1. Legal Ad

    Documents:

        PB LEGAL AD 4-24-18.PDF

2. Agenda

    Documents:

        PB AGENDA 4-24-18.PDF

3. 977 Brighton Avenue

    Documents:

        BRIGHTON AVE. - 977 (REPORT).PDF
        BRIGHTON AVE. - 977 (REPORT ATTACHMENTS AND PUBLIC COMMENT).PDF
        BRIGHTON AVE. - 977 (APPLICANTS SUBMITTAL).PDF
        BRIGHTON AVE. - 977 (PLANS).PDF

4. 56 Hampshire Street

    Documents:

        HAMPSHIRE ST. - 56 (MEMO).PDF
        HAMPSHIRE ST. - 56 (MEMO ATTACHMENTS).PDF
        HAMPSHIRE ST. - 56 (APPLICANT SUBMITTALS).PDF
        HAMPSHIRE ST. - 56 (PUBLIC COMMENT).PDF
        HAMPSHIRE ST. - 56 (PLANS).PDF

5. 630 Ocean Avenue

    Documents:

        OCEAN AVE. - 630 (REPORT).PDF
        OCEAN AVE. - 630 (STAFF ATTACHMENTS).PDF
        OCEAN AVE. - 630 (APPLICANTS SUBMITTAL).PDF
        OCEAN AVE. - 630 (PLANS).PDF

6. 25 Monument Street

    Documents:

        MONUMENT ST. - 25 (REPORT).PDF
        MONUMENT ST. - 25 (REPORT ATTACHMENTS).PDF
        MONUMENT ST. - 25 (APPLICANTS SUBMITTAL).PDF
        MONUMENT ST. - 24 (ATT. 12 PUBLIC COMMENT).PDF
        MONUMENT ST. - 25 (PLANS).PDF

7. 415 Cumberland Avenue

    Documents:

CUMBERLAND AVE. - 415 (REPORT).PDF
CUMBERLAND AVE. - 415 (REPORT ATTACHMENTS).PDF
CUMBERLAND AVE. - 415 (APPLICANTS SUBMISSION).PDF
CUMBERLAND AVE. - 415 (PLANS).PDF

LEGAL ADVERTISEMENT
PORTLAND PLANNING BOARD - MEETING AGENDA

The Portland Planning Board will hold a meeting on Tuesday, April 24, 2018, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to planningboard@portlandmaine.gov

Workshop – 4:30 p.m.

i. Level II Site Plan; 977 Brighton Avenue; Avesta Housing, Applicant. (4:30 – 5:30 p.m. estimated time). The Board will hold a workshop to consider a proposal for the development of forty units of senior housing. All of the dwelling units will be one-bedroom apartments and 34 of the units will be affordable. Parking for 32 vehicles is also proposed. The site is in the Residence Professional (R-P) zone and is subject to review under the subdivision, site plan and affordable housing ordinances.

ii. Level III Site Plan; 56 Hampshire Street; New Height Group LLC, Applicant. (5:30-6:30 p.m. estimated time). The Board will hold a workshop to consider a proposal for the development of 30 residential condominium units with one retail space. Parking for 68 vehicles is also proposed. The proposed building is 3-6 stories with 66,759 sf in total. The site is in the India Street Form-based Code Zone (IS-FBC) and is subject to review under the subdivision, site plan, and affordable housing ordinances.

Public Hearing – 7:00 p.m.

i. Level III Site Plan and Conditional Use; The Cedars; 630 Ocean Avenue; JHA Assisted Living, Inc., applicant. (7:00 – 7:45 p.m. estimated time) The Board will hold a public hearing to consider the expansion of The Cedars, which is an institutional long-term care facility. The expansion will include an assisted living and long-term care facility with a building footprint of 15,108 sq. ft. and total building area of 45,325 sq. ft. Reconfiguring on-site parking and adding 13 new spaces. The site is in both the R-3 and R-5 zone and is subject to review under the R-3 and R-5 conditional use standards for an institutional expansion, Portland's site plan ordinance and the City's delegated review under the Site Location of Development Act.

ii. Level III Subdivision and Site Plan, 5 unit building, 25 Monument Street, Monument Partners, LLC, Applicant. (7:45 p.m. to 8:30 p.m. estimated time) The Board will hold a public hearing on the application for a four-story building with 20,122 sq. ft. building that includes five (5) three-bedroom condominiums and eight (8) vehicle parking spaces on the first level. The 9,989 sq. ft. lot is located in both the Residential R-6 and Neighborhood Business B-1 zone. The proposal is subject to the standards of the subdivision, site plan ordinance, and housing replacement standards.

iii. Level III Site Plan; 415 Cumberland Avenue; Sam Reiche, representing 415 CA, LLC., Applicant. (8:30 p.m. estimated time) The Board will hold a public hearing on a proposal for the conversion of the existing building into eight residential units and two commercial units. The building is in the Downtown Business B-3 zone and is subject to review under the City's subdivision and site plan standards.

SEAN DUNDON, CHAIR – PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE

PLANNING BOARD



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

AGENDA
PORTLAND PLANNING BOARD MEETING

Please note that the location of this meeting is in Room 24, Basement Level of City Hall

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PUBLIC HEARING – 7:00 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM
2. COMMUNICATIONS AND REPORTS
3. REPORT OF ATTENDANCE AT THE MEETINGS HELD ON APRIL 17, 2018:

Workshop: Dundon, Eaton, Silk, Smith, Stanley, and Whited. Mazer recused
Public Hearing: Dundon, Mazer, Eaton, Smith, Stanley, and Whited. Silk recused.

4. REPORT OF DECISIONS AT THE MEETINGS HELD ON APRIL 17, 2018:

i. R-3 and R-5 Zoning Text Amendments; Developer's Collaborative, Applicant. Mazer moved and Stanley seconded a motion to find the proposed text amendments consistent with the comprehensive plan and recommends adoption of the amendments, as presented, to the City Council. Vote: 6-0, Silk recused.

ii. Amended Level III Site Plan and Subdivision; 75 Chestnut Street; A & M Partners, Inc., Applicant. Mazer noted that the Waivers and Inclusionary Zoning conditions approved by the Planning Board on December 13, 2016 (#2016-184) remain in force. Mazer moved and Stanley seconded a motion to approve the subdivision plan with three (3) conditions of approval. Vote: 6-0, Silk absent. Mazer moved and Stanley seconded a motion to approve the site plan with eight (8) conditions of approval. Vote: 6-0, Silk absent.

5. NEW BUSINESS

i. Level III Site Plan and Conditional Use; The Cedars; 630 Ocean Avenue; JHA Assisted Living, Inc., applicant. (7:00 – 7:45 p.m. estimated time) The Board will hold a public hearing to consider the expansion of The Cedars, which is an institutional long-term care facility. The expansion will include an assisted living and long-term care facility with a building footprint of 15,108 sq. ft. and total building area of 45,325 sq. ft. Reconfiguring on-site parking and adding 13 new spaces. The site is in both the R-3 and R-5 zone and is subject to review under the R-3 and R-5 conditional use standards for an institutional expansion, Portland's site plan ordinance and the City's delegated review under the Site Location of Development Act.

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PLANNING BOARD REPORT
PORTLAND, MAINE

977 Brighton Avenue
Senior Housing
Level III Site Plan and Subdivision Plan
2018-011
Applicant: Avesta Housing

Submitted to Portland Planning Board Workshop Date: April 24, 2018	Prepared by: Christian Roadman Date: April 20, 2018

I. INTRODUCTION

Avesta Housing seeks to construct a 40 unit apartment building for senior citizens. 34 units, or 85%, of the proposed units are intended to qualify as low income housing units for rent. As currently understood by staff, 24 units will be affordable to a household earning 50% of area mean income, and 10 units affordable for a family earning 60% of area mean income. The remaining six units will be market rate. This project capitalizes on density bonuses as part of the Affordable Housing section of the Land Use Code.

The proposed project is located at the corner of Brighton Avenue and Wessex Street. Wessex Street is unfinished, and the project calls for paving the street. 32 parking spaces are proposed for the site, which potentially complies with the Land Use Code. Under Division 20 (parking) eligible projects providing affordable housing may have a lower number of parking spaces per unit than otherwise allowed. The required amount must be set by the board.

The applicant states that the project location is good for senior housing, as it offers access to transit along Brighton Avenue and proximity to shopping centers for both employment and commerce. This is one of the first projects to utilize the density bonuses and dimensional modifications available under the R-P Residence Professional zoning district. The project is larger and of a different use than many other buildings in the area – Brighton is a largely commercial corridor with office and retail uses, with single family residential neighborhoods immediately adjacent.

While the current application is at a preliminary level, the Land use Code specifies that affordable housing projects receive expedited review. Given this, an early workshop with the Planning Board seemed appropriate. Some important materials for review are still forthcoming: a neighborhood meeting is scheduled in the near future, and the applicant will provide a traffic study as part of the next submission. Given the number of units proposed, and the project site's access off of Brighton Avenue, the traffic study will be an important document. In the meantime, staff seek board direction and input regarding the details of the site that are currently known.

Applicant: Avesta Housing (Greg Payne)
Consultants: Walsh Engineering Associates (Tom Greer), CWS Architects (Ben Walter), Owen Haskell - surveyor

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
21 Foot Drive Aisle Width	24 feet
37.5% Compact Parking Spaces	20%

Review	Relevant Code
Site Plan	*Section 14-526*
Subdivision	*Section 14-497*
Affordable Housing	*Section 14-488*

III. PROJECT DATA

Existing Zoning	R-P Residence Professional, R-3 Residential
Existing Use	Single Family Home – requires confirmation
Proposed Use	Multifamily Residential
Proposed Development Program	32 affordable units, 8 market rate units
- Bedroom Mix	All 1 bedroom
Parcel Size	32,000 sq. ft.

	Existing	*Proposed*	*Net Change*
Building Footprint (sq. ft.)	3,128	7,825	4,697
Building Floor Area (sq. ft.)	3,740	31,300	27,560
Impervious Surface Area (sq. ft.)	8,168	19,395	11,227
Parking Spaces	5	32	27
Bicycle Parking Spaces	0	16	16
Estimated Cost of Project	$7,100,000		

IV. EXISTING CONDITIONS

At present, a one story wood frame building that is listed as a duplex in the assessor's records and a separate two story wood frame building exist on the site. The rear, or northernmost area of the site (approximately 4,000 square feet), is in the R-3 residential zone. The remainder of the site (approximately 28,000 square feet) is in the R-P residence professional zone.

The properties immediately west and east of the proposed building's location are commercial or professional office buildings, but not large-scale, buildings. Also north of Brighton Avenue are a number of nearby single family homes, including several along the unfinished Wessex Street. The Fred P. Hall Elementary School is to the northeast, within walking distance.

Across Brighton Avenue (to the south) the scale of development is fairly large. A car dealership is across the street, and a shoppingcenter is at the intersection of Brighton with Rand Road. Brighton Avenue's is a local arterial road which carries a significant amount of traffic. The intersection of Brighton Avenue and Wessex Street is not signalized.

V. PROPOSED DEVELOPMENT

Avesta Housing proposes to build a 40 unit apartment building on the site, after demolishing the existing onsite buildings. The proposed building would be oriented towards Brighton Avenue, with entrances off that street as well as off the proposed parking lot on the rear / south of the site. The proposed building takes advantage of height and setback bonuses available for provision of affordable housing. The proposed building height is 48 feet and four inches tall at its north end, and 46 feet and four inches tall at its south end (below the 50 foot maximum permitted with affordable housing density bonuses) The building as designed includes vinyl, wood shake, and cement-panel siding. Every proposed unit is a 1 bedroom. Laundry machines are proposed on multiple floors onsite, and the proposed building includes a front office.

The proposed site plan includes a parking lot with 32 spaces, of which 12 are designated accessible spaces and 12 are compact spaces (four spaces are designed as compact ADA spaces). The parking lot is the source of both the applicant's waiver requests, for reduced drive aisle width and increased percentage of compact spaces. The proposed parking lot extends into existing wetland, which would be partially infilled. The applicant included a permit from the Maine Department of Environmental Protection granting permission to alter the wetland. The applicant cites site geometry, maximization of onsite parking, and minimization of wetland impact reasons for its waiver requests. 16 bicycle parking spaces, via 8 bicycle racks, are also proposed.

As part of the project, Wessex Street, which is currently unfinished, would be paved. Currently, the applicant's plans indicate a 24 foot wide street, which is not to the City standard (28 feet).

VI. Public Comment and Neighborhood Meeting

The Planning Department received four emailed comments by the time of this writing, which are attached to this report. Two comments are from individuals who grew up on the street (one grew up in a building on the site). Both cite the history and age of the existing building facing Brighton Avenue, built in 1924, as reasons against demolition. It

was the home and greenhouse location of Ameido Martelle, a Portland resident, as well as the home of Joe Martelle, a member of the Maine Broadcasters Hall of Fame. Joe Martelle submitted one of the comments. The greenhouse structures are no longer present on the property.

The third comment in opposition is from a neighbor on Brighton Avenue who raised concerns about traffic safety (entering and exiting Brighton Avenue without a traffic light at Wessex), the size and scale of the proposed building / parking lot, lighting impacts (loss of sunlight and impact of exterior lighting), and maintenance.

A fourth comment, received from the property owner on Brighton Avenue across Wessex Street, was neither in favor of nor in support of the project, but raised a number of issues. These include concerns about turning movements onto Brighton Avenue, potential use of the property owner's property as a turnaround and/or pet-walking site, and the potential for shadow impacts. This comment also expressed that paving of Wessex Street would be a positive development.

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

The applicant submitted a warranty deed for three lots, and a quitclaim deed for two lots, which evidence ownership of the property in question. The boundary survey submitted with the application is not stamped by a Maine Licensed Surveyor and must be resubmitted.

A document provided by the applicant, Avesta, cites the organization's 2,200 apartments and two assisted living facilities, as well as its $195 million in assets, as evidence of its capacity to successfully complete the proposed project. The document lists anticipated funding sources for the project, including subsidies, low income housing tax credit, and loans.

VIII. ZONING ANALYSIS

Multifamily housing is not a use normally available under the R-P or R-3 zones, but is provided for in the R-P zone in the Affordable Housing section of the Land Use Code. Planning staff, in consultation with zoning staff, confirmed that 40 units are appropriate under the density bonuses allowable. The project also takes advantage of height and setback bonuses, which were determined to comply with zoning.

Because part of the site (roughly 4,000) is located in an R-3 zone, this square footage was omitted from the calculations pertaining to density bonuses.

According to the Parking section, Division 20, of the Land Use Code, the Planning Board may determine the parking required for affordable housing projects such as this one. The applicant cites previous experience with / approval of affordable housing projects as support for the amount of parking requested. Tom Errico, the City's traffic engineering consultant, requested more information regarding the proposed parking spaces (including the number of proposed handicapped and compact spaces) as part of his traffic-related comments, addressed further below.

IX. DEVELOPMENT REVIEW

A. SUBDIVISION (Section 14-497)

The proposed development prompts review for conformance with relevant standards of Portland's subdivision ordinance and applicable regulations. Please note, the current application is at a preliminary level.

Will Not Result in Undue Water and Air Pollution, and Will Not Result in Undue Soil Erosion; Will Provide for Adequate Sanitary Sewer and Stormwater Disposal, and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage

The applicant submitted a wastewater capacity authorization letter for the project.

The City's civil engineering consultant, Lauren Swett, reviewed the applicant's preliminary submission for compliance with applicable codes, standards, and practices. Ms. Swett submitted a memorandum, attached to this report, indicating the need for significant revisions to the applicant's submitted plans and documents regarding stormwater control, impervious surface calculations, grading, erosion, and maintenance.

Sufficient Water Available

The applicant did not provide evidence of sufficient water from the Portland Water District.

Will Not Cause Unreasonable Traffic Congestion

The applicant did not provide a traffic study. City traffic engineering consultant Tom Errico contacted the applicant's traffic engineer to communicate what he will require in such a study.

Comprehensive Plan

The applicant identified the following local goals, drawn from the City's comprehensive plan, as applicable to the project:

- Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households
- Encourage additional contextually-appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods
- Pursue policies to enable people who work in Portland to have the option to live in Portland
- Encourage quality, sustainable design in new housing development
- Adopt affordable housing: pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods

B. SITE PLAN (Section 14-526)

The proposed development prompts review for conformance with relevant standards of Portland's site plan ordinance and applicable regulations. Please note, the current application is at a preliminary level.

a) Transportation Standards

Impact on Surrounding Street Systems and Access and Circulation; Sidewalks; Parking

A traffic study is forthcoming. Two submitted public comments, as well as staff discussion and comment, expressed concern regarding access and egress movements from Wessex Street onto Brighton Avenue, a busy local arterial.

In advance of the traffic study, consulting traffic engineer Tom Errico provided the following comments:

The Wessex Street cross-section shall meet City standards or 28 feet in width. This width will permit on-street parking on one side of the street.
The sidewalk on Wessex Street shall extend along the entire property frontage.
Supporting documentation shall be provided on the determination of parking spaces (total number, number of handicap spaces, and number of compact spaces)

Construction Management Plan

The applicant submitted a construction management plan and narrative as part of the application. There appears to be a discrepancy regarding on-street vs. on-site contractor parking that should be addressed. Lauren Swett, consulting Civil Engineer, also provided the following comments:

- the construction management plan should address building code best practice safeguards during construction
- a construction timeline is referenced but not included.

Public Transit Access

The site is served by public transit on Brighton Avenue, which is one reason cited by the applicant for the location of this proposed development. A transit shelter serving inbound buses is located within a quarter mile of the development, so provision of a shelter is not required per City code. Despite this, staff suggest that the applicant consider providing an easement for a transit shelter, or constructing a bus pad, for outbound buses serving the proposed development.

b) Environmental Quality Standards

Preservation of Significant Natural Features

As noted above, the project impacts a wetland and the applicant submitted a permit from the Department of Environmental Protection allowing alteration. The requests for waivers of the driveway width and the higher percentage of compact spaces are proposed in order to minimize further impacts on the wetland.

Landscaping and Landscape Preservation

The project is subject to the street tree requirements and landscaping standards. Jeff Tarling, City Arborist, recommended that the project street trees along Brighton Avenue and Wessex Street be a uniform planting of like tree types. He noted that most likely, the overhead utility wires will remain and thus the trees should be ornamental types such as 'Accolade' Cherry or Crabapple. He also commented that Silver Maple are not recommended near any City street, and should therefore be changed on the plan.

Caitlin Cameron, Urban Designer, noted that the parking lot should be better screened with landscaping. Please see her other design comments below.

Water Quality, Storm Water Management and Erosion Control

Consulting civil engineer Lauren Swett's comments regarding these topics are addressed above, and her memorandum is attached to this report.

c) Public Infrastructure and Community Safety Standards

Public Safety and Fire Prevention

Division Chief Mike Thompson noted that the Fire Department has adequate capacity in the area for this project, and that emergency access for fire apparatus is available.

Availability and Adequate Capacity of Public Utilities

As noted above, additional information confirming adequate utility capacity is required. The applicant submitted a wastewater capacity authorization letter for the project.

d) Site Design Standards

Snow and Ice Loading

Lauren Swett, consulting City engineer, commented that appropriate snow storage locations (outside of existing and proposed drainage courses) should be indicated.

Historic Resources

The applicant submitted a letter sent to the Maine Historic Preservation Commission requesting information on any impact construction may have on historic, archaeological, or architectural properties. The applicant did not provide a response from the Commission.

Please note the two public comments pertaining to the former site as a greenhouse / nursery, described above.

Exterior Lighting

The applicant provided a lighting plan, and state in a zoning analysis that all lighting will be shielded. The plan anticipates spillage of .2 foot candles properties adjacent the parking lot to the east, and spillage of .2 foot candles onto Wessex Street. Staff review of this item is ongoing.

Please note the public comment pertaining to concerns about exterior lighting, described above.

Noise and Vibration

The applicant states that mechanical equipment will meet appropriate noise limits.

Materials & Waste

The applicant states that all waste will be handled in an interior trash room and picked up by a private waste hauler. Lauren Swett, consulting civil engineer, commented on the absence of a dumpster in her memorandum. The applicant should confirm that there will not be an exterior dumpster.

Zoning Related Design Standards

Caitlin Cameron, Urban Designer, provided the following review comments (her memo is attached to this report in its entirety):

- Applicant did not provide renderings of the project in context
- More information on material finishes is requested
- Aside from the canopy and the material variation, the façade and form appear flat and boxy. Window proportions are inconsistent with those found in the residential context, and the project does not look very residential
- Visual interest and residential character could be added with the following: articulation elements; more fine grain material than concrete panel; different roofline treatment; depth at the windows; reduction of materials or adjustment of material placement
- The surface parking lot is not adequately screened from view along Wessex Street, and no apparent screening is provided between the surface parking lot and neighboring properties.

Additionally, Ms. Cameron posed the following questions:
- What material finishes are proposed?
- What is the detail of the window opening? Do the windows have a reveal?

XII. NEXT STEPS

This workshop lands fairly early in the development review process for this project. Staff anticipate additional submittals from the applicant, which should help determine if there is need for an additional Planning Board workshop. A traffic study is particularly necessary.

While the applicant held one neighborhood meeting per the Affordable Housing section of the City's code, another is forthcoming to meet the requirements for development review.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

A. CONSULTING TRAFFIC ENGINEER COMMENTS
B. CONSULTING CIVIL ENGINEER COMMENTS
C. CITY ARBORIST STAFF COMMENTS
D. URBAN DESIGNER STAFF COMMENTS
E. FIRE STAFF COMMENTS
F. PUBLIC COMMENT 1 - JOE MARTELL 2-12-18
G. PUBLIC COMMENT 2 – GENE LEIGHTON 3-18-18
H. PUBLIC COMMENT 3 – BILL MONTGOMERY
I. PUBLIC COMMENT 4 – JUDITH STANHOPE

APPLICANT'S SUBMITTALS

1. COVER LETTER
2. COMPREHENSIVE PLAN GOALS
3. CONSTRUCTION MANAGEMENT PLAN NARRATIVE
4. RECORDED QUITCLAIM DEED
5. RECORDED WARRANTY DEED
6. DEP NRPA APPLICATION
7. EVIDENCE OF FINANCIAL AND TECHNICAL CAPACITY
8. STATEMENT OF FIRE DEPARTMENT PROJECT REVIEW DATA
9. LEVEL III SITE PLAN APPLICATION
10. LIGHTING STATEMENT
11. 1RST NEIGHBORHOOD MEETING MATERIALS
12. NRPA PERMIT
13. PARKING SUPPLEMENTAL INFORMATION
14. PARKING WAIVER STATEMENT
15. STORMWATER REPORT

16. TEST BORINGS
17. WASTEWATER APPLICATION AND CAPACITY AUTHORIZATION
18. WETLAND REPORT
19. ZONING ANALYSIS

PLANS

A. FLOOR PLANS
B. ELEVATIONS
C. BOUNDARY & TOPOGRAPHIC SURVEY
D. SUBDIVISION RECORDING PLAT
E. SITE PLAN
F. EXISTING CONDITIONS & DEMOLITION PLAN
G. GRADING AND UTILITIES PLAN
H. EROSION CONTROL PLAN
I. LANDSCAPE PLAN
J. LIGHTING PLAN
K. SITE DETAILS
L. CONSTRUCTION MANAGEMENT PLAN

Att. A

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

977 Brighton Avenue - Initial Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Apr 19, 2018 at 4:27 PM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Christian – The following presents my initial comments as it relates to the site plan. I would note that my review of off-site traffic impacts will be performed upon receipt of the Traffic Impact Study. I would note that access and egress movements from Wessex Street onto Brighton Avenue is a concern as it relates providing safe conditions along a very busy City arterial street.

- The Wessex Street cross-section shall meet City standards or 28 feet in width. This width will permit on-street parking on one side of the street.
- The sidewalk on Wessex Street shall extend along the entire property frontage.
- Supporting documentation on the number of handicap parking spaces shall be provided.
- Supporting documentation on the number of parking spaces provided for the site shall be provided.
- Supporting documentation on the number of compact parking spaces shall be provided.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TYLIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
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"One Vision, One Company"

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T 800.426.4262
T 207.774.2112
F 207.774.6635

Att. B

MEMORANDUM

TO: Christian Roadman, Planner
FROM: Lauren Swett, PE & Amy LeBel, EIT
DATE: April 18, 2018
RE: 977 Brighton Avenue Elderly Apartments, Level III Site Plan Application

---

Woodard & Curran has reviewed the Level III Site Plan Application for the proposed 40-unit senior housing project located at 977 Brighton Avenue in Portland, Maine. The project involves construction of a 4-story building and associated site improvements. We have reviewed the project for compliance with applicable City of Portland Land Use Codes and Technical Manuals and general engineering practices.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, dated December 22, 2017, prepared by Pinkham & Greer Civil Engineers, on behalf of Avesta Housing Development Corporation.
- Engineering Plans, Sheets C1.1-C1.2, C2.1-C2.6, C3.1- C3.3 and D1.0, dated December 21, 2017, prepared by Pinkham & Greer Civil Engineers, on behalf of Avesta Housing Development Corporation.

Comments

1) It is noted that this is a preliminary application. The follow comments reflect items required for the final plan submission.
2) In accordance with the City of Portland Land Use Code (Chapter 14) Subdivisions and Site Plan Standards, please address the following comments:
   a) Note 1 on the Snow Clearance Notes on sheet C1.2 indicates that snow may be stored within the snow storage areas, but the location of the designated areas are unclear on the site plan. Please indicate snow storage locations that are sited outside of existing and proposed drainage courses.
3) In accordance with the City of Portland Technical Manual, please address the following comments:
   a) Stormwater Management Standards (Section 5)
      - 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. The Applicant proposes four FocalPoint systems and storage chambers. We offer the following comments:
        - Basic Standard: Plans, notes, and details are provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. Please address the following comments related to the Erosion Control Plan:
          (a) The stone filter protection icon does not appear to align with Focal Point Systems 1, 4-1 and 4-2. Please revise accordingly.
          (b) Stone filter protection is provided northeast of the site building. Based on other sheets, it does not appear that infrastructure is proposed in this area. Please revise to reflect proposed conditions.
          (c) The erosion control berm line does not appear to extend downgradient of all proposed work on the northern end of the property. Please revise accordingly.
          (d) Please provide a detail for riprap outlet protection.
        - General Standard: The Applicant needs to distinguish between new impervious surface and redeveloped non-roof impervious surface. New impervious surface (if greater than 1,000 SF) shall comply with the Maine Chapter 500 General Standard by providing treatment of no less than 95% of the impervious area and 80% of the developed area.

Areas of redeveloped non-roof impervious area shall comply to the redevelopment standard, providing treatment of 50% of the area. All stormwater calculations shall include the Wessex Street area.

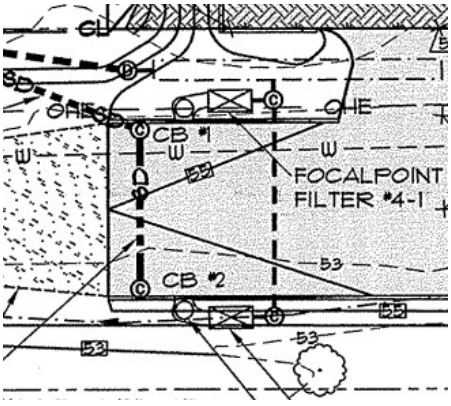
(a) The Applicant should provide sizing calculations per the MaineDEP Stormwater BMP Manual for all proposed treatment BMPs.
(b) The Applicant should provide details for all proposed treatment BMPs and related infrastructure (FocalPoint System, Storage Chambers and Outlet Control Structure), including invert elevations.
(c) Please include a maintenance description and update tables to include the chamber system in the Inspection and Maintenance Report.

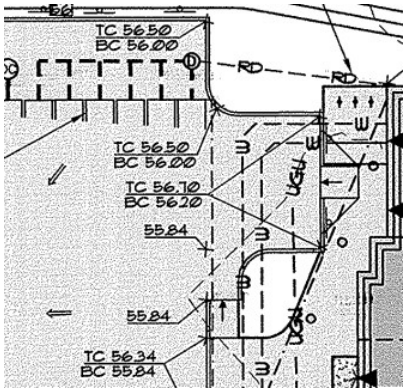
- Flooding Standard: The Applicant has noted that post-development peak flows are smaller than pre-development peak flows for the 2-, 10- and 25-year storm events.
  (a) Wessex Street should be included in both Drainage Plans and all stormwater calculations.
  (b) Please provide the 10- and 25- year storm event models for the post-development HydroCAD model.

b) Boundary Survey Requirements (Section 13)
- The submitted boundary survey date July 13, 2016 does not include a professional surveyor stamp/signature. Applicant is required to submit a Boundary Survey that has been Stamped by a Maine Licensed Professional Surveyor.

4) Please address the following comments regarding the Construction Management Plan (CMP):
a) Per Section C. of the City of Portland CMP Template, please add the following under 'other applicable permits':
Building Code: Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the International Building Code.
b) The CMP Narrative references a construction timeline at end of the document in Section E. Construction Schedule. It does not appear that the timeline was attached to the document.

5) General Comments
a) Please reevaluate the 55 and 56 foot contours respectively on the Grading Plan in the following locations:





b) Please provide details for the following items: driveway culvert, drainage manhole, stormwater infrastructure (see Stormwater Section above) stockade fence and concrete pavement.
c) The Applicant has not provided a location for a dumpster or other solid waste receptacle. Does the applicant intend that all solid waste disposal be handled internal to the building?
d) Please indicate locations of the extruded concrete curb (detail 4 on sheet C3.2) or describe locations in the note section for that detail.
e) The Applicant submitted letters to Portland Water District and the City of Portland Department of Public Works to request utility capacity to serve documentation for the proposed project. A response

letter from the Department of Public Works confirmed downstream sewers have the capacity to convey the estimated wastewater flow. Since the project is connecting into a combined sewer, a backflow preventer is recommended; a detail should be provided in the plan set. Response letters from other utilities confirming ability to serve the proposed development should be submitted to the City upon receipt.

Please contact our office if you have any questions.

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Comments for Two Planning Board Items?

Jeff Tarling <jst@portlandmaine.gov> Fri, Apr 20, 2018 at 1:59 PM
To: Christian Roadman <croadman@portlandmaine.gov>

Hi Christian -

Review comments on the 977 Brighton Avenue project:

Street & parking lot trees -

Would recommend that the project 'street-trees' along Brighton Avenue and Wessex Street be a uniform planting of like tree types vs 'two & two', that could be 7 of the same species along Wessex Street, most likely the overhead utility wires will remain thus the trees should be ornamental types - perhaps 'Accolade' Cherry or Crabapple.

Silver Maple are not recommended near any City street, but would be OK in backyard situations. Thus we would want to see that type changed in this plan.

Thanks

Jeff

Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

On Thu, Apr 19, 2018 at 12:13 PM, Christian Roadman <croadman@portlandmaine.gov> wrote:
[Quoted text hidden]

Planning and Urban Development Department
Planning Division

Subject: Design Review – 977 Brighton Avenue

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, April 11 2018

The project at 977 Brighton Avenue was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Christian Roadman, Planner, and Shukria Wiar, Planner against the *City of Portland Design Manual*: *R-P Residential Professional Zone* and the *Multiple-Family Standards*.

Design Review Comments*:*

- Applicant did not provide renderings of the project in context
- More information on material finishes is requested

(a) R-P Residential Professional Zone

Standard (1) . For development within the R-P zone where there is a consistent established architectural style or character to the existing structures in the immediate vicinity tin which the development is proposed, that the concurrently visible architectural style or character of the proposed development would not be incongruous to that established style or character.

Staff determined that there is not a consistent, established architectural style or character to the immediate vicinity.

(i) Two-Family, Special Needs Independent Living Units, Multiple-Family . . . :

Standard (1) . Exterior Design – Building is multi-family and its 4-story scale relates that use. The context includes one-story commercial buildings and many small-scale vernacular residential buildings; other than the Barron Center, there is not much in the way of multi-family buildings in this area. Most of the residential context is from the early 20th century with the commercial corridor on Brighton Avenue having more recent buildings. The project varies the massing somewhat on the sides and rear of the building - this helps to mitigate the scale of this multi-family building which is larger than the single-family homes nearby. The central entrance is emphasized with a canopy. Aside from the canopy and the material variation, the façade and form appear flat and boxy. The window proportions are also inconsistent with those found in the residential context. In essence, the building does not look very residential. Staff suggest possible ways to bring more visual interest and a residential character to the building:

- Articulation elements
- More fine grain material than panel
- Different roofline treatment
- Depth at the windows

- Reduce the number of materials, or adjust the placement

Questions:

- What finishes on the materials are proposed?
- What is the detail of the window openings? Do the windows have a reveal?

Standard (2). Relationship to Street –Building relationship to the street varies in this context – some buildings face the street, some are set back from the street, some turn the side to the street. The front orientation is to Brighton Street with a 17' front setback from the busy street and an entry porch.

Standard (3). Open Space – Open spaces provided on property – covered entry porch and landscape buffer surrounding building but no seating or yard space proposed.

Standard (4). Light and Air – All units provided with ample windows, some storage space.

Standard (5). Parking – Parking is away from Brighton Avenue, hidden by the building. On the Wessex Street side, surface parking is not adequately screened from view – only two trees shown currently between parking and public ROW; no apparent screening provided between the surface parking and the neighboring properties.

Standard (6). Not applicable

MEMORANDUM

To: FILE

From: Christian Roadman

Subject: Application ID: 2017-299

Date: 4/20/2018

Comments Submitted by: Robert Thompson/Fire on 4/4/2018

Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.

Comments Submitted by: Robert Thompson/Fire on 4/4/2018

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.

Comments Submitted by: Robert Thompson/Fire on 4/4/2018

Emergency access for fire apparatus is available with the plans.

Comments Submitted by: Robert Thompson/Fire on 4/4/2018

Adequate water supply is available for the building.

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Re: Fe: I.D.#2017-299, proposed "Aquesta Housing Project" for 977 Brighton Avenue

3 messages

Barbara Barhydt <bab@portlandmaine.gov> Tue, Feb 13, 2018 at 12:48 PM
To: jmy <jmy@portlandmaine.gov>, Christian Roadman <croadman@portlandmaine.gov>
Cc: Victoria Volent <vvolent@portlandmaine.gov>

This is Christian's project as well. Victoria, this project is on hold. They did not hold their required meeting 30 days before submitting the application, so Jeff Levine wants us to put this on hold until they meet the requirements of Division 30.

Thanks.

Barbara

Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
(207) 874-8699
Fax: (207) 756-8256
bab@portlandmaine.gov

On Tue, Feb 13, 2018 at 12:46 PM, jmy <jmy@portlandmaine.gov> wrote:

> Victoria,
>
> This is public comment for the 977 Brighton Avenue project for your files.
>
> Jen
>
> On Monday, February 12, 2018 at 4:29:15 PM UTC-5, Joe Martelle wrote:
>
> > Att: Members of the Portland Planning Board
> >
> > Re: I.D. # 2017-299, Proposed "Aquesta Housing Project" sub division of 40 housing units and proposed leveling of property
> > at 977 Brighton Avenue, Portland
> >
> > Please be advised that Portland is the city of my birth, having lived at 977 Brighton Avenue while growing up. I believe the house, now offices, should be preserved as a Portland landmark. Therefore, I am opposed to this proposed project or the following reasons.
> >
> > My late father, Ameido Martelle, known to his many friends and customers as 'Marty' operated greenhouses [since torn down] , seedling nursery and pansies garden on this land for over 30 years. The property also served as our family home. My parents worked long hours in the garden and greenhouses, usually nights and on weekends, since they both had full-time jobs. Dad';s specialty was growing native garlic and tomatoes, along with other seedlings, flowers and his beautiful pansies. Regular customers from the Greater Portland area and from all over Maine annually visited dad's greenhouses to purchase geraniums on Memorial Day. Anyone who grew-up in Portland from the 50s through the 70s will usually associate Memorial Day with my dad's geraniums which adorned the grave sites of their loved ones. I can still see the countless cars lined-up on Brighton Ave., and the smiles on the faces of his loyal customers as they returned year after year to greet him. Quite often, my dad's photo appeared in the Portland Press Herald and Evening Express praising his green thumb. He was also interviewed numerous times by the late Clif Reynolds on Ch. 6 regarding my father's ability to grow native garlic, and what a special gift "our dad" had.
> >
> > I am not sure when the house was built, but do know, I was around five years old when we moved to the house at the conclusion of WWII. Therefore, the structure is at least 73 years old and probably much older.
> >
> > I also believe our former home at 977 Brighton Avenue should not be demolished because I 'spun' records, as a future radio wannabe, in the basement of this wonderful ole home. After graduating from Cheverus High School in '59, and attending St Francis Xavier Univ. in Nova Scotia and Emerson College for Broadcasting in Boston, I went on to enjoy a 40 year career in broadcasting. I was on the air in Portland at WGAN, WLOB and WCSH. I also managed WCSH Radio in the late 70s, before heading to Boston where I was a radio-TV personality for 20 years. My other radio stops were Cincinnati, Houston and West Palm Beach. In 2013, it was my honor to be inducted to the Maine Broadcasters Hall of Fame. My successful career all began in he basement of that grand old home on Brighton Avenue. These are just a few reasons why I feel strongly that this house should not be leveled. Therefore, I am asking you in behalf of my late mom and dad, the entire Martelle family and thousands of satisfied folks who benefited from the fruits of their hard labor to block any proposed destruction of the property at 977 Brighton Avenue. I truly believe this home is a Portland Landmark and should be labeled as such.
> >
> > Please feel free to contact me for any additional information. I stand ready to assist you any way I can to hopefully preserve the integrity of this property.
> >
> > Thanking you kindly for your time and consideration,,
> >
> > I remain,
> >
> > Respectfully,
> >
> > Joe Martelle
> > Box386
> > Mesa, Colorado 81643
> > Tel: 970-268-5693
> > e-mail: joemartell@aolcom

Jennifer Munson <jmy@portlandmaine.gov> Tue, Feb 13, 2018 at 2:32 PM
To: Barbara Barhydt <bab@portlandmaine.gov>
Cc: Christian Roadman <croadman@portlandmaine.gov>, Victoria Volent <vvolent@portlandmaine.gov>

I did not send it to Christian because I noticed the project was no longer in UI and I didn't know who had the project.

Jennifer Munson, Office Manager
Planning and Urban Development
City of Portland
389 Congress St., 4th Floor
Portland ME 04101
jmy@portlandmaine.gov
(207) 874-8719
(207) 756-8258 (fax)

[Quoted text hidden]

Barbara Barhydt <bab@portlandmaine.gov> Tue, Feb 13, 2018 at 2:41 PM
To: Jennifer Munson <jmy@portlandmaine.gov>
Cc: Christian Roadman <croadman@portlandmaine.gov>, Victoria Volent <vvolent@portlandmaine.gov>

I am fairly sure I assigned it to him and I did send out the councilor note. Maybe I lost it somehow, but I worked with it.

Thank you for checking with Vicki

Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
(207) 874-8699
Fax: (207) 756-8256
bab@portlandmaine.gov

[Quoted text hidden]

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: 977 Brighton Ave

1 message

Matthew Grooms <mgrooms@portlandmaine.gov> Mon, Mar 19, 2018 at 9:18 AM
To: Jennifer Munson <jmy@portlandmaine.gov>
Cc: Christian Roadman <croadman@portlandmaine.gov>

Hi Jen,

Here is a public comment for 977 Brighton Avenue. I believe this is one of Christian's projects.

Thanks,

Matt

---------- Forwarded message ----------
From: **Gene Leighton** <geno34243@outlook.com>
Date: Sun, Mar 18, 2018 at 2:55 PM
Subject: 977 Brighton Ave
To: "mgrooms@portlandmaine.gov" <mgrooms@portlandmaine.gov>

Dear Sir,

My name is Gene Leighton, I spent many years living on Brighton Avenue in Portland.

Regarding the plans for senior housing at 977 Brighton Ave, I would ask that you consider the age and history of the property being considered for development before any plans are approved.

Mr Martelle , the former owner for decades raised tomatoes, assorted flowers and the like. In its day it was as a very successful family run business.

While the property may not be within an historic district such as properties on the peninsula, I feel considering it's past has merit.

Thank you in advance for your consideration.

Gene Leighton

Sent from my iPhone

--
Matthew Grooms
Planner
Planning Division
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8725 (T)
(207) 756-8258 (F)
mgrooms@portlandmaine.gov

Google Groups

977 Brighton Avenue project by Avesta

W M <wmontdmd@yahoo.com> Apr 6, 2018 4:48 PM

Posted in group: **Planning Board**

Dear Planning Board Members:

I have attended the one public meeting of which I am aware presented by Avesta about this project. I own the adjacent property across Wessex Street from 977. I have my office there and have been there since 1989.

Traffic flow could be the weakest link and may well prove to be a safety problem. It can at times be challenging to get onto Brighton from Wessex due to the high traffic volume on Brighton. If the number of vehicles trying to get out of Wessex onto Brighton at one time becomes increased substantially, which is very likely with this project, there are going to be routine back- ups and people trying to get out when perhaps they should wait. Think "rush time". Contributing to the problem is that snow clearance and sanding at the Brighton-Wessex intersection are not as they should be. Slippery winter conditions are going to make it worse. A traffic light responsive to vehicles on Wessex at the intersection would do it, but somehow I doubt that will be an option.

It will be convenient for drivers to use my parking lot to cut through and to turn around. A little of that is OK; a lot, not so much.

On a positive side, the improvement of Wessex Street itself, which is much needed, is a major plus.

I know the engineers are aware of the very wet soil conditions at the back end of the property.

Four stories will make for a large structure, unique to the immediate area. It won't affect my property this way, I believe, but it will cut off at least some morning sunlight to the property immediately adjacent me next back on Wessex. I know that is a concern for the young couple living there. They purchased their home last year.

If dogs are allowed, I suspect they will get "walked" on the grass at the edge of my parking lot as there will not be a good area on the grounds at 977. "Across the street and out of mind". That will not be welcomed. It would be good if there were severe penalties "in house" for that. The Portland leash law recognizes the problems associated with dog waste, but I doubt the law alone will do it.

No doubt you will hear from others, and I may have other thoughts. This is not an anti-project e-mail necessarily, but I wanted to get this information to you. Thank you.

Bill Montgomery, 989 Brighton Avenue

Google Groups

Development in vincity of 977 Brighton Ave.

Judy Stanhope <jstanhope@scarboroughschools.org> Apr 18, 2018 2:44 PM
Posted in group: **Planning Board**

I am writing to express my concern over the proposal to build a 40 unit senior housing building on the corner of Brighton Avenue an Wessex Street. I own and reside in the home at 1001 Brighton Avenue. My house would be separated from the proposed development by one building.

My concerns are as follows:

- **Traffic, traffic, traffic: Traffic at this location is heavy and it is unclear how the traffic associated with a 40 unit development can safely enter and exit Brighton Ave. At this location Brighton Avene begins to expand into 6 lanes. The residents on Wessex already have difficulty, as do I. Does the city intend to install another traffic light? This presents more problems because there are already several traffic lights in the area.**

  I

- **Scale:**

  - **The size of the building is not compatible with the residential / professional buildings in the area.**
  - **The proposed 4 story height will block sunlight to neighboring residences.**
  - **The building and associated parking seems to be too large for the lot.**

- **Impact of exterior lighting on neighboring residence**

- **Maintenance: Currently the property is not adequately maintained by Avesta. What assurances do we have the property will be well maintained?**

Thank you for considering my concerns.

Judith Stanhope
1001 Brighton Avenue
Portland, Maine 04102

Att. 1

File: 16150

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

December 22, 2017

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

RE: 977 BRIGHTON AVENUE ELDERLY APARTMENTS
AVESTA HOUSING

Dear Barbara,

We are pleased to submit the attached application for Avesta's 40 unit senior housing project located at 977 Brighton Avenue. This project will provide affordable housing for Portland's senior citizens, a growing population segment.

The building will be four stories with a main entrance facing Brighton Avenue. A secondary entrance will be off the parking lot, which will be accessed off Wessex Street. Wessex Street will be upgraded with new curbs, sidewalk and paving.

This is a relative easy site to construct our project on. There is adequate room to stage the project off Wessex Street, a dead end street. We have included a Construction Management Plan as part of the Application.

The utilities will come off Wessex Street except for the sewer. This will come from Brighton Avenue.

This site is particularly well suited for this project. The retail businesses in the area will provide services to our residents as well as employment opportunities. The project is also located on the bus route, providing easy access for our residents to Portland and Westbrook.

We are at the transition of the neighborhood from residential uses to commercial. Our multi-story residential building will help make that transition. We believe this site will also provide easy pedestrian access to the service centers, making it a friendly neighborhood.

We are providing 32 parking spaces for the 40 units. This is a ratio of 0.8 spaces per unit, above other recently approved projects. We hope the Board agrees with our conclusion.

PINKHAM & GREER
CIVIL ENGINEERS

We look forward to meeting with the City Staff, Planning Board and our neighbors. Thank you for your consideration of our project.

Sincerely,

PINKHAM & GREER,
CIVIL ENGINEERS

Thomas S. Greer, P.E.

Enclosures

cc: Ben Walter, Greg Payne, File

TSG/rjs

Comprehensive Plan Goals
977 Brighton Avenue

Housing: A Livable City

State Goals: To encourage and promote affordable decent, housing opportunities for all Maine citizens

Local Goals:

- *Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.*
- *Encourage additional contextually-appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.*
- *Pursue policies to enable people who work in Portland to have the option to live in Portland.*
- *Encourage quality, sustainable design in new housing development.*

Goals from Future Strategies

9. *Adopt Affordable Housing*
    - *Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.*

This project is located adjacent a residential neighborhood and walking distance to retail establishments. These establishments will provide as a service center to the residents as well as employment opportunities. The site is located on a bus route providing regional access.

Construction Management Plan Narrative
977 Brighton Avenue
Avesta Housing Development Corporation

A construction management site plan has been prepared and is attached to this document.

The Construction Management narrative and plan depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The goal for the plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in their duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that Avesta Housing Development Corporation and its contractor has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

B. Development Review of Construction Management Plan

Avesta Housing Development Corporation and its contractor shall submit a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. The plan minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process. The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, Avesta Housing Development Corporation and its contractor shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532.
General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include:

1. **Street Opening Permits:** A street opening permit will be required for all subsurface utility connections within Wessex Street (including water, gas, and electric/ communications, and curbing). Schedule and duration of work are unknown at this time.

2. **Blasting:** No blasting is anticipated for this project.

D. Construction Administration and Communication

Avesta Housing Development Corporation and its contractor will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust.

1. Contact Person and contact information for the Avesta Housing Development Corporation and its contractor and who is available 24 hours.
   Contractor and contact person: Unknown at this time

   Developer/owner contact person:Avesta Housing Development Corporation
   Greg Payne
   (207) 553-7780 x3341

2. Contractor will have a project sign with the contact information.
3. Phone numbers will on sign and available for issues at all times of day during the construction period
4. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.
   Construction schedule:
   - **Commencement of construction: spring/summer of 2018**
   - **Duration of construction: 12 months**
   - **Schedule of major construction events: See construction timeline at end of document**

2. Hours of Construction: **7:00 AM – 7:00 PM Monday – Friday. Construction activities shall start no earlier than 8:00 AM on Saturdays, Sundays or Holidays.** Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and Section 25-129. Noise, dust and debris.
3. There is no anticipation of night work on this project.
4. All deliveries for materials will comply with the noise requirements listed above or will be restricted to the hours allowed for construction.

5. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.
   Deliveries may only occur during normal hours of construction and must be taken on-site. No deliveries are allowed to occur from Wessex Street.

F. Security & Public Safety

1. The site construction fence will be placed either on the property line, at back of curb, or at limit of work; as depicted on the plan to allow for construction equipment and construction employees to access the exterior walls of the building and for the site work.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16.
3. Demolition of the existing house and garage and other associated site items will occur. A demolition fire safety program is needed and will be prepared and supplied when a contractor is selected.
4. Avesta Housing Development Corporation and its contractor shall develop a fire safety and emergency protocol plan and contact the nearest Fire Station to advise them of the ongoing construction project.
5. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual. (not anticipated)
6. Any proposed temporary security lighting shall be shown on the CMP and all fixtures shall be full cutoffs. (not anticipated)

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Will occur when making connection to utilities within the adjacent street and when new curbing is set. All required permits will be obtained at the responsibility of the general contractor. Traffic and bicycle flow will be maintained and controlled as necessary for this work to occur. Reconstruction of Wessex Street will require maintaining one way emergency traffic.

2. Sewer and Stormwater: All sewer and stormwater water system connections will be per the City's requirements/standards and are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual. Sewer connection is required for this project.

   Other utilities: All other utilities (gas, water, underground electric/communications) will be per the utility provider requirements/standards. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works.

3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along arterial and or collector streets are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plan is required for this project for reconstruction of Wessex Street.

   Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic
   - Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
   - Flaggers will be used during utility connection within the adjacent streets.
   - No police detail or lighted intersections are anticipated for this project.

   All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

   - Typical construction fencing will be used to secure the site. Alternate sidewalks are available on the other side of the adjacent streets.
   - ADA compliance shall be maintained.
   - A short duration sidewalk relocation on Brighton Avenue is anticipated.

   Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works. Avesta Housing Development Corporation and its contractor shall apply for the necessary permits.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls

3. Dust controls: The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17- 18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or site lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt
    6) This would include Monday-Friday Sat/Sunday/Holidays

I. Erosion Control and Preservation of Trees

1. Avesta Housing Development Corporation's selects contractors that shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Construction Management Plan depicts locations of the material staging areas, the location on onsite temporary construction job trailers, the location on onsite truck delivery/holding areas, the location onsite parking, the general location of the construction security fence, temporary toilets, and the general location of temporary construction dumpsters.
2. Delivery Truck Holding Areas On-Site: The delivery holding area is shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queuing on public streets.
3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshaling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan (side of Wessex Street).

K. Parking During Construction

1. Construction Parking: Parking for construction workers is provided on site. If it is found that more parking is required separate arrangements for off-street parking at an off-site location shall be provided (at one of the many nearby private or public parking lots.
2. Parking: The existing site has parking available and will be expanded as part of the first phase of construction.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes. All deliveries to the site shall be via Wessex Street. All deliveries will be made on site within the secure construction fence. Delivery volumes will vary depending on construction sequencing but will only occur during allowable hours of operation.

L. Special Measures as Necessary

For construction work that will take place over a long period (e.g. 12 months or more), involve major demolition/deep excavation/ piling and/or special construction techniques, or are located near sensitive uses e.g. medical care facilities, schools), the Construction Management Plan should provide details and demonstrate that all appropriate special measures have been taken to avoid, minimize, or possibly compensate for potential impacts. This may include taking baseline measurements before construction, such as arranging to photograph the foundations of nearby properties upon consent of the owners, in order to assess any future impacts of vibration, noise, etc.

No special measures of construction are anticipated for this project.

QUITCLAIM DEED with COVENANT

KNOW ALL BY THESE PRESENTS,

THAT I, **PHUONG T. NGUYEN**, of South Portland, Cumberland County, Maine in consideration of ONE DOLLAR and other valuable consideration paid by **AVESTA HOUSING DEVELOPMENT CORPORATION**, a Maine nonprofit corporation with a place of business in Portland, Cumberland County, Maine, and whose mailing address is 307 Cumberland Avenue, Portland ME 04101, hereby grant to Avesta Housing Development Corporation, its successors and assigns forever, WITH QUITCLAIM COVENANT, the land in Portland, Cumberland County, Maine, more fully described on Exhibit A attached hereto and made a part hereof.

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to Avesta Housing Development Corporation, its successors and assigns, to its and their use and behoof forever.

IN WITNESS WHEREOF, Phuong T. Nguyen has hereunto set her hand and seal this 6th day of October, 2015.

MAINE REAL ESTATE TAX PAID

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF:

(Witness)

PHUONG T. NGUYEN

STATE OF MAINE
CUMBERLAND, ss.

October 6, 2015

Then personally appeared Phuong T. Nguyen and acknowledged the foregoing instrument to be her free act and deed.

Before me: _____
Notary Public/Attorney at Law

NOTARY PRINT NAME: Amy W. Devin

EXHIBIT A

A certain lot or parcel of land, together with any buildings and improvements thereon, situated in the City of Portland, County of Cumberland, and State of Maine, being more particularly described as follows:

Two certain lots or parcels of land, situated in the City of Portland, County of Cumberland and State of Maine, and described as "Land east side of Wessex Street, Lots 358 and 359, on plan of "Glenwood" by Jordan and Richardson, dated May 1895 and recorded in the Registry of Deeds of said County of Cumberland, Plan Book 8, Page 11, area 8,000 square feet."

Being the same premises conveyed to Martin T. Dinh and Phuong T. Nguyen by warranty deed from Chase ME, LLC, dated July 27, 2012 and recorded in the Cumberland County Registry of Deeds in Book 29796, Page 84. For Grantor's source of title further reference is made to the Quitclaim Deed With Covenant of Martin T. Dinh to Phuong T. Nguyen, dated February 14, 2014, and recorded in the Cumberland County Registry of Deeds in Book 31398, Page 296.

Received
Recorded Register of Deeds
Oct 06,2015 11:55:26A
Cumberland County
Nancy A. Lane

Doc#: 53187 Bk:32645 Pg: 302

MAINE REAL ESTATE TAX PAID

WARRANTY DEED

Maine Statutory Short Form

KNOW ALL BY THESE PRESENTS, that **Chase ME, LLC**, a Maine Limited Liability Company, with a principal place of business in the City of South Portland, County of Cumberland and State of Maine, for consideration paid, **GRANTS** to **Avesta Housing Development Corporation**, whose mailing address is 307 Cumberland Avenue, Portland, Maine 04101, with **WARRANTY COVENANTS,** all of the Grantor's interest in real property commonly known as 977 Brighton Avenue, and located in the City of Portland, County of Cumberland and State of Maine, described as follows:

SEE SCHEDULE A ATTACHED HERETO AND MADE A PART HEREOF.

Meaning and intending to convey and hereby conveying the same premises described in a deed from Wise Investment Properties, Inc. to Chase ME, LLC dated November 14, 2005 and recorded in the Cumberland County Registry of Deeds in Book 23402, Page 40.

IN WITNESS WHEREOF, it, the said Chase ME, LLC has caused these presents to be signed by Judith A. Chase and Mark C. Chase, its Members thereunto duly authorized this 28th day of September, 2015.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF

WITNESS

Chase ME, LLC

Judith A. Chase

WITNESS

Chase ME, LLC

Mark C. Chase

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. September 28, 2015

Then personally appeared the above named Judith A. Chase and Mark C. Chase and acknowledged the foregoing instrument to be their free act and deed in their said capacity, before me

Jerome J. Gamache, Notary Public
My Commission Expires June 23, 2020

SCHEDULE A

Certain lots or parcels of land together with the buildings and improvements thereon, located in the City of Portland, County of Cumberland and State of Maine, and being more particularly bounded and described as follows:

Being three lots of land, 352, 353 and 354 as delineated on plan called Glenwood, said plan having been prepared by Jordan and Richardson, dated May 1895, and recorded in the Cumberland County Registry of Deeds in Plan Book 8, Page 11. Said lots containing 12,000 square feet of land, more or less.

Also another certain lot or parcel of land, with any buildings thereon, located in said Portland, bounded and described as follows:

Commencing at a stake set in the easterly side line of Wessex Street, one hundred (100') feet distant north of the intersection of the said easterly line of Wessex Street and the northerly side line of Brighton Street; thence running along the said easterly line of Wessex Street in a northeasterly direction forty (40') feet to a stake; thence at right angles with Wessex Street in a southeasterly direction of one hundred (100') feet to a stake; thence at right angles with last named boundary in a southwesterly direction forty (40') feet to a stake; thence at right angles with last named boundary in a northwesterly direction one hundred (100') feet to the point of beginning. Containing four thousand (4,000) square feet of land. Said measurements are more or less.

Being Lot No. 355 on the plan of "Glenwood" by Jordan and Richardson dated May 1895, and recorded in the Registry of Deeds for said County of Cumberland, Plan Book 8, Page 11.

Also another certain lot or parcel of land, with any buildings thereon, located in said Portland, bounded and described as follows:

Lots 356 and 357 as shown on said Plan of Glenwood recorded in said Registry of Deeds in Plan Book 8, Page 11.

Received
Recorded Register of Deeds
Oct 06,2015 11:52:45A
Cumberland County
Nancy A. Lane

WALSH
ENGINEERING ASSOCIATES, INC.

File 16150

January 26, 2018

Ms. Alison Sirois
Maine DEP
312 Canco Rd
Portland, ME 04103

RE: 977 Brighton Avenue Elderly Apartments, Portland, Avesta Housing

Dear Alison,

Attached is the NRPA Application for a 40 unit senior housing project by Avesta Housing. This project located at the corner of Wessex Street and Brighton Avenue in Portland will require filing 6,085 sq. ft. of wetland and putting a culvert in a small section of channelized water.

The channel starts at Wessex Street and ends at Lomond Street, a distance of 250 feet. At Lomond Street the channel is picked up in the City's storm drain. The Wetlands Report by Albert Frick Inc., determined this is not a stream.

Please review the application and let me know if you need any additional information.

Respectfully,

Thomas S. Greer, P.E.
Walsh Engineering Associates, Inc.

cc. Greg Payne, Ben Walters, File
Enc.

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

➔PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

1. Name of Applicant:	Avesta Housing Development Corp. (Greg Payne)	**5.Name of Agent:**	Walsh Engineering Associates, Inc. (Thomas S. Greer, P.E.)
2. Applicant's Mailing Address:	307 Cumberland Ave Portland, ME 04101	**6. Agent's Mailing Address:**	28 Vannah Avenue Portland, ME 04101
3. Applicant's Daytime Phone #:	207-553-7780	**7. Agent's Daytime Phone #:**	207-781-5242
4. Applicant's Email Address: Required from *either* applicant or agent:	gpayne@avestahousing.org	**8.Agent's E-mail Address:**	tgreer@walsh-eng.com

9. Location of Activity: (Nearest Road, Street, Rt.#)	977 Brighton Ave & Wessex St	**10. Town:**	Portland	**11. County:**	Cumberland

12. Type of Resource: (Check all that apply)	❑ River, stream or brook ❑ Great Pond ❑ Coastal Wetland ☒ Freshwater Wetland ❑ Wetland Special Significance ❑ Significant Wildlife Habitat ❑ Fragile Mountain	**13. Name of Resource:**	wetland / unnamed stream
		14. Amount of Impact: (Sq.Ft.)	**Fill:** 6,085 sq. ft. **Dredging/Veg Removal/Other:**

15. Type of Wetland: (Check all that apply)	❑ Forested ❑ Scrub Shrub ❑ Emergent ❑ Wet Meadow ❑ Peatland ❑ Open Water ❑ Other_____	**FOR FRESHWATER WETLANDS**	*Tier 1*	*Tier 2*	*Tier 3*
			❑ 0 - 4,999 sq ft. ☒ 5,000-9,999 sq ft ❑ 10,000-14,999 sq ft	❑ 15,000 – 43,560 sq. ft.	❑ > 43,560 sq. ft. or ❑ smaller than 43,560 sq. ft., not eligible for Tier 1

16. Brief Activity Description	Construction of a 40 unit senior housing building with associated parking.

17. Size of Lot or Parcel & UTM Locations:	❑ _____square feet, or ☒ .734 acres	UTM Northing: _____	UTM Easting: _____
18. Title, Right or Interest:	☒ own ❑ lease ❑ purchase option ❑ written agreement		

19. Deed Reference Numbers:	Book#: 32645 Page: 302 & 310	**20. Map and Lot Numbers:**	Map #: 275/C	Lot #: 1,2,3,6,7,8 & 9	
21. DEP Staff Previously Contacted:	Alison Sirois	**22. Part of a larger project:**	❑ Yes ☒ No	**After-the-Fact:**	❑ Yes ☒ No
23. Resubmission of Application?	❑ Yes➔ ☒ No	**If yes, previous application #**		**Previous project manager:**	
24. Written Notice of Violation?	❑ Yes ➔ ☒ No	**If yes, name of DEP enforcement staff involved:**		**25. Previous Wetland Alteration:**	❑ Yes ❑ No

26. Detailed Directions to the Project Site:	Take Brighton Avenue to Wessex Street. The project is on the corner.

27. TIER 1	**TIER 2/3 AND INDIVIDUAL PERMITS**	
☒ Title, right or interest documentation ☒ Topographic Map ☒ Narrative Project Description ☒ Plan or Drawing (8 1/2" x 11") ☒ Photos of Area ☒ Statement of Avoidance & Minimization ☒ Statement/Copy of cover letter to MHPC	❑ Title, right or interest documentation ❑ Topographic Map ❑ Copy of Public Notice/Public Information Meeting Documentation ❑ Wetlands Delineation Report (Attachment 1) that contains the Information listed under Site Conditions ❑ Alternatives Analysis (Attachment 2) including description of how wetland impacts were Avoided/Minimized	❑ Erosion Control/Construction Plan ❑ Functional Assessment (Attachment 3), if required ❑ Compensation Plan (Attachment 4), if required ❑ Appendix A and others, if required ❑ Statement/Copy of cover letter to MHPC ❑ Description of Previously Mined Peatland, if required

28. FEES Amount Enclosed:	$75.00

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

DEP SIGNATORY REQUIREMENT

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor a permit be issued.

CORPS SIGNATORY REQUIREMENT

USC Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry shall be fines not more than $10,000 or imprisoned not more than five years or both. I authorize the Corps to enter the property that is subject to this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

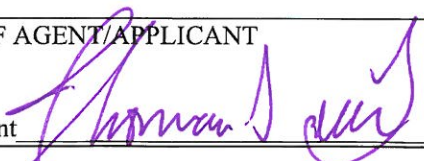
DEP SIGNATORY REQUIREMENT

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #4 for the applicant and #8 for the agent)."

_____ Date: _____

SIGNATURE OF AGENT/APPLICANT

Signature of Agent  Date: 1/26/18

NOTE: Any changes in activity plans must be submitted to the DEP and the Corps in writing and must be approved by both agencies prior to implementation. Failure to do so may result in enforcement action and/or the removal of the unapproved changes to the activity.

(yellow)

Doc#: 53187 Bk:32645 Pg: 302

WARRANTY DEED

Maine Statutory Short Form

KNOW ALL BY THESE PRESENTS, that **Chase ME, LLC**, a Maine Limited Liability Company, with a principal place of business in the City of South Portland, County of Cumberland and State of Maine, for consideration paid, **GRANTS** to **Avesta Housing Development Corporation**, whose mailing address is 307 Cumberland Avenue, Portland, Maine 04101, with **WARRANTY COVENANTS,** all of the Grantor's interest in real property commonly known as 977 Brighton Avenue, and located in the City of Portland, County of Cumberland and State of Maine, described as follows:

SEE SCHEDULE A ATTACHED HERETO AND MADE A PART HEREOF.

MAINE REAL ESTATE TAX PAID

Meaning and intending to convey and hereby conveying the same premises described in a deed from Wise Investment Properties, Inc. to Chase ME, LLC dated November 14, 2005 and recorded in the Cumberland County Registry of Deeds in Book 23402, Page 40.

IN WITNESS WHEREOF, it, the said Chase ME, LLC has caused these presents to be signed by Judith A. Chase and Mark C. Chase, its Members thereunto duly authorized this 28th day of September, 2015.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF

WITNESS

Chase ME, LLC

Judith A. Chase

WITNESS

Chase ME, LLC

Mark C. Chase

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. September 28, 2015

Then personally appeared the above named Judith A. Chase and Mark C. Chase and acknowledged the foregoing instrument to be their free act and deed in their said capacity, before me

Jerome J. Gamache, Notary Public
My Commission Expires June 23, 2020

SCHEDULE A

Certain lots or parcels of land together with the buildings and improvements thereon, located in the City of Portland, County of Cumberland and State of Maine, and being more particularly bounded and described as follows:

Being three lots of land, 352, 353 and 354 as delineated on plan called Glenwood, said plan having been prepared by Jordan and Richardson, dated May 1895, and recorded in the Cumberland County Registry of Deeds in Plan Book 8, Page 11. Said lots containing 12,000 square feet of land, more or less.

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Received
Recorded Register of Deeds
Oct 06,2015 11:52:45A
Cumberland County
Nancy A. Lane

QUITCLAIM DEED with COVENANT

KNOW ALL BY THESE PRESENTS,

THAT I, **PHUONG T. NGUYEN**, of South Portland, Cumberland County, Maine in consideration of ONE DOLLAR and other valuable consideration paid by **AVESTA HOUSING DEVELOPMENT CORPORATION**, a Maine nonprofit corporation with a place of business in Portland, Cumberland County, Maine, and whose mailing address is 307 Cumberland Avenue, Portland ME 04101, hereby grant to Avesta Housing Development Corporation, its successors and assigns forever, WITH QUITCLAIM COVENANT, the land in Portland, Cumberland County, Maine, more fully described on Exhibit A attached hereto and made a part hereof.

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to Avesta Housing Development Corporation, its successors and assigns, to its and their use and behoof forever.

IN WITNESS WHEREOF, Phuong T. Nguyen has hereunto set her hand and seal this 6th day of October, 2015.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF:

(Witness)

PHUONG T. NGUYEN

MAINE REAL ESTATE TAX PAID

STATE OF MAINE
CUMBERLAND, ss.

October 6, 2015

Then personally appeared Phuong T. Nguyen and acknowledged the foregoing instrument to be her free act and deed.

Before me: _____
~~Notary Public~~/Attorney at Law

NOTARY PRINT NAME: Amy W. Devin

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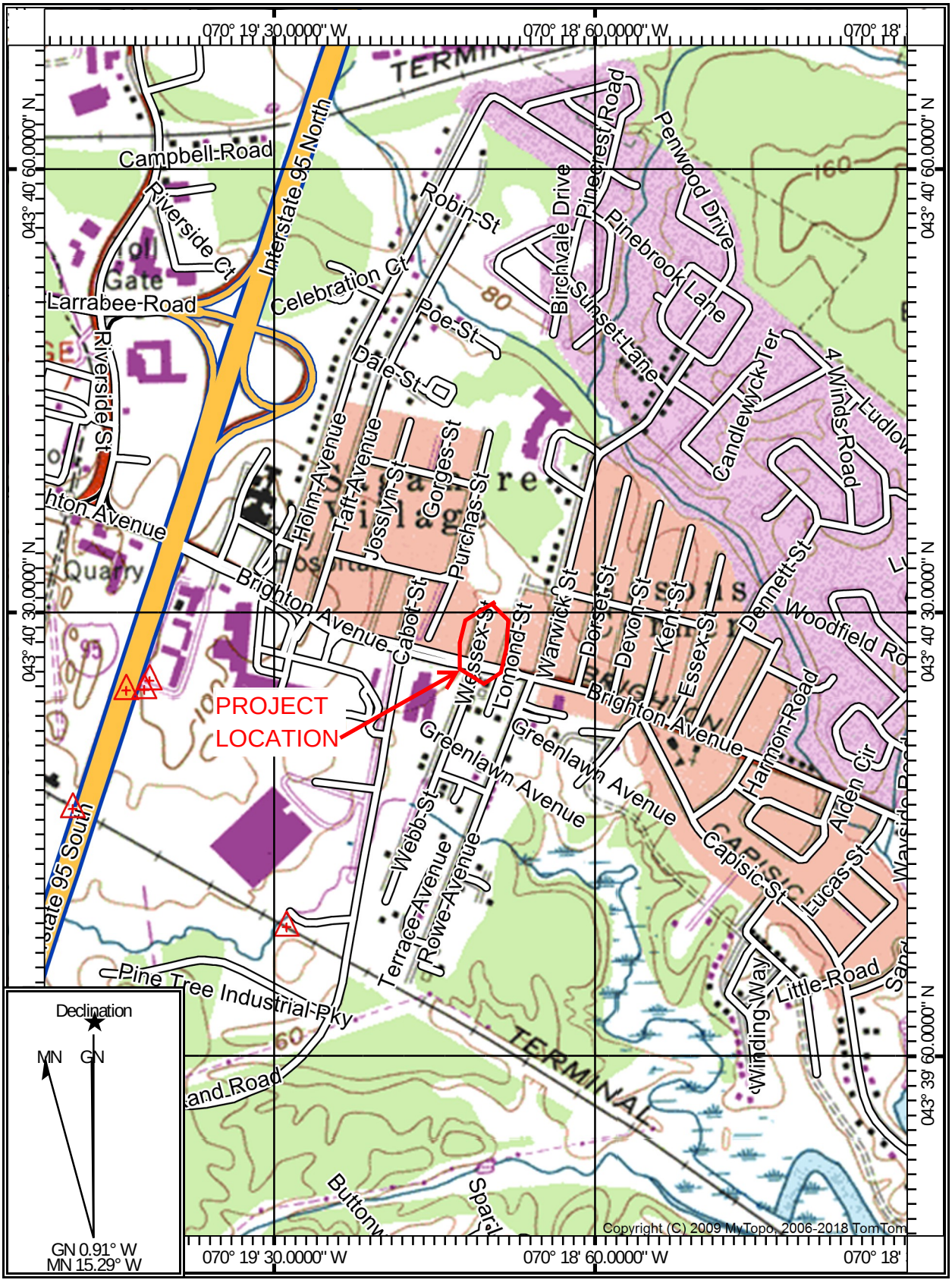


SCALE 1:12000

0 1000 2000 3000

Feet

16150-977 Brighton Avenue, Portland
January 22, 2018

977 Brighton Avenue
Avesta Housing
File: 16150

Project Description. This project is the construction of a 4 story building for 40 senior housing units and parking for 32 automobiles. This project will have 3 units that are affordable.

Avoidance & Minimization. This site has been selected due to the zoning allowing the density required for the project. This eliminated other sites in the City with different zoning. The project is asking the City to allow reduced parking which minimizes site impacts. The current code requires 40 spaces, we are requesting 32 spaces.

Grading around the edge of the parking are reduced to 2:1 to avoid additional impacts.



N

GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

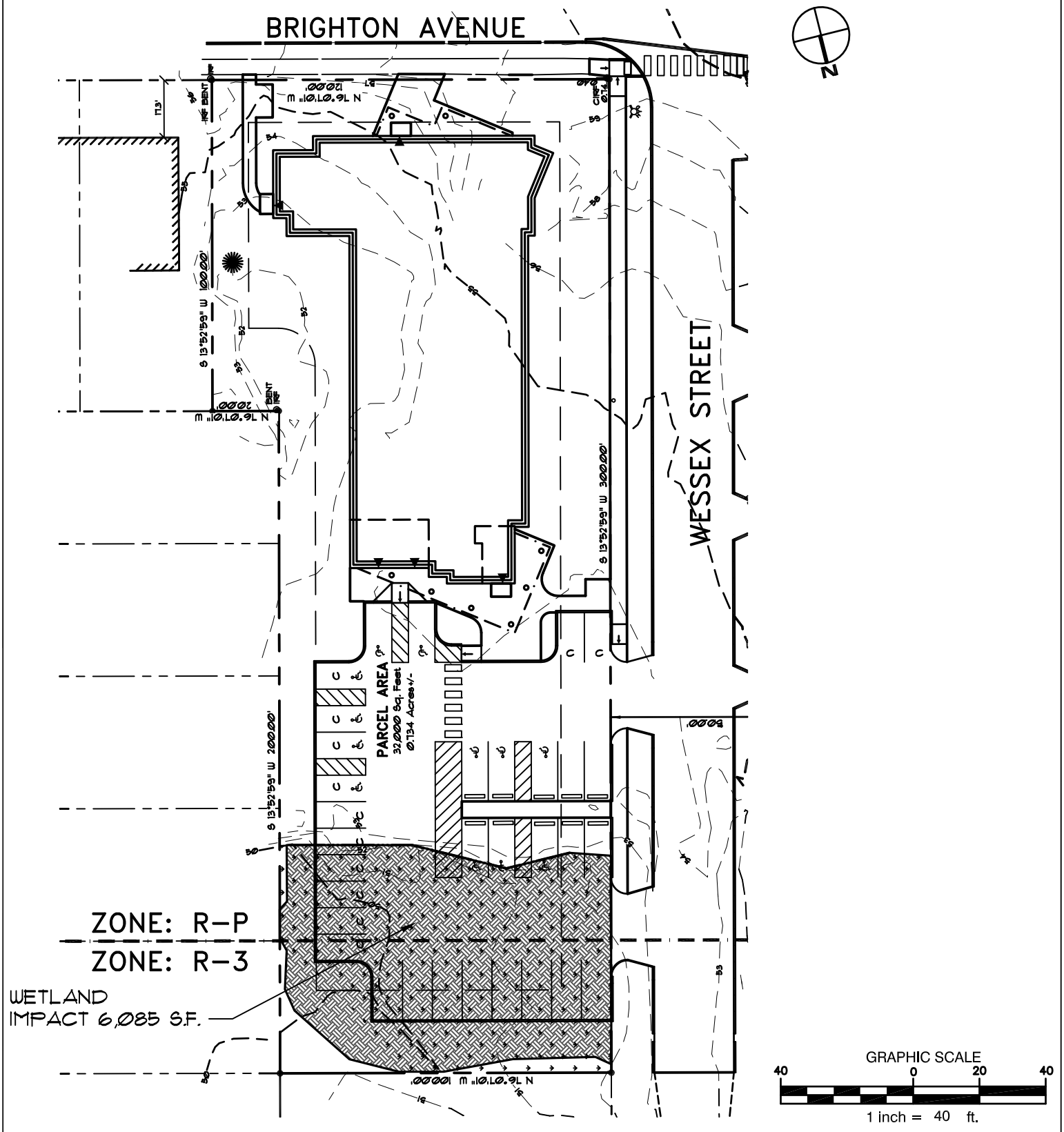
Copyright © 2018

977 BRIGHTON AVENUE ELDERLY APARTMENTS

AVESTA 977 BRIGHTON LP
307 CUMBERLAND AVENUE
PORTLAND, MAINE 04101

Sheet Title:
AERIAL

Job No.:	16150
Date:	1/23/18
Scale:	AS SHOWN
Drawn:	RJS
Checked:	TSG



WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

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977 BRIGHTON AVENUE ELDERLY APARTMENTS

AVESTA 977 BRIGHTON LP
307 CUMBERLAND AVENUE
PORTLAND, MAINE 04101

Sheet Title:
WETLAND IMPACT AREA

Job No.:	16150
Date:	1/23/18
Scale:	AS SHOWN
Drawn:	RJS
Checked:	TSG

977 Brighton Avenue, Portland Taken 11/24/17





977 Brighton Avenue, Portland Taken 11/24/17





977 Brighton Avenue, Portland Taken 11/24/17



WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Mr. Kirk F. Mohney
Maine Historic Preservation Commission
55 Capitol Street, 65 State House Station
Augusta, ME, 04333-0065

RE: 977 Brighton Avenue, Portland

Dear Mr. Mohney:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and your files and inform us of any impact that this construction may have on historic, archaeological or architectural properties.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

SEP - 8 2016

Albert Frick Associates, Inc.
Environmental Consultants
95A County Road Gorham, ME 04038
Office: (207)839-5563 Fax: (207)839-5564
www.albertfrick.com info@albertfrick.com

Albert Frick, CSS, LSE
Chris Coppi, CWS, LSE
Brady Frick, LSE
Bryan Jordan, LSE
Matthew Logan, LSE
Jamie Latorre, Office Manager

September 6, 2016

Seth Parker
Director of Real Estate Development
Avesta Housing
307 Cumberland Avenue
Portland, ME 04101

Re: Wetlands Report, 977 Brighton Ave, Portland.

Dear Mr. Parker:

On April 13th and August 25th, Albert Frick Associates, Inc. (AFA) conducted a wetland review of the above-mentioned property for the purpose of determining permitting requirements for a potential parking area. Initially, AFA visited the property on April 13th and identified a small freshwater, shrub/wet meadow wetland which was delineated with blue flagging. The delineated wetland was located with a GPS Trimble, Geo 7x unit in order to illustrate the extent of the wetland which is shown on the site plan attached with this report. The proposed parking area is located within the wetland impacting approximately 3,633 square feet of the shrub/wet meadow as shown on the attached plan. This plan is a conceptual in nature and should not be used for permitting purposes since actual grading elevations have not been completed by site engineering at this time.

No vernal pools, as defined by Maine's Natural Resources Protection Act (NRPA), were observed on the property.

Jurisdictional Natural Resources:

Wetlands
The freshwater wetland is classified as a Palustrine Scrub-Shrub/Emergent Wetland (PSS/EM1) "shrub and wet meadow" because it is dominated by shrubs and low growing herbaceous plant species, namely flowering herbs (goldenrod- *Solidago*). The wetland was observed in the northern corner of the property.

A drainage way, originating from the Wessex Street road culvert, was observed at the northwest corner of the property. The drainage way conveys stormwater west of Wessex Street to the property

which then flows diagonally south across the property and eventually discharging through another culvert on Lomond Street to the east. Upon entering the property, the drainage way quickly becomes a flat, drainage way without defined banks and little mineral deposition along its course. Therefore, this drainage way would **not** be considered to be a river, stream or brook as defined by the Natural Resources Protection Act, 38 M.R.S. 480 (B) (9).

Permitting:

Maine Department of Environmental Protection (DEP)

Research of the property and review of DEP records has revealed that the wetland on the property is eligible for the wetland alteration exemption which allows up to, but not to exceed, 4,300 square feet of wetland alteration pursuant to the Natural Resources Protection Act, 38 M.R.S. 480 (Q) (17). Wetland alterations result from regulated activities which cause a direct or indirect impact to the wetland which include, but are not limited to, filling, soil displacement, vegetation removal and the construction of permanent structures. If a proposed activity on the property results in 4,300 square feet or less of wetland impact, then a permit from the Department is not required in accordance with 480 (Q) (17).

Since the proposed parking area results in less than 4,300 square feet of wetland impact, then a DEP permit is not required. See the attached site plan which illustrates the extent of fill tentatively proposed in the wetland. **Please note that this conceptual plan assumes that the edge of the wetland alteration is the bottom of the fill slope and not the edge of the parking surface. Furthermore, wetland impacts required to redirect the drainage way, namely the area of the excavation ditch, must be included when determining the total wetland impact.**

If a proposed project results in over 4,300 square feet of wetland impact on the property, in total, then a Natural Resources Protection Act Permit (Tier permit) from the Maine Department of Environmental Protection (DEP) is required.

Lastly, the wetlands on the property do not require a setback to the regulated activities mentioned above, in accordance with the NRPA, 480 (C).

City of Portland

The wetland on the property is not shown on the shoreland zoning map in accordance with the City of Portland's Zoning Map.

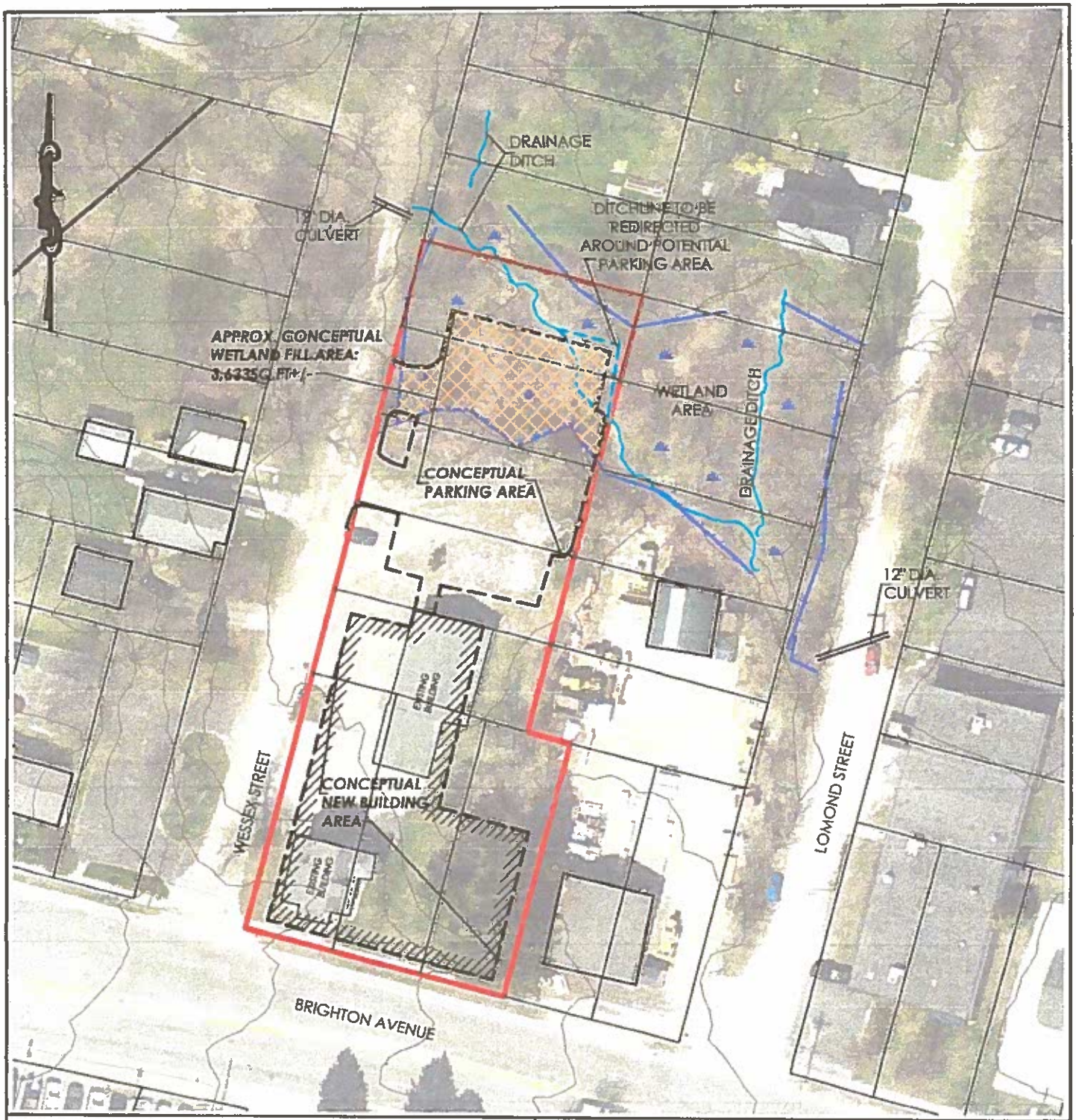
Please contact me if you have any questions or matters for further discussion. If the parking project requires DEP review, we can certainly assist you with the preparation of a Tier permit if necessary. I can be reached by phone at 839-5563 or by email at chris@albertfrick.com.

Sincerely,

Chris Coppi

Chris Coppi, CWS
Wetland Scientist
Licensed Site Evaluator

Enc. Site Plan and photos



SITE PLAN

PREPARED FOR

AVESTA HOUSING

977 BRIGHTON AVE

PORTLAND, MAINE

Albert Frick Associates, Inc.

Environmental Consultants

Gorham, Maine

Date:	Revision Description

Drawn By: B.J.	Checked By: A.F
Date: 4/18/16	Scale: 1" = 60'

8/25/16 Site Photos- 977 Brighton Ave, Portland



Photo 1: View of shrub/wet meadow wetland consisting of flowering herbs and shrubs.



Photo 2: View of drainage way channel moving onto the property (and wetland boundary in blue). Notice the absence of a mineral bottom soon after the drainage way enters the wetland.

8/25/16 Site Photos- 977 Brighton Ave, Portland



Photo 3: View of drainage way inside wetland- Very flat channel, with little mineral deposition. Lack of aquatic or obligate wetland plants (Likely Thyme-leaved Speedwell, FAC-*Veronica serpyllifolia shown in channel)* suggest an ephemeral (resulting from rain events) drainage course.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Ms. Lisa St. Hilaire
Information Manager, Maine Natural Areas Program
22 State House Station
Augusta, ME 04333-0022

RE: 977 Brighton Avenue, Portland

Dear Ms. St. Hilaire:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and inform us of any impact that it may have on important and significant natural features in the area.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Mr. John Perry
Maine Department of Inland Fisheries and Wildlife
284 State St
41 State House Station
Augusta, ME 04333

RE: 977 Brighton Avenue, Portland

Dear Mr. Perry:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and inform us of any impact that it may have on wildlife or important and significant wildlife habitat.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To:
Consultation Code: 05E1ME00-2018-SLI-0293
Event Code: 05E1ME00-2018-E-00610
Project Name: 977 Brighton Avenue Elderly Apartments

January 22, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2018-SLI-0293

Event Code: 05E1ME00-2018-E-00610

Project Name: 977 Brighton Avenue Elderly Apartments

Project Type: DEVELOPMENT

Project Description: Construction of a 4 story, 41 unit apartment building.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.67456123571125N70.31900414278903W



Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Aroostook Band of Micmacs
ATTN: Tribal Historic Preservation Officer
7 Northern Road
Presque Isle, Maine 04769

RE: 977 Brighton Avenue, Portland

Dear Sir or Madam:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and your files and inform us if you have any comments related to this project.

Thank you in advance for your consideration.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Houlton Band of Maliseet Indians
ATTN: Tribal Historic Preservation Officer
88 Bell Road
Littleton, Maine 04730

RE: 977 Brighton Avenue, Portland

Dear Sir or Madam:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and your files and inform us if you have any comments related to this project.

Thank you in advance for your consideration.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Passamaquoddy Tribe of Indians
Indian Township Reservation
ATTN: Tribal Historic Preservation Officer
P.O. Box 301
Princeton, Maine 04668

RE: 977 Brighton Avenue, Portland

Dear Sir or Madam:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and your files and inform us if you have any comments related to this project.

Thank you in advance for your consideration.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Passamaquoddy Tribe of Indians
Pleasant Point Reservation
ATTN: Tribal Historic Preservation Officer
P.O. Box 343
Perry, Maine 04667

RE: 977 Brighton Avenue, Portland

Dear Sir or Madam:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and your files and inform us if you have any comments related to this project.

Thank you in advance for your consideration.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

WALSH
ENGINEERING ASSOCIATES, INC.

File: 16150

January 22, 2018

Penobscot Nation
ATTN: Tribal Historic Preservation Officer
Cultural and Historic Preservation Department
12 Wabanaki Way
Indian Island, Maine 04468

RE: 977 Brighton Avenue, Portland

Dear Sir or Madam:

Enclosed please find material relating to a proposed new Residential Building to be located at 977 Brighton Avenue in Portland. Please review this material and your files and inform us if you have any comments related to this project.

Thank you in advance for your consideration.

Respectfully,

Rita J. Sawyer
Walsh Engineering Associates, Inc.

cc: File
Enc.

AVESTA HOUSING

977 Brighton Apartments
977 Brighton Ave
Financial and Technical Capacity

Founded in 1972, Avesta Housing has grown to become one of the country's most innovative and respected leaders in affordable housing. With steady growth over the subsequent four decades, Avesta has assets of $195 million, an annual operating budget of $26 million and a staff of approximately 100 employees. Avesta owns or manages more than 2,200 apartments and operates two assisted living facilities. Today, Avesta is one of the largest nonprofit developers of affordable housing in New England. Avesta receives consistently high marks from its many state, federal and private-sector partners, and is recognized nationally for groundbreaking work in bringing together nonprofit, for-profit, private and public-sector organizations for the benefit of Maine communities.

Our professional team brings decades of cumulative experience in the development of affordable housing to the 977 Brighton Apartments project. CWS Architects, led by principal Ben Walter, have partnered with Avesta on many projects, including most recently Huston Commons in Portland and Steeple Square in Westbrook. The firm has also designed a wide range of other residential projects, affordable and market-rate, built recently in and around Portland. Pinkham & Greer Civil Engineers, led by principal Tom Greer, also have extensive experience across New England, including with Avesta in Portland, Paris and Livermore Falls, ME. Other members of the team, including our attorneys at Curtis Thaxter and tax professionals at Otis Atwell, have similarly deep, varied experience with Avesta and other affordable housing developers.

Avesta has a proven track record of securing funding and frequently utilizes a variety of funding resources to complete our many projects. We will utilize Low Income Housing Tax Credit funding for a significant portion of the equity required for the proposed rental project. The remainder of the funding required is anticipated come from a mix of sources as listed below.

Source	*Amount*	*Anticipated Confirmation*
Federal Low Income Housing Tax Credit (LIHTC)	$4,294,760	September 2018
MaineHousing subsidy	$327,249	September 2018
Federal Home Loan Bank Affordable Housing Program (AHP) Subsidy	$500,000	December 2017
AHP subsidized advance	$2,070,000	December 2017
Developer Fee Loan	$138,600	confirmed
Bangor Savings Bank Construction Loan	[up to $4,100,000, if necessary]	Term sheet received August 2017

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

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

Proposed
977 Brighton Avenue Apartments
Portland, Maine

Statement of Fire Department Project Review Data

Attached is a preliminary Code Review of the proposed 977 Brighton Avenue Apartments (on the corner of Brighton Avenue and Wessix Street) to be developed, owned and managed by Avesta Housing of Portland.

In summary, the 40 1-BR unit Residential Apartment Building will be design to Type 5A construction (protected wood frame) requirements, 4 stories in height, protected by a monitored fire alarm and 13R sprinkler system. The building is approximately 44' at Brighton Avenue and 46' at the rear due to grade changes.

The building has a gross area of 30,736 SF approximately equally spread of four floors. In addition to the residential units, the remainder of the space included residential support and circulation spaces such as utility, laundry, community, rental office, telemed room, mail services, etc. There are not non-residential primary uses in the building.

Vehicle access to the building can be achieved by on three sides of the buildings and the forth side is easily accessible by foot. There is an existing fire hydrant on the corner of Brighton and Wessex and domestic/sprinkler water supply will likely come off Wessex Street. See site plans for size and location.

To date, hydrant flow data has not been secured to determine NFPA 1 location requirements.



Benedict B. Walter, AIA
President
Licensed Architect ME NH GA
bwalter@cwsarch.com

977 Brighton Ave Apartments **December 21, 2017**
Portland, ME

Code Analysis

	IBC 2009		NFPA 101 - 2009		
Category	**Reference**	**Code Requirements**	**Reference**	**Code Requirements**	**Proposed**
Use Group	310.1	R-2 (Senior) Apartments	6.1.8.1.5	Residential - New Apartment Building	Apartments
Building Construction	Table 601	Type 5A - Combustible Protected Foundation - Concrete frost wall and slab Exterior walls - 2x6 wood frame with GWB finish. Exterior siding. Interior walls - Wood frame with GWB surfacing Roof - Wood trusses and EPDM Roof	NFPA 220	Construction Type V (111)	
Height & Area Limitations	Table 503	12,000 SF per floor 3 Stories / 50'			
Height Modifications	504.2	Sprinklered NFPA 13 - add 1 story and 20'			Sprinklered - NFPA13
Maximum allowable height		4 stories / 70'			4 stories / 48'-4" height from lowest grade to high point of roof
Area Modifications	506.3	Sprinklered NFPA 13 [I_s = 2]			
	506.2	Not Used			
	506.1	$\{A_t+[A_t x T_f]+[A_t x I_s]\} = A_a$ {12000+[NA]+[12000x2]} =36,000			
Maximum allowable area	506.1	36,000 SF Per Floor			1st Floor = 7,684 SF 2nd Floor = 7,684 SF 3rd Floor = 7,684 SF 4th Floor = 7,684 SF Total Area: 30,736 SF
Fire ratings	Table 602	Loadbearing Ext walls >30' = 1 hr Loadbearing Ext walls 10'-30' = 1 hr Nonloadbearing Ext walls >30' = 0 hr Nonloadbearing Ext walls 10'-30' = 1 hr			1 hour 1 Hour 0 hour 1 hour
Fire ratings - cont.	Table 1018.1	Exit access corridors - 1/2 hour (with sprinkler system)	30.3.6.1.2	Exit access corridors - 1/2 hour	1/2 hour
			30.3.6.2	Exit access corridor doors - 20-minute self-closing & latching	20 minute doors, spring hinges
	1022.1	Fire Enclosure of 4 story Vertical Exit Enclosures - 2 hour	30.2.2.1.2	Exits: 1 Hour (Sprinklered)	2 hour
	708.4	4 story Shafts & Elevator Hoistways - 2 hr	30.3.1.1.4	Shafts: 1 Hour (Sprinklered) and 1-hour doors	2 hour
	709.3	Dwelling Unit Separation - 1 hour	30.3.7.2	Dwelling Unit Separation - 1/2 hour	1 hour
	Table 601	Interior loadbearing walls - 1 hour			1 hour
	Table 601	Int. nonloadbearing walls - 0 hour			0 Hour
	Table 601	Floor Construction - 1 hour			1 hour
	Table 601	Roof construction - 1 hour			1 hour
	Table508.2.5	Boiler Rooms over 10 HP - 1 hour or automatic fire extinguishing	T 30.3.2.1.1	Boiler Rooms - 1 Hour and sprinkler	1 Hour & Sprinklered
	Table508.2.5	Waste Collection Room over 100 sf - 1 hour or automatic fire extinguishing	T 30.3.2.1.1	Trash Collection Rooms - 1 Hour and sprinkler	1 Hour & Sprinklered
	Table508.2.5	Laundry Rooms over 100 s.f. - 1 hour or automatic fire extinguishing	T 30.3.2.1.1	Laundries over 100 s.f. - 1 hour and sprinklers with smoke partitions	1 Hour & Sprinklered
	Table508.2.5	Storage Rooms over 100 s.f. - 1 hour or automatic fire extinguishing	T 30.3.2.1.1	Storage rooms outside of dwelling units - 1 hour OR sprinklers with smoke partitions	Sprinklered
Opening Protectives	Table 715.4	1/2 Hour Rated Exit access corridors - 20 min.	30.3.6.2	Exit access corridor doors - 20-minute self-closing & latching	20 min.

977 Brighton Ave Apartments **December 21, 2017**
Portland, ME

Code Analysis

Category	IBC 2009 Reference	IBC 2009 Code Requirements	NFPA 101 - 2009 Reference	NFPA 101 - 2009 Code Requirements	Proposed
	Table 715.4	1 Hour Barriers - 45 min.			45 min.
	Table 715.4	1 Hour Shafts & Exits - 60 min.			60 min.
	Table 715.4	2 Hour Barriers - 90 min.			90 min.
Wired Glass Panels	Table 715.5.4	20 min. opening = Not limited			As required
		3/4 hour opening = 1296 sq in			As required
		1 and 1 1/2 hour opening = 100 sq in			As required
Fire Damper Rating	Table 716.3.2.1	Less than 3 hour rated assembly - 1-1/2 hour.			As required
Interior Flame Spread Index	Table 803.9	Required vertical exits and passageways - C	30.3.3.2	In exits - Class A	As required
	Table 803.9	Corridors providing exit access - C	30.3.3.2	Lobbies and corridors - Class A or B	As required
	Table 803.9	Rooms or enclosed spaces - C	30.3.3.2	Other Spaces - Class A, B or C	As required
			30.3.3.3.2	Exit enclosures and corridor floors - Not less than Class II	
Occupant Load	T 1004.1.1	Residential Occupancy = 1/200 GSF	T7.3.1.2	Residential Apartment occupant load = 1/200 SF	
	T 1004.1.1	Storage areas, mechanical equipment rooms = 1/300 GSF		Storage areas, mechanical equipment rooms = 1/500 GSF	
	T 1004.1.1	Assembly, Unconcentrated (Tables & Chairs) = 1/15 NSF		Assembly, Unconcentrated (Tables & Chairs) = 1/15 NSF	
		1st floor 6949 / 200 = 34.7 1st Community Room 735/15 = 49 2nd floor 7684 / 200 = 38.4 3rd floor 7684 / 200 = 38.4 4th floor 7684 / 200 = 38.4		1st floor 6949 / 200 = 34.7 1st Community Room 735/15 = 49 2nd floor 7684 / 200 = 38.4 3rd floor 7684 / 200 = 38.4 4th floor 7684 / 200 = 38.4	
		Total = 199		Total = 199	
Means of Egress					
	1005.1	Egress width per occupant @ stairways = 0.3" x 84 = 25.2"	T7.3.3.1	Egress width per occupant @ stairways = 0.3" x 76= 23"	(2) two stairs @ 50" = 100"
	105.1	Minimum stair width: 44" unless serving less than 50 occupants			
	1005.1	Egress width capacity per occupant @ doors and corridors = .2 x 84 = 16.8"	T7.3.3.1	Egress width capacity = 0.2" per occupant @ level components & ramps .2 x 76 = 15.2"	(Typ.) 36" Doors = 34" net clear opening
	1008.1.1	Minimum door opening width = 32"	7.2.1.2.3.2	Minimum door opening width = 32"	34"
	1014.3	Common path of travel < 125'	30.2.5.3.2	Common path of travel = 50' max. (sprinklered)	12'-6"
	T 1016.1	Length of travel < 250' (sprinklered)	30.2.6.4	Max travel from non-unit areas to exit = 250' (sprinklered)	73'-4"
	1018.2	Minimum corridor width = 44"	7.3.4.1	Minimum corridor width = 36"	57" Min
	1018.4	Dead ends < 50' w/ NFPA 13	30.2.5.4.2	Dead ends = 50' max (sprinklered)	25'-9"
	T 1021.1	Number of exits <500 occupants = 2	30.2.4	Minimum number of exits = 2	2
			30.2.6.2	Max travel within unit = 125'	35'-11"
			30.2.6.3.2	Max travel from unit entrance to exit = 200'	63'-0"
Emergency Lighting	1006.1	Emergency lighting is required except in dwelling units	30.2.9	Emergency lighting is required	Provided
	1011.1	Exit Signs are required	7.10.1.2	Exit Signs are required	Provided
Fire Suppression Systems	903.2.8	Sprinkler System Required	30.3.5	NFPA 13 or 13R Required	NFPA13 Provided
Standpipes	905.3	Class III Required			Provided
Extinguishment requirements	906	Portable fire extinguishers shall be installed as per NFPA 10 (IFC 2009)	30.3.5.12	Not Required	Provided
Fire Alarm Systems	907.2.9	Required	30.3.4.1	Required	Provided
			30.3.4.2	Manual initiation required	Provided
			30.3.4.2.3	Automatic initiation required	Provided
			30.3.4.3	Annunciators required	Provided

977 Brighton Ave Apartments
Portland, ME

December 21, 2017

Code Analysis

	IBC 2009		NFPA 101 - 2009		
Category	**Reference**	**Code Requirements**	**Reference**	**Code Requirements**	**Proposed**
Smoke Detetectors	907.2.9.2	Required	30.3.4.5	Required within and outside every sleeping area	Provided in sleeping and living areas

16150
977 BRIGHTON

Att. 9

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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

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

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

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

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

Project Name:	977 Brighton Avenue Elderly Apartments
Proposed Development Address:	977 Brighton Ave
Project Description:	40 unit senior housing
Chart/Block/Lot:	Map 275 / Block C / Lots 1, 2, 3, 6, 7, 8 and 9
Preliminary Plan	12/21/17
Final Plan	

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

APPLICANT

Name:	Greg Payne
Business Name:	Avesta Housing Development Corporation
Address:	307 Cumberland Avenue
City/State:	Portland, ME
Zip Code:	04101
Work #:	(207) 553-7780 x3341
Home #:	
Cell #:	
Fax #:	
E-mail:	gpayne@avestahousing.org

OWNER

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

AGENT/REPRESENTATIVE

Name:	Pinkham & Greer, Civil Engineers
Address:	28 Vannah Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	(207) 781-5242
Home #:	
Cell #:	
Fax #:	(207) 781-4245
E-mail:	tgreer@pinkhamandgreer.com

BILLING (to whom invoices will be forwarded to)

Name:	Avesta Housing Development Corporation
Address:	307 Cumberland Avenue
City/State:	Portland, ME
Zip Code:	04101
Work #:	(207) 553-7780 x3341
Home #:	
Cell #:	
Fax #:	
E-mail:	gpayne@avestahousing.org

ENGINEER

Name:	Pinkham & Greer, Civil Engineers
Address:	28 Vannah Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	(207) 781-5242
Home #:	
Cell #:	
Fax #:	(207) 781-4245
E-mail:	tgreer@pinkhamandgreer.com

SURVEYOR

Name:	Owen Haskell, Inc.
Address:	390 US Route One #10
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	(207) 774-0424
Home #:	
Cell #:	
Fax #:	(207) 774-0511
E-mail:	

ARCHITECT

Name:	CWS Architects-Ben Walter
Address:	264 U.S. Route OneBuilding 100, Suite 2A
City/State:	Scarborough, ME
Zip Code:	04074
Work #:	(207) 774-4441
Home #:	
Cell #:	
Fax #:	
E-mail:	bwalter@cwsarch.com

ATTORNEY

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

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Thomas Greer
E-mail:	tgreer@pinkhamandgreer.com
Name:	Rita Sawyer
E-mail:	rsawyer@pinkhamandgreer.com
Name:	Jody Cady
E-mail:	jcady@pinhamandgreer.com

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☑	Stormwater Quality	$250.00
☑	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [40] x $25.00 each	$ 1,000.00
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 2,000.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

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

TOTAL AREA OF SITE	32,000	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	30,500	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)	8,168	sq. ft.
Impervious Area (Total Proposed)	19,395	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	3,128	sq. ft.
Building Footprint (Total Proposed)	7,825	sq. ft.
Building Floor Area (Total Existing)	3,740	sq. ft.
Building Floor Area (Total Proposed)	31,300	sq. ft.
ZONING		
Existing	R-P / R-3	
Proposed, if applicable	R-P / R-3	
LAND USE		
Existing	Single Family Home	
Proposed	Residential - 40 units	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	1	
# of Residential Units (Total Proposed)	40	
# of Lots (Total Proposed)	1	
# of Affordable Housing Units (Total Proposed)	34	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	40	
# of Two-Bedroom Units (Total Proposed)	0	
# of Three-Bedroom Units (Total Proposed)	0	
PARKING SPACES		
# of Parking Spaces (Total Existing)	5	
# of Parking Spaces (Total Proposed)	32	
# of Handicapped Spaces (Total Proposed)	12	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	16	
ESTIMATED COST OF THE PROJECT	$7,100,000.00	

VI. APPLICANT SIGNATURE

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

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

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

Signature of Applicant:	Thomas Dent
Date:	12/21/17

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
x		1	Completed Application form
x		1	Application fees
x		1	Written description of project
x		1	Evidence of right, title and interest
n/a		1	Evidence of state and/or federal approvals, if applicable
x		1	Written assessment of proposed project's compliance with applicable zoning requirements
n/a		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
x		1	Written requests for waivers from site plan or technical standards, if applicable.
x		1	Evidence of financial and technical capacity
n/a		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
x		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
x		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
x		Proposed grading and contours;	
x		Existing structures with distances from property line;	
x		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
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.	

Site Lighting
977 Brighton Avenue

Brighton Avenue has street lights all along this section of the street. No lighting is planned for Wessex Street.

The site lighting will consist of a single pole light in the parking lot and canister lights under the canopies. A single wall mounted fixture will be adjacent the side entry on the east side.

A R C H E T Y P E

March 1, 2018

Dear Neighbor:

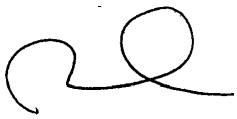
Please join us for a neighborhood meeting as we share plans for the construction at 415 Cumberland Avenue into seven (7) residential units and two (2) commercial units.

Meeting Location: 415 Cumberland Avenue, ME 04101
Meeting Date: Wednesday March 14, 2018
Meeting Time: 5:30 PM

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

If you have any questions, please email Sam Reiche at reiche.sam@gmail.com.

Sincerely,



David Lloyd
Maine Licensed Architect

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

48 Union Wharf, Portland, Maine 04101 (207) 772–6022• Fax (207) 772–4056

Archetype, P.A.
48 Union Wharf
Portland, ME 04101

Place
Stamp
Here

Neighborhood Meeting Certification

I, Thomas S. Greer hereby certify that a neighborhood meeting was held on March 1, 2018 at 23 Orono Road (Hall Elementary School), in Portland at 6:30PM concerning a 40 unit senior housing building on the corner of Brighton Avenue and Wessex Street.

I also certify that on February 16, 2018, invitations were mailed to all addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development and the residents on the "interested parties" list.

Signed,

Thomas S Greer 3/5/18 (date)

Attached to this certification are:

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

Neighborhood Meeting

February 16, 2018

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a 40 unit senior housing building on the corner of Brighton Avenue and Wessex Street.

Meeting Location: Hall Elementary School
23 Orono Road, Portland

Meeting Date: March 1, 2018 (Thursday)
Meeting Time: 6:30-7:30pm

The purpose of this meeting is to introduce the project to our neighbors as part of the City approval process.

- The project includes the removal of the existing house and garage and replaces it with a 40 unit senior housing project with 32 parking spaces.
- The application will be filed with the City on April 1st.
- The developer, Avesta Housing can be contacted at:

  Address: Avesta Housing, Greg Payne
  307 Cumberland Avenue
  Portland, ME 04101
  Phone #: (207) 553-7780 x3341
  Email: gpayne@avestahousing.org

- The City Planning Authority can be contacted at :
  Website: https://www.portlandmaine.gov/314/Planning-Urban-Development
  Phone #: (207) 756-8246


ZONE: R-3
ZONE: R-P
WESSEX STREET
BRIGHTON AVENUE
WEBB STREET

NEIGHBORHOOD MEETING ATTENDEE LIST
977 Brighton Avenue Elderly Apartments
March 1, 2018

Name & Address	Name & Address
Thomas S. Greer Walsh Engineering Associates, Inc. One Karen Drive, Suite 2A Westbrook, ME 04092	Judith Stanhope 1001 Brighton Avenue Portland, Me 04102
Bill Montgomery Office: 989 Brighton Avenue Portland, ME 04102	
Krista Hopkins & Laura White 8 Wessex St. Portland ME 04102	
Eric & Donna Holbeck 36 Wessex St. Portland ME 04102	
Tracie Crommett Jamie Staples 6 Wessex St. Portland ME 04102	
Maya Lena 51 Essex St	
Kristine Trogner 97 Devon St.	
Paul & Susan Olsen 8 Lomond St.	
Ed & Diana Cundy 18 Orono Rd. Portland	
William & Samantha Dooley 34 Essex St	

WALSH
ENGINEERING ASSOCIATES, INC.

977 Brighton Avenue
Avesta Housing
March 1, 2018

SUMMARY OF PUBLIC INFORMATIONAL MEETING

The neighborhood meeting started at 6:30 at the Hall School. Approximately 20 people were in attendance. Greg Payne of Avesta started off the presentation. He focused on Avesta goals and the need for affordable housing. He explained the 3 classes of apartments and the approximate income levels that are required.

Tom Greer presented the site issues and noted Wessex Street is being rebuilt. The drainage goes to the rear of the site and is treated before being discharged to the wetland area. Wetland fills will be required. The City will issue permits as well as DEP and Army Corp.

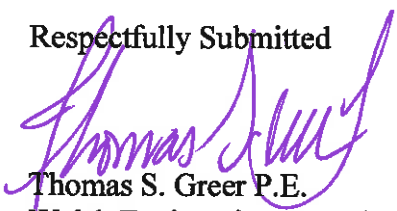
Ben Walter of CWS explained the architecture including the outdoor spaces and how those are integrated into the building design. He noted the common space, laundry rooms and trash room for the residents.

It was opened for questions and comments. Below is a sampling of comments.

- Wessex Street neighbors are not happy with the City's maintenance of the road. They fill potholes and have fixed the drainage pipe.
- The city doesn't always plow the snow and leaves the road narrow.
- They would like us to pave another 100 feet or so, to get to the end of the road. We explained that is not possible under the funding program that we are using. There was a lot of discussion about the funding through tax credits.
- One neighbor was concerned with the building blocking the early morning sunrise.
- Traffic was discussed. The access onto Brighton Avenue can be a challenge. One resident noted the lights on Brighton do create a gap even during rush hour. No traffic studies have been performed.
- The neighbor noted that culverts have been plugged over the years causing backups of water that pond in basements.
- It was discussed that the sewer connects to Brighton Avenue, not down Wessex Street. If more homes are added to Wessex Street what do they do?
- The construction schedule was noted. Funding in early 2019, with start of construction early 2020 is possible, all based on funding.
- One neighbor noted the grounds of the existing home are unkempt. Greg will check on that.
- One neighbor on Wessex Street is very upset about the project. The only 4 story building in the neighborhood; blocks the sunlight and may create traffic and drainage issues.

The meeting was concluded at 7:30

Respectfully Submitted



Thomas S. Greer P.E.
Walsh Engineering Associates, Inc.

File: 16150

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

AVESTA HOUSING DEVELOPMENT	) NATURAL RESOURCES PROTECTION ACT
Portland, Cumberland County	) FRESHWATER WETLAND ALTERATION
PARKING LOT	) WATER QUALITY CERTIFICATION
L-27816-TB-A-N (approval)	) FINDINGS OF FACT AND ORDER

Project Description: The applicant proposes to alter 6,085 square feet of scrub-shrub and wet meadow freshwater wetlands to construct a parking lot to serve a 4-story, 40-unit apartment building. The project is shown on a set of plans, the first of which is titled "Subdivision Recording Plat Sheet 1 of 2, 977 Brighton Ave Elderly Apartments," prepared by Pinkham and Greer Civil Engineers and dated December 21, 2017. The applicant has avoided and minimized wetland impacts to the greatest extent practicable by reducing the number of parking spaces and by installing 2H:1V side slopes around the parking lot. According to the Department's Geographic Information System (GIS), there are no mapped essential or significant wildlife habitats associated with the project site. The proposed project is located at 977 Brighton Avenue in the City of Portland.

Permit for:	[X]	Tier 1
DEP Decision:	[X]	Approved [ ] Denied (see attached letter)
CORPS Action:	[X]	The Corps has been notified of your application. The following are subject to Federal screening: (1) projects with previously authorized or unauthorized work, in combination with a Tier 1 permit for a single and complete project, which total more than 15,000 square feet of altered area; (2) projects with multiple state permits and/or state exemptions which apply to a single and complete project that total more than 15, 000 square feet of altered area; and (3) projects that may impact a vernal pool, as determined by the State of Maine or the Corps. If your activity is listed above, *Corps approval is required for your project*. For information regarding the status of your application contact the Corps' Maine Project Office at (207) 623-8367.

Standard Conditions:

1) If construction or operation of the activity is not begun within four (4) years from the date signed, this permit shall lapse and the applicant shall reapply to the Department for a new permit. This permit is transferable only with prior approval from the Department. If the activity is associated with a larger project, starting any aspect of that project constitutes start of construction.
2) The project shall be completed according to the plans in the application. Any change in the project plans must be reviewed and approved by the Department.
3) Properly installed erosion control measures shall be installed prior to beginning the project, and all disturbed soil should be stabilized immediately upon project completion.

4) A copy of this approval will be sent to the City of Portland. Department approval of your activity does not supersede or substitute the need for any necessary local approvals.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 27TH DAY OF MARCH, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For: Paul Mercer, Commissioner

Filed
MAR 28 2018
State of Maine
Board of Environmental Protection

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

JM/L27816AN/ATS#82730

Natural Resources Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S.A. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92) DEP LW0428

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

Erosion Control for Homeowners

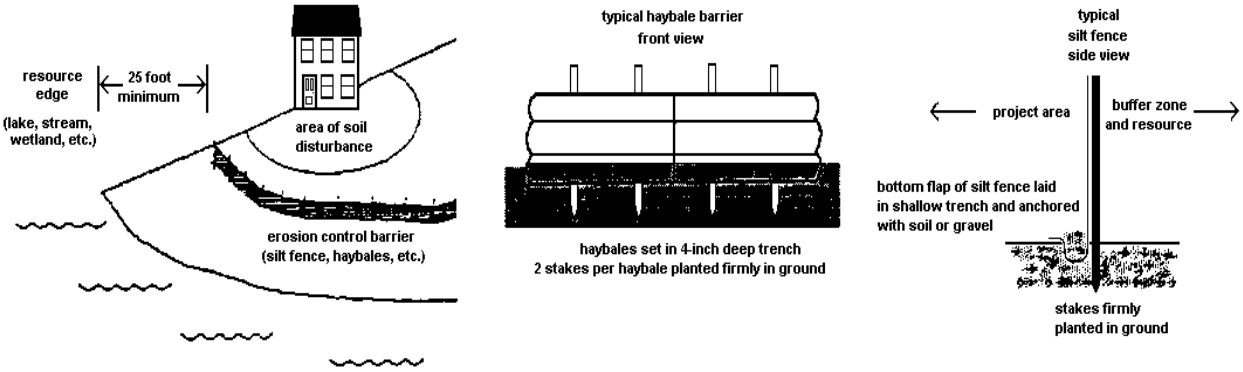
Before Construction

1. If you have hired a contractor, make sure you discuss your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit.

2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead -- buy a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.

4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.



During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

After Construction

1. After your project is finished, seed the area. Note that all ground covers are not equal. For example, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high-maintenance areas. But this same seed mix is a poor selection for stabilizing a road shoulder or a cut bank that you don't intend to mow. Your contractor may have experience with different seed mixes, or you might contact a seed supplier for advice.

2. Do not spread grass seed after September 15. There is the likelihood that germinating seedlings could be killed by a frost before they have a chance to become established. Instead, mulch the area with a thick layer of hay or straw. In the spring, rake off the mulch and then seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away or being eaten by birds or other animals.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

Why Control Erosion?

To Protect Water Quality

When soil erodes into protected resources such as streams, rivers, wetlands, and lakes, it has many bad effects. Eroding soil particles carry phosphorus to the water. An excess of phosphorus can lead to explosions of algae growth in lakes and ponds called blooms. The water will look green and can have green slime in it. If you are near a lake or pond, this is not pleasant for swimming, and when the soil settles out on the bottom, it smothers fish eggs and small animals eaten by fish. There many other effects as well, which are all bad.

To Protect the Soil

It has taken thousands of years for our soil to develop. It usefulness is evident all around us, from sustaining forests and growing our garden vegetables, to even treating our septic wastewater! We cannot afford to waste this valuable resource.

To Save Money ($$)

Replacing topsoil or gravel washed off your property can be expensive. You end up paying twice because State and local governments wind up spending your tax dollars to dig out ditches and storm drains that have become choked with sediment from soil erosion.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status*. The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error*. Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge*. If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

AVESTA HOUSING

977 Brighton Apartments
977 Brighton Avenue
Supplemental Information on Parking

Avesta is requesting approval for a ratio of parking spaces to units in our proposed 977 Brighton Apartments project that is lower than 1:1.

The project will include 32 parking spaces in one parking lot adjacent to the building, 12 of which will be handicapped accessible. Given that we are proposing a total of 40 apartments in this project, the parking ratio would be .80 spaces per unit.

This ratio is in line with or higher than other Avesta Housing properties on the peninsula in downtown Portland. For example, our 409 Cumberland building has the equivalent of 25 spaces, accounting for a car-share vehicle, and 57 units for a .44 ratio; our Pearl Place and Pearl Place II family campus has 90 spaces and 114 units for a .79 ratio. Parking studies conducted by the City and other consultants over the past 10+ years for a range of projects developed by Avesta and others (e.g., for 58 Boyd St, Bayside Anchor, 409 Cumberland Ave), have consistently demonstrated that the level of demand for parking on the Portland peninsula is frequently less than 1 space/unit and often less than .7 spaces/unit.

In Avesta Housing properties, vehicle ownership rates are a significant driver of this lower than 1:1 demand. We collect information on vehicle ownership from our tenants during initial lease-up and on an on-going basis through resident surveys. Because we issue and monitor parking permit stickers for our parking areas, we also require that tenants inform us of any change in or addition of vehicles. Here is vehicle ownership information for four comparable Avesta Housing properties on the peninsula:

Property	Units	Parking Spaces	Parking : Unit Ratio	# of Households w/ Vehicles	% of Households w/ Vehicles
Munjoy Commons	39	39	1.00	37	95%
Pearl Place 1 & 2	114	90	0.79	76	67%
409 Cumberland	57	25	0.44	25	44%
Oak Street Lofts	37	8	0.22	17	46%

In addition to accessing the parking on-site, residents will live in close proximity to employment hubs, amenities, and services within easy walking distance or via public transportation on the Portland METRO and longer-distance bus routes (e.g., ZOOM Turnpike Express and Intercity Shuttle Bus). We have established a partnership with METRO to promote ridership among our tenants, to include informational materials and maps in building common areas, free ride tickets in resident welcome packets, and on-site educational sessions, among other efforts.

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

Parking Waiver Request
977 Brighton Avenue

The building has 40 one bedroom units; 15 will be accessible units and 85% are affordable. The parking consists of 12 ADA spaces, 12 compact spaces (4 ADA) and 12 standard spaces. This is 32 spaces or 0.80 spaces per unit. Based on previous Avesta parking studies this will meet the demand for parking.

The project will require a waiver for the drive aisle width behind the compact spaces. The plan has 2 aisles with a width of 24' and one with an aisle width of 21', 3' less than the required 24' width. These spaces back out on the stripped 8' walkway providing ADA space access to the building. This will make the affective maneuvering area 29' wide for the compact spaces. The waiver is required based on the geometry of the site. The parking is adjacent Wessex Street Right Of Way and the grading is adjacent the boundary line on the back side of the lot, this also reduces wetland impacts. The desire is to provide as much on site parking as possible.

The project will require a waiver for the number of compact spaces. The site's geometry and wetland impacts are the impetus for the waiver. The spaces are reduced in length to avoid wetlands in the rear. Two compact spaces are shown in the front parking area. This area is dedicated to pedestrian usage as much as possible, minimizing the area available for parking.

Drawings Notes:

1. The Planning Board waives / does not waive Section 14-526 (a) 4 (iv) of the City of Portland Chapter 14 Land Use Ordinance for reduction of drive aisle from 24 feet to 21 feet.
2. The Planning Board waives / does not waive Section 1.14 of the City of Portland's Technical Manual Standard that parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces, to allow 12 compact spaces which is 37.5% of the total number.

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

STORMWATER MANAGEMENT REPORT
977 BRIGHTON AVENUE ELDERLY APARTMENTS
PORTLAND, MAINE

December 22, 2017

Project Description:

This project located at the corner of Brighton Avenue and Wessex Street will be the construction of a four story building for 40 senior apartments. Avesta Housing is the Applicant. The existing home and garage on site will be removed.

Existing Conditions:

The site slopes from Brighton Avenue down along Wessex Street to a small stream at the back of the site. The existing site has a single family home near Brighton Avenue, a garage in the middle of the site and a wetland in the back along Wessex Street.

Developed Conditions:

The developed site will consist of a 4 story building with a footprint of 7,825 sq. ft. The rear of the site will have 32 parking spaces of which 12 area ADA compliant. The building will be accessed off Brighton Avenue by a walkway and in the rear with a small walkway and patio. The total impervious area on site is 19,395 sq. ft.

Stormwater Treatment:

This site is the redevelopment of the existing site. Under Chapter 500 Redevelopment Guidelines the project must treat 60% of the runoff. This is obtained by using Focal Point Systems for Wessex Street side of the site and for the parking lot area. These are proprietary systems. Once reviewed by the manufacturer a letter of adequacy will be generated.

Methodology:

This stormwater analysis was performed using HydroCad Software based on TR-55 modeling conditions. This model requires assumptions as to the land cover, slopes and soils. These are enhanced by the topography mapping, soils mapping, and on-site observations. The flows were determined using a Type III coastal storm and rainfall totals for the 24 hour period for a 1 year storm, 2.6", for a 2 year storm, 3.1", for a 10 year storm, 4.6", and for a 25 year storm, 5.8".

These data are published in the manual for Stormwater Management for Maine: Best Management Practices, published by the Maine Department of Environmental Protection.

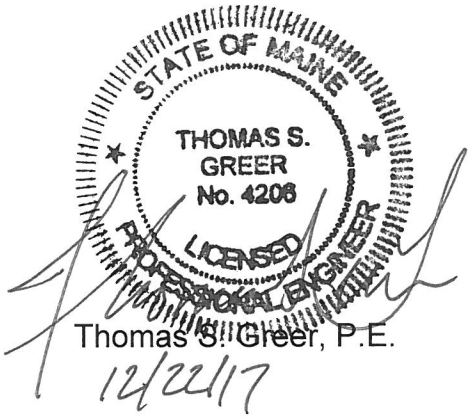
Peak flows: The peak flows are controlled by using a storage system under the parking lot. It will reduce the peak flows from the existing peak flows as shown in the table below.

Table

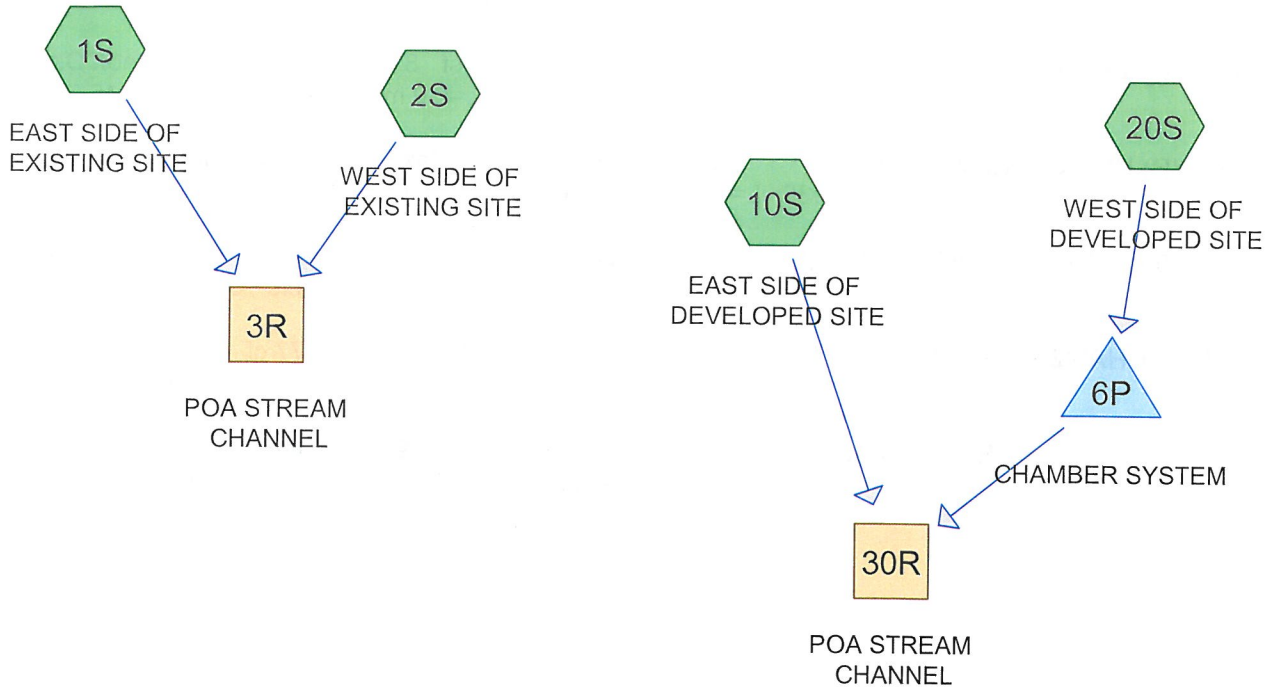
Peak Flows Cubic Feet Per Second (cfs)			
Storm Event	2 Year	10 Year	25 Year
Existing	1.09	2.12	2.99
Developed	0.54	1.03	1.35

Conclusion:

This parcel provides flow control and treatment of stormwater. It will have no unreasonable impacts on downstream abutters or environments.



Thomas S. Greer, P.E.
12/22/17



Subcat Reach Pond Link

Routing Diagram for SENIOR APARTMENTS 16150 TSG
Prepared by Hewlett-Packard Company, Printed 12/21/2017
HydroCAD® 10.00-16 s/n 01454 © 2015 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EAST SIDE OF Runoff Area=13,040 sf 12.46% Impervious Runoff Depth>1.10"
Tc=5.0 min CN=78 Runoff=0.41 cfs 0.028 af

Subcatchment 2S: WEST SIDE OF Runoff Area=18,709 sf 16.70% Impervious Runoff Depth>1.29"
Tc=6.0 min CN=81 Runoff=0.68 cfs 0.046 af

Subcatchment 10S: EAST SIDE OF Runoff Area=8,533 sf 2.81% Impervious Runoff Depth>0.99"
Tc=5.0 min CN=76 Runoff=0.24 cfs 0.016 af

Subcatchment 20S: WEST SIDE OF Runoff Area=23,427 sf 81.55% Impervious Runoff Depth>2.31"
Tc=6.0 min CN=94 Runoff=1.45 cfs 0.104 af

Reach 3R: POA STREAM CHANNEL Avg. Flow Depth=0.28' Max Vel=1.54 fps Inflow=1.09 cfs 0.074 af
n=0.035 L=10.0' S=0.0100 '/' Capacity=54.17 cfs Outflow=1.09 cfs 0.074 af

Reach 30R: POA STREAM CHANNEL Avg. Flow Depth=0.19' Max Vel=1.23 fps Inflow=0.54 cfs 0.084 af
n=0.035 L=10.0' S=0.0100 '/' Capacity=54.17 cfs Outflow=0.54 cfs 0.084 af

Pond 6P: CHAMBER SYSTEM Peak Elev=52.52' Storage=2,377 cf Inflow=1.45 cfs 0.104 af
Outflow=0.45 cfs 0.068 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.193 af Average Runoff Depth = 1.59"
62.18% Pervious = 0.909 ac 37.82% Impervious = 0.553 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EAST SIDE OF Runoff Area=13,040 sf 12.46% Impervious Runoff Depth>2.21"
Tc=5.0 min CN=78 Runoff=0.83 cfs 0.055 af

Subcatchment 2S: WEST SIDE OF Runoff Area=18,709 sf 16.70% Impervious Runoff Depth>2.46"
Tc=6.0 min CN=81 Runoff=1.30 cfs 0.088 af

Subcatchment 10S: EAST SIDE OF Runoff Area=8,533 sf 2.81% Impervious Runoff Depth>2.05"
Tc=5.0 min CN=76 Runoff=0.51 cfs 0.033 af

Subcatchment 20S: WEST SIDE OF Runoff Area=23,427 sf 81.55% Impervious Runoff Depth>3.69"
Tc=6.0 min CN=94 Runoff=2.25 cfs 0.166 af

Reach 3R: POA STREAM CHANNEL Avg. Flow Depth=0.40' Max Vel=1.89 fps Inflow=2.13 cfs 0.143 af
n=0.035 L=10.0' S=0.0100 '/' Capacity=54.17 cfs Outflow=2.12 cfs 0.143 af

Reach 30R: POA STREAM CHANNEL Avg. Flow Depth=0.27' Max Vel=1.52 fps Inflow=1.03 cfs 0.162 af
n=0.035 L=10.0' S=0.0100 '/' Capacity=54.17 cfs Outflow=1.03 cfs 0.162 af

Pond 6P: CHAMBER SYSTEM Peak Elev=53.12' Storage=3,530 cf Inflow=2.25 cfs 0.166 af
Outflow=0.65 cfs 0.129 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.342 af Average Runoff Depth = 2.81"
62.18% Pervious = 0.909 ac 37.82% Impervious = 0.553 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EAST SIDE OF Runoff Area=13,040 sf 12.46% Impervious Runoff Depth>3.18"
Tc=5.0 min CN=78 Runoff=1.19 cfs 0.079 af

Subcatchment 2S: WEST SIDE OF Runoff Area=18,709 sf 16.70% Impervious Runoff Depth>3.47"
Tc=6.0 min CN=81 Runoff=1.82 cfs 0.124 af

Subcatchment 10S: EAST SIDE OF Runoff Area=8,533 sf 2.81% Impervious Runoff Depth>2.99"
Tc=5.0 min CN=76 Runoff=0.74 cfs 0.049 af

Subcatchment 20S: WEST SIDE OF Runoff Area=23,427 sf 81.55% Impervious Runoff Depth>4.80"
Tc=6.0 min CN=94 Runoff=2.89 cfs 0.215 af

Reach 3R: POA STREAM CHANNEL Avg. Flow Depth=0.48' Max Vel=2.08 fps Inflow=3.00 cfs 0.204 af
n=0.035 L=10.0' S=0.0100 '/' Capacity=54.17 cfs Outflow=2.99 cfs 0.204 af

Reach 30R: POA STREAM CHANNEL Avg. Flow Depth=0.31' Max Vel=1.65 fps Inflow=1.35 cfs 0.227 af
n=0.035 L=10.0' S=0.0100 '/' Capacity=54.17 cfs Outflow=1.35 cfs 0.227 af

Pond 6P: CHAMBER SYSTEM Peak Elev=54.48' Storage=4,265 cf Inflow=2.89 cfs 0.215 af
Outflow=0.96 cfs 0.178 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.468 af Average Runoff Depth = 3.84"
62.18% Pervious = 0.909 ac 37.82% Impervious = 0.553 ac

Summary for Subcatchment 1S: EAST SIDE OF EXISTING SITE

Runoff = 0.41 cfs @ 12.08 hrs, Volume= 0.028 af, Depth> 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YEAR Rainfall=3.10"

	Area (sf)	CN	Description
*	1,625	98	BUILDING
*	11,415	75	LANDSCAPED
	13,040	78	Weighted Average
	11,415		87.54% Pervious Area
	1,625		12.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 2S: WEST SIDE OF EXISTING SITE

Runoff = 0.68 cfs @ 12.10 hrs, Volume= 0.046 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YEAR Rainfall=3.10"

	Area (sf)	CN	Description
*	1,500	98	PAVED
*	12,826	75	LANDSCAPED
*	2,758	93	GRAVEL
*	1,625	98	PAVED
	18,709	81	Weighted Average
	15,584		83.30% Pervious Area
	3,125		16.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10S: EAST SIDE OF DEVELOPED SITE

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.016 af, Depth> 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YEAR Rainfall=3.10"

	Area (sf)	CN	Description
*	240	98	PAVED
*	8,293	75	LANDSCAPED
	8,533	76	Weighted Average
	8,293		97.19% Pervious Area
	240		2.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, DIRECT

Summary for Subcatchment 20S: WEST SIDE OF DEVELOPED SITE

Runoff = 1.45 cfs @ 12.09 hrs, Volume= 0.104 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YEAR Rainfall=3.10"

	Area (sf)	CN	Description
*	11,280	98	PAVED
*	4,322	75	LANDSCAPED
*	7,825	98	BUILDING
	23,427	94	Weighted Average
	4,322		18.45% Pervious Area
	19,105		81.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

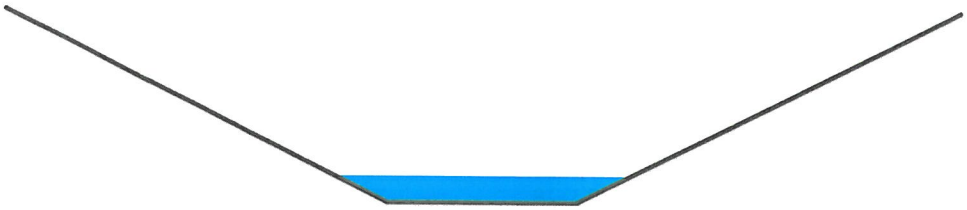
Summary for Reach 3R: POA STREAM CHANNEL

Inflow Area = 0.729 ac, 14.96% Impervious, Inflow Depth > 1.21" for 2 YEAR event
Inflow = 1.09 cfs @ 12.09 hrs, Volume= 0.074 af
Outflow = 1.09 cfs @ 12.09 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.54 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.54 fps, Avg. Travel Time= 0.3 min

Peak Storage= 7 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 54.17 cfs

2.00' x 2.00' deep channel, n= 0.035
Side Slope Z-value= 2.0 '/' Top Width= 10.00'
Length= 10.0' Slope= 0.0100 '/'
Inlet Invert= 0.00', Outlet Invert= -0.10'



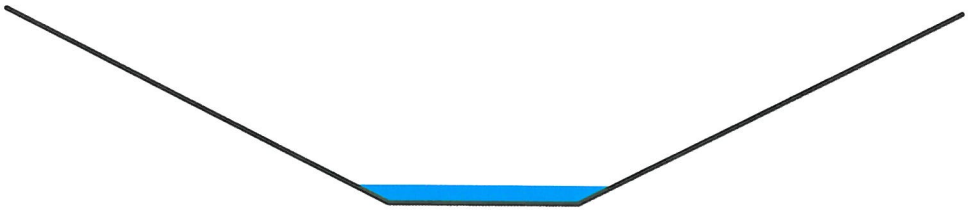
Summary for Reach 30R: POA STREAM CHANNEL

Inflow Area = 0.734 ac, 60.53% Impervious, Inflow Depth > 1.37" for 2 YEAR event
Inflow = 0.54 cfs @ 12.32 hrs, Volume= 0.084 af
Outflow = 0.54 cfs @ 12.33 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.23 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 0.3 min

Peak Storage= 4 cf @ 12.33 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 54.17 cfs

2.00' x 2.00' deep channel, n= 0.035
Side Slope Z-value= 2.0 '/' Top Width= 10.00'
Length= 10.0' Slope= 0.0100 '/'
Inlet Invert= 0.00', Outlet Invert= -0.10'



Summary for Pond 6P: CHAMBER SYSTEM

Inflow Area = 0.538 ac, 81.55% Impervious, Inflow Depth > 2.31" for 2 YEAR event
Inflow = 1.45 cfs @ 12.09 hrs, Volume= 0.104 af
Outflow = 0.45 cfs @ 12.41 hrs, Volume= 0.068 af, Atten= 69%, Lag= 19.2 min
Primary = 0.45 cfs @ 12.41 hrs, Volume= 0.068 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 52.52' @ 12.41 hrs Surf.Area= 1,950 sf Storage= 2,377 cf

Plug-Flow detention time= 158.2 min calculated for 0.068 af (65% of inflow)
Center-of-Mass det. time= 88.0 min (846.8 - 758.8)

Volume	Invert	Avail.Storage	Storage Description
#1	51.00'	5,368 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	780	0	0
52.00	1,950	1,365	1,365
53.00	1,950	1,950	3,315
53.50	780	683	3,998
54.00	100	220	4,218
55.00	100	100	4,318
56.00	2,000	1,050	5,368

Device	Routing	Invert	Outlet Devices
#1	Primary	52.00'	**6.0" Round Culvert** L= 110.0' Ke= 0.500 Inlet / Outlet Invert= 52.00' / 51.50' S= 0.0045 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#2	Primary	55.50'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.45 cfs @ 12.41 hrs HW=52.52' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.45 cfs @ 2.72 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

977 BRIGHTON AVENUE ELDERLY APARTMENTS
PORTLAND, MAINE

INSPECTION AND MAINTENANCE
OF STORMWATER MANAGEMENT FACILITIES

Stormwater Management Facilities include swales, paved surfaces, drain pipe, riprapped aprons, level spreaders, buffers detention basins/treatment ponds. Periodic inspection and maintenance of these site features and devices is necessary to prevent erosion, protect roadways and other paved areas, and remove pollutants from stormwater runoff.

The operation and maintenance will be the responsibility of the developer.

POST CONSTRUCTION MONITORING:

32-38. Post-construction stormwater management plan compliance.

Any person owning, operating, or otherwise having control over a BMP required by a post Construction stormwater management plan shall maintain the BMPs in accordance with the approved plan and shall demonstrate compliance with that 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 (“DPW”) 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 DPW in a form provided by DPW, 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 DPW 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, DPW may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs.

(Ord. No. 35-09/10, 8-17-09; Ord. 108-15/16, 11-16-2015)

SWALES, DITCHES, CURBS AND PAVED AREAS:

Swales, ditches, curbs and paved areas are easily inspected during a site walk or even a ride-by. Since visual inspection is easy, their condition should be assessed during and/or after significant rainfall events such as thunder showers and periods of heavy or extended rainfall and during periods of significant snowmelt. Any damage or unusual condition such as sedimentation of a ditch, erosion, damaged curb or dying vegetation should be recorded, dated and initialed by the inspector when observed. Even if there is no damage, the inspector should make record of these inspections at least twice annually.

Paved areas should be visually inspected monthly during the winter. The inspector should pay particular attention to the build up of sand around catch basin grates and remove accumulations that block the free flow of surface runoff to the catch basins. The date and initials of the inspector should be recorded on the forms provided as well as a notation of any cleanup effort that was made and the approximate volume of sand that was removed.

CATCH BASINS, FIELD INLETS AND DRAIN MANHOLES:

Catch Basins and field inlets are precast concrete structures with sumps and cast iron grates used to collect stormwater and trap heavy sediments. Drain Manholes are similar structures constructed with a channel instead of a sump and a solid cast iron cover instead of a grate. Drain Manholes exist at changes in direction and/or size of storm drain pipe. Catch Basins, field inlets and drain manholes provide access to the closed storm drain system for inspection and maintenance.

Throughout the winter / spring sanding period, inspect catch basins and field inlets monthly and after every significant rainfall event or period of heavy snowmelt. Clean catch basin and field inlet sumps when sediment level is within 3 inches of the outlet pipe invert. Record dates of inspections, observations and maintenance measures implemented (if any) on the forms provided and initial the entry.

Confined space entry safety procedures should be practiced when entering these structures.

DRAIN PIPES:

Drain pipes are road culverts and pipes connecting drain manholes. Inspect drain pipes when inspecting other stormwater maintenance facilities. At least annually make a visual inspection of the pipe. During the daylight you should be able to see light through most pipes as they have been laid to a straight line and grade. In some cases (e.g. pipe runs to a drain

manhole, or is blocked) you will need a light to inspect pipes.

Clean pipes as necessary. Record inspections on the forms provided noting condition of pipe and any maintenance procedures implemented.

FOCAL POINT SYSTEMS:

See Manufacturer's data on maintenance of the filters.

977 BRIGHTON AVENUE ELDERLY APARTMENTS PORTLAND, MAINE			
INSPECTION / MAINTENANCE LOG			
SWALES, DITCHES, CURBS AND PAVED SURFACES			
I: INSPECTED - C: CLEANED - S: SWEPT - R: REPAIRED			
DATE	**INITIALS**	**ACTION**	**COMMENT**
10-2-17	TSG	I, C	EXAMPLE: removed sand around CB's 1, 2 and 3. Heavy rain over the weekend.

977 BRIGHTON AVENUE ELDERLY APARTMENTS
PORTLAND, MAINE

INSPECTION / MAINTENANCE LOG

CATCH BASIN, FIELD INLETS & DRAIN MANHOLES

I: INSPECTED - C: CLEANED - R: REPAIRED

DATE	INITIALS	ACTION	COMMENT
10/2/17	JKL	I, C	EXAMPLE: Called ACME to clean catch basins, cleaned debris from culvert inlets along access road.

977 BRIGHTON AVENUE ELDERLY APARTMENTS PORTLAND, MAINE			
INSPECTION / MAINTENANCE LOG			
DRAIN PIPES			
I: INSPECTED - C: CLEANED - R: REPAIRED			
DATE	**INITIALS**	**ACTION**	**COMMENT**
10-2-17	TSG	I, C	EXAMPLE: Called ACME to clean catch basins, cleaned debris from culvert inlets along access road.

977 BRIGHTON AVENUE ELDERLY APARTMENTS PORTLAND, MAINE			
INSPECTION / MAINTENANCE LOG			
FOCAL POINT FILTERS			
I: INSPECTED - C: CLEANED - S: SWEPT - R: REPAIRED			
DATE	**INITIALS**	**ACTION**	**COMMENT**
10-2-17	TSG	I, C	EXAMPLE: Unit cleaned by ACME, 2 truckloads to Pike

STORMWATER MANAGEMENT SYSTEM MAINTENANCE PROGRAM SUMMARY CHECKLIST					
		Frequency			
Item	Commentary	Month	Semi-Annual	Annual	Long-Term
Open Swale, Ditches & Inlet Structures	Inspect for debris accumulation, erosion and excessive vegetation. Mow monthly, remove debris, repair and revegetate any area of erosion	**X Mow**		**X**	
Pavement	Review for damage and buildup of debris and sand.	**X**	**X Sweep**		
Pipelines	Inspect for sediment build-up in pipe. Flush and remove as required.			**X**	
Focal Point Filters	The filter should be inspected after every major storm in the first few months to ensure proper function			**X Sediment Removal**	**X Weed, Repl. Media**

HOUSEKEEPNG REPORT

977 BRIGHTON AVENUE ELDERLY APARTMENTS
PORTLAND, MAINE

December 22, 2017

Housekeeping: The developer is responsible for notifying the contractor and owner of the housekeeping standards.

1. Spill Prevention: The contractor and owners need to take care with construction and waste materials such that contaminates do not enter the stormwater. The storage of materials such as paint, petroleum products, cleaning agents and the like are to be stored in watertight containers. The use of the products should be in accordance with manufacturer recommendations. When fueling equipment, including snowblowers and lawnmowers, have oil absorbent pads available below the fueling.

   Staging areas are noted on the plans for the contractor's use. Refueling of small engines by the owner should occur in the garage or on a paved surface.

   Any spill or release of toxic or hazardous substances must be reported to the Department. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the Department's website at: http:/www.maine.gov/dep/spills/emergspillresp/

2. Groundwater Protection: Protection of the groundwater is required by the contractor and owner. Petroleum products should be stored in manufactured cans designed for the purpose. Spill preventions procedures should be followed.

3. Fugitive Sediment and Dust: The contractor is required to minimize dust from the construction operation. The road should be swept regularly (weekly) and prior to any rain event. The gravel areas are to be watered regularly to minimize dust. Any mud that is tracked off site should be cleaned up prior to it drying and becoming a dust issue.

   Do not use oil to control dust.

   Dewatering a stream without a permit from the Department may violate state water quality standards and the Natural Resources Protection Act.

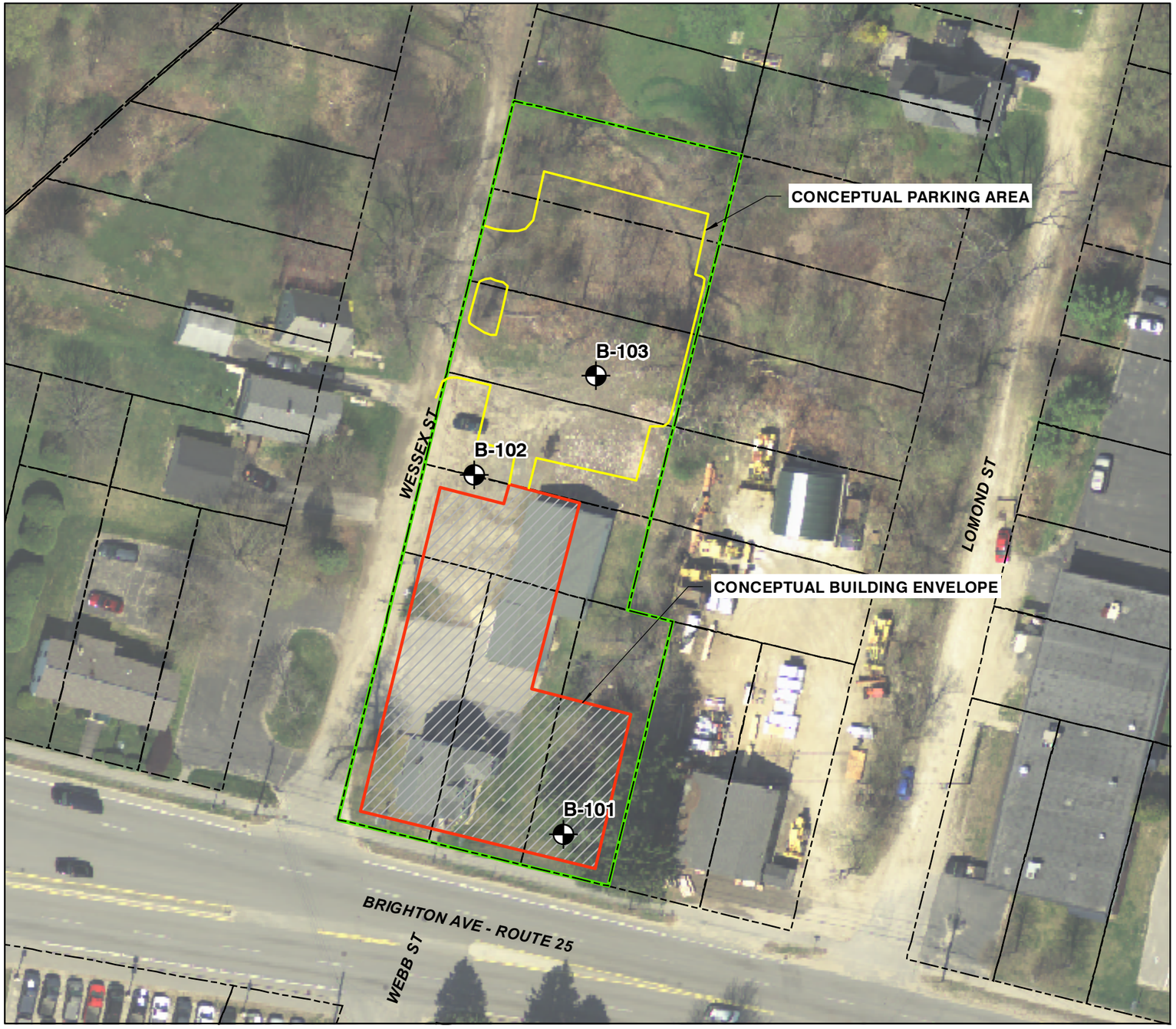
4. Debris and Other Materials: Construction materials and construction debris should be covered to prevent rainwater from washing contaminants off the site. Any fertilizers, cleaning products, herbicides should be protected from the weather and used in accordance with manufacturers recommendations.

   Note any contaminants that are washed off the site by rainwater is a violation of the Clean Waters Act.

Storage Handling and Disposal of Solid Waste items must comply with Maine's Solid Waste Management Rules. Lack of appropriate pollutant control may result in violations of the Groundwater Quality Standards.

This project has a written Erosion Control Plan and Stormwater Maintenance Plan. Modifications to the plan must be approved by the Town.

Maintenance of stormwater treatment and control systems must occur regularly. The Stormwater Maintenance Report provides inspection details and time lines for doing the inspections and reporting to the Town and DEP



50 0 50 100
Scale in Feet

TRUE

LEGEND

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN PREPARED FROM IMAGERY FROM STATE OF MAINE AERIAL ORTHOPHOTOS ENTITLED "GEOLIBRARY_3IN_2012," PROVIDED BY THE STATE OF MAINE, MAINE OFFICE OF GIS AND MAINE GEOLIBRARY BOARD.
2. THE BORINGS WERE LOCATED IN THE FIELD BY S. W. COLE ENGINEERING, INC. USING A MAPPING GRADE TRIMBLE GPS RECEIVER AND OVERLAID ON THE ABOVE IMAGERY.
3. CONCEPTUAL BUILDING ENVELOPE AND PARKING AREA FROM A 1"=60' SCALE PLAN OF THE SITE ENTITLED "SITE PLAN," PREPARED BY ALBERT FRICK ASSOCIATES, INC., DATED 4/18/2016.
4. PARCEL LINES FROM MAINE LIBRARY OF GEOGRAPHIC INFORMATION (MLGI), MAINE OFFICE OF GEOGRAPHIC INFORMATION SYSTEMS (MEGIS) (COMP., ED.)
5. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
6. 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.

S.W.COLE ENGINEERING, INC.

AVESTA HOUSING

EXPLORATION LOCATION PLAN

PROPOSED HOUSING
977 BRIGHTON AVENUE
PORTLAND, MAINE

Job No.	16-0368	Scale	1"=50'
Date:	05/18/2016	Sheet	1

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S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-101**
SHEET: 1 OF 1
PROJECT NO.: 16-0368

PROJECT / CLIENT: PROPOSED 3-STORY HOUSING BUILDING / AVESTA
LOCATION: 977 BRIGHTON AVENUE
DRILLING CO. : GREAT WORKS TEST BORINGS, INC. DRILLER: JEFF LEE

DATE START: 5/12/2016
DATE FINISH: 5/12/2016
ELEVATION:
SWC REP.: P. OTTO

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"		
SAMPLER:	SS	1 3/8"	140 LBS.	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS WET AT 6'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									1.0'	DARK BROWN SAND Y SILT WITH ORGANICS (TOPSOIL)
	1D	24"	15"	2.0'	2	2	3	8	2.0'	GRAY-BROWN CLAYEY SILT
	2D	24"	18"	4.0'	6	14	15	19		BROWN SILTY CLAY WITH SAND PARTINGS q_p = 8 to 9 ksf ~HARD TO VERY STIFF~
	3D	24"	18"	7.0'	6	7	11	11		q_p = 5.5 to 7.5 ksf
									9.0'	
	4D	24"	20"	12.0'	W O H / 12"		1	1		GRAY SILTY CLAY q_p = < 0.5 ksf
	1V			16.0'	3 5/8" X 7" TVANE					S_v = 0.35 / 0.0 ksf ~SOFT~
	1V'			16.7'	3 5/8" X 7" TVANE					S_v = 0.39 / 0.0 ksf
	2V			25.7'	3 5/8" X 7" TVANE					S_v = 0.28 / 0.0 ksf
	2V'			26.4'	3 5/8" X 7" TVANE					S_v = 0.33 / 0.0 ksf
										HYDRAULIC PUSH ROD PROBE FROM 26.4' - 70'
										PROBABLE GRAY SILTY CLAY

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-101**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-101**
SHEET: 1 OF 1
PROJECT NO.: 16-0368

PROJECT / CLIENT: PROPOSED 3-STORY HOUSING BUILDING / AVESTA
LOCATION: 977 BRIGHTON AVENUE
DRILLING CO. : GREAT WORKS TEST BORINGS, INC. DRILLER: JEFF LEE

DATE START: 5/12/2016
DATE FINISH: 5/12/2016
ELEVATION:
SWC REP.: P. OTTO

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"		
SAMPLER:	SS	1 3/8"	140 LBS.	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS WET AT 6'

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
										HYDRAULIC PUSH ROD PROBE FROM 26.4' - 70'
										PROBABLE GRAY SILTY CLAY
									60.0'	
										PROBABLE GRAY SILTY CLAY WITH FREQUENT SAND LAYERS
									70.0'	25 BLOWS FOR 0"
										REFUSAL AT 70.0'
										PROBABLE BEDROCK

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-101**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-102**
SHEET: 1 OF 1
PROJECT NO.: 16-0368

PROJECT / CLIENT: PROPOSED 3-STORY HOUSING BUILDING / AVESTA
LOCATION: 977 BRIGHTON AVENUE
DRILLING CO. : GREAT WORKS TEST BORINGS, INC. DRILLER: JEFF LEE

DATE START: 5/13/2016
DATE FINISH: 5/13/2016
ELEVATION:
SWC REP.: P. OTTO

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"		
SAMPLER:	SS	1 3/8"	140 LBS.	30"
CORE BARREL:				

WATER LEVEL INFORMATION
FREE WATER AT 1.5 - 2'

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 GRAVELLY SILTY SAND (FILL)
	1D	24"	5"	2.0'	8	7	7	5	1.5'	~MEDIUM DENSE~
										BROWN-GRAY SILTY SAND, SOME GRAVEL (FILL)
	2D	24"	4"	4.0'	4	2	3	2		~LOOSE~
									4.5'	
										BROWN SILTY CLAY
	3D	24"	18"	7.0'	6	10	12	14		~VERY STIFF TO HARD BECOMING… q_p = 8 to 9 ksf
	4D	24"	12"	9.0'	8	8	4	4	9.0'	...STIFF~ q_p = 3 to 4 ksf
										GRAY SILTY CLAY
	5D	24"	4"	12.0'	2	2	1	2		q_p = < 0.5 ksf
	1S	24"	24"	17.0'	PISTON SAMPLER					
	1V			17.7'	3 5/8" X 7" TVANE					S_v = 0.33 / 0.0 ksf ~SOFT~
	1V'			18.4'	3 5/8" X 7" TVANE					S_v = 0.33 / 0.0 ksf
	2S	24"	24"	27.0'	PISTON SAMPLER					
	2V			27.7'	3 5/8" X 7" TVANE					S_v = 0.43 / 0.0 ksf
	2V'			28.4'	3 5/8" X 7" TVANE					S_v = 0.41 / 0.0 ksf
										HYDRAULIC PUSH ROD PROBE FROM 28.4' - 53'
										PROBABLE GRAY SILTY CLAY

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-102**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-102**
SHEET: 1 OF 1
PROJECT NO.: 16-0368

PROJECT / CLIENT: PROPOSED 3-STORY HOUSING BUILDING / AVESTA
LOCATION: 977 BRIGHTON AVENUE
DRILLING CO. : GREAT WORKS TEST BORINGS, INC. DRILLER: JEFF LEE

DATE START: 5/13/2016
DATE FINISH: 5/13/2016
ELEVATION:
SWC REP.: P. OTTO

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"		
SAMPLER:	SS	1 3/8"	140 LBS.	30"
CORE BARREL:				

WATER LEVEL INFORMATION
FREE WATER AT 1.5 - 2'

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
										HYDRAULIC PUSH ROD PROBE FROM 28.4' - 53'
										PROBABLE GRAY SILTY CLAY
									45.0'	
										PROBABLE GRAY SILTY CLAY WITH FREQUENT SAND LAYERS
									53.0'	25 BLOWS FOR 0"
										REFUSAL AT 53.0'
										PROBABLE BEDROCK

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-102**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-103**
SHEET: 1 OF 1
PROJECT NO.: 16-0368

PROJECT / CLIENT: PROPOSED 3-STORY HOUSING BUILDING / AVESTA
LOCATION: 977 BRIGHTON AVENUE
DRILLING CO. : GREAT WORKS TEST BORINGS, INC. DRILLER: JEFF LEE

DATE START: 5/12/2016
DATE FINISH: 5/12/2016
ELEVATION:
SWC REP.: P. OTTO

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	SSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS.	30"
CORE BARREL:				

WATER LEVEL INFORMATION
FREE WATER AT 5.0' ON 5/12/2016
FREE WATER AT 2.0' ON 5/13/2016

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 SILTY GRAVELLY SAND (FILL)
	1D	24"	15"	2.0'	4	8	7	8		~MEDIUM~
									3.5'	
	2D	24"	18"	4.0'	7	8	7	3		DARK GRAY SANDY SILT
										AND CLAYEY SANDY SILT ~MEDIUM~
									5.5'	
	3D	24"	20"	7.0'	4	7	8	11		BROWN SILTY CLAY q_p = 7 to 8 ksf
										~VERY STIFF TO HARD~
									9.0'	
										GRAY SILTY CLAY
										~SOFT~ q_p = ≤ 1.0 ksf
	4D	24"	24"	12.0'	2	2	1	2	12.0'	q_p = < 0.5 ksf
										BOTTOM OF EXPLORATION AT 12.0'

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-103**

KEY TO 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.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: December 20, 2017

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

Site Address: 977 Brighton Avenue, Portland, ME

Chart Block Lot Number: 275/C/1, 2, 3, 6, 7, 8 & 9

Proposed Use: Rresidential
Previous Use: Residential
Existing Sanitary Flows: 300 +/- GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
Brighton Avenue

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

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

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699
Owner/Developer Name: Avesta Housing Development Corporation
Owner/Developer Address: 307 Cumberland Avenue, Portland, ME 04101
Phone: 207-553-7780 Fax: E-mail: gpayne@avestahousing.org
Engineering Consultant Name: Pinkham & Greer, Civil Engineers (Thomas S. Greer)
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: 3,600 GPD
Peaking Factor/ Peak Times: 4 at 7-8 am, 6-8 pm
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)* 40 units, 1.5 people/unit x 60 gpd/person

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: n/a

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: n/a GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

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

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

Christopher C. Branch, P.E.
Director of Public Works

Date: March 20, 2018

Re: Wastewater Capacity Authorization

Address: 977 Brighton Avenue
Applicant: Avesta Housing

Planner: Victoria Volent

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Residential	3 Bedroom	1	270 GPD	- 270
Proposed flow				
Multiple Family Dwelling Units	1-Bedroom	40	90*	+3600
			Net Change	**+ 3330**

*Values based on EPA 2002-02 Onsite Wastewater Treatment Systems Manual – Chapter 3 – 1.5 persons/ unit x 60 GPD/ Person = 90 GPD

Comments:
The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

You are reminded that the sewers you are proposing to connect into convey both sanitary and stormwater (Combined Sewer) and therefore a backflow preventer is suggested.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,
CITY OF PORTLAND

Bradley A. Roland, P.E.
Senior Project Engineer

CC:

Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland
Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

Keith Gray, City Engineer/Engineering Manager, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works
Rachel Smith, Industrial Pretreatment Coordinator, Portland Department of Public Works
John Emerson, Wastewater Coordinator, Portland Department of Public Works

Lauren Swett, Woodard & Curran, DPW Development Review
Scott Firmin, Director of Wastewater, Portland Water District
Charlene Poulin, Wastewater Chief Operator – Systems

SEP - 8 2016

Att. 18

Albert Frick Associates, Inc.
Environmental Consultants
95A County Road Gorham, ME 04038
Office: (207)839-5563 Fax: (207)839-5564
www.albertfrick.com info@albertfrick.com

Albert Frick, CSS, LSE
Chris Coppi, CWS, LSE
Brady Frick, LSE
Bryan Jordan, LSE
Matthew Logan, LSE
Jamie Latorre, Office Manager

September 6, 2016

Seth Parker
Director of Real Estate Development
Avesta Housing
307 Cumberland Avenue
Portland, ME 04101

Re: Wetlands Report, 977 Brighton Ave, Portland.

Dear Mr. Parker:

On April 13th and August 25th, Albert Frick Associates, Inc. (AFA) conducted a wetland review of the above-mentioned property for the purpose of determining permitting requirements for a potential parking area. Initially, AFA visited the property on April 13th and identified a small freshwater, shrub/wet meadow wetland which was delineated with blue flagging. The delineated wetland was located with a GPS Trimble, Geo 7x unit in order to illustrate the extent of the wetland which is shown on the site plan attached with this report. The proposed parking area is located within the wetland impacting approximately 3,633 square feet of the shrub/wet meadow as shown on the attached plan. This plan is a conceptual in nature and should not be used for permitting purposes since actual grading elevations have not been completed by site engineering at this time.

No vernal pools, as defined by Maine's Natural Resources Protection Act (NRPA), were observed on the property.

Jurisdictional Natural Resources:

Wetlands
The freshwater wetland is classified as a Palustrine Scrub-Shrub/Emergent Wetland (PSS/EM1) "shrub and wet meadow" because it is dominated by shrubs and low growing herbaceous plant species, namely flowering herbs (goldenrod- *Solidago*). The wetland was observed in the northern corner of the property.

A drainage way, originating from the Wessex Street road culvert, was observed at the northwest corner of the property. The drainage way conveys stormwater west of Wessex Street to the property

which then flows diagonally south across the property and eventually discharging through another culvert on Lomond Street to the east. Upon entering the property, the drainage way quickly becomes a flat, drainage way without defined banks and little mineral deposition along its course. Therefore, this drainage way would **not** be considered to be a river, stream or brook as defined by the Natural Resources Protection Act, 38 M.R.S. 480 (B) (9).

Permitting:

Maine Department of Environmental Protection (DEP)

Research of the property and review of DEP records has revealed that the wetland on the property is eligible for the wetland alteration exemption which allows up to, but not to exceed, 4,300 square feet of wetland alteration pursuant to the Natural Resources Protection Act, 38 M.R.S. 480 (Q) (17). Wetland alterations result from regulated activities which cause a direct or indirect impact to the wetland which include, but are not limited to, filling, soil displacement, vegetation removal and the construction of permanent structures. If a proposed activity on the property results in 4,300 square feet or less of wetland impact, then a permit from the Department is not required in accordance with 480 (Q) (17).

Since the proposed parking area results in less than 4,300 square feet of wetland impact, then a DEP permit is not required. See the attached site plan which illustrates the extent of fill tentatively proposed in the wetland. **Please note that this conceptual plan assumes that the edge of the wetland alteration is the bottom of the fill slope and not the edge of the parking surface. Furthermore, wetland impacts required to redirect the drainage way, namely the area of the excavation ditch, must be included when determining the total wetland impact.**

If a proposed project results in over 4,300 square feet of wetland impact on the property, in total, then a Natural Resources Protection Act Permit (Tier permit) from the Maine Department of Environmental Protection (DEP) is required.

Lastly, the wetlands on the property do not require a setback to the regulated activities mentioned above, in accordance with the NRPA, 480 (C).

City of Portland

The wetland on the property is not shown on the shoreland zoning map in accordance with the City of Portland's Zoning Map.

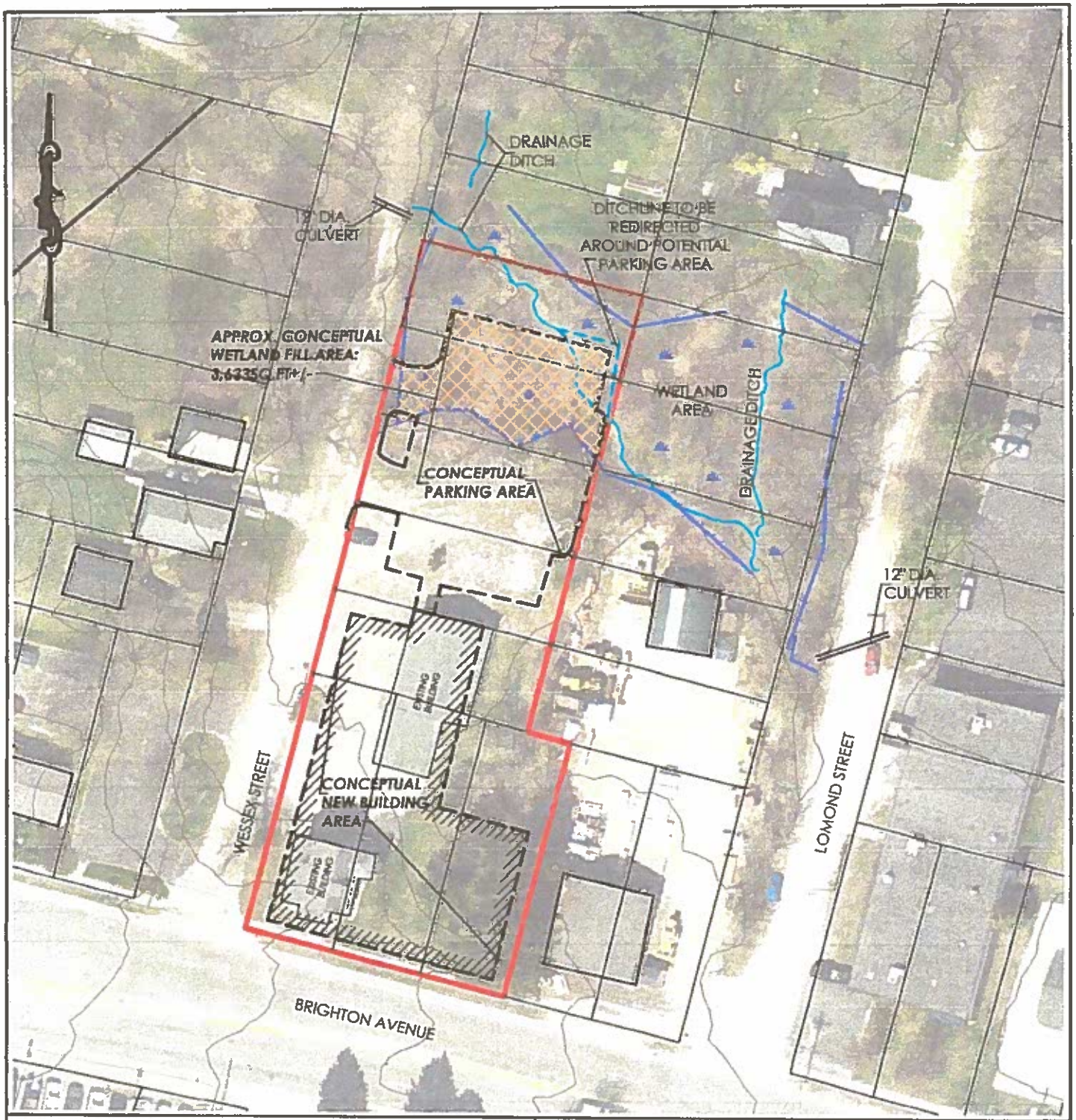
Please contact me if you have any questions or matters for further discussion. If the parking project requires DEP review, we can certainly assist you with the preparation of a Tier permit if necessary. I can be reached by phone at 839-5563 or by email at chris@albertfrick.com.

Sincerely,

Chris Coppi

Chris Coppi, CWS
Wetland Scientist
Licensed Site Evaluator

Enc. Site Plan and photos



SITE PLAN

PREPARED FOR

AVESTA HOUSING

977 BRIGHTON AVE

PORTLAND, MAINE

Albert Frick Associates, Inc.

Environmental Consultants

Gorham, Maine

Date:	Revision Description

Drawn By: B.J.	Checked By: A.F
Date: 4/18/16	Scale: 1" = 60'

8/25/16 Site Photos- 977 Brighton Ave, Portland



Photo 1: View of shrub/wet meadow wetland consisting of flowering herbs and shrubs.



Photo 2: View of drainage way channel moving onto the property (and wetland boundary in blue). Notice the absence of a mineral bottom soon after the drainage way enters the wetland.

8/25/16 Site Photos- 977 Brighton Ave, Portland



Photo 3: View of drainage way inside wetland- Very flat channel, with little mineral deposition. Lack of aquatic or obligate wetland plants (Likely Thyme-leaved Speedwell, FAC-*Veronica serpyllifolia shown in channel)* suggest an ephemeral (resulting from rain events) drainage course.

ZONING ANALYSIS

DIVISION 8. R-P RESIDENCE-PROFESSIONAL ZONE

This project is located in the R-P Residential-Professional Zone. It is also an affordable housing project meeting the requirements of Division 30 Affordable Housing. The setbacks and density have been calculated using the density bonus' from Division 30.

Below are selected sections of the R-P Zone that we believe apply to the project.

Sec. 14-146. Purposes.

The purposes of the R-P residence-professional zone are:

(b) To serve as a transition or buffer zone between residential and more intensive nonresidential zones.

This project is a more intensive residential use making the transition.

Sec. 14-147. Permitted uses.

The following uses are permitted in the R-P district:

(a) Residential: Any residential use is permitted in the residential zone abutting the lot. If there is no abutting residential zone, the nearest residential zone to the lot. In the case of two (2) or more abutting residential zones, the most restrictive such zone.

This project abuts the R-3 Residential Zone.

Sec. 14-149. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, the following requirements shall apply. Residential uses permitted under section 14-147(a) shall meet the requirements of such abutting or nearest residential zone. Nonresidential uses in the R-P zone shall meet the following minimum requirements:

See Chart below comparing dimensional requirements.

(a) *Minimum lot size:* Six thousand (6,000) square feet.
(b) *Minimum street frontage:* Sixty (60) feet.
(c) *Minimum yard dimensions:*
    1. *Front yard:*
        a. *Principal or accessory structures: Twenty (20) feet, except that:*
            i. *The front yard need not exceed the average depth of immediately abutting front yards; and*
            ii. *The front yard of a lot existing as of April 4, 1988, which lot is less than one hundred (100) feet deep, need not be deeper than ten (10) percent of the depth of the lot.*
    2. *Rear yard:*
        a. *Principal structures: Twenty (20) feet.*
        b. *Accessory structures (detached): Seven (7) feet.*

3. *Side yard:*

a. *Principal structures:*

Number of Stories	*Required Side Yard*
1 story . . . . . 10 feet	
2 stories . . . . . 12 feet	
3 or more stories . . 14 feet	

The width of one (1) side yard may be reduced one (1) foot for each foot that the other side yard is correspondingly increased, provided, however, no side yard shall be reduced to less than seven (7) feet in width.

b. *Accessory structures (detached): Seven (7) feet.*

c. *Side yards on side streets (corner lot): For both principal or accessory structures:*

i. *One (1) or two (2) stories: Fifteen (15) feet; and*

ii. *Three (3) or more stories: Eighteen (18) feet.*

(d) *Minimum lot width: Sixty (60) feet.*

(e) *Maximum structure height: Forty-five (45) feet. Where the lot abuts an R-6 residential zone, the maximum permitted height shall be the maximum permitted height of the R-6 zone. If there is a difference in height between abutting R-6 zones, the least restrictive height limitation shall apply.*

(f) *Maximum impervious surface ratio: The maximum impervious surface ratio is established according to the abutting residential zone. If there is no abutting residential zone to the lot in question, the nearest residential zone to the lot. In the case of two (2) or more abutting residential zones, the least restrictive such zone. The ratios are as follows:*

Residential Zone	*Maximum Impervious Surface Ratio*
R-1/R-2	*0.60*
R-3	*0.70*
R-4/R-5/R-5A/R-6	*0.80*

(g) *Floor area ratio (F.A.R.): The maximum floor area ratio is established according to the abutting residential zone. If there is no abutting residential zone to the lot in question, the nearest residential zone to the lot. In the case of two (2) or more abutting residential zones, the least restrictive such zone. The ratios are as follows:*

Residential	*Floor Area Ratio*
R-1/R-2	*0.45*
R-3	*0.55*
R-4/R-5/R-5A/R-6	*0.65*

ZONE INFORMATION

ZONE: RESIDENTIAL 3 (R-3) & RESIDENTIAL-PROFESSIONAL
PERMITTED USE: MULTI-FAMILY RESIDENTIAL PROPOSED USE: AFFORDABLE SENIOR HOUSING

SPACE STANDARDS	R-3	R-P	14-488 BONUS	ALLOWED	PROVIDED
LOW INCOME UNITS			85%		34
WORKFORCE UNITS			0%		0
MARKET UNITS			15%		6
TOTAL NUMBER OF UNITS			100%		40
LOT AREA PER UNIT	6,500 SQ. FT.	1500/UNIT *	2.5x1500	= 600	800
MINIMUM LOT SIZE	6,500 SQ. FT.	6,500 SQ. FT.			32,000
MINIMUM STREET FRONTAGE	50 FEET	50 FEET			420 FEET
MAXIMUM FRONT YARD					10 FEET
MINIMUM FRONT YARD	25 FEET	25 FEET **	-5 FEET	= 20 FEET	17 FEET
MINIMUM REAR YARD	25 FEET	25 FEET			140 FEET
MINIMUM SIDE YARD					
2 1/2 STORY STRUCTURE	16 FEET	16 FEET	-5 FEET	= 11 FEET	20 FEET
SIDE YARD ON A SIDE STREET	20 FEET	20 FEET	-5 FEET	= 15 FEET	15 FEET
MINIMUM UNIT SIZE					528 SQ. FT.
OVERALL BUILDING AREA (GROSS)					30,089 SQ. FT.
ACTUAL LOT COVERAGE (FOOTPRINT)					7,522 SQ. FT.
MAXIMUM LOT COVERAGE	35%	35%			24%
MINIMUM LOT WIDTH	65 FEET	65 FEET			150 FEET
MAXIMUM BUILDING HEIGHT	35 FEET	35 FEET	+15 FEET	= 50 FEET	46 FEET

* PER 14-488

** OR AVERAGE OF ABUTTING FRONT YARDS

Sec. 14-150. Other requirements.

All nonresidential uses in the R-P zone shall meet the requirements of division 25 (space and bulk regulations and exceptions) of this article in addition to the following requirements:

Not Applicable, this is a residential use.

Sec. 14-151. External effects.

Every use in a R-P zone shall be subject to the following requirements:

(a) *Enclosed structure: The use shall be operated within a completely enclosed structure, except for those customarily operated in the open air.*

Residential use, all indoors.

(b) *Noise: The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed fifty-five (55) decibels on the A scale, on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.*

Mechanical equipment to be located on the roof and meet these levels.

(c) *Vibration and heat: Vibration inherently and recurrently generated and heat*

shall be imperceptible without instruments at lot boundaries.

No items should generate heat or vibrations.

(d) *Glare, radiation or fumes: Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.*

All lighting will be shielded, see Lighting Plan.

(e) *Smoke: Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level, as classified in Method 9 (Visible Emissions) of the*

Opacity Evaluation System of the U.S. Environmental Protection Agency.

No items generate smoke.

(f) *Materials or wastes: No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All material which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in closed containers. Areas attracting large numbers of birds, rodents or insects are prohibited.*

All waste will be handled indoors in the trash room and picked up by a private waste hauler.

DIVISION 30. AFFORDABLE HOUSING

Sec.14-484. Purpose.

It is in the public interest to promote an adequate supply of affordable housing for the city's residents. The purpose of this division therefore is to offer incentives to developers to include units of affordable housing within development projects, thereby mitigating the impact of market rate housing construction on the limited supply of available land for suitable housing, and helping to meet the housing needs of all economic groups within the city. The city believes that this division will assist in meeting the city's comprehensive goals for affordable housing, in the prevention of overcrowding and deterioration of the limited supply of affordable housing, and by doing so promote the health, safety and welfare of its citizens.

Sec. 14-485. Definitions.

Affordable means that the percentage of income a household is charged in rent and other housing expenses, or must pay in monthly mortgage payments (including insurance and taxes), does not exceed 30% of a household's income, or other amount established in city regulations that does not vary significantly from this amount.

Low-income housing unit for rent means a dwelling unit for which:

(a) *The rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by the United States Department of Housing and Urban Development (HUD); and*

(b) *Annual rent increases for that unit are limited in perpetuity by deed restriction or other legally binding agreement to the percentage increase in the*

U.S. Department of Housing and Urban Development moderate-income figure for metropolitan Cumberland county Maine for a household of that size.

These units will be for rent.

Dwelling unit has the same meaning as that term is defined in section 14-47.

Eligible project means a development project:

(a) *That is permissible under the provisions of this chapter in the zone in which it is proposed;*

This project qualifies as a residential project.

(b) *That will be a multi-family dwelling ,as defined in section 14-47, and will not be located in an R-1 or R-2 zone;*

This project is in the R-P Zone, qualifying for this chapter.

(c) *That creates new dwelling units, among which is at least one low-income housing unit for rent or workforce housing for sale, through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. Affordable housing units for sale or rent may not differ in exterior design from other units within an eligible project; and*

The project will have a mix of affordable units and market rate units, all the same.

(d) *Projects shall not be considered "eligible projects" solely because they are subject to Section 14-487 ("Ensuring Workforce Housing").*

This project goes beyond the workforce housing unit numbers required.

Workforce housing unit for rent means a dwelling unit which:

(a) *Is affordable to a household earning less than 100% of HUD AMI; and*

The project will have at 24 at 50% AMI 10 at 60% AMI and 6 Market Rate units.

(b) *Annual rent increases for that unit are limited by deed restriction or other legally binding agreement to the percentage increase in the HUD Greater Portland Metropolitan Statistical Area median income figures for a household of that size.*

Avesta will manage these units and will conform to the rent restrictions.

Sec. 14-487. Ensuring Workforce Housing.

(a) *Purpose. Based on the city's Comprehensive Plan and the housing study completed in 2015, it is in the public interest to promote an adequate supply of housing that is affordable to a range of households at different income levels. The purpose of this section is to ensure that housing developments over a certain size provide a portion of workforce housing units and, by doing so, promote the health, safety, and welfare of Portland citizens.*

This project provides excess workforce housing.

(c) *All Developments of Ten Units or More Conditional Uses.*

Notwithstanding any language to the contrary in Chapter 14, all developments of ten units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements of this section, 14-487.

This project falls under this provision having 40 units.

(d) *Workforce Housing Minimum. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units as per (e)2. below, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.*

(e) *Standards.*

1. *Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.*

   This project is not phased.

2. *Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.*

   All units will be integrated into the building.

3. *Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.*

   All units are one bedroom.

4. *As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.*

   No fees required.

5. *Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.*

   These units will not be offered for sale.

6. *If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing*

TIF, subject to City Council approval.

This project exceeds the 33% and is eligible for a TIF.

7. *The term of affordability for the required 10 percent workforce units provided shall be defined as follows:*

Percentage of Workforce Units Provided	*Minimum Term of Affordability for Required Workforce Units*
10%	*Longest term permitted under federal, state and local laws and ordinances*
25%	*30 years*
50%	*20 years*
100%	*10 years*

This project has 34 affordable units and 6 market rate units.

Sec. 14-488. Density, parking and dimensional bonuses and reductions.

Notwithstanding any other provision of this chapter to the contrary, in order to encourage low income and workforce units in designated growth areas, eligible projects may avail themselves of the following options.

(a) Density bonuses. The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table.

Eligible projects in all B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-5, R-7, and R-P Zones

Percentage Low Income Units for Sale/Rent	*Percentage Workforce Units for Sale/Rent*	*Density Permitted**	*Additional Height Permitted***	*Setback Reductions***
10%	*20%*	*1.1 x base*	*N/A*	*N/A*
20%	*40%*	*1.2 x base*	*10 feet*	*N/A*
30%	*60%*	*1.3 x base*	*10 feet*	*5'*
50%	*100%*	*2.0 x base*	*15 feet*	*5'*
75%	*N/A*	*2.5 x base*	*25 feet*	*10'*

This project has 85% affordable units and qualifies for the maximum relief.

**: "Base" is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, multifamily is permitted with a "base" no less than 1 unit per 1,500 sf. of land area. If an eligible project is providing both workforce and affordable housing units, the applicant shall have the option of utilizing applicable incentives, but not cumulatively.*

This project is in the R-P District.

***: Setback reductions are absolute reductions in front, side and/or rear yard setback requirements. The maximum setback reductions in the B-1, B-1b and R-P*

zones shall be 5 feet.

This project will use the maximum reduction of 5'.

**** The maximum additional height permitted in the B-1 zones and the R-P zone shall be 15 feet. In addition, the maximum structure height is 50 feet within 750 feet of the Portland Observatory.*

This project will use the maximum 15' height addition.

(b) *Off-street parking. Off-street parking is required as provided in Division 20 (off-street parking) of this article.*

The parking will be reviewed with the Board to reduce the total required.

(e) *Unit Size and Term of Affordability. In order to be eligible for this section, the low income and workforce housing units must:*

1. *Meet Section 14-487 Ensuring Workforce Housing, subsection (e) Standards 1,2 and 3; and*

2. *Be affordable for the longest term permitted under federal, state and local laws.*

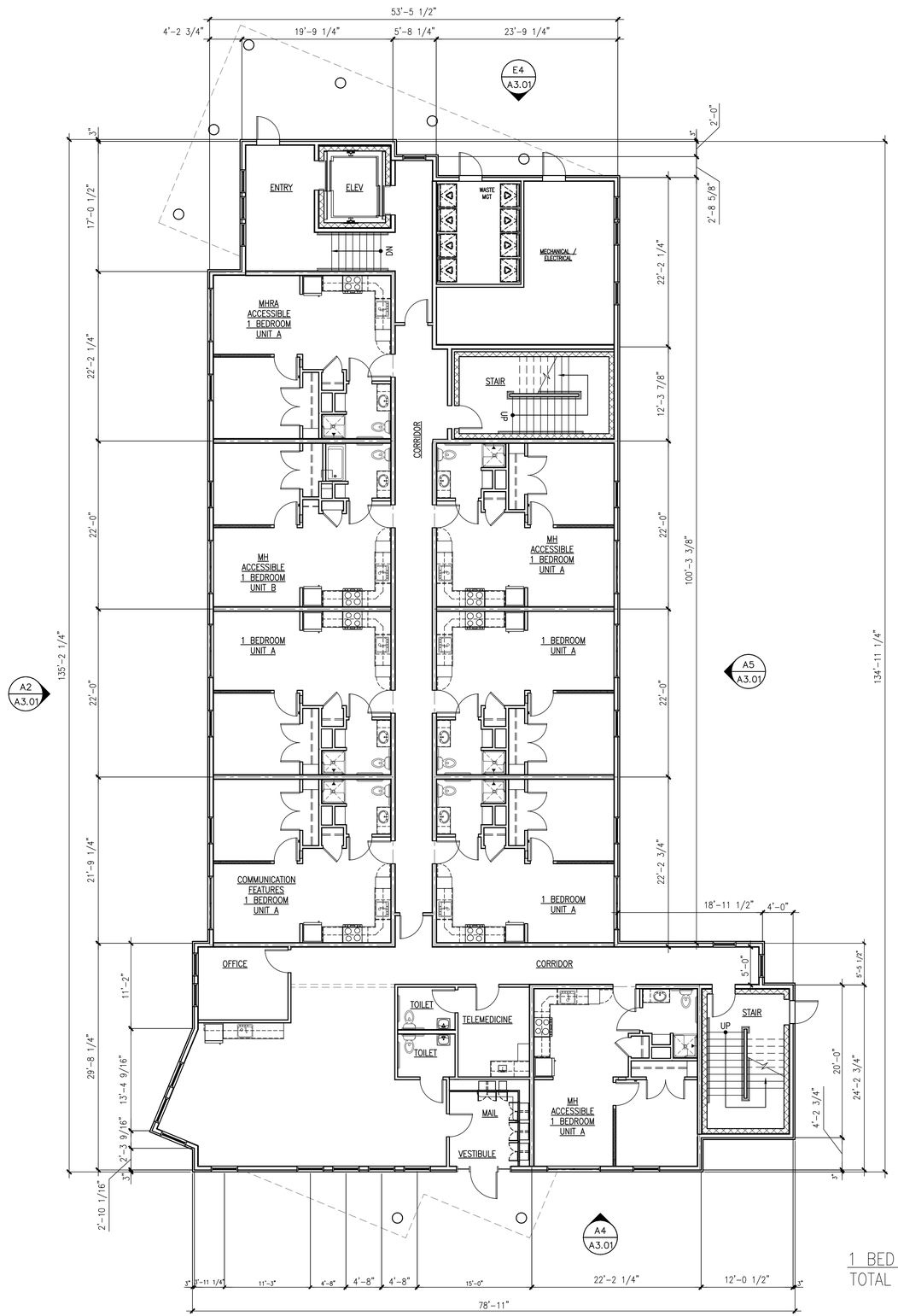
Avesta will keep these units affordable long term.

(f) *Required Public Process. The developer of the project must also commit to a good faith effort to communicate openly with affected properties as their process moves forward. At a minimum, no less than 30 days prior to application for site plan review, any project that wishes to take advantage of this section must (1) hold a public meeting noticed to all properties within 500 feet of their site and (2) post a sign on the property in question describing the proposed project; intent to submit an application to the city in 30 days (cite anticipated submission date); and contact information for the developer and the Planning Authority (Department of Planning and Urban Development website link). The Planning Board may adopt regulations regarding the content and processes for noticing as part of the Technical Manual.*

This project will hold a Public Informational Meeting.

(g) *Projects under 14-487. Projects that are subject to 14-487 that choose to provide the required workforce housing units on site are eligible for a 25% increase in total permitted units. If an eligible project is also subject to 14- 487, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under 14-488.1 but not both.*

See the zone chart to see the bonus allowed and used.



FIRST FLOOR PLAN 7684 SQ. FT.

1 BED UNITS = 40
TOTAL 1ST FL = 8

ALL UNITS DESIGNED WITH THE SAME LAYOUT FOR ADAPTABLE OR ACCESSIBLE UNIT. DESIGNATION OF ACCESSIBLE UNIT QUANTITY AND LOCATION TO BE PROVIDED WITH APPLICATION. ALL UNITS MEET DIMENSIONAL REQUIREMENTS

A5 FIRST FLOOR PLAN
REFERENCED FROM: SCALE: 1/8" = 1'-0"

W:\2015 Design Projects\15040 Avesta 977 Brighton Apartments\1-Drawings\Arch\- 1st Floor plan

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
PORTLAND, MAINE 04101
T. 207-774-4441
F. 207-774-4016
WWW.CWSARCH.COM

OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING

307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE SENIOR APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

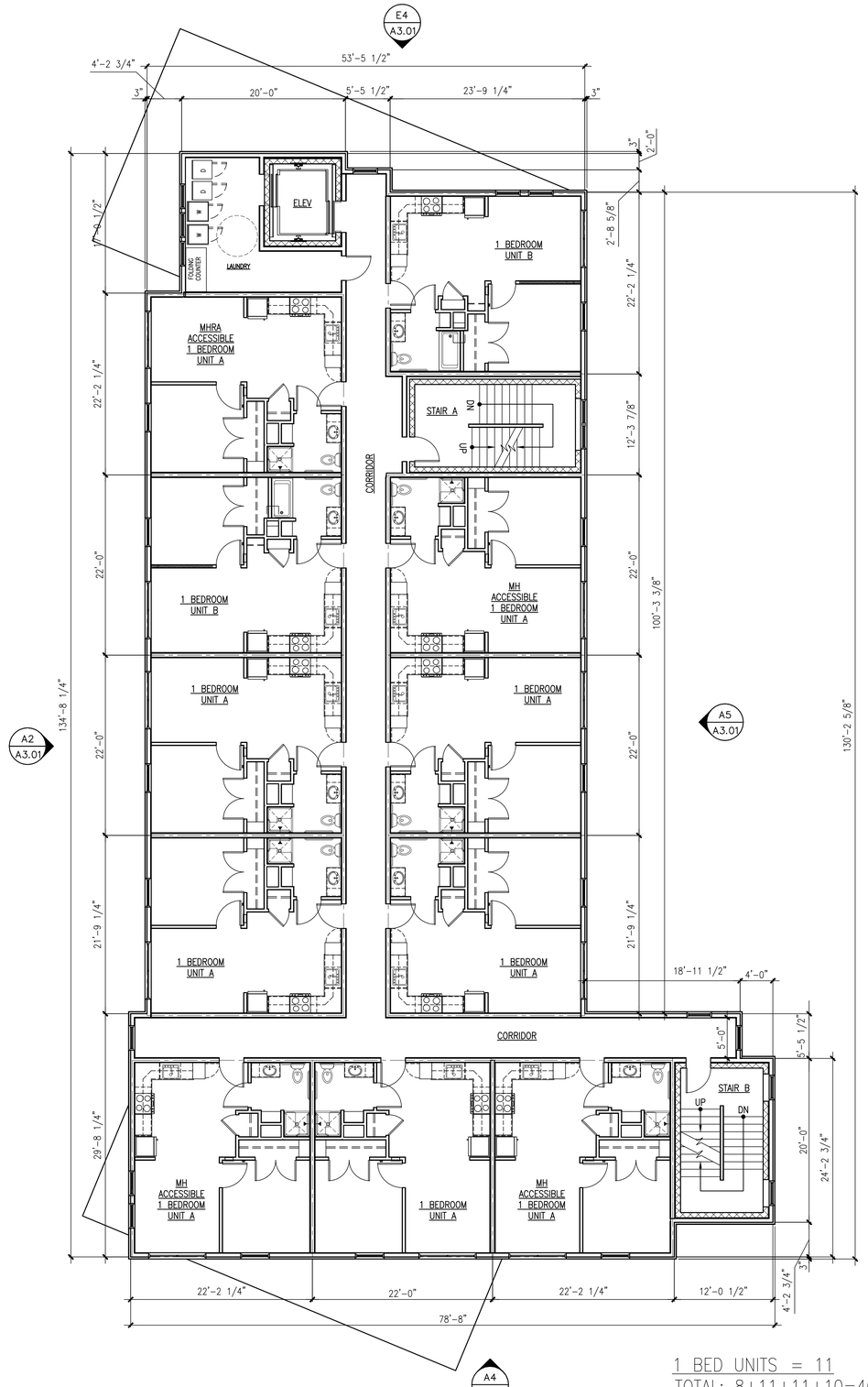
FIRST FLOOR PLAN

CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
A1.10

SCALE: AS NOTED
DATE: 12/21/2017



1 BED UNITS = 11
TOTAL: 8+11+11+10=40

SECOND FLOOR PLAN
7684 SQ. FT.

ALL UNITS DESIGNED WITH THE SAME LAYOUT FOR ADAPTABLE OR ACCESSIBLE UNIT. DESIGNATION OF ACCESSIBLE UNIT QUANTITY AND LOCATION TO BE PROVIDED WITH APPLICATION. ALL UNITS MEET DIMENSIONAL REQUIREMENTS

A5 SECOND FLOOR PLAN
REFERENCED FROM: SCALE: 1/8" = 1'-0"

W:\2015 Design Projects\15040 Avesta 977 Brighton Apartments\1-Drawings\Unit~ 2nd Floor plan

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

434 Cumberland Avenue Portland ME 04101
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
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OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING

307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE SENIOR APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

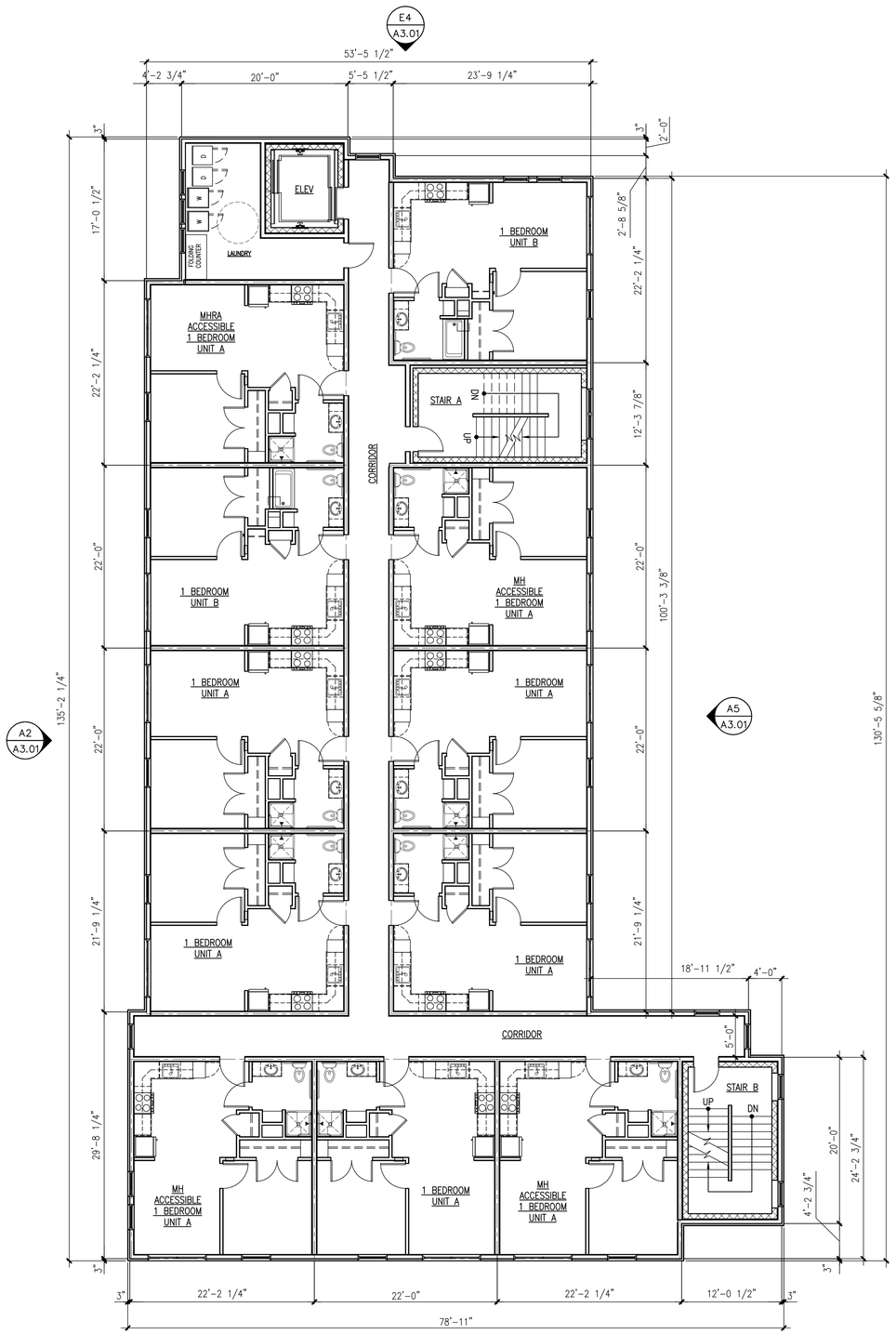
SECOND FLOOR PLAN

CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
A1.20

SCALE: AS NOTED
DATE: 12/21/2017



THIRD FLOOR PLAN
7684 SQ. FT.

ALL UNITS DESIGNED WITH THE SAME LAYOUT FOR ADAPTABLE OR ACCESSIBLE UNIT. DESIGNATION OF ACCESSIBLE UNIT QUANTITY AND LOCATION TO BE PROVIDED WITH APPLICATION. ALL UNITS MEET DIMENSIONAL REQUIREMENTS

A5 THIRD FLOOR PLAN
SCALE: 1/8" = 1'-0"

W:\2015 Design Projects\15040 Avesta 977 Brighton Apartment\1-Drawings\Arch - 3rd Floor plan

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
PORTLAND, MAINE 04101
T: 207.774.4441
F: 207.774.4016
WWW.CWSARCH.COM

OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING

307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE SENIOR APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

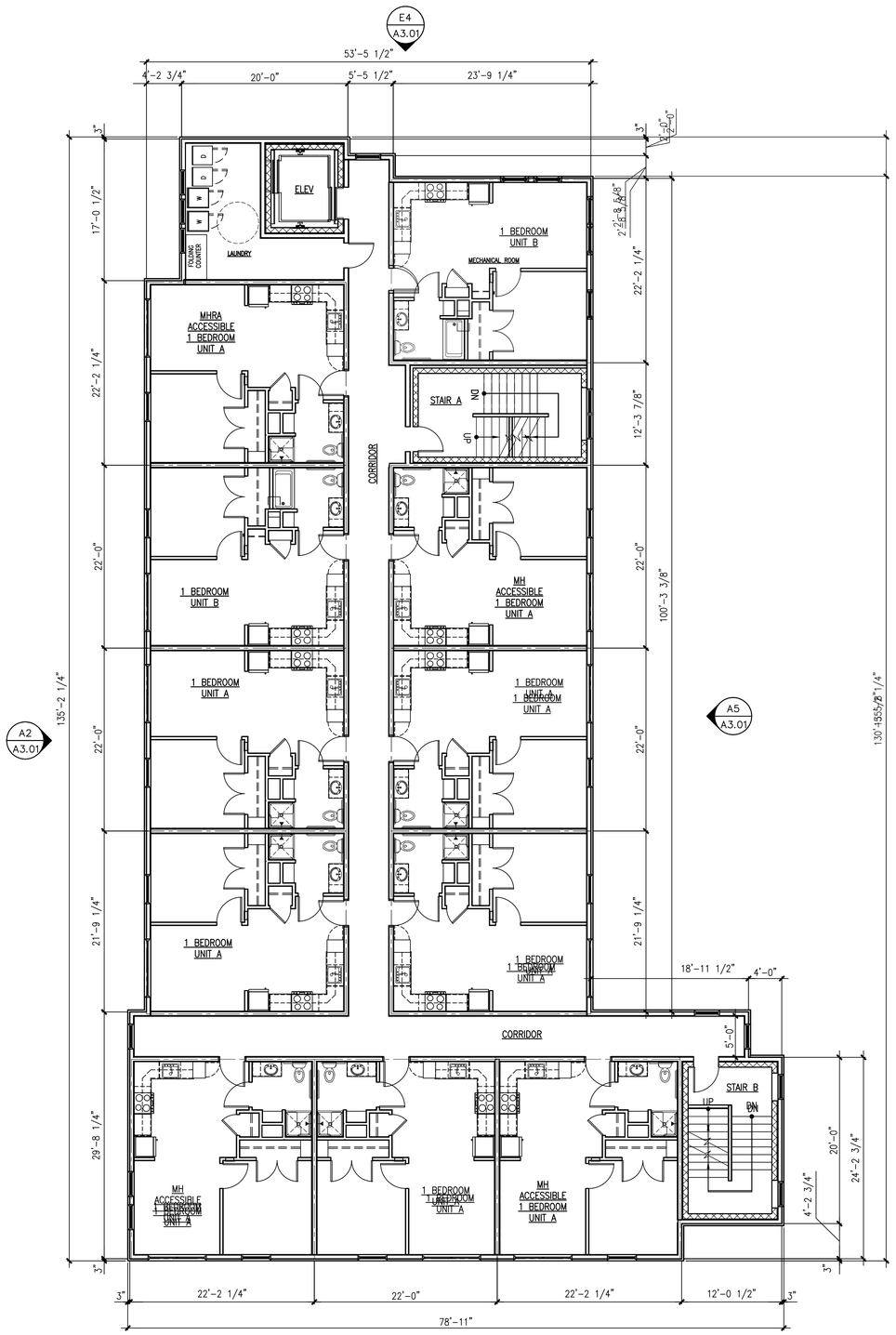
THIRD FLOOR PLAN

CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
A1.30

SCALE: AS NOTED
DATE: 12/21/2017



A4
A3.01

FOURTH FLOOR PLAN

7684 SQ. FT.

ALL UNITS DESIGNED WITH THE SAME LAYOUT FOR ADAPTABLE OR ACCESSIBLE UNIT. DESIGNATION OF ACCESSIBLE UNIT QUANTITY AND LOCATION TO BE PROVIDED WITH APPLICATION. ALL UNITS MEET DIMENSIONAL REQUIREMENTS

A5 FOURTH FLOOR PLAN

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

M:\2015 Design Projects\15040 Avesta 977 Brighton Apartments\1-Drawings\Arch - 4th Floor plan

CWS ARCHITECTS
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OWNER

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c/o AVESTA HOUSING

307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE SENIOR APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

FOURTH FLOOR PLAN

CWS PROJECT NUMBER: 15.040

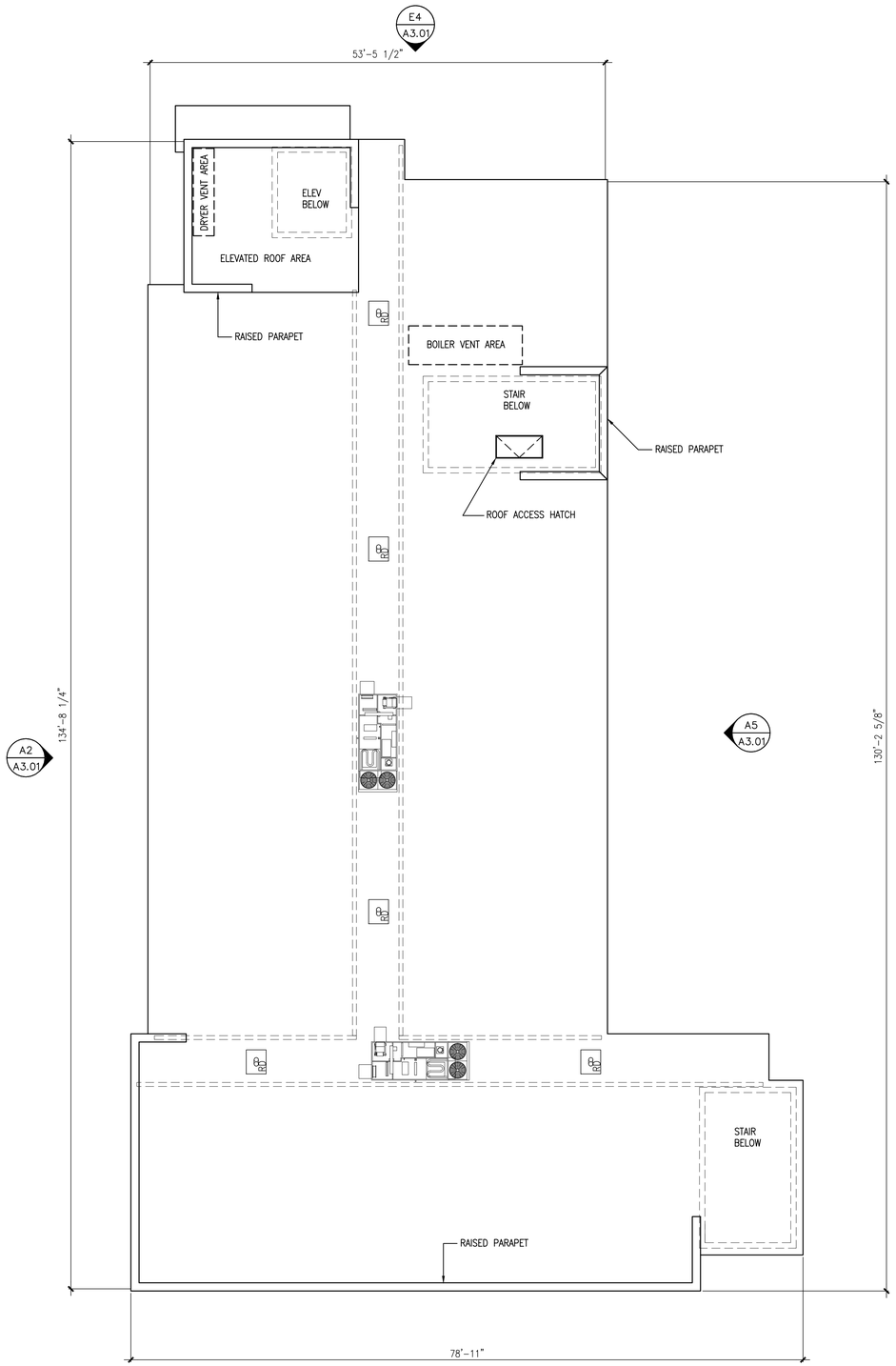
REVISIONS

DRAWING NUMBER

A1.40

SCALE: AS NOTED

DATE: 12/21/2017



ROOF PLAN



A5 ROOF PLAN

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

W:\2015 Design Projects\15040 Avesta 977 Brighton Apartments\1-Drawings\Arch - Roof plan

CWS ARCHITECTS
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OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING

307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE SENIOR APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

ROOF PLAN

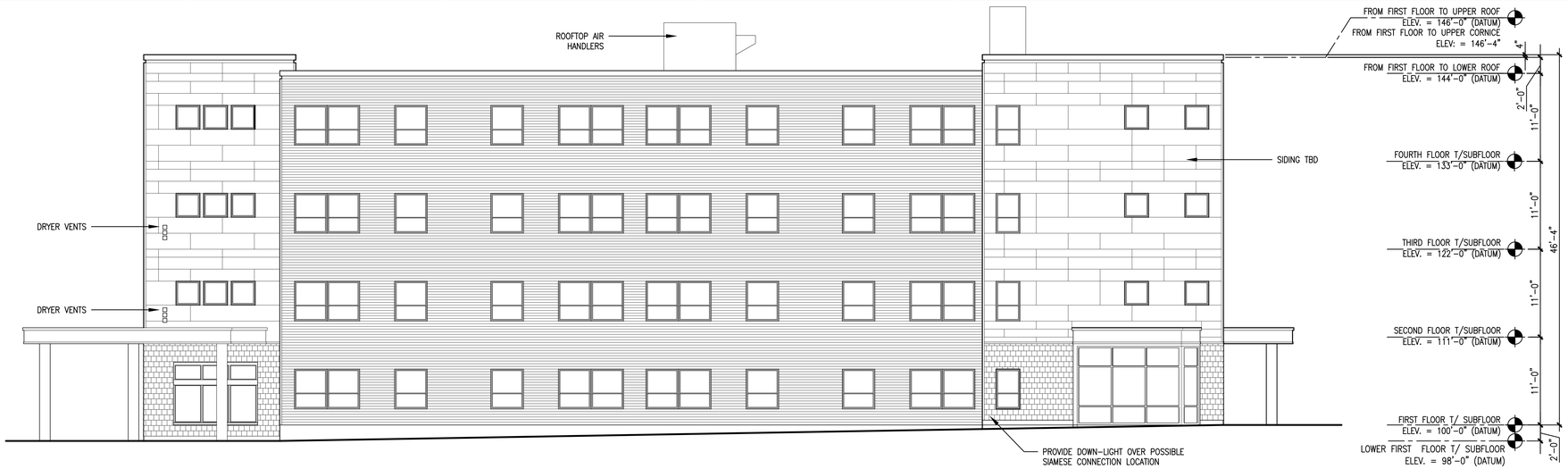
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER

A1.50

SCALE: AS NOTED
DATE: 12/21/2017



A2 WEST ELEVATION - WESSEX ST

REFERENCED FROM: A1 SERIES BUILDING PLANS



A4 SOUTH ELEVATION - BRIGHTON AVE

REFERENCED FROM: A1 SERIES BUILDING PLANS



E4 NORTH ELEVATION

REFERENCED FROM: A1 SERIES BUILDING PLANS



A5 EAST ELEVATION

REFERENCED FROM: A1 SERIES BUILDING PLANS

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OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING

307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE SENIOR APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

EXTERIOR ELEVATIONS

CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER

A3.10

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

DATE: 12/21/2017

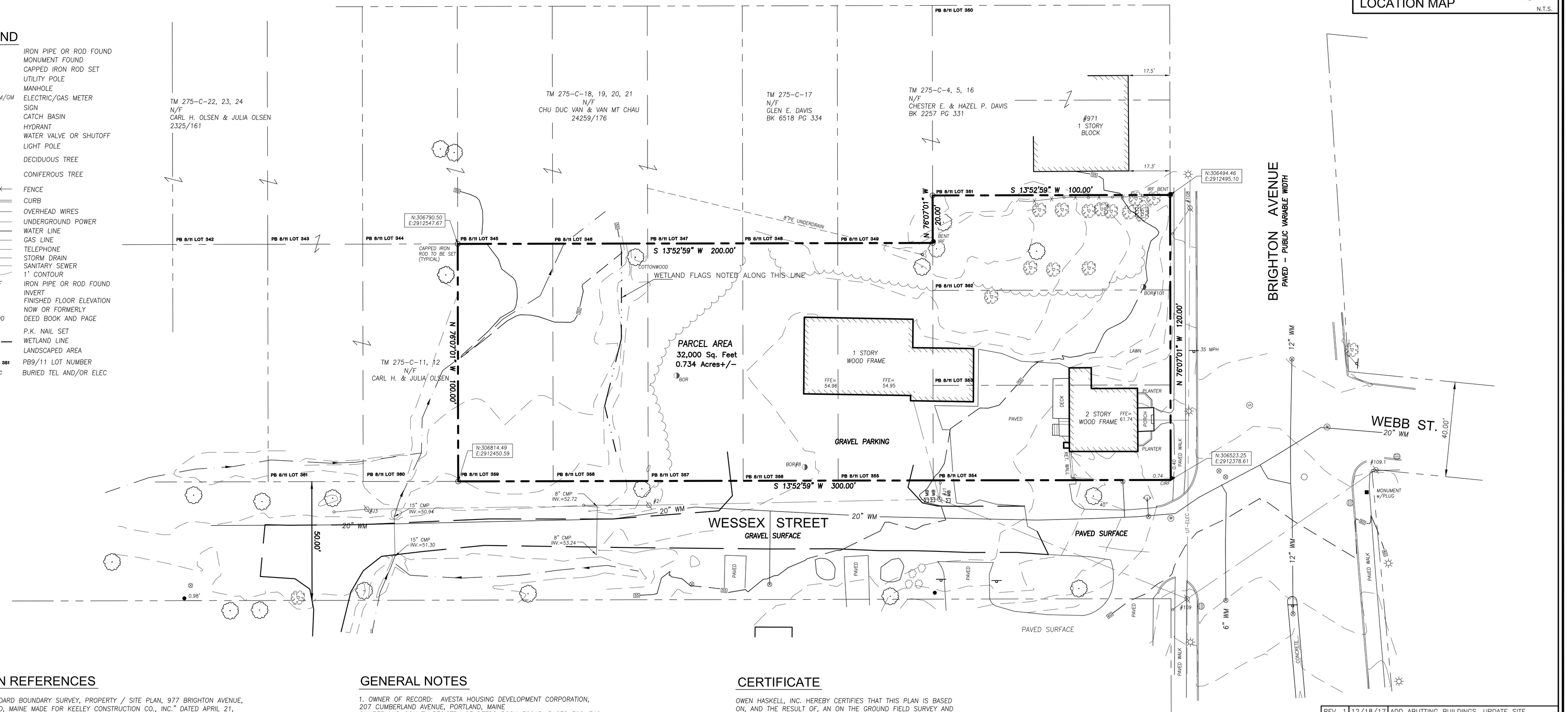
W:\2015 Design Projects\15040 Avesta 977 Brighton Apartments\1-Drawings\30-Elevations

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.

LEGEND

●	IRON PIPE OR ROD FOUND
■	MONUMENT FOUND
●	CAPPED IRON ROD SET
⌀	UTILITY POLE
○	MANHOLE
☒ EM/GM	ELECTRIC/GAS METER
⊡	SIGN
▤ ◍	CATCH BASIN
◇	HYDRANT
⊗	WATER VALVE OR SHUTOFF
☼	LIGHT POLE
	DECIDUOUS TREE
	CONIFEROUS TREE
X X	FENCE
	CURB
OHW	OVERHEAD WIRES
E	UNDERGROUND POWER
W	WATER LINE
G	GAS LINE
T	TELEPHONE
SD	STORM DRAIN
SS	SANITARY SEWER
100	1' CONTOUR
IPF/IRF	IRON PIPE OR ROD FOUND
INV.	INVERT
FFE	FINISHED FLOOR ELEVATION
N/F	NOW OR FORMERLY
000/000	DEED BOOK AND PAGE
▲	P.K. NAIL SET
. . .	WETLAND LINE
L/S	LANDSCAPED AREA
PB 8/11 LOT 351	PB9/11 LOT NUMBER
UT-ELEC	BURIED TEL AND/OR ELEC



PLAN REFERENCES

1. *"STANDARD BOUNDARY SURVEY, PROPERTY / SITE PLAN, 977 BRIGHTON AVENUE, PORTLAND, MAINE MADE FOR KEELEY CONSTRUCTION CO., INC." DATED APRIL 21, 1989 BY TITCOMB ASSOCIATES.*

2. *"RAND ROAD SIDELINE SURVEY FROM PORTLAND TERMINAL RAILROAD TO BRIGHTON AVE. AND A PORTION OF BRIGHTON AVE., CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT, ENGINEERING SECTION" DATED NOV. 13, 2003.*

3. *"SAGAMORE VILLAGE, OWNER-UNITED STATES OF AMERICA, CITY OF PORTLAND, CUMBERLAND COUNTY, MAINE" DATED SEPTEMBER 28, 1947 BY H.B. ULLIAN, C.E. RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 34, PAGE 38.*

4. *"PLAN OF GLENWOOD, DEERING, MAINE, WOOD, HARMON & CO." DATED MAY 1895 BY JORDAN & RICHARDSON RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 8, PAGE 17.*

5. *CITY OF PORTLAND BLUE SHEETS.*

6. *PLAN OF BOUNDARY AND TOPOGRAPHIC SURVEY OF HALL SCHOOL MADE FOR OAK POINT ASSOCIATES BY OWEN HASKELL, INC. DATED 2-14-2013.*

GENERAL NOTES

1. *OWNER OF RECORD: AVESTA HOUSING DEVELOPMENT CORPORATION, 207 CUMBERLAND AVENUE, PORTLAND, MAINE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 32645, PAGES 302-310*

2. *PARCEL IS SHOWN AS LOTS 1, 2, 3, 6, 7, 8 AND 9, BLOCK C, ON CITY OF PORTLAND'S ASSESSORS MAP 275.*

3. *BEARINGS ARE BASED ON GRID NORTH NAD83. CITY COORDINATES FOR MONUMENT AT NORTHWEST CORNER OF RIGGS STREET AND WARWICK STREET AND MONUMENT AT SOUTHEAST CORNER OF HALL SCHOOL PROPERTY USED.*

4. *ELEVATIONS ARE BASED ON CITY DATUM. BENCH MARK: 3' OFFSET MONUMENT AT RIGGS AND WARWICK STREET, ELEVATION 63.61 ESTABLISHED BY LEVEL RUN FROM CITY 3' OFFSET MONUMENT OPPOSITE ESSEX STREET ELEVATION 61.39 MAY 1999, PRIOR TO MONUMENT BEING CUT DOWN.*

5. *SCATTERED WETLAND FLAGS WERE FOUND, ALONG THE NOTED WETLAND LINE BY UNKNOWN WETLANDS DELINEATOR.*

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, EXCEPT IRONS NOT SET TO DATE.

DATE — JOHN C. SCHWANDA PLS 1252

ORIGINALLY PREPARED BY REGINALD S. PARKER PLS#1154

GRAPHIC SCALE

0 10' 20' 40' 80'

REV.		
1	12/18/17	ADD ABUTTING BUILDINGS, UPDATE SITE

BOUNDARY & TOPOGRAPHIC SURVEY

AT

977 BRIGHTON AVENUE, PORTLAND, MAINE

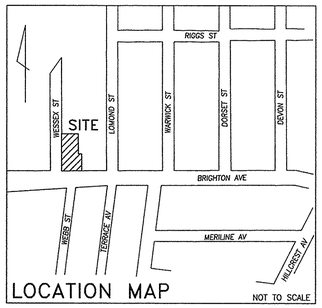
MADE FOR

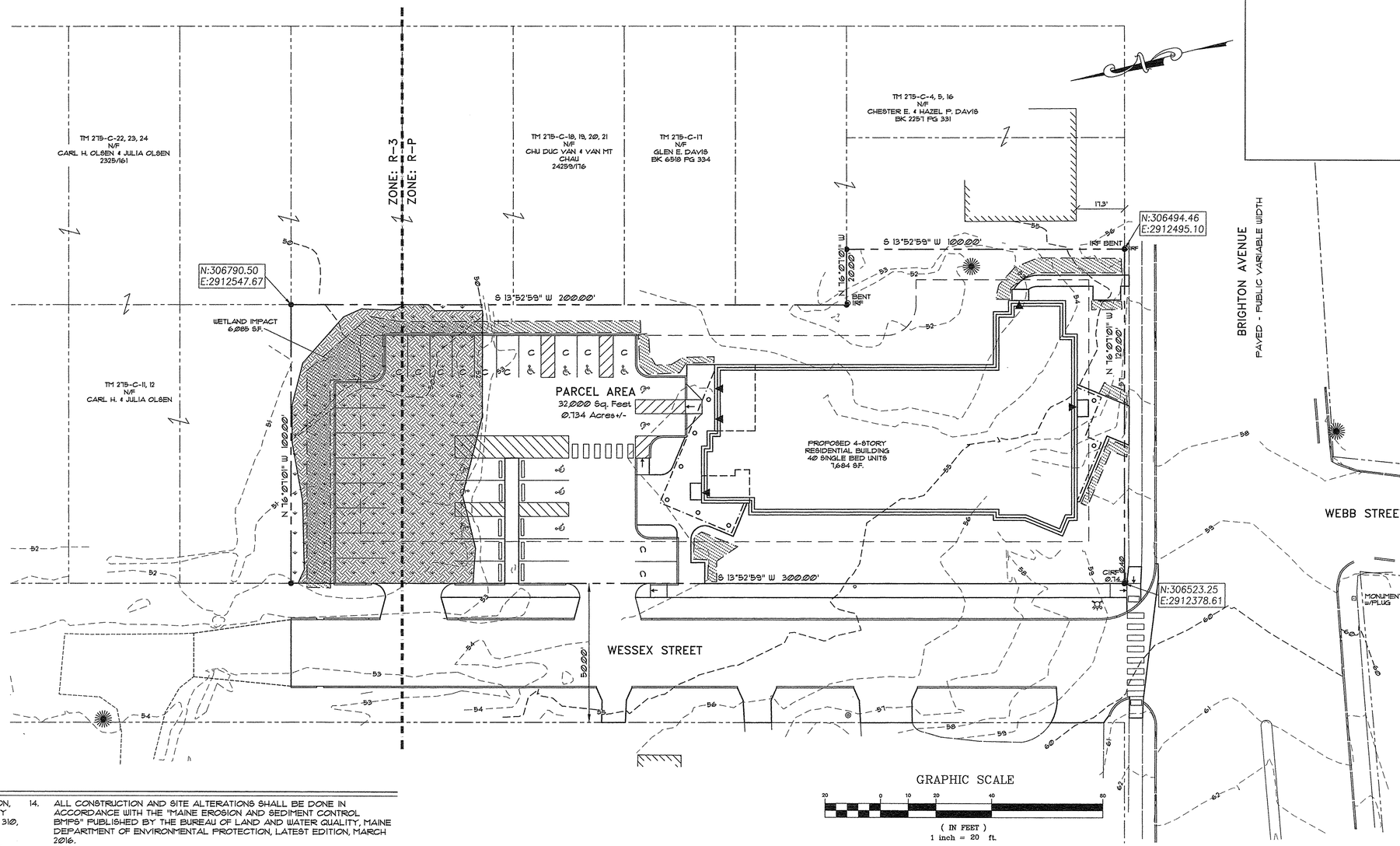
AVESTA HOUSING

307 CUMBERLAND AVENUE, PORTLAND, MAINE

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

Drwn By	TMK, RSP	Date	Job No.
Trace By	TMK/JLW	JULY 13, 2016	2016-171P
Check By	RSP	Scale	Drwg. No.
Book No.	FILE	1" = 20'	1





GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

1. OWNER/DEVELOPER: AVESTA HOUSING DEVELOPMENT CORPORATION, 307 CUMBERLAND AVENUE, PORTLAND MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 33190, PAGE 302 & BOOK 33190, PAGE 310, RECORDED DATES 10/6/15.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVEUNE, PORTLAND, MAINE.
3. ARCHITECT: CWS ARCHITECTS, 264 U.S. ROUTE ONE #2A, SCARBOROUGH, MAINE.
4. TOPOGRAPHIC, UTILITY AND BOUNDARY INFORMATION TAKEN FROM "BOUNDARY & TOPOGRAPHIC SURVEY AT 977 BRIGHTON AVENUE, PORTLAND, MAINE MADE FOR AVESTA HOUSING 307 CUMBERLAND AVENUE, PORTLAND, MAINE" BY OWEN HASKELL, INC., 390 U.S. ROUTE ONE, FALMOUTH, MAINE. PLAN DATED JULY 13, 2016. BENCHMARK: 3' OFFSET MONUMENT AT RIGGS AND WARWICK STREET, ELEVATION 63.61.
5. WETLAND MAPPING PROVIDED BY ALBERT FRICK ASSOCIATES, INC., 95A GORHAM ROAD, GORHAM, MAINE.
6. SOILS MAPPING TAKEN FROM SOIL CONSERVATION STUDY OF CUMBERLAND COUNTY AND ARE SCANTIC (Sn), SILT LOAM, AT THE SOUTH HALF OF THE SITE AND ELMWOOD (EmB), FINE SANDY LOAM AT THE NORTH HALF OF THE PARCEL.
7. ZONE: RESIDENTIAL PROFESSIONAL AND RESIDENTIAL 3
   CHANGED TO AFFORDABLE SENIOR HOUSING
   PROPOSED USE: AFFORDABLE SENIOR HOUSING
8. TAX MAP REFERENCE: MAP 215 / BLOCK C / LOTS 1, 2, 3, 6, 7, 8 AND 9.
9. TOTAL PARCEL = 0.734 ACRES
10. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 811 OR 1-888-DIG-SAFE.
11. BUILDING SHALL HAVE A NUMBER CLEARLY VISIBLE FROM THE ROAD.
12. LOT TO BE SERVICED BY PUBLIC WATER AND SEWER. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
13. POWER, TELEPHONE AND CABLE ARE TO BE UNDERGROUND FROM AN EXISTING POLE. THESE SERVICES ARE SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
14. 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 2016.
15. NO CONSTRUCTION OR FILLING OF WETLANDS OTHER THAN THAT SHOWN ON THE PLAN ARE ALLOWED. NRPA PERMIT IS REQUIRED FOR THIS PROJECT.
16. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
17. THE SUBJECT PARCEL KNOWN AS 977 BRIGHTON AVENUE IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
18. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR 977 BRIGHTON SITE PLAN.
19. FLOODPLAIN: THIS PROPERTY IS IN ZONE X OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0006 C, EFFECTIVE DATE DECEMBER 8, 1998. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
20. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON SHEET C1.2 UNDER SNOW CLEARANCE NOTES.
21. MECHANICAL EQUIPMENT IS TO BE INSTALLED ON THE ROOF.
22. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE OWNER AT THE END OF CONSTRUCTION. ANY MONUMENTATION DAMAGED BY CONSTRUCTION IS TO BE REPLACED.
23. 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 2016.
24. THIS PROJECT HAS A GEOTECHNICAL REPORT BY S.W. COLE ENGINEERING INC. ALL RECOMMENDATIONS OF THE REPORT ARE TO BE FOLLOWED WHILE CONDUCTING AND COMPLETING SITE EARTHWORK.

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- BUILDING SETBACK
- ZONING DISTRICT
- EDGE OF PAVEMENT
- 200 CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- WETLAND LIMIT
- WETLAND
- IRON ROD OR PIPE FOUND
- BOUND FOUND
- TREES

PROPOSED

- EDGE OF PAVEMENT
- SLOPED CONCRETE CURB
- VERTICAL GRANITE CURB
- GRADE BREAKS AT PLAZAS
- GRADE BREAKS AT SIDEWALK
- EDGE OF GRAVEL
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING CANOPY
- CONCRETE WHEELSTOPS
- CAPPED IRON ROD TO BE SET
- HANDICAP PARKING
- "NO PARKING" AREA
- PAINTED CROSSWALK
- DETECTABLE SURFACE AT RAMP
- WETLAND IMPACT
- SNOW STORAGE AREAS

SUBDIVISION PLAT, APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

DATE

Date

John C. Schwanda, PLS No. 1252

For Boundary and Existing Conditions Only

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
434 Cumberland Avenue Portland ME 04101
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER

STATE OF MAINE
THOMAS S. GREER No. 4268
REGISTERED PROFESSIONAL ENGINEER
12/21/17

PINKHAM & GREER CIVIL ENGINEERS
28 VANNAH AVE, PORTLAND, ME. 04102
TEL: 207.797.3242 FAX: 207.797.4142

OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING
307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE ELDERLY
APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

SUBDIVISION
RECORDING PLAT
SHEET 1 OF 2
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C1.1

SCALE: AS SHOWN
DATE: 12/21/2017

S:\Land Projects\2015\15040-977 BRIGHTON AVE, #PORTLAND\CAD\15040 SUB

CITY OF PORTLAND
CONDITIONS OF APPROVAL

IMPERVIOUS INFORMATION

	EXISTING	PROPOSED
BUILDINGS	3,128 SQ. FT.	7,825 SQ. FT.
PAVEMENT & GRAVEL	5,040 SQ. FT.	11,570 SQ. FT.
	8,168 SQ. FT.	19,395 SQ. FT.
NET IMPERVIOUS	+ 11,227 SQ. FT.	

PARKING & BICYCLES

PARKING SPACES PROVIDED:	32
STANDARD SPACES:	
9x18	8
8x18	4
8x15 (COMPACT)	8
ACCESSIBLE SPACES:	
8x18	8
8X15 (COMPACT)	4
BICYCLE SPACES PROVIDED:	16 (8 RACKS)
BIKE SPACES REQUIRED:	
2 BIKE SPACES PER	
5 DWELLING UNITS (40/2.5):	16

UNIT ANALYSIS

UNITS:	40 1-BEDROOM UNITS
UNIT COMPOSITION:	
50% OF ANNUAL MEDIAN INCOME:	24
60% OF ANNUAL MEDIAN INCOME:	10
MARKET RATE:	6
WORKFORCE UNITS:	0

SURVEY GENERAL NOTES

1. OWNER OF RECORD: AVESTA HOUSING DEVELOPMENT CORPORATION, 307 CUMBERLAND AVENUE, PORTLAND, MAINE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 32645, PAGES 302-310
2. PARCEL IS SHOWN AS LOTS 1, 2, 3, 6, 7, 8 AND 9, BLOCK C, ON CITY OF PORTLAND'S ASSESSORS MAP 215.
3. BEARINGS ARE BASED ON GRID NORTH NAD83. CITY COORDINATES FOR MONUMENT AT NORTHWEST CORNER OF RIGGS STREET AND WARWICK STREET AND MONUMENT AT SOUTHEAST CORNER OF HALL SCHOOL PROPERTY USED.
4. ELEVATIONS ARE BASED ON CITY DATUM. BENCH MARK: 3' OFFSET MONUMENT AT RIGGS AND WARWICK STREET, ELEVATION 63.61 ESTABLISHED BY LEVEL RUN FROM CITY 3' OFFSET MONUMENT OPPOSITE ESSEX STREET ELEVATION 61.39 MAY 1999, PRIOR TO MONUMENT BEING CUT DOWN.
5. SCATTERED WETLAND FLAGS WERE FOUND, ALONG THE NOTED WETLAND LINE BY UNKNOWN WETLANDS DELINEATOR.

SURVEY PLAN REFERENCES

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3. "SAGAMORE VILLAGE, OWNER-UNITED STATES OF AMERICA, CITY OF PORTLAND, CUMBERLAND COUNTY, MAINE" DATED SEPTEMBER 28, 1941 BY H.B. ULLIAN, C.E. RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 34, PAGE 38.
4. "PLAN OF GLENWOOD, DEERING, MAINE, WOOD, HARMON & CO." DATED MAY 1895 BY JORDAN & RICHARDSON RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 8, PAGE 11.
5. CITY OF PORTLAND BLUE SHEETS.
6. PLAN OF BOUNDARY AND TOPOGRAPHIC SURVEY OF HALL SCHOOL MADE FOR OAK POINT ASSOCIATES BY OWEN HASKELL, INC. DATED 2-14-2013.

SNOW CLEARANCE NOTES

1. SNOW MAY BE STORED WITHIN THE SNOW STORAGE AREAS.
2. ANY SNOW THAT CAN NOT BE STORED ON SITE SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE IF NECCESSARY.
3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXEMPTION REQUIREMENTS SPECIFIED WITHIN CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.
4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING ETC. RESULTING FROM THEIR ACTIVITIES.
5. THE SNOW CONTRACTOR SHALL USE SALT OR CHLORIDE SUBSTITUTE TO DEICE THE PARKING LOT.
6. THE OWNER IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

WAIVERS REQUESTED

1. THE PLANNING BOARD WAIVES / DOES NOT WAIVE SECTION 14-526 (a) 4 (iv) OF THE CITY OF PORTLAND CHAPTER 14 LAND USE ORDINANCE FOR REDUCTION OF DRIVE AISLE FROM 24 FEET TO 21 FEET.
2. THE PLANNING BOARD WAIVES / DOES NOT WAIVE SECTION 1.14 OF THE CITY OF PORTLAND'S TECHNICAL MANUAL STANDARD THAT PARKING LOTS WITH GREATER THAN 10 SPACES MAY BE COMPRISED OF UP TO 20% COMPACT PARKING SPACES, TO ALLOW 12 COMPACT SPACES WHICH IS 37.5% OF THE TOTAL NUMBER

SUBDIVISION PLAT, APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

_____

_____

_____

_____

_____

_____

_____

_____
DATE

CITY OF PORTLAND SUBDIVISION NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE OVERHEAD.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.
10. SUBDIVISION AT THE TIME OF APPROVAL IS DEFINED AS "SUBDIVISION SHALL MEAN THE DIVISION OF A LOT, TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE LOTS, INCLUDING LOTS OF FORTY (40) ACRES OR MORE, WITHIN ANY FIVE-YEAR PERIOD WHETHER ACCOMPLISHED BY SALE, LEASE, DEVELOPMENT, BUILDINGS OR OTHERWISE AND AS FURTHER DEFINED IN 30-A M.R.S.A. SECTION 4401. THE TERM SUBDIVISION SHALL ALSO INCLUDE THE DIVISION OF A NEW STRUCTURE OR STRUCTURES ON A TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD AND THE DIVISION OF AN EXISTING STRUCTURE OR STRUCTURES PREVIOUSLY USED FOR COMMERCIAL OR INDUSTRIAL USE INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD. THE AREA INCLUDED IN THE EXPANSION OF AN EXISTING STRUCTURE IS DEEMED TO BE A NEW STRUCTURE FOR THE PURPOSE OF THIS PARAGRAPH. A DWELLING UNIT SHALL INCLUDE ANY PART OF A STRUCTURE WHICH, THROUGH SALE OR LEASE, IS INTENDED FOR HUMAN HABITATION, INCLUDING SINGLE-FAMILY AND MULTIFAMILY HOUSING CONDOMINIUMS, TIME-SHARE UNITS AND APARTMENTS."

ZONE INFORMATION

ZONE: RESIDENTIAL 3 (R-3) & RESIDENTIAL-PROFESSIONAL
PERMITTED USE: MULTI-FAMILY RESIDENTIAL PROPOSED USE: AFFORDABLE SENIOR HOUSING

SPACE STANDARDS	R-3	R-P	14-488 BONUS	ALLOWED	PROVIDED
LOW INCOME UNITS			85%		34
WORKFORCE UNITS			0%		0
MARKET UNITS			15%		6
TOTAL NUMBER OF UNITS			100%		40
LOT AREA PER UNIT	6,500 SQ. FT.	1500/UNIT *	2.5x1500	= 600	800
MINIMUM LOT SIZE	6,500 SQ. FT.	6,500 SQ. FT.			32,000
MINIMUM STREET FRONTAGE	50 FEET	50 FEET			420 FEET
MAXIMUM FRONT YARD					10 FEET
MINIMUM FRONT YARD	25 FEET	17.6 FEET**	-5 FEET	= 12.85 FEET	17 FEET
MINIMUM REAR YARD	25 FEET	25 FEET			140 FEET
MINIMUM SIDE YARD					
2 1/2 STORY STRUCTURE	16 FEET	16 FEET	-5 FEET	= 11 FEET	20 FEET
SIDE YARD ON A SIDE STREET	20 FEET	20 FEET	-5 FEET	= 15 FEET	15 FEET
MINIMUM UNIT SIZE					528 SQ. FT.
OVERALL BUILDING AREA (GROSS)					30,089 SQ. FT.
ACTUAL LOT COVERAGE (FOOTPRINT)					7,522 SQ. FT.
MAXIMUM LOT COVERAGE	35%	35%			24%
MINIMUM LOT WIDTH	65 FEET	65 FEET			150 FEET
MAXIMUM BUILDING HEIGHT	35 FEET	35 FEET	+15 FEET	= 50 FEET	46 FEET

* PER 14-488

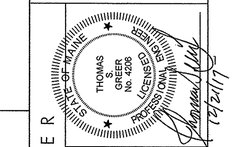
**25' OR AVERAGE OF ABUTTING FRONT YARDS, AVERAGE OF YARDS ABUTTING 977 = 17.85'

Date

John C. Schwanda, PLS No. 1252
For Boundary and Existing Conditions Only

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
434 Cumberland Avenue Portland ME 04101
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER



PINKHAM & GREER
CIVIL ENGINEERS
28 AMORY AVE, PORTLAND, ME 04103
TEL: 207-797-1744 FAX: 207-797-1749

OWNER

AVESTA 977 BRIGHTON LP
c/o AVESTA HOUSING
307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE ELDERLY APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

SUBDIVISION RECORDING PLAT
SHEET 2 OF 2
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C1.2

SCALE: AS SHOWN
DATE: 12/21/2017

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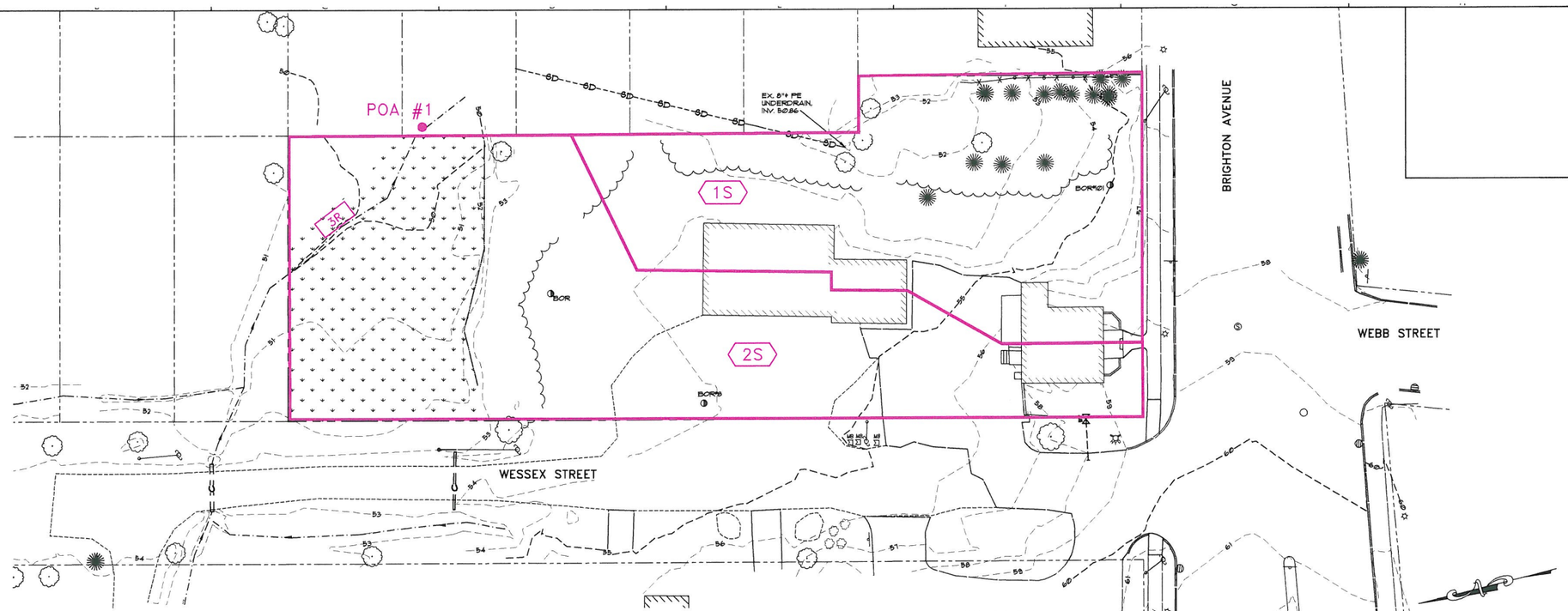
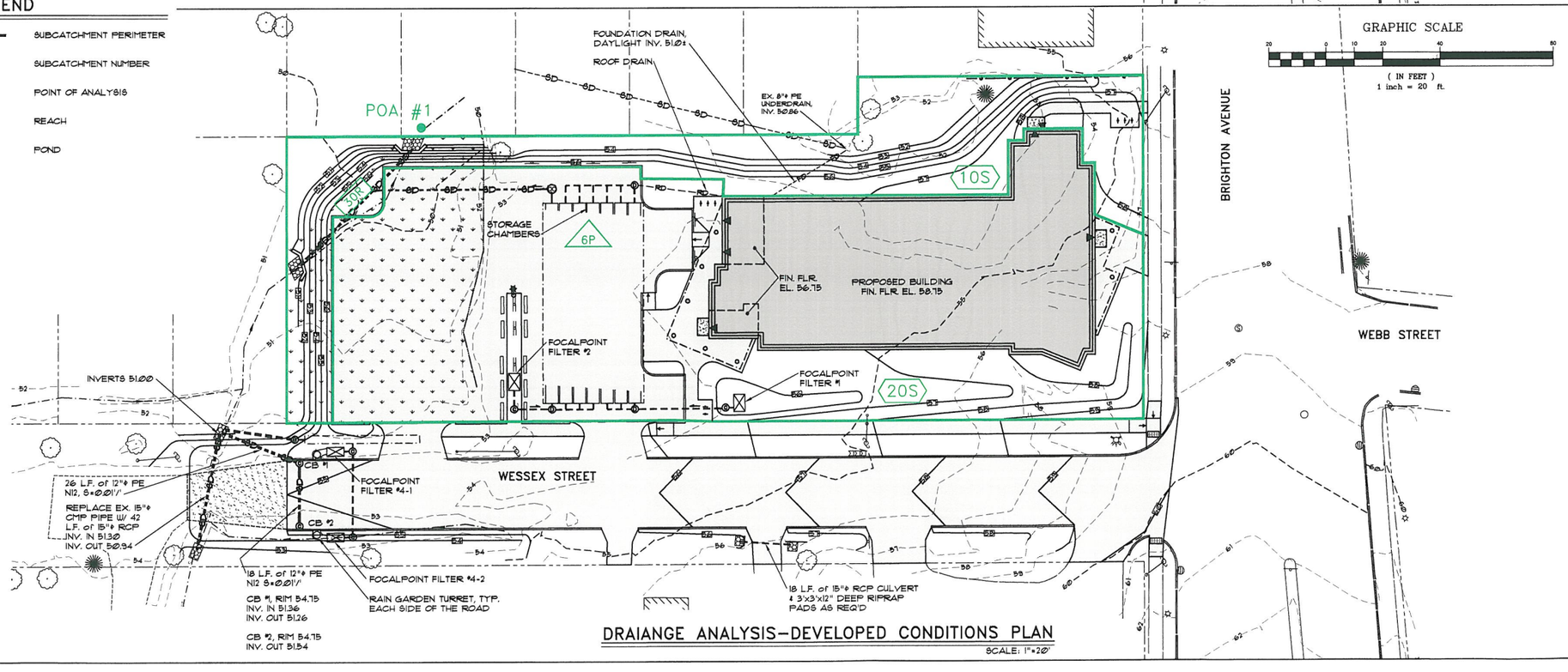


DRAIANGE ANALYSIS–EXISTING CONDITIONS PLAN

SCALE: 1"=20'

DRAINAGE LEGEND

———	SUBCATCHMENT PERIMETER
10S	SUBCATCHMENT NUMBER
POA #1 ●	POINT OF ANALYSIS
10R	REACH
10P	POND



DRAIANGE ANALYSIS–DEVELOPED CONDITIONS PLAN

SCALE: 1"=20'

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
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STATE OF MAINE THOMAS S. GREER No. 4206 LICENSED PROFESSIONAL ENGINEER

12/21/17

DESIGNER

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OWNER

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c/o AVESTA HOUSING
307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE ELDERLY APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

DRAINAGE ANALYSIS

CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER

D1.0

SCALE: AS SHOWN

DATE: 12/21/2017

ZONE INFORMATION

ZONE: RESIDENTIAL 3 (R-3) & RESIDENTIAL-PROFESSIONAL
PERMITTED USE: MULTI-FAMILY RESIDENTIAL PROPOSED USE: AFFORDABLE SENIOR HOUSING

SPACE STANDARDS	R-3	R-P	14-488 BONUS	ALLOWED	PROVIDED
LOW INCOME UNITS			85%		34
WORKFORCE UNITS			0%		0
MARKET UNITS			15%		6
TOTAL NUMBER OF UNITS			100%		40
LOT AREA PER UNIT	6,500 SQ. FT.	1500/UNIT *	2.5x1500	= 600	800
MINIMUM LOT SIZE	6,500 SQ. FT.	6,500 SQ. FT.			32,000
MINIMUM STREET FRONTAGE	50 FEET	50 FEET			420 FEET
MAXIMUM FRONT YARD					10 FEET
MINIMUM FRONT YARD	25 FEET	17.6 FEET**	-5 FEET	= 12.85 FEET	17 FEET
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MINIMUM SIDE YARD					
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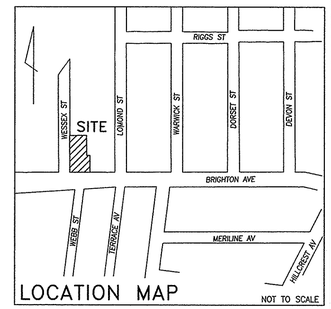
* PER 14-488

**25' OR AVERAGE OF ABUTTING FRONT YARDS, AVERAGE OF YARDS ABUTTING 977 = 17.85'

GENERAL NOTES

1. OWNER/DEVELOPER: AVESTA HOUSING DEVELOPMENT CORPORATION, 307 CUMBERLAND AVENUE, PORTLAND MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 33190, PAGE 302 & BOOK 33190, PAGE 310, RECORDED DATES 10/6/15.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVEUNE, PORTLAND, MAINE.
3. ARCHITECT: CWS ARCHITECTS, 264 U.S. ROUTE ONE #2A, SCARBOROUGH, MAINE.
4. TOPOGRAPHIC, UTILITY AND BOUNDARY INFORMATION TAKEN FROM "BOUNDARY & TOPOGRAPHIC SURVEY AT 977 BRIGHTON AVENUE, PORTLAND, MAINE MADE FOR AVESTA HOUSING 307 CUMBERLAND AVENUE, PORTLAND, MAINE" BY OWEN HASKELL, INC., 390 U.S. ROUTE ONE, FALMOUTH, MAINE. PLAN DATED JULY 13, 2016. BENCHMARK: 3' OFFSET MONUMENT AT RIGGS AND WARWICK STREET, ELEVATION 63.61.
5. WETLAND MAPPING PROVIDED BY ALBERT FRICK ASSOCIATES, INC., 95A GORHAM ROAD, GORHAM, MAINE.
6. SOILS MAPPING TAKEN FROM SOIL CONSERVATION STUDY OF CUMBERLAND COUNTY AND ARE SCANTIC (Sn), SILT LOAM, AT THE SOUTH HALF OF THE SITE AND ELMWOOD (EmB), FINE SANDY LOAM AT THE NORTH HALF OF THE PARCEL.
7. ZONE: RESIDENTIAL PROFESSIONAL AND RESIDENTIAL 3 CHANGED TO AFFORDABLE SENIOR HOUSING
PROPOSED USE: AFFORDABLE SENIOR HOUSING
8. TAX MAP REFERENCE: MAP 275 / BLOCK C / LOTS 1, 2, 3, 6, 7, 8 AND 9.
9. TOTAL PARCEL = 0.734 ACRES
10. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 811 OR 1-888-DIG-SAFE.
11. BUILDING SHALL HAVE A NUMBER CLEARLY VISIBLE FROM THE ROAD.
12. LOT TO BE SERVICED BY PUBLIC WATER AND SEWER. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
13. POWER, TELEPHONE AND CABLE ARE TO BE UNDERGROUND FROM AN EXISTING POLE. THESE SERVICES ARE SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
14. 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 2016.
15. NO CONSTRUCTION OR FILLING OF WETLANDS OTHER THAN THAT SHOWN ON THE PLAN ARE ALLOWED. NRPA PERMIT IS REQUIRED FOR THIS PROJECT.
16. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
17. THE SUBJECT PARCEL KNOWN AS 977 BRIGHTON AVENUE IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
18. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR 977 BRIGHTON SITE PLAN.
19. FLOODPLAIN: THIS PROPERTY IS IN ZONE X OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0006 C, EFFECTIVE DATE DECEMBER 8, 1998. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
20. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON SHEET C1.2 UNDER SNOW CLEARANCE NOTES.
21. MECHANICAL EQUIPMENT IS TO BE INSTALLED ON THE ROOF.
22. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE OWNER AT THE END OF CONSTRUCTION. ANY MONUMENTATION DAMAGED BY CONSTRUCTION IS TO BE REPLACED.
23. 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 2016.
24. THIS PROJECT HAS A GEOTECHNICAL REPORT BY S.W. COLE ENGINEERING INC. ALL RECOMMENDATIONS OF THE REPORT ARE TO BE FOLLOWED WHILE CONDUCTING AND COMPLETING SITE EARTHWORK.



LOCATION MAP

CITY OF PORTLAND SITE PLAN NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE OVERHEAD.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

PARKING & BICYCLES

PARKING SPACES PROVIDED:		32
STANDARD SPACES:		
9x18	8	
8x18	4	
8x15 (COMPACT)	8	
ACCESSIBLE SPACES:		
8x18	8	
8x15 (COMPACT)	4	
BICYCLE SPACES PROVIDED:		16 (8 RACKS)
BIKE SPACES REQUIRED:		
2 BIKE SPACES PER 5 DWELLING UNITS (40/2.5):		16

WAIVERS REQUESTED

1. THE PLANNING BOARD WAIVES / DOES NOT WAIVE SECTION 14-526 (a) 4 (iv) OF THE CITY OF PORTLAND CHAPTER 14 LAND USE ORDINANCE FOR REDUCTION OF DRIVE AISLE FROM 24 FEET TO 21 FEET.
2. THE PLANNING BOARD WAIVES / DOES NOT WAIVE SECTION 1.14 OF THE CITY OF PORTLAND'S TECHNICAL MANUAL STANDARD THAT PARKING LOTS WITH GREATER THAN 10 SPACES MAY BE COMPRISED OF UP TO 20% COMPACT PARKING SPACES, TO ALLOW 12 COMPACT SPACES WHICH IS 37.5% OF THE TOTAL NUMBER.

IMPERVIOUS INFORMATION

	EXISTING	PROPOSED
BUILDINGS	3,128 SQ. FT.	7,825 SQ. FT.
PAVEMENT & GRAVEL	5,040 SQ. FT.	11,570 SQ. FT.
	8,168 SQ. FT.	19,395 SQ. FT.
NET IMPERVIOUS	+ 11,227 SQ. FT.	

PROJECT DRAWINGS

C1.1	SUBDIVISION RECORDING PLAT, SHEET 1 of 2
C1.2	SUBDIVISION RECORDING PLAT, SHEET 2 of 2
C2.1	SITE PLAN
C2.2	EXISTING CONDITIONS AND DEMOLITION PLAN
C2.3	GRADING AND UTILITIES PLAN
C2.4	EROSION CONTROL PLAN, NOTES AND DETAILS
C2.5	LANDSCAPE PLAN, NOTES AND DETAILS
C2.6	SITE LIGHTING
C3.1	SITE DETAILS
C3.2	SITE DETAILS
C3.3	SITE DETAILS
D1.0	DRAINAGE ANALYSIS
1	BOUNDARY & TOPOGRAPHIC SURVEY

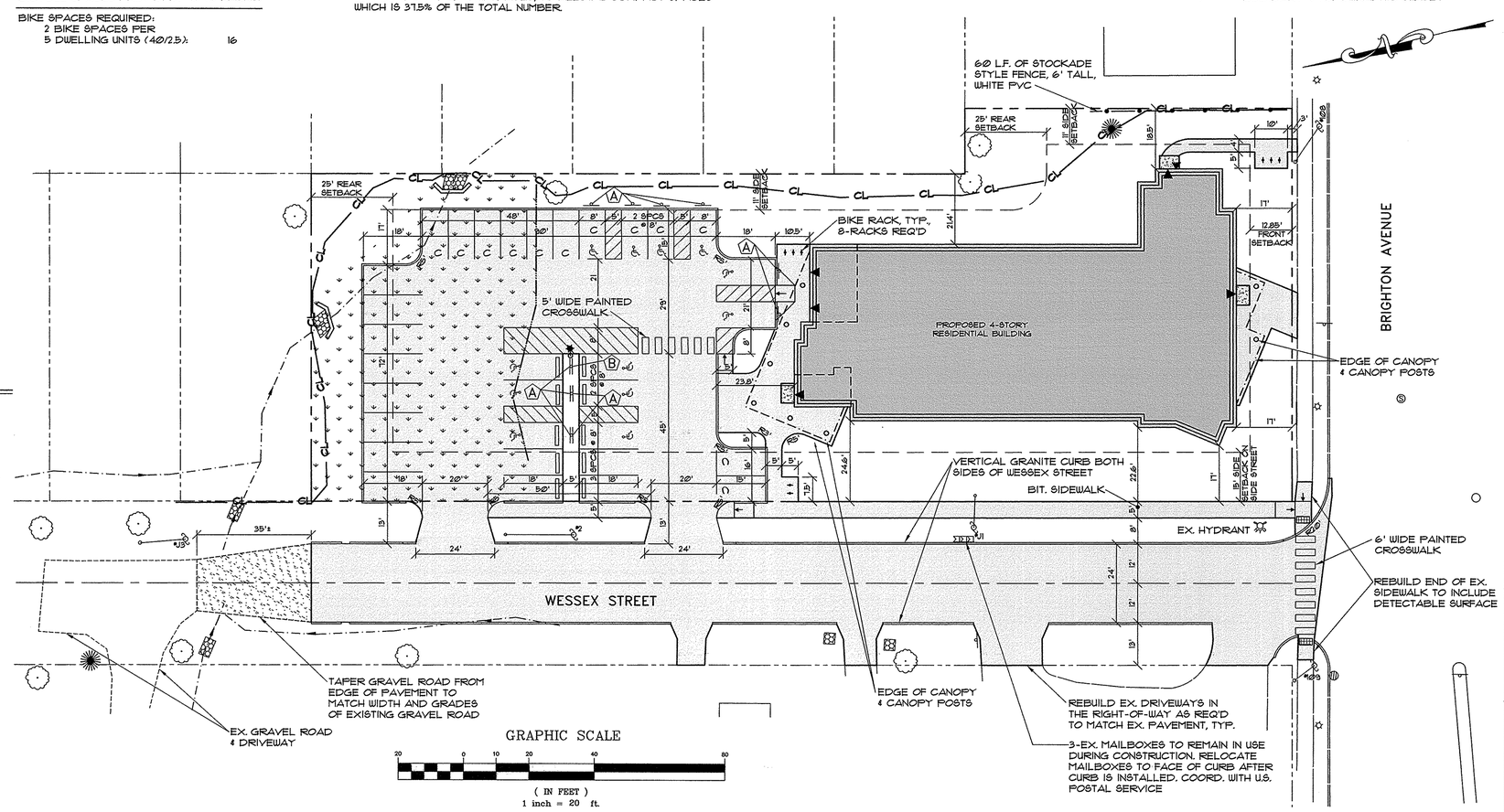
LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- BUILDING SETBACK
- EDGE OF PAVEMENT
- BUILDING
- EDGE OF GRAVEL
- CURB
- WATERCOURSE
- WETLAND LIMIT
- WETLAND
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- WATER DISTRICT MANHOLE
- TRANSFORMER
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- LIGHT POLE
- TREES

PROPOSED

- EDGE OF PAVEMENT
- SLOPED CONCRETE CURB
- VERTICAL GRANITE CURB
- GRADE BREAKS AT PLAZAS
- GRADE BREAKS AT SIDEWALK
- EDGE OF GRAVEL
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING CANOPY
- CLEARING LIMIT
- CENTERLINE
- STOCKADE FENCE
- STONE HEADWALL
- LIGHT POLE
- WALL MOUNTED LIGHT
- UTILITY POLE
- SIGN & SIGN IDENTIFICATION
- RELOCATED MAILBOX
- BIKE RACK
- CONCRETE WHEELSTOPS
- HANDICAP PARKING
- "NO PARKING" AREA
- PAINTED CROSSWALK
- DETECTABLE SURFACE AT RAMP
- RIPRAP
- CONCRETE PAVEMENT
- BITUMINOUS PAVEMENT
- BUILDING HATCH



CWS ARCHITECTS
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STATE OF MAINE — THOMAS S. GREER No. 12258 — LICENSED PROFESSIONAL ENGINEER — 12/21/17

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DESIGNER

OWNER
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c/o AVESTA HOUSING
307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT
977 BRIGHTON AVE ELDERLY APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

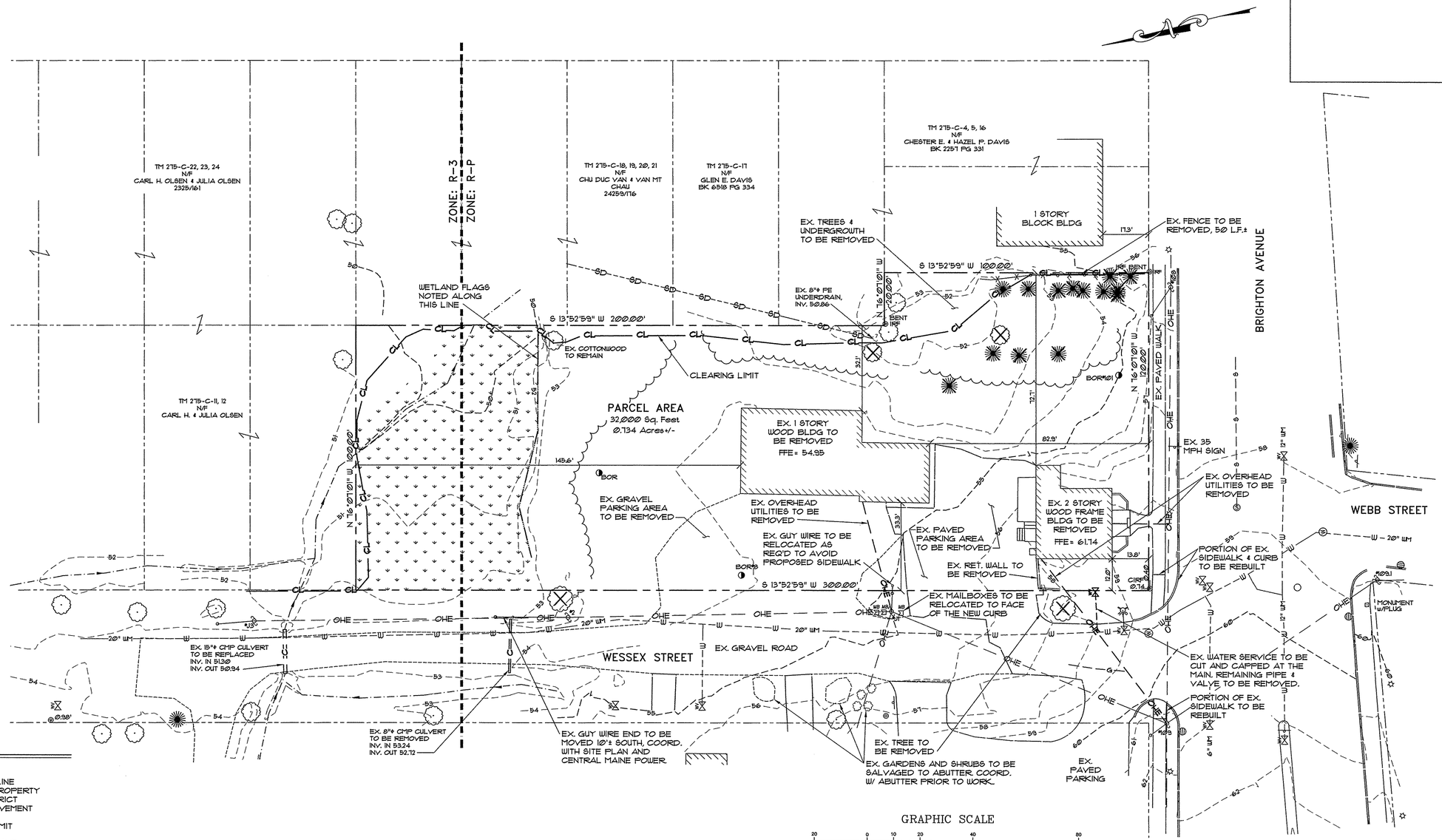
DRAWING
SITE PLAN
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C2.1

SCALE: AS SHOWN
DATE: 12/21/2017

S:\Land Projects\2015\15030-977 BRIGHTON AVE. APARTMENTS, PORTLAND\DWG\15030 BASE



LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- ZONING DISTRICT
- EDGE OF PAVEMENT
- BUILDING
- CLEARING LIMIT
- CONTOURS
- EDGE OF GRAVEL
- CURB
- WATERCOURSE
- WETLAND LIMIT
- WETLAND
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- WATER DISTRICT MANHOLE
- TRANSFORMER
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- LIGHT POLE
- GAS LINE
- STORMDRAIN
- CULVERT
- OVERHEAD UTILITY
- WATER LINE
- HYDRANT
- GATE VALVE
- FENCE
- IRON ROD OR PIPE FOUND
- BOUND FOUND
- TREES
- TREELINE

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DESIGNER

STATE OF MAINE
THOMAS S. GREER
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PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE ELDERLY APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

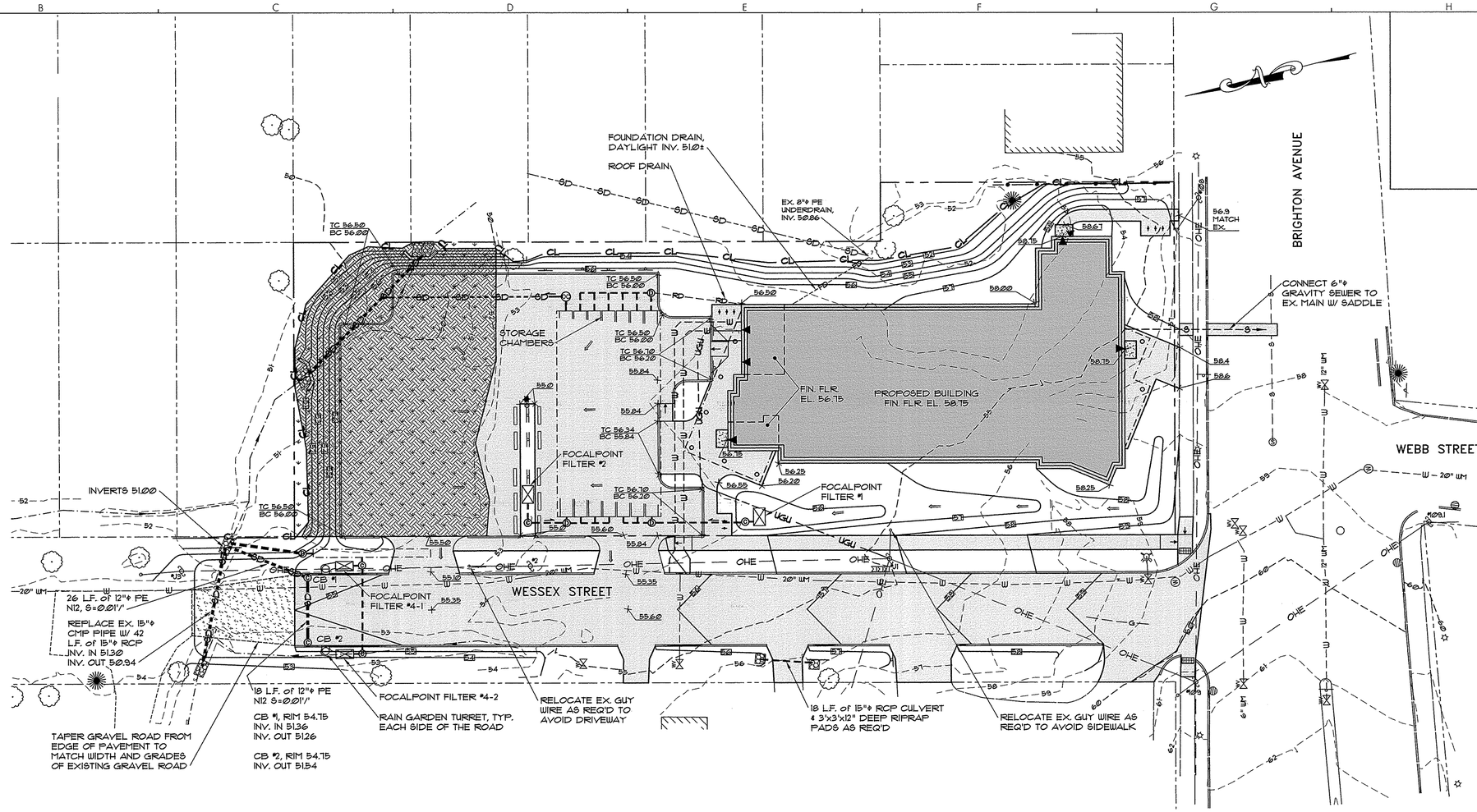
DRAWING

EXISTING SITE & DEMOLITION PLAN
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C2.2

SCALE: AS SHOWN
DATE: 12/21/2017



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- BUILDING
- EDGE OF GRAVEL
- CURB
- WATERCOURSE
- WETLAND LIMIT
- WETLAND
- CONTOURS
- STORMDRAIN
- CULVERT
- OVERHEAD UTILITY
- WATER LINE
- GAS LINE
- HYDRANT
- GATE VALVE
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- WATER DISTRICT MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- LIGHT POLE
- TREES
- STOCKADE FENCE

PROPOSED

- EDGE OF PAVEMENT
- SLOPED CONCRETE CURB
- VERTICAL GRANITE CURB
- GRADE BREAKS AT PLAZAS
- GRADE BREAKS AT SIDEWALK
- EDGE OF GRAVEL
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING CANOPY
- CLEARING LIMIT
- SANITARY SEWER
- STORMDRAIN
- WATER LINE
- UNDERGROUND UTILITY
- ROOF DRAIN
- FOUNDATION DRAIN
- CATCH BASIN
- DRAIN MANHOLE
- OUTLET CONTROL MANHOLE
- FOCALPOINT TREATMENT
- CONTOURS
- SURFACE DRAINAGE
- SPOT GRADE
- TOP OF CURB/BOTTOM OF CURB SPOT GRADE
- STOCKADE FENCE
- STONE HEADWALL
- UTILITY POLE
- LIGHT POLE
- WALL MOUNTED LIGHT
- SIGN
- RELOCATED MAILBOX
- BIKE RACK
- CONCRETE WHEELSTOPS
- DETECTABLE SURFACE AT RAMP
- RIPRAP
- CONCRETE PAVEMENT
- BITUMINOUS PAVEMENT
- BUILDING HATCH
- WETLAND IMPACT

SURVEYORS 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.

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DESIGNER

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12/21/17

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307 CUMBERLAND AVE.
PORTLAND, MAINE 04101

PROJECT
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977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING
GRADING & UTILITIES PLAN
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C2.3

SCALE: AS SHOWN
DATE: 12/21/2017

I:\Land Projects\2015\15030-977 BRIGHTON AVE. APARTMENTS, PORTLAND\DWG\15030 SITE

EROSION CONTROL NOTES

GENERAL:

1. DURING CONSTRUCTION THE CONTRACTOR IS REQUIRED TO HAVE A MAINTENANCE AND INSPECTION PLAN FOR STORMWATER CONTROL AND EROSION CONTROL DEVICES. INSPECT THE DISTURBED AREAS ONCE PER WEEK AND BEFORE AND AFTER RAIN STORMS. REPAIR OR CORRECT ANY AREAS THAT ARE DEFICIENT WITHIN 7 CALENDAR DAYS. KEEP A LOG OF THE INSPECTIONS AND NOTE ANY CORRECTIVE ACTION TAKEN. THE LOG MUST BE AVAILABLE FOR REVIEW BY THE TOWN AND DEP. KEEP RECORDS FOR 3 YEARS.

2. 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.

3. 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 2016.

4. 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.

5. 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 WATERBODIES WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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%

11. INSTALL EROSION CONTROL MESH IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. MESH TO BE EQUAL TO NORTH AMERICAN GREEN PRODUCT C125BN.

12. 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.

13. PLACE AND GRADE LOAM IN A REASONABLY UNIFORM MANNER. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED. REMOVE FROM SURFACE ALL STONES LARGER THAN 2" AND ALL OTHER UNSUITABLE MATERIAL. LIME AND FERTILIZER SHOULD BE MIXED INTO SOIL PRIOR TO ROLLING EXCEPT IF INCLUDED IN HYDROSEED MIXTURE. PERMANENT STABLILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 95% CATCH.

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 - .008 IN. TO .0002 IN. DIAMETER (% BY VOLUME) ..... 45 - 75
   SILT - .0002 IN. TO .000008 IN. DIAMETER (% BY VOLUME) ... 20 - 40
   CLAY - LESS THAN .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:

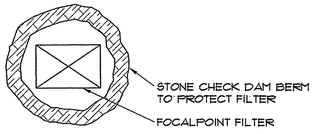
APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 POUNDS PER 1000 SQUARE FEET). APPLY FERTILIZER (10-20-20) AT A RATE OF 800 POUNDS PER ACRE (18.4 POUNDS PER 1000 SQUARE FEET).

MULCH:

STRAW OR HAY (ANCHORED) ..... 70 - 90 LBS	PROTECTED AREAS
STRAW OR HAY (ANCHORED) ..... 185 - 215 LBS	WINDY AREAS
SHREDDED OR CHOPPED ..... 185 - 215 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



NOTES:
1. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE DAM. SEDIMENT SHOULD BE REMOVED FROM BEHIND DAM IF IT ACCUMULATES TO ONE HALF THE ORIGINAL HEIGHT OF THE DAM.
2. STONE: 2"-3" CRUSHED STONE (MDOT 703.31)

HOUSEKEEPING NOTES

THE DEVELOPER IS RESPONSIBLE FOR NOTIFYING THE CONTRACTOR AND OWNER OF THE HOUSEKEEPING STANDARDS.

1. SPILL PREVENTION: THE CONTRACTOR AND OWNERS NEED TO TAKE CARE WITH CONSTRUCTION AND WASTE MATERIALS SUCH THAT CONTAMINATES DO NOT ENTER THE STORMWATER. THE STORAGE OF MATERIALS SUCH AS PAINT, PETROLEUM PRODUCTS, CLEANING AGENTS AND THE LIKE ARE TO BE STORED IN WATERTIGHT CONTAINERS. THE USE OF THE PRODUCTS SHOULD BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. WHEN FUELING EQUIPMENT, INCLUDING SNOWBLOWERS AND LAWNMOWERS, HAVE OIL ABSORBENT PADS AVAILABLE BELOW THE FUELING.

   STAGING AREAS ARE NOTED ON THE CONSTRUCTION MANAGEMENT PLAN FOR THE CONTRACTOR'S USE. REFUELING OF SMALL ENGINES BY THE OWNER SHOULD OCCUR IN THE GARAGE OR ON A PAVED SURFACE.

   ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT: HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/

2. GROUNDWATER PROTECTION: PROTECTION OF THE GROUNDWATER IS REQUIRED BY THE CONTRACTOR AND OWNER. PETROLEUM PRODUCTS SHOULD BE STORED IN MANUFACTURED CANS DESIGNED FOR THE PURPOSE. SPILL PREVENTIONS PROCEDURES SHOULD BE FOLLOWED.

3. FUGITIVE SEDIMENT AND DUST: THE CONTRACTOR IS REQUIRED TO MINIMIZE DUST FROM THE CONSTRUCTION OPERATION. THE ROAD SHOULD BE SWEPT REGULARLY (WEEKLY) AND PRIOR TO ANY RAIN EVENT. THE GRAVEL AREAS ARE TO BE WATERED REGULARLY TO MINIMIZE DUST. ANY MUD THAT IS TRACKED OFF SITE SHOULD BE CLEANED UP PRIOR TO IT DRYING AND BECOMING A DUST ISSUE. DO NOT USE OIL TO CONTROL DUST.
   DEWATERING A STREAM WITHOUT A PERMIT FROM THE DEPARTMENT MAY VIOLATE STATE WATER QUALITY STANDARDS AND THE NATURAL RESOURCES PROTECTION ACT.

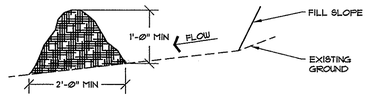
4. DEBRIS AND OTHER MATERIALS: CONSTRUCTION MATERIALS AND CONSTRUCTION DEBRIS SHOULD BE COVERED TO PREVENT RAINWATER FROM WASHING CONTAMINANTS OFF THE SITE. ANY FERTILIZERS, CLEANING PRODUCTS, HERBICIDES SHOULD BE PROTECTED FROM THE WEATHER AND USED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

   NOTE ANY CONTAMINANTS THAT ARE WASHED OFF THE SITE BY RAINWATER IS A VIOLATION OF THE CLEAN WATERS ACT.

   STORAGE HANDLING AND DISPOSAL OF SOLID WASTE ITEMS MUST COMPLY WITH MAINE'S SOLID WASTE MANAGEMENT RULES. LACK OF APPROPRIATE POLLUTANT CONTROL MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARDS.

   THIS PROJECT HAS A WRITTEN EROSION CONTROL PLAN AND STORMWATER MAINTENANCE PLAN. MODIFICATIONS TO THE PLAN MUST BE APPROVED BY THE CITY.

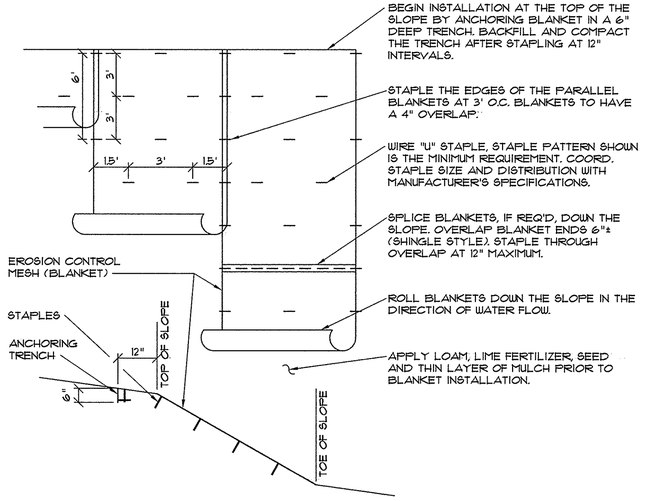
   MAINTENANCE OF STORMWATER TREATMENT AND CONTROL SYSTEMS MUST OCCUR REGULARLY. THE STORMWATER MAINTENANCE REPORT PROVIDES INSPECTION DETAILS AND TIME LINES FOR DOING THE INSPECTIONS AND REPORTING TO THE CITY AND DEP.



NOTES:
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS.
   WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
   EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER.
   EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.
   THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
   A. ORGANIC MATERIAL: BETWEEN 20% - 100% (DRY WEIGHT BASIS)
   B. PARTICLE SIZE: BY WEIGHT, 100% PASSING 6" SCREEN, 70-85% PASSING Ø.75" SCREEN
   C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   D. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   E. SOLUBLE SALTS CONTENT SHALL BE LESS THAN 4.0 MMHOS/CM.
   F. PH: 5.0 - 8.0
2. ON SLOPES LESS THAN 5% OR AT THE BOTTOM OF SLOPES 2:1 OR LESS UP TO 20 FEET LONG, THE BARRIER MUST CONFORM TO THE ABOVE DIMENSIONS. ON THE LONGER OR STEEPER SLOPES, THE BARRIER SHOULD BE WIDER TO ACCOMMODATE THE ADDITIONAL FLOW.

2 EROSION CONTROL MIX SEDIMENT BARRIER

NOT TO SCALE



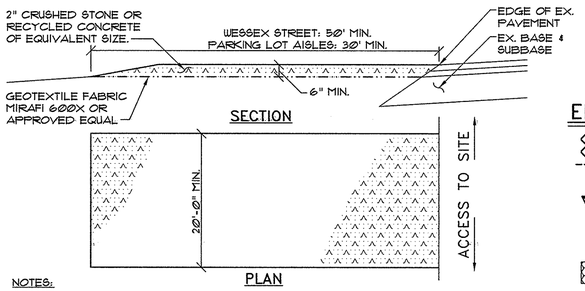
1 EROSION CONTROL MESH INSTALLATION DETAIL

NOT TO SCALE

3. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL ELEVATION. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
4. LOCATIONS WHERE OTHER BMP'S SHOULD BE USED:
   A. AT LOW POINTS OF CONCENTRATED FLOW
   B. BELOW CULVERT OUTLET APRONS
   C. WHERE A PREVIOUS STAND-ALONE EROSION CONTROL MIX APPLICATION HAS FAILED
   D. AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM (LARGE UPGRADIENT WATERSHED)
   E. AROUND CATCH BASINS AND CLOSED STORM DRAIN SYSTEMS.
5. THE EROSION CONTROL MIX BARRIERS SHOULD BE INSPECTED REGULARLY AND AFTER EACH LARGE RAINFALL. REPAIR ALL DAMAGED SECTIONS OF BERM IMMEDIATELY BY REPLACING OR ADDING ADDITIONAL MATERIAL PLACED ON THE BERM TO THE DESIRED HEIGHT AND WIDTH.
6. IT MAY BE NECESSARY TO REINFORCE THE BARRIER WITH SILT FENCE OR STONE CHECK DAMS IF THERE ARE SIGNS OF UNDERCUTTING OR THE IMPOUNDMENT OF LARGE VOLUMES OF WATER.
7. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
8. REPLACE SECTIONS OF BERM THAT DECOMPOSE, BECOME CLOGGED WITH SEDIMENT OR OTHERWISE BECOME INEFFECTIVE. THE BARRIER SHOULD BE RESHAPED AS NEEDED.
9. EROSION CONTROL MIX BARRIERS CAN BE LEFT IN PLACE AFTER CONSTRUCTION. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER BARRIER IS NO LONGER REQUIRED SHOULD BE SPREAD TO CONFORM TO THE EXISTING GRADE AND BE SEEDED AND MULCHED. WOODY VEGETATION CAN BE PLANTED INTO THE BARRIERS, OR THEY CAN BE OVER-SEEDED WITH LEGUMES. IF THE BARRIER NEEDS TO BE REMOVED, IT CAN BE SPREAD OUT INTO THE LANDSCAPE.

3 STONE CHECK DAM, FILTER PROTECTION PLAN

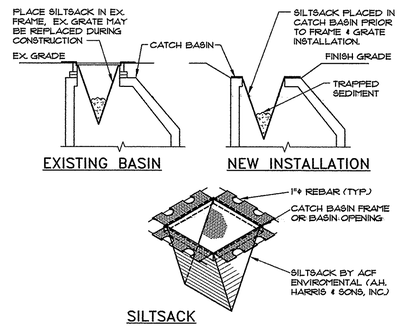
NOT TO SCALE



NOTES:
1. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.
2. REMOVE STABILIZED CONSTRUCTION ENTRANCE AFTER EXCAVATION OS COMPLETE.

4 STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



5 CATCH BASIN PROTECTION

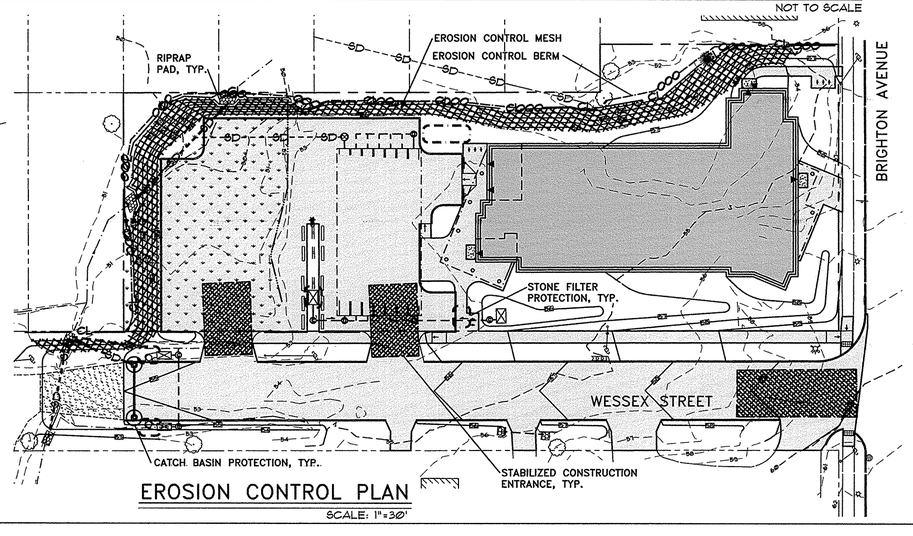
NOT TO SCALE

EROSION CONTROL LEGEND

- EROSION CONTROL MESH
- EROSION CONTROL BERM
- STONE FILTER PROTECTION
- STABILIZED CONDTRUVTION ENTRANCE
- CATCH BASIN PROTECTION WITH SILTSACK
- RIPRAP

FOR PLAN LEGEND SEE SHEET C2.3

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.



EROSION CONTROL PLAN

SCALE: 1"=30'

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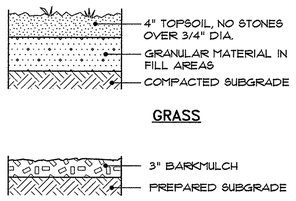
DRAWING
EROSION CONTROL PLAN, NOTES AND DETAILS
CWS PROJECT NUMBER: 15.040

REVISIONS

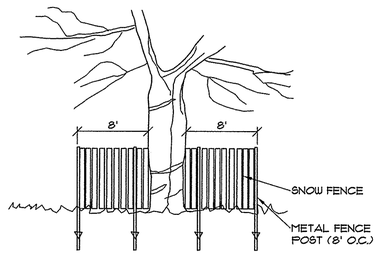
DRAWING NUMBER
C2.4

SCALE: AS SHOWN
DATE: 12/21/2017



4 LANDSCAPE SURFACE FINISHES

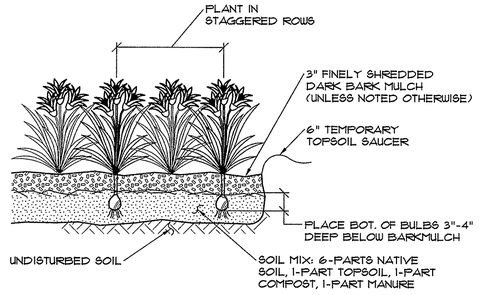
NOT TO SCALE



TREE PROTECTION IS REQUIRED FOR THE EXISTING TREES ALONG CUMBERLAND AVENUE

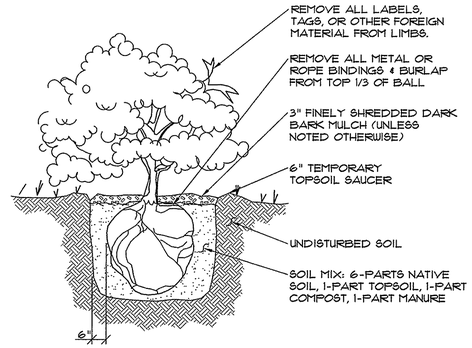
3 TREE PROTECTION FENCE

NOT TO SCALE



2 DAYLILY PLANTING DETAIL

NOT TO SCALE



1 SHRUB PLANTING DETAIL

NOT TO SCALE

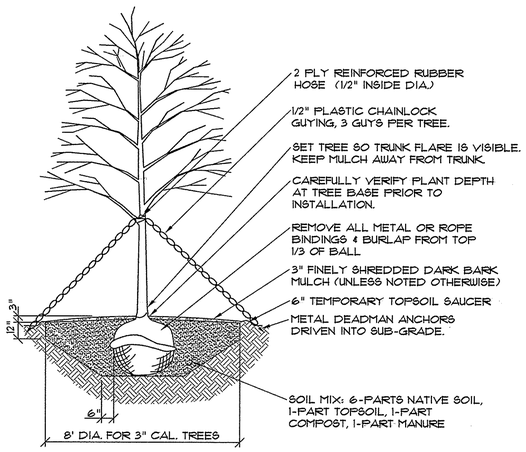
LANDSCAPE NOTES

GENERAL:

1. SAVE EXISTING TREES AS SHOWN. DO NOT CUT OR CLEAR ANY VEGETATION BEYOND THE IMPACT LIMIT LINE.
2. ALL PLANT MATERIALS INSTALLED ARE TO MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. ALL PROPOSED PLANT LOCATIONS SHALL BE AS SHOWN ON PLANS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING AND WILL NOTIFY OWNER'S REPRESENTATIVE IN THE EVENT OF CONFLICTS.
4. PLANT LOCATIONS ARE TO BE SCALED FROM THELANDSCAPE PLAN UNLESS NOTED OTHERWISE.
5. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
6. FINAL QUANTITY FOR EACH PLANT TYPE IS NOTED IN THE PLANT LIST. THIS NUMBER SHALL TAKE PRECEDENCE IN THE CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE LIST AND ON THE PLAN.
7. ANY PROPOSED SUBSTITUTIONS MUST BE APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
8. ALL DISTURBED AREAS TO BE LOAMED AND SEEDED.

MAINTENANCE:

1. LAWNS: SHALL BE WATERED, FERTILIZED AND MOWN ON A REGULAR BASIS ACCORDING TO SEASON AND RAINFALL, TO PRODUCE A STRONG TURF OF 80% MIN. COVERAGE WITHIN THE FIRST YEAR, FREE FROM SIZABLE THIN OR BARE SPOTS. REGRADING AND RESEEDING WILL BE PERFORMED ON BARE SPOTS UNTIL COVERAGE IS COMPLETE.
2. TREES & SHRUBS: THE ESTABLISHMENT PERIOD SHALL BE TWO CALENDAR YEARS FROM THE DATE OF FINAL ACCEPTANCE. DURING THE ESTABLISHMENT PERIOD THE OWNER OR OWNER'S CONTRACTOR SHALL WATER, CULTIVATE AND PRUNE AS REQUIRED TO MAINTAIN A HEALTHY GROWING CONDITION.
3. AT THE END OF THE ESTABLISHMENT PERIOD AND UPON SUBSEQUENT ANNUAL INSPECTIONS, PLANTS WHICH HAVE DIED OR FAILED TO THRIVE SHALL BE REPLACED WITH EQUIVALENT SIZE AND SPECIES. AFTER THE CONTRACTOR'S GUARANTEE PERIOD HAS ENDED, IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN AND REPLACE PLANTINGS.
4. TREES, SHRUBS AND LAWNS WHICH ARE NOT IRRIGATED WITH AN AUTOMATIC SPRINKLER OR DRIP SYSTEM SHALL BE THOROUGHLY WATERED ON A REGULAR BASIS DURING PERIODS OF BELOW AVERAGE RAINFALL. SOIL SHOULD BE SAMPLED AT A DEPTH OF 12" AND IF DRY, WATER TO DEPTH OF 24".
5. MULCH IS TO BE MAINTAINED AT A DEPTH TO COMPLETELY COVER THE SOIL AND TO PRESERVE MOISTURE AND MINIMIZE WEEDS.
6. TREES, SHRUBS AND LAWNS SHALL BE FERTILIZED ANNUALLY AND TREATED WITH INSECTICIDES AND/OR FUNGICIDES AS REQUIRED FOR CONTINUED HEALTHY GROWTH.
7. SUCKERS, WEEDS, AND DEAD WOOD SHALL BE REMOVED ON A SEASONAL BASIS, AND SHRUBS SHALL BE PRUNED TWICE A YEAR ACCORDING TO THE REQUIREMENTS OF EACH SPECIES (I.E. SOME SPECIES SHOULD NOT BE PRUNED AT ALL). SHRUBS SHALL NOT BE PRUNED INTO INDIVIDUALS BUT ALLOWED TO GROW INTO A MASS.
8. WHERE TREES ARE LOCATED NEAR SIDEWALKS OR PARKING LOTS, THE CANOPY SHALL BE LIMBED UP TO PROMOTE SAFE CLEARANCE TO 8' ABOVE GRADE.
9. LAWN AREAS SHALL BE MOWN AS OFTEN AS NECESSARY TO KEEP LAWNS TO A 2 1/2 - 3" HEIGHT, AND AERATED ON A SEASONAL BASIS.
10. BEDS AND LAWN EDGES SHALL BE REGULARLY TRIMMED AND EDGED.
11. PERENNIAL AND ANNUAL BEDS SHALL BE DESIGNED, PLANTED AND MAINTAINED FOR SEASONAL COLOR AND INTEREST. ANNUALS MAY BE INCORPORATED TO A MAXIMUM LIMIT OF 25% OF THE BED AREA OF MAINTAINED BEDS FROM MAY 15 THROUGH NOVEMBER 15. PERENNIAL BEDS SHALL BE WATERED AS REQUIRED FOR HEALTHY PLANT GROWTH, AND WEEDED AND DEADHEADED ON A MONTHLY BASIS.



NOTES:
1. PRUNE ALL DEAD AND BROKEN BRANCHES. RETAIN NATURAL SHAPE, NEVER CUT LEADER.
2. IN LEDGE CONDITIONS, BLASTING SHALL BE 10' DIA AND 4' BELOW TREE HOLE BOTTOM GRADE.

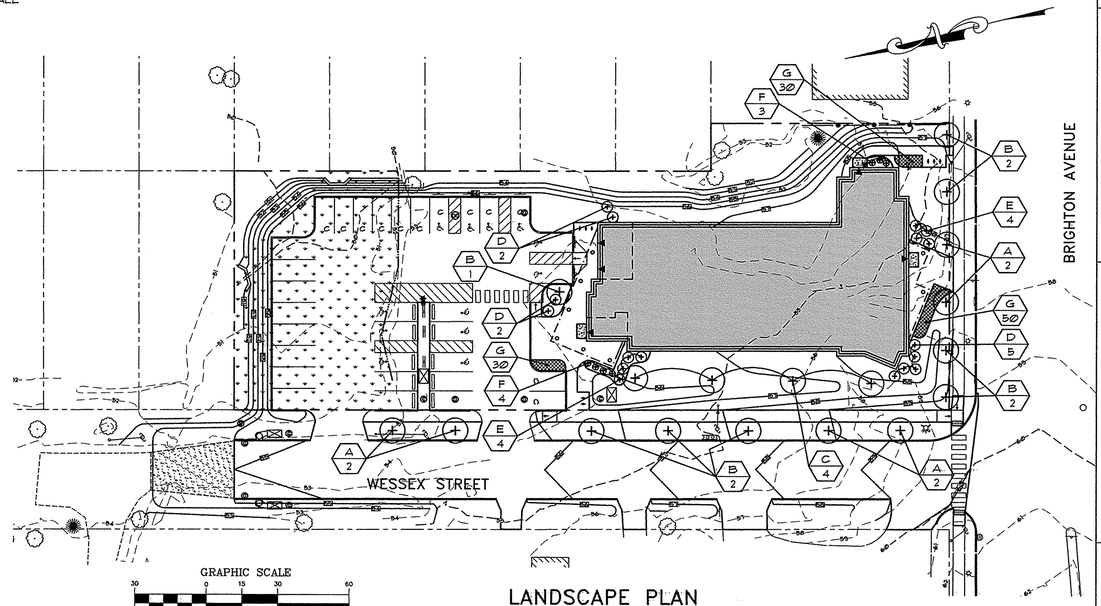
5 DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

PLANT LIST

(A / 12 = SYMBOL / QUANTITY)

SYMBOL	COMMON NAME/BOTANICAL NAME	SIZE	QUANTITY	ROOT	NOTES
A	HORNBEAM / carpinus caroliniana	2" cal.	6	B&B	X
B	SILVER MAPLE / acer saccharinum	2 1/2" cal.	8	B&B	X
C	PAPERBARK MAPLE / acer Griseum	7'-8' tall	4	B&B	X
D	AMUR PRIVET / L. Amurense	4' tall	9	B&B	3 Canes min.
E	CORNELIAN CHERRY DOGWOOD / C. Mas	5'-6' tall	8	B&B	3 Trunks
F	BLUE BILLOW HYDRANGEA / H. Serrata 'Blue billow'	#3	7	Cont.	
G	DAYLILY VARIETIES / Hemerocallis	1 gal.	110	Cont.	select for bloom Early Summer to Fall



GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

LANDSCAPE PLAN

SCALE: 1"=30'

CWS ARCHITECTS
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434 Cumberland Avenue Portland ME 04101
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER

STATE OF MAINE THOMAS S. GREER No. 4206 REGISTERED PROFESSIONAL ENGINEER
12/21/17

PINKHAM & GREER CIVIL ENGINEERS
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977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

LANDSCAPE PLAN.
NOTES AND DETAILS
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C2.5

SCALE: AS SHOWN
DATE: 12/21/2017

G:\cws Projects\2015\1510-977 BRIGHTON AVE. APARTMENTS, PORTLAND\DWG\1510 SHEET

McGRAW-EDISON®

energy solutions

Catalog #		Type
Project		
Comments		Date
Prepared by		

DESCRIPTION

The IMPACT Elite family of cutoff wall luminaires is the ideal complement to site design. Incorporating modular LightBAR™ technology, Impact Elite provides outstanding uniformity and energy-conscious illumination. Combined with a rugged construction, the Impact Elite is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments, and recreational facilities. UL/cUL listed for wet locations.

SPECIFICATION FEATURES

Construction
Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two (2) captive fasteners. Optional tamper-resistant Torx™-head fasteners offer vandal resistant access to the electrical chamber.

Optics
Choice of six (6) patented, high efficiency AccuLED Optics™ that maximize light collection and direction distribution onto the application region. Each optical lens is precision manufactured via injection-molding, then precisely arranged and sealed to the board media. BL optics offer backlight control to decrease wall brightness while the optional uplight glow provides soft illumination to highlight architectural surfaces. Offered standard in 4000K (+/- 275K) CCT and nominal 70 CRI.

Electrical
LED drivers mount to die-cast aluminum back casting for optimal heat sinking and operation efficiency. Impact Elite Watt Series LED operates from 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. 80% lumen maintenance expected at 60,000 hours. The Impact Elite Wall Series LED luminaire is suitable for operation in -40°C to 40°C ambient environments. LightBARs™ feature an IP66 enclosure rating. Emergency egress options for -20°C ambient environments and optional occupancy sensor available.

Mounting
Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two (2) captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom of fixture.

Finish
Cast components finished in a 5-stage Super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty
Five-year warranty.



ISC
IMPACT ELITE LED CYLINDER

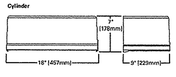
1 - 2 LightBARs
Solid State LED

WALL MOUNT LUMINAIRE

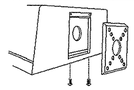
DESIGNLIGHTS CONSORTIUM

STANDARD DIMENSIONS

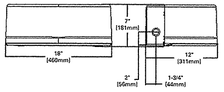
Cylinder



HOOK-N-LOCK MOUNTING



STANDARD DIMENSIONS WITH BACK BOX



CERTIFICATION DATA
UL/cUL Listed
LM79 / LM80 Compliant
IP65 LightBARs
ARRA Compliant
ISO 9001

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60hz, 347V/60hz, 480V/60hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

SHIPPING DATA
Approximate Net Weight:
18 lbs. (8 kgs.)

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COOPER Lighting
www.cooperlighting.com

McGRAW-EDISON®

energy solutions

Catalog #		Type
Project		
Comments		Date
Prepared by		

DESCRIPTION

The Galloon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated.

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Choice of 16 patented, high-efficiency AccuLED Optics. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 6000K CCT and 3000K CCT. For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed. The house side shield is designed to seamlessly integrate with the SL2, SL3, SL4 or AFL optics.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Standard with 0-10V dimming. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. The Galloon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 530mA and 700mA drive currents.

Mounting
Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. Designed for pole or wall mounting. When mounting two or more luminaires at 90° or 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table on page 3. For wall mounting, specify wall mount bracket option. 3G vibration rated.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard colors include black, bronze, gray, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty
Five-year warranty.



GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

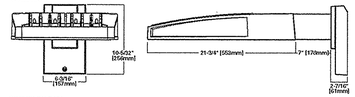
AREA/SITE LUMINAIRE

DIMENSIONS

POLE MOUNT



WALL MOUNT



DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	38 (16.0 kgs)	0.96
5-6	21-5/8" (548mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

Cooper Lighting
by EATON

CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
ARRA Compliant
IP66 Rated

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

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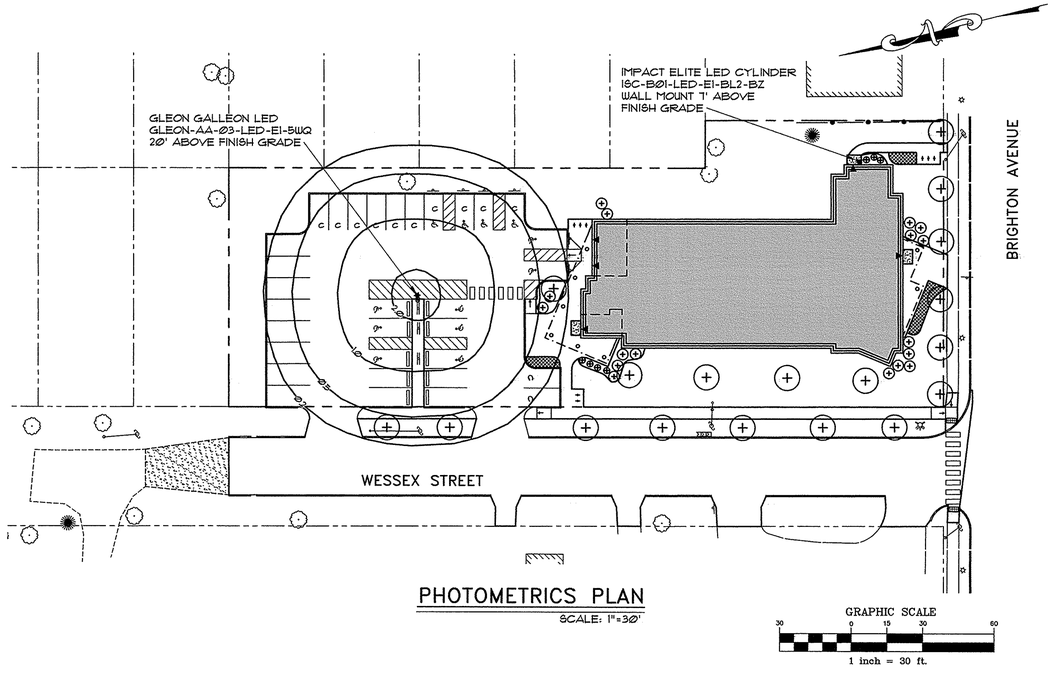

PHOTOMETRICS PLAN

SCALE: 1"=30'

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

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PORTLAND, MAINE 04102

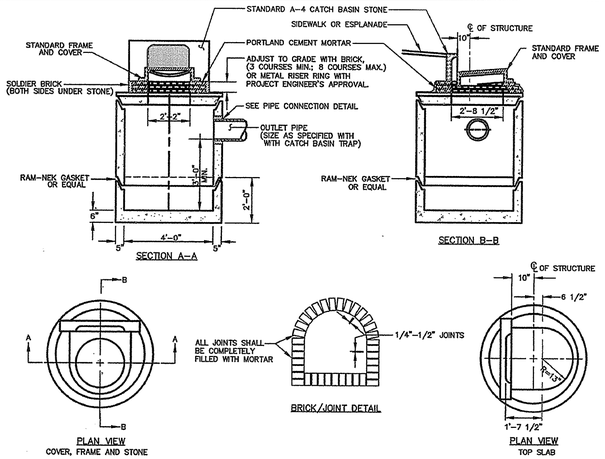
DRAWING
SITE LIGHTING
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C2.6

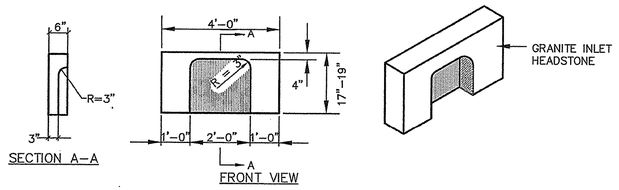
SCALE: AS SHOWN
DATE: 12/21/2017

© Land Projects\2015\1510-977 BRIGHTON AVE, APARTMENTS, PORTLAND\DWG\1510 SITE



3 PRECAST CONCRETE CATCH BASINS (II-2)

NOT TO SCALE



6 4' GRANITE HEADSTONE FOR CATCH BASIN INLET (II-11)

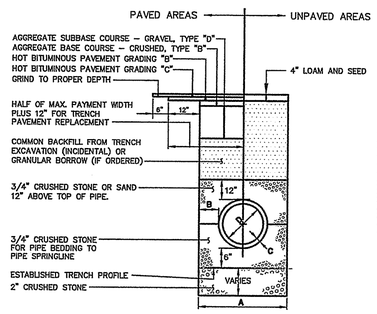
NOT TO SCALE

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 DRSA OR APPROVED EQUAL.
10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP. SEE FIGURE II-09.

2 GENERAL NOTES FOR MANHOLES & CATCH BASINS (II-4)

NOT TO SCALE



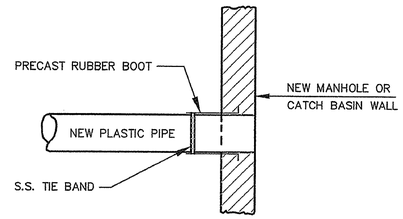
NOTES

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

5 TYPICAL PIPE TRENCH INSTALLATION (II-14)

NOT TO SCALE



METHOD 2 - NEW CONSTRUCTION

1 PLASTIC PIPE CONNECTION METHOD 2 (II-13)

NOT TO SCALE

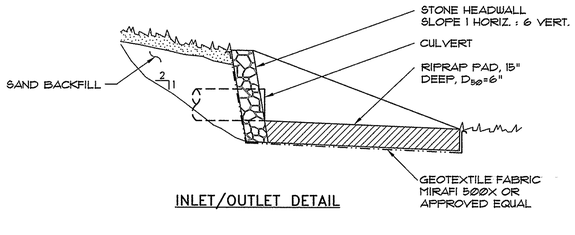
IDENTIFICATION TAPE TO BE INSTALLED ABOVE ALL NEW UNDERGROUND UTILITIES AND ABOVE ANY EXISTING UTILITIES THAT MAY BE EXPOSED BY THIS CONSTRUCTION.

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.

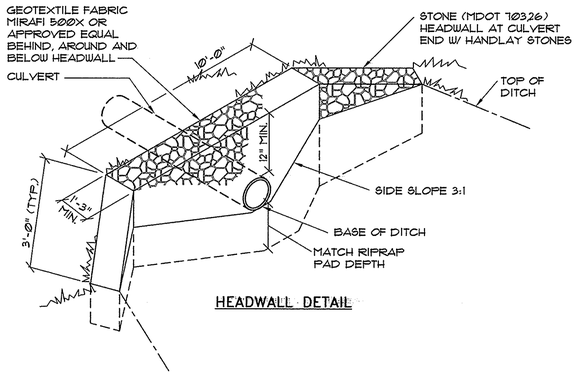
APWA UNIFORM COLOR CODE:

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

4 UNDERGROUND UTILITIES WARNING TAPE



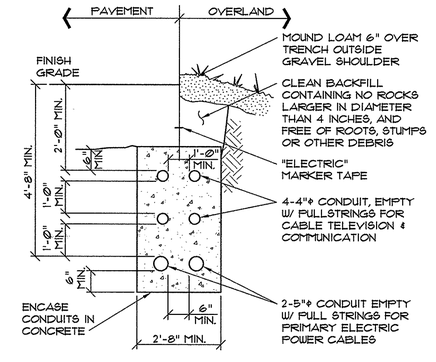
INLET/OUTLET DETAIL



HEADWALL DETAIL

9 STONE HEADWALL

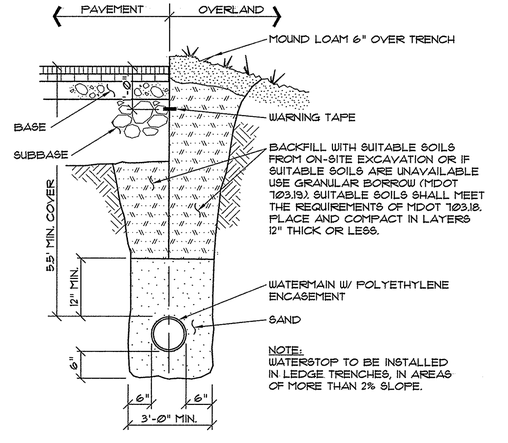
NOT TO SCALE



NOTES:
1. INSTALLATION SHALL NOT ALLOW INTER-TWINING OF CABLES.
2. PROVIDE SCH. 40 PVC CONDUIT FULL LENGTH OF INSTALLATION.

8 CABLE TRENCH SECTION

NOT TO SCALE



7 TYPICAL WATER MAIN SECTION

NOT TO SCALE

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977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

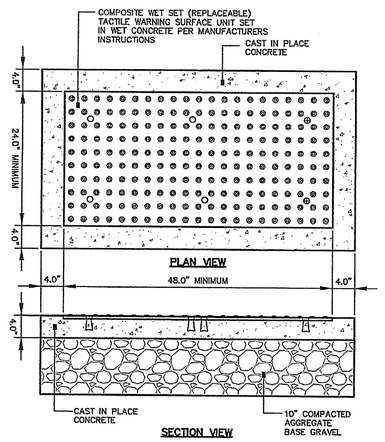
DRAWING
SITE DETAILS
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C3.1

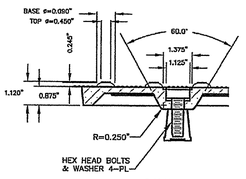
SCALE: AS SHOWN
DATE: 12/21/2017

O:\Land Projects\2015\15130-977 BRIGHTON AVE APARTMENTS, PORTLAND\PLOTS\15130 DETAILS



NOTES:

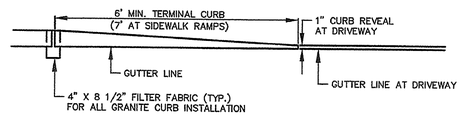
1. COMPOSITE WET SET (REPLACEABLE) TACTILE WARNING SURFACE UNITS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. (WWW.ADATILE.COM), OR APPROVED EQUAL.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE TILE AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. FOR ALL SIDEWALK RAMPS MADE OF CONCRETE OR ASPHALT, FEDERAL YELLOW COLORED (#33538) TILES SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
5. FOR ALL SIDEWALK RAMPS MADE OF BRICK, SEATTLE YELLOW (#23594) COATED COLORED TILES SHALL BE USED.



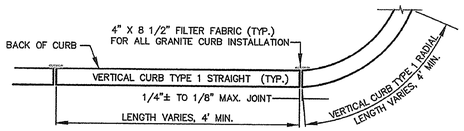
BOLT DETAIL

2 SIDEWALK RAMP DETECTABLE WARNING TILE (I-7)

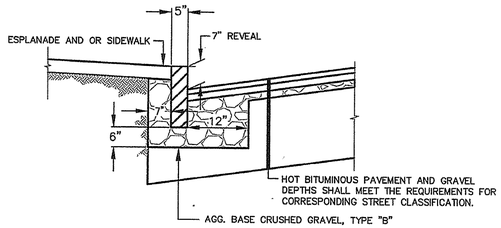
NOT TO SCALE



TERMINAL CURB PROFILE



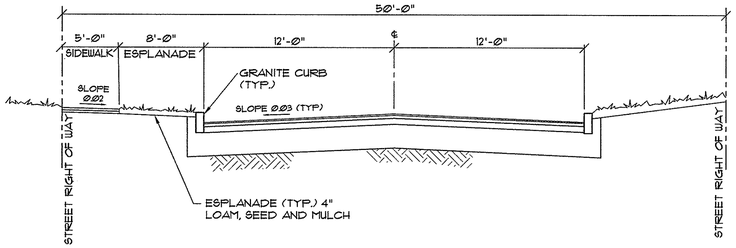
VERTICAL GRANITE CURB PLAN VIEW



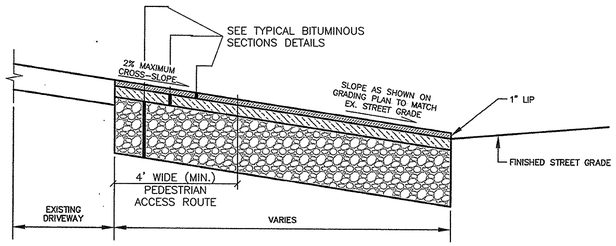
VERTICAL GRANITE CURB CROSS SECTION

3 VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREET (I-17)

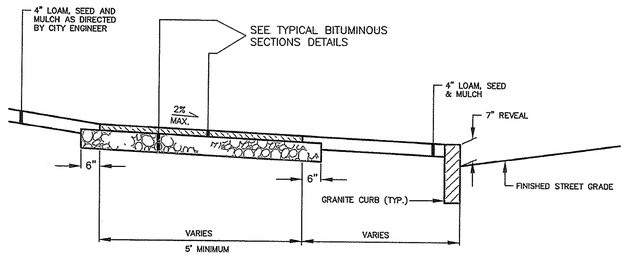
NOT TO SCALE



LOCAL STREET SECTION (I-1)



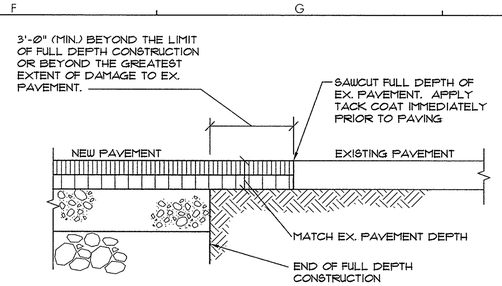
BITUMINOUS DRIVEWAY APRON SECTION (I-13)



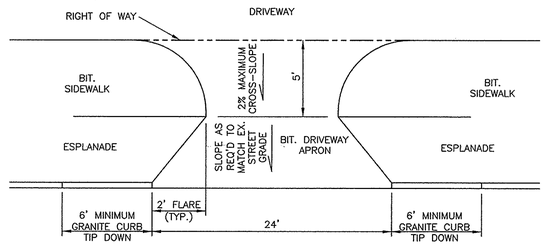
BITUMINOUS SIDEWALK SECTION (I-12)

1 BITUMINOUS PAVEMENT DETAILS

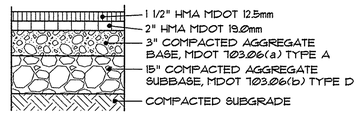
NOT TO SCALE



PAVEMENT CUTTING & MATCHING SECTION

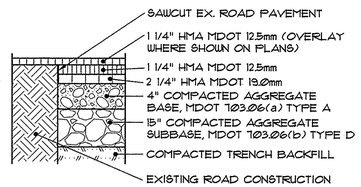


DRIVEWAY APRON LAYOUT (I-9)



FULL DEPTH PAVEMENT
WESSEX STREET, PARKING LOT
& DRIVEWAY APRONS

FULL DEPTH PAVEMENT
SIDEWALKS AND PLAZA AREAS

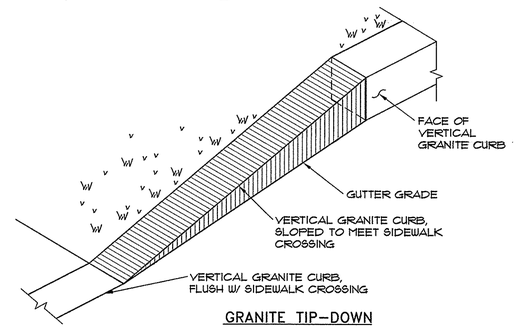


PAVEMENT REPAIR AT TRENCHES
IN THE RIGHT-OF-WAYS

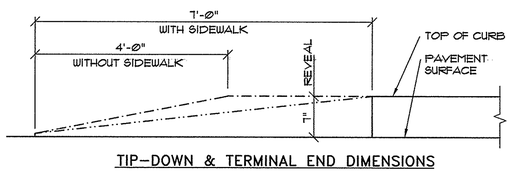
NOTES:

1. HMA = HOT MIX ASPHALT.
   MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

TYPICAL BITUMINOUS PAVEMENT DETAILS



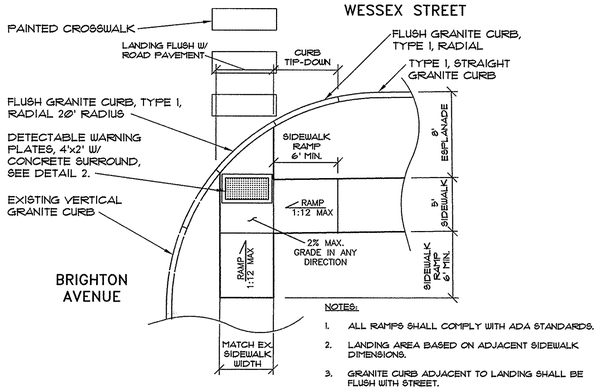
GRANITE TIP-DOWN



TIP-DOWN & TERMINAL END DIMENSIONS

6 CURB TERMINATION & TRANSITIONS

NOT TO SCALE

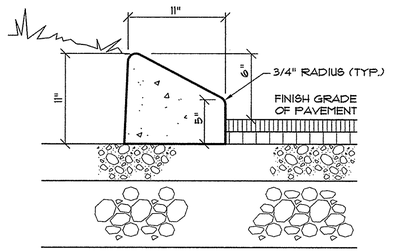


NOTES:

1. ALL RAMPS SHALL COMPLY WITH ADA STANDARDS.
2. LANDING AREA BASED ON ADJACENT SIDEWALK DIMENSIONS.
3. GRANITE CURB ADJACENT TO LANDING SHALL BE FLUSH WITH STREET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.
5. RAMP SECTIONS SHOULD MATCH THE SURFACE MATERIAL USED FOR THE SIDEWALK CONSTRUCTION.

5 SIDEWALK RAMP DETAIL

NOT TO SCALE

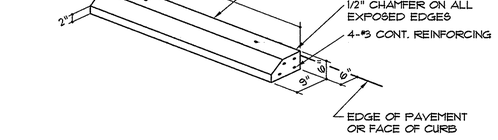


CONCRETE NOTES:

1. MIN. 28 DAY COMPRESSIVE STRENGTH: 4000 PSI
2. AIR ENTRAINMENT: 4% TO 6%
3. REINFORCING: FIBERMESH OR EQUIVALENT GRACE PRODUCT. STRAND LENGTH 1 1/2", 1" TO 1 1/2 LB/CUBIC YARD.
4. SLUMP: 1" TO 1 1/2"
5. FINISH: VERTICAL AND TOP FACES: SMOOTH SLIPFORM
   SLOPED FACES: BROOM
6. JOINTS: SAWCUT 10' O.C. 3" DEEP THE DAY AFTER PLACING.
7. SEALER: SALTGUARD OR EQUAL WATER BASED SEALER.

4 EXTRUDED CONCRETE CURB

NOT TO SCALE



7 CONCRETE WHEELSTOP DETAIL

NOT TO SCALE

CWS ARCHITECTS
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OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER
PINKHAM & GREER CIVIL ENGINEERS
28 WINNIK AVE, PORTLAND, ME. 04103
TEL: 207.797.5477 FAX: 207.775.1449

OWNER
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c/o AVESTA HOUSING
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PORTLAND, MAINE 04101

PROJECT
977 BRIGHTON AVE ELDERLY APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING
SITE DETAILS
CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
C3.2

SCALE: AS SHOWN
DATE: 12/21/2017

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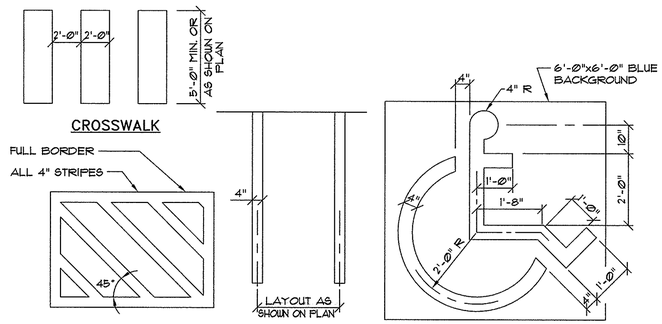
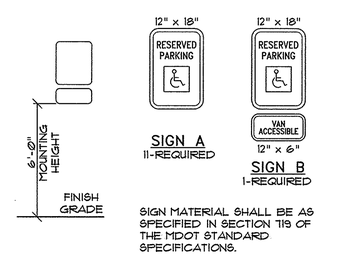


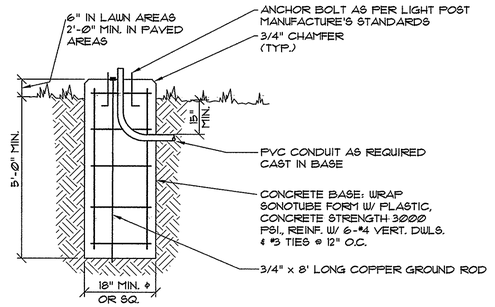
2 STRIPING DETAILS

NOT TO SCALE



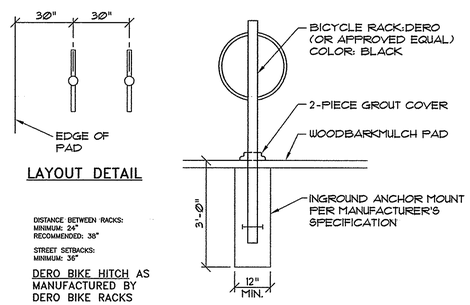
1 ACCESSIBLE PARKING SPACE SIGN DETAILS

NOT TO SCALE



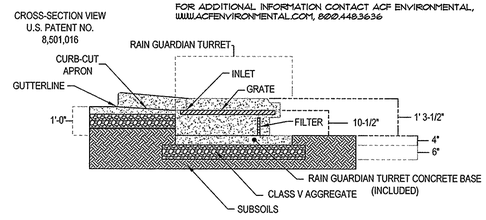
4 LIGHT POLE BASE DETAIL

NOT TO SCALE

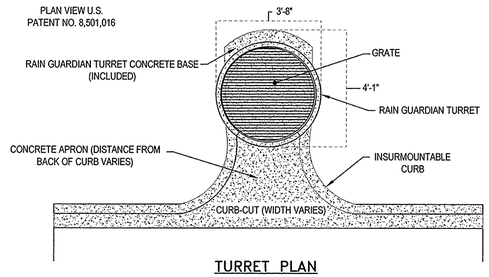


3 EXTERIOR RACK DETAIL

NOT TO SCALE



TURRET SECTION



TURRET PLAN

SPECIFICATIONS:

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (12,232 LBS).
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4 PERCENT TO 8 PERCENT BY VOLUME).
3. MANUFACTURED AND DESIGNED TO ASTM C858.
4. THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
5. SOIL UNDER BASE TO BE COMPACTED TO 95 PERCENT STANDARD PROCTOR.
6. TWO-PIECE LIGHT-DUTY GALVANIZED GRATE (345 LBS/PIECE) FOR 541 LB CONCENTRATED LOAD OR 309 LB/SQFT UNIFORM LOAD.
7. TWO-PIECE HEAVY-DUTY GALVANIZED GRATE (775 LBS/PIECE) FOR 2,456 LB CONCENTRATED LOAD OR 1,404 LB/SQFT UNIFORM LOAD.
8. USE EXPANSION JOINT MATERIAL BETWEEN TURRET AND BIORETENTION INLET.

5 RAIN GUARDIAN TURRET

NOT TO SCALE

CWS ARCHITECTS
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434 Cumberland Avenue Portland ME 04101
OFFICE: 207 774 4441 CWSARCH.COM

STATE OF MAINE THOMAS S. GREER No. 4206 REGISTERED PROFESSIONAL ENGINEER

PINKHAM & GREER CIVIL ENGINEERS
28 WARREN AVE., PORTLAND, ME. 04103
TEL: 207.797.8242 FAX: 207.797.8243

DESIGNER

OWNER
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c/o AVESTA HOUSING
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PORTLAND, MAINE 04101

PROJECT
977 BRIGHTON AVE ELDERLY APARTMENTS
977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING
SITE DETAILS
CWS PROJECT NUMBER: 15.040

REVISIONS

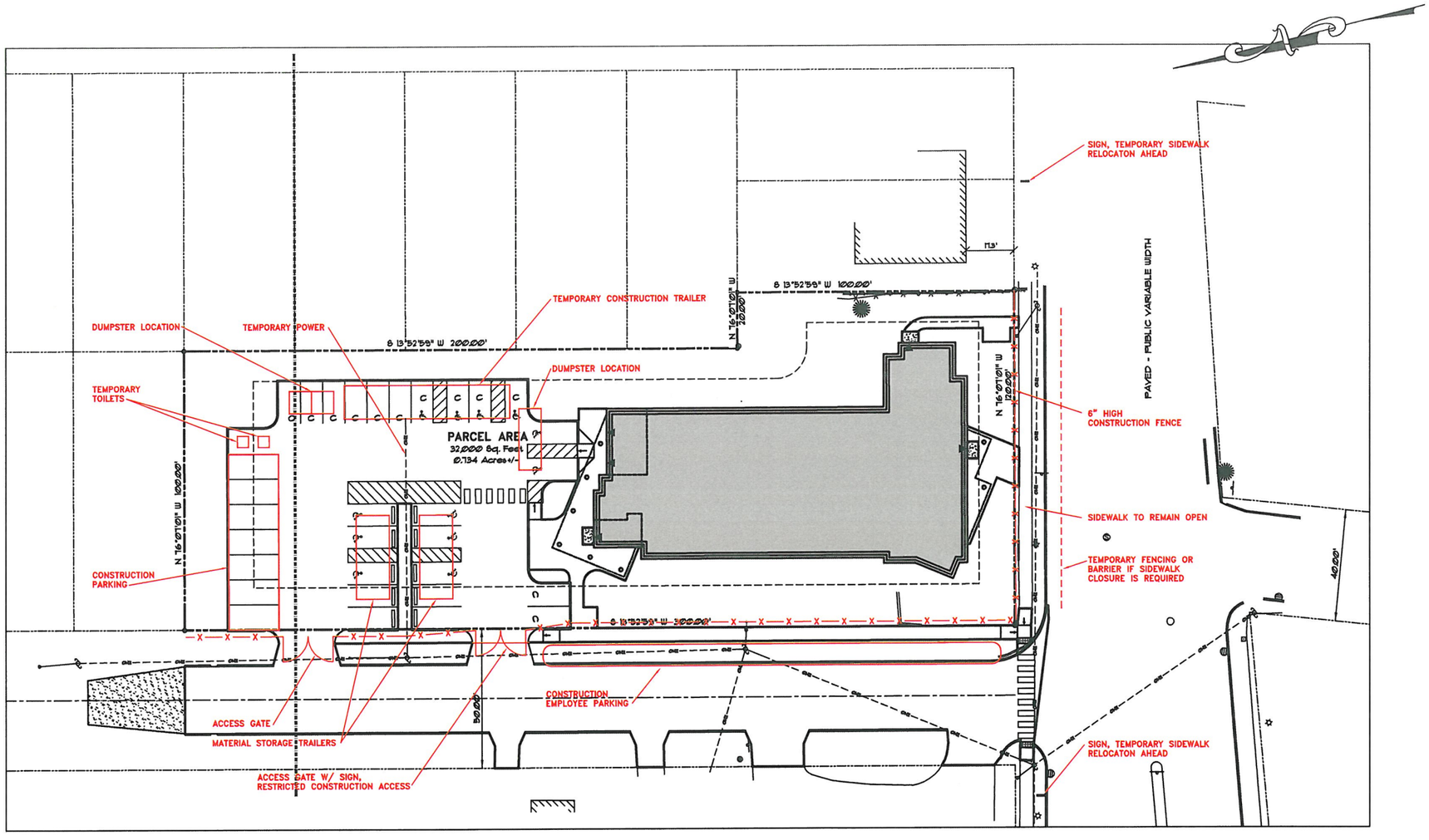
DRAWING NUMBER
C3.3

SCALE: AS SHOWN
DATE: 12/21/2017

G:\Land Projects\2015\15100-977 BRIGHTON AVE. APARTMENTS, PORTLAND\DWG\15100 DETAILS

NOTES

1. PROVIDE SAFETY CONES, BARRELS, FENCING, WARNING TAPE AS REQUIRED TO RESTRICT ACCESS TO THE SITE AND PROVIDE FOR PEDESTRIAN SAFETY.
2. REMOVE EXISTING BUILDING USING THE EXISTING PARKING AREA AS STAGING AREA.
3. CONSTRUCT PARKING LOT AREA TO EXPAND THE CONSTRUCTION STAGING AREA. USE WESSEX STREET FOR ACCESS AND MAKE ALL DELIVERIES IN THE STAGING AREA. WESSEX STREET TO REMAIN OPEN AT ALL TIMES FOR EMERGENCY ACCESS.
4. PROVIDE DUMPSTERS ON SITE THROUGHOUT THE CONSTRUCTION PROCESS.
5. TEMPORARY TRAILERS AND EMPLOYEES CONVENIENCE FACILITIES TO BE MAINTAINED ON SITE THROUGHOUT THE PROJECT.
6. CONSTRUCTION EMPLOYEE PARKING TO BE MAINTAINED ON SITE. ANY PARKING ALONG WESSEX STREET MUST LEAVE ROOM FOR TWO WAY TRAFFIC.



CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

DESIGNER

PINKHAM & GREER CIVIL ENGINEERS

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AVESTA 977 BRIGHTON LP
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PORTLAND, MAINE 04101

PROJECT

977 BRIGHTON AVE ELDERLY APARTMENTS

977 BRIGHTON AVENUE
PORTLAND, MAINE 04102

DRAWING

CONSTRUCTION MANAGEMENT PLAN

CWS PROJECT NUMBER: 15.040

REVISIONS

DRAWING NUMBER
CM-1

SCALE: AS SHOWN
DATE: 12/22/2017

Memorandum
Planning and Urban Development Department
Planning Division

To: Chair Dundon and Members of the Portland Planning Board

From: Caitlin Cameron, Urban Designer

Date: April 20, 2018

Re: **April 24th 2018 Planning Board Workshop**
Level III Site Plan, IOZ Conditional Use
30 condominium/retail development, 56 Hampshire Street (#2017-294)
NewHeight Group LLC, Chip Newell, Applicant

I. INTRODUCTION

NewHeight Group LLC has submitted Level III Site Plan and Subdivision, and Inclusionary Conditional Use applications for a residential project on Federal Street between Hampshire and Franklin streets in the India Street neighborhood. The proposal is for a three to six story single building of 30 market-rate condominiums, a retail space, and structured and surface parking. The parking includes spaces for 68 vehicles – 15 for the neighboring apartment building, 1 for the retail space, and the remaining 52 for the residential use. The required 3 affordable units will be provided off-site. The project is located in the IS-FBC zone (UN and UT subdistricts) and within 100 feet of the India Street Historic District but does not apply in this case.

This Workshop was noticed to 114 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on April 16th and 17th 2018. The applicant held a Neighborhood Meeting on March 2nd 2018 and the notes are included in Attachment U. The Planning Division hear from three residential neighbors/groups (PC 1-3). Comments from neighbors are primarily concerned with the height and shadow impact of the new building so close to their small-scale, historic residential buildings. There is also some question about the appropriateness of commercial space on Hampshire Street.



Applicant: NewHeight Group LLC (represented by Chip Newell)
Agent and : Terradyn Consultants, LLC (Michael Tadema-Wielandt, P.E.)
Architect: Archetype, P.A. (David Lloyd)

Required reviews and requested waivers:

Applicant's Proposal	Applicable Standards
New construction over 50,000 sf	Level III Site Plan Review and ISFBC UN/UT Design Review
Subdivision (30 dwelling units)	Level III Subdivision Review
Multi-family Residential >10 units	Inclusionary Zoning Conditional Use
Waivers	**Citation**
Driveway Width	City of Portland Technical Manual
Parking Aisle Width	City of Portland Technical Manual
Parking Stall Dimensions	City of Portland Technical Manual

II. PROJECT DATA

SUBJECT	*DATA*
Total area of the site	19,905 sq ft
Total Disturbed Area	19,905 sq ft
Existing Zoning	ISFBC (UT, UN)
Existing Use	Commercial building, surface parking
Proposed Use	Residential, retail, parking
Impervious Surface Area **--Existing** **--Proposed** **--Net Change**	 16,555 sq ft 9,953 sq ft 6,602 sq ft
Building Footprint **--Existing** **--Proposed** **--Net Change**	 5,118 sq ft 13,611 sq ft 8,493 sq ft
Building Floor Area **--Existing** **--Proposed** **-Net Change**	 5,118 sq ft 66,759 sq ft 61,641 sq ft
Proposed Room Mix **-One-bedroom** **-Two-bedroom** **-Three-bedroom**	 7 14 9
Parking Spaces	68 (52 residential; 1 retail; 15 neighbor spaces)
Bicycle parking Spaces	13 (none existing)
Estimated Cost of the project:	$12,950

III. EXISTING CONDITIONS

This site is within the India Street neighborhood and has frontage on three streets – Hampshire, Federal, and Franklin Street. The development site has been aggregated by combining the former Portland Food Co-op site, a former city property on Franklin Street, and a portion of the rear lot of the neighboring residential property. The property is currently occupied by an old industrial bakery building used for storage for the Portland Food Co-op and surface parking. Several new buildings have recently been completed or are under construction around this site – the Luminato residential building on Franklin Street a block away, and a renovation of a former apartment building into a hostel. These new buildings are quickly defining the Franklin Street character and streetscape.

The site is within the India Street Form-based Code zone and near a prominent, gateway corner. Hampshire and Federal streets are designated as Urban Neighborhood (UN) zoning subdistricts which emphasizes small-scale, private frontage with the intent of maintaining a private, small street character.

Franklin Street and a portion of Federal Street has an Urban Transitional (UT) zoning designation that allows for up to six stories and longer buildings with a more flexible approach to use and ground floor character.

The parcel is near the India Street Historic District. However, the so-called 100' rule does not apply in this case and new development on this site is not subject to historic review. Buildings on this site will be part of historic streetscapes of Federal and Hampshire streets and the zoning and design standards emphasize contextuality in order to create a congruent and cohesive streetscape.

The site has long-view approaches both from Congress Street and for traffic coming up Franklin Street. As such, it is important to consider the character of this building as it relates to the historic buildings of Congress Street but also how it creates a new character on Franklin Street.

Staff design review has struggled a little bit with how this building can mediate these two contexts. From a massing perspective, the project is successful. However, staff concluded that the project compatibility with the Hampshire, Federal, and Congress Street contexts is still questionable. These contexts rely heavily on traditional materials of red brick and clapboard and have symmetrical façade compositions.



IV. PROPOSED DEVELOPMENT

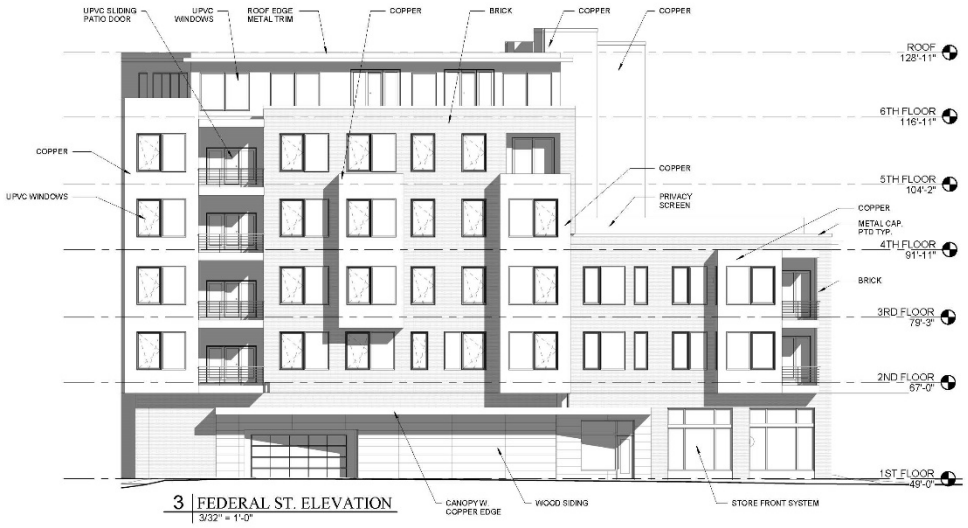
The proposed building is shown in the Plan set and described in the applicant's submittal. This image (Plan P21) shows the overall project view from Franklin and Congress streets.



The proposal includes:

- 31 market-rate condominiums
- 3 workforce housing units are required by Inclusionary Zoning – provided off-site
- Parking for 68 vehicles (structured, mechanical, surface)
- 1 retail space (under 2,000 sf) – condo docs prohibit cooking/restaurant
- Extended planting areas/plazas on City property along the Franklin Street frontage, dead-end of Federal Street, and at the corner of Congress and Franklin street.

The elevation below faces Federal Street and shows the residential and garage entrances (Plan P19). Hampshire and Federal have a 45', four-story height maximum; Franklin Street allows up to 65' and six stories. The resulting proposal includes height and massing variation.



3 | FEDERAL ST. ELEVATION
3/32" = 1'-0"

VERDANTE

Federal Street Portland, Maine

V. STAFF REVIEW

A. RIGHT, TITLE AND INTEREST

The applicant has submitted the deed (Attachment B). The applicant has agreed to provide parking for a neighboring apartment building as well as maintain light and air for that building. The applicant also acquired land from the City in order to have direct frontage onto Franklin Street.

Since the original application, the applicant has acquired property from the neighbor to expand the lot size. The Boundary Survey needs to be updated to reflect a recent land acquisition – those boundaries are shown in the plans but not the survey.

The applicant is proposing to encroach on the City's ROW with a number of habitable bay windows over both Franklin and Federal Streets. Staff do not support building proposals that occupy City property, especially when the building overhangs a public walkway. If this is allowed, licenses and financial contributions will be required.

B. ZONING ASSESSMENT

1. General Assessment: The proposed building and parking structure is located in the IS-FBC zone and includes one UN, a split UN/UT, and one UT frontages. On UN streets there is a three-story minimum and a four-story, 45' maximum. On UT streets the height maximum is six stories and 65'. The project appears to meet the height, setback requirements. The proposal is taking advantage of the ability to have a height bonus on the UT portions of the building – this takes the building up to six stories and potentially 77'. The project meets the maximum building length on Hampshire and Federal Streets (Federal Street frontage is split between two zones). The project seeks to use Additional Building Length provisions on Franklin Street. The building may be up to 200' (157' proposed) in length given certain requirements which the project meets by using structured parking. On Hampshire Street, which can allow up to 50' (50' proposed), the project includes a commercial ground floor but this cannot be used for additional building length. See the Zoning Checklist for a complete analysis (Attachment 1).

2. Staff Analysis: The intent of the zone is for new buildings to be human-scaled and contextual – staff feel the intent of the zone and subdistrict purpose statements are being met by the project as currently proposed.

   14-275.1 Purpose: *The India Street Form-based Code is different that traditional zoning, . . . The intent of the India Street Form-based Code Zone is to establish a zoning district that encourages a vibrant, walkable, mixed-use urban district, preserves and values the existing historic neighborhood fabric, and fosters and supports local businesses and residential areas.*

   Outstanding Zoning questions:

   - Height – Please provide height as measure from average grade to confirm compliance
   - Height – The Height bonus on Franklin Street is contingent on meeting the green roof requirements. Staff will request some additional runoff calculations and finalization of the maintenance agreement. The 50% pervious area calculation is barely met and staff will continue to evaluate this requirement.
   - Lot Coverage: The overhangs in ROW affect the lot coverage and pervious area calculations. The areas of these encroachments need to be confirmed for zoning as well as licenses.
   - Setbacks: The driveway currently encroaches on the 35' surface parking setback. Staff request additional information to ensure this encroachment is to the minimum amount.

C. SUBDIVISION STANDARDS

(14-497(a). Review Criteria)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below and in *Attachments 1-5.*

1. Water, Air Pollution

The project is not anticipated to result in undue air or water pollution.

2 & 3. Adequacy of Water Supply

The applicant has provided evidence of capacity from the Portland Water District with conditions *(*Attachment P*)*.

4. Soil Erosion

No unreasonable soil erosion or reduction in the capacity of the land to hold water is anticipated (Attachment 2*)*. Site Plan (Plan P5) and Erosion Control Plan (Plan P6) provide information about stabilizing the site during and after construction.

5. Impacts on Existing or Proposed Highways and Public Roads

The applicant has not provided a full traffic and transportation analysis. Tom Errico, the city's consulting traffic engineer, has requested the studies and made further comment on impacts to the future Fanklin Street design (Attachment 3).

6. Sanitary Sewer/Stormwater Disposal

A 6-inch sewer line is proposed to service the building and would outlet to Hampshire Street. No grease trap is proposed – restaurant uses are not allowed as part of the building. The applicant has submitted a wastewater capacity application to the Department of Public Works and is waiting for the response letter.

The greenroof is proposed to achieve a height bonus – that green roof will be required to meet Ch 32 and provide stormwater runoff detention. The applicant has provided stormwater management and utility plans as well as information for the green roof. The City's consulting civil engineer will review these plans further as part of the Site Plan review (Attachment 2, S, and P23).

7. Solid Waste

The applicant has proposed a trash and recycling room adjacent to the residential entrance and has indicated in the condominium documents that residents are responsible for engaging a waste management contractor to provide waste removal service. The project is not anticipated to cause an unreasonable burden on the ability of the city to dispose of solid waste.

8. Scenic Beauty

This proposal is not deemed to have an adverse impact on the scenic beauty of the area. The project is not within a historic district or within 100' of a historic landmark.

9. Comprehensive Plan

India Street Sustainable Neighborhood Plan

This newly adopted neighborhood plan includes the following goals and principles which are met by this proposal:

Goal – Vitality – the project adds 33 new units bringing more people to the neighborhood

Goal – Diversity of building types and residents – The project targets a different demographic for the neighborhood.
Principle 7: Guided Growth – the project provides dense residential development on Franklin Street corridor, one of the areas identified as potential growth and infill development sites.
Principle 8: Form of Development – High residential density, maintaining the pedestrian-scale blocks, continuous sidewalks, and street-oriented buildings – these concepts are all included in the project.
Principle 13: Responsive to Climate Change – this will be the second project in the neighborhood to have a green roof and address stormwater runoff.

Incentives for Affordable Housing and ***Housing – Sustaining Portland's Future***
The city believes that it is in the public interest to promote an adequate supply of affordable housing for its residents. The proposed project is required under the newly adopted Division 30, Section 14-487, Ensuring Workforce Housing to provide at least 10% workforce housing units. As described below and in (Attachment 5), the project proposes to provide three off-site rental units. Housing stock is placed in a multi-modal neighborhood with good connections to several neighborhoods, offices, and services.

10. Financial and Technical Capacity
As noted above, the applicant has provided evidence of financial and technical capacity (Attachment G).

11. Wetland/Water Body Impacts
Project is not located within a watershed of any pond or lake or within 250 feet of any wetland, great pond or river.

12. Groundwater Impacts
There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area
Per the FEMA flood maps, the site is not located in a flood zone.

14. Wetland/Water Body Impacts
No potential wetlands within the proposed subdivision.

15. Wetland/Water Body Impacts
No river, stream or brook within or abutting the proposed subdivision.

(14-497(c) Conformity with Code) *Any proposed subdivision shall be in conformity with all relevant provisions of this Code.* Project has been reviewed for conformity with the zoning code – see staff analysis below.

D. SITE PLAN STANDARDS

14-526 Site Plan Standards

Traffic - Access, Circulation, Loading and Servicing

The current proposal introduces one curb cut onto Federal Street for a single entry/exit for all 68 parking spaces. The project also includes one retail space (under 2,000sf) with proposed loading/service on Federal Street. Zoning requires surface parking to be set back 35' from the street – the applicant is requested to provide turning templates to show that the driveway area, which encroaches on this 35' setback, has been reduced to the minimum amount required to access the surface parking spaces.

The Traffic Engineering Reviewer has also noted the following (Attachment 2):

- *The Applicant shall conduct **a trip generation analysis** for the project for the weekday PM peak hour for assessing monetary contribution requirements for the implementation of Franklin Street improvements. The Applicant shall conduct the estimate for all land uses (an estimate was provided for the residential portion of the project only) and provide supporting calculations.*
- *The location of the proposed driveway shall consider future Franklin Street improvement conditions (particularly that a new intersection of Federal Street and Franklin Street will be created – with possible traffic signal control). **Current plans indicate the driveway separation to Franklin Street will be 29 feet, which does not meet City standards. I continue to review this issue and will provide feedback in the future.***
- *Truck deliveries are proposed on Federal Street, but circulation in and out of the space will be difficult given the dead-end street condition. Hampshire Street may be a more suitable location and additional review is required.*

Sidewalks – Staff have several revisions requested for the sidewalk design to meet the *City of Portland Technical Manual* standards especially regarding curb alignment, pedestrian crossings ramp, street trees, street lighting placement and fixture selection (Attachment 4). The City is not satisfied by the current design of sidewalk connecting Federal and Franklin streets, especially in regards to providing steps in the public sidewalk which is not ADA compliant solution. Staff will work with the applicant on further revising these designs. The transportation Planner had these comments (Attachment 4):

- *The City is also interested in exploring opportunities to create an ADA-accessible pedestrian access route from Federal Street to the sidewalk along Franklin Street.*
- *Plans should be revised to indicate cross slopes and running slopes, especially meeting ADA requirements.*
- *The applicant's response indicates that bike racks have been added along Federal Street frontage near the lobby but it is not readily apparent on the Site Plan.*

The applicant is proposing to encroach on the City's ROW with a number of habitable bay windows over both Franklin and Federal Streets. Staff do not support building proposals that occupy City property, especially when the building overhangs a public walkway. A series of complaints have been filed about other projects with these overhangs where water and ice impact on passers-by.

Public Transit Access - No transit shelter is required.

Parking – The zoning requires 27 parking spaces for the residential project. 68 spaces are proposed, 52 of which are for the residents of 56 Hampshire and includes three tiers of mechanical parking and 2 ADA spaces. The parking is provided in a combination of structured, covered, and surface spaces (Plan P5). See the Zoning Analysis regarding the drive aisle within the 35' setback for surface parking.

The applicant intends to provide 15 residential surface parking spaces on-site for the neighboring apartment building.

- How will neighboring residents be routed to access those parking spaces?

The new retail space is under 2,000 sf and does not require parking per the ordinance. However, the applicant proposes to provide one (1) parking space for the retail:

- Where is that space located and is it intended for staff or visitors?
- How is that designated?

The City proposes to re-assign and re-stripe the on-street parking on Federal Street allowing for parallel spaces on both sides of the street. Staff suggest that one on-street parking space on Hampshire Street might be designated a 15-minute space or a commercial loading space.

Staff need more information in order to fully evaluate the requested waivers. The Traffic Engineering Reviewer has also noted the following regarding parking design (Attachment 3):

- *Parking aisle widths do not comply with City Technical standards and the Applicant shall provide technical/site information in support of a waiver.*
- *The driveway width on Federal Street appears to be narrower than City Technical Standards. The Applicant shall provide technical/site information in support of a waiver.*
- *All of the mechanical parking spaces do not meet City parking space dimensional standards. The spaces appear to be slightly narrower and slightly longer. I continue to review the details, but likely support a waiver from the City's Technical Standards.*
- *The applicant shall provide information on how the eight tandem parking spaces (#9 though #16) will be managed.*

Snow Storage – Shown against fence within surface parking area and out of the circulation path for cars.

Transportation Demand Management – Not applicable

Landscape Preservation / Site Landscaping and Screening – There are no significant landscape or natural features to preserve. The applicant shows landscape and fence screening between Franklin Street and the surface parking as well as the neighboring residential properties and the surface parking.

- Staff suggests that a wood fence is not the appropriate character facing a major, multi-modal street.
- Is the fence shown adequate screening for the neighboring residential properties? There is no screening between the surface parking and a neighboring porch, for example.

Landscape Plan – The applicant proposes substantial landscape improvements around the property and includes improvements to the public land between the building and Franklin Street as well as the City property at the corner of Franklin and Congress streets, and at the end of Federal Street. Landscape and screening are required at the surface parking both between the street and the neighboring residential properties (Plan P11).

- Staff will work with applicant to create a legal agreement about the maintenance of landscape improvements on public land.
- Applicant made revisions based on City Arborist comments. Additional review from the City Arborist of the current proposal is needed for these public space landscape improvements.
- The City Arborist will need to evaluate the proposal to remove six (6) healthy street trees (Attachment 5).

- Thirty-one (30) trees are required, fourteen (14) are provided = 16 trees x $400 = **$6,400 contribution to the Street Tree Fund**

Water quality, Stormwater Management and Erosion Control - Staff do not have significant concerns – see comments from Civil Engineer (Attachment 2). The project is achieving a height bonus by providing 50% pervious lot coverage and a green roof. Additional calculations are needed to show the runoff detention of the green roof meeting the expected public benefit in exchange for the height increase. The green roof must meet Chapter 32 and provide a Stormwater Maintenance Agreement – a draft of that has been provided.

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

The final submission will be evaluated for the lighting and safety especially on Federal Street and the connection to Franklin Street.

Fire Prevention and Public Utilities – Applicant has provided the letter from the Water District showing capacity to serve. The sewer capacity letter is still outstanding. There are two questions from Fire Prevention at this time (Attachment 4):

- *There is a concern of carbon monoxide in the enclosed portion of the parking garage.*
- *Access around the building appears to be adequate. What is the distance from the building to the paved way of Franklin Street?*

Massing, Ventilation and Wind Impact and Shadows: Generally addressed in the Design Review. The neighboring residential properties on Hamsphire Street have expressed concern about the shadow impact from the 6 stories on their living and yard space. This is a concern, however, the project is currently meeting the zoning height requirements.

Historic Resources – The project is not within the historic district and not within 100' of a historic landmark.

Exterior Lighting incl Street Lighting – Staff will evaluate the photometric plan when it is revised. The Building lighting cut sheets meet the requirement provided only the downlight options are used. Staff will give guidance to applicant regarding any new street lights along all frontages in the ROW (at the applicant's cost). The lights would need to meet the Technical Standards for street lighting and match the lights installed elsewhere in the India Street neighborhood (Eastern Waterfront medium). Staff will work with the applicant to develop the street light plan.

Noise and Vibration – The final submissions should clarify where the HVAC will be located and how it will be screened from the public ROW and neighboring residential properties even if the exact specifications are submitted later.

Construction Management Plan – Staff have not reviewed or provided comment at this time.

E. DESIGN STANDARDS



The site is located within the IS-FBC zone, Franklin Street is the UT subdistrict, Hampshire and Federal Streets are in the UN subdistrict. The UT subdistric takes over on Federal Street 50' past the corner. Preliminary design review concluded that the building design generally meets overall intent of the zone with a few outstanding points regarding materials and character, garage ground floor design, and fence design. Full comments see Attachment 1.

Staff Analysis: The surrounding built context could be divided into the low-rise historic residential structures of the narrow Hampshire Street and the newer, large-scale development on the wide Franklin Street. The design priorities for new construction in this neighborhood are buildings that maintain the urban street wall, engage the public realm, and respect and fit into the established context. The design successfully creates interesting forms and massing, and maintains the street walls. The three-story mass on Hampshire Street is contextually sensitive in scale and provides an active ground floor with commercial use, **however, staff felt the façade design should be more symmetrical and employ red brick in order to tie into that street context.** The proposal orients the residential entrance and appropriately, the taller mass, to Federal and Franklin Street. The view of the building from Congress Street creates a varied mass and roofline but staff were concerned that **this prominent view corner feels eroded rather than a strong, gateway presence.** Visual interest is brought through massing variation, façade plane changes of the bay windows, and varied roof lines. There is a regular pattern of vertical proportioned windows, consistent with the traditional patterns. **Staff is conflicted about the use of grey brick, which, seen in the Franklin Street context, works, but given the predominance of red brick in the India Street context of Congress and Hampshire Streets, feels out of place**. The project also adds some publicly accessible open space on the corner of Congress and Franklin. This space is an amenity for the neighborhood residents and visitors as well as providing a more attractive gateway feature.

Staff request Board feedback about:

- Material selection, placement, and number of materials – use of grey, rather than red brick
- Overall character + compatibility with existing neighborhood compared with Franklin Street
- Ground floor on Franklin Streets - Fenestration, Articulation, Pedestrian comfort and scale
- Character of fence at Franklin street wall
- Landscape design approach at public corner – appropriate approach?



VI. INCLUSIONARY ZONING CONDITIONAL USE

The applicant is required by Division 30, Section 14-487 to provide 3 workforce housing units (on-site or off-site) or pay the fee-in-lieu. The applicant has proposed to provide one of these units off-site at 42 Hampshire Street as a three-bedroom. The remaining two are also proposed off-site but the details have not been determined. The Housing Planner has the following comments (Attachment 6):

- *To comply with the Division 30, Section 14-487, Ensuring Workforce Housing, the applicant is required to provide a minimum of 3 workforce unit (on-site or off-site) or pay the fee-in-lieu. As noted above, the applicant is proposing to provide 3 off-site workforce units. Based on the requirements outlined in Section 14-487, the number of bedrooms in the workforce units shall be ten percent of the total number of bedrooms in the development. The total number of bedrooms in the development is 62. As noted above, the applicant is proposing to provide one off-site workforce unit with 3 bedrooms. Two additional workforce units with a minimum of 3 bedrooms in total will be required to be included in the final submission package.*

- *Staff will be looking for the applicant to provide the location of the two remaining workforce units, with the bedroom count, to ensure compliance with Division 30, Section 14-487.*

VII. NEXT STEPS

The final submission will need to fully address the Site Plan and Subdivision review standards, including the following:

- Submit an updated, stamped Survey
- Transportation: Trip generation analysis; Parking study
- Transportation: Information in support of waiver requests
- Transportation: Information to address the Traffic Engineer review questions – vehicle management for mechanical and tandem parking
- Site Design: Work with staff for sidewalks/ROW design and materials, street lights, and street tree layouts
- Site Design: Provide turning templates showing the minimum driveway needed within the 35' setback to access surface parking
- Subdivision: Provide Plat for review
- Subdivision: Provide Condo docs for legal review
- Zoning: Green roof calculations
- Zoning: Resolve outstanding staff questions
- Fire: Response to staff questions
- Design: Locations and screening details for HVAC
- Design: Questions regarding compatibility with neighborhood streetscapes
- License: Work with City to determine the license conditions for building overhanging the ROW
- Landscape: Legal agreement for landscape maintenance on public property
- Utilities: Submit capacity letter for Wastewater
- IZ Conditional Use: Provide location and bedroom count of remaining two workforce housing units
- City Reviews Outstanding: Photometrics Plan, Street tree removal, street lights, CPTED
- Any other issues raised by the Planning Board

ATTACHMENTS:

Attachments to Memorandum

1. Zoning and Design Checklist
2. Civil and Stormwater
3. Traffic Engineering
4. Fire, Sidewalk
5. City Arborist
6. IZ Conditional Use

Public Comments

PC1 Judith Allen 2.14.18
PC2 Priscilla Slack 2.24.18
PC3 Judith Allen et al 3.08.18

Applicant's Submittal

A. Application
B. Right, title and Interest
C. Development Description
D. State & Federal Permits
E. Land Ordinance Review
F. Easements
G. Technical & Financial Capacity
H. Natural Features
I. Stormwater Management
J. Consistency with Master Plans
K. Utilities
L. Solid Waste
M. Fire Safety
N. Design Standards Review
O. HVAC Equipment
P. Water Capacity
Q. Details – Mechanical Parking
R. Details – Exterior Building Lighting Specifications
S. Details – Roof Garden Specifications
T. Construction Management Plan
U. Neighborhood Meeting Package
V. Response Letter 3/6/18

Plans

P1 Cover Sheet
P2 General Notes
P3 Boundary Topographic Survey
P4 Existing and Demolition Plan
P5 Site Plan
P6 Grading Drainage, and Erosion Plan
P7 ESC Notes
P8 Utility Plan
P9 Site Details
P10 Utility & Drainage Details
P11 Landscape Plan
P12 Photometrics Lighting Plan

P13 1st Floor Plan
P14 2nd Floor Plan
P15 3rd Floor Plan
P16 4th Floor Plan
P17 5th Floor Plan
P18 6th Floor Plan
P19 Elevations
P20 Elevations
P21 Perspectives
P22 Diagram Pervious Surface Calculation
P23 Roof Garden Details

Development Review Checklist

IS-FBC

Level I / Level II / Level III / Master Plan
Project Name:__Verdante_____
Address:__56 Hampshire Street_____
Description: Alteration / Addition / New Construction
Date Received:__4/13/18_____ Prelim / Final
Planner:__Caitlin Cameron_____
Subdistrict UN / UT / UA

	Complies	More Info	Does Not Comply	N/A	Comments
PURPOSE					
General Guiding Principles	☒	☐	☐	☐	
Subdistrict Intent	☒	☐	☐	☐	UT Federal + Franklin; UN Hampshire/Federal
GENERAL DEV. STANDARDS					
(a) Prohibited Uses	☒	☐	☐	☐	Residential/retail
(b) Siting Standards					
Mid-Block Permeability	☐	☐	☐	☒	
Frontage Req. – Additional Building Length	☒	☐	☐	☐	UN Hampshire = 50' (bays exceed 50') UT Federal = 82' UN Federal = 50' UT Franklin = 157' with structured parking
Setbacks	☒	☐	☐	☐	No special conditions; 10' setbacks
Small Lot < 35'	☐	☐	☐	☒	
Side Yard less than 5'	☐	☐	☐	☒	
Special corner treatment	☐	☐	☐	☒	
Attached Buildings	☐	☐	☐	☒	
Landscaping & Screening					
Surface Parking	☒	☐	☐	☐	Screened by fence – Staff question the design character of the fence. Wood seems too residential for the street wall of a mixed-use, large street such as Franklin.
1st Lot Layer - Height	☒	☐	☐	☐	6' max height
1st Lot Layer – Perm.	☐	☒	☐	☐	Visual permeability required above 2' – Does Board consider this to be permeable enough?
Other Lot Layer - Height	☐	☒	☐	☐	Fences in side and rear not to exceed 8' – fences above 6' require building permit

	Complies	More Info	Does Not Comply	N/A	Comments
(c) Height Standards					
Height Bonus - Eligible?	☒	☐	☐	☐	UT eligible streets – 1 bonus story allowed; Height not to exceed 77' from average grade
Height Bonus – Conditions Green Roof + Pervious = 50% lot	☒	☒	☐	☐	Staff are still reviewing green roof details, area calculations – 9,953sf (50% lot area) pervious proposed (does not include bay overhangs). See Civil comments for further info.
(d) Parking Standards	☒	☒	☐	☐	27 spaces required, 68 spaces provided (+15 for neighbor, 1 for retail, 52 residential); Not all Tech Manual standards met – see Traffic Comments, Additional information requested
SUBDISTRICT DIMS REQ.					
Siting Standards					
Orientation	☒	☐	☐	☐	UT principal façade; UN retail facade
Corner Condition	☐	☐	☐	☒	
Lot Coverage	☐	☒	☐	☐	68% - provide floor area of 2nd floor including bays and decks to confirm this calculation
Frontage Requirements					
Building Length	☐	☒	☐	☐	
Additional Bldg Length	☒	☐	☐	☐	Franklin and Federal complies; Hampshire Street not seeking additional building length
Fenestration Req. (UA)	☐	☐	☐	☒	
Setbacks					
Principal Building					
Front Yard	☒	☐	☐	☐	0' - front yards; Increased front yard on Federal at Hampshire permitted to maintain maximum building length req on Hampshire
Side Yard	☒	☐	☐	☐	At least 10' on all side yards
Side Yard	☒	☐	☐	☐	
Exceptions?	☐	☐	☐	☒	
Rear Yard	☐	☐	☐	☒	No rear yards

	Complies	More Info	Does Not Comply	N/A	Comments
Building Entries					
Frequency	☒	☐	☐	☐	Hampshire = 1 required, 1 provided; Federal = 1 required within UN, 1 provided; Federal = 1 required within UT, 3 doors provided; Franklin = 1 required, 1 provided
Principal Entry Orientation	☒	☒	☐	☐	Principal entry on Federal; 1 retail entry on Hampshire; Building Code may not approve entry opening into public ROW on Franklin
Principal Entry Elevation	☒	☐	☐	☐	All entries (5) at grade
Height Standards					
Principal Building					
Height	☐	☒	☐	☐	Hampshire/Federal = UN 45'max; Federal/Franklin = UT 77' max; Provide height measured from average grade
Stories	☒	☐	☐	☐	3 stories on Hampshire; 6 stories on Franklin.
Stepbacks (UT, bonus)	☒	☐	☐	☐	For UT building, 10' stepbacks required after 45' height for side yards adjacent to UN property.
Accessory Building(s)	☐	☐	☐	☒	
Parking Standards					
Surface Parking Location	☐	☐	☒	☐	Only minimum driveway needed to access surface parking allowed to encroach the 35' setback – more pavement than reasonably necessary should be eliminated and will be interpreted as surface parking area not meeting the setback. Provide turning templates for those parking spaces.
Garage Door Setback	☒	☐	☐	☐	1st lot layer determined by façade plane, door is setback from building façade
Garage Door Opening	☒	☐	☐	☐	18' door

IS-FBC: Building Design Standards (BDS)

	Complies	More Info	Does Not Comply	N/A	Comments
BUILDING DESIGN STANDARDS (BDS)					Review (2/12/18 and 4/18/18) Caitlin Cameron, Deb Andrews, Shukria Wiar
1. Neighborhood Context					
Intent	☒	☐	☒	☐	While the intent is met on Franklin Street, there is some question about the composition of facades as they relate to Federal and Hampshire which have more traditional, symmetrical compositions. The bays are an appropriate, contextual element that help tie the project into the built forms of the context, but their placement is more contemporary.
Guidelines	☐	☒	☒	☐	On Hampshire – revise façade composition to reflect context which has more symmetrical composition. Perhaps position or number of bays could accomplish this. On Federal and Hampshire, simplify material palette.
2. Massing & Proportion					
Intent	☒	☐	☐	☐	
Guidelines	☐	☐	☐	☐	Staff raised some question about the building massing as it relates to the Congress/Franklin Street corner approach. The massing is varied, but staff wondered whether this prominent corner should have a more "gateway" feel to the building viewed from this approach.
Standard 2.1	☐	☐	☐	☒	
3. Articulation & Composition					
Intent	☒	☐	☒	☐	While the intent is met on Franklin Street, there is some question about the composition of facades as they relate to

					Federal and Hampshire which have more traditional, symmetrical compositions. The bays are an appropriate, contextual element that help tie the project into the built forms of the context, but their placement is more contemporary.
Guidelines	☒	☐	☐	☐	
Standard 3.1: 3 required	☒	☐	☐	☐	Each façade uses: bays, balconies, material change; Federal and Franklin include canopies at entries.
Standard 3.2	☐	☒	☐	☐	More information needed regarding material detailing and transitions.
Standard 3.3: Blank Wall	☒	☐	☐	☐	
4. Fenestration					
Intent	☒	☐	☒	☐	The commercial use is clearly distinguished from the residential use in its design and fenestration. Overhanging bays into the ROW are not part of the established streetwall pattern. Bays are also usually part of a symmetrical façade composition – this would be an appropriate approach on Hampshire Street with the small, traditional context.
Guidelines	☒	☐	☐	☐	Consider revising the garage fenestration to be different from the residential window type.
Standard 4.1 (UA only)	☐	☐	☐	☒	
Standard 4.2	☒	☐	☐	☐	
Standard 4.3	☐	☒	☐	☐	What is VT of glass? Ribbed glass proposed.
Standard 4.4	☒	☐	☐	☐	

	Complies	More Info	Does Not Comply	N/A	Comments
5. Building Materials					
Intent	☐	☐	☐	☐	Brick is primary material – Staff review found that the grey brick is appropriate on Franklin Street where the context is more contemporary. However, staff are not convinced that grey brick is contextually sensitive to the surrounding streets of Hampshire, Federal, and Congress Street where red brick is very prominent characteristic, especially of the historic district that shares this streetscape.
Guidelines	☐	☐	☐	☐	Staff prefer that bays use consistent material – simplify the palette to better conform to the context (especially Federal/Hampshire)
6. Building Entries					
Intent	☒	☐	☐	☐	Entries provided on all street facades.
Guidelines	☒	☐	☒	☐	Bike room door could include sidelight or windows to make more active/distinguish from mechanical room door.
Standard 6.1	☒	☐	☐	☐	Principal entrance faces Federal Street.
Standard 6.2 (UA only)	☐	☐	☐	☒	
Standard 6.3	☒	☐	☐	☐	
Standard 6.4	☒	☐	☐	☐	
Standard 6.5	☒	☐	☐	☐	
Standard 6.6	☒	☐	☐	☐	Slight setback
Standard 6.7: Frequency	☒	☐	☐	☐	At least one entry is required on each façade; 2 on Federal (1 UN, 1 UT)
7. Roof Lines					
Intent	☒	☒	☐	☐	Circulation towers are integrated and minimized in the design. Where will rooftop mechanicals be located? Are rooftop mechanicals screened?
Guidelines	☒	☐	☐	☐	

Standard 7.1	☐	☒	☐	☐	More information requested regarding rooftop systems.
Standard 7.2	☒	☐	☐	☐	
8. Structured Parking					
Intent	☒	☐	☐	☐	The impact of the garage is minimized by a full wall; active street level is addressed by windows (with reeded glass, an active door and canopy. Should the windows be less residential in character?
Guidelines	☒	☐	☐	☐	The structured parking is integrated into the ground floor of the building using the same material palette as the rest of the building.
Standard 8.1	☒	☐	☐	☐	Façade includes: bays, balconies, change in material, canopy
Standard 8.2	☒	☐	☐	☐	Cars are fully concealed by wall and reeded glass will diffuse glare from headlights.
Standard 8.3	☒	☐	☐	☐	
Standard 8.4	☒	☐	☐	☐	

COMMITMENT & INTEGRITY
DRIVE RESULTS

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Att. 2

MEMORANDUM

TO: Caitlin Cameron, Urban Designer
FROM: Lauren Swett, PE
DATE: April 18, 2018
RE: 56 Hampshire Street, Level III Site Plan Application

Woodard & Curran has reviewed the Level III Site Plan Application and response to comments for the proposed development located at 56 Hampshire Street in Portland, Maine. The project involves development of a 6-story, 31-unit residential building including commercial space and covered parking on the first floor level.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Response to Comments and attachments, dated March 6, 2018, prepared by Terradyn Consultants, LLC on behalf of NewHeight Group.
- Engineering Plans, Sheets 1 – 14, revised April 9, 2018, prepared by Terradyn Consultants, LLC on behalf of NewHeight Group.

Comments

1) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
   b) General Standard: The project will result in a de minimis decrease in impervious area. As such, the project is not required to include stormwater management features for stormwater quality control. The Applicant is proposing a green roof, and design information has been provided.
   c) Flooding Standard: The project will result in a de minimis decrease in impervious area. As such, the project is not required to include stormwater management features to control the rate or quantity of stormwater runoff from the site. The Applicant is proposing to install a green roof, which may provide some stormwater flow attenuation.
2) The Applicant has provided correspondence to utilities. Portland Water District ability to serve has been confirmed. Final confirmation of sewer capacity and ability to serve should be provided when available. It is noted that this capacity should consider the drainage from the parking area.

All other comments have been addressed at this time.

Att. 3

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire Street - Preliminary Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com> Thu, Apr 19, 2018 at 3:53 PM
To: "Cameron, Caitlin" <ccameron@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Caitlin – I have reviewed the revised project application materials and offer the following preliminary traffic comments.

- The Applicant shall conduct a trip generation analysis for the project for the weekday PM peak hour for assessing monetary contribution requirements for the implementation of Franklin Street improvements. The Applicant shall conduct the estimate for all land uses (an estimate was provided for the residential portion of the project only) and provide supporting calculations.

- The location of the proposed driveway shall consider future Franklin Street improvement conditions (particularly that a new intersection of Federal Street and Franklin Street will be created – with possible traffic signal control). Current plans indicate the driveway separation to Franklin Street will be 29 feet, which does not meet City standards. I continue to review this issue and will provide feedback in the future.

- Truck deliveries are proposed on Federal Street, but circulation in and out of the space will be difficult given the dead-end street condition. Hampshire Street may be a more suitable location and additional review is required.

- Parking aisle widths do not comply with City Technical standards and the Applicant shall provide technical/site information in support of a waiver.

- The driveway width on Federal Street appears to be narrower than City Technical Standards. The Applicant shall provide technical/site information in support of a waiver.

- All of the mechanical parking spaces do not meet City parking space dimensional standards. The spaces appear to be slightly narrower and slightly longer. I continue to review the details, but likely support a waiver from the City's Technical Standards.

- The Applicant shall provide information regarding how vehicles will be managed during wait periods for the mechanical parking system.

- The Applicant shall provide information on how the eight tandem parking spaces (#9 through #16) will be managed.

- It appears the project is formalizing a Federal Street cross-section that results in a curb-to-curb width of 43 feet within a 66-foot right-of-way. A linear curb line shall be provided along the frontage (eliminate the pull-out area). The perpendicular parking spaces on the south side will likely be converted to parallel spaces. Further assessment of the cross-section is required.

- The Applicant should note pedestrian routing and access easement provisions between the parking spaces allocated to the abutting property and building entrances.

- The parking area servicing spaces #1 through #4 shall be designed to minimize pavement surface and comply with minimum aisle width requirements (24 feet). The plan shall be sufficiently detailed.

- The Applicant has provided a Construction Management Plan and my initial comments are noted below:
    - Specific details on material deliveries and associated traffic management shall be provided.
    - It seems very likely that some impact to Franklin Street will occur. Accordingly, the Applicant shall provide a Construction Management Plan addressing impacts to Franklin Street.
    - A temporary sidewalk is proposed on Hampshire Street adjacent to the project site. Greater detail is required on ADA compliance and end point transition.
    - Specific details on contractor parking shall be provided.
    - The Contractor shall be responsible for snow removal on Federal Street between Hampshire Street and the end of the street.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

MEMORANDUM

To: FILE

From: Caitlin Cameron

Subject: Application ID: 2017-294

Date: 4/20/2018

Comments Submitted by: Robert Thompson/Fire on 2/12/2018

There is a concern of carbon monoxide in the enclosed portion of the parking garage. I'm assuming this will be addressed in the building ventilation system.

Comments Submitted by: Robert Thompson/Fire on 2/12/2018

Access around building appears to be adequate. What is the distance from the building to the paved way of Franklin Street?

Comments Submitted by: Bruce Hyman/Planning / Transportation on 4/20/2018

The following are my comments for the upcoming workshop for 56 Hampshire Street regarding the street/sidewalk-streetscape/ADA-accessibility:
Site Plan - Sheet C-3.0:
The case needs to be made for the inset loading zone as shown that significantly impacts the continuous width and function of the sidewalk - other loading zone options/configurations are preferred and should be explored
As noted in the applicants response to previous comments, the city is also interested in exploring opportunities to create an ADA-accessible pedestrian access route from Federal Street to the sidewalk along Franklin Street
Water Resources at DPW should provide guidance on the adequacy of the design of the curb ramp at the corner of Hampshire-Federal Streets - the tipdown curb on Federal Street is shown flush with the street at the catch basir
The site plan should be revised to show intended cross-slopes and running slopes (matching the details on Sheet C-6.0) of sidewalks and driveways to ensure an ADA-accessible pedestrian access route is constructed
The applicants response indicates that bike racks have been added along the Federal Street frontage near the lobby but it is not readily apparent on the site plan
Site Details - Sheet C-6.0:
The brick driveway detail is to be revised to indicate a maximum cross-slope of 2% to ensure an ADA-compliant pedestrian access route is constructed
The detectable warning panel/plate detail is to be revised to correctly show the 4" 'concrete apron' around the entirety of the outside of the panels - the availability of the radius panels with an 8' radius as shown on the site plan should be confirmed to ensure its constructability
Please don't hesitate to contact me if you or the applicant have any questions about my comments. I may have additional comments at a later date.

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire 2017-294 - prelim comments

Jeff Tarling <jst@portlandmaine.gov> Tue, Feb 20, 2018 at 12:59 PM
To: Caitlin Cameron <ccameron@portlandmaine.gov>

Hi Caitlin -

Street-trees:

The proposed 56 Hampshire Street project plans to remove 5 existing mature Honeylocust trees along Franklin Street. The project next door removed 3 Locusts two years ago significantly altering the continuous allee effect of the Honeylocust rows, planted in the 1970's, that stretch from Marginal Way to Commercial Street.

Unfortunately, 'Tree-Save' options are limited due to the canopy width interfering with proposed building structure. This project unlike the one next door does replace the lost street-trees with new upright version of Basswood, a native cousin to the European Linden. The 'American Sentry' Linden is an excellent choice to restore the Franklin Street boulevard due to its upright form.

Federal Street, Hampshire street-tree(s) - The project does not propose street trees on either Hampshire or Federal Streets. Depending on future overhead utilities there appears to be room along Federal Street for two street trees, likely using an upright shaped tree in a tree planter would be a good option. Currently we have one street-tree on Hampshire Street along the project frontage. Would recommend that the Hampshire Street tree be replaced if sidewalk width allows for adequate pedestrian passage.

Additional landscape planting in the area shown as 'loam & seed' could provide space for shade loving planting. This could include Striped Maple, Stewartia, Viburnum, and herbaceous landscape planting. The shade between the existing and proposed buildings along with orientation is likely to result in a space challenging to maintain good turf. We would recommend revisiting landscape planting options for this area, this space could include small patio garden for residents. It is a small space that could have some contributing benefit to the future residents...

Project 'street-tree' requirements - The project frontage is along three city streets offering opportunities for planting to closer meet the standards. Limitations that prevent on street planting would trigger contribution to the Tree Fund to support additional tree planting near the project. The recent oridinace change in regards to Street-trees also requires a per tree removal cost to remove healthy street-trees. A quick check notes five (5) street trees lost on Franklin and one (1) street tree lost on Hampshire Street.

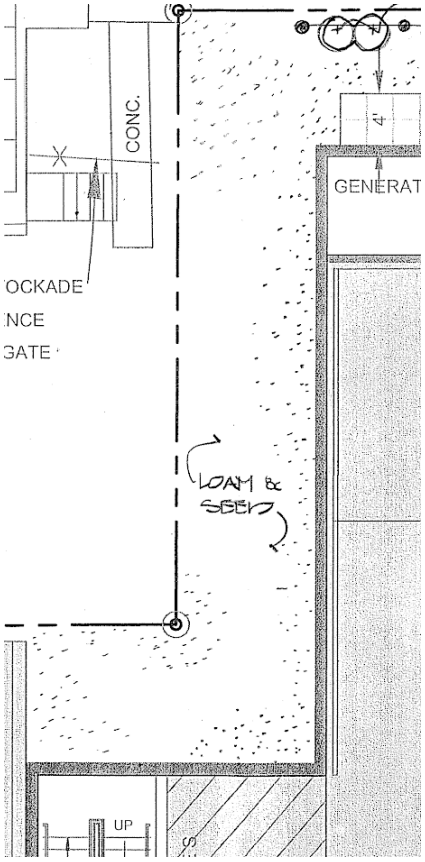
The project proposes a contemporary style wooden fence for screening where landscape planting space is limited.

Overall, the project proposes to make best use of placing trees and landscape planting with the Anthony Muench design landscape. The plant pallet is up to date and functional for this location. A second look at the tree & landscape review comments above is recommended.

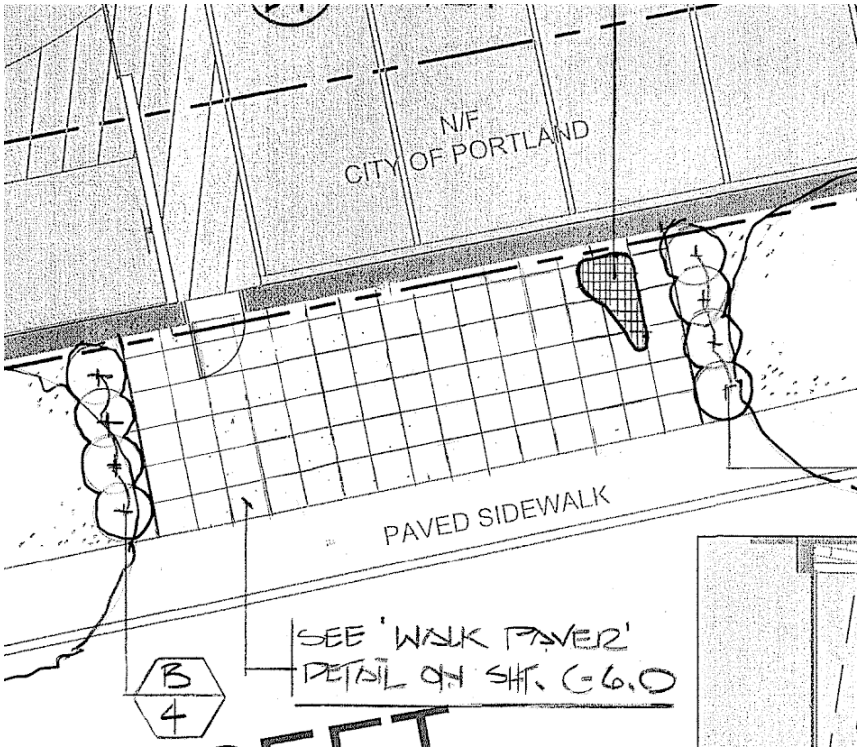
Thanks,

Jeff Tarling

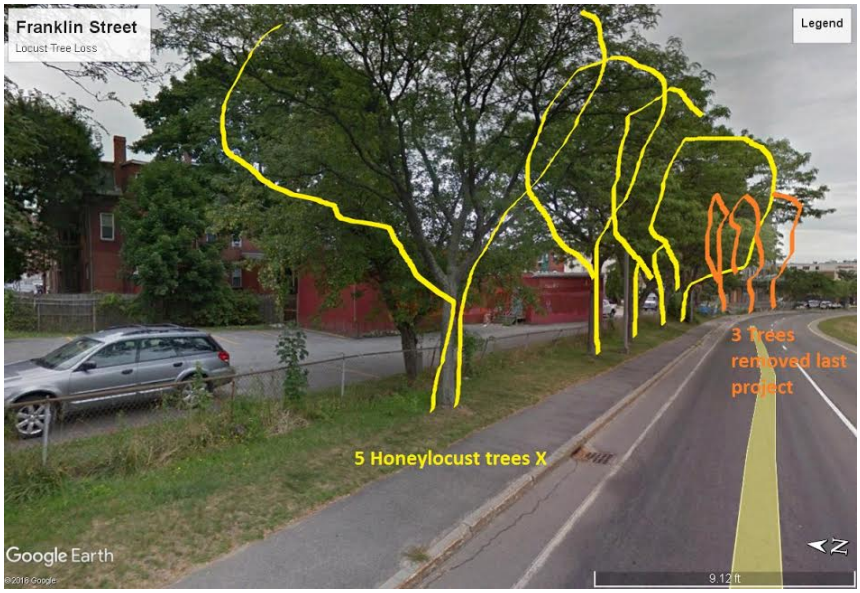
"Open" landscape space off Hampshire Street shown as 'loam & seed', a second look is recommended to see if the space could have a better use...



Project proposes sidewalk pavers to meet up with the existing sidewalk along Franklin Street. The width of the proposed walk could be narrowed slightly to allow for regular tree spacing and to reduce impact to the root zone of the new street trees.



Franklin Street tree loss, Yellow proposed, Orange trees lost in last project next door.



Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov
[Quoted text hidden]

Att. 6

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire - IZ status

Victoria Volent <vvolent@portlandmaine.gov> Fri, Apr 20, 2018 at 8:56 AM
To: Caitlin Cameron <ccameron@portlandmaine.gov>

Caitlin,

The development located at 56 Hampshire Street proposes the creation of 30 units of owner occupied housing consisting of 7 one-bedroom units, 14 two-bedroom units, and 9 three-bedroom units. 3 units are proposed as Workforce units. One workforce unit with 3 bedrooms will be located off-site at 42 Hampshire Street. The other two workforce units are also proposed to be located off-site, however the location and bedroom count are unknown as of today.

To comply with the Division 30, Section 14-487, Ensuring Workforce Housing, the applicant is required to provide a minimum of 3 workforce unit (on-site or off-site) or pay the fee-in-lieu. As noted above, the applicant is proposing to provide 3 off-site workforce units. Based on the requirements outlined in Section 14-487, the number of bedrooms in the workforce units shall be ten percent of the total number of bedrooms in the development. The total number of bedrooms in the development is 62. As noted above, the applicant is proposing to provide one off-site workforce unit with 3 bedrooms. Two additional workforce units with a minimum of 3 bedrooms in total will be required to be included in the final submission package.

Staff will be looking for the applicant to provide the location of the two remaining workforce units, with the bedroom count, to ensure compliance with Division 30, Section 14-487.

Thank you,

Victoria

Victoria Volent
Housing Program Manager
Housing and Community Development
Phone: 207-482-5028
Fax: 207-874-8949
www.portlandmaine.gov

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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), Design Manual and Technical Manual.

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

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

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

Project Name:	Verdante at Lincoln Park
Proposed Development Address:	56 Hampshire Street, Portland, ME 04101
Project Description:	6-story, 31-unit residential condominium development with ground floor retail
Chart/Block/Lot:	Map 28, Block C, Lots 13 & 18, and 12' wide City of Portland owned easement
Preliminary Plan	X
Final Plan	

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

APPLICANT

Name:	Chip Newell
Business Name:	NewHeight Group
Address:	118 Congress Street, Unit 401
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-633-4328
Home #:	
Cell #:	
Fax #:	
E-mail:	chip@newheightgroup.com

OWNER

Name:	NewHeight Group
Address:	118 Congress Street, Unit 401
City/State:	Portland, ME
Zip Code:	04101
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Michael Tadema-Wielandt, P.E., Terradyn Consultants, LLC
Address:	565 Congress Street, Suite 310
City/State:	Portland, ME
Zip Code:	04101
Work #:	
Home #:	
Cell #:	207-632-9010
Fax #:	
E-mail:	mtw@terradynconsultants.com

BILLING (to whom invoices will be forwarded to)

Name:	NewHeight Group
Address:	118 Congress Street, Unit 401
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-633-4328
Home #:	
Cell #:	
Fax #:	
E-mail:	erin@newheightgroup.com

ENGINEER

Name:	Michael Tadema-Wielandt, P.E., Terradyn Consultants, LLC
Address:	565 Congress Street, Suite 310
City/State:	Portland, ME
Zip Code:	04101
Work #:	
Home #:	
Cell #:	207-632-9010
Fax #:	
E-mail:	mtw@terradynconsultants.com

SURVEYOR

Name:	Randy R. Loubier, Owen Haskell, Inc.
Address:	390 U.S. Route One
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-774-0424
Home #:	
Cell #:	
Fax #:	
E-mail:	rloubier@owenhaskell.com

ARCHITECT

Name:	David Lloyd, Archetype, P.A.
Address:	48 Union Wharf
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-772-6022
Home #:	
Cell #:	
Fax #:	
E-mail:	lloyd@archetypepa.com

ATTORNEY

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

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Michael Tadema-Wielandt, Terradyn Consultants
E-mail:	mtw@terradynconsultants.com
Name:	Adrienne Fine, Terradyn Consultants
E-mail:	adrienne@terradynconsultants.com
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☐	Stormwater Quality	$250.00
☑	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [31] x $25.00 each	$ 775.00
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 1,775.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

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

TOTAL AREA OF SITE	18,685	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	18,685	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	16,555	sq. ft.
Impervious Area (Total Proposed)	9,304	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	5,118	sq. ft.
Building Footprint (Total Proposed)	12,755	sq. ft.
Building Floor Area (Total Existing)	approx. 5,118	sq. ft.
Building Floor Area (Total Proposed)	62,025	sq. ft.
ZONING		
Existing	IS-FBC	
Proposed, if applicable	IS-FBC	
LAND USE		
Existing	Commercial	
Proposed	Residential and Retail	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	0	
# of Residential Units (Total Proposed)	31	
# of Lots (Total Proposed)	31	
# of Affordable Housing Units (Total Proposed)	0 on-site	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	8	
# of Two-Bedroom Units (Total Proposed)	15	
# of Three-Bedroom Units (Total Proposed)	8	
PARKING SPACES		
# of Parking Spaces (Total Existing)	14 striped	
# of Parking Spaces (Total Proposed)	62	
# of Handicapped Spaces (Total Proposed)	2	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	13	
ESTIMATED COST OF THE PROJECT	$12,950,000	

VI. APPLICANT SIGNATURE

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

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

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

Signature of Applicant:	Erin Corcoran, NewHeight Group
Date: 12.19.17	

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

2. Right, Title and Interest

2.1 OVERVIEW

The applicant is NewHeight Group. The project site is made up of three parcels that the applicant controls through ownership or purchase & sale agreements, as summarized in the table below. Copies of the property deed and agreements are attached in attachment 2-A.

Parcel	Map-Block-Lot	Owner	Applicant Interest
1	28-C-13	Rebeco, LLC	Purchase & Sale Agreement
2	28-C-18	Clark Box, LLC	Purchase & Sale Agreement
3	12’ wide parcel between Parcel 1 and Franklin Street	NewHeight Ventures II, LLC	Ownership

2.2 ATTACHMENTS

Attachment 2-A – Property Deed and Purchase and Sale Agreements

ATTACHMENT 2-A

Title, Right, or Interest Documentation

QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation ("Grantor"), FOR CONSIDERATION PAID, releases to **NEWHEIGHT VENTURES II, LLC** a Maine limited liability company having a mailing address of 118 Congress Street, Portland Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located on Federal Street, in the City of Portland, County of Cumberland and State of Maine (the "Property"), more particularly described on Exhibit A attached hereto and made part hereof.

MAINE REAL ESTATE TAX PAID

Meaning and intending to describe a portion of the premises conveyed to the Grantor by virtue of a Warranty Deed granted by P&J Corporation dated July 24, 1967, recorded in the Cumberland County Registry of Deeds, Book 3005, Page 375, and a portion of the premises conveyed to Grantor by virtue of a Warranty Deed from Hazel E. Montefusco dated October 24, 1967, recorded in the Cumberland County Registry of Deeds, Book 3017, Page 259.

By acceptance of this Deed, Grantee covenants and agrees to indemnify, defend, and hold Grantor harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Property. The obligations set forth in this paragraph are intended to be and shall be considered covenants that run with the Property herein conveyed and shall bind all subsequent owners of the Property.

Signature page follows.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 14 day of November, 2017.

WITNESS:

CITY OF PORTLAND

Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

November 14, 2017

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

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

SONIA T. BEAN
NOTARY PUBLIC
State of Maine
My Commission Expires
April 8, 2024

Exhibit A

Federal Street

A certain lot or parcel of land on the northerly side of Franklin Street and the westerly side of Federal Street, in the City of Portland, County of Cumberland and State of Maine as shown on "Boundary & Topographic Survey at #56 Hampshire Street, Portland, Maine, made for The Newheight Group" by Owen Haskell, Inc. Dated January 27, 2017. Revised through June 27, 2017. OHI Job#2017-008P, bounded and described as follows:

Beginning on the westerly sideline of Federal Street at the southeasterly corner of land now or formerly of Rebeco, LLC recorded in Deed Book 27634, Page 128;

Thence, S 47°59'51" W along the westerly sideline of said Federal Street 12.81 feet to the northerly sideline of Franklin Street;

Thence, N 62°27'23" W along the northerly sideline of said Franklin Street 120.92 feet to the southeasterly corner of land now or formerly of Clark Box, LLC described as the second parcel in Deed Book 31943, Page 126;

Thence, N 38°10'37" E along the easterly line of land of said Clark Box, LLC 12.21 feet to land now or formerly of said Rebeco, LLC;

Thence, S 62°27'23" E along the southerly line of land of Rebeco, LLC 123.14 feet to the point of beginning. Containing 1,464 S.F. or 0.03 acres, more or less.

This conveyance is made subject to the covenants, agreements, and rights of others described in a certain access easement to use the land herein conveyed for purposes of travel by vehicles and pedestrians as set forth in a deed from the City of Portland to Ernest B. Woodard dated October 2, 1972 and recorded in the Cumberland County Registry of Deeds, Book 3554, Page 57, and the covenants, agreements, and rights of others described in a certain access easement to use the land herein conveyed for purposes of travel by vehicles and pedestrians as set forth in a deed from the City of Portland to Ralph J. Taliento and John J. Taliento dated January 6, 1972 and recorded in the Cumberland County Registry of Deeds, Book 3208, Page 82.

Received
Recorded Register of Deeds
Nov 16,2017 09:56:52A
Cumberland County
Nancy A. Lane

PURCHASE AND SALE AGREEMENT

THIS AGREEMENT made and entered into this 15th day of December, 2017, by and between **CLARK BOX, LLC**, a Maine limited liability company with a mailing address of 251 Danforth Street, Portland, ME 04102 ("Seller") and **NEWHEIGHT VENTURES II, LLC**, a Maine limited liability company having a mailing address of 118 Congress Street, #401, Portland, Maine 04101("Buyer")

WITNESSETH:

1. Premises. Seller agrees to sell and Buyer agrees to buy a certain parcel of land, located on the easterly side of Franklin Street, Cumberland County, Maine, consisting of approximately .128 acres of vacant land, as further described as the second parcel in the deed to Seller recorded in the Cumberland County Registry of Deeds in Book 31934, Page 126 (the "Premises"). Buyer intends to construct a building on a portion of the Premises and land which is adjacent to the Premises (the "Project").

2. Purchase Price. Subject to the adjustments and prorations hereinafter described, and in consideration of the other undertakings of the Buyer under this Agreement, Buyer agrees to pay for the Premises the sum of One Dollar ($1.00), which is to be paid at closing.

3. Title. Seller shall convey the Premises to Buyer at the closing in fee simple with good and marketable title, free and clear of all liens, claims and encumbrances. In the event that Seller is unable to convey title as aforesaid, upon written notice from Buyer, Seller shall use diligent efforts to remedy all title defects. In the event that said defects are not remedied within thirty (30) days from the date of such notice, then Seller's and Buyer's obligations hereunder, will terminate. Buyer may, at Buyer's option, elect to close notwithstanding such defects as may exist.

4. Closing. The closing of this transaction shall take place at the offices of Buyer's counsel upon fifteen (15) days' notice by Buyer to the Seller, but in no event later than June 30, 2018. At the Closing, Seller shall execute and deliver to Buyer, a Quitclaim Deed with Covenant to the Premises. In addition, Seller shall execute and deliver a seller's affidavit for title insurance purposes, a FIRPTA affidavit, an underground storage tank notification and disclosure form, REW forms, a document evidencing the termination of the Prior Access Easement (as defined in Section 10), and such other customary transfer documents as Buyer may reasonably request.

5. Risk of Loss, Damage, Destruction and Insurance. Prior to the Closing, the Premises shall be the sole responsibility of Seller and Seller shall bear the risk of any loss to the Premises whether by fire or otherwise. Seller agrees to maintain liability insurance upon the Premises.

6. Due Diligence. At all reasonable times during the term hereof, Buyer shall have the right to enter the Premises and perform such building inspections, engineering tests, soil tests, boundary surveys, hazardous waste investigations, water tests, or other inspections as

Buyer deems necessary or appropriate, all to be done at Buyer's sole cost and expense provided any testing done under this Section does not interfere with Seller's use of the Premises. Seller agrees to provide such information about the Premises as Seller has in its possession. Buyer agrees to return the Premises as nearly as possible to its original condition after all of such tests and inspections. Buyer shall complete all inspections no later than the Closing (the "Inspection Period"). If the results of any inspection done pursuant to this Paragraph are unsatisfactory to Buyer, Buyer shall have the right during the Inspection Period to terminate this Agreement by written notice. If at any time after the expiration of the Inspection Period the condition of the Premises changes materially and adversely, due to no action or fault of the Buyer, then Buyer may terminate this Agreement by written notice.

7. Representations and Warranties. Seller makes the following representations and warranties, upon which Buyer is expressly relying, notwithstanding Paragraph 6 above:

(a) There are no pending, or to the best of Seller's knowledge, threatened boundary disputes, violations of building codes or zoning ordinances or litigation with respect to the Premises or Seller's ownership thereof.

(b) To the best of Seller's knowledge after due inquiry, there are no hazardous or toxic materials, wastes or substances in or on the Premises in any amounts that would violate or require reporting or remedial or responsive action under any federal, state or local law or ordinance. Seller has received no notices from any federal, state or municipal body alleging a violation of any environmental laws.

(c) Seller is a validly created limited liability company in good standing under the laws of Maine and, has, or will have prior to Closing, all necessary power and authority to enter into this Agreement and to transfer the Premises to Buyer as provided hereunder.

8. Possession. Seller shall deliver the Premises to Buyer at closing free and clear of all leases, tenancies and occupancies by any person.

9. Adjustments, Proration and Closing Costs. Real estate taxes and assessments and all utilities shall be prorated as of the Closing on the basis of the latest available tax bill. The Maine real estate transfer tax shall be paid by Seller and Buyer. The recording fee for the deed and any expenses relating to Buyer's financing will be paid for by Buyer.

10. Seller's Prior Access Easement. At or prior to Closing, by instrument in form and substance satisfactory to Buyer, Seller agrees to terminate its rights to use the 12 foot strip of land, which is currently owned by the City of Portland and is being purchased by Buyer, as an access easement (the "Prior Access Easement"), and which is further described in Grantor's deed to the Premises. In that deed the right to use such strip of land is erroneously granted to Congress Street Properties, LLC when it should have been granted to Seller. Seller shall if necessary cause Congress Street Properties LLC to join in the termination of the Prior Access Easement, as determined in Buyer's sole discretion.

11. Buyer's Agreements. At or before Closing, Buyer agrees to provide Seller with the following:

(a) Buyer shall via an instrument to be recorded at Closing agree to provide Seller with the exclusive use of the area depicted on the plan attached as Exhibit A (the Exclusive Area) upon completion of (the "Parking Area"). Buyer and Seller agree that seller shall have the right to use the Exclusive Area for parking in any manner it chooses. Buyer agrees that its building will include a privacy wall shielding the Exclusive Area from Franklin Avenue. The privacy wall shielding the Exclusive Area from Franklin Avenue will be at least 6' in height, running the length of the Parking Area.

(b) Buyer shall provide Seller with a view easement, which shall prohibit Buyer from constructing any structure on the Premises which is located to the north of the line drawn on the attached Exhibit A. Buyer and Seller agree that the specific location of such line shall be mutually agreed upon prior to Closing.

(c) Buyer shall provide Seller with an easement or other instrument which provides for vehicular access to the Parking Area, through the ground-level parking garage for the Project. The exact dimensions and location of such access easement shall be determined by Buyer as part of its overall development plan. It is the intention of the parties that such easement shall replace the Prior Access Easement. Such easement shall be limited to vehicular access for tenants in Seller's apartment building at 312 Congress Street (together, "Seller's Tenants"), Seller, and Seller's maintenance staff member. Seller shall provide Buyer with the names and contact information for all Seller's Tenants who require parking, and the Buyer shall provide each such tenant, Seller, and Seller's maintenance staff member with electronic access to and from the Project's garage. The rights granted to Seller in such instrument shall not include the right to install utilities.

(d) Buyer shall provide Seller with fifteen (15) temporary parking spaces (the "Temporary Spaces") to be used by the Seller's Tenants during construction of the Project. The location of the Temporary Spaces shall be agreed upon by the parties prior to Closing. Seller agrees that the Temporary Spaces will not be located on the Premises but shall be located as near to the Premises as is reasonably possible. Buyer's obligation to provide the Temporary Spaces shall expire when the Parking Area is made available to Seller's Tenants.

(e) Buyer shall give J. Daniel Hoffman, Manager of Seller, the option to invest a minimum of $100,000.00 into the Project, such investment to be subject to reasonable terms and conditions including mutually satisfactory buy out provisions.

(f) Subsequent to completion of the Project, Buyer agrees to plow and maintain the Parking Area at its sole expense.

(g) No later than the Closing, Buyer agrees to pay Seller the amount of $5,000.00, to be used by Seller to paint the northwest side of Seller's building located at 312 Congress Street.

(h) Buyer agrees to pay Seller the total amount of $18,000.00 to cover Seller's loss in rents during construction of the Project, to be paid in monthly installments of $1,500.00 for twelve months during construction of the Project.

(i) During any period of time between Closing and commencement of construction on the Project, Seller and Buyer shall enter into a lease, in a form which is reasonably acceptable to both parties, under which Buyer shall lease the Premises to Seller for the sum of $1.00 per year. During the term of such lease, Seller shall be free to operate the Premises as it has prior to Closing, and Seller shall be responsible for all costs associated therewith.

(j) Buyer shall provide Seller a copy of the proposed condominium documents as they pertain to parking, the Parking Area and Seller's access to the Parking Area.

The provisions set forth in this Section 11 are intended by the parties to survive the closing.

12. Buyer's Conditions Precedent. Buyer's obligation to close hereunder and to perform its obligations under Section 11 above are subject to satisfaction of the following conditions at or before Closing:

(a) As of the date hereof, and as of the date of closing, all of Seller's representations and warranties shall be true and correct in all material respects.

(b) Buyer shall have received a written, recordable instrument, in a form which is acceptable to Buyer and which can be recorded at Closing, evidencing Seller's termination of the Prior Access Easement.

(c) Buyer shall have received a written recordable instrument, in a form which is acceptable to Buyer and which can be recorded at Closing, evidencing Congress Street Properties, LLC's termination of its rights under the Option to Lease Real Estate recorded in said Registry in Book 31943, Page 128.

(d) As of the date of Closing, there shall have been no material adverse change in the Premises.

If any of the foregoing conditions is not satisfied as of the date specified, or if no date is specified, by the Closing, Buyer shall have the right to terminate this Agreement, whereupon Buyer shall be relieved of all obligations under this Agreement, including, without limitation, those set forth in Section 11.

13. Seller's Conditions Precedent. Seller's obligation to close hereunder is subject to satisfaction of the following condition at Closing:

(a) Seller shall have received written documents, the forms of which are reasonably acceptable to Seller, evidencing the items set forth in Section 11(a)-(f).

If the foregoing condition is not satisfied by the Closing, Seller shall have the right to terminate this Agreement.

14. Default and Remedies. In the event of default hereunder, both parties shall have available all remedies at law and in equity.

15. Brokers. The parties represent to each other that neither has had any dealings with any real estate broker in connection with this transaction. Each party agrees to indemnify the other from and against the claims of any brokers arising from this transaction, which indemnity shall survive the closing and shall include reasonable costs of collection, including reasonable attorneys' fees.

16. Miscellaneous. Time is of the essence of this Agreement. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the recipient at the address set forth at the beginning of this Agreement. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein. Seller's representations and warranties, and Buyer's obligations under Section 11 above, shall survive the closing. All documents and instruments called for under this Agreement shall be prepared using commercially reasonable terms and conditions, and the parties shall negotiate the same in good faith, including negotiating in good faith any commercially reasonable, mutually acceptable changes that may be required as a result of the approval process for the Project. This Agreement will inure to the benefit of and bind the respective successors and assigns of Seller and Buyer. This Agreement may not be assigned by Buyer without the written consent of Seller. This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, but all of which together shall constitute one and the same instrument. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of the masculine shall include, where appropriate, the feminine and neuter. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of the date first written above.

WITNESS:

CLARK BOX, LLC, Seller

By: J. Daniel Hoffman, its Manager

NEWHEIGHT VENTURES II, LLC, Buyer

By: _____
Erin Cooperrider, its Managing Member

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Exhibit A


HAMPSHIRE STREET
65 HAMPSHIRE
60-62 HAMPSHIRE
312 CONGRESS
RETAIL B 960 GSF
RETAIL A 666 GSF
GENERATOR
WATER HEATER ROOM
LOBBY
MAIL
TRASH
BIKES
ELEC.
16 ADA
MECHANICAL PARKING 2 LEVELS - 19 SPACES OR 3 LEVELS - 29 SPACES
48 OR 65 PARKING SPACES 1 OF WHICH IS A TANDEM SPACE
BIKE S
MECHANICAL PARKING 2 LEVELS - 13 SPACES OR 3 LEVELS - 20 SPACES
SPRINK
15 ADA
14
13
1 2 3 4 5 6 7 8 9 10 11 12
COMP
COMP
RAMP UP
10' REAR AND SIDE SETBACK
15' BONUS FLOOR STEPBACK
AREA CALCULATIONS
1ST FLOOR 12,173 GSF
2ND FLOOR 12,600 GSF 9 UNITS
3RD FLOOR 12,558 GSF 9 UNITS
4TH FLOOR 9,723 GSF 5 UNITS
5TH FLOOR 9,168 GSF 5 UNITS
6TH FLOOR 5,957 GSF 3 UNITS
62,179 GSF
31 UNITS
2 RETAIL SPACES
48 OR 65 PARKING SPACES
UP 50 FT PARALLEL TO HAMPSHIRE 45' HEIGHT LIMIT
UP HEIGHT LIMIT 65' + 12' BONUS
FEDERAL STREET
FRANKLIN STREET
SIDEWALK
30'-0"
50'-0"
1 1ST FLOOR
1/8" = 1'-0"
Exclusive Area
Prepared For: NewHeight Group
Consultant:
Architect: ARCHETYPE architects 48 Union Wharf Portland, Maine 04101
Project: VERDANTE Hampshire Street Portland, Maine
Revisions:
Date: DEC 4, 2017
Scale: 1/8" = 1'-0"
FIRST FLOOR
A1.1

PURCHASE AND SALE AGREEMENT

THIS AGREEMENT made and entered into this 21 day of December, 2017 by and between **REBECO, LLC**, a Maine limited liability company with a mailing address c/o Caremi Partners, Ltd, 888 East Las Olas Blvd, Suite 710, Fort Lauderdale, FL 33301 ("Seller") and **VERDANTE CONDOMINIUM, LLC**, a Maine limited liability company with a mailing address of c/o NewHeight Ventures II, LLC, 118 Congress Street, #401, Portland, Maine 04101 ("Buyer").

W I T N E S S E T H:

1. PREMISES. Seller agrees to sell and Buyer agrees to buy the land situated at 56 Hampshire Street, Maine and more particularly described in the deed recorded in the Cumberland County Registry of Deeds in Book 27634, Page 128 (the "Premises").

2. PURCHASE PRICE. The Purchase Price shall be Nine Hundred Thousand Dollars ($900,000.00), to be paid at the closing by Buyer to Seller in a form and manner reasonably satisfactory to both parties.

3. TITLE. Seller shall convey the Premises to Buyer at the closing in fee simple with good and marketable title, subject to easements, privileges, restrictions, agreements and like matters of record. In the event that Seller is unable to convey title as aforesaid, Seller shall be given a reasonable period of time, after notice in writing, in which to remedy any title defects. In the event that said defects cannot be corrected or remedied or in the event that Seller elects not to remedy same, Seller's and Buyer's obligations hereunder will terminate. Buyer may, at Buyer's option, elect to close notwithstanding such defects as may exist without any reduction in the purchase price.

4. CLOSING. The closing of this transaction shall take place on January 31, 2018, at the offices of Curtis Thaxter LLC, One Canal Plaza, Portland, Maine, or, if the Buyer and the Seller shall mutually agree in advance and in writing, at another time and place. At the closing, Seller shall execute and deliver to Buyer a Quitclaim Deed with Covenant to the Premises (the "Deed").

5. RISK OF LOSS, DAMAGE, DESTRUCTION AND INSURANCE. Prior to the closing, the Premises shall be the sole responsibility of Seller and Seller shall bear the risk of any loss to the Premises whether by fire or otherwise.

6. CONDITION OF PREMISES. Buyer has made a physical examination of the Premises and agrees to accept the same in the condition they were in at the time of examination, reasonable wear and tear excepted. Seller has not made and does not make in this Agreement any representation or warranty as to the condition of the Premises.

7. POSSESSION. Seller shall deliver possession of the Premises to the Buyer free and clear of all leases, tenancies and occupancies by any person.

8. ADJUSTMENTS, PRORATION AND CLOSING COSTS. Real estate taxes and assessments shall be prorated as of the closing on the basis of the latest available tax bill. The Maine real estate transfer tax shall be paid by Seller. The recording fee for the Deed will be paid for by Buyer.

9. DEFAULT AND REMEDIES. In the event that either party defaults hereunder, the non-defaulting party shall have available all remedies at law and in equity.

10. MISCELLANEOUS. Time is of the essence of this Agreement. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the address set forth in the first paragraph hereof. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein. The rights of Buyer under this Agreement may not be assigned in whole or in part without written consent of Seller. This Agreement is subject to the Limited Liability Company Agreement of Buyer dated December 14, 2017 (the "LLC Agreement"), and if there are any discrepancies between it and this Agreement, the LLC Agreement shall control. This Agreement will inure to the benefit of and bind the respective successors and assigns of Seller and Buyer. This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, but all of which together shall constitute one and the same instrument. The electronic signature of any party hereto shall be as binding as the original signature of such party for all purposes; and the copy of any party's signature to this Agreement delivered by facsimile, e-mail, or such other electronic means shall be as binding and enforceable as such party's original signature to this Agreement. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of the masculine shall include, where appropriate, the feminine and neuter. This Agreement shall be governed by and construed in accordance with the laws of Maine without regard to principals of conflicts of laws, including all matters of construction, validity, and performance. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

[Signature Page Follows]

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of the date first written above.

WITNESS:

VERDANTE CONDOMINIUM, LLC, Buyer

By: NewHeight Ventures II, LLC, its Managing Member

_____

_____

By: _____
S.P. Newell, its Managing Member

REBECO, LLC, Seller

_____

By: _____
Ophir Barone, its Manager

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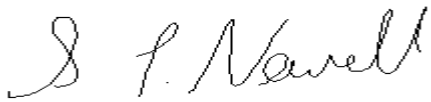
IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of the date first written above.

WITNESS:

VERDANTE CONDOMINIUM, LLC, Buyer

By: NewHeight Ventures II, LLC, its Managing Member

_____



_____

S.P. Newell, its Managing Member

REBECO, LLC, Seller

_____ By: _____

Ophir Barone, its Manager

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1. DEVELOPMENT DESCRIPTION

1.1 OVERVIEW

NewHeight Group intends to construct a 6-story, 31-unit residential building with commercial space on the first floor on an 18,685 square foot project site located at 56 Hampshire Street in Portland, Maine. The site is comprised of three separate parcels identified as lots 13 & 18, Block C, on the City of Portland Assessors' Map 28, and a 12' wide strip of land located between Lot 13 and Franklin Street, formerly owned by the City of Portland. The site is currently developed with two existing structures and paved parking.

1.2 PROJECT PURPOSE AND NEED

The proposed project includes redevelopment of a previously developed lot in an area that has utility infrastructure in place and will provide residential units that are compatible with the existing neighborhood. The proposed Verdante at Lincoln Park residences will be designed for young urban residents; some are expected to be first time homebuyers and some working professionals and Baby Boomers/Empty Nesters seeking a city home.

The unit designs focus on meeting the desires of these buyers by offering floor plans that match their varied lifestyles and use space as efficiently as possible. Included in the plans is a fitness room, a guest room, shared outdoor space and storage for gear such as bicycles. The building is designed to complement but not duplicate Luminato Condominiums, recently completed to the south of the proposed development.

Verdante's location in the increasingly vibrant East End will provide easy access to the neighborhood amenities, the arts and cultural experiences of Portland, and proximity to parks and recreation that city dwellers seek. Parking for the development will be located within the enclosed garage and on an existing surface lot at the north end of the site. The ground floor is also designed to include space for owner storage units, bicycle storage, and trash/recycling. Two retail units are also located on the ground floor along the Hampshire Street frontage.

1.3 EXISTING CONDITIONS

The existing site includes two non-residential structures and paved parking and vehicle access surround the buildings. Nearly the entire site is covered with impervious surface. Underground utilities in Hampshire Street include water, gas, sewer, and storm drain. Overhead power and telecom services are on poles located on the west side of Hampshire Street.

Brick sidewalks with granite curb exist along the site's Hampshire Street and Federal Street frontages, and limited on-street parking is available on both streets. Cobra-head style street lights are located on two utility poles on Hampshire Street in front of the site. Four cobra-head style street lights are located along Franklin Street southwest of the site.

Hampshire Street and commercial uses abut the site to the north, Federal Street and residential uses abut the site to the east, Franklin Street abuts the site to the south, and residential uses and City owned land abut the site to the west.

The site is currently accessed from Hampshire Street, Federal Street, and across the 12' wide easement that benefits both Lots 13 and 18. The street conditions in the vicinity of the Project Site are:

Street Name	Description	On-street Parking	Sidewalk	Notes
Hampshire Street	Approximately 25' wide paved way with two-way traffic in a 40' wide public ROW.	Yes. Parallel parking on one side of the street in front of the site.	Brick	
Federal Street	Approximately 43' wide paved way with two-way traffic in a 66' wide public ROW.	Yes. Pull-in parking on one side of the street across from the site.	Brick	Federal Street is a dead end at Franklin Street in front of the site.

The site has an elevation change of less than 10' across the approximately 240' long parcel. It generally slopes to the southeastern property boundary. Photographs of the existing site are provided in Attachment A-1.

1.4 PROPOSED DEVELOPMENT

The development program includes the following components:

1.4.1 ON-SITE

A new six-story building with a footprint of 12,755 square feet will be constructed on the site. The first floor will feature two retail spaces, utility rooms, a lobby for the residential units, and covered parking. The second and third floors will each feature 9 residential condominium units, the fourth and fifth floors will each feature 5 residential condominium units, and the sixth floor will feature 3 residential condominium unit. The residential units will be between 700 and 2,300 square feet in size and will include designs for one to three bedrooms. The total number of residential units in the building is 31. The total building floor area is 62,025 square feet. The proposed building is within both the Urban Transitional (UT) and Urban Neighborhood (UN) subdistricts of the India Street Form Based Code (IS-FBC) zone. Within the Urban Neighborhood subdistrict the building will be 3 stories, approximately 40' tall. Within the Urban Transitional subdistrict the building will be 6 stories, approximately 77' tall. Elevation views and perspective renderings of the proposed building are provided in Attachment 1-B.

The retail spaces on the first floor will be on the Hampshire Street frontage and gain access from this street. One retail space is 960 s.f. and the other is 868 s.f.. A lobby for the residential units, bicycle storage, solid waste area, and mail room will all be located on the first floor between the retail spaces and covered parking.

1.4.2 OFF-SITE IMPROVEMENTS

The applicant is proposing improvements to the area between the end of Federal Street and Franklin Street, similar to those recently constructed at the end of Newbury Street, including a pedestrian connection between Federal and Franklin Streets. The applicant is also proposing landscaping improvements to the city owned park on the corner of Franklin and Congress Streets. This park is immediately adjacent to the proposed project.

1.5 TRAFFIC

The 31-unit condominium project is expected to generate between 16 and 17 vehicle trips during the PM peak hour and approximately 182 vehicle trips on a weekday. The relatively small amount of traffic that will be generated by the project is not expected to have a significant effect on the surrounding street network.

1.6 PARKING

The proposed project is required to have twenty-eight (28) parking spaces per ordinance requirements, as summarized in the following table:

USE	RATE REQUIRED	# OF SPACES
31 Residential Units	1 space per unit, first 3 units exempt is IS-FBC	28 Spaces
2 Retail Units each less than 2,000 sf	1 space per 200 sf of retail in excess of 2,000 sf	0 Spaces
	TOTAL	28 Spaces Required

The project includes 47 parking spaces for use by residents on the first floor of the building. Resident parking is provided in two - three level automated mechanical parking structures and two surface ADA parking spaces (labeled spaces 16 & 17 on the Site Plan).

Additionally, the applicant's Purchase & Sale Agreement with the owner of Lot 28-C-9 requires the applicant to provide access and exclusive use of the surface parking area at the north end of the parcel. This area is expected to include approximately 15 parking spaces, as shown on the Site Plan.

The developer currently intends that acquiring parking spaces will be an option in addition to the purchase price of the units, so that purchasers will be aware of the "true" cost of urban parking and decide if it is necessary for their lifestyle. This will materially lower the price of smaller units, making them more affordable to a wider group of wage earners. All buyers will have the option of purchasing one or two parking spaces.

1.7 UTILITIES AND STORMWATER

The proposed project will include the installation of new utility services to the building. All new utility services will be provided from the existing utilities available within Hampshire and Federal Streets. The proposed locations of the new utility services are shown on the

Utility Plan (Sheet C-5.0). More information on proposed utility services is provided in Section 11 of this application.

Post-development stormwater runoff will closely follow existing runoff patterns. Runoff from the building and parking will be collected in proposed subsurface drainage infrastructure that will convey stormwater to the existing subsurface drainage system in Federal and Hampshire Streets. The proposed project results in a decrease in impervious area. More information on stormwater runoff from the site is provided in Section 9 of this application.

1.8 ATTACHMENTS

Attachment 1-A – Existing Site Photographs
Attachment 1-B – Building Elevation Views & Renderings

ATTACHMENT 1-A

Existing Site Photographs



PHOTO 1 – STANDING ACROSS FEDERAL STREET, FACING WEST



PHOTO 2 –STANDING ALONG THE WESTERN PROPERTY BOUNDARY LOOKING INTO THE SITE, FACING SOUTHEAST



PHOTO 3 –STANDING ALONG HAMPSHIRE STREET AT THE NORTHERN PROPERTY BOUNDARY, FACING SOUTHWEST

Photos taken on 8/19/2017 by Michael Tadema-Wielandt of Terradyn Consultants, LLC

3. STATE AND FEDERAL PERMITS

The development is subject to Site Plan and Subdivision approval by the City of Portland and Building Permit(s) are also required. No additional State or Federal Permits are required.

4. LAND ORDINANCE REVIEW

4.1 OVERVIEW

The property currently lies within the City of Portland India Street Form-Based Code Zone (IS-FBC). The property frontage along Hampshire Street and the eastern portion of Federal Street is within the Urban Neighborhood Subdistrict (UN), and the property frontage along Franklin Street and the western portion of Federal Street is within the Urban Transitional Subdistrict (UT). The following Space and Bulk requirements apply to the IS-FBC Zone, UN – Urban Neighborhood Subdistrict:

	IS-FBC Zone Summary Dimensional and Parking Requirements Applied to 56 Hampshire Street		
Zoning Requirements	IS-FBC UN Zoning Standard	IS-FBC UT Zoning Standard	Project Site
Minimum Lot Size	None	None	18,685 s.f. *
Minimum Lot Area per Dwelling Unit	None	None	602 s.f.
Maximum Building Length	50 feet	100 feet	59’ / 132’ **
Front Yard	Min: 0 feet Max: 5 feet	Min: 0 feet Max: 10 feet	Approx. 1 foot
Minimum Side Yard	5 feet	10 feet	10 feet
Minimum Rear Yard	10 feet	10 feet	10 feet
Maximum Impervious Surface	90%	90%	50%
Maximum Building Height	45 feet	65 feet + 12 foot bonus floor	40 feet in UN 77 feet in UT ***
Parking Residential Use Adjacent Residence	1 space per unit, first 3 units exempt = 28 spaces 15 parking spaces for residential building at 312 Congress Street		62 on-site spaces (47 for Verdante, 15 for 312 Congress Street)

*The project site lot size includes the approximately 11,632 s.f. parcel identified as Lot 13 Block N on Tax Map 29, the approximately 5,589 s.f. parcel identified as Lot 18 Block N on Tax Map 29, and the adjoining 12’ wide parcel formerly owned by the City of Portland for a total of 18,685 s.f..

**The proposed maximum building length in the UN subdistrict is 59 feet, which meets the IS-FBC standards to allow additional building length by utilizing ground floor partitions and providing 2 retail spaces. The proposed maximum building length in the UT subdistrict is 132 feet, which meets the IS-FBC standards to allow additional building length by utilizing the structured parking exception.

***The portion of the proposed building in the UT Subdistrict will be 77 feet in height, which meets the IS-FBC maximum building height standard through the height bonus provisions. The frontage with the bonus height is along a UT Street so the building is eligible for a height bonus of one additional story up to 12' for implementing a green roof. The proposed green roof will cover more than 50% of the building roof, and a total of at least 50% of the cumulative lot area will be pervious (9,343 s.f.). Approximately 1,905 s.f. of vegetated area surrounds the building and driveway on the site, and there is a 7,440 s.f. green roof (59% of the total roof area) for a total of 9,345 s.f. of pervious area on the lot, which meets the requirements for the height bonus provisions. The total impervious area on site is 9,340 s.f., or approximately 50% of the site.

4.2 SHORELAND ZONING

The site is not located within the Shoreland Zoning District.

5. EASEMENTS OR OTHER BURDENS

5.1 OVERVIEW

Owen Haskell, Inc. completed a boundary survey of the site in January of 2017. A 12' wide easement benefitting both lots 13 and 18, across the land previously owned by the City of Portland, exists along the southwestern property boundary and connects to Federal Street. The existing easement will be terminated when the applicant purchases lots 13 & 18.

A new access easement will be created benefitting lot 28-C-4 and allowing residents of 312 Congress Street to access the surface parking at the north end of the project site.

6. TECHNICAL AND FINANCIAL CAPACITY

6.1 TECHNICAL CAPACITY

The applicant has assembled a highly qualified team of professionals to plan, permit, and develop construction documents for the project. The Team is working under the direction of Erin Cooperrider and Chip Newell of NewHeight Group as Project Developers. The Team services will be provided by the following companies and their respective team leaders:

6.2 CONSULTANT TEAM

Civil Engineer	Michael Tadema-Wielandt, P.E. Terradyn Consultants, LLC 565 Congress Street Portland, ME 04101 (207) 632-9010 – Cell (207) 221-1317 – Fax mtw@terradynconsultants.com
Surveyor	Randy Loubier Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, Maine 04105 (207) 774-0424 – Work (207) 774-0511 – Fax rloubier@owenhaskell.com
Architect	David Lloyd Archetype, PA 48 Wharf Street Portland, ME 04101 (207) 772-6022 – Work (207) 772-4056 – Fax lloyd@archetypepa.com
Electrical	Will Bennett, Jr. Bennett Engineering P.O. Box 297 Freeport, ME 04032 (207) 865-9475 – Work (207) 865-1800 – Fax

6.3 EXPERIENCE OF PROJECT TEAM

The team of consultants retained by the Developer has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

The applicant, NewHeight Group, has significant experience in the development and management of large residential projects. NewHeight Group is a Maine-based real estate development and services firm with decades of experience in the residential, hotel, office, and retail industries. More than a company, it's a group of people committed to elevating lifestyles, transforming communities, and, ultimately, making Maine an even better place to live. The NewHeight Group team offers decades of experience that span all aspects of development including site acquisition, zoning and permitting, financing, design and construction, and marketing and sales.

NewHeight Group has a proven track record in condo design, construction, and community building in Portland, Maine. Most recently they completed two successful residential condominium projects on the East End of Portland, 118 On Munjoy Hill in 2015, and Luminato in 2017, both of which sold out quickly.

6.4 FINANCIAL CAPACITY

The applicant has the capacity to finance the proposed project. A letter of financial capacity for the project is contained in Attachment 6-A.

6.5 CONSTRUCTION COST ESTIMATE

The project has an overall construction cost estimate of $12,950,000. This construction cost value is considered preliminary and subject to change as building design and project layout is refined, etc.

6.6 ATTACHMENTS

Attachment 6-A – Letter of Financial Capacity

ATTACHMENT 6-A

Letter of Financial Capacity

SACO & BIDDEFORD SAVINGS INSTITUTION

MAILING ADDRESS · 50 Industrial Park Rd, Saco, ME 04072 · 1-877-SACO-BID

City of Portland
389 Congress Street
Portland, ME 40101

Re; Verdante Condominiums

December 21, 2017

To Whom It May Concern:

I am writing this letter on behalf of NewHeight Group (NHG) in reference to the development of the upcoming Verdante Condominiums at 56 Hampshire Street in Portland.

Saco & Biddeford Savings Institution (SBSI) has an ongoing lending relationship with NewHeight Group. SBSI is currently the lender for the construction of NHG's Luminato Condominiums. To date, NHG has proven to be a highly qualified, effective and professional development team.

SBSI is aware of the Verdante Condominiums development and would be pleased to entertain financing requests from NHG for that project and for other future developments.

Should you have any question, please contact me at (207) 602-7652

Best Regards,

James M Whelan
Vice President
Commercial Loan Officer
Saco & Biddeford Savings Institution

8.0 NATURAL FEATURES

8.1 OVERVIEW

The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

9. STORMWATER MANAGEMENT

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-526(b)(3).

9.1 OVERVIEW

The existing project site is entirely developed and relatively flat. Stormwater runoff from most of the project site drains overland across the eastern property boundary towards Federal Street. The Federal Street right of way generally drains east toward Hampshire Street and an existing city stormwater system located in Federal and Hampshire Streets. A small portion of the existing paved parking lot on the northwestern portion of the site drains towards Franklin Street over a vegetated median. There are no known areas of erosion or flooding on or adjacent to the site.

Post development stormwater runoff will generally follow existing patterns. Runoff from the proposed paved parking to the northwest of the building will continue to drain towards Franklin Street over a vegetated median. Run-on to the proposed paved parking beneath the building will drain to a proposed stormdrain system within the garage that connects to the existing stormdrain system in Federal and Hampshire Streets, as it does today. Runoff from the proposed building will drain to a roof drain system that outlets to an existing catch basin structure in front of the site in Federal Street. The roof will be made up of a 7,440 sf green roof that stores stormwater, and 5,167 sf of impervious roof surface. The green roof reduces stormwater runoff from the roof through retention or slowing of stormwater, and is considered pervious for zoning impervious calculations.

The existing project site contains approximately 16,555 square feet of impervious surface. Redevelopment of the project site will result in a decrease of approximately 7,215 square feet of impervious area and a total impervious surface of 9,340 square feet. Therefore, the project is not required to meet the General or Flooding Standards.

The project is not expected to cause ponding, flooding, or erosion problems on or downstream of the site. The relatively small amount of runoff entering the city's storm drain network is not expected to overburden the system.

10. CONSISTNECY WITH CITY MASTER PLANS

10.1 OVERVIEW

Our office is not aware of any applicable Master Plans created for the project site.

11. UTILITIES

11.1 OVERVIEW

The proposed project will involve installation of new utility services to the building. All new utility services will be provided from the franchise utilities available within Federal and Hampshire Streets. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-5.0).

11.2 WATER SUPPLY

The proposed project will receive its water supply from the Portland Water District's (PWD) public water supply system. Separate fire and domestic services will be installed to the building from PWD's existing main in Federal Street. Terradyn Consultants submitted an ability to serve request to PWD on December 6, 2017. A response from PWD was not received at the time of submission, but will be provided when it is received.

11.2.1 Total Project Water Usage

The total average daily water demand for the proposed project is estimated to be 5,868 gallons per day, based on design flows published in the State of Maine Subsurface Wastewater Disposal Rules.

8 x 1 Bedroom Residential Units at 120 gpd/unit	= 960 gpd
15 x 2 Bedroom Residential Units at 180 gpd/unit	= 2,700 gpd
8 x 3 Bedroom Residential Units at 270 gpd/unit	= 2,160 gpd
2 x Retail Unit with 2 Employees at 12 gpd/employee	= 48 gpd
	Total = 5,868 gpd

11.3 WASTEWATER DISPOSAL

The proposed project will be connected to the Portland Water District's and City of Portland's wastewater collection and conveyance systems. The City of Portland Wastewater Capacity Application has been completed and forwarded to Mr. Brad Roland.

The overall project is anticipated to generate an average daily flow of approximately 5,868 gpd. Based on the existing sewer system in the area, there appears to be adequate capacity to handle these projected flow amounts.

11.4 ELECTRICITY SUPPLY

CMP currently maintains overhead and underground utilities in the area. The existing overhead electric and communication utilities along Hampshire Street will be installed underground to a new electric vault proposed beneath the Federal Street sidewalk in front of the proposed building. Electricity will be fed from this vault to the proposed building and other adjacent properties including the recently constructed Luminato condominiums.

11.5 ATTACHMENTS

Attachment 11-A – Correspondence with Utilities

ATTACHMENT 11-A

Correspondence with Utilities

TERRADYN
CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

1728

December 6, 2017

MEANS
means@pwd.org
Portland Water District
225 Douglass Street
Portland, ME 04104

Request for Ability to Serve Letter
31-Unit Residential Development
with First Floor Retail Space
56 Hampshire Street, Portland, Maine

Dear Sir or Madam:

Terradyn Consultants LLC has been retained by The NewHeight Group to assist with site design and permitting for a proposed 31-unit condominium development project located at 56 Hampshire Street in Portland, Maine. We are writing to request a letter confirming the Portland Water District's ability to serve the proposed development.

The 18,685 square foot parcel is identified as Block C, Lots 13 and 18 on the City of Portland Tax Map 28, and a 12' wide easement owned by the City of Portland. The site is at the corner of Hampshire and Federal Streets. Two existing non-residential structures are located on the site.

The proposed project includes the construction of a 12,272 square foot, 6-story building, including 31 condominium units and first floor retail space. Covered parking will also be provided on the ground level. Public water and sewer utilities will be installed to serve the project. It is anticipated that a new 6" fire protection water service and a new 4" domestic water service will be installed for the new building.

Attached are a site location figure showing the property delineated on a USGS map and a preliminary site utility plan of the project, showing how the development may be served with water. A spreadsheet showing the total number of proposed plumbing fixtures is provided in a separate document.

Please provide our office with confirmation that the Portland Water District has the ability to serve the proposed development. As the design is refined, we will provide more detailed drawings of the project for your review.

If you have any questions or need more information to make your determination on ability to serve, please contact me at (207) 322-1223 or adrienne@terradynconsultants.com.

Sincerely,

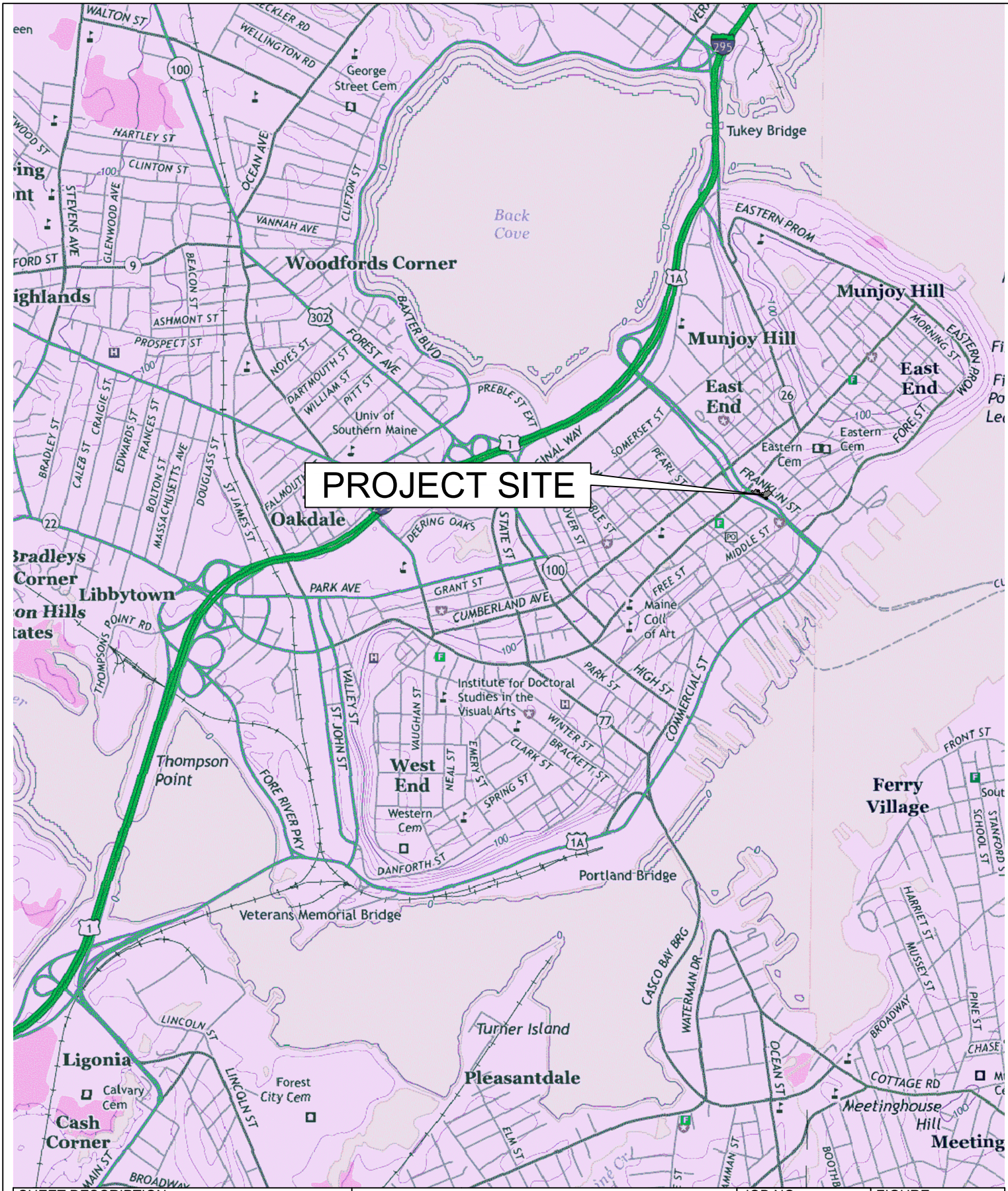
TERRADYN CONSULTANTS LLC



Adrienne Fine, P.E.
Design Engineer

cc: Susan Morris, Chip Newell, Erin Cooperrider, Tom Federle, The NewHeight Group
David Lloyd, Archetype

Enc.



SHEET DESCRIPTION L2 U.S.G.S. QUADRANGLE MAP PORTLAND WEST AND PORTLAND EAST	TERRADYN CONSULTANTS, LLC Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting	JOB NO. 1728	FIGURE 1
PREPARED FOR THE NEWHEIGHT GROUP 118 CONGRESS STREET, □401 PORTLAND, MAINE 04101	P.O. Box 339 111 Elderberry Lane New Gloucester, ME 04260 Office: (207) 926-5111 Fax: (207) 221-1317 www.terradynconsultants.com	DATE 9/6/2017	OF 2
		SCALE 1"□2,000'	



SHEET DESCRIPTION
L2
AERIAL PHOTOGRAPH □2012□

PREPARED FOR
THE NEWHEIGHT GROUP
118 CONGRESS STREET, □401
PORTLAND, MAINE 04101

TERRADYN
CONSULTANTS, LLC

P.O. Box 339
111 Elderberry Lane
New Gloucester, ME 04260
Office: (207) 926-5111
Fax: (207) 221-1317
www.terradynconsultants.com

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

JOB NO.
1728

DATE
9/6/2017

SCALE
1"□60'

FIGURE
2

OF
2

12. SOLID WASTE

12.1 OVERVIEW

The project will generate solid waste both during construction and on an on-going basis after construction is complete. Estimates of solid waste generation, recycling rates, and procedures for the transport and disposal of solid waste that will be generated by the operation of the proposed development are provided below.

The following amount of solid waste associated with the construction and operation of the development have been estimated:

- 414 cubic yards of construction debris related to the new building construction activities (excluding volume of recycled materials).

- 1,054 pounds per week of solid waste will be generated by the operation of the development. Assuming that 50% of the waste is recycled, it is estimated that the project will generate 13.7 tons of recyclable waste and 13.7 tons of non-recyclable waste per year.

12.2 SOLID WASTE GENERATED DURING THE BUILDING CONSTRUCTION

Approximately 414 cubic yards of construction debris is expected to be generated during construction. Assuming that 80% of construction debris is recycled, construction of the project will generate approximately 83 c.y. of non-recyclable waste.

The waste stream will be transported and disposed of at the following locations:

Hazardous Materials:	WMI Crossroads Facility in Norridgewock, Maine
Mixed Construction Material:	Riverside Recycling Facility in Portland, Maine; WMI Crossroads Facility in Norridgewock, Maine or Juniper Ridge in Old Town, Maine (Contractor option)
Separated Wood Construction Debris:	KTI Biofuels in Lewiston, Maine
Separated Metal/Ferrous Material:	One Steel Recycling Inc. in Arundel or Oakland, Maine

The collection, transfer, disposal, and payment of all fees for solid wastes shall be the responsibility of the Contractor, with all waste transferred by a licensed non-hazardous waste transporter.

12.3 SOLID WASTE GENERATED FROM THE OPERATION OF THE DEVELOPMENT

Approximately 1,054 pounds of solid waste and recyclable material is expected to be generated every week by the residents of the project. The operational solid waste and recyclable material will be collected by the City of Portland in accordance with Chapter 12 of the City Code.

12.4 ATTACHMENTS

Attachment 12-A – Computations of Types and Volumes of Solid Wastes for Construction Project

ATTACHMENT 12-A

Computations of Types of Volumes of Solid Wastes

ATTACHMENT 12-A

SOLID WASTES COMPUTATIONS AND DISPOSAL

A. NEW BUILDING CONSTRUCTION:

Basis of Estimate: 10 c.y./1,500 s.f. of finished space

Area: Approximately 62,025 square feet of finished space

Solid Waste: Approximately 414 c.y.

Other Wastes Associated with Other Site Construction: Cardboard from packaging etc.: Limited Quantity

Total: 414 c.y. before recycling

Net: 83 c.y. if 80% of the material is recycled

Disposition:
Assume 10 percent is concrete which can be sent to the approved aggregate recycling facilities operated by Shaw Bros. or R.J. Grondin and Sons for processing into recycled aggregate.

Assume 70 percent is wood or metal which can be transported to KTI Biofuels in Lewiston (for wood) or One Steel Recycling in Oakland, Maine for metals.

Approximately 83 cubic yards of mixed construction debris that will be hauled to the Riverside Recycling Facility in Portland, WMI Crossroads facility in Norridgewock, Maine or the Juniper Ridge Facility in Old Town, Maine.

The contractor should provide dumpsters designated by material type and identify recycling methods and disposal sites prior to construction. All haulers must have a current non-hazardous waste haul license.

B. OPERATIONAL SOLID WASTE:

RESIDENTIAL USE:

Basis of Estimate: 17 pounds/wk per individual. Estimate of 2 individuals per residential unit. From Table 14-1 of the CEQR Technical Manual from January 2014 Edition; Source: New York City Department of Sanitation.

Number of individuals: 62

Solid Waste: Approximately 1,054 pounds/week

13. FIRE SAFETY

13.1 OVERVIEW

The applicant and project team will provide the Portland Fire Department with the information required in the PFD Site Review Checklist, as well as a basic review of NFPA 1 and City of Portland Technical Standards related to public safety.

The project site will be accessed from Hampshire Street and Federal Street, which are improved with a 25’ wide paved surface and a 43’ wide paved surface respectively. A 6” cast iron water main owned by the Portland Water District currently exists in Federal Street, and the closest fire hydrant is located on the southeast side of Federal Street at the intersection of Hampshire and Federal Streets.

Three sides of the proposed building will be fully accessible from Hampshire, Federal, and Franklin Streets. The proposed building will be fully sprinkled in compliance with all applicable codes.

14. CONFORMITY WITH APPLICABLE DESIGN STANDARDS

14.1 OVERVIEW

This project conforms to all applicable Site Plan Standards of Section 14-526 of the city's Land Use Ordinance as described in the following narrative.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The project will not have a significant impact on the surrounding street system. Vehicles will access the site and parking areas from existing access points and the estimated number of new vehicle trips generated by the project is insignificant compared to existing trips on surrounding streets.

2. Access and Circulation:

   a. Site Access and Circulation

   (i) Pedestrian access to the site will be provided via the re-constructed existing sidewalks along Hampshire and Federal Streets. There will also be a pedestrian entrance into the building along Franklin Street. A proposed walkway along the northern side of the building will also provide pedestrian access to the building. Door controlled access will be provided at each of the building entry locations.

   (ii) The project will use existing points of access.

   (iii) Drive up features are not proposed

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

   b. Loading and Servicing

   (i) Delivery or service vehicles are expected to be infrequent and may temporarily use on-street parking on Hampshire or Federal Streets.

   c. Sidewalks.

   (i) The existing sidewalks along the Hampshire and Federal Street frontages will be reconstructed as part of this project. All sidewalk improvements shall conform to the City of Portland Technical Manual as shown on the project drawings.

(ii) The sidewalk ramp at the proposed site entrance drive, and at the corner of Hampshire and Federal Streets will be constructed in accordance with City of Portland Technical Design Standards.

(iii) The proposed walkway along the northern side of the proposed building will connect directly to the existing city sidewalk on Hampshire Street. The proposed walkway from the southwesterly side of the proposed building will connect to the sidewalk along the easterly side of Franklin Street.

3. Public Transit Access:

Metro Bus Route 8 runs west on Congress Street in the proximity of the project site. The nearest bus stop to the project is at the corner of Congress Street and Franklin Street, approximately 150' northwest of the site. The project does not meet the minimum threshold to require a new transit facility.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

(i) The project requires one parking space per unit after the first 3 units, or 28 total spaces. Fourty-seven (47) spaces will be provided on site in a covered parking lot at the 1st floor level beneath the building, and will be accessed from Federal Street. Two of the on-site spaces will be ada accessible, and the remaining 26 spaces will be provided by a mechanical automated parking system.

The surface parking area at the northern end of the project site will be reserved for use by the residents of 312 Congress Street.

(ii) A parking study is not required for this project.

(iii) The dimensions of the 45 spaces in the mechanical parking structures are dictated by the mechanical parking structure construction. One of the two ada accessible spaces will meet the dimensional requirements for a van accessible space (8' x 18' space with an adjacent 8' x 18' accessible aisle), and the other ada accessible space will be an 8' x 21' parallel space with a 5' wide accessible aisle.

(iv) The proposed on-site parking area will be paved with bituminous concrete.

b. Location and Required Number of Bicycle Parking Spaces:

(i) The project requires 2 bicycle parking spaces for every 5 dwelling units, or 13 spaces. Bicycle parking spaces will be provided in a bike room

adjacent to the residential unit lobby and accessed from Federal Street. Additional surface bike parking will be provided in the garage.

c. Motorcycles and Scooter Parking:

(i) Dedicated motorcycle/scooter parking is not provided.

d. Snow Storage:

(i) Approximately half of the parking spaces will be either all or partially uncovered, with the other half located entirely beneath the building. A paved snow storage area is provided for the snow removal of the uncovered spaces to the northwest of the proposed parking area serving 312 Congress Street.

(ii) Snow will not be stored in parking areas, and no bio-retention is proposed.

5. Transportation Demand Management (TDM):

a. A TDM plan is not required for this project.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

a. The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

b. Not applicable
c. Not applicable

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

(i) Ten trees are located along the southern property line adjacent to Franklin Street. One tree is located along the northern property line, just north of the existing on-site garage building. One tree is located in the Hampshire Street sidewalk in front of the site. One tree is located at the northern corner of the existing on-site building. Three of the trees along Franklin Street will be preserved. The remaining 10 trees surrounding the site are located within 10’ of the proposed building and will be removed as part of the project. New trees will be provided as shown on the Landscape Plan.

(ii) The existing trees are not within required setback areas

(iii) Not applicable.

(iv) Waiver: 7 of the trees to be removed along Franklin Street are overgrown street trees that would have a negative impact on the proposed structures, and are encroaching upon public infrastructure. These trees will be replaced with appropriate street trees as specified by the landscape architect. The tree at the northern corner of the existing building is a smaller tree that will be removed. This area of the site will be landscaped to the extent practicable while allowing emergency and maintenance access to the northern side of the building.

In the event that 13 replacement trees cannot be planted on the site, the applicant will pay the required cost of required replacement trees to the City of Portland Tree Fund, as detailed in Section 4 of the Technical Manual.

(v) The project is not in the Shoreland Zone

b. Site Landscaping.

(i) Landscaped Buffers:

(a) Not applicable.

(b) Not applicable.

(c) Not applicable.

(d) Vegetated buffers between the proposed building and surrounding residential development is specified on the Landscape Plan.

(ii) Parking Lot Landscaping:

(a) Not applicable. The majority of the onsite parking area is below the proposed building. Landscaping and screening from adjacent lots and roadways will be provided along the edge of the portion of the parking lot that is uncovered.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable

(e) Not Applicable

(iii) Street Trees

(a) Street trees are proposed along the Franklin Street frontage to replace trees being removed. The trees will be located between the existing Franklin Street sidewalk and the site property line.

(b) Not Applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

The existing project site contains approximately 16,555 square feet of impervious surface. Redevelopment of the project site will result in a decrease of approximately 7,215 square feet of impervious area and a total impervious surface of 9,340 square feet. Therefore, the project is not required to meet the General or Flooding Standards.

Post development stormwater runoff will follow existing patterns. Runoff from the proposed parking lot and the proposed building will drain to a proposed stormdrain system in the garage below the proposed building and in Federal Street, and connect to the existing stormdrain system in Federal and Hampshire Streets.

(i) The project will not result in flooding of adjacent lots.

(ii) Runoff volumes and rates will not increase onto adjacent lots.

(iii) Volumes and rates of stormwater runoff into the Federal Street and Hampshire Street rights of way are expected to decrease. The project will not create ponding, flooding, or other drainage problems within Federal Street or Hampshire Street.

(iv) Volumes and rates of stormwater runoff into the city's storm drain network are expected to be similar to existing volumes and rates. The project will not create problems downstream or exceed the capacity of the system.

b. The project will result in a decrease in impervious surface and is not required to meet the General or Flooding Standards.

c. Not Applicable. The project is not located in a watershed of an urban impaired stream.

d. Not applicable.

e. The project will be served by both a public wastewater system and public drainage system. The project will not pose a risk of groundwater contamination.

f. Wastewater will flow to the public sewer system, which is adequately sized for the project flows.

(c) Public Infrastructure and Community Safety Standards.

1. Consistency with City Master Plans:

a. The project has been designed to be consistent with the City of Portland Land Use Ordinance and off-premises infrastructure.

b. Not applicable.

2. Public Safety and Fire Prevention:

a. The site has been designed to promote safety and security for residents and their guests. Access to the residential lobby and parking area will utilize keyed entry. Site lighting will provided added security.

b. Emergency vehicle access will be via Hampshire Street (26’ wide paved surface) and Federal Street (43’ wide paved surface).

c. An existing fire hydrant is located on the southeast side of Federal Street at the Federal and Hampshire Street intersection. The proposed building will also feature sprinklers for fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

a. The project will be served by new water, sewer, and storm drain utilities. An ability to serve request has been sent to the Portland Water District, and a Wastewater Capacity Application has been forwarded to Brad Roland at the City of Portland.

b. Overhead electrical and telecommunications utilities exist along Hampshire and Federal Streets. The project site will be served by underground utilities. A new electrical vault will be installed along Federal Street to service the proposed project and the recently completed Luminato condominiums. The electrical utilities in the vicinity of the project will be moved underground.

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

d. The project will be connected to the public sewer system within Hampshire Street.

e. The sanitary sewer and stormwater collection systems were designed to comply with City standards.

f. Solid waste storage areas will be provided in the ground level of the building with access from the parking area.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

a. The bulk, location and height of the proposed building will not result in adverse impacts to abutting properties.

b. The bulk, location and height of the proposed building will not substantially reduce the value or utility of adjacent structures.

c. HVAC systems will be located on the roof of the proposed building. Venting is proposed to be directed away from public spaces and adjacent residential sites.

2. Shadows:

a. The project is not expected to cause shadows on publically available open space, or have an adverse effect on vegetation as a result of shadows cast from the proposed building.

3. Snow and Ice Loading:

a. The proposed building will have a flat roof. Accumulated snow and ice will not fall onto adjacent properties or public ways.

4. View Corridors:

a. The project site is located outside of any protected view corridors.

5. Historic Resources:

a. The development is not within a designated historic district and does not affect designated landmarks.

b. Not Applicable

c. There are no known archaeological resources on the site.

6. Exterior Lighting:

a. Site Lighting

(i) Exterior site lighting will be provided by building mounted lights along sidewalks and in parking areas. All fixtures will feature full cut-off optics to prevent unintended light pollution. Proposed lighting is shown on the Lighting Photometric Plan (Sheet P-1).

b. Architectural and Specialty Lighting:

(i) No architectural or specialty lighting is proposed.

(ii) No up-lighting is proposed.

c. Street Lighting

(i) No street lighting is proposed

7. Noise and Vibration:

Noise levels are expected to meet the permitted levels for the IS-FBC Zone.

a. HVAC and Mechanical Equipment

(i) HVAC equipment will be located on the roof of the proposed building and will meet all applicable state and federal emissions requirements. The units will not be visible from Hampshire, Federal, or Franklin Streets or adjacent sites.

(ii) The emergency generator is proposed adjacent to the ground level parking and shall meet the City of Portland noise and operation requirements.

8. Signage and Wayfinding:

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

(i) The project is not subject to a Certificate of Appropriateness.

(ii) Not applicable. No commercial or directional traffic signage is proposed as part of the project.

(iii) Not applicable. No on-site directional traffic signage is proposed as part of the project.

(iv) Not applicable. No waiver is required.

9. Zoning Related Design Standards:

a. The project is not located within a historic zone.

15. VERIFICATION OF PROPOSED HVAC EQUIPMENT

15.1 OVERVIEW

The following manufacturer cut sheets verify that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

15.2 ATTACHMENTS

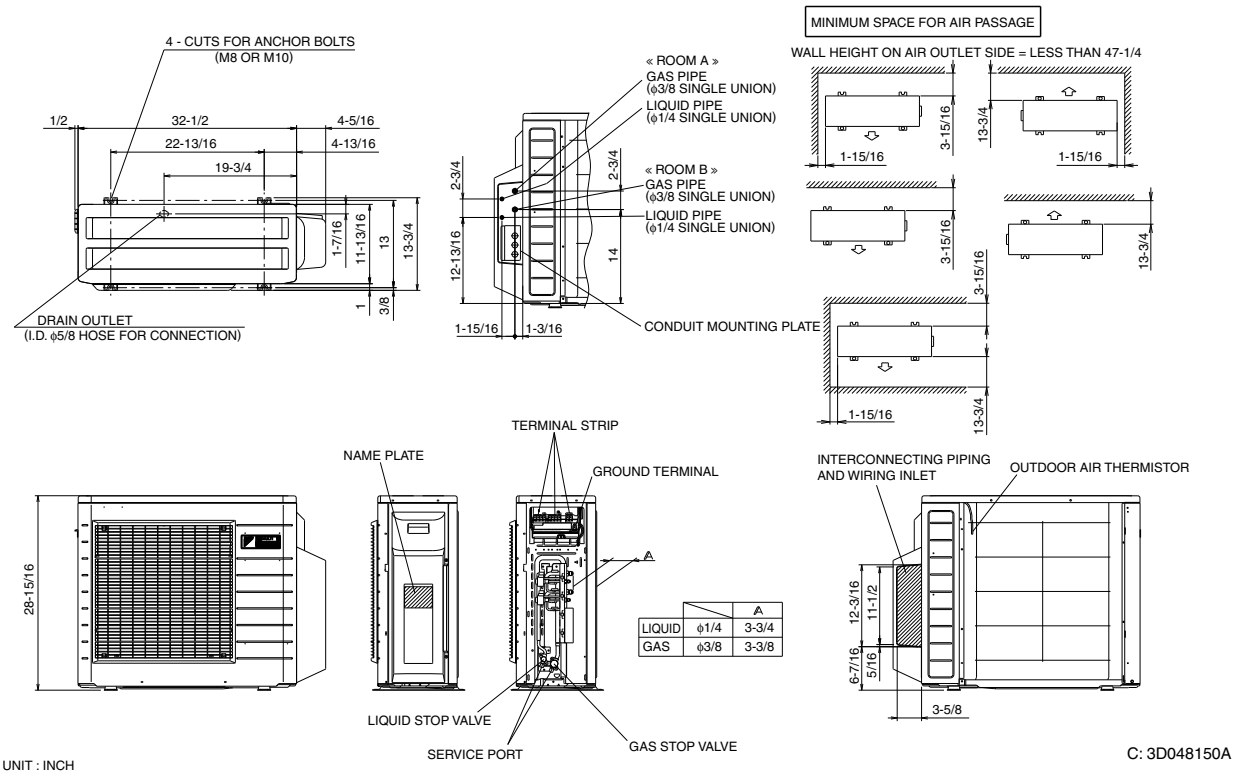
Attachment 15-A – HVAC Equipment Cut Sheets

ATTACHMENT 15-A

HVAC Equipment Cut Sheets

4.2 Outdoor Unit

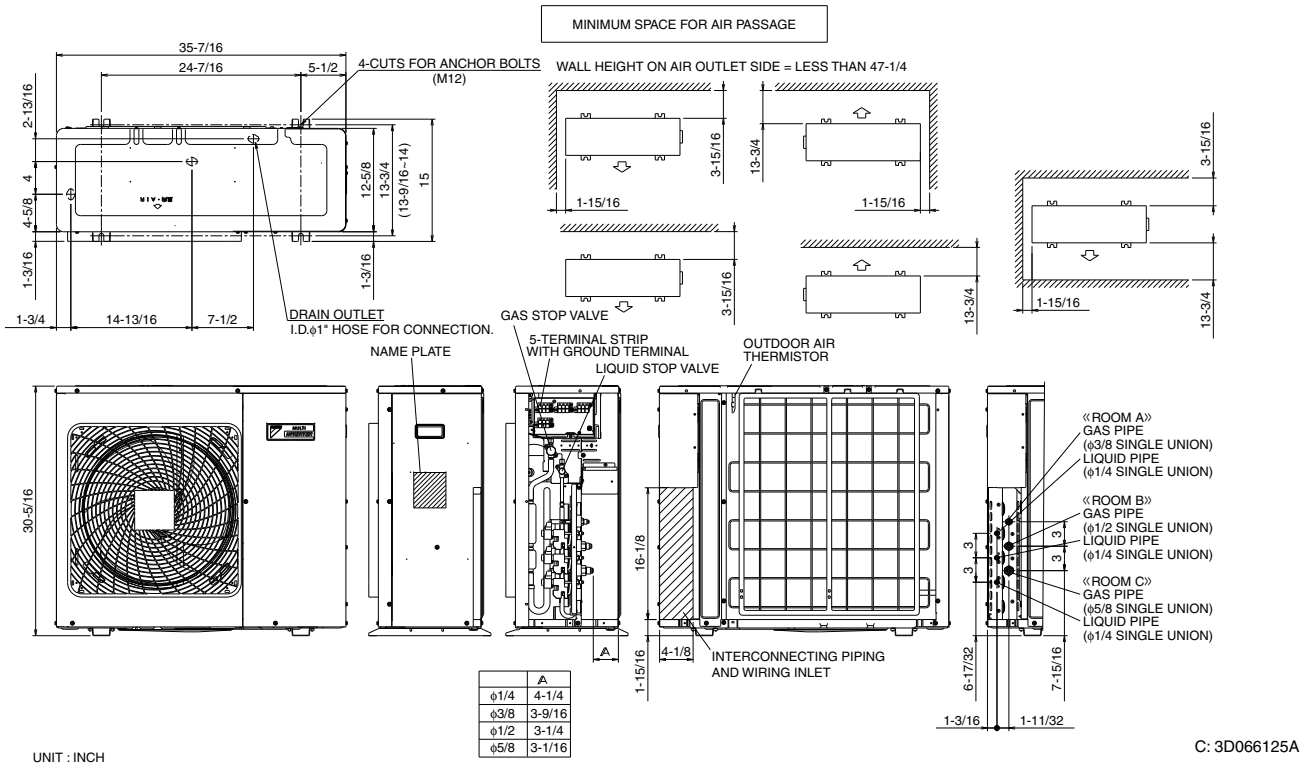
2MXS18GVJU



UNIT : INCH

C: 3D048150A

3MXS24JVJU

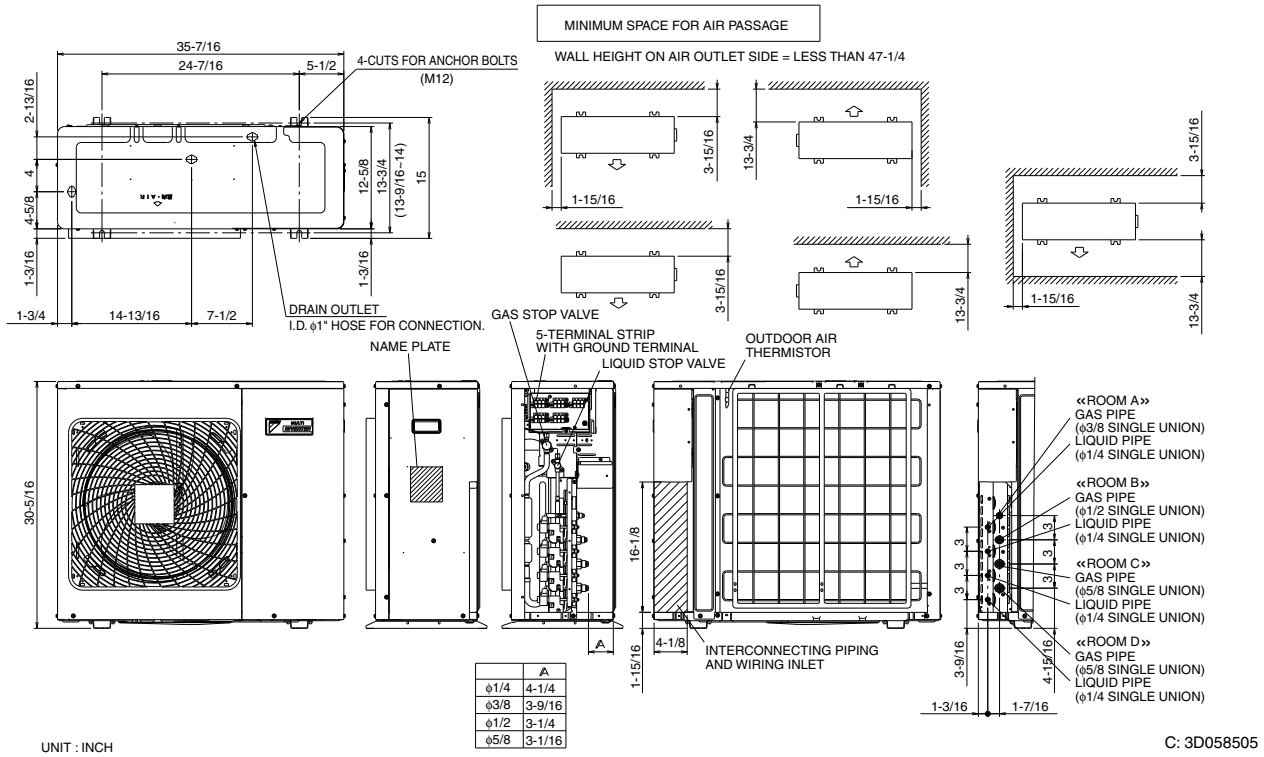


UNIT : INCH

C: 3D066125A

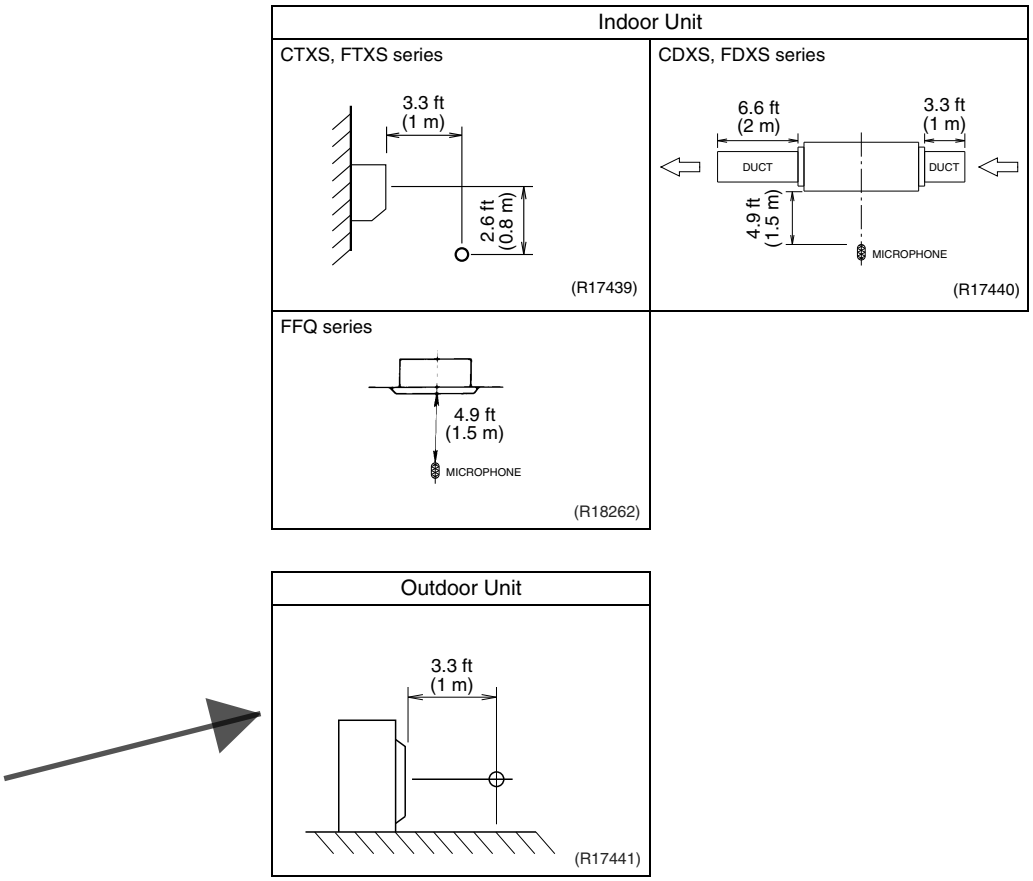
1

4MXS32GVJU



10. Sound Level

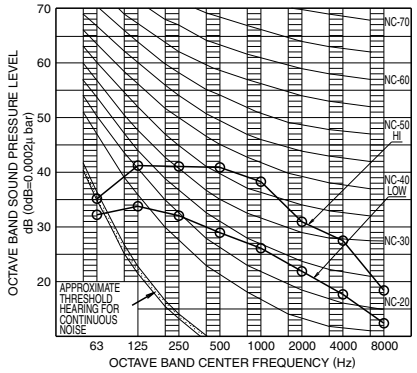
10.1 Measuring Location



Note: 1. Operation sound is measured in an anechoic chamber.
2. The data are based on the conditions shown in the table below.

Cooling	Heating	Piping Length
Indoor ; 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) Outdoor ; 95°FDB (35°CDB) / 75°FWB (24°CWB)	Indoor ; 70°FDB (21°CDB) / 60°FWB (15.6°CWB) Outdoor ; 47°FDB (8.3°CDB) / 43°FWB (6°CWB)	16.4 ft (5 m)

FFQ15LVJU



OVER ALL (dB)

SCALE	HI	LOW
A	42.5	31.5

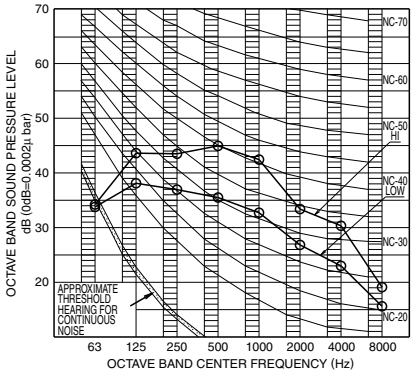
(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V, 60Hz
STANDARD CONDITION (JIS)	
4 DIRECTION DISCHARGE	

4D080698

FFQ18LVJU



OVER ALL (dB)

SCALE	HI	LOW
A	46.0	37.5

(B.G.N IS ALREADY RECTIFIED)

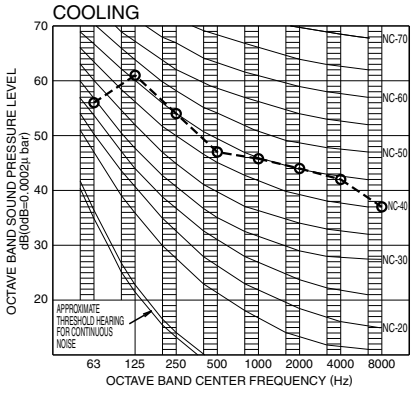
OPERATING CONDITIONS

POWER SOURCE	208/230V, 60Hz
STANDARD CONDITION (JIS)	
4 DIRECTION DISCHARGE	

4D080699

10.2.2 Outdoor Unit

2MXS18GVJU



OVER ALL (dB)

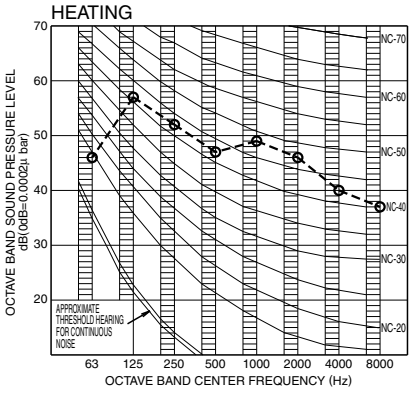
SCALE	60Hz 208/230V(H)
A	50

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Cooling



OVER ALL (dB)

SCALE	60Hz 208/230V(H)
A	51

(B.G.N IS ALREADY RECTIFIED)

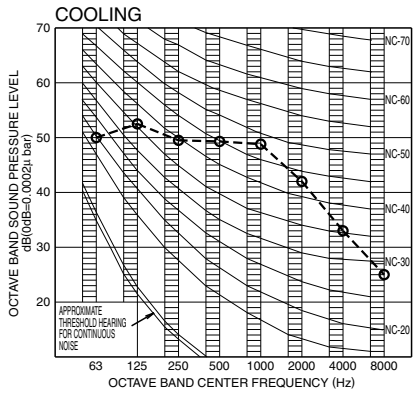
OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Heating

3D048472A

3MXS24JVJU, 4MXS32GVJU



OVER ALL (dB)

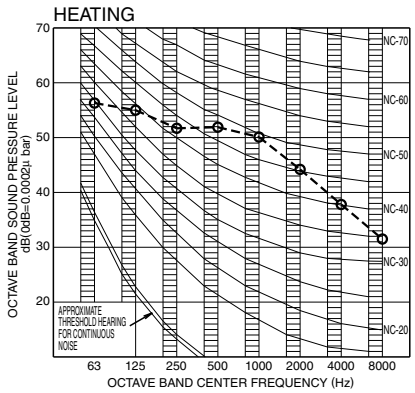
SCALE	60Hz 208/230V
A	52

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Cooling



OVER ALL (dB)

SCALE	60Hz 208/230V
A	54

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Heating

3D058787A

Att. P

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

March 6, 2018

Adrienne Fine
Terradyn Consultants
565 Congress Street Suite 310
Portland, ME 04102

Re: 56 Hampshire Street, PO
Ability to Serve with PWD Water

Dear Ms. Fine:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on December 7, 2017. Based on the information provided per plans dated March 6, 2018, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire and 2-inch domestic service may be installed from the water main in Federal Street. The service should enter through the properties frontage on Federal Street at least 10-feet from any side property lines.

- Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- The existing building is currently served with a 1-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

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

Existing Site Service

According to District records, the project site does currently have existing water service. A 1-inch diameter copper domestic service line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 6-inch diameter cast iron water main in Federal Street and a public fire hydrant located approximately 125 feet from the site. The most recent static pressure reading was 86 psi on May 25, 2017.

Public Fire Protection

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

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

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

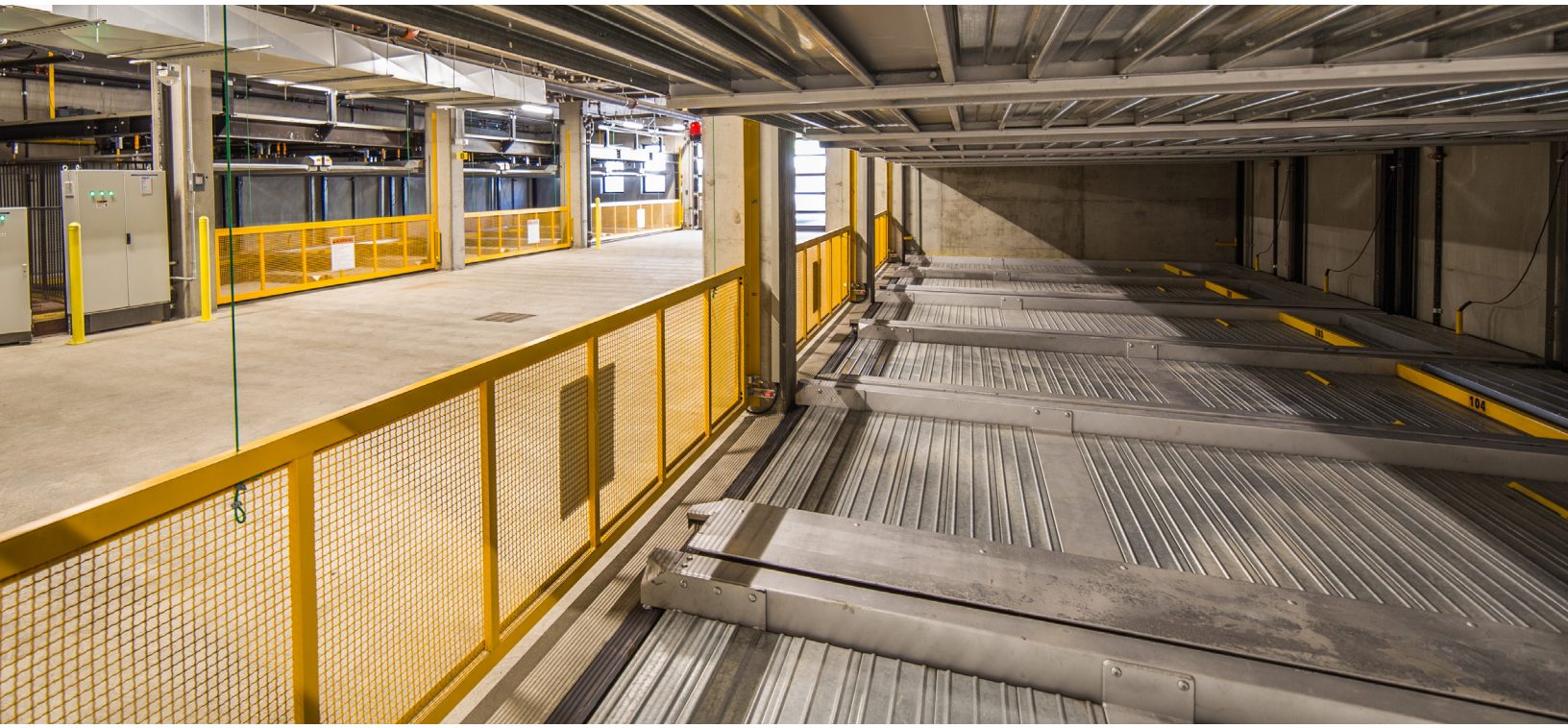
Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

cityLift

TAKE THE SPACE OUT OF PARKING.



ABOUT

WE TURN PARKING SPACE INTO PEOPLE SPACE.

BUILT-IN VALUE.

Our best-in-class manufacturing arm allows us to create the best value in the marketplace passing the savings on to you. Add unmatched reliability + seamless service and it equals a winning equation.

COLLABORATION COMES FIRST.

By offering customized systems that free up both your square footage and your time–our experts amplify the benefit of every inch (and dollar) saved by working closely with your team, every step of the way.

MAXIMIZE PEOPLE SPACE.

Our custom-built, space-saving parking systems free up valuable real estate–especially in high-density urban areas–to be used for people, instead of parking.

SAFETY FOCUSED.

Safer than valet parking, CityLift's systems minimizes the risk of theft and dramatically reduces the risk of unwarranted door dings or damage, in return, helping lower insurance premiums for many facilities.

SOLUTIONS

	STACKER	PUZZLE	TOWER	AISLE
NEW CONSTRUCTION	√	√	√	√
RETROFIT	√	√		
INDEPENDENT ACCESS FOR DRIVER		√	√	√
EV CHARGING		√	√	√
ADA COMPLIANT			√	√
SECURITY GATES / REMOTE ACCESS		√		
REMOTE MONITORING		√	√	√
MAXIMUM # LEVELS	2	7	20	7
RETRIEVAL SPEED (SECONDS)	45 – 180	30 – 45	90 – 120	60 – 120
# INSTALLED UNITS BY CITYLIFT'S MANUFACTURING PARTNER	5,000	38,000	16,000	5,000
BENEFITS	• Min 12' clear height • Small to large scale project • Easy to install	• Min 12' clear height • Price and operating cost	• Efficient design • Narrow space • Standalone or part of new structure	• Efficient design • Above or below ground • Standalone or part of new structure
TYPE OF SYSTEM	Manual	Semi Automated	Fully Automated	Fully Automated

TYPICAL APPLICATIONS

- Mixed Use
- Residential Developments
- Airports
- Hotels
- Hospitals
- Commercial
- Car Dealerships
- Retail



5-Level Puzzle



11-Story Tower



5-Level Aisle

CASE STUDY

FULLY AUTOMATED GARAGE
2335 BROADWAY ST., OAKLAND, CA

Solution: Tower
Parking Levels: 7
Number of Spaces: 39
Developer: Signature Development Group
Completion Date: 2017

CityLift's tower solution turned 7 spaces into 39 parking spaces built on 7 levels. Together with Signature Development Group, CityLift designed and developed the first fully automated parking garage in the San Francisco Bay Area. EV charging will also be available.



VIEW VIDEOS AND MORE AT: WWW.CITYLIFTPARKING.COM

ANDREW GINSBURG | PRESIDENT | 561.866.8635 | AGINSBURG@CITYLIFTPARKING.COM
AJ JENKINS | VP BUSINESS DEVELOPMENT | 561.703.8121 | AJENKINS@CITYLIFTPARKING.COM

SYSTEM HIGHLIGHTS AND MAINTENANCE PLAN

SERVICE PROGRAM





REGULAR MAINTENANCE = RELIABILITY
SERVICE BY TRAINED DEDICATED STAFF
COMPREHENSIVE PROGRAM INCLUDES

- On-site staff and customer training
- Regular maintenance program
- 27-point inspection with quarterly inspections
- 24x7 remote monitoring of operating systems (optional but recommended)
- Uber car reimbursement guarantee to customer if unable to access car for any reason

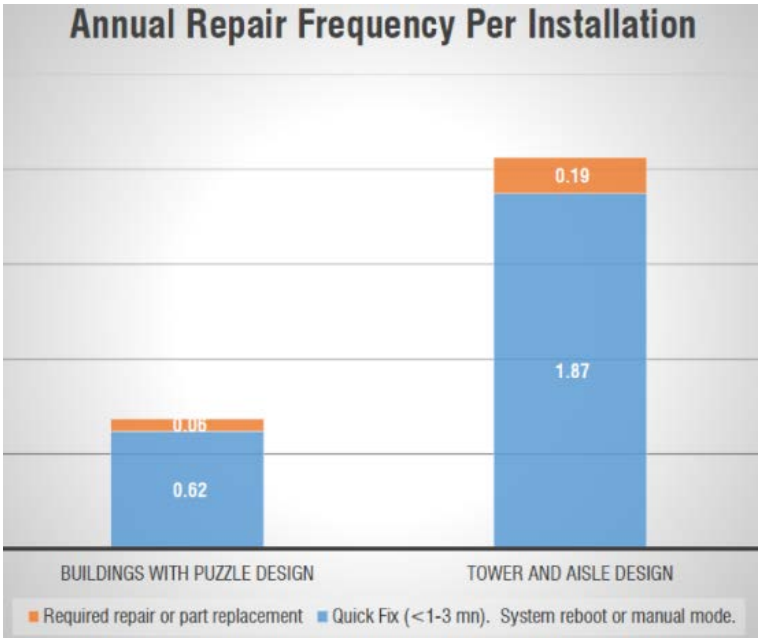


PRICING

- First 12 months included with purchase
- $200-$300/space/year after month 12. We will extend our maintenance plan to Five Years with a Five-Year agreement with CityLift Parking.

HISTORIAL REPAIR ANALYSIS

- CityLift Parking has the lowest repair frequency ratio on the market. Our components are built for longevity, durability, and consistency. Below is a chart with repair and maintenance records for 121 installations representing over 8000 spaces from 2012 to 2014 with average installation age of 21 years.



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DESIGN AND PERMITTING

DESIGN AND PERMITTING

- 25+ year's product experience. Quantified repair track record
- Technical specs meet or exceed code and planning requirements
- UL listed mechanical and electronic system components
- US licensed engineer sign off on seismic, anchoring and structural strength requirements
- Close working relationship with architect on design and permitting

PRIOR TO SHIPPING

- Pre-assembly at factory
- Independent 3rd party QC at factory

INSTALLATION AND TESTING

- Licensed contractor & Authorized trained installer
- On site oversight by manufacturer engineer
- Full QA testing prior to completion
- Training of operators and customers

SYSTEM HIGHLIGHTS

Regulatory Agency and Codes	CityLift Parking will comply with all requirements, including: • UL and NEMA for all electronic components • NFPA 79 • Building Code • ASCE, AISC for structural details • Local requirements
Business License	CityLift Parking will provide its business license upon work award.
Manufacturer's Qualifications	The specific technology itself is 25 years old with over 65,000 designed parking lifts installed.
Installer Qualifications	Installation will be supervised by technical staff from the manufacturer with over five years of installation experience

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Required Coordination	CityLift will require coordination with MEP and fire sprinkler providers to ensure sufficient space is provided to store vehicles in each space.
Platforms	The platforms for the upper and lower cars consist of galvanized steel platforms that ride up and down the steel columns. The upper and lower platforms are constructed with two steel side members, three steel cross members, ribbed steel platform material which runs from side member to side member and one-wheel stop. The platform is solid and does not allow oil or water to drip onto the lower cars.
Lifting Mechanism	CityLift designs offers faster retrieval times compared to hydraulic systems, greater energy efficiency, and no risk of environmental contamination from oil leaks. The motor has an expected life of 15-20 years. In the event of a power outage and no electrical backup cars can be manually lowered to be retrieved or you can integrate a backup generator
Operating Temperature	-20c & + 40c
Motors	**Lift Motor Model:** DRS100 (4kW) **Gate Motor Model:** DR63 (0.18kW) **Traverse Motor Model:** DRS71 (0.4kW)
Safety Devices	Safety devices include: 1. Security hook fall prevention device 2. Operation warning device 3. Emergency stop device 4. Electrical overload protection device 5. Operation interlock device 6. Photoelectronic safety device for entry 7. Power brake 8. Vehicle positioning device 9. Power anti-phase protector 10. Magic eye safety device for closing of gate if gates are purchased 11. Overrun protection switch 12. Loose/broken chain detection device 13. Upper limit height sensor, if needed for low clear heights
Power	Configurable to building power specifications. 208 - 3 phase power supply EV charging installations would require an additional 30 amps 208V per EV space

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	Power backup can be integrated into a building backup generator. In addition, an outlet at each zone will allow the plug in of portable generator. CityLift would work with the electrical subcontractor to identify power locations, control boxes, and other requirements.
Load Capacity	5,200 pounds per vehicle
Remote Access	For private use, CityLift provides 2 fobs per parking space at no additional cost. These fobs allow remote access within the garage as well as contain an embedded chip in the fob that activates the lift at a customer kiosk if one is provided. These are programmable and can be administered by a property manager. With transient installations, we will provide an intelligent kiosk for parking and retrieving vehicles. Upon request, CityLift can work with other access device manufacturers to provide further device integration.
Fire sprinklers	As required CityLift Parking will coordinate clearance requirements with the manufacturer. Fire sprinklers are not included in our bid.
Safety Gates	Security gate doors can be provided. Doors open vertically and have safety sensors to stop closing in case of an obstruction. Height can be configured if requested.
Electrical Vehicle Charging	If requested, parts or all of the layout can be provided with built in 240V electrical charging adaptors into the ground level platforms If the buyer would prefer to prepare but not activate EV charging, CityLift would prepare the conduit and the platform for adding EV wiring, electrical box and charge plug at a later time. Cost TBD at the time of installation.
Shop Drawings	Full shop drawings included in price.
Maintenance and Repairs	One year of service is included, which covers: 1.) Monthly maintenance 2.) 24x7 call coverage 3.) Response to service calls to be on site within one hour 4.) Repairs 5.) Training for on-site staff so they can do 1st stage corrective actions 6.) Parts warranty 7.) Ride-sharing service reimbursement in case of mechanical failure. 8.) Training of operators and users 9.) Maintenance and user manuals. Service will be continued after one year for $200-$300/year/space. Extended contracts up to 60 months can be structured at time of contracting.

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INITIAL SERVICE PROGRAM

During the initial twelve (12) month period of the service program, CityLift will perform the following activities (the "Initial Service Program"):

1. **TRAINING**
   - (a) On-site operational training for Buyer's staff.
   - (b) Operational training materials provided for Buyer's users.
2. **EQUIPMENT MAINTENANCE**
   - (a) Annually:
     - (i) Inspect condition of anchors on both ends of lifter chain.
     - (ii) Inspect level of machine oil in the lifter reduction gear.
     - (iii) Inspect and measure levelness of the lifter.
     - (iv) Add machine oil into the rack parts of rack jack.
     - (v) Clean up in the control panel.
     - (vi) Visually inspect condition of each magnetic switch in the control panel.
   - (b) Semi-Annually:
     - (i) Lifter:
       1. Add machine oil on lifter chain.
       2. Add oil on Pillow blocks of driving units.
       3. Check/tighten mounting bolts on driving unit parts.
       4. Add oil into couplings of the driving unit.
       5. Check/tighten weight guide roller mounting bolts.
       6. Inspect rotation of weight guide rollers.
       7. Add grease on weight guide rails.
       8. Add grease on lifter rail.
       9. Inspect smooth rotating of the lifter guide rollers.
       10. Clean up of lifter hook boxes parts.
       11. Inspect mounting bolts on the lifter rails.

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(ii) Traverser:

1. Add grease into gear couplings on the traverser drive unit.
2. Check/tighten mounting bolts of the traverser rail.

(iii) Shift:

1. Confirm normal operation of shift motor.
2. Inspect condition of wire connections in carl cord for friction unit.

(iv) Other:

1. Confirm normal operation of monitor.
2. Cleaning of auto door system; inspection of v-belt.
3. Inspect cooling fans in control panel.
4. Inspect cooling fans in inverters.
5. Confirm electrical current value of each motor, taken during lifter operation with car on the lifter.

(c) Monthly or Quarterly (TBD by Owner and CityLift):

(i) Lifter:

1. Check lifter chain tension.
2. Inspect "chain end pin" condition on both anchor bolts.
3. Inspect reduction gears.
4. Confirm no irregular noise from the driving unit.
5. Check the brake function and the brake shoe space.
6. Confirm no irregular brake noise.
7. Check the heat of the (Main/Sub) lifting motors and the clutch.
8. Inspect the condition of mounting bolts of (Main/Sub) lifting motors.
9. Inspect brake mounting bolts, the spring measurement value and indication.
10. Inspect the condition of the reduction gears.
11. Inspect the condition of the clutch.
12. Inspect the condition of the pillow block.

(ii) Traverser:

1. Check/tighten mounting bolts on the traverser driving unit.
2. Inspect condition of the traverser driving wheel and driven wheel (abrasion, damage).

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3. Check/tighten fixing bolts of pallet rail on the traverser.

(iii) Electric Equipment:

1. Check operation of emergency stop system.
2. Confirm proper operation of the entry indication lamps.
3. Confirm proper operation of infrared photo sensors on the car entry.
4. Check/tighten bolts on the infrared sensors fixed on the car entry.
5. Inspect the travelling cables for damage.
6. Confirm proper operation of the stop position indication lamp.
7. Confirm proper operation of emergency limit sensor.
8. Check/adjust the space of lifter reducing sensors.
9. Check/adjust the space of the lifter fixing floor position sensors.
10. Check/adjust the space of the lifter hook position sensors.
11. Check/adjust the space of the traverser stop position sensors.
12. Check/adjust the space of traverser reducing sensors.

(iv) Pallet:

1. Inspect pallets for damage.
2. Confirm normal operation of pallet fix equipment.
3. Measure friction bar height.
4. Inspect pallet wheels for damage.
5. Inspect rubber stoppers for damage.
6. Check/tighten mounting bolts of pallet detection dogs.
7. Confirm proper operation of dogs and proximity switches.

(v) Friction Units:

1. Inspect friction rollers for damage.
2. Inspect condition of tension springs.
3. Inspect driving chain and confirm swing range and deflection.
4. Confirm normal operation of cam follower on the shift side.
5. Inspect friction motors.
6. Confirm condition of the friction swing stop spring.

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7. Confirm no over plus of allowance on chain coupling.

(vi) Other:

1. Confirm proper operation of warning alarm.
2. Inspect condition of safety covers.
3. Confirm smooth movement of auto door.
4. Confirm lifter lock unit function.
5. Inspect bolts on the lock position.
6. Check gap at pallet rail edges and tighten as necessary.
7. Confirm proper operation of entrance lights.
8. Clean operation panel and sweep around auto door.
9. Check automatic operation with a car.

3. **PARTS REPLACEMENT**

During term of the applicable Product Warranty, CityLift will perform all replacements of worn or defective parts in accordance with the terms of the warranty. Provided, however, CityLift will not be responsible for any repair / replacement of parts damaged by Buyer or any user of the equipment.

4. **ONE-HOUR RESPONSE TO SERVICE CALLS**

CityLift will respond to calls for on-site service/repairs under this Initial Service Program within one hour after Buyer notifies CityLift of the need for service/repair, at CityLift's designated customer service number.

5. **SUBSTITUTE TRANSPORTATION**

If, for any reason other than that caused by Buyer or any permitted user, a malfunction in the equipment prevents access to Buyer's or a permitted user's car, and CityLift is unable to provide access within a reasonable time after attempting repairs (determined in CityLift's sole discretion), CityLift will reimburse Buyer or its permitted user for the cost of using alternative transportation (e.g., taxi, Uber or Lyft), up to a maximum of $50 per occurrence.

CityLift reserves the right to add to, subtract from or otherwise modify the items in this Initial Service Program as CityLift deems necessary, in its sole discretion.

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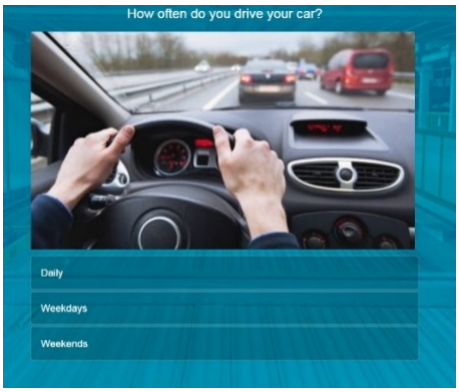
POST CONSTRUCTION FOLLOW UP & REMEDIATION

Upon completion of your project, CityLift prepares and delivers detailed O&M manuals and user "quick start" guides tailored specifically to your project. We send a customer service link that is tailored to your project. Users will fill this out offering valuable feedback to CityLift which we collect and follow up on appropriately. See this LINK for an example sent to a prior CityLift customer (yours will be customized to your site). This offers valuable insight to the user experience so the CityLift team can keep evaluating your project. We offer continued customer service by staying active even after your installation is complete.



We will provide a detailed user manual that offers step by step directions on how to operate the systems. We outline common practices of exiting and entering the system, connecting for EV charging, summoning a vehicle, and typical operator methods. We provide onsite training for any users you deem as an operator.

Once completed and our systems are operational, CityLift can remote monitor the efficiency of your installation 24/7.

We have methods in place that will track impacts to the efficiency of our systems and offer you swift remediation by CityLift. If there are irregularities or impacts to the efficiency of our systems, an error alert, as seen in Illustration #1 below, is sent to CityLift team members where someone will quickly follow up. **You CANNOT remote monitor hydraulic systems, so if you have a failure and do not have a satisfactory vendor, it could take days or even weeks to repair.** If someone onsite were to call CityLift's Main Number or the Toll-Free number, illustration #2 outlines the support flow chart the user will experience.

Illustration #1

Alert Notification

Remote Keypad:	http://bit.ly/2rBIyqO
Description:	Emergency Stop Button has been pressed
Alert Code:	1
Project:	Kingfish, A, Space 0
Address:	5239 Claremont Ave., Oakland, CA 94618

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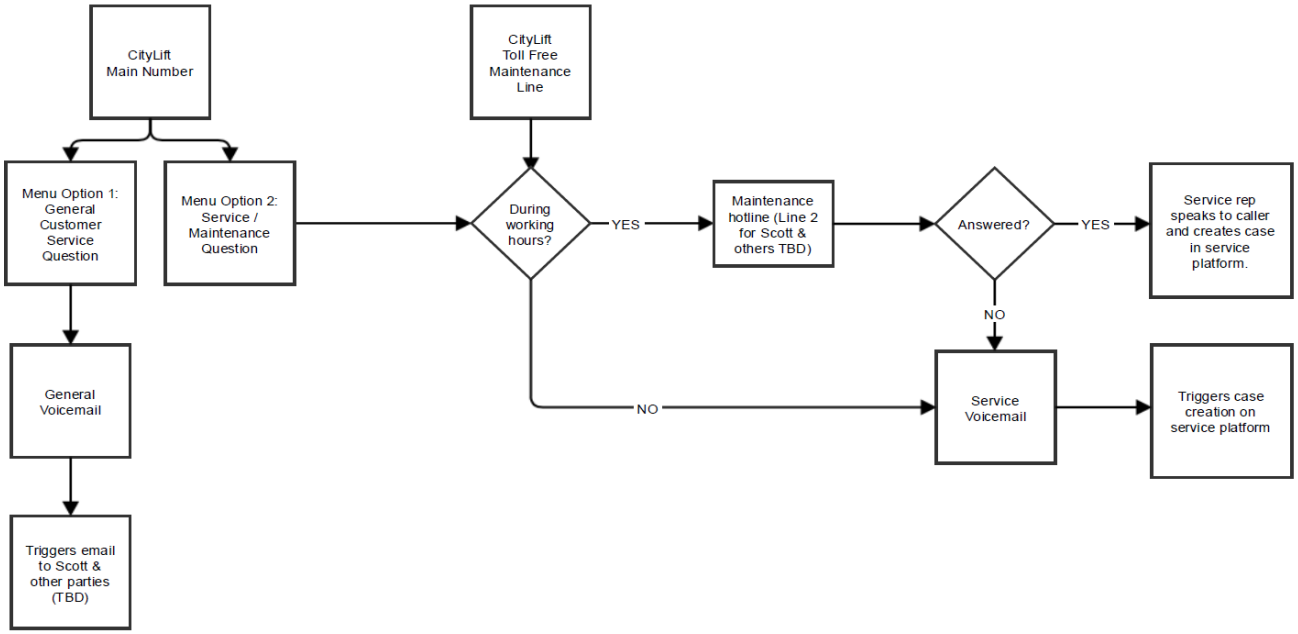
Illustration #2



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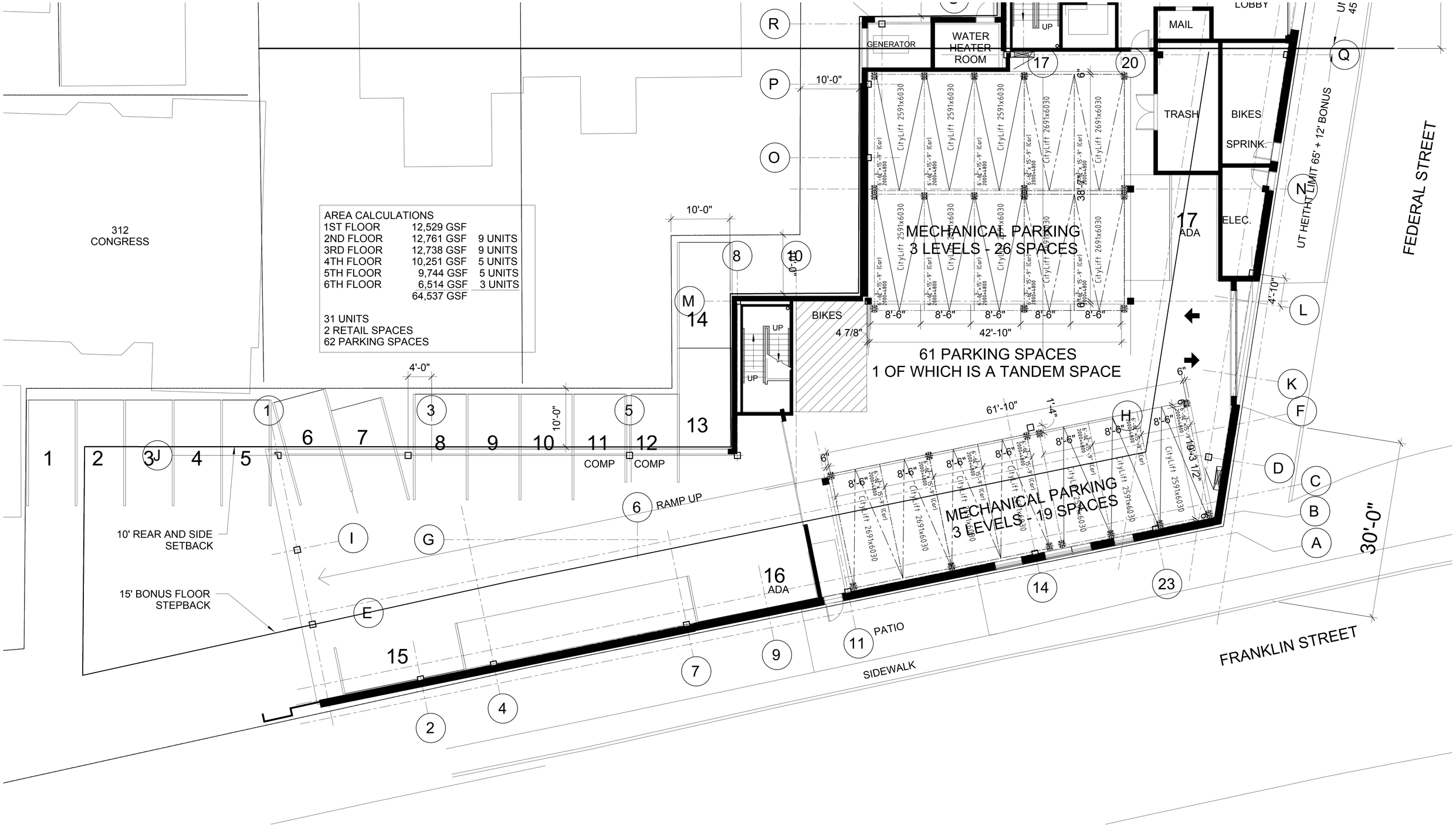
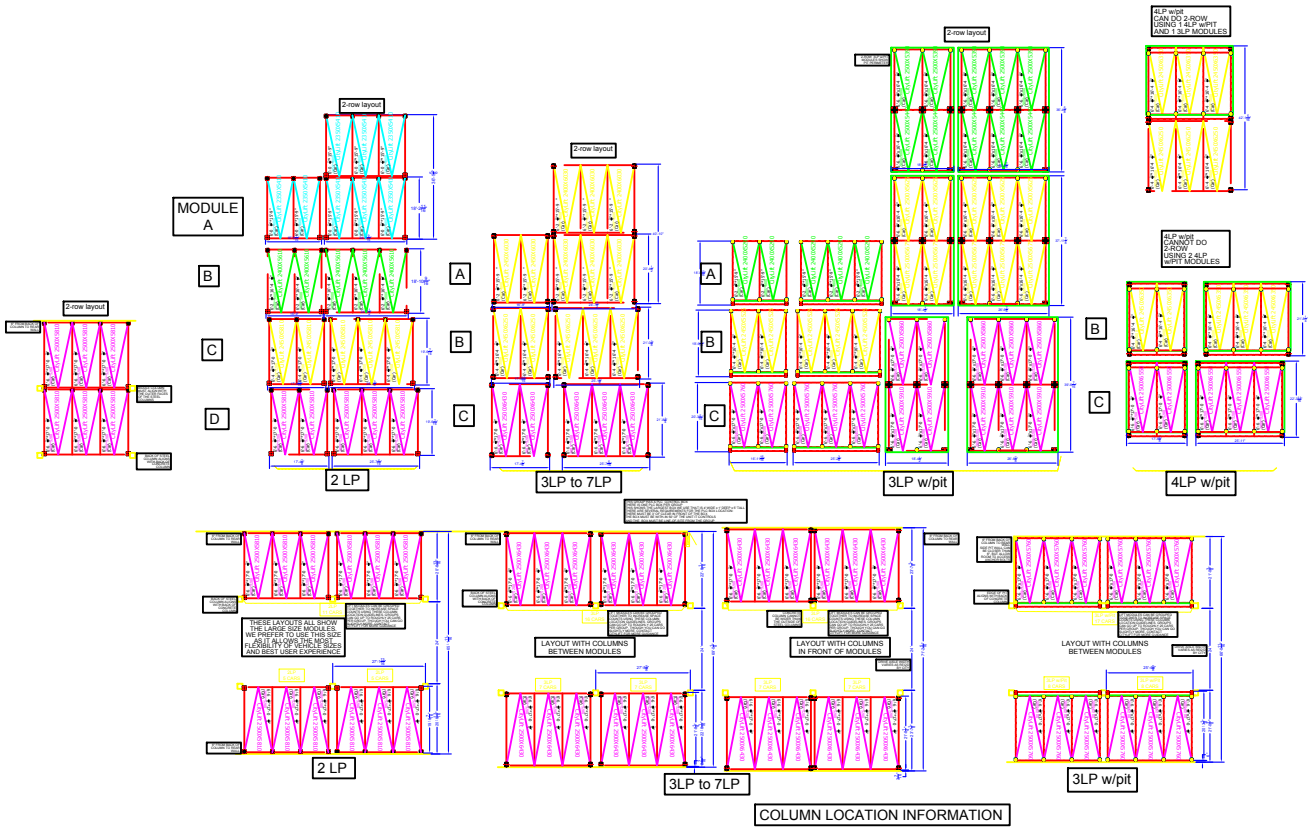
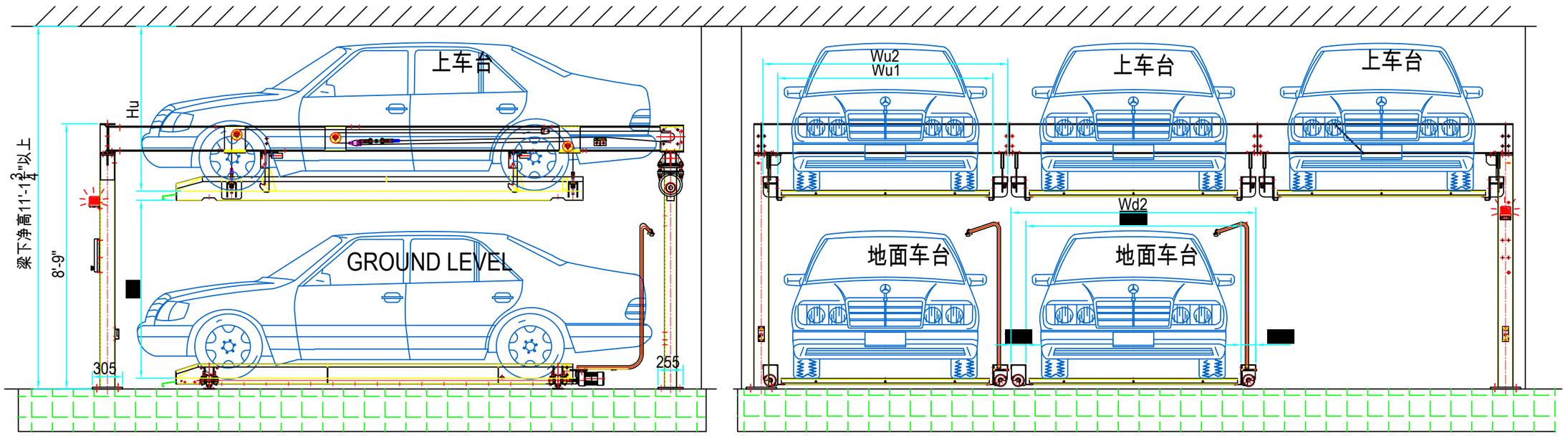


AREA CALCULATIONS
1ST FLOOR 12,529 GSF
2ND FLOOR 12,761 GSF 9 UNITS
3RD FLOOR 12,738 GSF 9 UNITS
4TH FLOOR 10,251 GSF 5 UNITS
5TH FLOOR 9,744 GSF 5 UNITS
6TH FLOOR 6,514 GSF 3 UNITS
64,537 GSF
31 UNITS
2 RETAIL SPACES
62 PARKING SPACES
312 CONGRESS
GENERATOR
WATER HEATER ROOM
UP
MAIL
LOBBY
TRASH
BIKES
SPRINK.
ELEC.
ADA
MECHANICAL PARKING
3 LEVELS - 26 SPACES
61 PARKING SPACES
1 OF WHICH IS A TANDEM SPACE
MECHANICAL PARKING
3 LEVELS - 19 SPACES
UT HEITHT LIMIT 65' + 12' BONUS
FEDERAL STREET
FRANKLIN STREET
10' REAR AND SIDE SETBACK
15' BONUS FLOOR STEPBACK
RAMP UP
COMP
PATIO
SIDEWALK
10'-0"
4'-0"
42'-10"
61'-10"
30'-0"



2-row layout
MODULE A
B
C
D
2 LP
A
B
C
3LP to 7LP
A
B
C
3LP w/pit
4LP w/pit CAN DO 2-ROW USING 1 4LP w/PIT AND 1 3LP MODULES
4LP w/pit CANNOT DO 2-ROW USING 2 4LP w/PIT MODULES
B
C
4LP w/pit
THESE LAYOUTS ALL SHOW THE LARGE SIZE MODULES. WE PREFER TO USE THIS SIZE AS IT ALLOWS THE MOST FLEXIBILITY OF VEHICLE SIZES AND BEST USER EXPERIENCE
2 LP
LAYOUT WITH COLUMNS BETWEEN MODULES
LAYOUT WITH COLUMNS IN FRONT OF MODULES
3LP to 7LP
LAYOUT WITH COLUMNS BETWEEN MODULES
3LP w/pit
COLUMN LOCATION INFORMATION



A3 1:40

样板图

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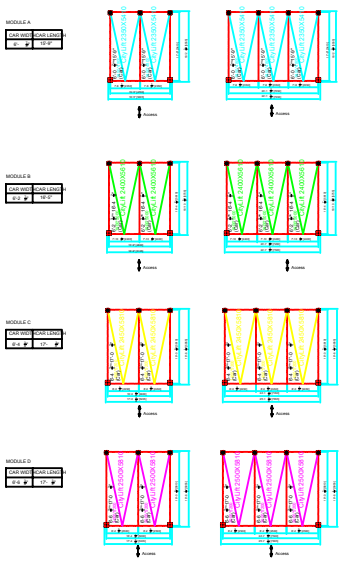
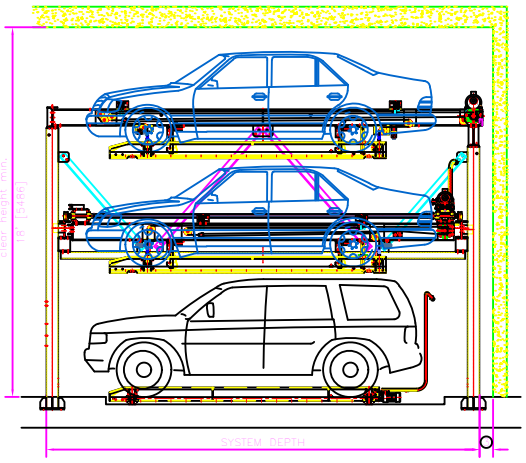
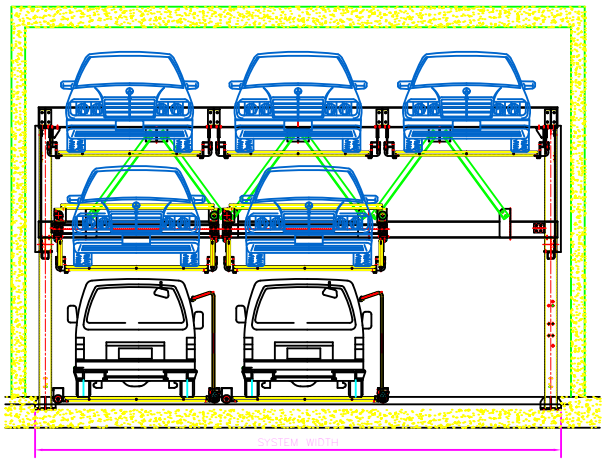
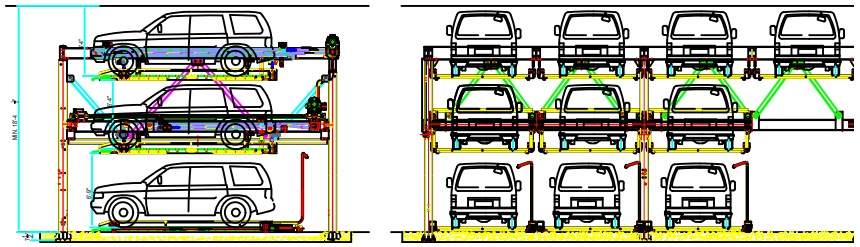
2 LEVEL PUZZLE MODULES: Dec.13,2016 version



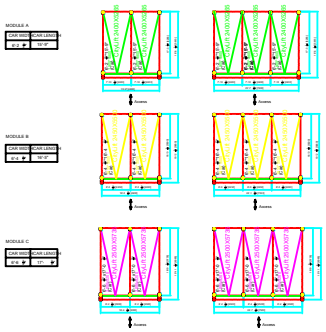
NOTE:
1. 6" clear distance from lift system to surrounding structure on all sides.
   (a) 6" gap can be reduced by adding small brace from puzzle to building at no additional cost.
   (b) steel columns can be eliminated by attaching puzzle beam to building columns or side walls.
2. CityLift puzzle are free-standing and do not require additional steel for support. There are steel columns every 2 or 3 bays.
3. The modules above are standard sizes. Custom sizes are available.
4. When possible, structural columns should be outboard of puzzle system columns.
5. Length and width options are interchangeable.


clear height min
14' [3496]
SYSTEM DEPTH


SYSTEM WIDTH



3 LEVEL WITH PIT MODULES: Dec.13,2016 version



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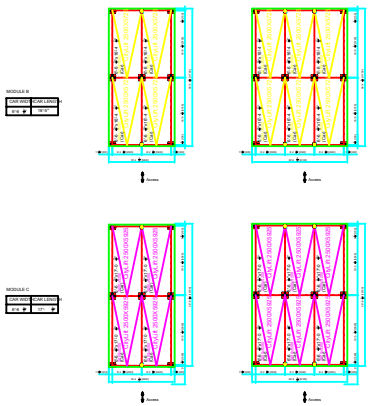
3 LEVEL WITH PIT TANDEM MODULES: Dec.13,2016 version



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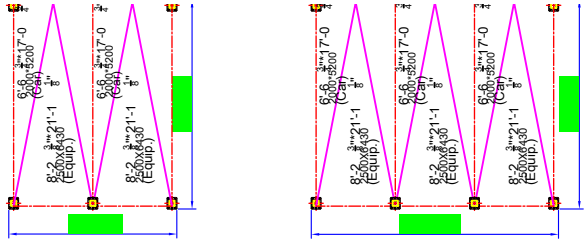
MODULE B

CAR WIDTH	CAR LENGTH
6'-6 3/4"	17'- 3/4"



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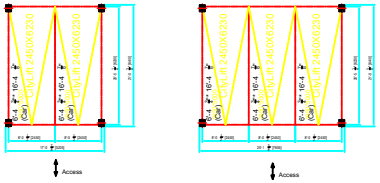
5. Length and width options are interchangeable.

3 LEVEL PUZZLE MODULES: Dce.13, 2016 version

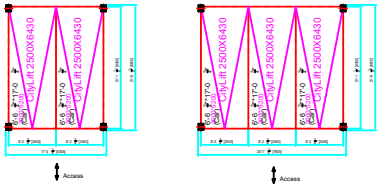
MODULE A

CAR WIDTH	CAR LENGTH
6'-4"	16'-5"



MODULE B

CAR WIDTH	CAR LENGTH
6'-6"	17'- 8"



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CIRQUE WALL/CEILING



Cirque Large Wall Sconce show in charcoal. Turbo Path shown in charcoal.

Att. R

Beautiful for its simplicity, Cirque indoor or outdoor LED light fixture features a thick, round, pressed-glass shade with polished surface suspended from a die-cast base. The fixture has a sleek, modern design and offers installation versatility as a flush mount on the ceiling or as a sconce on the wall.

SPECIFICATIONS

DELIVERED LUMENS	Cirque Small: 472.2 LED	Cirque Large: 1143 LED
WATTS	Cirque Small: 12 LED	Cirque Large: 22.1 LED
VOLTAGE	120V, 277V (LED Only)	
DIMMING	ELV	
LIGHT DISTRIBUTION	Symmetric	
MOUNTING OPTIONS	Wall or Ceiling	
CCT	3000K or 4000K	
CRI	80+	
COLOR BINNING	3 Step	
BUG RATING	Cirque Small: B1-U3-G1	Cirque Large: B1-U3-G1
DARK SKY	Compliant (Ceiling)	
WET LISTED	IP65	
GENERAL LISTING	ETL, Title 24	
START TEMP	-30°C	
FIELD SERVICEABLE LED	No	
CONSTRUCTION	Aluminum	
HARDWARE	Stainless Steel	
FINISH	Marine Grade Powder Coat	
LED LIFETIME	L70; 70,000 Hours	
WARRANTY*	5 Years	

* Visit techlighting.com for specific warranty details.



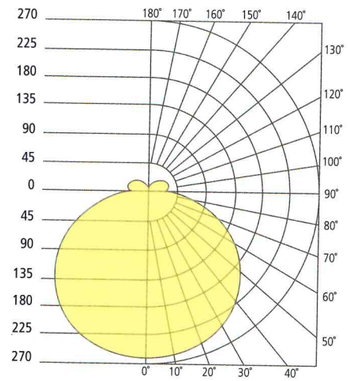
CIRQUE SMALL
shown in bronze

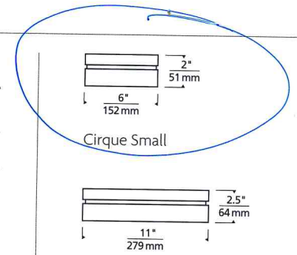


CIRQUE LARGE
shown in charcoal

CIRQUE LARGE

Total Lumen Output:	1143
Total Power:	22.1
Luminaire Efficacy:	51.5
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U3-G1





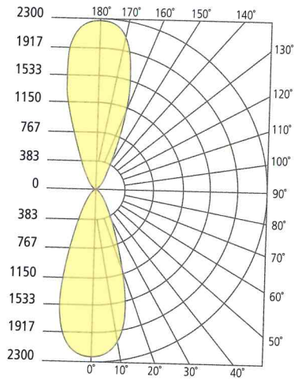
CIRQUE WALL / CEILING

700OWCQ	SHAPE	CRI/CCT	FINISH	VOLTAGE
	L LARGE - 9"	**830** 80 CRI, 3000K	**Z** BRONZE	**120** 120V
	S SMALL - 6"	**840** 80 CRI, 4000K	**H** CHARCOAL	**277** 277V
		INC INCANDESCENT*		

*120V ONLY

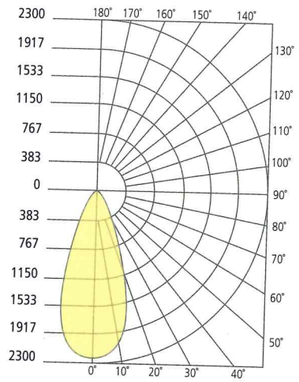
TEGEL 12 UP/DOWN

Total Lumen Output:	2346
Total Power:	29.2
Luminaire Efficacy:	80.2
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U5-G0



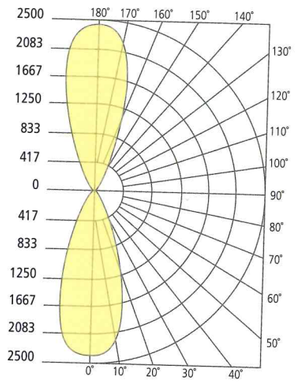
TEGEL 12 DOWN

Total Lumen Output:	1212
Total Power:	15.6
Luminaire Efficacy:	77.7
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U0-G0



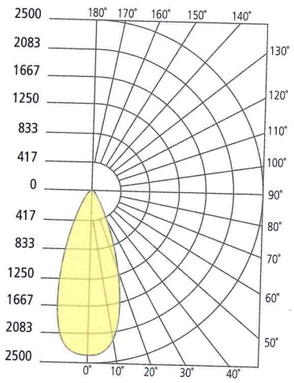
TEGEL 18 UP/DOWN

Total Lumen Output:	2419
Total Power:	29.9
Luminaire Efficacy:	80.6
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U5-G0



TEGEL 18 DOWN

Total Lumen Output:	1212
Total Power:	15.6
Luminaire Efficacy:	77.7
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U0-G0



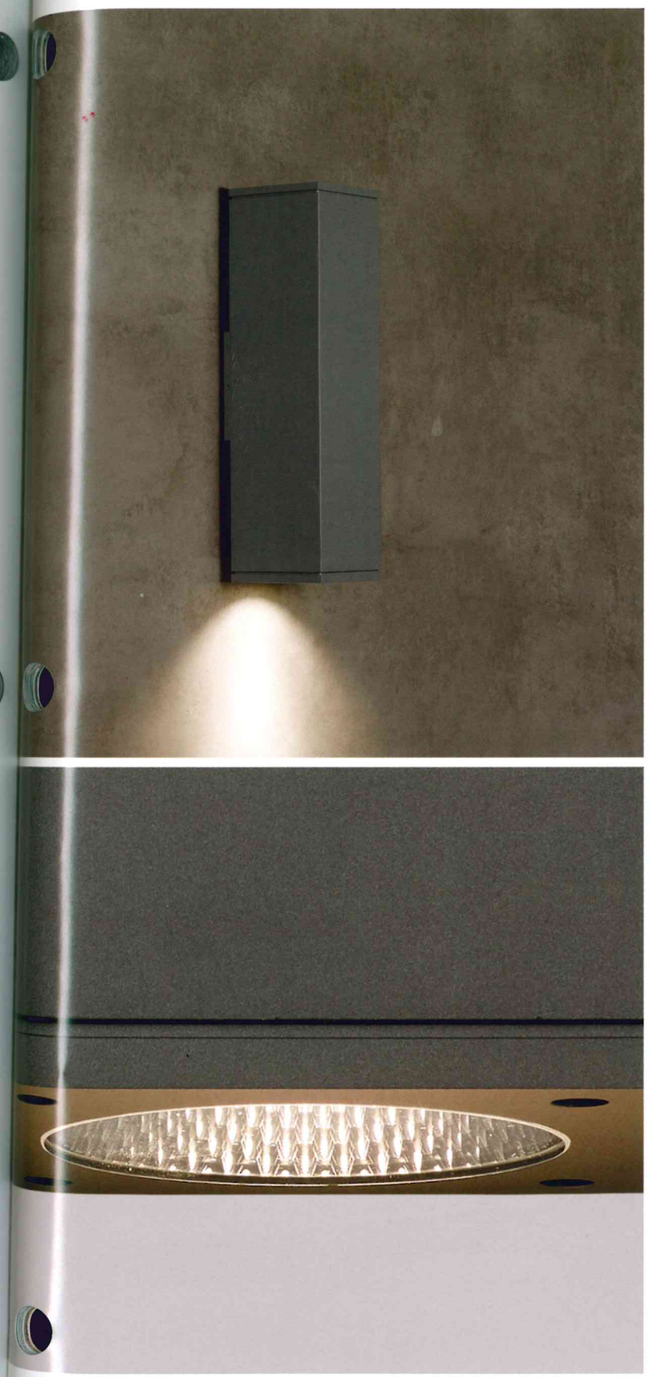


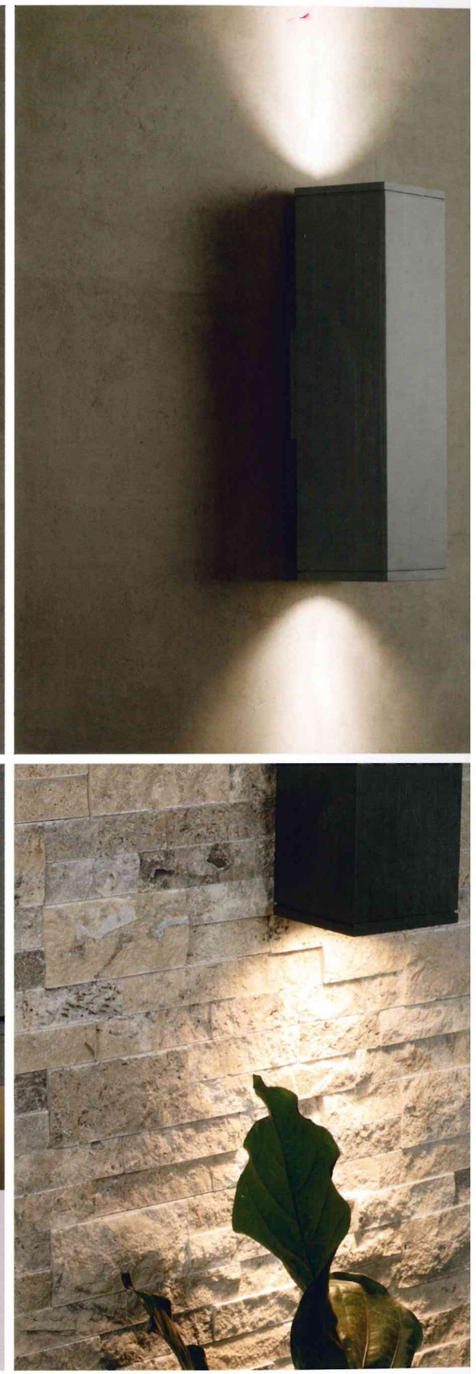
TEGEL WALL

700WTEG

CRI/CCT		LENGTH		BEAM SPREAD*		LENS	FINISH		FUNCTION		VOLTAGE	OPTIONS	
830	80 CRI, 3000K	**12**	12"	**N**	10° NARROW	**C**	CLEAR	**Z**	BRONZE	**DO**	DOWNLIGHT ONLY	**UNV**	120V–277V		NONE
840	80 CRI, 4000K	**18**	18"	**W**	36° WIDE			**Y**	GRAY	**UD**	UPLIGHT / DOWNLIGHT			**PC**	BUTTON PHOTOCONTROL
				NN	10° UP AND DOWN			**H**	CHARCOAL					**LF**	IN-LINE FUSE
				WW	36° UP AND DOWN									**SP**	SURGE PROTECTION
				NW	10° AND 36°									**PCLF**	BUTTON PHOTOCONTROL & IN-LINE FUSE
														PCSP	BUTTON PHOTOCONTROL & SURGE PROTECTION
														LFSP	IN-LINE FUSE & SURGE PROTECTION
														PCLFSP	BUTTON PHOTOCONTROL, IN-LINE FUSE & SURGE PROTECTION

*N, W = DOWNLIGHT ONLY (DO); NN, WW, NW = UP AND DOWNLIGHT ONLY (UD)





Roof Garden System

PART I - GENERAL

1.01 DESCRIPTION

The Carlisle Roof Garden System incorporates an adhered membrane waterproofing system with a Roof Garden Assemblies installed above.

The waterproofing system utilizes one of Carlisle"s adhered roofing assemblies; EPDM, TPO, PVC, FleeceBACK or AFX products installed over a structural deck or tapered insulation and cover board.

Above the waterproofing system is utilizing various components including Root Barrier, Polystyrene Insulation, MiraDRAIN G4 Drainage Composite, Carlisle Engineered Growth Media and Carlisle Vegetation. These components are installed above the membrane dependant on desired planting schedule, allowable loads and the climatic region of the project.

As an alternative to the traditional, planted-in-place Roof Garden system, Carlisle offers the modular Green Grid tray system, which incorporates a protection fabric and pre-planted modules over the adhered waterproofing system.

1.02 Roof Garden Definition

Ultra-Extensive Roof Garden System

Roof Garden System (growth media depth 2.5" to 4") is ideally suited for areas likely to receive little maintenance. Recommended plants include sedums, herbs and grasses. The anticipated weight above the membrane assembly is generally between 4.8 and 6 pounds per square foot, per inch of system depth, in a saturated state.

1.03 DESIGN GUIDELINES

The Roof Garden Waterproofing assemblies will incorporate a minimum 60-mil thick Sure-Seal EPDM. Membrane will be adhered with appropriate adhesive to tapered insulation with an acceptable cover board. To facilitate drainage, a minimum roof slope of 1/4" in 12" must be provided at the waterproofing membrane level.

1.04 QUALITY ASSURANCE

A. This Roof Garden Waterproofing System must be installed by a Carlisle Authorized Roofing Applicator in compliance with shop drawings as approved by Carlisle. There must be no deviations made from Carlisle's specifications or the approved shop drawings without the **PRIOR APPROVAL** of Carlisle.

B. A **pre-installation meeting** should be coordinated by the specifier and attended by the roofing applicator, membrane manufacturer"s representative and other trades working on the roof system both before and after membrane installation. The purpose of this meeting is to discuss the necessity of ensuring proper membrane protection during all phases of installation and to review other applicable requirements or unusual field conditions.

C. Upon request by the Authorized Applicator, an inspection will be conducted by a Field Service Representative of Carlisle to ascertain that the membrane roofing system has been installed according to Carlisle's specifications and details. This **inspection** shall be coordinated **prior to installing the "above membrane roof garden components"** so access to the membrane is not impaired.

D. Flood testing or other leak detection means is **required** to check the waterproof integrity of the membrane prior to installing any above membrane components.

E. An in-progress inspection may be scheduled after the initial inspection (after the membrane installation is completed) to ensure proper protection procedures are being followed to prevent possible damage to the membrane during the installation of Roof Garden components.

Note: The roofing applicator must notify Carlisle at least 3 weeks in advance of the applicable inspection dates for coordination purposes.

1.05 SUBMITTALS

A. To ensure compliance with Carlisle's warranty requirements, **all projects should be forwarded to Carlisle for review** prior to installation.

B. A dimensioned layout of all field splices shall be included along with the project submittals (shop drawing and Request for Warranty).

C. For all projects, prior to project inspection by Carlisle, a final shop drawing must be approved by Carlisle.

1.06 WARRANTY

A. **10, 15 or 20-year** System Warranty is available for a charge on commercial buildings and applies only to **products manufactured or marketed by Carlisle SynTec Incorporated**. The membrane system is defined as membrane, flashings, adhesives, sealants and other Carlisle brand products utilized in this installation..

When Carlisle Roof Garden components are specified and installed, for a nominal charge, a 10, 15 or 20-year Overburden Warranty can be added. The warranty covers all Carlisle Roof Garden components above the membrane limited to the protection fabric, polystyrene, drainage products, moisture retention mat, growth media, and Carlisle Roof Garden Plants. In the event of a leak, Carlisle is responsible for overburden removal, roof repair, and replacement of the overburden.

If a 20-year **No Dollar Limit** warranty including overburden is desired, a Sustainable Roofing Alliance Consultant must be utilized on the project during the design and construction phases. The SRA consultant shall be on site to monitor the installation.

B. **Access for warranty service**

If a 10, 15 or 20-year Overburden Warranty is not obtained or if the owner chooses to use overburden by others, it shall be the owner's responsibility to expose the waterproofing membrane assembly in the event warranty service or investigation is necessary.

C. The formation or presence of mold or fungi in a building is dependent upon a broad range of factors including, but not limited to, the presence of spores and nutrient sources, moisture, temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of Carlisle and Carlisle shall not be responsible for any claims, repairs, restoration or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

1.07 JOB CONDITIONS

Material Safety Data Sheets (MSDS) must be on location at all times during transportation, storage, and application of materials. The applicator shall follow all safety regulation as recommended by OSHA and other agencies having jurisdiction.

A. Coordination between various trades is essential to avoid unnecessary rooftop traffic over sections of the roof and to prevent damage to the membrane. Heavily traveled areas must be protected by placing temporary protection courses to prevent damage to the membrane.

B. The use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly should be investigated by the specifier. Consult the latest publications by ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.) and NRCA (National Roofing Contractors Association) for specific information.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the job site in the original, unopened containers labeled with the manufacturer's name, brand name and installation instructions.

B. Job site storage temperatures in excess of 90° F (32° C) may affect shelf life of curable materials (i.e., sealants, cleaners, primers, adhesives, SecurTAPE, Pourable Sealer, Pressure-Sensitive Flashing and uncured flashing).

C. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60° F

(16° C) before use. Do not store containers with opened lids due to loss of solvent that will occur from flash off.

D. Sure-Seal and Sure-Weld FleeceBACK and AFX Membrane, when specified, should be stored in its original plastic wrap or be covered to protect from moisture. Any moisture absorbed by the fleece backing must be removed by using a wet-vac system, prior to membrane application.

E. Membranes that have been exposed to the elements for approximately 7 days must be prepared with Weathered Membrane Cleaner prior to hot air welding. Refer to Carlisle"s Sure-Weld Specifications, Part II, Application, for applicable requirements.

F. Insulation, Dens Deck Prime, Securock, and base sheets, when specified, must be stored so they are kept dry and are protected from the elements. Store insulation, Dens Deck Prime, and Securock on a skid and completely cover with a breathable material such as tarp or canvas. If the insulation is lightweight, it should be weighted to prevent possible wind damage.

G. Carlisle Engineered Growth Media should be stored under cover whenever possible to avoid direct sunlight exposure to the SuperSacks in which the material is delivered and excessive moisture absorption. Care should be taken not to damage the packaging to avoid leakage when hoisted to the rooftop.

H. Carlisle Roof Garden Plants, when specified, should be planted promptly after delivery to the jobsite. Sedum cuttings should be used within 12 hours of arrival. Plugs should be unpacked immediately upon arrival and planted within three (3) days. Vegetated Sedum Tiles and Mats should be unpacked and installed within 36 hours. Unused plugs and tiles should be stored in an outdoor location with access to at least four (4) hours per day of direct sunlight.

PART II - PRODUCTS

2.01 GENERAL

The components of this roofing system are to be products of Carlisle. The installation, performance or integrity of products by others is not the responsibility of Carlisle and is expressly disclaimed by the Carlisle Warranty.

2.02 MEMBRANE

Sure-Seal® (black) EPDM, Sure-Seal® AFX-Plus, FleeceBACK® EPDM or Sure-Weld® TPO membrane can be used with this system. Refer to Paragraph 1.03, Design Guidelines for required membrane thickness that is dependent upon the type of Roof Garden and warranty selected. For membrane physical properties, refer to the appropriate Carlisle Technical Data Bulletins or Product Data Sheets.

2.03 RELATED CARLISLE MATERIALS FOR WATERPROOFING

A. Sure-Seal Products

Sure-Seal Bonding Adhesive, Low VOC Bonding Adhesive, FAST Adhesive, Cold Applied Adhesive, AquaBASE 120 Adhesive, SecurTAPE, HP-250 Primer, Low VOC EPDM Primer, Splicing Cement, In-Seam Sealant™, Lap Sealant, Universal Single-Ply Sealant, Weathered Membrane Cleaner, Cured EPDM Flashing, Cured Cover Strip, Pressure-Sensitive Overlayment Strip, Elastoform Flashing, Termination Bars, Fasteners/Plates Water Cut-Off Mastic, Pourable Sealer, Walkway Pads/Rolls, Pre-Molded Pipe Seals, and Pressure-Sensitive Inside/Outside Corners are used depending on the waterproofing assembly.

B. Sure-Weld Products

Sure-Weld Flashing, Sure-Weld Bonding Adhesive, Low VOC Bonding Adhesive, FAST Adhesive, Cold Applied Adhesive, AquaBASE 120 Adhesive, Cut-Edge Sealant, Water Cut-Off Mastic, Universal Single-Ply Sealant, TPO Molded Pocket Sealant, Weathered Membrane Cleaner, Pressure-Sensitive Cover Strip, Coated Metal, Heat Weldable Walkway Rolls, Pre-Molded Accessories, TPO Primer, Low VOC TPO Primer, Termination Bars, and Fasteners/Plates are used depending on the waterproofing assembly.

C. Sure-Flex Products

Sure-Flex PVC Bonding Adhesive, Sure-Flex PVC non-reinforced Flashing, Sure-Flex PVC “T” Joint Cover, Sure-Flex PVC Cut-Edge Sealant, Water Cut-Off Mastic, Universal Single-Ply Sealant, PVC One-Part Pourable Sealer, Foil Grip Aluminum Tape, PVC Membrane Cleaner, Sure-Flex PVC Coated Metal, Sure-

Flex PVC Heat Weldable Walkway Rolls, Sure-Flex PVC Inside/Outside Corners and Sure-Flex Pre-Molded accessories are used depending on the waterproofing assembly.

D. Other Carlisle products, such as insulation and edgings/copings, are also required when such components are to be included as part of the System Warranty.

2.04 CARLISLE ROOF GARDEN COMPONENTS

A. **MiraDRAIN G4 Drainage Composite** consists of a high impact polystyrene core with “cups” and high-flow overflow drains. A non-woven 100% post-consumer recycled polyester combination filter fabric and green moisture retention mat is bonded to the retention side of the molded core to prevent passage of particles into the water reservoirs. Designed to filter and retain water in all Roof Gardens while allowing excess water to quickly reach the drainage system. Drainage composite is 1.21” thick and holds up to 0.32” of rainfall (0.2 Gallons) per square foot. Packaged in 4' x 50' rolls weighing 70 pounds.

B. **Carlisle Engineered Growth Media** – A lightweight FLL-approved growth media used for roof garden applications. Applied at the specified depth on Carlisle Roof Garden assemblies.

Depth: **3 ¼”**

Bulk Media Blend: **Lightweight Extensive**

Bulk Density (dry weight): **35.8 lbs/ft3**

Bulk Density (saturated weight): **57.5 lbs/ft3**

Total Pore Volume: **78.0 Vol%**

Maximum Water Holding Capacity: **37.0 Vol%**

Air-Filled Porosity (at max. WHC): **41.0 Vol%**

Water Permeability: **0.48 cm/s**

Water Permeability: **11.4 in/min.**

pH: **7.4**

Soluble Salts (water, 1:10, m:v): **0.4 mmhos/cm**

Soluble Salts (water, 1:10, m:v): **1.3 g (KC1)/L**

Organic Matter Content: **7.0 mass %**

C. **Carlisle Roof Garden Plants**

Vegetated Sedum Mats – Carlisle"s Vegetated Sedum Mats are available in 21.25 or 25 square foot rolls. Mats enable full vegetative coverage on the day of installation with the fastest possible installation time. Carlisle"s Vegetated Sedum Mats weigh approximately 5.5 pounds per square foot in a saturated state and are planted with seven to nine varieties of sedum**. Refer to Roof Garden Attachment V for more information.**

D. **Polystyrene Insulation (available from Carlisle)**

Insulfoam DB is a minimum 40 psi compressive strength**,** moisture resistant, closed cell expanded polystyrene with ¼” x ¼” drainage channels every 2” O.C. Installed directly over the roof membrane in Intensive (deep) garden assemblies. Available in 4"x 4" and 4" x 8" board sizes with a thickness of 1" to 40”. Readily available in custom lengths and widths.

E. **Carlisle Aluminum Roof Garden Edge** – a 0.080" thick extruded aluminum edge used to separate roof garden assemblies from adjacent walkways or perimeter stone ballast. The edging comes in 10" lengths and 4” high with a 3” flange or 8” high with a 6” flange. Additional heights are available from Carlisle.

F. **Carlisle Aluminum Roof Garden Drain Box** – a 0.125” thick extruded aluminum drain box that is 12” x 12” with a welded 4-1/2” flange to keep the drain areas clear of stone ballast or growth media. The drain box is available in 4” or 8” heights. Drainage holes are pre-punched around the sides. Access to the drain is provided by a removable lid. Custom sized Drain Boxes are available from Carlisle.

G. **Carlisle Modified Base Sheet** – A tough, glass fiber, reinforced, SBS-modified asphalt, base sheet (nominal 39” wide by 50" long) that meets or exceeds the requirements for ASTM D 6163 Type I, Grade S for SBS-modified bituminous sheet materials. The Carlisle Modified Base Sheet is used directly under AFX-Plus Membrane.

PART III EXECUTION

3.01 GENERAL

When feasible, begin the application at the highest point of the highest roof level and work to the lowest point to prevent moisture infiltration and minimize construction traffic on completed sections. This will include completion of all flashings and terminations.

3.02 ROOF DECK CRITERIA

Proper decking shall be provided by the building owner. The building owner or its designated representative must ensure that the building structure is investigated by a registered engineer to assure its ability to withstand the total weight of the specified roofing system, as well as construction loads and live loads, in accordance with all applicable codes. The specifier must also designate the maximum allowable weight and location for material loading and storage on the roof.

3.03 SUBSTRATE REQUIREMENTS

The substrate must be dry, relatively smooth and free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Cracks or voids in the substrate greater than 1/4" (6 mm) must be filled with a suitable material.

3.04 WATERPROOFING INSTALLATION

Before beginning installation, refer to the applicable Material Safety Data Sheets, OSHA safety requirements, and Technical or Product Data Bulletins for cautions and warnings.

A. **Insulation Attachment**

1. Base layer of insulation can be mechanically attached with acceptable Carlisle Fasteners and Insulation Plates, Refer to applicable Adhered Application section for acceptable decks and the Carlisle Fasteners.

2. Fastening density is determined from insulation type and thickness. Refer to appropriate insulation attachment details in Sure-Seal/Sure-White Adhered Application Details, Sure-Weld Adhered Application Details or the Sure-Flex Specification.

3. As an alternate to mechanically attaching the base layer of insulation, Carlisle FAST Adhesive can be used. Refer to Sure-Seal/Sure-White Adhered Application – Attachment III, Sure-Weld Adhered Application – Attachment IV, or the Sure-Flex Adhered Specification Section 602116, paragraph 3.04.

4. Top layer of insulation must be an acceptable cover board adhered with FAST Adhesive. Refer to Sure-Seal/Sure-White Adhered Application – Attachment III or Sure-Weld Adhered Application – Attachment IV for application procedure. Cover boards shall be minimum ½-inch thick Dens-Deck Prime or Securock.

B. **Membrane Installation**

1. FleeceBACK Membranes either Sure-Seal EPDM or Sure-Weld TPO may be adhered with the appropriate adhesive directly over sloped structural concrete or wood roof decks. Direct application over cellular or perlite lightweight insulating concrete substrate may also be specified (contact Carlisle for acceptable lightweight insulating concretes).

2. Follow Carlisle‟s applicable Adhered Roofing System Specifications for insulation types, surface preparation procedures, membrane positioning, and adhesive application requirements.

C. **Membrane Splicing**

1. Refer to appropriate splicing procedures published in Sure-Seal EPDM or Sure-Weld TPO Adhered Application Specification.

2. **In addition to the standard splice procedure all field splices shall be overlaid with the appropriate 6" EPDM or TPO Pressure-Sensitive Cover Strip.**

3. Prior to Pressure-Sensitive Cover Strip application, the splice area must be primed with Sure-Seal HP-250 or Low VOC EPDM or Low VOC TPO Primer.

D. **Flashing**

1. Walls, curbs, skylights and all other penetrations through the membrane must be flashed in accordance with Carlisle"s published specifications/details for the applicable membrane specified.

2. Flashing heights shall be greater in height than the specified depth of the Roof Garden assembly (Drainage composite, growth media, etc.).

3. Vertical field splices at walls, curbs, etc., must be overlaid in the same fashion as the field splices.

E. **Roof Drains**

1. Roof garden drains should be covered with Carlisle Aluminum Drain Box or a perforated drain box by others with removable lid for inspection purposes. 1-1/2" nominal diameter rounded river washed gravel is applied around the drain box a minimum 18" to promote drainage.

2. A standard cast iron compression ring clamping with 1-1/2" nominal diameter rounded river washed gravel applied around the drain sump area (minimum 18" in width) for drainage.

3.05 ROOF GARDEN INSTALLATION

A. **Prior to installation of Roof Garden Components**

1. Limit foot traffic over completed waterproofing system. Heavily traveled areas (staging areas, corridors used to transport roof garden components) must be protected using ½" thick plywood or other sheathing.

2. Perform a Flood Test to ensure the watertight integrity of the waterproofing system. Testing should take place after the membrane and flashings have been in place a minimum of 24 hours. Plug drains and provide necessary barriers to contain water.

3. "Flood Test" the membrane surface with water for 48 hours at a minimum depth of 2". Inspect for leaks and repair membrane if damage to waterproofing assembly is found. Retest after repairs have been made.

4. Sweep the surface of the membrane to remove all debris and loose or foreign material.

B. **Ultra-Extensive Roof Garden Installation**

1. **MiraDrain G4 Drainage Composite**

   a. Unroll the drainage composite and flip over so green or white moisture retention mat is facing upwards.

   b. Place drainage composite directly over the waterproofing membrane with the built-in overlapping flap facing the direction of the slope.

   c. Position additional drainage composite rolls next to each other with green moisture retention mat butted against the long side. Once in place, flip 6" retention mat flap over the first drainage composite. For runs of MiraDRAIN G4 exceeding 50 feet in length, peel back both fabrics approximately 3" on the adjacent ends of the rolls and insert two rows of the MiraDRAIN "cups" into the cups of the abutting roll. This locks the MiraDRAIN rolls together and does not allow for passage of growth media directly onto the waterproofing membrane.

   d. Continue with placement of drainage component until the designated roof garden area is covered.

2. **Carlisle Engineered Growth Media**

   a. Hoist growth media in SuperSacks by crane to the roof area that is receiving the Roof Garden.

   b. Distribution of the Carlisle Engineered Growth Media shall be directly over the MiraDRAIN G4 Drainage Composite from SuperSacks that are lowered by crane 2" to 4" above the drainage composite.

   c. Slit the bottom of the sack with a knife or other cutting device to dispense the growth media directly over the drainage composite or into wheelbarrows for transportation to hard to access areas.

      Caution: Location points for distribution of growth media must not overload the structural capacity of building.

   d. Coverage rate per sack for a shallow assembly is approximately 150 square feet for a 4" depth.

      Caution: Care must be taken when distribution of Carlisle Growth Media is during windy conditions to limit potential scouring of media. If growth media is not used on the day of arrival, product should be stored under a trap or other opaque cover to prevent direct exposure to sunlight and moisture.

      Note: As an alternative to super sacks, growth media may be purchased in bulk and blown to the roof using a blower truck. For information please contact Carlisle.

3. **Carlisle Roof Garden Vegetated Mats**

   a. Lift the 48" x 75" mats from the pallets and unroll the mats directly over the growth media.

   b. Unroll Vegetated Mats adjacent to each other with edges butted together to within ¼".

   c. Continue with placement of vegetated mats until the designated roof garden area is covered.

   d. Water the Roof Garden assembly by hand or sprinkler(s) until the system is saturated.

C. **After installation of Roof Garden Components**

1. Irrigate the Roof Garden with a lawn sprinkler, hand sprayer, or with a designed irrigation system until saturation to the point of runoff.
2. Refer to **Roof Garden Attachment VI** for maintenance schedule.

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Roof Garden
"Attachment V"
Carlisle Vegetated Sedum Mats

June 2010

A. Vegetated Sedum Mats – Carlisle"s Vegetated Sedum Mats are well suited for high slope applications and are pre-grown with a large variety of sedums. Each mat is available in 21.25 – 25 square foot rolls weighing approximately 80 pounds. Vegetated coverage after installation is 85% or greater. Vegetated Sedum Mats can be specified for US Hardening Zones 3 through 8. For Hardening Zones 9 and 10, please contact Carlisle for guidance. For US Hardening Zone Map refer to Roof Garden Attachment III.

B. Sedum Mat Varieties

Carlisle"s Vegetated Sedum Mats are planted with a minimum of 7 different varieties of sedum to achieve a mix of colors and textures. Sedum varieties consist of:

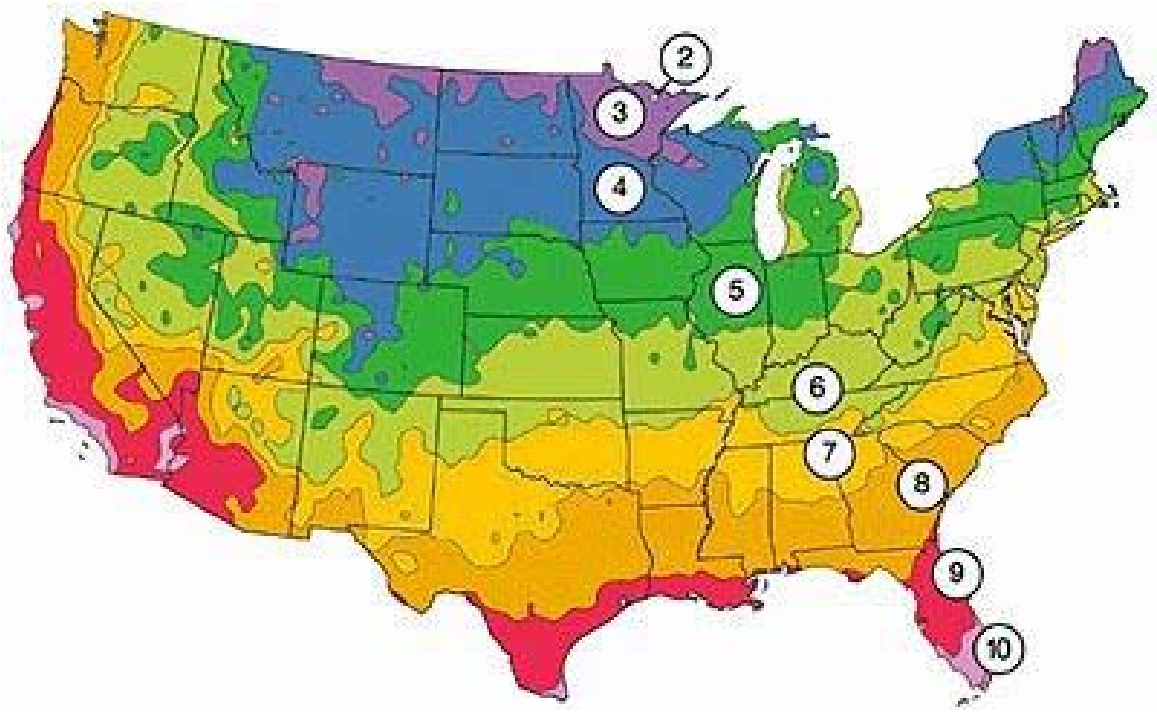
- Sedum Acre
- Sedum Album
- Sedum Ellacombianum
- Sedum Kamtschaticum
- Sedum Pulchellum
- Sedum Reflexum „Blue Spruce"
- Sedum Spurium „Fuldaglut"
- Sedum Spurium „Dragons Blood"
- Sedum Spurium „John Creech"
- Sedum Spurium „Red Carpet"
- Sedum Spurium „Tricolor"
- Sedum Sexangular





C. Installation - Remove the Sedum Mats from the pallets with care. Simply place the Sedum Mats over a minimum 2.5" of Carlisle Growth Media, leaving 1/8"-1/4" gap between the Mats. Water the Roof Garden assembly to the point of system saturation and water begins to leave the assembly.

Plant Varieties by Hardening Zones



United States Hardening Zones 2 through 10

Zone 2

- Arenaria Montana
- Cerastium tomentosum
- Saponaria ocymoides
- Thymus praecox 'Purple Carpet'
- Veronica liwanensis

Zone 3

- Achillea 'Appleblossom'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Arenaria montana
- Armeria maritima 'Alba'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Cerastium tomentosum
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum „W. Gold"
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Veronica liwanensis

Zone 4

- Achillea 'Appleblossom'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'

Plant Varieties Cont.

- Achillea x lewisii 'King Edward'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum „W. Gold"
- Sedum kamtschaticum k. varigatum
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 5

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Plant Varieties Cont.

Zone 6

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum reflexum „Blue Spruce"
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 7

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum reflexum „Blue Spruce"

Plant Varieties Cont.

- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 8

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum reflexum „Blue Spruce"
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 9

- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine"
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Sedum kamtschaticum k. varigatum
- Sedum reflexum „Blue Spruce"
- Sedum sieboldii
- Sempervivum 'Black

Zone 10 – Please contact Carlisle for plants suitable to Zone 10.

Roof Garden
"Attachment VI"
Roof Garden Maintenance

November 2011

Immediately After Planting

1. Water/irrigate the roof to the point of run-off.
2. Inspect drains for any foreign debris that may hinder their performance.

Irrigation Requirements

1. W ater the system two to three times a week in the mid-morning for at least the first month.
2. During extremely hot, dry, drought type conditions, regularly check your Roof Garden system for signs of stress. If the plants seem to be thirsty where they are wilted, you must irrigate the system. During these times, irrigation should be done twice a week in the morning or evenings.
3. If the Roof Garden was installed in an area that receives less than 35 inches of rainfall per year, a permanent irrigation system is required.

First Season

1. One month after planting, all weeds and non-specified plant material must be pulled from the growth media and removed from the rooftop. A minimum of two weed removal events should occur during the first season. Little to no weeding should be necessary.
2. During weed removal events, all drains must be inspected. If Carlisle Roof Garden Drain Boxes are utilized, remove the four Phillips head screws on the lid and remove to visually inspect the drain internals.
3. After the local trees have dropped their leaves, a final Autumn inspection must be performed. All debris must be removed from the Roof Garden and drains must be given a final inspection for the season.

Second Season

1. If in USDA climate 7 or above, a Spring fertilizer application may be given. Granular **organic** fertilizer can be used at the full rate recommended on the packaging. Petrochemical-based time-release fertilizer (Osmocote, Miracle-Gro, etc.) can be used at **half** the rate recommended on the packaging. Organic fertilization will result in a lower water requirement for the plants. On all-sedum roofs, fertilization should not be needed.
2. A mid-Spring weed removal and drain inspection event must occur. A total of two weed removal and drain inspection events should occur during the second season
3. If Carlisle"s Sedum Mats are used, neither watering nor weeding should be required.
4. After the local trees have dropped their leaves, a final Autumn inspection must be performed. All debris must be removed from the Roof Garden and drains must be given a final inspection for the season.

Third season

1. A Spring fertilizer application may be given, if needed.
2. One weed removal event must occur, in the mid-Spring
3. During the Autumn maintenance event, all foreign debris must be removed from the roof

If possible, monitor your Carlisle Roof Garden by visual examination at least once a month to make sure that the plants appear healthy. Should your roof garden experience any health-related issues, contact Carlisle SynTec Inc. for support. Once established, your Carlisle Roof Garden should provide you with decades of beautiful and trouble-free service.

7. CONSTRUCTION MANAGEMENT PLAN

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

7.1 CONSTRUCTION MANAGEMENT PLAN

NewHeight Group is seeking to commence construction of Verdante at Lincoln Park during the summer of 2018 and complete work by the spring of 2019. The construction will involve site work and new building construction. The attached construction plan outlines the anticipated timeline and sequence of activities.

7.2 ATTACHMENTS

Attachment 7-A – Construction Management Plan

ATTACHMENT 7-A

Construction Management Plan

CONSTRUCTION MANAGEMENT PLAN

Project:
Verdante at Lincoln Park
56 Hampshire Street
Portland, Maine 04101

Applicant:
NewHeight Group
118 Congress Street, Unit 401
Portland, Maine 04101

Prepared By:
Terradyn Consultants, LLC
565 Congress Street, Suite 310

Construction Manager:
To be determined

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that the Applicant and Contractor have identified to minimize impacts from the construction of Verdante at Lincoln Park, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, the Applicant and Contractor shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

C. Construction Administration and Communication

The Applicant and Contractor will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust.

The following person is designated the Contact Person and will be available 24 hours in the event of an emergency:

CONTACT PERSON:
To be determined

Construction Signage shall be posted at the site with Contact Information for the Contractor. Construction site signage shall be removed at project completion.

D. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing, prior to construction.
2. Hours of Construction: Construction may occur during the daytime hours as defined in Section 17-18 of the City Code (Construction Activities) and Section 25-129 of the City Code (Noise, dust and debris).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section does not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Delivery of materials shall take place during the Hours of Construction listed above and shall be stored on the project site in the locations noted on the Construction Management Plan (Sheet C-2.3).

E. Security & Public Safety

1. The Contractor shall erect the temporary barriers and access gates shown on the Construction Management Plan (Sheet C-2.3) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. The Applicant or Contractor shall purchase and install a knox padlock from the Portland Fire Department to allow access by the Portland Fire Department at the primary access gate.
3. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
4. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
5. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
6. Any temporary security lighting fixtures shall feature full cutoff optics to reduce light trespass onto abutting properties.

F. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.
2. Public Sidewalk Closures: The Hampshire Street sidewalk and the Federal Street sidewalk in front of the site will be reconstructed as part of the proposed project. The Hampshire Street sidewalk reconstruction will include the area directly in front of the site. The Federal Street sidewalk reconstruction will include the length of sidewalk from Hampshire Street to the dead end on the western side of Federal Street. These sections of sidewalk will be closed

for the duration of the building construction, and signage will be posted as shown on the Construction Management Plan.

3. Sewer, Water, and Stormwater: Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual. Sewer system connections within Hampshire Street are expected to result in reduced travel way width and reduced parking along the southern side of Hampshire Street for up to two days. Water and stormwater system connections within Federal Street are expected to result in reduced travel way width along the western side of Federal Street for up to two days.
4. Work within City Right of Way: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public.

Construction operations shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, the Contractor may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. The Contractor shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic
- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
- In extreme situations, flaggers may be required.
- Police detail is required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.

- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

G. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. A solid waste dumpster shall be located on site for the disposal of trash and debris.
2. The Hampshire Street and Federal Street right of way shall be swept regularly to control the tracking of mud onto adjacent public streets.
3. Dust controls: The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris.
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code and Section 25-129 on Noise, dust and debris.
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or site lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt
    6) This would include Monday-Friday Sat/Sunday/Holidays

H. Erosion Control and Preservation of Trees

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these

documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.

2. The Contractor shall maintain all tree and landscaping preservation measures as depicted on the Landscape Plan (Sheet L-1) within the area of construction.
3. The storage of materials shall be located in the areas depicted on the Construction Management Plan (Sheet C-2.3) and avoid being located under/near trees.

I. Construction Staging and Deliveries

1. A location for material storage and lay down is shown on the Construction Management Plan. Additional areas may be utilized as available as long as they do not interfere with material deliveries.

Parking During Construction

1. Construction Parking: Construction workers shall utilize off-site parking for the duration of construction.

CONSTRUCTION MANAGEMENT NOTES:

1. THE CONSTRUCTION GATE SHALL SWING INTO THE PROJECT SITE
2. FENCING AROUND THE PERIMETER OF THE CONSTRUCTION WORK □ONE WILL BE MAINTAINED THROUGHOUT BUILDING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
3. CLOSURE OF THE HAMPSHIRE STREET AND FEDERAL STREET SIDEWALKS DIRECTLY IN FRONT OF THE SITE WILL BE REQUIRED FOR THE DURATION OF BUILDING CONSTRUCTION. A TEMPORARY WALKWAY AND SIGNAGE SHALL BE PROVIDED AS SHOWN DURING SIDEWALK CLOSURES. ADA ACCESSIBILITY SHALL BE MAINTAINED AT ALL TIMES.
4. TWO 15 MINUTES PARKING SPACES ALONG HAMPSHIRE STREET DIRECTLY IN FRONT OF THE SITE WILL BE TEMPORARILY REMOVED WHILE THE TEMPORARY PEDESTRIAN WALKWAY IS IN PLACE.
5. PARTIAL TRAVEL LANE CLOSURES OF HAMPSHIRE STREET WILL BE NECESSARY DURING UNDERGROUND UTILITY INSTALLATION. THIS WORK SHALL BE SCHEDULED AND SEQUENCED TO MINIMI□E THE DURATION OF ANY STREET OCCUPANCY. AT NO TIME CAN CONSTRUCTION ACTIVITY INCLUDING DELIVERY VEHICLES CLOSE OR BLOCK STREETS OR AFFECT PUBLIC SAFETY ACCESS WITHOUT PRIOR NOTICE AND APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.

GRID NORTH

HAMPSHIRE STREET
PAVED - PUBLIC - 40' WIDE

21'

COORDINATE TRAVEL LANE AND SIDEWALK CLOSURES WITH THE CITY OF PORTLAND

JERSEY BARRIER, OR OTHER APPROVED CHANNELI□ING DEVICE TO BE PLACED DURING BUILDING CONSTRUCTION

TEMPORARILY REMOVE TWO 15 MINUTE PARKING SPACES

4' WIDE TEMPORARY PEDESTRIAN WALKWAY

PEDESTRIAN WALKWAY ENTRANCE SIGNAGE AND TEMPORARY STOP SIGN

PEDESTRIAN WALKWAY ENTRANCE SIGNAGE

6' HIGH CHAIN LINK CONSTRUCTION FENCE, TYP.

BRICK

TAX MAP 28
BLOCK C LOT 5
N/F
BROADREACH INVESTMENTS LLC
25181/94

TAX MAP 28
BLOCK C LOT 6
N/F
BODHI SAFTA LLC
31853/125

TAX MAP 28
BLOCK C LOT 10
N/F
WILLIAM H. FOX
14720/105

BUILDING

PAVED

1"IPF
0.6'

RETAIL
B
960 GSF

RETAIL
A
868 GSF

UP

LOBBY

MAIL

GENERATOR

WATER HEATER ROOM

CONC.

STOCKADE FENCE □/GATE

TRASH

BIKES

ELEC.

BRICK

FEDERAL STREET
PAVED - PUBLIC - 66' WIDE

CONSTRUCTION GATE

AREA USED FOR MATERIAL STORAGE □ LAY DOWN

TAX MAP 28
BLOCK C LOT 4
N/F
CLARK BOX, LLC
31943/126
1□□PARCEL

BUILDING

TAX MAP 28
BLOCK C LOT 9
N/F
ROBINSON □ ALLEN
20875/305

STOCKADE FENCE

STAIRS DOWN

PORCH

CONCRETE

"M" MON

TAX MAP 28
BLOCK C LOT 2
N/F
HUCKSTER'S ROW PROPERTIES LLC
20018/283

BUILDING

TAX MAP 28
BLOCK C LOT 13
REBECO, LLC
27634/128
AREA= 11,632 SF ±, 0.27 ACRES ±

SPRINK

PROTECT LIGHT POLE

TAX MAP 28
BLOCK C LOT 18
N/F
CLARK BOX, LLC
31943/126 2□d PARCEL
AREA□ 5,589 SF, 0.128 ACRES

STOCKADE FENCE

BUILDING

N/F
NEWHEIGHT VENTURES II, LLC

MH

PAVED SIDEWALK

NO PARKING

PATIO

PROTECT LIGHT POLE

PAVED SIDEWALK

N/F
CITY OF PORTLAND
3026/374

PROTECT TREE

PROTECT TREES

PAVED SIDEWALK

PROTECT LIGHT POLE

FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH

GRAPHIC SCALE

10 0 5 10 20 40

□IN FEET □
1 □□□□10 □□

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 12697
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 12-22-2017

NO.	DATE	REVISIONS	APP'D BY
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
P.O. BOX 339
111 ELDERBERRY LANE
NEW GLOUCESTER, ME 04260
565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
96 HAMPSHIRE STREET
PORTLAND, MAINE 04101

CONSTRUCTION MANAGEMENT PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, 401
PORTLAND, ME 04101

DATE□	9/5/2017
SCALE□	1". 10'
DESIGNED□	ARF
JOB NO□	1728
FILE□	1728 BASE.DWG
SHEET	C-2.3

Att. T

NEIGHBORHOOD MEETING CERTIFICATION

I, Erin Cooperrider, hereby certify that a neighborhood meeting was held on Friday, March 2nd at Cloudport, 63 Federal Street E, Portland at 5:30 p.m.

I also certify that on February 19, invitations were mailed to the following:

1. All addresses on the mailing list provided by the City of Portland Planning Division which includes property owners within 500 feet of the proposed development.
2. Residents on the "interested parties" list.
3. A digital copy of the notice was also provided to the Planning Division and the assigned planner to be forward to those on the interested citizen list who receive e-mail notices.
4.

Signed,

Erin Cooperrider, Managing Member, NewHeight Ventures II, LLC

Date: 03/30/18

Attached to this certification are:

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

A R C H E T Y P E

February 13, 2018

Dear Neighbor:

Please join us for a neighborhood meeting as we share plans for the construction of a six story 31-unit condominium building located at 56 Hampshire Street, Portland Maine.

Meeting Location: Cloudport, 63 Federal St, Portland, ME 04101
Meeting Date: Friday March 2, 2018
Meeting Time: 5:30 PM

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

If you have any questions, please email Erin Cooperrider at erin@newheightgroup.com.

Sincerely,

David Lloyd
Maine Licensed Architect

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

48 Union Wharf, Portland, Maine 04101 (207) 772-6022 • Fax (207) 772-4056

56 Hampshire Street, Verdante Condominiums Neighborhood Meeting Signin Sheet, March 2, 2018

Name	Address	Phone	Email	Own or Rent?
Priscilla Slack	62 Hampshire St.			
JUDITH ALLEN	62 HAMPSHIRE ST	207 618-2652	judithallen65@yahoo.com	OWN
Tim Robinson	" "	207 332 2299	schivastar@aol.com	own
Ellen Seidman	167 Newbury St	301-518-0272	ellenseidman@gmail.com	Own
Deborah + Bel-Cummings	22 HANCOCK	207-808-850	dbell03@gmail.com	OWN
Marc Ouellette	69 Hampshire St	2074613007	Marc.R.Ouellette@gmail.com	Own
Brent Heller	52 Federal	518 7038	brentheller@gmail	own
Sally Oldham	Vaughan St	899-1192	oldhamsa@gmail.com	own
TED OLDHAM	VAUGHAN ST	899 1192	tholdham@aol.com	Own

Cerridwen Aker	100 Federal St. Unit 1	207 479 3753	cerridwen.elektra@gmail.com	Rent
Josh Deane	100 federal st un. 1	978-621-6571	josh.s.deane@gmail.com	Rent
Derek Veilleux	167 Newbury St. UNIT 306	207 378 0187	dveilleux@mac.com	own.
Heather Holbor	33 HAMPSHIRE ST	908 591 1166	hostelheather@gmail.com	own
Michelle Polacsek	167 Newbury ST. #406	207 486-1630	mpolacsek@une.edu	own

Verdante Neighborhood Meeting
Cloudport
63 Federal Street E, Portland, ME 04101
March 2, 2018, 5:30 – 7:00 PM

Formal presentation by Development Team began at 5:35.
22 people were present, 3 more arrived during the presentation

Chip Newell of NewHeight Group and David Lloyd of Archetype presented the proposed project to the gathering. The presentation included a discussion of the neighborhood planning process that lead to the creation of the India Street Form Based Code. Chip asked whether anyone in attendance had had been involved in the city's process. Judith Allen and Tim Robinson, abutters, as well as others acknowledged they had been active participants in that process. Following the presentation, attendees voiced the following questions and comments.

Q: During construction, where will the construction workers park? Would the city allow you to use the center of Franklin Arterial?
A: Workers are responsible for finding their own, legal parking spaces. It is highly unlikely the City would allow use of the median on Franklin for parking or any other construction-related purpose. The construction team will create a construction management plan. Some spaces will be onsite and some will need to be purchased off-site.

Comments and **questions** from Judith Allen, resident at 62 Hampshire Street:

Our building was built in 1867, at the same time as Lincoln Park, and is a designated contributing building in the historic district. The bricks and mortar of our building will be completely in the shadows of this building. Our bricks and mortar have had light and air on them for more than 100 years. I believe this shadow will be very detrimental to our building.

I am very against having commercial units on Hampshire Street. We don't need more commercial on Hampshire, it should be along Franklin. Most commercial spaces are food related. We don't need more food related businesses on Hampshire Street. If we have a bar next to us, it will kill us. I am concerned about noise and parking requirements that might result from a bar. Why not have a beautiful townhouse on Hampshire street rather than the commercial space?

You need to work around the tree at 56 Hampshire. You are obligated to plant more trees. The trees on the corner of Hampshire cost $200 each and in my conversation with the arborist he said there is 1 tree required per unit?

I do really like you are using brick. I would like red better. Grey kind of looks like cinderblock.

I am very concerned about traffic and parking. We are a neighborhood of affordable housing. I am going to recommend that you don't get any residential parking on the street. Do you only have 28 parking spaces for 31 units?

I know from 18 years of renting, the only people who didn't have cars, are Section 8. I don't think you are going to have any of those people in here.

It would be more appropriate if the whole building was all four story.

Hampshire cannot handle the traffic, you should enter from Franklin Street. The upper part of Hampshire should not be two ways.

I don't like the "mud lot" on the corner of Newbury and Hampshire from the Luminato building and want the back of the building at Luminato to be covered.

Response: Shade will happen. I cannot comment on its effect on brick and mortar. Different people have different attitudes about commercial, but the condominium documents prevent cooking in the commercial spaces. Verdante will have 61 parking spaces on site which includes parking for Dan Hoffman's building; there will be 46 spaces for 31 units in the Verdante building. We don't believe that anyone at Luminato parks on the street, and don't expect anyone at Verdante will park on the street. We are providing affordable housing. As far as reconnecting Federal and Franklin, we would love to see it happen. At a recent meeting with the City, they spoke more about this connection than they ever have. There will be trees planted, the number of trees planted will be determined in accordance with what is able to be planted given utility requirements and other uses of the ground. The "mud lot" referred to is not a part of the 167 Newbury St property. The landscaping at 167 Newbury has not yet been completed because of limitations from weather at the end of last year. It will be completed in the spring.

Comments and **questions** from Tim Robinson, husband of J. Allen, and resident at 62 Hampshire Street:

Q: Parking for Dan Hoffman's building. That is going to be on the surface. How do they access the parking, do they go under your building?
A: Yes.

I have some concerns, some have already been addressed.

Q: Construction hours, can they be limited from 6 to 6?
A: City ordinance governs the days and hours of work, and they are limited.

We may lose tenants, who lose their view of the park. It may be detrimental to our buildings and we may lose tenants.

Q: Off-site affordable housing, where did you supply that for Luminato? Where will you provide it for this project? Is there a restriction on how far away it can be?
A: At 42 Hampshire Street, we don't know yet where it will be for Verdante. Yes, we believe it must be located within a 1,500-foot radius.

Q: Is there any way that this building might come down by one story to make it more compatible with the buildings in the neighborhood? Are you familiar with the buildings going up across from Micucci's, could you go that height?

Judith Allen comments and adds to the question:

Four floors would definitely make a difference. You are blocking every ray of sun on our building. I don't know how you can get away with that. I am concerned about the effect on the bricks from potential mildew.

Q: Where are people going to park if they want to shop? How it is that the Lawrence French [sic] building is four stories, and you're saying that six stories is allowed? The City didn't give you a variance on the code?
A: No. One can argue that the City is asking us to do this. The concept is similar to Connecticut Avenue in DC where there are taller buildings along the major street and the height steps down from there. The India Street FBC allows, and in effect encourages, greater height along Franklin as a transition from the downtown core to the neighborhood.

You got the City to push back the Urban Transition Zone in relation to where the line is drawn.

A: No, we just worked with the city to correct the location of the UT line along Federal. Our building will be built in accordance with the zoning.

Q: What is the length of the building on Franklin street, compared to Luminato?
A: David Lloyd said he didn't know, but would have the information for future meetings.

We would support extending the sidewalk to continue to Franklin Street.

Q: Is Franklin shrinking to one lane?
A: A study and plan have been created that, if implemented, would narrow the Franklin corridor by shrinking the median, not the number of lanes, I believe.

Comment from Derek Veilleux, resident at 167 Newbury Street:

I would encourage you to look at site from the opposite side of Federal Street, with the building as a transitional element between Franklin and Federal. It could use more finesse to respond to the scale of the buildings across the street. Subtle brick detail would help the grey brick not look so much like CMU. Contrasting mortar might also help.

Response: David Lloyd said the Devil is in the details, and we haven't yet reached this level of detail.

Tim Robinson asked:

Q: Is there are plan for the generator? A location?
A: There is a requirement for a generator. Code requires it to run life safety systems.

Judith Allen asked:

Q: Will the fire department check that the ladders will fit?
A: Yes, the fire department will review the plans.

The meeting ended at 6:44 p.m.
The meeting notice and sign in sheet are attached.

TERRADYN
CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

March 6, 2018

Caitlin Cameron, Urban Designer
Planning & Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

Subject: **Response to Comments – Level III Development Review**
Verdante at Lincoln Park – 56 Hampshire Street

Dear Caitlin:

Terradyn Consultants, LLC is pleased to provide additional information and responses to comments for Verdante at Lincoln Park, NewHeight Group's proposed project located at 56 Hampshire Street. Previously, our office submitted the Level III Development Review application on December 22, 2017 and the Inclusionary Zoning Conditional Use Application on January 16, 2018. We received verbal comments at a staff review meeting on February 21, 2018 and written comments on February 22, 2018. We have reviewed the comments and prepared the additional information and responses below. An updated project plan set and architectural plans and renderings are also included with this additional project information.

ARCHITECTURAL

Architectural Narrative from Archetype Architects:

The Verdante at Lincoln Park building is designed under the guiding principles established in the India Street Form Based Code or IS-FBC. A portion of the proposed building is in the Urban Transitional (UT) Subdistrict which runs along Franklin Street and part way up Federal Street. The height of the building in the UT district is 77 feet as a result of a height bonus granted for the use of a green roof. The portion of the building along the Hampshire Street frontage is in the Urban Neighborhood (UN) Subdistrict. The height of the building in the UN district is approximately 40 feet. This height is symbiotic with neighboring buildings.

The first floor along the Hampshire Street frontage contains active pedestrian activities such as building lobby space and proposed retail/office space. The remaining areas of the first floor contain building maintenance areas and parking. The parking area incorporates mechanical parking which allows many more cars than would typically be possible in a standard parking arrangement. This system requires the ceiling heights in the first floor to be 12 feet. This increase in ceiling height has the added benefit of allowing

for future changes of this parking area to other uses when self-driving cars reduce the demand for parking. This space can easily be converted to retail or office space facing Franklin Street.

The massing of the building is a direct result of applying all of the setbacks as required under the IS-FBC. This results in a building that is a reflection of the FBC and also yields a very interesting and unique form. This form works to support our intent to design a contemporary building of this time. The major exterior materials are brick, Nichiha and glass. The design intent is also to be a complimentary neighbor to the Luminato building but different in its shape and exterior materials. This second building along the Franklin Street corridor continues to reestablish Franklin Street as an active urban contributing street.

Architectural Comment Responses:

Architectural comments were received during the staff review meeting and in writing. Below is additional information regarding architectural comments.

Frontage: The frontage along Hampshire Street was reduced to 50' per the India Street Form Based Code (IS-FBC).

Landscaping & Screening: The fence along Franklin Street has been reduced to 6' maximum height and now has visual permeability, per the IS-FBC. See the Landscape Plan (L-1) in the revised plan set for fence details.

Green Roof Area Calculations: The green roof and pervious calculations are provided on the calculation plans provided by Archetype. Green roof details are attached to this comment response letter.

Parking: The parking spaces within the mechanical parking lifts do not meet dimensional standards but the dimensions are fixed based on parking lift dimensions. These lifts provide more parking spaces in less area than traditional parking spaces, and the users will be assigned specific spaces (in mechanical trays) that will correspond with the size of their cars. The mechanical parking information was uploaded to ePlan on February 12th under the Documents section titled "Mechanical Parking".

Lot Coverage: The second floor is 12,879 gross square feet including bays and decks.

Step-backs: The architectural and civil plans have been updated based on UT and UN stepback requirements in the IS-FBC. This can be seen on the project plans from Archetype and Terradyn Consultants, LLC.

Parking: The parking area outside of the covered parking has been reduced so only the minimum driveway needed to access the surface parking is provided outside of the 35'

setback from Franklin Street. Snow storage will now take place on lawn area as shown on the Site Plan, C-3.0 of the permitting plan set.

CIVIL

Civil comments were received during the staff review meeting and in writing. Below is additional information regarding civil engineering comments.

Drainage:
The drainage from the covered parking area will be discharged through an oil/water separator to the sanitary sewer system. This will include drainage from the mechanical parking sumps. We are working the revised design of the drainage system and will provide updated plans for review when they are finalized.

The roof drain pipe from Verdante will connect to an existing storm drain pipe in Hampshire Street. This is reflected on the revised Grading, Drainage & Erosion Control Plan (Sheet C-4.0).

Stormwater Management:
The proposed re-developed non-roof impervious area is 3,621 s.f., which is below the 5,000 s.f. threshold for requiring treatment under the redevelopment standard.

We are working with the City Water Resources Department on the Stormwater Service Charge credits to ensure our design will meet the credit requirements.

Sidewalk and Driveway: The driveway apron has been updated to brick to match the sidewalk material.

Utilities:
Portland Water District has reviewed the current Utility Plan and provided an Ability to Serve letter. The letter is included with this response to comments.

We will upload other utility ability to serve documents to ePlan when we receive them.

SIDEWALK DESIGN

Comments on the sidewalk design were received during the staff review meeting and in writing. Below is additional information regarding sidewalk design comments.

Lighting: Lighting will be provided by building lights. The light cut sheet is included with this response to comments.

Driveway Apron: The driveway apron has been revised to be the same material (brick) as the sidewalk. The driveway apron detail has been updated on Plan Sheet C-6.0 to reflect this change.

Granite Curb: The granite curb notes have been updated to specify the placement of new curb and re-used curb in certain areas.

Catch Basins: We will work with the City Water Resources Department to finalize the design of the catch basin and sidewalk integration.

Franklin St Sidewalk Connection: The applicant wants to work with city staff to design a pedestrian connection that will benefit both the city and the project. The grade break between Federal Street and Franklin Street is too great to construct a straight ramp from Federal down to Franklin without violating ADA design standards. We look forward to additional discussion with city staff on the design of the pedestrian connection and developing a solution that benefits both parties.

Ramp Tip-downs: The proposed brick sidewalk at the corner of Hampshire Street and Federal Street will have just one curb ramp at the corner. Our office explored the possibility of providing two ramps per city standards, one in each crossing direction, but due to existing catch basin locations and space restrictions, this is not feasible. If there were two ramps, they would land at the existing catch basin locations. The proposed design meets ADA requirements.

Details:
Detectable Warning – the detectable warning strip has been extended to the full width of the ramp. The warning strip is to be cast iron. This has been updated on the site plan and on the detail.

Sidewalk Detail - A note has been added to the sidewalk detail to indicate that the cross slope is 2% max.

Bikes:
Bicycle Parking – The bicycle parking is provided within the bike room accessed from the Federal Street sidewalk. This project requires 2 bicycle parking spaces for every 5 dwelling units, or 12 spaces. The 12 bicycle spaces will be provided in the bike room. This information has been added to Sheet C-1.1 – General Notes.

Bike Racks – A bike rack has been added to the sidewalk on Federal Street near the lobby entrance and close to the intersection with Hampshire Street to provide additional bike parking for guests, retail customers and employees, and overflow tenant bicycle parking.

Street Trees: The Federal Street sidewalk will house underground electrical utilities and an underground electrical vault. This will take up the majority of the Federal Street sidewalk, so it is not feasible to provide street trees here. The Hampshire Street sidewalk will also house underground electrical utilities and is narrower, but we will replace the Hampshire Street tree subject to limitations from utilities.

TRAFFIC

Comments on traffic were received during the staff review meeting and in writing. Below is additional information regarding the traffic comments.

Trip Generation: The proposed project includes 28 residential units that will produce approximately 15 vehicle trips during the PM peak hour, and an average of 164 total trips on a weekday. This trip generation is expected to be an over estimate due to the nature of the residences and the sale of parking spaces separately from units. The developers expect the residents of this project will drive less than typical due to the buildings proximity to downtown, amenities, and offices. Many residents may work from home, walk to work, or commute by bicycle.

Parking: The required number of parking spaces for the project is 25, plus 15 parking spaces are required for the tenants of the neighboring building. The proposed project will include 62 parking spaces (including 15 for the neighbor). This is more parking than required, but based on the developer's experience with similar projects and the potential for offices uses, this parking is expected to be required for the project.

Of the 47 spaces for Verdante, 45 spaces are within the three level mechanical parking structures and only take up the ground area of 17 parking spaces. This will have less of an impact than a typical parking lot or garage. The developer has experience with similar projects and expects this demand for parking. However, the parking spaces will be pre-sold to individuals purchasing Verdante condos, so if the parking demand is less than expected, then the mechanical parking structures will be reduced accordingly. At this time the 1st floor retail space does not require any parking, but if this space is filled with an office use instead, then parking will be reserved in the mechanical lift systems for the office tenants.

Franklin Street Considerations: The proposed driveway curb cut is approximately 29' from Franklin Street, and the garage opening is approximately 36' from Franklin Street.

Delivery Parking: Short term (15 minute) parallel parking spaces have been added to the Federal Street frontage by reducing the sidewalk width in some locations. This will provide parking for deliveries, drop offs, or moving trucks.

Drive Aisles: The drive aisle widths are dimensioned on the Site Plan (Sheet C-3.0). Due to the entrance location, the emergency stairwell location, zoning setbacks, abutting properties, and the mechanical parking structures, it is not feasible to provide full drive aisle widths throughout the covered parking. This parking will only be accessed by tenants of Verdante and the abutting property via keyed garage entry, so the users will be familiar with the layout of the parking areas. A waiver is requested to reduce these drive aisle widths as shown on the Site Plan.

Driveway Width: The driveway entrance from Federal Street into the Verdante garage is 18' wide. This will be a keyed garage entrance only for the tenants of Verdante and the neighboring building utilizing parking. Constant two-way traffic flow is not required. A waiver is requested to reduce the driveway with to 18' as shown on the Site Plan.

Mechanical Parking: Dimensions have been added to the mechanical parking spaces on the Site Plan. Mechanical Parking information was uploaded to ePlan on February 12th. These parking space dimensions are fixed by the mechanical parking structures, do not require maneuvering into each space, and take up less space than the same number of ground parking spaces would. A waiver is requested to allow these mechanical parking spaces to be approximately 8.5' x 19.3'.

Parking: The tandem parking spaces (#13 and #14) will be part of the tenant parking for the neighboring building and will be managed by the owner of that building.

Parking spaces adjacent to the neighboring building, outside of the covered parking, are 8.25' x 18', which matches the dimensions of the existing parking spaces in this location. In order to fit the 5 spaces required here to satisfy an agreement with the abutter, these spaces each needed to be 9 inches narrower than a typical parking space. A waiver is requested to allow these parking spaces to be narrower than a typical City of Portland parking space.

FIRE

Comments from the Fire Department /Robert Thompson were received in writing on 2/22/18. Below is additional information regarding fire department comments.

Garage Ventilation: The garage will be ventilated with exhaust fans located left of the upper mechanical parking and intake louvers will be located on the Franklin Street façade.

Portland Water District Capacity Letter: The Portland Water District is working on their own plans to potentially renew the water line in Federal Street at the time of this project. They have reviewed the most recent Utility Plan (C-5.0) and provided an Ability to Serve letter that is included with this comment response.

Franklin Street distance: The paved way of Franklin Street is approximately 29' from the proposed curb cut for the garage entrance on Federal Street. A label has been added to the site plan.

LANDSCAPING

Comments on the landscaping were received during the staff review meeting and in writing. An updated landscape plan (Sheet L-1) is included in the revised plan set. This plan takes into account the comments received from Jeff Tarling, City Arborist and other City staff.

Street Trees are not feasible along Federal Street and may not be feasible along Hampshire Street due to underground utilities in the sidewalks.

CLOSURE

We trust that the above responses and attached materials address the comments and provide additional information for the Planning Board to consider. We look forward to meeting with the Planning Board on April 24th and participating in a workshop on the project. Please contact me at (207) 632-9010 or mtw@terradynconsultants.com if you have any questions or require additional information.

Sincerely,
TERRADYN CONSULTANTS LLC



Michael E. Tadema-Wielandt, P.E.
Vice President

Enclosures: Updated Civil Drawings
Updated Architectural Drawings and Renderings
Portland Water District Ability to Serve Letter

cc. NewHeight Group
David Lloyd, Archetype

Judith Allen, resident and owner, 62 Hampshire St. and registered voter District 1

Written comments regarding proposed building project at 56 Hampshire St. to the Portland Planning Board

Detrimental aspects of the proposed Verdante Luxury condominium project to Hampshire St, the India Street Historic Zone, Lincoln Park and the Congress Street Historic District:

- Although the Verdante proposal for 6 stories (+ 7th roof story 129 ft.) is based on facing Franklin St, cars can only access the building from the Hampshire St. side of the buildings. Hampshire St is a narrow, three-block long street with mostly older three-story residential buildings that provide affordable housing for Portland. On the Congress St end of Hampshire St. (the site of the proposed Verdante complex), all the residential buildings are designated as Contributing Historic Buildings in the India Street Historic Preservation Zone (see attached image)

- The height and facade of the proposed Verdante building is completely out of character with the surround architecture and would drive a wedge between the East End, India St Historic Zone and Lincoln Park, and the historic building along Congress St. In this crucial corridor of historic buildings between Federal St. and Congress Street that runs from East End \Cemetery to City Hall. The height of Verdante would also compete on the skyline of Portland with the spire of the beautiful Emulate Conception Cathedral. The proposed site of the Verdante project is not just any spot on the map of Portland, it is in the most crucial center of the history and beauty of Portland, and yet the design is completely insensitive to both.

Radical change to Hampshire St.:

- Together the Luminato and Verdant projects more than double the number of housing units on Hampshire St, radically changing this quite residential street by adding a total of 55 units and 2 commercial spaces in the 2 projects and greatly increasing traffic and demands on limited street parking (allowed only on one side of the street): specifically there are 24 units in the Luminato Condominiums added to the proposed Verdante building with 31 units and only 28 parking places, with no parking for 3 apartment and no parking for the 2 commercial spaces or for service vehicles except on the street. Add also the 15 parking spaces that the Verdante design provides for the residents of 312 Congress St. and you have cars from 72 units all circulating on Hampshire St substantially increasing traffic and demands on available street parking for the residences of Hampshire St.

- Until plans for restoring Franklin St. and reconnecting Federal St and Newberry St. are implemented, (now dead-end streets) large residential buildings like this one should be delayed or limited in size and height.

Luxury condominiums verses affordable housing:

Hampshire St is a residential street offering affordable housing. The Verdante Luxury Condominiums add no affordable housing to the neighborhood and in fact hurt the existing affordable housing by increased strain on the very limited street parking (the existing, older building depend on residential street parking), increasing noise and traffic on a formerly quiet residential St. The 2 commercial units in stead of residential units begins to move Hampshire St. away from the much needed affordable housing street to a commercial street.

Negative impact on the Value of our Building at 60/62 Hampshire St:
1. It will be completely in the Shadow of the Verdante high-rise that will enclose our historic Victorian building completely on two sides, making this possibly the only historic building in Portland enclosed within the L shape of a looming 129ft building resulting in:

- Blocking all direct sunlight to the brick walls will have adverse effects on bricks, mortar and structure of the building with increased dampness to the structure that has had sunlight and air on its brick walls since it was built in 1867.
- Once sunny apartments with a view of Lincoln Park will become dark, damp and without view.
- Investment in 4 newly planted trees on our property is at risk with no direct sunlight.
- Plans to go green with photovoltaic will no longer an option for our building.
- Tenant gardens at the back of our building will not longer have any direct sun.

2. Increased noise, traffic and demand for on street parking from the two proposed commercial units with entrances on Hampshire St will have a very negative impact on the value of our building and our ability to rent apartments, especially if they are bars or restaurants or other businesses that are open later than 8pm. We know first hand the negative impact the infamous Sangillos Bar (now Thomas Bar) has had on lower Hampshire St. Almost all new commercial businesses in the immediate neighborhood are either bars, cafes or restaurants (all on much wider, two-way streets) so we have good reason to expect the same here. It would be more appropriate for the two commercial spaces to face Franklin St, a street of commercial buildings rather than on Hampshire St., a very narrow one-way (except for one block) residential street. We need more affordable housing not more commercial units. Don't make it even more difficult for those of us who do provide affordable housing and for tenants who need affordable housing.

3. Degradation to our tree lined block by removing the street tree in front of 56 Hampshire St. (appropriately small sizes tree for a city street, one of only 6 trees on the street). The city was petitioned by the residence of Hampshire to plant these 6 street trees when the road was repave about 10 years ago. Note: although the Verdante renderings of the proposed project show trees on Hampshire and Federal St. The details of the plans do not include replacing these trees. Note also that the similar Luminato building has virtually no landscaping on the Hampshire St. side of the building and no trees at all around the building. Instead Hampshire St gets a view of rows of air conditioners and electrical meters and an empty vacant lot where there use to be a residential building, torn down during the construction project instead of being rehabilitated to provide affordable housing.

Requests for a more positive development to improve Hampshire St. & neighborhood:

- An appropriate building for this historic, residential neighborhood would be a 3 to 4-story brick-faced building residential building to replace the small wooden storage building and parking at 56 Hampshire St. would be an improvement (such as the new 4-story, brick-faced construction on India St.)
- 13 trees removed in proposed construction should be replaced on Hampshire/Franklin/Newberry St., not elsewhere in the city
- No residential parking allowed for Verdante building since they have parking provided where other older residential buildings on Hampshire and Federal depend on the very limited residential street parking for tenants.
- Residential units on the 1st floor Hampshire St. instead of 2 commercial spaces. Any commercial spaces should be on the Franklin St. side of the project



Corner of Hampshire St, and Congress ST.,October 2017

Public Comment

Priscilla Slack

62 Hampshire Street – tenant

(207) 874-7427

Please call to inform about Planning Board meetings

Over phone 2/24/18 - Expressed concern about height of new building – especially casting shadow, won't be able to use yard, proximity of building. Character is not in keeping with the historic buildings on Hampshire.

Deb Andrews
Historic Preservation Board
Program Manager
City of Portland, Maine

March 8th, 2018

RE: Written Comments and Concerns regarding Verdante Proposed Condominium Project at 56 Hampshire Street

Dear Mrs. Andrews and Historic Preservation Board Members:

If the proposed plan for the Verdante building at 56 Hampshire Street is allowed to proceed we the owners of 60 and 62 Hampshire Street believe there will be serious negative consequences concerning the structure of our brick buildings, both of which are contributing historic buildings in the India Street Historic Preservation Zone.

The proposed Verdante building will enclose our historic Victorian building completely on the south and west sides, making this possibly the only historic building in Portland enclosed within the L-shape of a looming 129 foot building. Our building will be completely in the shadow of the Verdante building blocking all direct sunlight to the brick walls of our building. In the past, and due to moisture and mold build up on the bricks, a lack of sun has caused the bricks to crumble and dissipate. This structure has had sunlight and air on it since its walls were built in 1867. As you may be aware, and unlike modern brick, the greater than 100-year-old bricks are hard on the surface but soft in the interior. In the basement of our building we have seen the effects of dampness on these older bricks, with some non-structural bricks crumbling to powder. Additionally, the fewer the hours of direct sunlight on the roof the greater the accumulation of snow and the potential for ice damming.

The proposed dimensions of the L-shaped Verdante building are the direct result of a preliminary vote by the Planning Board on Aug 8, 2017 to extend the UT zone on Federal Street and away from Franklin Arterial. A vote that was passed under the premise that the Planning Board would a have a chance to revisit the issue during a site review. The vote extended the UT zone on Federal Street much deeper than the UT zone on Congress Street. At that meeting the historic buildings on Federal Street were considered, but the effect on our building was not even mentioned. If the UT zone were the same as on the corner of Congress and Franklin Streets the Verdante building would rise to the 129 foot height much further back and south from Hampshire Street, leaving a narrow corridor of sunlight and circulating air to reach the walls of our building.

We request that the Historic Preservation Board act to protect our building and this important corridor of Portland history between Federal and Congress Streets. We are not against development, but development should not be at the expense of the historic buildings of Portland. Furthermore, we **request that the August 8, 2017 Planning Board decision concerning UT zone re-alignment be reviewed and amended** in light of the potential serious negative consequences to our historic building. **Please inform us as to what steps we should take to get a review of the August 8th decision.**

Sincerely,

Judy Allen, Eirene Efstathiou
Tim Robinson, William Fox (Owners 60/62 Hampshire Street)

SITE DEVELOPMENT PLANS
FOR
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET - PORTLAND, MAINE
MARCH 2018
PERMIT DOCUMENTS

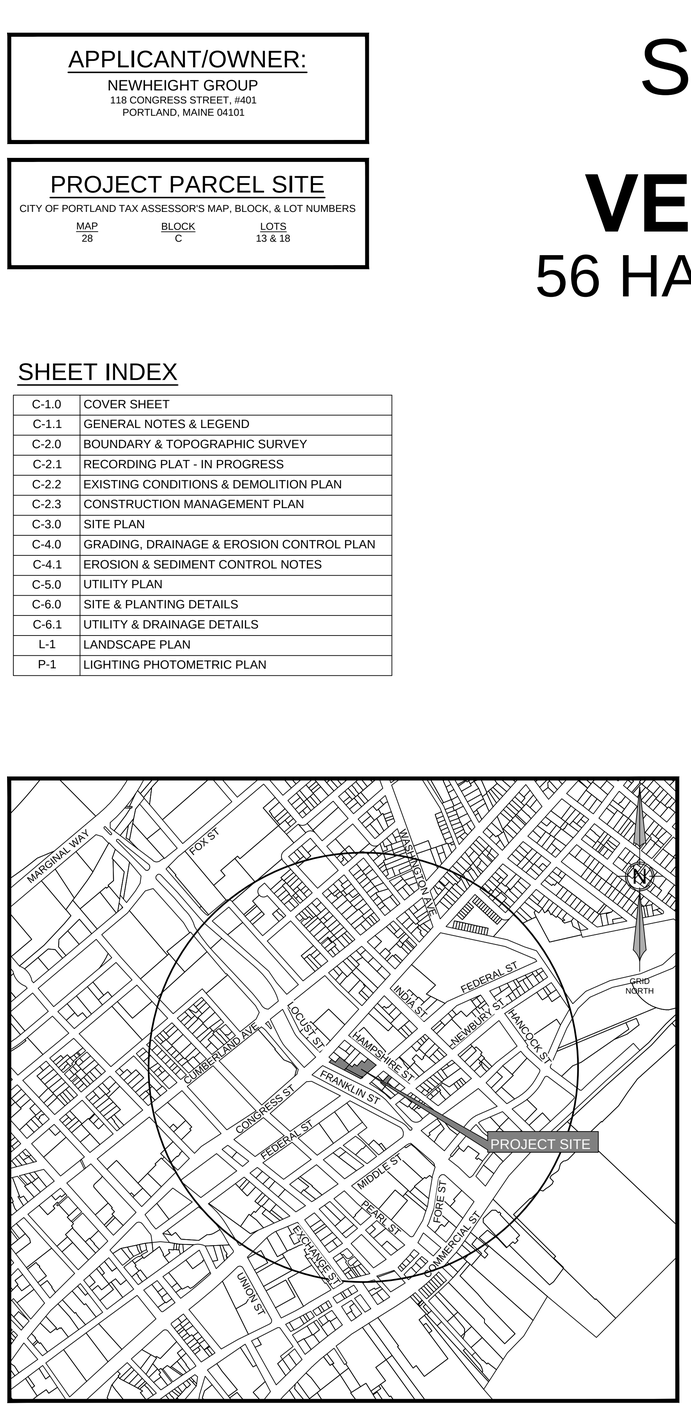
APPLICANT/OWNER:
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, MAINE 04101

PROJECT PARCEL SITE
CITY OF PORTLAND TAX ASSESSOR'S MAP, BLOCK, & LOT NUMBERS

MAP	BLOCK	LOTS
28	C	13 & 18

SHEET INDEX

C-1.0	COVER SHEET
C-1.1	GENERAL NOTES & LEGEND
C-2.0	BOUNDARY & TOPOGRAPHIC SURVEY
C-2.1	RECORDING PLAT - IN PROGRESS
C-2.2	EXISTING CONDITIONS & DEMOLITION PLAN
C-2.3	CONSTRUCTION MANAGEMENT PLAN
C-3.0	SITE PLAN
C-4.0	GRADING, DRAINAGE & EROSION CONTROL PLAN
C-4.1	EROSION & SEDIMENT CONTROL NOTES
C-5.0	UTILITY PLAN
C-6.0	SITE & PLANTING DETAILS
C-6.1	UTILITY & DRAINAGE DETAILS
L-1	LANDSCAPE PLAN
P-1	LIGHTING PHOTOMETRIC PLAN



LOCATION MAP
SCALE: 1"=500'

PERMITS

TYPE OF PERMIT	GOVERNING BODY	STATUS
SITE PLAN/SUBDIVISION APPROVAL	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL, 389 CONGRESS STREET PORTLAND, ME 04101 TEL. 207.874.8722	SUBMITTED 12/22/2017
BUILDING PERMIT	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL, 389 CONGRESS STREET PORTLAND, ME 04101 TEL. 207.874.8900	TO BE SUBMITTED BY BUILDING CONTRACTOR
UTILITY / STREET OPENING	CITY OF PORTLAND PUBLIC SERVICES DIVISION 55 PORTLAND STREET PORTLAND, ME 04101 TEL. 207.874.8801	TO BE FILED BY SITE CONTRACTOR

UTILITIES

SEWER/STORM
CITY OF PORTLAND
PUBLIC SERVICES DIVISION
55 PORTLAND STREET
PORTLAND, MAINE 04102
207.874.8850

WATER
PORTLAND WATER DISTRICT
22 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, MAINE 04104
207.774.5961

ELECTRIC
CENTRAL MAINE POWER COMPANY
162 CANCO ROAD
PORTLAND, ME 04103
(207) 842-2367

TELEPHONE
FAIRPOINT COMMUNICATIONS
5 DAVIS FARM ROAD
P.O. BOX 11560
PORTLAND, MAINE 04103
888.984.1515

NATURAL GAS
UNITIL
376 RIVERSIDE INDUSTRIAL PARKWAY
PORTLAND, MAINE 04103
866.933.3821

DIG SAFE SYSTEM, INC.
TEL. 1-888-DIG-SAFE (344-7233)
WWW.DIGSAFE.COM

PREPARED BY:

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
565 CONGRESS STREET, SUITE 310
PORTLAND, MAINE 04101
207.926.5111
CONTACT: MICHAEL TADEMA-WIELANDT

ARCHITECT:
ARCHETYPE ARCHITECTS
48 UNION WARF
PORTLAND, ME 04101
207.772.6022
CONTACT: DAVID LLOYD

SURVEYOR:
OWEN HASKELL, INC.
309 U.S. ROUTE ONE, UNIT 10
FALMOUTH, MAINE 04105
207.774.0424
RANDY LOUBIER

ELECTRICAL/MECHANICAL ENGINEER:
BENNETT ENGINEERING
P.O. BOX 297
FREEPORT, MAINE 04032
207.865.9475
CONTACT: WILLIAM BENNETT

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED PROFESSIONAL ENGINEER
Michael E Wielandt

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 03-06-2018

NO.	DATE	REVISIONS	APP'D BY
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

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SUITE 310
PORTLAND, ME 04102
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TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, MAINE 04101
COVER SHEET

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	AS NOTED
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728 COVER.DWG	
SHEET	C-1.0

GENERAL NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXITS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS.
3. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-DIGSAFE). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT NO EXTRA EXPENSE TO THE OWNER.
5. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
6. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PROJECT CONTRACT SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS, WHICHEVER IS MORE STRINGENT.
8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = HYDRANT BONNET BOLT ON NORTHEASTERN SIDE OF HAMPSHIRE STREET, ELEVATION 49.30, NGVD 1929 DATUM.
9. FEMA MAP COMMUNITY PANEL NUMBER 230051 0014 B. THE SITE IS LOCATED IN A C ZONE.
10. THE PROPERTY SHOWN ON THIS PLAN MAY BE DEVELOPED AND USED ONLY AS DEPICTED IN THIS APPROVED PLAN. ALL ELEMENTS AND FEATURES OF THE PLAN AND ALL THE PROPERTY WHICH APPEARS IN THE RECORD OF THE PLANNING BOARD PROCEEDINGS ARE CONDITIONS OF THE APPROVAL. NO CHANGE FROM THE CONDITIONS OF APPROVALS IS PERMITTED UNLESS AN AMENDED PLAN IS FIRST SUBMITTED TO AND APPROVED BY THE PLANNING AUTHORITY.
11. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE CURB SHALL MEET THE REQUIREMENTS OF MaineDOT SPECIFICATIONS 609.03 AND CITY OF PORTLAND TECHNICAL STANDARDS.
13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB OR FACE OF BUILDING.
14. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.
15. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CITY OF PORTLAND PUBLIC WORKS INSPECTION SERVICES DIVISION (874-8300 EXT. 8838), CODE ENFORCEMENT OFFICE AND DEVELOPMENT REVIEW COORDINATOR IN WRITING THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING MAY BE REQUIRED TO INCLUDE THE PUBLIC WORKS AUTHORITY OR DEVELOPMENT REVIEW COORDINATOR.
16. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY. THE CONTRACTOR SHALL COORDINATE AND SEEK APPROVAL FROM THE PUBLIC SERVICE DIVISION FOR THE PLACEMENT/PARKING OF EQUIPMENT WITHIN THE PUBLIC RIGHT OF WAY.
18. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12. ALL DEMOLITION MATERIAL FROM THE PROJECT SITES SHALL BE TAKEN TO THE RIVERSIDE RECYCLING FACILITY OR AS OTHERWISE DIRECTED PENDING THE RESULTS OF A HAZARDOUS BUILDING MATERIALS SURVEY AS AUTHORIZED AND COORDINATED BY THE OWNER. ALL SALVAGED MATERIAL WITHIN THE PUBLIC R.O.W.(SIDEWALKS, BRICKS, GRANITE CURB) NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE PORTLAND PUBLIC SERVICES DEPARTMENT AT NO EXTRA COST TO THE OWNER.
19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
20. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AT ALL TIMES DURING CONSTRUCTION TO INSURE INTEGRITY. IF DISTURBED THEY SHALL BE REPLACED BY A SURVEYOR REGISTERED IN THE STATE OF MAINE AT THE CONTRACTOR'S EXPENSE.
21. THE OWNER SHALL BE RESPONSIBLE TO COORDINATE THE PERFORMANCE OF A HAZARDOUS MATERIALS INSPECTION OF THE PROPERTY.
22. A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN CONFORMANCE TO THE CITY'S RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN PUBLIC RIGHT OF WAYS.
23. CONTRACTOR MUST MAINTAIN THROUGH TRAFFIC ON ADJACENT STREETS AT ALL TIMES.
24. ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS IDENTIFIED HEREIN SHALL CONFORM TO THE CITY OF PORTLAND CONSTRUCTION AND TECHNICAL STANDARDS AND SPECIFICATIONS AND/OR CURRENT MaineDOT STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
25. SITE WORK FOR BUILDING SHALL INCLUDE GRADING THE BUILDING PAD AREA (DEFINED AS THE BUILDING FOOTPRINT PLUS 5'-0" BEYOND THE EXTERIOR WALL) TO A GRADE 18" BELOW THE GROUND FLOOR FINISH ELEVATION. ALL WORK SHALL INCLUDE EXCAVATION (INCLUDING ROCK REMOVAL AND EXISTING FOUNDATION DEMOLITION) AND BACKFILL OF ALL FOOTINGS AND FOUNDATIONS, INSTALLATION OF PERIMETER FOUNDATION DRAINS, EXCAVATION AND BACKFILL OF ALL UNDERSLAB UTILITIES AND PLACEMENT OF ALL AGGREGATES BELOW THE FLOOR SLAB AND ADJACENT FOUNDATION WALLS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL DETAILS PERTAINING TO ANY BUILDING RELATED FOUNDATION WORK).
26. RECORD DRAWINGS MUST INCLUDE ALL BURIED UTILITIES INCLUDING, BUT NOT LIMITED TO, BENDS, APPURTENANCES, AND OTHER FEATURES, TO BE LOCATED IN THE FIELD BY GIS AND RECORDED AS AN AS-BUILT PLAN BY THE CONTRACTOR AT THE END OF THE PROJECT. THIS PLAN SHALL ALSO BE PROVIDED TO THE OWNER.
27. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS PREPARED BY ARCHETYPE ARCHITECTS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE POINTS.
28. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
29. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST THREE (3) BUT NOT MORE THAN (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A.

GRADING AND DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n = 0.013 OR LESS. UNLESS A SPECIFIC PIPE MATERIAL IS CALLED FOR ON THE CONTRACT DRAWINGS. PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
2. SLOPE PROTECTION IS TO BE PROVIDED PER THE DESIGN PLANS AND MAY INCLUDE RIPRAP, SOD OR MULCH.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT DISTURBANCE TO ANY STEEP SLOPE AREAS ARE MINIMIZED TO THE EXTENT PRACTICABLE.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
5. ALL PAVING WITHIN THE PUBLIC R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF PORTLAND RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC R.O.W.
6. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
7. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES AND PHYSICAL FEATURES THAT ARE OUTSIDE THE SCOPE OF WORK. THE CONTRACTOR SHALL MAINTAIN SITE STABILITY DURING CONSTRUCTION TO AVOID EROSION AND SEDIMENT TRANSPORT. CONTRACTOR SHALL RESTORE ALL AREAS TO A FINAL STABILIZED CONDITION AS DIRECTED BY DESIGN DRAWINGS.
9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
10. EXTERIOR GRADES AROUND PROPOSED STRUCTURE SHALL BE COORDINATED WITH FINAL BUILDING PLANS AND PROVIDE FOR ALL ACCESS OPENINGS.
11. SUBGRADE FILL PLACED BENEATH ALL PERMANENT PAVEMENT, SIDEWALK OR CONCRETE SURFACES EXCLUDING ANY BUILDING AREAS, SHALL BE GRANULAR BORROW. SUBGRADE FILL PLACED BENEATH ALL LANDSCAPE AREAS EXCEPT THOSE ADJACENT THE FOUNDATION SYSTEMS MAY BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUBGRADE CONSTRUCTION. EXCAVATED ON-SITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. EXCAVATED ONSITE MATERIALS MAY NOT BE USED AS COMPACTED STRUCTURAL FILL BENEATH THE BUILDING AREAS OR AS FOUNDATION BACKFILL. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH MaineDOT SPECIFICATIONS.
12. ALL FILLS SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH AND COMPACTED BY HEAVY COMPACTION EQUIPMENT. MINIMUM COMPACTION SHALL BE 95% OF MAXIMUM DENSITY ASTM 1557, MODIFIED AND FIELD DENSITY ASTM D2922 (NUCLEAR METHODS).
13. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY. NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.

CONSTRUCTION MANAGEMENT NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH 2009 NFPA 1 CHAPTER 16 SAFE GUARDS DURING BUILDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS.
2. ANY CUTTING AND WELDING WORK PERFORMED ONSITE SHALL REQUIRE A "HOT WORK" PERMIT FROM THE PORTLAND FIRE DEPARTMENT.
3. THE GENERAL CONTRACTOR SHALL POST EMERGENCY CONTACT INFORMATION ON THE PROJECT SITE PROPERTY DURING CONSTRUCTION IN THE EVENT OF AN AFTER HOURS EMERGENCY. THIS CONTACT INFORMATION SHALL ALSO BE PROVIDED TO THE PORTLAND FIRE DEPARTMENT.
4. IF THE SITE IS SECURED BY TEMPORARY OR PERMANENT FENCING WITH LOCKED GATES, THEN THE APPLICANT OR ASSIGNED REPRESENTATIVE SHALL PURCHASE A KNOX PADLOCK FROM THE PORTLAND FIRE DEPARTMENT TO ALLOW ACCESS BY THE PORTLAND FIRE DEPARTMENT.
5. STREETS SHALL MAINTAIN A 20' WIDTH FOR FIRE DEPARTMENT ACCESS AT ALL TIMES.
6. FIRE HYDRANTS SHALL NOT BE BLOCKED OR ENCLOSED BY FENCING. A 3' CLEARANCE SHALL BE MAINTAINED AT ALL TIMES AROUND FIRE HYDRANTS.

UTILITY NOTES:

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED BETWEEN THE SITE WORK CONTRACTOR AND DIVISION 22/26 CONTRACTOR(S). THE SITE WORK CONTRACTOR SHALL BE RESPONSIBLE TO EXTEND ALL PROPOSED UTILITIES TO WITHIN FIVE (5) FEET OF THE BUILDING TO A LOCATION COORDINATED WITH THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS. THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES WITHIN FIVE (5) FEET AND INSIDE THE BUILDING OR UNDER SLAB.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH FAIRPOINT COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.
3. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER, THE TELECOMMUNICATIONS SERVICE WITH FAIRPOINT COMMUNICATIONS, AND THE CABLE SERVICE WITH TIME WARNER CABLE. ALL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR UTILITY COMPANY STANDARDS, WHICHEVER IS MORE STRINGENT.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
6. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.
8. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. A 12 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
9. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOBSITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER, AND AFFECTED BUSINESSES.
10. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL SERVICES IN CONDUIT TO SITE LIGHTING, COMPLYING WITH APPLICABLE CODES. COORDINATE WITH OWNER, SITE ELECTRICAL, ARCHITECTURAL AND CMP PLANS.
11. ALL SANITARY SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT. ALL SANITARY SERVICES AND APPURTENANCES TO BE ABANDONED SHALL BE PROPERLY RECORDED WITH PORTLAND PUBLIC WORKS ENGINEERING DEPARTMENT. A DIGITAL VIDEOTAPE SHALL BE MADE OF SANITARY SEWER SYSTEMS TO BE UTILIZED PRIOR TO CONSTRUCTION; UPSTREAM PIPES INTENDED FOR ABANDONMENT SHALL BE INSPECTED TO VERIFY THAT THEY NO LONGER SERVE OTHER FACILITIES.

PERMITTING NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE SITE PLAN REVIEW PERMIT FROM THE CITY OF PORTLAND WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE ZONING ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

DIMENSIONAL REQUIREMENTS (IS-FBC ZONE)			
STANDARD	UN SUBDISTRICT REQUIRED	UT SUBDISTRICT REQUIRED	PROVIDED
MIN. LOT SIZE	NONE	NONE	19,787 SF
MIN. LOT AREA PER DWELLING UNIT	NONE	NONE	660 SF
FRONT YARD	MIN: 0 FT, MAX: 5 FT	MIN: 0 FT, MAX: 10 FT	APPROX. 1 FT ON HAMPSHIRE ST, VARIES ON FEDERAL ST 0 - 9 FT
MIN. SIDE YARD	5 Ft	10 FT	10 FT
MIN. REAR YARD	10 Ft	10 FT	10 FT
MAX. STRUCTURE HEIGHT	45 FT	65 FT + 12 FT BONUS	40 FT IN UN, 77 FT IN UT
MAX. IMPERVIOUS SURFACE	90%	90%	49%
PARKING	1 SPACE PER UNIT, FIRST 3 UNITS EXEMPT (27 SPACES)		66 ON-SITE SPACES 49 SPACES FOR VERDANTE + 17 SPACES FOR 312 CONGRESS STREET
BICYCLE PARKING	2 SPACES FOR EVERY 5 UNITS (12 SPACES)		12 SPACES IN BIKE ROOM + BIKE RACKS ALONG FEDERAL STREET

LEGEND

- EXISTING PROPERTY LINE
- PROJECT SITE BOUNDARY
- EXISTING SETBACK LINE
- PROPOSED EASEMENT
- 124 EXISTING MINOR CONTOUR
- 124 EXISTING MAJOR CONTOUR
- 124 PROPOSED CONTOUR
- SD EXISTING STORMDRAIN
- SD PROPOSED STORMDRAIN
- S EXISTING SANITARY SEWER
- S PROPOSED SANITRY SEWER
- W EXISTING WATER LINE
- W PROPOSED WATER LINE
- UD EXISTING UNDERDRAIN
- UD PROPSED UNDERDRAIN
- OHE EXISTING OVERHEAD ELECTRIC & TELEPHONE
- OHE PROPOSED OVERHEAD ELECTRIC & TELEPHONE
- UGE EXISTING UNDERGROUND ELECTRIC & TELEPHONE
- UGE PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- EXISTING CURB
- PROPOSED CURB
- PROPOSED FENCE
- SF SILT FENCE
- TP-A TEST PIT
- EXISTING VALVE
- PROPOSED VALVE
- EXISTING HYDRANT
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING DRAIN MANHOLE
- PROPOSED DRAIN MANHOLE
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- 30.20 EXISTING SPOT GRADE
- 30.20 PROPOSED SPOT GRADE
- SURVEY CONTROL POINT
- EXISTING MONUMENT
- EXISTING IRON PIPE
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED PAVEMENT
- PROPOSED BRICK

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NUMBER 12107
LICENSED PROFESSIONAL ENGINEER
Michael E Wielandt
P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 04-09-2018

NO.	DATE	APP'D BY
4	04-09-2018	MTW
3	03-06-2018	MTW
2	01-12-2018	MTW
1	12-22-2017	MTW

REVISIONS
1 SUBMITTED TO PLANNING BOARD FOR APPROVAL
2 UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS
3 REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED
4 REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS

565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102

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111 ELDERBERRY LANE
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TERRADYN CONSULTANTS, LLC

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
96 HAMPSHIRE STREET
PORTLAND, ME 04101

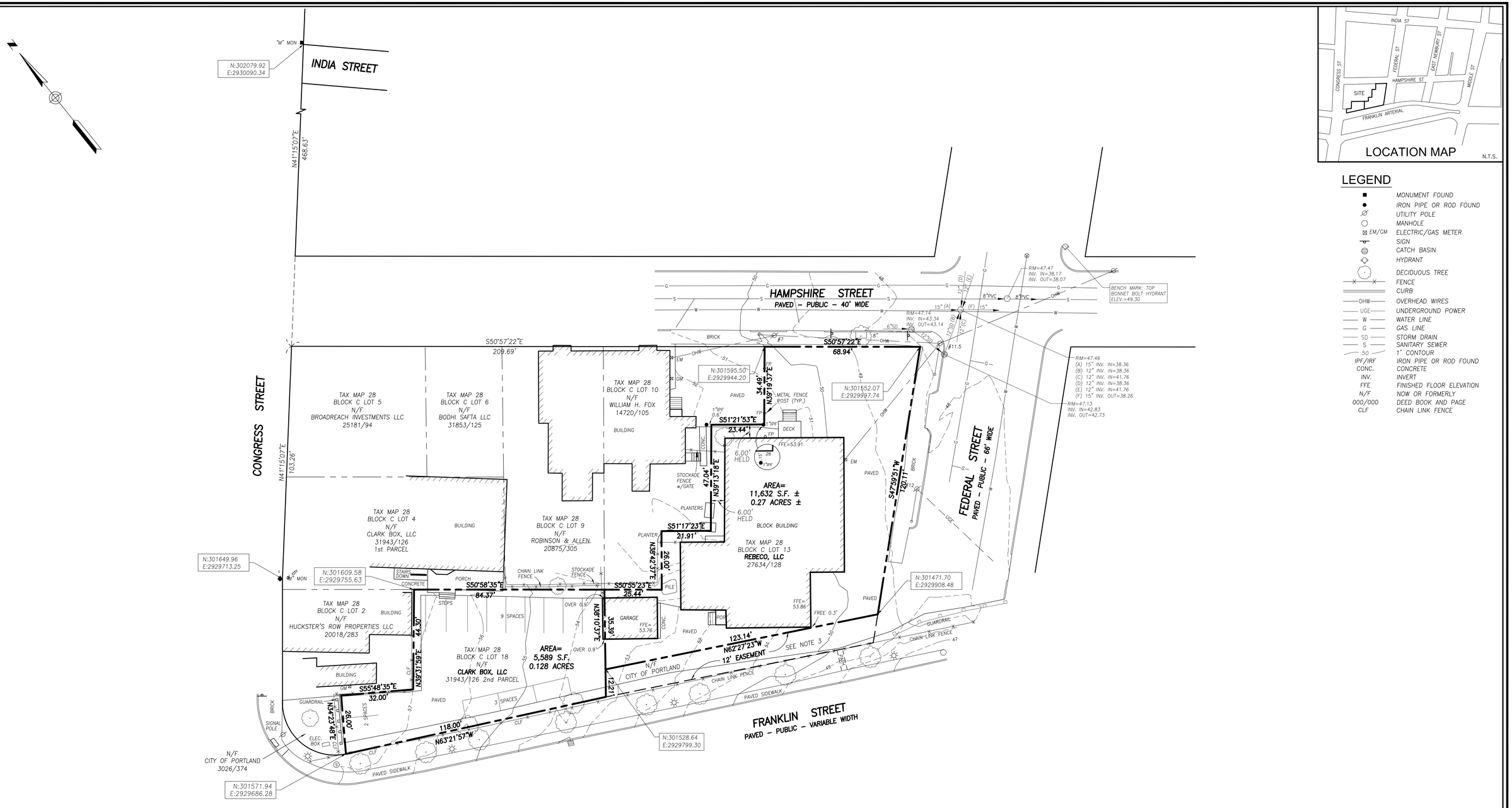
GENERAL NOTES & LEGEND

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	AS NOTED
DESIGNED:	ARF
JOB NO:	1728
FILE: 1562-COVER.DWG	

SHEET C-1.1

PRELIMINARY - NOT FOR CONSTRUCTION



LEGEND

■	MONUMENT FOUND
●	IRON PIPE OR ROD FOUND
⌀	UTILITY POLE
○	MANHOLE
⊠ EM/GM	ELECTRIC/GAS METER
	SIGN
	CATCH BASIN
	HYDRANT
	DECIDUOUS TREE
X X	FENCE
	CURB
OHW	OVERHEAD WIRES
UGE	UNDERGROUND POWER
W	WATER LINE
G	GAS LINE
SD	STORM DRAIN
S	SANITARY SEWER
50	1' CONTOUR
IPF/IRF	IRON PIPE OR ROD FOUND
CONC.	CONCRETE
INV.	INVERT
FFE	FINISHED FLOOR ELEVATION
N/F	NOW OR FORMERLY
000/000	DEED BOOK AND PAGE
CLF	CHAIN LINK FENCE

UTILITY NOTE

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

GRAPHIC SCALE

0 10' 20' 40' 80'

PLAN REFERENCES

1. *"EXISTING CONDITIONS SURVEY AT 290 CONGRESS STREET, PORTLAND, MAINE MADE FOR CASCO BAY ENGINEERING" MAY 6, 2014 BY OWEN HASKELL, INC.*

2. *"LAND TITLE SURVEY ON CONGRESS ST., HAMPSHIRE ST., FEDERAL ST., PORTLAND, MAINE FOR OAK LEAF TERRACE CO." SEPT. 28, 1995 REV. 1 3–17–02 BY OWEN HASKELL, INC.*

3. *"CITY OF PORTLAND PUBLIC WORKS DEPARTMENT CONTRACT DRAWINGS HAMPSHIRE STREET RECONSTRUCTION BRATTLE STREET RECONSTRUCTION PROJECT NO. 210–3100–430" DATED 11/16/01. ON FILE AT THE CITY OF PORTLAND.*

4. *"PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR RALPH J. TALIENTO & JOHN J. TALIENTO" DATED MARCH 24, 1978 BY H.I. & E.C. JORDAN COMPANY, PLAN FILE #77.*

5. *"ALTA/ACSM LAND TITLE SURVEY ON LAND LOCATED AT 316–316A CONGRESS STREET IN PORTLAND, MAINE" DATED 7/13/2000 BY NADEAU & LODGE, INC.*

GENERAL NOTES

1. *BEARINGS AND COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83. ELEVATIONS ARE BASED ON CITY DATUM. HORIZONTAL AND VERTICAL CONTROL DATA PROVIDED BY THE CITY OF PORTLAND AND TAKEN FROM PLAN REFERENCE 3.*

2. *HAMPSHIRE STREET AND FEDERAL STREET LINES ARE BASED ON MARKERS FOUND ON PLAN REFERENCE 3 AND CITY BLUE SHEETS. FRANKLIN STREET LINE WAS BASED ON COURSES AND DISTANCES IN THE LOCUS DEEDS.*

3. *THE 12 FOOT WIDE EASEMENT BENEFITS BOTH LOTS 18 & 13.*

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.

DATE

RANDY R. LOUBIER, PLS NO. 2407

REV. 1	2–17–17	ADD TM 28 BLOCK C LOT 18

BOUNDARY & TOPOGRAPHIC SURVEY

AT

#56 HAMPSHIRE STREET, PORTLAND, MAINE

MADE FOR

THE NEWHEIGHT GROUP

118 CONGRESS STREET, #401, PORTLAND, MAINE

OWEN HASKELL, INC.

PROFESSIONAL LAND SURVEYORS

390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774–0424

Drawn By RS	Date	Job No.
Trace By JLW	JANUARY 27, 2017	2017–008P
Check By RRL	Scale	Drwg. No.
Book No. FILE	1" = 20'	1

HAMPSHIRE STREET

PAVED - PUBLIC - 40' WIDE

FEDERAL STREET

PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET

PAVED - PUBLIC - VARIABLE WIDTH

REMOVE AND REPAIR PAVEMENT, SEE DETAIL

REMOVE EXISTING SEWER SERVICE. CAP AND ABANDON PORTION OF SEWER SERVICE REMAINING IN HAMPSHIRE STREET

APPROXIMATE LOCATION OF EXISTING 1" WATER SERVICE. RETIRE EXISTING 1" SERVICE

ALTER AND ADJUST CATCH BASIN

RIM=47.46
(A) 15" INV. IN=38.36
(B) 12" INV. IN=38.36
(C) 12" INV. IN=41.76
(D) 12" INV. IN=38.36
(E) 12" INV. IN=41.76
(F) 15" INV. OUT=38.26

RIM=47.14
INV. IN=43.34
INV. OUT=43.14

ALTER AND ADJUST CATCH BASIN

RIM=47.13
INV. IN=42.83
INV. OUT=42.73

REMOVE METAL FENCE POSTS, TYP. OF 3

REMOVE ALL ON-SITE PAVEMENT

REMOVE BRICK SIDEWALK AND CURB, TRENCH FOR UNDERGROUND UTILITIES, TYP.

RELOCATE EXISTING OVERHEAD UTILITIES UNDERGROUND

SAWCUT ALONG PROPERTY LINE AND REMOVE PAVEMENT FROM LOT 13

REMOVE OVERHEAD UTILITIES AND METER

REMOVE PORTION OF STOCKADE FENCE ON LOT 13

MOVE PLANTERS, COORDINATE WITH ABUTTER

REMOVE STOCKADE FENCE, APPROX. 100 LF

REMOVE CHAIN LINK FENCE, 42 LF

RELOCATE STEPS

REMOVE UTILITY POLE, TYP. OF 3

CONNECT EXISTING UGE SERVICE TO PROPOSED UGE UTILITIES, SEE UTILITY PLAN

REMOVE TREES, TYP. OF 10

REMOVE CHAIN LINK FENCE, 44 LF

REMOVE GUARDRAIL

REMOVE CHAIN LINK FENCE, 297 LF

REMOVE GUARDRAIL

TAX MAP 28
BLOCK C LOT 5
N/F
BROADREACH INVESTMENTS LLC
25181/94

TAX MAP 28
BLOCK C LOT 6
N/F
BODHI SAFTA LLC
31853/125

TAX MAP 28
BLOCK C LOT 10
N/F
WILLIAM H. FOX
14720/105

TAX MAP 28
BLOCK C LOT 4
N/F
CLARK BOX, LLC
31943/126
1st PARCEL

TAX MAP 28
BLOCK C LOT 9
N/F
ROBINSON & ALLEN
20875/305

TAX MAP 28
BLOCK C LOT 2
N/F
HUCKSTER'S ROW PROPERTIES LLC
20018/283

TAX MAP 28
BLOCK C LOT 18
N/F
CLARK BOX, LLC
31943/126 2nd PARCEL
AREA= 5,589 SF, 0.128 ACRES

TAX MAP 28
BLOCK C LOT 13
REBECO, LLC
27634/128
AREA= 11,632 SF ±, 0.27 ACRES ±

N/F
CITY OF PORTLAND
3026/374

N/F
NEWHEIGHT VENTURES II, LLC

BUILDING

RAZE BUILDING
GARAGE
FFE= 53.76

RAZE BUILDING

FFE=53.91

FFE= 53.86

DECK

PAVED

PAVED SIDEWALK

CHAIN LINK FENCE

STOCKADE FENCE

METAL FENCE POST (TYP.)

STOCKADE FENCE w/GATE

CONCRETE

STAIRS DOWN

PORCH

STEPS

PLANTERS

PLANTER

PILE

CONC.

POR.

PATH

GUARDRAIL

9 SPACES

3 SPACES

2 SPACES

1"IPF 0.6'

1"IPF

6.00' HELD

6.00' HELD

OVER 0.9'

OVER 0.9'

FREE 0.3'

SEE NOTE 3

"M" MON

ELEC. BOX

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12067
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 04-09-2018

NO.	DATE	REVISIONS	APP'D BY
4	04-09-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS.	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
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www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
59 HAMPSHIRE STREET
PORTLAND, ME 04101

EXISTING CONDITIONS & DEMOLITION PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-2.2

HAMPSHIRE STREET

PAVED - PUBLIC - 40' WIDE

GRID NORTH

26'

VERTICAL GRANITE CURB

RECONSTRUCT BRICK SIDEWALK AND RE-SET GRANITE CURB; MATCH EXISTING CURB LINE. RE-USE THE BEST PIECES OF GRANITE CURB FROM HAMPSHIRE AND FEDERAL STREETS.

RELOCATE STOP SIGN

7' TIPDOWN

24" WIDE CAST IRON DETECTABLE WARNING STRIP

FLUSH GRANITE CURB

7' WIDE BRICK SIDEWALK

BRICK

8'R

4' WIDE PAVER WALKWAY, SEE DETAIL

3.5'

7' TIPDOWN

10'R

RECONSTRUCT BRICK SIDEWALK & SET NEW GRANITE CURB.

15 MINUTE PARKING AND LOADING SIGN, TYP.

10'R

UP 50 FT PARALLEL TO HAMPSHIRE 45' HEIGHT LIMIT

50'

7'

24'

6.1'

5'

10'R

VERTICAL GRANITE CURB

10'R

UP 50 FT PARALLEL TO HAMPSHIRE 45' HEIGHT LIMIT 65' + 12' BONUS

BRICK

25'

43'

7' TIPDOWN

BUILDING MOUNTED LIGHT, TYP. OF 7

OVERHEAD DOOR

1' WIDE BITUMINOUS STRIP WITH 1" LIP

18'

7.6'

7' TIPDOWN

11' WIDE BRICK SIDEWALK

29'

3 GRANITE STEPS

MH PAVED SIDEWALK

BUILDING OVERHANG OR DECK ON UPPER FLOORS, TYP.

2'X2' PAVERS

PATIO

5.7'

22'

PAVED SIDEWALK

18' FOR EXISTING PARKING SPACES

FEDERAL STREET

PAVED - PUBLIC - 66' WIDE

TAX MAP 28
BLOCK C LOT 5
N/F
BROADREACH INVESTMENTS LLC
25181/94

TAX MAP 28
BLOCK C LOT 6
N/F
BODHI SAFTA LLC
31853/125

TAX MAP 28
BLOCK C LOT 10
N/F
WILLIAM H. FOX
14720/105

BUILDING

PAVED

1"IPF
0.6'

CONC.

STOCKADE FENCE w/GATE

BRICK

RETAIL
1535 SF
1721 GSF

LOBBY

ELEV.

UP

4'

GENERATOR

WATER HEATER ROOM

MAIL

TRASH

BIKES

BARRIER FREE PARKING SIGN

ELEC.

SPRINK.

21

8'

8'

10' SETBACK

MECHANICAL PARKING
3 LEVELS - 26 SPACES

8.5' TYP.

19'3" TYP.

TAX MAP 28
BLOCK C LOT 4
N/F
CLARK BOX, LLC
31943/126
1st PARCEL

BUILDING

TAX MAP 28
BLOCK C LOT 9
N/F
ROBINSON & ALLEN
20875/305

10' SETBACK

PROPOSED FENCE

BARRIER FREE PARKING SIGN

STANDARD PARKING SPACES (9' x 18') TYP.

10 12 14 16

BIKES

UP

DN

10'R

TAX MAP 28
BLOCK C LOT 13
REBECO, LLC
27634/128
AREA= 11,632 SF ± 0.27 ACRES ±

66 PARKING SPACES

STAIRS DOWN

RELOCATE STEPS

CONCRETE

PORCH

MON

TAX MAP 28
BLOCK C LOT 2
N/F
HUCKSTER'S ROW PROPERTIES LLC
20018/283

BUILDING

8' 8'

1 2 3 4

5 6 7 8 9 11 13 15

11'

12'

OVERHEAD DOOR

10' SETBACK

35' SURFACE PARKING SETBACK LINE

MECHANICAL PARKING
3 LEVELS - 19 SPACES

N/F
NEWHEIGHT VENTURES II, LLC

NO PARKING

20.6'

18.8'

TAX MAP 28
BLOCK C LOT 18
N/F
CLARK BOX, LLC
31943/126 2nd PARCEL
AREA= 5,589 SF, 0.128 ACRES

STOCKADE FENCE

BUILDING

25'

55'

17 COMP

18 COMP

15'

19 20

7'

SNOW STORAGE

15' BONUS FLOOR BUILDING STEPBACK

COMPACT PARKING SPACES (9' x 15') TYP.

BARRIER FREE PARKING SIGN

8'x21' ADA PARALLEL PARKING SPACE WITH 5' WIDE ACCESSIBLE AISLE

N/F
CITY OF PORTLAND
3026/374

PROPOSED FENCE LOCATION, SEE LANDSCAPE PLAN

PAVED SIDEWALK

FRANKLIN STREET

PAVED - PUBLIC - VARIABLE WIDTH

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12097
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

DATE: 04-09-2018

NO.	DATE	REVISIONS	BY
4	04-09-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS.	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2017	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	APP'D

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
P.O. BOX 339
111 ELDERBERRY LANE
NEW GLOUCESTER, ME 04260
565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
86 HAMPSHIRE STREET
PORTLAND, ME 04101
SITE PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-3.0

HAMPSHIRE STREET

PAVED - PUBLIC - 40' WIDE

FEDERAL STREET

PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET

PAVED - PUBLIC - VARIABLE WIDTH

GRID NORTH

ADJUST CATCH BASIN
REPLACE FRAME & GRADE

6" ROOF DRAIN INV. IN TO
EXISTING STORM DRAIN= 42.85'

RIM=47.46
(A) 15" INV. IN=38.36
(B) 12" INV. IN=38.36
(C) 12" INV. IN=41.76
(D) 12" INV. IN=38.36
(E) 12" INV. IN=41.76
(F) 15" INV. OUT=38.26

RIM=47.47
INV. IN=38.17
INV. OUT=38.07

CORE NEW INVERT IN FOR
12" SD FROM OIL/WATER
SEPARATION, INV=38.25

RIM=47.14
INV. IN=43.34
INV. OUT=43.14

ALTER & ADJUST
CATCH BASIN
REPLACE FRAME
& GRADE

RIM=47.13
INV. IN=42.83
INV. OUT=42.73

6" ROOF DRAIN
INV = 43.0'

RETAIL
1535 SF
1721 GSF

LOBBY

GENERATOR

WATER
HEATER
ROOM

ELEV.

MAIL

TRASH

BIKES

ELEC.

SPRINK.

BRICK

PAVED

BRICK

BUILDING

CONC.

STOCKADE
FENCE
w/GATE

1"IPF
0.6'

12" SD
L=121', S=0.045

2" SUMP PUMP
DISCHARGE

DMH-1
RIM ELEV 49.50
INV IN (12") 44.59
INV IN (SUMP PUMP) 45.50
INV IN (SUMP PUMP) 45.50
INV OUT 44.49

12" SD
L=64', S=0.01

OIL WATER
SEPARATOR

STABILIZED CONSTRUCTION
ENTRANCE

DMH-2
RIM ELEV 48.72
INV IN (12") 43.85
INV OUT 43.75

CB-1
RIM ELEV 50.09
INV OUT 45.09

12" SD
L=50', S=0.01

2" SUMP PUMP
DISCHARGE

THREE STEPS DOWN
TOP OF STEP 49.14
BOTTOM OF STEP 47.39

NO PARKING

PATIO

PAVED SIDEWALK

STAIRS
DOWN

CONCRETE

PORCH

STOCKADE FENCE

EXISTING
PARK

SF

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E.
TADEMA-WIELANDT
No. 12867
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 04-09-2018

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NEW GLOUCESTER, ME 04260

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
96 HAMPSHIRE STREET
PORTLAND, ME 04101

GRADING, DRAINAGE & EROSION CONTROL PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-4.0

EROSION AND SEDIMENT CONTROL PLAN

Pre-Construction Phase
A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 mrsa § 480-b. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

BMP Construction Phase
A. Sediment barriers. Prior to the beginning of any construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the proposed disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

B. Construction entrance: Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

C. Riprap: Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate. Maintain temporary riprap, such as temporary check dams until the disturbed area is permanently stabilized.

D. Temporary stabilization. Stabilize with temporary seeding, mulch, or other non-erodable cover any exposed soils that will remain unworked for more than 14 days except, stabilize areas within 100 feet of a wetland or waterbody within 7 days or prior to a predicted storm event, whichever comes first. If hay or straw mulch is used, the application rate must be 2 bales (70-90 pounds) per 1000 sf or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90% of the ground surface. Hay mulch must be kept moist or anchored to prevent wind blowing. An erosion control blanket or mat shall be used at the base of grassed waterways, steep slopes (15% or greater) and on any disturbed soil within 100 feet of lakes, streams and wetlands. Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading. On large projects this should be accomplished by phasing the operation and completing the first phase up to final grading and seeding before starting the second phase, and so on.

E. Vegetated waterway. Upon final grading, the disturbed areas shall be immediately seeded to permanent vegetation and mulched and will not be used as outlets until a dense, vigorous vegetative cover has been obtained. Once soil is exposed for waterway construction, it should be immediately shaped, graded and stabilized. Vegetated waterways need to be stabilized early during the growing season (prior to september 15). If final seeding of waterways is delayed past september 15, emergency provisions such as sod or riprap may be required to stabilize the channel. Waterways should be fully stabilized prior to directing runoff to them.

Permanent stabilization defined
A. Seeded areas. For seeded areas, permanent stabilization means an 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

B. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

C. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

D. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

E. Agricultural use. For construction projects on land used for agricultural purposes (e.G., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

F. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

G. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

General Construction Phase
The following erosion control measures shall be followed by the contractor throughout construction of this project:

A. All topsoil shall be collected, stockpiled, seeded with rye at 3 pounds/1,000 sf and mulched, and reused as required. Silt fencing shall be placed down gradient from the stockpiled loam. Stockpile to be located by designation of the owner and inspecting engineer.

B. The inspecting engineer at his/her discretion, may require additional erosion control measures and/or supplemental vegetative provisions to maintain stability of earthworks and finish graded areas. The contractor shall be responsible for providing and installing any supplemental measures as directed by the inspecting engineer. Failure to comply with the engineer's directions will result in discontinuation of construction activities.

C. Erosion control mesh shall be applied in accordance with the plans over all finish seeded areas as specified on the design plans.

D. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.

E. All erosion, and sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved erosion and sediment control plan.

F. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.

G. Areas shall be scarified to a minimum depth of 3 inches prior to placement of topsoil.

H. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.

I. All fills shall be placed and compacted in layers not to exceed 8 inches in thickness.

J. Except for approved landfills or non-structural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory lifts.

K. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

L. Fill shall not be placed on a frozen foundation.

M. Seeps or springs encountered during construction shall be handled appropriately.

N. All graded areas shall be permanently stabilized immediately following finished grading.

O. Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

Permanent vegetation
Permanent vegetative cover should be established on disturbed areas where permanent, long lived vegetative cover is needed to stabilize the soil, to reduce damages from sediment and runoff, and to enhance the environment.

Seedbed preparation
A. Grade as feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.

B. Apply limestone and fertilizer according to soil tests such as those offered by the university of maine soil testing laboratory. Soil sample mailers are available from the local cooperative extension service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 800 pounds per acre or 18.4 pounds per 1,000 square feet using 10-20-20 (n-p2o5-k2o) or equivalent. Apply ground limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of 3 tons per acre (138 lb. Per 1,000 sq. Ft).

C. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow or other suitable equipment. The final harrowing operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.D. Remove from the surface all stones 2 inches or larger in any dimension. Remove all other debris, such as wire, cable, tree roots, concrete, clods, lumps or other unsuitable material.

E. Inspect seedbed just before seeding. If traffic has left the soil compacted; the area must be tilled and firmed as above.

F. Permanent seeding should be made 45 days prior to the first killing frost or as a dormant seeding with mulch after the first killing frost and before snowfall. When crown vetch is seeded in later summer, at least 35% of the seed should be hard seed (unscarified). If seeding cannot be done within the seeding dates, mulch according to the temporary mulching bmp and overwinter stabilization and construction to protect the site and delay seeding until the next recommended seeding period.

G. Following seed bed prepartation, swale areas, fill areas and back slopes shall be seeded at a rate of 3 lbs./1,000 s.F. With a mixture of 35% creeping red h. Fescue, 6% red top, 24% kentucky bluegrass, 10% perennial ryegrass, 20% annual ryegrass and 5% white dutch clover.

I. Areas which have been temporarily or permanently seeded shall be mulched immediately following seeding.

J. Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.

Winter construction phase
If an area is not stabilized with temporary or permanent measures by november 15, then the site must be protected with additional stabilization measures.

A. Permanent stabilization consists of at least 90% vegetation, pavement/gravel base or riprap.

B. Do not expose slopes or leave slopes exposed over the winter or for any other extended time of work suspension unless fully protected with mulch.

C. Apply hay mulch at twice the standard rate (150 lbs. Per 1,000 sf). The mulch must be thick enough such that the ground surface will not be visible and must be anchored.

D. Use mulch and mulch netting or an erosion control mulch blanket or all slopes greater than 8 % or other areas exposed to direct wind.

E. Install an erosion control blanket in all drainageways (bottom and sides) with a slope greater than 3 %.

F. See the vegetation measures for more information on seeding dates and types.

G. Winter excavation and earthwork shall be completed so that no more than 1 acre of the site is without stabilization at any one time.

H. An area within 100 feet of a protected natural resource must be protected with a double row of sediment barrier.

I. Temporary mulch must be applied within 7 days of soil exposure or prior to any storm event, but after every workday in areas within 100 feet from a protected natural resource.

J. Areas that have been brought to final grade must be permanently mulched that same day.

K. If snowfall is greater than 1 inch (fresh or cumulative), the snow shall be removed from the areas due to be seeded and mulched.

L. Loam shall be free of frozen clumps before it is applied.

M. All vegetated ditch lines that have not been stabilized by november 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department.

Maintenance and inspection phase
A. Minimum erosion control measures will need to be implemented and the applicant will be responsible to maintain all components of the erosion control plan until the site is fully stabilized. However, based on site and weather conditions during construction, additional erosion control measures may need to be implemented. All areas of instability and erosion must be repaired immediately during construction and need to be maintained until the site is fully stabilized or vegetation is established. A construction log must be maintained for the erosion and sedimentation control inspections and maintenance

B. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: bmps that need to be maintained; location(s) of bmps that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional bmps are needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

Dewatering
A dewatering plan is needed to address excavation de-watering following heavy rainfall events or where the excavation may intercept the groundwater table during construction. The collected water needs treatment and a discharge point that will not cause downgradient erosion and offsite sedimentation or within a resource. Please follow the details of such a plan.

Housekeeping

1. Spill prevention. Controls must be used to prevent pollutants from construction and waste materials stored on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop, and implement as necessary, appropriate spill prevention, containment, and response planning measures.

   NOTE: Any spill or release of toxic or hazardous substances must be reported to the Department. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the Department's website at : http://www.maine.gov/dep/spills/emergspillresp/

2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

4. Debris and other materials. Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

   NOTE: To prevent these materials from becoming a source of pollutants, construction and post-construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

5. Excavation de-watering. Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the Engineer and Owner.

   NOTE: Dewatering controls are discussed in the "Maine Erosion and Sediment Control BMPs, Maine Department of Environmental Protection."

6. Authorized Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

   (a) Discharges from firefighting activity;

   (b) Fire hydrant flushings;

   (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);

   (d) Dust control runoff in accordance with permit conditions and Section 3 above;

   (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;

   (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;

   (g) Uncontaminated air conditioning or compressor condensate;

   (h) Uncontaminated groundwater or spring water;

   (i) Foundation or footer drain-water where flows are not contaminated;

   (j) Uncontaminated excavation dewatering (see requirements in Section 5 above);

   (k) Potable water sources including waterline flushings; and

   (l) Landscape irrigation.

7. Unauthorized non-stormwater discharges . The following non-stormwater discharges are prohibited:

   (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;

   (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;

   (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and

   (d) Toxic or hazardous substances from a spill or other release.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12134
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 03-06-2018

NO.	DATE	REVISIONS	BY	APP'D
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW	MTW

565 CONGRESS STREET
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PORTLAND, ME 04102

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TERRADYN
CONSULTANTS, LLC

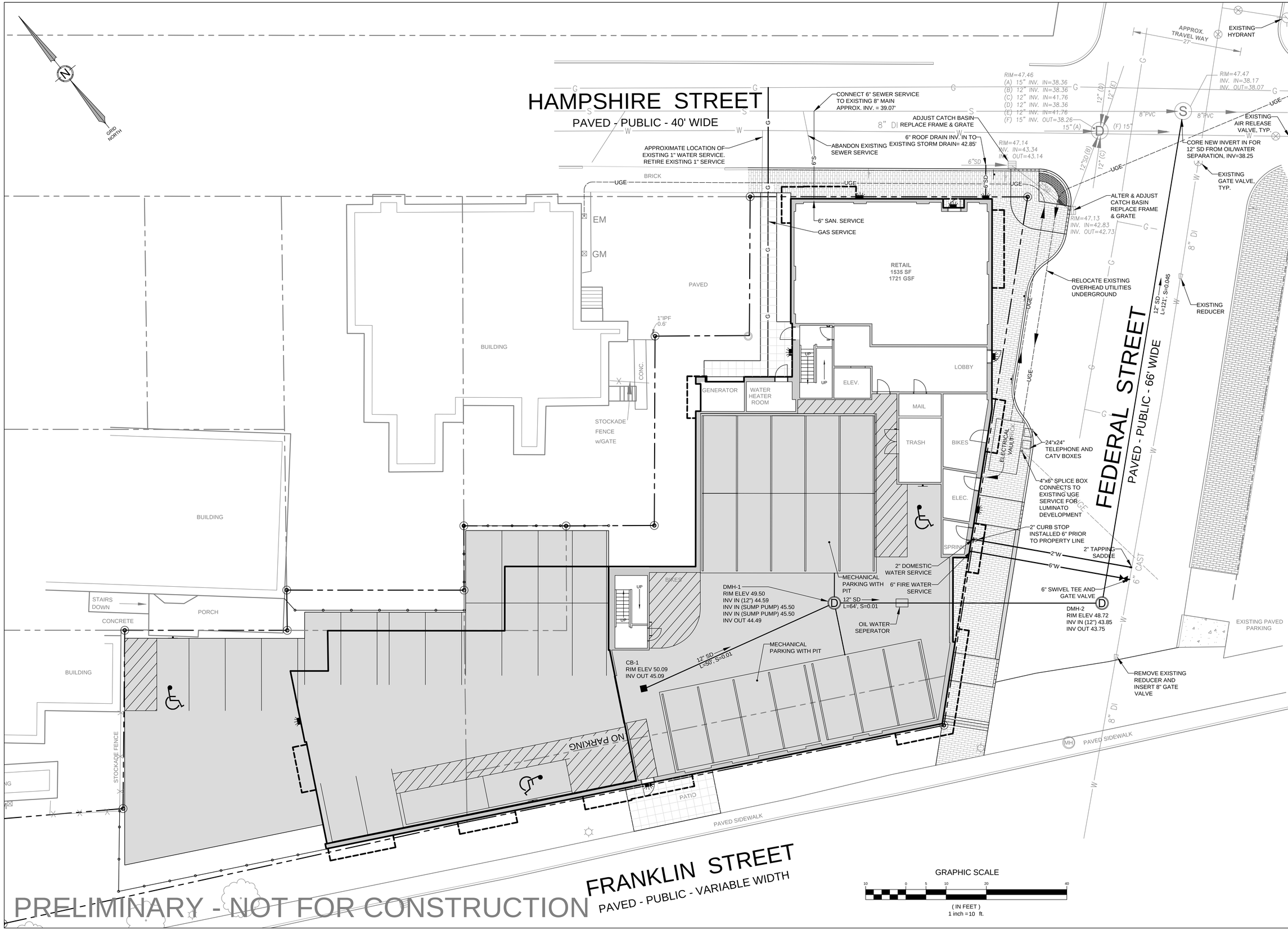
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
EROSION & SEDIMENT CONTROL NOTES

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	N.T.S.
DESIGNED:	ARF
JOB NO:	1728
FILE: 1704-DETAILS.DWG	

SHEET C-4.1



PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 11587
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 04-09-2018

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OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
UTILITY PLAN

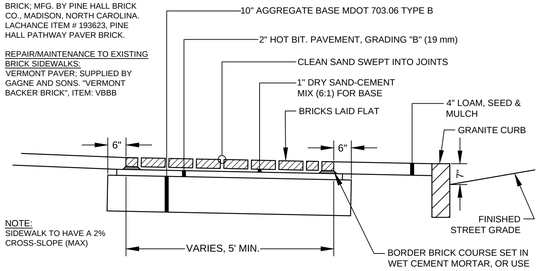
PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-5.0

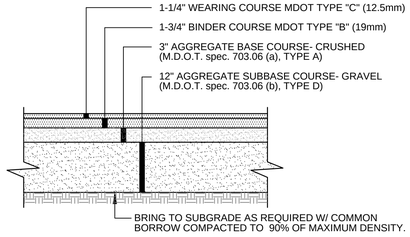
BRICKS TO BE USED:

NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS, "VERMONT BACKER BRICK", ITEM: VBBB

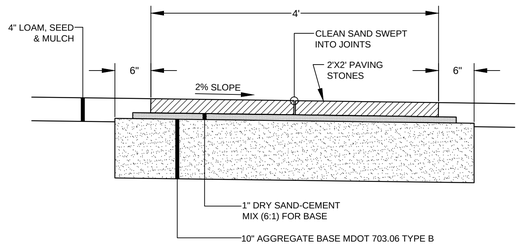


BRICK SIDEWALK WITH BITUMINOUS BASE
NOT TO SCALE



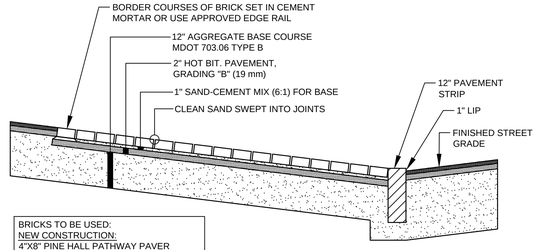
NOTES:
1. MDOT TYPE D AGGREGATE GRADATION SHALL BE MODIFIED FOR A MAXIMUM 4" STONE AND LIMIT #200 SIEVE TO 5% PASSING.

TYP. DRIVEWAY PAVEMENT SECTION
NOT TO SCALE



PAVER NOTES:
PAVING STONES: LEXINGTON PARK TILE BY GENESTE CONCRETE.
COLOR: GRANITE BLEND
LAYING PATTERN: STACK BOND

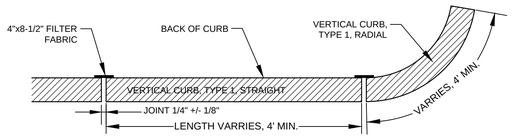
PAVER WALKWAY
NOT TO SCALE



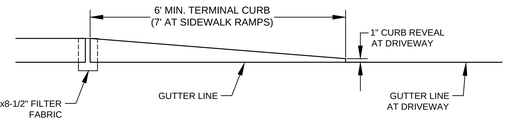
BRICKS TO BE USED:
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK MFG. BY PINE HALL BRICK CO., MADISON, NC, LACHANCE ITEM # 193623

REPAIR/MAINTENANCE TO EXISTING:
VERMONT BACKER BRICK, SUPPLIED BY GAGNE & SONS, ITEM # VBBB

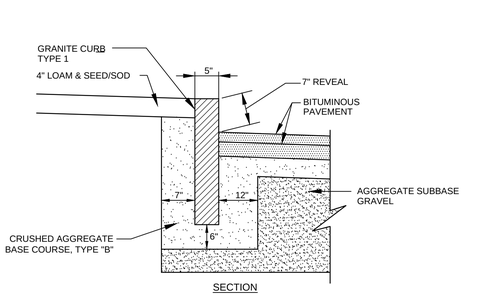
BRICK DRIVEWAY APRON
NOT TO SCALE



PLAN VIEW



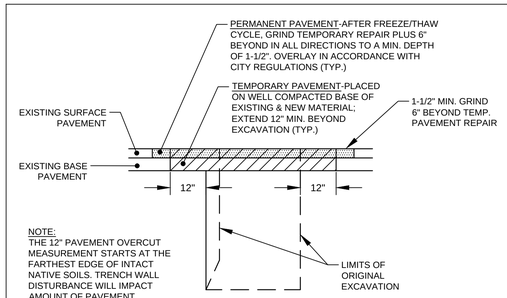
TERMINAL CURB PROFILE



SECTION

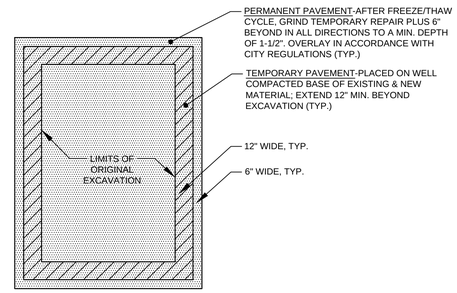
NOTES:
1. MIN. LENGTH OF STRAIGHT CURB STONES: 4', MAX. LENGTH: 8'
2. CIRCULAR CURB REQ. FOR RADIUS LESS THAN 50'
3. BASE GRAVEL SHALL BE COMPACTED TO A FIRM EVEN SURFACE PRIOR TO SETTING OF CURB.

VERTICAL GRANITE CURB
NOT TO SCALE

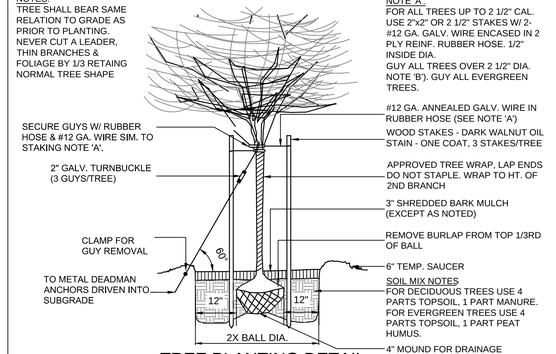


NOTE:
THE 12" PAVEMENT OVERCUT MEASUREMENT STARTS AT THE FARTHEST EDGE OF INTACT NATIVE SOILS. TRENCH WALL DISTURBANCE WILL IMPACT AMOUNT OF PAVEMENT REMOVAL REQUIRED

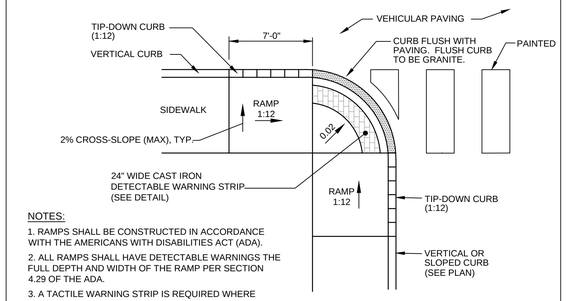
TYP. EXCAVATION IN CITY RIGHT OF WAY
NOT TO SCALE



PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR
NOT TO SCALE

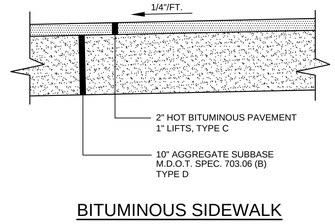


TREE PLANTING DETAIL
NOT TO SCALE

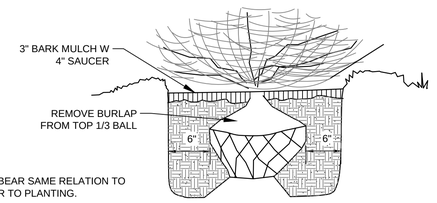


NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL RAMPS SHALL HAVE DETECTABLE WARNINGS THE FULL DEPTH AND WIDTH OF THE RAMP PER SECTION 4.29 OF THE ADA.
3. A TACTILE WARNING STRIP IS REQUIRED WHERE RAMP ABUTS AN AREA USED BY VEHICLES.

HANDICAP RAMP AT ROAD INTERSECTION
NOT TO SCALE



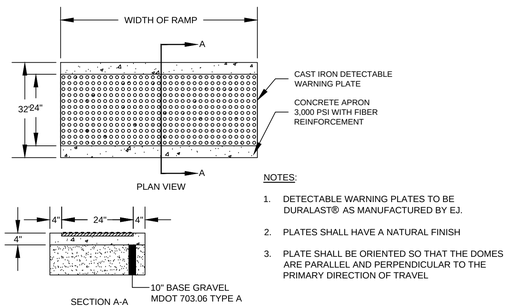
BITUMINOUS SIDEWALK
NOT TO SCALE



NOTE:
SHRUBS SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING.

SOIL MIX NOTES:
1. EVERGREEN: 4 PARTS TOPSOIL, 1 PART HUMUS
2. DECIDUOUS: 4 PARTS TOPSOIL, 1 PART MANURE

SHRUB PLANTING DETAIL
NOT TO SCALE



SECTION A-A

NOTES:
1. DETECTABLE WARNING PLATES TO BE DURALAST® AS MANUFACTURED BY EJ.
2. PLATES SHALL HAVE A NATURAL FINISH
3. PLATE SHALL BE ORIENTED SO THAT THE DOMES ARE PARALLEL AND PERPENDICULAR TO THE PRIMARY DIRECTION OF TRAVEL

DETECTABLE WARNING PLATE DETAIL
NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 10121
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 03-06-2018

NO.	DATE	REVISIONS	BY	APP'D
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW	MTW

TERRADYN CONSULTANTS, LLC
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565 CONGRESS STREET, SUITE 310, PORTLAND, ME 04102
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SHEET C-6.0

NOTES:

1. A FLEXIBLE PIPE TO MANHOLE CONNECTOR SHALL BE EMPLOYED IN THE CONNECTION OF ALL PIPE TO MANHOLE JUNCTIONS.

2. THE CONNECTOR SHALL BE KOR-N-SEAL AS MANUFACTURED BY NPC SYSTEMS, INC., OF MILFORD, NH OR EQUAL.

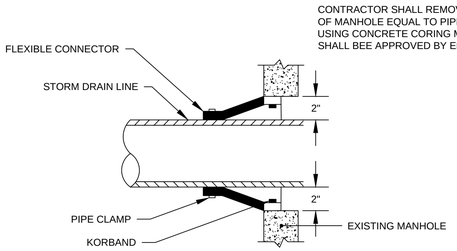
3. THE CONNECTOR SHALL BE THE SOLE ELEMENT RELIED ON TO ASSURE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO MANHOLE, NO ADHESIVES OR LUPRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTORS TO THE MANHOLE. THE RUBBER FOR THE CONNECTOR SHALL COMPLY TO ASTM C923 AND CONSIST OF EPDM AND ELASTOMERS KNOWN TO BE RESISTANT TO OZONE, WEATHER ELEMENTS, CHEMICALS, INCLUDING ACIDS, ALKALIS, ANIMAL AND VEGETABLE FATS, OILS AND PETROLEUM PROCUCTS FROM SPILLS.

4. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS, EXCLUDING THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND SHALL BE TORQUED BY A BREAK-AWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET AT 60/70 IN./LBS.

5. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER.

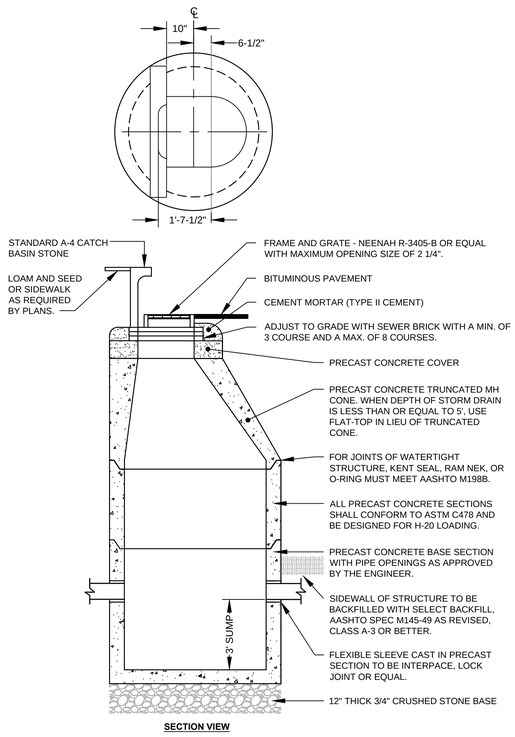
6. THE CONNECTOR SHALL BE OF A SIZE SPECIFICALLY DESIGNED FOR THE PIPE MATERIAL AND SIZE BEING UTILIZED ON THE PROJECT.

7. ALL CONNECTORS WHICH ARE CAPPED AWAITING PIPE INSTALLATION AT A LATER DATE MUST BE RESTRAINED.



CORE AND SEAL CONNECTION TO EXISTING STORM DRAIN MANHOLE

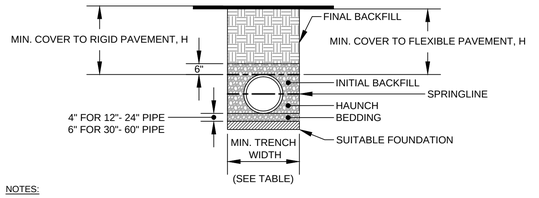
NOT TO SCALE



SECTION VIEW

CATCH BASIN - CURB INLET

NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

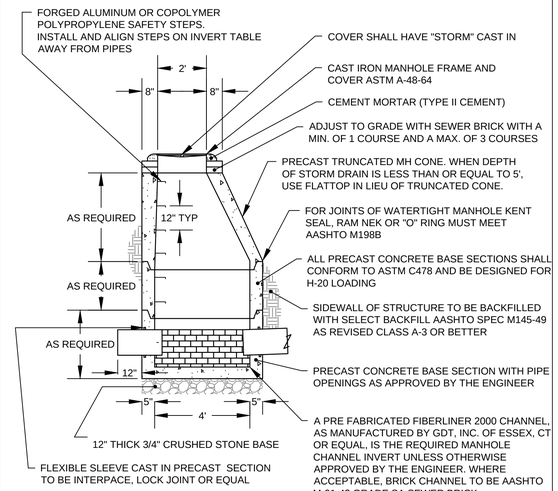
* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

7. INSULATION: RIGID INSULATION SHALL BE PROVIDED FOR PIPES WITH LESS THAN 4' OF COVER IN ACCORDANCE WITH THE FOLLOWING TABLE:

COVER OVER PIPE	INSULATION THICKNESS
12" - 24"	3"
24" - 36"	2"
36" - 48"	1"
48"+	NONE

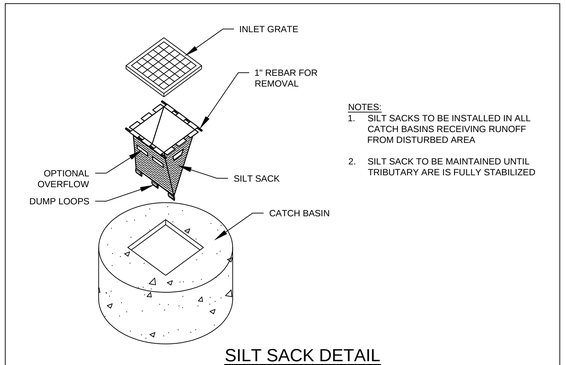
TYPICAL TRENCH DETAIL

NOT TO SCALE



4' DIAMETER PRECAST STORM DRAIN MANHOLE

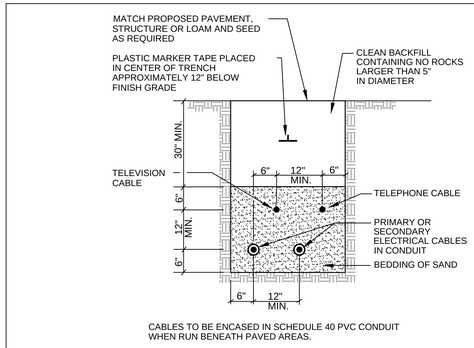
NOT TO SCALE



NOTES:
1. SILT SACKS TO BE INSTALLED IN ALL CATCH BASINS RECEIVING RUNOFF FROM DISTURBED AREA
2. SILT SACK TO BE MAINTAINED UNTIL TRIBUTARY ARE IS FULLY STABILIZED

SILT SACK DETAIL

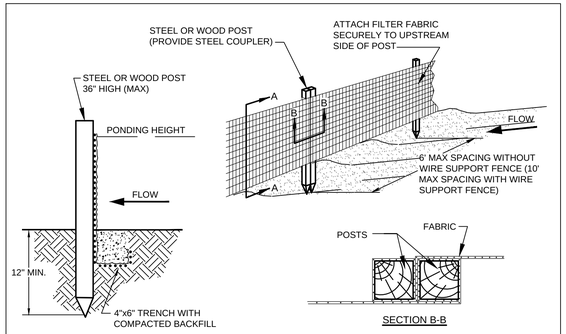
NOT TO SCALE



CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE

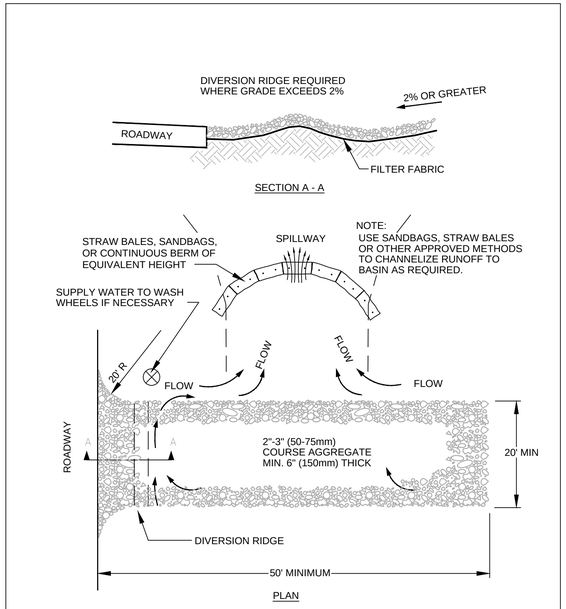


SECTION A-A

SECTION B-B

SILT FENCE

NOT TO SCALE



PLAN

NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12134
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 03-06-2018

NO.	DATE	REVISIONS	BY	APPD
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SHEET C-6.1

PLANT LIST

TREES & SHRUBS

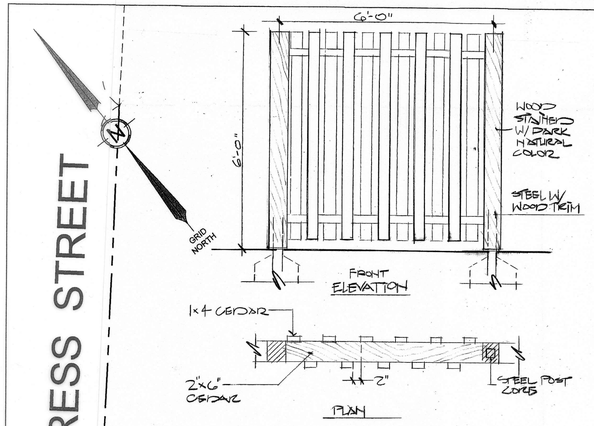
KEY	COMMON & BOTANICAL NAME	SIZE	ROOT	QTY	NOTES
A	STREETKEEPER HONEYLOCUST G. TRIACANTHOS Var. 'inermis' 'Streetkeeper'	2 ½ " Cal.	B&B	7	Trim for 8' clear under branches
B	JAPANESE STEWARTIA S. PSEUDOCAMELLIA	1 ½ " Cal.	B&B	1	
C	SHASTA VIBURNUM V. PLICATUM Var. TOMENTOSUM 'SHASTA'	3'-4' HT.	B&B	5	
D	CORNELIAN CHERRY CORNUS MAS	4' HT.	B&B	2	
E	NORTHERN BAYBERRY M. PENSYLVANICA	18-24" HT.	PTD	8	
F	FRAGRANT SUMAC RHUS AROMATICA 'Gro-Low'	#2	CONT	12	
G	SHASTA VIBURNUM V.PLICATUM VAR. Tomentosum 'Summer Snowflake'	#5	B&B	6	
H	GREEN CARPET JUNIPER J. SABINA	#3	CONT	14	

PERENNIALS

AA	SWITCH GRASS PANICUM VIRGATUM 'Cheyenne sky'	———	16	@18" O.C.
BB	SWITCH GRASS PANICUM VIRGATUM ' Shenandoah'	———	24	"
CC	DAYLILY VAR. HEMEROCALLIS	PTD	80	BLOOM IN JULY THRU SEPT 18" O.C.
DD	HOSTA 'BIG DADDY'	———	25	

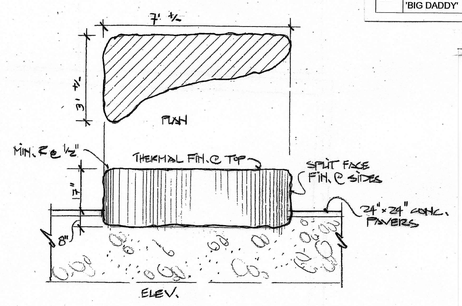
WOOD FENCE DETAIL

(1 / L-1) NTS



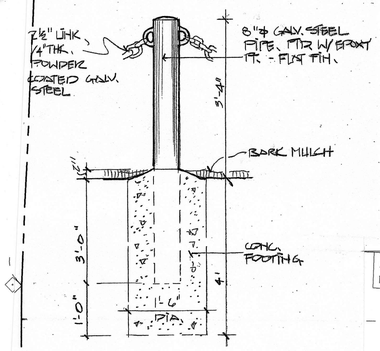
STONE BENCH DETAIL

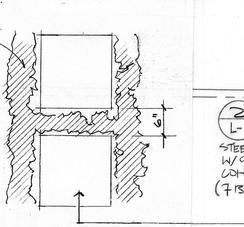
(3 / L-1) NTS



STEEL BOLLARD DETAIL

(2 / L-1)





PLANTING NOTES

1. The contractor shall supply all plants in quantities sufficient to complete the work shown on plan. Any discrepancies between quantities shown on plant list and those required by this drawing shall not entitle contractor to additional remuneration.
2. Any plant substitutions must be approved by the owner.
3. Any tree or shrub which comes over or under any utility shall be relocated on the site by the landscape architect.
4. All lawn areas to have 6" of topsoil unless noted otherwise.
5. All trees and shrubs shall be placed in the designated areas as shown on the plan and before planting shall be approved by the landscape architect.
6. The contractor shall relocate any tree or shrub as directed by the landscape architect.
7. All plant material installed shall meet the specifications of the American Standard for Nursery Stock (latest edition) as set forth by the American Association of Nurserymen.
8. The landscape contractor shall replace or repair to original condition any and all utilities, paving, curbing, etc., damaged as a result of their operations at no additional cost to the owner.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

REGISTERED LANDSCAPE ARCHITECT ANTHONY F. MARCH No. 7 4.9.18 State of Maine

DATE: 04-09-2018

NO.	DATE	REVISIONS	APPD BY
4	04-09-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
P.O. BOX 339
11 FOREDAY LANE
NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102
(207) 926-5111

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
LANDSCAPE PLAN

PREPARED FOR
NEWHEIGHT GROUP
1 & CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	L-1

HAMPSHIRE STREET

PAVED - PUBLIC - 40' WIDE

GRID NORTH

TAX MAP 28
BLOCK C LOT 5
N/F
BROADREACH INVESTMENTS LLC
25181/94

TAX MAP 28
BLOCK C LOT 6
N/F
BODHI SAFTA LLC
31853/125

TAX MAP 28
BLOCK C LOT 10
N/F
WILLIAM H. FOX
14720/105

BUILDING

1"IPF
0.6'

CONC.

STOCKADE
FENCE
w/GATE

BRICK

PAVED

RETAIL
B
960 GSF

RETAIL
A
868 GSF

LOBBY

MAIL

GENERATOR

WATER
HEATER
ROOM

TRASH

BIKES

ELEC.

BRICK

TAX MAP 28
BLOCK C LOT 4
N/F
CLARK BOX, LLC
31943/126
1st PARCEL

BUILDING

TAX MAP 28
BLOCK C LOT 9
N/F
ROBINSON & ALLEN
20875/305

STOCKADE
FENCE

STAIRS
DOWN

CONCRETE

PORCH

"M" MON

TAX MAP 28
BLOCK C LOT 13
REBECO, LLC
27634/128
AREA= 11,632 SF ±, 0.27 ACRES ±

SPRINK.

TAX MAP 28
BLOCK C LOT 2
N/F
HUCKSTER'S ROW PROPERTIES LLC
20018/283

BUILDING

STOCKADE FENCE

TAX MAP 28
BLOCK C LOT 18
N/F
CLARK BOX, LLC
31943/126 2nd PARCEL
AREA= 5,589 SF, 0.128 ACRES

BUILDING

N/F
NEWHEIGHT VENTURES II, LLC

NO PARKING

PATIO

MH

PAVED SIDEWALK

PAVED SIDEWALK

N/F
CITY OF PORTLAND
3026/374

PAVED SIDEWALK

FEDERAL STREET

PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET

LIGHT FIXTURE TABLE

LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
A	LED LNC	HUBBELL	LNC-9L-U-3K-2	6	10'	WALL
B	GEOPAK SERIES SIZE 1 LED	HUBBELL	TRP1-12L-30-4K-4-U-BL	1	15'	WALL

NOTES:
1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
2. ONLY PROPOSED LIGHTING FIXTURES ARE MODELED
3. DEPRECIATION FACTOR FOR LED IS 0.90

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12697
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 12-22-2017

NO.	DATE	REVISIONS	APP'D BY
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
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565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102
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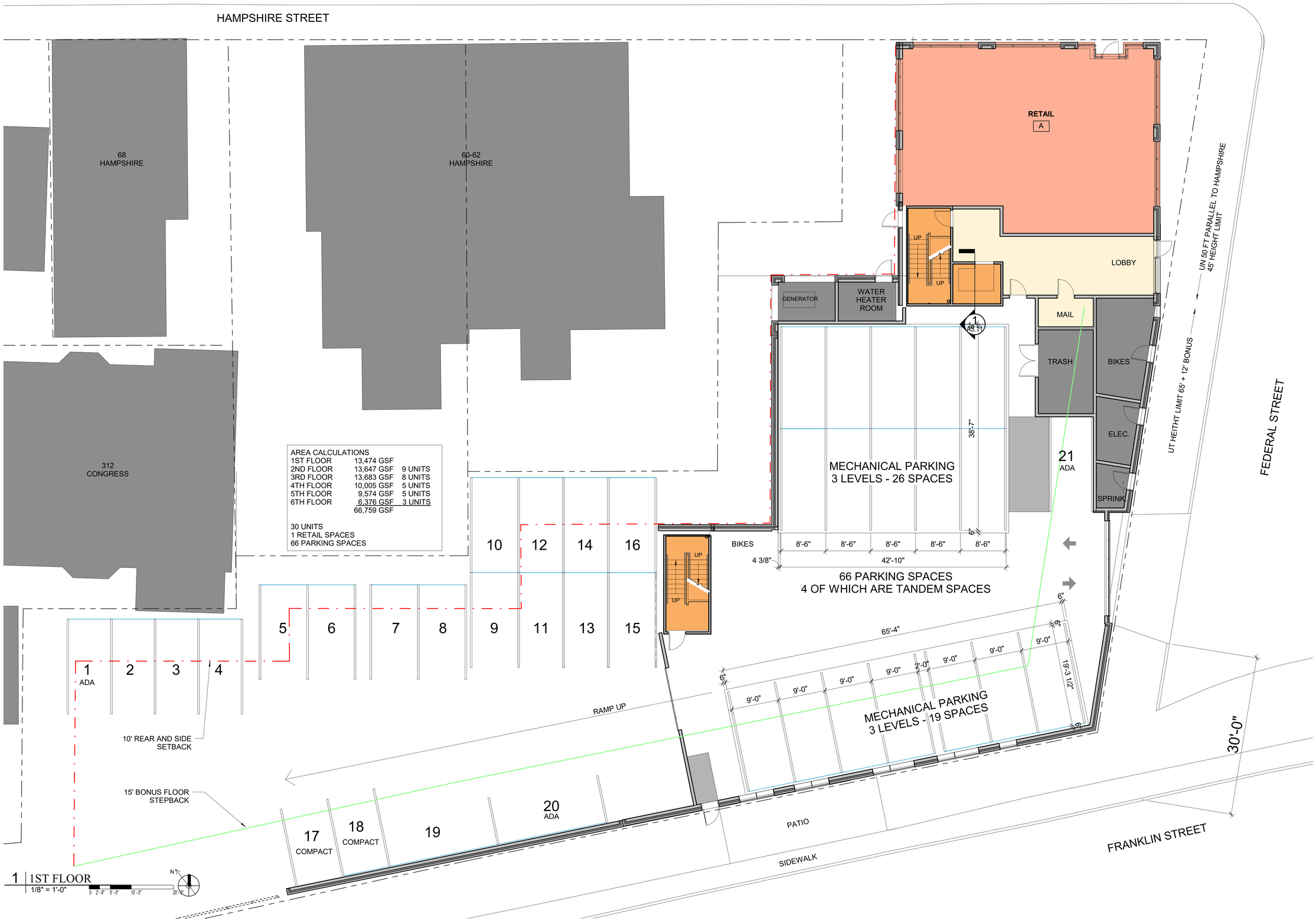
www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
96 HAMPSHIRE STREET
PORTLAND, ME 04101

PREPARED FOR
NEWHEIGHT GROUP
116 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	P-1

PHOTOMETRICS LIGHTING PLAN



AREA CALCULATIONS

1ST FLOOR	13,474 GSF	
2ND FLOOR	13,647 GSF	9 UNITS
3RD FLOOR	13,683 GSF	8 UNITS
4TH FLOOR	10,005 GSF	5 UNITS
5TH FLOOR	9,574 GSF	5 UNITS
6TH FLOOR	6,376 GSF	3 UNITS
	66,759 GSF	

30 UNITS
1 RETAIL SPACES
66 PARKING SPACES

Prepared For: NewHeight Group

Consultant:

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

Project: VERDANTE
Federal Street Portland, Maine

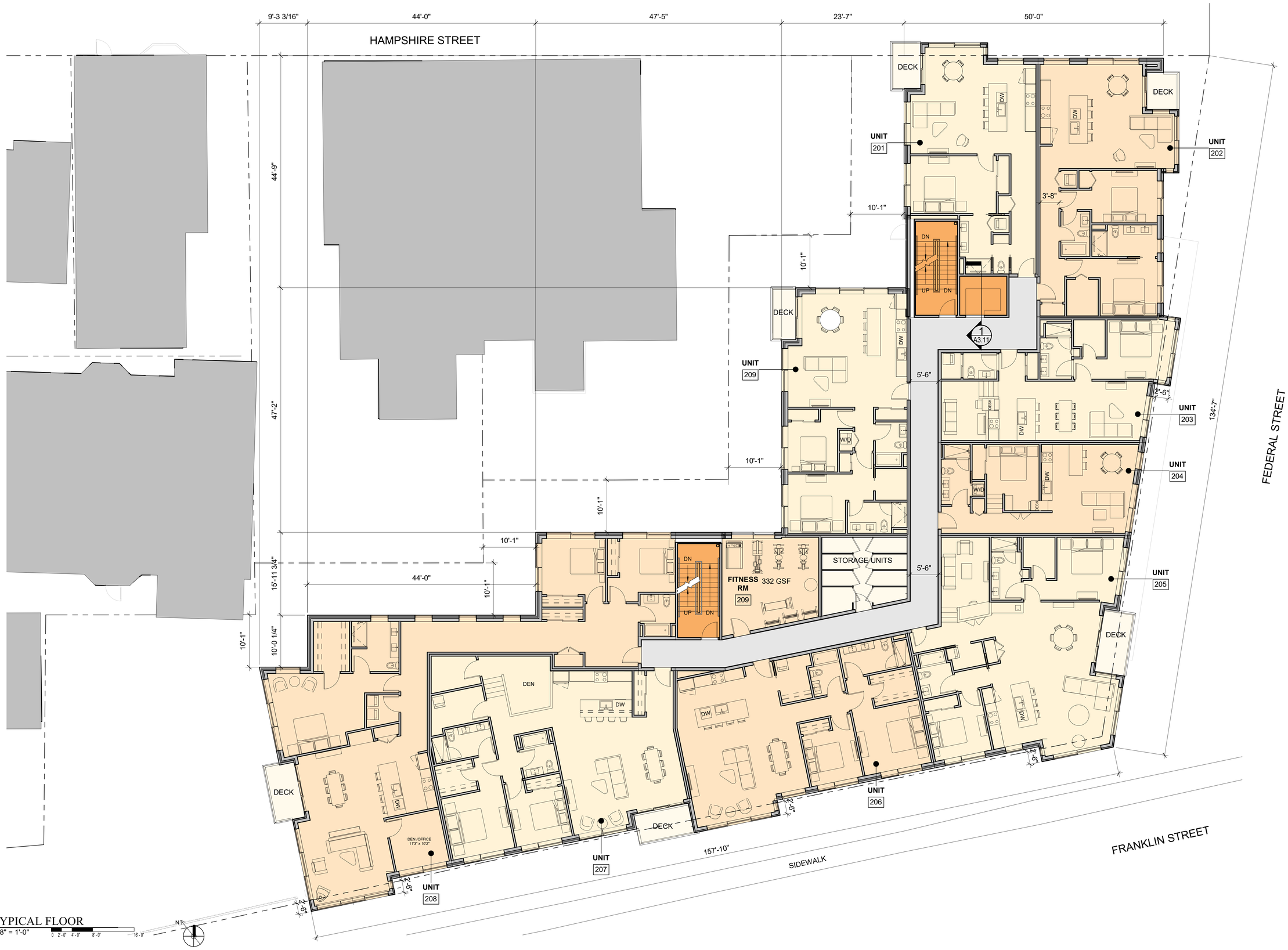
Revisions:

Scale: 1/8" = 1'-0"

Date: APR 13, 2018

FIRST FLOOR

A1.1



Prepared For: NewHeight Group

Consultant:

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

Project: VERDANTE
Federal Street Portland, Maine

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Date: APR 13, 2018

SECOND FLOOR

A1.2

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

DECK

DECK

UNIT 301

UNIT 302

DN

UP DN

DECK

DW

DW

DW

DESK

UNIT 303

UNIT 309

W/D

GUEST ROOM 300

UNIT 310

2 A2.2

1 A2.2

DN

UP DN

STORAGE UNITS

DECK

DEN

DW

DW

DECK

DECK

DW

DEN /OFFICE 11'3" x 10'2"

UNIT 307

UNIT 308

UNIT 306

UNIT 305

1 | 3RD FLOOR
1/8" = 1'-0"

0' 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: APR 13, 2018

THIRD FLOOR

A1.3

HAMPSHIRE STREET

COMMON DECK 727 SF

GREEN ROOF 797 SF

PRIVATE DECK 309 SF

DN

UP DN

PRIVATE DECK 300 SF

UNIT 405

GREEN ROOF 350 SF

DW

UNIT 401

FEDERAL STREET

GREEN ROOF 190 SF

DN

MECH.

UP DN

PRIVATE DECK 165 SF

GREEN ROOF 137 SF

PRIVATE DECK 60 SF

GREEN ROOF 50 SF

DEN / OFFICE

DW

DECK

UNIT 402

UNIT 403

DECK

UNIT 404

FRANKLIN STREET

1 4TH FLOOR
1/8" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: APR 13, 2018

FOURTH FLOOR

A1.4

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

ROOF BELOW

UNIT 505

UNIT 501

UNIT 502

UNIT 503

UNIT 504

DECK

DECK

DECK

DECK

DW

DW

DW

DW

DN

UP

DN

DN

UP

DN

1 | 5TH FLOOR
1/8" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
Federal Street Portland, Maine

Revisions:

Scale:
1/8" = 1'-0"

Date:
APR 13, 2018

FIFTH FLOOR

A1.5

HAMPSHIRE STREET

ROOF BELOW

DN

DN

1
A3.11

PRIVATE
DECK
312 SF

UNIT
PH A

DW

PRIVATE
DECK
100 SF

GREEN
ROOF
300 SF

FEDERAL STREET

DN

DN

UNIT
PH C

DW

UNIT
PH B

PRIVATE
DECK
615 SF

PRIVATE
DECK
100 SF

GREEN
ROOF
929 SF

PRIVATE
DECK
430 SF

DECK BELOW

FRANKLIN STREET

1 6TH FLOOR
1/8" = 1'-0"

0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
Federal Street Portland, Maine

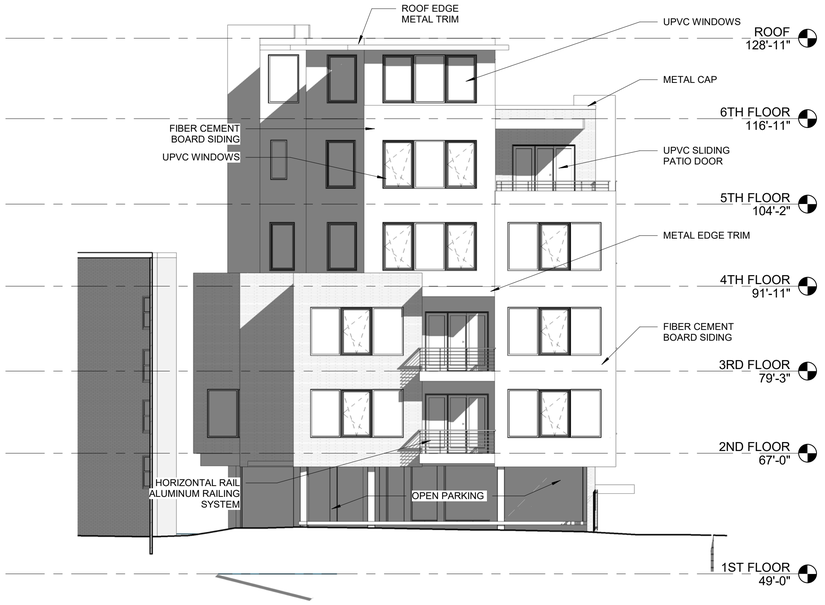
Revisions:

Scale:
1/8" = 1'-0"

Date:
APR 13, 2018

SIXTH FLOOR

A1.6



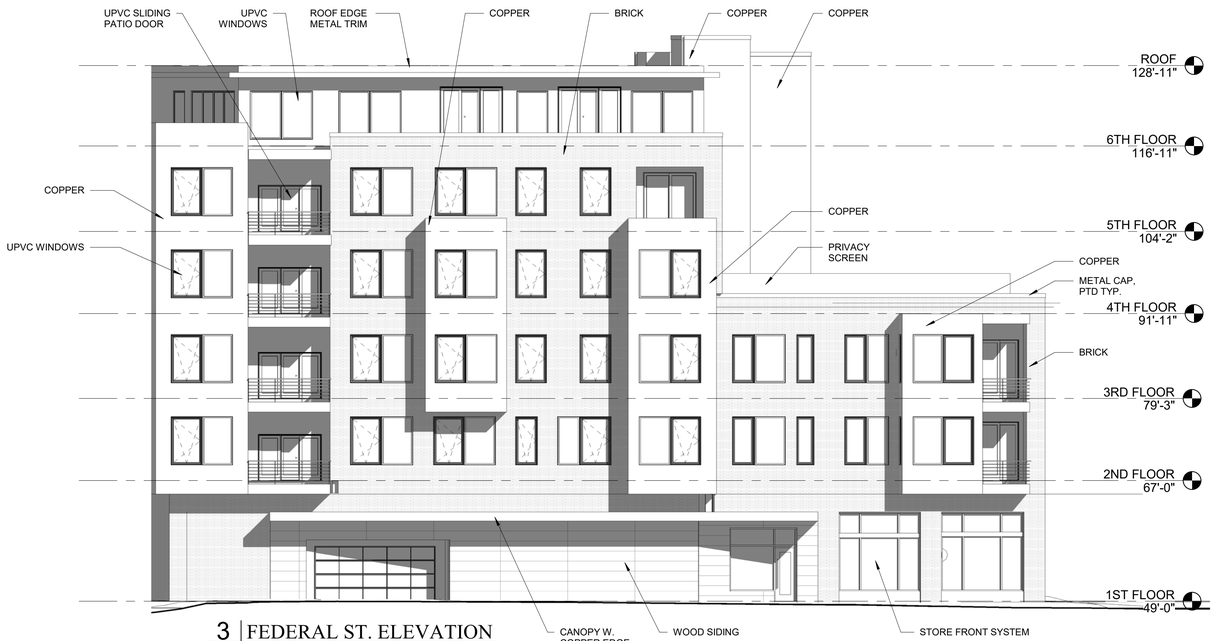
1 | CONGRESS ST. ELEVATION
3/32" = 1'-0"



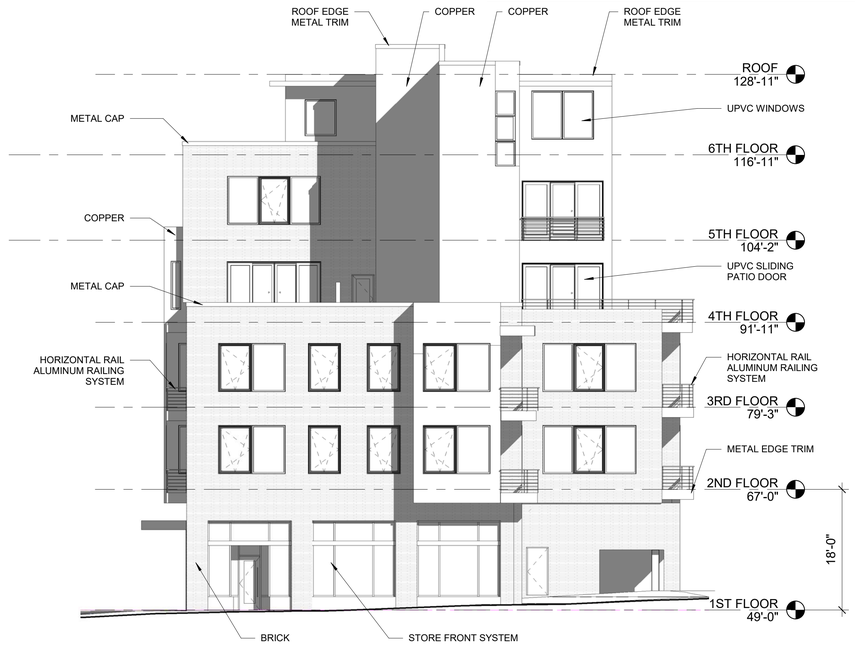
2 | FRANKLIN ST. ELEVATION
3/32" = 1'-0"

GENERAL NOTES:
1. AVERAGE GRADE BY DEFINITION: GRADE TAKEN AT THE FIVE (5) BUILDING CORNERS DIVIDED BY FIVE (5) -
49'-9" + 47'-11" + 49'-0" + 54'-6" + 55'-3"= 256'-5" /5 = 51'- 2"

2. BUILDING HEIGHT: THE VERTICAL MEASUREMENT FROM AVERAGE GRADE TO HIGHEST POINT OF THE ROOF BEAMS = 77' - 0"



3 | FEDERAL ST. ELEVATION
3/32" = 1'-0"



4 | HAMPSHIRE ST. ELEVATION
3/32" = 1'-0"

VERDANTE

Federal Street Portland, Maine

APR 13, 2018

A2.1

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101



1 HAMPSHIRE ST. BACK
1/8" = 1'-0"



2 CONGRESS ST. BACK
1/8" = 1'-0"

VERDANTE

Federal Street Portland, Maine

APR 13, 2018

A2.2

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

ARCHETYPE
ARCHITECTS


STOP
ARCHETYPE
ARCHITECTS

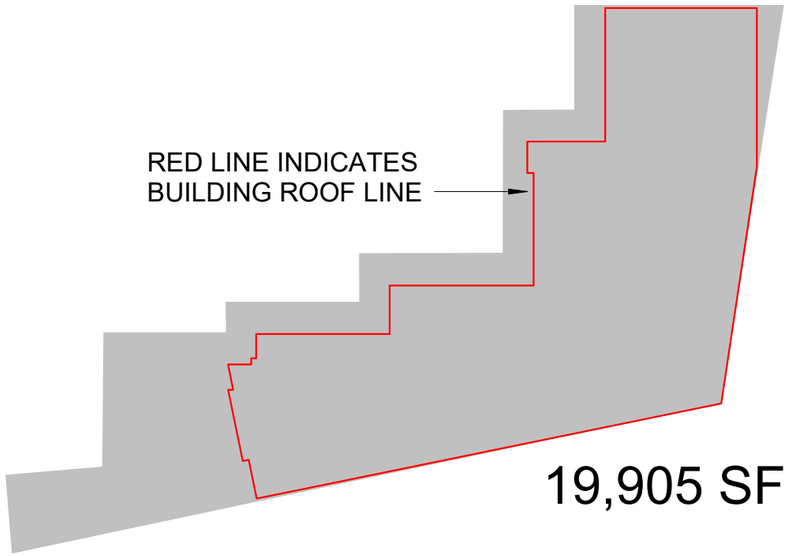

ARCHETYPE
ARCHITECTS


ARCHETYPE
ARCHITECTS

ARCHETYPE
ARCHITECTS



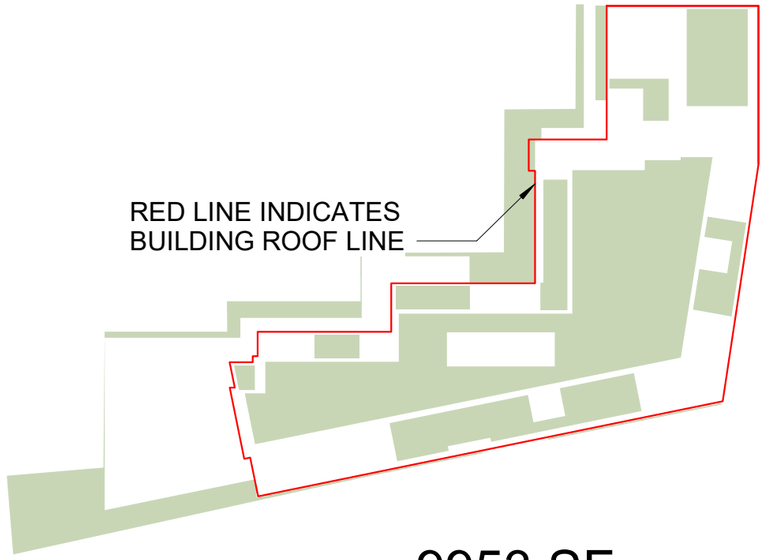
ARCHETYPE
ARCHITECTS



19,905 SF

1 LOT AREA

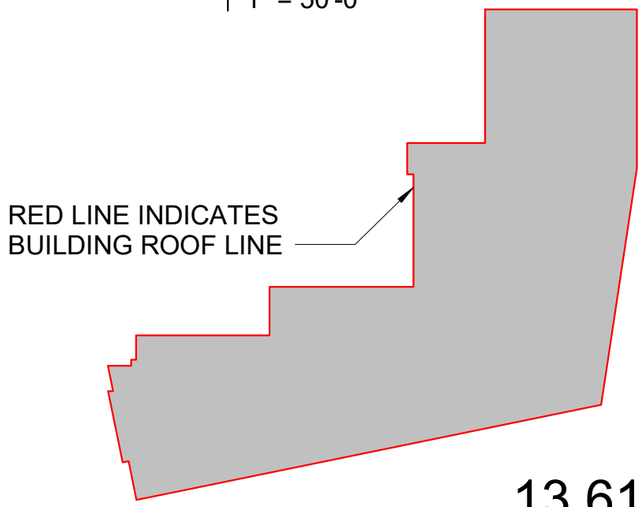
1" = 50'-0"



9953 SF

2 PERVIOUS AREA

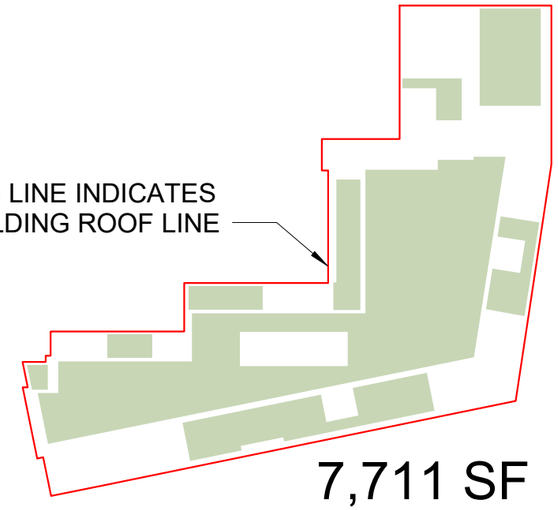
1" = 50'-0"



13,611 SF

3 COMBINED ROOF AREA

1" = 50'-0"



7,711 SF

4 GREEN ROOF AREA

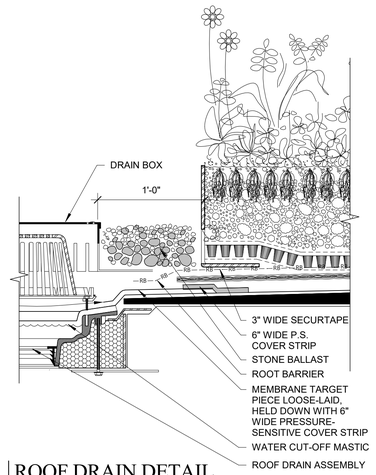
1" = 50'-0"

VERDANTE

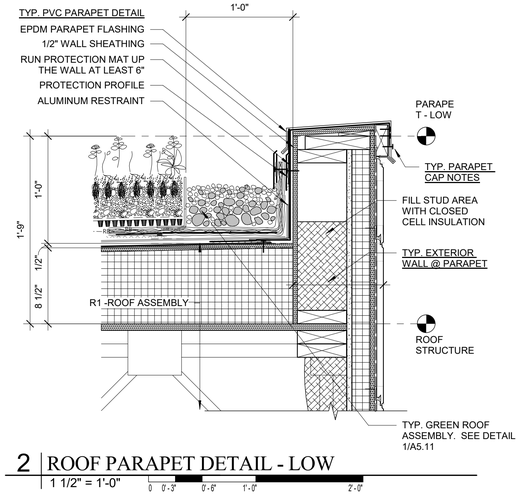
Federal Street Portland, Maine

APR 13, 2018

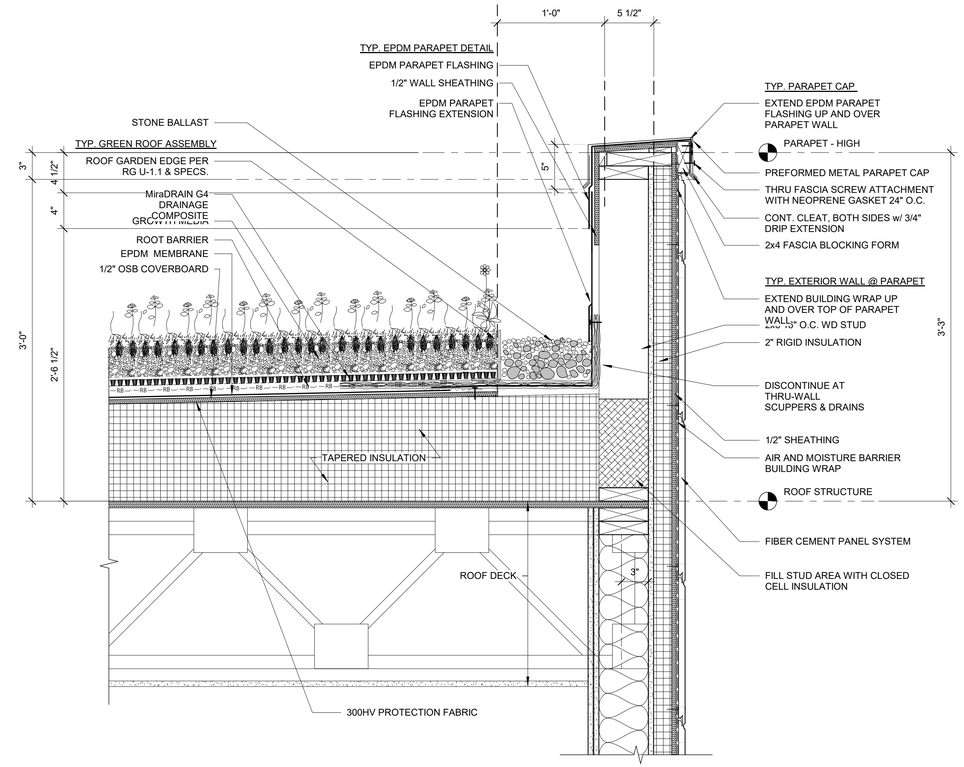
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101



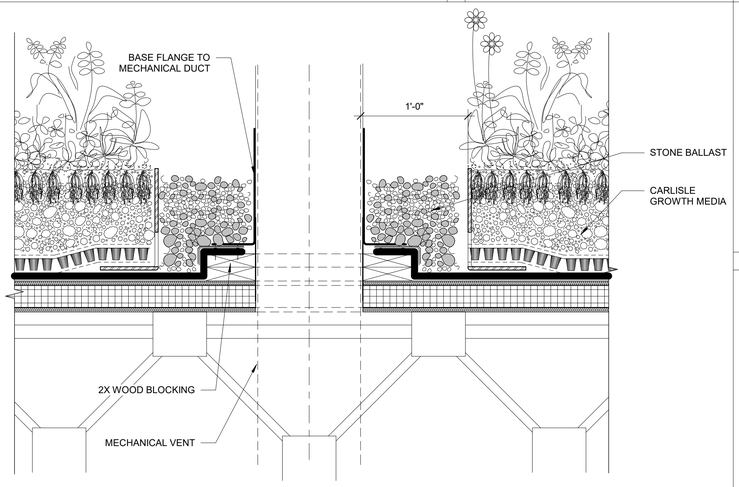
4 | ROOF DRAIN DETAIL
1 1/2" = 1'-0"



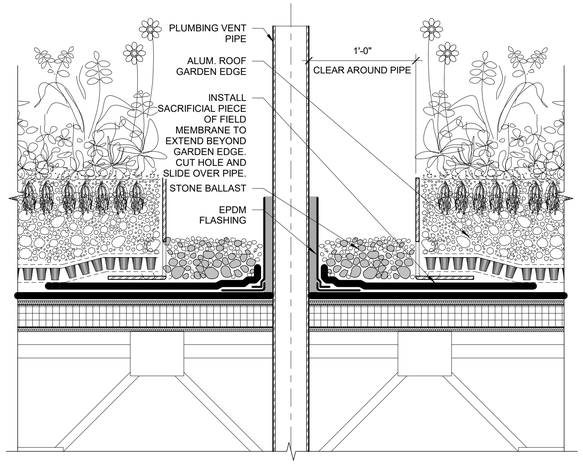
2 | ROOF PARAPET DETAIL - LOW
1 1/2" = 1'-0"



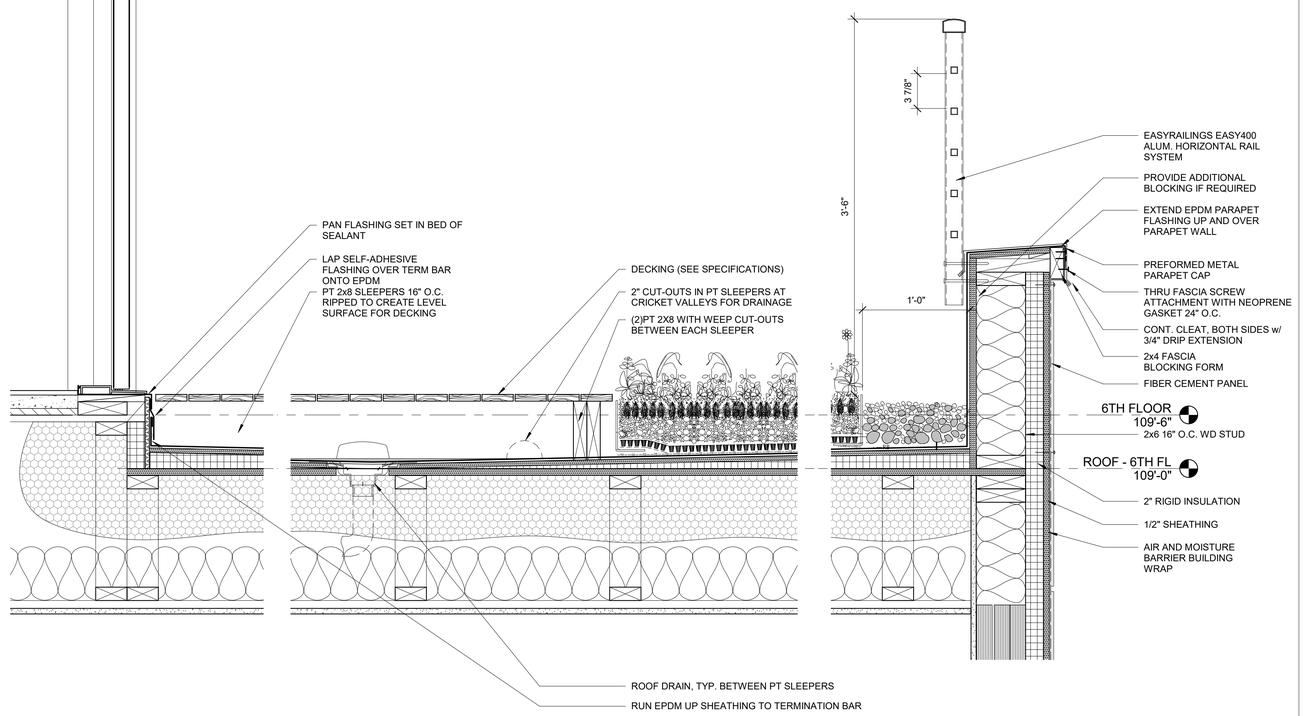
1 | ROOF PARAPET DETAIL - HIGH
1 1/2" = 1'-0"



6 | TYP. ROOF PENETRATION - MECH DUCT
1 1/2" = 1'-0"



7 | TYP. ROOF PENETRATION - PLUMBING PIPE
1 1/2" = 1'-0"



8 | GREEN ROOF DETAIL AT 6TH FLOOR DECK
1 1/2" = 1'-0"

LICENSED ARCHITECT
DAVID LLOYD
NO. 936
STATE OF MAINE

Prepared For:
NewHeight Group
118 Congress Street, Unit 401
Portland, Maine

Consultant:

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

Project:
LUMINATO
167 Newbury Street Portland, Maine

Revisions:

Scale: 1 1/2" = 1'-0"

Date: AUG. 25, 2016

DETAILS - ROOF

A5.11

Planning Board Report
Portland, Maine

630 Ocean Avenue, The Cedars Building Expansion
Level III Site Plan (2017-278), Site Location of Development and Conditional Use (2017-298)
JHA Assisted Living, INC and Cedars Nursing Care, INC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: April 24, 2018	Prepared by: Matthew Grooms, Planner Date: April 20, 2018

I. INTRODUCTION

JHA Assisted Living, INC and Cedars Nursing Care, INC are requesting a Level III site plan, conditional use, and site location of development amendment review for a proposed expansion of their campus located at 630 Ocean Avenue. The proposed development scheme, which includes demolition of an existing single-family building, reconfiguration of existing parking and construction of a new three-story building, is derived from recent trends in the long-term care model where residents are provided with private rooms as opposed to semi-private rooms. The proposed expansion represents a minimal increase in the number of residents, which are accommodated through additional on-site parking.



Figure 1: The Cedars Campus with view of surrounding context. The area outlined in red represents the proposed expansion area.

This development is being referred to the Planning Board for compliance with site plan and conditional use standards of the land use code as well as the Site Location of Development Act regulations. A Planning Board workshop was held on February 13, 2018 and the applicant has submitted final plans for review in response to staff review comments and Planning Board feedback. A total of 280 notices were sent to property owners within 500 feet of the site and a legal ad ran in the April 16th and 17th 2018 editions of the Portland Press Herald.

Applicant: JHA Assisted Living, INC and Cedars Nursing Care, INC
Consultants: Jan Wiegman, Wright-Pierce; Alex Toye, Action Pact Design

II. REQUIRED REVIEWS

Review	Applicable Standards
Site Plan	Section 14-526
Conditional Use	Section 14-474
Site Location of Development	Section 14-Technical Manual

III. PROJECT DATA

Existing Zoning	R-3 and R-5 Residential
Existing Use	Institutional Long-Term Care
Proposed Use	Institutional Long-Term Care

Parcel Size	460,350 SF

	Existing	Proposed	Net Change
Building Footprint	81,114 SF	96,956 SF	15,842 SF
Building Floor Area	N/A	45,000 SF	45,000 SF
Impervious Surface Area	4.98 acres	5.37 acres	0.39 acres
Parking Spaces (on site)	170	183	13
Bicycle Parking Spaces	0	4	4
Estimated Cost of Project	$16,000,000		

IV. EXISTING CONDITIONS

The applicant proposes to develop on a 10.5 acres site located on the west side of Ocean Avenue between Rainbow Mall Road to the north Washington Avenue to the south. At present, the site is occupied by the Cedars long-term care facility campus, which consists of three connected buildings, two two-story buildings identified as "The Osher Inn" and "The Hoffman Center", as well as a larger three-story building identified as "The Atrium", along with off-street parking for 170 vehicles distributed across seven (7) parking areas, and a series of individual unit parking garages. The campus is organized around a central courtyard, with the three existing buildings situated around the perimeter of that courtyard. An internal driveway system provides multiple opportunities for resident drop-off and pick-up, and internal pedestrian pathways are provided alongside the internal driveway. This site features primary access off of Ocean Avenue with secondary access off of Byfield Road. A former single-family structure is located at the northeast corner of the site and is currently being utilized as office space. This building fronts Ocean Avenue and is accessible via a second-curb cut located just north of the primary facility entrance.



Figure 2: View of the existing entrance with single-family structure in the background.



Figure 3: Single-family structure to be demolished under proposed expansion.

The development site itself is located along a ridge, and generally slopes from higher areas in the northern portions of the site towards the south, with a portion of the property conveying surface flows towards the west. The far western portion of the site discharges to Fall Brook. This property also contains significant bedrock, and with prior projects, blasting work has been required.

BACKGROUND

In 1988, the Planning Board approved a 99-bed long term care facility and a 50-bed intermediate care facility for this site. The property totaled 5.93 acres at that time. The long-term care facility was built with 102 beds (23,200 sq, ft. footprint/65,648 sq ft floor area) and is now known as Cedars Care Center and is the location of the Rehabilitation Center. The intermediate care facility was deferred. In 1997 Cedars acquired an additional 4 acres and received approval to add a 61-bed intermediate care facility (95,332 sq. ft. total floor area) now known as the Atrium.

In 2005 approval was given for a 2-story addition for 30 assisted living units (12,371 sq. ft. footprint/ 26,119 sq. ft. floor

area) known as the Cedars Assisted Living Facility. At that time the site was reorganized into a condominium form of ownership so that each facility is a condominium unit and the balance of the site is a "common element" to be used in common by all three units.

The first two Cedar projects (Cedars Care Center and Atrium) impacted wetlands and a Tier II wetlands permit was issued by DEP/ACE subject to on-site provision of three mitigation parcels identified as Parcels A, B and C. The assisted living development approved in 2005 was constructed over part of Mitigation Parcel B and an underground storm water detention/treatment system was incorporated into the project on the side nearest Ocean Avenue. The most recent development (the assisted living facility) triggered a Tier III review and was permitted by the MDEP.

In 2008, The Planning Board considered a conditional use application submitted by The Cedars to renovate the rehabilitation center located on the first floor on the westerly side of the Cedars Care Center.

The above listed background was identified and described in a prior Planning Board report written for the conditional use application heard by the Planning Board back in 2008 and can reviewed in greater detail under Attachment 8.

V. PROPOSED DEVELOPMENT

The applicant proposes to demolish the single-family structure at the northeast corner of the site, as well as a portion of the parking area located north of the internal driveway. The existing curb cut which serves the single-family structure will be closed and the existing sidewalk along Ocean Avenue will be reconstructed to be continuous between the principal site entrance and the intersection of Ocean Avenue and Rainbow Mall Road. In place of the single-family structure, the applicant is proposing to construct a new three-story institutional building with approximately 45,000 square feet of floor area.

The project is largely driven by the evolution of the care model with a shift towards the household model of care delivery and private rooms for residents. The existing long-term care facility at the Hoffman Center has semi-private rooms and will be converted into three households with private rooms. The 40 displaced beds will be moved to the proposed new facility and two households will be created, occupying two floors of the building. A new 20 bed assisted living memory care household will occupy the first floor of the new facility as well.

The parking area located to the north of the internal driveway is being reconfigured to incorporate additional parking spaces in accordance with the city's off-street parking standards. This parking area will extend farther west by approximately 90 feet and will involve some tree clearing and regrading. An additional 14 parking spaces are being constructed farther west within the applicant's property and includes a space for motorcycle parking. Altogether, the project results in a net gain of 13 parking spaces from what currently exists.

Other site improvements include landscaping, consisting of trees, shrubs, ornamental grasses and lawn areas, proposed around the perimeter of the newly proposed building and along the property's Ocean Avenue frontage. The existing drainage system will largely remain in place and will feature minimal upgrades, including revisions to the existing detention basins, new underdrained soil filters and new storm drain structures to accommodate the site revisions and new facility.

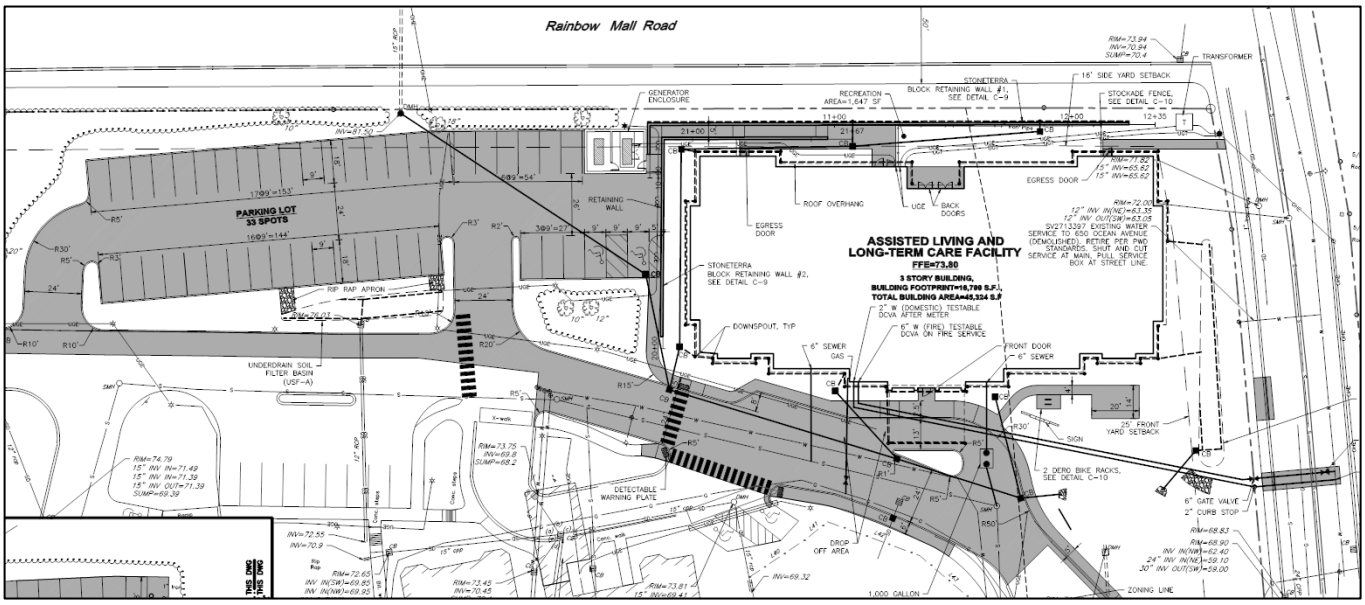


Figure 4: Proposed site plan showing parking lot reconfiguration, utility connections and pedestrian infrastructure improvements



Figure 5: Proposed building elevation (front). Note, the building is oriented inward to the site, away from Ocean Avenue.

VI. PUBLIC COMMENT & NEIGHBORHOOD MEETING

The Planning Division has received two written comments in regards to this project as of the writing of this report. These comments have raised concerns regarding previous blasting work that was carried out in previous projects at The Cedars facility, and concerns related generally to site grading and stormwater runoff.



Figure 6: Proposed side elevation which is oriented towards Ocean Avenue.

City staff, in a meeting with the applicant on January 30th, discussed these public comments and raised questions regarding the potential for blasting work to occur. At that time, a geotechnical had not yet been received and it was not known whether or not blasting would be required. We informed the applicant of blasting requirements within the City, with which the applicant has agreed to comply. A neighborhood meeting for this project was held on January 29th (Attachment X)

VII. PLANNING BOARD WORKSHOP

A Planning Board workshop was held on February 13, 2018. At this meeting, the primary focus of the discussion was in regards to the proposed building's height, design of the building, and the impacts that required blasting work would have on surrounding properties. Members of the public universally claimed that the building was too tall and given its prominent location very close to both Rainbow Mall Road and Ocean Avenue, that it would overwhelm surrounding properties. Members of the Board also questioned whether or not the building's false roof should be measured as a Mansard roof. In addition to concerns regarding the building's height, the staff also raised a number of concerns with the building's design, particularly that the design was not contextual and overly complicated. Members of the public were also concerned that new blasting would cause additional damage to building foundations and disrupt existing drainage patterns. As a result of this, a member of the Board asked that a condition of approval be drafted requiring the applicant to expand the noticing buffer for the pre-blast survey.

Following this workshop, the applicant met with City staff to discuss potential changes to the plans and updated their proposal to lower the height of the false roof, slightly shift the building's footprint away from the street, bolster site landscaping, significantly simplify the building's design, and provide context views of the building. At this meeting, staff asked that the building include just one façade material. The applicant has indicated that they would prefer an all brick building, though if the cost proves prohibitive, they discussed the option of an all clapboard building instead. Both options have been included with the updated plans, and the applicant has asked that a condition of approval be drafted stating that in the event the all brick building proves infeasible, that the clapboard option may be reviewed administratively by staff.

VIII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed demonstrating ownership of the subject property (Attachment E).

IX. FINANCIAL & TECHNICAL CAPACITY

The Cedars, a non-profit organization, will be utilizing three sources of funding for the project, that include fundraising, Cedars social impact bonds and bank financing. The Cedars is working with a fundraising consultant, Steve Braverman, to guide their capital campaign which they have set a goal to raise $10 million in donations and $10 million in social impact bonds. With the help of an investment banker, the Cedars will be negotiating with their current lender Bangor Savings Bank to borrow any additional necessary funds, anticipated not to exceed $10 - $12 million. It is anticipated that the fundraising and bank lending will be in place by April 2018. (Attachment H).

In regards to Technical Capacity, the applicant has provided resumes for their consulting team demonstrating necessary expertise to complete this project.

X. ZONING ANALYSIS

The proposed project is located within both the R-3 and R-5 Residential zones and as such, is subject to the standards of the more restrictive zone, that being the R-3 zone. The proposed use, "institutional long-term care" is identified as a conditional use, and is subject to the conditional use standards listed under Section 14-474. Discussion of compliance with applicable conditional use standards can be found on the next page of this report.

In regards to dimensional standards, the proposed expansion was found to meet all applicable standards. The proposed building height, which reaches a maximum peak of approximately 50' feet above grade, was determined to meet the city's requirements given the proposed roof type and measurement criteria for mansard roofs, which are measured from the deck of the roof. The City's Zoning Administrator, Ann Machado, reviewed the proposal and found it to be satisfactory (Attachment V).

The applicant has revised the building elevations and reduced the height of the building parapet by approximately 3' feet and changed the pitch of the roof to a 12/10 pitch, which is more contextual to other nearby properties and is responsive to Board and staff feedback.

Cedars Site Plan Dimensional Requirements				
Code	**Item**	**Proposed**	**Conditions R-5**	**Conditions R-3**
14-87, 14-88(c)2.a.	Permitted Uses	Institutional	Allowed with conditional permit	Allowed with conditional permit
14-90	Dimensions			
a	Lot Size	10.5 acres	2 acres	2 acres
c	Frontage	578 feet	50	50 Feet
d	Front Setback	25	20	25
	Side Setback (Street)	20	20	20
	Side Setback	Variable	14	16
	Rear Setback	No Change		25
e	Max. Lot Cover	20.3%	40%	35%
f	Min Lot Width	Varies; over 400'	90 feet	65 feet
g	Max Str. Height	35'	35 feet	35 feet
h	Units/Building	N/A	12 max	2 max
i-q	N/A	N/A		N/A
14-91	Others			
a	Parking	0	(See Div 20)	(See Div 20)
c	N/A	N/A	N/A	N/A
14-92-6	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
Parking			**From Division 20**	
Off-Street	Residential Use	N/A	2/Dwelling Unit	
	LT Care	4	4; 1/5 Beds	
	LT Care	9	9; 1/Employee during day shift	
14-526A	Bike Parking	4	2.6; 2/10 new required parking spaces	
	Motor/Scooter	1	1	

Conditional Use Review

Sec. 14-88 (c) Conditional Uses

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 building and will not cause significant physical encroachment into established residential areas.

   The proposed expansion is located on a parcel dedicated as a long-term care facility and does not encroach upon existing residential areas within the vicinity. The existing single-family structure has been utilized as administrative offices since 1991 and is physically located on the parcel occupied by The Cedars Long-Term Care Facility.

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter.

   The proposed use will displace a residential structure that has been used as administrative offices by the Cedars since approximately 1991. It is not clear when this structure was last used as a residence. Further, the proposed three-story building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas located on this parcel are subject to mitigation easements for prior wetland impacts, and they will not be impacted by the proposed redevelopment.

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.

   The minimum lot size is met.

Sec. 14-474. Conditional Use Standards

d. 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 proposed expansion will result in minimal additional traffic, with 20 additional beds and 9 additional staff. The project site is self-contained and no changes are proposed to the existing curb-cut off of Ocean Avenue. Similarly, Ocean Avenue is a minor arterial, with other commercial and institutional uses in the immediate vicinity, and according to the city's consulting traffic engineer, Ocean Avenue has sufficient capacity to serve this expansion.

e. 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 use, "institutional long-term care" does not inherently create unsanitary or harmful conditions and it is not anticipated that any adverse conditions as stated in this standard will result from the proposed use.

f. 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.

As mentioned previously, the Cedars campus is self-contained and largely screened from residential properties and public rights-of-way by means of extensive vegetation located around the perimeter of the site. It is not anticipated that this project will result in any detrimental impacts to surrounding properties beyond what currently exists.

The proposed building differs from other buildings on the campus in that it will be constructed within 25 feet of the property line along Ocean Avenue and will be highly visible from public spaces. The proposed building, while located in close proximity to Ocean Avenue, is not oriented towards the street. As a result, a design review of the project was held, and city staff have requested that the applicant revise the building's design to be more contextually appropriate and as well, to better screen the street-facing façade by means of vegetation.

XI. SITE LOCATION OF DEVELOPMENT REVIEW

Technical Manual Section 14.3. Standards

a. Financial and technical capacity. The developer has the financial capacity and technical ability to develop the project in a manner consistent with state environmental standards and with the provisions of Portland's Code of Ordinances . The Planning Board may issue a permit that conditions any site alterations upon a developer providing the Planning Board with evidence that the developer has been granted a line of credit or a loan by a financial institution authorized to do business in this State or with evidence of any other form of financial assurance the Planning Board determines to be adequate. The Planning Board shall also assess any such application in accordance with the standards set forth in Chapter 373 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

The project application includes a description of financial and technical capacity. The applicant intends to fundraise and utilize bonds to cover the cost of the project. Additional funds required will be secured through financing provided by Gorham Savings Bank. Technical capacity has similarly been provided.

b. Traffic movement. – Not Applicable

c. No adverse effect on the natural environment. The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 375 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

The applicant has provided documentation regarding identified wetlands on their property as well as areas of the site which drain into Fall Brook. Under this development proposal, those areas will not be impacted.

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

Per the city's land use ordinance, the following materials should be submitted at the time of final review:

- Final plan submittal requirements as noted in 14-527(e) and (f); and
- Information regarding site lighting should be identified on the site plan.

XIII. SITE PLAN REVIEW

The final plans for the Cedars Expansion project have been reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

1. Transportation Standards

a. Impact on Surrounding Street Systems

As stated previously, the proposed expansion is due to changes in industry best practices, where preference has changed from semi-private rooms to private rooms. The new building, while adding some additional capacity, will result in a net increase of just 20 beds and 9 additional employees. Tom Errico, the city's consulting traffic engineer, has reviewed the applicant's proposal and has offered the following comment (Attachment 4):

- Based upon the number of new employees and project details the proposed expansion is not expected to generate a significant amount of new traffic. The project is not expected to significantly impact traffic mobility and safety and a traffic study is not required.

b. Access and Circulation

Under this application, minimal changes to site circulation and access are proposed. An existing curb cut which serves the single-family structure at the northeast corner of the site is being closed, and the site will now only be accessible via the principal entrance located along Ocean Avenue, and from Byfield Road which is maintained as a fire lane and secondary access point. Interior site circulation remains almost entirely unchanged, with the exception of one reconfigured parking area located north of the existing internal driveway. The proposal also features pedestrian infrastructure improvements, including new ADA accessible sidewalks and crosswalks, and a new, direct sidewalk connection between the proposed building and Ocean Avenue.

City staff in reviewing site circulation and access have confined their review largely to the area of proposed disturbance, however several deficiencies have been identified and brought to the attention of the applicant.

Of particular note is the lack of a sidewalk along Rainbow Mall Road which was found to be a city accepted public street. At present, there is a sidewalk along the northern side of Rainbow Mall Road which extends from Washington Avenue to just south of Ledgewood Drive. Typically, under the site plan ordinance an applicant would be required to install or repair sidewalk along their street frontage in accordance with city standards. However, in this particular case, the applicant's property does not extend all the way to Rainbow Mall Road, and is separated from that right-of-way by a parcel owned by Old Port Realty Company, which measures approximately 10' feet in width closer to the intersection with Ocean Avenue. This parcel eventually widens as one moves closer to Washington Avenue along Rainbow Mall Road. Given this fact, the applicant is not required by the site plan ordinance to provide this improvement, however the City is asking for a financial contribution of $5,400 to install an ADA accessible crosswalk across Rainbow Mall Road on the north side of Ocean Avenue. The exact request as presented by the Department of Public Works by City Engineer Keith Gray is as follows:



Figure 7: Existing extent of sidewalk is shown in blue. The portion of sidewalk not constructed is shown in red.

- We ask the applicant to make a contribution in the amount of $5,400 for the ADA improvements at the intersection of Rainbow Mall Road and Ocean Ave. In addition, we recommend that the applicant consider a contribution for a sidewalk along Rainbow Mall Road. The estimated cost for constructing 850 feet of sidewalk along Rainbow Mall Road is approximately $36,500. The Department of Public Works will be installing new granite curb and paving Rainbow Mall Road this summer. The construction of the sidewalk is not included in our scope of work. We have previously discussed with the applicant the possibility of a contribution for the sidewalk construction as it would be beneficial to their employees as well as the general public. The Department requests a contribution of $13,000 for the construction of the sidewalk along Rainbow Mall Road.

Bruce Hyman, Transportation Program Manager in the Planning Office, has reviewed the proposed plans, looking largely at pedestrian infrastructure and offers the following comments (Attachment 5):

- An ADA-compliant pedestrian-way/sidewalk, a minimum of 5' in width, is to be provided on the north side of the driveway from the sidewalk on Ocean Avenue to the proposed new building's entrance - this may require moving the bicycle parking to be adjacent to the sidewalk.

  Status: Sidewalk was provided with final plans.

- Efforts should be made to improve the ADA-accessibility of the existing sidewalk route on the south side of the driveway - there appears to be no existing curb ramp connecting a crosswalk across the existing driveway

  Status: Resolved, curb ramp provided.

- It would be desirable to have more pedestrian connectivity/facilities between the new parking lot and other buildings without walking within parking lots and within the vehicular paths of driveways.

  Status: Not resolved

- Detail Sheet C07, Crosswalk Layout: The applicant may want to consider a more visible crosswalk pattern similar to the city's standard: 24″ stripes in width, 8′ in length with 24″ of spacing in between stripes - the detail shows 12″ wide stripes rather than 24″

  Status: Resolved, crosswalk pattern modified.

- General Neighborhood pedestrian circulation: The topic of the lack of a pedestrian route/sidewalk on Rainbow Mall Road was raised at the neighborhood meeting. The applicant does not directly own the frontage on the south side of Rainbow Mall Road but it should collaborate to the extent practicable with the Ledgewood Owners Association on planning for a sidewalk along it at least for the portion from Ocean Avenue to connect to the Ledgewood Drive sidewalk. This would potentially benefit some Cedars residents, staff and visitors to increase access and physical activity opportunities.

  Status: A draft condition of approval has been drafted asking that a financial contribution of $5,400 be provided to construct a crosswalk across Rainbow Mall Road along the west side of Ocean Avenue. Staff understand that the applicant is not required to install a sidewalk along Rainbow Mall Road, but the City Engineer has invited the applicant's participation in an upcoming city project, which involves the installation of curbing along the north side of the street. DPW has requested a voluntary contribution of $13,000 which would be paired with a City contribution of $23,500 to construct 850 feet of sidewalk.

c. Public Transit Access
The proposed development is not located along a public transit route.

d. Parking
Division 20 of the land use ordinance requires the provision of one parking space per five beds in a long-term care facility, and one parking space per employee working the daytime shift. The proposed expansion will result in a net gain of 20 new beds and 9 new day-time employees, for a total required parking increase of 13 spaces, which is met with new parking being provided. Tom Errico, has reviewed the plans and has provided the following comment (Attachment 4):

- The applicant is expanding the proposed parking supply by 13 spaces to accommodate 9 additional employees and parking for the 20 residential units. I find the supply increase to be reasonable.

In addition to vehicle parking, the applicant is also providing space to park 4 bicycles and 1 motorcycle or scooter in accordance with site plan standards.

e. Transportation Demand Management
A transportation demand management plan is not technically required given that the project constitutes an expansion of approximately 45,000 square feet and the threshold for TDM is 50,000 square feet for institutional uses. The project total exceeds 50,000 square feet of floor area and would qualify if being developed today, however when the site was initially developed, TDM standards had not yet been adopted and so no plan is required, though we encourage the applicant to pursue TDM best practices.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

A portion of the applicant's property, at the southeast corner of the site along Ocean Avenue, is identified as a freshwater wetland community, and is conserved via easement as an undeveloped portion of the site. Under this development proposal, the applicant does not propose to impact any wetland or other significant natural feature.

b. Landscaping and Landscape Preservation

The final plans show site landscaping around the perimeter of the proposed building, and notably a buffer of Karpick Red Maple between the proposed building and Ocean Avenue. The northeast corner of the project site, where the new building is proposed, is currently occupied by a single-family structure and includes extensive existing vegetation between the building and Rainbow Mall Road. A significant portion of that vegetation will be removed under this proposal to accommodate the much larger three-story building institutional building. To compensate for this tree loss, the applicant is proposing a variety of shrubs and trees to be planted at the rear of the building, including American Red Oak and American Hophornbeample.

The applicant does not have frontage along Rainbow Mall Road, as a separate parcel that is owned by Old Port Realty, features an approximately 10' foot-wide strip of land along the entirety of Rainbow Mall Road. This parcel will remain undisturbed, and will similarly provide a visual buffer between the project site and the proposed building. Following the Planning Board workshop, the applicant met with Ledgewood Condominium Association and executed a Memorandum of Agreement (MOA) regarding maintenance and landscaping of the vegetated area separating the Cedars property from Rainbow Mall Road. This area is to be fully maintained by The Cedars and Ledgewood Condominium Association has agreed to provide an easement for this purpose.

In terms of other site landscaping features, the project is providing additional landscaping elements towards the property entrance and a mixture of shrubs and trees in and around the proposed off-street parking area in accordance with site plan standards.

Jeff Tarling, the City Arborist, has reviewed the preliminary plans and has provided the following comment regarding landscaping and landscape preservation (Attachment 6).

- Entrance-way landscape - how does the existing landscape blend into the new project. The final approval should show the details of the more formal ornamental landscape beds and limit of work

  Status: Additional detail has been provided and has been found to be satisfactory.

  .

- Parking lot landscape - 'should meet parking lot landscape standards', The parking lot island appears to have a stormwater feature which is good, additional trees and shrubs could be used to meet parking lot standards. There appears to be room for a few trees, recommend Tupelo & or Red Maple 2" caliper size, (Tupelo is a slow growing native tree that tolerates wet conditions) and for shrubs Winterberry, Sweetern for examples. Ideally the island below would contain taller trees mentioned.

  Status: Additional parking lot landscaping has been provided

- Rainbow Mall Road edge - The Rainbow Mall Road edge has been an important feature for the Cedar's since the orginal approval. The goal is to maintain a tree and vegetated edge that allows window views into to site for safety / security but maintains the wooded feel of the residential properties nearby.

From a quick review, it would be important to establish a limit of work and 'tree save' protection for the vegetation between the proposed project and Rainbow Mall, this should be a condition. The proposed tree and landscape treatment may need to be enhanced with additional trees and shrubs. A condition could be that if existing trees and vegetation is lost that additional plants be added. 'Tree Save' areas should be defined on site and part of the Pre-Construction meeting. This would included the usual requirements of not storing equipment or materials in or near the root zone of the tree save areas. Projection should include temporary construction fencing. The parking lot edge along Rainbow Mall Road could include low wooden guardrail along the edge to reduce vehicle encroachment into the buffer area. The Tree Protection web links below may be useful

Status: The applicant has bolstered the screening vegetation being provided to help off-set the proximity of the new building to the street. The construction management plan identifies tree save protection measures for existing vegetation.

c. Water Quality/Storm Water Management/Erosion Control

According to the applicant's application, the proposed development will result in a net increase in impervious surface of 0.39 acres. The existing site includes buildings, parking and roadway infrastructure, plantings/trees within parking islands, several detention areas and wetlands. The site is located along a ridge, and generally slopes from higher areas in the northern portions of the site towards the south, with a portion of the property conveying surface flows towards the west. The majority of surface runoff flows from the northern edge of the property, is conveyed through a series of drainage pipes into several detention and retention facilities, and then into the wetland complex at the southern portion of the site. From this wetland, surface flows then discharge into Ocean Avenue. The far western portion of the site discharges to Fall Brook and will not be disturbed as part of this project.

The proposed conditions will not substantially alter the existing drainage patterns. The proposed improvements include incorporating two new stormwater treatment measures, and modification to the outlet control structure of one of the existing detention basins.

Lauren Swett, the consulting peer review engineer for this project, has reviewed the applicant's plans and offers the following comments (Attachment 2):

a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.

b) General Standard: The project will result in an increase in impervious surface of 16,339 square feet and is required to comply with the General Standard. The Applicant is proposing to install underdrain soil filters to provide for adequate treatment. We have the following comment on the proposed design.

- The soil filters do not have defined emergency overflow spillways. USF-A could overflow internal to the site; however, it appears that USF-B may overflow into Ocean Avenue. In the 25-year storm, the peak elevation calculated in the HydroCAD model indicates, that water levels may be higher than the soil filter berm and the elevation of the adjacent section of Ocean Avenue. The Applicant should address peak flow elevations and provide for adequate emergency overflow to prevent the soil filter from draining into Ocean Avenue.

  Status: This information has been provided.

c) Flooding Standard: The project will result in an increase in impervious surface of 16,339 square feet and is required to comply with the Flooding Standard. The Applicant's HydroCAD model indicates that the project will adequately manage stormwater to meet the Flooding Standard.

d) Urban Impaired Stream Standard: Portions of the project area are located within the delineated Fall Brook Watershed, which is identified as an Urban Impaired Stream by the Maine DEP; however, the project area discharges outside of the watershed, and is not required to comply with the Urban Impaired Stream Standard.

3. Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans
The project is generally consistent with related master plans.

b. Public Safety and Fire Prevention
Mike Thompson, Fire Division Chief, has reviewed the final plans and has found them to be satisfactory, though he has requested that two knox boxes be provided, one at the front entrance and the other at the rear (utility) entrance (Attachment 7). The applicant has agreed to providing these.

It should be noted that the geotechnical exploration for this project revealed that a large blast, meaning removal of greater than 300 cubic yards of rock material will be required to complete this project. The staff have notified the applicant of required permits available through the Fire Department and have shared relevant sections of the City Code pertaining to explosives and blasting. City regulations require noticing of property owners and a pre-blast survey of properties located within 600 feet of the perimeter of the blasting site. At the Planning Board workshop, a member of the Board requested that the pre-blast survey be extended, and the staff are will provide additional information regarding the impact of expanding the blast survey to either 700 or 800 feet from the blasting area.

c. Availability and Capacity of Public Utilities
The applicant proposes a new 2" water service, 6" fire service and 6" wasterwater line. A gas line is also being installed and underground electric is proposed. At this time, staff have not received 'ability to serve' letters from Central Maine Power or the Portland Water District. Provision of these letters has been drafted as a condition of approval.

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact
The maximum building height in both the R-3 and R-5 zones is 35' feet above grade. The peak of the proposed building is approximately 47' feet above grade, roughly 3' feet lower than presented at the workshop. Ann Machado, the zoning administrator has reviewed the building's height and found it to be compliant with zoning. The structure is a flat roofed building built to 35' feet in height, with a parapet in the form of a false roof, extending up to 47' feet. The parapet is designed to screen rooftop mechanical equipment and is similar in nature to the false roofs on other buildings on the Cedars campus. It is not anticipated that the project will result in adverse conditions related to massing, ventilation and wind.

b. Shadows
No shadow impacts on publicly accessible open spaces or adjacent properties are anticipated.

c. Snow and Ice Loading
The property owner has indicated that this is an existing site and that snow management is already accounted for.

d. View Corridors
The site is not located within an established view corridor and is not anticipated to cause adverse impacts to view protection areas within the city.

e. Historic Resources
The proposed project is not located within an established historic district or landscape.

f. Exterior Lighting
As part of the applicant's preliminary submittal, they provided a photometric plan which demonstrated compliance with the city's standards for light trespass.

g. Noise and Vibration
Information on the HVAC 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 applicant is proposing a three-story, 45,000 square foot institutional building, designed to complement the existing buildings on the campus while incorporating design cues from surrounding residential and institutional buildings within the vicinity. With the preliminary submittal, the applicant provided building elevations and renderings, which were reviewed by city staff during a design review attended by Caitlin Cameron, Urban Designer; Jean Fraser, Planner; Matthew Grooms, Planner against the City of Portland Design Manual: Special Needs Independent Living Units, Multiple-Family Standards. These renderings show a building oriented away from the principal street frontage with significant fenestration along the front façade, a porte cochere for resident pick-up and drop-off, single material facade, and numerous decorative elements such as quoins, keystones and fan windows. Below, you will see how the building's design has changed since the Planning Board workshop. The brick/clapboard option has been simplified and replaced with an all brick building. In the event that this material proves too costly, the applicant requests that the all clapboard option as seen below may be reviewed administratively after Planning Board approval. The city's urban designer offers the following comments based upon the design review process (Attachment 3):



Figure 8: Preliminary submittal. Rendering of front facade, as presented at Planning Board workshop



Figure 9: Preliminary submittal. Rendering of street facing facade as seen from Ocean Avenue, as presented at Planning Board workshop



Figure 10: Updated rendering of front facade, in response to Board and staff feedback



Figure 11: Updated rendering (Ocean Avenue), in response to Board and staff feedback



Figure 12: Clapboard alternative (front facade)



Figure 5: Clapboard alternative (Ocean Avenue)

(i) Two-Family, Special Needs Independent Living Units, Multiple-Family . . . :

Standard (1) . Exterior Design – Building is an institutional use and its scale and basic design relate that use. The context includes other institutional buildings such as the existing campus, a school, but also many small-scale vernacular residential buildings. Most of the context is from the early 20th century with the Cedars campus as more recent buildings. The project varies the forms through a hipped roof line and with plane changes – this helps to mitigate the scale of this institutional building which is larger than the single-family homes nearby. The central entrance is emphasized with a canopy and highly glazed atrium space.

Staff previously commented that the architectural characteristics of the context are simpler than is found in the proposal. **The applicant made the following revisions to simplify the overall design and improve relationship to the residential context to address staff and Board comment:**

- Use all one siding material (except at the entrance)
- Lowered the height of the roof parapet and adjusted the slope to be more similar to the proportions and pitches found nearby.
- Some details were removed to simplify the building such as the balustrade at the entrance, some of the keystone details. The quoins, fan windows, shutters remain.
- The entrance canopy was revised in character to be less contemporary and fit the style of the building and campus.

Standard (2). Relationship to Street – Building placement is in relationship to the campus with side of building facing the street. This is mostly to accommodate vehicle circulation and provide some buffer from the street for the occupants. Building relationship to the street varies in this context

- Some buildings face the street, some are set back from the street, some turn the side to the street. Staff found the placement to be compatible with the street and the proposed use. Side/back facades have some massing variation and fenestration.

Standard (3). Open Space – Open spaces provided on property – landscaping surrounding building but no seating or similar occupiable open space within or immediately adjacent to this building.

Standard (4). Light and Air – All units provided with ample windows and some storage.

Standard (5). Parking – Parking is away from the street and screened from view.

Standard (6). Not applicable

XIV. PROPOSED MOTIONS

A. CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on April 24, 2018 for application 2017-298 relevant to the Conditional Use as authorized by Division 4, Section 14-88 Conditional Uses and Division 29, Section 14-474 Conditional Use Standards; and the testimony presented at the Planning Board Hearing, the Planning Board finds the proposed conditional use, Long-Term Care Facility **[does/does not]** meet the standards of Section 14-88 and 14-474.

B. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on April 24, 2018 for application 2017-278 relevant to the site plan regulations; and the testimony presented at the planning board hearing, the Planning Board finds that the plan **[is/is not]** in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. The applicant shall provide a new or updated stormwater maintenance agreement that shall be reviewed and approved by the Department of Public Works and Corporation Counsel.
2. Applicable 'ability to serve' letters shall be provided for Central Maine Power and the Portland Water District.
3. In the event that the applicant is unable to construct the proposed all-brick building as approved by the Planning Board, they shall be required to seek administrative approval from the Planning Authority for the alternative clapboard design. If the building materials or design deviate significantly from the alternative presented to the Board, then the applicant will be required to go back before the Planning Board for a site plan amendment.
4. A large blast, meaning removal of more than 300 cubic yards of rock material, has been indicated in the applicant's application. For large blasts, a pre-blast survey is required within 600 feet of the perimeter of the blasting site. As requested by the Planning Board, the applicant shall expand the pre-blast survey to

encompass properties located within a distance as determined by the Planning Board at the April 24th Public Hearing.

5. A financial contribution of $5,400 shall be provided for construction of an ADA compliant crosswalk across Rainbow Mall Road along the west side of Ocean Avenue.

C. SITE LOCATION OF DEVELOPMENT

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on April 24, 2018 for application 2017-278 relevant to the Site Location of Development Act regulations; and the testimony presented at the Planning Board Hearing, the Planning Board finds that the plan [is/is not] in conformance with the Site Location of Development Act regulations.

XV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Sidewalk Contribution Request
2. Final Woodard and Curran Review Memo
3. Final Design Review Memo
4. Final Traffic Comments
5. Final Pedestrian Infrastructure Comments
6. City Arborist Comments
7. Fire Review Comments
8. Planning Board Hearing Report (2008)
9. Preliminary Planning Review Comments
10. Zoning Determination Memo
11. Pre-Blast Survey Map
12. Public Comment
    a. PC1: Art Sears (01.18.2018)
    b. PC2: Manduca Music (01.26.2018)
    c. Janet Valente

APPLICANT'S SUBMITTALS

A. Cover Letter and Table of Contents
B. Site Plan Application
C. Application Fee
D. Description of Project
E. Right, Title and Interest
F. Zoning
G. Easements
H. Financial and Technical Capacity
I. Construction Management
J. Traffic
K. Significant Natural Features
L. Stormwater Management Plan
M. Consistency with Master Plans
N. Capacity to Serve
O. Solid Waste Generation
P. Fire Department Technical Standards

Q. Consistency with City of Portland Technical Design Manual
R. HVAC
S. Site Plan Requirements and Parking
T. Conditional Use Application
U. Geotechnical Report
V. Comments Response Letter I
W. Comments Response Letter II
X. Signed Ledgewood Plantings MOA
Y. Neighborhood Meeting Minutes and Notice

PLANS

Plan 1 Front Elevation Brick
Plan 2 Front Elevation Siding
Plan 3 Rear Elevation Brick
Plan 4 Rear Elevation Siding
Plan 5 Building Street Sections
Plan 6 Building Renderings Brick
Plan 7 Building Renderings Siding
Plan 8 Cover Sheet
Plan 9 General Notes
Plan 10 Overall Existing Conditions
Plan 11 Site Specific Existing Conditions Plan
Plan 12 Overall Site Layout Plan
Plan 13 Site Layout and Utilities Plan
Plan 14 Site Grading and Erosion Control Plan
Plan 15 Details I
Plan 16 Details II
Plan 17 Details III
Plan 18 Details IV
Plan 19 Erosion and Sedimentation Control Details
Plan 20 Pre-Development Stormwater Plan
Plan 21 Post Development Stormwater Plan
Plan 22 Landscape Plan
Plan 23 Landscape Details

Att. 1

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

630 Ocean Ave - Cedars - Rainbow Mall Road

Keith Gray <kgray@portlandmaine.gov> Wed, Apr 18, 2018 at 9:52 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Barbara Barhydt <bab@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>

Hello Matt,

We ask the applicant to make a contribution in the amount of $5,400 for the ADA improvements at the intersection of Rainbow Mall Road and Ocean Ave. In addition, we recommend that the applicant consider a contribution for a sidewalk along Rainbow Mall Road. The estimated cost for constructing 850 feet of sidewalk along Rainbow Mall Road is approximately $36,500. The Department of Public Works will be installing new granite curb and paving Rainbow Mall Road this summer. The construction of the sidewalk is not included in our scope of work. We have previously discussed with the applicant the possibility of a contribution for the sidewalk construction as it would be beneficial to their employees as well as the general public. The Department requests a contribution of $13,000 for the construction of the sidewalk along Rainbow Mall Road.

Thank you,
Keith

--
Keith D. Gray, PE
City Engineer
Engineering Services Manager
Dept. of Public Works
City of Portland Maine

207.874.8834
kgray@portlandmaine.gov

Att. 2

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

630 Ocean Ave

Lauren Swett <lswett@woodardcurran.com> Fri, Apr 13, 2018 at 8:04 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>

Hi Matt,

The Applicant has addressed all of my prior comments for 630 Ocean Avenue. They are still waiting for ability to serve letters from utilities.

I'm not sure if you've received comments yet on the CM plan, but I took a look, and I don't see many issues. Their construction will be primarily contained within their site; however, they are doing utility connections in Ocean Avenue. The CM plan includes the general references to work in the street requiring adequate permits and traffic plans, but I the plan should specifically note that they will be in Ocean Ave for their utility work.

If there are any questions, let me know.

Thanks,

Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

*Licensed in Maine and Wisconsin

Commitment & Integrity Drive Results

www.woodardcurran.com

Planning and Urban Development Department
Planning Division

Subject: Design Review – 630 Ocean Avenue Expansion

Written by: Caitlin Cameron, Urban Designer

Date of Review: Friday, April 13 2018

The project at 630 Ocean Avenue was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Jean Fraser, Planner against the *City of Portland Design Manual*: *Special Needs Independent Living Units, Multiple-Family Standards*.

Design Review Comments*:*

- Applicant did not provide a streetscape view of the project as requested.
- Staff find that either the brick or the clapboard version of the building is acceptable and meets the design standards. The use of one material throughout the building is consistent with the context, both residential and institutional.

(i) Two-Family, Special Needs Independent Living Units, Multiple-Family . . . :
Standard (1) . Exterior Design – Building is an institutional use and its scale and basic design relate that use. The context includes other institutional buildings such as the existing campus, a school, but also many small-scale vernacular residential buildings. Most of the context is from the early 20th century with the Cedars campus as more recent buildings. The project varies the forms through a hipped roof line and with plane changes – this helps to mitigate the scale of this institutional building which is larger than the single-family homes nearby. The central entrance is emphasized with a canopy and highly glazed atrium space.

Staff previously commented that the architectural characteristics of the context are more simple than is found in the proposal. **The applicant made the following revisions to simplify the overall design and improve relationship to the residential context to address staff and Board comment:**

- **Use all one siding material (except at the entrance)**
- **Lowered the height of the roof parapet and adjusted the slope to be more similar to the proportions and pitches found nearby.**
- **Some details were removed to simplify the building such as the balustrade at the entrance, some of the keystone details. The quoins, fan windows, shutters remain.**
- **The entrance canopy was revised in character to be less contemporary and fit the style of the building and campus**

Standard (2). Relationship to Street – Building placement is in relationship to the campus and put the side to the street. This is mostly to accommodate vehicle circulation and provide some buffer from the street for the occupants. Building relationship to the street varies in this context

– some buildings face the street, some are set back from the street, some turn the side to the street. Staff found this placement to be compatible with the street and the proposed use. Side/back facades have some massing variation and fenestration.

Standard (3). Open Space – Open spaces provided on property – landscaping surrounding building but no seating or similar occupiable open space within or immediately adjacent to this building.

Standard (4). Light and Air – All units provided with ample windows and some storage.

Standard (5). Parking – Parking is away from the street and screened from view.

Standard (6). Not applicable

Att. 4

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

The Cedars Expansion - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Apr 19, 2018 at 9:11 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt – I have reviewed the application information and I find the project to be acceptable. If you have any questions, please contact me.

Best regards

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

PEZ.2017-278: 630 Ocean Avenue - The Cedars - Pedestrian Accessibility and Circulation

Bruce Hyman <bhyman@portlandmaine.gov> Fri, Apr 20, 2018 at 10:21 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Barbara Barhydt <bab@portlandmaine.gov>

Good morning, Matt,

The following are my final comments for 630 Ocean Avenue, The Cedars:

- The applicant, in its letter dated February 8, 2018 and subsequent revisions to the Site Plan, has acceptably responded to all of my prior comments submitted to them. I have no further comment.

Please do not hesitate to contact me if you have further questions.

Bruce

--
Bruce Hyman
Transportation Program Manager
Transportation Division

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

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

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Review Comments - The Cedars and 25 Monument

Jeff Tarling <jst@portlandmaine.gov> Mon, Feb 5, 2018 at 11:16 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Errico Thomas <thomas.errico@tylin.com>, "lswett@woodardcurran.com" <lswett@woodardcurran.com>

Hi Matt -

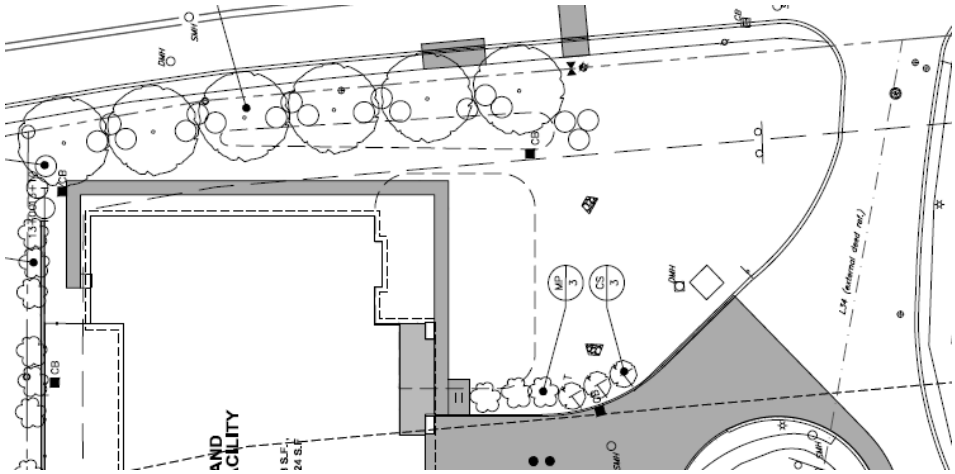
Cedars Expansion Project - Tree & Landscape Comment Review

The latest expansion project at the Cedar's seeks to blend the corner lot of Ocean Avenue & Rainbow Mall Road together with the various past projects.

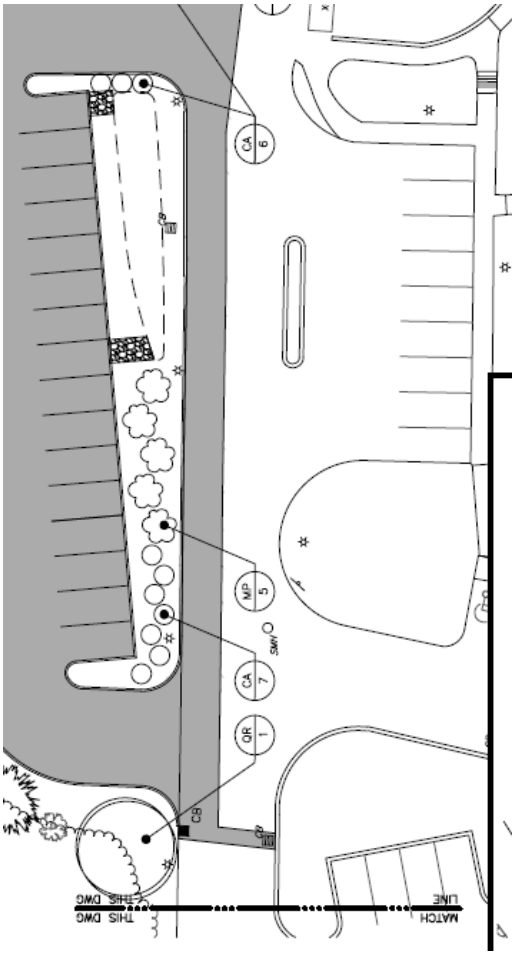
Tree & Landscape goals would include continuing the street tree line along Ocean Avenue that dates back to the original approval, protecting existing natural vegetation along Rainbow Mall Road also similar to past projects and improving the existing landscape features internally near the project.

a) Street trees - the project proposes 6 'Karpick' Red Maple which is a good choice for this location and matches the existing trees planted west of the drive along Ocean Avemue.

b) Entrance-way landscape - how does the existing landscape blend into the new project. The final approval should show the details of the more formal ornamental landscape beds and limit of work.



c) Parking lot landscape - 'should meet parking lot landscape standards', The parking lot island appears to have a **stormwater feature** which is good, additional trees and shrubs could be used to meet parking lot standards. There appears to be room for a few trees, recommend Tupelo & or Red Maple 2" caliper size, (Tupelo is a slow growing native tree that tolerates wet conditions) and for shrubs Winterberry, Sweetern for examples. Ideally the island below would contain taller trees mentioned.

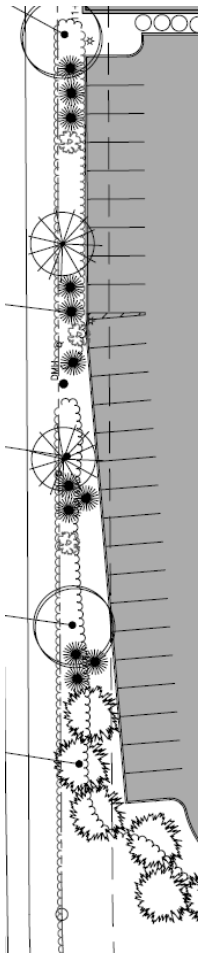


d) Rainbow Mall Road edge - The Rainbow Mall Road edge has been an important feature for the Cedar's since the orginal approval. The goal is to maintain a tree and vegetated edge that allows window views into to site for safety / security but maintains the wooded feel of the residential properties nearby.

From a quick review, it would be important to establish a limit of work and 'tree save' protection for the vegetation between the proposed project and Rainbow Mall, this should be a condition. The proposed tree and landscape treatment may need to be enhanced with additional trees and shrubs. A condition could be that if existing trees and vegetation is lost that additional plants be added. 'Tree Save' areas should be defined on site and part of the Pre-Construction meeting. This would included the usual requirements of not storing equipment or materials in or near the root zone of the tree save areas. Projection should include temporary construction fencing. The parking lot edge along Rainbow Mall Road could include low wooden guardrail along the edge to reduce vehicle encroacment into the buffer area. The Tree Protection web links below may be useful

https://www.treesaregood.org/portals/0/docs/treecare/AvoidingTreeDamage.pdf

https://www.treesaregood.org/portals/0/docs/treecare/ConstructionDamage.pdf



e) Tree Planting Details - Revised tree planting specifications, The International Society of Arboriculture (ISA) have released improved tree and shrub planting details and spec sheets that no longer modify the sub-base beneath the planting in most situations. We would recommend that the Project revise the spec sheet in the Landscape Details to reflect these changes so the future landscape contractor installs the trees and plants correctly. We can supply with additional information, the web links below outline' these changes.

https://www.treesaregood.org/portals/0/docs/treecare/New_TreePlanting.pdf

http://www.isa-arbor.com/education/onlineresources/cad/drawings/Planting/L_tree%20planting_24inch%20to%2036inch%20box_compacted%20soil_K.pdf

http://www.isa-arbor.com/education/onlineresources/cadplanningspecifications.aspx#Planting





Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

On Mon, Feb 5, 2018 at 8:57 AM, Matthew Grooms <mgrooms@portlandmaine.gov> wrote:
[Quoted text hidden]

MEMORANDUM

To: FILE

From: Matthew Grooms

Subject: Application ID: 2017-278

Date: 2/5/2018

Comments Submitted by: Robert Thompson/Fire on 1/17/2018
Adequate fire hydrants are in the area

Comments Submitted by: Robert Thompson/Fire on 1/17/2018
Access to the building is easily achieved with the proposed location of the building

Comments Submitted by: Robert Thompson/Fire on 1/17/2018
Two knox boxes will be required for the building, one at the front entrance, and one at the rear entrance/utility area

Comments Submitted by: Robert Thompson/Fire on 1/17/2018

Memorandum
Department of Planning and Urban Development
Planning Division

To: Chair Tevanian and Members of the Portland Planning Board

From: Jean Fraser, Planner

Date: Prepared on September 19, 2008
Prepared for September 23, 2008 Planning Board Workshop

Re: Cedars Healthcare Center: Rehabilitation Center Addition;
Vicinity of 630 Ocean Avenue

Introduction

Cedars Healthcare requests minor site plan and conditional use approval for the proposed expansion of the rehabilitation center within the Cedars Care Center part of this complex at 630 Ocean Avenue. The proposed expansion would comprise an 890 sq ft addition to the existing building footprint to facilitate a 1500 sq ft renovation and enlargement of the rehabilitation center. The renovation is stated to be a reorganization and modernization of the existing rehabilitation center to improve the current level of service; it is not intended to increase the capacity to serve additional patients.

The project is referred to the Planning Board as it is a conditional use under the R-3 zone; it is also being reviewed for compliance with the Site Plan Standards.

Summary of the Proposal

Zone:	R-3
Site Area:	Overall complex: 10.57 acres
Existing Use:	Healthcare Rehabilitation Center
Proposed Use:	Continued use as Rehabilitation Center
Existing Bldg. Floor Area:	71,840 sq ft
Proposed Bldg. Floor Area:	72,730 sq ft
Net inc. in footprint for Rehab-ilitation Center renovation:	890 sq ft
Building Addition Height:	single story
Existing Parking:	188 spaces
Proposed Parking:	186 spaces
Required Parking:	186 spaces

Background

In 1988, the Planning Board approved a 99 bed long term care facility and a 50 bed intermediate care facility for this site. The property totaled 5.93 acres at that time. The long term care facility was built with 102 beds (23,200 sq, ft. footprint/65,648 sq ft floor area) and is now known as Cedars Care Center and is the location of the Rehabilitation Center. The intermediate care facility was deferred. In 1997 Cedars acquired an additional 4 acres and received approval to add a 61 bed intermediate care facility (95,332 sq. ft. total floor area) now known as the Atrium.

In 2005 approval was given for a 2-story addition for 30 assisted living units (12,371 sq. ft. footprint/ 26,119 sq. ft. floor area), now almost complete and known as the Cedars Assisted Living Facility (Approval letter in Attachment Aiii). At that time the site was reorganized into a condominium form of ownership so that each facility is a condominium unit and the balance of the site is a "common element" to be used in common by all three units (Condominium documents were submitted and are included at Attachment Aiv).

The first two Cedar projects (Cedars Care Center and Atrium) impacted wetlands and a Tier II wetlands permit was issued by DEP/ACE subject to on-site provision of three mitigation parcels identified as Parcels A, B and C. The assisted living development approved in 2005 was constructed over part of Mitigation Parcel B and an underground storm water detention/treatment system was incorporated into the project on the side nearest Ocean Avenue. The most recent development (the assisted living facility) triggered a Tier III review and was permitted by the MDEP (Permit submitted and attached as in Attachment Aiii).

All of these projects secured an SLDA permit which at that time was permitted by the City on behalf of MDEP. The current proposal is a modification of the SLDA and is now subject to MDEP review for storm water; an application has been submitted to the MDEP (not included in the applicant's submission to the City except for the Storm water Management Plan in Attachment Aviii). A summary of the storm water and drainage improvements on the overall site was requested by staff and is included in Attachment B as the site is close to residential properties.

Current proposal

Cedars Healthcare is proposing to renovate the existing rehabilitation center located on the first floor on the westerly side of the Cedars Care Center (approved 1988; completed 1991). The proposal involves an addition of 1500 sq ft to the current first floor area to allow for modernization of the rehabilitation center and associated infrastructure (further description by the applicant is contained in Attachment Ai, with the layout shown in Attachments Fiii and elevations/floor plan in Attachment Fv.)

The aerial photograph in Attachment E shows the location and scale of the proposal within the Cedars complex.

The photograph below shows the existing loading area and external wall of the existing rehabilitation center, as viewed from the parking areas to the west.



The 1500 sq ft will be made up as follows:

- 610 sq ft within the existing loading dock, which is redundant (another loading dock was created in another phase)
- 890 sq ft building footprint expansion partly under the existing roof and into the paved parking and loading areas adjacent to the existing building.

The proposal includes removal of 350 sq ft of existing paved area which will be revegetated, which results in a net reduction in impervious area of 108 sq ft. (described in Attachment Aviii and illustrated with calculations in Attachment Fiv).

Conditional Use Review

Sec. 14-88 (c)

a. *In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or building and will not cause significant physical encroachment into established residential areas.*

The proposed expansion takes place on the existing site on the rear elevation of the existing Care Center. It appears to efficiently utilize the former loading area, and otherwise is located beneath a section of the existing roof overhang and partly within paved parking and loading areas.

b. *The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter.*

This project does not result in a displacement or conversion of a residential use.

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.*

The minimum lot size is met.

Sec. 14-474

a. *There are unique or distinctive characteristics or effects associated with the proposed conditional use.*

There are no known or distinctive characteristics associated with this use. It is a small expansion of the original Cedars long term care use which has been on this site since 1988.

b. *There will be an adverse impact upon the health, safety, or welfare of the public or the surrounding area.*

The Cedars facility has been on this site since 1988 with no reported adverse impact upon the public health, safety or welfare. The proposal involves minor construction within the building/activity envelope. The applicants state that the proposal does not increase the capacity to serve additional patients but aims to improve the level of service for existing patients.

c. *Such impact differs substantially from the impact which would normally occur from such a use in that zone.*

There are no known technical issues associated with this expanded use that would lead one to conclude that the project impact would differ from other such uses.

(d) Conditions on conditional use permits. The board of appeals may impose such reasonable conditions upon the premises benefited by a conditional use as may be necessary to prevent or minimize adverse effects therefrom upon other property in the neighborhood. Such conditions shall be expressly set forth in the resolution authorizing the conditional use permit and in the permit. Violation of such conditions shall be a violation of this article.

The proposal does not appear to have any adverse impacts upon other property in the neighborhood.

Site Plan Review

Traffic/Parking

The project does not generate any additional traffic or parking as no increase in patient numbers is envisaged.

The expanded footprint results in the loss of two parking spaces, leaving 186 spaces on the site. The submitted cover letter and 2005 Parking Study (Attachment A) refer to a zoning requirement of 149 spaces, but the approval in 2005 was based on the provision of 186 spaces to meet the zoning requirement. The Zoning Administrator has confirmed that the proposal meets parking and other zoning requirements (Attachment C).

Trees

The proposal results in the loss of one mid-size pine tree which currently helps screen a condenser and above-ground oil tank enclosure. Staff suggests that replacement planting (large shrubs) should be required near the location of the removed tree.

Drainage

The proposed addition will expand over existing developed areas and the storm water runoff from the building addition will drain into the detention pond to the southeast (towards Ocean Avenue) and then into the municipal storm water system in Ocean Avenue.

The Storm Water Management Plan in Attachment Aviii outlines how the addition will reduce net impervious surface and potential pollution. The City's Engineering Reviewer has confirmed that there are no storm water concerns (Attachment D).

Staff has received one telephone call from a neighbor, Ms Manduka, who owns the property approximately 500 feet to the west of the proposed addition. It is understood that Ms Manduka considers that the Cedars development has increased the storm water impact on her property, particularly from the road around the western edge of the site and snow dumping in the vicinity of the wetlands near her lot.

Staff notes that the proposal under review would not affect Ms Manduka since it is downhill from the western roadway and drains to the south east ie the opposite direction.

It is possible that some other part of the Cedars complex or the operation of snow removal is contributing to impacts on neighbors. Staff requested additional background on this question. John Watson (Cedars CFO) submitted an e-mail on 9.18.2008 that summarizes previous storm water and drainage issues and how Cedars has sought to address concerns raised by reviewers and neighbors in the past.

Neighborhood Meeting

The proposal was noticed to 465 parties including interested citizens and neighbors within 500 feet of the outer boundary of the Cedars site. To date one neighbor (Ms Manduka) has contacted Planning staff. A Neighborhood Meeting is not legally required by the City's Ordinance for this type of project.

Staff recommends that the applicant hold a voluntary Neighborhood Meeting between the Workshop and the Hearing to ensure that nearby neighbors understand the nature of the current project and to review any residual concerns regarding storm water. Given the small scale of the proposal, staff suggests that the meeting notices be sent to neighbors located within 500 feet of the Cedars boundary on the south side of the site.

Attachments

A. Original Submission
   i. Cover letter and Site Plan Application Form
   ii. Conditional Use Application Form
   iii. Previous Approval documents
   iv. Right, title and Interest (Declaration of Condominium Document)
   v. Technical and financial Capability
   vi. Project maps
   vii. Parking Study (from 2005)
   viii. Storm water Management Plan (August 2008)

B. E-mail from Cedars CFO John Watson dated Sept 18.2008 presenting further clarification re Storm Water Management for the entire Cedars complex

C. Memo from City Zoning Administrator dated Sept 10, 2008

D. Memo from City Engineering Reviewer, Dan Goyette (Woodard & Curran) dated Sept 18, 2008

E. Aerial Location Plan (prepared by staff)

F. Plan Set
   i. Boundary survey
   ii. Project Location Map
   iii. Site Plan
   iv. Alterations to Land Cover Map (re impervious area calculations)
   v. Architectural Plan and Elevations

Planning and Urban Development Department
Planning Division

February 5, 2018

John Watson
JHA Assisted Living, INC and Cedars Nursing Care, INC
630 Ocean Avenue
Portland, ME 04103

Jan Wiegman, P.E.
Wright Pierce
11 Bowdoin Mill Island, Suite 140
Topsham, ME 04086

RE: Staff Review Comments for The Cedars Expansion – New Institutional Long Term Care Facility (2017-278) – Planning Board Review

Project Name:	The Cedars Expansion	Project ID:	(2017-278)
Project Address:	630 Ocean Avenue	CBL:	170-A-020
Applicant:	John Watson		
Planner:	Matthew Grooms		

Dear Mr. Watson and Mr. Wiegman,

Thank you for submitting a preliminary Level III Site Plan and Conditional Use application to construct a new three-story building proposed for institutional long-term care use, and reconfigure on-site parking at the Cedars facility, located at 630 Ocean Avenue in the R-3 and R-5 Residential zones. This project is being reviewed as a preliminary plan subject to the following applicable Land Use Code provisions:

- Site Plan Ordinance, Article V
- Division 4. R-3 Residential Zone
- Division 6. R-5 Residential Zone
- Division 20. Off-Street Parking Standards
- Neighborhood Meeting Regulations, Section 14-32

Final Plan for Planning Board Review: Staff Review Comments

I. Site Design Standards

1. Please provide renderings of the proposed building as it will be seen from on-street locations, specifically the intersection of Ocean Avenue and Rainbow Mall Road.
2. As part of this expansion project, a private internal pathway should be provided with direct connection to the existing public sidewalk located along the property's Ocean Avenue frontage.

3. Please provide a geotechnical report detailing the necessity for blasting work as part of this project. Please note, if blasting is to occur, the project shall adhere to the standards of Article VIII of the land-use code and Section 3.7 of the City's Technical Manual.
4. All proposed site lighting shall be illustrated on the site plan.
5. On the site plan, identify any improvements proposed within the areas labeled as 'recreation areas'. Please provide applicable details for proposed fencing as well.
6. The City has reverted to cast-iron set-in-place detectable warning panels as opposed to replaceable panels. As the proposed panels are not located within the public right-of-way, please note that this is not a site plan review requirement.
7. City staff are reviewing the project's public transit access requirement, and will provide additional direction prior to the Planning Board workshop.
8. Utility capacity letters shall be provided when available. In the event that these are not available prior to the public hearing, their submission shall be made a condition of approval.

Additional Submittals Required:

Please upload the digital plans and documents to address staff comments. Upon receipt of the revised material, the City of Portland will review the additional plans and information for conformance with applicable ordinances. Please be aware that an application expires within 120 days of the date upon which this written request for additional information was made.

If you have any questions, feel free to contact me at (207) 874-8725 or by email at mgrooms@portlandmaine.gov.

Sincerely,
Matthew Grooms
Planner

April 20, 2018

Site Plan 2017-278
Zoning Review of the Height of the proposed structure

The first part of my review is based on a document dated September 12, 2017 from Martin Dickmann, Executive Vice- President of Action Pact Holdings, LLC, received via email on September 13, 2017.

§ 14-47 defines *Building, height of* as:

> *Building, height of: The vertical measurement from grade, or the predevelopment grade on the islands, to the highest point of the roof beams in flat roofs; to the highest point of the roof beams or the highest point on the deck of mansard roofs; to a level midway between the level of the eaves and highest point of pitched roofs or hip roofs; or to a level two-thirds of the distance from the level of the eaves to the highest point of gambrel roofs. For this purpose the level of the eaves shall be taken to mean the highest level where the plane of the roof intersects the plane of the outside wall on a side containing the eaves.*

The document calls the proposed roof a "Gourmet Mansardic roof". It is defined as "Structurally, a conventional flat-roofed building with an appended projecting element" as shown on the diagram. The roof itself is flat. This is also shown on the roof plan - plan A3.01, plan A5.01, and plan A5.02.

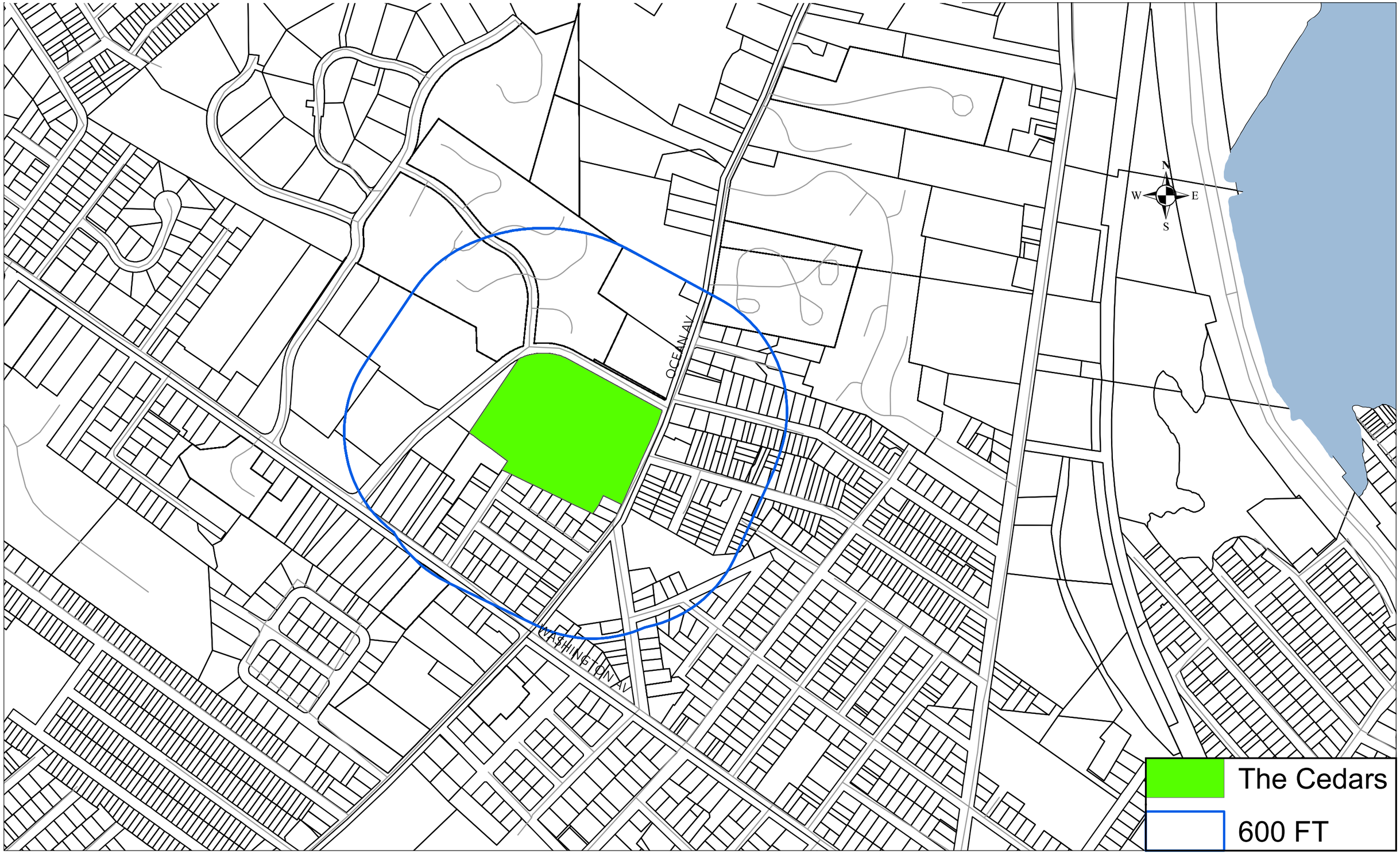
Although this document refers to it as a "mansard roof" based on the definition and plans, Zoning considers this a flat roof; therefore the height of the roof is measured to the highest point of the roof beam from the average grade. In the R-3 Residential Zone the maximum height is 35' [section 14-90(g)].

The Adjacent Building Grades Plan by Wright Pierce, dated April 2018 (attached) shows the average grade for the building as 73.80 feet based on the proposed grade at the four corners of the building. On Plan A1.01 – Proposed Building Elevations revised 03.20.208 (attached) the Front Elevation shows the average grade line across the building at 73.80 feet. The "Top of Roof Deck/Truss Support beams" is shown as 35 feet above the average grade line. Based on these two plans, the building appears to meet the maximum height requirement of 35 feet.

Ann Machado
Zoning Administrator

The Cedars - Pre-Blast Survey Noticing Buffers

Att. 11



Att. 12a

Google Groups

ID# 2017-278

asears@maine.rr.com <asears@maine.rr.com> Jan 18, 2018 2:53 PM

Posted in group: **Planning Board**

Comments on Cedars expansion!

Based on the last expansion I have concerns. The requirement to have a tree berm along Rainbow Mall Road was never followed through and some of the added trees have passed on. This should be placed on the agenda again. Parking along side Rainbow mall Road is an issue from time to time and should not be allowed. This is a driving test area as well as a driver test area so is already dangerous. If Maine Blasting and Drilling is being used again the City needs to require a bond as they have already caused significant damage in the area and have numerous lawyers to deny ALL claims. Let's allow our elected officials to protect and prioritize property owners this time.
Art Sears
6 Ashlar Court
Portland

Another example parking not allowed on Pheasant Hill road as well as the Brown parking lot due to the Cheverus all ball field and it is abused annually and the City does nothing to enforce the original agreement. Can the city planners get the Police involved??????

Art or Anne

Att. 12b

Google Groups

Cedars expansion

Manduca Music <mark@manducamusic.com> Jan 26, 2018 7:51 PM
Posted in group: **Planning Board**

To: Portland, Maine Planning Board members
From: Elizabeth Manduca 861 Washington Ave. Portland, ME 04103 207-233-9401 or 207-233-7012
January 26, 2018

I am writing concerning the expansion of The Cedars facility on Ocean Ave. While I believe the facility provides a great service to our elderly, I have not had a good experience with Cedars as a neighbor. During their last expansion, we had substantial damage to our property (owned since 1971) which is outlined below. I met with city officials and the Cedars staff concerning these damages. I provided photographs and eyewitness testimony. Cedars promised to do a number of things to rectify this situation and to this day, many years later, they have done nothing.

The only thing the city did was to make new rules about development run-off and blasting, all too late to help us or our neighbors. We should have filed a lawsuit against both the city and Cedars, but they promised in good faith to help and then did nothing.

Here is what happened during their last expansion.

BLASTING

1. The blasting of the ledge was so powerful that it blew the glass out of one of my doors. Thankfully no one was hurt. The blasts lifted the children right off the floor of my piano studio. All of my family members experienced a lift and rolling of our floors as each blast occurred.

2. The blasts split my new cellar floor, cracked my walls and made it so that I am still not able to close some doors properly. My neighbors complained about this also.

Cedars offered nothing to repair this damage.

WATER

1. After the blasting, my backyard was flooded with water to the point that I could no longer use 1/4 of my backyard.

2. Their road is graded at a downhill slope and the run-off spills into our yard. They continued to pile snow at the end of this road further exacerbating the situation. I asked them to move the snow away from that area and they only moved it over a few feet, thus still sending debris in this area.

3. The run-off from the road contains salt, gas, and sand. The gas was showing up in trenches we had dug to redirect the water. I showed them photos of this. The plant life has changed and a lot of plants or trees will not grow in this area.

4. I showed them pictures of gardens we had in this area before they split the ledge and photos of things underwater afterwards. We eventually had to pay to a landscaper to raise our garden beds.

MEETINGS

1. Cedars sent engineers to look at my cellar floor. They wore little monocle glasses and looked into the cracks on the floor. They sent a report saying that due to the material in the cracks on the floor, they couldn't have caused the damage. The cellar floor was new…I spoke with a blaster who said of course the blasting did all this damage.

2. I was invited to a meeting at Cedars to discuss the water problem. I was ushered into a room with a number of people including an attorney. I believe they were trying to intimidate me. They told me that based on their studies, the blasting couldn't have caused the change in the flow of the water. This was a wetlands anyway.
I replied, "if this is a wetlands area, how are you allowed to build on it?" No answer.

I told them that I had lived at this property since 1971. I wasn't stupid-I can obviously see the changes in my own backyard."

3. This is what they offered. They would build a drain at the end of the road, put gutters on all the garages to redirect run-off from rain; they would put trees along the edge of the roadway leading to our backyards. They didn't do any of these things. All three properties abutting the woods by Cedars have had substantial water damage to the point that you cannot even walk out to the ends of the property in the spring.

4. I complained repeatedly to our town councilor during the weeks of blasting, but no one from the city responded.

Cedars has quietly acquired a few private properties on Slemons Rd. I spoke with one of the residents who said they are pressuring him to sell as well. They will destroy this residential area to build this gargantuan structure. I don't know how it is possible that Cedars can build it without significant damage to the surrounding area.

We will be keeping a close eye on this project. We'll have meetings with the neighbors to try and ensure that further damage and degradation of property is not allowed again.

Sincerely, Elizabeth Manduca

From: **Janet Valente** <jlvelente@hotmail.com>
Date: Fri, Feb 9, 2018 at 1:22 PM
Subject: Cedars expansion
To: "mgrooms@portlandmaine.gov" <mgrooms@portlandmaine.gov>

Hello:

I'm writing to you as a concerned homeowner regarding the pending building of a 3 story building on Cedars Nursing Home. I live at 20 Providence Street and am very concerned about what was presented in the previous neighborhood meeting.

My concerns are as follows:

1. the significant impingement of a 3 story brick building on the corner of Rainbow Mall Rd and Ocean Ave. The size is overwhelming for that corner. The setback that appears to be recommended is far too close to the roads and would tower over the neighborhood, thus seriously damaging the character of the neighborhood.

   The abutting homes were built around 1925, 1940s, and two directly opposite the potential site were built in the 1700s. This is a stable neighborhood and these homes have been relatively well maintained. The 3 story brick building that close to the road, towering over that corner, will stick out like a sore thumb and degrade the look and the style of the neighborhood. People who buy these homes and live in them buy them for a reason and the look. This is a very old part of the city, one that has not been "damaged" by the city's expansion.

2. When Cedars was first built, the City, as I remember, required them to set back significantly from the street with a buffer along Ocean Ave and the surrounding property. This plan follows none of these original requirements.

   The original property was wet land and now has multiple pipes and French drains throughout their property. The site you want to build on is ledge and is that entire side of Ocean Ave to the Falmouth line and beyond. Blasting and the potential harm to home in the immediate area is a significant worry no matter how "deep" you go.

   The plans as presented provides very, very little in the way of a buffer and I believe will make the water issue in the neighborhood worse no matter how minor you think it might be. We all already have a water issue in our yards.

4. Cedars said that they would only be adding a few new employees. However, the added traffic/parking that will be caused by the additional visitors to both the new building and the renovations to the Rehab building, I believe will be significant. The existing parking

lots abutting the pending building and the Hoffman Center are already full. Thirteen (13) additional spaces will provide little to reduce the added traffic/parking needs. The added traffic to that immediate area keeps building. Providence Street is now a by-pass with heavy traffic, including commercial traffic. It is now a "main" road. People leaving Cedars now often cross over Ocean from their driveway entrance on to Providence St. I believe that will increase. It has become increasingly dangerous to residents who are backing out of their driveways and walking on Providence.

SUGGESTIONS: If this goes through, I would ask that you consider reversing the location of the building and the existing parking lot. That would place the new building in the exiting parking lot and the parking lot where the new building would have gone. Additionally, there would need
to be a very tall buffering along the Ocean Ave boundary of that moved parking lot (some type of trees standing 30-40' tall at the time of planting).

Second suggestion: placing the new building where the existing garages are in the back of the lot. Perhaps the garages can be moved along their interior road or placed where the current employee parking lot is in the back of their property. They have room for employee parking if they removed the white house they own on that road.

I am dismayed that they have purchased two house lots on Slemons Rd and that they are not being used for this new development. The new building could be set back significantly from that road with significant buffering along that Rd. Apparently, the homeowners in that immediate area have more "power" than we do. The City seems to have accommodated them significantly.

I hope you give some serious consideration to our concerns. I am only speaking for myself in this e-mail. However, I know many of us in the immediate area are very concerned about this impending project.

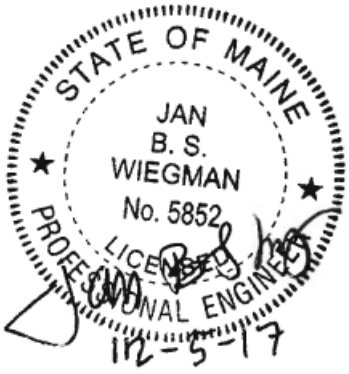
Jan Valente
20 Providence Street
Portland, Maine 04103
(207)772-0574

LEVEL III SITE PLAN APPLICATION

for the

THE CEDARS
LONG-TERM & ASSISTED LIVING MEMORY CARE FACILITY

PORTLAND, MAINE



Cedars Nursing Care, Inc. and JHA Assisted Living, Inc.

630 Ocean Avenue
Portland, Maine 04103

December 2017

WRIGHT-PIERCE
Engineering a Better Environment

TABLE OF CONTENTS

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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), Design Manual and Technical Manual.

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

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

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

Project Name:	The Cedars - Long Term and Assisted Living Memory Care Facility
Proposed Development Address:	630 Ocean Avenue, Portland, ME 04103
Project Description:	Institutional Long Term Care and A.L. Memory Care Expansion
Chart/Block/Lot:	174 A013
Preliminary Plan	N/A
Final Plan	✓

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

APPLICANT

Name:	The Cedars c/o John Watson
Business Name:	JHA Assisted Living, Inc. and Cedars Nursing Care, Inc.
Address:	630 Ocean Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	207.221.7000
Home #:	-
Cell #:	-
Fax #:	-
E-mail:	JWatson@thecedarsportland.org

OWNER

Name:	JHA Services, Inc.
Address:	630 Ocean Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	207.221.7000
Home #:	-
Cell #:	-
Fax #:	-
E-mail:	JWatson@thecedarsportland.org

AGENT/REPRESENTATIVE

Name:	Wright-Pierce, c/o Jan Wiegman
Address:	11 Bowdoin Mill Island, Suite 140
City/State:	Topsham, ME
Zip Code:	04086
Work #:	207-725-8721
Home #:	-
Cell #:	-
Fax #:	207-729-8414
E-mail:	jan.wiegman@wright-pierce.com

BILLING (to whom invoices will be forwarded to)

Name:	Cedars Nursing Care, Inc.
Address:	630 Ocean Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	207.221.7000
Home #:	-
Cell #:	-
Fax #:	-
E-mail:	JWatson@thecedarsportland.org

ENGINEER

Name:	Jan Wiegman c/o Wright-Pierce
Address:	11 Bowdoin Mill Island, Suite 140
City/State:	Topsham, ME
Zip Code:	04086
Work #:	207-725-8721
Home #:	-
Cell #:	-
Fax #:	207-729-8414
E-mail:	jan.wiegman@wright-pierce.com

SURVEYOR

Name:	Titcomb Associates
Address:	133 Gray Road
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-797-9199
Home #:	-
Cell #:	-
Fax #:	207-878-3142
E-mail:	rcroteau@titcombsurvey.com

ARCHITECT

Name:	Action Pact Design
Address:	423 Westport Road
City/State:	Kansas City, MO
Zip Code:	64111
Work #:	785-477-1126
Home #:	-
Cell #:	-
Fax #:	-
E-mail:	Alex Toye; alex.toye@actionpact.com

ATTORNEY

Name:	Natilie Burns : Jensen Baird Gardner & Henry
Address:	Ten Free Street, PO Box 4510
City/State:	Portland, ME
Zip Code:	04112-4510
Work #:	207-775-7221
Home #:	-
Cell #:	-
Fax #:	207-775-7935
E-mail:	nburns@jbgh.com

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Michael Guethle
E-mail:	michael.guethle@wright-pierce.com
Name:	Alex Toye
E-mail:	alex.toye@actionpact.com
Name:	Matt LaPierre
E-mail:	matthew.lapierre@wright-pierce.com

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☑	Stormwater Quality	$250.00
☐	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [ ] x $25.00 each	$
☑	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$ -0.00-
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 4,500.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

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

TOTAL AREA OF SITE	10.5 ac / 460,350	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	45,000	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)	4.98 acres	sq. ft.
Impervious Area (Total Proposed)	5.37 acres	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	81,114	sq. ft.
Building Footprint (Total Proposed)	96,956	sq. ft.
Building Floor Area (Total Existing)	N/A	sq. ft.
Building Floor Area (Total Proposed)	+/- 45,000 additional	sq. ft.
ZONING		
Existing	R-3, R-5	
Proposed, if applicable	N/A	
LAND USE		
Existing	Institutional Long Term Care	
Proposed	Institutional Long Term Care	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	N/A	
# of Residential Units (Total Proposed)	N/A	
# of Lots (Total Proposed)	N/A	
# of Affordable Housing Units (Total Proposed)	N/A	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	N/A	
# of One-Bedroom Units (Total Proposed)	N/A	
# of Two-Bedroom Units (Total Proposed)	N/A	
# of Three-Bedroom Units (Total Proposed)	N/A	
PARKING SPACES		
# of Parking Spaces (Total Existing)	170	
# of Parking Spaces (Total Proposed)	183	
# of Handicapped Spaces (Total Proposed)	12 total (2 new prop'd)	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	No Racks, Storage Avail.	
# of Bicycle Spaces (Total Proposed)	4 outside spaces	
ESTIMATED COST OF THE PROJECT	$16,000,000	

VI. APPLICANT SIGNATURE

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

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

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

Signature of Applicant:	Kathryn Callnan
Date:	11-21-17

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)**
✓		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;	
N/A		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);	
N/A		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;	
N/A		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

Section 3: Application Fees

3.0 Application Fees

Application fees have been calculated and have been confirmed by the Planning division. The fees are based on:

1.	Level III Development – Less than 50,000 s.f.	$ 750.
2.	Stormwater Quality	$ 250.
3.	Site Location Review	$3,500.
	Total:	$ 4,500.

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☐	Stormwater Quality	$250.00
☐	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [ ] x $25.00 each	$
☑	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$ -0.00-
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 4,250.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

Section 4: Description of Project

4.0 Proposed Project

The Cedars long term care facility, located at 630 Ocean Avenue in Portland, Maine, is proposing an expansion and redevelopment of a portion of its facilities. The project is largely driven by the evolution of the care model with a shift towards the household model of care delivery and private rooms for residents. The existing long term care facility at the Hoffman Center has semi-private rooms and will be converted in three households with private rooms. The 40 displaced beds will be moved to the proposed new facility and two household will be created, occupying two floors of the building. A new 20 bed assisted living memory care household will occupy the first floor of the new facility as well.

The Assisted Living/Memory care represents an expansion of services and beds for the campus. The new facility will be located on the campus near the intersection with Ocean Avenue and Rainbow Mall Road and will have a footprint of approximately 15,000 s.f. The Hoffman Center renovations will not add to the existing building but will be interior renovations.

Parking improvements associated with the proposed project, are designed to accommodate the City Code requirements for the new institutional use, the AL Memory Care household, and to replace any parking spaces that are displaced by the new building. Site demolition will include the removal of an administrative building, parking areas, trees, and lawn space.

Landscaping is proposed around the perimeter of the site and other areas adjacent to proposed improvements. Landscaping will include trees, shrubs, ornamental grasses and lawns areas.

The existing drainage system will largely remain in place and in some cases upgraded with new underdrains, structures, and pipe. The drainage upgrades will include revisions to the existing detention basins, new underdrained soil filters and new storm drain structures to accommodate the site revisions and the new facility.

Section 5: Evidence of Right, Title, and Interest

5.0 Existing Deeds

A list of deeds and easements for the parcels for this project have been attached to this section.

A discussion of easements and similar land use information can be found in Section 7 of this permit.

WARRANTY DEED
(Maine Statutory Short Form)

KNOW ALL PERSONS BY THESE PRESENTS, that JHA Properties, Inc., a Maine nonprofit corporation, of Portland, County of Cumberland, and State of Maine, for consideration paid, grants to JHA Assisted Living, Inc., a Maine nonprofit corporation organized and existing under the laws of the State of Maine, and having its principal place of business at Portland, in the County of Cumberland, and State of Maine, whose mailing address is 630 Ocean Avenue, Portland, Maine, with **WARRANTY COVENANTS**, the land in Portland, County of Cumberland, State of Maine, described as follows: The Unit ("Unit") designated as Number 3 of the Cedars Condominium located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium"), together with the Unit's undivided percentage interest in the Common Elements of the Condominium as set forth in the Declaration, created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006 and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property hereby conveyed and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

IN WITNESS WHEREOF, it, the said JHA Properties, Inc., has caused this deed to be signed and sealed in its corporate name by Kathryn Callnan, its President/Chief Executive Officer, thereunto duly authorized, this 1st day of May, 2014.

Received
Recorded Register of Deeds
May 06,2014 09:12:50A
Cumberland County
Pamela E. Lovley

WITNESS:

JHA Properties, Inc.

By: Kathryn Callnan
Name: Kathryn Callnan
Title: President/Chief Executive Officer

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. May 1, 2014

Then personally appeared the above named Kathryn Callnan, President/Chief Executive Officer of said Corporation, as aforesaid, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of said Corporation, before me,

LYNNE A. BURR
Notary Public-Maine
My Commission Expires
December 05, 2016

Attorney at Law/Notary Public

SEAL

AMENDMENT TO DECLARATION OF COVENANTS AND RESTRICTIONS

THIS AMENDMENT TO DECLARATION OF COVENANTS AND RESTRICTIONS is made this 30th day of June, 2006 by, Cedars Nursing Care Center, Inc., and JHA Properties, Inc., both Maine non-profit corporations having a place of business at 630 Ocean Avenue, Portland, Cumberland County, Maine, 04103, (herein collectively referred to as the "Declarants") and the State of Maine Department of Environmental Protection, a governmental agency having a place of business in Augusta, Kennebec County, Maine, and a mailing address of 17 State House Station, Augusta, Maine 04333-0017 (referred to as the "MDEP"), pursuant to MDEP Natural Resource Protection Act Project Number 97-441-S (formerly Tier #T-00441-TE-A-N), dated September 26, 1997 (collectively referred to as "Order"), as amended by the MDEP Order #L-22483-TG-B-M, dated February 20, 2006 (hereinafter referred to as "New Order"), relating to preservation of portions of an approximately ten (10) acre parcel of land near 630 Ocean Avenue, Portland, Maine.

RECITALS

WHEREAS, the Declarants made a Declaration of Covenants and Restrictions, dated March 27, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75 (the "Original Declaration"), pursuant to MDEP Natural Resource Protection Act Project Number 97-441-S (formerly Tier #T-00441-TE-A-N), dated September 26, 1997 (collectively referred to as "Order"), relating to preservation of three certain parcels of land bounded and described as set forth on Exhibits A and A-1 to the Original Declaration and respectively described therein (and herein) as "Mitigation Parcel A," "Mitigation Parcel B" and "Mitigation Parcel C;"

WHERAS, MDEP Natural Resource Protection Act Project Number 97-441-S (formerly Tier #T-00441-TE-A-N) was amended by MDEP Order #L-22483-TG-B-M, dated February 20, 2006 (hereinafter referred to as "New Order");

WHEREAS, the Site Plan Location Permit issued by the City of Portland, Maine, Permit No. _____, dated September 13, 2005, and the application of JHA Assisted Living, Inc. for a MDEP Natural Resources Protection Act permit, Application No. DEP #L-22483-TE-B-M both contemplate (1) that certain portions of the property included in Mitigation Parcel A and Mitigation Parcel B as set forth in the Original Declaration would be released from the Original Declaration by amendment to the legal descriptions of said Mitigation Parcel A and Mitigation Parcel B and (2) that additional mitigation parcels would be created in replacement thereof;

WHEREAS, the Declarants have executed and delivered a Declaration of Covenants and Restrictions of even date herewith creating the two additional mitigation parcels (designated as "Mitigation Parcel A-1" and "Mitigation Parcel D," both as shown on Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, revised April 5, 2006, and to be recorded in the Cumberland County Registry of Deeds;

WHEREAS, Declarant Cedars Nursing Care Center, Inc., holds title to Mitigation Parcel A as described in the Original Declaration by virtue of a certain real property situated in Portland, Maine, described in a deed from Sidney J. Haijar to The Jewish Home for the Aged, dated April 24, 1987, and recorded in Book 7732, Page 282 at the Cumberland County Registry of Deeds and to certain real property situated in Portland, Maine, described in a deed from JHA Services, Inc., to Cedars Nursing Care Center, Inc., dated March 27, 1988, and recorded in Book 13696, Page 315 at the Cumberland County Registry of Deeds, all of which real property is subject to a certain Loan Agreement and Mortgage given by Cedars Nursing Care Center, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of May 1, 1993, recorded in the Cumberland County Registry of Deeds in Book 10717, Page 311;

WHEREAS, Declarant JHA Properties, Inc., holds title to Mitigation Parcel B as described in the Original Declaration by virtue of a deed from JHA Services, Inc., to JHA Properties, Inc., dated March 27, 1998, recorded in Book 13696, Page 317 at the Cumberland Country Registry of Deeds, which real property is subject to a certain Loan Agreement and Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of March 1, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 1 and as amended and supplemented by a Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of October 9, 1998, and recorded in the Cumberland County Registry of Deeds in Book 14221, Page 222;

WHEREAS, the New Order permits the Declarant to fill 16,018 square feet of forested freshwater wetlands and for the after-the-fact filling of 1,000 square feet of forested freshwater wetlands in order to construct an Independent Living Facility, subject to the conditions set forth therein;

WHEREAS, pursuant to the Natural Resources Protection Act, Title 38 M.R.S.A. Section 480-A et seq. and Chapter 310 of regulations promulgated by the MDEP (the "Wetland Protection Rules") and in satisfaction of the New Order, Declarants desire by this Amendment to Declaration of Covenants and Restrictions, to amend the description of Mitigation Parcel A and Mitigation Parcel B as described in the Original Declaration as more particularly set forth herein and to confirm their agreement that the Original Declaration, as so amended, may be enforced by the MDEP;

NOW, THEREFORE, Cedars Nursing Care Center, Inc., and JHA Properties, Inc., as Declarants, and MDEP, hereby covenant and agree as follows:

1. Declarants and the MDEP hereby AMEND the description of Mitigation Parcel A to read as set forth on **Exhibit I** attached hereto and made a part hereof and hereby RELEASE from the Original Declaration the following released area from said Mitigation Parcel A as described in the Original Declaration:

> A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point lying N 40°48'48" E a distance of One Hundred Fifty-Three and 38/100 (153.38) feet from the southerly corner of Mitigation Parcel A as described in a deed recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75; **thence, from said point of beginning,** N 38°27'46" W a distance of Eight-Four and 24/100 (84.24) feet to a point; thence N 55°39'58" E a distance of Six and 40/100 (6.40) feet to a point; thence S 83°16'49" E a distance of Thirty-Three and 51/100 (33.51) feet to a point; thence S 58°44'00" E a distance of Eight and 31/100 (8.31) feet to a point; thence S 34°11'12" E a distance of Twenty-Six and 44/100 (26.44) feet to a point; thence S 12°22'27" E a distance of Twenty-Four and 54/100 (24.54) feet to a point; thence S 40°48'48" W a distance Twenty and 47/100 (20.47) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described released easement area contains 2,121 square feet and lies over a portion of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282, and is a portion of Mitigation Parcel A as described in a Declaration of Covenants and Restrictions recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75.

2. Declarants and MDEP hereby AMEND the description of Mitigation Parcel B to read as set forth on **Exhibit II** attached hereto and made a part hereof and hereby RELEASE from the Original Declaration the following the following released area from said Mitigation Parcel B as described in the Original Declaration:

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point lying the following two courses and distances from said Ocean Avenue and the easterly corner of land now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282: thence N 33°52'30" W by said land of Cedars Nursing Care Center, Inc. a distance of One Hundred Sixty-Four and 46/100 (164.46) feet to a 5/8" capped iron rod ("PLS 509") and land now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in said Registry in Book 13696, Page 315; thence N 52°41'19" W by said land of Cedars Nursing Care Center, Inc. a distance of Fifty-Three and 55/100 (53.55) feet to said point of beginning; **thence, from said point of beginning,** S 35°08'49" W a distance of Nineteen and 01/100 (19.01) feet to a point; thence S 62°52'24" E a distance of Sixteen and 66/100 (16.66) feet to a point; thence S 10°12'08" E a distance of Twenty-Three and 48/100 (23.48) feet to a point; thence N 66°31'23' W a distance of Twenty-One and 47/100 (21.47) feet to a point; thence N 25°23'48' E a distance of Seventeen and 68/100 (17.68) feet to a point; thence N 64°36'12" W a distance of Eighty-Two and 00/100 (82.00) feet

to a point; thence S 25°23'48" W a distance of Eighteen and 39/100 (18.39) feet to a point; thence N 89°17'25" W a distance of Thirty-Six and 41/100 (36.41) feet to a point; thence N 19°30'34" E a distance of Sixty-Eight and 29/100 (68.29) feet to a point; thence N 01°46'29" W a distance of Thirty-Four and 09/100 (34.09) feet to a point; thence N 46°36'49" E a distance of Eighty-Seven and 87/100 (87.87) feet to a point; thence S 82°01'39" E a distance of Seventeen and 23/100 (17.23) feet to a point; thence S 33°39'21" E a distance of Twenty-Three and 77/100 (23.77) feet to a point; thence S 03°35'26" W a distance of Sixty-Three and 84/100 (63.84) feet to a point; thence S 67°26'24" E a distance of Sixty and 83/100 (60.83) feet to a point; thence S 24°08'41" E a distance of Thirty and 34/100 (30.34) feet to a point; thence N 83°22'48" W a distance of Eleven and 21/100 (11.21) feet to a point; thence N 78°14'02" W a distance of Twenty-Eight and 91/100 (28.91) feet to a point; thence S 35°08'49" W a distance of Thirty-Two and 24/100 (32.24) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described released easement area contains 15,956 square feet and lies over portions of property now or formerly of Cedars Nursing Care Center, Inc. as described in deeds recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282 and Book 13696, Page 315; also lying over a portion of property now or formerly of JHA Properties , Inc. as described in a deed recorded in said Registry in Book 13696, Page 317. The above-described released easement area is a portion of Mitigation Parcel B as described in a Declaration of Covenants and Restrictions recorded in said Registry in Book 13709, Page 75.

Declarants hereby confirm all other covenants and restrictions in the Original Declaration

Any provision contained in the Original Declaration or in this Amendment to Declaration of Covenants and Restrictions may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of all of the Property subject thereto and by the MDEP.

Each provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions, and any agreement, promise, covenant and undertaking to comply with each provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions, shall be deemed a covenant running with the land as a burden and upon the title to the property subject thereto.

Invalidity or unenforceability of any provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions in whole or in part shall not affect the validity of enforceability of any other provision or any valid and enforceable part of a provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions.

This Amendment to Declaration of Covenants and Restrictions shall be governed by and interpreted in accordance with the laws of the State of Maine.

IN WITNESS WHEREOF, each of the Declarants has caused this Amendment to Declaration of Covenants to be signed and sealed in its corporate name by its duly authorized officer as of the day and year first above written.

CEDARS NURSING CARE CENTER, INC.

By: Kathryn J. Callnan
Kathryn J. Callnan
Its: President

JHA PROPERTIES, INC.

By: Kathryn J. Callnan
Kathryn J. Callnan
Its: President

STATE OF MAINE
Cumberland, ss.

April 24, 2006

Personally appeared before me the above named Kathryn J. Callnan, President of Cedars Nursing Care Center, Inc., and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said non-profit corporation.

Sylvia Gill
Notary Public
Print Name: Sylvia Gill
Commission Expires: 10/21/2006

STATE OF MAINE
Cumberland, ss.

April 24, 2006

Personally appeared before me the above named Kathryn J. Callnan, President of JHA Properties, Inc., and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said non-profit corporation.

Sylvia Gill
Notary Public
Print Name: Sylvia Gill
Commission Expires: 10/21/2006

MAINE HEALTH AND HIGHER EDUCATIONAL FACILTIES AUTHORITY (the "Authority") joins herein for purposes of

(1) consenting to the execution and delivery of the foregoing Amendment to Declaration of Covenants and Restrictions, and

(2) agreeing, for itself and its successors and assigns, that the mortgage lien and other rights of the Authority under (a) that certain Loan Agreement and Mortgage, given by Cedars Nursing Care Center, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of May 1, 1993, recorded in the Cumberland County Registry of Deeds in Book 10717, Page 311 and/or (b) that certain Loan Agreement and Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of March 1, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 1, and as amended and supplemented by a Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of October 9, 1998, and recorded in the Cumberland County Registry of Deeds in Book 14221, Page 222, shall be subject and subordinate to the Declaration of Covenants and Restrictions, dated March 27, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75, as amended by the foregoing Amendment to Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, Maine Health and Higher Educational Facilities Authority has caused this Amendment to Declaration of Covenants and Restrictions to be signed and sealed in its corporate name by its duly authorized officer as of the day and year first above written.

MAINE HEALTH AND HIGHER EDUCATIONAL FACILTIES AUTHORITY

By: _____
Robert O. Lenna
Its Executive Director

STATE OF MAINE
Kennebec, ss.

JUNE 29th, 2006

Personally appeared before me the above named Robert O. Lenna, Executive Director of Maine Health and Higher Educational Facilities Authority and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Maine Health and Higher Educational Facilities Authority.

Jo-Ellen P. King
Notary Public
Print Name: JO-ELLEN P. KING
Commission Expires: OCTOBER 27, 2011

1110838.1

Jo-Ellen P. King
Notary Public, Maine
My Commission Expires
October 27, 2011

THE STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION HEREBY JOINS IN THE RELEASE AND AMENDMENT AS SET FORTH ABOVE AND HEREBY ACKNOWLEDGES THE FOREGOING:

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____
Name: ANDREW FISK
Title: BUREAU DIRECTOR

STATE OF MAINE
Kennebec, ss.

May 26, 2006

Personally appeared before me the above named Andrew Fisk, Director of the Maine Department of Environmental Protection, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of the Maine Department of Environmental Protection.

Lynn Bachelder
Notary Public Lynn Bachelder
Print Name: _____
Commission Expires: 4/10/11

EXHIBIT I

DESCRIPTION OF MITIGATION PARCEL A - REVISED

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point being the southerly corner of Mitigation Parcel A as described in a deed recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75;

Thence N 57°43'44" W a distance of Twenty-Four and 95/100 (24.95) feet to a point;

Thence N 20°00'29" E a distance of Sixty-Nine and 06/100 (69.06) feet to a point;

Thence N 88°05'33" W a distance of Thirty-Nine and 67/100 (39.67) feet to a point;

Thence N 52°36'18" W a distance of Thirty-Two and 69/100 (32.69) feet to a point;

Thence N 25°47'25" W a distance of Twenty-Nine and 33/100 (29.33) feet to a point;

Thence N 60°36'26" E a distance of Sixteen and 83/100 (16.83) feet to a point;

Thence N 68°16'52" E a distance of One Hundred and 11/100 (100.11) feet to a point;

Thence N 55°39'58" E a distance of Nineteen and 41/100 (19.41) feet to a point;

Thence S 38°27'46" E a distance of Eighty- Four and 24/100 (84.24) feet to a point;

Thence S 40°48'48" W a distance of One Hundred Fifty-Three and 38/100 (153.38) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described easement contains 14,972 square feet and lies over a portion of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282. The above described easement is a portion of Mitigation Parcel A as described in a Declaration of Covenants and Restrictions recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75.

Reference is made to "Mitigation Parcel A—Revised" as shown on the Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, to be recorded in the Cumberland County Registry of Deeds, for a depiction of Mitigation Parcel A as revised by this Amendment.

EXHIBIT I

DESCRIPTION OF MITIGATION PARCEL A - REVISED

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point being the southerly corner of Mitigation Parcel A as described in a deed recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75;

Thence N 57°43'44" W a distance of Twenty-Four and 95/100 (24.95) feet to a point;

Thence N 20°00'29" E a distance of Sixty-Nine and 06/100 (69.06) feet to a point;

Thence N 88°05'33" W a distance of Thirty-Nine and 67/100 (39.67) feet to a point;

Thence N 52°36'18" W a distance of Thirty-Two and 69/100 (32.69) feet to a point;

Thence N 25°47'25" W a distance of Twenty-Nine and 33/100 (29.33) feet to a point;

Thence N 60°36'26" E a distance of Sixteen and 83/100 (16.83) feet to a point;

Thence N 68°16'52" E a distance of One Hundred and 11/100 (100.11) feet to a point;

Thence N 55°39'58" E a distance of Nineteen and 41/100 (19.41) feet to a point;

Thence S 38°27'46" E a distance of Eighty- Four and 24/100 (84.24) feet to a point;

Thence S 40°48'48" W a distance of One Hundred Fifty-Three and 38/100 (153.38) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described easement contains 14,972 square feet and lies over a portion of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282. The above described easement is a portion of Mitigation Parcel A as described in a Declaration of Covenants and Restrictions recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75.

Reference is made to "Mitigation Parcel A—Revised" as shown on the Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, to be recorded in the Cumberland County Registry of Deeds, for a depiction of Mitigation Parcel A as revised by this Amendment.

EXHIBIT II

DESCRIPTION OF MITIGATION PARCEL B - REVISED

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point lying N 33°52'30" W by land now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282, a distance of One Hundred Thirty-Two and 37/100 (132.37) feet from said Ocean Avenue and the easterly corner of said land of Cedars Nursing Care Center, Inc.;

Thence S 58°09'19" W a distance of Eleven and 06/100 (11.06) feet to a point;

Thence N 66°31'23" W a distance of Forty-Six and 92/100 (46.92) feet to a point;

Thence N 10°12'08" W a distance of Twenty-Three and 48/100 (23.48) feet to a point;

Thence N 62°52'24" W a distance of Sixteen and 66/100 (16.66) feet to a point;

Thence N 35°08'49" E a distance of Fifty-One and 25/100 (51.25) feet to a point;

Thence S 78°14'02" E a distance of Twenty-Eight and 91/100 (28.91) feet to a point;

Thence S 83°22'48" E a distance of Eleven and 21/100 (11.21) feet to a point;

Thence S 24°08'41" E a distance of Forty-One and 40/100 (41.40) feet to a point;

Thence S 03°56'26" E a distance of Thirty and 30/100 (30.30) feet to a point;

Thence S 58°09'19" W a distance of Nineteen and 47/100 (19.47) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described easement contains 5,277 square feet and lies over portions of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deeds recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282 and book 13696, Page 315; also lying over a portion of property now or formerly of JHA Properties , Inc. as described in a deed recorded in said Registry in Book 13696, Page 317. The above described easement is a portion of Mitigation Parcel B as described in a Declaration of Covenants and Restrictions recorded in said Registry in Book 13709, Page 75.

Reference is made to "Mitigation Parcel B—Revised" as shown on the Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, to be recorded in the Cumberland County Registry of Deeds, for a depiction of Mitigation Parcel B as revised by this Amendment.

Received
Recorded Register of Deeds
Jun 30,2006 01:31:55P
Cumberland County
John B OBrien

DECLARATION OF CONDOMINIUM

OF

CEDARS CONDOMINIUMS

Portland, Maine

June 30, 2006

DECLARATION OF CONDOMINIUM
OF
CEDARS CONDOMINIUMS
PORTLAND, MAINE

THIS DECLARATION OF CONDOMINIUM is made this 30th day of June 2006, by and between JHA Properties, Inc. a Maine non-profit corporation, its successors and assigns ("JHA Properties"), and Cedars Nursing Care Center, Inc., a Maine non-profit corporation, its successors and assigns ("Cedars"; together with JHA Properties, the "Declarants"), each with a place of business at 630 Ocean Avenue, Portland, Maine 04103, as the owners in fee simple of the Real Estate (as hereinafter defined).

ARTICLE I
SUBMISSION

Section 1.1. Property. Declarants hereby submit the real estate described in Exhibit A attached hereto and made a part hereof (the "Real Estate") situated in the City of Portland, County of Cumberland and State of Maine, together with and subject to all easements, rights and appurtenances thereto belonging and the Buildings (as hereinafter defined) thereon (collectively, the "Property") to the provisions of Chapter 31 of Title 33 of the Maine Revised Statutes Annotated, as the same may be amended from time to time, known as the Maine Condominium Act (the "Act") and hereby creates with respect to the Property a condominium to be known as "Cedars Condominiums" (the "Condominium"). The Condominium consists of the land described in Exhibit A and those Units (as hereinafter defined) listed in Exhibit B, attached hereto and made a part hereof, and depicted on the Plat (as hereinafter defined).

The submission of the Real Estate to the Condominium shall create three (3) Condominium Units, as more particularly described herein, which upon recording of the Declaration shall be owned in fee by the Declarants as follows:

(a) Unit No. 1 shall be owned in fee by Cedars, its successors and assigns, and JHA Properties, for itself and its successors and assigns, hereby **grants and releases** to Cedars, its successors and assigns all right, title and interest JHA Properties may have in and to Unit No.1 and the development rights associated therewith.

(b) Unit No. 2 shall be owned in fee by Cedars, its successors and assigns, and JHA Properties, its successors and assigns, as tenants in common, in the following percentages:

(i) Cedars 33.6% ("Cedars' Tenancy-in-Common Interest"); and

(ii) JHA Properties 66.4% ("JHA Properties' Tenancy-in-Common Interest").

JHA Properties, for itself and its successors and assigns, hereby **grants and releases** to Cedars, its successors and assigns all right, title and interest JHA Properties may have in and to Cedars' Tenancy-in-Common Interest in Unit No.2 and the development rights associated therewith. Cedars, for itself and its successors and assigns, hereby **grants and releases** to JHA Properties, its successors and assigns all right, title and interest Cedars may have in and to JHA Properties' Tenancy-in-Common Interest in Unit No.2 and the development rights associated therewith.

(c) Unit No. 3 shall be owned in fee by JHA Properties, its successors and assigns, and Cedars, for itself and its successors and assigns, hereby **grants and releases** to JHA Properties, its successors and assigns all right, title and interest Cedars may have in and to Unit No.3 and any development rights associated therewith.

(d) In consideration of the rights and easements created under this Declaration each of the Declarants, for itself and its successors and assigns, hereby **grants and releases** to the other all right, title and interest it may have in and to the following easements of record with respect to the Real Estate:

(i) Utility and Access Easement described as Parcel B in easement deed from Cedars Nursing Care Center, Inc., to JHA Services, Inc., dated May 25, 1990, and recorded in the Cumberland County Registry of Deeds, Book 9188, Page 115, as amended and modified Short Form Quitclaim Deed from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 17, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 319, and by Easement Modification, between JHA Services, Inc. and Cedars Nursing Care Center, Inc., dated April 1, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13708, Page 305 (said deed dated May 25, 1990, as so modified being the "Granting Deed");

(ii) Emergency Access Road Easement described as Parcel C in the Granting Deed;

(iii) Parking Easement, Utility and Access Easement and Loop Road Easement retained as Items 1, 2 and 3 of Parcel C in the Granting Deed;

(iv) Access Easement in easement deed from JHA Properties, Inc., to Cedars Nursing Care Center, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 321;

(v) Access Easement in easement from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 325; and

(v) Agreement and Reciprocal Easement Deed, between Cedars Nursing Care Center, Inc., and JHA Properties, Inc., dated as of March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 331.

Section 1.2. Maximum Number of Units. The maximum number of Units the Declarants reserve the right to create is three (3).

Section 1.3. Address of Condominium. The address of the Condominium is:

Cedars Condominiums
630 Ocean Avenue
Portland, Maine 04103

ARTICLE 2
DEFINITIONS

Section 2.1. Terms Defined in the Act. Capitalized terms not otherwise defined in this Declaration or in the Plat, shall have the meanings specified or used in the Act.

Section 2.2. Terms Specifically Defined in this Declaration. In addition to the terms defined above, the following terms shall have the following meanings in this Declaration, the Bylaws, and the Plat:

(a) "Act" has the meaning set forth in Section 1.1.

(b) "Association" means the Unit owners' association of the Condominium, which shall be known as the Cedars Condominiums Owners Association.

(c) "Budget" has the meaning set forth in Section 13.1(a).

(d) "Buildings" (or in the singular, a "Building") means any residential, commercial, long term care, service or recreational structure or other improvement now existing or hereafter constructed on the Real Estate.

(e) "Bylaws" means the document having that name and providing for the governance of the Association, pursuant to Section 1603-106 of the Act, as such document may be amended from time to time.

(f) "Cedars" has the meaning set forth in introductory paragraph of this Declaration.

(g) "Cedars' Tenancy-in-Common Interest" has the meaning set forth in Section 1.1(b).

(h) "Common Elements" (or in the singular, a "Common Element") means those parts of the Property either described in the Act as being common elements or described in this Declaration or in the Plat as being common elements.

(i) "Common Expenses" means expenditures made by or financial liabilities of the Association together with any allocations to reserves.

(j) "Condominium" means the condominium described in Section 1.1.

(k) "Condominium Documents" means the Declaration, the Plat, Bylaws and Rules and Regulations.

(l) "Declarants" has the meaning set forth in introductory paragraph of this Declaration.

(m) "Declaration" means this document, as the same may be amended from time to time.

(n) "Development Rights" means those rights, if any, which the Declarants have reserved to themselves as set forth in Article 14 and elsewhere in this Declaration.

(o) "Eligible Mortgage Holder" means the holder of a recorded first mortgage on a Unit which has requested in writing that the Association notify it of actions by the Association upon which such mortgage holders are entitled to vote or whose consent is required under this Declaration.

(p) "Executive Board" means the executive board of the Association.

(q) "JHA Properties" has the meaning set forth in introductory paragraph of this Declaration.

(r) "JHA Properties' Tenancy-in-Common Interest" has the meaning set forth in Section 1.1(b).

(s) "Identifying Number" means the number assigned to a Unit in the Plat.

(t) "Insurance Trust Agreement" means that certain agreement, if any, between the Association and the Insurance Trustee providing for the management and disbursement of insurance proceeds in accordance with Section 9.2 hereof.

(u) "Insurance Trustee" means that certain entity responsible for the management and disbursement of insurance proceeds pursuant to the Insurance Trust Agreement, if any.

(v) "Limited Common Elements" (or in the singular, a "Limited Common Element") means those parts of the Property either described in the Act as being limited common elements or described herein or in the Plat as being limited common elements.

(w) "Monthly Assessment" means the Unit owner's share of the anticipated Common Expenses, allocated by Unit, for each month of the Association's fiscal year as reflected in the budget adopted by the Executive Board for such year.

(x) "Mortgagee" means the holder of any recorded first mortgage encumbering one or more of the Units.

(y) "Percentage Interest" means the undivided interest in the Common Elements appurtenant to a Unit, as set forth on Exhibit B attached hereto, as the same may be amended from time to time.

(z) "Plat" means the Cedars Condominiums Recording Plat/Condominium Plan/ALTA/ASCM/Land Title Survey, made for JHA Properties, Inc., & Cedars Nursing Care Center, Inc., JHA Assisted Living, Inc., prepared by Titcomb Associates, dated September 8, 2005, and revised April 5, 2006, recorded in the Cumberland County Registry of Deeds in Plan Book 206 at Page 430 as the same may be amended from time to time, reduced photocopies of which are attached hereto as Exhibit C.

(aa) "Property" has the meaning set forth in Section 1.1.

(bb) "Real Estate" has the meaning set forth in Section 1.1.

(cc) "Record" means to record in the Cumberland County Registry of Deeds.

(dd) "Rules and Regulations" means such rules and regulations as are promulgated by the Declarants or the Executive Board from time to time with respect to the use of all or any portion of the Property.

(ee) "Special Assessment" means a Unit owner's share of any assessment made by the Executive Board in addition to the Monthly Assessment.

(ff) "Special Declarant Rights" means those rights which the Declarants have reserved to themselves as set forth in Article 14 and elsewhere in this Declaration.

(gg) "Unit" means a physical portion of the Condominium created by this Declaration or any amendment thereto and designated for separate ownership or occupancy, the boundaries of which are described in Article 3 or in any amendment creating such Unit.

Section 2.3. Provisions of the Act. The provisions of the Act shall apply to and govern the operation and governance of the Condominium, except to the extent that contrary provisions, not prohibited by the Act, are contained in one or more of the Condominium Documents.

ARTICLE 3
UNIT BOUNDARIES AND MAINTENANCE RESPONSIBILITIES

Section 3.1. Unit Boundaries.

(a) The boundary lines of each Unit are formed by the following planes:

(1) the upper boundary shall be a horizontal plane at an elevation of one hundred and thirty-five feet (135) above sea level (determined by reference to City of Portland datum: masonry nail in Utility Pole #82 located on Ocean Avenue (elevation=70.90) as shown on the Plat),

(2) the lower boundary shall be a horizontal plane at an elevation of forty-five (45) feet above sea level; and

(3) the vertical boundaries shall be perpendicular planes located three (3.00) feet outside the perimeter of the footprint of the building located or to be located within said Unit as shown on the Plat, each projected (A) horizontally to meet the projection of the adjacent vertical planes and (B) downward and upward to meet the upper and lower horizontal boundaries; except that, at those locations where the outside surface of an exterior wall of a Building in one Unit is adjacent to the outside surface of an exterior wall of a Building in another Unit, the vertical boundary of each Unit shall be a vertical plane that is equidistant between the outside of the finish material forming the exterior walls of the Buildings in question, except that in the case of Unit No. 1, Unit No. 1 shall also include:

(i) The enclosed triangular structure on the first floor at the intersection of the north-facing exterior surfaces of the two Building wings at the north end of the Building in Unit No. 1, one wing that extends in a northwesterly direction and the other wing that extends in a northeasterly direction;

(ii) The enclosed triangular structure on the first floor at the intersection of the south-facing exterior surfaces of the two Building wings at the south end of the Building in Unit No. 1, one wing that extends in a southwesterly direction and the other wing that extends in a southeasterly direction; and

(iii) The enclosed vestibule at the entrance of Unit No. 1 on the east side of the Building in Unit No. 1.

NOTE: Although the foundations of each Building will be located as shown on the Plat, the vertical boundaries for each Unit described above are located outside of the perimeter of such foundations in order to accommodate roof eaves and overhangs and other building features that extend beyond such foundation perimeter.

(b) Each Unit consists of all portions of any Building that is located within the aforesaid boundary lines, except the air space displaced Common Elements extending into or within such Unit which serve other Unit(s) and/or the Common Elements, including without limitation chutes, flues, chases, ducts, wires, conduits and pipe runs as described in clause (a)(3) of this section. The finish material, such as plaster or drywall, and furring around chutes, flues, chases, ducts, conduits, pipe runs and similar structures containing wires, vents, pipes, utilities or services that serve another Unit or Units and/or the Common Elements, the Unit to include the thickness of such finish material around chutes, flues, chases, ducts, conduits, pipe runs and

similar structures but not the cavity within such wires, vents, pipes, utilities or services are located.

(c) Each Unit's Identifying Number is shown on the Plat.

Section 3.2. Relocation of Unit Boundaries; Subdivision of Unit. The owners of any Unit shall be permitted to (i) relocate boundaries between Units or (ii) subdivide a Unit in accordance with the procedures for an amendment of this Declaration as set forth in Article 16 below.

Section 3.3. Maintenance Responsibilities.

(a) The Association, through the Executive Board and as determined by the Unit owners, shall be responsible for (i) maintenance, repair and replacement of the Common Elements, but excluding the Limited Common Elements, and (ii) maintenance, repair and replacements as may be required for the functioning of or for the bringing of utilities, such as water, gas, electricity and sewer to all of the Units, all of which maintenance, repair and replacement shall be furnished by the Association as part of the Common Expenses.

(b) The Association, through the Executive Board and as determined by the Unit owners, shall be responsible for maintenance, repair and replacement of the Limited Common Elements at the cost and expense of the owners of the Unit or Units to which such Limited Common Elements are allocated.

(c) If damage is caused to (i) the Common Elements or (ii) any other part of the Condominium, in each case by any Unit owner, or guests, tenants, or invitees of such Unit owner for which maintenance, repairs and replacements shall be required that would otherwise be a Common Expense, such Unit owner shall pay for such damage and such maintenance, repairs and replacement as may be determined necessary or advisable by the Association. Each Unit owner shall be responsible for the cleanliness, including, but not limited to, ice and snow removal, of any Limited Common Element allocated to such Unit owner's Unit. In addition to the maintenance, repair and replacement of the Common Elements, the Association, through the Executive Board and upon the request of the Unit owners, shall arrange for or provide to each Unit owner trash and garbage removal service on a regular basis. The Executive Board, in its discretion, may provide the maintenance and other services described in this Section 3.2(a) either through its own employees or through independent contractors or both. The cost of the provision of such services shall be a Common Expense.

(d) Each Unit owner is responsible for the maintenance, repair and replacement of such Unit owner's Unit, including, without limitation, exterior glass windows, roofs, skylights, garage doors and other doors included within the Unit. Each Unit owner shall afford to the Association, and other Unit owners, and to their agents and employees, access through such Unit owner's Unit reasonably necessary for the maintenance, repair and replacement of the Common Elements and the shared Limited Common Elements.

(e) Charges for electric, sewer, water service, telephone and cable television service will be separately metered and each Unit owner will be responsible for the cost of such services furnished to such owner's Unit. Utilities that are not separately metered or billed by the respective utility companies and that are used by all of the Units shall be treated as part of the Common Expenses. Electricity for lighting of the Common Elements may be provided by the Association as part of the Common Expenses.

ARTICLE 4
DESCRIPTION AND ALLOCATION OF COMMON ELEMENTS AND LIMITED COMMON ELEMENTS

Section 4.1. Description of Common Elements. Common Elements shall include:

(a) Within Unit Boundaries. The following portions of any Building within the boundaries of a Unit that are not Limited Common Elements:(i) the portion of any chute, flue, duct, wire, conduit, bearing wall, bearing column or any other fixture within the designated boundaries of a Unit that serve, in whole or in part, another Unit or Units and/or the Common Elements, (ii) all driveways on the Property providing access to and from any public way, (iii) those parking areas not designated as Limited Common Elements on the Plat, (iv) any signage not physically attached to a Unit; (v) those portions identified and designated as Common Elements on the Plat, in each case including, by way of description but not limitation, and, if applicable, within the Units' boundaries to the extent that they are constructed:

(b) Land. All lands submitted to the Condominium as described herein, except land (i) directly under a Unit, which land shall be a Limited Common Element allocated to such Unit, and (ii) other Limited Common Elements, all subject to the easements set forth in Article 6 of this Declaration.

(c) Improvements. All improved surfaces, drives, driveways, curbs, sidewalks and parking spaces that are not Limited Common Elements, subject to the easements and provisions set forth in Article 6 of this Declaration.

(d) Ornamentals, Drainage System and Utilities. Lawn areas, drainage systems located on the Property, shrubbery, and waterways, and all conduits and utility lines over, on or under the Land that are not Limited Common Elements, subject to the easements and provisions set forth in Article 6 of this Declaration.

(e) Utilities. Connections for gas, electricity, light, telephone and water not owned by the public utility or other agencies providing such services, provided that any portion of such connections that serves only one or two of the Units shall be a Limited Common Element allocated with the Unit or Units so served.

(f) Lighting. Any exterior lighting or other facilities necessary to the upkeep and safety of the grounds.

(g) After-Constructed Improvements. All other improvements that may be constructed on the property except those improvements that are part of a Unit or a Limited Common Element.

(h) Certain Other Buildings and Improvements. The so-called "White House" located near Ocean Avenue and northeasterly of the entrance drive to the Condominium from Ocean avenue shall be a Common Element.

(i) Other Elements. All other elements of the Condominium rationally of common use and necessary to the existence, upkeep and safety thereof and, in general, all other devices or installations existing for common use that are not Limited Common Elements.

Section 4.2. Description of Limited Common Elements. Limited Common Elements shall include (i) at those locations where the outside surface of an exterior wall of a Building in one Unit is adjacent to the outside surface of an exterior wall of a Building in another Unit, any expansion joints connecting such exterior walls, and any expansion joints connecting the roofs of such Units, all of which shall be a Limited Common Element associated with both of such Units; (ii) the portion of any chute, flue, chase, duct, wire, conduit, bearing wall, bearing column or any other fixture lying within the designated boundaries of a Unit that serves less than all of the Units, which shall be Limited Common Elements associated with the Unit or Units so served, (iii) the portion of any connections for gas, electricity, light, telephone and water not owned by the public utility or other agencies providing such services that serves only one or two of the Units, which shall be a Limited Common Element associated with the Unit or Units so served or (iv) any structure, improvement or other property that is identified and designated as Limited Common Elements on the Plat, including, without limitation, the garages that are assigned as Limited Common Elements to Unit 3. Those portions of the Limited Common Elements serving only the Unit adjacent to such Limited Common Element are Limited Common Elements allocated only to the Unit which they serve. This allocation shall not be changed without the consent of the Unit owners served or benefited by such Limited Common Elements.

Section 4.3. [Intentionally Omitted.]

Section 4.4. [Intentionally Omitted.]

Section 4.5. Reserved Common Elements. The Executive Board shall have the power in its discretion from time to time to grant revocable licenses in designated Common Elements to the Association or to any Unit owners and to establish a reasonable charge to such Unit owners for the use and maintenance thereof. Such designation by the Executive Board shall not be construed as a sale or disposition of the Common Elements.

Section 4.6. Alteration of Common Elements by the Declarant. The Declarants reserve the right to modify, alter, remove or improve portions of the Common Elements, including without limitation, any equipment, fixtures and appurtenances, when in the Declarants' judgment it is necessary or desirable to do so, until the completion of all Units. Such rights do not include rights to add or remove real estate not deemed to be fixtures.

Section 4.7. Allocation of Common Elements. Each Unit owner shall acquire, as an appurtenance to each Unit, its Percentage Interest in the Common Elements as set forth on Exhibit B attached hereto, as the same may be amended from time to time. The said Percentage Interest shall not be divisible from the Unit to which it appertains and shall be deemed to be conveyed or encumbered with the Unit even though such interest is not expressly mentioned or described in the conveyance or other instrument. Except as otherwise permitted under the Act or this Declaration, the Percentage Interest of each Unit owner shall not be altered without the consent of all of the Unit owners expressed in an amendment to this Declaration duly recorded. Said Percentage Interests shall be used to allocate the division of proceeds, if any, resulting from any casualty, loss, eminent domain proceedings, common surplus, or from any other disposition of the Property.

Section 4.8. Allocation of Parking Spaces. The Declarant reserves the right, until the construction of all Units is completed, to allocate to particular Units as Limited Common Elements the parking spaces shown on the Plat that are not otherwise designated Limited Common Elements on said Plat. Such right shall be deemed a Development Right and shall be subject to the terms and conditions set forth in Article 14 of this Declaration. After the expiration of such Development Right pursuant to Article 14 of this Declaration, the Executive Board shall have the power in its discretion from time to time to so allocate those parking spaces.

ARTICLE 5
ALLOCATION OF PERCENTAGE INTERESTS IN COMMON EXPENSES AND VOTING RIGHTS

Section 5.1. Percentage Interests. Attached as Exhibit B hereto is a list of all Units by their Identifying Number and the Percentage Interest appurtenant to each Unit, together with an explanation of the formula by which such Percentage Interest is determined. All calculations on Exhibit B shall be conclusive and binding on all Unit owners, the Executive Board, the Association and any Mortgagees.

Section 5.2. Common Expenses. The liability allocated to each Unit for the Common Expense of the Condominium shall be the same percentage share as the Percentage Interest allocated to such Unit on Exhibit B.

Section 5.3. Allocation of Unit Owner's Voting Rights. Each Unit owner shall be entitled to one (1) vote for each Unit owned by such person to permit equality of voting power among the Units.

ARTICLE 6
EASEMENTS

Section 6.1. Utility Easements. The Units, Common Elements and Limited Common Elements shall be, and hereby are, made subject to easements in favor of the

Declarants, other Unit owners, appropriate utility and service companies, cable television 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 by this Section 6.1 shall include, without limitation, rights of the Declarants, any Unit owner 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, drainage ditches and pump stations, telephone wires and equipment, television equipment and facilities (cable or otherwise), electrical wires, conduits, and equipment and ducts and vents over, under, through, along and on the Units and Common Elements. Notwithstanding the foregoing provisions of this Section 6.1, any such easement through a Unit shall be located either in substantially the same location as such facilities or similar facilities existed at the time of the completion of the initial construction of the Buildings and other improvements within the affected Unit or so as not to materially interfere with the use or occupancy of such Buildings and other improvements by its occupants. With respect to any utility lines or equipment serving only the Condominium and located upon the Common Elements, the Executive Board shall have the right and power to assign the easement related to such Common Elements to any private or public utility company. The Executive Board shall also have the right and power to convey to any private or public utility company permits, licenses and easements over the Common Elements for the installation, maintenance, repair and replacement of utility poles, lines, wires and other equipment. In addition, the Executive Board shall have the right to grant permits, licenses and easements over the Common Elements for the building and maintenance of roads and for other purposes necessary for the proper operation of the Condominium.

Section 6.2. Maintenance of Surface Water Drainage. Declarants reserve for themselves and the Association an easement on, over and under those portions of the Common Elements not located within a Unit for the purpose of maintaining and/or correcting drainage of surface water in order to maintain reasonable standards of health, safety and appearance and to comply with and observe any conservation easement or declaration now or hereafter recorded with respect of the Property or any portion thereof. The easement created by this Section 6.2 expressly includes the right to cut any trees, bushes, or shrubbery, to grade the soil, or to take any other action reasonably determined to be necessary and otherwise in compliance with applicable standards of health, safety and appearance conservation easements or declarations. The Declarants or the Association, as the case may be, shall restore the affected property as closely to its original condition as is practicable.

Section 6.3. Common Elements Easements. The Common Elements (other than the Limited Common Elements) shall be, and hereby are, made subject to an easement in favor of the Unit owners and their invitees, employees, tenants and servants, the Association and the agents and employees of the Association for access, egress and ingress over, through and across each portion thereof, pursuant to such requirements and subject to such charges as the Executive Board may from time to time prescribe; *provided* that nothing contained herein shall create any access easement in favor of Unit owners with respect to such portions of the Common Elements that are not needed in order to gain access to one or more Units and as to which the Executive Board may from time to time determine it to be necessary or desirable to limit or control access

by Unit owners or the occupants of Units, or both, including, by way of illustration and not limitation, machinery and equipment rooms; *provided, further,* that every Unit owner shall have an unrestricted right of ingress and egress to such Unit owner's Unit.

Section 6.4. Declarant's Easements for Maintenance Repair and Renovation. The Units, Common Elements and Limited Common Elements are subject to an easement in favor of the Declarants for the purposes of construction, reconstruction, maintenance, repair, renovation, replacement or correction of the Common Elements or Limited Common Elements.

Section 6.5. Association's Easements for Maintenance, Repair and Renovation. The Units, Common Elements and the Limited Common Elements shall be and hereby are made subject to an easement in favor of the Association and the agents, employees and independent contractors thereof for the purpose of the inspection, upkeep, maintenance, repair and replacement of the Common Elements and the Limited Common Elements.

Section 6.6. Easements Burdening Common Elements and Limited Common Elements. The Common Elements and the Limited Common Elements shall be and hereby are made subject to the following easements in favor of the Units benefited:

(a) For the installation, repair, maintenance, use, removal and/or replacement of pipes, ducts, heating and air conditioning systems, electrical, telephone and other communication wiring and cables and all other utility lines and conduits which are part of or exclusively serve a single Unit and which pass across or through a portion of the Common Elements;

(b) For the installation, repair, maintenance, use, removal and/or replacement of overhead lighting fixtures, electrical receptacles and the like which are located in a portion of the ceiling, wall or floor adjacent to a Unit which is a part of the Common Elements; *provided that* the installation, repair, maintenance, use, removal or replacement of such fixtures, receptacles and the like does not unreasonably interfere with the common use of any part of the Common Elements or impair or structurally weaken any Building;

(c) 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 Element or Limited Common Element; and

(d) For the construction of improvements upon Limited Common Elements as such construction may be approved in writing by the Executive Board. Each Unit owner shall be liable to the Association for any damage to the Common Elements as the result of such Unit owner's exercise of the easement rights described in this paragraph (e).

Section 6.7. Structural Support Easements. To the extent necessary, each Unit shall have an easement for structural support over every other Unit, the Common Elements and the Limited Common Elements, and each Unit and the Common Elements shall be subject to an

easement for structural support in favor of every other Unit, the Common Elements and the Limited Common Elements.

Section 6.8. Easements Burdening Units and Limited Common Elements. The Units and the Limited Common Elements are hereby made subject to the following easements:

(a) In favor of the Association and its agents, employees and independent contractors, (i) for inspection of the Units and Limited Common Elements in order to verify the performance by Unit owners of all items of maintenance and repair for which they are responsible, (ii) for inspection, maintenance, repair and replacement of the Common Elements or the Limited Common Elements situated in or accessible from such Units or Limited Common Elements or both, (iii) for correction of emergency conditions in one or more Units or Limited Common Elements, or both, or casualties to the Common Elements, the Limited Common Elements and/or the Units, and (iv) to do any other work reasonably necessary for the proper maintenance of the Condominium, it being understood and agreed that the Association and its agents, employees and independent contractors shall take reasonable steps to minimize any interference with a Unit owner's use of his Unit resulting from the Association's exercise of any rights it may have pursuant to this Section 6.8; and

(b) In favor of the Unit owner benefited thereby and the Association, and their respective agents, employees and independent contractors, for the installation, repair, maintenance, use, removal and/or replacement of pipes, ducts, electrical, telephone, telegraph or other communication systems and all other utility lines and conduits which are part of the Common Elements and which pass across or through a portion of one or more Units.

(c) In favor of the Unit owner or owners benefited thereby and the Association and their respective patients, residents, tenants, invitees, agents, employees and independent contractors to the full extent from time to time required in order that the Units and the Buildings conform with all applicable life safety and other governmental and licensing requirements (i) for egress from Unit No. 1 through adjacent first floor corridors and hallways of the so-called "Service Connector" portion of Unit No. 3 to exterior exits located in said "Service Connector"; (ii) for egress from Unit No. 2 through adjacent first floor corridors and hallways in Unit No. 1 to exterior exits located in Unit No. 1; (iii) for egress from the exterior court yard area enclosed by the Buildings in Unit No. 1, Unit No. 2 and Unit No. 3, through the first floor corridors and hallways in the "Service Connector" portion of Unit No. 3 to exterior exits located in said Service Connector; and (iv) for egress from any Unit through adjacent corridors and hallways in any other for purposes of providing access to exits or other life safety features now or hereafter required for compliance with applicable life safety and other governmental and licensing requirements.

(d) In favor of the Unit owners benefited thereby and the Association and their agents, employees and independent contractors, for the installation, repair, maintenance, use, removal and/or replacement of walls, doors, jambs and doorframes in any corridor providing passage from one Unit to another in order to regulate or restrict passage between the Units

through such corridor (a "Corridor Separation Structure"), *provided that* (i) the Association shall be required to install a Corridor Separation Structure only at the written request of the Unit owner and Mortgagee of at least one of the Units in question; (ii) the costs of design and installation of a Corridor Separation Structure shall be born by the Unit owner or Unit owners requesting such Corridor Separation Structure; (iii) a Corridor Separation Structure shall be designed, installed, maintained and operated so that the requirements of all applicable life safety and other governmental and licensing requirements are satisfied; (iv) each Corridor Separation Structure shall be a Limited Common Element with the costs of maintenance, operation, repair, replacement and removal thereof allocated to the Units in question; and (v) a Corridor Separation Structure shall be removed only at the written request of the Unit owners and Mortgagees of both of the Units in question.

Section 6.9. Easements for Encroachments. If construction, reconstruction, repair, shifting, settlement or other movement of any portion of the Condominium results either in the Common Elements encroaching on any Unit, or in any Unit encroaching on the Common Elements or on any other Unit, a valid easement shall exist during the period of the encroachment for the encroachment and for the maintenance thereof.

Section 6.10. Duration of Easements. All easements, rights and restrictions described and mentioned in this Declaration are easements appurtenant, running with the land and the Property, including by way of illustration but not limitation, the Units, the Common Elements and the Limited Common Elements, and (except as expressly may be otherwise provided herein or in the instrument creating the same) shall continue in full force and effect until the termination of this Declaration.

Section 6.11. Certain Other Easements. The Property is subject to, and benefited by, the following easements:

(a) Snow Plowing Easement given by Cedars Nursing Care Center, Inc. to the City of Portland, dated April 17, 1990, and recorded in the Cumberland County Registry of Deeds, Book 9260, Page 236;

(b) Utility Easements given by Cedars Nursing Care Center, Inc. to Central Maine Power Company and New England Telephone and Telegraph Company, dated May 7, 1990 and September 5, 1990, and recorded in the Cumberland County Registry of Deeds respectively in Book 9162, Page 206 and Book 9306, Page 219;

(c) Utility Easements given by JHA Properties, Inc. to Central Maine Power Company, dated July 26, 1990, and recorded in the Cumberland County Registry of Deeds, Book 14382, Pages 187 and 188;

(d) Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. dated March 27, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13709, Page 75, as amended by Amendment to Declaration of Covenants and Restrictions, among the Maine Department of Environmental Protection, Cedars

Nursing Care Center, Inc. and JHA Properties, Inc., dated June ___, 2006, to be recorded in the Cumberland County Registry of Deeds;

(e) Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc., dated June ___, 2006, to be recorded in the Cumberland County Registry of Deeds;

(f) Certificate of Variance Approval, dated February 6, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13595, Page 182;

ARTICLE 7
RESTRICTIONS ON USE, SALE AND LEASE OF UNITS

Section 7.1. Use. The following restrictions shall apply to the use of the Condominium:

(a) The Units shall be used as part of an integrated campus providing skilled nursing care, assisted living residences and independent living residences, and such other uses as shall be determined from time to time by the Association through the Executive Board.

(b) No Unit owner may obstruct the Common Elements in any way. No Unit owner may store anything in or on the Common Elements other than in or on any Common Element storage area without the prior written consent of the Executive Board.

(c) No Unit owner may carry on any practice, or permit any practice to be carried on, which unreasonably interferes with the quiet enjoyment of the occupants of any other Unit. The Property is to be maintained in a clean and sanitary condition, and no Unit owner may place any garbage, trash or rubbish anywhere in the Property other than in a Unit owner's own Unit and in or on such parts of the Common Elements as may be designated for such purpose by the Executive Board.

(d) No Unit shall be used, occupied or kept in a manner that in any way increases the fire insurance premiums for the Property without the prior written consent of the Executive Board.

(e) The Executive Board may from time to time promulgate reasonable Rules and Regulations, not in conflict with the provisions of this Declaration, concerning the use and enjoyment of the Property. Copies of the then current Rules and Regulations and any amendments thereto shall be furnished to all Unit owners by the Association promptly after the adoption of such Rules and Regulations and any amendments thereto.

(f) The owner of a Unit shall be responsible for maintaining such Unit in good order and repair, at the expense of such owner, including (but not limited to) cleaning and replacing glass panes in any window serving such Unit.

(g) The owner of a Unit shall be responsible for the cleanliness of any Limited Common Element serving such Unit, at the expense of such Unit owner.

(h) Without the prior written consent of the Executive Board, the owner of a Unit shall not alter in any way any portion of such Unit owner's Unit that is part of the exterior facade of the Units, including by way of example, but not by way of limitation, roofing materials or design, exterior doors, siding type and color, and windows.

Section 7.2. Sale and Lease of Units.

A Unit owner, including but not limited to any Declarant, may sell or lease such Unit owner's Unit at any time and from time to time, *provided* that each tenant and lease shall be subject to and be bound by all of the covenants, restrictions and conditions set forth in the Condominium Documents.

ARTICLE 8
RIGHTS OF MORTGAGE HOLDERS, INSURERS AND GUARANTORS

Section 8.1. Subject to Declaration. Whether or not it expressly so states, any mortgage constituting a lien against a Unit and an obligation secured thereby shall provide generally that the mortgage and the rights and obligations of the parties thereto shall be subject to the terms and conditions of the Act, the Declaration, the Plat and any Rules and Regulations.

Section 8.2. Rights of Eligible Mortgage Holders.

(a) The Association shall send reasonable prior written notice by prepaid United States mail to Eligible Mortgage Holders of the consideration by the Association of the following proposed actions:

(1) The termination of the Condominium pursuant to Section 1602-118 of the Act;

(2) A change in the allocated interest of a Unit, a change in the boundaries of a Unit or a subdivision of a Unit;

(3) The merger or consolidation of the Condominium with another condominium;

(4) The conveyance or subjection to a security interest of any portion of the Common Elements;

(5) The proposed use of any proceeds of hazard insurance required to be maintained by the Association under Section 1603-113(a) of the Act for purposes other than the repair or restoration of the damaged property;

(6) The adoption of any proposed budget by the Executive Board under Section 1603-103(c) of the Act, and of the date of the scheduled Unit owners meeting to consider ratification thereof, which notice shall be accompanied by a summary of the proposed Budget; and

(7) Any default in the performance or payment by a Unit owner of any obligations under this Declaration, including, without limitation, default in the payment of Common Expense liabilities.

(b) In the event of any proposed actions described in clauses (1) through (5) of paragraph (a) of this Section 8.2, an Eligible Mortgage Holder shall have the right, but not the obligation, in place of the Unit owner to cast the votes allocated to that Unit or give or withhold any consent required of the Unit owner for such action by delivering written notice to the Association with a copy to the Unit owner prior to or at the time of the taking of the proposed action, which notice shall be sent by prepaid United States mail, return receipt requested, or by delivery in hand. Failure of the Eligible Mortgage Holder to so exercise such rights shall not constitute a waiver thereof and shall not preclude the Unit owner from exercising such right. In the event of any default described in subsection (a), paragraph (7) of this Section 8.2, the Eligible Mortgage Holder shall have the right, but not the obligation, to cure such default.

(c) An Eligible Mortgage Holder, or its representative, shall have the right to attend Association and Executive Board meetings for the purposes of discussing the matters described in paragraphs (1) through (6) of Section 8.2 (a).

Section 8.3. Rights of Mortgage Holders, Insurers or Guarantors.

(a) The Association shall send timely prior written notice of the following matters by prepaid United States mail to holders, insurers and guarantors of a mortgage on any Unit:

(1) Any condemnation or casualty loss that affects either a material portion of the Condominium or the Unit securing the mortgage;

(2) A lapse, cancellation or material modification of any insurance policy maintained by the Association; and

(3) Any proposed action that requires the consent of fifty-one percent (51%) of the Eligible Mortgage Holders.

(b) To receive such notice, the mortgage holder, insurer or guarantor shall send a written request therefor to the Association, stating its name and address and the Unit identifying number or address of the Unit on which it holds, insures or guarantees the mortgage.

Section 8.4. Liability for Use and Charges. Notwithstanding any term in Section 10.1 hereof to the contrary, any Mortgagee who obtains title to a Unit pursuant to the remedies provided in a mortgage for foreclosure of such mortgage or a deed in lieu of foreclosure shall not

be liable for such Unit owner's unpaid assessments or charges which accrue prior to the acquisition of title to such Unit by the Mortgagee, except to the extent otherwise provided for in the Act and except to the extent that such Mortgagee is liable as a Unit owner for the payment of such unpaid assessment or charge that is assessed against the Mortgagee as a result of all Unit owners being reassessed for the aggregate amount of such deficiency.

Section 8.5. Condemnation Rights. No provision of this Declaration shall give a Unit owner, or any other party, priority over any rights of the Mortgagee of a Unit pursuant to its mortgage in the case of a distribution to such Unit owner of insurance proceeds or condemnation award for loss to or a taking of one or more Units and/or Common Elements.

Section 8.6. Books and Records. Any Mortgagee shall have the right, exercisable by written notice to the Executive Board, to examine the books and records of the Association and to require that it be provided with a copy of each annual report of the Association and other financial data of the Association reasonably requested by such Mortgagee.

ARTICLE 9
INSURANCE

Section 9.1. Types and Amounts. The Association shall maintain at a minimum, as a Common Expense and to the extent reasonably available, the following types and amounts of insurance:

(a) Property insurance on the Common Elements, insuring against all risks of direct physical loss commonly insured against under the fire and extended coverage endorsement and such other insurance as the Executive Board deems necessary or desirable. The total amount of any insurance after application of any deductions shall not be less than 80% of the actual cash value of the insured property at the time the insurance is purchased and at each renewal date exclusive of land, foundations, excavation and other items normally excluded from property policies. The loss payable clause of such policy shall show the Association or the Insurance Trustee, if any, as a trustee for each Unit owner and each Mortgagee of a Unit. Such policy may also contain the standard mortgagee clause, naming each Mortgagee, its successors and assigns. If the Executive Board fails within sixty (60) days after the date of an insured loss to initiate a claim for damages recoverable under the policy or policies obtained pursuant to this paragraph (a), any Mortgagee may initiate such a claim on behalf of the Association.

(b) Liability insurance, including medical payments insurance, complying with the requirements of Section 9.2 hereof, covering all occurrences commonly insured against for death, bodily injury and property damage arising out of or in connection with the use, ownership or maintenance of the Common Elements. Such insurance policy shall contain a "severability of interest endorsement" or equivalent coverage which precludes the insurer from denying the claim of a Unit owner because of the negligent acts of the Association or another Unit owner. The amount of such liability insurance shall be at least $1,000,000.00 for bodily injury and property damage for any single occurrence. The scope and amount of coverage of all liability insurance policies shall be reviewed at least once each year by the Executive Board and may be changed in

its discretion, *provided* that such policies shall continue to comply with the requirements of this Section 9.1 and Section 9.2 hereof.

(c) If the insurance described in paragraphs (a) and (b) of this Section 9.1 is not reasonably available, the Association shall provide notice of the same to the Unit owners and shall carry any other insurance that will provide similar coverage that can be reasonably obtained.

(d) Such worker's compensation insurance as applicable laws may require.

(e) Insurance to satisfy the indemnification obligation of the Association set out in Section 10.2 hereof, if and to the extent reasonably available, including but not limited to insurance coverage commonly referred to as "directors and officers insurance".

(f) If at any time it is determined that all or any part of the Property lies within a special flood hazard area, a master or blanket policy of flood insurance covering the Property, including but not limited to, all Common Elements and Limited Common Elements, the Units and all improvements, fixtures and appliances contained within the Unit as of the date of settlement on the Unit or the value thereof, and building service equipment and common equipment, fixtures, personal property and supplies owned by the Association, but excluding any improvements or appliances subsequently added by a Unit owner and all other personal property of the Unit owner. The amount of any such flood insurance obtained pursuant to this paragraph (f) shall be equal to the lesser of one hundred percent (100%) of the insurable value of the property insured or the maximum coverage available under the appropriate National Flood Insurance Administration program. Such flood insurance policy may, at the option of the Association, contain a "deductible" provision in an amount not to exceed the lesser of $5,000 or one percent (1%) of the policy face amount. Funds to cover this amount shall be included in the Association reserve fund.

Section 9.2. Required Provisions. Insurance obtained by the Association shall be in accordance with the following provisions:

(a) Exclusive authority to adjust losses under policies hereafter in force on the Common Elements and the Limited Common Elements shall be vested in the Executive Board or its authorized representative.

(b) Each Unit owner may obtain additional insurance at his own expense; *provided, however*, that: (1) such policies shall not be invalidated by the waivers of subrogation required to be contained in policies required by this Declaration; and (2) no Unit owner shall be entitled to exercise his right to maintain insurance coverage in such a way as to decrease the amount which the Association may realize under any insurance policy which the Association may have in force on the Property at any particular time.

(c) With respect to the insurance policies described in paragraphs (a) and (b) of Section 9.1 issued to the Association and covering all or any part of the Property, the Association shall cause such policies to provide that:

(1) Each Unit owner is an insured person under such policies with respect to liability arising out of such Unit owner's ownership of an undivided interest in the Common Elements or membership in the Association.

(2) The insurer waives its right to subrogation under the policy against any Unit owner or members of such Unit owner's household.

(3) No act or omission by any Unit owner, unless acting within the scope of his authority on behalf of the Association, will void such policies or be a condition to recovery under such policies.

(4) If at the time of a loss under such policies 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.

(5) The liability of the insurer shall not be affected by, and the insurer shall not claim, any right of set-off, counterclaim, apportionment, proration, or contribution by reason of any other insurance obtained by or for any Unit owner.

(6) An insurer that has issued an insurance policy under this Article shall issue certificates or memoranda of insurance to the Association and, upon request, to any Unit owner or Mortgagee. Such policies may not be canceled nor may coverage thereunder be substantially changed (whether or not requested by the Executive Board) except by the insurer giving at least twenty (20) days prior written notice thereof to the Executive Board, the Insurance Trustee, if any, Unit owners, each holder of a first mortgage on a Unit, and every other party in interest who shall have requested such notice of the insurer;

(7) The insurer will recognize any Insurance Trust Agreement entered into by the Association.

Section 9.3. Additional Insurance. Nothing in this Declaration shall be construed to limit the authority of the Executive Board to obtain additional insurance which it deems advisable.

ARTICLE 10
UNITS SUBJECT TO CONDOMINIUM DOCUMENTS; EMINENT DOMAIN

Section 10.1. Applicability of Condominium Documents. Each present and future owner, tenant, occupant and holder of a mortgage on a Unit shall be subject to and shall comply with the provisions of the Act, and with the covenants, conditions and restrictions as set forth in the Condominium Documents and the deed to such Unit; *provided that*, nothing contained herein shall impose upon any tenant or holder of a mortgage on a Unit any obligation which the Act or one or more of the Condominium Documents, or both, make applicable only to Unit owners (including, without limitation, the obligation to pay assessments for Common Expenses). The acceptance of a deed or mortgage to any Unit, or the entering into of a lease or the entering into

occupancy of any Unit shall constitute an agreement that the provisions of the Act and the covenants, conditions and restrictions set forth in the Condominium Documents and the deed to such Unit are accepted and ratified by such grantee, holder of a mortgage on a Unit or tenant. All of such provisions shall be covenants running with the land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every deed, conveyance mortgage or lease thereof. Failure to comply with the covenants, conditions and restrictions set forth in the Condominium Documents and the deed to such Unit shall be grounds for an action to recover damages or for injunctive relief, or both, maintainable by the Executive Board on behalf of the Association or by an aggrieved Unit owner.

Section 10.2. Eminent Domain. Whenever all or part of the Common Elements shall be taken, injured or destroyed by eminent domain, each Unit owner shall be entitled to notice thereof and to participate in the proceedings incident thereto; *provided, however*, that the Association shall officially represent the Unit owners in such proceedings. In any proceedings for the determination of damages, such damages shall be determined for such taking, injury or destruction as a whole and not for each Unit owner's interest therein and any award for such damage shall be payable to the Association for the benefit of the Unit owners and of the Mortgagees.

ARTICLE 11
ASSOCIATION; EXECUTIVE BOARD OF THE ASSOCIATION

Section 11.1. The Association. The Association is the governing body for all Unit owners with respect to the administration, maintenance, repair, replacements, cleaning and management of the Common Elements. The membership of the Association shall at all times consist exclusively of all Unit owners. Each Unit owner shall automatically become and be a member of the Association as long as such person is a Unit owner and upon the termination of the interest of a Unit owner in the Condominium, such Unit owner's membership and any interest in the common funds of the Association shall thereupon automatically terminate and transfer and inure to the next Unit owner or Unit owners succeeding such Unit owner in interest. The Association shall have all of the powers granted pursuant to Section 1603-102 of the Act, including the powers to assign its right to future income.

Section 11.2. Members of the Executive Board.

(a) The initial Executive Board shall consist of three (3) members.

(b) There shall be no Declarant control period. The Unit owners (including the Declarants to the extent of any Units owned by a Declarant at that time) shall each have the right to appoint one person to be its designated representative on and a member of the Executive Board in accordance with the Bylaws. The members of the Executive Board so appointed shall serve until the first regular election of the Executive Board held at the next annual meeting of the Association held in accordance with the Bylaws; thereafter, members of the Executive Board shall be elected in accordance with the Bylaws. The Bylaws may provide for the members of the Executive Board to serve staggered terms.

(c) Subject to the terms and provision of the Act, this Declaration or the Bylaws, the Executive Board shall have the power to act on behalf of the Association. The Executive Board shall possess all of the duties and powers granted to the Executive Board by the Act.

Section 11.3. Disputes. In the event of any dispute or disagreement between any Unit owners relating to the Property, or any questions of interpretation or application of the provisions of the Condominium Documents, the determination thereof by the Executive Board shall be final and binding on each and all such Unit owners. 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 Section 11.3. All costs of obtaining such judgment shall be borne by the disputants, or in the absence of disputants, by the Association as a Common Expense.

Section 11.4. Abating and Enjoining Violations by Unit Owners. The violation of any Rules and Regulations adopted by the Executive Board, the breach of any provision contained in the Condominium Documents, the deed to any Unit, or the Act by any Unit owner or any tenant of such Unit owner, shall give the Executive Board the right, in addition to any other rights to which it may be entitled, to enjoin, abate or remedy by appropriate legal proceedings, either by law or in equity, the continuance of any such violation or breach.

Section 11.5. Limited Liability of the Executive Board. To the maximum extent permitted by applicable law, the Executive Board, and its members in their capacity as members, officers and employees:

(a) Shall not 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 Units, or from any of its pipes, drains, conduits, appliances, or equipment, or from any other place unless in each such instance such injury or damage has been caused by the willful misconduct or gross negligence of the Association or the Executive Board;

(b) Shall not be liable as a result of the performance of the Executive Board members' duties for any mistakes of judgment, negligence or otherwise, except for the Executive Board members' own willful misconduct or gross negligence;

(c) Shall have no 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;

(d) Shall not 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 such Unit owner or his tenants, employees, agents, customers or guests in a Unit, or in or

on the Common Elements or Limited Common Elements, except for the Executive Board members' own willful misconduct or gross negligence;

(e) Shall have no 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, except for the Executive Board members' own willful misconduct or gross negligence in the performance of their duties; and

(f) Shall have no 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 their performance of their duties, except for the Executive Board members' own willful misconduct or gross negligence.

Section 11.6. 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 attorneys' fees, reasonably incurred by or imposed upon the Executive Board Member in connection with any proceeding in which the Executive Board member may become involved by reason of the Executive Board member being or having been a member and/or officer of the Executive Board, or any settlement of any such proceeding, whether or not the Executive Board member is an Executive Board member, officer or both at the time such expenses are incurred, except with respect to any matter as to which such Executive Board member shall have been finally adjudicated in any action, suit or proceeding not to have acted in good faith in the reasonable belief that his or her action was in the best interests of the corporation or, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful; *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 still an Executive Board member at the time of settlement) approves such settlement and reimbursement as being in the best interests of the Association. The indemnification by the Unit owners set forth in this Section 11.6 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.

Section 11.7. 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 such complaints shall be defended by the Association. The Unit owners and the Eligible Mortgage Holders shall have no right to participate other than through the Association in such defense. Complaints of a nature specified in Section 3.3. hereof against one or more but less than all Unit owners shall be defended by such Unit owners who are defendants themselves and such Unit owners shall promptly give written notice of the institution of any such suit to the Association and to the holders of any mortgages encumbering such Units.

Section 11.8. Storage; Disclaimer of Bailee Liability. Neither the Executive Board, the Association, any Unit owner nor the Declarant shall be considered a bailee of any personal property stored on the Common Elements (including property located in storage areas on the Common Elements, including the Limited Common Elements), whether or not exclusive possession of the particular area is given to a Unit owner for storage 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.

ARTICLE 12
MANAGEMENT

The Association shall have the right to employ a professional, experienced managing agent who shall oversee the daily operation of the Condominium in accordance with the provisions of the Act and the Condominium Documents.

ARTICLE 13
ASSESSMENTS; LIABILITY OF UNIT OWNERS

Section 13.1. Power to Assess.

(a) The Association, acting through the Executive Board in accordance with the Bylaws, shall have the power to fix and determine, from time to time, the sums necessary and adequate to provide for the Common Expenses (based on the Budget for such fiscal period), including, but not limited to, such amounts as are necessary for (i) the maintenance, repair and replacement of the Common Elements and the Limited Common Elements, as set forth in Section 3.3(a) hereof, (ii) uncollectable assessments, (iii) budget deficits, (iv) such other reserves as are hereinafter described, (v) such additional reserves as the Executive Board shall deem necessary or prudent, and (vi) such other expenses as are specifically provided for in the Act, this Declaration, and the Bylaws. The Association may establish an adequate reserve fund for maintenance, repair and replacement of those Common Elements and Limited Common Elements for which the Association is responsible that are anticipated to require replacement, repair or maintenance on a periodic basis, and to cover any deductible amount for insurance policies maintained by the Association. If such reserve fund is established by the Association, the Association may fund it by the Monthly Assessments. Common Expenses, to the extent they are imposed, shall be assessed against each Unit in accordance with the allocation set forth in Section 5.2 above and Section 1602-107 of the Act. Charges incurred by the Association and related to Limited Common Elements shall be assessed against only those Units benefiting from the Limited Common Elements. After the adoption of the first annual proposed budged by the Executive Board, the Executive Board shall annually adopt a proposed budget (the "Budget"), and, within thirty (30) days of adoption shall provide a summary of the proposed Budget to all Unit owners, *provided that* the Association shall have no obligation to adopt the first Budget unless requested to do so by all of the Unit owners. The Executive Board shall also schedule a meeting of the

Unit owners to consider ratification of the Budget not less than fourteen (14) days nor more than thirty (30) days after the mailing of such summary. Unless at that meeting a majority of all of the Unit owners reject the Budget, the Budget is ratified, whether or not a quorum is present. In the event the Budget is not ratified, the current Monthly Assessment, if any, shall continue until the adoption of a new Budget is made at a meeting of the Association called for that purpose no sooner than fifteen (15) days nor later than thirty (30) days after the initial ratification meeting of the Unit owners. The Declarant shall pay the Monthly Assessment for Units owned by the Declarant in the same manner as the other Unit owners, beginning with the first Monthly Assessment as provided in Section 13.3 hereof.

(b) In addition to paragraph (a) of this Section 13.1, the following shall apply:

(1) Any Common Expense associated with the maintenance, repair or replacement of a Limited Common Element shall be assessed against the Unit or Units to which that Limited Common Element is assigned.

(2) Any payments, fees or charges for the use, rental or operation of any Common Element shall be applied first, to reduce the Common Expense relating to such Common Element and, second, any excess shall be applied to Common Expenses generally.

(3) Assessments to pay a judgment against the Association shall be a lien only against the Units in the Condominium at the time the judgment was entered, in proportion to their Common Expense liability.

(4) If any Common Expense is caused by the misconduct of any Unit owner, the Association may assess that expense exclusively against such Unit owner's Unit.

(5) If Common Expense liabilities are reallocated, Common Expense assessments and any installment thereof not yet due shall be recalculated in accordance with the reallocated Common Expense liabilities.

(6) Any Common Expense that is to be reimbursed by Unit owners according to use shall be paid as part of the Common Expense installment billed at the same time as the reimbursable expense, and for all purposes except allocation by Percentage Interest in the Common Elements, all such reimbursable expenses shall be treated as Common Expenses.

Section 13.2. Special Assessments. If the cash requirement estimated at the beginning of any fiscal year shall prove to be insufficient to cover the actual Common Expenses for such fiscal year for any reason (including by way of illustration and not limitation, any Unit owner's non-payment of its assessment or municipal assessments not yet assessed), the Executive Board shall have the power, at any time it deems necessary and proper, to levy one or more Special Assessments against each Unit owner. Special Assessments shall be due and payable in the manner and on the date set forth in the notice thereof.

Section 13.3. Payment of Assessments. Each Unit owner, including each Declarant to the extent a Declarant owns a Unit, shall pay all Monthly Assessments and Special Assessments levied by the Association in accordance with this Declaration and the Bylaws. Liability for such assessments shall be determined in accordance with Section 5.2 hereof. Such assessments shall begin accruing at the time of the creation of the Condominium and they shall be due and payable on a monthly basis as and if designated by the Executive Board. Assessments that are unpaid for over fifteen (15) days after the due date shall bear interest at the rate determined from time to time by the Executive Board from the due date until paid. In the sole discretion of the Executive Board, a late charge may be assessed against the delinquent Unit owner.

Section 13.4. New Assessments. After the initial assessment has been made by the Association, subsequent assessments shall be made by the Association annually on or before the anniversary date of the initial assessment or such other date as the Association may choose, based on the Budget adopted by the Association not later than sixty (60) days prior to the assessment. If the Executive Board shall fail to fix new Monthly Assessments for Common Expenses for the subsequent fiscal year before the expiration of any fiscal year, the Unit owners shall continue to pay the same sums they were paying for such Monthly Assessments during the fiscal year just ended and such sum shall be deemed to be the new Monthly Assessments for the succeeding fiscal year. If the Executive Board shall change the Monthly Assessment at a later date, the difference between the new Monthly Assessment, if greater, and the previous year's Monthly Assessment up to the effective date of the new Monthly Assessment shall be treated as if it were a Special Assessment under Section 13.2. hereof; thereafter each Unit owner shall pay the new Monthly Assessment. In the event the new Monthly Assessment is less than the previous year's Monthly Assessment, in the sole discretion of the Executive Board, the excess shall either be refunded to the Unit owners, credited against future Monthly Assessments or retained by the Association for reserves.

Section 13.5. No Exemption by Waiver. No Unit owner may exempt himself from liability for the Common Expenses by waiver of the enjoyment of the right to use any of the Common Elements or by the abandonment of such Unit owner's Unit or otherwise.

Section 13.6. Personal Liability of Unit Owners. All sums assessed by the Association as a Monthly Assessment or Special Assessment shall constitute the personal liability of the owner of the Unit so assessed and also, until fully paid, shall constitute a lien against such Unit pursuant to Section 1603-116 of the Act. Multiple owners of a Unit shall each be jointly and severally liable for all unpaid Monthly Assessments and Special Assessments. The Association may take such actions as are permitted by Section 1603-116 of the Act for failure to pay any assessment or other charges. The delinquent owner shall be obligated to pay (a) all expenses of the Executive Board, including reasonable attorneys' fees, incurred in the collection of the delinquent assessment by legal proceedings or otherwise, and (b) any amounts paid by the Executive Board for taxes or on account of superior liens or otherwise to protect its lien, which expenses and amounts, together with accrued interest, shall be deemed to constitute part of the delinquent assessment and shall be collectible as such.

Section 13.7. Liability of Purchaser of Unit for Unpaid Assessments.

(a) Upon the voluntary sale, conveyance or any other voluntary transfer of a Unit or any interest therein, the grantee thereof shall not be personally liable with the grantor thereof for all unpaid assessments for Common Expenses which are a charge against the Unit as of the date of consummation of the sale, conveyance or transfer, unless such grantee agrees to assume the obligation therefor; *provided, however*, except as provided in clause (b), a lien against the Unit so purchased for assessments imposed pursuant to this Declaration or the Act shall not be affected by such sale, conveyance or other transfer.

(b) Prior to or at the time of any conveyance of a Unit by Unit Owner, all unpaid assessments shall be paid in full. Any purchaser of a Unit shall be entitled to a written statement by the Association setting forth the accrued assessments for Common Expenses that are then unpaid, and such purchaser shall not be liable for, nor shall the Unit conveyed be subject to a lien for, accrued but unpaid assessments in excess of the amount therein set forth.

Section 13.8. Subordination of Certain Charges. The lien for any Monthly Assessments or any fees, charges, late charges, fines and interest that may be levied by the Association pursuant to Section 1603-102 of the Act shall be subordinate to any first mortgage lien recorded before or after such Monthly Assessment, fee, charge, late charge, fine or interest was due.

ARTICLE 14
SPECIAL DECLARANT RIGHTS AND DEVELOPMENT RIGHTS

Section 14.1. Special Declarant Rights and Development Rights. In addition to the easement rights reserved in Article 6, the Declarants reserve to themselves and for the benefit of their respective successors and assigns, and subjects the Property to, the right:

(a) to effect the construction of the Building and other improvements constituting Unit No. 2, in accordance with the description thereof set forth on the Plat.

(b) to effect an expansion of Unit No. 1, by (i) modifying the vertical boundaries thereof in the area of the single story structure attached to the west side of the Building constituting Unit No. 1 between the wing of said Building that extends southwesterly and the wing of said Building that extends in a northwesterly direction (the "Loading Structure"), as follows: (A) projecting in a northwesterly direction the vertical boundary that is three feet outside the southwest facing exterior wall of the Loading Structure that extends in a northwesterly direction from the northwest side of the southwesterly wing of said Building to the intersection of such projected vertical boundary with the extended vertical boundary described in clause (B); and (B) projecting the vertical boundary that is three feet outside the northwest facing fascia of overhanging roof of the Loading Structure that extends in a southwesterly direction from the westerly side of the Loading Structure to the intersection of such projected vertical

boundary with the projected vertical boundary described in clause (A); and (ii) constructing within the boundaries so modified additions to the Building and other improvements constituting Unit No. 1.

(b) until the construction of all Units is completed, to connect with and make use of utility lines, wires, pipes and conduits located on the Property for construction and sales purposes;

(c) until the construction of all Units is completed, to use the Common Elements for ingress and egress, for the repair and construction of Units and Common Elements, including, but not limited to, the movement and temporary storage of construction materials and equipment, and for the installation of signs and lighting for sales and promotional purposes; and

(d) to use easements through the Common Elements for the purposes of making improvements within the Condominium.

The real estate subject to these Development Rights and Special Declarant Rights is the Property.

Section 14.2 Amendment. This Article 14 shall not be amended without the written consent of the Declarants duly recorded in the Cumberland County Registry of Deeds.

ARTICLE 15
ASSIGNABILITY OF DECLARANT'S RIGHTS

The Declarants may assign any or all of their respective rights or privileges reserved or established by this Declaration or the Act in accordance with the provisions of the Act.

ARTICLE 16
AMENDMENT OF DECLARATION

Section 16.1. Amendments to Declaration. Except as otherwise provided herein or in Section 1602-117 of the Act, this Declaration may be amended only by unanimous vote or agreement of the Unit owners.

Section 16.2. Rights of Mortgagees. Approval of amendments of a material nature must be obtained from Eligible Mortgage Holders representing at least 51% of the votes of Units that are subject to mortgages held by Eligible Mortgage Holders. A change to any of the following, except where such change may be effected by the Declarants, the Association or certain Unit owners under the Act or this Declaration, are deemed to be material:

(a) voting rights;

(b) reallocation of interests in the Common Elements or Limited Common Elements, or rights to their use;

(c) boundaries of any Unit;

(d) convertibility of Units into Common Elements or Common Elements into Units;

(e) expansion or contraction of the Condominium, or the addition, annexation or withdrawal of property to or from the Condominium;

(i) insurance;

(j) restoration or repair of the Condominium (after a hazard damage or partial condemnation) in a manner other than that specified in the Condominium Documents;

(k) any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs; or

(l) any provisions that expressly benefit holders of mortgages on the Units.

The approval of an Eligible Mortgage Holder may be assumed when that Eligible Mortgage Holder has failed to submit a response to any written proposal for an amendment within thirty (30) days after the proposal is made. No amendment to the Condominium Documents shall diminish or impair the rights of the Declarants under the Condominium Documents without the prior written consent of the Declarants. No amendment may modify this Article 16 or the rights of any person hereunder. Except as specifically provided in the Condominium Documents, no provision of the Condominium Documents shall be construed to grant to any Unit owner, or to any other person, any priority over any rights of mortgagees of any Unit owner.

ARTICLE 17
TERMINATION

The Condominium may be terminated only by agreement of the Unit owners representing one hundred percent (100%) of the Percentage Interests. Termination of the Condominium will be governed by the provisions of Section 1602-118 of the Act.

ARTICLE 18
GENERAL PROVISIONS

Section 18.1. Headings. The headings used in this Declaration and any table of contents are inserted solely as a matter of convenience for the readers of this Declaration and shall not be relied upon or used in construing the effect or meaning of any of the provisions of this Declaration.

Section 18.2. Severability. The provisions of this Declaration shall be deemed independent and severable, and the invalidity or unenforceability of any provision or portion

thereof shall not affect the validity or enforceability of any other provision or portion hereof unless such deletions shall destroy the uniform plan of development and operation of the Condominium which this Declaration is intended to create.

Section 18.3. Applicable Law. This Declaration shall be governed by and construed according to the laws of the State of Maine.

Section 18.4. Interpretation. The provisions of this Declaration shall be liberally construed in order to effect Declarants' desire to create a uniform plan for development and operation of the Condominium. In the event of any conflict or discrepancy between this Declaration, the Bylaws and the Plat, the provisions of this Declaration shall govern.

Section 18.5. Effective Date. This Declaration shall become effective when it and the Plat have been recorded.

Section 18.6. Notices. All notices and other communications required or permitted to be given under or in connection with this Declaration shall be in writing and shall be deemed given when delivered in person or on the second business day after the day on which mailed by certified mail, return receipt requested, addressed to the address maintained in the register of current addresses established by the Association.

Section 18.7. Exhibits. All exhibits attached to this Declaration are hereby made a part of this Declaration.

Section 18.8. Pronouns. Wherever used, the singular number shall include the plural, the plural the singular and the use of any gender shall include all genders.

[The balance of this page is left blank intentionally. Signature page follows.]

IN WITNESS WHEREOF, the Declarants have caused this Declaration to be executed by their duly authorized representatives as of this 21 day of June, 2006.

JHA PROPERTIES, INC.

Witness

By: Kathryn J. Callnan, President

CEDARS NURSING CARE CENTER, INC.

Witness

By: Kathryn J. Callnan, President

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

June 21, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of JHA PROPERTIES, INC., a Maine non-profit corporation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said JHA PROPERTIES, INC.

Before me,

Lynne A. Burr, Notary Public
State of Maine
My Commission Expires 12/5/2009

Notary Public/Attorney at Law
Print Name: Lynne Burr
My commission expires: 2009

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

June 21, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of CEDARS NURSING CARE CENTER, INC., a Maine non-profit corporation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said CEDARS NURSING CARE CENTER, INC.,

Before me,

Lynne A. Burr, Notary Public
State of Maine
My Commission Expires 12/5/2009

Notary Public/Attorney at Law
Print Name: Lynne Burr
My commission expires: 2009

LIMITED JOINDER AGREEMENT OF MORTGAGEE

The undersigned, MAINE HEALTH AND HIGHER EDUCATIONAL FACILITIES AUTHORITY, a public body corporate and politic of the State of Maine, created and existing under the Constitution and the laws of the State of Maine, with a place of business at 3 University Drive, P.O. Box 2268, Augusta, Maine 04330 (herein called the "Mortgagee"), as holder of and mortgagee under the following instruments:

1. A certain Loan Agreement and Mortgage by JHA Properties, Inc., a Maine nonprofit corporation ("JHA Properties"), to the Mortgagee, dated as of March 1, 1998 and recorded in the Cumberland County Registry of Deeds in Book 13709, Page 1, and a certain Mortgage by JHA Properties, Inc., to the Mortgagee, dated as of October 9, 1998 and recorded in the Cumberland County Registry of Deeds in Book 14221, Page 222 (the "JHA Properties Mortgage"); and

2. A certain Loan Agreement and Mortgage by Cedars Nursing Care Center, Inc., a Maine nonprofit corporation ("Cedars"), to the Mortgagee, dated as of May 1, 1993 and recorded in the Cumberland County Registry of Deeds in Book 10717, Page 311 (the "Cedars Mortgage");

(herein the instruments described in paragraphs 1 and 2 above are sometimes collectively called the "Mortgages"), for itself and its successors and assigns, hereby

(i) **joins with** JHA Properties and Cedars (herein collectively called the "Declarants") in submitting the Property, as defined and described in this Declaration, separate portions of which are subject to the lien of one or the other of the Mortgages, to the provisions of the Maine Condominium Act, 33 M.R.S.A. Chapter 31, §§ 1601-101, et seq., as amended, for the sole and limited purposes of evidencing Mortgagee's consent as owner and holder of the Mortgages to the submission of the Property under this Declaration and to the creation and granting of those easements, uses, rights and privileges described in this Declaration and granting and releasing the liens, rights and interests described in clauses (ii) through (vi);

(ii) **grants and releases** to Cedars, its successors and assigns, all of Mortgagee's right, title and interest under the JHA Properties Mortgage in and to Unit No. 1 as created by this Declaration;

(iii) **grants and releases** to Cedars, its successors and assigns, and Properties, its successors and assigns, all of Mortgagee's right, title and interest under the Mortgages in and to Unit No. 2 as created by this Declaration and all Development Rights related to the construction of the Building and other improvements constituting Unit No. 2 in accordance with the description thereof set forth on the Plat;

(iv) **grants and releases** to JHA Properties, its successors and assigns, all of Mortgagee's right, title and interest under the Cedars_Mortgage in and to Unit No. 3 as created by this Declaration;

(v) **grants and releases** to JHA Properties and Cedars, their respective successors and assigns, all of Mortgagee's right, title and interest under either of the Mortgages in and to the following easements of record:

(A) Utility and Access Easement described as Parcel B in easement deed from Cedars Nursing Care Center, Inc., to JHA Services, Inc., dated May 25, 1990, and recorded in the Cumberland County Registry of Deeds, Book 9188, Page 115, as amended and modified Short Form Quitclaim Deed from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 17, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 319, and by Easement Modification, between JHA Services, Inc. and Cedars Nursing Care Center, Inc., dated April 1, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13708, Page 305 (the "Granting Deed");

(B) Emergency Access Road Easement described as Parcel C in the Granting Deed ;

(C) Parking Easement, Utility and Access Easement and Loop Road Easement retained as Items 1, 2 and 3 in the Granting Deed;

(D) Access Easement in easement deed from JHA Properties, Inc., to Cedars Nursing Care Center, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 321;

(E) Access Easement in easement from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 325; and

(F) Agreement and Reciprocal Easement Deed, between Cedars Nursing Care Center, Inc., and JHA Properties, Inc., dated as of March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 331; and

(vi) **expressly retains, excepts and reserves**, for itself and its successors and assigns, the lien of and all other rights under the Cedars Mortgage in and to Unit No. 1; and

(vii) **expressly retains, excepts and reserves**, for itself and its successors and assigns, the lien of and all other rights under the JHA Properties Mortgage in and to Unit No. 3;

PROVIDED, that such joinder and consent shall not be construed to make said Mortgagee, its successors and assigns, as mortgagee, the Declarant or to impose on it any of the obligations or liabilities of the Declarant under this Declaration, including, without limitation, any obligation or liability of any kind to any purchaser(s) of any condominium unit(s), and said Mortgagee makes no warranties or covenants to any person or party, express or implied, as to title, merchantability, fitness for any particular purpose, physical condition or otherwise as to the Condominium premises.

The Mortgagee hereby agrees that its lien on Unit No. 1 under the Cedars Mortgage and its lien on Unit No. 3 under the JHA Property Mortgage, all as excepted and reserved herein, shall be subject to the provisions of said Maine Condominium Act and shall attach to the Units and Percentage Interests created by this Declaration, as it may be amended. The Mortgagee further agrees that, in the exercise of its rights as mortgagee under the aforesaid Mortgages, the Mortgagee will recognize the establishment of a condominium by this Declaration of Condominium.

[The balance of this page is left blank intentionally. Signature page follows.]

IN WITNESS WHEREOF, the Mortgagee has caused this instrument to be executed and sealed in its corporate name by its officer thereunto duly authorized as of the date of the foregoing Declaration.

WITNESS:

MAINE HEALTH AND HIGHER EDUCATIONAL FACILITIES AUTHORITY

By: _____
Robert O. Lenna
Its Executive Director

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

June 29th, 2006

Personally appeared before me the above-named Robert O. Lenna, Executive Director of Maine Health and Higher Educational Facilities Authority, and acknowledged the foregoing instrument to be his free act and deed in said capacity, and the free act and deed of said Maine Health and Higher Educational Facilities Authority.

_____
Notary Public/Attorney-at-Law
Print Name: JO-ELLEN P. KING
My Commission Expires: OCTOBER 27, 2011

Jo-Ellen P. King
Notary Public, Maine
My Commission Expires
October 27, 2011

EXHIBIT A

PROPERTY DESCRIPTION

A certain lot or parcel of land lying on the northwesterly side of Ocean Avenue and the northeasterly terminus of Byfield Road in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point and the intersection of the northeasterly terminus of said Byfield Road with the northwesterly sideline of said Byfield Road;

Thence S 50°04'08" W by the northwesterly sideline of said Byfield Road a distance of Thirty and 45/100 (30.45) feet to a point and the easterly corner of land now or formerly of Christopher J. King and Elizabeth C. King as described in a deed recorded in the Cumberland County Registry of Deeds in Book 20322, Page 332;

Thence N 39°56'15" W by said land of King a distance of Ninety-Nine and 20/100 (99.20) feet to a point;

Thence S 52°11'01" W by said land of King; by land now or formerly of Barry E. Scott and Mary A. Scott as described in a deed recorded in said Registry in Book 2809, Page 26; and by land now or formerly of N. Penrose Hallowell IV as described in a deed recorded in said Registry in Book 15501, Page 236, a distance of Two Hundred Thirty-Nine and 65/100 (239.65) feet to a point and the northeasterly corner of land now or formerly of Brian R. Sheets and Gaye L. Sheets as described in a deed recorded in said Registry in Book 13242, Page 35;

Thence N 37°59'05" W by said land of Sheets a distance of Sixty and 00/100 (60.00) feet to a point and the southeasterly line of land now or formerly of John Tevanian and Thelma M. Tevanian as described in a deed recorded in said Registry in Book 3627, Page 59;

Thence N 52°11'01" E by said land of Tevanian a distance of One Hundred and 04/100 (100.04) feet to a point;

Thence N 37°52'24" W by said land of Tevanian a distance of Sixty-Four and 64/100 (64.64) feet to a point and the southerly corner of land now or formerly of Old Port Realty Corp. as described in a deed recorded in said Registry in Book 4013, Page 113;

Thence N 52°11'01" E by said land of Old Port Realty Corp. a distance of Six Hundred Sixty-Eight and 07/100 (668.07) feet to a point and land now or formerly of Ledgewood Owners Association as described in a deed recorded in said Registry in Book 4446, Page 125;

Thence S 58°38'42"E by said land of Ledgewood Owners Association a distance of Zero and 97/100 (0.97) feet to a point, said point herein designated as "Point A";

Thence Southeasterly by said land of Ledgewood Owners Association following a non- tangent curve to the right having a radius of Two Hundred Fifty-Two and 54/100 (252.54) feet an arc distance of Two Hundred Fifteen and 57/100 (215.57) feet to a point, said point being located S 69°09'08" E a distance of Two Hundred Nine and 08/100 (209.08) feet from said "Point A";

Thence S 44°41'54" E by said land of Ledgewood Owners Association a distance of One Hundred Thirty-Nine and 56/100 (139.56) feet to a capped 5/8" rebar (PLS #199);

Thence S 44°27'57" E by said land of Ledgewood Owners Association a distance of Two Hundred Ninety-Nine and 33/100 (299.33) feet to a 1" iron pipe;

Thence S 43°59'21" E by said land of Ledgewood Owners Association a distance of Seventy and 26/100 (70.26) feet to a point and the northwesterly sideline of said Ocean Avenue;

Thence S 35°36'51" W by said Ocean Avenue a distance of Fifty-One and 28/100 (51.28) feet to a point;

Thence S 40°42'51" W by said Ocean Avenue a distance of Four Hundred Twenty-Six and 00/100 (426.00) feet to a point and the easterly corner of land now or formerly of David H. Littlefield and Bonnie S. Littlefield as described in a deed recorded in said Registry in Book 4458, Page 44;

Thence N 47°24'30" W by said Littlefield a distance of One Hundred and 58/100 (100.58) feet to a capped 5/8" rebar (PLS #509);

Thence S 45°36'30" W by said land of Littlefield a distance of One Hundred and 00/100 (100.00) feet to a point and land now or formerly of Domenico Floridino and Anna Floridino as described in a deed recorded in said Registry in Book 3029, Page 521;

Thence N 47°19'15" W by said land of Floridino; by land now or formerly of Peter J. Molloy and Elizabeth D. Molloy as described in a deed recorded in said Registry in Book 16537, Page 279; by land now or formerly of Elizabeth F. Searles and Harold E. Searles as described in a deed recorded in said Registry in Book 3122, Page 381; by land now or formerly of Leslie E. Conley and Avis J. Conley as described in deeds recorded in said Registry in Book 2640, Page 412 and Book 2649, Page 394; and by the northeasterly terminus of said Byfield Road a distance of Four Hundred Eighty and 78/100 (480.78) feet to the point of beginning.

Bearings are based on magnetic north 1924.

The above described parcel contains 10.57 acres.

Reference is herein made to a plan entitled "Cedars Condominiums Recording Plat/Condominium Plan, ALTA/ACSM Land Title Survey Cedars Plan/ALTA/ASCM/Land Title Survey" made for JHA Properties, Inc., Cedars Nursing Care Center, and JHA Assisted Living, Inc. dated September 8, 2005, and revised April 5, 2006, made by Titcomb Associates.

EXHIBIT B

Unit Identifying Number	Percentage Interest
Unit 1	33.333%
Unit 2	33.333%
Unit 3	33.333%

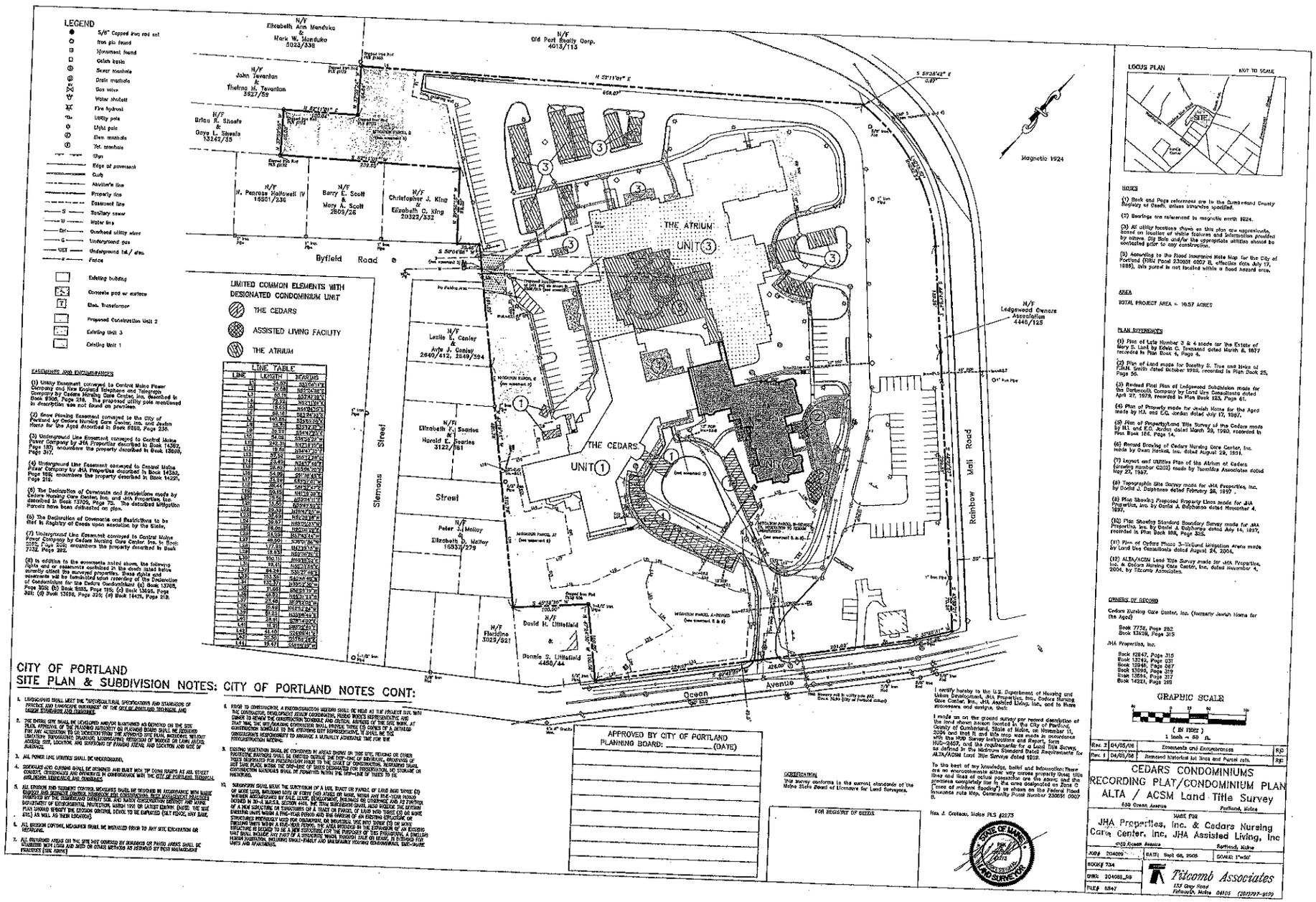
Formula Calculating Percentage Interest

All Units shall have an equal Percentage Interest to be calculated by (i) dividing one (1) by three (3).

Exhibit C

Doc#: 41828 Bk:24129 Pg: 315

Received
Recorded Register of Deeds
Jun 30,2006 01:45:01P
Cumberland County
John B OBrien



QUIT CLAIM DEED WITH COVENANT

KNOW ALL MEN BY THESE PRESENTS, that, CEDARS NURSING CARE CENTER, INC., a Maine non-profit corporation with a principal place of business in Portland, Cumberland County, Maine, for consideration paid grants to JHA ASSISTED LIVING, INC., a Maine non-profit corporation having a mailing address of 630 Ocean Avenue, Portland, Maine 04103, WITH QUIT CLAIM COVENANT its 33.6% (Thirty-Three and Six-Tenths Percent) tenancy-in-common interest in the following described property:

SEE EXHIBIT A ATTACHED HERETO
AND INCORPORATED HEREIN

WITNESS my hand and seal this 6th day of July, 2006.

MAINE REAL ESTATE TAX PAID

Signed, Sealed and Delivered
in the presence of

Witness

CEDARS NURSING CARE CENTER, INC.

By: Kathryn J. Callnan
Kathryn J. Callnan, President

State of New Hampshire
County of Hillsborough

July 6, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of Cedars Nursing Care Center, Inc., duly authorized, and acknowledged the foregoing instrument to be her free act and deed, and the free act and deed of Cedars Nursing Care Center, Inc.

Before me,

Notary Public
Print Name:
Commission Expires:

SEAL

SANDRA J. MORIN
Notary Public
My Commission Expires April 3, 2007

1141118.1

EXHIBIT A

The Unit ("Unit") designated as Number 2 of the Cedars Condominiums located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium") created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006, and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property hereby conveyed and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

Received
Recorded Register of Deeds
Jul 10,2006 02:40:15P
Cumberland County
John B OBrien

QUIT CLAIM DEED WITH COVENANT

KNOW ALL MEN BY THESE PRESENTS, that, JHA PROPERTIES, INC., a Maine non-profit corporation with a principal place of business in Portland, Cumberland County, Maine, for consideration paid grants to JHA ASSISTED LIVING, INC., a Maine non-profit corporation having a mailing address of 630 Ocean Avenue, Portland, Maine 04103, WITH QUIT CLAIM COVENANT its 66.4% (Sixty-Six and Four Tenths Percent) tenancy-in-common interest in the following described property:

SEE EXHIBIT A ATTACHED HERETO
AND INCORPORATED HEREIN

WITNESS my hand and seal this 27th day of September, 2006.

Signed, Sealed and Delivered
in the presence of

JHA PROPERTIES, INC.

Witness

By: Kathryn J. Callnan
Kathryn J. Callnan, President

State of Maine
County of Cumberland

September 27, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of JHA Properties, Inc., duly authorized, and acknowledged the foregoing instrument to be her free act and deed, and the free act and deed of JHA Properties, Inc.

Before me,

Sylvia Gill

Notary Public
Print Name:
Commission Expires:

SYLVIA GILL
Notary Public, Maine
My Commission Expires October 21, 2013

MAINE REAL ESTATE TAX PAID

EXHIBIT A

The Unit ("Unit") designated as Number 2 of the Cedars Condominiums located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium") created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006, and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property hereby conveyed and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

Received
Recorded Register of Deeds
Oct 10,2006 11:34:34A
Cumberland County
John B OBrien

LEGEND

- 5/8" Capped iron rod set
- Iron pin found
- Monument found
- Catch basin
- Sewer manhole
- Drain manhole
- Gas valve
- Water shutoff
- Fire hydrant
- Utility pole
- Light pole
- Elec. manhole
- Tel. manhole
- Sign
- Edge of pavement
- Curb
- Abutter's line
- Property line
- Easement line
- S — Sanitary sewer
- D — Storm drain
- W — Water line
- OH — Overhead utility wires
- G — Underground gas
- UET — Underground tel./ elec.
- UGET — Underground tel./ elec./ cable
- o — Fence
- Concrete pad or walk
- Existing building
- Concrete pad or surface
- T — Elec. Transformer
- Proposed Construction Unit 2
- Existing Unit 3
- Existing Unit 1
- Mitigation parcels

LIMITED COMMON ELEMENTS WITH DESIGNATED CONDOMINIUM UNIT

1. THE CEDARS
2. ASSISTED LIVING FACILITY
3. THE ATRIUM

LINE TABLE		
LINE	LENGTH	BEARING
L1	34.57	S33°08'11"E
L2	47.08	N62°24'26"E
L3	85.11	S53°47'19"E
L4	72.92	N52°11'01"E
L5	15.85	N44°04'15"E
L6	69.16	S83°24'33"E
L7	140.55	S54°59'56"E
L8	26.51	S35°12'37"W
L9	36.29	S54°47'23"E
L10	54.09	S34°54'22"W
L11	242.31	N47°19'15"W
L12	19.51	N34°47'32"E
L13	57.52	S55°12'28"E
L14	28.49	N34°17'48"E
L15	26.82	N65°06'20"E
L16	54.09	S51°38'43"E
L17	34.26	S33°57'01"W
L18	38.44	S51°57'47"E
L19	50.15	N41°16'39"E
L20	75.56	N23°34'11"E
L21	15.50	N55°49'59"E
L22	29.33	N26°47'25"W
L23	32.69	N52°36'18"W
L24	39.67	N88°05'33"W
L25	69.06	N20°00'29"E
L26	24.95	N57°43'44"W
L27	49.50	S35°01'56"W
L28	177.91	N47°19'15"W
L29	16.83	N60°36'26"E
L30	100.11	N68°16'52"E
L31	19.41	N55°39'58"E
L32	84.24	S38°27'46"E
L33	153.38	S40°48'48"W
L34	132.37	N33°52'30"W
L35	11.06	S58°09'19"W
L36	46.92	N66°31'23"W
L37	23.48	N10°12'08"W
L38	16.66	N62°52'24"W
L39	51.25	N35°08'49"E
L40	28.91	S78°14'02"E
L41	11.21	S83°22'48"E
L42	41.40	S24°08'41"E
L43	30.30	S03°56'26"E
L44	19.47	S58°09'19"W

EASEMENTS AND ENCUMBRANCES

(1) Utility Easement conveyed to Central Maine Power Company and New England Telephone and Telegraph Company by Cedars Nursing Care Center, Inc. described in Book 9306, Page 219. The proposed utility pole mentioned in description was not found on premises.

(2) Snow Plowing Easement conveyed to the City of Portland by Cedars Nursing Care Center, Inc. and Jewish Home for the Aged described in Book 9260, Page 236.

(3) Underground Line Easement conveyed to Central Maine Power Company by JHA Properties described in Book 14382, Page 187; encumbers the property described in Book 24129, Page 276.

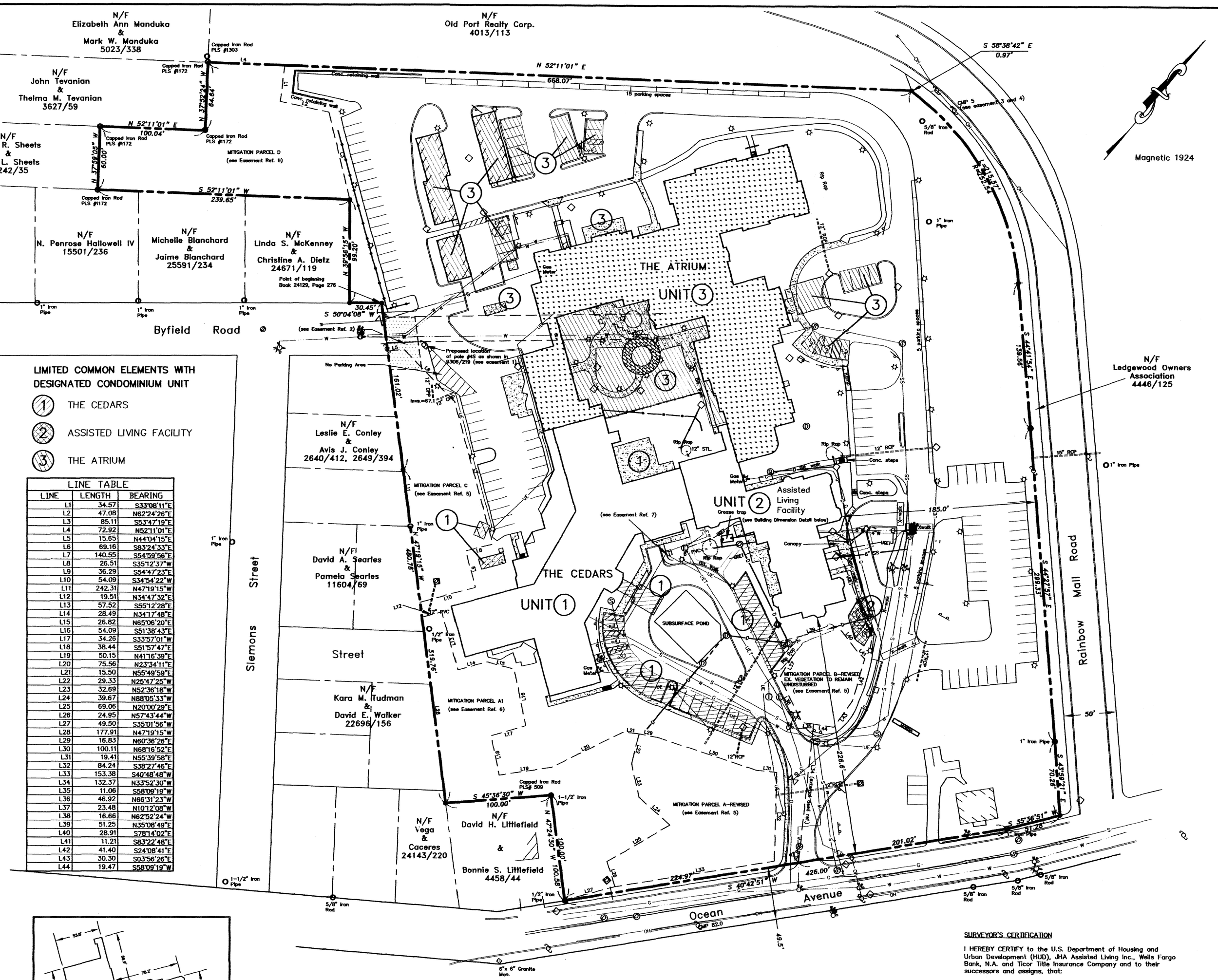
(4) Underground Line Easement conveyed to Central Maine Power Company by JHA Properties described in Book 14382, Page 188; encumbers the property described in Book 24129, Page 276.

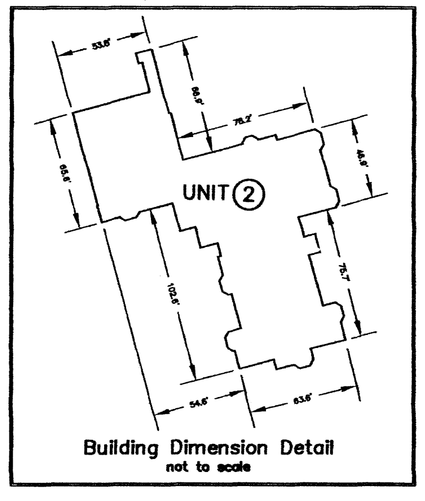
(5) The Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 13709, Page 75, and the Amendment to Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 24129, Page 254. The amended and unamended Mitigation Parcels have been delineated on plan.

(6) Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 24129, Page 265.

(7) Underground Line Easement conveyed to Central Maine Power Company by Cedars Nursing Care Center, Inc. in Book 9162, Page 206; encumbers the property described in Book 24129, Page 276.

(8) Certification of Variance Approval granted to Cedars Nursing Care Center, Inc., JHA Properties, Inc., and JHA Services, Inc. by the City of Portland in Book 13595, Book 182.





Building Dimension Detail
not to scale

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PRELIMINARY PLAN

CERTIFICATION

This survey conforms to the current standards of the Maine State Board of Licensure for Land Surveyors.

SURVEYOR'S CERTIFICATION

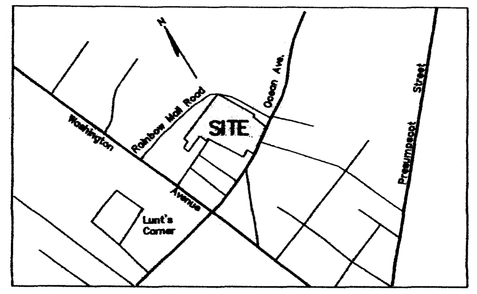
I HEREBY CERTIFY to the U.S. Department of Housing and Urban Development (HUD), JHA Assisted Living Inc., Wells Fargo Bank, N.A. and Ticor Title Insurance Company and to their successors and assigns, that:

I made an on the ground survey per record description of the land shown hereon located in Portland, Cumberland County, Maine, on September 8, 2005, revised through March 14, 2007, and field inspected the premises March 20, 2007; and that it and this map was made in accordance with the HUD Survey Instructions and Report, Form HUD-92457, and the requirements for an ALTA/ACSM Land Title Survey, as defined in the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys dated 2005.

To the best of my knowledge, belief and information, except as shown hereon: there are no encroachments either way across property lines; title lines and lines of actual possession are the same; and the premises are free of any 100/500 year return frequency flood hazard, and such flood free condition is shown on the Federal Flood Insurance Rate Map, Community Panel No. 230051 0007 B effective July 17, 1986.

Rex J. Croteau, PLS #2273
Titcomb Associates

LOCUS PLAN NOT TO SCALE



NOTES

(1) Book and Page references are to the Cumberland County Registry of Deeds, unless otherwise specified.

(2) Bearings are referenced to magnetic north 1924.

(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.

(5) According to the Flood Insurance Rate Map for the City of Portland (FIRM Panel 230051 0007 B, effective date July 17, 1986), this parcel is not located within a flood hazard area.

AREA

TOTAL PROJECT AREA = 460,350 square feet / 10.57 acres

PLAN REFERENCES

(1) Plan of Lots Number 3 & 4 made for the Estate of Mary S. Lunt by Edwin C. Townsend dated March 8, 1877 recorded in Plan Book 4, Page 4.

(2) Plan of Land made for Dorothy S. True and Heirs of F.W.H. Smith dated October 1929, recorded in Plan Book 25, Page 50.

(3) Revised Final Plan of Ledgewood Subdivision made for the Dartmouth Company by Land Use Consultants dated April 27, 1979, recorded in Plan Book 123, Page 61.

(4) Plan of Property made for Jewish Home for the Aged made by H.I. and E.C. Jordan dated July 17, 1987.

(5) Plan of Property/Land Title Survey of the Cedars made by H.I. and E.C. Jordan dated March 29, 1990, recorded in Plan Book 186, Page 14.

(6) Record Drawing of Cedars Nursing Care Center, Inc. made by Owen Haskell, Inc. dated August 29, 1991.

(7) Layout and Utilities Plan of the Atrium at Cedars (drawing number C202) made by Tsomides Associates dated May 27, 1997.

(8) Topographic Site Survey made for JHA Properties, Inc. by Daniel J. Dalphonso dated February 28, 1997 .

(9) Plan Showing Proposed Property Lines made for JHA Properties, Inc. by Daniel J. Dalphonso dated November 4, 1997.

(10) Plan Showing Standard Boundary Survey made for JHA Properties, Inc. by Daniel J. Dalphonso dated July 14, 1997, recorded in Plan Book 198, Page 325.

(11) Plan of Cedars Phase 3-Wetland Mitigation Areas made by Land Use Consultants dated August 24, 2004.

(12) ALTA/ACSM Land Title Survey made for JHA Properties, Inc. & Cedars Nursing Care Center, Inc. dated November 4, 2004, by Titcomb Associates.

(13) Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey made for JHA Properties, Inc., Cedars Nursing Care Center, Inc. and JHA Assisted Living, Inc. by Titcomb Associates dated September 8, 2005 and revised through April 5, 2006, recorded in the Cumberland County Registry of Deeds in Plan book 206, Page 430.

OWNERS OF RECORD

Unit 1 Cedars Nursing Care Center, Inc.; Book 24129, Page 276

Unit 2 JHA Assisted Living, Inc.; Book 24446, Page 225 and Book 24155, Page 29

Unit 3 JHA Properties, Inc.; Book 24129, Page 276

LEGAL DESCRIPTION OF UNIT 2

The Unit ("Unit") designated as Number 2 of the Cedars Condominiums located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium"), together with the Unit's undivided percentage interest in the Common Elements of the Condominium as set forth in the Declaration, created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006, and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

PRELIMINARY PLAN

CEDARS CONDOMINIUMS
AS BUILT UNIT 2
ALTA / ACSM Land Title Survey

630 Ocean Avenue — Portland, Maine

MADE FOR

Inn at Cedars, Inc. (JHA Assisted Living, Inc)
FHA Project No. 024-43094

630 Ocean Avenue — Portland, Maine

JOB# 204089	DATE: August 19, 2008	SCALE: 1"=50'
BOOK# 837		
DWG: 204089_R16		
FILE# 8847		

Titcomb Associates
133 Gray Road
Falmouth, Maine 04105 (207)797-9199

Section 6: Compliance with Applicable Zoning Requirements

6.0 Existing Zones

The site exists within a R-3 and R-5 Zones.

Compliance within these zones is indicated below:

R-3:

Use: Institutional use as a long-term care facility is a conditional use in this zone. The applicant requests that the conditional use be granted for the proposed building on the basis that the use is consistent with the existing site and in compliance with the conditional use standards found in Section 14-474 and Section 14-88 (c) of the ordinance as demonstrated below.

Section 14-474 (c) 2.

a. The volume of traffic will be very similar to the current levels. The proposed facility will be adding approximately 8 to 9 staff during the daytime shift and there will be 20 additional beds at the facility. This will result in approximately 16 additional trips during the peak hour. The site will continue to be served by the single entrance on Ocean Avenue. Because the small increase in beds for the site we do not anticipate any changes in the deliveries to the site.
b. The proposed use will not create unsanitary or harmful conditions. The building will have mechanical systems located on the roof of the building and trash will be collected and stored at the dumpsters on the site behind the Hoffmann Building. Please see Section 15 for additional information regarding solid waste.
c. The orientation of the building is such that operational access to the building is from the main campus access drive which is internal to the site. There will be an activity area for residents along Rainbow Mall Road, but this area will be screened by a retaining wall, fence and landscaping. The parking lot will be screened from Rainbow Mall Road by landscaping. The portion of the building facing Ocean Avenue will be landscaped.

Section 14-88 (c)

b. The proposed use will displace a residential structure, the “White House” that has been used as offices by the Cedars since approximately 1991. It is not clear when it was last used as a residence. The proposed building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas are subject to mitigation easements for prior wetland impacts, and they will not be impacted by the proposed redevelopment.

Section 14-91 (a) off street parking: Parking shall be provided as required by Division 20. There will be an additional 14 spaces to accommodate the increase in staff during the day time shift and the 20 assisted living beds as required in Division 20.

R-5:

Use: Institutional use as a long-term care facility is a conditional use in this zone. The applicant requests that the conditional use be granted for the proposed building on the basis that the use is consistent with the existing site and in compliance with the conditional use standards found in Section 14-474 and Section 14-118 (b) of the ordinance. The following responses

Section 14-474 (c) 2.

d. The volume of traffic will be very similar to the current levels. The proposed facility will be adding approximately 7 to 8 staff during the daytime shift and there will be 20 additional beds at the facility. This will result in approximately 14 additional trips during the peak hour. The site will be served by the single entrance on Ocean Avenue. Because the small increase in beds for the site we do not anticipate any changes in the deliveries to the site.

e. The proposed use will not create unsanitary or harmful conditions. The building will have mechanical systems located on the roof of the building and trash will be collected in the garage and stored at the dumpsters on the site.

f. The orientation of the building is such that operational access to the building is from the main campus access drive which is internal to the site. There will be an activity area for residents along Rainbow Mall Road, but this area will be screened by a retaining wall, fence and landscaping. The parking lot will be screened from Rainbow Mall Road by landscaping. The portion of the building facing Ocean Avenue will be landscaped.

Section 14-118 (b)

b. The proposed use will displace a residential structure, the “White House” that has been used as offices by the Cedars since 1991. It is not clear when it was last used as a residence. The proposed building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas are subject to mitigation easements for prior wetland impacts, and no wetland impacts are proposed as part of the redevelopment.

Section 14-91 (a) off street parking: Parking shall be provided as required by Division 20. There will be an additional 13 spaces to accommodate the increase in staff during the day time shift and the 20 assisted living beds as required in Division 20.

Cedars Site Plan Dimensional Requirements				
Code	**Item**	**Proposed**	**Conditions R-5**	**Conditions R-3**
14-87, 14-88(c)2.a.	Permitted Uses	Institutional	Allowed with conditional permit	Allowed with conditional permit
14-90	Dimensions			
a	Lot Size	10.5 acres	2 acres	2 acres
c	Frontage	578 feet	50	50 Feet
d	Front Setback	25	20	25
	Side Setback (Street)	20	20	20
	Side Setback	Variable	14	16
	Rear Setback	No Change		25
e	Max. Lot Cover	20.3%	40%	35%
f	Min Lot Width	Varies; over 400’	90 feet	65 feet
g	Max Str. Height	35’	35 feet	35 feet
h	Units/Building	N/A	12 max	2 max
i-q	N/A	N/A		N/A
14-91	Others			
a	Parking	0	(See Div 20)	(See Div 20)
c	N/A	N/A	N/A	N/A
14-92-6	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
Parking			**From Division 20**	
Off-Street	Residential Use	N/A	2/Dwelling Unit	
	LT Care	4	4; 1/5 Beds	
	LT Care	9	9; 1/Employee during day shift	
14-526A	Bike Parking	4	2.6; 2/10 new required parking spaces	
	Motor/Scooter	1	1	

Section 7: Summary of Existing Easements and Covenants

7.0 Existing Easements:

The existing easements are identified on the Boundary Survey Plan provided as part of this submission. The following is a list of easements that are associated with this project:

1. Utility Easement conveyed to Central Maine Power Company and New England Telephone and Telegraph Company by Cedars Nursing Care Center, Inc. described in Book 9306, Page 219. The proposed utility pole mentioned in description was not found on premises.
2. Snow Plowing Easement conveyed to the City of Portland by Cedars Nursing Care Center, Inc. and Jewish Home for the Aged described in Book 9260, Page 236.
3. Underground Line Easement conveyed to Central Maine Power Company by JHA Properties described in Book 14382, Page 187; encumbers the property described in Book 24129, Page 276.
4. The declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 13709, Page 75, and the Amendment to Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA properties, Inc. described in Book 24129, Page 254. The amended and unamended Mitigation Parcels have been delineated on plan.
5. Declaration of covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 24129, Page 265.
6. Underground Line Easement conveyed to Central Maine Power Company by Cedars Nursing Care Center, Inc. in Book 9162, Page 276.
7. Certification of Variance Approval granted to Cedars Nursing Care Center, Inc., JHA Properties, Inc., and JHA Services, Inc. by the City of Portland in Book 13595, Book 182.
8. Department of Environmental Protection Stormwater Standards and Conditions as set forth in Book 26415, Page 50.

Section 8: Financial and Technical Capacity

8.0 Financial Capacity

The Cedars, a non-profit organization, will be utilizing three sources of funding for the project, that include fundraising, Cedars social impact bonds and bank financing. The Cedars is working with a fundraising consultant, Steve Braverman, to guide their capital campaign which they have set a goal to raise $10 million in donations and $10 million in social impact bonds. With the help of an investment banker, the Cedars will be negotiating with their current lender Bangor Savings Bank to borrow any additional necessary funds, anticipated to not exceed $10 - $12 million. It is anticipated that the fundraising and bank lending will be in place by April 2018.

8.1 Technical Capacity

The client has obtained the services of Wright-Pierce to complete the permitting and design of the proposed improvements. Wright-Pierce is a Maine-based company with an office in Portland. Key staff for the project includes:

Jan Wiegman, P.E.: Senior project manager with over 30 years of experience in civil engineering and related fields. Mr. Wiegman has extensive experience in civil/site design and permitting, parking lot design, stormwater treatment, stormwater conveyance, traffic circulation, and client management.

Michael Guethle, P.E.: Project engineer with over 5 years of experience in civil and environmental engineering. Mr. Guethle has previously drafted plans for several development projects within the City of Portland and is familiar with the City's permitting processes and technical standards.

Matt LaPierre: Civil Technician with over 10 years of experience in civil engineering and related fields. Mr. LaPierre's experience is primarily focused on preparing civil/site development plans and completing field work.

Other Consultants:

Action Pact Design Group: Action Pact Design Group has been retained as the project architect given their extensive experience with building design for the long term care market. Alex Toye from the Kansas City, MO, office is leading the design effort for the firm.

Power Engineers, Inc.: Power Engineers, Inc. is a national firm with an office in Freeport firm with specialty services in wetland delineation and permitting. Cole Peters has delineated the wetland on the site in 2016.

Titcomb Associates: Titcomb Associated has been retained to provide survey for the project. Titcomb Associates routinely partners with Wright-Pierce to provide boundary survey and existing conditions base mapping.

Traffic Solutions: Bill Bray is a traffic engineer with substantial experience in traffic management studies and circulation design. Mr. Bray has been retained to assist in the development of a traffic assessment for the project.

MATTHEW LAPIERRE

Civil Engineering Technician

PROJECT ASSIGNMENT: **Civil Engineering Technician**

Education

A.A.S., Computer Aided Drafting, Northern Maine Technical College

Experience

15 Years

Joined Firm

2009

EXPERIENCE SUMMARY

Mr. LaPierre is a civil engineering technician at Wright-Pierce in the Civil Practice Group. He has 15 years of experience as a civil engineering technician.

RELEVANT PROJECT EXPERIENCE

Provided AutoCAD drafting and/or inspection services for the following:

Walnut Hill Road Reconstruction, Bethel, CT
This work includes a redesign for an existing roadway and intersection with updated storm drainage and sewer systems.

Bates College 55 & 65 Campus Avenue Housing, Lewiston, ME
Project includes two new student housing areas and surrounding site design for Bates College.

Water Storage Tank, Bethel, CT
Work includes the addition of a new water supply storage tank along with surrounding site improvements.

Water Storage Tank, Gardiner, ME
This project includes the addition of a new water supply storage tank along with surrounding site improvements.

Contract #11 Sewer Separation, Lebanon, NH
Project includes street renovations with new pavement and new paved walks along with new storm drainage, sewer lines and water lines.

Contract #7 Sewer Separation, Lebanon, NH
This project includes street renovations with new pavement and new paved walks along with new storm drainage, sewer lines and water lines.

Contract #4 Sewer Separation, Lebanon, NH
Project includes street renovations with new pavement and new paved walks along with new storm drainage, sewer lines and water lines.

Sewer Separation, Richmond, ME
The job includes new sewer manholes and sewer lines.

Waterfront Revitalization, Richmond, ME
This work includes renovations to the existing waterfront with new bathrooms and lift station.

Bell Marsh Drainage, Kittery, ME
Project includes new toe drain.

Summit Street Renovations, Old Orchard Beach, ME
Project includes street renovations with new pavement and new paved walks along with new storm drainage and sewer lines.

Pleasant Street Neighborhood Renovations, Westbrook, ME
Project includes street renovations with new pavement and new paved walks along with new storm drainage and sewer lines.

Eastern Maine Medical Center Infrastructure Improvements, Bangor, ME
This job includes a number of site modifications for a future building addition. Included in the modifications are relocated utilities, new retaining walls, new driveways and main entry drive.

Maine Natural Gas Service Mains, ME
Project includes the local build-out of natural gas services and mains to Freeport, Bath and Augusta, ME.

Nestle Waters North America Projects, ME
Project includes numerous upgrades and additions to existing water extraction sites in Maine.

Anaerobic Digester, Brunswick Landing, Brunswick, ME
For Village Green, project includes an entire site design for an anaerobic digester, waste to energy plant.

Southside Drainage Project, Weston, MA
Project includes new storm water infrastructure, along with a new paved roadway on Pond Brook Circle.

Northern Avenue Roadway Reconstruction and Storm Drain System Replacement, Farmingdale, ME
Project includes street renovations with new pavement and new paved walks along with new storm drainage and sewer lines.

Lebanon Sewer Interceptor, Lebanon, NH
Project includes replacement of a damaged sewer interceptor.

Wastewater Treatment Facility Upgrades, Farmington, NH
Project includes a new building addition along with new rapid infiltration basins.

Sewer Improvements, Rockland ME
Project includes sewer separation with new storm and sewer lines.

High Street Rehabilitation, Bath, ME
Project includes milling and repaving of High Street with additional sewer line improvements.

North Street Rehabilitation, Bath, ME
Project includes milling and repaving of North Street with additional sewer and drain line improvements.

Capen Road Bridge Culvert Replacement, Gardiner, ME
Project includes the replacement of a corrugated metal culvert with a concrete box culvert along with road improvements.

Megantic Fish & Game Corporation, Dam Rehabilitation Projects, Franklin County, ME
Project includes reconstruction of dams and fish pathways.

Rainbow Lake Dam Rehabilitation, Rainbow Township (T2 R11 WELS), ME
Project includes the rehabilitation and replacement of an existing dam.

Nequasset Fishway, Woolwich, ME
Project includes a replacement and reconstructed fishway.

Surry Fishpass, Surry, ME
Project includes new stone weirs with fish passes.

Fishway Rehabilitation, Barnstable, MA
Project includes replacing and rehabilitating an existing fishway.

Coastal Maine Botanical Garden, Boothbay, ME
Project includes expansion of the existing botanical garden and upgrades.

Merrymeeting Trail, Bowdoinham, ME
Project includes constructing a new bike path.

Former Naval Air Base Redevlopment, Brunswick, ME
For Midcoast Regional Redevelopment Authority, project includes demolition of existing buildings and parking areas to create new parking areas.

Red Mill Lane Culvert Rehabilitation, Rye, NH
Project includes demolition of existing culverts and being replaced with precast concrete structures.

Lubberland Creek Culvert Rehabilitation, Newmarket, NH
Project includes demolition of an existing culvert and replacing it with a precast concrete structure.

Drainage Improvements, Cranston, RI
Project includes replacing existing storm drain lines, and milling and repaving several streets.

Drainage Improvements, Fall River, MA
Project includes replacing existing storm drain lines and rehabbing drainage ways.

Greendale Avenue Drain Relief, Needham, MA
Project includes replacing storm, sewer and water lines. Milling and paving of Greendale Avenue.

Gazo Outfall, Burlington, VT
Project includes replacing a storm drain outfall and repairing embankment erosion.

Hampshire Road Culvert Replacement, Brownfield, ME
Project includes removing existing corrugated metal culvert and replacing with a steel multi-plate arch culvert, and restoring the existing stream and banking.

Londonderry Plaza 28 Pump Station, Londonderry, NH
Project includes removing the existing pump station with a new pump station.

West Side Pier Rehabilitation, Wells, ME
Project includes removing and replacing pier decking and rails.

Route 1 Shared Use Path, Kittery, ME
Project includes new construction of a bike/pedestrian path along Route 1.

Whipple Road Sidewalks, Kittery, ME
Project includes the replacing and enhancing the Whipple Road sidewalks.

Acadia Harvest Inc, Aquaculture Facility, Gouldsboro, ME
Project includes the site layout and coordination for a new aquaculture facility**.**

Damariscotta Mills Fish Ladder – Access Improvements and Shoreline Stabilization, Nobleboro, ME
Project includes improvements to retaining walls and stabilization the shoreline with riprap.

Egypt Road Culvert Replacement, Damariscotta, ME
Project includes removing the existing corrugated metal culvert and replacing with a large capacity culvert, and restoring the existing stream and banking

NWNA Kingfield Bottling Line Expansion, Kingfield, ME
Project includes site improvements for a small building addition.

The Cedars Longterm Care Facility, Portland, ME
The project includes site layout for a new building**.**

Bath, ME Waterfront
The project includes replacing existing and adding new waterfront sidewalks.

Frankfort Me Fishway/Dam study
The project studies the options for dam removal and fishway construction.

Travis Mills Foundation, Rome, ME
The project includes site layout and landscaping for the Travis Mills House.

Van Buren High Street Extension, Van Buren, ME
Project includes street renovations with new pavement along with new storm drainage and sewer lines.

JAN B. S. WIEGMAN, PE

Project Manger

PROJECT ASSIGNMENT: **Project Manager**

Education
M.S., Civil Engineering Rice University

B.S. Civil Engineering University of New Hampshire

Professional Registration
Maine

Experience
34 Years

Joined Firm
2011

Professional Certification
MaineDOT Local Project Administrator

Professional Affiliations
American Society of Civil Engineers

EXPERIENCE SUMMARY

Mr. Wiegman has over 34 years of engineering design, permitting and project management experience on a wide variety of civil, structural and transportation projects. Most recently, he has been managing several large-scale site development and transportation related projects and giving technical guidance on a wide variety of projects including the redevelopment of the Brunswick Naval Air Station for the Midcoast Regional Redevelopment Authority (MRRA).

RELEVANT PROJECT EXPERIENCE

Site Development/Permitting

- Long Term Care Facility, The Cedars, Portland, ME
- Wayfair Parking Lot Construction, Brunswick Landing, Brunswick, ME
- Acadia Harvest Inc. Aquaculture Facility, Gouldsboro, ME
- CLC YMCA Expansion Project Site Planning, Damariscotta, ME
- Bear Self Storage, Site Plan, Auburn, ME
- Commerce Way Industrial Subdivision, Brunswick Landing, Brunswick, ME
- Coastal Maine Botanical Gardens, Expansion, Boothbay, ME
- New England Tent and Awning Drying Facility, Brunswick, ME
- Pelican Street Parking Lot Reconstruction, Brunswick Landing, Brunswick, ME
- Burbank Street Parking Lot Reconstruction, Brunswick Landing, Brunswick, ME
- Subdivision Permitting Brunswick Landing, Brunswick, ME
- Residence Halls Project, Bates College, Lewiston, ME
- Greater Androscoggin Humane Society Site Plan, Lewiston, ME
- Wetlands Permitting South Oakfield Road Improvements, Oakfield, ME
- Topsham Commerce Park Subdivision, Topsham, ME
- Wetland Permitting Centerline Brook Crossing, Oakfield, ME
- Anaerobic Digester – Brunswick Landing, Brunswick, ME
- Boathouse Land Use Study, Bates College, Greene, ME
- Brunswick Landing Subdivision, Brunswick, ME
- The Lofts at No. 4 Mill, Sanford, ME

Stormwater

- Phosphorous Treatment Plan Coastal Maine Botanical Gardens, Boothbay, ME
- Willow Street Drainage Study, Bath, ME
- Stormwater Management Plan – Cobalt Court Subdivision, Windham, ME
- Stormwater Management Plan – Lilac Lane Subdivision, Gorham, ME

- Stormwater Management Plan – Laura Lane Subdivision, Gorham, ME
- Storm Drain Improvement, Pepperell Road, Kittery, ME
- Stormwater Management Plan - CLC YMCA, Damariscotta, ME
- Water Quality Treatment Unit O&M Manual, Lebanon, NH
- Stormwater Plan – Bangor Concert Venue, Bangor, ME
- Culvert Analysis - Back Narrows Road, Boothbay, ME
- Phosphorous Treatment Plan - The Lofts at No. 4 Mill, Sanford, ME
- Stormwater Infiltration Plan - Sanford Gateway Center, Sanford, ME*
- Stormwater Treatment Plan - Scarborough Gallery, Scarborough, ME*
- Stormwater Treatment Plan - Nappi Distributors, Gorham, ME*
- Stormwater Infiltration Plan - New Balance Factory Outlet, Oxford, ME*
- Stormwater Pollution Prevention Plan (SWPPP) Soil Erosion and Water Pollution Control Plans, Various Locations, ME*

Transportation

- Tufts Pond Road Reconstruction Plan, Kingfield, ME
- Admiral Fitch Avenue Lane Reconfiguration, Brunswick, ME
- Route 1 Construction Detour, Woodland Mill, Baileyville, ME
- North Street Rehabilitation, Phase 2, Bath, ME
- North Street Drainage Improvements, Bath, ME
- North Street Rehabilitation, Phase 1, Bath, ME
- Hutchins Street Reconstruction, Berlin, NH
- South Oakfield Road Improvements and Permitting, Oakfield, ME
- Roadway Reconstruction, Fitchburg, MA
- High Street Rehabilitation, Bath, ME
- Hillside Street Reconstruction, Yarmouth, ME
- Walnut Hill Road at Hoyt Road, Intersection Improvements, Bethel, CT
- Roadway Reconstruction, Hartford, CT
- Elm Street Sidewalk, Newport, ME
- Main Street Sidewalk and Street Lighting, Biddeford, ME
- South Oakfield Road Improvements Review, Oakfield, ME
- Old Alfred Road Sidewalk, Waterboro, ME
- Route 25 and 35 Sidewalks, Standish, ME
- Route 1 Weigh Station Improvements, Kittery, ME
- US Route 1/Lewis Road Intersection Improvements, Kittery, ME

Building Improvements and Funding Approvals

- Hangar 4 Building Improvements, Brunswick Landing, Brunswick, ME
- Building Demolition Contract #2 Brunswick Landing, Brunswick, ME
- Metering and Life Safety Improvements - Brunswick Landing, Brunswick, ME
- Paint Booth Project, Kestrel Aviation, Brunswick, ME
- TechPlace Building Improvements - Brunswick Landing, Brunswick, ME
- Building Demolition Contract #1- Brunswick Landing, Brunswick, ME

Sewer

- Engineered Septic System, Coastal Maine Botanical Gardens, Boothbay, ME
- Sewer Improvement Contract #2, Brunswick Landing, Brunswick, ME
- Sewer Outfall Review, Old Town, ME
- Inflow/Infiltration Removal Contract 1- Brunswick Landing, Brunswick, ME
- Sewer System Evaluation - Brunswick Landing, Brunswick, ME

MICHAEL A. GUETHLE, PE

Project Engineer

PROJECT ASSIGNMENT: **Project Engineer**

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Professional Registration
Maine

Experience
5 Years

Joined Firm
2015

Professional Affiliations
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Professional Certifications
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OSHA 10-Hour Safety

ACI Concrete Field Testing Technician – Grade 1

EXPERIENCE SUMMARY

Mr. Guethle is project engineer within the Civil and Infrastructure Engineering Practice Group at Wright-Pierce. His background is largely based in stormwater treatment design and maintenance, conveyance utilities, site development, dam design, and construction administration projects, ranging from small residential projects to the largest multi-modal transportation expansions in Maine. His diverse background creates a unique understanding of applicable design and construction knowledge, including experience with design tools such as AutoCAD, ArcGIS, HEC-RAS, and HydroCAD as well as construction tools such as a sub-centimeter GPS systems and contract management software. Below is a partial list of relevant projects throughout Maine and New York that he has been involved with throughout his career.

RELEVANT PROJECT EXPERIENCE

Site Development – Including Stormwater Treatment

Lyseth Lyman-Moore School Site Design, Portland, ME
Designing improvements to traffic circulation, parking, athletic fields layout, walking paths, and stormwater treatment at a combined elementary school and middle school campus. Project includes significant coordination with client and regulatory agencies. Project incorporates use of AutoCAD programs, HydroCAD design for stormwater BMPs, and additional design concerns from being within the watershed of an urban impaired stream.

Elm Street Sidewalk Construction, Damariscotta, ME
Designing grading, permitting, stormwater design, and parking layout for approx. 1,500 linear feet of new sidewalk within the Elm Street corridor, connecting an existing sidewalk from a residential neighborhood to the more urban downtown area.

Hagar Enterprises, Inc. Laydown Facility Expansion, Damariscotta, ME
Completing site design, stormwater treatment, and Site Law of Development Act (SLODA) permitting for the expansion of a laydown facility for Hagar Enterprises, Inc. in Damariscotta. This includes expanding a 2.6-acre facility to a 5.6-acre facility, expanding the existing stormwater treatment, evaluating stormwater treatment options, HydroCAD modeling, and coordinating with regulatory agencies as well as the contractor.

Inn Along the Way Site Development, Damariscotta, ME
Completing design and permitting for the redevelopment of an existing farm to an assisted living facility in Damariscotta. The work includes development of a MaineDEP stormwater permit, associated design of stormwater BMPs, and the design of roadways, parking facilities, and walking paths to meet permit requirements. Project also includes coordination with the contractor, client, and regulatory agencies.

Maine Wild Blueberry Expansion, Machias, ME
Development of a SLODA permit for the expansion of a blueberry processing facility to 5.7-acres of impervious area in Machias, Maine. The project includes development of the permit, associated design of stormwater BMPs, and the design of roadways and circulation to meet permit requirements while meeting unique client needs and expectations.

Whipple Road Sidewalk Design, Kittery, ME
Design of approximately 2,500 LF of sidewalk in a narrow right-of-way along Whipple Road. Project is a Locally Administered Project by the MaineDOT, and as such requires a significant amount of coordination between MaineDOT, the town, regulatory agencies, and project partners. Work for the project includes incorporation of utility pole relocations, development of sidewalk layout, environmental permitting and associated site drainage improvements.

Coastal Bluff Erosion Evaluation, Falmouth, ME
Design of multiple locations of eroding coastal bluff in developed residential neighborhoods in Falmouth. Project includes development of plans in AutoCAD and evaluation of multiple methods of slope stabilization to determine the preferred method of erosion mitigation.

Coastal Maine Botanical Gardens Expansion, Boothbay, ME
Designing grading, permitting, stormwater BMP design, and site layout design of the parking, roadway, landscaped, hardscaped, and building facilities for the multi-phase expansion of the Coastal Maine Botanical Gardens.

Munjoy Heights, Portland, ME*
Civil/site engineering design of a 6-building, 29-unit development on steep slopes of Munjoy Hill in the city. This includes, but is not limited to, the layout and design of sanitary sewers, storm drains, water mains, site driveway, retaining wall locations, building locations, and building drainage structures to be in accordance with the City of Portland technical standards.

89 Anderson Street Redevelopment, Portland, ME*
The project includes the civil/site engineering design of a single-building, 53-unit redevelopment of an existing underutilized lot in the East Bayside neighborhood in the city of Portland.

Knights Pond Improvements, Cumberland, ME*
Designing and permitting the layout, erosion control and potential impacts for the lowering of a dam with multiple subcontractors and interest groups. Project responsibilities included development of necessary permitting, development of plans and details in AutoCAD, and development of a project summary report.

Eagle Road Stormwater Improvements, Acton, ME*
The project included retrofit design of stormwater improvements for 1,200-LF of existing gravel roadway. Project responsibilities included assessing and obtaining information on existing conditions, creating a base plan with ArcGIS v.10 layers,

and development of plans in AutoCAD 2013 and Civil 3D 2013, as well as field visits.

Blue Heron Lane NRPA Permitting, Kennebunkport, ME*
Designed roadway and utility access to a residential development, while minimizing wetland impact and providing NRPA permitting for wetland impacts in municipal shoreland zoning locations. Project responsibilities included development of necessary permitting, development of plans and details in AutoCAD 2013, and development of a project summary report.

Wastewater Treatment Facility Upgrade, Monticello, NY*
Site layout, permitting, stormwater design, and erosion and sediment control design for the expansion of a wastewater facility.

Dam Engineering

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Design and permitting for the reconstruction of a privately owned dam. Project responsibilities included development of NRPA permits, Army Corps of Engineers permits, dam design, and construction oversight and administration. Additional coordination with regulatory agencies and the client was required due to the additional need for permit extensions due to a delay in construction materials.

Kennebunk Light & Power District Dam Study, Kennebunk, ME
Compiled a cost analysis for multiple alternatives to manage 3 existing dams in accordance with regulations an upcoming re-licensing with FERC deadline. Project consisted of redevelopment of a report, coordination with the client, understanding concerns from special interest groups and abutters, and development of a 40-year cost analysis for each option.

Ladd Dam Fishway, Vassalboro, ME
Completion of a HydroCAD and HecRAS Analysis to design and model a Denil fish passage system around Ladd Dam in North Vassalboro. Responsibilities included hydraulic modeling, development of a design, and coordination with the client.

On-Site Construction Administration – Including Stormwater Treatment and Erosion and Sediment Control

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Site observation for the redevelopment of an underutilized lot owned by the city into a public park. Observation tasks included construction of gravel subgrade, granite block steps, fencing and railing, concrete, pavement, and landscaping.

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Class III chief inspector for the $8.6 million IMT rail corridor and existing laydown yard expansion. Work includes 5,000 ft. of new track, 18-acre container storage area, 2,600 CY of concrete loading slab, 1,650 ft. of Commercial Street roadway improvements and replacement of the fender system. Class III chief inspector services included the inspection, measurement, and documentation of all work

performed by the contractor and their subcontracts to document compliance with the project plans & specifications as well as Maine DOT standard details and specifications, and other appurtenant standards.

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Construction inspector for the $2.2 million restoration of 9,000 linear feet of railroad and track construction. Work includes earthwork activities, site layout, stream relocation and restoration, planting, and track construction. Class II inspector services included the inspection, measurement, and documentation of all work performed by the contractor and their subcontracts to document compliance with the project plans and specifications as well as Maine DOT standard details and specifications, and MaineDOT Rail Maintenance Standards Handbook and AREMA.

Eldredge Lumber and Hardware Intermodal Site Redevelopment, Portland, ME*
The project included construction oversight of $800,000 redevelopment of approximately 7.5 acres of existing lumberyard. Work includes significant stormwater infrastructure retrofits and intermodal improvements to facilitate the future transfer of building products from rail for statewide distribution.

Cottage Brook Subdivision, Cape Elizabeth, ME*
2,500-LF of new roadway for a development in Cape Elizabeth. Work included project oversight for civil aspects of project, including but not limited to paving, drainage infrastructure, sewer, road and retaining wall construction, as well as erosion and sediment control inspection.

Stormwater Management and Treatment

Library Park Study, Bath, ME
HydroCAD analysis and report of 2-acre parcel surrounding public monuments and artwork.

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Reviewed the inspection of MaineDOT's stormwater BMPs throughout the state, determining the precise location, as well as the functioning condition and maintenance needs of each BMP. The final deliverables include ArcGIS v.10-generated site specific site plans, an inspection log to record functional information for each BMP at each location, and the operation and maintenance matrix that will offer user-friendly maintenance guidance for each type of BMP.

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Section 9: Construction Management Plan

9.0 Construction Management Plan

A Construction Management Plan is attached to this section. The Construction Management Plan has been provided by the Contractor, PM Construction, and incorporates the following items:

1. Construction Management Plan Summary
2. Construction Schedule
3. Construction Management Site Plan

Construction Management Plan
The Cedars
Long Term and Assisted Living Memory Care Facility

Construction Management Plans shall depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The City's goal for a construction management plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in their duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories below.

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that the The Cedars and PM Construction has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

B. Development Review of Construction Management Plan

The Cedars and PM Construction have attached a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. The plan minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process. The attached details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, The Cedars and PM Construction shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.

2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Cedars and PM Construction will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan includes the following:

- Contact Person and contact information for The Cedars and PM Construction (George Laplume, VP of Operations (207) 229-8097) who is available 24 hours
- Construction Signage posted on the site with Contact Information for Contractor
- Describe any additional communication strategies:
    - Directional and Safety signage as required
    - Daily on-site safety/coordination meetings
- All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing. Schedule attached; no phasing currently planned.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Material deliveries will occur at the construction entrances as indicated on the preliminary construction plan.

F. Security & Public Safety

1. The Construction Management Plan will depict all proposed fencing or other barriers and access gates (with knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping

- On-site security
- Installation of new fire protection systems as construction progresses
- Preservation of existing systems during demolition
- Organization and training of an on-site fire brigade
- Development of a pre-fire plan with the local fire department
- Rapid communication
- Consideration of special hazards resulting rom previous occupancies
- Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along arterial and or collector streets are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

   Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for n the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic

- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
- In extreme situations, flaggers may be required.
- Police detail is required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or site lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt

6) This would include Monday-Friday Sat/Sunday/Holidays

I. Erosion Control and Preservation of Trees

1. PM Construction shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. PM Construction shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.
3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshalling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan.

K. Parking During Construction

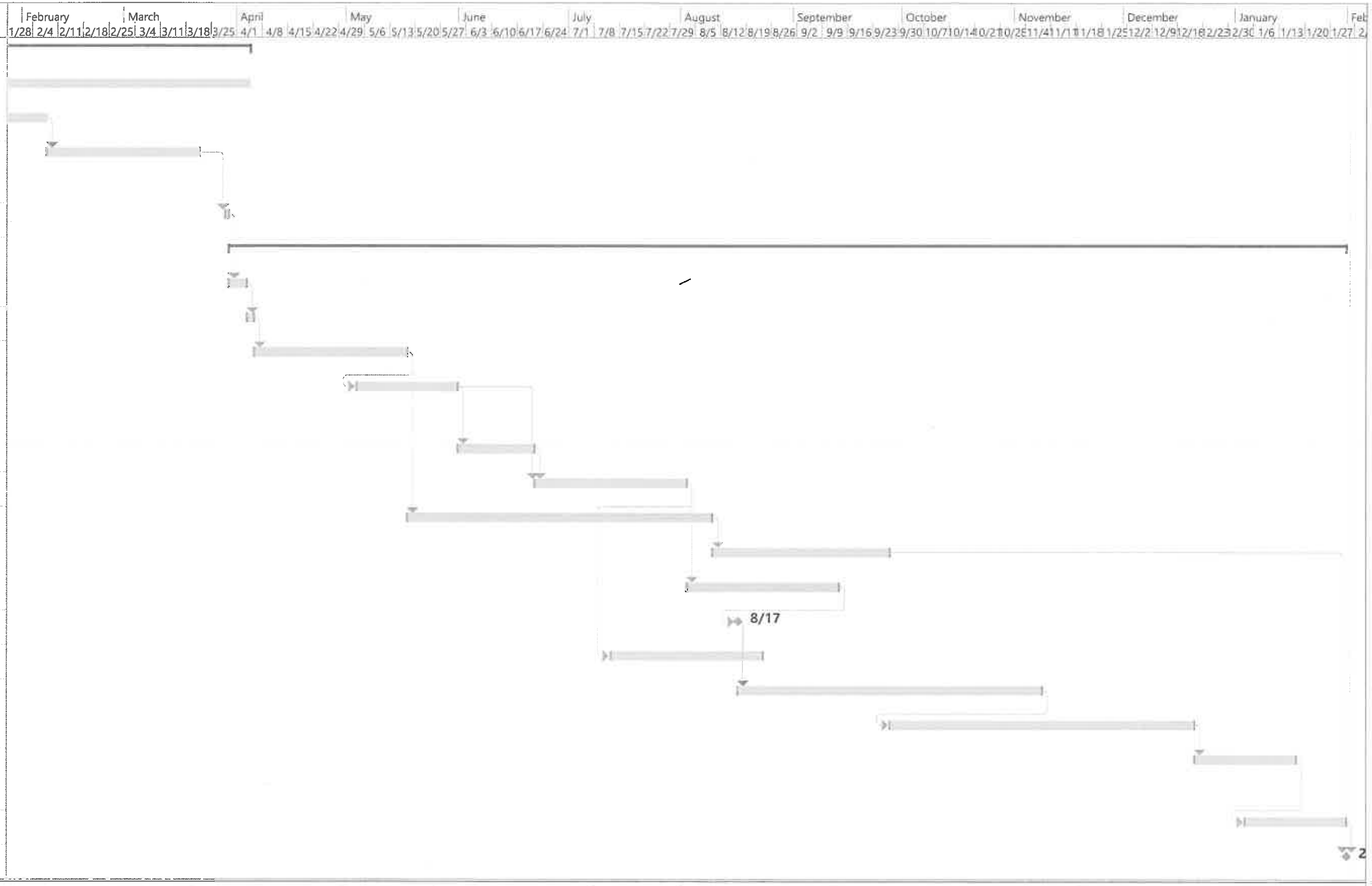
1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.
2. Parking: Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes.

L. Special Measures as Necessary

For construction work that will take place over a long period (e.g. 12 months or more), involve major demolition/ deep excavation/ piling and/or special construction techniques, or are located near sensitive uses (e.g. medical care facilities, schools), the Construction Management Plan should provide details and demonstrate that all appropriate special measures have been taken to avoid, minimize, or possibly compensate for potential impacts. This may include taking

baseline measurements before construction, such as arranging to photograph the foundations of nearby properties upon consent of the owners, in order to assess any future impacts of vibration, noise, etc.

ID	Task Name
1	**Preconstruction**
2	Permitting
3	Design
4	Subcontractor Bidding
5	Preconstruction Meeting
6	**Construction**
7	Mobilization
8	Erosion Control & Fencing
9	Lot Clearing & Earthwork
10	Structural Excavation & Backfill
11	Foundations
12	Superstructure
13	Site Utilities & Drainage
14	Site Finishes
15	Exterior Finishes
16	Building Watertight
17	Interior Framing
18	MEP Rough-ins
19	Interior Finishes
20	Furniture, Fixtures & equipment
21	Project Commisioning
22	Project Complete



Project: Project1
Date: Thu 11/16/17

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

PRELIMINARY FOR REVIEW ONLY

PRELIMINARY CONSTRUCTION PLAN

- CONSTRUCTION FENCE/ENTRANCE
- OFFICE/DUMPSTER LOCATION
- WASH OUT STATION

Rainbow Mall Road

WASH DOWN

JOB TRAILER OFFICE

CONSTRUCTION ENTRANCE

CONSTRUCTION FENCE

CONSTRUCTION ENTRANCE

Dumpster

LONG-TERM CARE FACILITY
FFE=73.80

ASSISTED LIVING FACILITY
FFE=74.3

N/F Ledgewood Owners Association 4446/125

RECREATION AREA=3,200 SF

RETAINING WALL

6' SIDE YARD SETBACK

EGRESS DOOR

ROOF OVERHANG

BACK DOOR

PORCH

FRONT DOOR

GARAGE DOOR

PORCH

25' FRONT YARD SETBACK

DETENTION POND

MITIGATION PARCEL B-REVISED
EX. VEGETATION TO REMAIN UNDISTURBED
(see Easement Ref. 5)

MITIGATION PARCEL A-REVISED
(see Easement Ref. 5)

R5 ZONE

R3 ZONE

ZONING LINE

L34 (external deed ref.)

Ocean Avenue

PLAN
SCALE: 1"=20'
0 20 40

LAST SAVED BY: MATTLAPIERRE 10/20/2017 2:32 PM

G:\DWGS\ME\PORTLAND\13682A-CEDARSNURSINGFACILITY\CIV\13682AC06.DWG | 13682aC06 | 1:4.56 | ----- | 10/20/2017 3:20:02 PM | MATTLAPIERRE

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	80% REVIEW	JBW	10/17

DESIGNED BY: MAG
CAD COORD.: MRL
CAD: MRL
CHECKED BY: MAG
DATE: 10-20-17
APPROVED BY: JBW
DATE: 10-20-17
PROJECT NO.: 13682A

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THE CEDARS
LONG-TERM AND MEMORY CARE FACILITY
PORTLAND, ME

SITE GRADING, EROSION CONTROL & LANDSCAPING PLAN

DRAWING
C-6

Section 10: Traffic

10.0 Traffic

The proposed development will increase the capacity of the campus facility by 20 beds in a new assisted living, memory care facility. In conjunction with the additional beds, the facility will need to increase the staffing by approximately 8 employees during the peak shift.

Based on review of the City of Portland Technical Manual, it is apparent that this project does not require a Traffic Management Plan because it does not generate more than 25 passenger car equivalents (PCE). However, through correspondences with the City of Portland's Traffic Consultant, it is apparent that a formal traffic assessment will be required. The result of this study will provide the following items:

1. Determination and assignment of peak hour trips.
2. Review of vehicle sight distance(s).
3. Analysis of roadway safety conditions in the immediate area of the project.

Wright-Pierce has retained Traffic Solutions as a subconsultant to carry out the above-mentioned study. This study is included as an attachment to this section.

Traffic Solutions
William J. Bray, P.E.
235 Bancroft Street
Portland, ME 04102
(207) 774-3603
(207) 400-6890 mobile
trafficsolutions@maine.rr.com

December 8, 2017

Traffic Assessment

For Proposed

The Cedars
Long-Term Care Facility
Expansion Project

Portland, Maine

INTRODUCTION

The Cedars long-term care facility located at 620 Ocean Avenue in the City of Portland are proposing a modest expansion of the existing retirement facility. The planned project constructs a three-story building, a long-term care facility covering two floors and an assisted living memory care facility on the remaining floor. The long-term care portion of the project will provide private rooms for existing residents in the existing Hoffman Center, resulting in no "*net*" increase in long-term care residents. The proposed memory care floor provides an increase of 20 rooms and represents an expansion of both staff and residents.

Access to The Cedars retirement facility will continue through the existing driveway entrance on Ocean Avenue.

This document determines daily and peak hour trip generation of the proposed project for both peak weekday commuter time periods and for a typical Saturday peak hour and examines current roadway safety trends on Ocean Avenue in the general proximity of The Cedars facility.

EXISTING CONDITIONS

Existing Traffic: Manual traffic turning movement counts were gathered at the driveway entrance to The Cedars retirement facility and Ocean Avenue on Wednesday, November 29 and Saturday, December 2, 2017. All vehicular traffic entering the driveway intersection was recorded in 15-minute intervals between 7:00 to 9:00 AM and, again, between 3:00 and 6:00 PM on Wednesday and between 11:00 and 3:00 PM on Saturday. From a summary of the data, a peak hour of traffic was determined for each of the three study time periods. The morning peak hour falls between 7:30 and 8:30 AM; the weekday afternoon peak hour occurs between 4:30 and 5:30 PM and the Saturday peak hour is recorded for 11:30 AM to 12:30 PM. Copies of the peak hour traffic "*stick*" drawings are attached for reference. Table 1, as follows, presents the peak hour traffic volumes for The Cedars facility for each of the three peak time periods:

Table 1
Existing Peak Hour Traffic Flows
The Cedars Retirement Facility

Peak Hour Time Period	Entering Trips	Exiting Trips	Total Trips
Wednesday, 11/29 7:30 to 8:30 AM	26 trips	11 trips	37 trips
Wednesday, 11/29 4:30 to 5:30 PM	14 trips	44 trips	58 trips
Saturday 12/2 11:30 AM to 12:30 PM	31 trips	18 trips	49 trips

As presented in Table 1 above, The Cedars facility presently generates a total of 37 trips in the weekday morning peak hour, a total of 58 trips in the weekday evening peak hour and a total of 49 trips in the Saturday peak hour.

SITE TRAFFIC

Site Trip Generation: Daily and peak hour trip generation was determined for the proposed 20 bed memory care portion of the project based upon trip tables presented in the ninth edition of the Institute of Transportation Engineers (ITE) "**TRIP GENERATION**" handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category.

The following trip rate was used to calculate trip generation for the proposed project:

Land Use #620 – Nursing Home

AM Peak Hour	= 0.17 trips per bed
PM Peak Hour	= 0.22 trips per bed
Saturday Peak Hour	= 0.38 trips per bed

Accordingly, the proposed 20 new memory care beds can be expected to generate a total of 3 new trips in the morning peak hour, 4 trips in the afternoon peak hour and an increase of 8 trips on Saturday.

Site Trip Distribution: The Institute of Transportation Engineers handbook also provides the following directional distribution rates for a nursing home land-use:

AM Peak Hour	= 70% enter site and 30% exit site
PM Peak Hour	= 24% enter site and 76% exit site
Saturday Peak Hour	= 63% enter site and 37% exit site

Based upon the noted directional distribution patterns, 2 trips during the morning peak hour, 1 trip in the evening peak hour and 5 trips on Saturday will enter the site and the remaining trips (1 AM trip, 3 PM trips and 3 trips Saturday) will exit the site.

EXISTING SAFETY CONDITIONS

The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2014 through 2016) crash data for the section of Ocean Avenue between Rainbow Mall Road and Morse Street, a distance of approximately 0.12 miles. Their report is presented as follows:

2014 -2016 Traffic Accident Summary

Location	Total Crashes	Critical Rate Factor
1. Ocean Avenue @ Providence Street	1	0.39
2. Ocean Avenue @ Rainbow Mall Road	3	1.40

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents***
- ***A Critical Rate Factor greater than 1.00***

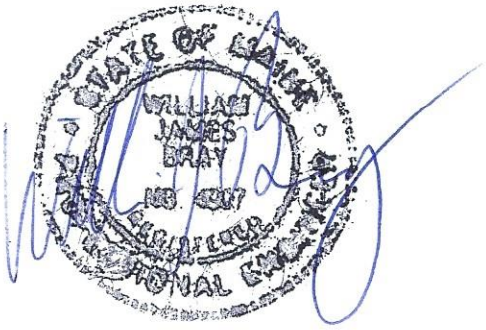
As the data presented in the table shows, the incidence of traffic crashes is extremely low, well below MaineDOT's threshold criteria for identification of a high crash location.

CONCLUSIONS

- The Cedars retirement facility presently generates very modest volumes of traffic during each of the critical weekly peak hour time periods. The existing facility generates a total of 37 trips during the morning peak hour, 58 trips in the afternoon peak hour and a total of 49 trips on Saturday.

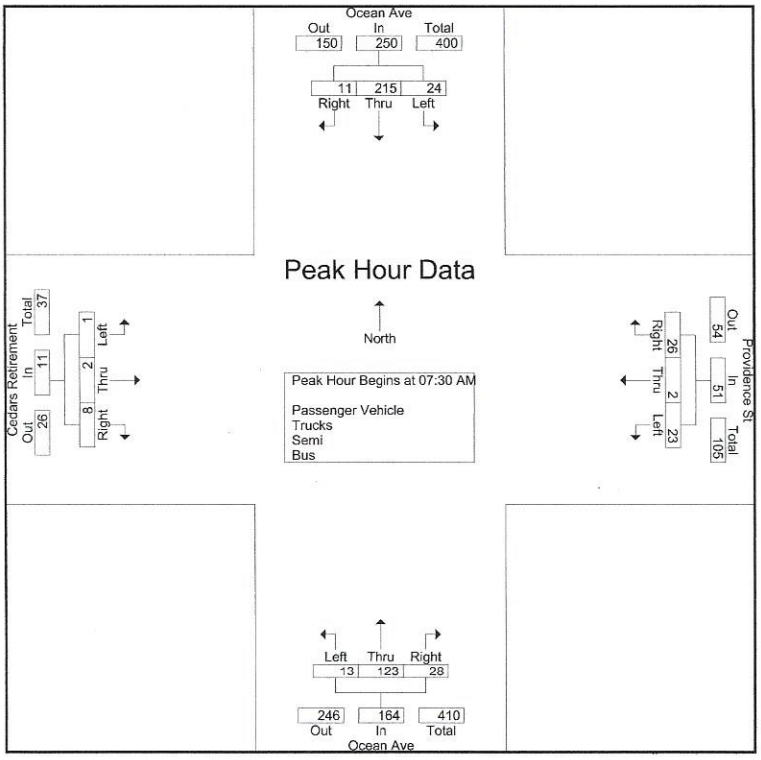
- The proposed building expansion project, which adds a total of 20 memory care beds to the overall facility, can be expected to generate less than 10 new vehicle trips in each of the "*key*" peak hour time periods (3 trips in the weekday AM peak hour; 4 trips in the evening peak hour and 8 trips on Saturday).

- The Maine Department of Transportation's most recent three-year (2014 to 2016) accident safety audit for the section of Ocean Avenue between Rainbow Mall Road and Morse Street would suggest that travel conditions within the noted road section are generally very safe. MaineDOT's report shows a total of 4 vehicle crashes were reported during the three-year study period.



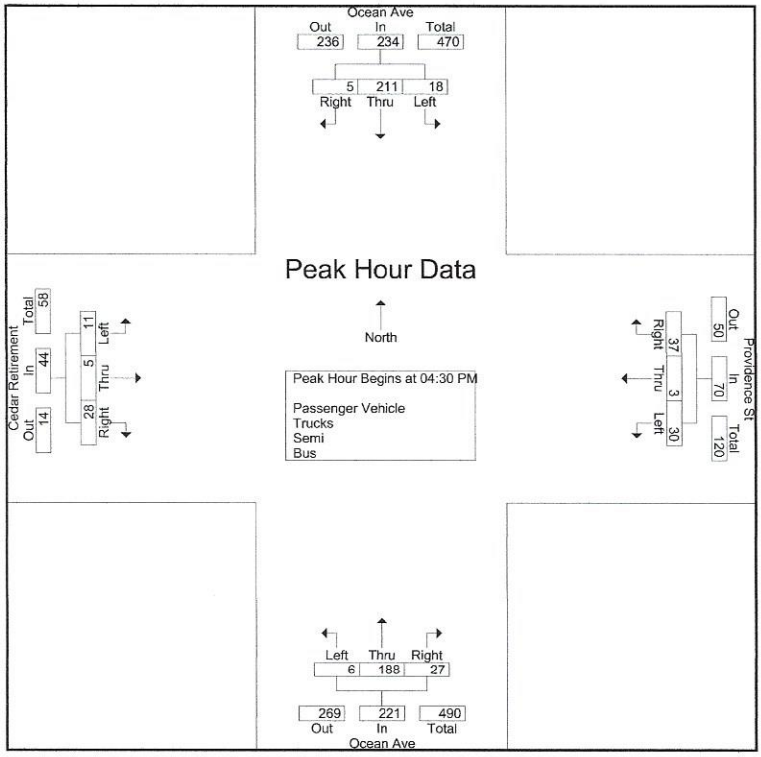
Portland: 620 Ocean Ave
Wednesday November 29, 2017
Cloudy With Sprinkles
Count By:Dawn-Marie Fahey

File Name : Portland 620 Ocean Ave AM 112917
Site Code : 01118171
Start Date : 11/29/2017
Page No : 6



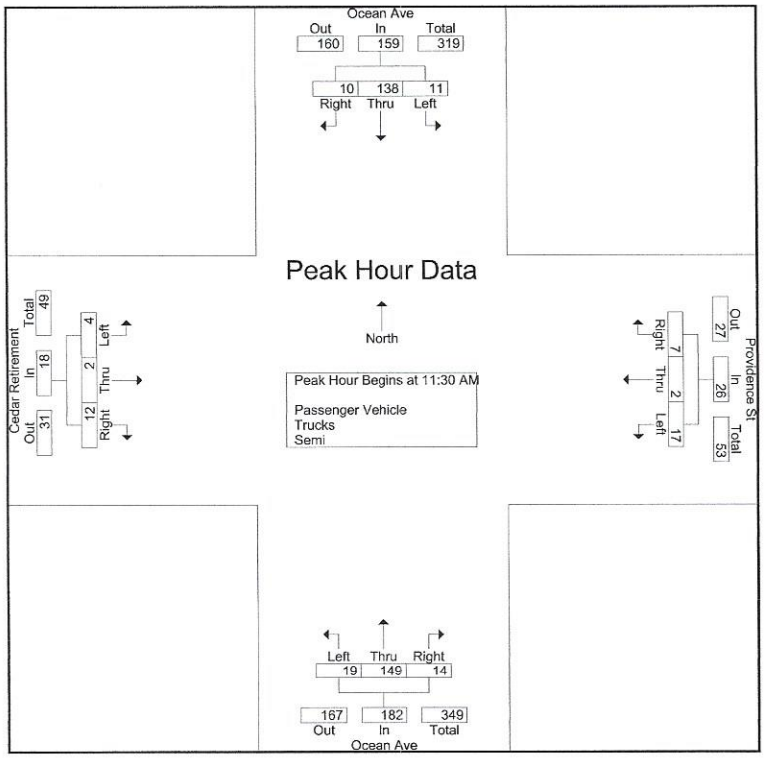
Portland: 620 Ocean Ave
Wednesday November 29, 2017
Cloudy with Sprinkles The Clear
Count By: Dawn-Marie Fahey

File Name : Portland 620 Ocean Ave PM 112917
Site Code : 01128172
Start Date : 11/29/2017
Page No : 6



Portland: 620 Ocean Ave
Saturday December 2, 2017
Clear
Count By: Dawn-Marie Fahey

File Name : Portland 620 Ocean Ave 120217
Site Code : 01202171
Start Date : 12/2/2017
Page No : 1



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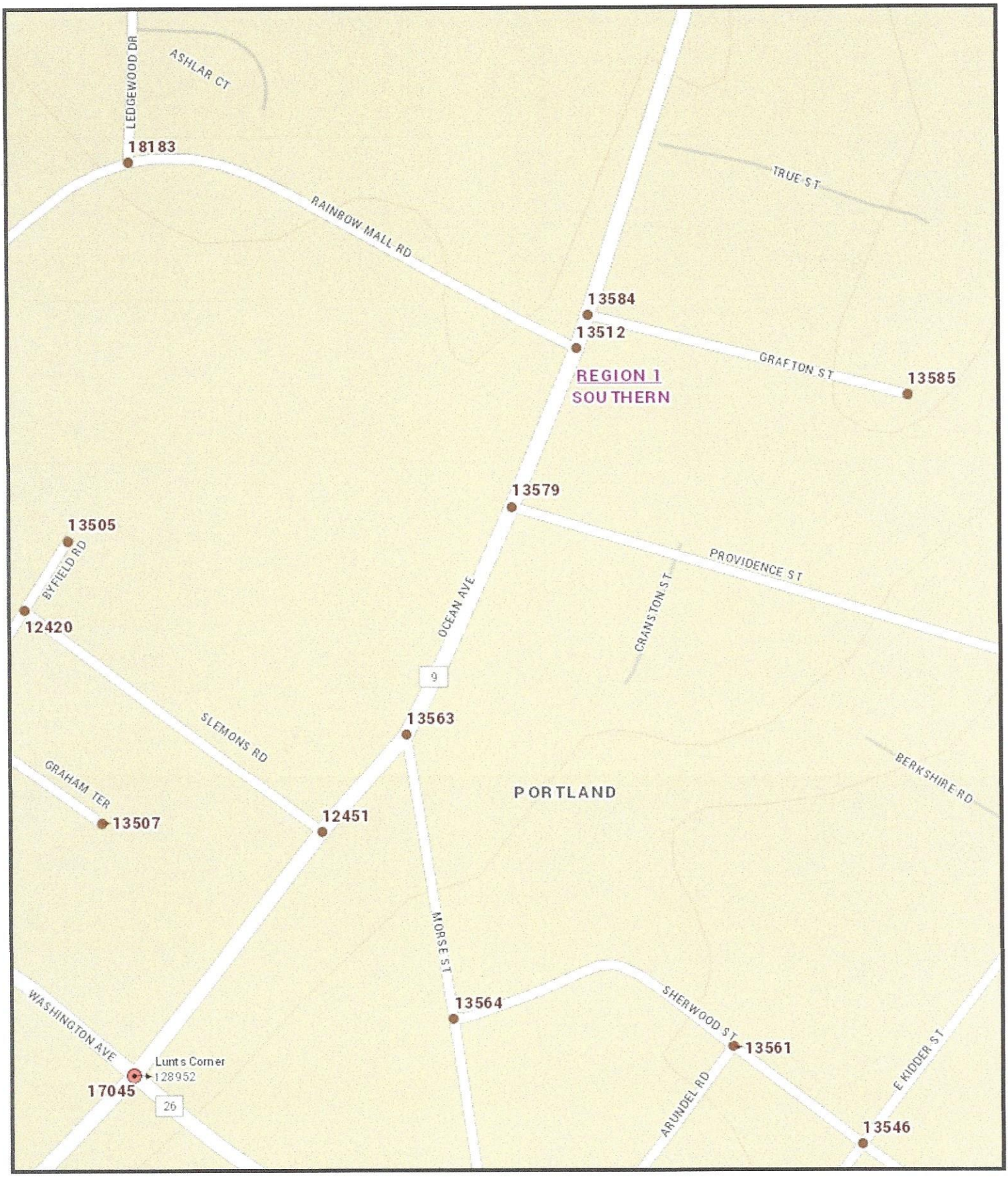

The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.045 Miles

1 inch = 0.05 miles

Date: 12/4/2017
Time: 7:15:08 AM

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

Ocean Ave in Portland

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2016 End Month: 12

Route: **0009X**	Start Node: **13563**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **13512**	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
13563	0009X - 64.54	Int of MORSE ST OCEAN AV	2	0	0	0	0	0	0	0.0	1.836	0.00	0.46	0.00
												Statewide Crash Rate:	0.14	
13579	0009X - 64.61	Int of OCEAN AV PROVIDENCE ST	2	1	0	0	0	0	1	0.0	1.822	0.18	0.46	0.00
												Statewide Crash Rate:	0.14	
P13512	0009X - 64.66	Int of OCEAN AV, RAINBOW MALL RD	2	3	0	0	0	3	0	100.0	1.475	0.68	0.49	1.40
												Statewide Crash Rate:	0.14	
Study Years:	3.00	**NODE TOTALS:**		4	0	0	0	3	1	75.0	5.133	0.26	0.35	0.74

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
13563	13579	3131561	0 - 0.07	0009X - 64.54	0.07	2	0	0	0	0	0	0	0.0	0.00127	0.00	585.99	0.00
Int of MORSE ST OCEAN AV				ST RTE 9											Statewide Crash Rate: 171.37		
13512	13579	3122200	0 - 0.05	0009X - 64.61	0.05	2	0	0	0	0	0	0	0.0	0.00086	0.00	642.07	0.00
Int of OCEAN AV, RAINBOW MALL RD				ST RTE 9											Statewide Crash Rate: 171.37		
Study Years: 3.00				**Section Totals:**	0.12		0	0	0	0	0	0	0.0	0.00213	0.00	514.95	0.00
				Grand Totals:	0.12		4	0	0	0	3	1	75.0	0.00213	625.84	738.33	0.85

Section 11 – Significant Natural Features

11.1 Coordination with Regulatory

This project is not proposing to impact any wetlands or other significant natural features. Included as an attachment to this section is a correspondence with the MDEP regarding the required permitting for this project.

11.2 Natural Features Study

A Natural Features Study is included as an attachment to this section, and the delineation is provided on the Plans. No impacts to wetlands are proposed as part of the project improvements.

11.3 Soils

Information regarding existing soils is included as an attachment to this section and is further reported in Section 12: Stormwater Treatment.

Kathleen O. Sculley

From: Cherry, David <David.Cherry@maine.gov>
Sent: Tuesday, September 26, 2017 9:14 AM
To: Michael A. Guethle
Cc: Sirois, Alison
Subject: The Cedars Long-Term Care Facility - Portland

Follow Up Flag: Follow up
Flag Status: Completed

Hi Michael,

I've looked over the pre-application materials you provided for The Cedars and have determined that the Department does not have jurisdiction over the project. In cities with delegated authority, the threshold for the Department taking over the project is 7 acres of structure area, which this project still under, approximately 5 acres currently. Any wetland alterations will need a permit from the Department under the Natural Resources Protection Act.

Please let me know if you have any questions.

Thanks,

David Cherry
Environmental Specialist
Maine Department of Environmental Protection
Bureau of Land Resources
312 Canco Road
Portland, ME 04103
david.cherry@maine.gov
207-523-9807

POWER ENGINEERS, INC.
303 U.S. ROUTE ONE
FREEPORT, ME 04032 USA

PHONE 207-869-1200
FAX 207-869-1299

September 26, 2016 ***DRAFT***

Jan Wiegman
Wright-Pierce
99 Maine Street
Topsham, ME 04086

Subject: Wetland Delineation – The Cedars, Ocean Avenue, Portland

Dear Jan:

In response to your request, on August 25, 2016 wetland boundaries were delineated at The Cedars Senior Living Community (the "Site") located at 630 Ocean Avenue, Portland. The position of the wetland boundary was subsequently surveyed by Titcomb Associates and is depicted on plans of the Site.

Wetland Delineation

The boundary of the wetland at the Site was delineated with sequentially numbered, pink flagging so that the location and extent of wetland can be taken into consideration for future site design and permitting plans. Evidence indicative of wetland from three parameters – vegetation, soils and hydrology – was used to identify and delineate the wetland in accordance with the 1987 *US Army Corps of Engineers Wetland Delineation Manual* and the subsequent *Regional Supplement to the US Army Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012). With the exception of unusual or atypical situations, evidence of wetland must be exhibited by all three parameters for an area or position to be designated as wetland.

The freshwater wetland community on the Site is dominated by trees and shrubs that include: red maple (*Acer rubrum*), American elm (*Ulmus americana*), speckled alder (*Alnus incana*), highbush blueberry (*Vaccinium corymbosum*), meadowsweet (*Spiraea latifolia*), jewelweed (*Impatiens capensis*), wool grass (*Scripus cyperinus*), cattail (*Typha* spp.), sensitive fern (*Onoclea sensibilis*), and purple loosestrife (*Lythrum salicaria*). All of these plants are identified as "Obligate" (**OBL**), "Facultative Wetland" (**FACW**) or "Facultative" (**FAC**) indicators of wetland by the 2016, *State of Maine National Wetland Plant List* prepared by the US Army Corps of Engineers and are therefore hydrophytes. By the National Wetland Inventory System, the wetland would be classified as palustrine deciduous scrub shrub (PSS1) wetland (Photographs 1 and 2).

The US Natural Resources Conservation Service (NRCS) identifies soils beneath wetland areas at the Site as being represented by the Scantic Series (Sn). These very deep, nearly level, poorly drained silt loams are classified as a hydric soil. Soils were also examined directly with a hand auger. Below an upper 8 inch thick dark gray (5Y4/1) silt loam horizon, a saturated olive gray (5Y5/2) silt loam was present containing 5-10% dark yellowish brown (2.5Y4/4) redox concentrations. Characteristics observed in the sample are representative of hydric soil indicator criteria F3: Depleted Matrix.

Hydrology is considered to be the "*driving force*" of wetlands (Mitch and Gosselink, 1986) and inherently is responsible for the adaptation of certain vegetation (hydrophytes) and the

development of specific soil characteristics (hydric) indicative of wetlands. At the time of the survey, evidence of wetland hydrology observed at the Site included: soils saturated within 12-inches of the surface, small localized areas of surface water, sediment deposits, water-stained leaves and drainage patterns indicative of wetlands.

Regulatory Jurisdiction

Activities in and adjacent to wetlands at the Site are regulated by the Maine Department of Environmental Protection (MDEP) under the provisions of the Natural Resources Protection Act (NRPA) and associated Wetland and Waterbodies Protection Rules (Chapter 310). Certain characteristics are relevant to whether a wetland regulated as a "freshwater wetland of special significance" (Ch 310 §4A 1-8)

The wetland at the Site:

- does not contain a "critically imperiled (S1)" (Ch 310 §3F) or "imperiled (S2)" (Ch 310 §3L) community as defined by the Natural Areas Program;
- would not be identified as "significant wildlife habitat" (38 MRSA §480-B(10)) by the Maine Department of Inland Fisheries and Wildlife;
- is not located within 250 feet of a "coastal wetland" (38 MRSA §480-B(2));
- is not located within 250 feet of a "great pond" (38 MRSA §465-A);
- does not contain more than 20,000 square feet of open water or aquatic or emergent marsh vegetation;
- does not occur in a 100-year floodplain mapped by the Federal Emergency Management Agency (FEMA);
- is not a "peatland" (Ch 310 §3P) and
- does not contain or occur within 25 feet of a "river stream or brook" (Ch 310 §4A (8))".

Therefore, there are no freshwater wetlands of special significance at the Site.

Typically, activities requiring alteration of wetland covering less than 15,000 square feet are eligible for Tier 1 permitting and in excess of this and up to an acre (43,560 square feet) a Tier 2 permit would be necessary under the NRPA. Excluding specific activities authorized by Permit by Rule (PBR - Chapter 305) provisions of the NRPA, activities in excess of one acre would require a Tier 3 permit. However, cumulative wetland impacts are taken into consideration relative to the required Tier of permitting and due to previous wetland impacts at the Site (authorized by MDEP permit L-22483TG-B-M) future wetland impacts would most likely require a Tier 3 permit.

Wetlands at the Site are also regulated by the Corps as "*waters of the United States*" under the provisions of Section 404 of the Clean Water Act. To authorize minimal-impact activities in wetlands, including placement of fill, the Corps makes use of a General Permit (GP) for the State of Maine. Such impacts to wetlands are broken down into two permit categories under the GP based on the following area thresholds: Category 1 – less than 15,000 square feet and Category 2 – 15,000 square feet to three acres. Activities eligible for Category 1 activities can be authorized without an application but a Notification Form submitted must be submitted to the Corps. Category 2 activities however are reviewed as applicable in conjunction with the US Fish and Wildlife Service, the US Environmental Protection Agency and the National Marine Fisheries Services, and require an application and written approval from the Corps. Previous wetland impacts at the Site approved by Corps permit NAE-2005-2407 would also be taken into account for determining eligibility and requirements for Category 2 permitting.

Wetland Functional Assessment

Approval of wetland impacts exceeding 15,000 sq ft typically require that a wetland functional assessment be conducted. Although the future development footprint and potential impacts to wetlands are not yet finalized, a functional assessment was submitted with the July 2005 permit applications approved by the MDEP and the Corps. The functional assessment method used at that time remains unchanged and little change in conditions are evident in and adjacent to wetlands at the Site that would influence the associated functions and values. Evaluation of the future footprint and design impacts is recommended when development plans are finalized: however it appears the earlier functional assessment would continue to be valid and relevant.

Do not hesitate to contact me at your earliest convenience at cole.peters@powereng.com or 207.869.1432 with questions or comments regarding the information presented above.

Sincerely,

DRAFT

Cole Peters
Professional Wetland Scientist



Photograph 1 Westward overview of the PSS1 wetland located on the south side of the parking area adjacent to the Rehabilitation and Skilled Care entrance to The Cedars (at right).



Photograph 2 Southeastward view along the west side of the Rehabilitation and Skilled Care building where a small portion of the PSS1 wetland is dominated by red maple trees.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



October 11, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:2,870 if printed on A landscape (11" x 8.5") sheet.

N

0 40 80 160 240 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 12, Sep 15, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuC2	Buxton silt loam, 8 to 15 percent slopes	0.2	1.4%
HrB	Hollis fine sandy loam, 3 to 8 percent slopes	7.6	44.5%
HrC	Hollis fine sandy loam, 8 to 15 percent slopes	8.3	48.6%
Sn	Scantic silt loam, 0 to 3 percent slopes	0.9	5.5%
Totals for Area of Interest		**17.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

BuC2—Buxton silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2x1by
Elevation: 10 to 490 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Buxton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buxton

Setting

Landform: Marine terraces, river valleys
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Fine glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 18 inches: silt loam
Bw2 - 18 to 23 inches: silty clay loam
BC - 23 to 35 inches: silty clay loam
C - 35 to 65 inches: silty clay

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 17 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Hydric soil rating: No

HrB—Hollis fine sandy loam, 3 to 8 percent slopes

Map Unit Composition

Hollis and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy supraglacial meltout till derived from mica schist

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 18 inches: fine sandy loam
R - 18 to 22 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

HrC—Hollis fine sandy loam, 8 to 15 percent slopes

Map Unit Composition

Hollis and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Landform: Hills
Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy supraglacial meltout till derived from mica schist

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 18 inches: fine sandy loam
R - 18 to 22 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Hydric soil rating: No

Sn—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2slv3
Elevation: 10 to 900 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Scantic and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scantic

Setting

Landform: Marine terraces, river valleys
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Glaciomarine deposits

Typical profile

Ap - 0 to 9 inches: silt loam
Bg1 - 9 to 16 inches: silty clay loam
Bg2 - 16 to 29 inches: silty clay

Cg - 29 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Hydric soil rating: Yes

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Section 12: Stormwater Management Plan

12.0 Stormwater Management Plan

Stormwater management plan for the proposed project is attached within this section.

12.1 Coordination with Regulatory

Coordination efforts with regulatory agencies for the proposed project is included within Section 11 of this permit.

12.2 Basic Standard, General Standard, Flooding Standard, Discharge to Wetlands Standard

Per State of Maine and City of Portland statute, the Basic Standard, General Standard, Discharge to Wetlands Standard, and Flooding Standard will apply for the proposed project. This information is incorporated within the attached Stormwater Management Plan.

12.3 Maintenance and Insepction

A sample maintenance plan is attached. The applicant currently maintains a landscaping service for the property. The applicant anticipates entering a maintenance agreement for stormwater treatment with their current landscaping service as a condition of approval for the proposed development.

STORMWATER MANAGEMENT PLAN

THE CEDARS LONG TERM AND A.L. MEMORYCARE FACILITY

PORTLAND, MAINE

INTRODUCTION

The proposed project will redevelop the existing site to accommodate a Long-Term and Assisted Living (AL) memory Care Facility at The Cedars. Parking lots, utility improvements, and stormwater treatment will be constructed to accommodate the proposed three-story building.

In general, the proposed project consists of the following construction items:

- Clearing
- Erosion and sedimentation control
- Utility construction
- Building construction
- Parking lot improvements
- Stormwater treatment facilities
- Site landscaping

EXISTING DRAINAGE CONDITIONS

The existing site includes buildings, parking and roadway infrastructure, plantings/trees within parking islands, several detention areas, and wetlands. The site is located along a ridge, and generally slopes from higher areas in the northern portions of the site towards the south, with a portion of the property conveying surface flows towards the west. The majority of surface runoff flows from the northern edge of the property, is conveyed through a series of drainage pipes into several detention and retention facilities, and then into the wetland complex at the southern portion of the site. From this wetland, surface flows then discharge into Ocean Avenue. These surface flows then ultimately discharge into the Atlantic Ocean at Back Cove in Portland.

The far western portion of the site discharges to Fall Brook. This portion of the site will not be disturbed or redeveloped as part of the proposed work.

Soils mapping and characteristics were obtained from the Medium Intensity Soil Survey for Cumberland County. As indicted on the soils map provided in Section 11, the primary hydrological soils group

covering the site is Type D, or poorly draining soils. This information is supported by the site being predominately ledge and wetlands, both of which are Type D soils.

PROPOSED DRAINAGE CONDITIONS

The proposed conditions will not substantially alter the existing drainage patterns. The proposed improvements include incorporating two new stormwater treatment measures, and modification to the Outlet Control Structure of one of the existing detention basins. Several structures will have frame/cover elevations modified as part of the improvements to accommodate minor grading changes for the roadway work. No improvements are proposed within the Fall Brook watershed.

REGULATORY REQUIREMENTS

City of Portland, Maine

The proposed project will require adherence to the Stormwater Runoff policies within the City of Portland Technical Manual. According to the Section 5, "PORTLAND STORMWATER MANAGEMENT STANDARDS AND MAINE DEP CHAPTER 500 STORMWATER MANAGEMENT", *"Stormwater Management Plans for New Development: Except as provided in below, the following development proposals shall submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including General and Flooding standards: Level I: Site Alteration, which will result in the creation of more than 1,000 square-feet of new impervious area or 10,000 square-feet of new non-impervious developed area, as defined under Developed Area and listed under Definitions of Chapter 500".*

The proposed project will also require adherence to the MDEP Chapters 500 and 502, which describe stormwater management requirements for new and re-development projects. These rules describe performance standards divided into six major categories: Basic Standards, General Standards, Phosphorous Standards, Urban Impaired Stream Standards, Flooding Standards, and Discharge to Wetlands Standard. The following sections describe how this project will address these stormwater management performance standards.

Basic Standards: A project must meet basic standards if it disturbs an area greater than one (1) acre. The proposed project will disturb greater than one acre of land, and therefore state and local regulations require adherence to this standard. These standards include erosion and sedimentation controls, inspection and maintenance procedures, and general housekeeping requirements. These

performance standards have been addressed in two separate reports entitled “Erosion and Sedimentation Control Plan” and “Inspection, Maintenance, and Housekeeping Plan”, both included as attachments to this report.

General Standards: A project is subject to the general standards if it results in the creation of one (1) or more acres of impervious area or developed areas greater than five (5) acres. The project has an existing site law permit for the existing buildings that was issued in 2005, and the project will be redeveloping a portion of the site. The proposed parcel contains more than one acre of impervious area and more than 5 acres of developed area. As such, this project has been designed to meet the general standards. These standards require that a minimum of 95% of all impervious areas and at least 80% of all developed areas are designed to be tributary to stormwater BMPs. Standard BMPs have been defined by the MDEP and are described thoroughly in their publication Stormwater Management for Maine: Best Management Practices manual, as most recently revised. The General Standards section of this Stormwater Management Plan describes the BMPs proposed for this project and specific design information for each BMP.

Development on the existing parcel was permitted or constructed prior to January 1, 2006, and this work was subject to either the Site Law Ordinance of Development Act, and has several detention and retention facilities installed as part of a Stormwater Law Permit associated with much of this development. Therefore, the existing portions of the parcel are not anticipated to be subject to the General Standards, and adherence to the General Standards is only proposed for the new development.

Phosphorus Standards: A project is subject to the phosphorous standards when it is in the watershed of a lake most at risk as identified in Chapter 502. This project is not located in the watershed of a lake that is identified as being Most at Risk in Chapter 502 and therefore the project is not subject to the Phosphorous Standards.

Urban Impaired Stream Standards: A project is subject to the Urban Impaired Stream Standards when the proposed project incorporates additional development within the watershed of a body of water identified as an “Urban Impaired Stream” as defined by MDEP Chapter 502. No work is proposed within urban impaired stream watersheds and, therefore, the project is not subject to the urban impaired stream standards.

Flooding Standards: The MDEP requires that projects creating impervious areas greater than three (3) acres, or developed areas greater than twenty (20) acres, address various flooding standards. The site totals more than 3 acres of impervious area, and as such is subject to the Flooding Standards. The site has been designed to meet the Flooding Standards by analyzing post-development flows for the 2-, 10-, and 25-year interval storms and comparing those interval storms to the pre-development conditions.

Discharge to Wetlands Standard: The MDEP requires that any project that discharges to a wetland must indicate that the water level within the wetland is not increased by more than 2" for a 24-hour period following a 2-year rain event.

WATER QUALITY TREATMENT

The proposed development will create 16,339 square feet of new impervious surfaces in the form of additional parking and building footprint. The new building will be located over a portion of an existing parking lot and other existing impervious surfaces. The existing site has greater than 1 acre of total impervious surfaces, and as such the proposed improvements are subject to water quality standards.

Two Grassed Underdrained Soil Filters (USFs) were designed to accommodate this volume and are identified as USF A and USF B. USF A is located in a parking lot area, where curb cuts and drainage infrastructure have been designed to convey surface flows to the proposed basin. Surface flows and rain drains will convey flows to the USF B, which has been located adjacent to the proposed building.

For USF A, a top-of-basin elevation of 76.00' was chosen, with 77.50' serving as the overflow and 77.00' as the storm drain inlet elevation These elevations were chosen to accommodate existing site grading. Curb cut inlets were designed to convey flows from the parking lot area through a riprap channel and into the basin. These riprap channels serve to mitigate sand from 10 storms per year, at 500 lbs/acre for each storm, with a sand density of 90 pcf. Given the 0.13 acres of sanded surfaces (impervious surfaces), this yields 7.22 cf of sand annually. Using a porosity of 0.4 for riprap, 18 CF of riprap is required. Rirap will be placed at 18" depth, and therefore 12 SF of riprap is required. A total of 40 SF of riprap has been provided at the outlet locations, and therefore the provided riprap incorporates the required amount of sand mitigation.

For USF B, a top-of-basin elevation of 70.25' was chosen, with 72.25' serving as the overflow and 72.00' as the storm drain inlet elevation. While this basin is 21" from the loam layer to the storm drain overflow,

only 18" of ponding has been allocated for water quality treatment, with the basin being over-sized to accommodate the flooding standard. These elevations were chosen to incorporate roof drain elevations and blend into the existing roadway corridor.

Both basins were designed using a filter media draining at 2.41 in/hr. Given the ledge and anticipated high water table, an impermeable liner has been incorporated as part of the proposed design. Additional information requiring the design of the USF has been incorporated within the project plans, particularly noting the layers of the proposed filter. The treatment volume calculations for each USF are indicated in the below tables:

Underdrained Soil Filter A					
	Subcatchment Review				
	Total Impervious Surfaces	5794	sf	0.13	acres
	Total Developed Surfaces	2748	sf	0.06	acres
	Total Drainage Area	8542	sf	0.20	acres
	Basin Design				
	Treatment V	Total acres	Multiplier	Volume	
	Impervious Area	0.133	1.0	483	
	Developed Area	0.063	0.4	92	
		Treatment Volume Required		**574**	**cf**
		Treatment Volume Provided		**580**	**cf**
	Surface Area at Filter Elevation	580	s.f.		
	Water Quaility Vol. (12-inch Ponding)	580	cf		
	Surface Area Check				
	Impervious A	5794	5%	290	
	Non-Impervious Developed Area	2748	2%	55	
		Total Surface Area Required, min.		**345**	**sf**

Underdrained Soil Filter B					
	Subcatchment Review				
	Total Impervious Surfaces	11919	sf	0.27	acres
	Total Developed Surfaces	2199	sf	0.05	acres
	Total Drainage Area	14118	sf	0.32	acres
	Basin Design				
	Treatment V	Total acres	Multiplier	Volume	
	Impervious Area	0.274	1.0	993	
	Developed Area	0.050	0.4	73	
	Treatment Volume Required			**1,067**	**cf**
	Treatment Volume Provided			**1,073**	**cf**
	Surface Area at Filter Elevation	715	s.f.		
	Water Quaility Vol. (18-inch Ponding)	1072.5	cf		
	Surface Area Check				
	Impervious A	11919	5%	596	
	Non-Impervious Developed Area	2199	2%	44	
	Total Surface Area Required, min.			**640**	**sf**

The general standards require that 95% of the new impervious surface area and 80% of the total developed surface area be treated. The proposed project is generating a net gain of 16,339 square feet of impervious area, and a net gain of 2,066 square feet of developed lawn area. The proposed treatment facilities are sized to treat 17,713 square feet of impervious area and 4,947 square feet of developed area. Therefore, greater than 100% of increased impervious and developed surfaces are being treated as part of the proposed project, and the water quality standard is met.

FLOODING STANDARD (WATER QUANTITY TREATMENT)

The site has been analyzed for pre-development and post-development runoff corresponding to the 2, 10 and 25 year storms. The Soil Conservation Service (SCS) TR-20 methodology was selected to determine the flow rates for this hydrologic analysis and HydroCAD (release 10.00) computer modeling software was utilized to perform the computations. This method relies heavily upon detailed watershed characteristics and historical rainfall data to model estimated peak discharges at selected recurrence intervals. The HydroCAD reports for these events is attached to this report.

In recent years, many organizations in the environmental science community have noticed an upward trend in total rainfall for the northeastern United States. In response, the National Resource Conservation Service (formerly SCS) has partnered with Cornell University and the Northeast Regional Climate Center (NRCC) to prepare updated statistical rainfall information (see www.precip.net). The NRCC has published a new statistical analysis of rainfall information in the northeast. The NRCC 24-hour duration rainfall data specific to Portland for various recurrences intervals have been used in these calculations.

Site specific watershed (subcatchment) details, including drainage area, land use cover, and time of concentration have been calculated. Retention and detention ponds, as well as low-lying areas and stormwater treatment cells, were designed as ponds with specific storage and outlet information. Four appurtenant Study Points were evaluated in order to determine where stormwater exits the property in the pre- and post-development condition. Study Points were designed at both outlets to the large on-site wetland, to Ocean Avenue, and to the western property boundary. The results for runoff existing the site at these Study Points are summarized in the table below:

STUDY POINT ANALYSIS (PEAK FLOW RATES: CFS)

Study Point	***Pre 2-yr***	***Post 2-yr***	***Pre 10-yr***	***Post 10-yr***	***Pre 25-yr***	***Post 25-yr***
1SP	1.13	0.99	4.87	4.87	5.27	5.27
2SP	0.00	0.00	1.03	1.02	5.04	5.00
3SP	0.96	0.10	1.68	0.18	4.94	4.60
4SP	1.63	1.63	2.73	2.73	3.60	3.60

As indicated in the above table, the discharge rate in the proposed condition is either equal to or less than the existing condition for the 2-year, 10-year and 25-year rain events. Therefore, the proposed development meets the flooding standard. Flooding controls for the site were largely completed within the two USF cells (noted in HydroCAD as PA, and PB), but also with modifications to the Detention Pond 4 (4P) outlets.

DISCHARGE TO WETLANDS

Whereas the proposed project will be discharging to certain wetlands, each wetland discharged to will have an associated analysis that indicates that the post-development wetland water level does not exceed 2” of ponding when compared to the pre-development wetland water level.

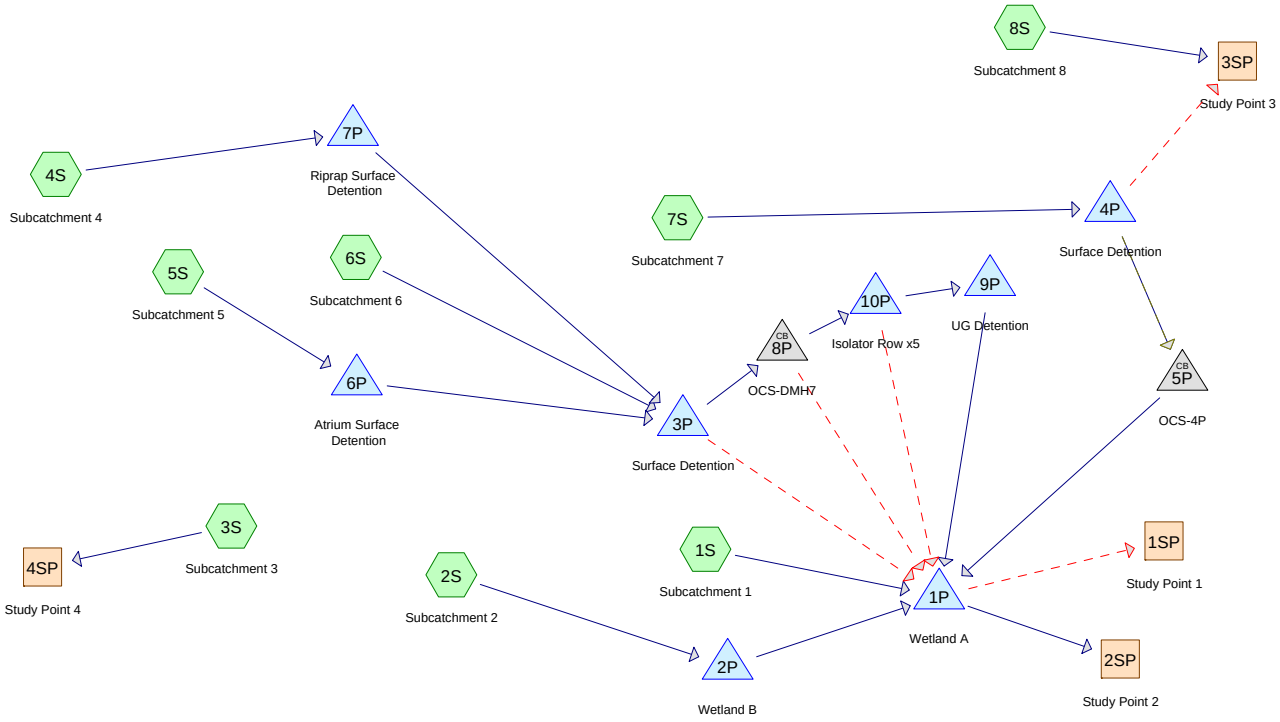
Wetland A is the only wetland on-site for which the post-development flows will be modified from the

pre-development condition. For Wetland A, pre-development flows to the existing wetland were compared to the post-development conditions. Wetland A is modeled as pond with a broad-crested weir in its southern outlet, and with a catch basin at its eastern outlet. The wetland is modeled with standing water at elevation 63.50', the approximate elevation of several of the wetland delineation flags.

Pre-development flows conveyed from a 2-year storm ponded this wetland to an elevation of 65.34'. Post-development flows conveyed from a 2-year storm ponded this wetland to an elevation of 65.32'. The difference between pre-development and post-development flows is therefore -0.02', and well below the 2" (or 0.17') maximum identified in the Discharge to Wetlands standard. Calculations for the 2-year storm are indicated in the HydroCAD report, attached to this report.

CONCLUSION

By incorporating various treatment methods and measures, surface runoff from the proposed development will receive treatment that meets the Basic, General, Flooding, and Discharge to Wetlands Standards.



Subcat Reach Pond Link

Routing Diagram for Pre-Development Cedars Model 17-10-11
Prepared by Microsoft, Printed 11/17/2017
HydroCAD® 10.00-12 s/n 01135 © 2014 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.979	98	(1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
5.587	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
10.566	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.587	HSG D	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
4.979	Other	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
10.566		**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	0.000	0.000	4.979	4.979		1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	0.000	0.000	5.587	0.000	5.587	>75% Grass cover, Good	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S
0.000	**0.000**	**0.000**	**5.587**	**4.979**	**10.566**	**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	62.86	58.69	48.0	0.0869	0.013	12.0	0.0	0.0
2	3P	69.10	68.75	70.0	0.0050	0.013	15.0	0.0	0.0
3	4P	67.66	67.65	5.0	0.0020	0.013	3.5	0.0	0.0
4	5P	67.48	66.86	81.0	0.0077	0.013	12.0	0.0	0.0
5	6P	71.00	69.20	220.0	0.0082	0.013	0.1	0.0	0.0
6	7P	71.83	69.20	375.0	0.0070	0.013	12.0	0.0	0.0
7	8P	66.60	66.60	10.0	0.0000	0.013	12.0	0.0	0.0
8	8P	65.70	65.50	40.0	0.0050	0.013	24.0	0.0	0.0
9	9P	65.70	65.60	10.0	0.0100	0.013	4.0	0.0	0.0
10	9P	67.00	66.90	10.0	0.0100	0.013	4.0	0.0	0.0
11	10P	66.60	66.55	5.0	0.0100	0.013	4.0	0.0	0.0
12	10P	67.00	66.55	50.0	0.0090	0.013	12.0	0.0	0.0

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1 Runoff Area=87,665 sf 15.27% Impervious Runoff Depth=1.58"
Flow Length=177' Slope=0.0100 '/' Tc=29.9 min CN=83 Runoff=2.75 cfs 0.266 af

Subcatchment 2S: Subcatchment 2 Runoff Area=90,682 sf 66.45% Impervious Runoff Depth=2.32"
Flow Length=178' Slope=0.0075 '/' Tc=33.7 min CN=92 Runoff=3.84 cfs 0.403 af

Subcatchment 3S: Subcatchment 3 Runoff Area=40,444 sf 47.45% Impervious Runoff Depth=2.05"
Flow Length=185' Slope=0.0200 '/' Tc=30.6 min CN=89 Runoff=1.63 cfs 0.159 af

Subcatchment 4S: Subcatchment 4 Runoff Area=26,132 sf 52.50% Impervious Runoff Depth=2.05"
Tc=7.0 min CN=89 Runoff=2.03 cfs 0.103 af

Subcatchment 5S: Subcatchment 5 Runoff Area=114,414 sf 56.89% Impervious Runoff Depth=2.14"
Tc=7.0 min CN=90 Runoff=9.20 cfs 0.469 af

Subcatchment 6S: Subcatchment 6 Runoff Area=39,891 sf 54.44% Impervious Runoff Depth=2.14"
Tc=7.0 min CN=90 Runoff=3.21 cfs 0.163 af

Subcatchment 7S: Subcatchment 7 Runoff Area=46,652 sf 42.35% Impervious Runoff Depth=1.97"
Tc=7.0 min CN=88 Runoff=3.50 cfs 0.176 af

Subcatchment 8S: Subcatchment 8 Runoff Area=14,355 sf 26.13% Impervious Runoff Depth=1.73"
Tc=7.0 min CN=85 Runoff=0.96 cfs 0.048 af

Reach 1SP: Study Point 1 Inflow=1.13 cfs 0.659 af
Outflow=1.13 cfs 0.659 af

Reach 2SP: Study Point 2 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 3SP: Study Point 3 Inflow=0.96 cfs 0.048 af
Outflow=0.96 cfs 0.048 af

Reach 4SP: Study Point 4 Inflow=1.63 cfs 0.159 af
Outflow=1.63 cfs 0.159 af

Pond 1P: Wetland A Peak Elev=65.34' Storage=51,716 cf Inflow=9.15 cfs 1.315 af
Primary=0.00 cfs 0.000 af Secondary=1.13 cfs 0.659 af Outflow=1.13 cfs 0.659 af

Pond 2P: Wetland B Peak Elev=69.11' Storage=9,275 cf Inflow=3.84 cfs 0.403 af
Outflow=1.59 cfs 0.208 af

Pond 3P: Surface Detention Peak Elev=71.44' Storage=7,457 cf Inflow=13.88 cfs 0.676 af
Primary=6.11 cfs 0.674 af Secondary=0.00 cfs 0.000 af Outflow=6.11 cfs 0.674 af

Pond 4P: Surface Detention Peak Elev=69.90' Storage=3,402 cf Inflow=3.50 cfs 0.176 af
Primary=0.37 cfs 0.155 af Secondary=0.00 cfs 0.000 af Tertiary=0.37 cfs 0.013 af Outflow=0.74 cfs 0.167 af

Pond 5P: OCS-4P Peak Elev=67.98' Inflow=0.74 cfs 0.167 af
12.0" Round Culvert n=0.013 L=81.0' S=0.0077 '/' Outflow=0.74 cfs 0.167 af

Pond 6P: Atrium Surface Detention Peak Elev=73.88' Storage=3,640 cf Inflow=9.20 cfs 0.469 af
Outflow=8.80 cfs 0.412 af

Pond 7P: Riprap Surface Detention Peak Elev=72.74' Storage=285 cf Inflow=2.03 cfs 0.103 af
12.0" Round Culvert n=0.013 L=375.0' S=0.0070 '/' Outflow=1.93 cfs 0.101 af

Pond 8P: OCS-DMH7 Peak Elev=67.01' Inflow=6.11 cfs 0.674 af
Primary=0.34 cfs 0.011 af Secondary=5.77 cfs 0.664 af Outflow=6.11 cfs 0.674 af

Pond 9P: UG Detention Peak Elev=65.90' Storage=286 cf Inflow=0.22 cfs 0.008 af
Outflow=0.06 cfs 0.008 af

Pond 10P: Isolator Row x5 Peak Elev=67.19' Storage=0.001 af Inflow=0.34 cfs 0.011 af
Primary=0.22 cfs 0.008 af Secondary=0.12 cfs 0.002 af Outflow=0.34 cfs 0.011 af

Total Runoff Area = 10.566 ac Runoff Volume = 1.786 af Average Runoff Depth = 2.03"
52.88% Pervious = 5.587 ac 47.12% Impervious = 4.979 ac

Summary for Subcatchment 1S: Subcatchment 1

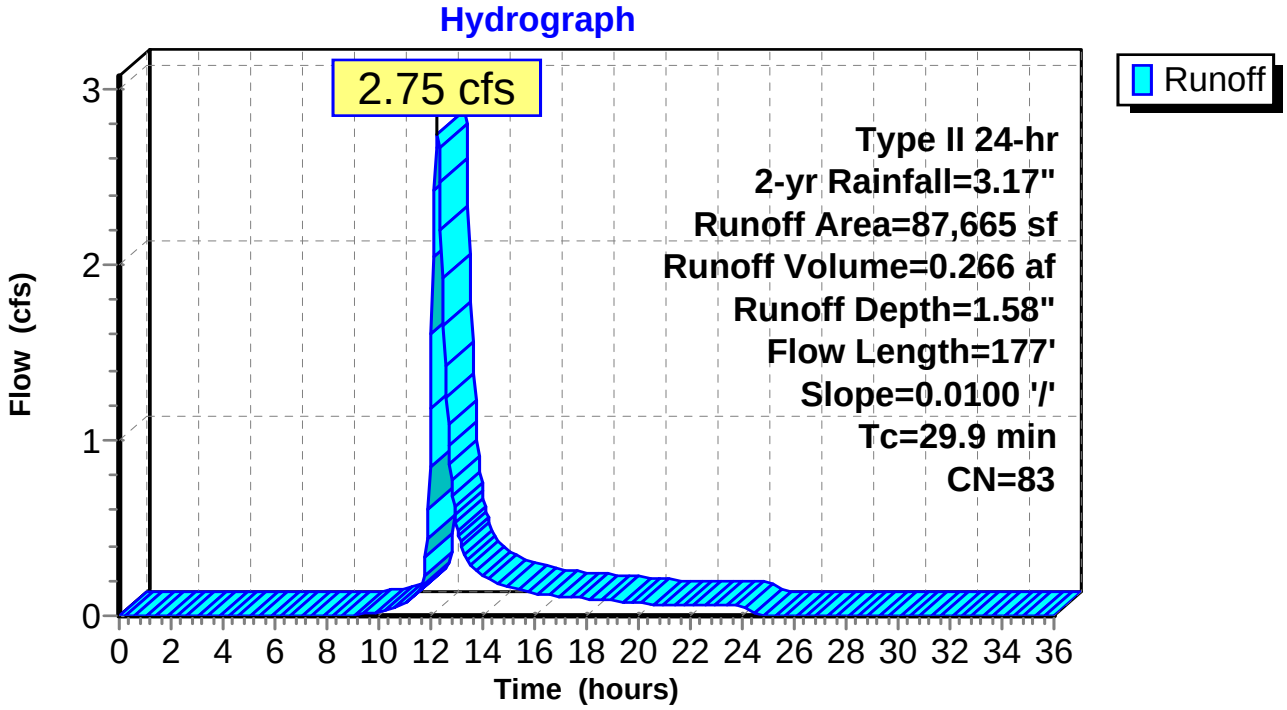
Runoff = 2.75 cfs @ 12.25 hrs, Volume= 0.266 af, Depth= 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	13,390	98	
	74,275	80	>75% Grass cover, Good, HSG D
	87,665	83	Weighted Average
	74,275		84.73% Pervious Area
	13,390		15.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	177	0.0100	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 1S: Subcatchment 1



Summary for Subcatchment 2S: Subcatchment 2

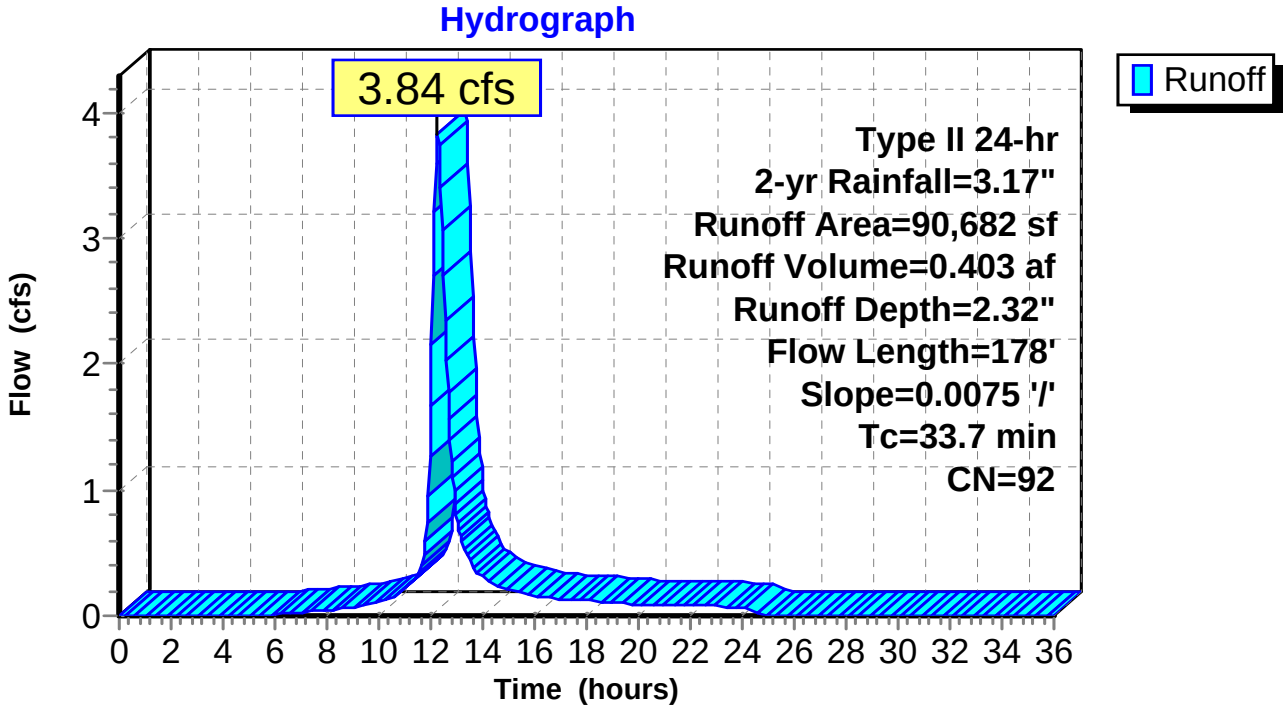
Runoff = 3.84 cfs @ 12.28 hrs, Volume= 0.403 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	60,255	98	
	30,427	80	>75% Grass cover, Good, HSG D
	90,682	92	Weighted Average
	30,427		33.55% Pervious Area
	60,255		66.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.7	178	0.0075	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 2S: Subcatchment 2



Summary for Subcatchment 3S: Subcatchment 3

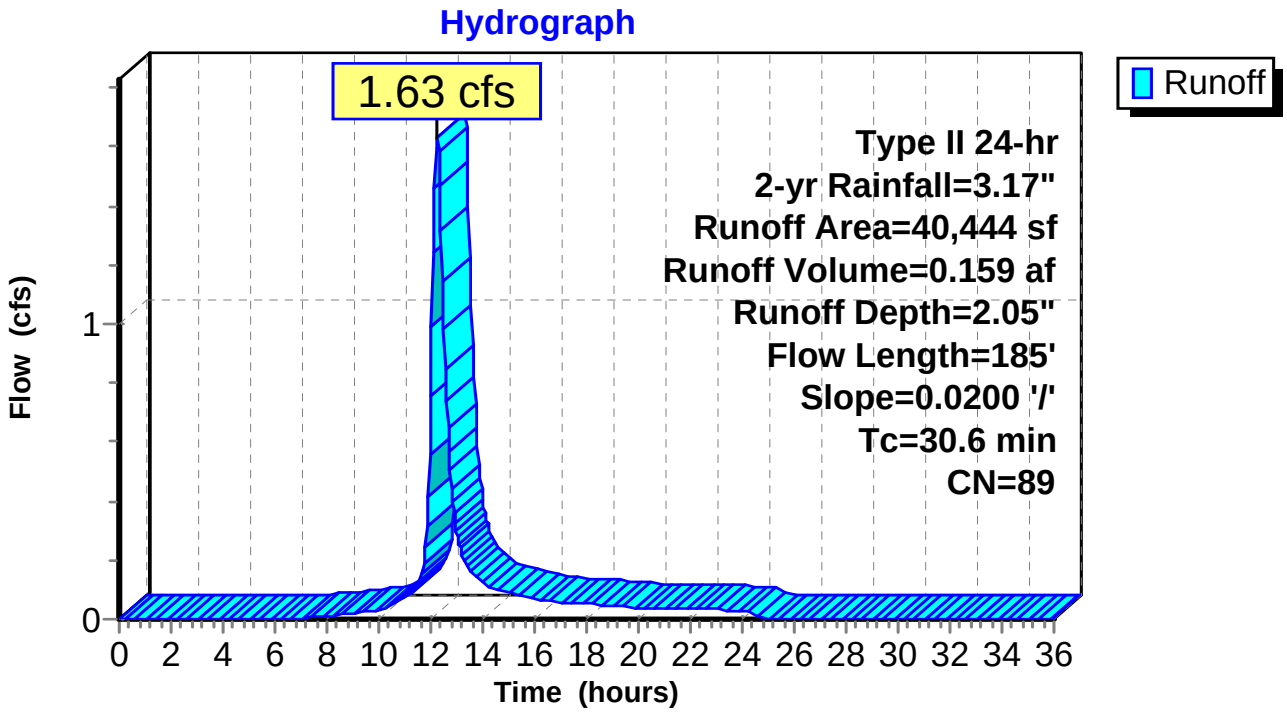
Runoff = 1.63 cfs @ 12.25 hrs, Volume= 0.159 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
	21,255	80	>75% Grass cover, Good, HSG D
*	19,189	98	
	40,444	89	Weighted Average
	21,255		52.55% Pervious Area
	19,189		47.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.8	150	0.0200	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.17"
0.8	35	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	185	Total			

Subcatchment 3S: Subcatchment 3



Summary for Subcatchment 4S: Subcatchment 4

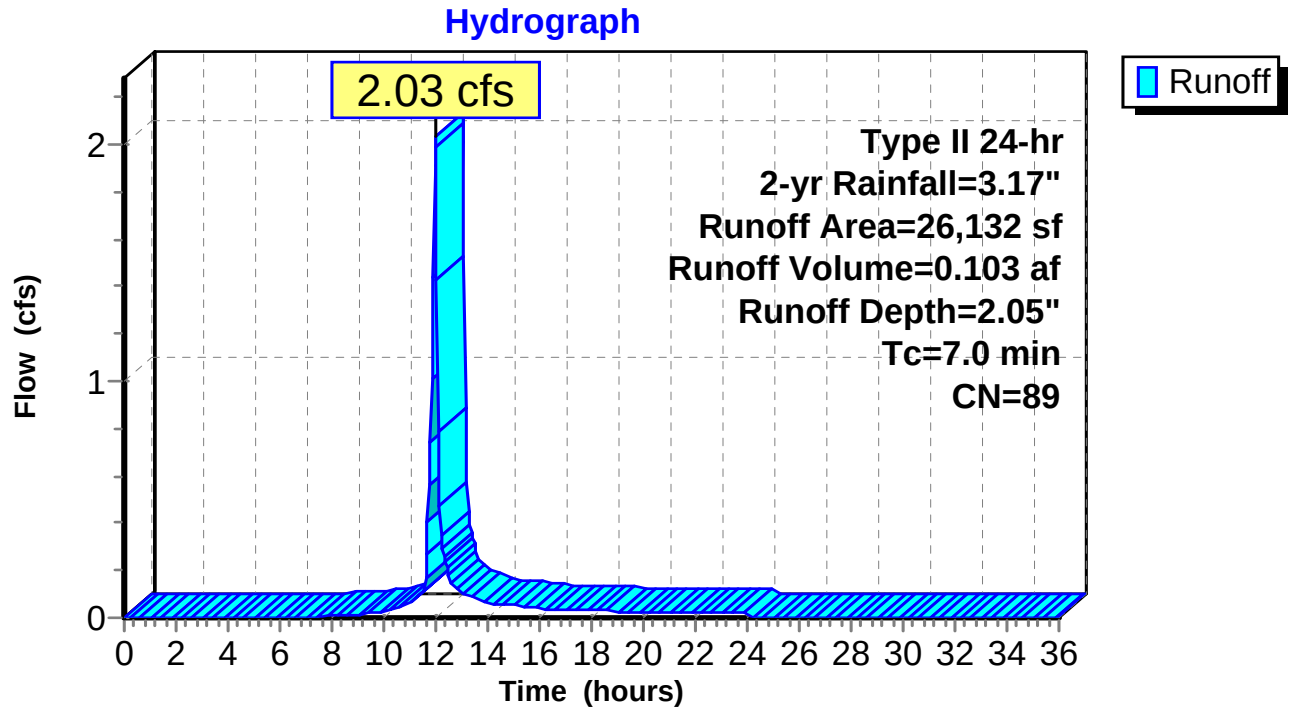
Runoff = 2.03 cfs @ 11.98 hrs, Volume= 0.103 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	13,720	98	
	12,412	80	>75% Grass cover, Good, HSG D
	26,132	89	Weighted Average
	12,412		47.50% Pervious Area
	13,720		52.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 4S: Subcatchment 4



Summary for Subcatchment 5S: Subcatchment 5

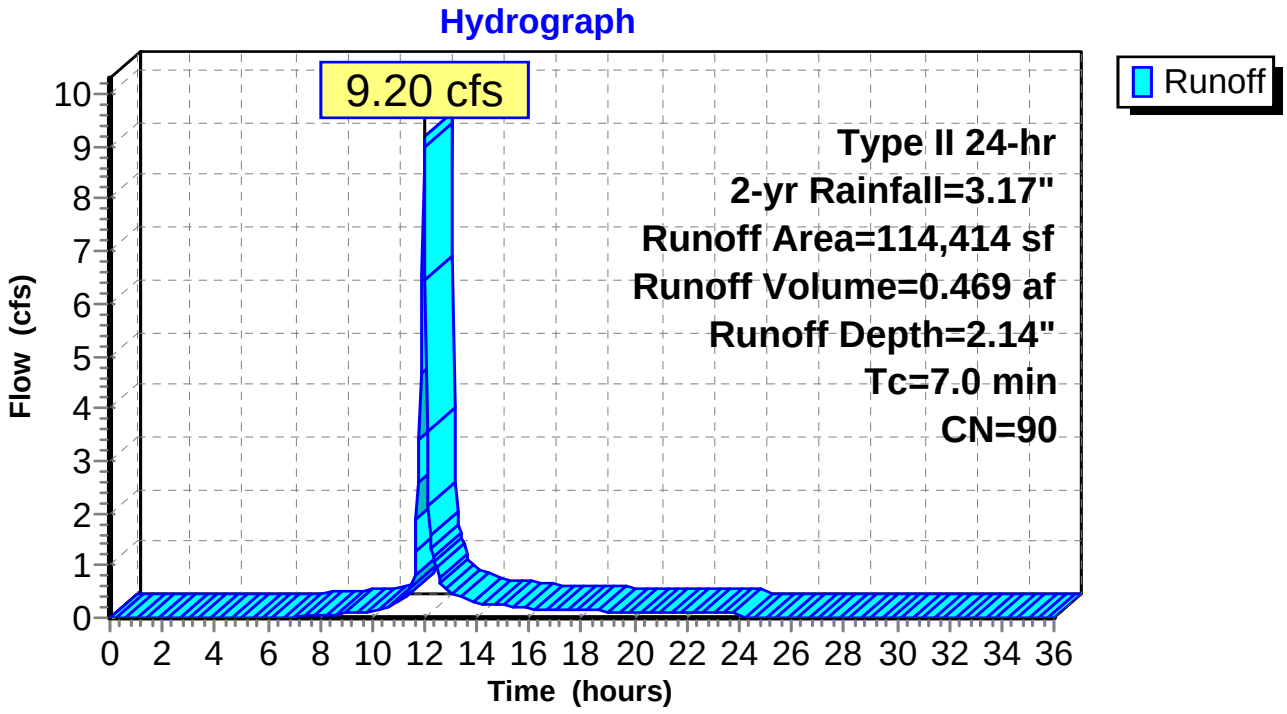
Runoff = 9.20 cfs @ 11.98 hrs, Volume= 0.469 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	65,087	98	
	49,327	80	>75% Grass cover, Good, HSG D
	114,414	90	Weighted Average
	49,327		43.11% Pervious Area
	65,087		56.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 5S: Subcatchment 5



Summary for Subcatchment 6S: Subcatchment 6

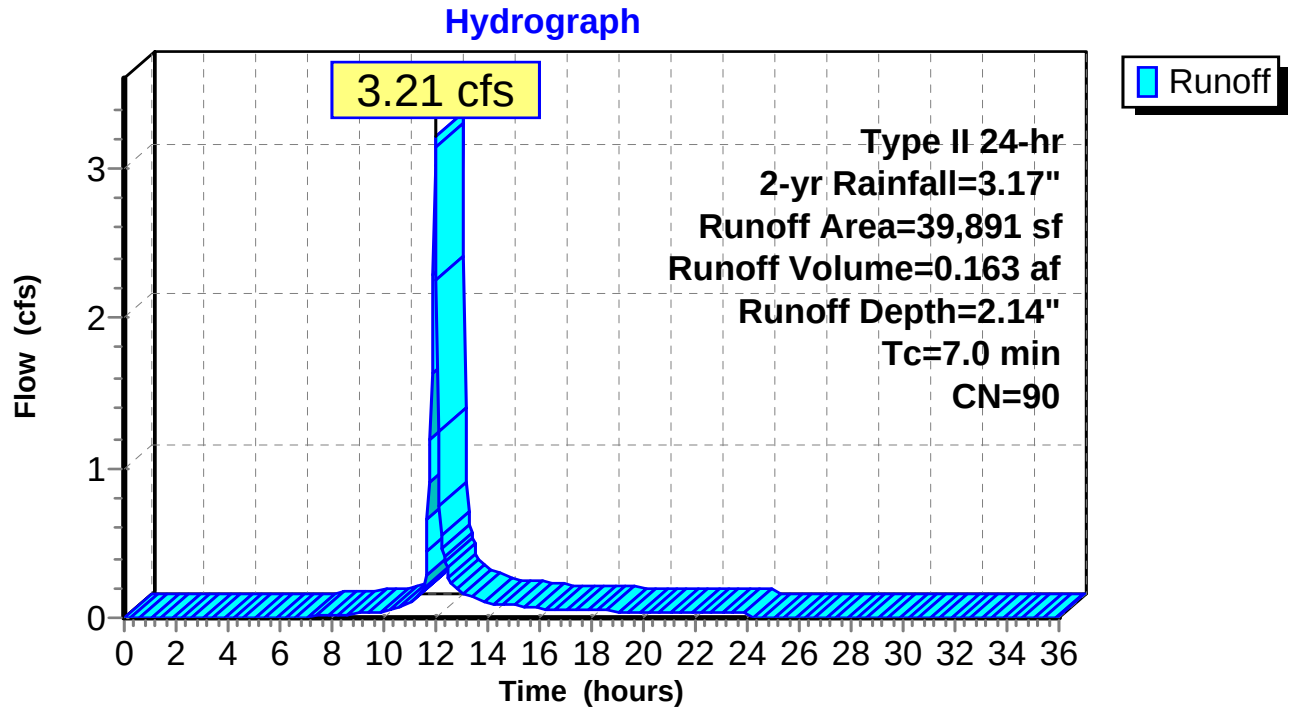
Runoff = 3.21 cfs @ 11.98 hrs, Volume= 0.163 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	21,718	98	
	18,173	80	>75% Grass cover, Good, HSG D
	39,891	90	Weighted Average
	18,173		45.56% Pervious Area
	21,718		54.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 6S: Subcatchment 6



Summary for Subcatchment 7S: Subcatchment 7

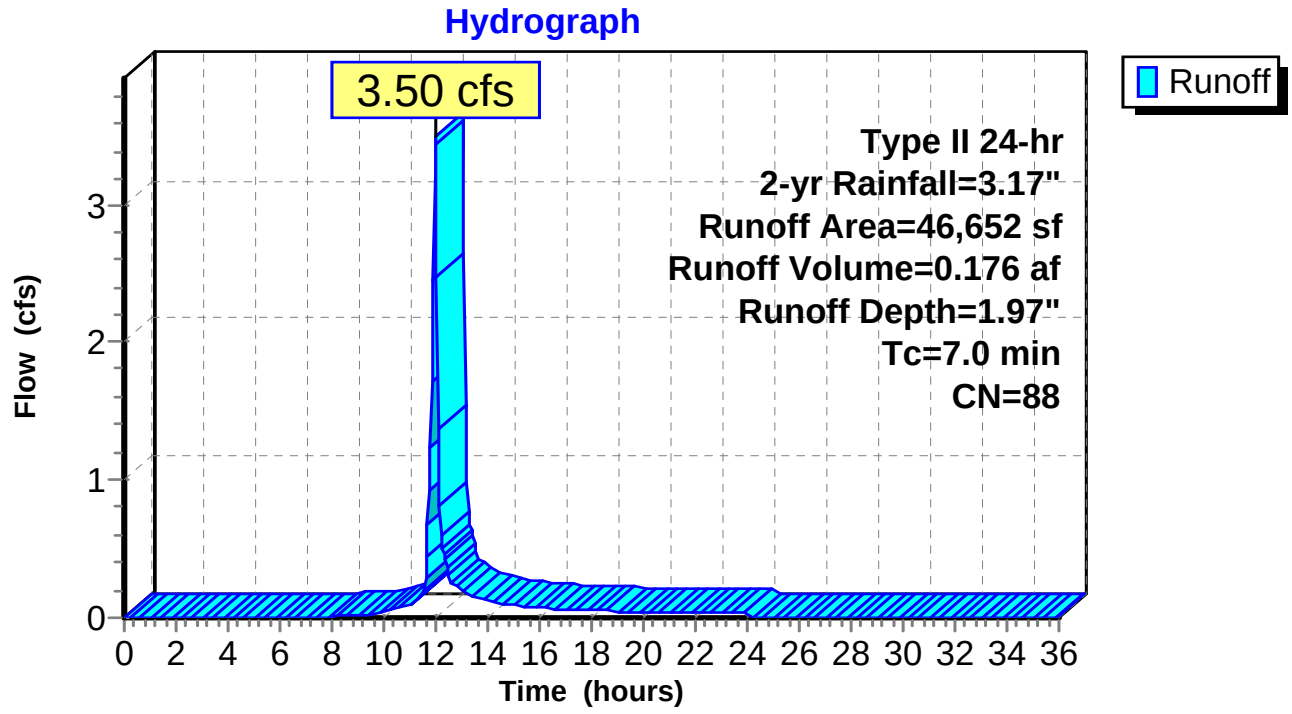
Runoff = 3.50 cfs @ 11.98 hrs, Volume= 0.176 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	19,759	98	
	26,893	80	>75% Grass cover, Good, HSG D
	46,652	88	Weighted Average
	26,893		57.65% Pervious Area
	19,759		42.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 7S: Subcatchment 7



Summary for Subcatchment 8S: Subcatchment 8

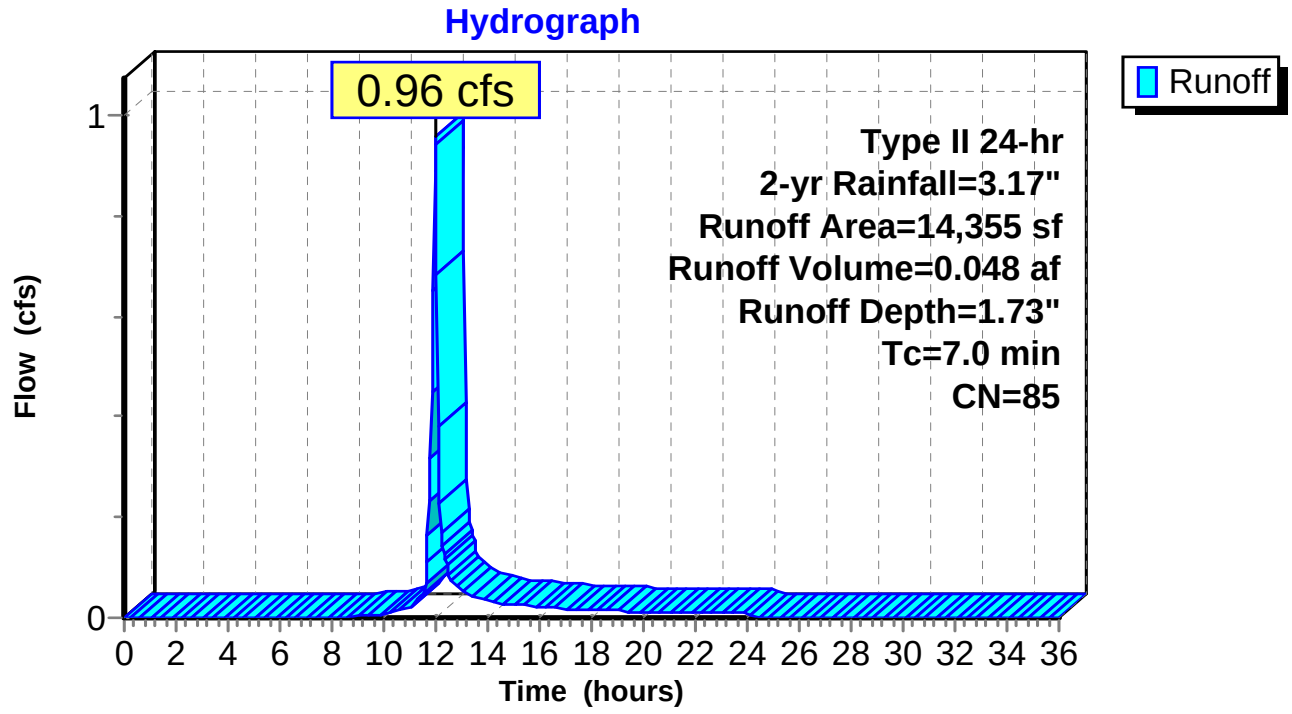
Runoff = 0.96 cfs @ 11.98 hrs, Volume= 0.048 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
	10,604	80	>75% Grass cover, Good, HSG D
*	3,751	98	
	14,355	85	Weighted Average
	10,604		73.87% Pervious Area
	3,751		26.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 8S: Subcatchment 8



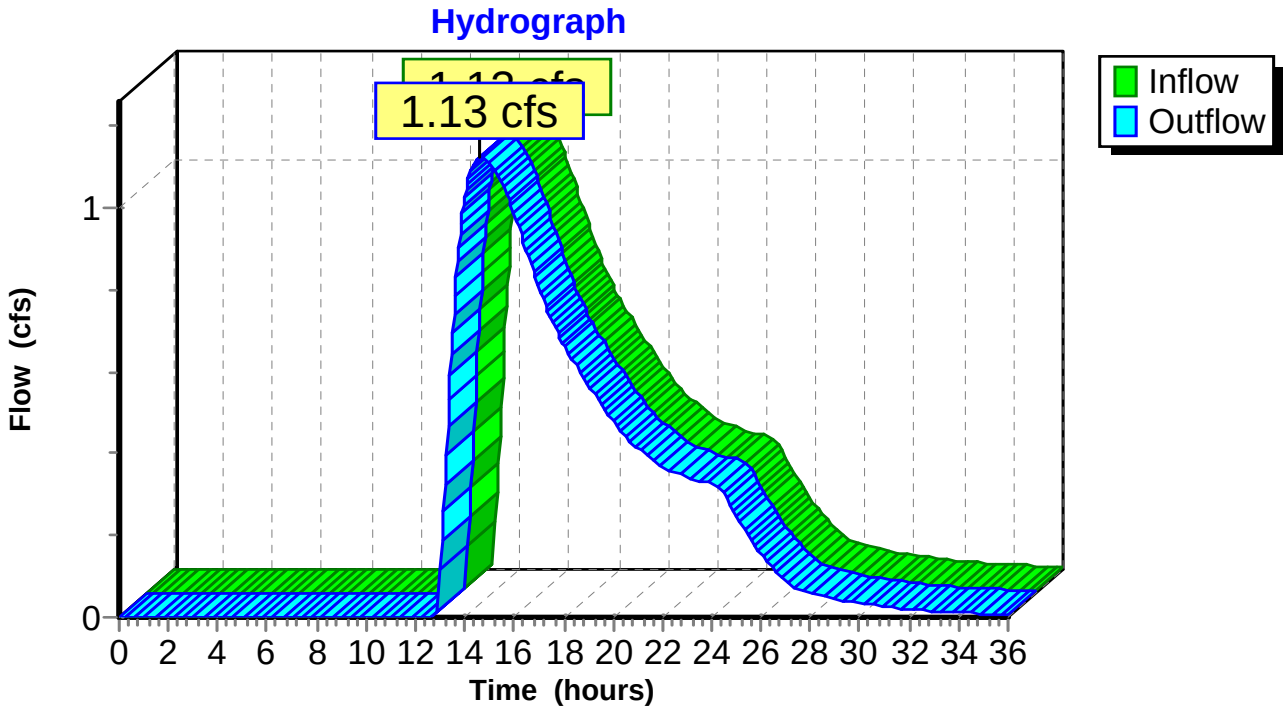
Summary for Reach 1SP: Study Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	1.13 cfs @	14.66 hrs, Volume=	0.659 af
Outflow	=	1.13 cfs @	14.66 hrs, Volume=	0.659 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 1SP: Study Point 1



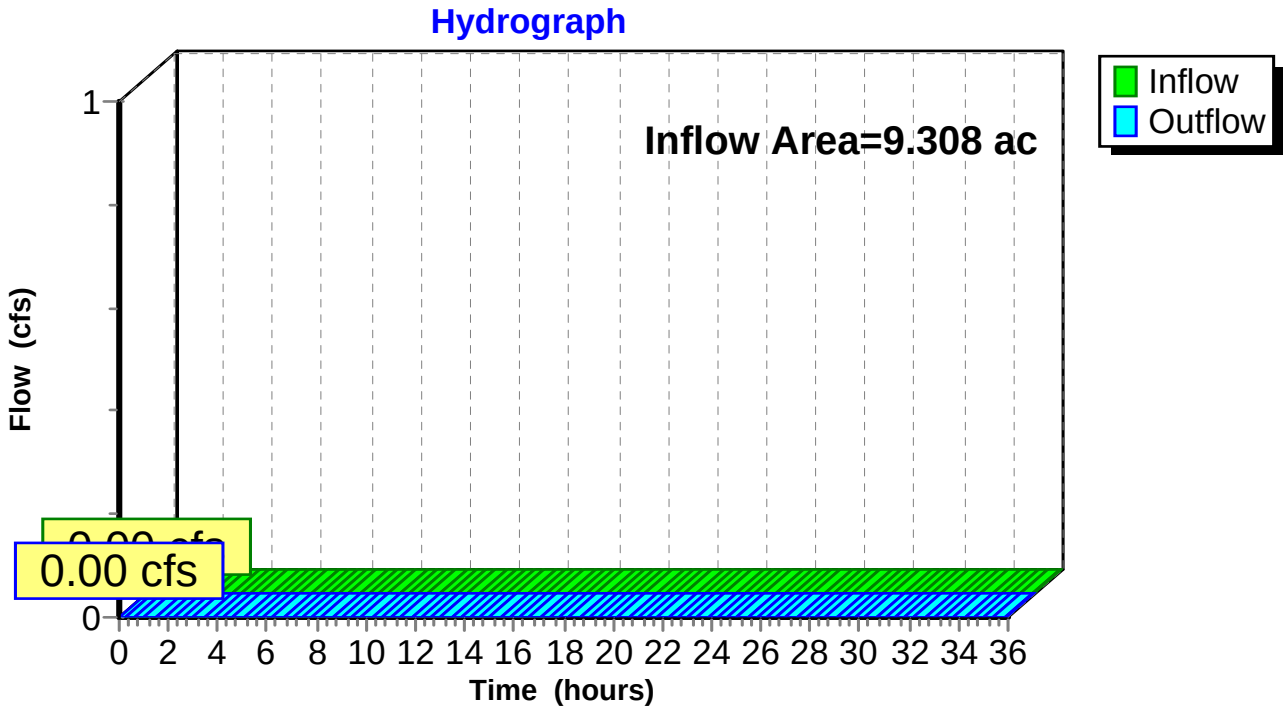
Summary for Reach 2SP: Study Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.308 ac, 47.83% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 2SP: Study Point 2



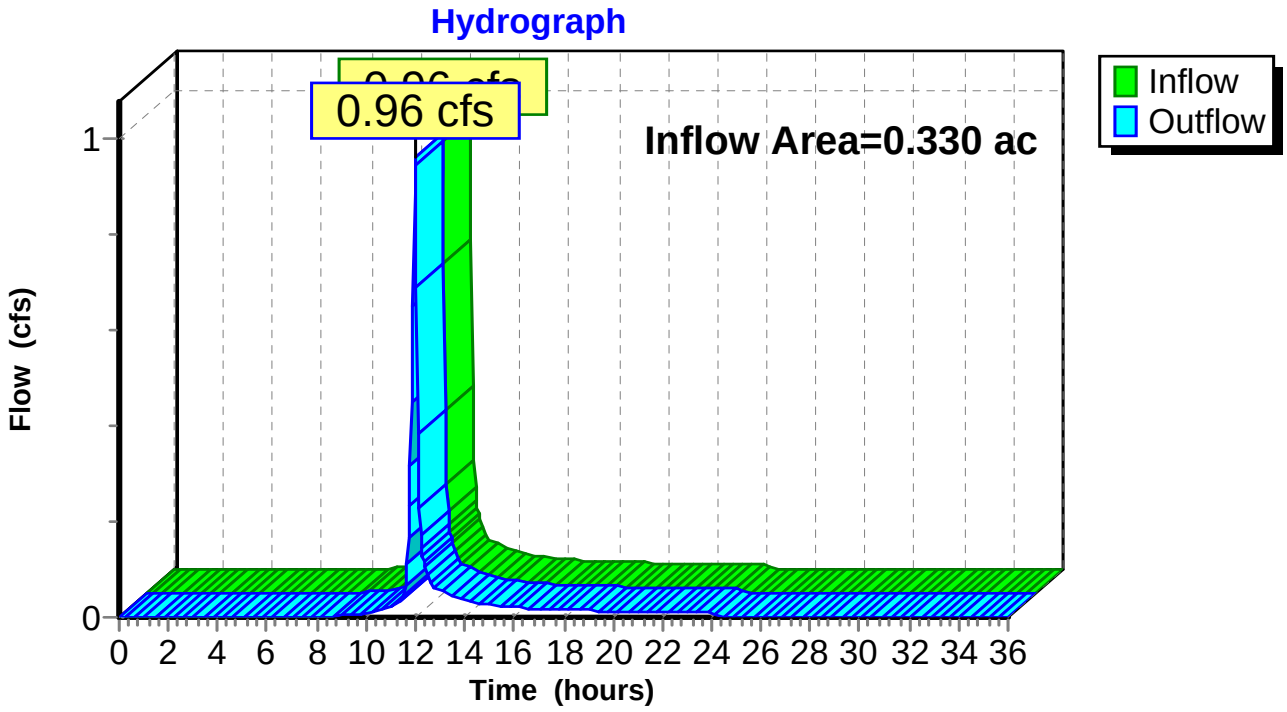
Summary for Reach 3SP: Study Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.330 ac, 26.13% Impervious, Inflow Depth = 1.73" for 2-yr event
Inflow = 0.96 cfs @ 11.98 hrs, Volume= 0.048 af
Outflow = 0.96 cfs @ 11.98 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 3SP: Study Point 3



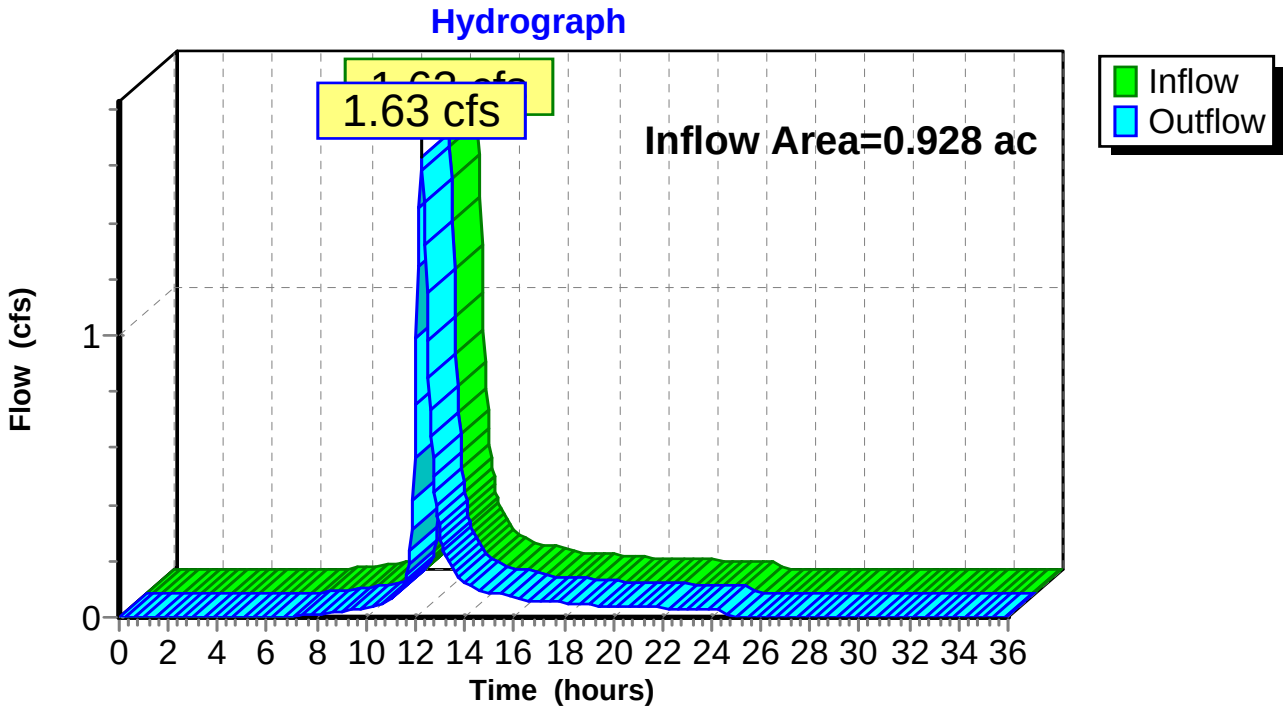
Summary for Reach 4SP: Study Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.928 ac, 47.45% Impervious, Inflow Depth = 2.05" for 2-yr event
Inflow = 1.63 cfs @ 12.25 hrs, Volume= 0.159 af
Outflow = 1.63 cfs @ 12.25 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 4SP: Study Point 4



Summary for Pond 1P: Wetland A

Inflow Area = 9.308 ac, 47.83% Impervious, Inflow Depth = 1.70" for 2-yr event
Inflow = 9.15 cfs @ 12.20 hrs, Volume= 1.315 af
Outflow = 1.13 cfs @ 14.66 hrs, Volume= 0.659 af, Atten= 88%, Lag= 147.5 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 1.13 cfs @ 14.66 hrs, Volume= 0.659 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Starting Elev= 63.50' Surf.Area= 14,739 sf Storage= 17,429 cf
Peak Elev= 65.34' @ 14.66 hrs Surf.Area= 22,633 sf Storage= 51,716 cf (34,287 cf above start)

Plug-Flow detention time= 644.1 min calculated for 0.259 af (20% of inflow)
Center-of-Mass det. time= 236.4 min (1,106.2 - 869.8)

Volume	Invert	Avail.Storage	Storage Description
#1	62.00'	209,276 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

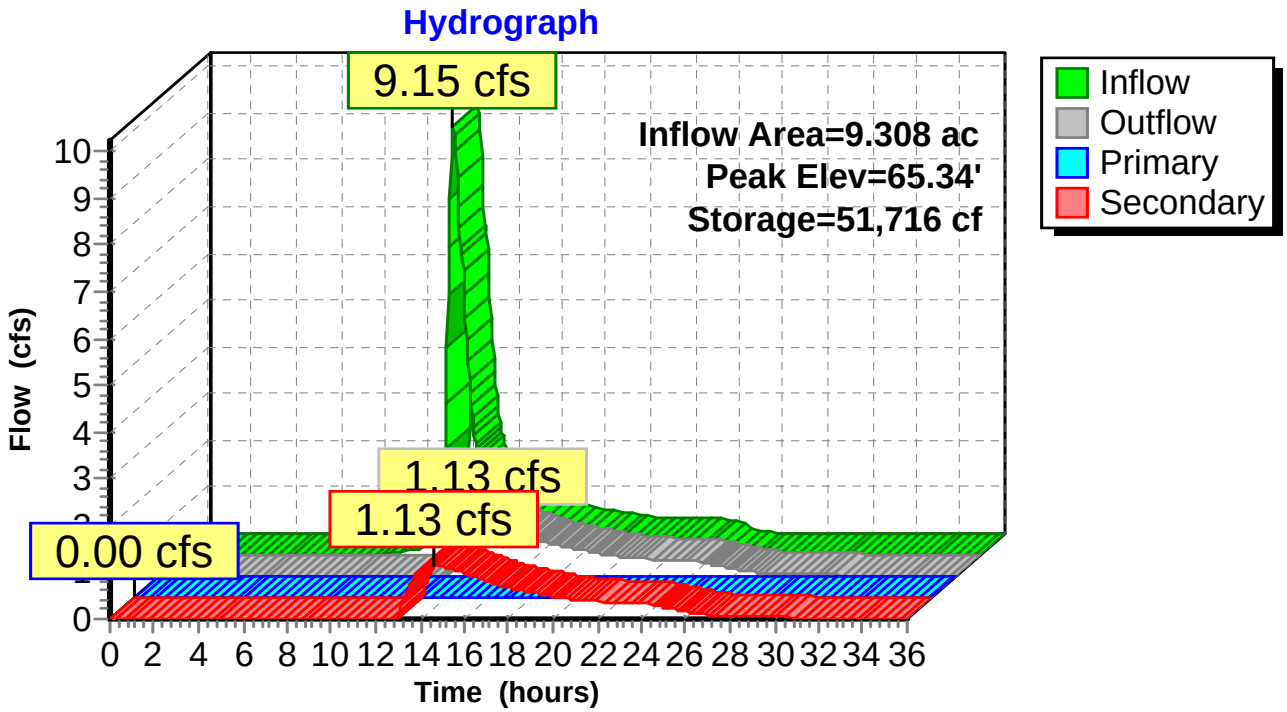
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.00	8,500	0	0
65.00	20,977	44,216	44,216
70.00	45,047	165,060	209,276

Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**3.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Secondary	62.86'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.86' / 58.69' S= 0.0869 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#3	Device 2	65.08'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=63.50' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=1.12 cfs @ 14.66 hrs HW=65.34' (Free Discharge)
└**2=Culvert** (Passes 1.12 cfs of 4.21 cfs potential flow)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 1.12 cfs @ 1.73 fps)

Pond 1P: Wetland A



Summary for Pond 2P: Wetland B

Inflow Area = 2.082 ac, 66.45% Impervious, Inflow Depth = 2.32" for 2-yr event
Inflow = 3.84 cfs @ 12.28 hrs, Volume= 0.403 af
Outflow = 1.59 cfs @ 12.70 hrs, Volume= 0.208 af, Atten= 58%, Lag= 25.5 min
Primary = 1.59 cfs @ 12.70 hrs, Volume= 0.208 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.11' @ 12.70 hrs Surf.Area= 7,808 sf Storage= 9,275 cf

Plug-Flow detention time= 236.6 min calculated for 0.208 af (52% of inflow)
Center-of-Mass det. time= 123.2 min (943.8 - 820.6)

Volume	Invert	Avail.Storage	Storage Description
#1	67.00'	21,636 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

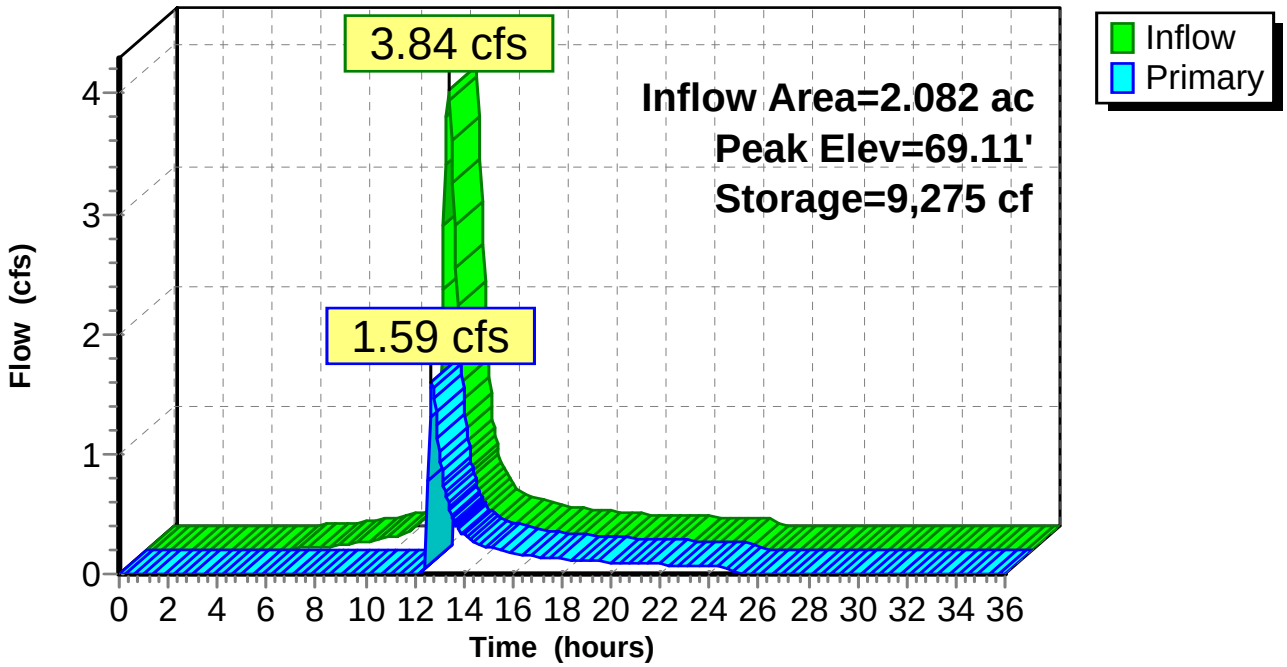
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.00	2,200	0	0
68.00	4,250	3,225	3,225
69.00	6,286	5,268	8,493
70.00	20,000	13,143	21,636

Device	Routing	Invert	Outlet Devices
#1	Primary	69.00'	**18.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=1.58 cfs @ 12.70 hrs HW=69.11' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.58 cfs @ 0.79 fps)

Pond 2P: Wetland B

Hydrograph



Summary for Pond 3P: Surface Detention

[79] Warning: Submerged Pond 6P Primary device # 1 INLET by 0.42'
[79] Warning: Submerged Pond 7P Primary device # 1 OUTLET by 2.22'

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 1.96" for 2-yr event
Inflow = 13.88 cfs @ 12.00 hrs, Volume= 0.676 af
Outflow = 6.11 cfs @ 12.12 hrs, Volume= 0.674 af, Atten= 56%, Lag= 7.6 min
Primary = 6.11 cfs @ 12.12 hrs, Volume= 0.674 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 71.44' @ 12.12 hrs Surf.Area= 5,020 sf Storage= 7,457 cf

Plug-Flow detention time= 18.6 min calculated for 0.674 af (100% of inflow)
Center-of-Mass det. time= 17.8 min (843.4 - 825.7)

Volume	Invert	Avail.Storage	Storage Description
#1	69.00'	21,926 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

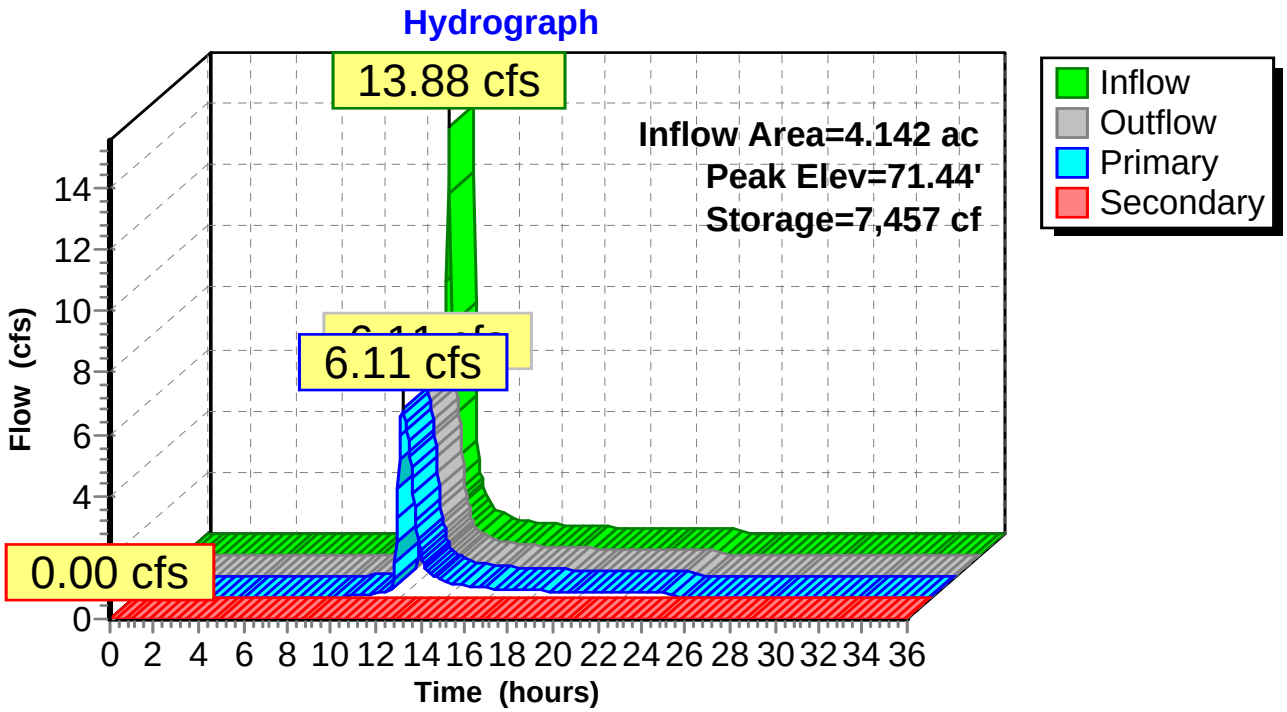
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.00	400	0	0
70.00	2,991	1,696	1,696
72.00	5,812	8,803	10,499
73.50	9,425	11,428	21,926

Device	Routing	Invert	Outlet Devices
#1	Primary	69.10'	**15.0" Round Culvert** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 69.10' / 68.75' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	72.50'	**35.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=6.08 cfs @ 12.12 hrs HW=71.42' (Free Discharge)
1=Culvert (Inlet Controls 6.08 cfs @ 4.95 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=69.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3P: Surface Detention



Summary for Pond 4P: Surface Detention

Inflow Area = 1.071 ac, 42.35% Impervious, Inflow Depth = 1.97" for 2-yr event
Inflow = 3.50 cfs @ 11.98 hrs, Volume= 0.176 af
Outflow = 0.74 cfs @ 12.17 hrs, Volume= 0.167 af, Atten= 79%, Lag= 11.4 min
Primary = 0.37 cfs @ 12.17 hrs, Volume= 0.155 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.37 cfs @ 12.17 hrs, Volume= 0.013 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.90' @ 12.17 hrs Surf.Area= 2,247 sf Storage= 3,402 cf

Plug-Flow detention time= 117.9 min calculated for 0.167 af (95% of inflow)
Center-of-Mass det. time= 91.2 min (904.5 - 813.3)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	10,990 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
64.00	13	0	0
67.00	71	126	126
68.00	928	500	626
69.00	1,378	1,153	1,779
70.00	2,348	1,863	3,642
72.00	5,000	7,348	10,990

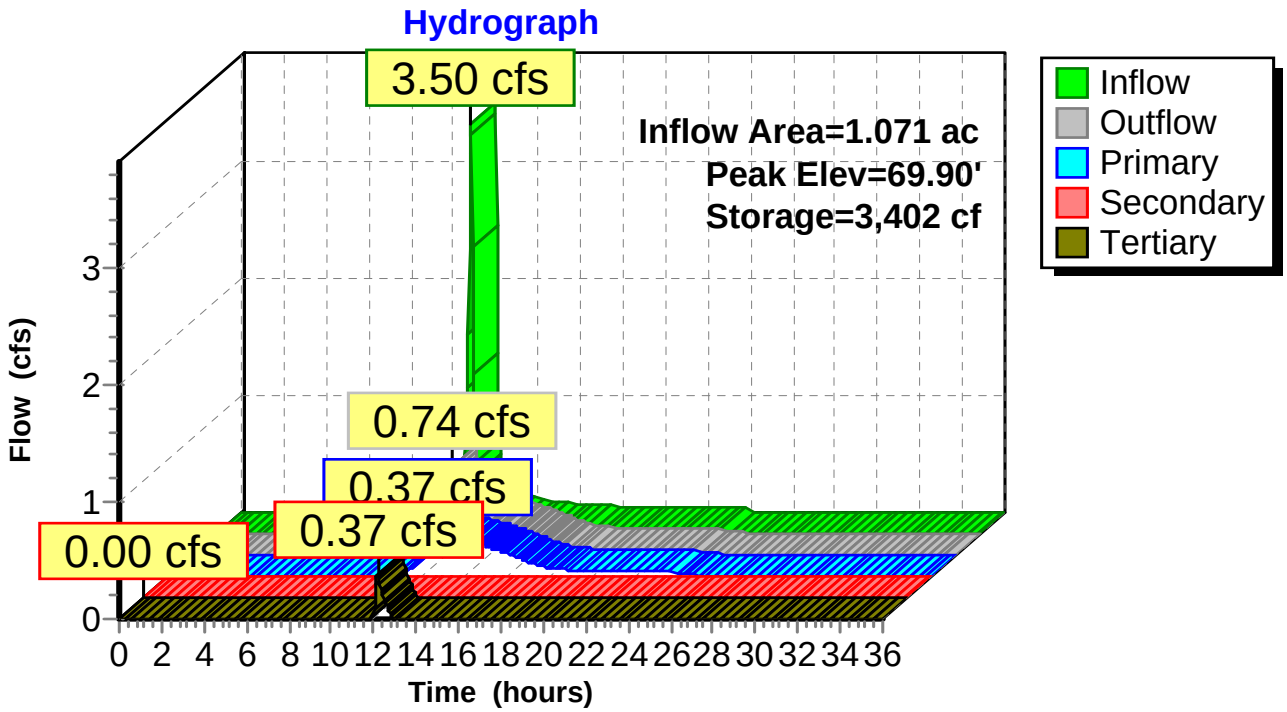
Device	Routing	Invert	Outlet Devices
#1	Primary	67.66'	**3.5" Round Culvert** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.66' / 67.65' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 0.07 sf
#2	Tertiary	69.66'	**1.2' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Secondary	70.50'	**45.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.37 cfs @ 12.17 hrs HW=69.89' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.37 cfs @ 5.49 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=64.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.36 cfs @ 12.17 hrs HW=69.89' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.36 cfs @ 1.30 fps)

Pond 4P: Surface Detention



Summary for Pond 5P: OCS-4P

[57] Hint: Peaked at 67.98' (Flood elevation advised)
[79] Warning: Submerged Pond 4P Primary device # 1 INLET by 0.31'

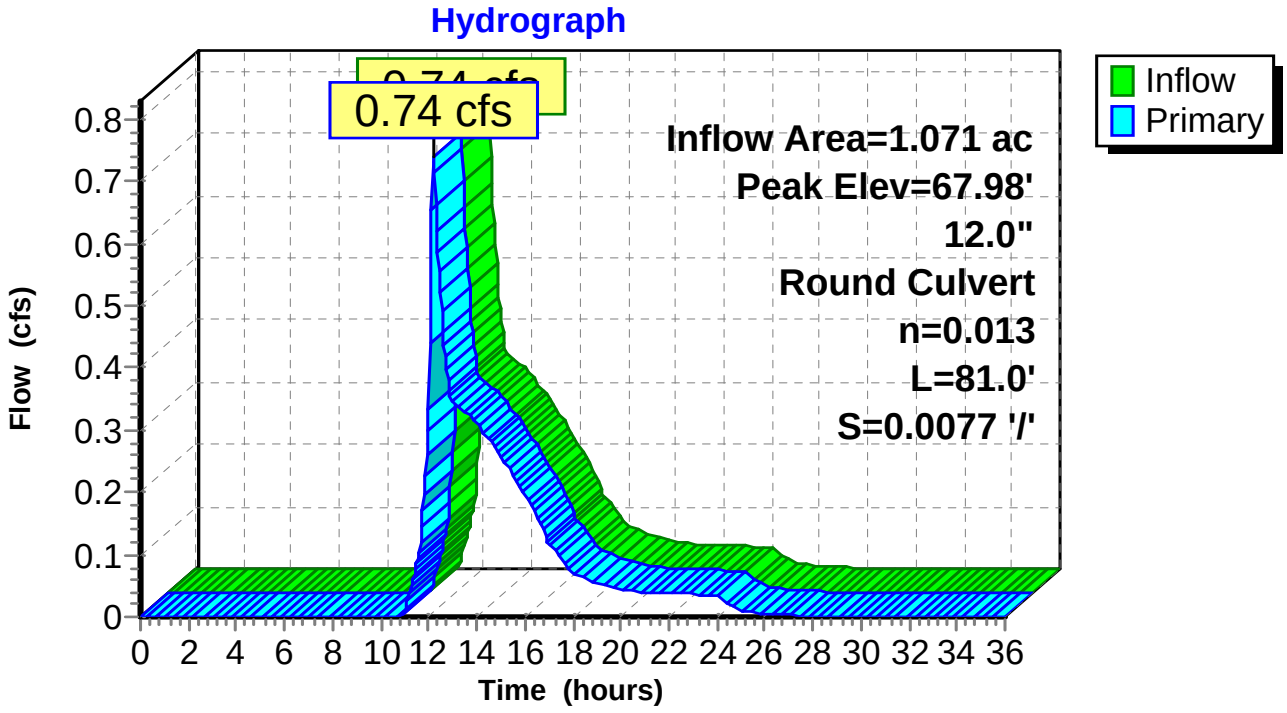
Inflow Area = 1.071 ac, 42.35% Impervious, Inflow Depth > 1.88" for 2-yr event
Inflow = 0.74 cfs @ 12.17 hrs, Volume= 0.167 af
Outflow = 0.74 cfs @ 12.17 hrs, Volume= 0.167 af, Atten= 0%, Lag= 0.0 min
Primary = 0.74 cfs @ 12.17 hrs, Volume= 0.167 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.98' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	67.48'	**12.0" Round Culvert** L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.48' / 66.86' S= 0.0077 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.73 cfs @ 12.17 hrs HW=67.97' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.73 cfs @ 1.89 fps)

Pond 5P: OCS-4P



Summary for Pond 6P: Atrium Surface Detention

Inflow Area = 2.627 ac, 56.89% Impervious, Inflow Depth = 2.14" for 2-yr event
Inflow = 9.20 cfs @ 11.98 hrs, Volume= 0.469 af
Outflow = 8.80 cfs @ 12.00 hrs, Volume= 0.412 af, Atten= 4%, Lag= 1.3 min
Primary = 8.80 cfs @ 12.00 hrs, Volume= 0.412 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 73.88' @ 12.00 hrs Surf.Area= 3,405 sf Storage= 3,640 cf

Plug-Flow detention time= 89.4 min calculated for 0.412 af (88% of inflow)
Center-of-Mass det. time= 30.1 min (835.2 - 805.1)

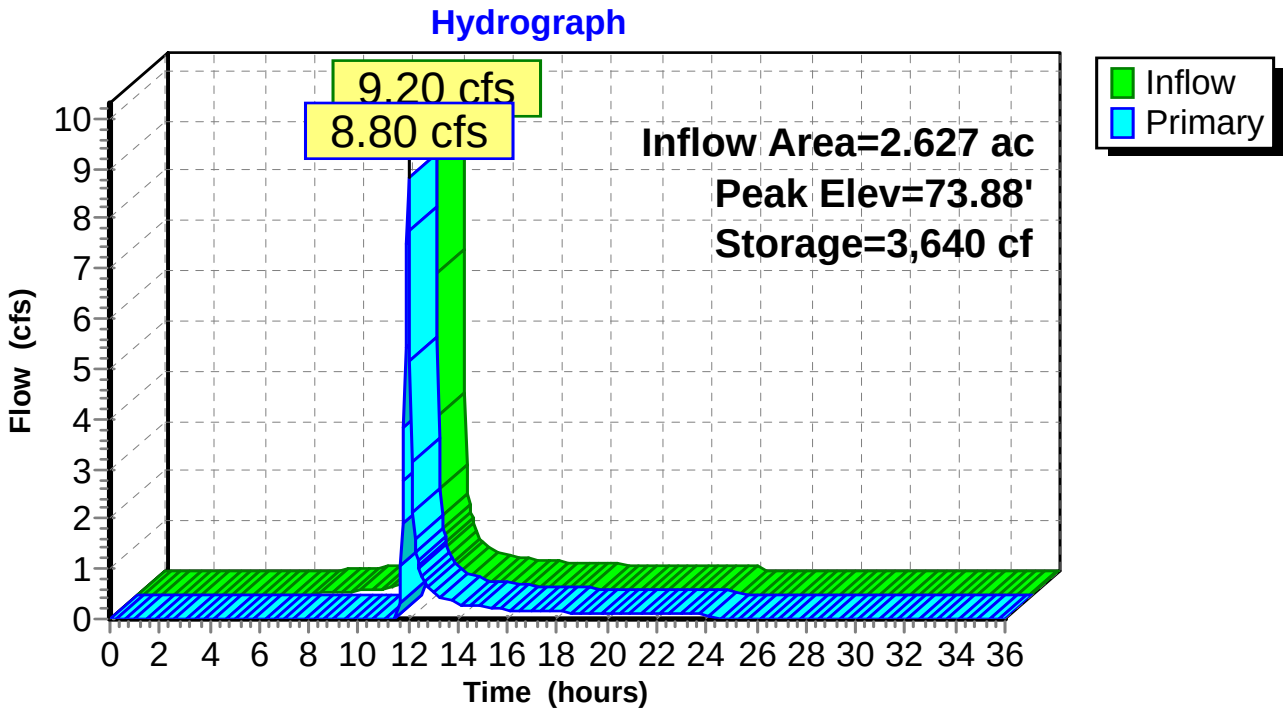
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	5,026 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	55	0	0
72.00	327	382	382
73.00	1,694	1,011	1,393
74.25	4,120	3,634	5,026

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.1" Round Culvert** L= 220.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.00' / 69.20' S= 0.0082 '/' Cc= 0.900 n= 0.013, Flow Area= 0.00 sf
#2	Primary	73.50'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=8.73 cfs @ 12.00 hrs HW=73.88' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.00 cfs @ 0.27 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 8.73 cfs @ 1.53 fps)

Pond 6P: Atrium Surface Detention



Summary for Pond 7P: Riprap Surface Detention

Inflow Area = 0.600 ac, 52.50% Impervious, Inflow Depth = 2.05" for 2-yr event
Inflow = 2.03 cfs @ 11.98 hrs, Volume= 0.103 af
Outflow = 1.93 cfs @ 12.00 hrs, Volume= 0.101 af, Atten= 5%, Lag= 1.2 min
Primary = 1.93 cfs @ 12.00 hrs, Volume= 0.101 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.74' @ 12.00 hrs Surf.Area= 277 sf Storage= 285 cf

Plug-Flow detention time= 22.6 min calculated for 0.101 af (98% of inflow)
Center-of-Mass det. time= 10.5 min (819.8 - 809.3)

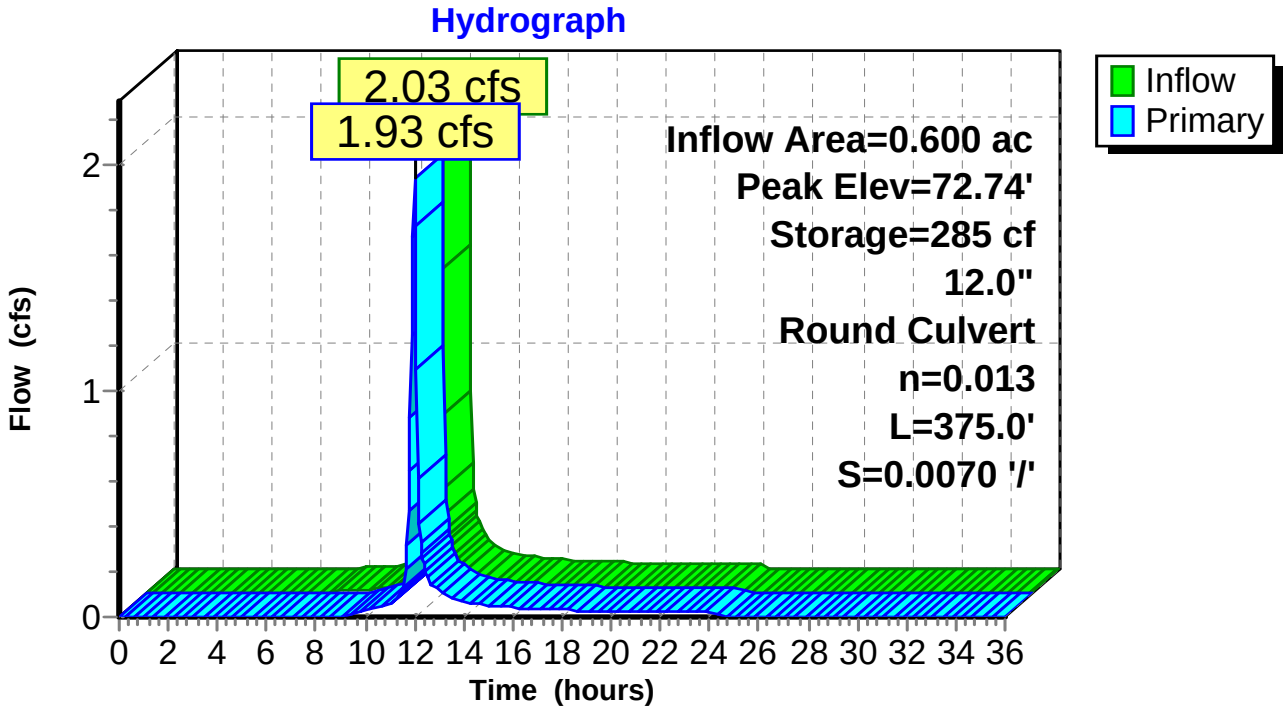
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	2,180 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	50	0	0
73.00	310	360	360
74.00	846	578	938
75.00	1,637	1,242	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**12.0" Round Culvert** L= 375.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 69.20' S= 0.0070 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.92 cfs @ 12.00 hrs HW=72.74' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 1.92 cfs @ 2.56 fps)

Pond 7P: Riprap Surface Detention



Summary for Pond 8P: OCS-DMH7

[57] Hint: Peaked at 67.01' (Flood elevation advised)

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 1.95" for 2-yr event
Inflow = 6.11 cfs @ 12.12 hrs, Volume= 0.674 af
Outflow = 6.11 cfs @ 12.12 hrs, Volume= 0.674 af, Atten= 0%, Lag= 0.0 min
Primary = 0.34 cfs @ 12.12 hrs, Volume= 0.011 af
Secondary = 5.77 cfs @ 12.12 hrs, Volume= 0.664 af

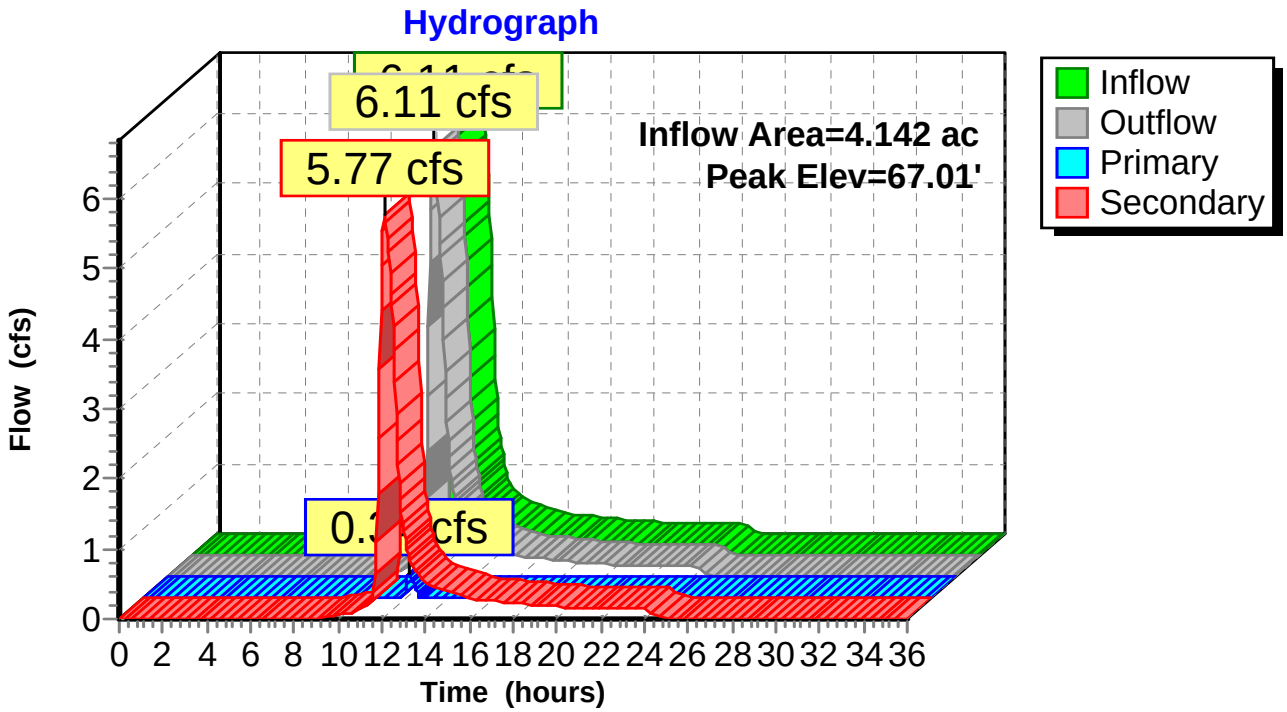
Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.01' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.60' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	65.70'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=0.33 cfs @ 12.12 hrs HW=67.01' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.33 cfs @ 1.65 fps)

Secondary OutFlow Max=5.74 cfs @ 12.12 hrs HW=67.01' (Free Discharge)
↑**2=Culvert** (Barrel Controls 5.74 cfs @ 3.75 fps)

Pond 8P: OCS-DMH7



Summary for Pond 9P: UG Detention

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 0.02" for 2-yr event
Inflow = 0.22 cfs @ 12.13 hrs, Volume= 0.008 af
Outflow = 0.06 cfs @ 12.55 hrs, Volume= 0.008 af, Atten= 71%, Lag= 25.1 min
Primary = 0.06 cfs @ 12.55 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 65.90' @ 12.55 hrs Surf.Area= 1,536 sf Storage= 286 cf

Plug-Flow detention time= 141.6 min calculated for 0.008 af (97% of inflow)
Center-of-Mass det. time= 142.1 min (878.1 - 736.0)

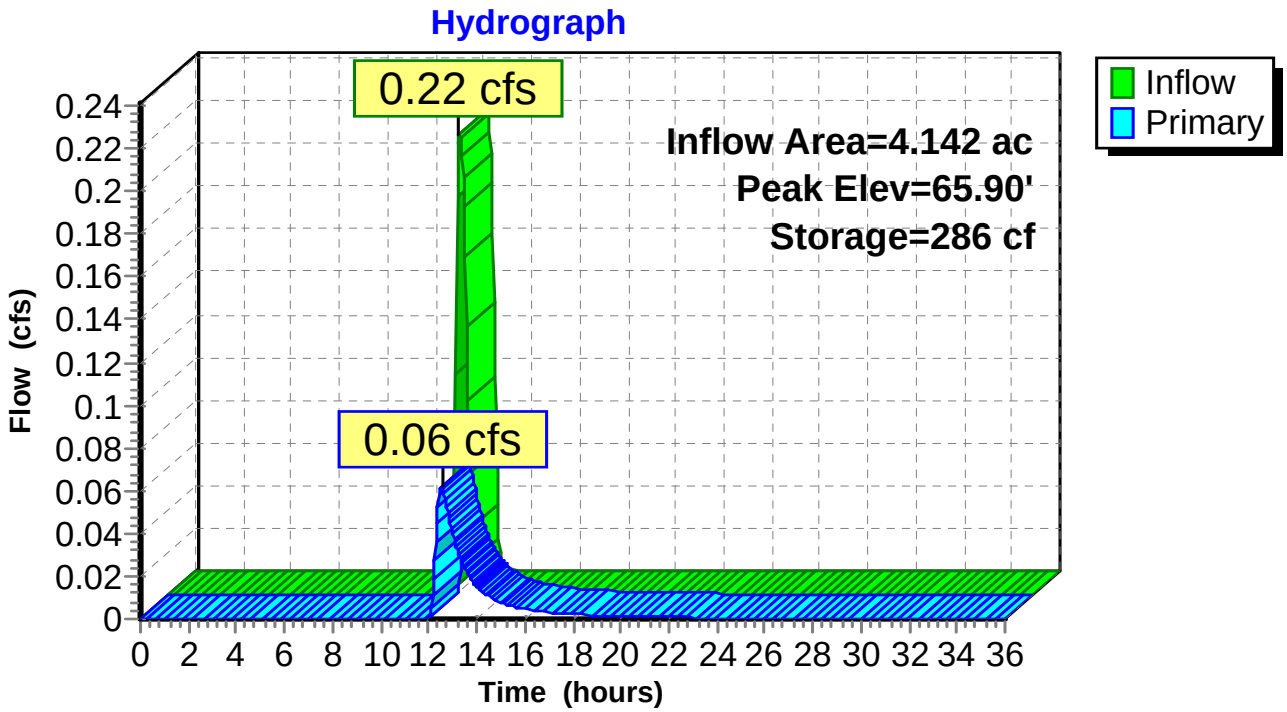
Volume	Invert	Avail.Storage	Storage Description
#1	65.70'	2,488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 2,619 cf Overall x 95.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
65.70	1,536	0	0
67.40	1,536	2,611	2,611
67.41	5	8	2,619

Device	Routing	Invert	Outlet Devices
#1	Primary	65.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.60' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Primary	67.00'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.90' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf

Primary OutFlow Max=0.06 cfs @ 12.55 hrs HW=65.90' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.06 cfs @ 1.67 fps)
└─**2=Culvert** (Controls 0.00 cfs)

Pond 9P: UG Detention



Summary for Pond 10P: Isolator Row x5

[81] Warning: Exceeded Pond 8P by 0.90' @ 35.95 hrs

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 0.03" for 2-yr event
Inflow = 0.34 cfs @ 12.12 hrs, Volume= 0.011 af
Outflow = 0.34 cfs @ 12.13 hrs, Volume= 0.011 af, Atten= 1%, Lag= 0.2 min
Primary = 0.22 cfs @ 12.13 hrs, Volume= 0.008 af
Secondary = 0.12 cfs @ 12.13 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.19' @ 12.13 hrs Surf.Area= 0.002 ac Storage= 0.001 af

Plug-Flow detention time= 3.2 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 3.4 min (735.0 - 731.6)

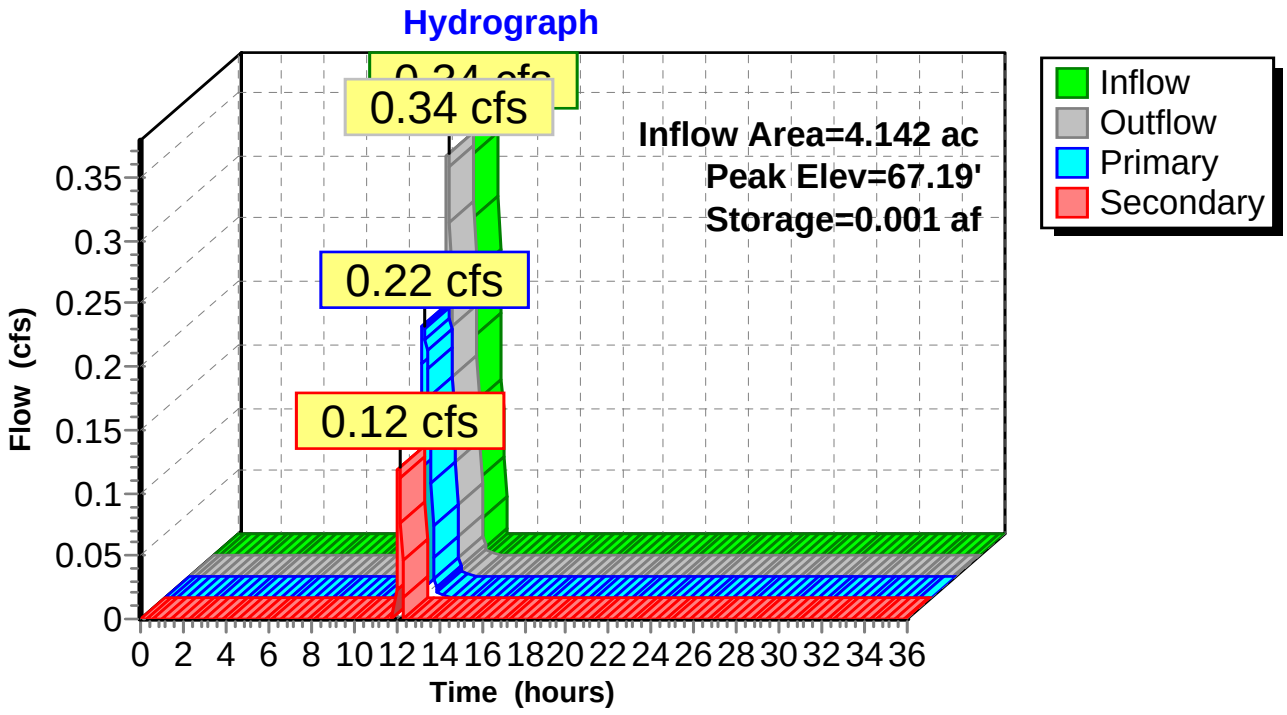
Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	0.002 af	**ADS_StormTech RC-310** x 5 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 1 rows

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.55' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Secondary	67.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.55' S= 0.0090 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.22 cfs @ 12.13 hrs HW=67.19' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.22 cfs @ 2.46 fps)

Secondary OutFlow Max=0.12 cfs @ 12.13 hrs HW=67.19' (Free Discharge)
↑**2=Culvert** (Inlet Controls 0.12 cfs @ 1.16 fps)

Pond 10P: Isolator Row x5



Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1 Runoff Area=87,665 sf 15.27% Impervious Runoff Depth=2.91"
Flow Length=177' Slope=0.0100 '/' Tc=29.9 min CN=83 Runoff=5.08 cfs 0.489 af

Subcatchment 2S: Subcatchment 2 Runoff Area=90,682 sf 66.45% Impervious Runoff Depth=3.81"
Flow Length=178' Slope=0.0075 '/' Tc=33.7 min CN=92 Runoff=6.18 cfs 0.660 af

Subcatchment 3S: Subcatchment 3 Runoff Area=40,444 sf 47.45% Impervious Runoff Depth=3.49"
Flow Length=185' Slope=0.0200 '/' Tc=30.6 min CN=89 Runoff=2.73 cfs 0.270 af

Subcatchment 4S: Subcatchment 4 Runoff Area=26,132 sf 52.50% Impervious Runoff Depth=3.49"
Tc=7.0 min CN=89 Runoff=3.36 cfs 0.175 af

Subcatchment 5S: Subcatchment 5 Runoff Area=114,414 sf 56.89% Impervious Runoff Depth=3.60"
Tc=7.0 min CN=90 Runoff=15.01 cfs 0.787 af

Subcatchment 6S: Subcatchment 6 Runoff Area=39,891 sf 54.44% Impervious Runoff Depth=3.60"
Tc=7.0 min CN=90 Runoff=5.23 cfs 0.275 af

Subcatchment 7S: Subcatchment 7 Runoff Area=46,652 sf 42.35% Impervious Runoff Depth=3.39"
Tc=7.0 min CN=88 Runoff=5.87 cfs 0.303 af

Subcatchment 8S: Subcatchment 8 Runoff Area=14,355 sf 26.13% Impervious Runoff Depth=3.10"
Tc=7.0 min CN=85 Runoff=1.68 cfs 0.085 af

Reach 1SP: Study Point 1 Inflow=4.87 cfs 1.704 af
Outflow=4.87 cfs 1.704 af

Reach 2SP: Study Point 2 Inflow=1.03 cfs 0.064 af
Outflow=1.03 cfs 0.064 af

Reach 3SP: Study Point 3 Inflow=1.68 cfs 0.085 af
Outflow=1.68 cfs 0.085 af

Reach 4SP: Study Point 4 Inflow=2.73 cfs 0.270 af
Outflow=2.73 cfs 0.270 af

Pond 1P: Wetland A Peak Elev=66.02' Storage=68,176 cf Inflow=18.10 cfs 2.425 af
Primary=1.03 cfs 0.064 af Secondary=4.87 cfs 1.704 af Outflow=5.90 cfs 1.768 af

Pond 2P: Wetland B Peak Elev=69.25' Storage=10,461 cf Inflow=6.18 cfs 0.660 af
Outflow=5.34 cfs 0.465 af

Pond 3P: Surface Detention Peak Elev=72.56' Storage=14,137 cf Inflow=22.59 cfs 1.178 af
Primary=7.86 cfs 1.169 af Secondary=1.19 cfs 0.008 af Outflow=9.05 cfs 1.176 af

Pond 4P: Surface Detention Peak Elev=70.46' Storage=4,860 cf Inflow=5.87 cfs 0.303 af
Primary=0.41 cfs 0.212 af Secondary=0.00 cfs 0.000 af Tertiary=2.45 cfs 0.083 af Outflow=2.86 cfs 0.295 af

Pond 5P: OCS-4P Peak Elev=68.90' Inflow=2.86 cfs 0.295 af
12.0" Round Culvert n=0.013 L=81.0' S=0.0077 '/' Outflow=2.86 cfs 0.295 af

Pond 6P: Atrium Surface Detention Peak Elev=74.02' Storage=4,114 cf Inflow=15.01 cfs 0.787 af
Outflow=14.54 cfs 0.730 af

Pond 7P: Riprap Surface Detention Peak Elev=73.30' Storage=479 cf Inflow=3.36 cfs 0.175 af
12.0" Round Culvert n=0.013 L=375.0' S=0.0070 '/' Outflow=2.95 cfs 0.173 af

Pond 8P: OCS-DMH7 Peak Elev=67.19' Inflow=7.86 cfs 1.169 af
Primary=0.69 cfs 0.037 af Secondary=7.16 cfs 1.132 af Outflow=7.86 cfs 1.169 af

Pond 9P: UG Detention Peak Elev=66.04' Storage=502 cf Inflow=0.26 cfs 0.019 af
Outflow=0.14 cfs 0.019 af

Pond 10P: Isolator Row x5 Peak Elev=67.37' Storage=0.001 af Inflow=0.69 cfs 0.037 af
Primary=0.26 cfs 0.019 af Secondary=0.44 cfs 0.018 af Outflow=0.69 cfs 0.037 af

Total Runoff Area = 10.566 ac Runoff Volume = 3.044 af Average Runoff Depth = 3.46"
52.88% Pervious = 5.587 ac 47.12% Impervious = 4.979 ac

Summary for Subcatchment 1S: Subcatchment 1

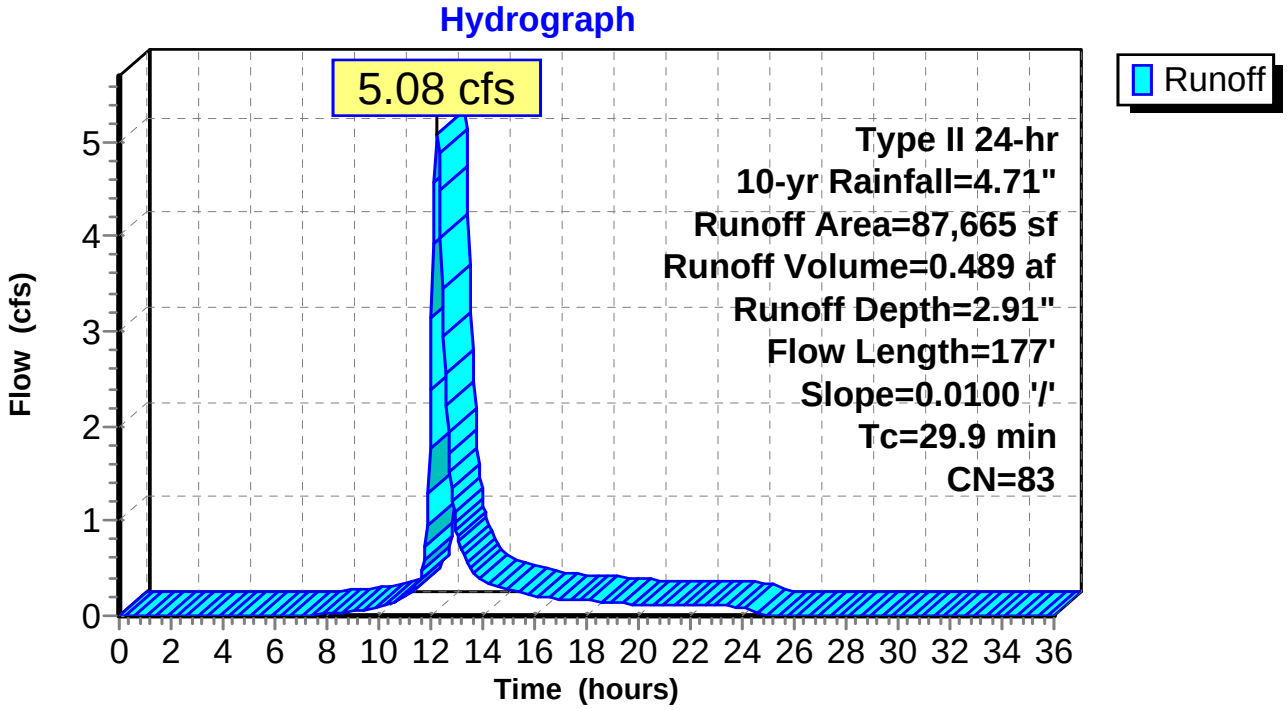
Runoff = 5.08 cfs @ 12.24 hrs, Volume= 0.489 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	13,390	98	
	74,275	80	>75% Grass cover, Good, HSG D
	87,665	83	Weighted Average
	74,275		84.73% Pervious Area
	13,390		15.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	177	0.0100	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 1S: Subcatchment 1



Summary for Subcatchment 2S: Subcatchment 2

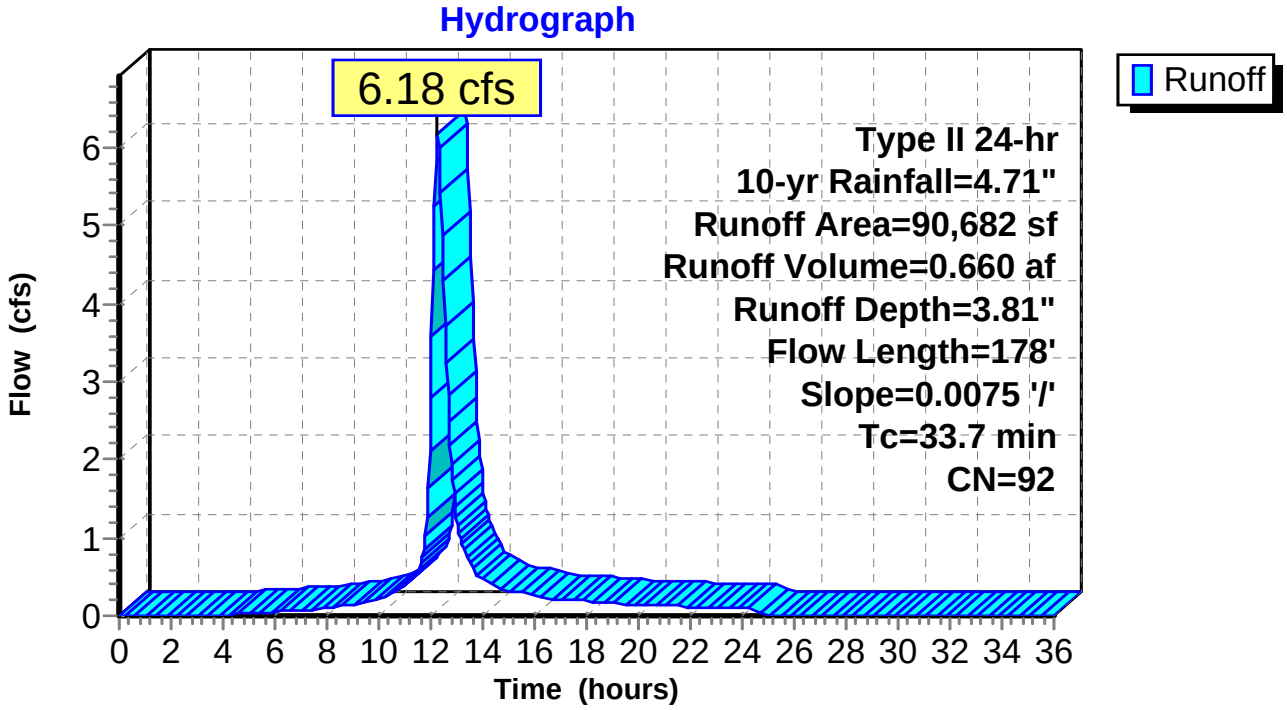
Runoff = 6.18 cfs @ 12.27 hrs, Volume= 0.660 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	60,255	98	
	30,427	80	>75% Grass cover, Good, HSG D
	90,682	92	Weighted Average
	30,427		33.55% Pervious Area
	60,255		66.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.7	178	0.0075	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 2S: Subcatchment 2



Summary for Subcatchment 3S: Subcatchment 3

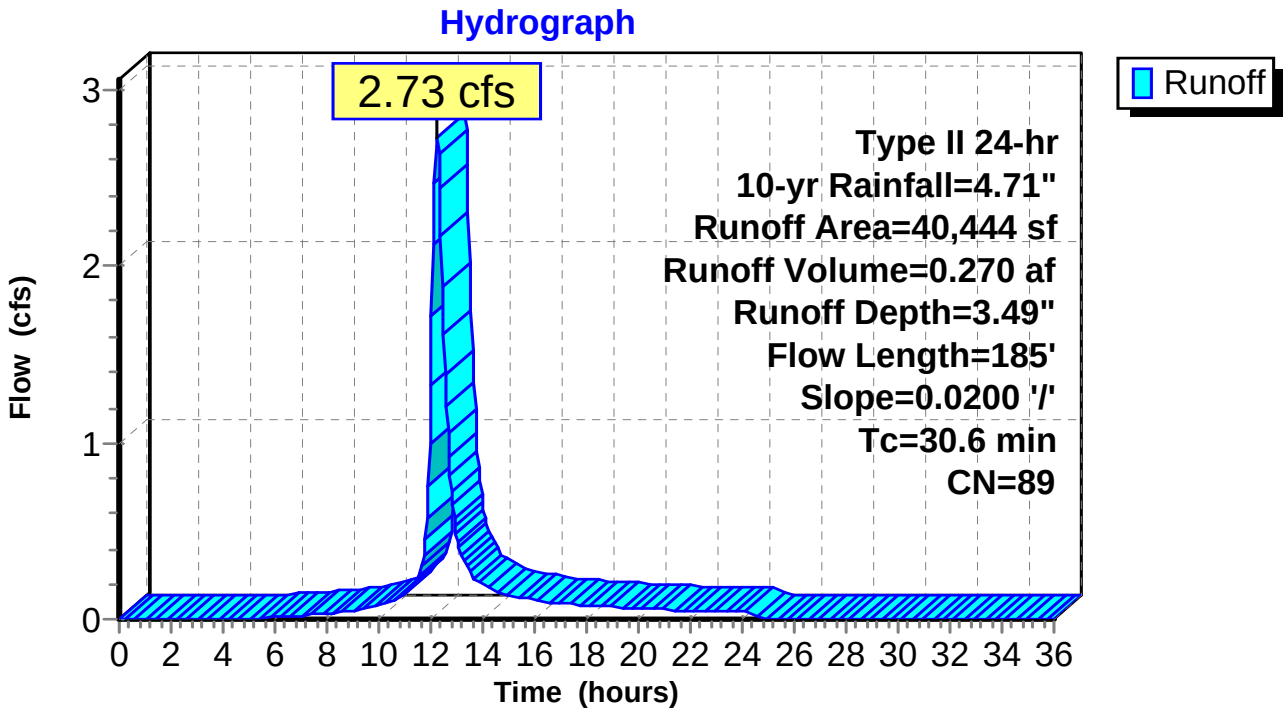
Runoff = 2.73 cfs @ 12.24 hrs, Volume= 0.270 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
	21,255	80	>75% Grass cover, Good, HSG D
*	19,189	98	
	40,444	89	Weighted Average
	21,255		52.55% Pervious Area
	19,189		47.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.8	150	0.0200	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.17"
0.8	35	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	185	Total			

Subcatchment 3S: Subcatchment 3



Summary for Subcatchment 4S: Subcatchment 4

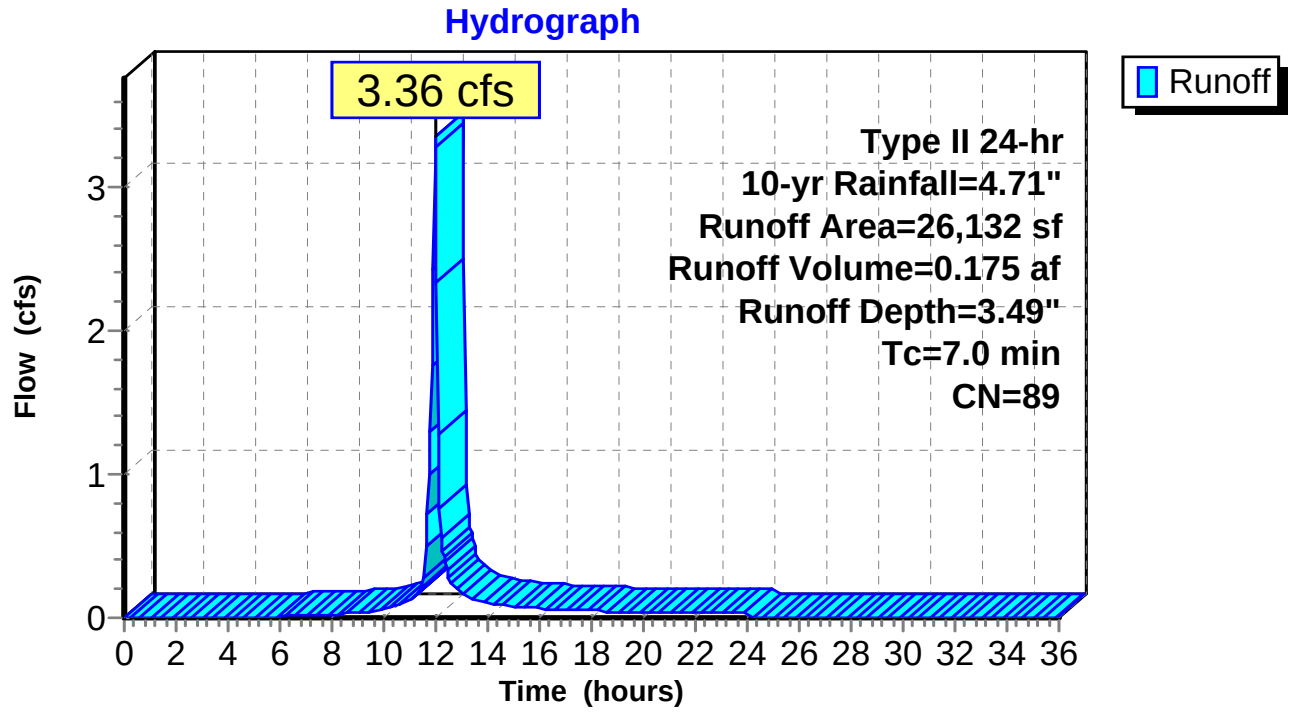
Runoff = 3.36 cfs @ 11.98 hrs, Volume= 0.175 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	13,720	98	
	12,412	80	>75% Grass cover, Good, HSG D
	26,132	89	Weighted Average
	12,412		47.50% Pervious Area
	13,720		52.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 4S: Subcatchment 4



Summary for Subcatchment 5S: Subcatchment 5

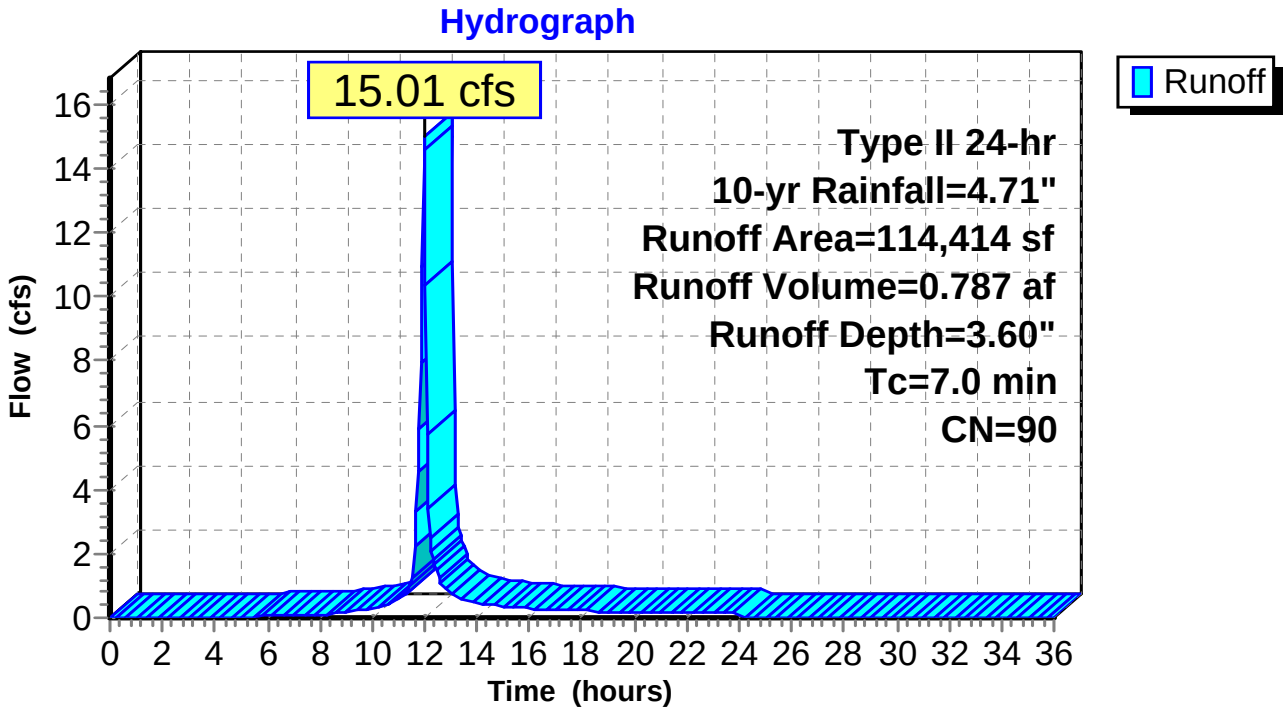
Runoff = 15.01 cfs @ 11.98 hrs, Volume= 0.787 af, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	65,087	98	
	49,327	80	>75% Grass cover, Good, HSG D
	114,414	90	Weighted Average
	49,327		43.11% Pervious Area
	65,087		56.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 5S: Subcatchment 5



Summary for Subcatchment 6S: Subcatchment 6

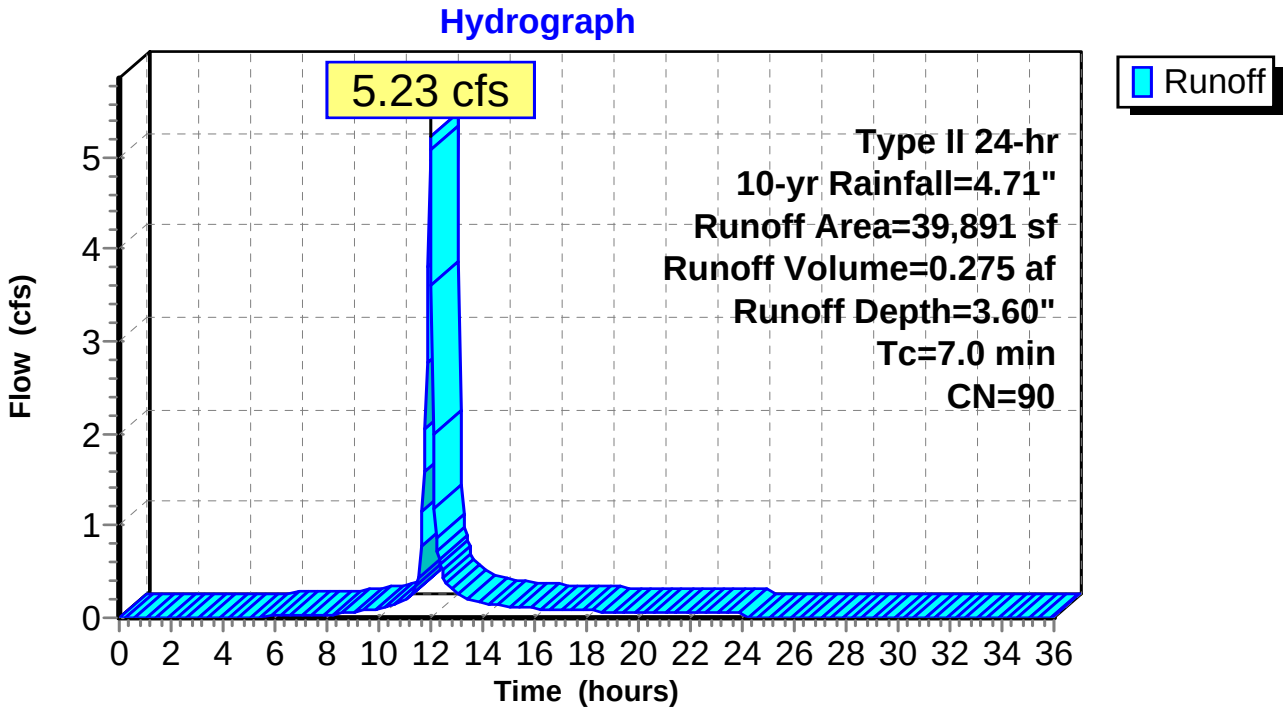
Runoff = 5.23 cfs @ 11.98 hrs, Volume= 0.275 af, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	21,718	98	
	18,173	80	>75% Grass cover, Good, HSG D
	39,891	90	Weighted Average
	18,173		45.56% Pervious Area
	21,718		54.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 6S: Subcatchment 6



Summary for Subcatchment 7S: Subcatchment 7

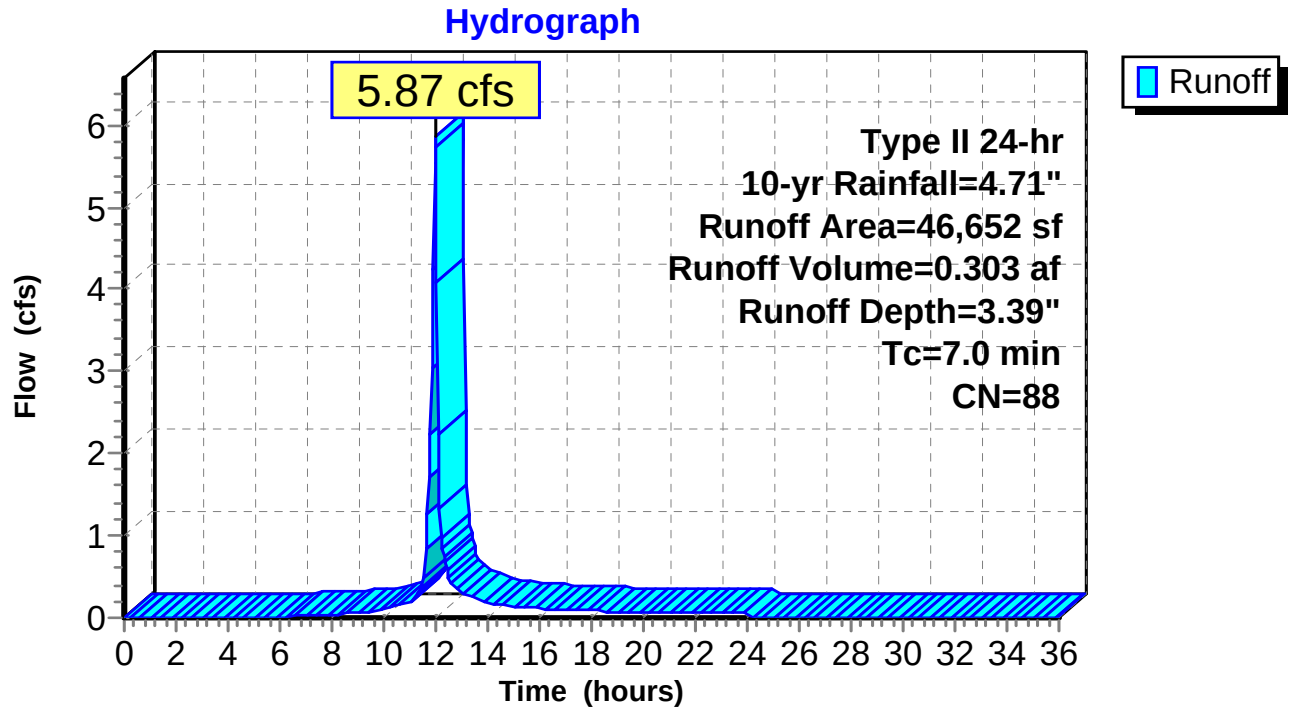
Runoff = 5.87 cfs @ 11.98 hrs, Volume= 0.303 af, Depth= 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	19,759	98	
	26,893	80	>75% Grass cover, Good, HSG D
	46,652	88	Weighted Average
	26,893		57.65% Pervious Area
	19,759		42.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 7S: Subcatchment 7



Summary for Subcatchment 8S: Subcatchment 8

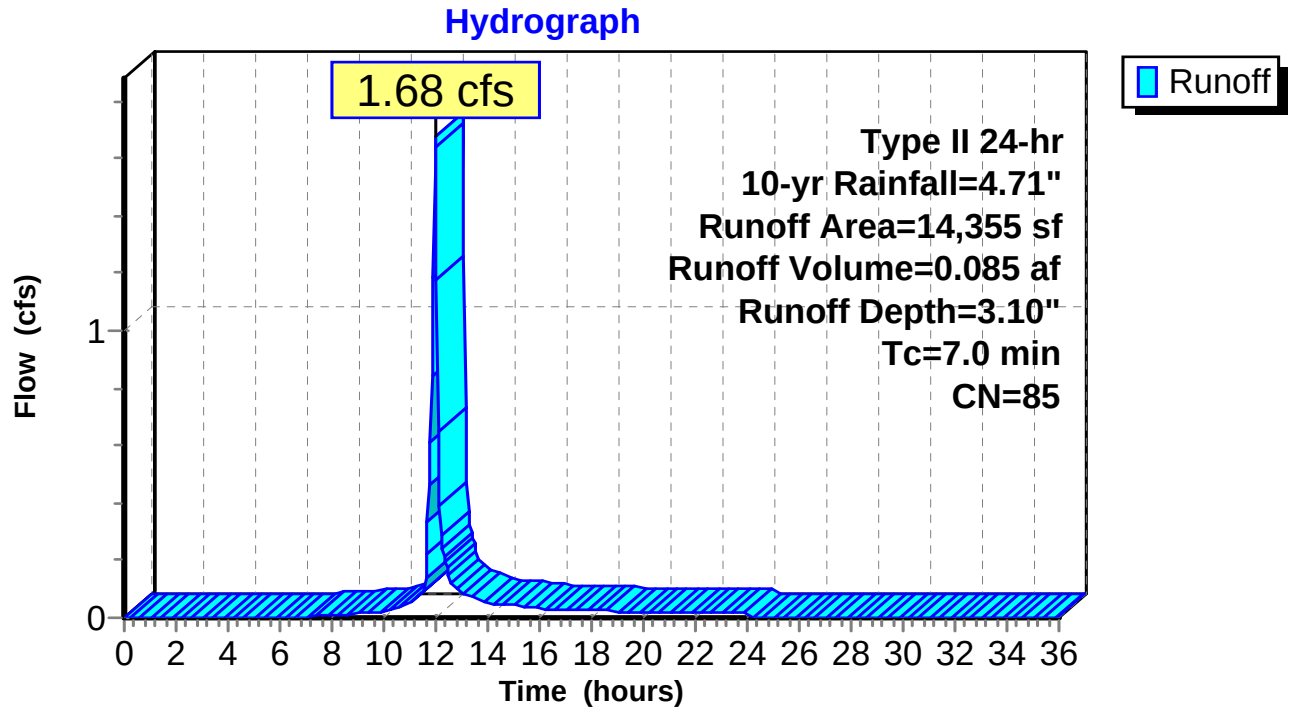
Runoff = 1.68 cfs @ 11.98 hrs, Volume= 0.085 af, Depth= 3.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
	10,604	80	>75% Grass cover, Good, HSG D
*	3,751	98	
	14,355	85	Weighted Average
	10,604		73.87% Pervious Area
	3,751		26.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 8S: Subcatchment 8



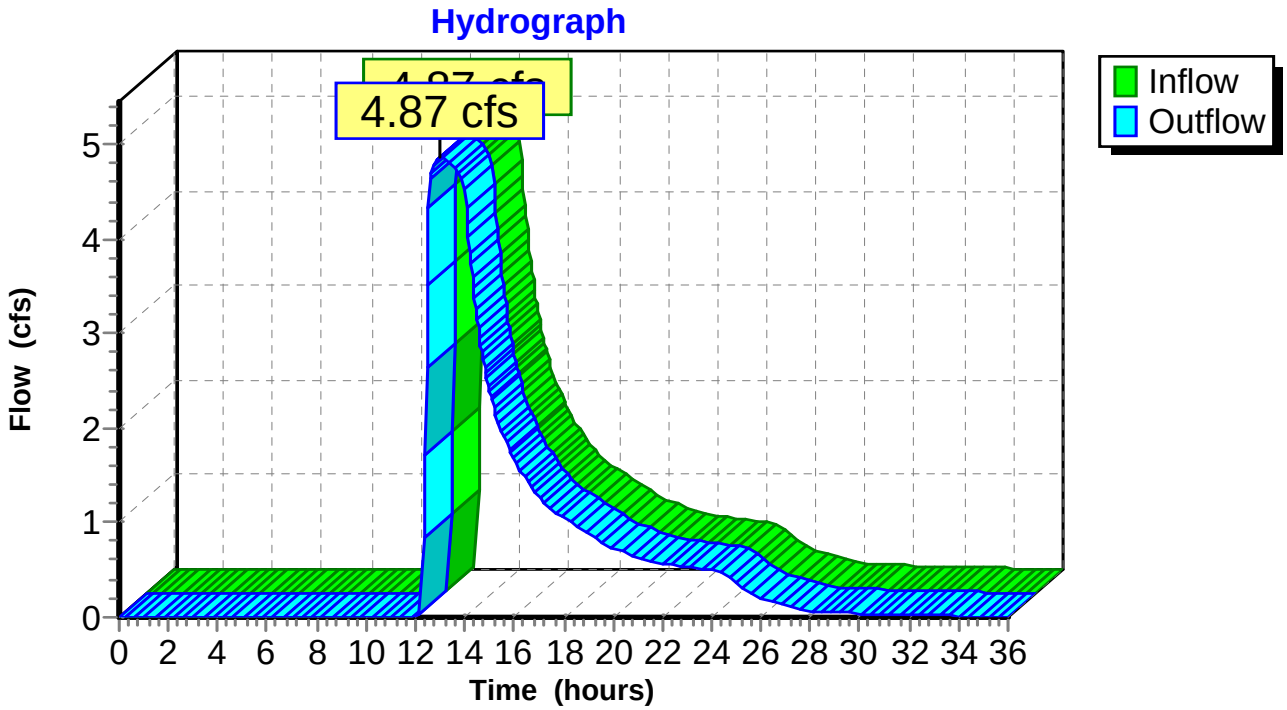
Summary for Reach 1SP: Study Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	4.87 cfs @	13.05 hrs, Volume=	1.704 af
Outflow	=	4.87 cfs @	13.05 hrs, Volume=	1.704 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 1SP: Study Point 1



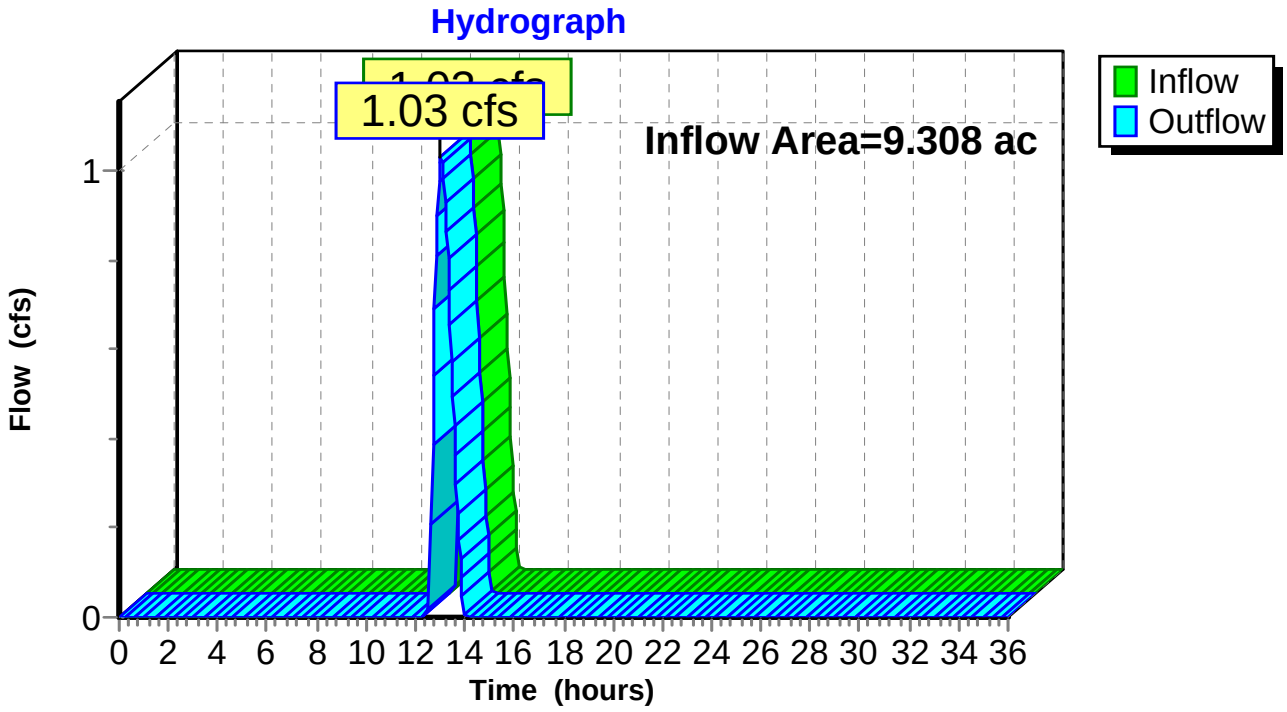
Summary for Reach 2SP: Study Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.308 ac, 47.83% Impervious, Inflow Depth = 0.08" for 10-yr event
Inflow = 1.03 cfs @ 13.05 hrs, Volume= 0.064 af
Outflow = 1.03 cfs @ 13.05 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 2SP: Study Point 2



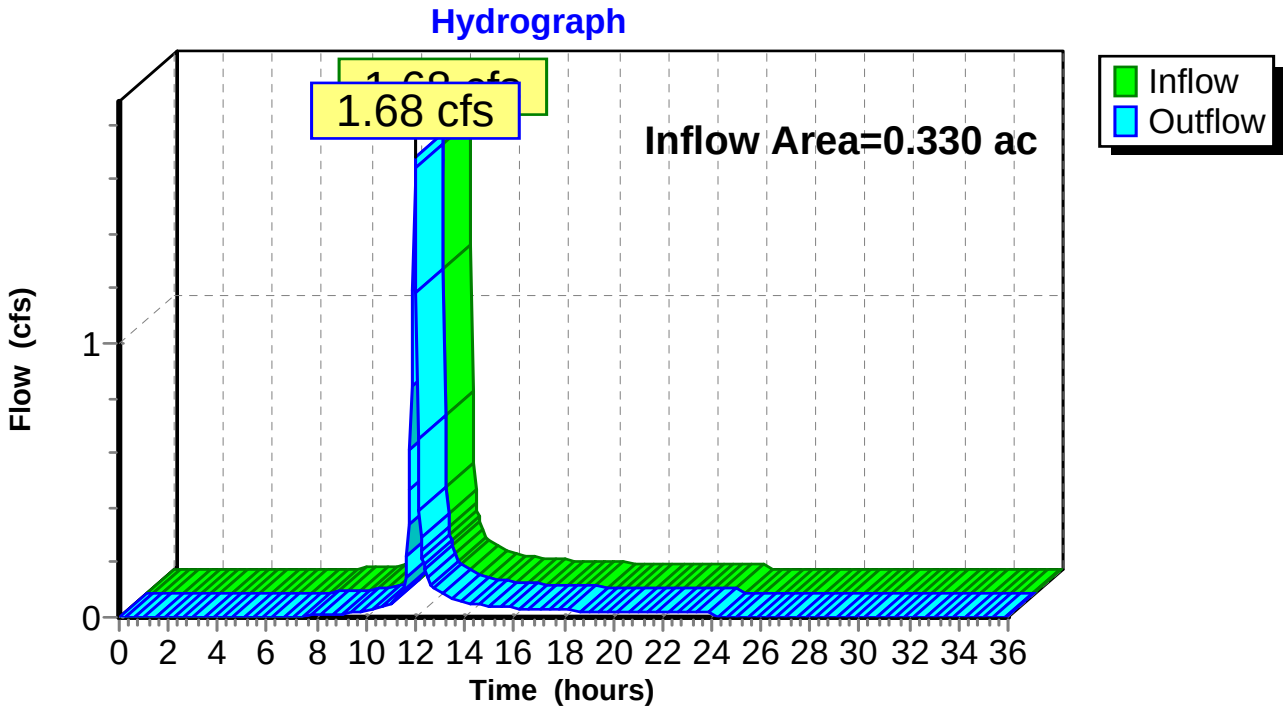
Summary for Reach 3SP: Study Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.330 ac, 26.13% Impervious, Inflow Depth = 3.10" for 10-yr event
Inflow = 1.68 cfs @ 11.98 hrs, Volume= 0.085 af
Outflow = 1.68 cfs @ 11.98 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 3SP: Study Point 3



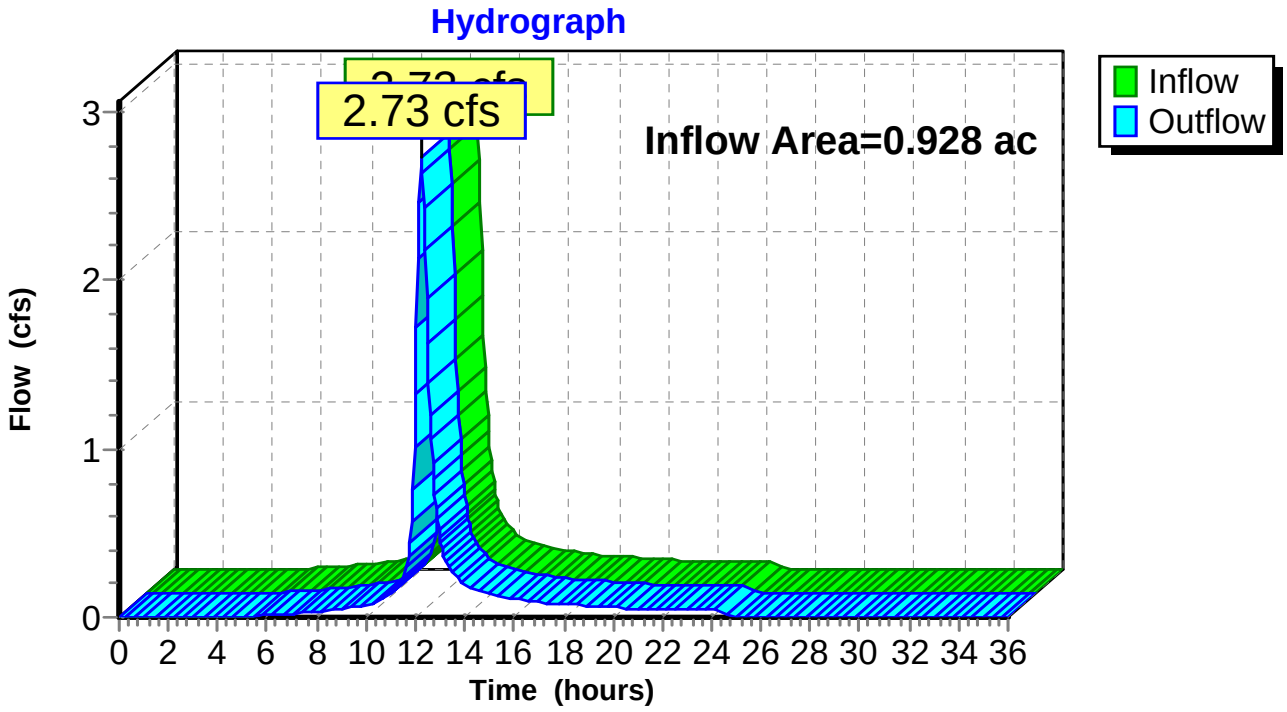
Summary for Reach 4SP: Study Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.928 ac, 47.45% Impervious, Inflow Depth = 3.49" for 10-yr event
Inflow = 2.73 cfs @ 12.24 hrs, Volume= 0.270 af
Outflow = 2.73 cfs @ 12.24 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 4SP: Study Point 4



Summary for Pond 1P: Wetland A

[79] Warning: Submerged Pond 8P Secondary device # 2 INLET by 0.32'
[81] Warning: Exceeded Pond 9P by 0.04' @ 13.25 hrs

Inflow Area = 9.308 ac, 47.83% Impervious, Inflow Depth = 3.13" for 10-yr event
Inflow = 18.10 cfs @ 12.33 hrs, Volume= 2.425 af
Outflow = 5.90 cfs @ 13.05 hrs, Volume= 1.768 af, Atten= 67%, Lag= 42.9 min
Primary = 1.03 cfs @ 13.05 hrs, Volume= 0.064 af
Secondary = 4.87 cfs @ 13.05 hrs, Volume= 1.704 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Starting Elev= 63.50' Surf.Area= 14,739 sf Storage= 17,429 cf
Peak Elev= 66.02' @ 13.05 hrs Surf.Area= 25,898 sf Storage= 68,176 cf (50,748 cf above start)

Plug-Flow detention time= 302.4 min calculated for 1.368 af (56% of inflow)
Center-of-Mass det. time= 127.8 min (973.2 - 845.4)

Volume	Invert	Avail.Storage	Storage Description
#1	62.00'	209,276 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

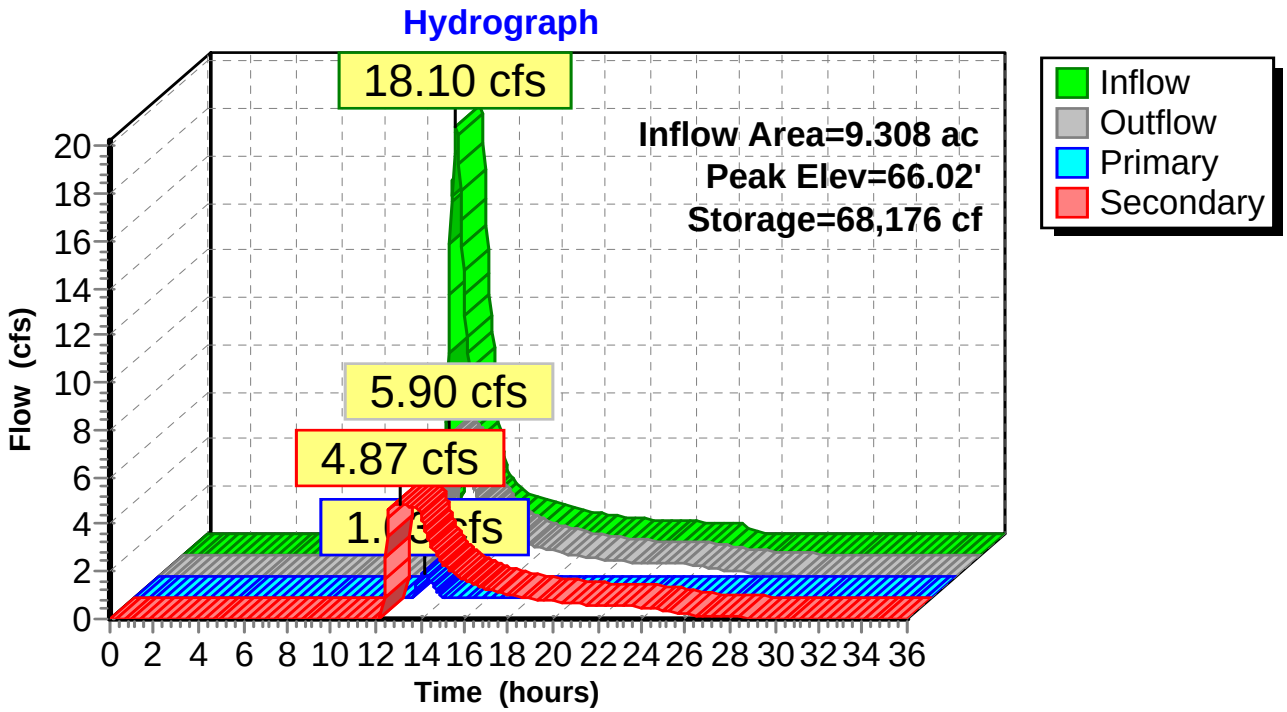
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.00	8,500	0	0
65.00	20,977	44,216	44,216
70.00	45,047	165,060	209,276

Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**3.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Secondary	62.86'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.86' / 58.69' S= 0.0869 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#3	Device 2	65.08'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=1.02 cfs @ 13.05 hrs HW=66.02' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 1.02 cfs @ 1.25 fps)

Secondary OutFlow Max=4.87 cfs @ 13.05 hrs HW=66.02' (Free Discharge)
└**2=Culvert** (Inlet Controls 4.87 cfs @ 6.20 fps)
└**3=Sharp-Crested Rectangular Weir** (Passes 4.87 cfs of 7.71 cfs potential flow)

Pond 1P: Wetland A



Summary for Pond 2P: Wetland B

Inflow Area = 2.082 ac, 66.45% Impervious, Inflow Depth = 3.81" for 10-yr event
Inflow = 6.18 cfs @ 12.27 hrs, Volume= 0.660 af
Outflow = 5.34 cfs @ 12.41 hrs, Volume= 0.465 af, Atten= 14%, Lag= 8.5 min
Primary = 5.34 cfs @ 12.41 hrs, Volume= 0.465 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.25' @ 12.41 hrs Surf.Area= 9,670 sf Storage= 10,461 cf

Plug-Flow detention time= 168.7 min calculated for 0.465 af (70% of inflow)
Center-of-Mass det. time= 73.4 min (880.4 - 807.0)

Volume	Invert	Avail.Storage	Storage Description
#1	67.00'	21,636 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

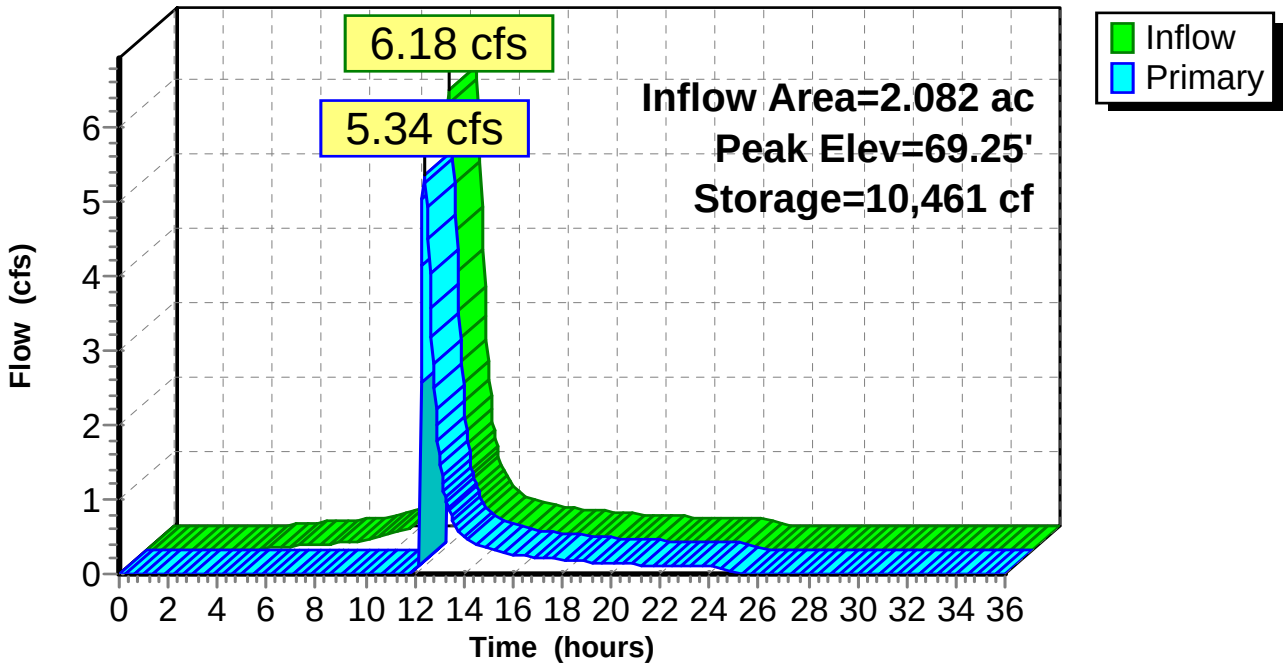
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.00	2,200	0	0
68.00	4,250	3,225	3,225
69.00	6,286	5,268	8,493
70.00	20,000	13,143	21,636

Device	Routing	Invert	Outlet Devices
#1	Primary	69.00'	**18.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=5.29 cfs @ 12.41 hrs HW=69.25' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 5.29 cfs @ 1.20 fps)

Pond 2P: Wetland B

Hydrograph



Summary for Pond 3P: Surface Detention

[79] Warning: Submerged Pond 6P Primary device # 1 INLET by 1.56'
[81] Warning: Exceeded Pond 7P by 0.20' @ 12.20 hrs

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 3.41" for 10-yr event
Inflow = 22.59 cfs @ 11.99 hrs, Volume= 1.178 af
Outflow = 9.05 cfs @ 12.14 hrs, Volume= 1.176 af, Atten= 60%, Lag= 8.7 min
Primary = 7.86 cfs @ 12.14 hrs, Volume= 1.169 af
Secondary = 1.19 cfs @ 12.14 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.56' @ 12.14 hrs Surf.Area= 7,163 sf Storage= 14,137 cf

Plug-Flow detention time= 20.1 min calculated for 1.175 af (100% of inflow)
Center-of-Mass det. time= 19.7 min (827.6 - 808.0)

Volume	Invert	Avail.Storage	Storage Description
#1	69.00'	21,926 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

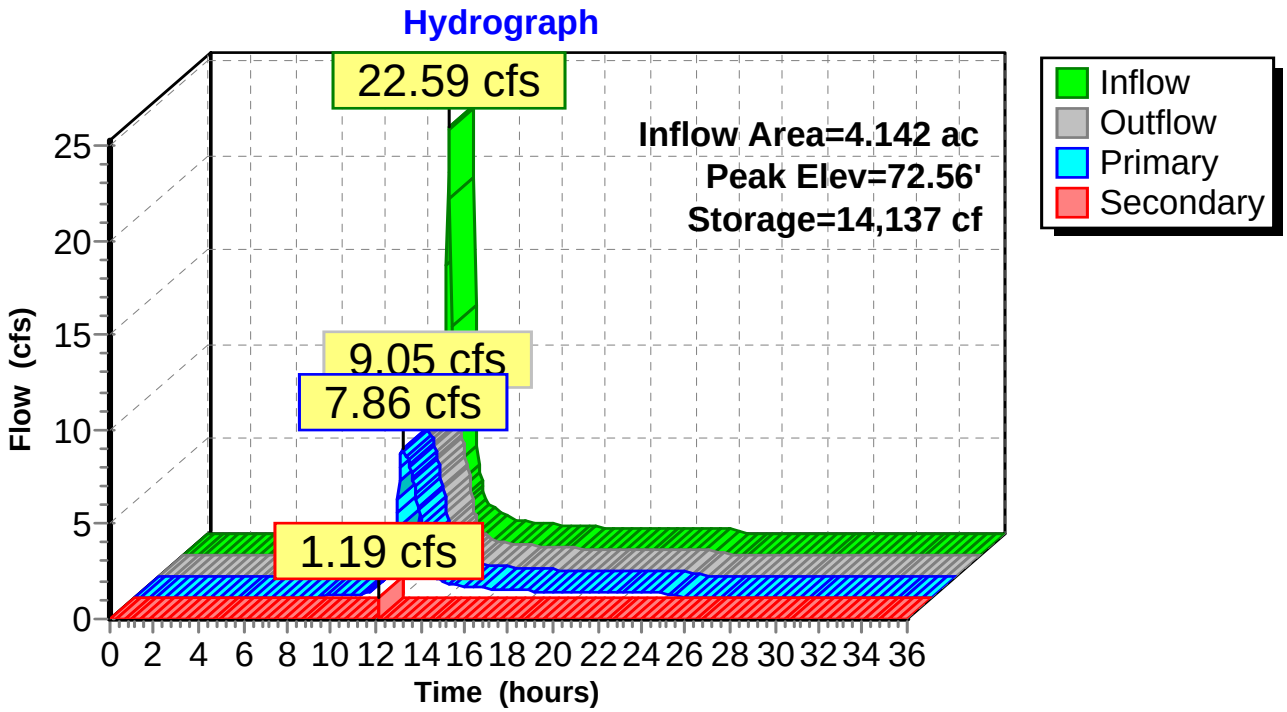
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.00	400	0	0
70.00	2,991	1,696	1,696
72.00	5,812	8,803	10,499
73.50	9,425	11,428	21,926

Device	Routing	Invert	Outlet Devices
#1	Primary	69.10'	**15.0" Round Culvert** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 69.10' / 68.75' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	72.50'	**35.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=7.84 cfs @ 12.14 hrs HW=72.55' (Free Discharge)
1=Culvert (Inlet Controls 7.84 cfs @ 6.39 fps)

Secondary OutFlow Max=1.02 cfs @ 12.14 hrs HW=72.55' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 1.02 cfs @ 0.54 fps)

Pond 3P: Surface Detention



Summary for Pond 4P: Surface Detention

Inflow Area = 1.071 ac, 42.35% Impervious, Inflow Depth = 3.39" for 10-yr event
Inflow = 5.87 cfs @ 11.98 hrs, Volume= 0.303 af
Outflow = 2.86 cfs @ 12.09 hrs, Volume= 0.295 af, Atten= 51%, Lag= 6.6 min
Primary = 0.41 cfs @ 12.09 hrs, Volume= 0.212 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 2.45 cfs @ 12.09 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 70.46' @ 12.09 hrs Surf.Area= 2,957 sf Storage= 4,860 cf

Plug-Flow detention time= 90.8 min calculated for 0.295 af (97% of inflow)
Center-of-Mass det. time= 73.8 min (871.7 - 797.9)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	10,990 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
64.00	13	0	0
67.00	71	126	126
68.00	928	500	626
69.00	1,378	1,153	1,779
70.00	2,348	1,863	3,642
72.00	5,000	7,348	10,990

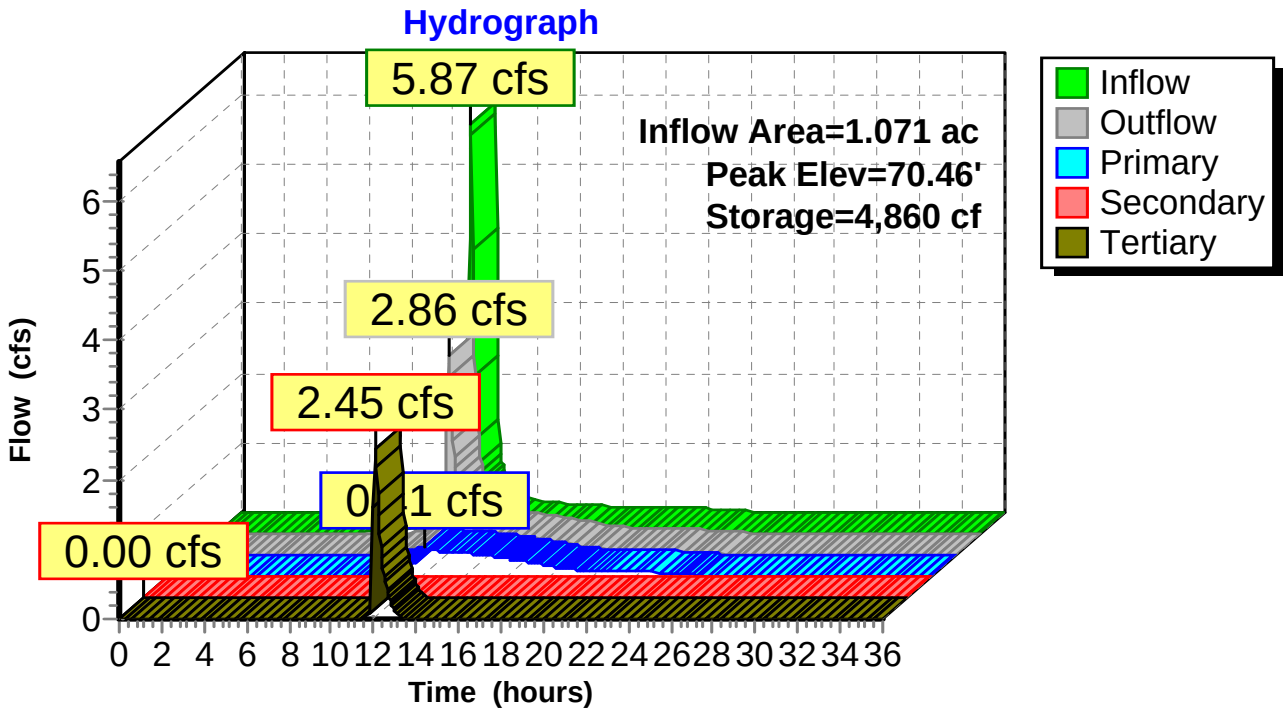
Device	Routing	Invert	Outlet Devices
#1	Primary	67.66'	**3.5" Round Culvert** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.66' / 67.65' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 0.07 sf
#2	Tertiary	69.66'	**1.2' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Secondary	70.50'	**45.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.41 cfs @ 12.09 hrs HW=70.45' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.41 cfs @ 6.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=64.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=2.41 cfs @ 12.09 hrs HW=70.45' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 2.41 cfs @ 2.53 fps)

Pond 4P: Surface Detention



Summary for Pond 5P: OCS-4P

[57] Hint: Peaked at 68.90' (Flood elevation advised)
[79] Warning: Submerged Pond 4P Primary device # 1 INLET by 1.23'

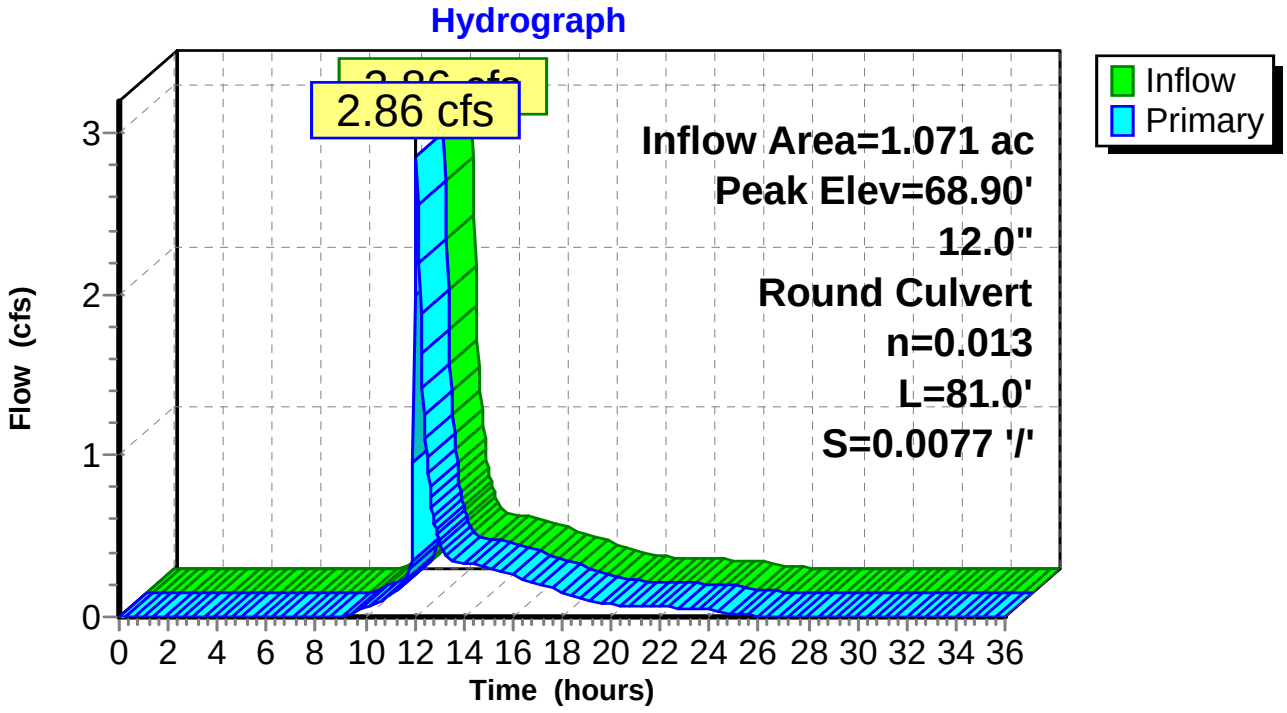
Inflow Area = 1.071 ac, 42.35% Impervious, Inflow Depth = 3.30" for 10-yr event
Inflow = 2.86 cfs @ 12.09 hrs, Volume= 0.295 af
Outflow = 2.86 cfs @ 12.09 hrs, Volume= 0.295 af, Atten= 0%, Lag= 0.0 min
Primary = 2.86 cfs @ 12.09 hrs, Volume= 0.295 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 68.90' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	67.48'	**12.0" Round Culvert** L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.48' / 66.86' S= 0.0077 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=2.83 cfs @ 12.09 hrs HW=68.88' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.83 cfs @ 3.60 fps)

Pond 5P: OCS-4P



Summary for Pond 6P: Atrium Surface Detention

Inflow Area = 2.627 ac, 56.89% Impervious, Inflow Depth = 3.60" for 10-yr event
Inflow = 15.01 cfs @ 11.98 hrs, Volume= 0.787 af
Outflow = 14.54 cfs @ 12.00 hrs, Volume= 0.730 af, Atten= 3%, Lag= 1.1 min
Primary = 14.54 cfs @ 12.00 hrs, Volume= 0.730 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 74.02' @ 12.00 hrs Surf.Area= 3,665 sf Storage= 4,114 cf

Plug-Flow detention time= 64.5 min calculated for 0.729 af (93% of inflow)
Center-of-Mass det. time= 25.3 min (815.8 - 790.5)

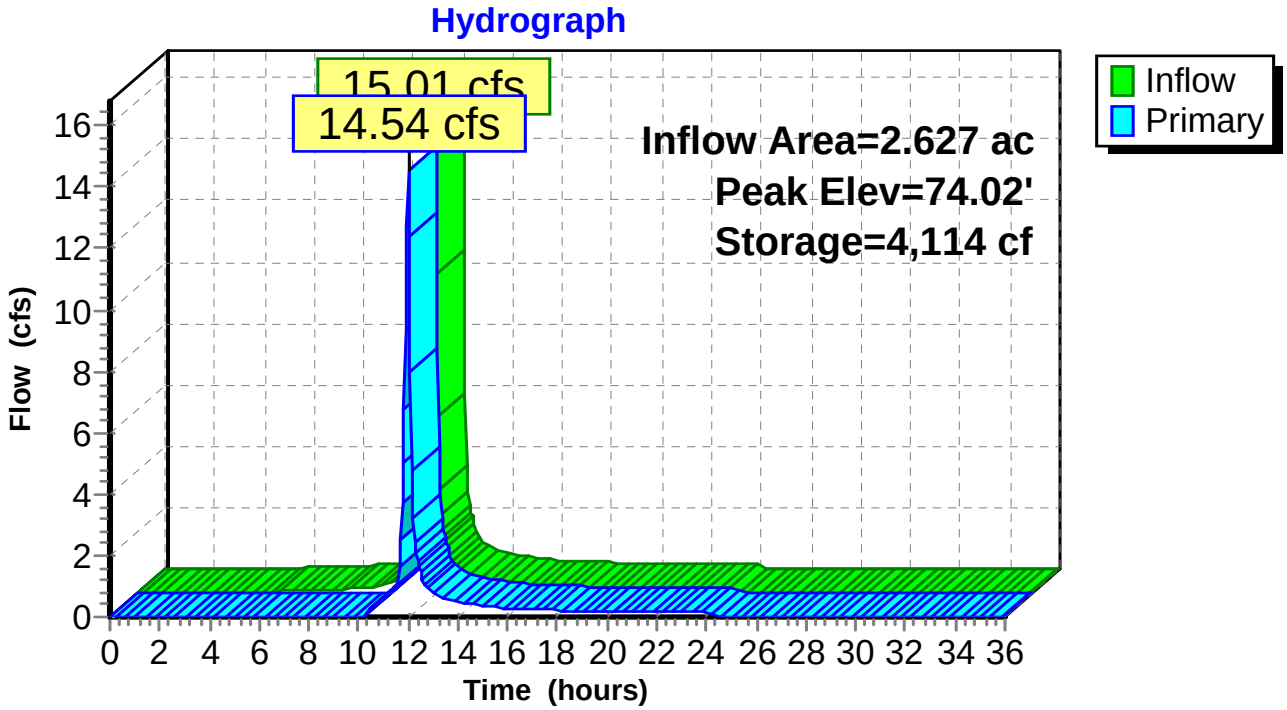
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	5,026 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	55	0	0
72.00	327	382	382
73.00	1,694	1,011	1,393
74.25	4,120	3,634	5,026

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.1" Round Culvert** L= 220.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.00' / 69.20' S= 0.0082 '/' Cc= 0.900 n= 0.013, Flow Area= 0.00 sf
#2	Primary	73.50'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=14.44 cfs @ 12.00 hrs HW=74.01' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.00 cfs @ 0.28 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 14.44 cfs @ 1.87 fps)

Pond 6P: Atrium Surface Detention



Summary for Pond 7P: Riprap Surface Detention

Inflow Area = 0.600 ac, 52.50% Impervious, Inflow Depth = 3.49" for 10-yr event
Inflow = 3.36 cfs @ 11.98 hrs, Volume= 0.175 af
Outflow = 2.95 cfs @ 12.02 hrs, Volume= 0.173 af, Atten= 12%, Lag= 2.3 min
Primary = 2.95 cfs @ 12.02 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 73.30' @ 12.02 hrs Surf.Area= 472 sf Storage= 479 cf

Plug-Flow detention time= 15.5 min calculated for 0.172 af (99% of inflow)
Center-of-Mass det. time= 8.5 min (802.8 - 794.3)

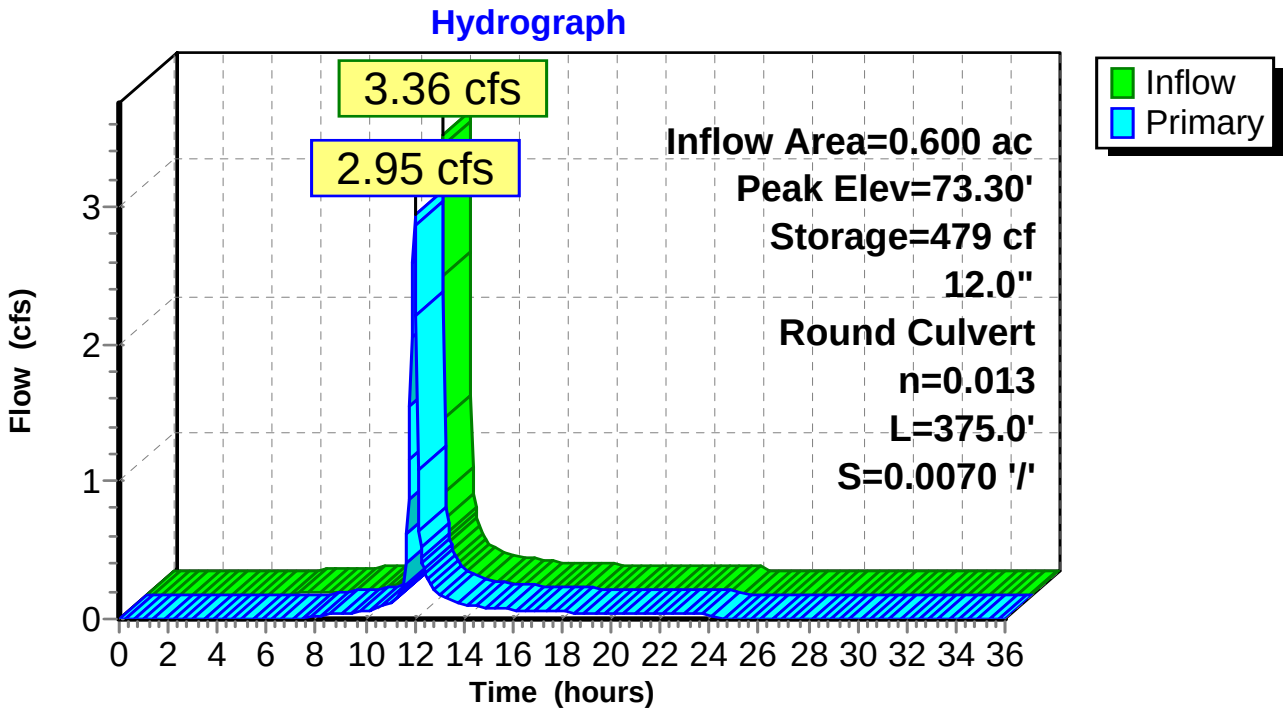
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	2,180 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	50	0	0
73.00	310	360	360
74.00	846	578	938
75.00	1,637	1,242	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**12.0" Round Culvert** L= 375.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 69.20' S= 0.0070 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=2.90 cfs @ 12.02 hrs HW=73.28' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.90 cfs @ 3.70 fps)

Pond 7P: Riprap Surface Detention



Summary for Pond 8P: OCS-DMH7

[57] Hint: Peaked at 67.19' (Flood elevation advised)

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 3.39" for 10-yr event
Inflow = 7.86 cfs @ 12.14 hrs, Volume= 1.169 af
Outflow = 7.86 cfs @ 12.14 hrs, Volume= 1.169 af, Atten= 0%, Lag= 0.0 min
Primary = 0.69 cfs @ 12.14 hrs, Volume= 0.037 af
Secondary = 7.16 cfs @ 12.14 hrs, Volume= 1.132 af

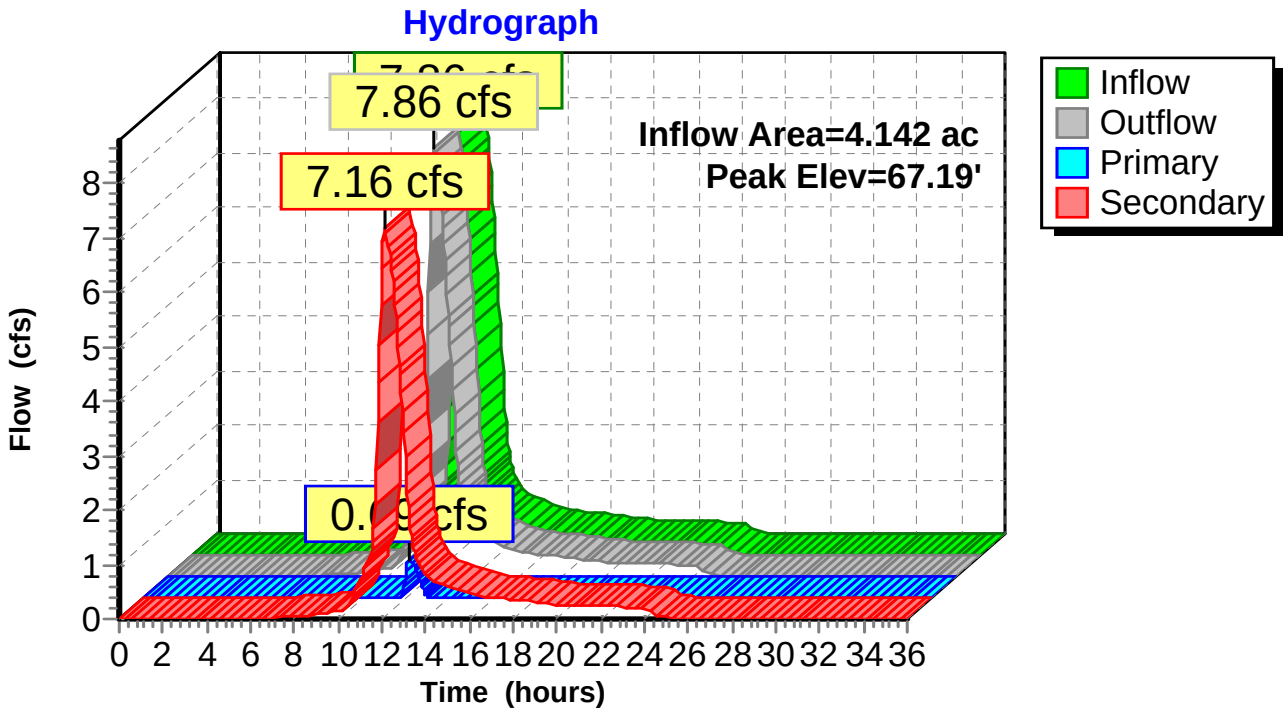
Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.19' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.60' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	65.70'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=0.69 cfs @ 12.14 hrs HW=67.19' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.69 cfs @ 2.06 fps)

Secondary OutFlow Max=7.15 cfs @ 12.14 hrs HW=67.19' (Free Discharge)
└**2=Culvert** (Barrel Controls 7.15 cfs @ 3.96 fps)

Pond 8P: OCS-DMH7



Summary for Pond 9P: UG Detention

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 0.06" for 10-yr event
Inflow = 0.26 cfs @ 12.14 hrs, Volume= 0.019 af
Outflow = 0.14 cfs @ 12.84 hrs, Volume= 0.019 af, Atten= 46%, Lag= 41.8 min
Primary = 0.14 cfs @ 12.84 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 66.04' @ 12.84 hrs Surf.Area= 1,536 sf Storage= 502 cf

Plug-Flow detention time= 95.4 min calculated for 0.019 af (99% of inflow)
Center-of-Mass det. time= 94.6 min (838.2 - 743.6)

Volume	Invert	Avail.Storage	Storage Description
#1	65.70'	2,488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 2,619 cf Overall x 95.0% Voids

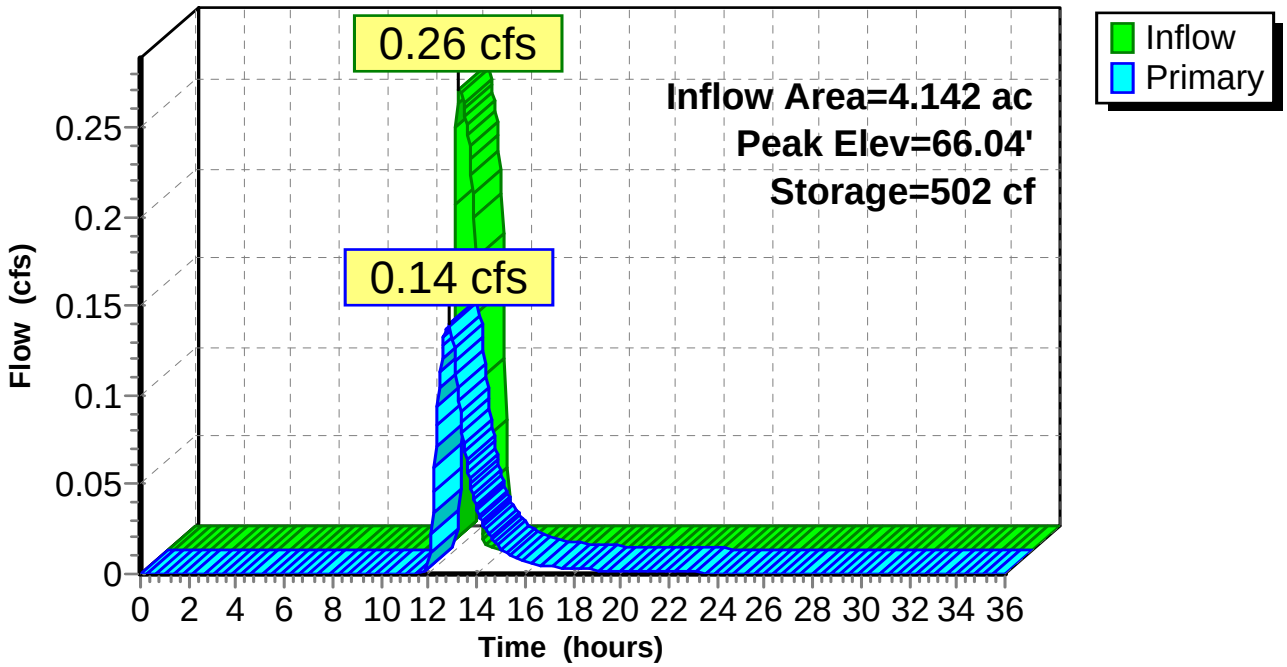
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
65.70	1,536	0	0
67.40	1,536	2,611	2,611
67.41	5	8	2,619

Device	Routing	Invert	Outlet Devices
#1	Primary	65.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.60' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Primary	67.00'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.90' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf

Primary OutFlow Max=0.14 cfs @ 12.84 hrs HW=66.04' (Free Discharge)
└─**1=Culvert** (Inlet Controls 0.14 cfs @ 1.60 fps)
└─**2=Culvert** (Controls 0.00 cfs)

Pond 9P: UG Detention

Hydrograph



Summary for Pond 10P: Isolator Row x5

[81] Warning: Exceeded Pond 8P by 0.90' @ 35.95 hrs

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 0.11" for 10-yr event
Inflow = 0.69 cfs @ 12.14 hrs, Volume= 0.037 af
Outflow = 0.69 cfs @ 12.14 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.2 min
Primary = 0.26 cfs @ 12.14 hrs, Volume= 0.019 af
Secondary = 0.44 cfs @ 12.14 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.37' @ 12.14 hrs Surf.Area= 0.001 ac Storage= 0.001 af

Plug-Flow detention time= 1.9 min calculated for 0.037 af (100% of inflow)
Center-of-Mass det. time= 2.0 min (740.2 - 738.1)

Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	0.002 af	**ADS_StormTech RC-310** x 5 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 1 rows

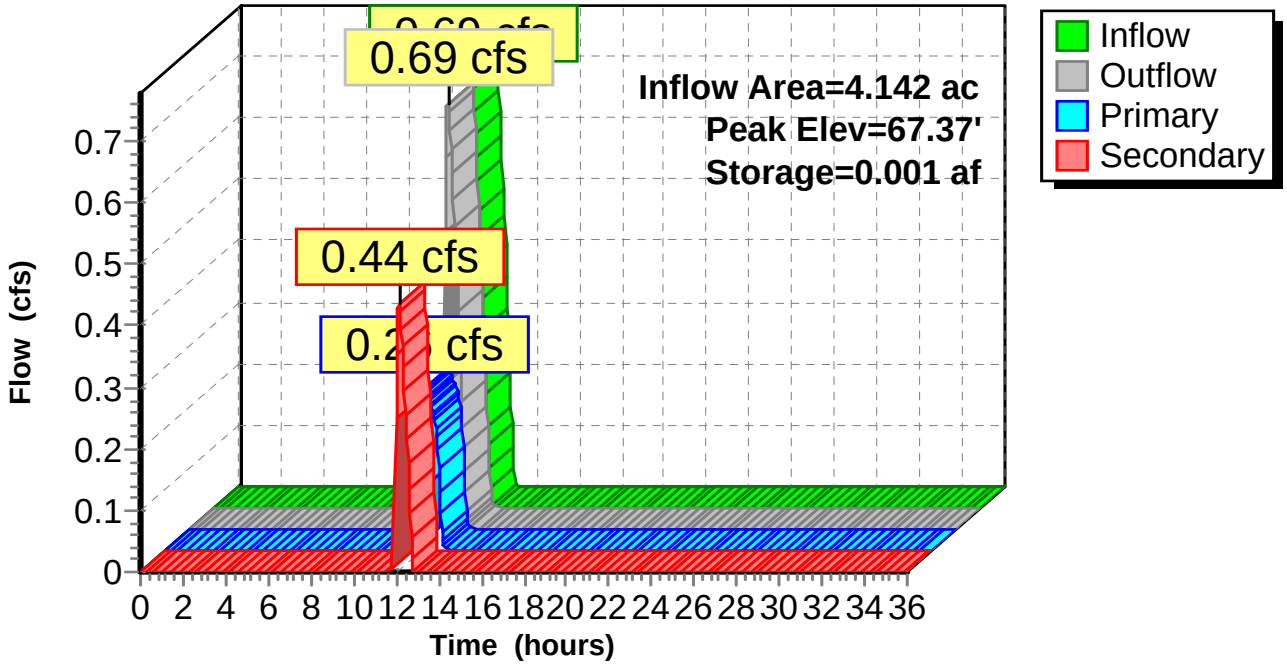
Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.55' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Secondary	67.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.55' S= 0.0090 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.26 cfs @ 12.14 hrs HW=67.37' (Free Discharge)
↑└**1=Culvert** (Inlet Controls 0.26 cfs @ 2.95 fps)

Secondary OutFlow Max=0.43 cfs @ 12.14 hrs HW=67.37' (Free Discharge)
↑└**2=Culvert** (Inlet Controls 0.43 cfs @ 1.64 fps)

Pond 10P: Isolator Row x5

Hydrograph



Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1 Runoff Area=87,665 sf 15.27% Impervious Runoff Depth=4.02"
Flow Length=177' Slope=0.0100 '/' Tc=29.9 min CN=83 Runoff=6.98 cfs 0.674 af

Subcatchment 2S: Subcatchment 2 Runoff Area=90,682 sf 66.45% Impervious Runoff Depth=4.99"
Flow Length=178' Slope=0.0075 '/' Tc=33.7 min CN=92 Runoff=8.00 cfs 0.866 af

Subcatchment 3S: Subcatchment 3 Runoff Area=40,444 sf 47.45% Impervious Runoff Depth=4.66"
Flow Length=185' Slope=0.0200 '/' Tc=30.6 min CN=89 Runoff=3.60 cfs 0.360 af

Subcatchment 4S: Subcatchment 4 Runoff Area=26,132 sf 52.50% Impervious Runoff Depth=4.66"
Tc=7.0 min CN=89 Runoff=4.40 cfs 0.233 af

Subcatchment 5S: Subcatchment 5 Runoff Area=114,414 sf 56.89% Impervious Runoff Depth=4.77"
Tc=7.0 min CN=90 Runoff=19.53 cfs 1.044 af

Subcatchment 6S: Subcatchment 6 Runoff Area=39,891 sf 54.44% Impervious Runoff Depth=4.77"
Tc=7.0 min CN=90 Runoff=6.81 cfs 0.364 af

Subcatchment 7S: Subcatchment 7 Runoff Area=46,652 sf 42.35% Impervious Runoff Depth=4.55"
Tc=7.0 min CN=88 Runoff=7.72 cfs 0.406 af

Subcatchment 8S: Subcatchment 8 Runoff Area=14,355 sf 26.13% Impervious Runoff Depth=4.23"
Tc=7.0 min CN=85 Runoff=2.25 cfs 0.116 af

Reach 1SP: Study Point 1 Inflow=5.27 cfs 2.178 af
Outflow=5.27 cfs 2.178 af

Reach 2SP: Study Point 2 Inflow=5.04 cfs 0.462 af
Outflow=5.04 cfs 0.462 af

Reach 3SP: Study Point 3 Inflow=4.94 cfs 0.141 af
Outflow=4.94 cfs 0.141 af

Reach 4SP: Study Point 4 Inflow=3.60 cfs 0.360 af
Outflow=3.60 cfs 0.360 af

Pond 1P: Wetland A Peak Elev=66.48' Storage=80,578 cf Inflow=31.15 cfs 3.297 af
Primary=5.04 cfs 0.462 af Secondary=5.27 cfs 2.178 af Outflow=10.32 cfs 2.640 af

Pond 2P: Wetland B Peak Elev=69.31' Storage=11,061 cf Inflow=8.00 cfs 0.866 af
Outflow=7.52 cfs 0.671 af

Pond 3P: Surface Detention Peak Elev=72.83' Storage=16,129 cf Inflow=28.88 cfs 1.581 af
Primary=8.22 cfs 1.435 af Secondary=15.32 cfs 0.145 af Outflow=23.53 cfs 1.580 af

Pond 4P: Surface Detention Peak Elev=70.59' Storage=5,247 cf Inflow=7.72 cfs 0.406 af
Primary=0.42 cfs 0.253 af Secondary=3.17 cfs 0.025 af Tertiary=3.14 cfs 0.119 af Outflow=6.74 cfs 0.398 af

Pond 5P: OCS-4P Peak Elev=69.40' Inflow=3.56 cfs 0.372 af
12.0" Round Culvert n=0.013 L=81.0' S=0.0077 '/' Outflow=3.56 cfs 0.372 af

Pond 6P: Atrium Surface Detention Peak Elev=74.10' Storage=4,447 cf Inflow=19.53 cfs 1.044 af
Outflow=18.97 cfs 0.987 af

Pond 7P: Riprap Surface Detention Peak Elev=73.85' Storage=818 cf Inflow=4.40 cfs 0.233 af
12.0" Round Culvert n=0.013 L=375.0' S=0.0070 '/' Outflow=3.26 cfs 0.231 af

Pond 8P: OCS-DMH7 Peak Elev=67.23' Inflow=8.22 cfs 1.435 af
Primary=0.78 cfs 0.045 af Secondary=7.44 cfs 1.390 af Outflow=8.22 cfs 1.435 af

Pond 9P: UG Detention Peak Elev=66.08' Storage=549 cf Inflow=0.27 cfs 0.022 af
Outflow=0.15 cfs 0.022 af

Pond 10P: Isolator Row x5 Peak Elev=67.41' Storage=0.001 af Inflow=0.78 cfs 0.045 af
Primary=0.27 cfs 0.022 af Secondary=0.51 cfs 0.023 af Outflow=0.78 cfs 0.045 af

Total Runoff Area = 10.566 ac Runoff Volume = 4.062 af Average Runoff Depth = 4.61"
52.88% Pervious = 5.587 ac 47.12% Impervious = 4.979 ac

Summary for Subcatchment 1S: Subcatchment 1

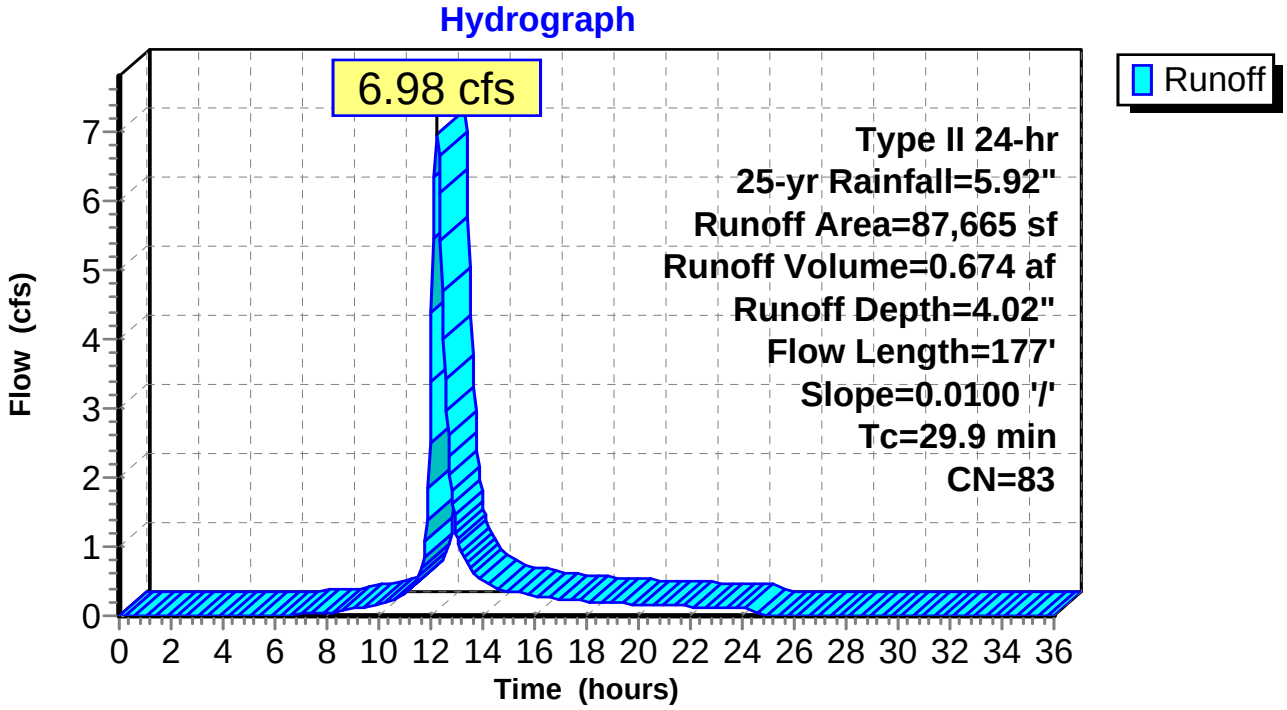
Runoff = 6.98 cfs @ 12.24 hrs, Volume= 0.674 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	13,390	98	
	74,275	80	>75% Grass cover, Good, HSG D
	87,665	83	Weighted Average
	74,275		84.73% Pervious Area
	13,390		15.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	177	0.0100	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 1S: Subcatchment 1



Summary for Subcatchment 2S: Subcatchment 2

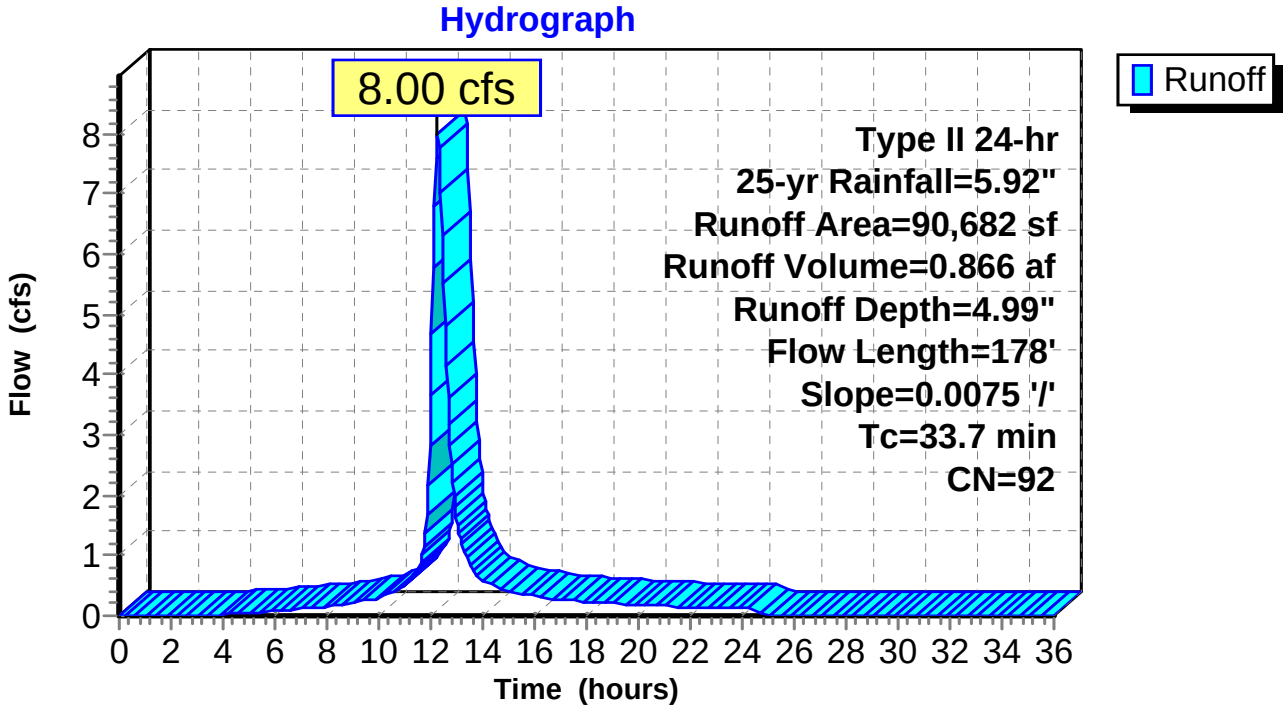
Runoff = 8.00 cfs @ 12.27 hrs, Volume= 0.866 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	60,255	98	
	30,427	80	>75% Grass cover, Good, HSG D
	90,682	92	Weighted Average
	30,427		33.55% Pervious Area
	60,255		66.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.7	178	0.0075	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 2S: Subcatchment 2



Summary for Subcatchment 3S: Subcatchment 3

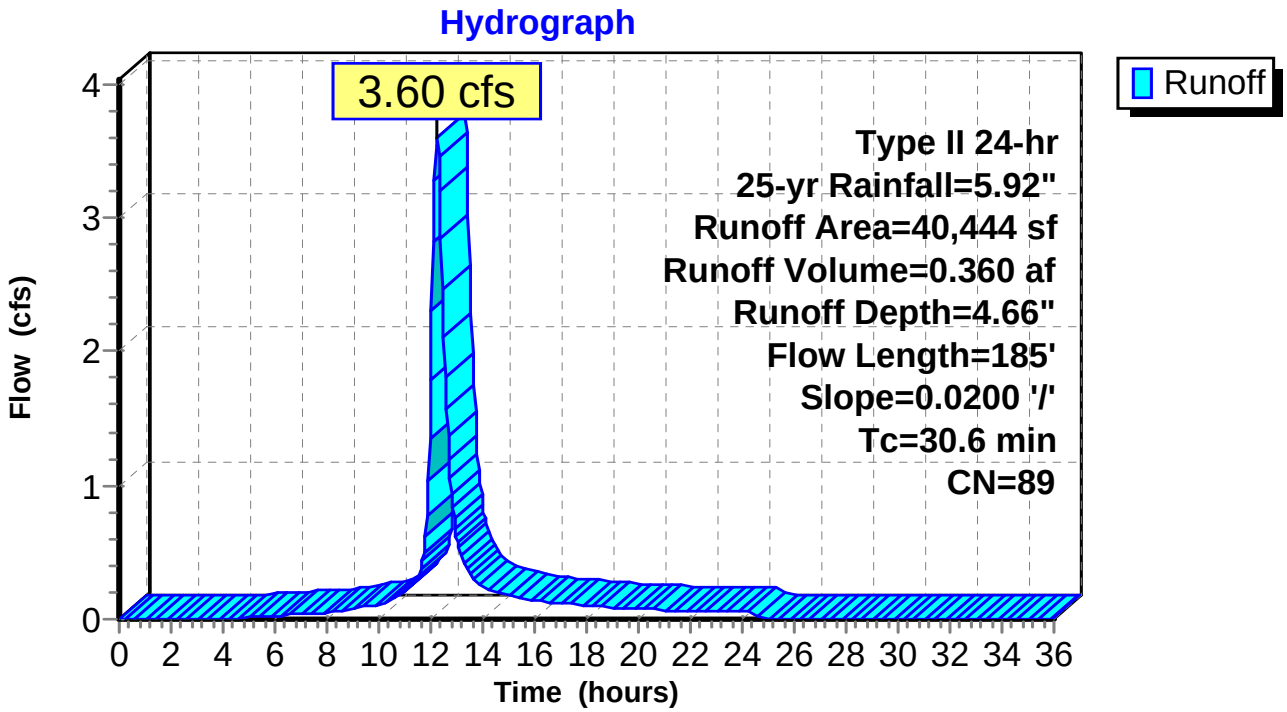
Runoff = 3.60 cfs @ 12.24 hrs, Volume= 0.360 af, Depth= 4.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
	21,255	80	>75% Grass cover, Good, HSG D
*	19,189	98	
	40,444	89	Weighted Average
	21,255		52.55% Pervious Area
	19,189		47.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.8	150	0.0200	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.17"
0.8	35	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	185	Total			

Subcatchment 3S: Subcatchment 3



Summary for Subcatchment 4S: Subcatchment 4

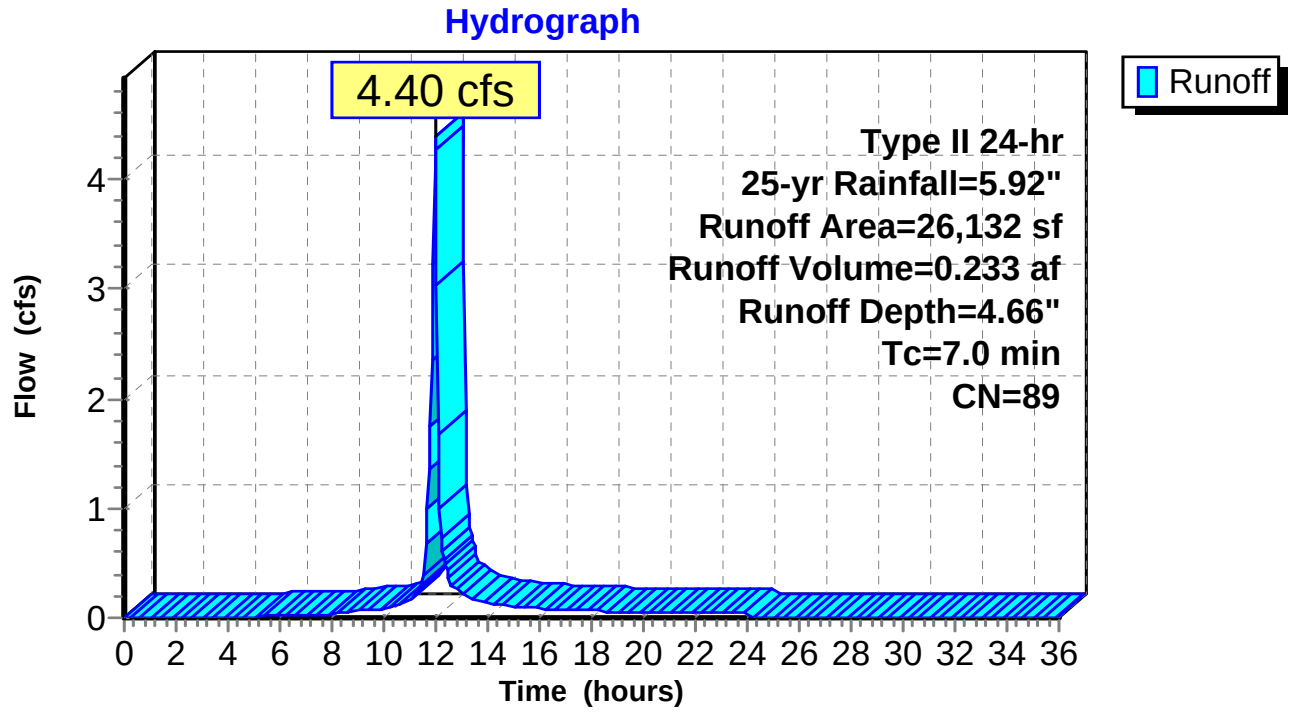
Runoff = 4.40 cfs @ 11.98 hrs, Volume= 0.233 af, Depth= 4.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	13,720	98	
	12,412	80	>75% Grass cover, Good, HSG D
	26,132	89	Weighted Average
	12,412		47.50% Pervious Area
	13,720		52.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 4S: Subcatchment 4



Summary for Subcatchment 5S: Subcatchment 5

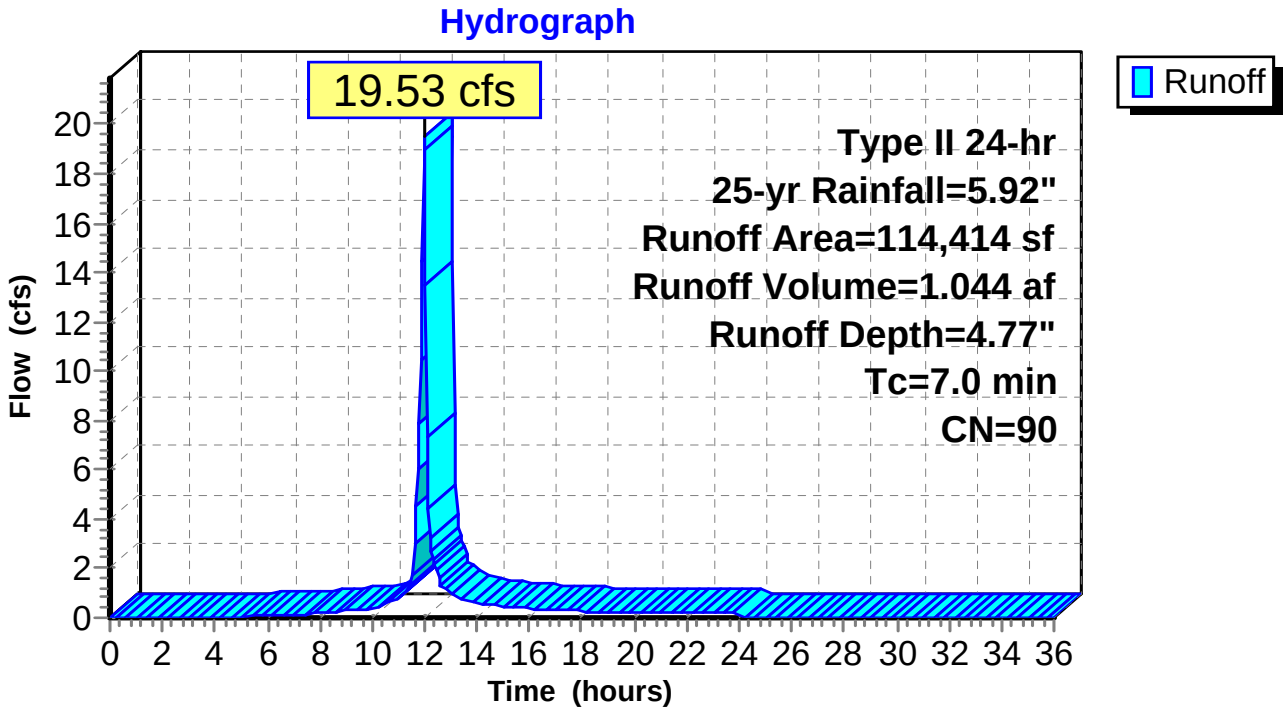
Runoff = 19.53 cfs @ 11.98 hrs, Volume= 1.044 af, Depth= 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	65,087	98	
	49,327	80	>75% Grass cover, Good, HSG D
	114,414	90	Weighted Average
	49,327		43.11% Pervious Area
	65,087		56.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 5S: Subcatchment 5



Summary for Subcatchment 6S: Subcatchment 6

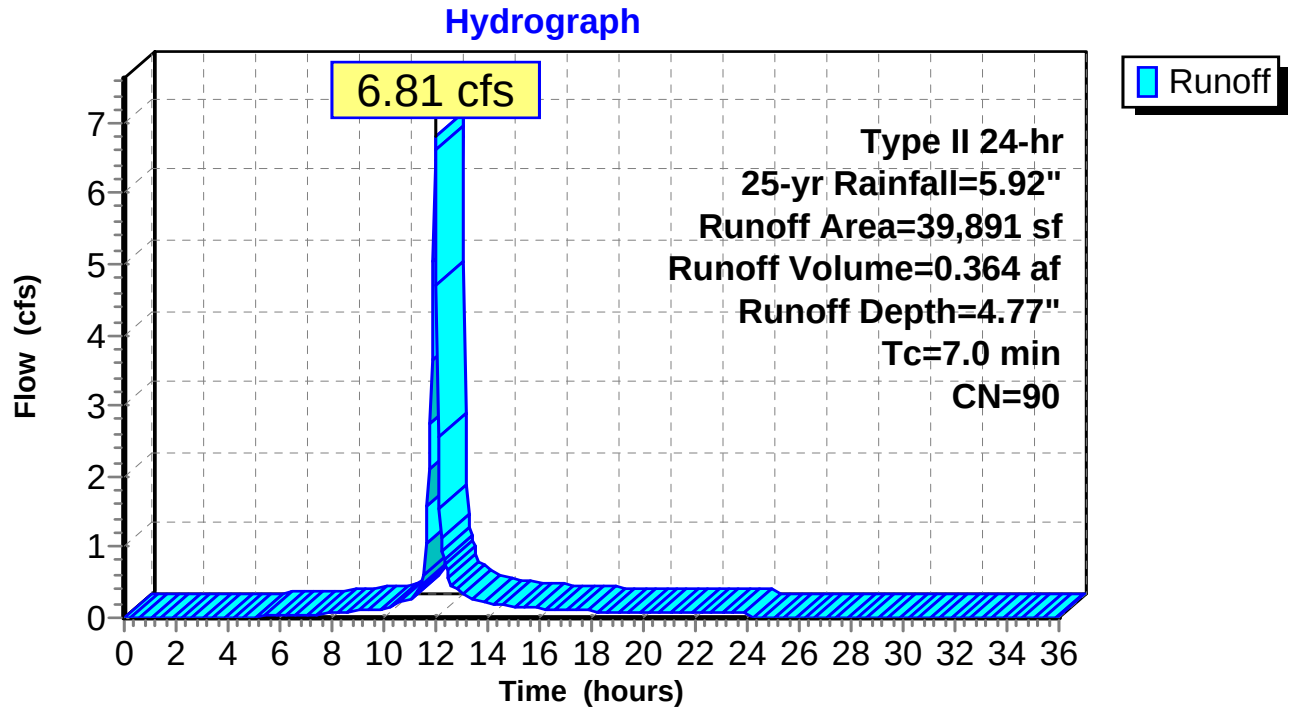
Runoff = 6.81 cfs @ 11.98 hrs, Volume= 0.364 af, Depth= 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	21,718	98	
	18,173	80	>75% Grass cover, Good, HSG D
	39,891	90	Weighted Average
	18,173		45.56% Pervious Area
	21,718		54.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 6S: Subcatchment 6



Summary for Subcatchment 7S: Subcatchment 7

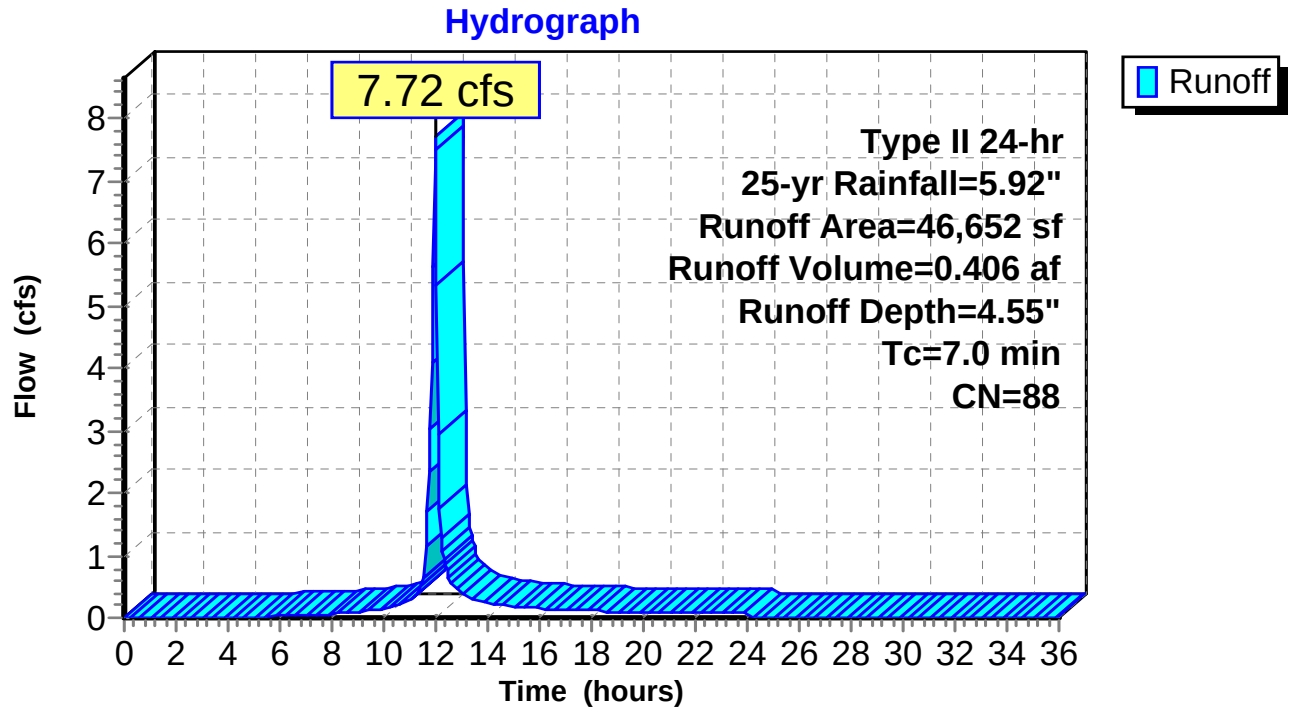
Runoff = 7.72 cfs @ 11.98 hrs, Volume= 0.406 af, Depth= 4.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	19,759	98	
	26,893	80	>75% Grass cover, Good, HSG D
	46,652	88	Weighted Average
	26,893		57.65% Pervious Area
	19,759		42.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 7S: Subcatchment 7



Summary for Subcatchment 8S: Subcatchment 8

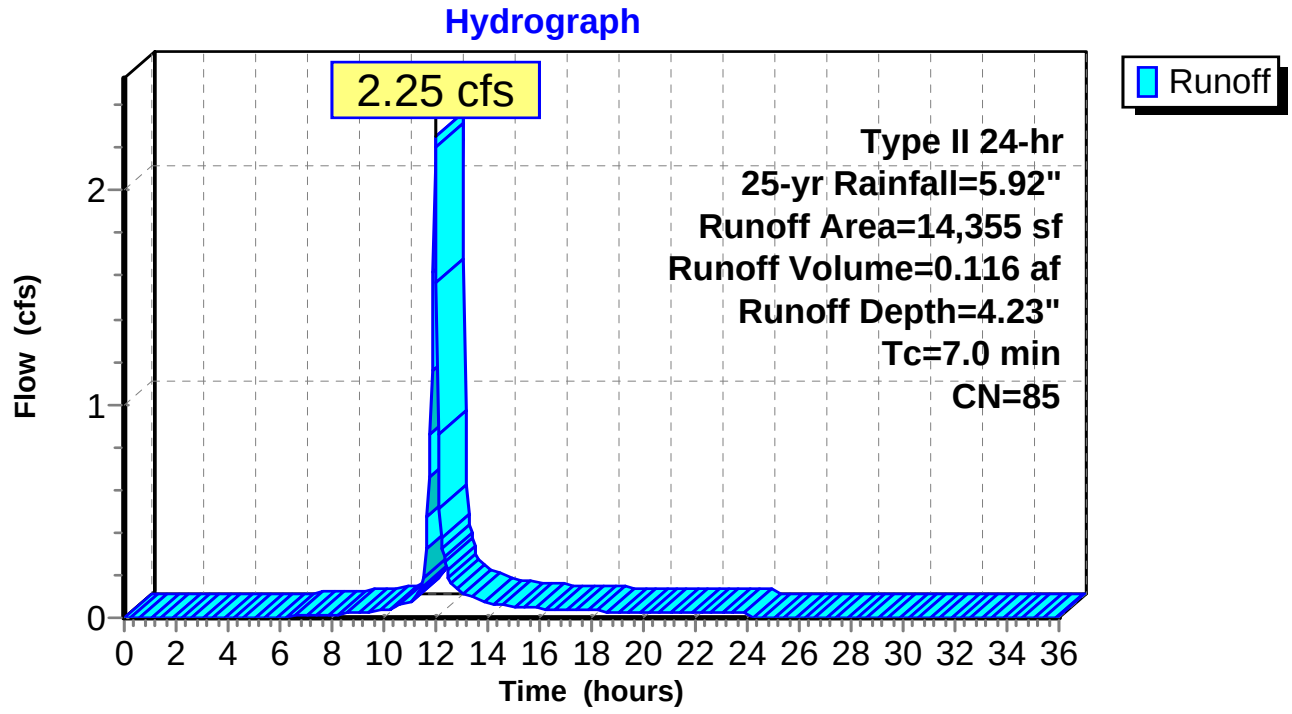
Runoff = 2.25 cfs @ 11.98 hrs, Volume= 0.116 af, Depth= 4.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
	10,604	80	>75% Grass cover, Good, HSG D
*	3,751	98	
	14,355	85	Weighted Average
	10,604		73.87% Pervious Area
	3,751		26.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 8S: Subcatchment 8



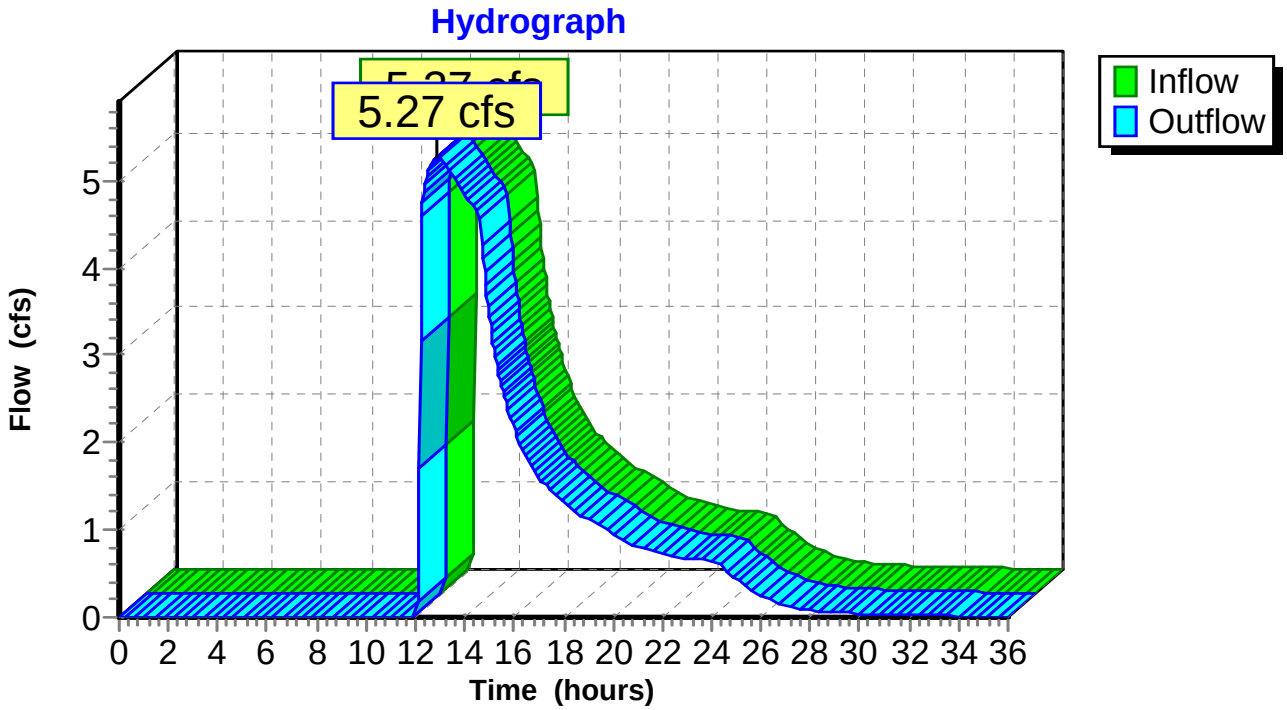
Summary for Reach 1SP: Study Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	5.27 cfs @	12.85 hrs, Volume=	2.178 af
Outflow	=	5.27 cfs @	12.85 hrs, Volume=	2.178 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 1SP: Study Point 1



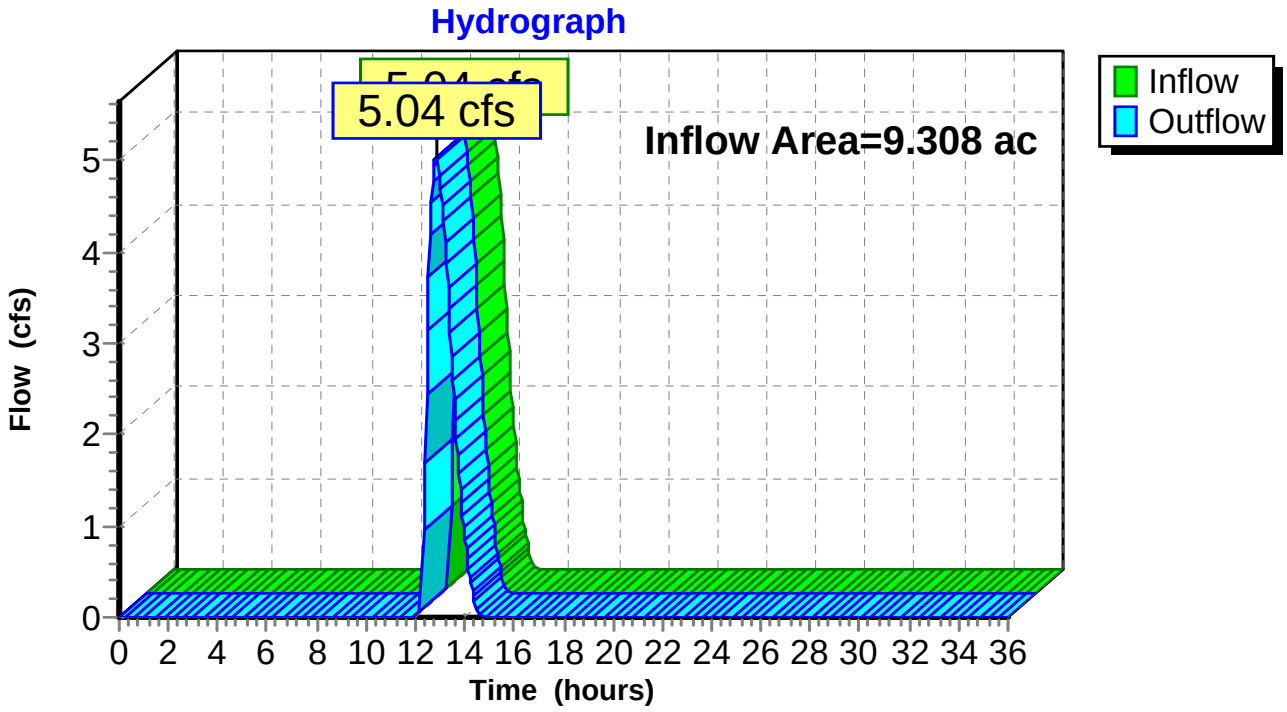
Summary for Reach 2SP: Study Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.308 ac, 47.83% Impervious, Inflow Depth = 0.60" for 25-yr event
Inflow = 5.04 cfs @ 12.85 hrs, Volume= 0.462 af
Outflow = 5.04 cfs @ 12.85 hrs, Volume= 0.462 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 2SP: Study Point 2



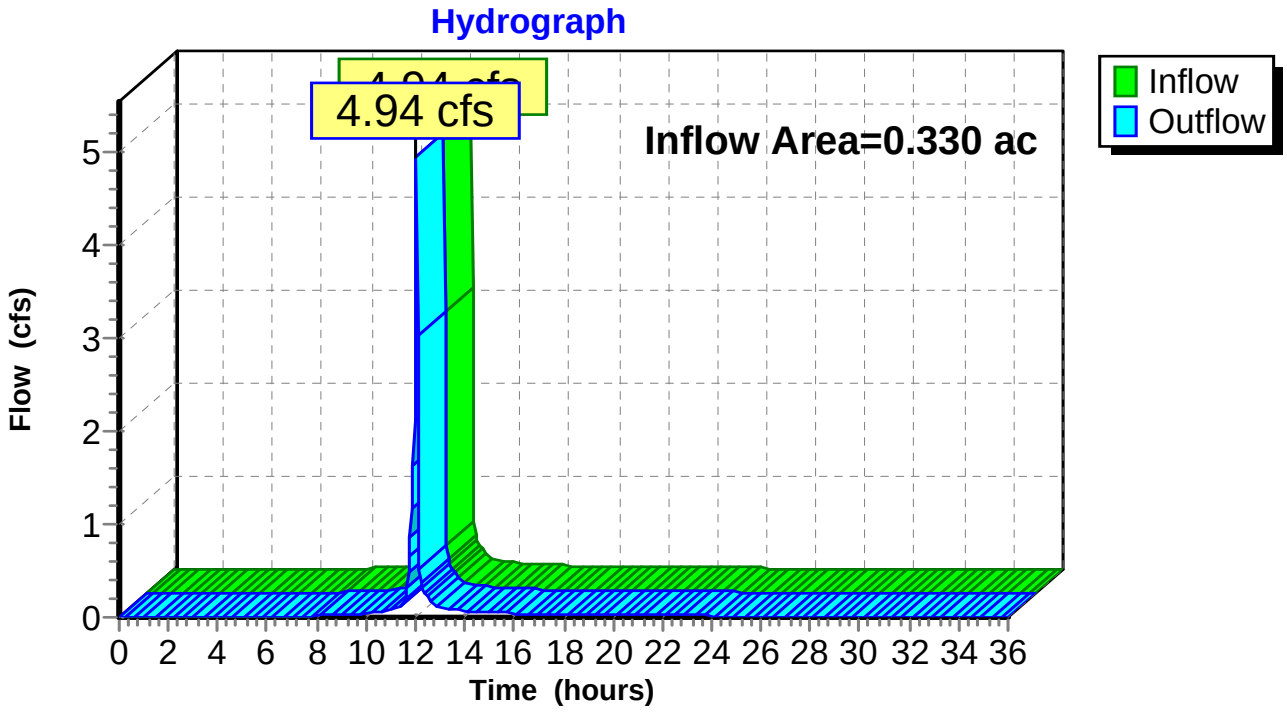
Summary for Reach 3SP: Study Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.330 ac, 26.13% Impervious, Inflow Depth = 5.14" for 25-yr event
Inflow = 4.94 cfs @ 12.02 hrs, Volume= 0.141 af
Outflow = 4.94 cfs @ 12.02 hrs, Volume= 0.141 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 3SP: Study Point 3



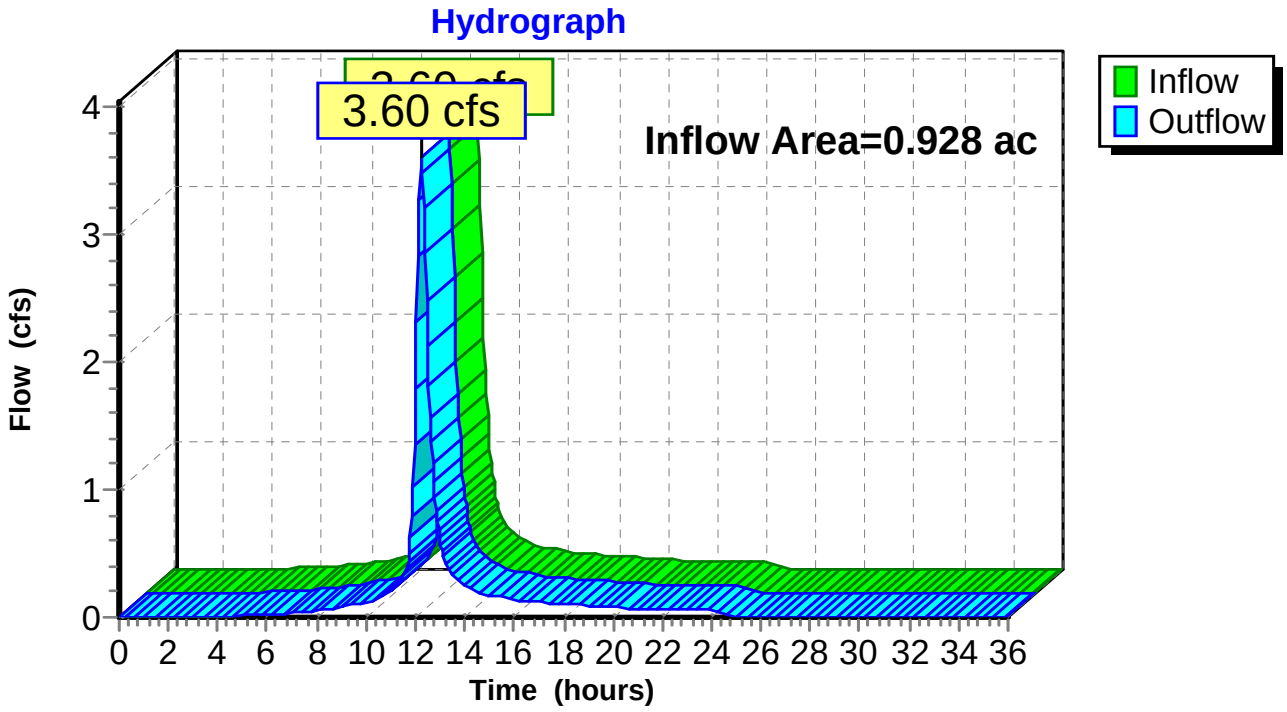
Summary for Reach 4SP: Study Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.928 ac, 47.45% Impervious, Inflow Depth = 4.66" for 25-yr event
Inflow = 3.60 cfs @ 12.24 hrs, Volume= 0.360 af
Outflow = 3.60 cfs @ 12.24 hrs, Volume= 0.360 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 4SP: Study Point 4



Summary for Pond 1P: Wetland A

[79] Warning: Submerged Pond 8P Secondary device # 2 INLET by 0.78'
[81] Warning: Exceeded Pond 9P by 0.41' @ 12.80 hrs

Inflow Area = 9.308 ac, 47.83% Impervious, Inflow Depth = 4.25" for 25-yr event
Inflow = 31.15 cfs @ 12.08 hrs, Volume= 3.297 af
Outflow = 10.32 cfs @ 12.85 hrs, Volume= 2.640 af, Atten= 67%, Lag= 46.2 min
Primary = 5.04 cfs @ 12.85 hrs, Volume= 0.462 af
Secondary = 5.27 cfs @ 12.85 hrs, Volume= 2.178 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Starting Elev= 63.50' Surf.Area= 14,739 sf Storage= 17,429 cf
Peak Elev= 66.48' @ 12.85 hrs Surf.Area= 28,109 sf Storage= 80,578 cf (63,149 cf above start)

Plug-Flow detention time= 243.2 min calculated for 2.237 af (68% of inflow)
Center-of-Mass det. time= 107.9 min (941.8 - 833.9)

Volume	Invert	Avail.Storage	Storage Description
#1	62.00'	209,276 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

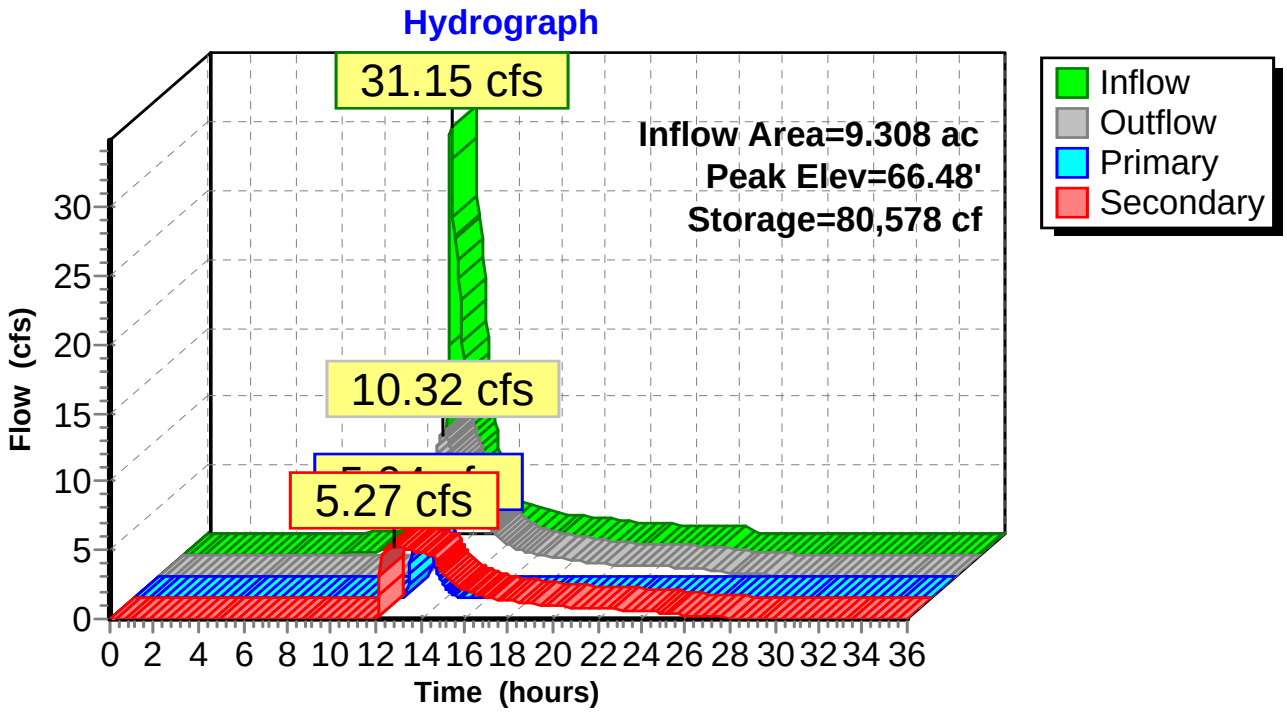
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.00	8,500	0	0
65.00	20,977	44,216	44,216
70.00	45,047	165,060	209,276

Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**3.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Secondary	62.86'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.86' / 58.69' S= 0.0869 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#3	Device 2	65.08'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=5.04 cfs @ 12.85 hrs HW=66.48' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 5.04 cfs @ 2.30 fps)

Secondary OutFlow Max=5.27 cfs @ 12.85 hrs HW=66.48' (Free Discharge)
↑**2=Culvert** (Inlet Controls 5.27 cfs @ 6.72 fps)
↑**3=Sharp-Crested Rectangular Weir** (Passes 5.27 cfs of 14.10 cfs potential flow)

Pond 1P: Wetland A



Summary for Pond 2P: Wetland B

Inflow Area = 2.082 ac, 66.45% Impervious, Inflow Depth = 4.99" for 25-yr event
Inflow = 8.00 cfs @ 12.27 hrs, Volume= 0.866 af
Outflow = 7.52 cfs @ 12.36 hrs, Volume= 0.671 af, Atten= 6%, Lag= 5.2 min
Primary = 7.52 cfs @ 12.36 hrs, Volume= 0.671 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.31' @ 12.36 hrs Surf.Area= 10,486 sf Storage= 11,061 cf

Plug-Flow detention time= 146.3 min calculated for 0.670 af (77% of inflow)
Center-of-Mass det. time= 62.7 min (862.5 - 799.8)

Volume	Invert	Avail.Storage	Storage Description
#1	67.00'	21,636 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

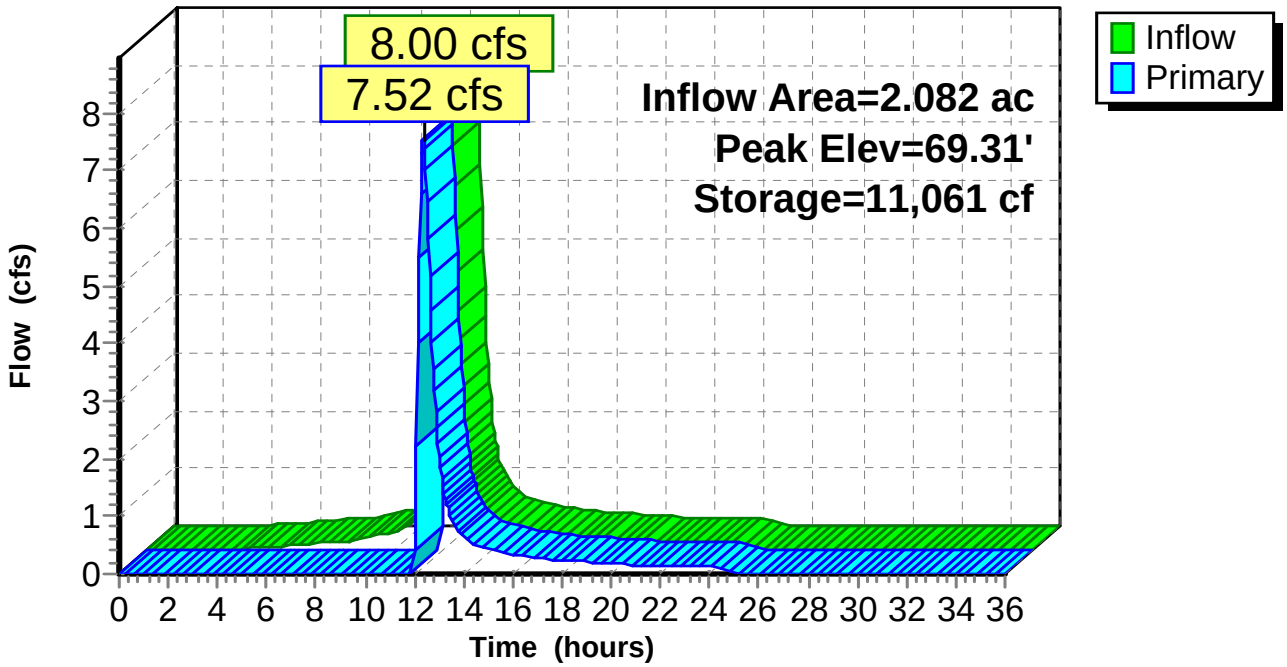
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.00	2,200	0	0
68.00	4,250	3,225	3,225
69.00	6,286	5,268	8,493
70.00	20,000	13,143	21,636

Device	Routing	Invert	Outlet Devices
#1	Primary	69.00'	**18.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=7.49 cfs @ 12.36 hrs HW=69.31' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 7.49 cfs @ 1.36 fps)

Pond 2P: Wetland B

Hydrograph



Summary for Pond 3P: Surface Detention

[79] Warning: Submerged Pond 6P Primary device # 1 INLET by 1.81'
[81] Warning: Exceeded Pond 7P by 0.20' @ 12.25 hrs

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 4.58" for 25-yr event
Inflow = 28.88 cfs @ 11.99 hrs, Volume= 1.581 af
Outflow = 23.53 cfs @ 12.07 hrs, Volume= 1.580 af, Atten= 19%, Lag= 4.5 min
Primary = 8.22 cfs @ 12.07 hrs, Volume= 1.435 af
Secondary = 15.32 cfs @ 12.07 hrs, Volume= 0.145 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.83' @ 12.07 hrs Surf.Area= 7,804 sf Storage= 16,129 cf

Plug-Flow detention time= 18.2 min calculated for 1.578 af (100% of inflow)
Center-of-Mass det. time= 17.9 min (816.6 - 798.7)

Volume	Invert	Avail.Storage	Storage Description
#1	69.00'	21,926 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

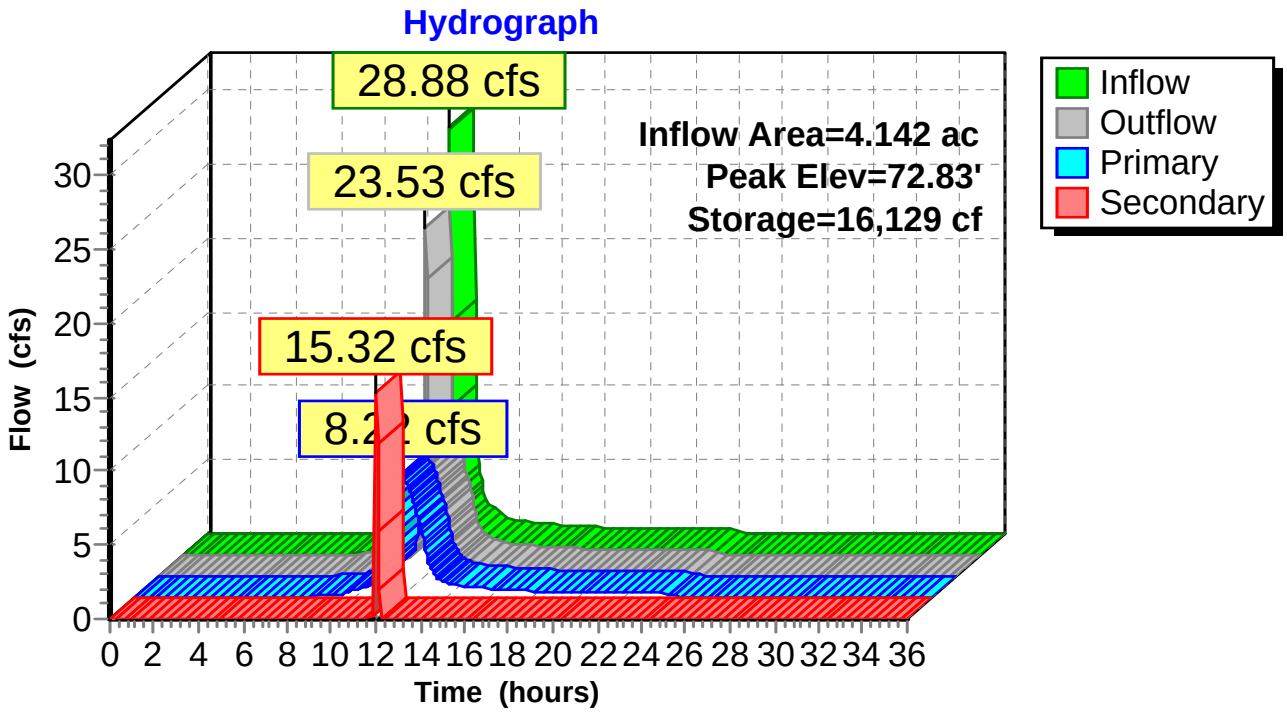
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.00	400	0	0
70.00	2,991	1,696	1,696
72.00	5,812	8,803	10,499
73.50	9,425	11,428	21,926

Device	Routing	Invert	Outlet Devices
#1	Primary	69.10'	**15.0" Round Culvert** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 69.10' / 68.75' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	72.50'	**35.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=8.17 cfs @ 12.07 hrs HW=72.79' (Free Discharge)
1=Culvert (Inlet Controls 8.17 cfs @ 6.66 fps)

Secondary OutFlow Max=13.45 cfs @ 12.07 hrs HW=72.79' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 13.45 cfs @ 1.31 fps)

Pond 3P: Surface Detention



Summary for Pond 4P: Surface Detention

Inflow Area = 1.071 ac, 42.35% Impervious, Inflow Depth = 4.55" for 25-yr event
Inflow = 7.72 cfs @ 11.98 hrs, Volume= 0.406 af
Outflow = 6.74 cfs @ 12.03 hrs, Volume= 0.398 af, Atten= 13%, Lag= 3.3 min
Primary = 0.42 cfs @ 12.03 hrs, Volume= 0.253 af
Secondary = 3.17 cfs @ 12.03 hrs, Volume= 0.025 af
Tertiary = 3.14 cfs @ 12.03 hrs, Volume= 0.119 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 70.59' @ 12.03 hrs Surf.Area= 3,126 sf Storage= 5,247 cf

Plug-Flow detention time= 79.1 min calculated for 0.398 af (98% of inflow)
Center-of-Mass det. time= 66.0 min (855.7 - 789.7)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	10,990 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
64.00	13	0	0
67.00	71	126	126
68.00	928	500	626
69.00	1,378	1,153	1,779
70.00	2,348	1,863	3,642
72.00	5,000	7,348	10,990

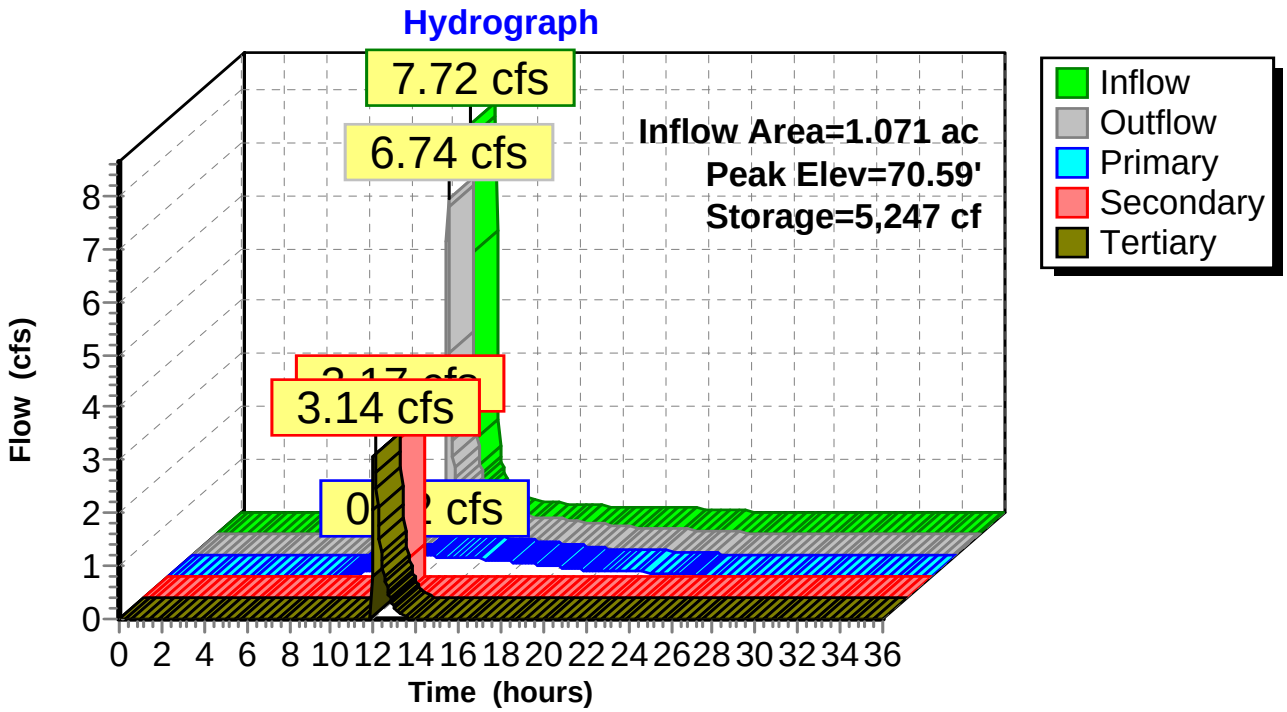
Device	Routing	Invert	Outlet Devices
#1	Primary	67.66'	**3.5" Round Culvert** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.66' / 67.65' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 0.07 sf
#2	Tertiary	69.66'	**1.2' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Secondary	70.50'	**45.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.42 cfs @ 12.03 hrs HW=70.58' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.42 cfs @ 6.33 fps)

Secondary OutFlow Max=2.68 cfs @ 12.03 hrs HW=70.58' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** (Weir Controls 2.68 cfs @ 0.75 fps)

Tertiary OutFlow Max=3.09 cfs @ 12.03 hrs HW=70.58' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 3.09 cfs @ 2.81 fps)

Pond 4P: Surface Detention



Summary for Pond 5P: OCS-4P

[57] Hint: Peaked at 69.40' (Flood elevation advised)
[79] Warning: Submerged Pond 4P Primary device # 1 INLET by 1.73'

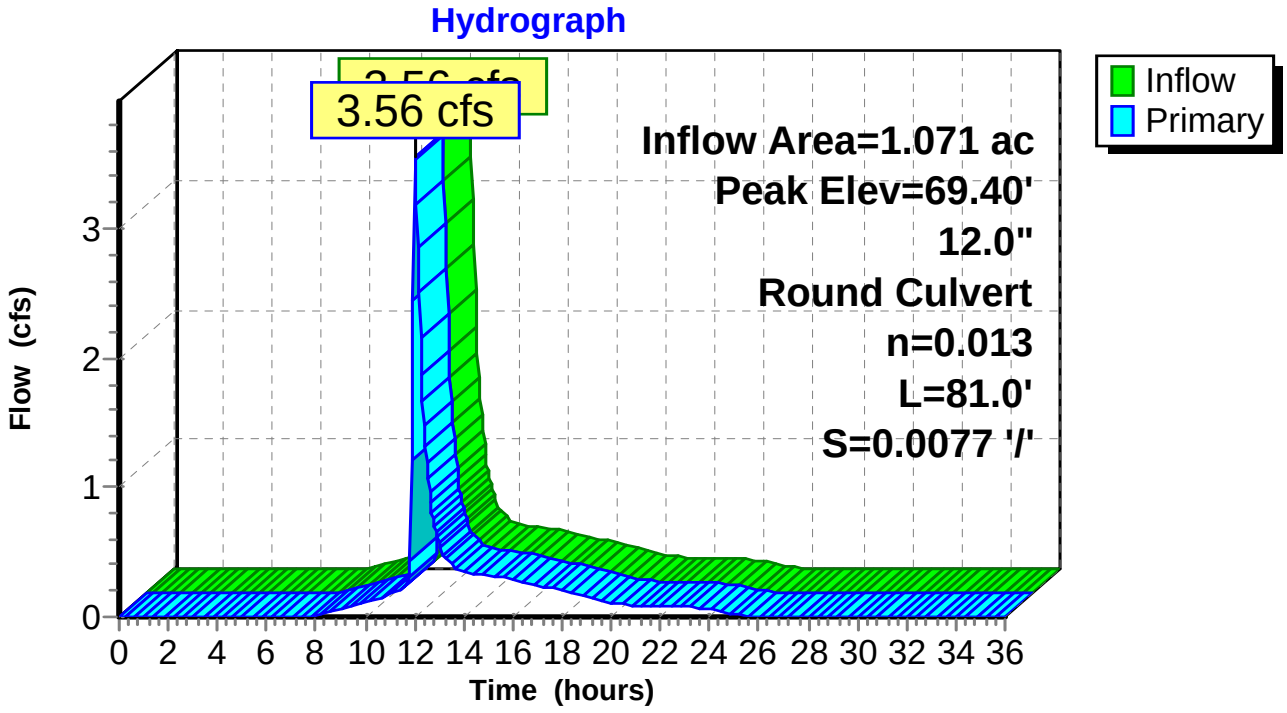
Inflow Area = 1.071 ac, 42.35% Impervious, Inflow Depth = 4.17" for 25-yr event
Inflow = 3.56 cfs @ 12.03 hrs, Volume= 0.372 af
Outflow = 3.56 cfs @ 12.03 hrs, Volume= 0.372 af, Atten= 0%, Lag= 0.0 min
Primary = 3.56 cfs @ 12.03 hrs, Volume= 0.372 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.40' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	67.48'	**12.0" Round Culvert** L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.48' / 66.86' S= 0.0077 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=3.52 cfs @ 12.03 hrs HW=69.37' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.52 cfs @ 4.48 fps)

Pond 5P: OCS-4P



Summary for Pond 6P: Atrium Surface Detention

Inflow Area = 2.627 ac, 56.89% Impervious, Inflow Depth = 4.77" for 25-yr event
Inflow = 19.53 cfs @ 11.98 hrs, Volume= 1.044 af
Outflow = 18.97 cfs @ 12.00 hrs, Volume= 0.987 af, Atten= 3%, Lag= 1.1 min
Primary = 18.97 cfs @ 12.00 hrs, Volume= 0.987 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 74.10' @ 12.00 hrs Surf.Area= 3,837 sf Storage= 4,447 cf

Plug-Flow detention time= 54.7 min calculated for 0.987 af (95% of inflow)
Center-of-Mass det. time= 22.9 min (805.6 - 782.8)

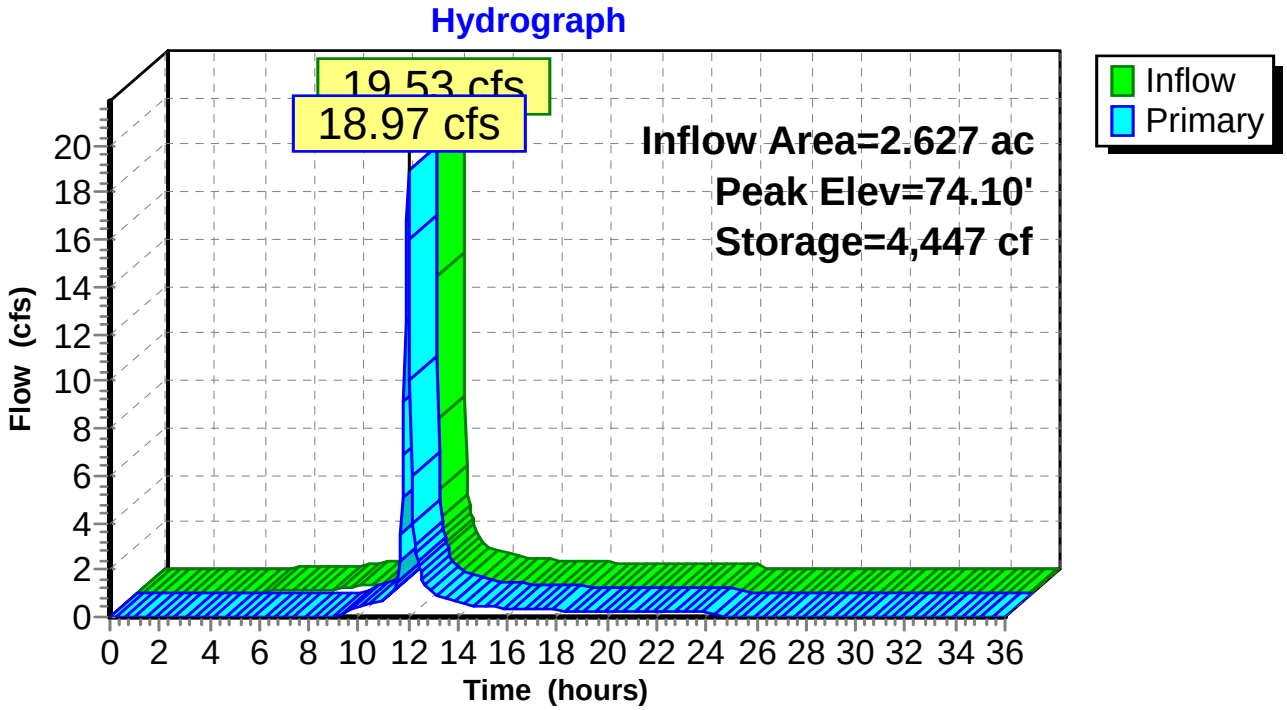
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	5,026 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	55	0	0
72.00	327	382	382
73.00	1,694	1,011	1,393
74.25	4,120	3,634	5,026

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.1" Round Culvert** L= 220.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.00' / 69.20' S= 0.0082 '/' Cc= 0.900 n= 0.013, Flow Area= 0.00 sf
#2	Primary	73.50'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=18.85 cfs @ 12.00 hrs HW=74.10' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.00 cfs @ 0.28 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 18.85 cfs @ 2.09 fps)

Pond 6P: Atrium Surface Detention



Summary for Pond 7P: Riprap Surface Detention

Inflow Area = 0.600 ac, 52.50% Impervious, Inflow Depth = 4.66" for 25-yr event
Inflow = 4.40 cfs @ 11.98 hrs, Volume= 0.233 af
Outflow = 3.26 cfs @ 12.04 hrs, Volume= 0.231 af, Atten= 26%, Lag= 3.7 min
Primary = 3.26 cfs @ 12.04 hrs, Volume= 0.231 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 73.85' @ 12.04 hrs Surf.Area= 766 sf Storage= 818 cf

Plug-Flow detention time= 13.6 min calculated for 0.231 af (99% of inflow)
Center-of-Mass det. time= 7.8 min (794.1 - 786.3)

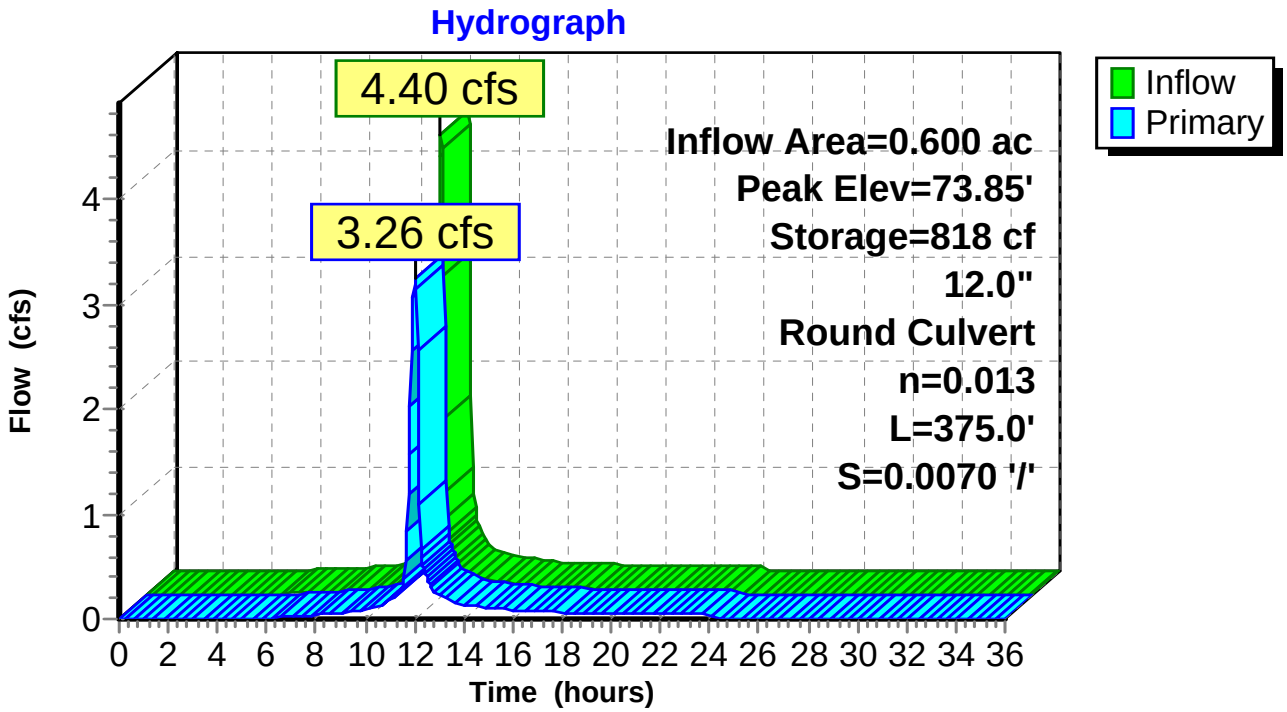
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	2,180 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	50	0	0
73.00	310	360	360
74.00	846	578	938
75.00	1,637	1,242	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**12.0" Round Culvert** L= 375.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 69.20' S= 0.0070 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=3.25 cfs @ 12.04 hrs HW=73.83' (Free Discharge)
1=Culvert (Barrel Controls 3.25 cfs @ 4.13 fps)

Pond 7P: Riprap Surface Detention



Summary for Pond 8P: OCS-DMH7

[57] Hint: Peaked at 67.23' (Flood elevation advised)

Inflow Area =	4.142 ac,	55.71% Impervious,	Inflow Depth =	4.16" for 25-yr event
Inflow =	8.22 cfs @	12.07 hrs, Volume=	1.435 af	
Outflow =	8.22 cfs @	12.07 hrs, Volume=	1.435 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.78 cfs @	12.07 hrs, Volume=	0.045 af	
Secondary =	7.44 cfs @	12.07 hrs, Volume=	1.390 af	

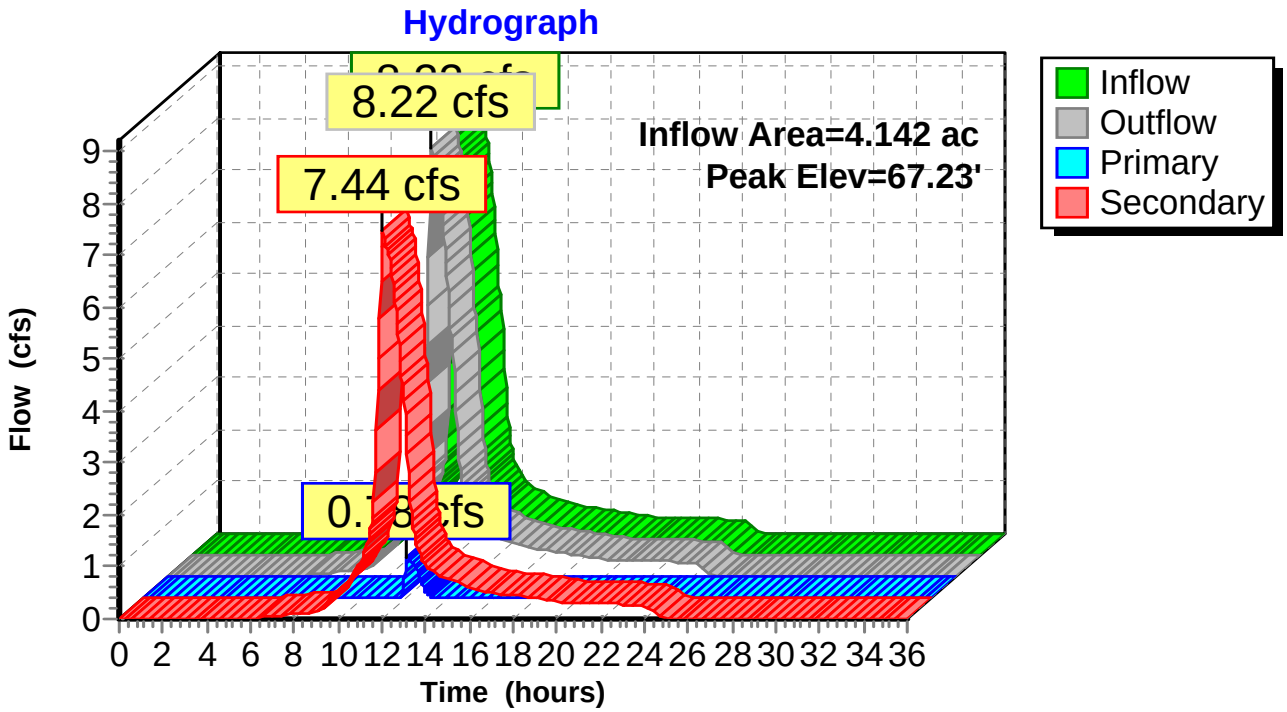
Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.23' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.60' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	65.70'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=0.76 cfs @ 12.07 hrs HW=67.22' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.76 cfs @ 2.12 fps)

Secondary OutFlow Max=7.41 cfs @ 12.07 hrs HW=67.22' (Free Discharge)
↑**2=Culvert** (Barrel Controls 7.41 cfs @ 3.99 fps)

Pond 8P: OCS-DMH7



Summary for Pond 9P: UG Detention

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 0.06" for 25-yr event
Inflow = 0.27 cfs @ 12.07 hrs, Volume= 0.022 af
Outflow = 0.15 cfs @ 12.91 hrs, Volume= 0.022 af, Atten= 43%, Lag= 50.5 min
Primary = 0.15 cfs @ 12.91 hrs, Volume= 0.022 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 66.08' @ 12.91 hrs Surf.Area= 1,536 sf Storage= 549 cf

Plug-Flow detention time= 88.2 min calculated for 0.022 af (99% of inflow)
Center-of-Mass det. time= 89.2 min (834.0 - 744.8)

Volume	Invert	Avail.Storage	Storage Description
#1	65.70'	2,488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 2,619 cf Overall x 95.0% Voids

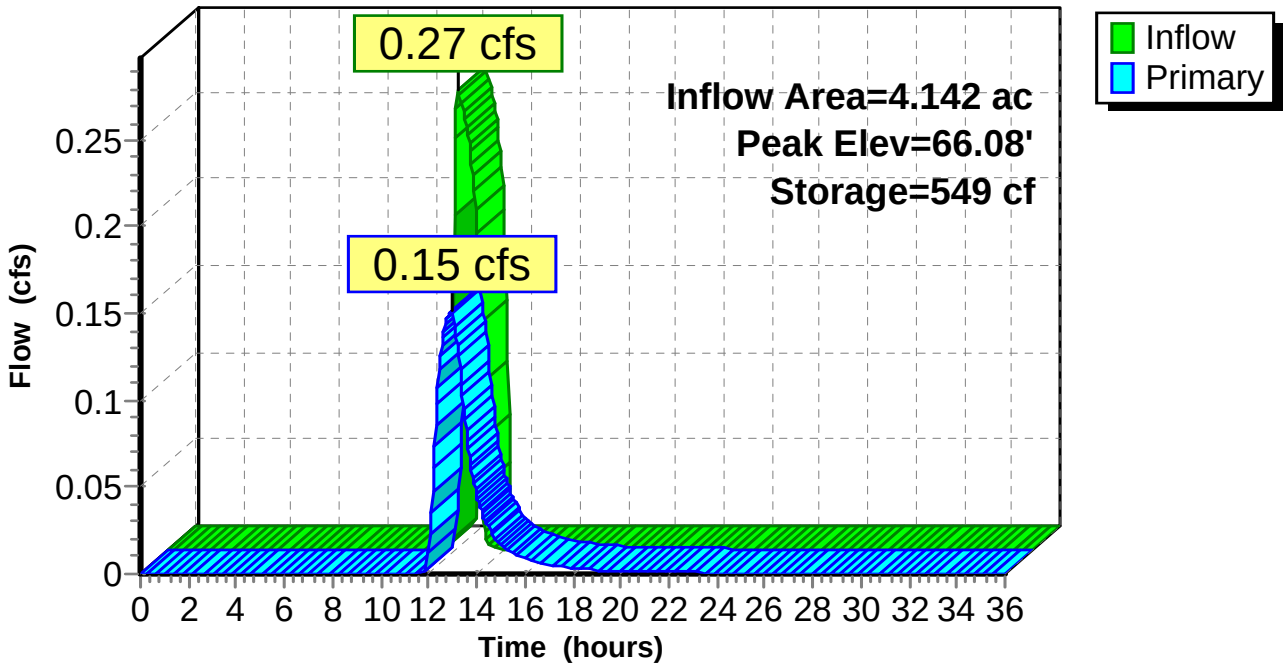
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
65.70	1,536	0	0
67.40	1,536	2,611	2,611
67.41	5	8	2,619

Device	Routing	Invert	Outlet Devices
#1	Primary	65.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.60' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Primary	67.00'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.90' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf

Primary OutFlow Max=0.15 cfs @ 12.91 hrs HW=66.08' (Free Discharge)
└─**1=Culvert** (Inlet Controls 0.15 cfs @ 1.74 fps)
└─**2=Culvert** (Controls 0.00 cfs)

Pond 9P: UG Detention

Hydrograph



Summary for Pond 10P: Isolator Row x5

[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[81] Warning: Exceeded Pond 8P by 0.90' @ 35.95 hrs

Inflow Area = 4.142 ac, 55.71% Impervious, Inflow Depth = 0.13" for 25-yr event
Inflow = 0.78 cfs @ 12.07 hrs, Volume= 0.045 af
Outflow = 0.78 cfs @ 12.07 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.1 min
Primary = 0.27 cfs @ 12.07 hrs, Volume= 0.022 af
Secondary = 0.51 cfs @ 12.07 hrs, Volume= 0.023 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.41' @ 12.07 hrs Surf.Area= 0.001 ac Storage= 0.001 af

Plug-Flow detention time= 1.8 min calculated for 0.045 af (100% of inflow)
Center-of-Mass det. time= 1.9 min (740.6 - 738.6)

Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	0.002 af	**ADS_StormTech RC-310** x 5 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 1 rows

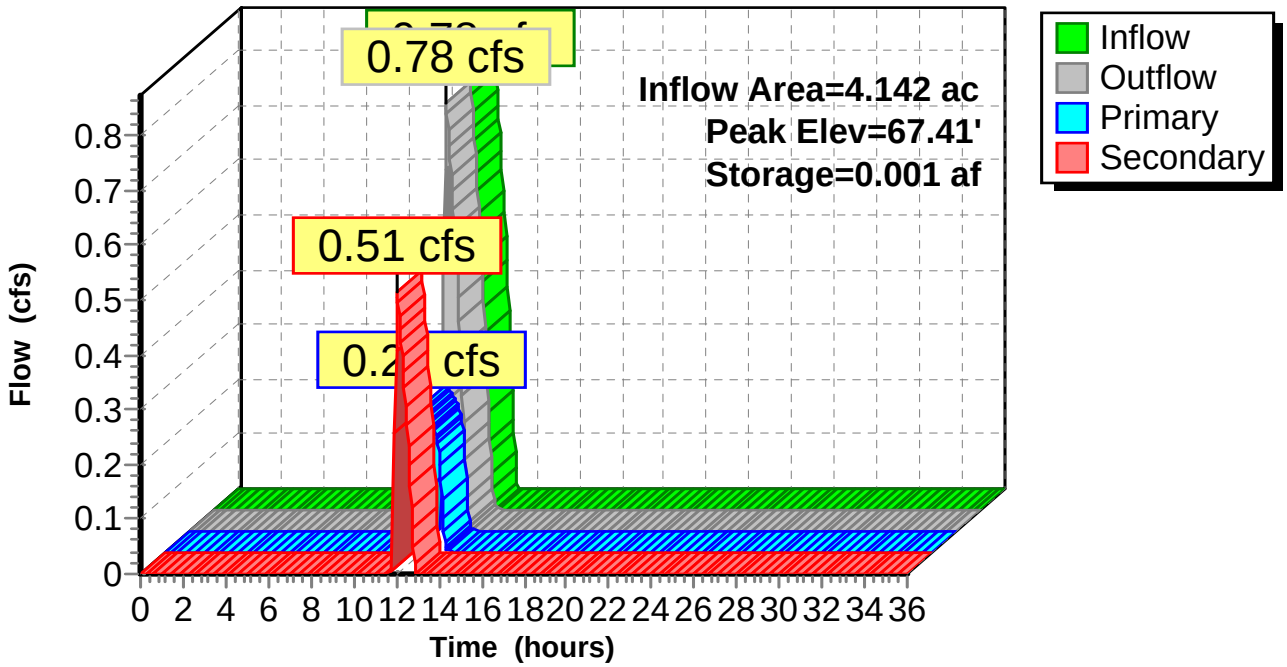
Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.55' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Secondary	67.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.55' S= 0.0090 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

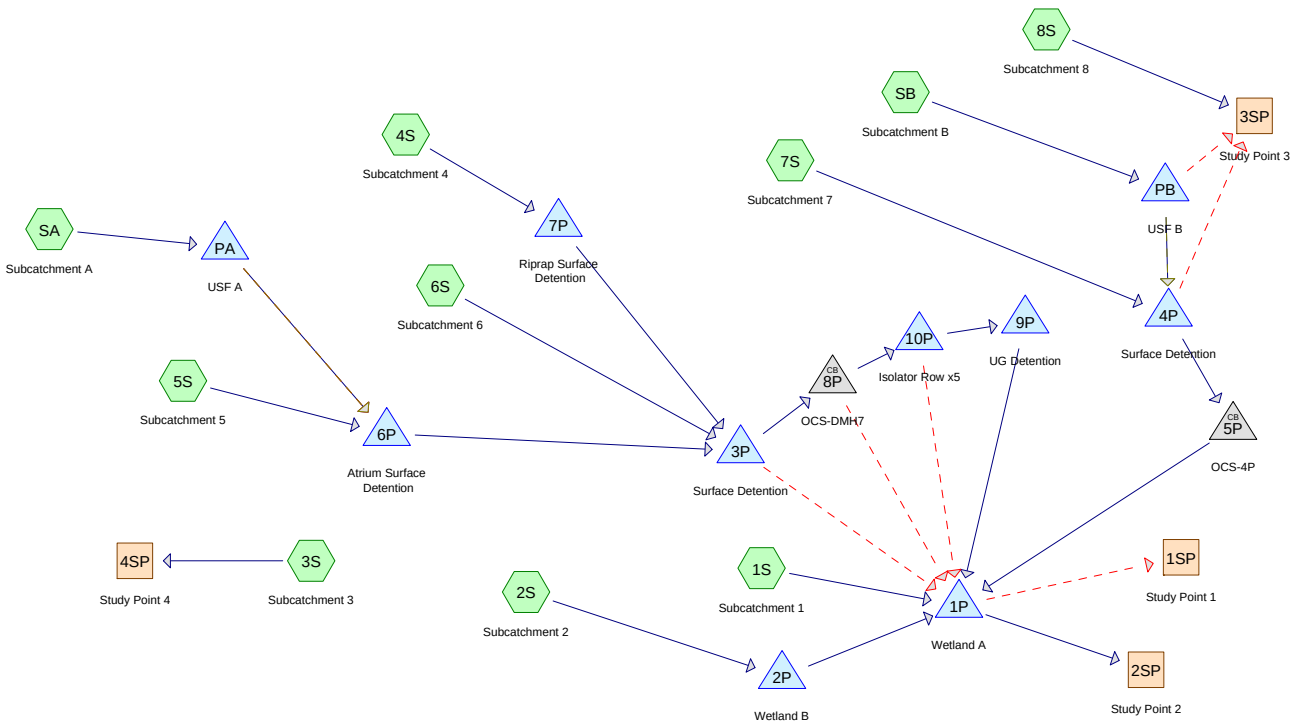
Primary OutFlow Max=0.26 cfs @ 12.07 hrs HW=67.40' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.26 cfs @ 3.03 fps)

Secondary OutFlow Max=0.50 cfs @ 12.07 hrs HW=67.40' (Free Discharge)
↑—**2=Culvert** (Inlet Controls 0.50 cfs @ 1.70 fps)

Pond 10P: Isolator Row x5

Hydrograph





Subcat Reach Pond Link

Routing Diagram for Post-Development Cedars Model 17-10-16
Prepared by Microsoft, Printed 11/17/2017
HydroCAD® 10.00-12 s/n 01135 © 2014 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.370	98	(1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, SA, SB)
5.196	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, SA, SB)
10.566	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.196	HSG D	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, SA, SB
5.370	Other	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, SA, SB
10.566		**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	0.000	0.000	5.370	5.370		1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, SA, SB
0.000	0.000	0.000	5.196	0.000	5.196	>75% Grass cover, Good	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, SA, SB
0.000	**0.000**	**0.000**	**5.196**	**5.370**	**10.566**	**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	62.86	58.69	48.0	0.0869	0.013	12.0	0.0	0.0
2	3P	69.10	68.75	70.0	0.0050	0.013	15.0	0.0	0.0
3	4P	67.66	67.65	5.0	0.0020	0.013	1.0	0.0	0.0
4	4P	70.25	70.25	1.0	0.0000	0.013	6.0	0.0	0.0
5	5P	67.48	66.86	81.0	0.0077	0.013	12.0	0.0	0.0
6	6P	71.00	69.20	220.0	0.0082	0.013	0.1	0.0	0.0
7	7P	71.83	69.20	375.0	0.0070	0.013	12.0	0.0	0.0
8	8P	66.60	66.60	10.0	0.0000	0.013	12.0	0.0	0.0
9	8P	65.70	65.50	40.0	0.0050	0.013	24.0	0.0	0.0
10	9P	65.70	65.60	10.0	0.0100	0.013	4.0	0.0	0.0
11	9P	67.00	66.90	10.0	0.0100	0.013	4.0	0.0	0.0
12	10P	66.60	66.55	5.0	0.0100	0.013	4.0	0.0	0.0
13	10P	67.00	66.55	50.0	0.0090	0.013	12.0	0.0	0.0
14	PA	73.00	72.20	60.0	0.0133	0.013	12.0	0.0	0.0
15	PB	67.50	67.40	20.0	0.0050	0.013	15.0	0.0	0.0

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1 Runoff Area=87,665 sf 15.27% Impervious Runoff Depth=1.58"
Flow Length=177' Slope=0.0100 '/' Tc=29.9 min CN=83 Runoff=2.75 cfs 0.266 af

Subcatchment 2S: Subcatchment 2 Runoff Area=90,682 sf 66.45% Impervious Runoff Depth=2.32"
Flow Length=178' Slope=0.0075 '/' Tc=33.7 min CN=92 Runoff=3.84 cfs 0.403 af

Subcatchment 3S: Subcatchment 3 Runoff Area=40,444 sf 47.45% Impervious Runoff Depth=2.05"
Flow Length=185' Slope=0.0200 '/' Tc=30.6 min CN=89 Runoff=1.63 cfs 0.159 af

Subcatchment 4S: Subcatchment 4 Runoff Area=26,132 sf 52.50% Impervious Runoff Depth=2.05"
Tc=7.0 min CN=89 Runoff=2.03 cfs 0.103 af

Subcatchment 5S: Subcatchment 5 Runoff Area=109,598 sf 64.38% Impervious Runoff Depth=2.32"
Tc=7.0 min CN=92 Runoff=9.39 cfs 0.487 af

Subcatchment 6S: Subcatchment 6 Runoff Area=39,891 sf 54.44% Impervious Runoff Depth=2.14"
Tc=7.0 min CN=90 Runoff=3.21 cfs 0.163 af

Subcatchment 7S: Subcatchment 7 Runoff Area=41,419 sf 41.76% Impervious Runoff Depth=1.97"
Tc=7.0 min CN=88 Runoff=3.11 cfs 0.156 af

Subcatchment 8S: Subcatchment 8 Runoff Area=1,744 sf 3.61% Impervious Runoff Depth=1.45"
Tc=7.0 min CN=81 Runoff=0.10 cfs 0.005 af

Subcatchment SA: Subcatchment A Runoff Area=8,542 sf 67.83% Impervious Runoff Depth=2.32"
Flow Length=65' Slope=0.0300 '/' Tc=7.0 min CN=92 Runoff=0.73 cfs 0.038 af

Subcatchment SB: Subcatchment B Runoff Area=14,118 sf 84.42% Impervious Runoff Depth=2.62"
Tc=7.0 min CN=95 Runoff=1.31 cfs 0.071 af

Reach 1SP: Study Point 1 Inflow=0.99 cfs 0.664 af
Outflow=0.99 cfs 0.664 af

Reach 2SP: Study Point 2 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 3SP: Study Point 3 Inflow=0.10 cfs 0.005 af
Outflow=0.10 cfs 0.005 af

Reach 4SP: Study Point 4 Inflow=1.63 cfs 0.159 af
Outflow=1.63 cfs 0.159 af

Pond 1P: Wetland A Peak Elev=65.32' Storage=51,207 cf Inflow=8.55 cfs 1.329 af
Primary=0.00 cfs 0.000 af Secondary=0.99 cfs 0.664 af Outflow=0.99 cfs 0.664 af

Pond 2P: Wetland B Peak Elev=69.11' Storage=9,275 cf Inflow=3.84 cfs 0.403 af
Outflow=1.59 cfs 0.208 af

Pond 3P: Surface Detention Peak Elev=71.49' Storage=7,720 cf Inflow=14.09 cfs 0.718 af
Primary=6.20 cfs 0.717 af Secondary=0.00 cfs 0.000 af Outflow=6.20 cfs 0.717 af

Pond 4P: Surface Detention Peak Elev=70.47' Storage=4,082 cf Inflow=3.14 cfs 0.212 af
Primary=0.26 cfs 0.139 af Secondary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.139 af

Pond 5P: OCS-4P Peak Elev=67.76' Inflow=0.26 cfs 0.139 af
12.0" Round Culvert n=0.013 L=81.0' S=0.0077 '/' Outflow=0.26 cfs 0.139 af

Pond 6P: Atrium Surface Detention Peak Elev=73.89' Storage=3,658 cf Inflow=9.40 cfs 0.511 af
Outflow=9.01 cfs 0.454 af

Pond 7P: Riprap Surface Detention Peak Elev=72.74' Storage=285 cf Inflow=2.03 cfs 0.103 af
12.0" Round Culvert n=0.013 L=375.0' S=0.0070 '/' Outflow=1.93 cfs 0.101 af

Pond 8P: OCS-DMH7 Peak Elev=67.02' Inflow=6.20 cfs 0.717 af
Primary=0.36 cfs 0.011 af Secondary=5.84 cfs 0.705 af Outflow=6.20 cfs 0.717 af

Pond 9P: UG Detention Peak Elev=65.91' Storage=300 cf Inflow=0.22 cfs 0.009 af
Outflow=0.07 cfs 0.009 af

Pond 10P: Isolator Row x5 Peak Elev=67.21' Storage=0.001 af Inflow=0.36 cfs 0.011 af
Primary=0.22 cfs 0.009 af Secondary=0.14 cfs 0.002 af Outflow=0.37 cfs 0.011 af

Pond PA: USF A Peak Elev=76.78' Storage=1,128 cf Inflow=0.73 cfs 0.038 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Tertiary=0.02 cfs 0.024 af Outflow=0.02 cfs 0.024 af

Pond PB: USF B Peak Elev=71.59' Storage=2,056 cf Inflow=1.31 cfs 0.071 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Tertiary=0.05 cfs 0.056 af Outflow=0.05 cfs 0.056 af

Total Runoff Area = 10.566 ac Runoff Volume = 1.850 af Average Runoff Depth = 2.10"
49.18% Pervious = 5.196 ac 50.82% Impervious = 5.370 ac

Summary for Subcatchment 1S: Subcatchment 1

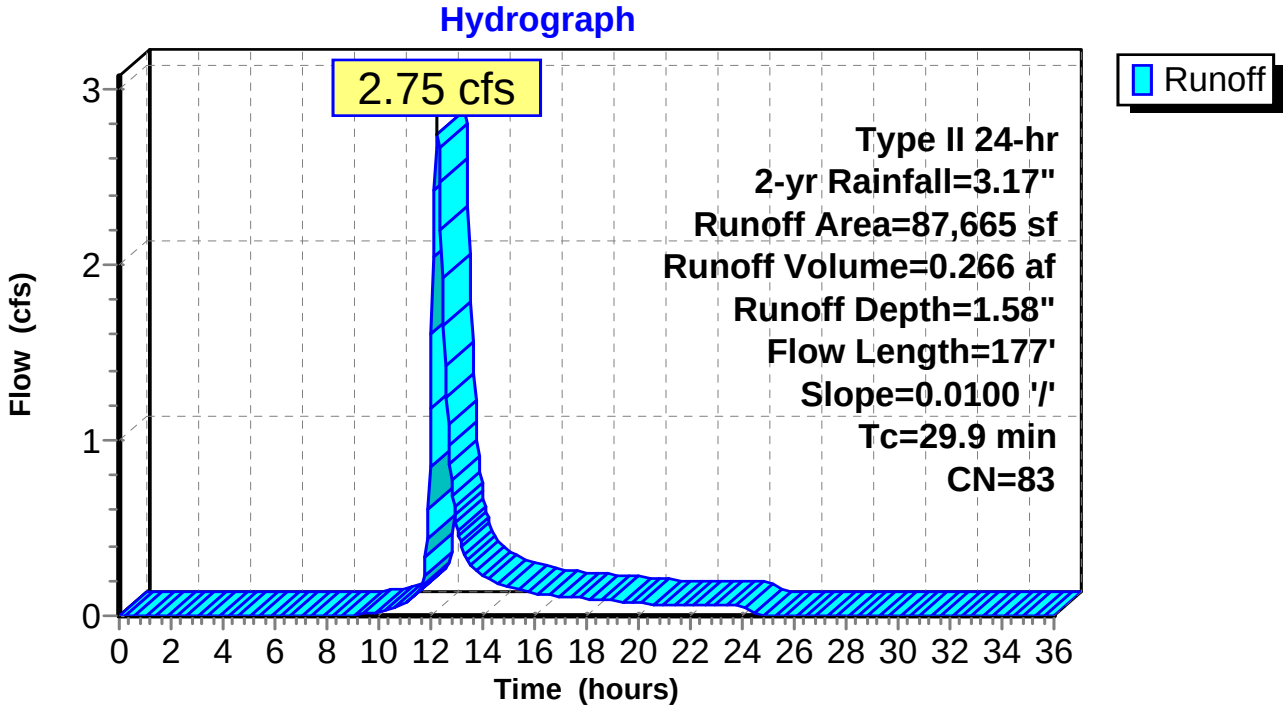
Runoff = 2.75 cfs @ 12.25 hrs, Volume= 0.266 af, Depth= 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	13,390	98	
	74,275	80	>75% Grass cover, Good, HSG D
	87,665	83	Weighted Average
	74,275		84.73% Pervious Area
	13,390		15.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	177	0.0100	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 1S: Subcatchment 1



Summary for Subcatchment 2S: Subcatchment 2

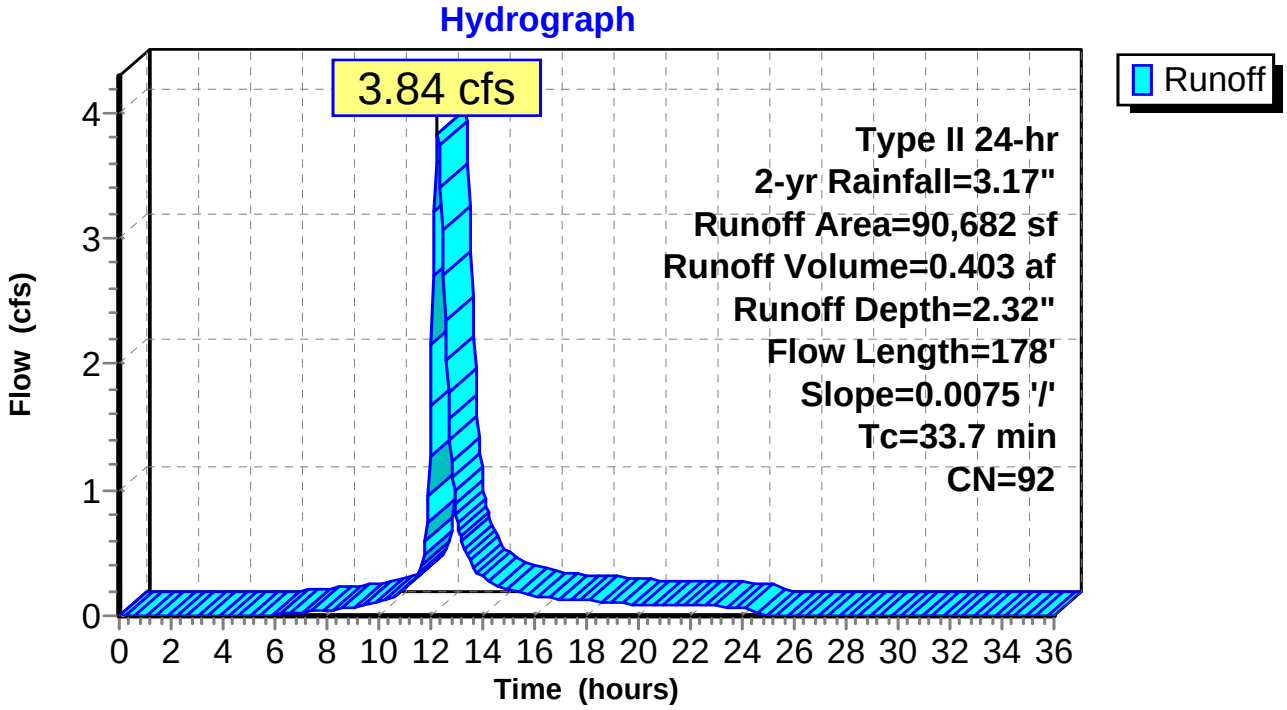
Runoff = 3.84 cfs @ 12.28 hrs, Volume= 0.403 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	60,255	98	
	30,427	80	>75% Grass cover, Good, HSG D
	90,682	92	Weighted Average
	30,427		33.55% Pervious Area
	60,255		66.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.7	178	0.0075	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 2S: Subcatchment 2



Summary for Subcatchment 3S: Subcatchment 3

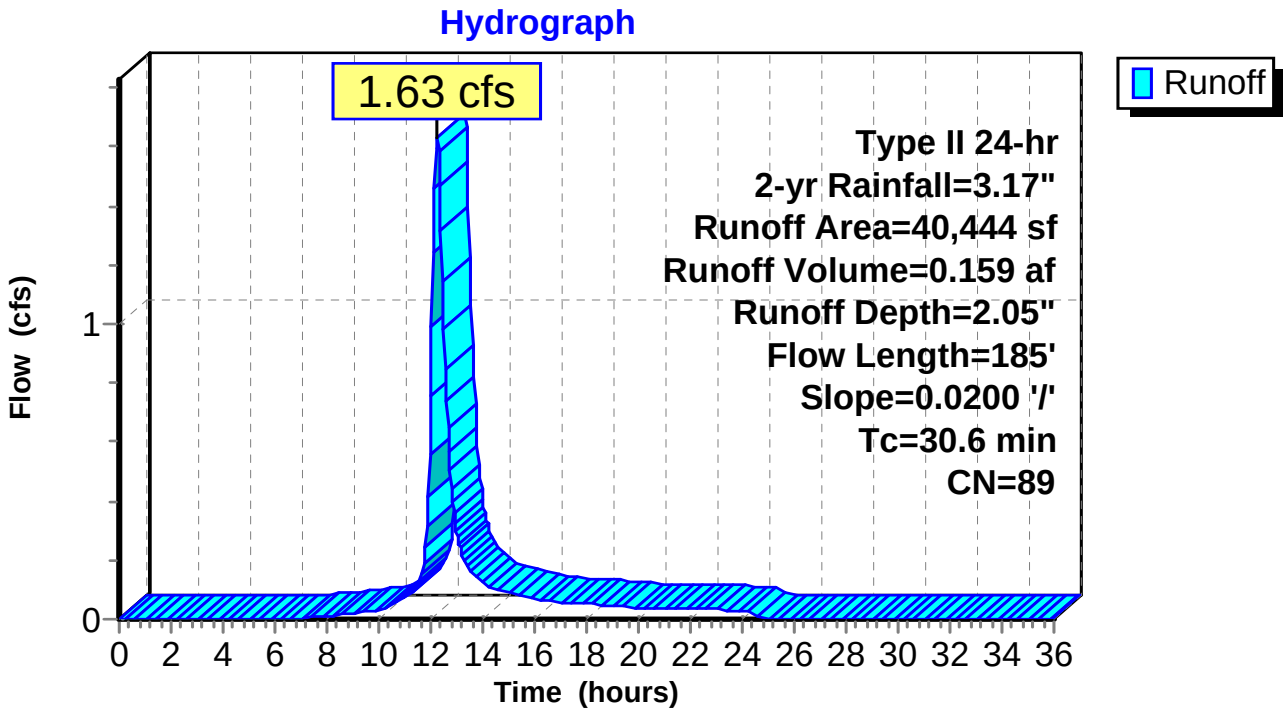
Runoff = 1.63 cfs @ 12.25 hrs, Volume= 0.159 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
	21,255	80	>75% Grass cover, Good, HSG D
*	19,189	98	
	40,444	89	Weighted Average
	21,255		52.55% Pervious Area
	19,189		47.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.8	150	0.0200	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.17"
0.8	35	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	185	Total			

Subcatchment 3S: Subcatchment 3



Summary for Subcatchment 4S: Subcatchment 4

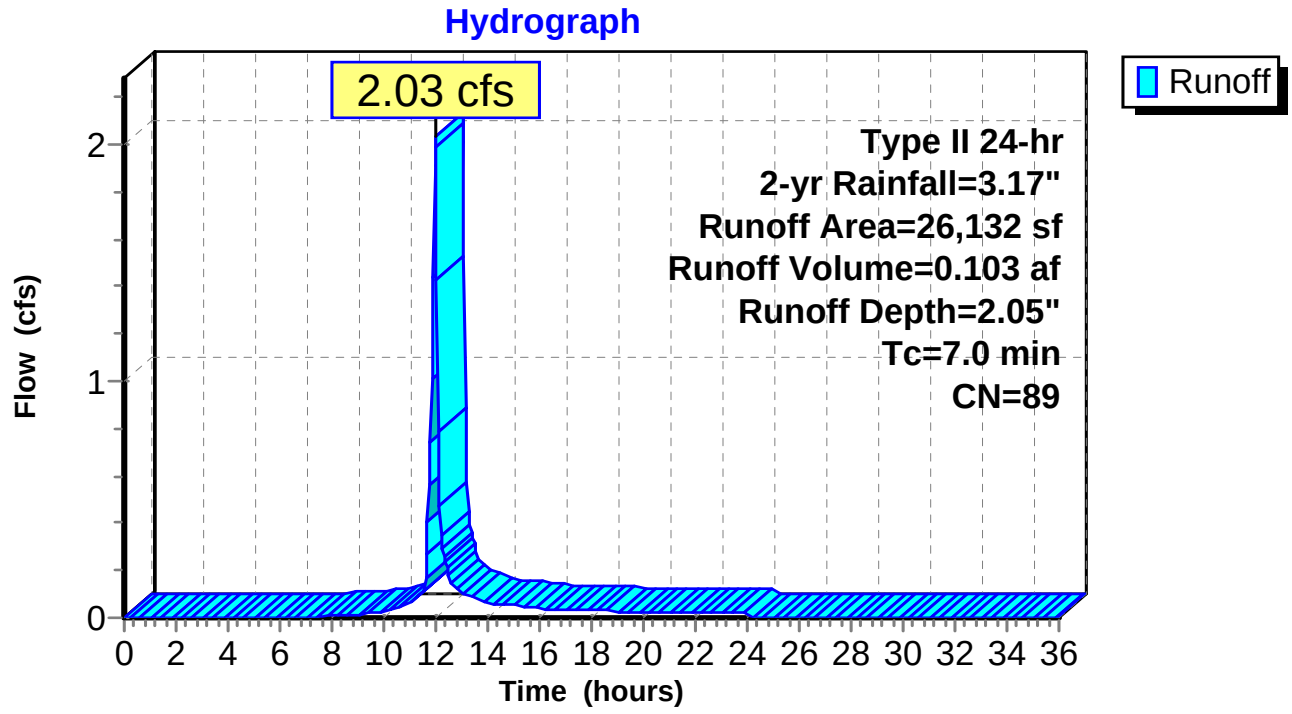
Runoff = 2.03 cfs @ 11.98 hrs, Volume= 0.103 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	13,720	98	
	12,412	80	>75% Grass cover, Good, HSG D
	26,132	89	Weighted Average
	12,412		47.50% Pervious Area
	13,720		52.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 4S: Subcatchment 4



Summary for Subcatchment 5S: Subcatchment 5

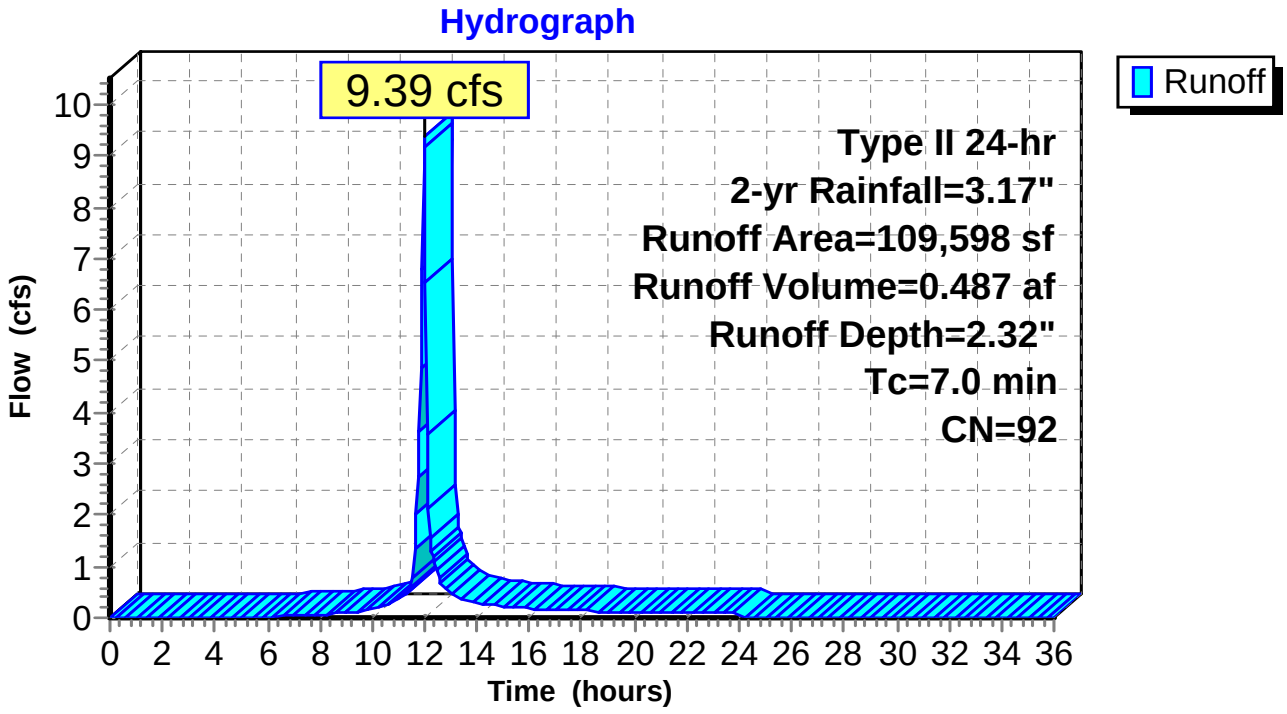
Runoff = 9.39 cfs @ 11.98 hrs, Volume= 0.487 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	70,563	98	
	39,035	80	>75% Grass cover, Good, HSG D
	109,598	92	Weighted Average
	39,035		35.62% Pervious Area
	70,563		64.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 5S: Subcatchment 5



Summary for Subcatchment 6S: Subcatchment 6

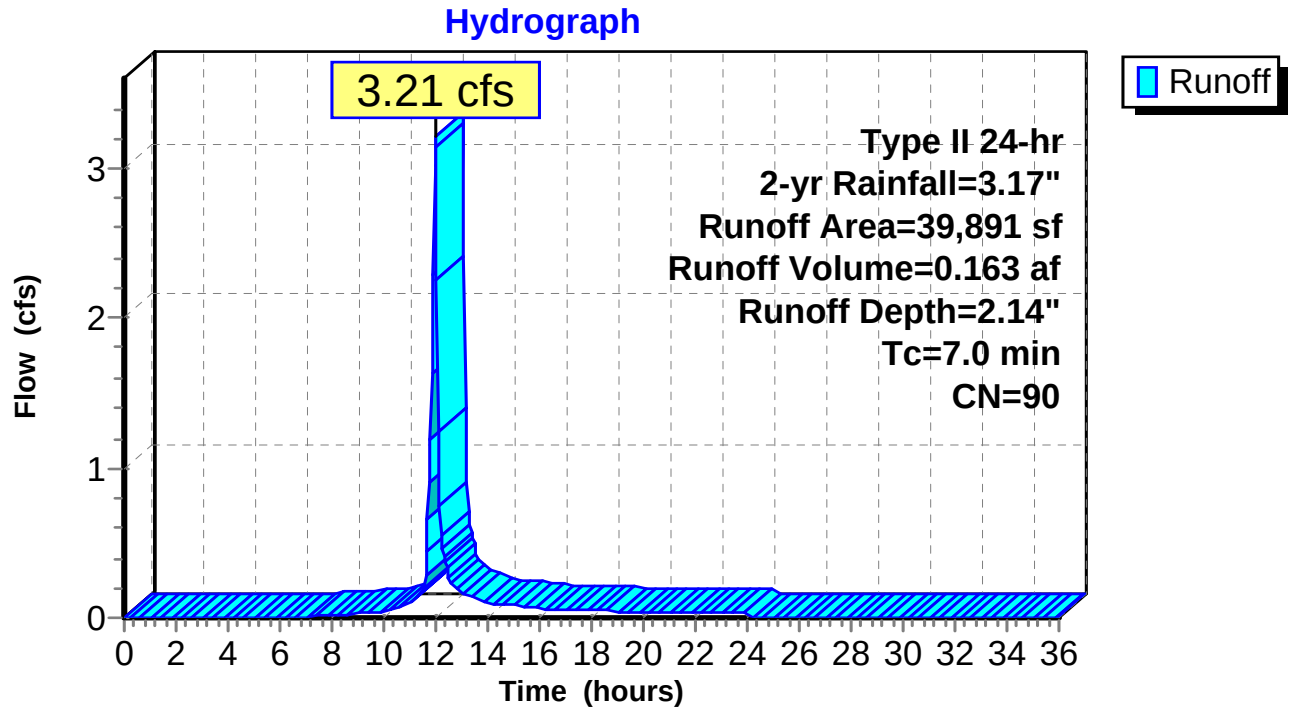
Runoff = 3.21 cfs @ 11.98 hrs, Volume= 0.163 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	21,718	98	
	18,173	80	>75% Grass cover, Good, HSG D
	39,891	90	Weighted Average
	18,173		45.56% Pervious Area
	21,718		54.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 6S: Subcatchment 6



Summary for Subcatchment 7S: Subcatchment 7

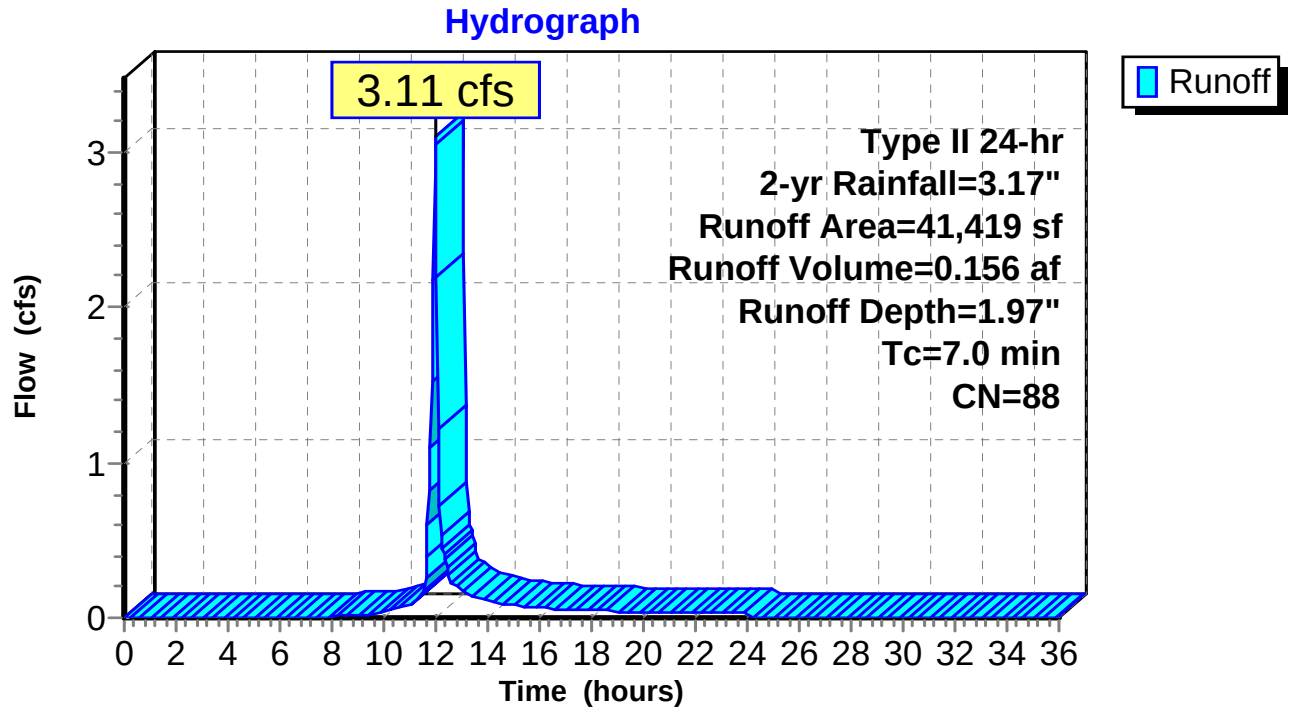
Runoff = 3.11 cfs @ 11.98 hrs, Volume= 0.156 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	17,297	98	
	24,122	80	>75% Grass cover, Good, HSG D
	41,419	88	Weighted Average
	24,122		58.24% Pervious Area
	17,297		41.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 7S: Subcatchment 7



Summary for Subcatchment 8S: Subcatchment 8

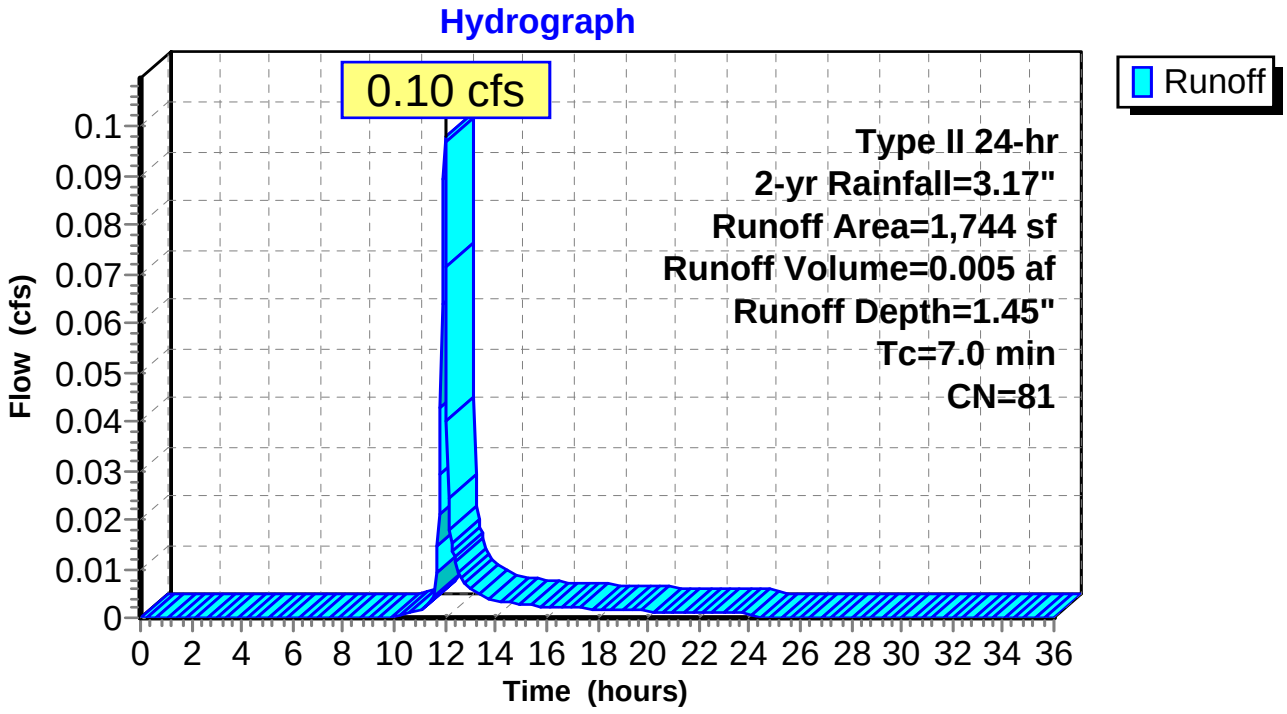
Runoff = 0.10 cfs @ 11.99 hrs, Volume= 0.005 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
	1,681	80	>75% Grass cover, Good, HSG D
*	63	98	
	1,744	81	Weighted Average
	1,681		96.39% Pervious Area
	63		3.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 8S: Subcatchment 8



Summary for Subcatchment SA: Subcatchment A

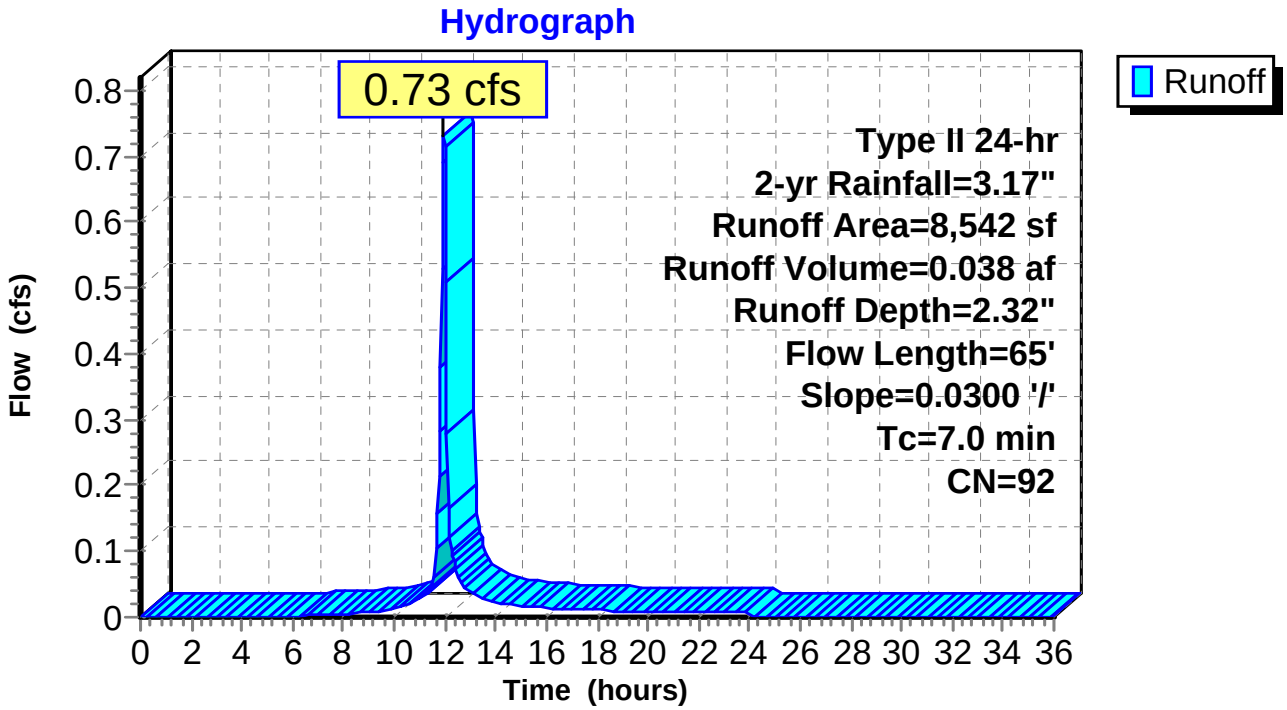
Runoff = 0.73 cfs @ 11.98 hrs, Volume= 0.038 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	5,794	98	
	2,748	80	>75% Grass cover, Good, HSG D
	8,542	92	Weighted Average
	2,748		32.17% Pervious Area
	5,794		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	65	0.0300	1.48		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.17"
6.3					**Direct Entry, min**
7.0	65	Total			

Subcatchment SA: Subcatchment A



Summary for Subcatchment SB: Subcatchment B

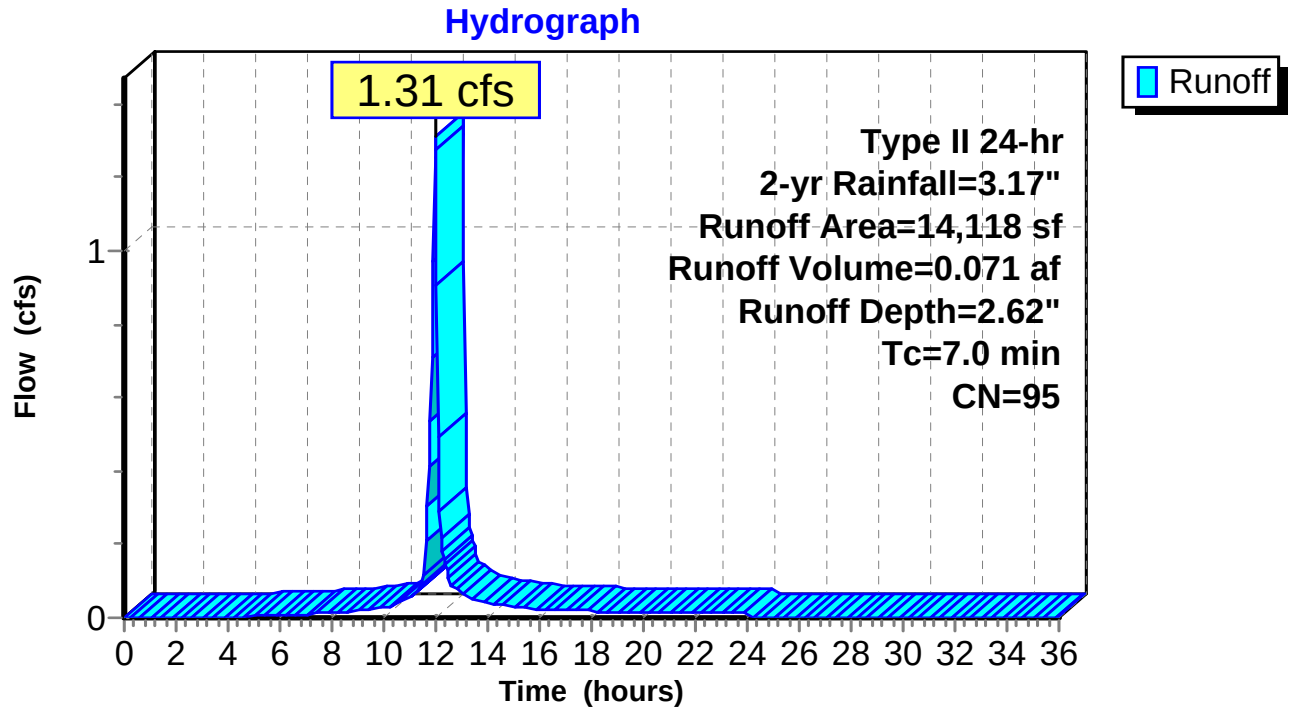
Runoff = 1.31 cfs @ 11.98 hrs, Volume= 0.071 af, Depth= 2.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.17"

	Area (sf)	CN	Description
*	11,919	98	
	2,199	80	>75% Grass cover, Good, HSG D
	14,118	95	Weighted Average
	2,199		15.58% Pervious Area
	11,919		84.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment SB: Subcatchment B



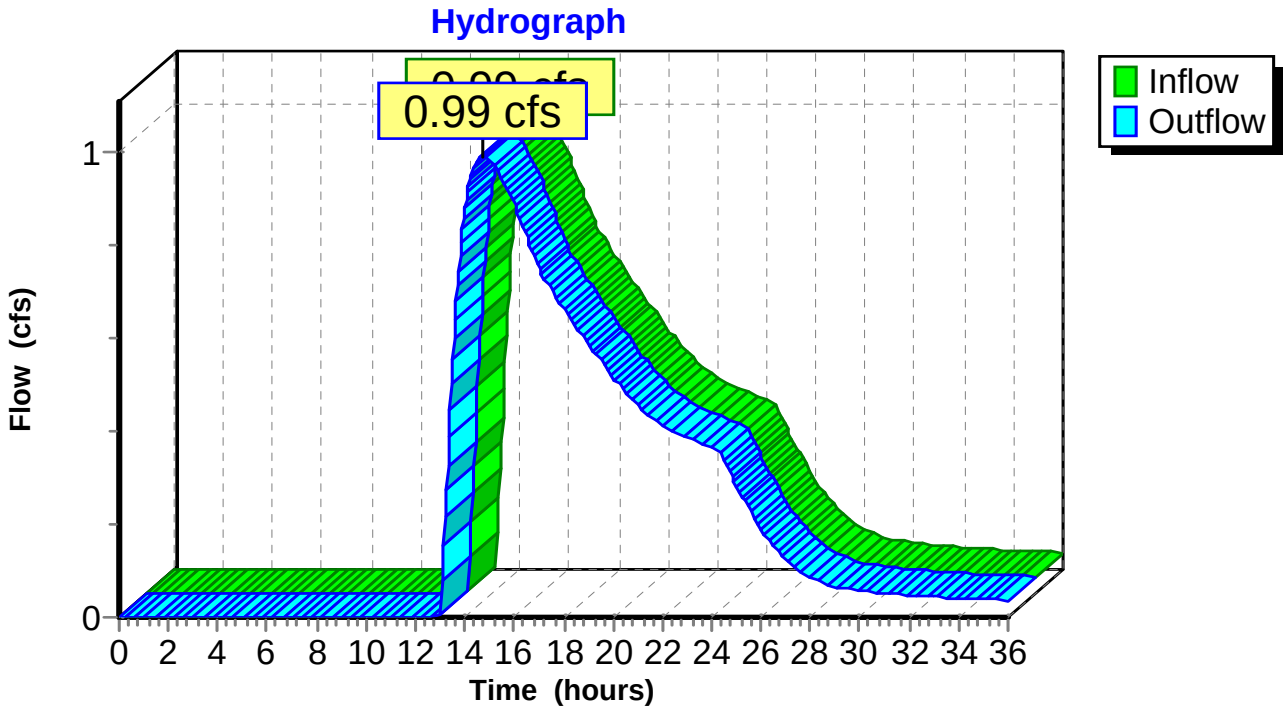
Summary for Reach 1SP: Study Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	0.99 cfs @	14.74 hrs, Volume=	0.664 af
Outflow	=	0.99 cfs @	14.74 hrs, Volume=	0.664 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 1SP: Study Point 1



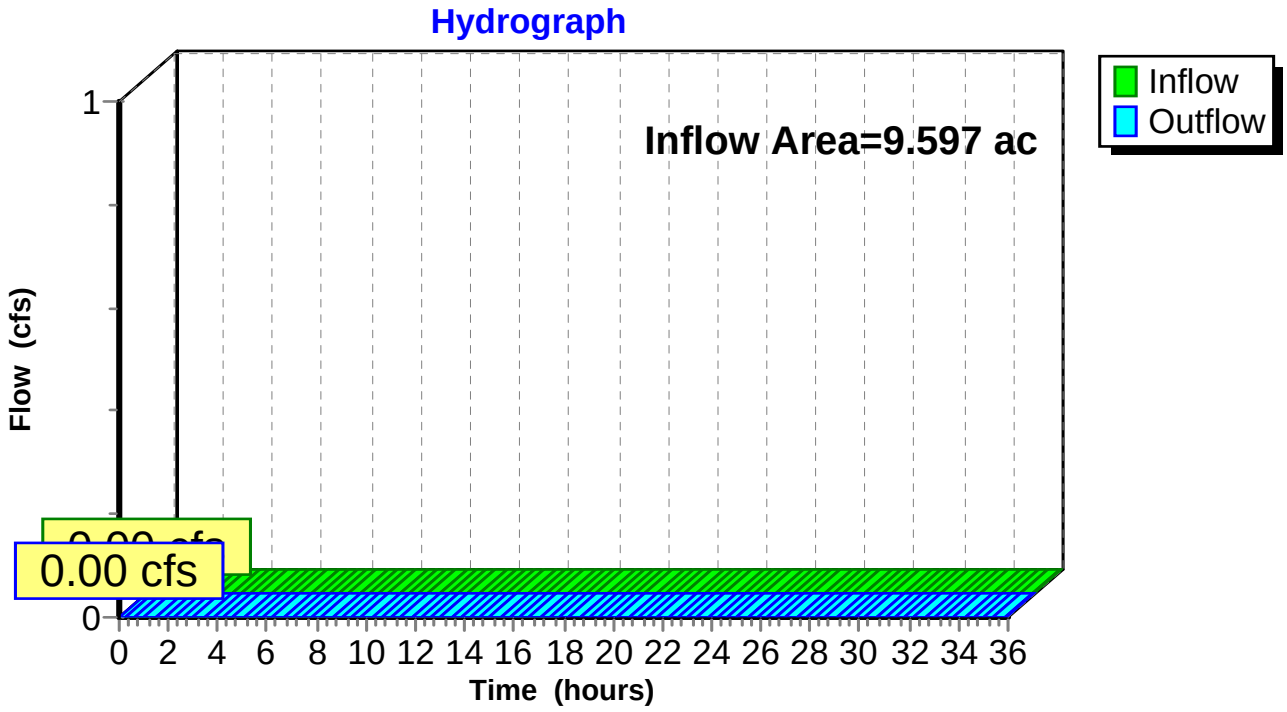
Summary for Reach 2SP: Study Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.597 ac, 51.35% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 2SP: Study Point 2



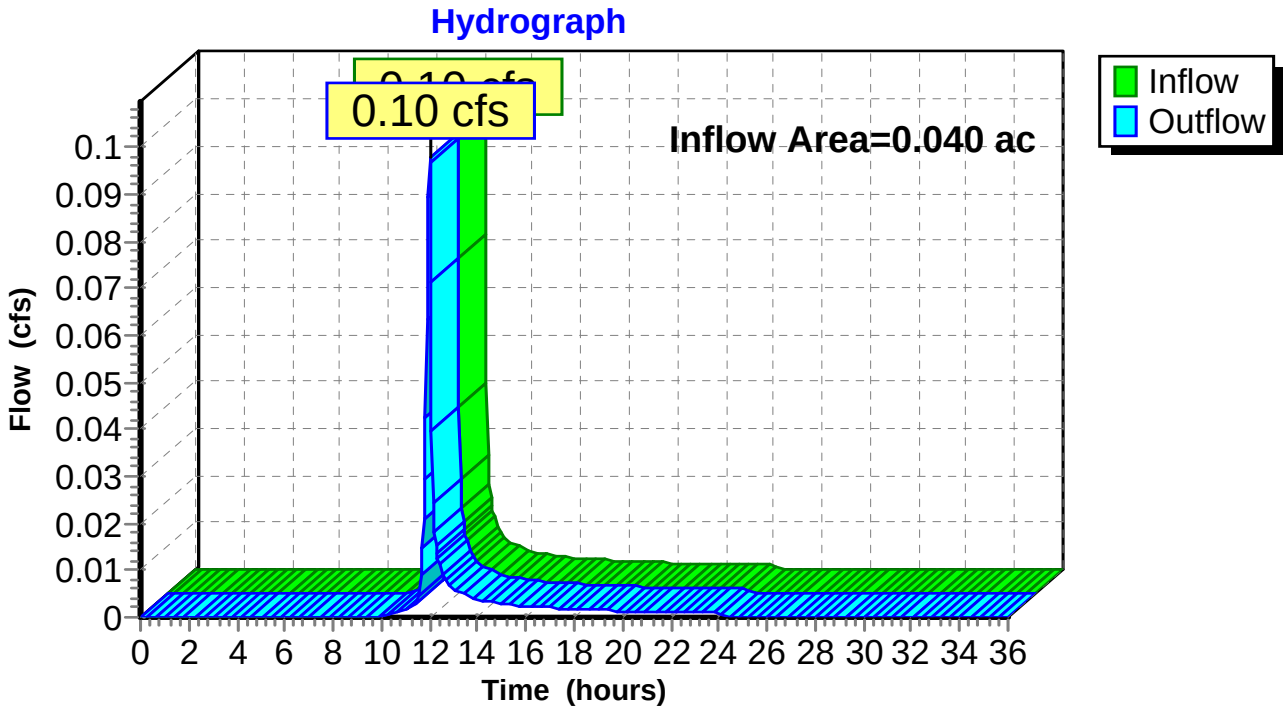
Summary for Reach 3SP: Study Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.040 ac, 3.61% Impervious, Inflow Depth = 1.45" for 2-yr event
Inflow = 0.10 cfs @ 11.99 hrs, Volume= 0.005 af
Outflow = 0.10 cfs @ 11.99 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 3SP: Study Point 3



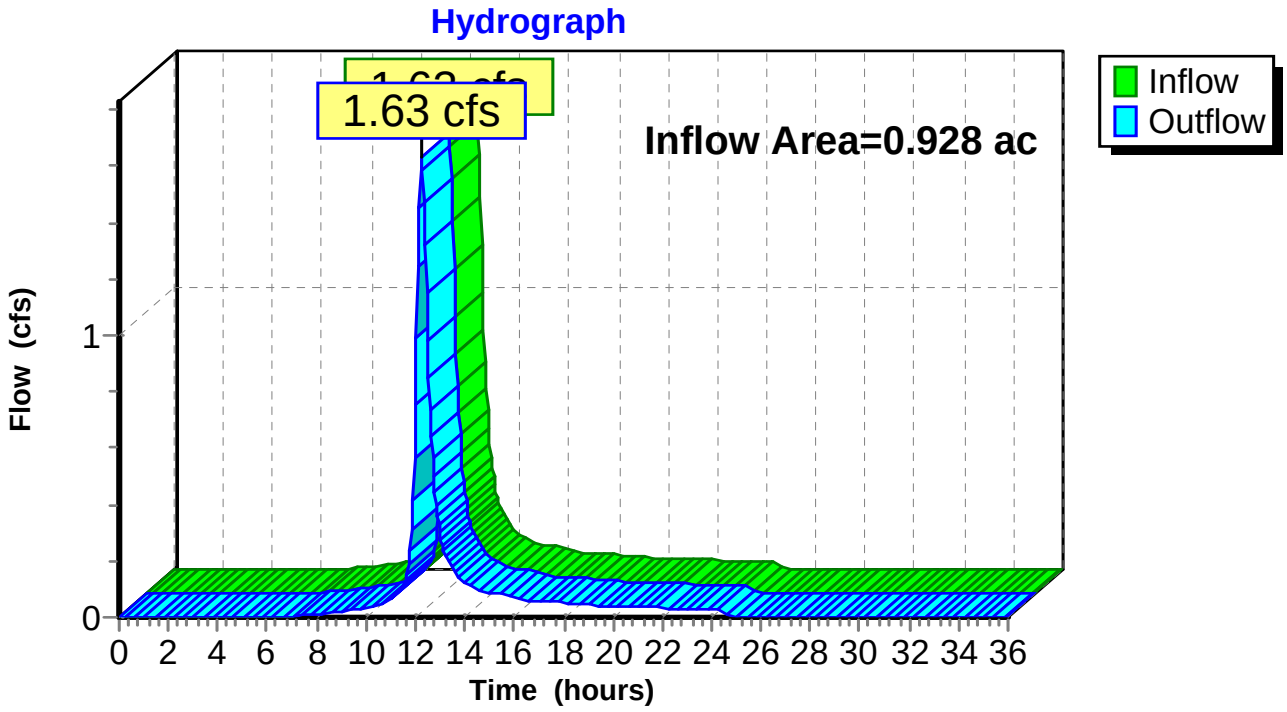
Summary for Reach 4SP: Study Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.928 ac, 47.45% Impervious, Inflow Depth = 2.05" for 2-yr event
Inflow = 1.63 cfs @ 12.25 hrs, Volume= 0.159 af
Outflow = 1.63 cfs @ 12.25 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 4SP: Study Point 4



Summary for Pond 1P: Wetland A

Inflow Area = 9.597 ac, 51.35% Impervious, Inflow Depth > 1.66" for 2-yr event
Inflow = 8.55 cfs @ 12.20 hrs, Volume= 1.329 af
Outflow = 0.99 cfs @ 14.74 hrs, Volume= 0.664 af, Atten= 88%, Lag= 152.1 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.99 cfs @ 14.74 hrs, Volume= 0.664 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Starting Elev= 63.50' Surf.Area= 14,739 sf Storage= 17,429 cf
Peak Elev= 65.32' @ 14.74 hrs Surf.Area= 22,524 sf Storage= 51,207 cf (33,778 cf above start)

Plug-Flow detention time= 720.2 min calculated for 0.264 af (20% of inflow)
Center-of-Mass det. time= 253.0 min (1,153.6 - 900.7)

Volume	Invert	Avail.Storage	Storage Description
#1	62.00'	209,276 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

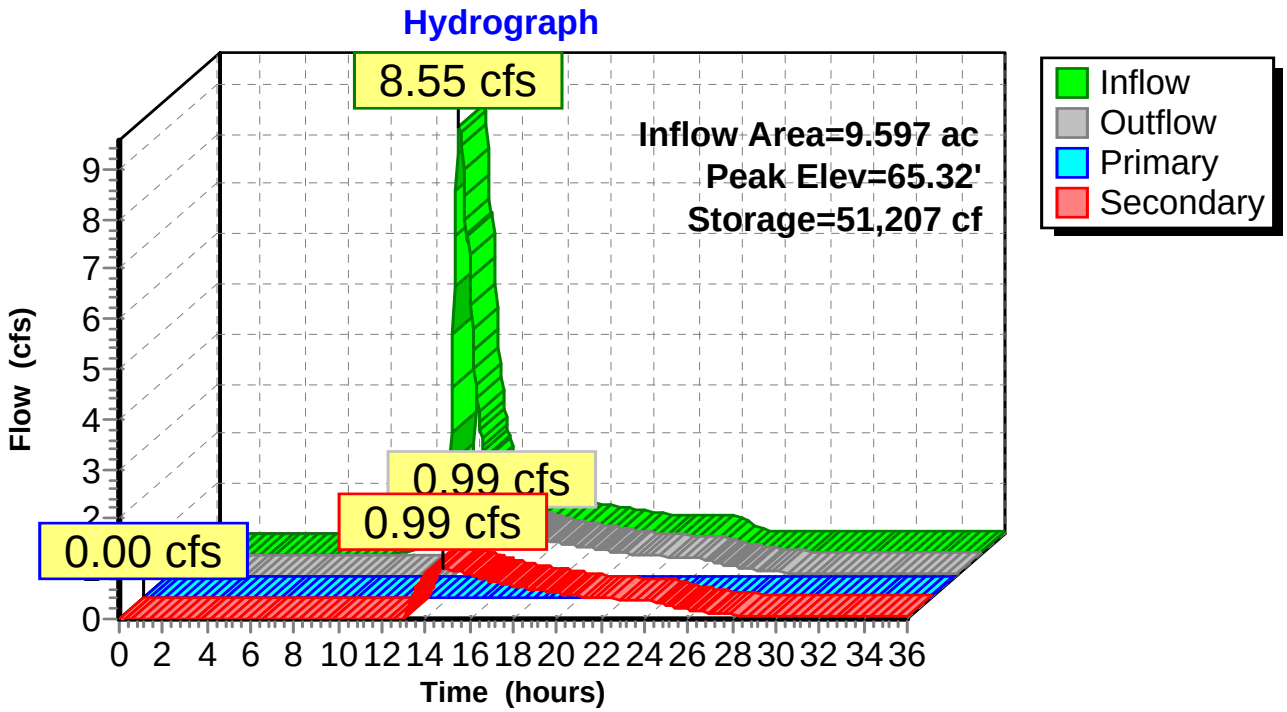
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.00	8,500	0	0
65.00	20,977	44,216	44,216
70.00	45,047	165,060	209,276

Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**3.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Secondary	62.86'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.86' / 58.69' S= 0.0869 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#3	Device 2	65.08'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=63.50' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.98 cfs @ 14.74 hrs HW=65.32' (Free Discharge)
└**2=Culvert** (Passes 0.98 cfs of 4.18 cfs potential flow)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 0.98 cfs @ 1.65 fps)

Pond 1P: Wetland A



Summary for Pond 2P: Wetland B

Inflow Area = 2.082 ac, 66.45% Impervious, Inflow Depth = 2.32" for 2-yr event
Inflow = 3.84 cfs @ 12.28 hrs, Volume= 0.403 af
Outflow = 1.59 cfs @ 12.70 hrs, Volume= 0.208 af, Atten= 58%, Lag= 25.5 min
Primary = 1.59 cfs @ 12.70 hrs, Volume= 0.208 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.11' @ 12.70 hrs Surf.Area= 7,808 sf Storage= 9,275 cf

Plug-Flow detention time= 236.6 min calculated for 0.208 af (52% of inflow)
Center-of-Mass det. time= 123.2 min (943.8 - 820.6)

Volume	Invert	Avail.Storage	Storage Description
#1	67.00'	21,636 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

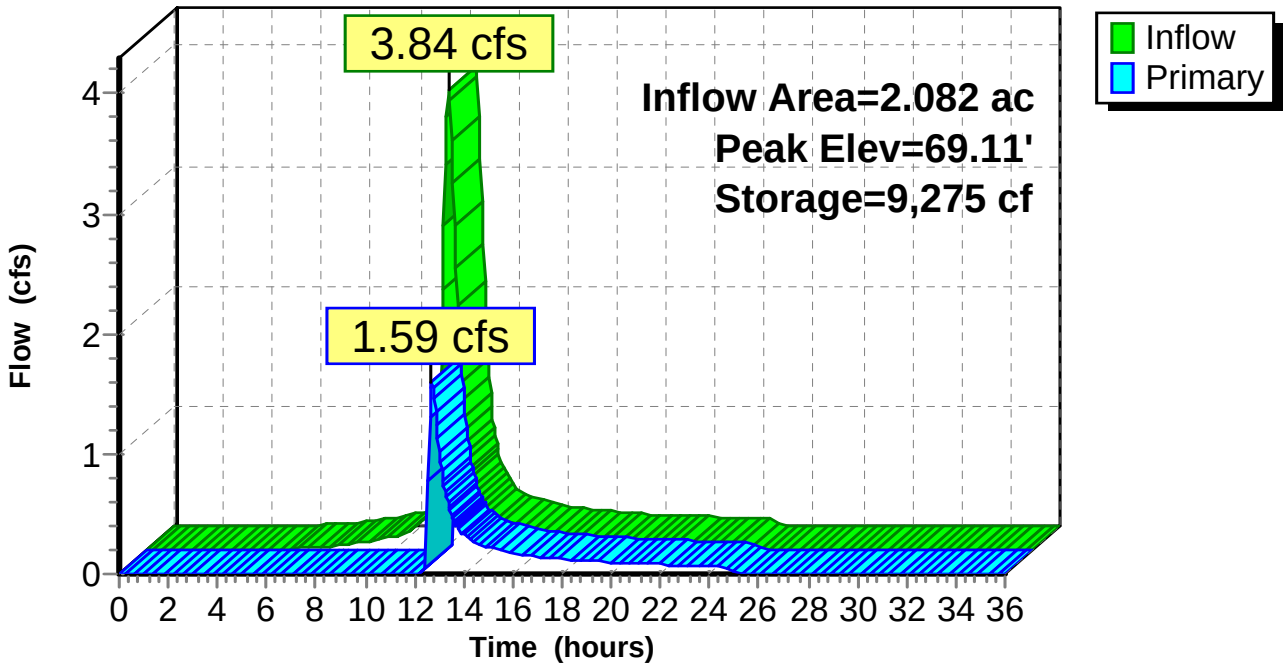
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.00	2,200	0	0
68.00	4,250	3,225	3,225
69.00	6,286	5,268	8,493
70.00	20,000	13,143	21,636

Device	Routing	Invert	Outlet Devices
#1	Primary	69.00'	**18.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=1.58 cfs @ 12.70 hrs HW=69.11' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.58 cfs @ 0.79 fps)

Pond 2P: Wetland B

Hydrograph



Summary for Pond 3P: Surface Detention

[79] Warning: Submerged Pond 6P Primary device # 1 INLET by 0.48'
[79] Warning: Submerged Pond 7P Primary device # 1 OUTLET by 2.28'

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth > 2.04" for 2-yr event
Inflow = 14.09 cfs @ 12.00 hrs, Volume= 0.718 af
Outflow = 6.20 cfs @ 12.12 hrs, Volume= 0.717 af, Atten= 56%, Lag= 7.6 min
Primary = 6.20 cfs @ 12.12 hrs, Volume= 0.717 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 71.49' @ 12.12 hrs Surf.Area= 5,093 sf Storage= 7,720 cf

Plug-Flow detention time= 19.9 min calculated for 0.717 af (100% of inflow)
Center-of-Mass det. time= 17.1 min (852.9 - 835.8)

Volume	Invert	Avail.Storage	Storage Description
#1	69.00'	21,926 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

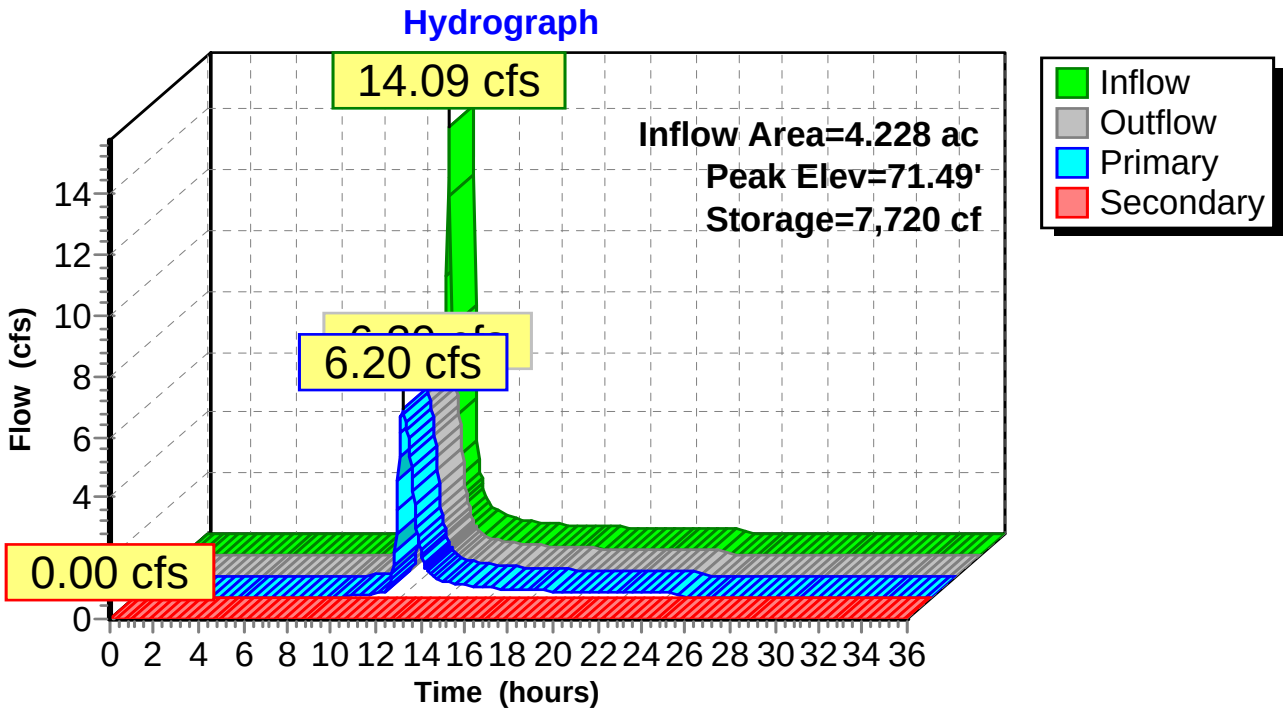
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.00	400	0	0
70.00	2,991	1,696	1,696
72.00	5,812	8,803	10,499
73.50	9,425	11,428	21,926

Device	Routing	Invert	Outlet Devices
#1	Primary	69.10'	**15.0" Round Culvert** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 69.10' / 68.75' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	72.50'	**35.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=6.17 cfs @ 12.12 hrs HW=71.47' (Free Discharge)
1=Culvert (Inlet Controls 6.17 cfs @ 5.03 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=69.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3P: Surface Detention



Summary for Pond 4P: Surface Detention

[79] Warning: Submerged Pond PB Primary device # 1 INLET by 2.97'
[78] Warning: Submerged Pond PB Tertiary device # 2 by 2.38'

Inflow Area = 1.275 ac, 52.61% Impervious, Inflow Depth > 2.00" for 2-yr event
Inflow = 3.14 cfs @ 11.98 hrs, Volume= 0.212 af
Outflow = 0.26 cfs @ 12.71 hrs, Volume= 0.139 af, Atten= 92%, Lag= 43.5 min
Primary = 0.26 cfs @ 12.71 hrs, Volume= 0.139 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 70.47' @ 12.71 hrs Surf.Area= 1,840 sf Storage= 4,082 cf

Plug-Flow detention time= 424.7 min calculated for 0.139 af (65% of inflow)
Center-of-Mass det. time= 244.0 min (1,165.9 - 922.0)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	8,676 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

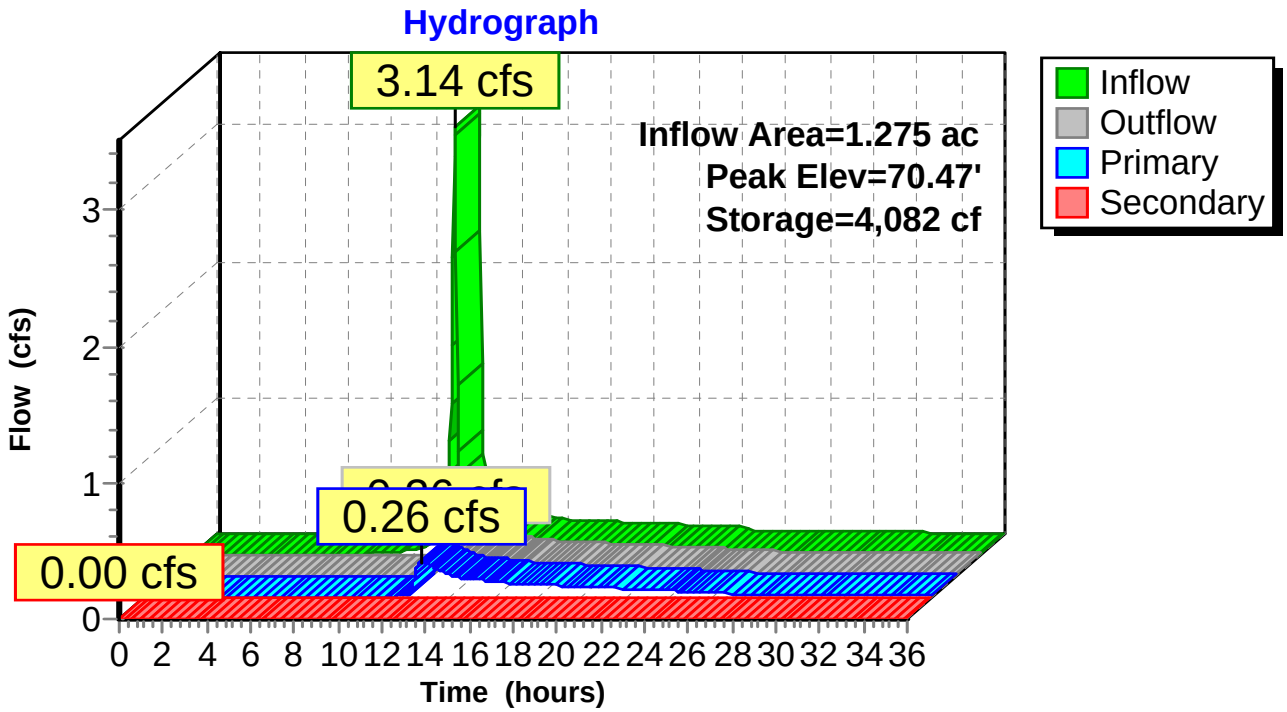
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
64.00	13	0	0
67.00	71	126	126
68.00	928	500	626
69.00	1,378	1,153	1,779
70.00	1,604	1,491	3,270
71.00	2,104	1,854	5,124
72.00	5,000	3,552	8,676

Device	Routing	Invert	Outlet Devices
#1	Primary	67.66'	**1.0" Round Culvert** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.66' / 67.65' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 0.01 sf
#2	Secondary	71.25'	**45.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	70.25'	**6.0" Round Culvert X 3.00** L= 1.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 70.25' / 70.25' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf

Primary OutFlow Max=0.26 cfs @ 12.71 hrs HW=70.47' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.03 cfs @ 5.33 fps)
└**3=Culvert** (Barrel Controls 0.23 cfs @ 1.33 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=64.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: Surface Detention



Summary for Pond 5P: OCS-4P

[57] Hint: Peaked at 67.76' (Flood elevation advised)
[79] Warning: Submerged Pond 4P Primary device # 1 INLET by 0.10'

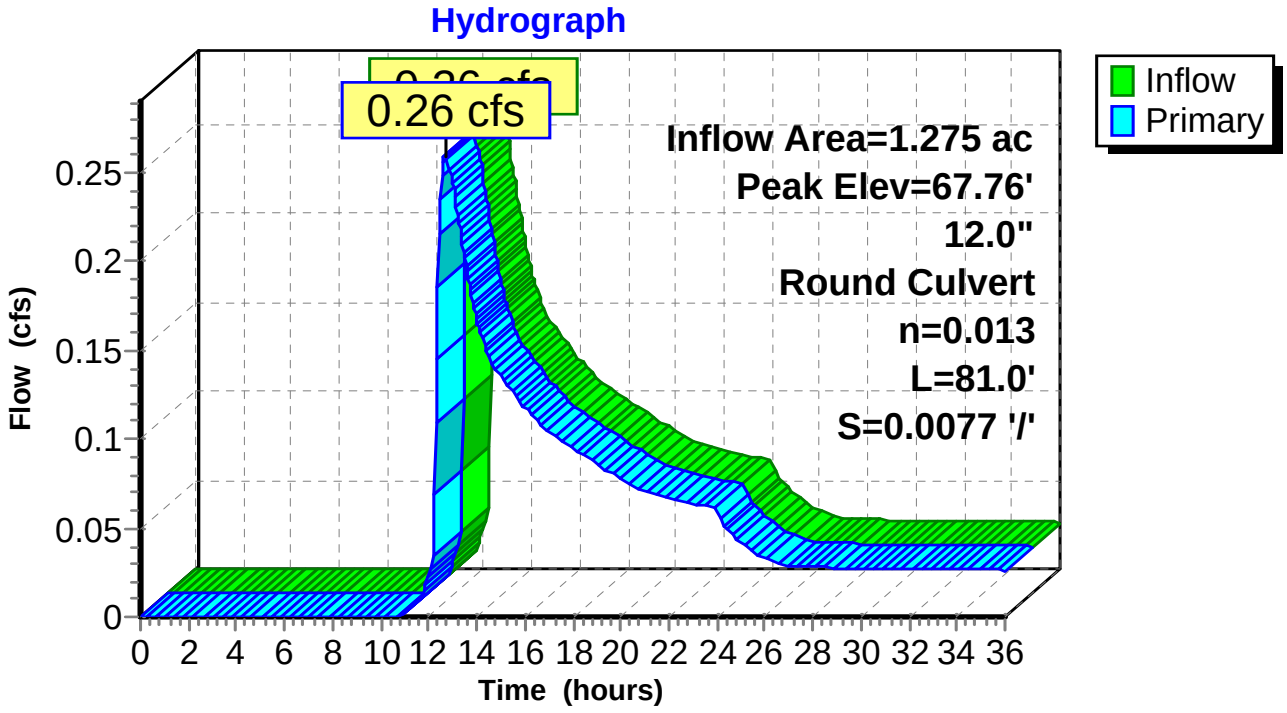
Inflow Area = 1.275 ac, 52.61% Impervious, Inflow Depth > 1.31" for 2-yr event
Inflow = 0.26 cfs @ 12.71 hrs, Volume= 0.139 af
Outflow = 0.26 cfs @ 12.71 hrs, Volume= 0.139 af, Atten= 0%, Lag= 0.0 min
Primary = 0.26 cfs @ 12.71 hrs, Volume= 0.139 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.76' @ 12.71 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	67.48'	**12.0" Round Culvert** L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.48' / 66.86' S= 0.0077 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.26 cfs @ 12.71 hrs HW=67.76' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.26 cfs @ 1.43 fps)

Pond 5P: OCS-4P



Summary for Pond 6P: Atrium Surface Detention

[79] Warning: Submerged Pond PA Primary device # 1 INLET by 0.89'
[78] Warning: Submerged Pond PA Tertiary device # 2 by 0.06'

Inflow Area = 2.712 ac, 64.63% Impervious, Inflow Depth > 2.26" for 2-yr event
Inflow = 9.40 cfs @ 11.98 hrs, Volume= 0.511 af
Outflow = 9.01 cfs @ 12.00 hrs, Volume= 0.454 af, Atten= 4%, Lag= 1.3 min
Primary = 9.01 cfs @ 12.00 hrs, Volume= 0.454 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 73.89' @ 12.00 hrs Surf.Area= 3,415 sf Storage= 3,658 cf

Plug-Flow detention time= 97.0 min calculated for 0.454 af (89% of inflow)
Center-of-Mass det. time= 33.3 min (850.4 - 817.1)

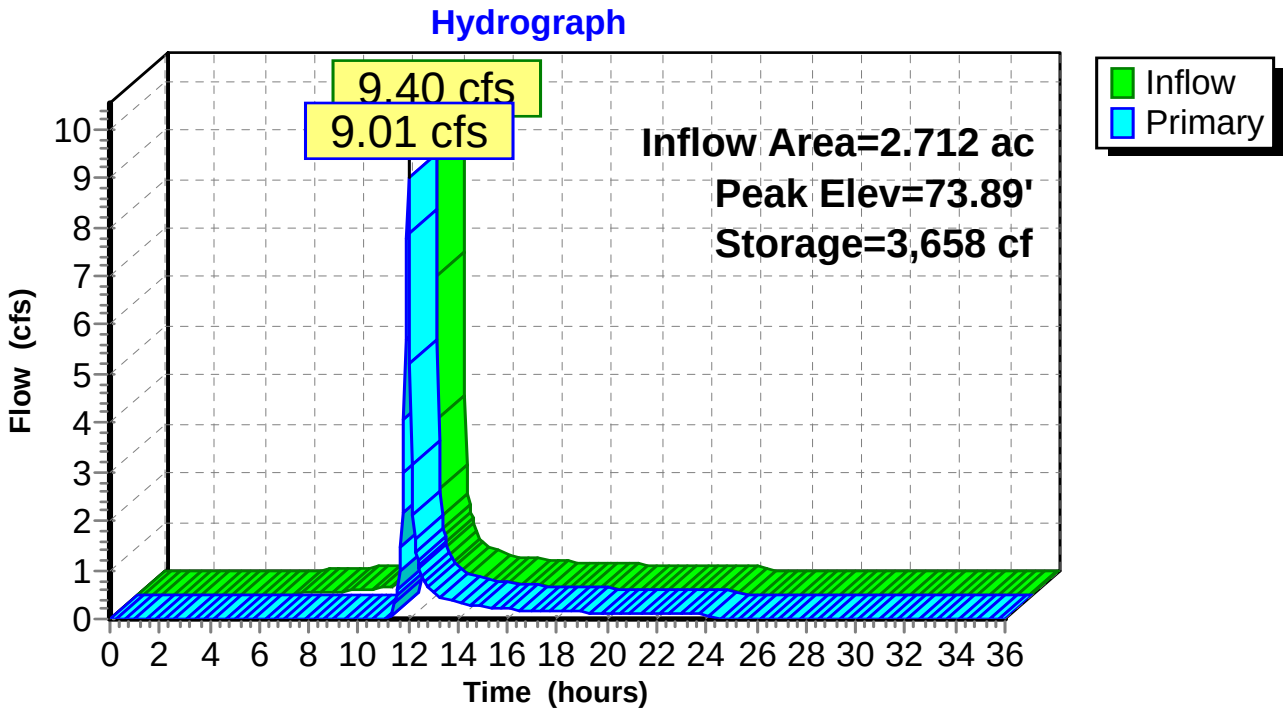
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	5,026 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	55	0	0
72.00	327	382	382
73.00	1,694	1,011	1,393
74.25	4,120	3,634	5,026

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.1" Round Culvert** L= 220.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.00' / 69.20' S= 0.0082 '/' Cc= 0.900 n= 0.013, Flow Area= 0.00 sf
#2	Primary	73.50'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=8.96 cfs @ 12.00 hrs HW=73.89' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.00 cfs @ 0.27 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 8.96 cfs @ 1.55 fps)

Pond 6P: Atrium Surface Detention



Summary for Pond 7P: Riprap Surface Detention

Inflow Area = 0.600 ac, 52.50% Impervious, Inflow Depth = 2.05" for 2-yr event
Inflow = 2.03 cfs @ 11.98 hrs, Volume= 0.103 af
Outflow = 1.93 cfs @ 12.00 hrs, Volume= 0.101 af, Atten= 5%, Lag= 1.2 min
Primary = 1.93 cfs @ 12.00 hrs, Volume= 0.101 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.74' @ 12.00 hrs Surf.Area= 277 sf Storage= 285 cf

Plug-Flow detention time= 22.6 min calculated for 0.101 af (98% of inflow)
Center-of-Mass det. time= 10.5 min (819.8 - 809.3)

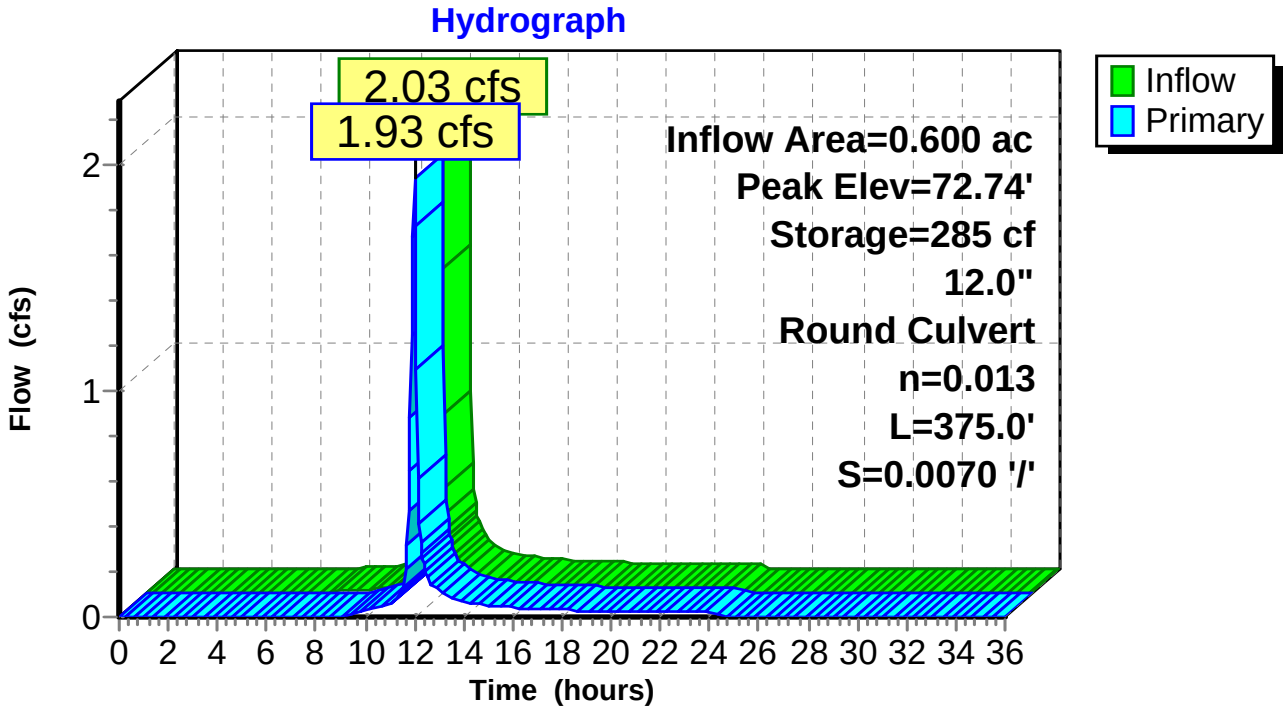
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	2,180 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	50	0	0
73.00	310	360	360
74.00	846	578	938
75.00	1,637	1,242	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**12.0" Round Culvert** L= 375.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 69.20' S= 0.0070 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.92 cfs @ 12.00 hrs HW=72.74' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 1.92 cfs @ 2.56 fps)

Pond 7P: Riprap Surface Detention



Summary for Pond 8P: OCS-DMH7

[57] Hint: Peaked at 67.02' (Flood elevation advised)

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth > 2.03" for 2-yr event
Inflow = 6.20 cfs @ 12.12 hrs, Volume= 0.717 af
Outflow = 6.20 cfs @ 12.12 hrs, Volume= 0.717 af, Atten= 0%, Lag= 0.0 min
Primary = 0.36 cfs @ 12.12 hrs, Volume= 0.011 af
Secondary = 5.84 cfs @ 12.12 hrs, Volume= 0.705 af

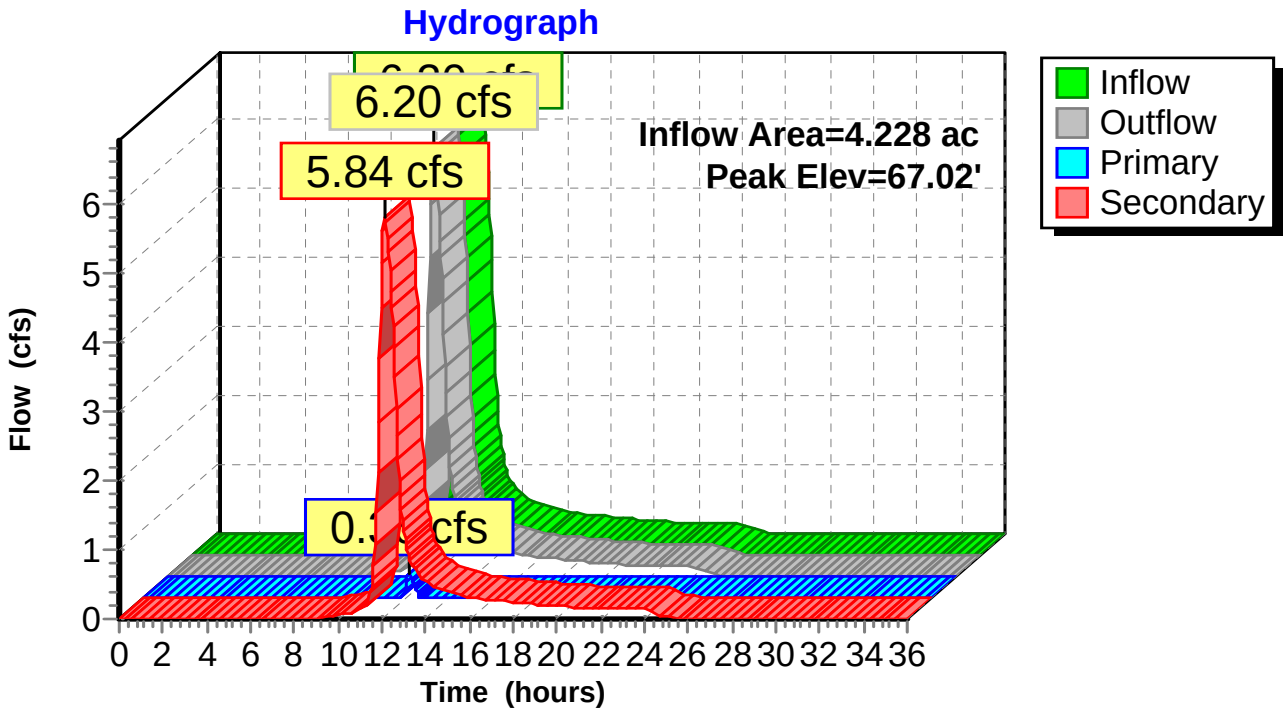
Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.02' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.60' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	65.70'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=0.35 cfs @ 12.12 hrs HW=67.02' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.35 cfs @ 1.67 fps)

Secondary OutFlow Max=5.82 cfs @ 12.12 hrs HW=67.02' (Free Discharge)
└**2=Culvert** (Barrel Controls 5.82 cfs @ 3.76 fps)

Pond 8P: OCS-DMH7



Summary for Pond 9P: UG Detention

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth = 0.03" for 2-yr event
Inflow = 0.22 cfs @ 12.10 hrs, Volume= 0.009 af
Outflow = 0.07 cfs @ 12.55 hrs, Volume= 0.009 af, Atten= 69%, Lag= 27.2 min
Primary = 0.07 cfs @ 12.55 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 65.91' @ 12.55 hrs Surf.Area= 1,536 sf Storage= 300 cf

Plug-Flow detention time= 137.0 min calculated for 0.009 af (97% of inflow)
Center-of-Mass det. time= 137.6 min (873.6 - 736.1)

Volume	Invert	Avail.Storage	Storage Description
#1	65.70'	2,488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 2,619 cf Overall x 95.0% Voids

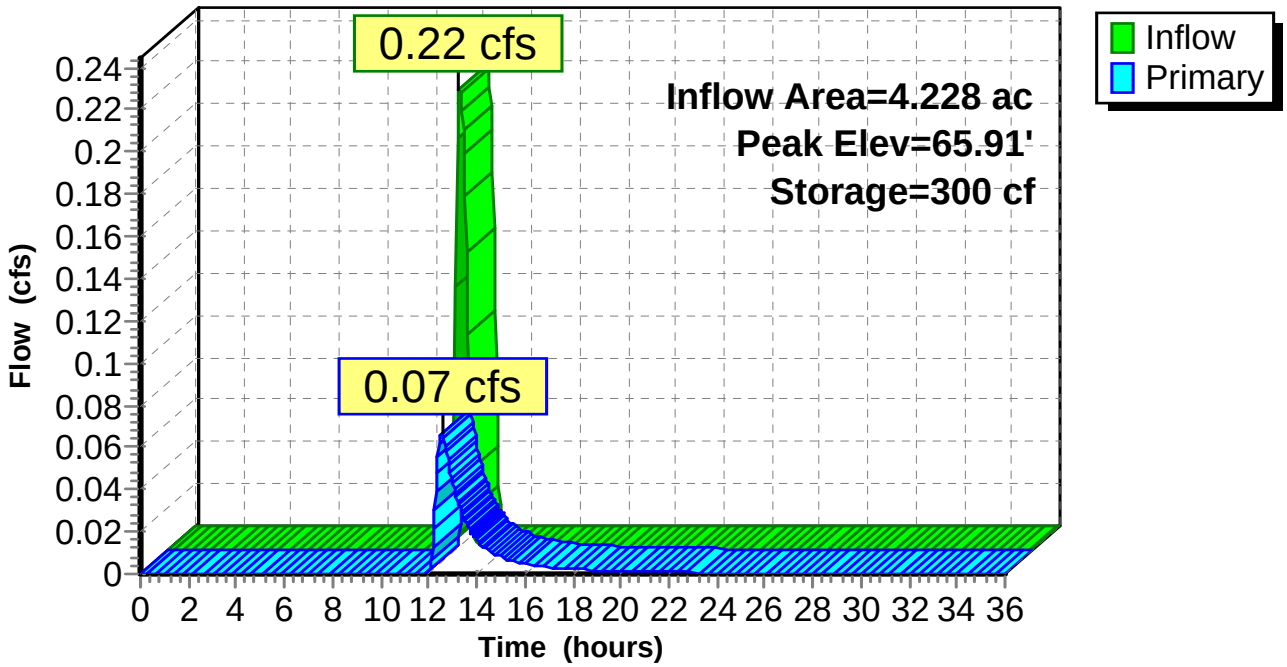
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
65.70	1,536	0	0
67.40	1,536	2,611	2,611
67.41	5	8	2,619

Device	Routing	Invert	Outlet Devices
#1	Primary	65.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.60' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Primary	67.00'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.90' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf

Primary OutFlow Max=0.07 cfs @ 12.55 hrs HW=65.91' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.07 cfs @ 1.70 fps)
└─**2=Culvert** (Controls 0.00 cfs)

Pond 9P: UG Detention

Hydrograph



Summary for Pond 10P: Isolator Row x5

[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[81] Warning: Exceeded Pond 8P by 0.87' @ 35.95 hrs

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth = 0.03" for 2-yr event
Inflow = 0.36 cfs @ 12.12 hrs, Volume= 0.011 af
Outflow = 0.37 cfs @ 12.12 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min
Primary = 0.22 cfs @ 12.10 hrs, Volume= 0.009 af
Secondary = 0.14 cfs @ 12.12 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.21' @ 12.12 hrs Surf.Area= 0.002 ac Storage= 0.001 af

Plug-Flow detention time= 3.1 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 3.3 min (734.9 - 731.7)

Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	0.002 af	**ADS_StormTech RC-310** x 5 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 1 rows

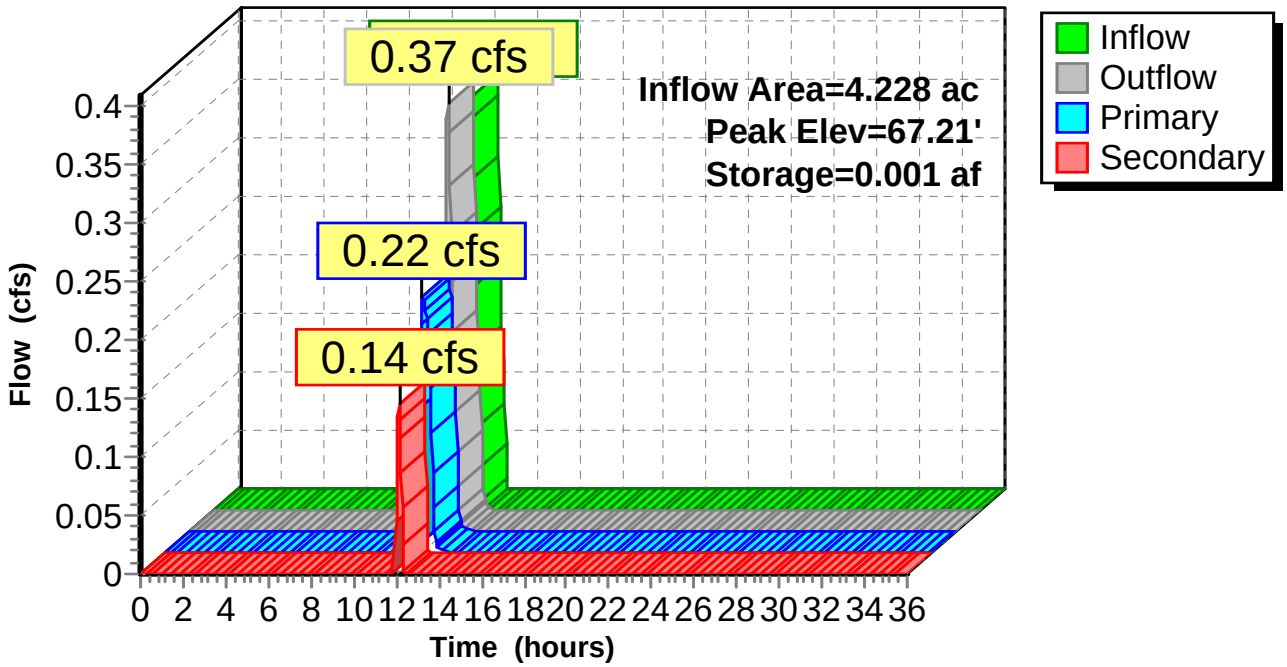
Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.55' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Secondary	67.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.55' S= 0.0090 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.22 cfs @ 12.10 hrs HW=67.20' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.22 cfs @ 2.50 fps)

Secondary OutFlow Max=0.13 cfs @ 12.12 hrs HW=67.20' (Free Discharge)
↑**2=Culvert** (Inlet Controls 0.13 cfs @ 1.20 fps)

Pond 10P: Isolator Row x5

Hydrograph



Summary for Pond PA: USF A

Inflow Area = 0.196 ac, 67.83% Impervious, Inflow Depth = 2.32" for 2-yr event
Inflow = 0.73 cfs @ 11.98 hrs, Volume= 0.038 af
Outflow = 0.02 cfs @ 14.39 hrs, Volume= 0.024 af, Atten= 97%, Lag= 144.8 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.02 cfs @ 14.39 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 76.78' @ 14.39 hrs Surf.Area= 951 sf Storage= 1,128 cf

Plug-Flow detention time= 545.8 min calculated for 0.024 af (64% of inflow)
Center-of-Mass det. time= 444.8 min (1,240.6 - 795.9)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	2,192 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

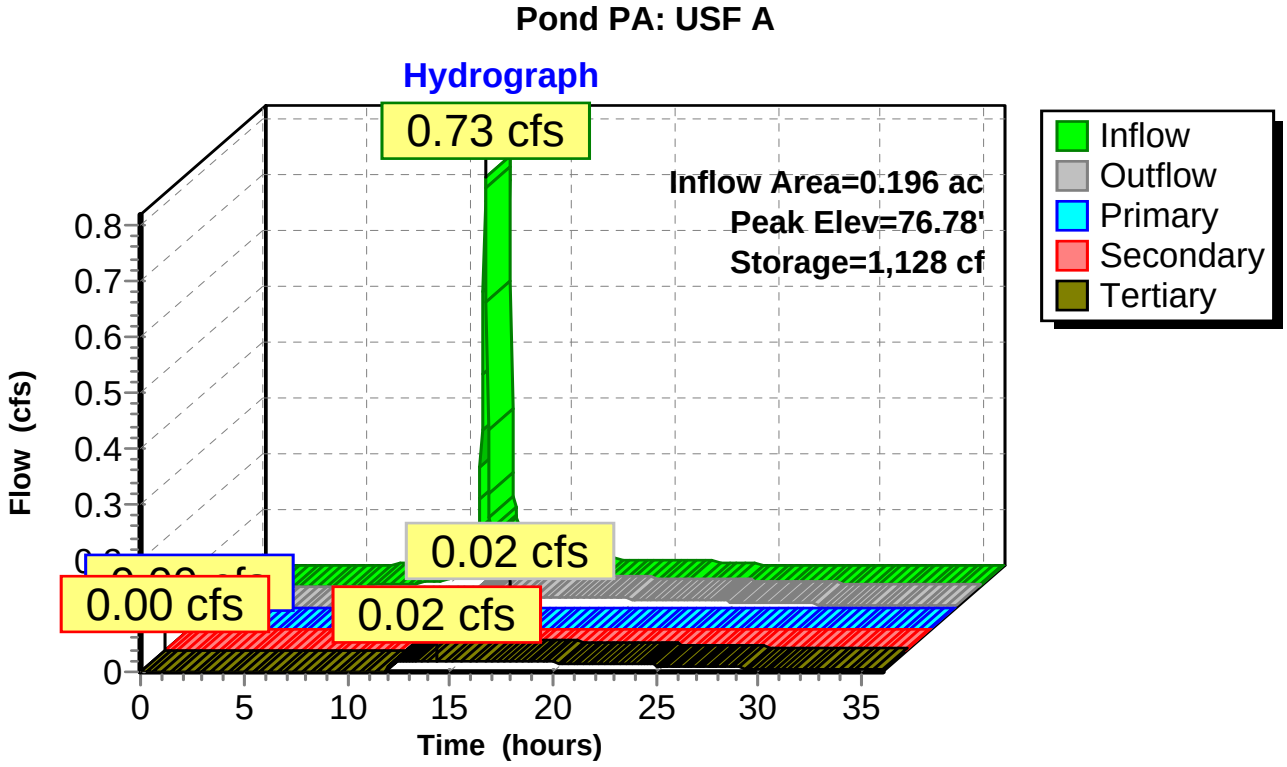
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	585	0.0	0	0
73.01	585	30.0	2	2
75.99	585	30.0	523	525
76.00	585	100.0	6	531
77.00	1,056	100.0	821	1,351
77.33	1,260	100.0	382	1,733
77.67	1,437	100.0	458	2,192

Device	Routing	Invert	Outlet Devices
#1	Primary	73.00'	**12.0" Round Culvert** L= 60.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 73.00' / 72.20' S= 0.0133 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Tertiary	73.83'	**2.410 in/hr Exfiltration over Surface area above 73.83'** Excluded Surface area = 585 sf
#3	Device 1	77.00'	**24.0" x 24.0" Horiz. Orifice/Grate X 5.00 columns** X 5 rows C= 0.600 in 4.0" x 4.0" Grate Limited to weir flow at low heads
#4	Secondary	77.50'	**30.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=73.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=73.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.02 cfs @ 14.39 hrs HW=76.78' (Free Discharge)
└─**2=Exfiltration** (Exfiltration Controls 0.02 cfs)



Summary for Pond PB: USF B

Inflow Area = 0.324 ac, 84.42% Impervious, Inflow Depth = 2.62" for 2-yr event
Inflow = 1.31 cfs @ 11.98 hrs, Volume= 0.071 af
Outflow = 0.05 cfs @ 13.55 hrs, Volume= 0.056 af, Atten= 96%, Lag= 94.6 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.05 cfs @ 13.55 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 71.59' @ 13.55 hrs Surf.Area= 1,588 sf Storage= 2,056 cf

Plug-Flow detention time= 526.6 min calculated for 0.056 af (79% of inflow)
Center-of-Mass det. time= 446.4 min (1,225.2 - 778.8)

Volume	Invert	Avail.Storage	Storage Description
#1	67.86'	3,817 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.86	715	0.0	0	0
67.87	715	30.0	2	2
70.25	715	30.0	511	513
70.26	715	100.0	7	520
72.00	1,853	100.0	2,234	2,754
72.50	2,400	100.0	1,063	3,817

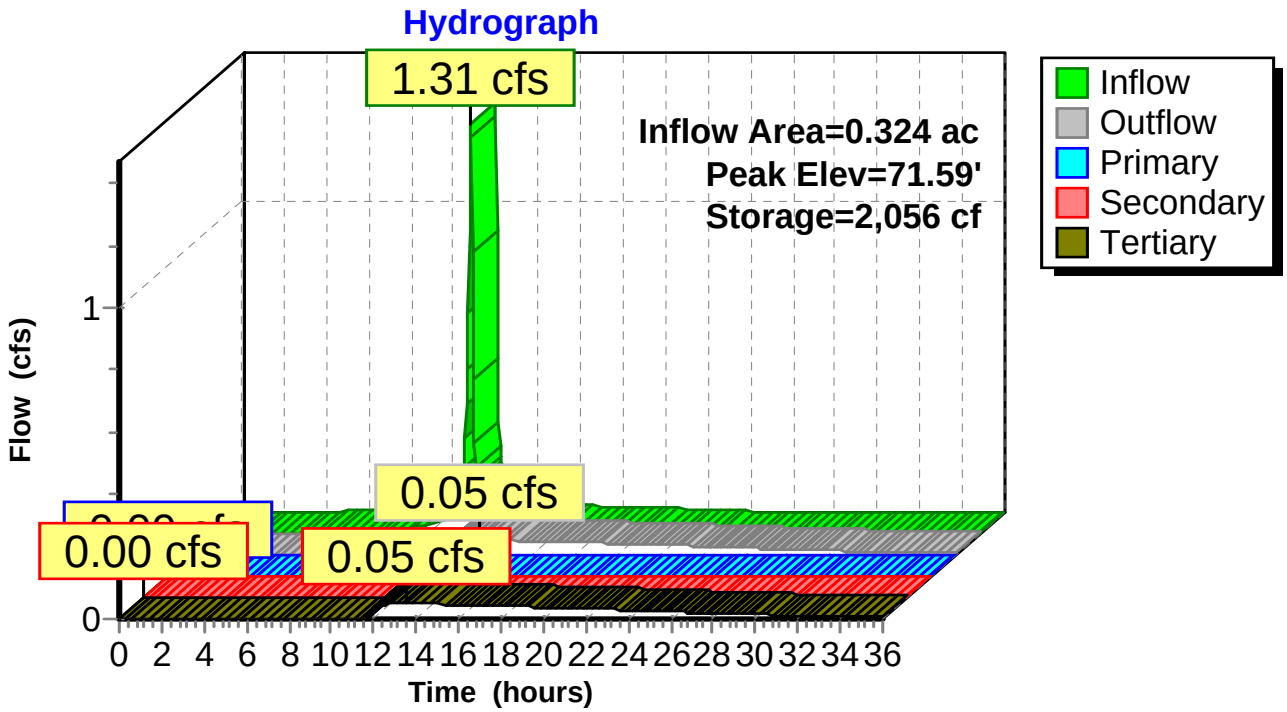
Device	Routing	Invert	Outlet Devices
#1	Primary	67.50'	**15.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.50' / 67.40' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Tertiary	68.09'	**2.410 in/hr Exfiltration over Surface area above 68.09'** Excluded Surface area = 715 sf
#3	Device 1	72.00'	**24.0" x 24.0" Horiz. Orifice/Grate X 5.00 columns** X 5 rows C= 0.600 in 4.0" x 4.0" Grate Limited to weir flow at low heads
#4	Secondary	72.25'	**30.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=67.86' (Free Discharge)
└**1=Culvert** (Passes 0.00 cfs of 0.39 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=67.86' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.05 cfs @ 13.55 hrs HW=71.59' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Pond PB: USF B


Hydrograph
1.31 cfs
Inflow Area=0.324 ac
Peak Elev=71.59'
Storage=2,056 cf
0.05 cfs
0.00 cfs
0.05 cfs
Inflow
Outflow
Primary
Secondary
Tertiary
Flow (cfs)
0
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
Time (hours)

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1 Runoff Area=87,665 sf 15.27% Impervious Runoff Depth=2.91"
Flow Length=177' Slope=0.0100 '/' Tc=29.9 min CN=83 Runoff=5.08 cfs 0.489 af

Subcatchment 2S: Subcatchment 2 Runoff Area=90,682 sf 66.45% Impervious Runoff Depth=3.81"
Flow Length=178' Slope=0.0075 '/' Tc=33.7 min CN=92 Runoff=6.18 cfs 0.660 af

Subcatchment 3S: Subcatchment 3 Runoff Area=40,444 sf 47.45% Impervious Runoff Depth=3.49"
Flow Length=185' Slope=0.0200 '/' Tc=30.6 min CN=89 Runoff=2.73 cfs 0.270 af

Subcatchment 4S: Subcatchment 4 Runoff Area=26,132 sf 52.50% Impervious Runoff Depth=3.49"
Tc=7.0 min CN=89 Runoff=3.36 cfs 0.175 af

Subcatchment 5S: Subcatchment 5 Runoff Area=109,598 sf 64.38% Impervious Runoff Depth=3.81"
Tc=7.0 min CN=92 Runoff=14.92 cfs 0.798 af

Subcatchment 6S: Subcatchment 6 Runoff Area=39,891 sf 54.44% Impervious Runoff Depth=3.60"
Tc=7.0 min CN=90 Runoff=5.23 cfs 0.275 af

Subcatchment 7S: Subcatchment 7 Runoff Area=41,419 sf 41.76% Impervious Runoff Depth=3.39"
Tc=7.0 min CN=88 Runoff=5.21 cfs 0.269 af

Subcatchment 8S: Subcatchment 8 Runoff Area=1,744 sf 3.61% Impervious Runoff Depth=2.73"
Tc=7.0 min CN=81 Runoff=0.18 cfs 0.009 af

Subcatchment SA: Subcatchment A Runoff Area=8,542 sf 67.83% Impervious Runoff Depth=3.81"
Flow Length=65' Slope=0.0300 '/' Tc=7.0 min CN=92 Runoff=1.16 cfs 0.062 af

Subcatchment SB: Subcatchment B Runoff Area=14,118 sf 84.42% Impervious Runoff Depth=4.13"
Tc=7.0 min CN=95 Runoff=2.01 cfs 0.112 af

Reach 1SP: Study Point 1 Inflow=4.87 cfs 1.743 af
Outflow=4.87 cfs 1.743 af

Reach 2SP: Study Point 2 Inflow=1.02 cfs 0.063 af
Outflow=1.02 cfs 0.063 af

Reach 3SP: Study Point 3 Inflow=0.18 cfs 0.009 af
Outflow=0.18 cfs 0.009 af

Reach 4SP: Study Point 4 Inflow=2.73 cfs 0.270 af
Outflow=2.73 cfs 0.270 af

Pond 1P: Wetland A Peak Elev=66.02' Storage=68,121 cf Inflow=18.24 cfs 2.472 af
Primary=1.02 cfs 0.063 af Secondary=4.87 cfs 1.743 af Outflow=5.89 cfs 1.806 af

Pond 2P: Wetland B Peak Elev=69.25' Storage=10,461 cf Inflow=6.18 cfs 0.660 af
Outflow=5.34 cfs 0.465 af

Pond 3P: Surface Detention Peak Elev=72.57' Storage=14,180 cf Inflow=22.54 cfs 1.236 af
Primary=7.86 cfs 1.225 af Secondary=1.40 cfs 0.009 af Outflow=9.27 cfs 1.234 af

Pond 4P: Surface Detention Peak Elev=71.21' Storage=5,616 cf Inflow=5.26 cfs 0.363 af
Primary=1.91 cfs 0.284 af Secondary=0.00 cfs 0.000 af Outflow=1.91 cfs 0.284 af

Pond 5P: OCS-4P Peak Elev=68.39' Inflow=1.91 cfs 0.284 af
12.0" Round Culvert n=0.013 L=81.0' S=0.0077 '/' Outflow=1.91 cfs 0.284 af

Pond 6P: Atrium Surface Detention Peak Elev=74.01' Storage=4,109 cf Inflow=14.93 cfs 0.846 af
Outflow=14.48 cfs 0.789 af

Pond 7P: Riprap Surface Detention Peak Elev=73.30' Storage=479 cf Inflow=3.36 cfs 0.175 af
12.0" Round Culvert n=0.013 L=375.0' S=0.0070 '/' Outflow=2.95 cfs 0.173 af

Pond 8P: OCS-DMH7 Peak Elev=67.19' Inflow=7.86 cfs 1.225 af
Primary=0.70 cfs 0.038 af Secondary=7.17 cfs 1.187 af Outflow=7.86 cfs 1.225 af

Pond 9P: UG Detention Peak Elev=66.05' Storage=509 cf Inflow=0.26 cfs 0.019 af
Outflow=0.14 cfs 0.019 af

Pond 10P: Isolator Row x5 Peak Elev=67.37' Storage=0.001 af Inflow=0.70 cfs 0.038 af
Primary=0.26 cfs 0.019 af Secondary=0.44 cfs 0.018 af Outflow=0.70 cfs 0.038 af

Pond PA: USF A Peak Elev=77.16' Storage=1,532 cf Inflow=1.16 cfs 0.062 af
Primary=0.22 cfs 0.013 af Secondary=0.00 cfs 0.000 af Tertiary=0.03 cfs 0.035 af Outflow=0.25 cfs 0.048 af

Pond PB: USF B Peak Elev=72.11' Storage=2,962 cf Inflow=2.01 cfs 0.112 af
Primary=0.15 cfs 0.012 af Secondary=0.00 cfs 0.000 af Tertiary=0.07 cfs 0.083 af Outflow=0.22 cfs 0.094 af

Total Runoff Area = 10.566 ac Runoff Volume = 3.118 af Average Runoff Depth = 3.54"
49.18% Pervious = 5.196 ac 50.82% Impervious = 5.370 ac

Summary for Subcatchment 1S: Subcatchment 1

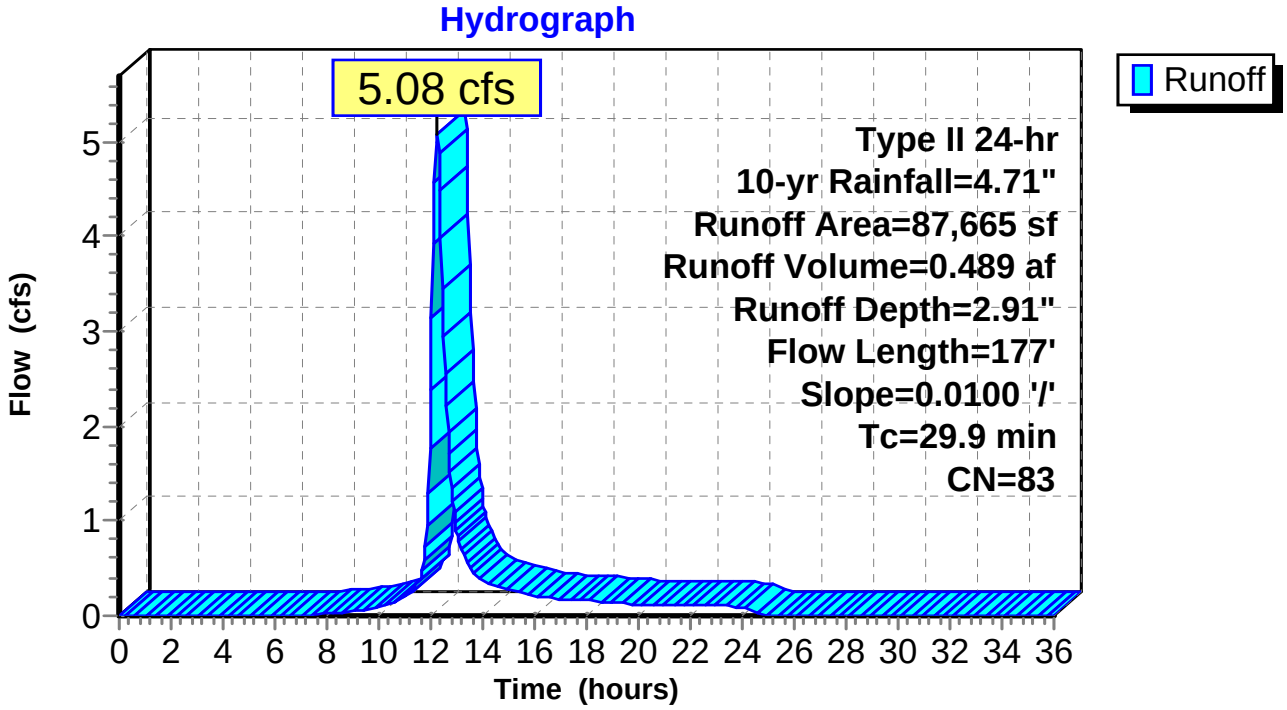
Runoff = 5.08 cfs @ 12.24 hrs, Volume= 0.489 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	13,390	98	
	74,275	80	>75% Grass cover, Good, HSG D
	87,665	83	Weighted Average
	74,275		84.73% Pervious Area
	13,390		15.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	177	0.0100	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 1S: Subcatchment 1



Summary for Subcatchment 2S: Subcatchment 2

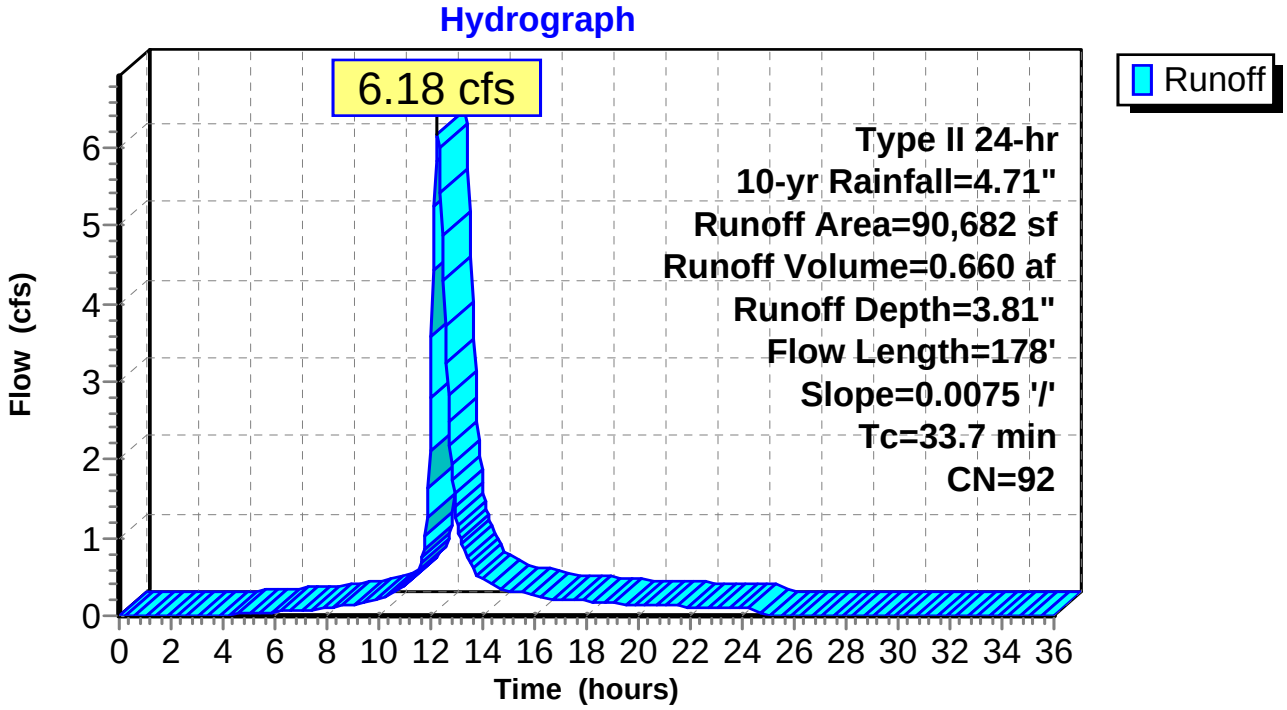
Runoff = 6.18 cfs @ 12.27 hrs, Volume= 0.660 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	60,255	98	
	30,427	80	>75% Grass cover, Good, HSG D
	90,682	92	Weighted Average
	30,427		33.55% Pervious Area
	60,255		66.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.7	178	0.0075	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 2S: Subcatchment 2



Summary for Subcatchment 3S: Subcatchment 3

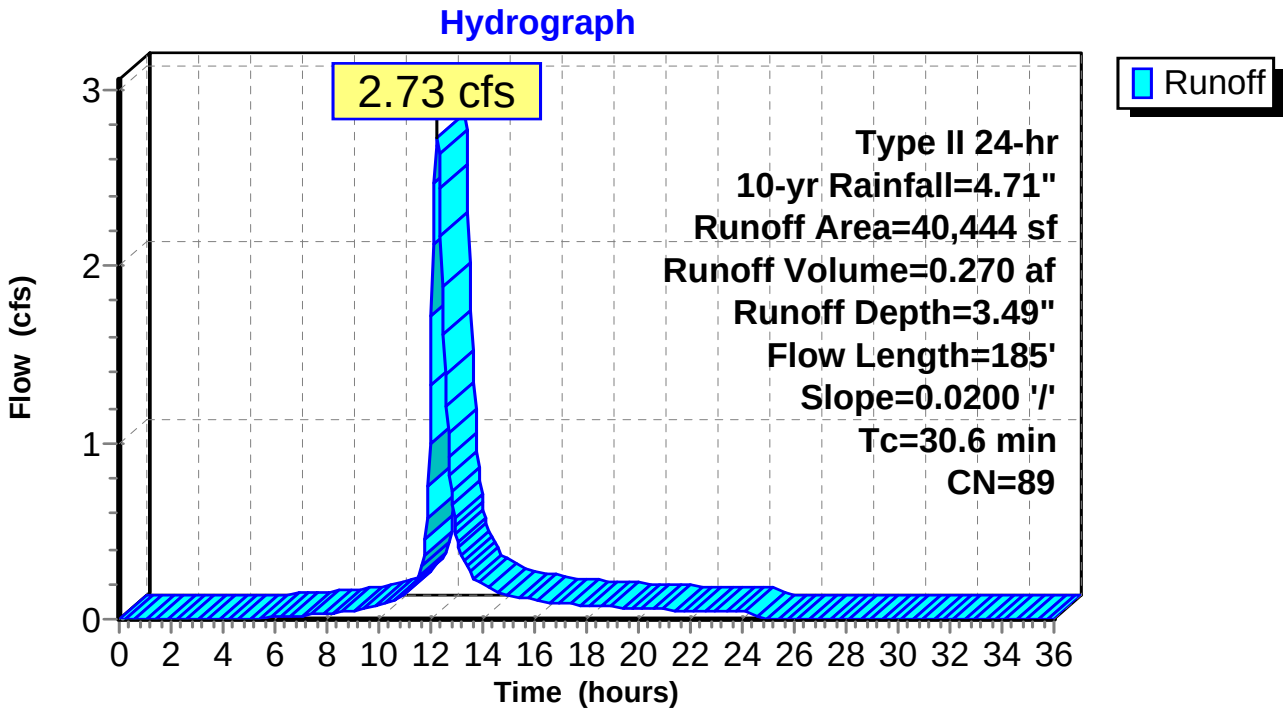
Runoff = 2.73 cfs @ 12.24 hrs, Volume= 0.270 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
	21,255	80	>75% Grass cover, Good, HSG D
*	19,189	98	
	40,444	89	Weighted Average
	21,255		52.55% Pervious Area
	19,189		47.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.8	150	0.0200	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.17"
0.8	35	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	185	Total			

Subcatchment 3S: Subcatchment 3



Summary for Subcatchment 4S: Subcatchment 4

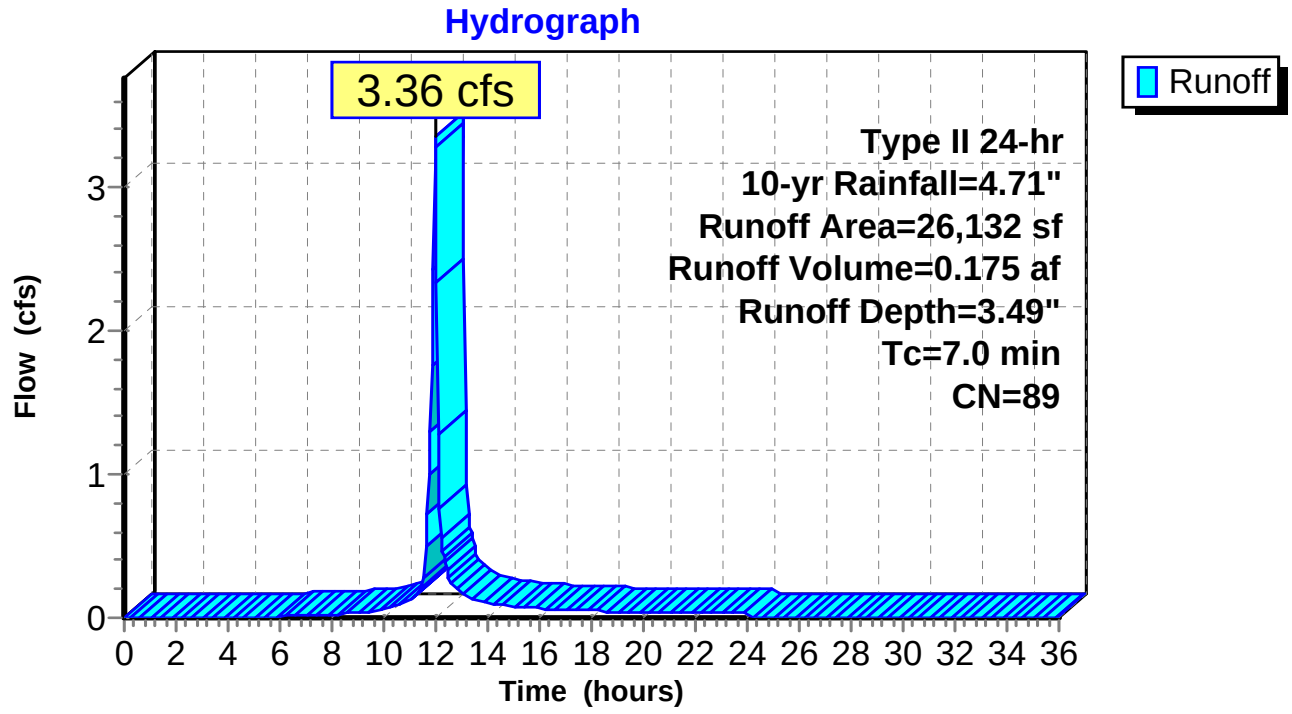
Runoff = 3.36 cfs @ 11.98 hrs, Volume= 0.175 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	13,720	98	
	12,412	80	>75% Grass cover, Good, HSG D
	26,132	89	Weighted Average
	12,412		47.50% Pervious Area
	13,720		52.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 4S: Subcatchment 4



Summary for Subcatchment 5S: Subcatchment 5

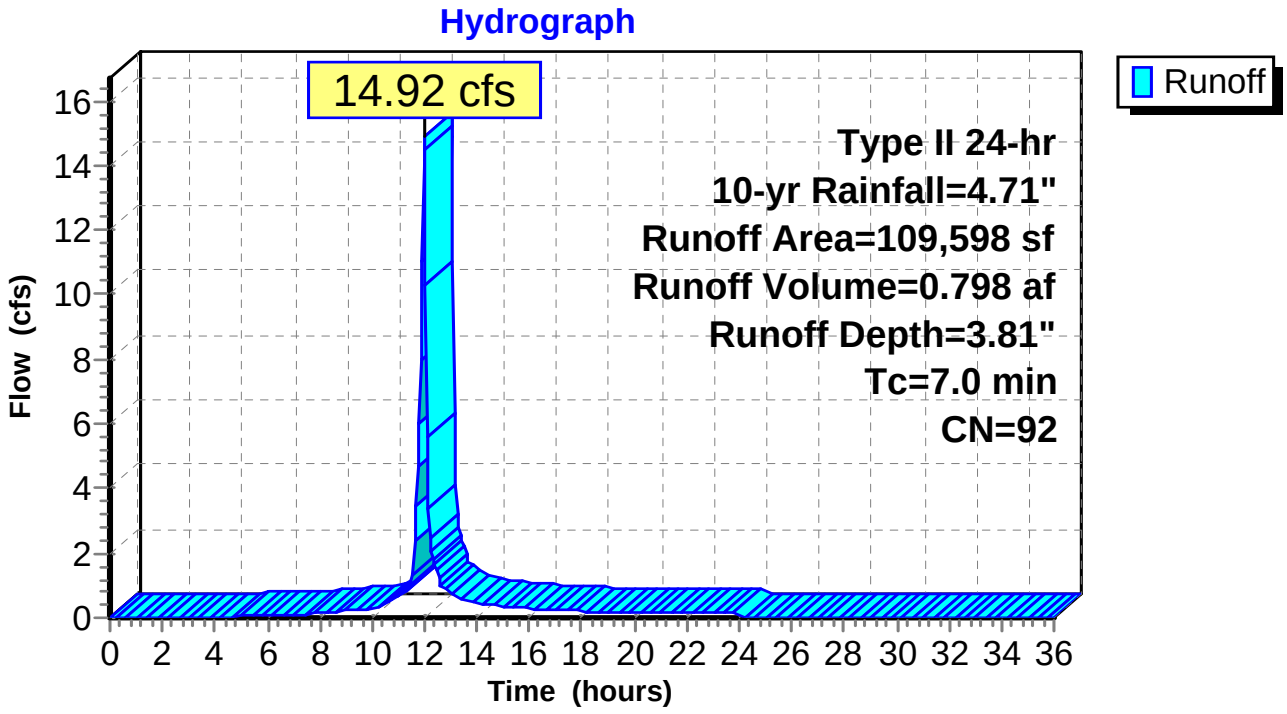
Runoff = 14.92 cfs @ 11.98 hrs, Volume= 0.798 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	70,563	98	
	39,035	80	>75% Grass cover, Good, HSG D
	109,598	92	Weighted Average
	39,035		35.62% Pervious Area
	70,563		64.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 5S: Subcatchment 5



Summary for Subcatchment 6S: Subcatchment 6

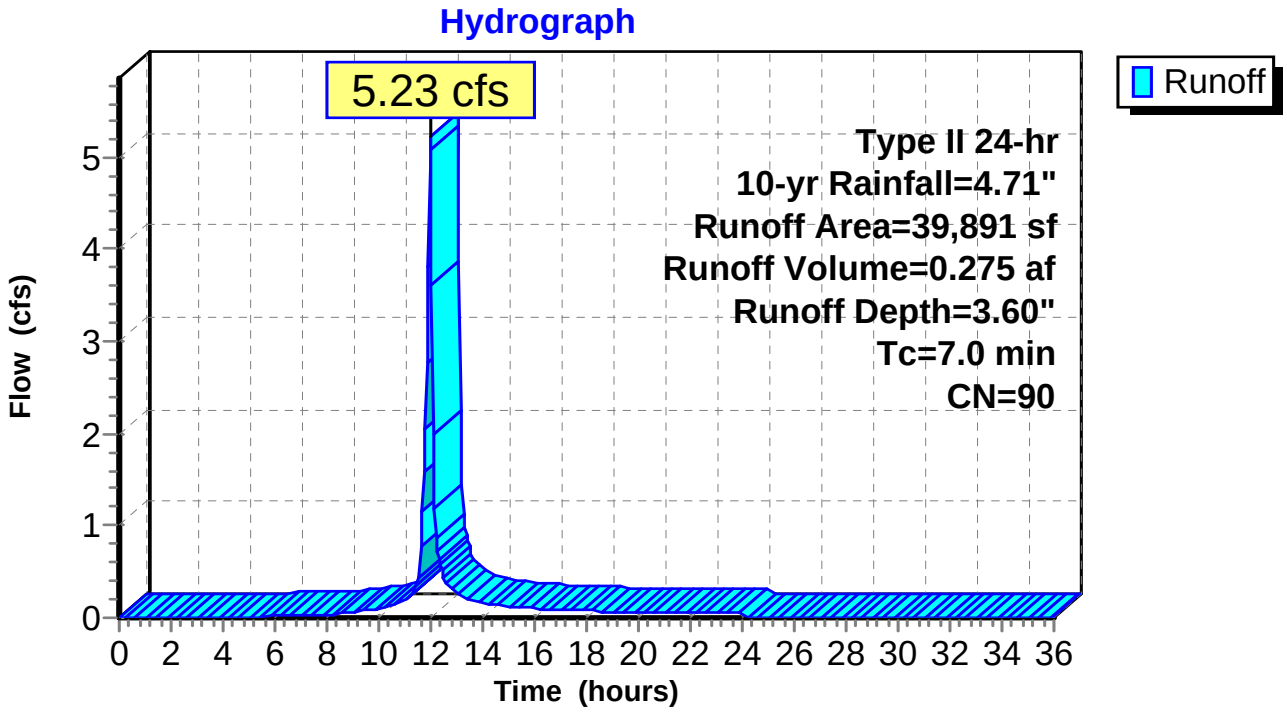
Runoff = 5.23 cfs @ 11.98 hrs, Volume= 0.275 af, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	21,718	98	
	18,173	80	>75% Grass cover, Good, HSG D
	39,891	90	Weighted Average
	18,173		45.56% Pervious Area
	21,718		54.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 6S: Subcatchment 6



Summary for Subcatchment 7S: Subcatchment 7

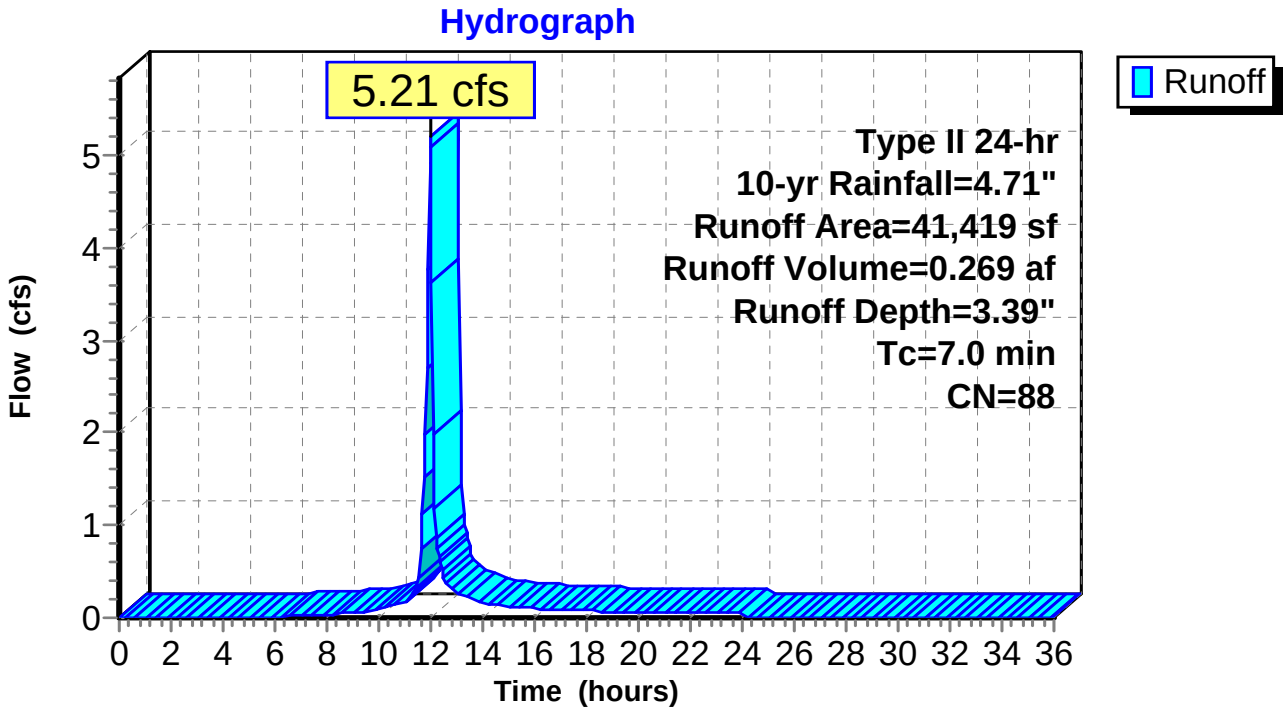
Runoff = 5.21 cfs @ 11.98 hrs, Volume= 0.269 af, Depth= 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	17,297	98	
	24,122	80	>75% Grass cover, Good, HSG D
	41,419	88	Weighted Average
	24,122		58.24% Pervious Area
	17,297		41.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 7S: Subcatchment 7



Summary for Subcatchment 8S: Subcatchment 8

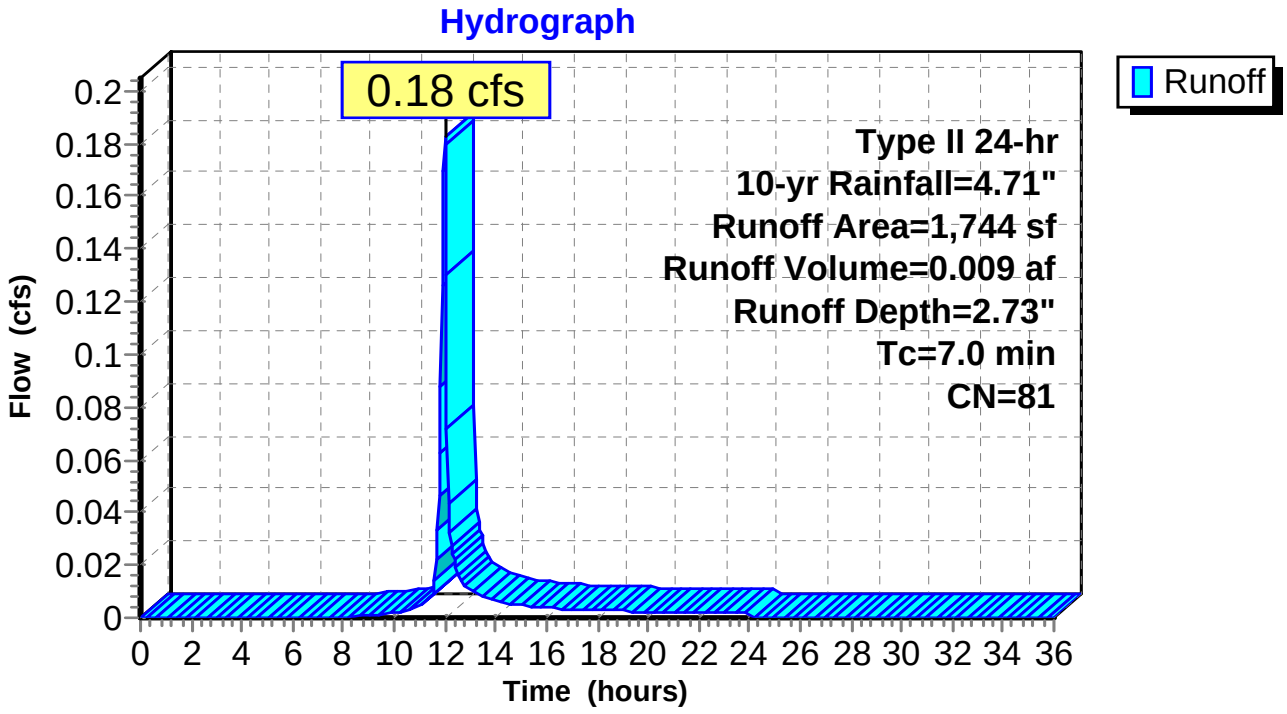
Runoff = 0.18 cfs @ 11.98 hrs, Volume= 0.009 af, Depth= 2.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
	1,681	80	>75% Grass cover, Good, HSG D
*	63	98	
	1,744	81	Weighted Average
	1,681		96.39% Pervious Area
	63		3.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 8S: Subcatchment 8



Summary for Subcatchment SA: Subcatchment A

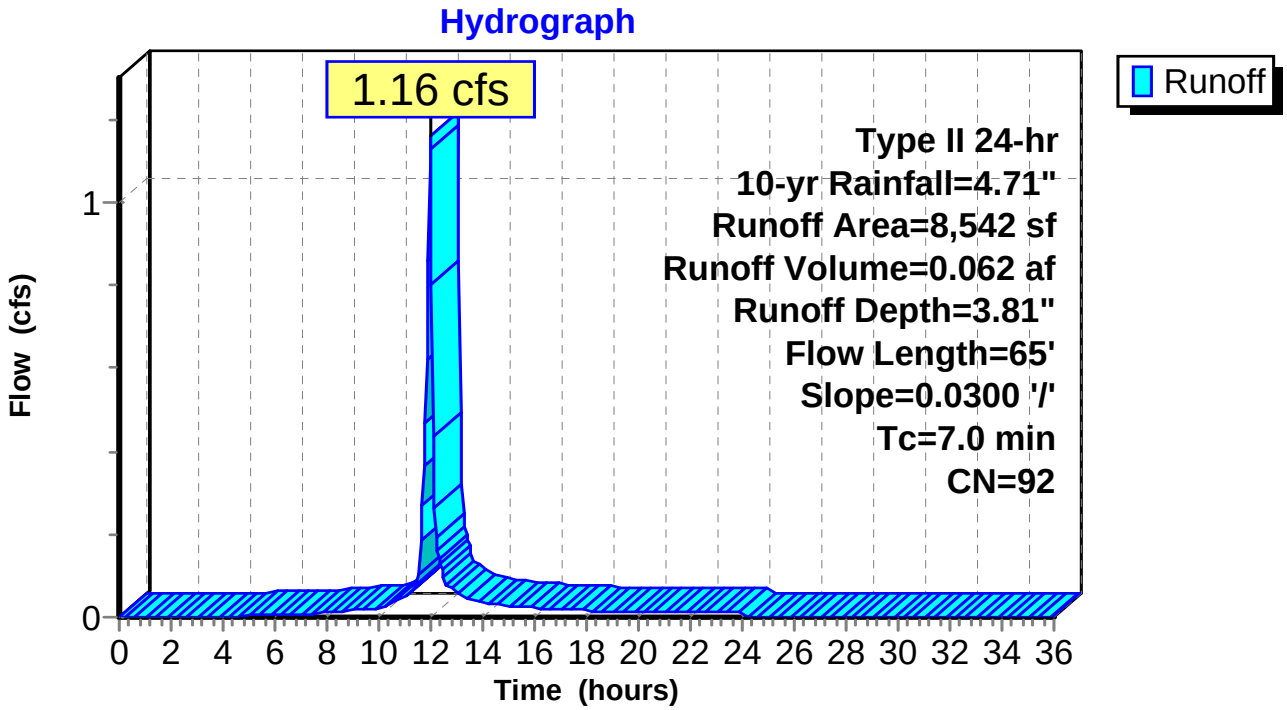
Runoff = 1.16 cfs @ 11.98 hrs, Volume= 0.062 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	5,794	98	
	2,748	80	>75% Grass cover, Good, HSG D
	8,542	92	Weighted Average
	2,748		32.17% Pervious Area
	5,794		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	65	0.0300	1.48		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.17"
6.3					**Direct Entry, min**
7.0	65	Total			

Subcatchment SA: Subcatchment A



Summary for Subcatchment SB: Subcatchment B

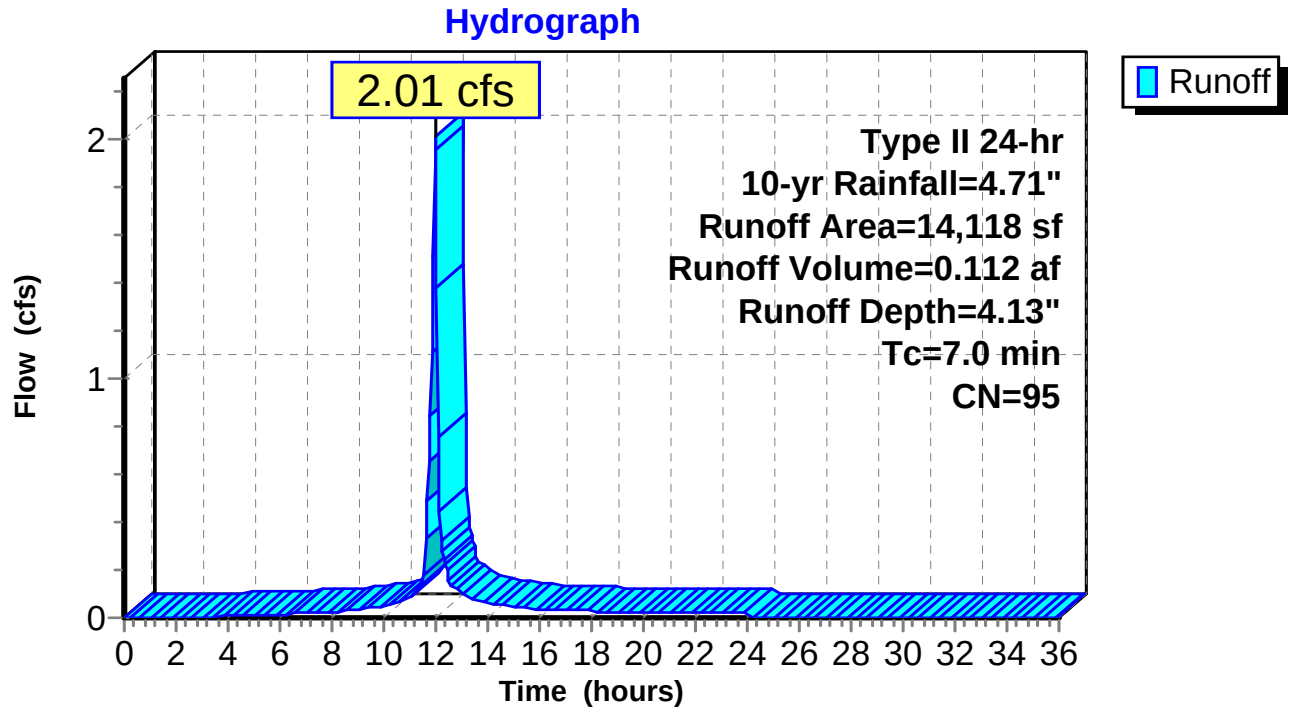
Runoff = 2.01 cfs @ 11.98 hrs, Volume= 0.112 af, Depth= 4.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.71"

	Area (sf)	CN	Description
*	11,919	98	
	2,199	80	>75% Grass cover, Good, HSG D
	14,118	95	Weighted Average
	2,199		15.58% Pervious Area
	11,919		84.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment SB: Subcatchment B



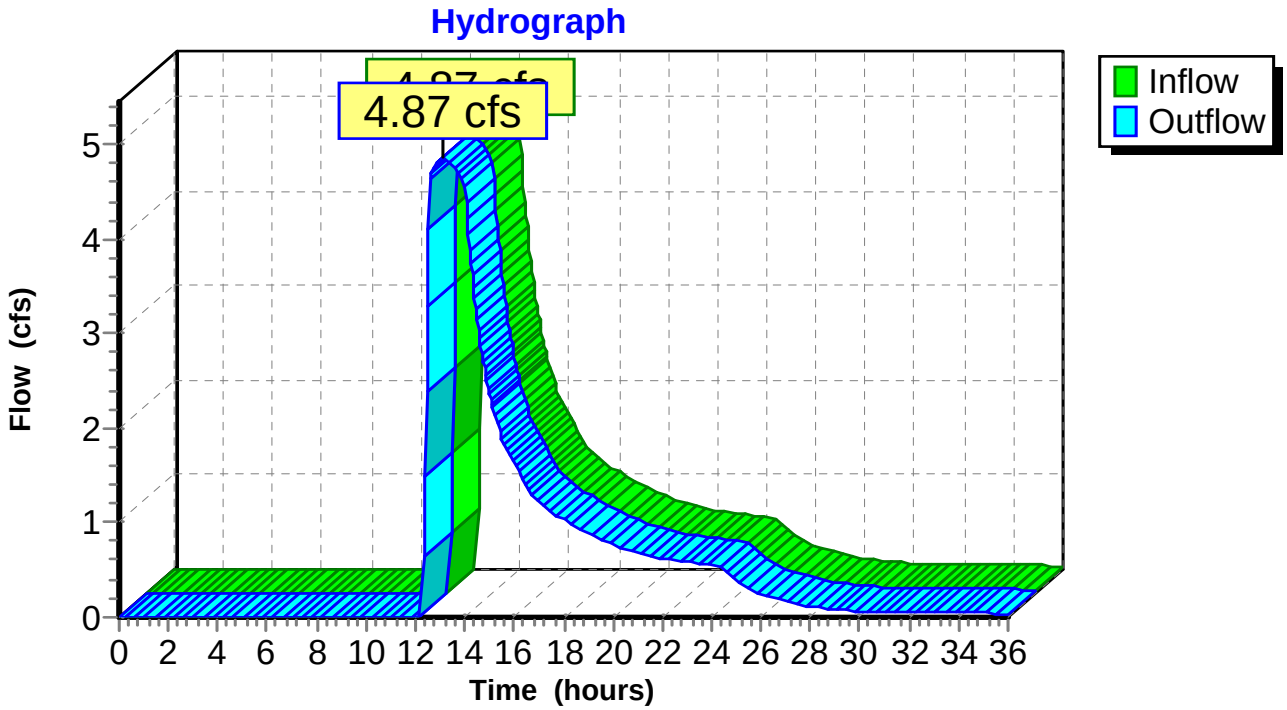
Summary for Reach 1SP: Study Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	4.87 cfs @	13.07 hrs, Volume=	1.743 af
Outflow	=	4.87 cfs @	13.07 hrs, Volume=	1.743 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 1SP: Study Point 1



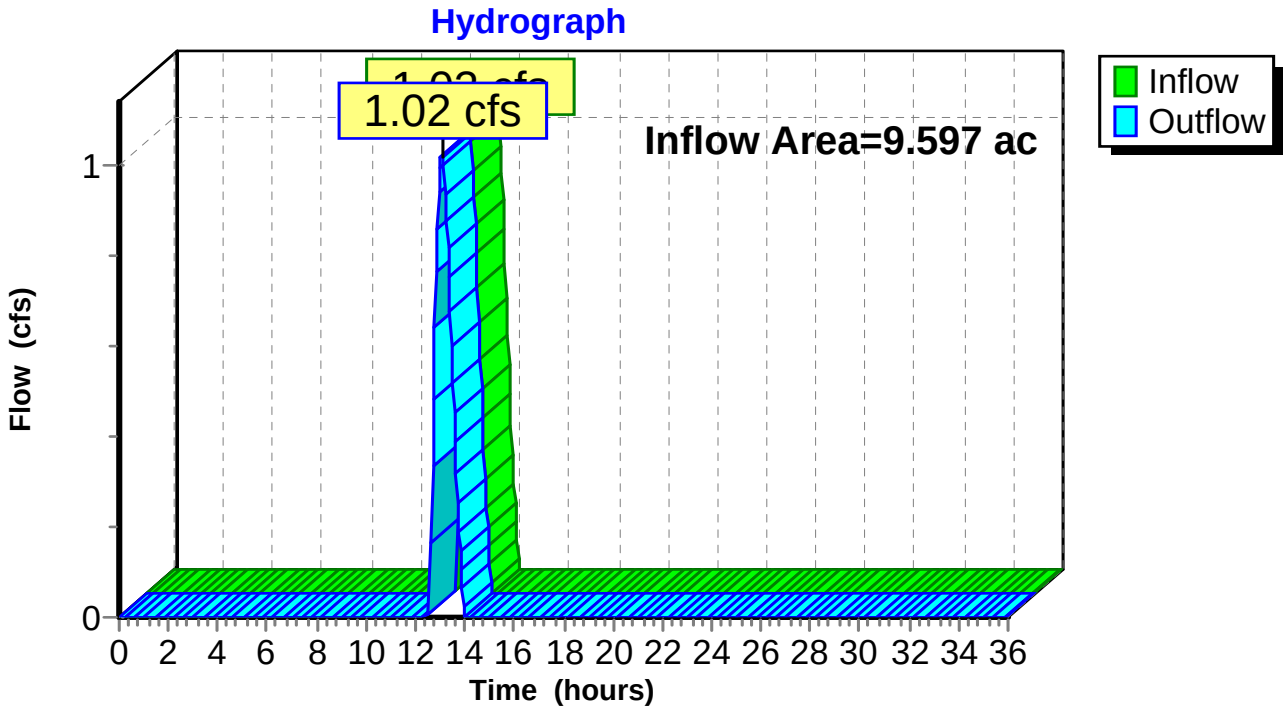
Summary for Reach 2SP: Study Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.597 ac, 51.35% Impervious, Inflow Depth = 0.08" for 10-yr event
Inflow = 1.02 cfs @ 13.07 hrs, Volume= 0.063 af
Outflow = 1.02 cfs @ 13.07 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 2SP: Study Point 2



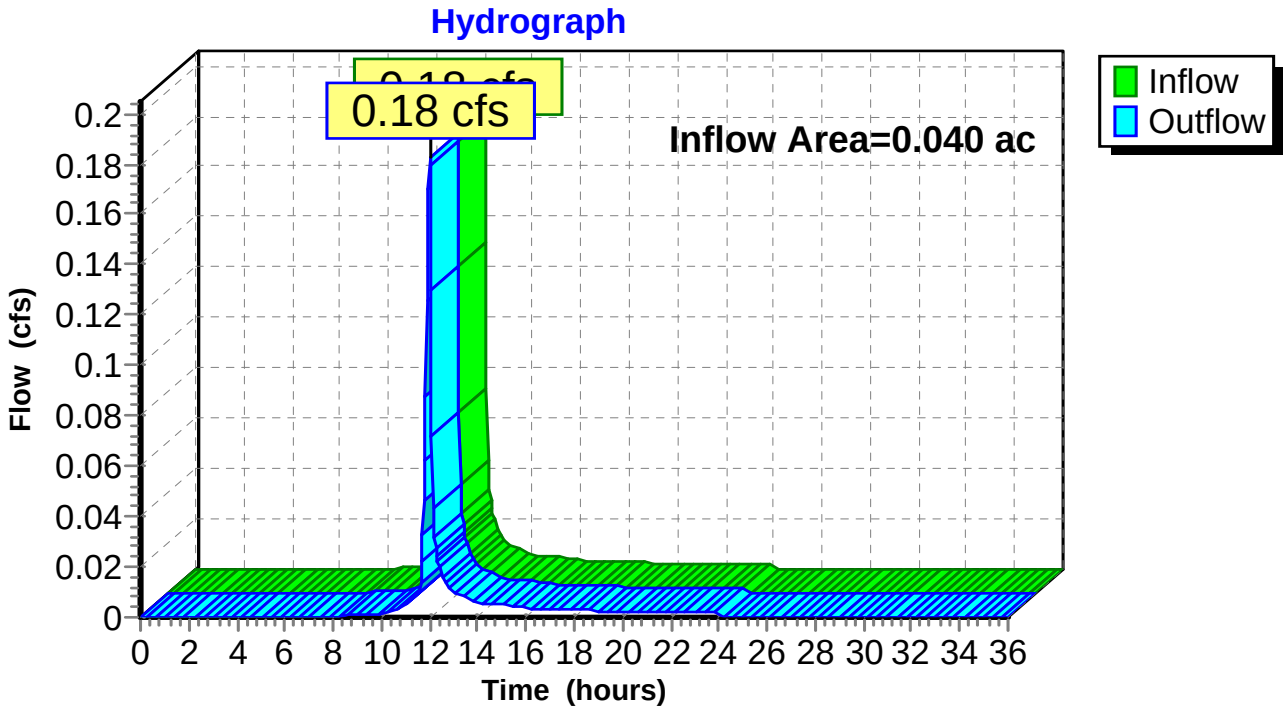
Summary for Reach 3SP: Study Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.040 ac, 3.61% Impervious, Inflow Depth = 2.73" for 10-yr event
Inflow = 0.18 cfs @ 11.98 hrs, Volume= 0.009 af
Outflow = 0.18 cfs @ 11.98 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 3SP: Study Point 3



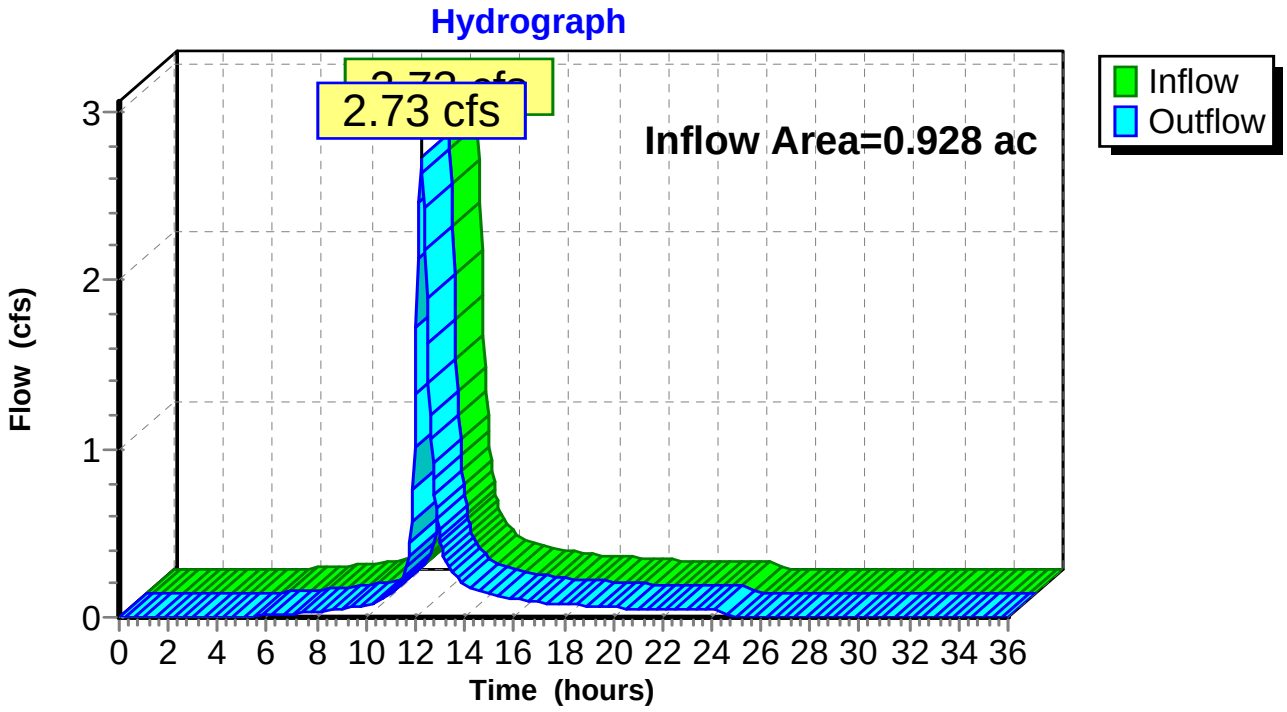
Summary for Reach 4SP: Study Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.928 ac, 47.45% Impervious, Inflow Depth = 3.49" for 10-yr event
Inflow = 2.73 cfs @ 12.24 hrs, Volume= 0.270 af
Outflow = 2.73 cfs @ 12.24 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 4SP: Study Point 4



Summary for Pond 1P: Wetland A

[79] Warning: Submerged Pond 8P Secondary device # 2 INLET by 0.32'
[81] Warning: Exceeded Pond 9P by 0.03' @ 13.25 hrs

Inflow Area = 9.597 ac, 51.35% Impervious, Inflow Depth > 3.09" for 10-yr event
Inflow = 18.24 cfs @ 12.34 hrs, Volume= 2.472 af
Outflow = 5.89 cfs @ 13.07 hrs, Volume= 1.806 af, Atten= 68%, Lag= 43.6 min
Primary = 1.02 cfs @ 13.07 hrs, Volume= 0.063 af
Secondary = 4.87 cfs @ 13.07 hrs, Volume= 1.743 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Starting Elev= 63.50' Surf.Area= 14,739 sf Storage= 17,429 cf
Peak Elev= 66.02' @ 13.07 hrs Surf.Area= 25,888 sf Storage= 68,121 cf (50,693 cf above start)

Plug-Flow detention time= 324.6 min calculated for 1.406 af (57% of inflow)
Center-of-Mass det. time= 128.6 min (993.3 - 864.8)

Volume	Invert	Avail.Storage	Storage Description
#1	62.00'	209,276 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

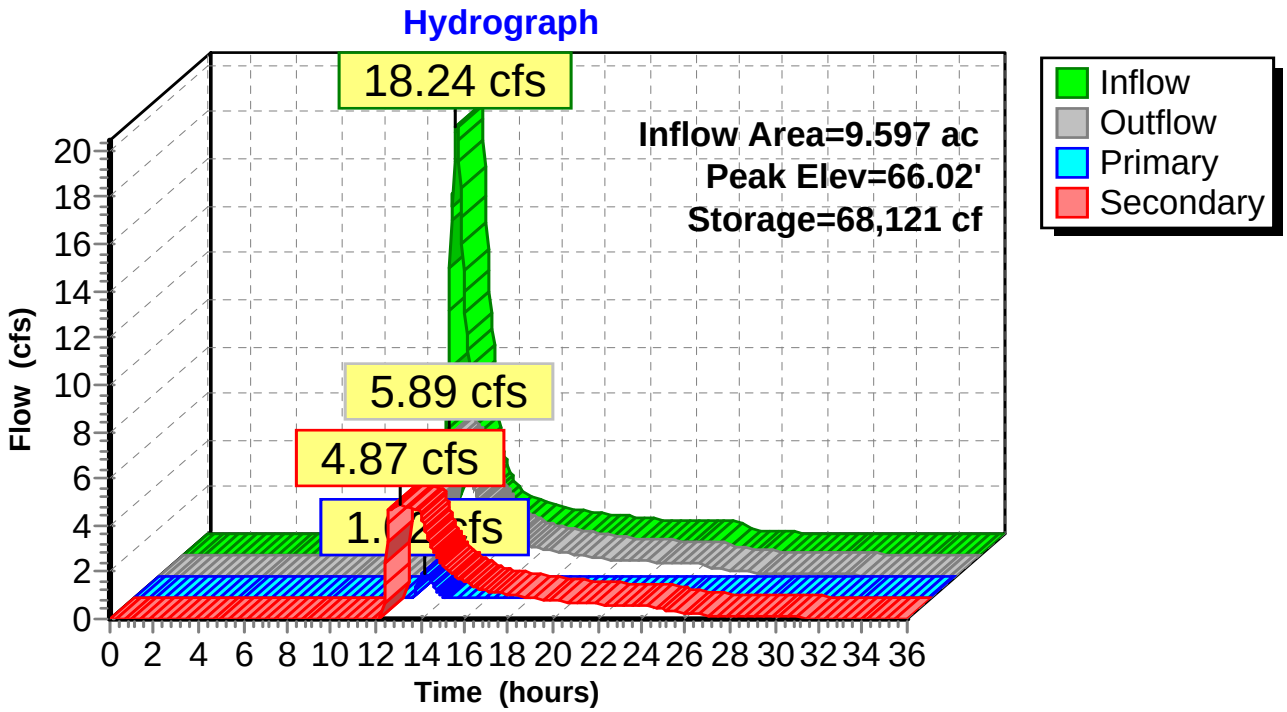
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.00	8,500	0	0
65.00	20,977	44,216	44,216
70.00	45,047	165,060	209,276

Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**3.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Secondary	62.86'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.86' / 58.69' S= 0.0869 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#3	Device 2	65.08'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=1.01 cfs @ 13.07 hrs HW=66.02' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 1.01 cfs @ 1.24 fps)

Secondary OutFlow Max=4.87 cfs @ 13.07 hrs HW=66.02' (Free Discharge)
└**2=Culvert** (Inlet Controls 4.87 cfs @ 6.20 fps)
└**3=Sharp-Crested Rectangular Weir** (Passes 4.87 cfs of 7.68 cfs potential flow)

Pond 1P: Wetland A



Summary for Pond 2P: Wetland B

Inflow Area = 2.082 ac, 66.45% Impervious, Inflow Depth = 3.81" for 10-yr event
Inflow = 6.18 cfs @ 12.27 hrs, Volume= 0.660 af
Outflow = 5.34 cfs @ 12.41 hrs, Volume= 0.465 af, Atten= 14%, Lag= 8.5 min
Primary = 5.34 cfs @ 12.41 hrs, Volume= 0.465 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.25' @ 12.41 hrs Surf.Area= 9,670 sf Storage= 10,461 cf

Plug-Flow detention time= 168.7 min calculated for 0.465 af (70% of inflow)
Center-of-Mass det. time= 73.4 min (880.4 - 807.0)

Volume	Invert	Avail.Storage	Storage Description
#1	67.00'	21,636 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

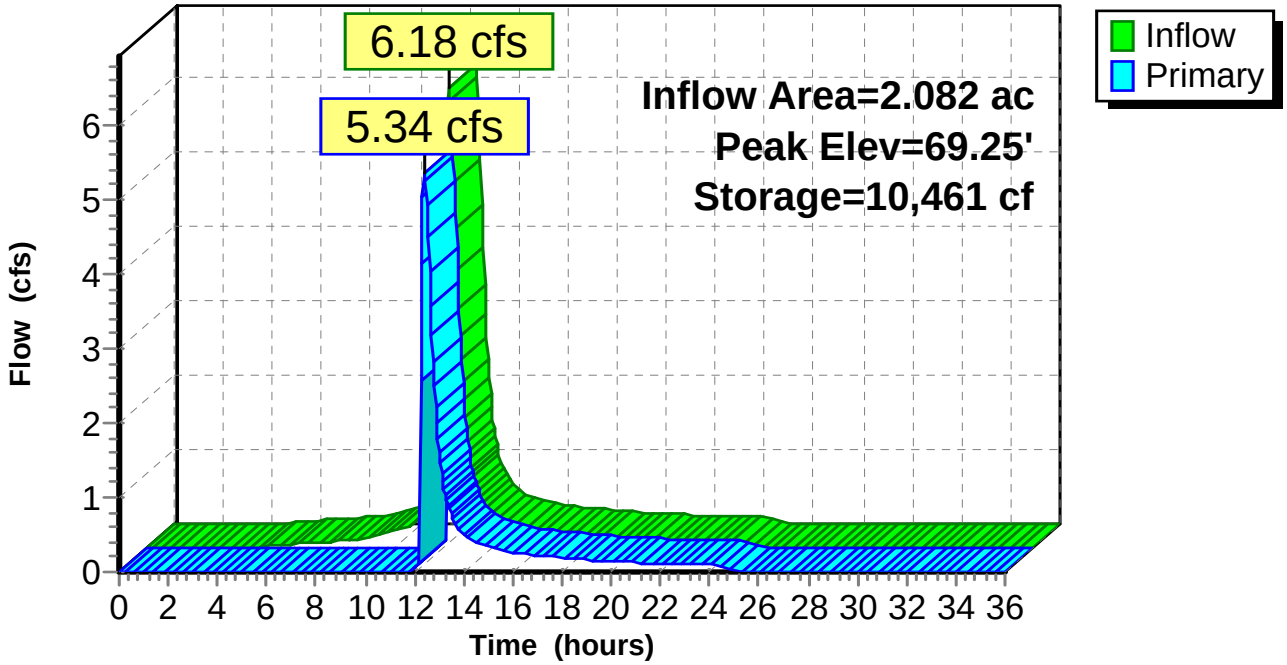
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.00	2,200	0	0
68.00	4,250	3,225	3,225
69.00	6,286	5,268	8,493
70.00	20,000	13,143	21,636

Device	Routing	Invert	Outlet Devices
#1	Primary	69.00'	**18.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=5.29 cfs @ 12.41 hrs HW=69.25' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 5.29 cfs @ 1.20 fps)

Pond 2P: Wetland B

Hydrograph



Summary for Pond 3P: Surface Detention

[79] Warning: Submerged Pond 6P Primary device # 1 INLET by 1.56'
[81] Warning: Exceeded Pond 7P by 0.21' @ 12.20 hrs

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth > 3.51" for 10-yr event
Inflow = 22.54 cfs @ 11.99 hrs, Volume= 1.236 af
Outflow = 9.27 cfs @ 12.14 hrs, Volume= 1.234 af, Atten= 59%, Lag= 8.7 min
Primary = 7.86 cfs @ 12.14 hrs, Volume= 1.225 af
Secondary = 1.40 cfs @ 12.14 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.57' @ 12.14 hrs Surf.Area= 7,177 sf Storage= 14,180 cf

Plug-Flow detention time= 20.6 min calculated for 1.232 af (100% of inflow)
Center-of-Mass det. time= 19.1 min (835.5 - 816.4)

Volume	Invert	Avail.Storage	Storage Description
#1	69.00'	21,926 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

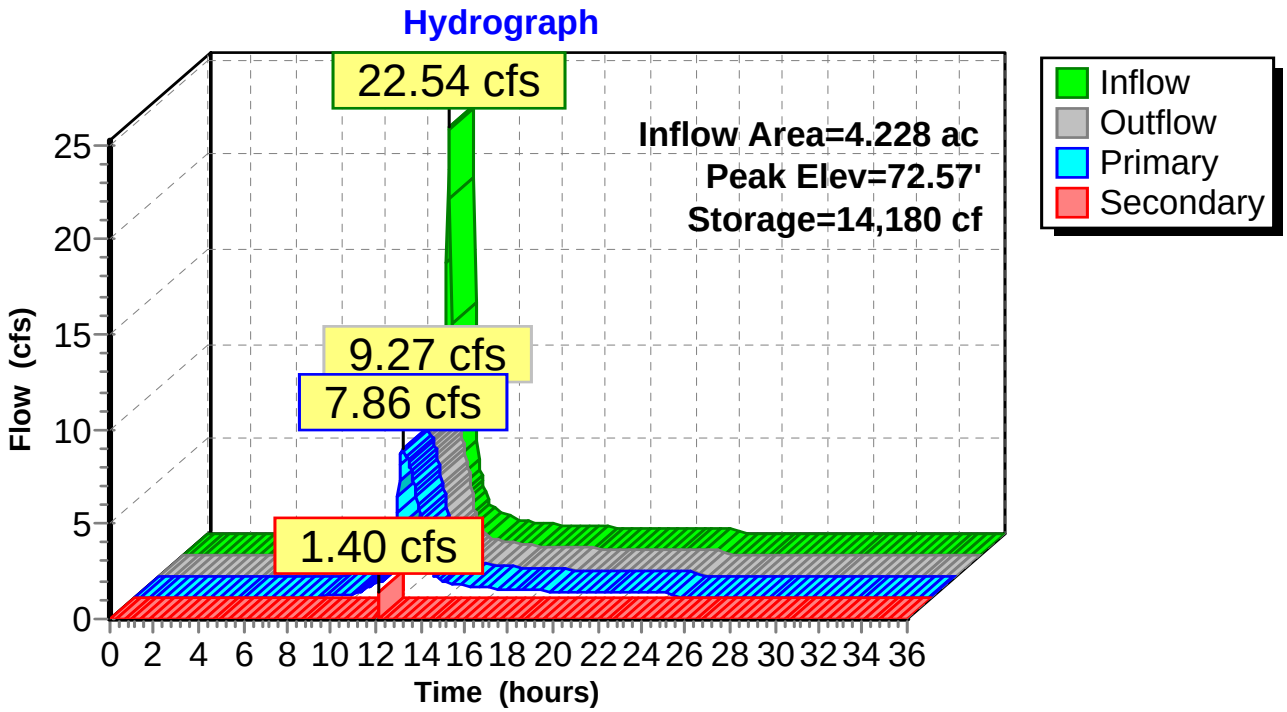
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.00	400	0	0
70.00	2,991	1,696	1,696
72.00	5,812	8,803	10,499
73.50	9,425	11,428	21,926

Device	Routing	Invert	Outlet Devices
#1	Primary	69.10'	**15.0" Round Culvert** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 69.10' / 68.75' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	72.50'	**35.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=7.85 cfs @ 12.14 hrs HW=72.56' (Free Discharge)
1=Culvert (Inlet Controls 7.85 cfs @ 6.40 fps)

Secondary OutFlow Max=1.19 cfs @ 12.14 hrs HW=72.56' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 1.19 cfs @ 0.57 fps)

Pond 3P: Surface Detention



Summary for Pond 4P: Surface Detention

[79] Warning: Submerged Pond PB Primary device # 1 INLET by 3.70'
[78] Warning: Submerged Pond PB Tertiary device # 2 by 3.11'

Inflow Area = 1.275 ac, 52.61% Impervious, Inflow Depth > 3.42" for 10-yr event
Inflow = 5.26 cfs @ 11.98 hrs, Volume= 0.363 af
Outflow = 1.91 cfs @ 12.12 hrs, Volume= 0.284 af, Atten= 64%, Lag= 8.2 min
Primary = 1.91 cfs @ 12.12 hrs, Volume= 0.284 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 71.21' @ 12.12 hrs Surf.Area= 2,698 sf Storage= 5,616 cf

Plug-Flow detention time= 250.8 min calculated for 0.284 af (78% of inflow)
Center-of-Mass det. time= 113.4 min (1,010.9 - 897.4)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	8,676 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

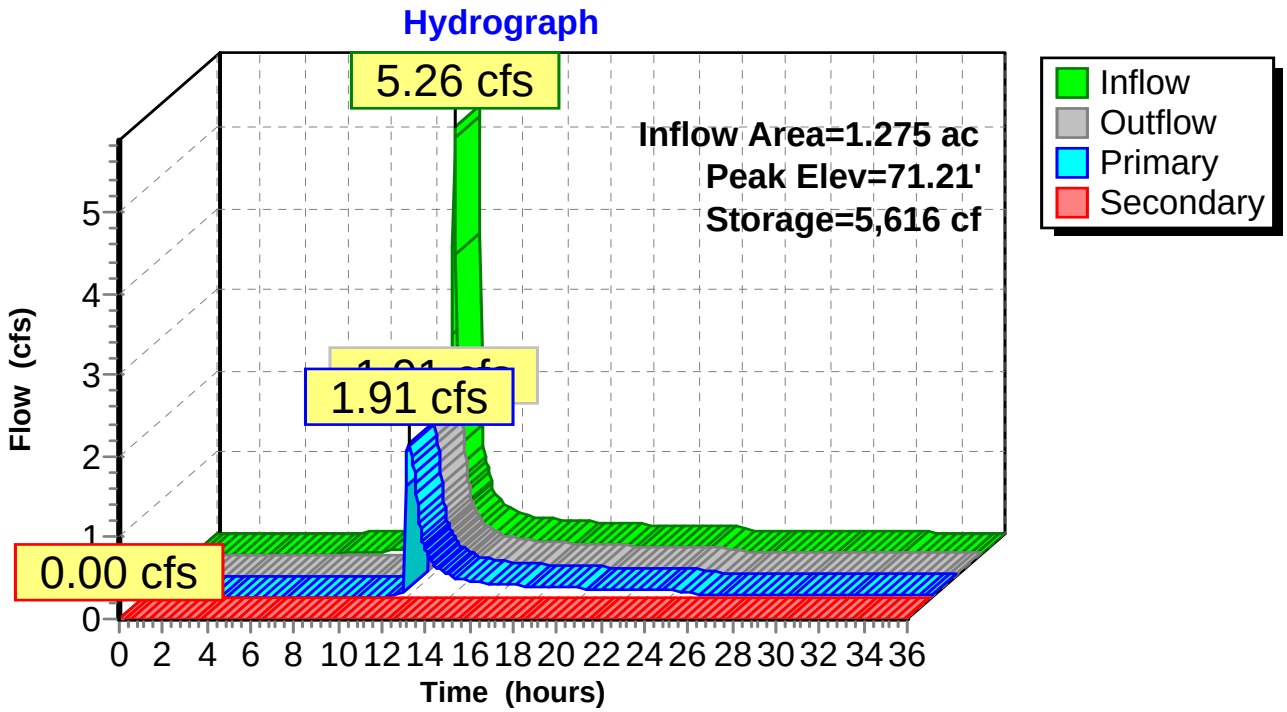
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
64.00	13	0	0
67.00	71	126	126
68.00	928	500	626
69.00	1,378	1,153	1,779
70.00	1,604	1,491	3,270
71.00	2,104	1,854	5,124
72.00	5,000	3,552	8,676

Device	Routing	Invert	Outlet Devices
#1	Primary	67.66'	**1.0" Round Culvert** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.66' / 67.65' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 0.01 sf
#2	Secondary	71.25'	**45.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	70.25'	**6.0" Round Culvert X 3.00** L= 1.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 70.25' / 70.25' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf

Primary OutFlow Max=1.90 cfs @ 12.12 hrs HW=71.20' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.03 cfs @ 5.99 fps)
└**3=Culvert** (Inlet Controls 1.87 cfs @ 3.17 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=64.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: Surface Detention



Summary for Pond 5P: OCS-4P

[57] Hint: Peaked at 68.39' (Flood elevation advised)
[79] Warning: Submerged Pond 4P Primary device # 1 INLET by 0.72'

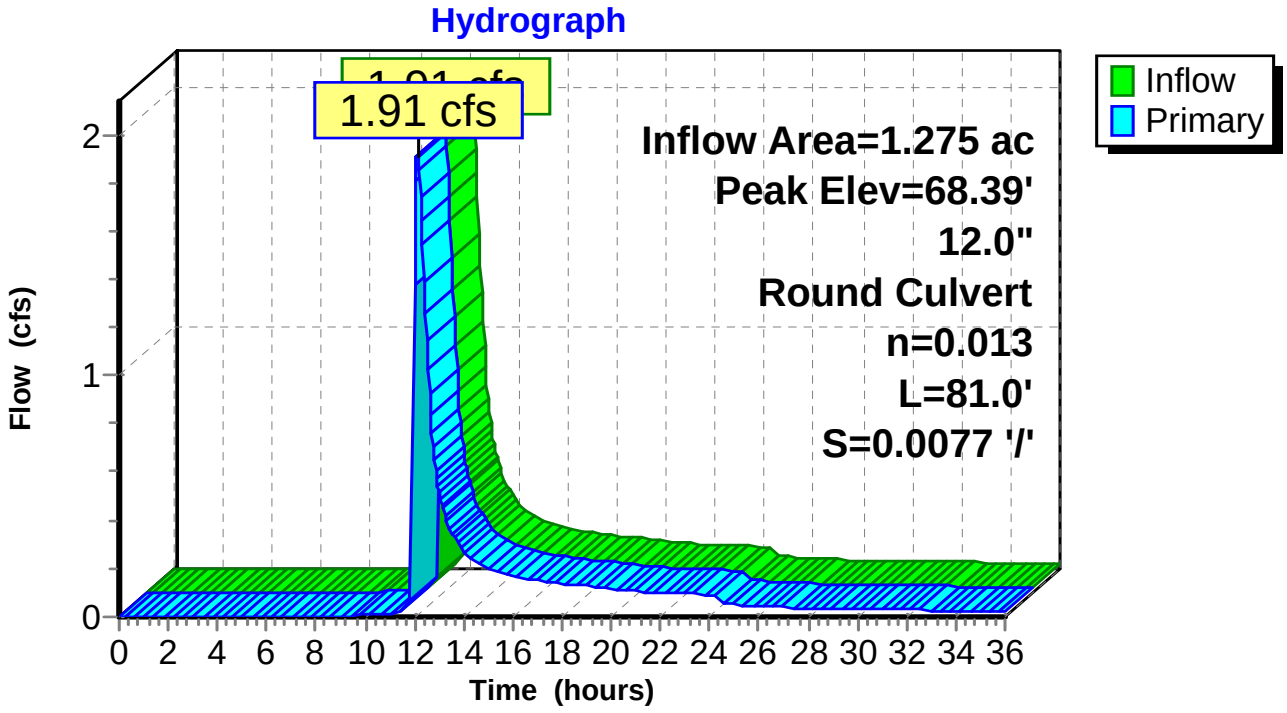
Inflow Area = 1.275 ac, 52.61% Impervious, Inflow Depth > 2.67" for 10-yr event
Inflow = 1.91 cfs @ 12.12 hrs, Volume= 0.284 af
Outflow = 1.91 cfs @ 12.12 hrs, Volume= 0.284 af, Atten= 0%, Lag= 0.0 min
Primary = 1.91 cfs @ 12.12 hrs, Volume= 0.284 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 68.39' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	67.48'	**12.0" Round Culvert** L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.48' / 66.86' S= 0.0077 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.90 cfs @ 12.12 hrs HW=68.38' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.90 cfs @ 2.55 fps)

Pond 5P: OCS-4P



Summary for Pond 6P: Atrium Surface Detention

[79] Warning: Submerged Pond PA Primary device # 1 INLET by 1.01'
[78] Warning: Submerged Pond PA Tertiary device # 2 by 0.18'

Inflow Area = 2.712 ac, 64.63% Impervious, Inflow Depth > 3.74" for 10-yr event
Inflow = 14.93 cfs @ 11.98 hrs, Volume= 0.846 af
Outflow = 14.48 cfs @ 12.00 hrs, Volume= 0.789 af, Atten= 3%, Lag= 1.1 min
Primary = 14.48 cfs @ 12.00 hrs, Volume= 0.789 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 74.01' @ 12.00 hrs Surf.Area= 3,663 sf Storage= 4,109 cf

Plug-Flow detention time= 70.7 min calculated for 0.789 af (93% of inflow)
Center-of-Mass det. time= 27.3 min (828.4 - 801.2)

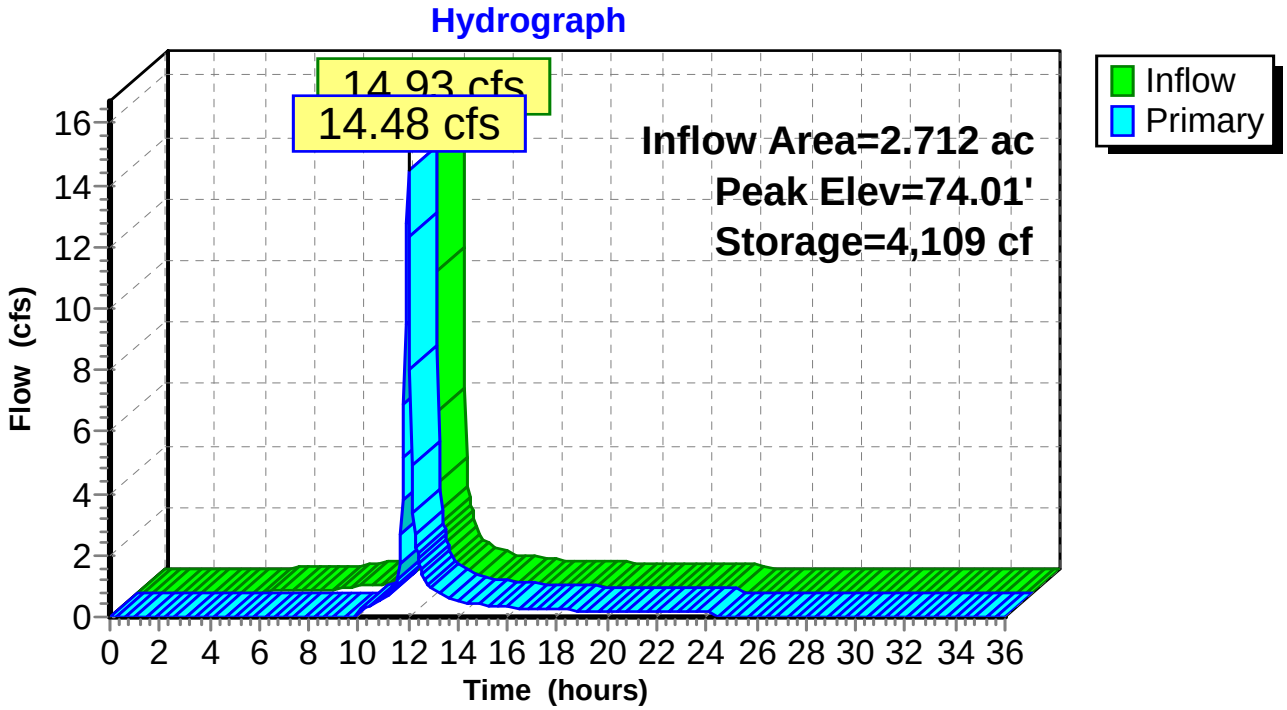
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	5,026 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	55	0	0
72.00	327	382	382
73.00	1,694	1,011	1,393
74.25	4,120	3,634	5,026

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.1" Round Culvert** L= 220.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.00' / 69.20' S= 0.0082 '/' Cc= 0.900 n= 0.013, Flow Area= 0.00 sf
#2	Primary	73.50'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=14.37 cfs @ 12.00 hrs HW=74.01' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.00 cfs @ 0.28 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 14.37 cfs @ 1.87 fps)

Pond 6P: Atrium Surface Detention



Summary for Pond 7P: Riprap Surface Detention

Inflow Area = 0.600 ac, 52.50% Impervious, Inflow Depth = 3.49" for 10-yr event
Inflow = 3.36 cfs @ 11.98 hrs, Volume= 0.175 af
Outflow = 2.95 cfs @ 12.02 hrs, Volume= 0.173 af, Atten= 12%, Lag= 2.3 min
Primary = 2.95 cfs @ 12.02 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 73.30' @ 12.02 hrs Surf.Area= 472 sf Storage= 479 cf

Plug-Flow detention time= 15.5 min calculated for 0.172 af (99% of inflow)
Center-of-Mass det. time= 8.5 min (802.8 - 794.3)

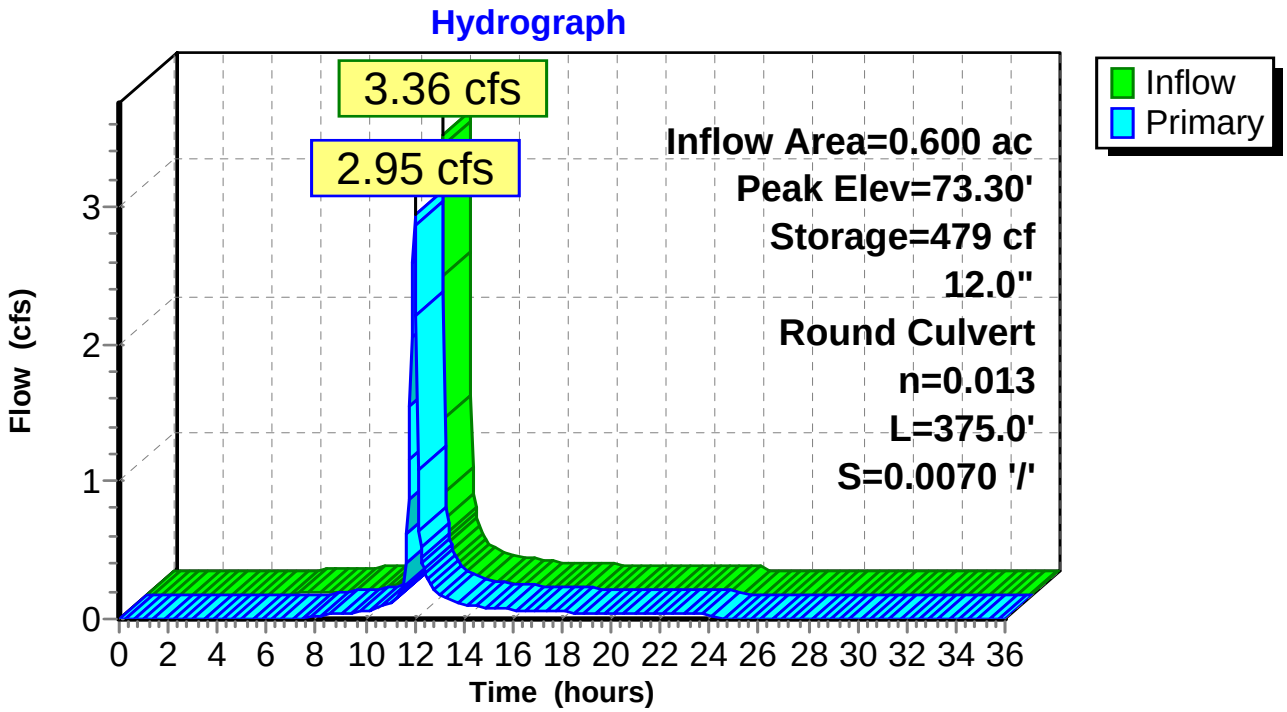
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	2,180 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	50	0	0
73.00	310	360	360
74.00	846	578	938
75.00	1,637	1,242	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**12.0" Round Culvert** L= 375.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 69.20' S= 0.0070 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=2.90 cfs @ 12.02 hrs HW=73.28' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.90 cfs @ 3.70 fps)

Pond 7P: Riprap Surface Detention



Summary for Pond 8P: OCS-DMH7

[57] Hint: Peaked at 67.19' (Flood elevation advised)

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth > 3.48" for 10-yr event
Inflow = 7.86 cfs @ 12.14 hrs, Volume= 1.225 af
Outflow = 7.86 cfs @ 12.14 hrs, Volume= 1.225 af, Atten= 0%, Lag= 0.0 min
Primary = 0.70 cfs @ 12.14 hrs, Volume= 0.038 af
Secondary = 7.17 cfs @ 12.14 hrs, Volume= 1.187 af

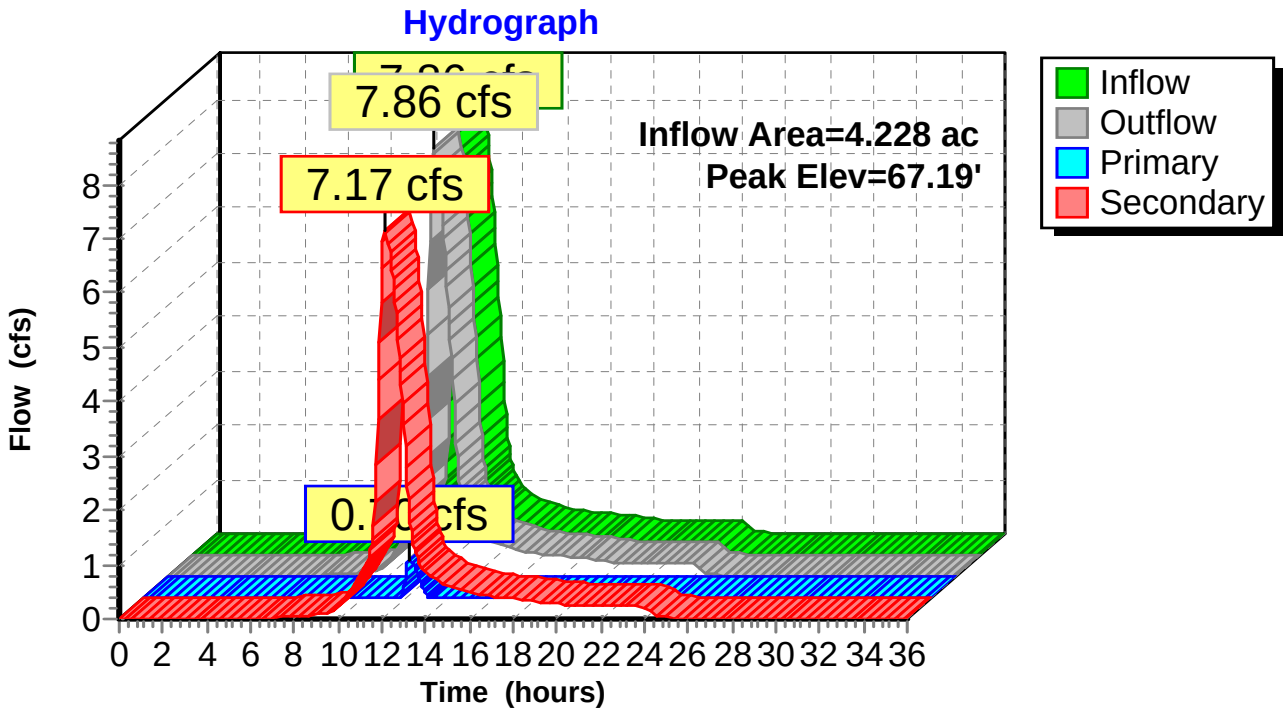
Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.19' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.60' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	65.70'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=0.69 cfs @ 12.14 hrs HW=67.19' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.69 cfs @ 2.06 fps)

Secondary OutFlow Max=7.16 cfs @ 12.14 hrs HW=67.19' (Free Discharge)
└**2=Culvert** (Barrel Controls 7.16 cfs @ 3.96 fps)

Pond 8P: OCS-DMH7



Summary for Pond 9P: UG Detention

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth = 0.06" for 10-yr event
Inflow = 0.26 cfs @ 12.14 hrs, Volume= 0.019 af
Outflow = 0.14 cfs @ 12.85 hrs, Volume= 0.019 af, Atten= 45%, Lag= 42.7 min
Primary = 0.14 cfs @ 12.85 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 66.05' @ 12.85 hrs Surf.Area= 1,536 sf Storage= 509 cf

Plug-Flow detention time= 92.8 min calculated for 0.019 af (99% of inflow)
Center-of-Mass det. time= 93.8 min (837.8 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	65.70'	2,488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 2,619 cf Overall x 95.0% Voids

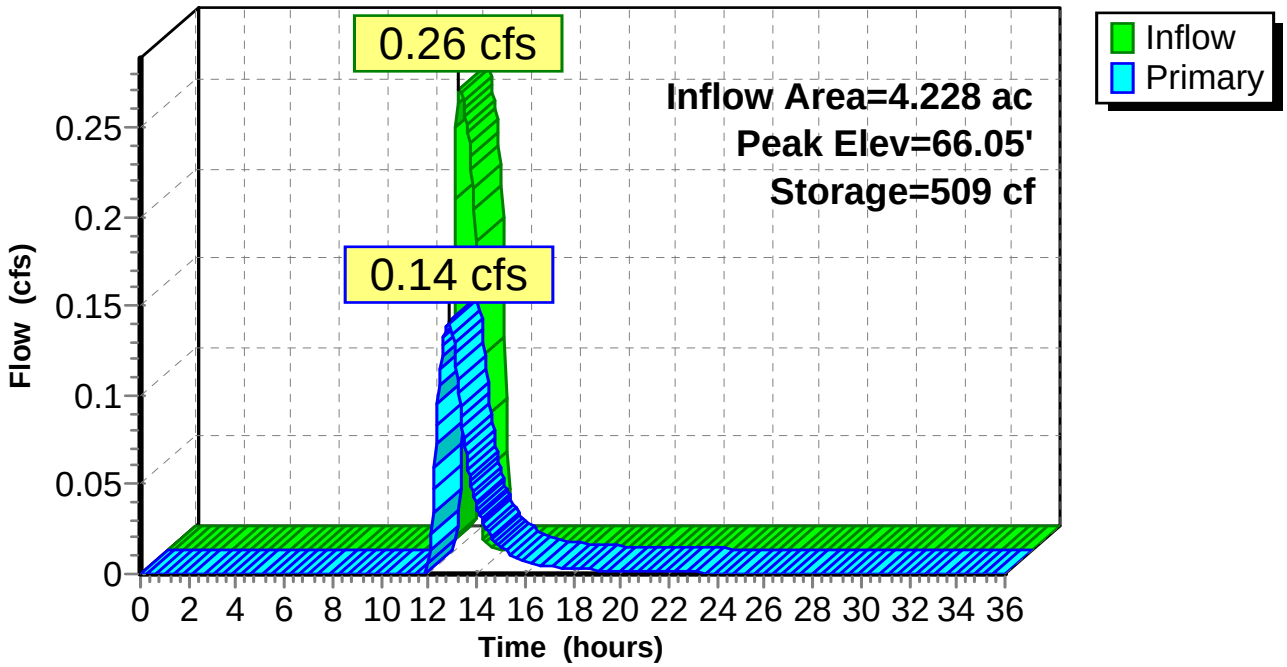
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
65.70	1,536	0	0
67.40	1,536	2,611	2,611
67.41	5	8	2,619

Device	Routing	Invert	Outlet Devices
#1	Primary	65.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.60' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Primary	67.00'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.90' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf

Primary OutFlow Max=0.14 cfs @ 12.85 hrs HW=66.05' (Free Discharge)
└─**1=Culvert** (Inlet Controls 0.14 cfs @ 1.62 fps)
└─**2=Culvert** (Controls 0.00 cfs)

Pond 9P: UG Detention

Hydrograph



Summary for Pond 10P: Isolator Row x5

[81] Warning: Exceeded Pond 8P by 0.86' @ 35.95 hrs

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth = 0.11" for 10-yr event
Inflow = 0.70 cfs @ 12.14 hrs, Volume= 0.038 af
Outflow = 0.70 cfs @ 12.14 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.2 min
Primary = 0.26 cfs @ 12.14 hrs, Volume= 0.019 af
Secondary = 0.44 cfs @ 12.14 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.37' @ 12.14 hrs Surf.Area= 0.001 ac Storage= 0.001 af

Plug-Flow detention time= 2.9 min calculated for 0.038 af (100% of inflow)
Center-of-Mass det. time= 2.0 min (740.5 - 738.5)

Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	0.002 af	**ADS_StormTech RC-310** x 5 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 1 rows

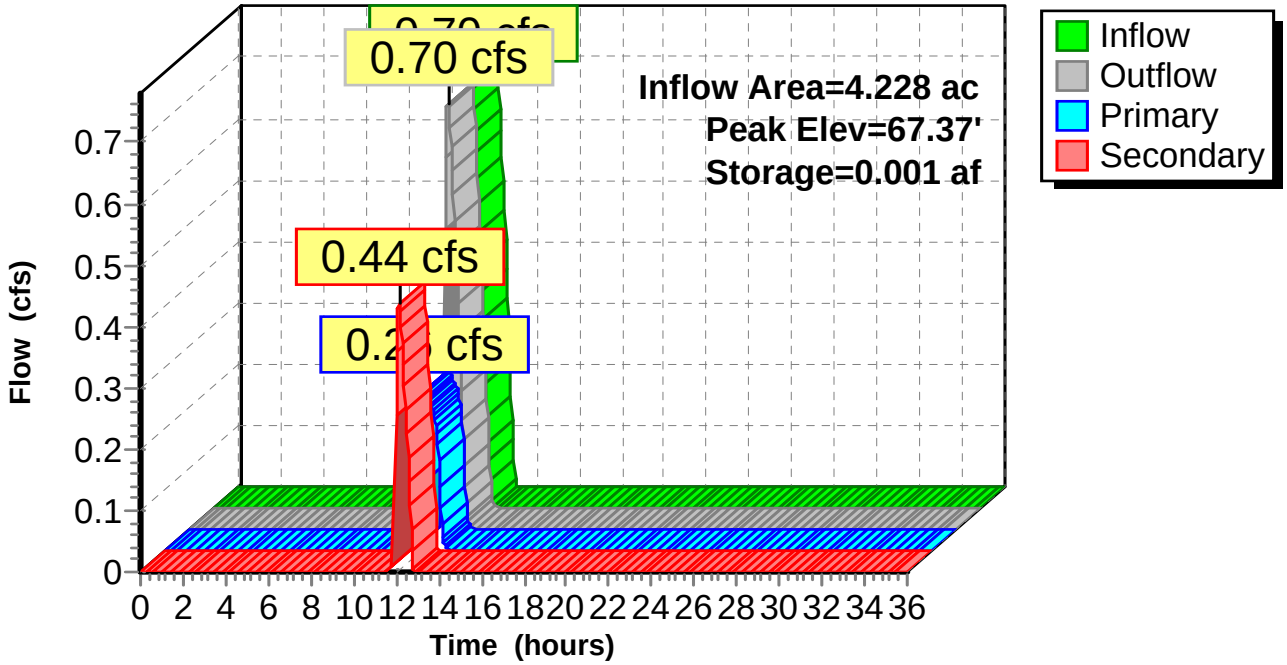
Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.55' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Secondary	67.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.55' S= 0.0090 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.26 cfs @ 12.14 hrs HW=67.37' (Free Discharge)
↑└**1=Culvert** (Inlet Controls 0.26 cfs @ 2.96 fps)

Secondary OutFlow Max=0.44 cfs @ 12.14 hrs HW=67.37' (Free Discharge)
↑└**2=Culvert** (Inlet Controls 0.44 cfs @ 1.64 fps)

Pond 10P: Isolator Row x5

Hydrograph



Summary for Pond PA: USF A

Inflow Area = 0.196 ac, 67.83% Impervious, Inflow Depth = 3.81" for 10-yr event
Inflow = 1.16 cfs @ 11.98 hrs, Volume= 0.062 af
Outflow = 0.25 cfs @ 12.17 hrs, Volume= 0.048 af, Atten= 79%, Lag= 11.5 min
Primary = 0.22 cfs @ 12.17 hrs, Volume= 0.013 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.03 cfs @ 12.17 hrs, Volume= 0.035 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 77.16' @ 12.17 hrs Surf.Area= 1,157 sf Storage= 1,532 cf

Plug-Flow detention time= 422.4 min calculated for 0.048 af (77% of inflow)
Center-of-Mass det. time= 336.4 min (1,118.6 - 782.2)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	2,192 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	585	0.0	0	0
73.01	585	30.0	2	2
75.99	585	30.0	523	525
76.00	585	100.0	6	531
77.00	1,056	100.0	821	1,351
77.33	1,260	100.0	382	1,733
77.67	1,437	100.0	458	2,192

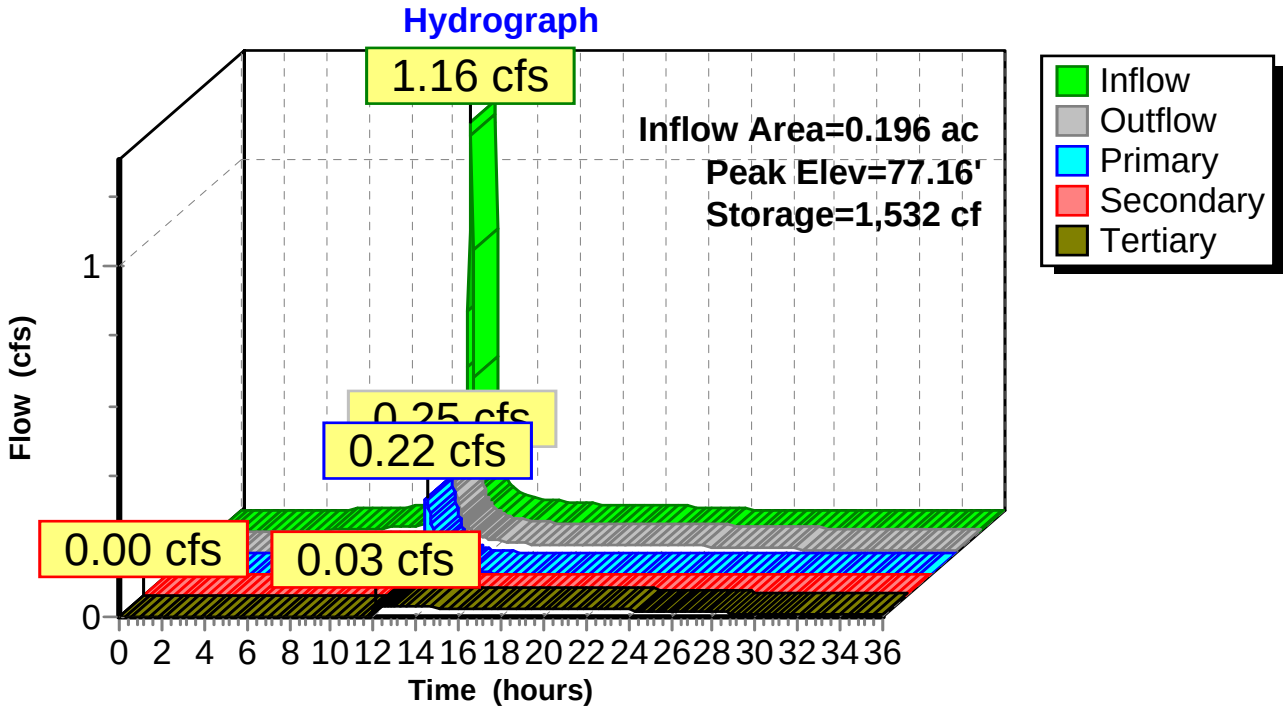
Device	Routing	Invert	Outlet Devices
#1	Primary	73.00'	**12.0" Round Culvert** L= 60.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 73.00' / 72.20' S= 0.0133 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Tertiary	73.83'	**2.410 in/hr Exfiltration over Surface area above 73.83'** Excluded Surface area = 585 sf
#3	Device 1	77.00'	**24.0" x 24.0" Horiz. Orifice/Grate X 5.00 columns** X 5 rows C= 0.600 in 4.0" x 4.0" Grate Limited to weir flow at low heads
#4	Secondary	77.50'	**30.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.21 cfs @ 12.17 hrs HW=77.16' (Free Discharge)
└─**1=Culvert** (Passes 0.21 cfs of 6.82 cfs potential flow)
└─**3=Orifice/Grate** (Orifice Controls 0.21 cfs @ 1.93 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=73.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.03 cfs @ 12.17 hrs HW=77.16' (Free Discharge)
└─**2=Exfiltration** (Exfiltration Controls 0.03 cfs)

Pond PA: USF A



Summary for Pond PB: USF B

Inflow Area = 0.324 ac, 84.42% Impervious, Inflow Depth = 4.13" for 10-yr event
Inflow = 2.01 cfs @ 11.98 hrs, Volume= 0.112 af
Outflow = 0.22 cfs @ 12.35 hrs, Volume= 0.094 af, Atten= 89%, Lag= 22.2 min
Primary = 0.15 cfs @ 12.35 hrs, Volume= 0.012 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.07 cfs @ 12.35 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.11' @ 12.35 hrs Surf.Area= 1,972 sf Storage= 2,962 cf

Plug-Flow detention time= 482.5 min calculated for 0.094 af (84% of inflow)
Center-of-Mass det. time= 414.4 min (1,181.6 - 767.2)

Volume	Invert	Avail.Storage	Storage Description
#1	67.86'	3,817 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.86	715	0.0	0	0
67.87	715	30.0	2	2
70.25	715	30.0	511	513
70.26	715	100.0	7	520
72.00	1,853	100.0	2,234	2,754
72.50	2,400	100.0	1,063	3,817

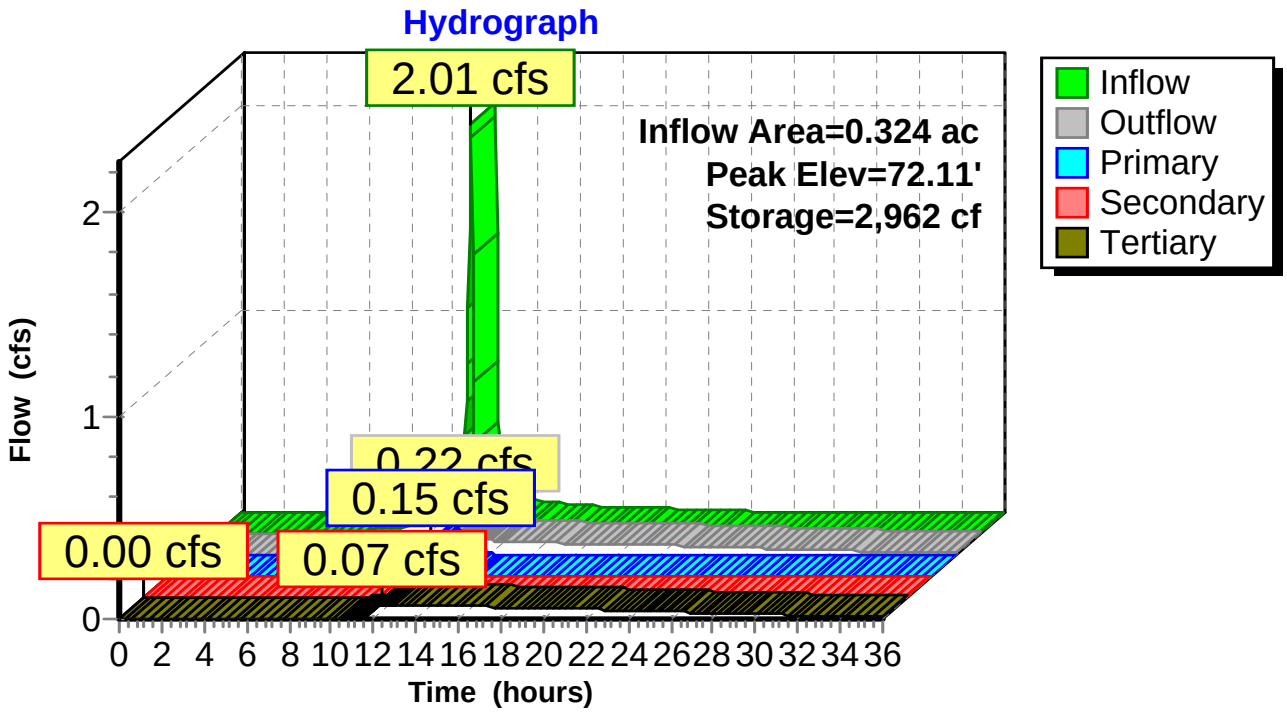
Device	Routing	Invert	Outlet Devices
#1	Primary	67.50'	**15.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.50' / 67.40' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Tertiary	68.09'	**2.410 in/hr Exfiltration over Surface area above 68.09'** Excluded Surface area = 715 sf
#3	Device 1	72.00'	**24.0" x 24.0" Horiz. Orifice/Grate X 5.00 columns** X 5 rows C= 0.600 in 4.0" x 4.0" Grate Limited to weir flow at low heads
#4	Secondary	72.25'	**30.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.16 cfs @ 12.35 hrs HW=72.11' (Free Discharge)
└**1=Culvert** (Passes 0.16 cfs of 9.31 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 0.16 cfs @ 1.08 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=67.86' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.07 cfs @ 12.35 hrs HW=72.11' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.07 cfs)

Pond PB: USF B


Hydrograph
2.01 cfs
Inflow Area=0.324 ac
Peak Elev=72.11'
Storage=2,962 cf
0.22 cfs
0.15 cfs
0.00 cfs
0.07 cfs
Inflow
Outflow
Primary
Secondary
Tertiary
Flow (cfs)
0
1
2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
Time (hours)

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1 Runoff Area=87,665 sf 15.27% Impervious Runoff Depth=4.02"
Flow Length=177' Slope=0.0100 '/' Tc=29.9 min CN=83 Runoff=6.98 cfs 0.674 af

Subcatchment 2S: Subcatchment 2 Runoff Area=90,682 sf 66.45% Impervious Runoff Depth=4.99"
Flow Length=178' Slope=0.0075 '/' Tc=33.7 min CN=92 Runoff=8.00 cfs 0.866 af

Subcatchment 3S: Subcatchment 3 Runoff Area=40,444 sf 47.45% Impervious Runoff Depth=4.66"
Flow Length=185' Slope=0.0200 '/' Tc=30.6 min CN=89 Runoff=3.60 cfs 0.360 af

Subcatchment 4S: Subcatchment 4 Runoff Area=26,132 sf 52.50% Impervious Runoff Depth=4.66"
Tc=7.0 min CN=89 Runoff=4.40 cfs 0.233 af

Subcatchment 5S: Subcatchment 5 Runoff Area=109,598 sf 64.38% Impervious Runoff Depth=4.99"
Tc=7.0 min CN=92 Runoff=19.21 cfs 1.046 af

Subcatchment 6S: Subcatchment 6 Runoff Area=39,891 sf 54.44% Impervious Runoff Depth=4.77"
Tc=7.0 min CN=90 Runoff=6.81 cfs 0.364 af

Subcatchment 7S: Subcatchment 7 Runoff Area=41,419 sf 41.76% Impervious Runoff Depth=4.55"
Tc=7.0 min CN=88 Runoff=6.86 cfs 0.360 af

Subcatchment 8S: Subcatchment 8 Runoff Area=1,744 sf 3.61% Impervious Runoff Depth=3.81"
Tc=7.0 min CN=81 Runoff=0.25 cfs 0.013 af

Subcatchment SA: Subcatchment A Runoff Area=8,542 sf 67.83% Impervious Runoff Depth=4.99"
Flow Length=65' Slope=0.0300 '/' Tc=7.0 min CN=92 Runoff=1.50 cfs 0.082 af

Subcatchment SB: Subcatchment B Runoff Area=14,118 sf 84.42% Impervious Runoff Depth=5.33"
Tc=7.0 min CN=95 Runoff=2.55 cfs 0.144 af

Reach 1SP: Study Point 1 Inflow=5.27 cfs 2.219 af
Outflow=5.27 cfs 2.219 af

Reach 2SP: Study Point 2 Inflow=5.00 cfs 0.465 af
Outflow=5.00 cfs 0.465 af

Reach 3SP: Study Point 3 Inflow=4.60 cfs 0.062 af
Outflow=4.60 cfs 0.062 af

Reach 4SP: Study Point 4 Inflow=3.60 cfs 0.360 af
Outflow=3.60 cfs 0.360 af

Pond 1P: Wetland A Peak Elev=66.48' Storage=80,466 cf Inflow=29.94 cfs 3.350 af
Primary=5.00 cfs 0.465 af Secondary=5.27 cfs 2.219 af Outflow=10.28 cfs 2.684 af

Pond 2P: Wetland B Peak Elev=69.31' Storage=11,061 cf Inflow=8.00 cfs 0.866 af
Outflow=7.52 cfs 0.671 af

Pond 3P: Surface Detention Peak Elev=72.83' Storage=16,133 cf Inflow=28.80 cfs 1.651 af
Primary=8.22 cfs 1.502 af Secondary=15.34 cfs 0.147 af Outflow=23.56 cfs 1.649 af

Pond 4P: Surface Detention Peak Elev=71.37' Storage=6,107 cf Inflow=7.06 cfs 0.478 af
Primary=2.13 cfs 0.357 af Secondary=4.42 cfs 0.041 af Outflow=6.54 cfs 0.398 af

Pond 5P: OCS-4P Peak Elev=68.48' Inflow=2.13 cfs 0.357 af
12.0" Round Culvert n=0.013 L=81.0' S=0.0077 '/' Outflow=2.13 cfs 0.357 af

Pond 6P: Atrium Surface Detention Peak Elev=74.10' Storage=4,441 cf Inflow=19.46 cfs 1.113 af
Outflow=18.90 cfs 1.056 af

Pond 7P: Riprap Surface Detention Peak Elev=73.85' Storage=818 cf Inflow=4.40 cfs 0.233 af
12.0" Round Culvert n=0.013 L=375.0' S=0.0070 '/' Outflow=3.26 cfs 0.231 af

Pond 8P: OCS-DMH7 Peak Elev=67.23' Inflow=8.22 cfs 1.502 af
Primary=0.78 cfs 0.047 af Secondary=7.44 cfs 1.455 af Outflow=8.22 cfs 1.502 af

Pond 9P: UG Detention Peak Elev=66.08' Storage=559 cf Inflow=0.27 cfs 0.023 af
Outflow=0.15 cfs 0.023 af

Pond 10P: Isolator Row x5 Peak Elev=67.41' Storage=0.001 af Inflow=0.78 cfs 0.047 af
Primary=0.27 cfs 0.023 af Secondary=0.51 cfs 0.024 af Outflow=0.78 cfs 0.047 af

Pond PA: USF A Peak Elev=77.46' Storage=1,902 cf Inflow=1.50 cfs 0.082 af
Primary=0.36 cfs 0.029 af Secondary=0.00 cfs 0.000 af Tertiary=0.04 cfs 0.038 af Outflow=0.40 cfs 0.067 af

Pond PB: USF B Peak Elev=72.30' Storage=3,366 cf Inflow=2.55 cfs 0.144 af
Primary=0.29 cfs 0.027 af Secondary=0.95 cfs 0.008 af Tertiary=0.08 cfs 0.090 af Outflow=1.33 cfs 0.126 af

Total Runoff Area = 10.566 ac Runoff Volume = 4.142 af Average Runoff Depth = 4.70"
49.18% Pervious = 5.196 ac 50.82% Impervious = 5.370 ac

Summary for Subcatchment 1S: Subcatchment 1

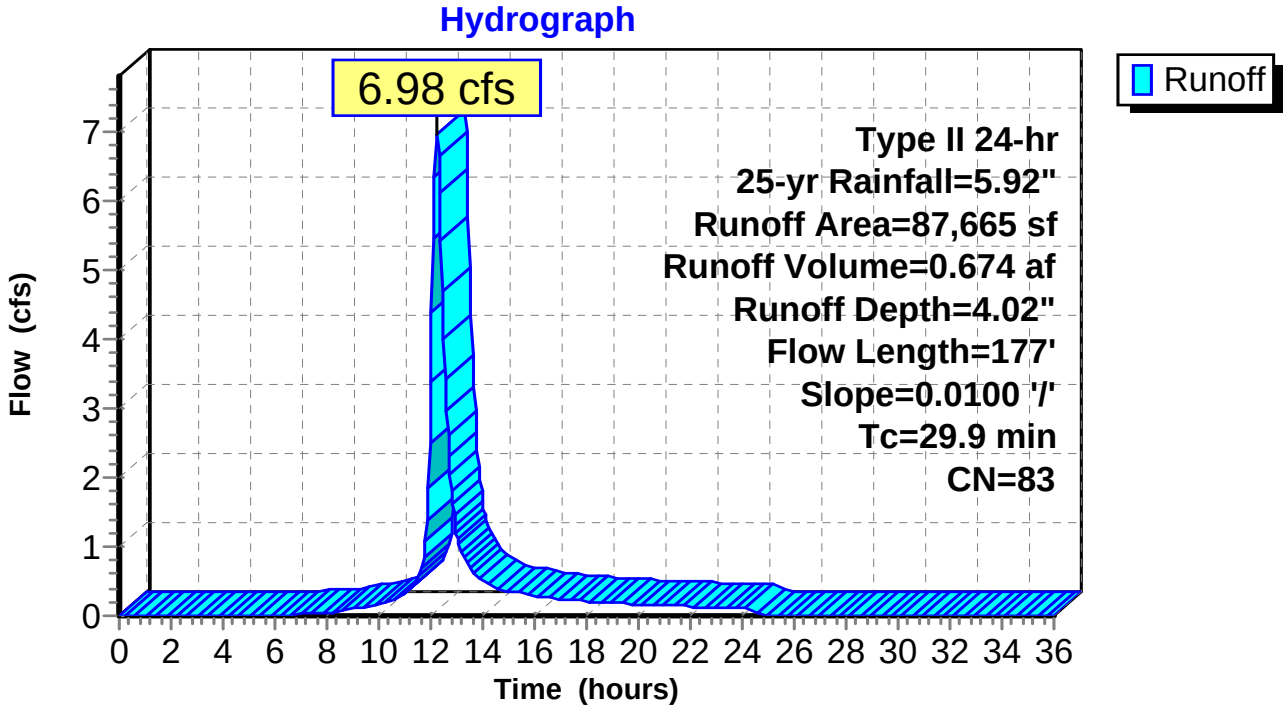
Runoff = 6.98 cfs @ 12.24 hrs, Volume= 0.674 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	13,390	98	
	74,275	80	>75% Grass cover, Good, HSG D
	87,665	83	Weighted Average
	74,275		84.73% Pervious Area
	13,390		15.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	177	0.0100	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 1S: Subcatchment 1



Summary for Subcatchment 2S: Subcatchment 2

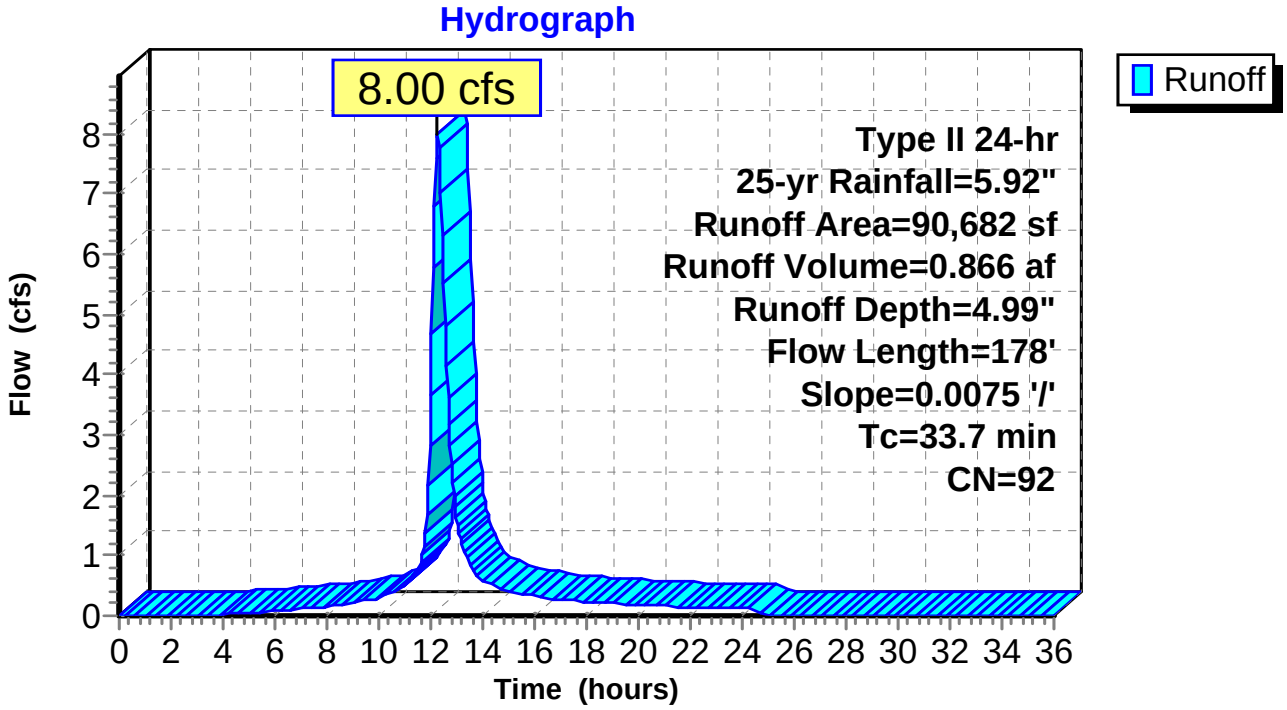
Runoff = 8.00 cfs @ 12.27 hrs, Volume= 0.866 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	60,255	98	
	30,427	80	>75% Grass cover, Good, HSG D
	90,682	92	Weighted Average
	30,427		33.55% Pervious Area
	60,255		66.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.7	178	0.0075	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.17"

Subcatchment 2S: Subcatchment 2



Summary for Subcatchment 3S: Subcatchment 3

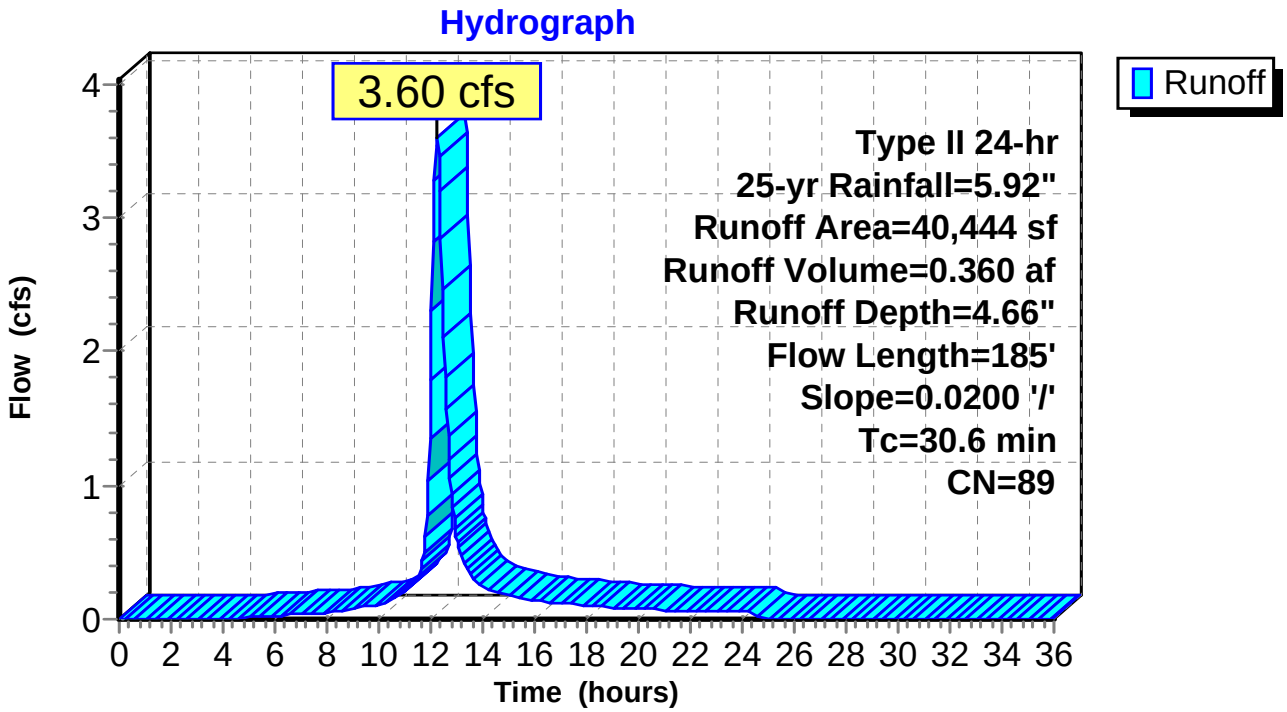
Runoff = 3.60 cfs @ 12.24 hrs, Volume= 0.360 af, Depth= 4.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
	21,255	80	>75% Grass cover, Good, HSG D
*	19,189	98	
	40,444	89	Weighted Average
	21,255		52.55% Pervious Area
	19,189		47.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.8	150	0.0200	0.08		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.17"
0.8	35	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	185	Total			

Subcatchment 3S: Subcatchment 3



Summary for Subcatchment 4S: Subcatchment 4

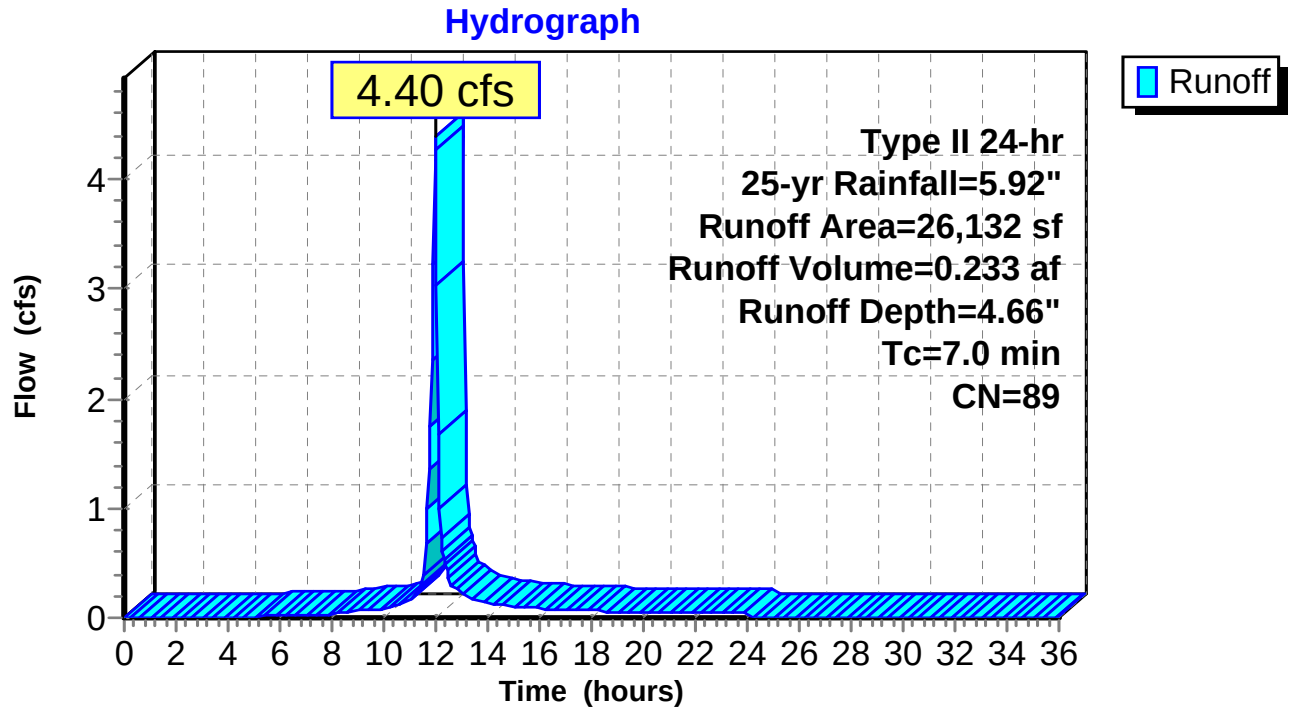
Runoff = 4.40 cfs @ 11.98 hrs, Volume= 0.233 af, Depth= 4.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	13,720	98	
	12,412	80	>75% Grass cover, Good, HSG D
	26,132	89	Weighted Average
	12,412		47.50% Pervious Area
	13,720		52.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 4S: Subcatchment 4



Summary for Subcatchment 5S: Subcatchment 5

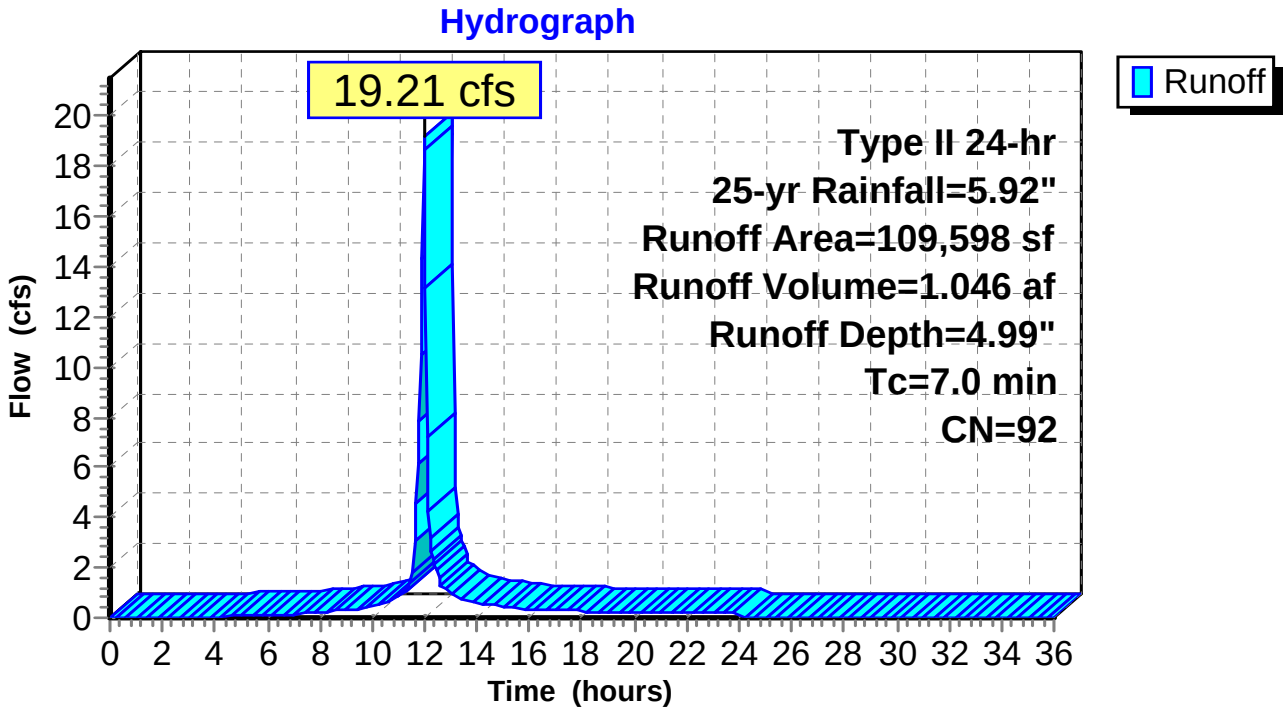
Runoff = 19.21 cfs @ 11.98 hrs, Volume= 1.046 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	70,563	98	
	39,035	80	>75% Grass cover, Good, HSG D
	109,598	92	Weighted Average
	39,035		35.62% Pervious Area
	70,563		64.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 5S: Subcatchment 5



Summary for Subcatchment 6S: Subcatchment 6

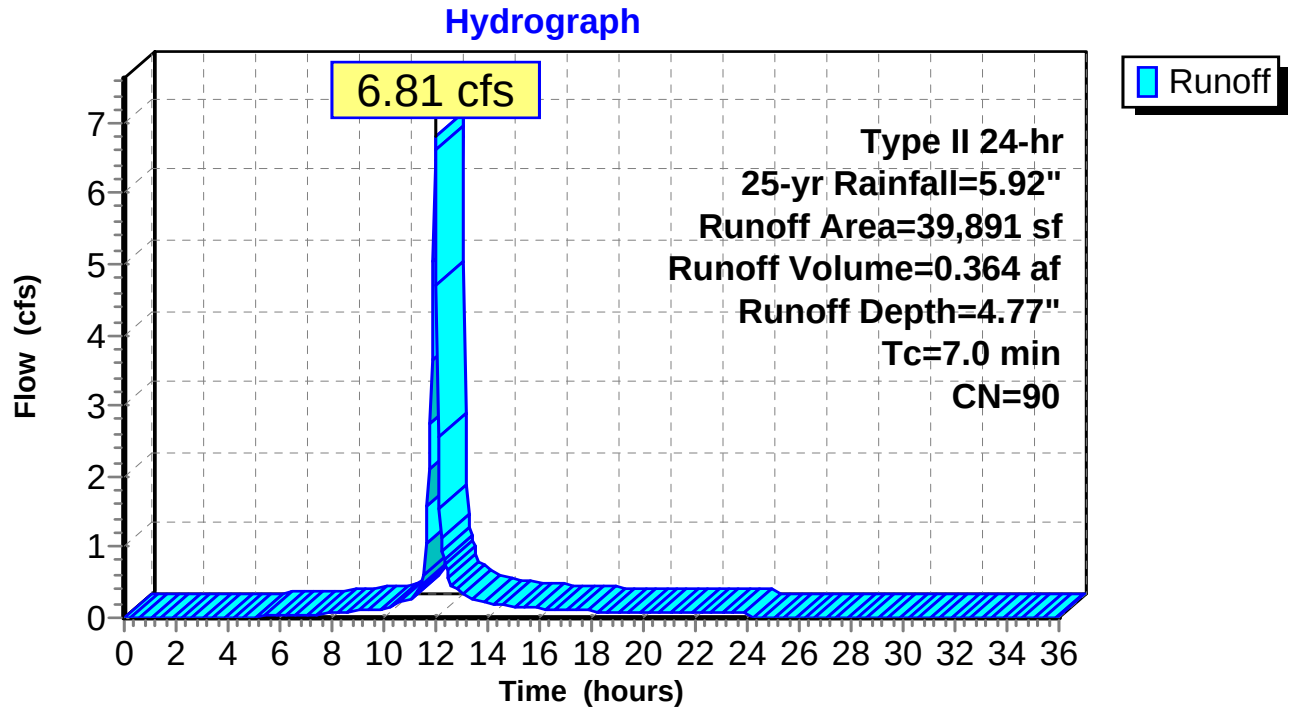
Runoff = 6.81 cfs @ 11.98 hrs, Volume= 0.364 af, Depth= 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	21,718	98	
	18,173	80	>75% Grass cover, Good, HSG D
	39,891	90	Weighted Average
	18,173		45.56% Pervious Area
	21,718		54.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 6S: Subcatchment 6



Summary for Subcatchment 7S: Subcatchment 7

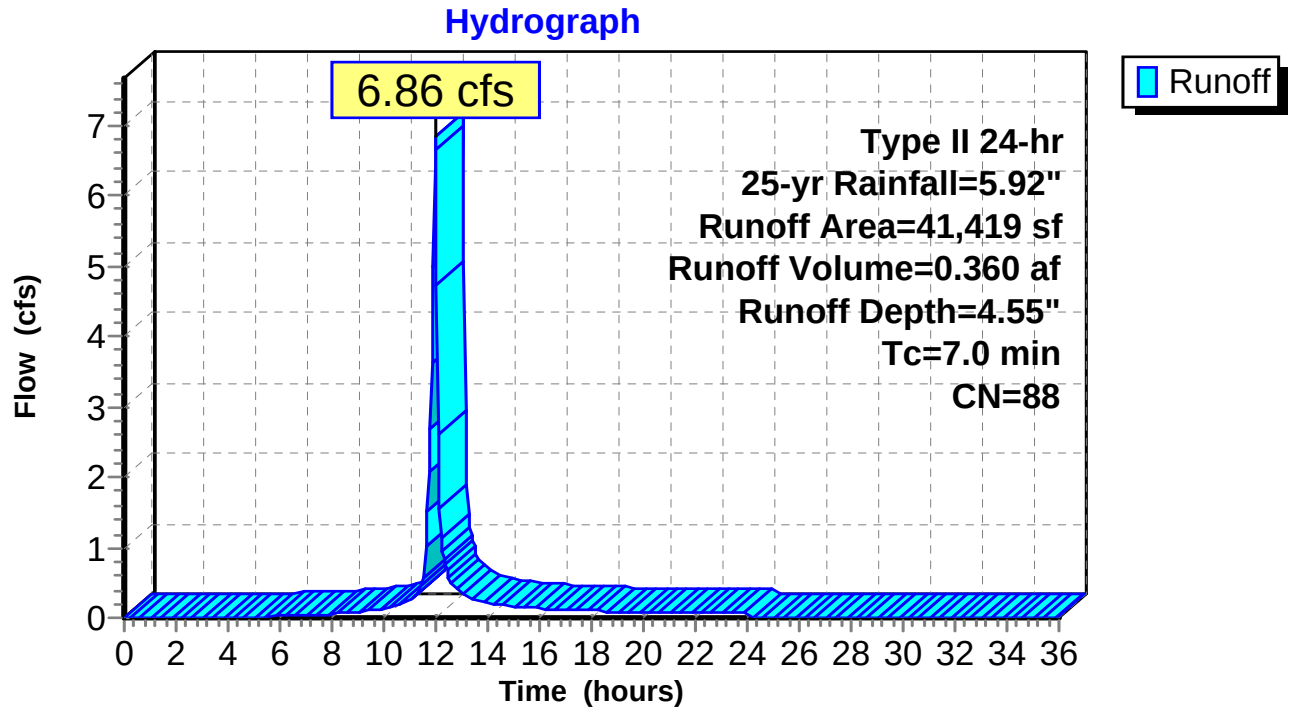
Runoff = 6.86 cfs @ 11.98 hrs, Volume= 0.360 af, Depth= 4.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	17,297	98	
	24,122	80	>75% Grass cover, Good, HSG D
	41,419	88	Weighted Average
	24,122		58.24% Pervious Area
	17,297		41.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 7S: Subcatchment 7



Summary for Subcatchment 8S: Subcatchment 8

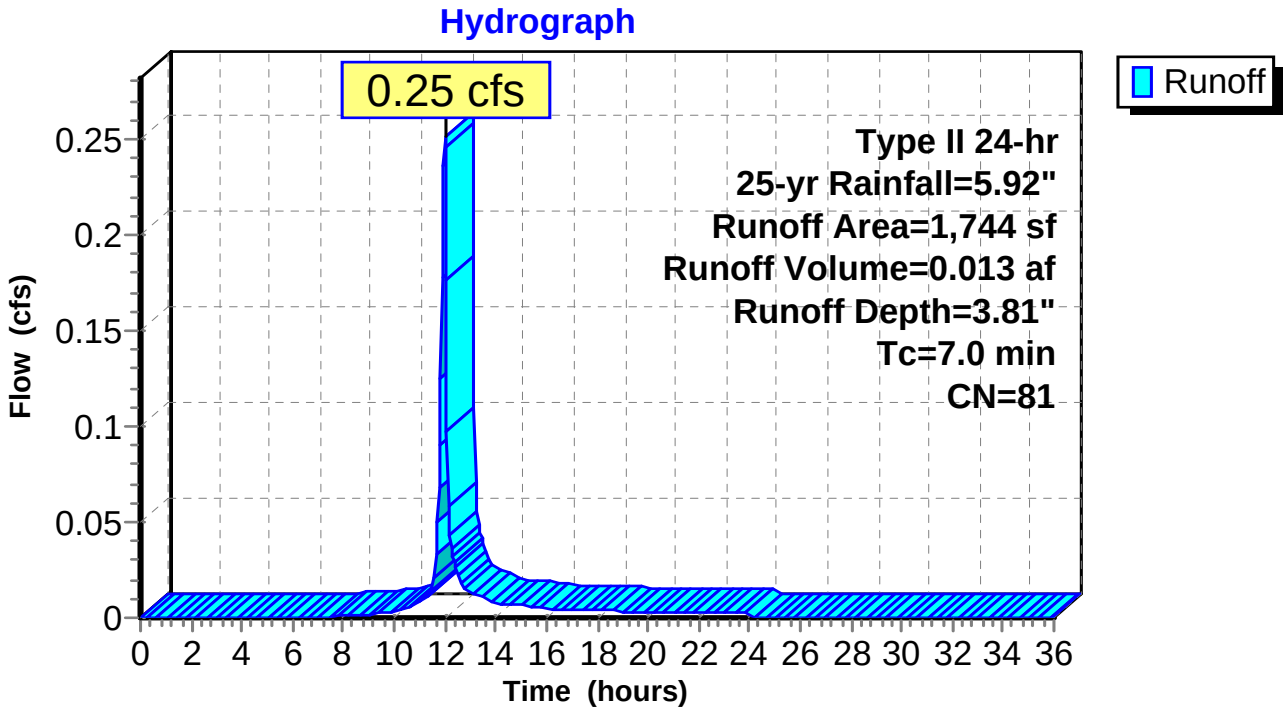
Runoff = 0.25 cfs @ 11.98 hrs, Volume= 0.013 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
	1,681	80	>75% Grass cover, Good, HSG D
*	63	98	
	1,744	81	Weighted Average
	1,681		96.39% Pervious Area
	63		3.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment 8S: Subcatchment 8



Summary for Subcatchment SA: Subcatchment A

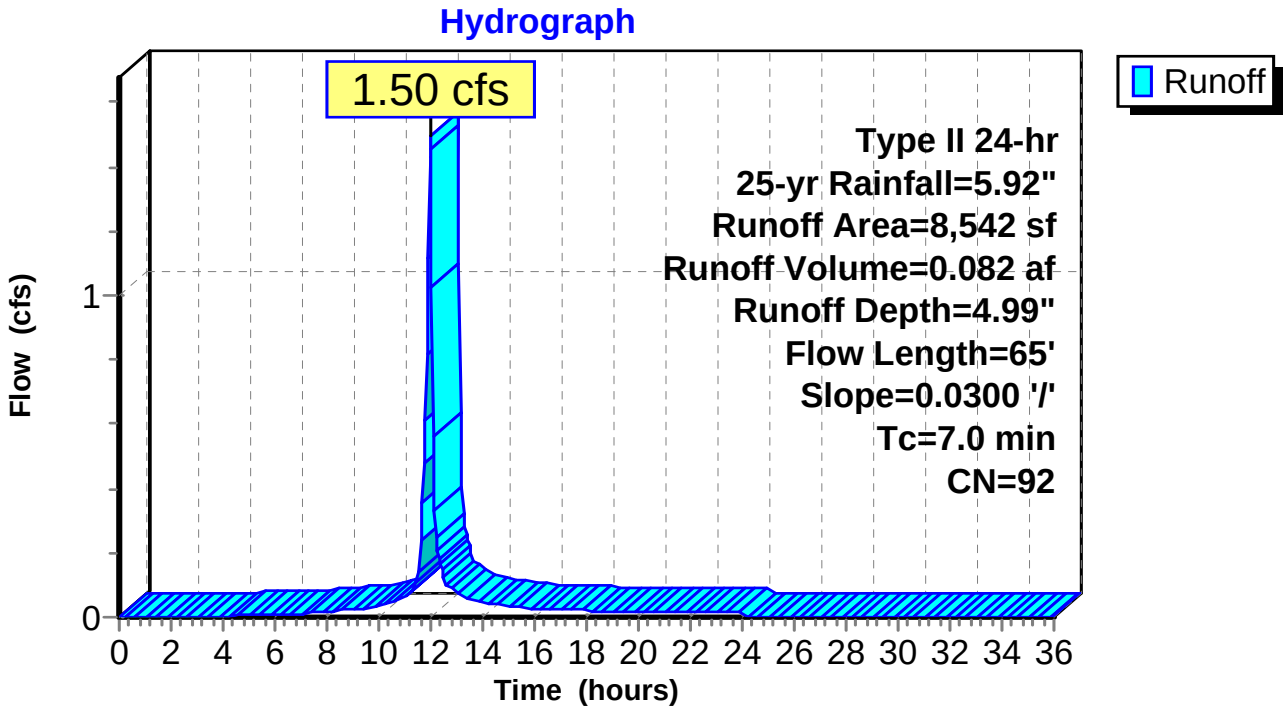
Runoff = 1.50 cfs @ 11.98 hrs, Volume= 0.082 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	5,794	98	
	2,748	80	>75% Grass cover, Good, HSG D
	8,542	92	Weighted Average
	2,748		32.17% Pervious Area
	5,794		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	65	0.0300	1.48		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.17"
6.3					**Direct Entry, min**
7.0	65	Total			

Subcatchment SA: Subcatchment A



Summary for Subcatchment SB: Subcatchment B

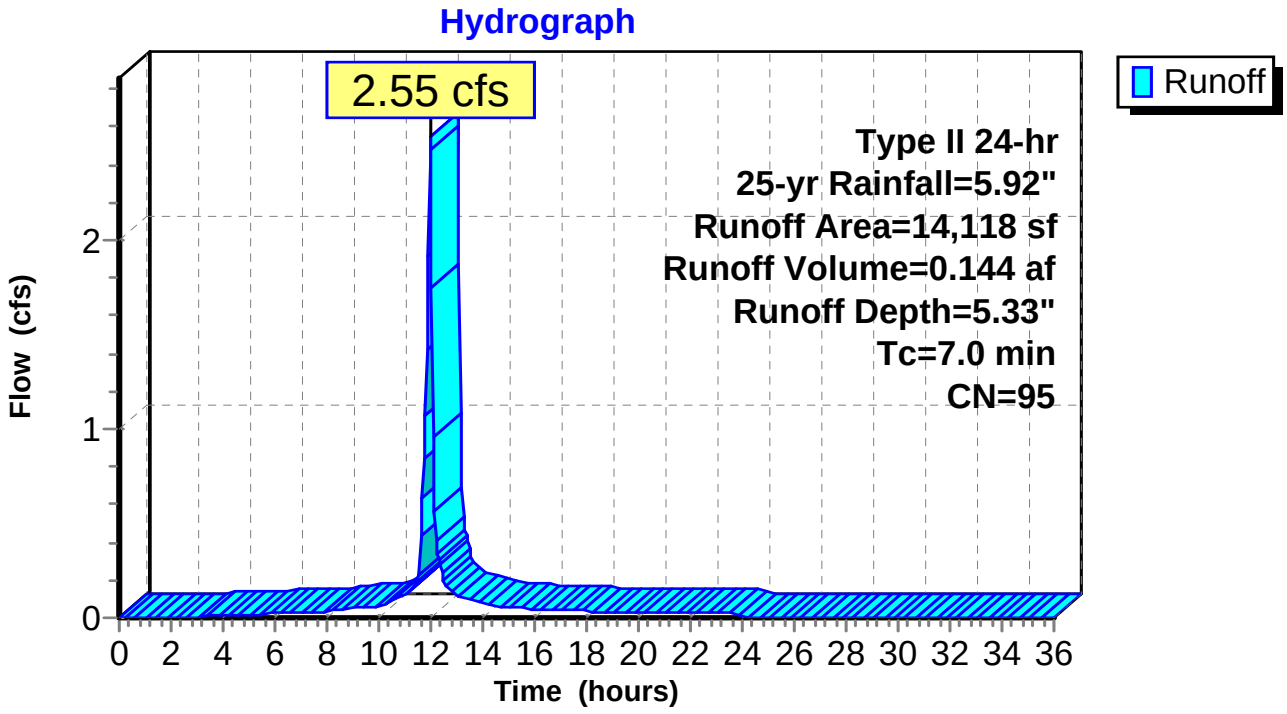
Runoff = 2.55 cfs @ 11.98 hrs, Volume= 0.144 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=5.92"

	Area (sf)	CN	Description
*	11,919	98	
	2,199	80	>75% Grass cover, Good, HSG D
	14,118	95	Weighted Average
	2,199		15.58% Pervious Area
	11,919		84.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Subcatchment SB: Subcatchment B



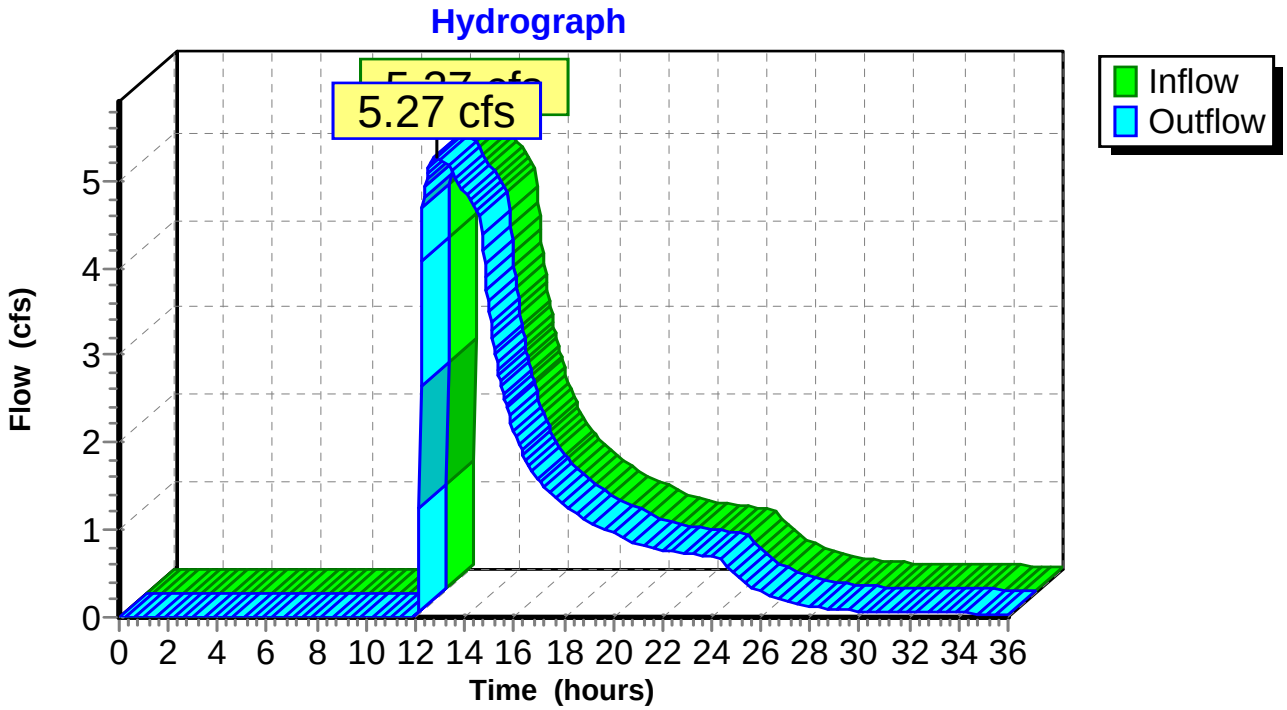
Summary for Reach 1SP: Study Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	5.27 cfs @	12.87 hrs, Volume=	2.219 af
Outflow	=	5.27 cfs @	12.87 hrs, Volume=	2.219 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 1SP: Study Point 1



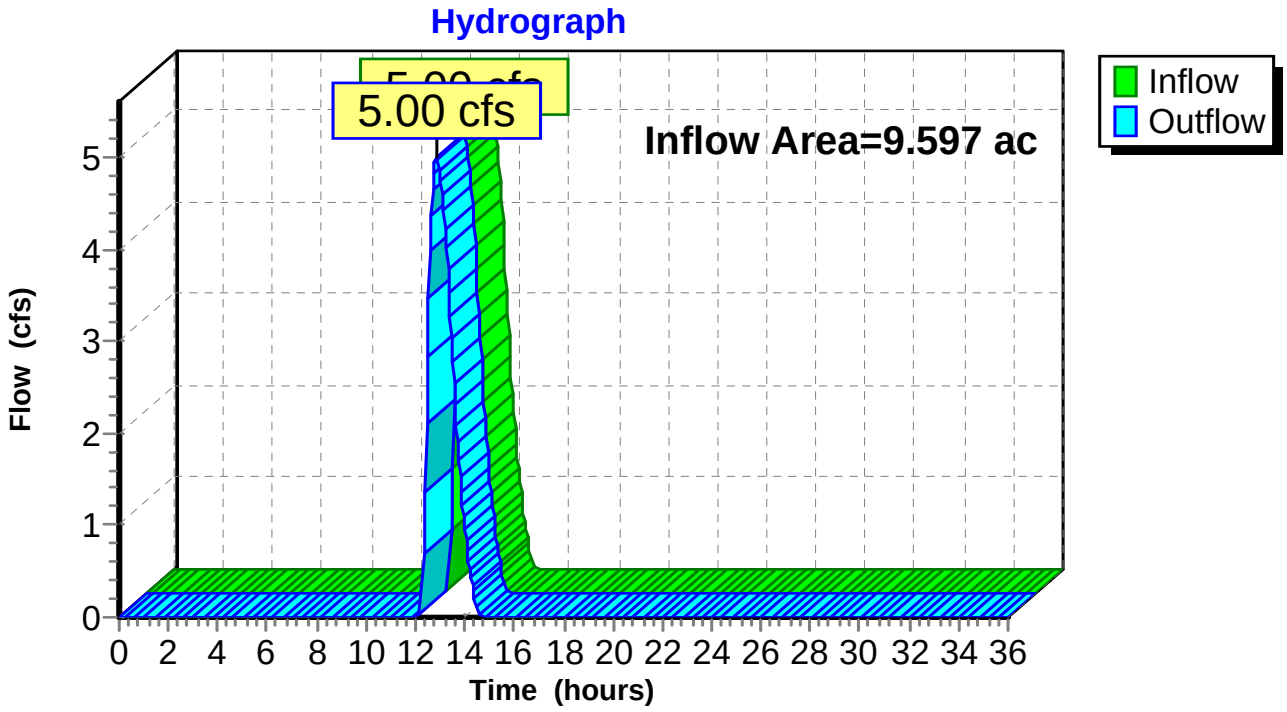
Summary for Reach 2SP: Study Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.597 ac, 51.35% Impervious, Inflow Depth = 0.58" for 25-yr event
Inflow = 5.00 cfs @ 12.87 hrs, Volume= 0.465 af
Outflow = 5.00 cfs @ 12.87 hrs, Volume= 0.465 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 2SP: Study Point 2



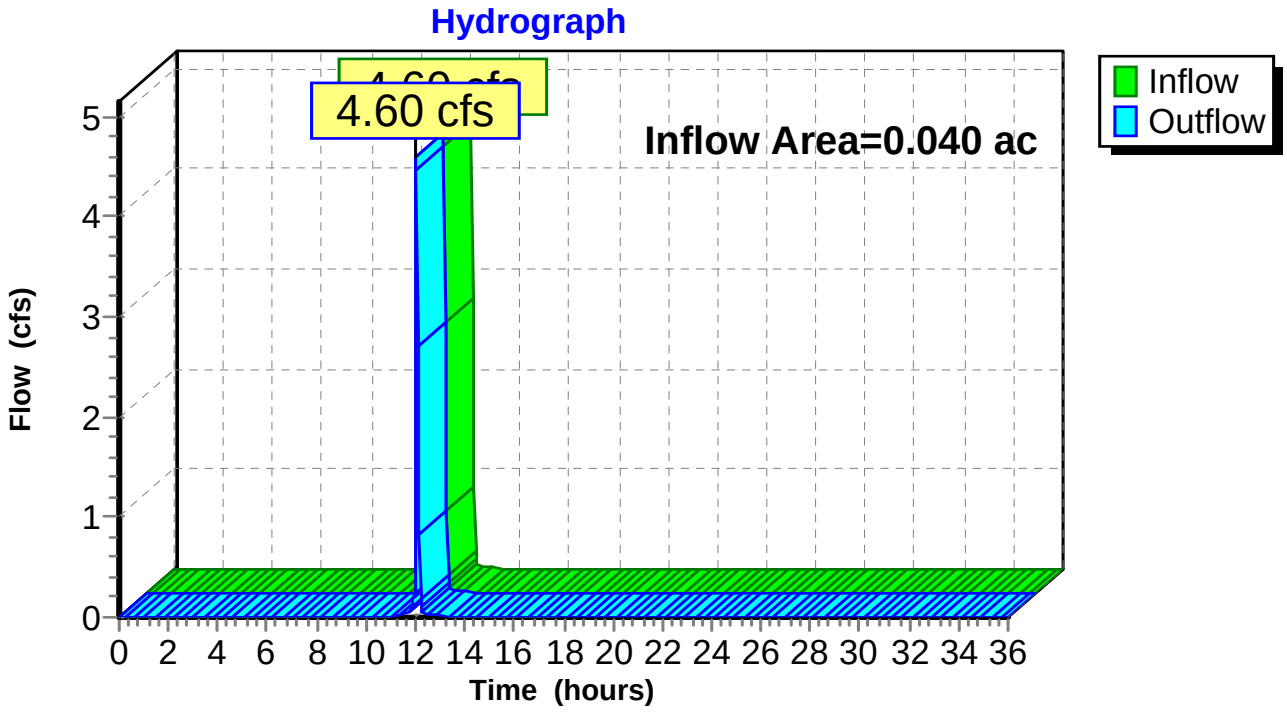
Summary for Reach 3SP: Study Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.040 ac, 3.61% Impervious, Inflow Depth = 18.47" for 25-yr event
Inflow = 4.60 cfs @ 12.03 hrs, Volume= 0.062 af
Outflow = 4.60 cfs @ 12.03 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 3SP: Study Point 3



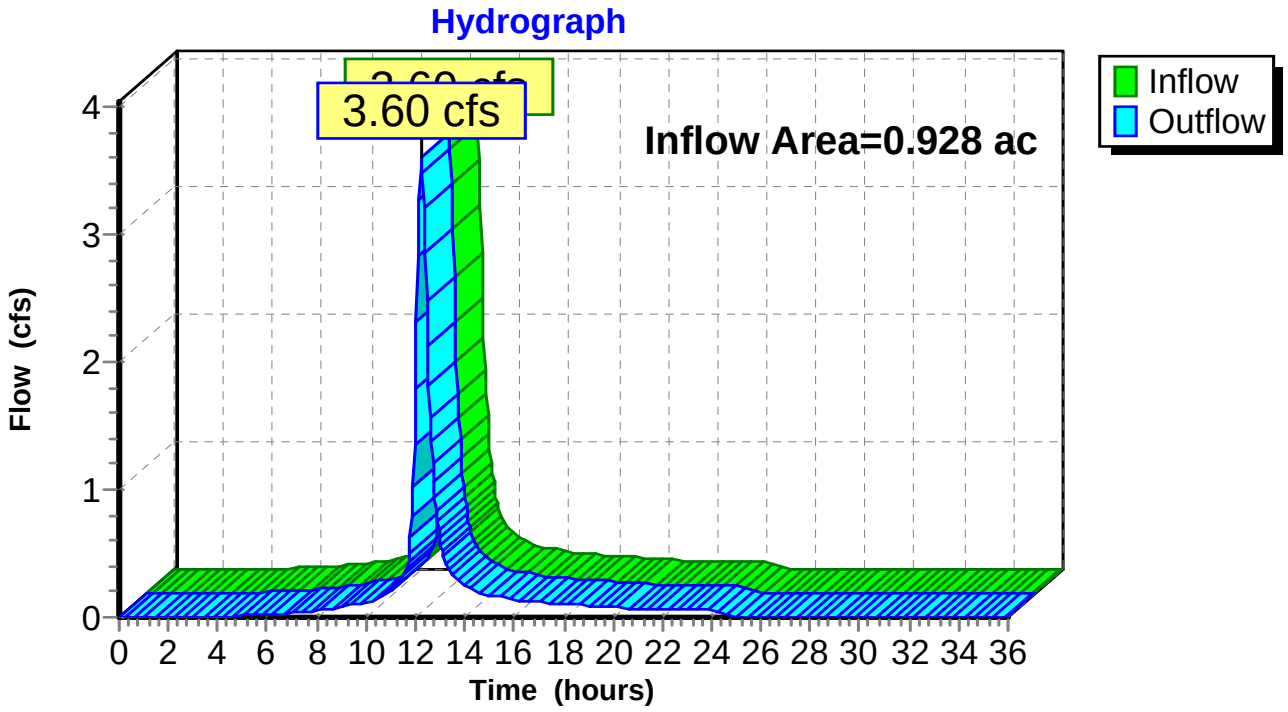
Summary for Reach 4SP: Study Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.928 ac, 47.45% Impervious, Inflow Depth = 4.66" for 25-yr event
Inflow = 3.60 cfs @ 12.24 hrs, Volume= 0.360 af
Outflow = 3.60 cfs @ 12.24 hrs, Volume= 0.360 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Reach 4SP: Study Point 4



Summary for Pond 1P: Wetland A

[79] Warning: Submerged Pond 8P Secondary device # 2 INLET by 0.78'
[81] Warning: Exceeded Pond 9P by 0.40' @ 12.80 hrs

Inflow Area = 9.597 ac, 51.35% Impervious, Inflow Depth > 4.19" for 25-yr event
Inflow = 29.94 cfs @ 12.08 hrs, Volume= 3.350 af
Outflow = 10.28 cfs @ 12.87 hrs, Volume= 2.684 af, Atten= 66%, Lag= 47.6 min
Primary = 5.00 cfs @ 12.87 hrs, Volume= 0.465 af
Secondary = 5.27 cfs @ 12.87 hrs, Volume= 2.219 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Starting Elev= 63.50' Surf.Area= 14,739 sf Storage= 17,429 cf
Peak Elev= 66.48' @ 12.87 hrs Surf.Area= 28,090 sf Storage= 80,466 cf (63,038 cf above start)

Plug-Flow detention time= 257.9 min calculated for 2.283 af (68% of inflow)
Center-of-Mass det. time= 107.2 min (956.0 - 848.9)

Volume	Invert	Avail.Storage	Storage Description
#1	62.00'	209,276 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.00	8,500	0	0
65.00	20,977	44,216	44,216
70.00	45,047	165,060	209,276

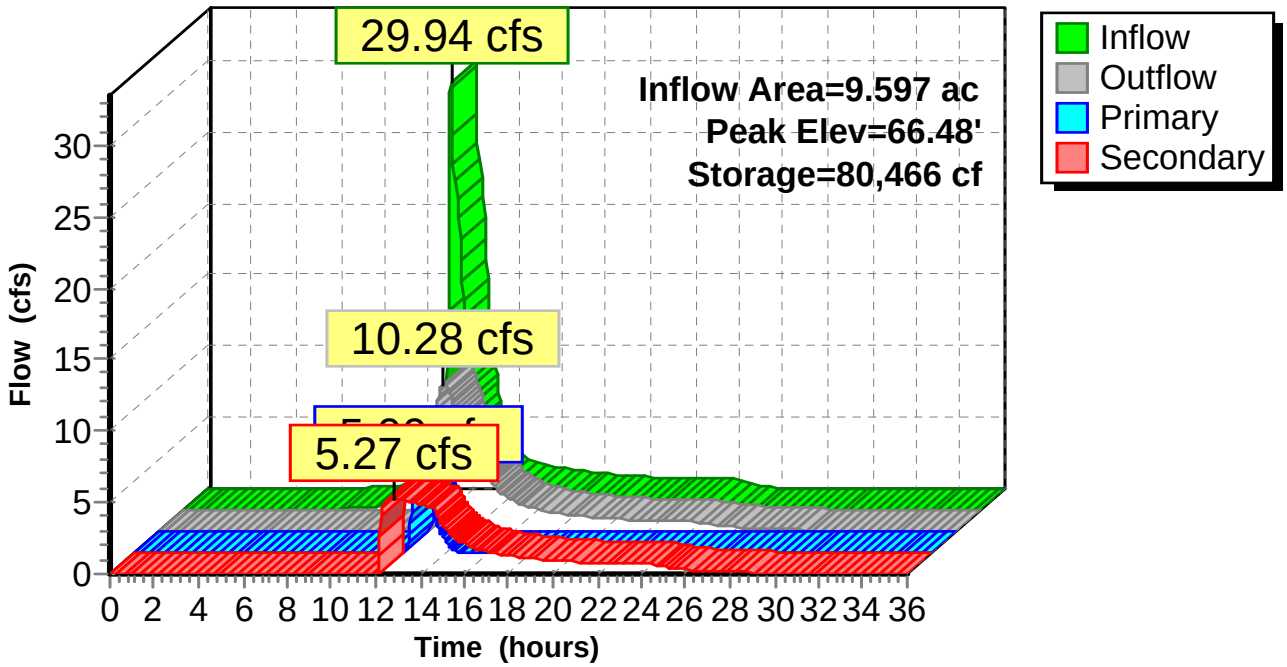
Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**3.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Secondary	62.86'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.86' / 58.69' S= 0.0869 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#3	Device 2	65.08'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=5.00 cfs @ 12.87 hrs HW=66.48' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 5.00 cfs @ 2.29 fps)

Secondary OutFlow Max=5.27 cfs @ 12.87 hrs HW=66.48' (Free Discharge)
↑**2=Culvert** (Inlet Controls 5.27 cfs @ 6.71 fps)
↑**3=Sharp-Crested Rectangular Weir** (Passes 5.27 cfs of 14.04 cfs potential flow)

Pond 1P: Wetland A

Hydrograph



Summary for Pond 2P: Wetland B

Inflow Area = 2.082 ac, 66.45% Impervious, Inflow Depth = 4.99" for 25-yr event
Inflow = 8.00 cfs @ 12.27 hrs, Volume= 0.866 af
Outflow = 7.52 cfs @ 12.36 hrs, Volume= 0.671 af, Atten= 6%, Lag= 5.2 min
Primary = 7.52 cfs @ 12.36 hrs, Volume= 0.671 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 69.31' @ 12.36 hrs Surf.Area= 10,486 sf Storage= 11,061 cf

Plug-Flow detention time= 146.3 min calculated for 0.670 af (77% of inflow)
Center-of-Mass det. time= 62.7 min (862.5 - 799.8)

Volume	Invert	Avail.Storage	Storage Description
#1	67.00'	21,636 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

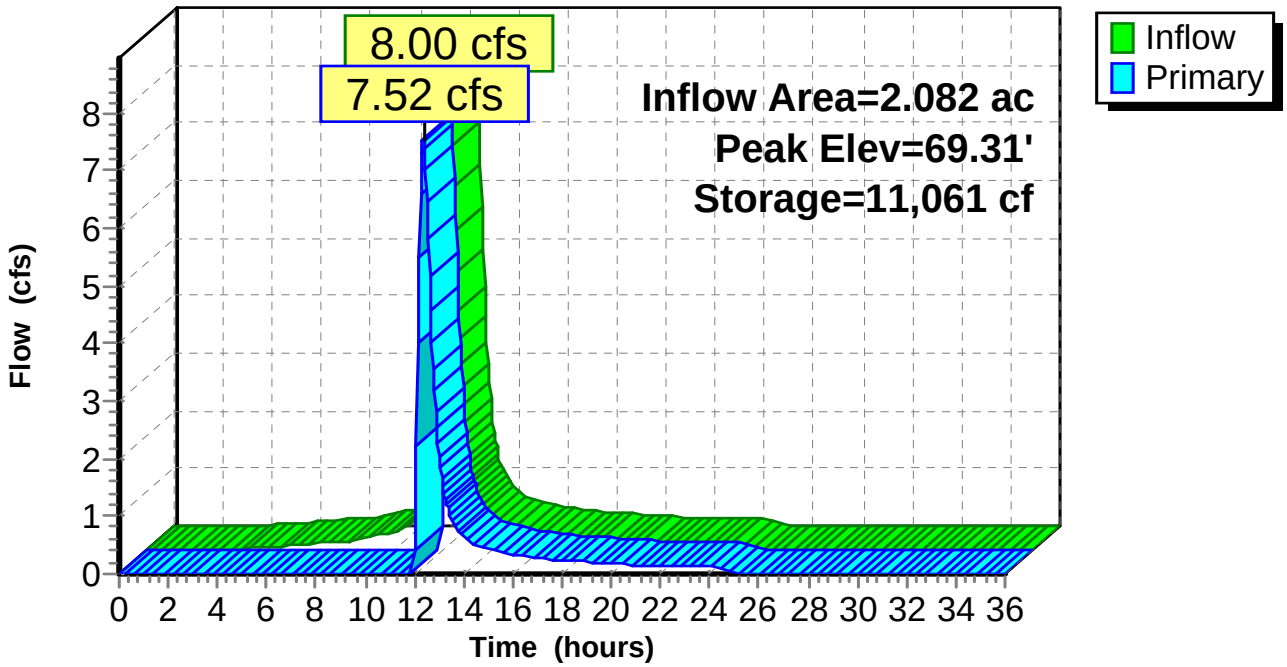
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.00	2,200	0	0
68.00	4,250	3,225	3,225
69.00	6,286	5,268	8,493
70.00	20,000	13,143	21,636

Device	Routing	Invert	Outlet Devices
#1	Primary	69.00'	**18.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=7.49 cfs @ 12.36 hrs HW=69.31' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 7.49 cfs @ 1.36 fps)

Pond 2P: Wetland B

Hydrograph



Summary for Pond 3P: Surface Detention

[79] Warning: Submerged Pond 6P Primary device # 1 INLET by 1.81'
[81] Warning: Exceeded Pond 7P by 0.21' @ 12.25 hrs

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth > 4.69" for 25-yr event
Inflow = 28.80 cfs @ 11.99 hrs, Volume= 1.651 af
Outflow = 23.56 cfs @ 12.07 hrs, Volume= 1.649 af, Atten= 18%, Lag= 4.5 min
Primary = 8.22 cfs @ 12.07 hrs, Volume= 1.502 af
Secondary = 15.34 cfs @ 12.07 hrs, Volume= 0.147 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.83' @ 12.07 hrs Surf.Area= 7,805 sf Storage= 16,133 cf

Plug-Flow detention time= 18.9 min calculated for 1.649 af (100% of inflow)
Center-of-Mass det. time= 17.5 min (822.5 - 805.0)

Volume	Invert	Avail.Storage	Storage Description
#1	69.00'	21,926 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

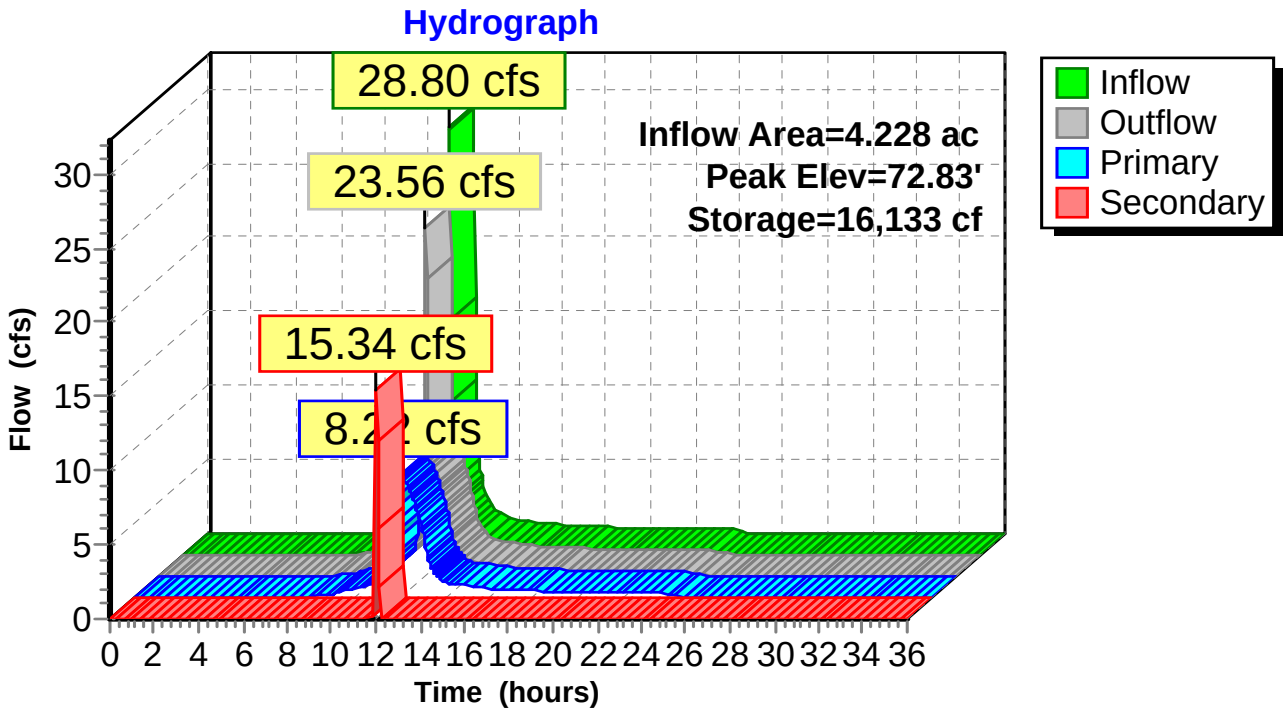
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.00	400	0	0
70.00	2,991	1,696	1,696
72.00	5,812	8,803	10,499
73.50	9,425	11,428	21,926

Device	Routing	Invert	Outlet Devices
#1	Primary	69.10'	**15.0" Round Culvert** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 69.10' / 68.75' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	72.50'	**35.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=8.17 cfs @ 12.07 hrs HW=72.79' (Free Discharge)
1=Culvert (Inlet Controls 8.17 cfs @ 6.66 fps)

Secondary OutFlow Max=13.49 cfs @ 12.07 hrs HW=72.79' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 13.49 cfs @ 1.31 fps)

Pond 3P: Surface Detention



Summary for Pond 4P: Surface Detention

[79] Warning: Submerged Pond PB Primary device # 1 INLET by 3.85'
[78] Warning: Submerged Pond PB Tertiary device # 2 by 3.26'

Inflow Area = 1.275 ac, 52.61% Impervious, Inflow Depth > 4.50" for 25-yr event
Inflow = 7.06 cfs @ 11.98 hrs, Volume= 0.478 af
Outflow = 6.54 cfs @ 12.02 hrs, Volume= 0.398 af, Atten= 7%, Lag= 2.5 min
Primary = 2.13 cfs @ 12.02 hrs, Volume= 0.357 af
Secondary = 4.42 cfs @ 12.02 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 71.37' @ 12.02 hrs Surf.Area= 3,181 sf Storage= 6,107 cf

Plug-Flow detention time= 193.9 min calculated for 0.397 af (83% of inflow)
Center-of-Mass det. time= 83.1 min (955.9 - 872.8)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	8,676 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
64.00	13	0	0
67.00	71	126	126
68.00	928	500	626
69.00	1,378	1,153	1,779
70.00	1,604	1,491	3,270
71.00	2,104	1,854	5,124
72.00	5,000	3,552	8,676

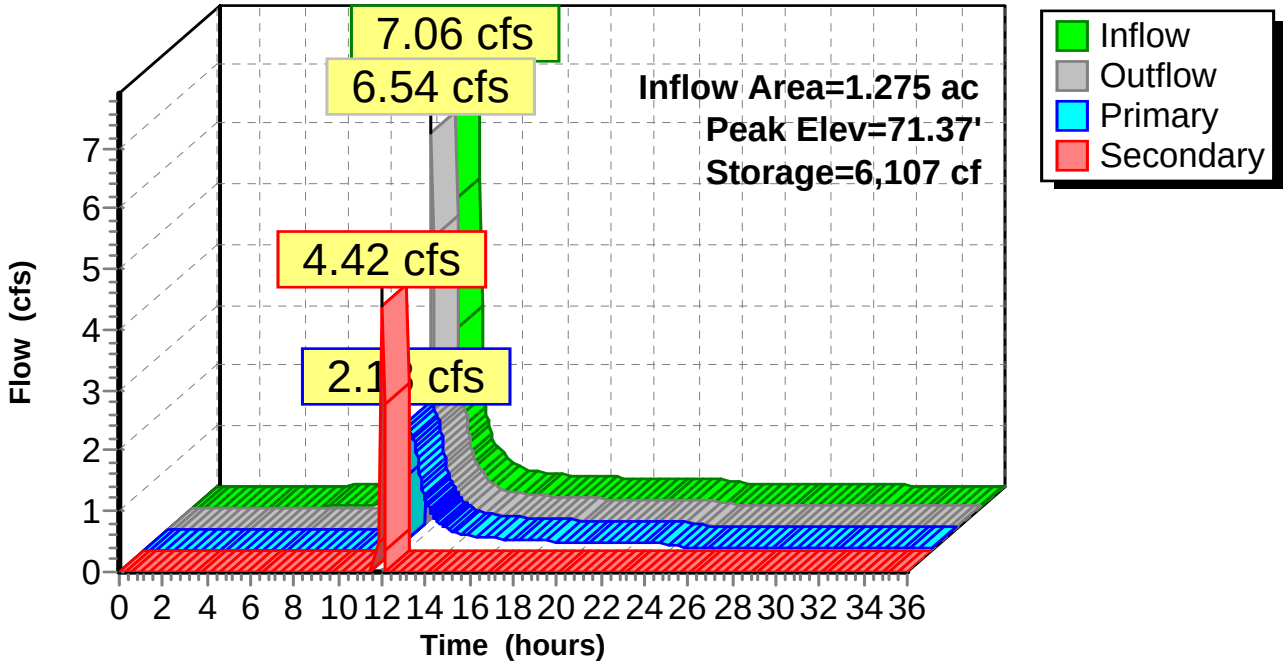
Device	Routing	Invert	Outlet Devices
#1	Primary	67.66'	**1.0" Round Culvert** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.66' / 67.65' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 0.01 sf
#2	Secondary	71.25'	**45.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	70.25'	**6.0" Round Culvert X 3.00** L= 1.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 70.25' / 70.25' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf

Primary OutFlow Max=2.10 cfs @ 12.02 hrs HW=71.35' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.03 cfs @ 6.12 fps)
└**3=Culvert** (Inlet Controls 2.06 cfs @ 3.50 fps)

Secondary OutFlow Max=3.81 cfs @ 12.02 hrs HW=71.35' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 3.81 cfs @ 0.85 fps)

Pond 4P: Surface Detention

Hydrograph



Summary for Pond 5P: OCS-4P

[57] Hint: Peaked at 68.48' (Flood elevation advised)
[79] Warning: Submerged Pond 4P Primary device # 1 INLET by 0.81'

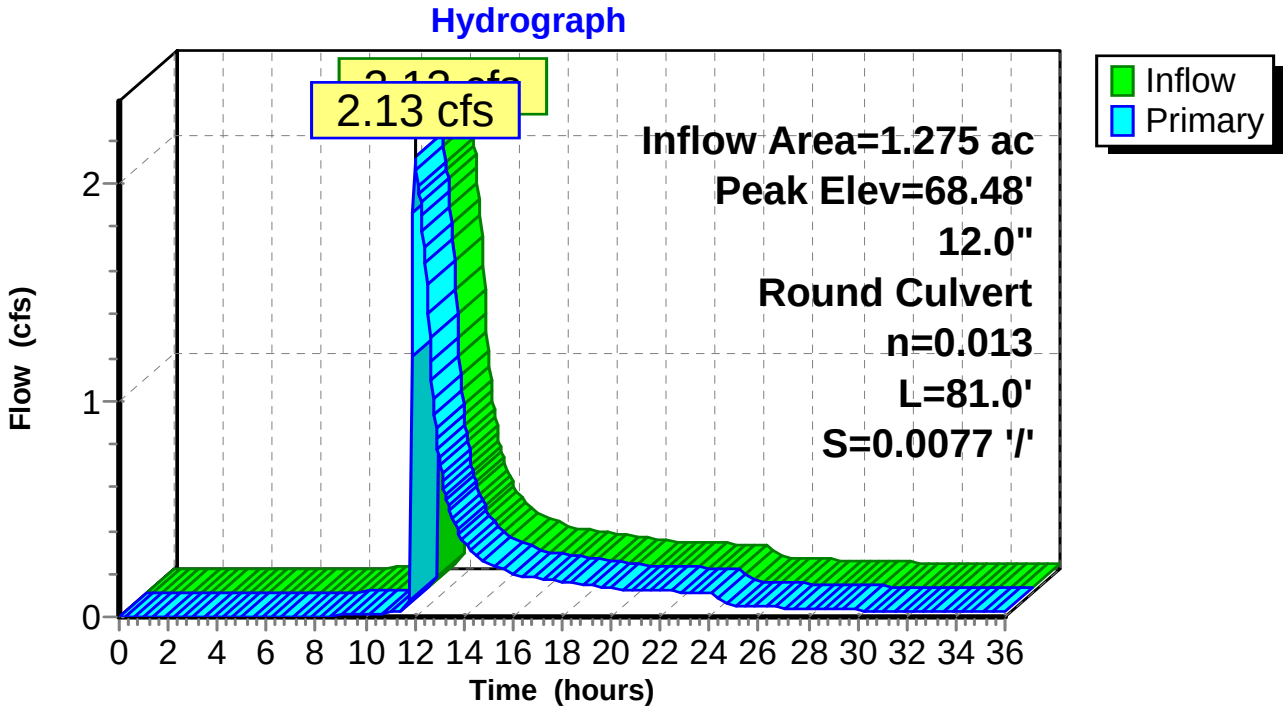
Inflow Area = 1.275 ac, 52.61% Impervious, Inflow Depth > 3.36" for 25-yr event
Inflow = 2.13 cfs @ 12.02 hrs, Volume= 0.357 af
Outflow = 2.13 cfs @ 12.02 hrs, Volume= 0.357 af, Atten= 0%, Lag= 0.0 min
Primary = 2.13 cfs @ 12.02 hrs, Volume= 0.357 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 68.48' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	67.48'	**12.0" Round Culvert** L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.48' / 66.86' S= 0.0077 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=2.10 cfs @ 12.02 hrs HW=68.47' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.10 cfs @ 2.67 fps)

Pond 5P: OCS-4P



Summary for Pond 6P: Atrium Surface Detention

[79] Warning: Submerged Pond PA Primary device # 1 INLET by 1.10'
[78] Warning: Submerged Pond PA Tertiary device # 2 by 0.27'

Inflow Area = 2.712 ac, 64.63% Impervious, Inflow Depth > 4.92" for 25-yr event
Inflow = 19.46 cfs @ 11.98 hrs, Volume= 1.113 af
Outflow = 18.90 cfs @ 12.00 hrs, Volume= 1.056 af, Atten= 3%, Lag= 1.0 min
Primary = 18.90 cfs @ 12.00 hrs, Volume= 1.056 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 74.10' @ 12.00 hrs Surf.Area= 3,835 sf Storage= 4,441 cf

Plug-Flow detention time= 58.5 min calculated for 1.056 af (95% of inflow)
Center-of-Mass det. time= 24.0 min (815.1 - 791.1)

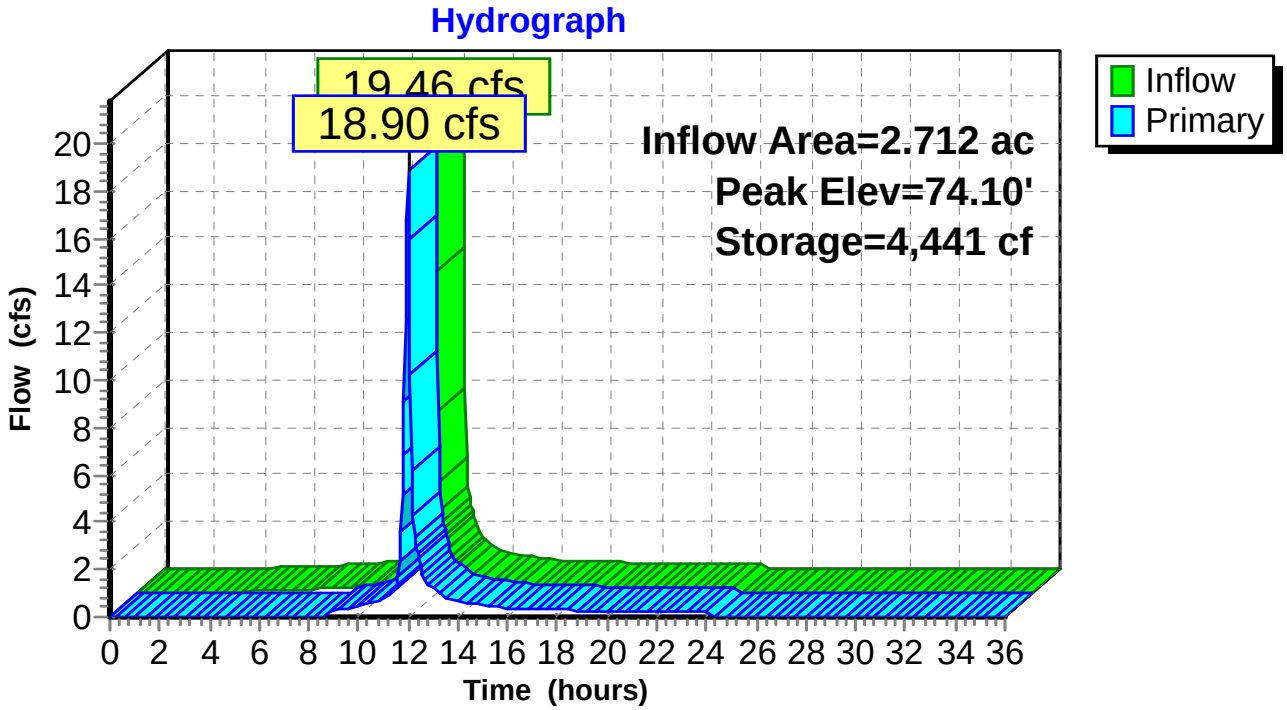
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	5,026 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	55	0	0
72.00	327	382	382
73.00	1,694	1,011	1,393
74.25	4,120	3,634	5,026

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.1" Round Culvert** L= 220.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.00' / 69.20' S= 0.0082 '/' Cc= 0.900 n= 0.013, Flow Area= 0.00 sf
#2	Primary	73.50'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=18.81 cfs @ 12.00 hrs HW=74.10' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.00 cfs @ 0.28 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 18.81 cfs @ 2.09 fps)

Pond 6P: Atrium Surface Detention



Summary for Pond 7P: Riprap Surface Detention

Inflow Area = 0.600 ac, 52.50% Impervious, Inflow Depth = 4.66" for 25-yr event
Inflow = 4.40 cfs @ 11.98 hrs, Volume= 0.233 af
Outflow = 3.26 cfs @ 12.04 hrs, Volume= 0.231 af, Atten= 26%, Lag= 3.7 min
Primary = 3.26 cfs @ 12.04 hrs, Volume= 0.231 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 73.85' @ 12.04 hrs Surf.Area= 766 sf Storage= 818 cf

Plug-Flow detention time= 13.6 min calculated for 0.231 af (99% of inflow)
Center-of-Mass det. time= 7.8 min (794.1 - 786.3)

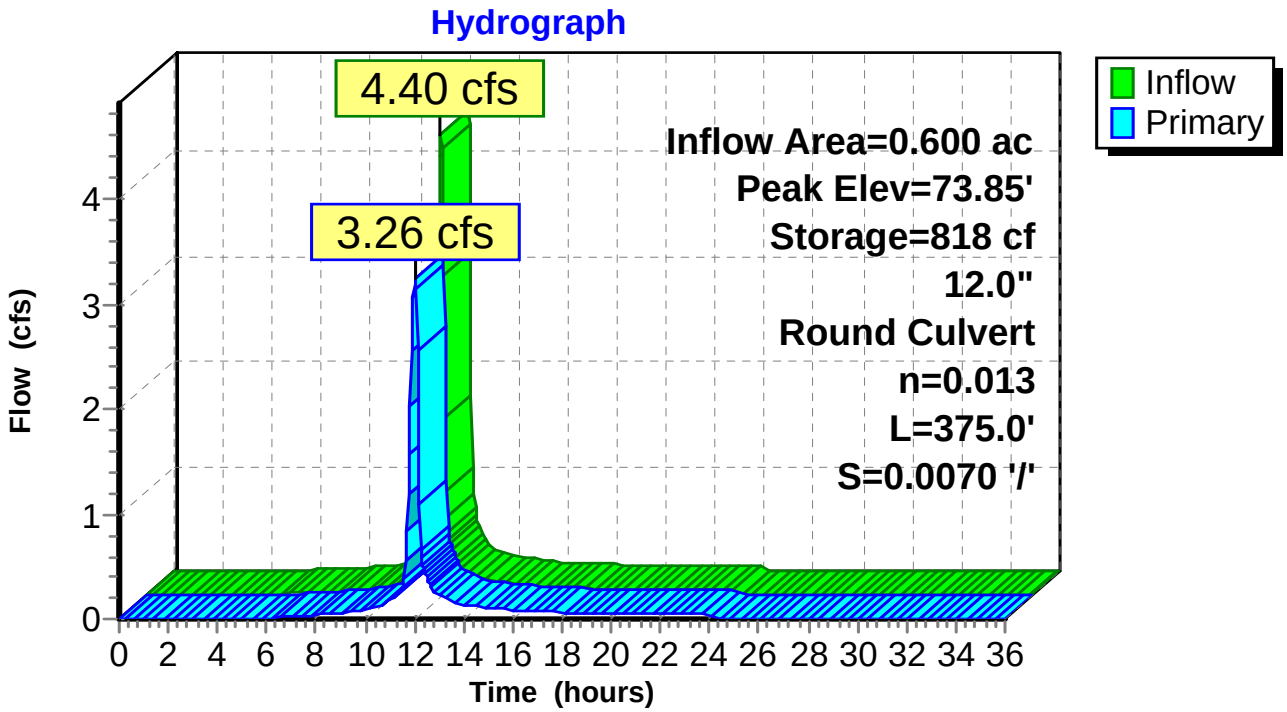
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	2,180 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	50	0	0
73.00	310	360	360
74.00	846	578	938
75.00	1,637	1,242	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**12.0" Round Culvert** L= 375.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 69.20' S= 0.0070 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=3.25 cfs @ 12.04 hrs HW=73.83' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 3.25 cfs @ 4.13 fps)

Pond 7P: Riprap Surface Detention



Summary for Pond 8P: OCS-DMH7

[57] Hint: Peaked at 67.23' (Flood elevation advised)

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth > 4.26" for 25-yr event
Inflow = 8.22 cfs @ 12.07 hrs, Volume= 1.502 af
Outflow = 8.22 cfs @ 12.07 hrs, Volume= 1.502 af, Atten= 0%, Lag= 0.0 min
Primary = 0.78 cfs @ 12.07 hrs, Volume= 0.047 af
Secondary = 7.44 cfs @ 12.07 hrs, Volume= 1.455 af

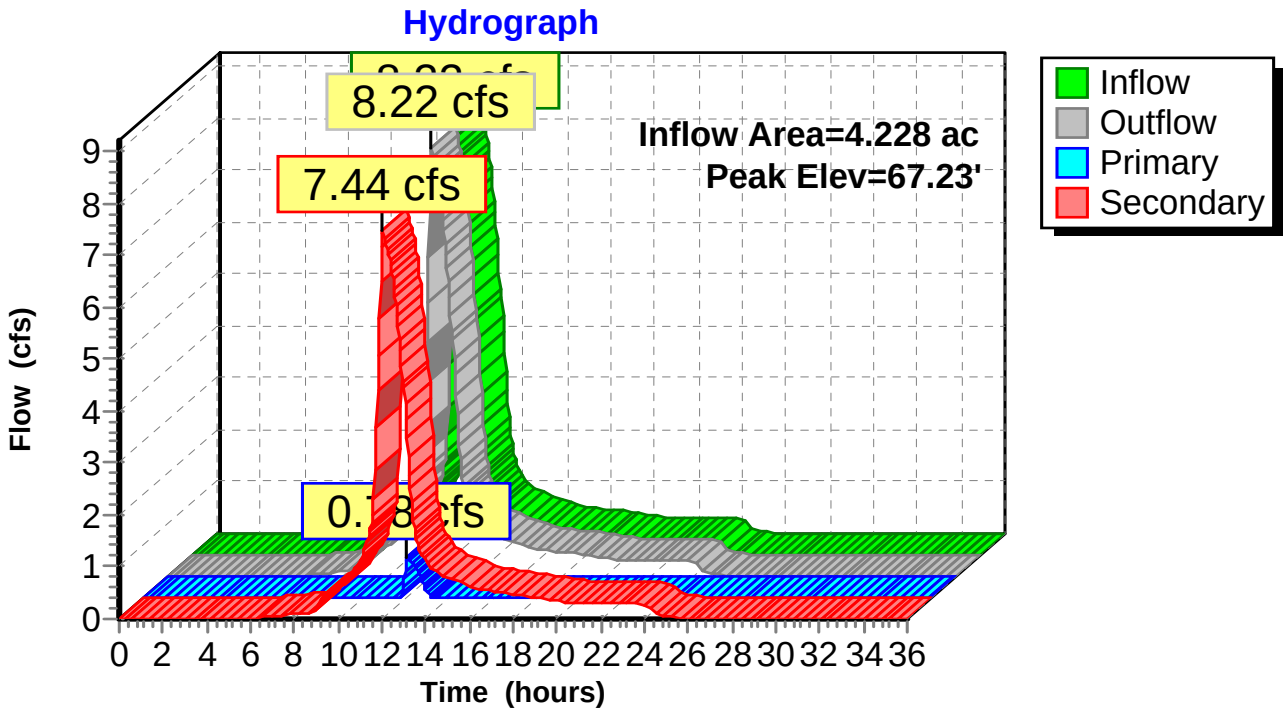
Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.23' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.60' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	65.70'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=0.76 cfs @ 12.07 hrs HW=67.22' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.76 cfs @ 2.12 fps)

Secondary OutFlow Max=7.41 cfs @ 12.07 hrs HW=67.22' (Free Discharge)
↑**2=Culvert** (Barrel Controls 7.41 cfs @ 3.99 fps)

Pond 8P: OCS-DMH7



Summary for Pond 9P: UG Detention

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth = 0.07" for 25-yr event
Inflow = 0.27 cfs @ 12.07 hrs, Volume= 0.023 af
Outflow = 0.15 cfs @ 12.94 hrs, Volume= 0.023 af, Atten= 42%, Lag= 52.3 min
Primary = 0.15 cfs @ 12.94 hrs, Volume= 0.023 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 66.08' @ 12.94 hrs Surf.Area= 1,536 sf Storage= 559 cf

Plug-Flow detention time= 88.9 min calculated for 0.023 af (99% of inflow)
Center-of-Mass det. time= 88.2 min (834.0 - 745.8)

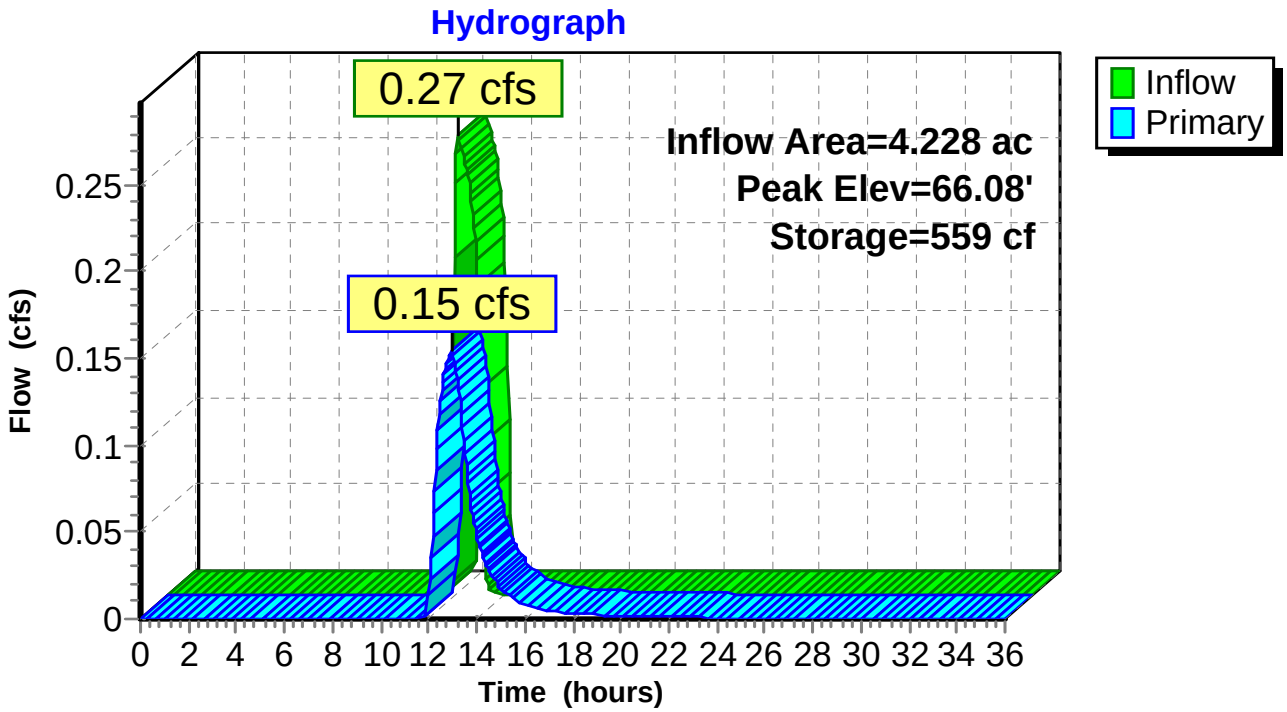
Volume	Invert	Avail.Storage	Storage Description
#1	65.70'	2,488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 2,619 cf Overall x 95.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
65.70	1,536	0	0
67.40	1,536	2,611	2,611
67.41	5	8	2,619

Device	Routing	Invert	Outlet Devices
#1	Primary	65.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.70' / 65.60' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Primary	67.00'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.90' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf

Primary OutFlow Max=0.15 cfs @ 12.94 hrs HW=66.08' (Free Discharge)
└─**1=Culvert** (Inlet Controls 0.15 cfs @ 1.77 fps)
└─**2=Culvert** (Controls 0.00 cfs)

Pond 9P: UG Detention



Summary for Pond 10P: Isolator Row x5

[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[81] Warning: Exceeded Pond 8P by 0.86' @ 35.95 hrs

Inflow Area = 4.228 ac, 60.70% Impervious, Inflow Depth = 0.13" for 25-yr event
Inflow = 0.78 cfs @ 12.07 hrs, Volume= 0.047 af
Outflow = 0.78 cfs @ 12.07 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.1 min
Primary = 0.27 cfs @ 12.07 hrs, Volume= 0.023 af
Secondary = 0.51 cfs @ 12.07 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 67.41' @ 12.07 hrs Surf.Area= 0.001 ac Storage= 0.001 af

Plug-Flow detention time= 2.8 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 1.9 min (741.4 - 739.5)

Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	0.002 af	**ADS_StormTech RC-310** x 5 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 1 rows

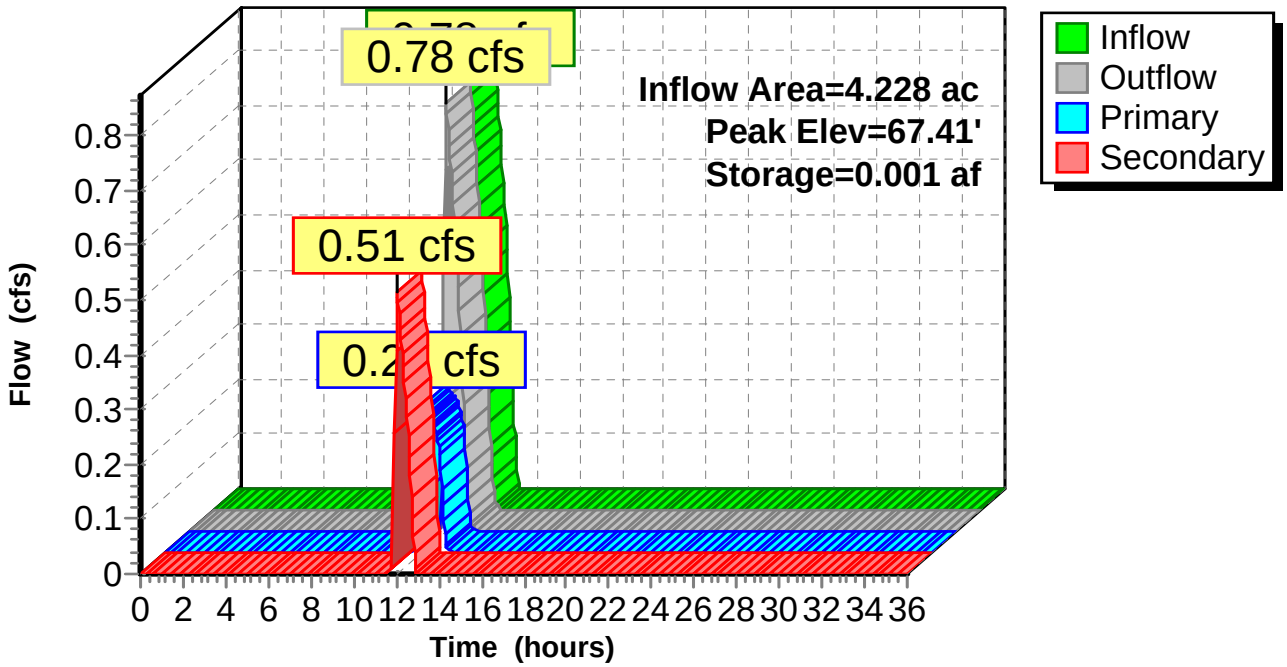
Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.60' / 66.55' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Secondary	67.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.00' / 66.55' S= 0.0090 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.26 cfs @ 12.07 hrs HW=67.40' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.26 cfs @ 3.03 fps)

Secondary OutFlow Max=0.50 cfs @ 12.07 hrs HW=67.40' (Free Discharge)
↑—**2=Culvert** (Inlet Controls 0.50 cfs @ 1.70 fps)

Pond 10P: Isolator Row x5

Hydrograph



Summary for Pond PA: USF A

Inflow Area = 0.196 ac, 67.83% Impervious, Inflow Depth = 4.99" for 25-yr event
Inflow = 1.50 cfs @ 11.98 hrs, Volume= 0.082 af
Outflow = 0.40 cfs @ 12.14 hrs, Volume= 0.067 af, Atten= 73%, Lag= 9.7 min
Primary = 0.36 cfs @ 12.14 hrs, Volume= 0.029 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.04 cfs @ 12.14 hrs, Volume= 0.038 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 77.46' @ 12.14 hrs Surf.Area= 1,328 sf Storage= 1,902 cf

Plug-Flow detention time= 342.3 min calculated for 0.067 af (82% of inflow)
Center-of-Mass det. time= 267.6 min (1,042.7 - 775.0)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	2,192 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	585	0.0	0	0
73.01	585	30.0	2	2
75.99	585	30.0	523	525
76.00	585	100.0	6	531
77.00	1,056	100.0	821	1,351
77.33	1,260	100.0	382	1,733
77.67	1,437	100.0	458	2,192

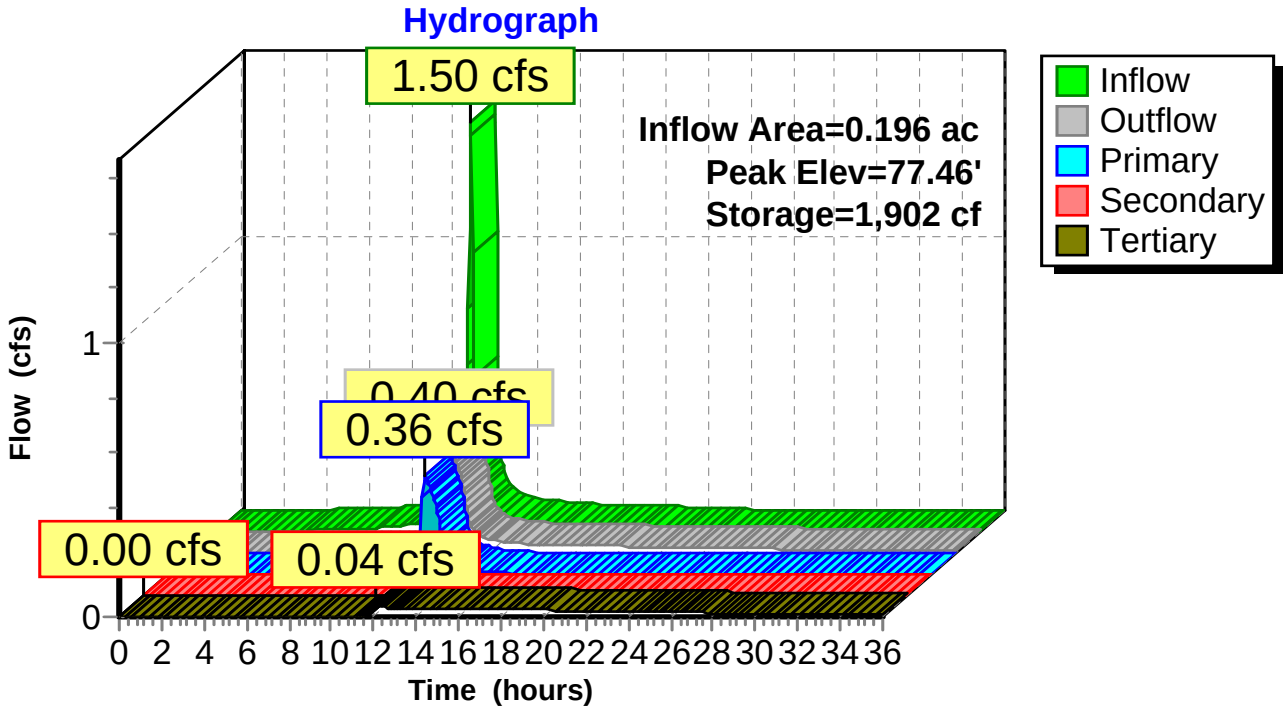
Device	Routing	Invert	Outlet Devices
#1	Primary	73.00'	**12.0" Round Culvert** L= 60.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 73.00' / 72.20' S= 0.0133 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Tertiary	73.83'	**2.410 in/hr Exfiltration over Surface area above 73.83'** Excluded Surface area = 585 sf
#3	Device 1	77.00'	**24.0" x 24.0" Horiz. Orifice/Grate X 5.00 columns** X 5 rows C= 0.600 in 4.0" x 4.0" Grate Limited to weir flow at low heads
#4	Secondary	77.50'	**30.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.36 cfs @ 12.14 hrs HW=77.46' (Free Discharge)
└─**1=Culvert** (Passes 0.36 cfs of 7.07 cfs potential flow)
└─**3=Orifice/Grate** (Orifice Controls 0.36 cfs @ 3.26 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=73.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.04 cfs @ 12.14 hrs HW=77.46' (Free Discharge)
└─**2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Pond PA: USF A



Summary for Pond PB: USF B

Inflow Area = 0.324 ac, 84.42% Impervious, Inflow Depth = 5.33" for 25-yr event
Inflow = 2.55 cfs @ 11.98 hrs, Volume= 0.144 af
Outflow = 1.33 cfs @ 12.10 hrs, Volume= 0.126 af, Atten= 48%, Lag= 7.5 min
Primary = 0.29 cfs @ 12.10 hrs, Volume= 0.027 af
Secondary = 0.95 cfs @ 12.10 hrs, Volume= 0.008 af
Tertiary = 0.08 cfs @ 12.10 hrs, Volume= 0.090 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 72.30' @ 12.10 hrs Surf.Area= 2,185 sf Storage= 3,366 cf

Plug-Flow detention time= 400.4 min calculated for 0.126 af (87% of inflow)
Center-of-Mass det. time= 340.4 min (1,101.6 - 761.2)

Volume	Invert	Avail.Storage	Storage Description
#1	67.86'	3,817 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.86	715	0.0	0	0
67.87	715	30.0	2	2
70.25	715	30.0	511	513
70.26	715	100.0	7	520
72.00	1,853	100.0	2,234	2,754
72.50	2,400	100.0	1,063	3,817

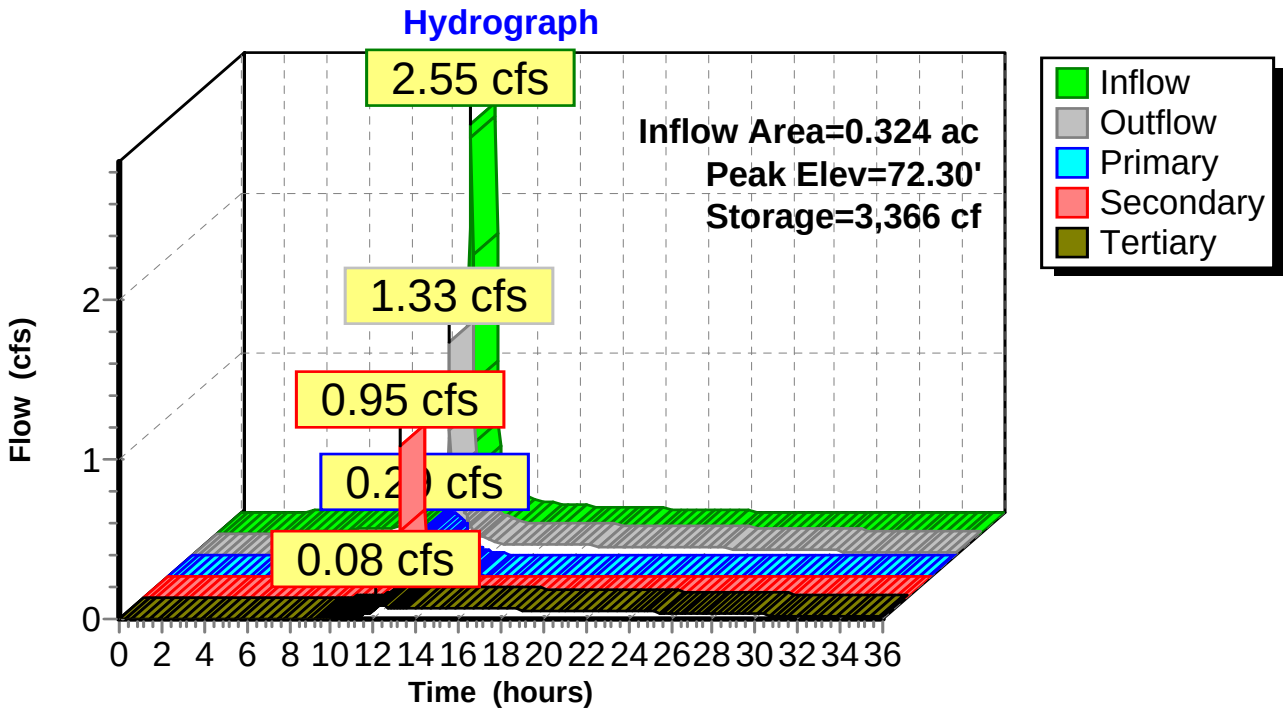
Device	Routing	Invert	Outlet Devices
#1	Primary	67.50'	**15.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.50' / 67.40' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Tertiary	68.09'	**2.410 in/hr Exfiltration over Surface area above 68.09'** Excluded Surface area = 715 sf
#3	Device 1	72.00'	**24.0" x 24.0" Horiz. Orifice/Grate X 5.00 columns** X 5 rows C= 0.600 in 4.0" x 4.0" Grate Limited to weir flow at low heads
#4	Secondary	72.25'	**30.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.29 cfs @ 12.10 hrs HW=72.30' (Free Discharge)
└**1=Culvert** (Passes 0.29 cfs of 9.53 cfs potential flow)
└**3=Orifice/Grate** (Orifice Controls 0.29 cfs @ 2.65 fps)

Secondary OutFlow Max=0.88 cfs @ 12.10 hrs HW=72.30' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 0.88 cfs @ 0.56 fps)

Tertiary OutFlow Max=0.08 cfs @ 12.10 hrs HW=72.30' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Pond PB: USF B


Hydrograph
2.55 cfs
1.33 cfs
0.95 cfs
0.2 cfs
0.08 cfs
Inflow Area=0.324 ac
Peak Elev=72.30'
Storage=3,366 cf
Inflow
Outflow
Primary
Secondary
Tertiary
Flow (cfs)
0
1
2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
Time (hours)

12.4 - INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

The Cedars Long – Term Care Facility
Portland, Maine

Introduction

The following plan outlines the anticipated inspection, maintenance and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in this inspection and maintenance plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional detail on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the Maine Department of Environmental Protection (MDEP).

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

C. Temporary Storm Drain Inlet Protection:

- The inlet protection structure shall be inspected before each rain event and repaired as necessary.
- Sediment shall be removed and the storm drain sediment barrier restored to its original dimensions when the sediment has accumulated to half of the design depth of the trap.
- Barriers shall be removed upon permanent stabilization of the tributary area.
- Upon removal of the barrier, all accumulated sediments downstream of the structure shall be cleaned from the storm drain system.

D. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

E. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established

temporary vegetative cover.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

G. Stormwater Best Management Practices:

- Some Stormwater Best Management Practices may require inspection during construction. Each Stormwater Best Management Practice shall be inspected in accordance with its associated detail as indicated on the site plan.
- For all Stormwater Best Management Practices, contractor shall ensure that all areas tributary to each Stormwater Best Management Practice are stabilized prior to construction.

After Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in all applicable permits, shall conduct the inspections.

2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction.

A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains 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.

B. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.
- If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

C. Winter Sanding:

- 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 or other acceptable method.
- Ensure that no winter sanding is done in Porous Pavement locations.

D. Grassed Underdrained Soil Filters

- Fertilization to establish vegetation within the soil filter should be avoided.
- Snow storage shall not occur in the soil filter.
- Check for accumulated sediments in the bottom of the soil filters. Remove sediments when they occupy 10 percent of the filter or sediment forebay bottom; if trenches fail to drain after surface sediment accumulations are removed, the filter medium must be replaced, using the same design, installation measures, and permeability testing procedures described in this application and related documents.
- Check for the dissipation of water after large storm events. The soil filter should be completely drained 72 hours after filling from the storm event.

3. Duration of Maintenance: Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system.

Housekeeping

The following general performance standards apply to the proposed project both during and after construction.

A. Spill prevention: Controls must be used to prevent pollutants from being discharged from materials and equipment on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. 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.

C. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

D. Debris and other materials: Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

E. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

F. Excavation de-watering: Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.

G. Authorized non-stormwater discharges: Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

(a) discharges from firefighting activity;

(b) fire hydrant flushings;

(c) vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);

(d) dust control runoff in accordance with permit conditions and appendix (c)(3);

(e) routine external building washdown, not including surface paint removal, that does not involve detergents;

(f) pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;

(g) uncontaminated air conditioning or compressor condensate;

(h) uncontaminated groundwater or spring water;

(i) foundation or footer drain-water where flows are not contaminated;

(j) uncontaminated excavation dewatering (see requirements in appendix c(5));

(k) potable water sources including waterline flushings; and

(l) landscape irrigation.

H. Unauthorized non-stormwater discharges: The department's approval under this chapter does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with appendix c (6). Specifically, the department's approval does not authorize discharges of the following:

(a) wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;

(b) fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;

(c) soaps, solvents, or detergents used in vehicle and equipment washing; and

(d) toxic or hazardous substances from a spill or other release.

I. Staging of Operations: All stockpiling of materials and staging of construction equipment shall be completed in the outlined limit of work, or at the contractor's facilities off-site. All stockpiles shall be stabilized in the manner described in the Erosion and Sedimentation Control Plan and narrative.

J. Additional requirements. Additional requirements may be applied on a site-specific basis.

Stormwater Inspection and Maintenance Form

City of Portland, Maine

The Cedars - Long Term Care Facility

Inspector: _____ Date: _____

Maintenance Personnel: _____

	Inspection		Maintenance	
SITE AREA	Date	Comments	Date	Corrective Action
USF Vegetation and Mulch				
USF Media				
USF Sediment Riprap				
USF Misc				
General: Overflow Structures				
General: Vegetated areas adjacent to pavement runoff				
General: Lawn Vegetation				
General: Slope Vegetation				
General: Entrance Road Sweeping				
General: Catch Basins				

Sediment/Debris Disposal

Location of Sediment/Debris Accumulation	Location of Sediment/Debris Disposal	Date of Disposal

12.6 - EROSION AND SDEIMENTATION CONTROL PLAN

The Cedars Long-Term Care Facility
Portland, Maine

INTRODUCTION

This Erosion and Sedimentation Control Plan (E&S Plan) has been developed to provide a strategy to prevent unreasonable erosion of soil and sediment transport beyond the project site or into a protected natural resource. These strategies apply to the proposed development immediately prior to soil disturbing activities on the site and shall remain in place until the site is permanently stabilized.

The information presented in this E&S Plan is provided as an overview of the anticipated measures to be used on this site. In some instances, additional measures may be required due to unexpected conditions that arise during construction. Also, specific detail on the application of a recommended practice for an unexpected instance may not be covered in this E&S Plan. For additional detail on any of the erosion and sedimentation control measures discussed in this E&S Plan or for further recommendations of applicable practices, refer to the "Maine Erosion and Sedimentation Control BMP" manual published by the Maine Department of Environmental Protection (MDEP) dated March 2003, as revised.

1.0 PLAN IMPLEMENTATION PHASES

Generally, the implementation of this plan occurs in three distinct phases as described below:

1.1 Pre-construction Phase

Prior to the beginning of any construction, perimeter sediment barriers (i.e. silt fence, erosion control mix berm, etc…) shall be installed at, or just below, the limits of clearing or grubbing, and/or just above any adjacent property line or protected natural resource. Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

1.2 Construction Phase

Areas undergoing actual construction shall only expose that amount of mineral soil necessary for progressive and efficient site construction. Any area that has been disturbed and is not "permanently stabilized" (as described by this E&S Plan) shall be considered "open." Open areas shall be protected and stabilized with temporary erosion and sedimentation control measures as shown on the project plans and as described within this E&S Plan.

Preparation for winter stabilization applies to some disturbed areas that are open on or after September 15th of the construction season (refer to the Winter Construction Section of this E&S Plan, Paragraph B – Overwinter Stabilization Timeframe). Any areas that remain open after November 1 or new soil disturbance that occurs after November 1, but before April 15, must be protected by additional measures as described in the Winter Construction section of this E&S Plan. The recommendations outlined in the Winter Construction section of this E&S Plan shall supersede other conflicting recommendations.

1.3 Post-construction phase

Once the site has reached permanent stabilization, remove any temporary sediment control measures, such as silt fence, within 30 days. All accumulated sediment/debris in the permanent

stormwater management system, ditches, swales, paved surfaces, and/or any other location that has accumulated sediment/debris during construction shall be removed and disposed of in an approved manner.

2.0 PERMANENT STABILIZATION

The strategies outlined in this E&S Plan shall be in effect until the site reaches permanent stabilization. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well established. If necessary, areas must be seeded and mulched again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. The following list defines permanent stabilization for applicable situations.

2.1 Seeded Areas: For seeded areas, permanent stabilization means a 90% cover of vigorous perennial growth with no evidence of washing or rilling of the topsoil.

2.2 Sodded Areas: For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

2.3 Permanent Mulch: For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to approved application rates and limitations.

2.4 Riprap: For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of well-graded gravel or approved geotextile to prevent soil movement from behind the riprap.

2.5 Paved Areas: For paved areas, permanent stabilization means the placement of compacted gravel subbase is completed.

2.6 Ditches, channels, and swales: For open channels, permanent stabilization means the channel is stabilized with a 90% cover of vigorous perennial growth, a well-graded riprap lining, or with another non-erosive lining such as specified. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

3.0 TEMPORARY EROSION AND SEDIMENTATION CONTROL BMPS

The placement/use of the following erosion and sedimentation control measures shall be in accordance with the "Maine Erosion and Sedimentation Control BMP" manual published by the Maine Department of Environmental Protection (MDEP) dated March 2003, as revised.

3.1 Sediment Barriers: Prior to the beginning of any construction, sediment barriers (i.e. silt fence, erosion control mix berms, etc…) shall be installed across the slope(s), on the contour, at or just below the limits of clearing or grubbing, and/or just above any adjacent property line or watercourse to protect against construction related erosion. Sediment barriers shall be maintained until all tributary open areas have been permanently stabilized. The following are recommended perimeter sediment barriers.

- **Silt fence**: Shall be installed per the detail on the plans. The effective height of the fence shall not exceed 36 inches. It is recommended that silt fence be removed by cutting the fence materials at ground level so as to avoid additional soil disturbance.
- **Staked hay bales**: Shall be installed per the detail on the plans. Bales shall be wire-bound or string-tied and these bindings must remain parallel with the ground surface during installation to prevent deterioration of the bindings. Bales shall be installed within a minimum four (4) inch deep trench line with ends of adjacent bales tightly abutting another.
- **Erosion control mix berm**: Shall be installed per the detail on the plans. The mix shall consist primarily of organic material and contain a well-graded mixture of particle sizes. The mix must meet the most recent composition specifications published by the MDEP. No trenching is required for installation of this barrier.

3.2 Surface Stabilization: All disturbed areas that will not be worked for more than 7 days shall be protected and stabilized with mulch or other non-erodable cover. Areas located within 75 feet of a wetland or waterbody must be protected and stabilized within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first. Areas that have been seeded (temporary or permanent) shall be stabilized immediately. The following are recommended practices for surface stabilization:

- **Hay or straw Mulch:** Organic mulches including hay and straw need to be air-dried, free of undesirable seeds and coarse materials. Application rate shall be 2 bales (70-90 lbs) per 1000 square feet or 1.5 to 2 tons (90-100 bales) per acre. This type of mulch must be anchored with a tackifier amendment and/or via physical means (i.e. vehicle tracking, jute netting, etc…) to avoid displacement by wind or water.
- **Erosion control mix**: Erosion Control Mix can be manufactured on or off the site. It is composed primarily of shredded bark, stump grindings, composted bark, or other acceptable products based on a similar raw source. The mix must meet the most recent composition specifications published by the MDEP. The mix shall be placed evenly and must provide 100% soil coverage. Erosion control mix shall be applied such that the thickness on slopes 3:1 or less is 2 inches plus ½ inch per 20 feet of slope up to 100 feet. The thickness on slopes between 3:1 and 2:1 is 4 inches plus ½ inch per 20 feet of slope up to 100 feet. This shall not be used on slopes greater that 2:1.
- **Erosion control blankets**: Erosion Control Blankets are used on steep slopes (greater than 3H:1V) and also areas that will receive concentrated stormwater flows. Blankets aid in controlling erosion on disturbed soils and critical areas during the establishment period of vegetation. Various forms of erosion control blankets are commercially available, each with different advantages for different applications. The type of blanket to be used for individual applications shall be as indicated on the development plan set or via the use of an approved equivalent blanket. In all applications, the blanket manufacturer's specifications and installation methods shall be referenced and adhered to.

3.3 Soil Stockpiles: All topsoil shall be stockpiled for future use on the project at a stable location on-site. Structural measures, such as sediment barriers, may be warranted for additional sediment control of the stockpile areas. Stockpiles of soil or subsoil shall be mulched with hay or straw or with erosion control mix. This must be done within 24 hours of stocking and re-established prior to any rainfall. Any soil stockpile will not be placed (even covered with hay or straw) within 75 feet from any protected natural resources.

3.4 Stabilized Construction Entrance/Exit: Prior to any clearing or grubbing, a stabilized construction entrance/exit shall be constructed wherever traffic will exit the construction site onto

a paved roadway in order to minimize the tracking of sediment and debris from the construction site onto public roadways. The entrances and adjacent roadway areas shall be periodically swept or washed to further minimize the tracking of mud, dust or debris from the construction area. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. Stabilized construction exits shall be constructed in areas as specified and detailed on the plans.

3.5 **Stone Check Dams:** Stone check dams are generally temporary devices, which are constructed across a swale or drainage ditch. Their purpose is to reduce the velocity of concentrated stormwater flows, thereby reducing erosion of the swale or ditch. These devices will also trap small amounts of sediment generated in the ditch itself, however, they are not an effective sediment trapping device and should not be used as such. Stone check dams are typically constructed of 2"-3" crushed stone and stand 24 inches in height.

3.6 **Storm Drain Inlet Protection:** Storm drains are typically operational prior to permanent stabilization of tributary areas. In these instances, hay bales, crushed stone barriers, and/or silt sacks shall be used within a catch basin or prior to a pipe entrance. This temporary protection will assist in the removal of sediment prior to entrance into a storm drainage system and the prevention of clogging and/or loss of capacity. These devices alone will not prevent all sediment from entering the stormwater system and should be used in conjunction with other devices to achieve desired sediment removal levels.

3.7 **Dewatering:** Water from construction dewatering will 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 natural resource. Discharge is permitted within the filter basin locations prior to the installation of the filter media.

3.8 **Dust Control:** Dust control during construction shall be achieved by the use of a watering truck to periodically sprinkle the exposed roadway areas as necessary to reduce dust during the dry months. Applying other dust control products such as calcium chloride or other manufactured products are allowed if authorized by the proper local, state and/or federal regulating agencies. However, it is the contractor's ultimate responsibility to mitigate dust and soil loss from the site.

3.9 **Concrete Washout:** Concrete washout(s) shall be made available on-site during times when cast-in-place concrete structures are being poured. Concrete washout shall be large enough to wash out trucks, inspection equipment, and working tools as necessary. No concrete washwater shall be directly discharged to any stormwater infrastructure or to any protected natural resources. Once dried, concrete shall be disposed in accordance with proper local, state, and/or federal regulating agencies. Concrete washout shall be constructed in accordance with Dewatering Filter Detail, or other method as approved by engineer.

4.0 VEGETATIVE MEASURES

4.1 **Temporary Vegetation:** If any disturbed area of soil will be left bare for more than 7 days, or if construction is to be completed in phases over an extended duration, temporary seeding and mulching shall commence immediately following initial fine grading of the site. In sensitive areas (within 75 feet of protected natural resources) temporary mulch must be applied within 48 hours or prior to any storm event on all disturbed surfaces. It shall be maintained and reseeded, as necessary,

to ensure good vegetative cover for the entire duration of construction. Seed will be selected from the following table (Table 1 - Temporary Seed Mixture) according to the time of year or via an approved equivalent method.

TABLE 1
TEMPORARY SEED MIXTURE

Seed	Lbs./Acre	Lbs./1000s.f.	Recommended Seeding Date
Winter Rye	112	2.6	8/15 thru 10/1
Oats	80	1.8	4/1 thru 7/1 8/15 thru 9/15
Annual Ryegrass	40	0.9	4/1 thru 7/1
Sudangrass	40	0.9	5/15 thru 8/15
Perennial	40	0.9	8/15 thru 9/15

Note:

Some tree and shrub species may be desirable for sites primarily covered with sand and gravel. These methods shall be approved by the appropriate regulatory authority prior to use.

4.2 Permanent Vegetation: Revegetation measures shall commence immediately upon completion of final grading of areas to be loamed and seeded. Revegetation measures shall consist of the following:

4.2.1 Seedbed Preparation

- Four (4) inches of loam will be spread over disturbed areas and smoothed to a uniform surface. Loam shall be free of subsoil, clay lumps, stones and other objects over 2" in any dimension, and without weeds, roots or other objectionable material.

- Soil tests shall be taken at the time of soil stripping to determine fertilization requirements. Soil tests shall be taken promptly as to not interfere with the 7-day limit on soil exposure (48-hours adjacent to a protected natural resource). Based upon test results, soil amendments shall be incorporated into the soil prior to final seeding. In lieu of soil tests, soil amendments may be applied as shown below in Table 2:

TABLE 2
RECOMMENDED SOIL AMENDMENTS

Item	Application Rate
10-20-20 Fertilizer (N-P205-K20 or equal)	18.4lbs./1,000 s.f.
Ground Limestone (50% calcium and magnesium oxide)	138-lbs./1,000 s.f.

- Work lime and fertilizer into the soil as nearly as practical to a depth of four (4) inches with proper equipment. Roll the area to firm the seedbed except on clay, silty soils or coarse sand.

4.2.2 Application of Seed

- **Seeding**: The seed mixture shown below in Table 3 shall be utilized for permanent seeding for the majority of the project:

TABLE 3
PERMANENT SEED MIXTURE

Seed Type	Application Rate
Creeping Red Fescue	0.46 lbs/1,000 s.f. (20 lbs/acre)
Red Top	0.05 lbs/1,000 s.f. (2 lbs/acre)
Tall Fescue	0.46 lbs/1,000 s.f. (20 lbs/acre)
Total:	0.97 lbs/1,000 s.f. (42 lbs/acre)

- **Seeding**: The seed mixture shown below in Table 4 shall be utilized for permanent seeding for modifications adjacent to the athletics fields:

TABLE 4
PERMANENT SEED MIXTURE

Seed Type	Application Rate
Kentucky Bluegrass	2.5 lbs/1,000 s.f. (110 lbs/acre)

- **Hydroseeding:** Shall be conducted on prepared areas as described above. Hydroseeding shall not be done on slopes steeper than 2H:1V. Lime and fertilizer may be applied simultaneously with the seed. Recommended seeding rates must be increased by 10% when hydroseeding.

- **Surface Stabilization:** Mulching or other approved surface stabilization methods shall commence immediately after seed is applied. Refer to the surface stabilization section of this plan for more information.

4.2.3. Sodding

Following seedbed preparation, sod can be applied in lieu of seeding in areas where immediate vegetation is most beneficial such as ditches, around stormwater drop inlets and areas of aesthetic value. Sod should be laid at right angles to the direction of flow starting at the lowest elevation. Sod should be rolled or tamped down to even out the joints once laid down. Where flow is prevalent the sod must be properly anchored down. Irrigate the sod immediately after installation. In most cases, sod can be best established between April 1 and November 15 of the construction year.

5.0 WINTER CONSTRUCTION

The winter construction period is from November 1 through April 15. If the construction site is not permanently stabilized by November 15 then the site needs to be protected with over-winter stabilization.

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 areas 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.

Any added measures, which may be necessary to control erosion/sedimentation from the site dependent upon the actual site and weather conditions, must be installed. 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.

5.1 Winter Construction BMP Adjustments

1) **Sediments Barriers:** During frozen conditions, sediment barriers shall consist of erosion control mix berms as frozen soil prevents the proper installation of hay bales and silt fences.

2) **Mulching:** Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, asphalt emulsion chemical, track or weed cellulose fiber. When the ground surface is not visible through the mulch then cover is sufficient. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

- **Open Surfaces (flatter than 8%)**: 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 square feet 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 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 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 through the mulch.

- **Open Slopes (8% or steeper) and Drainage Ways**: Slopes shall not be left exposed for any extended time of work suspension unless fully mulched and anchored with netting or erosion control blankets. Mulching shall be applied at a rate of 230-lbs/1,000 square feet on all slopes steeper than 8%. Mulch netting shall

be used to anchor mulch in all drainage ways with a slope steeper than 3% for slopes exposed to direct winds and for all other slopes steeper than 8%. Erosion control blankets shall be used in lieu of mulch in all drainage ways. Erosion control mix can be used to substitute erosion control blankets on slopes that do not exceed 2H:1V. In this case, the erosion control mix shall be spread out, not placed in a berm as it is installed as a sedimentation barrier.

3) **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 square feet (3 tons per acre) or with a four-inch layer of wood waste erosion control mix. This will be done within 24 hours of stocking and re-established 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.

4) **Natural Resources Protection:** Any areas within 100 feet from any protected natural resources, if not stabilized with a minimum of 90% 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) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 100 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.

5) **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/1000 square feet. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 90% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.2 Overwinter Stabilization Timeframe

1) **Ditches and Channels:** All stone-lined ditches and channels must be constructed and stabilized on the site by November 15. All grass-lined ditches and channels must be constructed and stabilized by September 15. If a ditch or channel is not grass-lined by September 15, then one of the following actions must be taken to stabilize the ditch for late fall and winter.

- **Install a sod lining in the ditch**: A ditch must be lined 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.

- **Install a stone lining in the ditch**: A ditch must be lined with stone riprap by November 15. A registered professional engineer must be hired to determine the stone size and lining thickness needed to withstand the anticipated flow velocities and flow depths within the ditch. If necessary, the ditch must be regraded prior to placing the stone lining to prevent the stone lining from reducing the ditch's cross-sectional area.

2) **Disturbed Slopes:** All stone-covered slopes must be constructed and stabilized by November 15. All slopes to be vegetated must be seeded by September 15. The MDEP will consider any area having a grade greater than 15% (10H:1V) to be a slope. If a slope to be vegetated is not stabilized by September 1, then one of the following actions must be taken to stabilize the slope for late fall and winter.

- **Stabilize the soil with temporary vegetation and erosion control blankets**: By October 1 the disturbed slope must be seeded with winter rye at a seeding rate of 3 pounds per 1,000 square feet and apply erosion control blankets over the mulched slope. If the rye fails to grow at least three inches or cover at least 90% of the disturbed slope by November 1, the slope will be covered with a layer of erosion control mix or stone riprap as described in the following standards.

- **Stabilize the slope with sod**: The disturbed slope must be stabilized with properly installed sod by October 1. Proper installation includes pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. Slopes steeper than 33% (3H:1V) or having groundwater seeps on the slope face, may not use late-season sod installation for stabilization.

- **Stabilize the slope with erosion control mix**: A six-inch layer of erosion control mix must be spread over the slope by November 15. Prior to placing the erosion control mix, any snow accumulation on the disturbed slope must be removed. Slopes steeper than 50% (2H:1V) or having groundwater seeps on the slope face can not use erosion control mix to stabilize slopes.

- **Stabilize the slope with stone riprap**: A layer of stone riprap can be placed on the slope by November 15. A registered professional engineer must be hired to determine the stone size needed for stability and to design a filter layer for underneath the riprap.

3) **Other Disturbed Soils:** By September 15, all disturbed soils on areas having a slope flatter than 15% (15H:1V) must receive seed and mulch. If disturbed areas are not stabilized by this date, then one of the following actions must be taken to stabilize the soil for late fall and winter.

- **Stabilize the soil with temporary vegetation**: By October 1, seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1,000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and

anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or cover at least 90% of the disturbed soil before November 1, then mulch the area for over-winter protection as described in the following "Stabilize the soil with mulch" standard.

- **Stabilize the soil with sod**: Stabilize the disturbed soil with properly installed sod by October 1. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- **Stabilize the soil with mulch**: By November 15, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Prior to applying the mulch, any snow accumulation on the disturbed area must be removed. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

6.0 INSPECTION AND MAINTENANCE

Inspection and maintenance are required of all erosion and sedimentation control measures outlined in this plan. The Owner shall identify a qualified firm or person prior to construction to perform inspections and identify maintenance needs for the proposed project. Refer to the Inspection, Maintenance, and Housekeeping plan for this project (provided under separate cover) for an outline of the associated inspection and maintenance requirements.

Section 13: Consistency with City Master Plans

13.0 City Master Plans Consistency

No master plans were identified for this portion of the City. The project is located outside of the Fall Brook watershed.

Section 14: Capacity to Serve Letters

14.0 Capacity to Serve Letters

Ability/capacity to Serve letters were sent to the following utilities:

Water (Portland Water District)

Sewer (Portland DPW)

Electric (Central Maine Power)

Gas (Unitil)

Communications (Fairpoint)

Responses were obtained from Unitil indicating that the existing infrastructure was adequate. Portland Water District indicated that they site had the ability to serve the proposed development if fire suppression and domestic water lines were tied to the Ocean Avenue water main.

A sewer capacity form was also sent to the Department of Public Works. A copy of this sheet is included within this section.

Electric, Communications and Sewer confirmations were not received at the time of submission.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: October 6, 2017

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

Site Address: 630 Ocean Avenue, Portland, Maine (Development near corner of Byfield and Slemons

Chart Block Lot Number: 174 A013

Proposed Use: Residential/Institution
Previous Use: Residential
Existing Sanitary Flows: 300 GPD
Existing Process Flows: GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Connect to internal sewer, then discharge to sewer within Ocean Avenue (address 630 Ocean Avenue)

e Category		
	Commercial *(see part 4 below)*	
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	x

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: John Watson: The Cedars
Owner/Developer Address: 630 Ocean Avenue, Portland, ME 04103
Phone: 207-221-7005 Fax: N/A E-mail: JWatson@thecedarsportland.org
Engineering Consultant Name: Michael Guethle, PE, Wright-Pierce Engineers
Engineering Consultant Address: 75 Washington Avenue, Ste 202, Portland Maine 01401
Phone: 207-319-1512 Fax: N/A E-mail: michael.guethle@wright-pierce.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: 4,800 GPD
Peaking Factor/ Peak Times:
Specify the source of design guidelines: *(i.e.* __ *"Handbook of Subsurface Wastewater Disposal in Maine,"* __ *"Plumbers and Pipe Fitters Calculation Manual,"* __ *Portland Water District Records, Other (specify)* Metcalf & Eddy

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: 3 shared kitchen sinks (3*4 = 12)
Size of External Grease Interceptor: 1,000 gallons
Retention Time: 83 minutes (12 Gal/min max. at 1000 gal)
Peaking Factor/ Peak Times: 7A-9A, 4P-6P

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____ GPD
Do you currently hold Federal or State discharge permits? N/A Yes ____ No ____
Is the process wastewater termed categorical under CFR 40? Yes ____ No ____
OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*
Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

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

Kathleen O. Sculley

From: Robert Bartels <rbartels@pwd.org> on behalf of AMaP MEANS <means@pwd.org>
Sent: Friday, October 20, 2017 8:11 AM
To: Michael A. Guethle
Cc: Jan B. Wiegman; Matthew R. LaPierre
Subject: RE: 167461-630 Ocean Avenue, PO
Attachments: Peak Flow Based on Fixture Count_2017.xls

Follow Up Flag: Follow up
Flag Status: Flagged

Mike,

We would prefer no meter pits if that is possible. Depending on how you configure the new services from Ocean, they should be able to connect directly to the building, with the meter and backflow protection devices in a basement or mechanical room within the building. That would be our preference. Please let me know what you are thinking and send over an updated drawing of your services as soon as practical.

We will need a fixture count for the building to determine the meter size and to verify the service size. Attached is a spreadsheet to fill out and return to MEANS.

Thanks,

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

From: Michael A. Guethle [mailto:michael.guethle@wright-pierce.com]
Sent: Thursday, October 19, 2017 4:28 PM
To: AMaP MEANS <means@pwd.org>
Cc: Jan B. Wiegman <jan.wiegman@wright-pierce.com>; Matthew R. LaPierre <matt.lapierre@wright-pierce.com>
Subject: RE: 167461-630 Ocean Avenue, PO

Hi Robert,

Thanks for your note. Just following up on this item, we will provide 2 connections from Ocean Avenue. One will be a 6" fire sprinkler line, and one will be a 2" service line. Can these meters be located in the same large meter pit, or can each be placed in a standard-sized meter pit? If a large meter pit is necessary, we did not see a detail posted online and would appreciate if a CAD drawing of it would be available.

As far as location, we anticipate placing meter pit(s) on the ROW line. If it is acceptable to place the meter pits within the Right-Of-Way, please let us know and we will plan accordingly.

Should you have any concerns or other questions regarding these items, please let me know.

-Mike

Michael A. Guethle, P.E. | Project Engineer

75 Washington Avenue, Suite 202 | Portland, ME 04101
Office 207.319.1512
WRIGHT-PIERCE

From: Robert Bartels [mailto:rbartels@pwd.org] **On Behalf Of** AMaP MEANS
Sent: Tuesday, October 17, 2017 9:16 AM
To: Michael A. Guethle <michael.guethle@wright-pierce.com>
Subject: 167461-630 Ocean Avenue, PO

Michael,

Thank you for submitting the Ability to Serve request for the proposed expansion at 630 Ocean Avenue. PWD is concerned with the plan to connect to the existing water service onsite after the meter. This existing service already provides fire protection to private hydrants as well as the existing facility. Additionally, the meter in the pit is a 6”x1.5” compound meter (6” on the fire side, 1.5” on the domestic side). This meter would need to be evaluated for the additional domestic demand from the new building and may require replacement with a larger meter. A fire sprinkler designer would need to analyze the existing fire suppression system for the existing facility as well as the hydrants to determine if the service line could also be used for fire protection to the new building. PWD recommends considering separate fire and domestic services from the 12” main in Ocean Avenue for the new development.

Robert Bartels, PE

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

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	
Street Address	
City	

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x		=	0
Bidet		1	x		=	0
Dental Unit		1	x		=	0
Drinking Fountain - Public		0.5	x		=	0
Kitchen Sink		1.5	x		=	0
Bathroom Sink		1	x		=	0
Showerhead (Shower Only)		2	x		=	0
Service Sink		3	x		=	0
Toilet	-Flushometer(high pressure)	5	x		=	0
	-Tank Type	2.5	x		=	0
Urinal	-Flushometer Valve	5	x		=	0
	-Tank Type	2	x		=	0
Wash Sink (Each Set of Faucets)		2	x		=	0
Dishwasher		1.5	x		=	0
Washing Machine		4	x		=	0
Hose (outdoor spigot)	<3/4 in.	2.5	x		=	0
Combined Fixture Value Total						0

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Irrigation(Yes/No)?	
If yes, gpm required by irrigation designer:	

Total Fixed Demand (Peak Flow) **0 gpm**

Customer only needs to complete the cells highlighted in blue

October 19, 2017

Michael A. Guethle
Wright-Pierce
75 Washington Avenue, Suite 202
Portland, ME 04101

Re: Proposed redevelopment at 630 Ocean Avenue, (The Cedar's)

Dear Michael:

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

Unitil has natural gas Ocean Avenue and is able to service this projects need of 800 CFH. Please let me know the equipment breakdown so that we know how much cooking, hot water, heat and back up generation there will be by CFH. Also please let me know the delivery pressure that is requested. We can deliver either 2 PSI or 7" water column.

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

Sincerely,

Scott Carpenter

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

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

Christopher C. Branch, P.E.
Director of Public Works

Date: March 19, 2018

Re: Wastewater Capacity Authorization

Address: 630 Ocean Avenue
Applicant: Cedars Nursing Home

Planner: Barbara Barhydt

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit*	Total Gallons per Day
Proposed flow				
Institutions: Other than hospitals	# Employees	8	7.5 GPD/Employee	60
Institutions: Other than hospitals	# Bed	20	75 GPD/Bed	1500
Institutions: Other than hospitals				**+ 1560**
*Values based on Metcalf & Eddy Wastewater Engineering - Fifth Addition				

Comments:
The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov
Sincerely,
CITY OF PORTLAND

Bradley A. Roland, P.E.
Senior Project Engineer

CC:
Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland
Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

Keith Gray, City Engineer/Engineering Manager, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works
Ben Pearson, Compliance Coordinator, Portland Department of Public Works

John Emerson, Wastewater Coordinator, Portland Department of Public Works

Lauren Swett, Woodard & Curran, DPW Development Review
Scott Firmin, Director of Wastewater, Portland Water District
Charlene Poulin, Wastewater Chief Operator – Systems

Section 15: Solid Waste Generation

15.0 Solid Waste

Solid waste is currently stored in external receptacles, screened by wood fencing, as noted on Sheet C-2. Solid waste receptacles are hauled off-site for disposal at a licensed facility by a private waste hauler.

Using an average of 4.4 lb/person/day of solid waste, an increase of solid waste generation by 90lbs/day of solid waste is anticipated as a result of the proposed project. There are currently two dumpsters on-site, approximately 10-CY each. Whereas 10-CY dumpsters can hold approximately 4,000 lbs of waste each, no changes in solid waste disposal are proposed as a result of the proposed project. There is a location available for a third dumpster in the screened enclosure should it be necessary, or the maintenance staff can schedule more frequent solid waste removals.

Information regarding construction debris has been included in Section 9 of this application, the Construction Management Report.

Section 16: Fire Department Technical Standards

16.0 Fire Department Technical Standards

For site access items, existing fire hydrant locations have been identified on the existing conditions plan. From the pre-application meeting, it was discussed that a 16'-wide fire access lane would be required through the facility. These locations have been identified within the proposed plans.

Additional information to be provided by the architect in regards to fire department standards specific to the building design.

Section 17: Consistency with City of Portland Design Manual

17.0 Consistency with City of Portland Design Manual

Sections of the City of Portland Design Manual have been identified within this section, including applicability and identification of any waivers. If a section has not been identified as being applicable to the proposed project, then that section has been given an N/A for the site.

17.1 Transportation Systems and Street Design Standards:

Information regarding traffic studies is indicated within Section 10 of this permit application.

Sidewalks and driveway aprons are proposed to be asphalt with granite curing. Sidewalk width is equal to or greater than 5' in all areas, and no vertical level changes greater than 1/4" are proposed. Sidewalk slopes are designed to be at the running slope of the proposed circulation areas that they abut, with a cross-slope of 2%. Sidewalk ramps have been designed in accordance with section 1.8.4. The former driveway location for the building proposed to be demolished is to be replaced with curbed sidewalk.

Aggregates for roadway surface and base pavement, as well as base gravels and pipe support gravels, have been detailed to be in accordance with section 1.10.

Parking spaces have been designed in accordance with the technical manual, including for compact parking spaces and minimum drive aisles. Bicycle and Motorcycle/Scooter parking are proposed as part of the parking lot re-striping. Section 19 of this permit application discusses the project's ability to meet Division 20 of the City Land Use Code and Site Plan Standards.

Public crosswalks have been designed in accordance with section 1.20.

17.2 Sanitary Sewer and Storm Drain Design Standards

Proposed design is in accordance with the applicable sections of Division 24 of the City Code.

Storm drain trunk pipes are designed to carry stormwater flow through pipes sized as indicated in the plans. A calculation is included to show a minimum of 3cfs flow through the proposed pipes. The proposed drainage system has been designed to replace an existing broken storm drain. Pipe material shall be in accordance with technical manual. Underdrains are sized at 4" for the

stormwater treatment facility; stormwater treatment design has been included in Section 12 of this manual.

Catch basins have been designed in accordance with Figure II-2. Calculations indicating the ability for drainage to pass flows of 3cfs (minimum slope of .004 ft/ft) have been attached to this section.

Standard aggregates have been proposed for use within the circulation facility. Loam and seed will cover the proposed aggregates that are not to be paved or planted.

17.3 Public Safety Standards

Locations of existing fire hydrants have been identified on the project plans. No fire hydrants are proposed to be modified or relocated.

Emergency access lanes are discussed in Section 16 of this permit application.

The proposed project is altering site access/circulation, and as these standards, as well as emergency access, are identified in Section 10 of this application. The proposed project is not a subdivision, and therefore subdivision standards are not anticipated to apply.

Blasting to remove ledge is not part of the proposed project. If ledge is encountered, it will likely remain in place unless it is substantially higher than the proposed surface, or near to proposed pipe locations. If ledge is to be removed, it is preferred to be removed through mechanical means. If any blasting is to occur, it shall be completed in accordance with the City's blasting protocols outlined within the technical manual.

17.4 Landscaping and Landscape Preservation Standards

Significant natural features have been identified on the existing conditions plan, and were identified in the report by Jones Associates, included within Section 11. Trees in the project location greater than 10" diameter have been identified on the existing conditions plan.

Landscaping measures have been incorporated into parking areas, except in areas where snow removal would become impractical if plantings were included.

Retaining walls are proposed in certain areas of the project. In these locations, plantings will be placed to soften the hardscape of the retaining walls.

Trees are proposed along the edge of parking areas in locations where their placement is practicable to provide the general effect of street trees throughout the site. However, where is the proposed site layout is not that of a typical street, street trees standards were not anticipated to be designed.

Shrubs consist of at least 50% native plantings.

Trees are proposed to be installed at the edge of the parking areas. The trees are an approved species in accordance with the technical standards, as indicated in the landscaping plan and details. Grasses will be a standard MaineDEP grass application in areas where lawn grasses are not specified.

17.5 Portland Stormwater Management Standards

Section 12 of this permit application includes for applicability with this section. Please see Section 12 for additional information.

17.6 Erosion and Sedimentation Control Standards for Two-Family Homes

An erosion and sedimentation control plan and report has been developed as part of the permit and contract drawings. This proposed plan and report is in accordance with Maine DEP regulations, and can be found in Section 12.

17.7 Soil Survey Standards

A high intensity soil survey is not required for the proposed project, as the project is being constructed largely on developed soils. However, please see the medium-intensity soils information provided in Section 11.

17.8 Standards for Development in and Adjacent to Wetlands

The site was observed for wetlands by Power Engineers, Inc. on August 25, 2016. The associated wetlands report has been included as an appendix to Section 11. The proposed project does not anticipate filling any wetlands.

17.9 Water Supply Standards

N/A

17.10 Municipal Street Lighting Standards:

N/A

17.11 Shadow Standards:

N/A

17.12 Site Lighting Standards:

An exterior lighting/Site Lighting plan is attached to this section.

17.13 Boundary Survey Requirements

A boundary survey has been incorporated to the Overall Existing Conditions Plan, Sheet C-2.

17.14 Standards for Local Site Location of Development Review:

N/A

17.15 Solar Energy Generation:

N/A

The Cedars Ocean Avenue
City of Portland, Maine

CAPACITY OF PIPES FLOWING FULL
MINIMUM SLOPES USED IN DESIGN

Pipe Dia. (inches)	Pipe Dia. (feet)	Area (sq. ft.)	R (ft)	Slope (ft/ft)	Capacity with pipe flowing full (MGD) (n=0.012)	(MGD) (n=0.015)	Velocity (n=0.012) (ft/s)	Capacity with pipe flowing full (CFS) (n=0.013)	(CFS) (n=0.015)
Minimum Slopes - Sewers									
12	1	0.785	0.5	0.004	2.51	2.01	4.946	3.880652	3.104521
15	1.25	1.226563	0.625	0.0028	3.81	3.04	4.802	5.887253	4.709802
18	1.5	1.76625	0.75	0.0022	5.48	4.39	4.807	8.486359	6.789087

Quick Flow Conversions:
1 CFS = 448.8 GPM
1 CFS = 0.646 MGD
1 MGD = 1.548 CFS
1 MGD = 694.4 GPM

PLAN VIEW



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

Calculation Summary

Label	Avg	Max	Min	Avg/Min	Max/Min
SITE	0.44	4.3	0.0	N.A.	N.A.
33 park	1.12	2.9	0.4	2.80	7.25

Luminaire Schedule (note fixture cataloge numbers are not complete)

Type	Qty	Lumens	LLF	Watts	Description
P3	4	4800	0.900	57	TRA30-AC-24NB-55-3K-UNV-DIR3
P5	6	4864	0.900	57	TRA30-AC-24NB-55-3K-UNV-DIR5
P4	7	4618	0.900	55	TRA30-AC-24NB-55-3K-UNV-DIR4 (

NOTICE: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SWANEY LIGHITNG 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 INFORMATION CONCERNING THE OPERATION OF UNITS INDICATED. THIS DRAWING IS TO BE RETURNED UPON REQUEST AND IS NOT TO BE COMMUNICATED, DISCLOSED OR COPIED; EXCEPT AS EXPRESSLY AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.
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 FURNISHED BY THE MANUFACTURER. ANY VARIATION IN FIXTURE PERFORMANCE FROM PERFORMANCE SHOWN IN IES FILE IS NOT THE RESPONSIBILITY OF THE MANUFACTURER. IT'S USE FOR ANY OTHER PURPOSE IS NOT AUTHROIZED BY SWANEY LIGHTING ASSOCIATES.

SWANEY LIGHTING ASSOCIATES, INC.

GENERATED FOR: WRIGHT-PIERCE

SCALE NOT TO SCALE

TITLE
THE CEDARS
PORTLAND, ME
SITE LIGHTING LAYOUT

prelim site.AGI

Date:11/21/2017

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

BEACON
design . performance . technology
www.beaconproducts.com

Type:	
Project Name:	
Notes:	

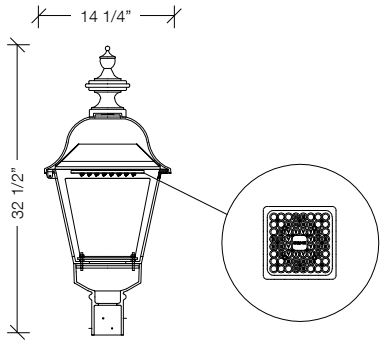
rev. 03.20.2017

TRA30 (LED)

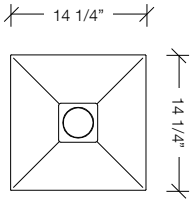
30" Traditional Luminaire
Max Weight: 35.0 lbs
Max EPA: 2.60 sq ft

Sample	*TRA30*		*AC*		*24NB-55*		*5K*		*UNV*		*DIR5*		*PEC*		*GENIXX*		*PM*		*NF*		*BBT*
Ordering		/		/		/		/		/		/		/		/		/		/	
	A		**B**		**C**		**D**		**E**		**F**		**G**		**H**		**I**		**J**		**K**

DETAILS

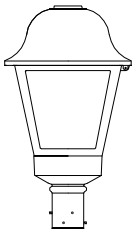


LED direct



Top View

STYLE OPTIONS


NF

A. MODEL

TRA30	Traditional 30"

B. LENS OPTIONS

AC	acrylic, clear
AF	acrylic, frosted
AS	acrylic, seeded
AW	acrylic, white
PC	polycarbonate, clear
PF	polycarbonate, frosted

C. ENGINE-WATTS

24NB-55	55 Watts - LED array
36NB-80	80 Watts - LED array
48NB-110	110 Watts - LED array
60NB-136	136 Watts - LED array

D. CCT - COLOR TEMP

3K	3000K
4K	4000K
5K	5000K (std.)

E. VOLTAGE

UNV	120-277V
347	347V[3]
480	480V[3]

F. OPTICS

DIR2	type II
DIR3	type III
DIR4	type IV
DIR5	type V

G. ELECTRICAL OPTIONS

PEC	photocell, button

H. CONTROL OPTIONS

GENI-XX	energeni [1]

I. MOUNTING OPTIONS

PT	post top
PM	pendant mount [2]

J. STYLE OPTIONS

NF	no finial

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	_____

[1] 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.

[2] consult factory
[3] 24NB - 55 only

rev. 03.20.2017

TRA30 (LED)

30” Traditional Luminaire
Max Weight: 35.0 lbs
Max EPA: 2.60 sq ft

Housing: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

Construction: The upper chamber/lid shall be topped by a decorative cast aluminum finial/cap and mechanically fastened to the optical chamber. The cast multi-sided cage shall accommodate UV stabilized acrylic or polycarbonate lenses (side panels) which shall be sealed for weather tight operation.
The electrical chamber/fitter shall be aluminum, decorative fitter designed to accommodate the ballast assembly and shall mount to 3 OD x 3” H tenon and secured by three stainless steel set screws.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

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.

Bezel Optical System: Each 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. Two-piece silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down 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 assemble is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using a specially designed acrylic optical lens over each LED.

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

LifeShield™ 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. 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. 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 (NEC Class 2). 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.

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.
Electrical: Luminaires are equipped with LED driver(s) that accept 90 through 305 VAC, 50 Hz to 60 Hz (UNIV). 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. All driver components supplied are component-to-component wiring within the luminaire will carry no more than 80% of rated current 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.

Agency Certification: The luminaire shall bear an NRTL label and be marked suitable for wet locations.

Limited 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 for complete details and exclusions.

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

18.0 HVAC and Manufacturing Emissions Requirements

Additional information to be provided by the architect/mechanical engineer in regards to the HVAC system

Section 19: Compliance with Site Plan and Parking Standards

19.0 Consistency with City of Portland Design Manual

Portions of the City of Portland City Code, Chapter 14, include Site Plan Standards (14-526), and Parking (Division 20). The following information discusses these items, with the understanding that most information is either not applicable to this particular development, or has been included in another specific section of this permit application.

19.1 Site Plan Standards:

Transportation standards have been addressed in Section 17 of this application addressing impacts on abutting streets, site circulation, sidewalk use, and incorporation of school busses. Snow storage has been indicated as part of the permitting plans. Information regarding any Transportation Demand Management plan is identified in Section 10 of this application.

The site is located a distance of 1,180 feet from a bus stop along the right-of-way. This is within the minimum of within 1,320 feet of a bus stop. Therefore, no new bus stops are required for the proposed development.

Proposed signage is in accordance with MUTCD standards.

Locations of significant natural features have been identified on the existing conditions plan. 4 of the 10 trees greater than 10" DBH that were identified within the property setbacks are to be removed. This meets the standard stating that 30% of existing trees 10" DBH or greater are to remain.

Parking lot landscaping has been provided for the proposed project. The City requires 2 trees per 5 spaces. A continuous strip of trees will remain along the northeastern edge of the proposed parking lot. 47 parking spaces will be provided in the large parking lot, and providing 2 trees for every 5 would require a minimum of 20 trees. Whereas trees will remain along this continuous edge, and islands are to be populated with clusters of three shrubs, the proposed project meets this standard. There are no sections of parking lot where 40 continuous spaces exist without planted islands.

A total number of parking spaces on-site has been calculated in the plan application.

Screening in the form of plantings will be completed around the proposed transformer. Screening will be provided by the ledge wall for new parking areas. Plantings have been incorporated in front of the proposed building at a rate of 6 shrubs per 45 feet of frontage. Red Maple, Karpick variety, trees have been proposed at 25' spacing along the developed portion of the Ocean Avenue. This meets the requirement of providing street trees at a maximum of 45' spacing within the developed roadway corridor, and has been designed with shrubs to provide a higher level of screening and blending the landscape in to what is present in the surrounding community. No street trees are not proposed within the site, as no new roadway construction is proposed.

No modifications to the existing solid waste layout/management are proposed.

A letter from the Historic Preservation Commission stating that the proposed development will not impact know historic or archaeological resources is attached to this section.

19.2 Parking Standards

Bicycle Parking, in the form of two 2-bicycle racks, has been provided at a location adjacent to the building entrance. These improvements include for a total of 4 new bicycle parking spaces. The City standard is for 2 bicycles per 10 parking spaces for the first 100 parking spaces, and then 1 bicycle for each additional 10 parking spaces. With 13 new spaces provided, this would total 2.6 bicycle parking spaces. This standard is met for the proposed improvements.

There are 142 existing standard parking spaces, 18 existing garage spaces, and 10 existing handicap accessible parking spaces on-site. For the proposed development, Division 20, Chapter 14 of Portland City Code requires 1 new parking space is per 5 beds in institutional developments; this amounts to 4 required new parking spaces from the 20 new beds. The proposed development will create 9 new peak-hour employees, and as such 9 new parking spaces are provided for employees.

The proposed development includes 11 additional standard parking spaces and 2 handicap accessible parking spaces total to 13 additional parking spaces (not including the 1 motorcycle/scooter parking space). The new parking layout for the site is 18 garage spaces, 12 handicap accessible spaces, and 153 standard parking spaces for a total of 183. Parking lots are to be curbed.

No proposed parking spaces are sized for compact spaces, and therefore the site meets the 20% maximum compact parking space standard.

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

November 6, 2017

Mr. Michael A. Guethle
Wright-Pierce
75 Washington Ave, Suite 202
Portland, ME 04101

Project: MHPC# 1466-17 The Cedars Long Term Facility; 630 Ocean Ave
Demolish Existing Building; Construct New Long Term Facility

Town: Portland, ME

Dear Mr. Guethle,

In response to your recent request, I have reviewed the information received October 24, 2017 to initiate consultation on the above referenced project.

Based on the information provided, I have concluded that there are no National Register listed or known National Register eligible properties on or adjacent to the parcels. In addition, the project area is not considered sensitive for archaeological resources.

Please contact Megan M. Hopkin of our staff, at megan.m.hopkin@maine.gov or 207-287-2992, if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

PHONE: (207) 287-2132 FAX: (207) 287-2335

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
planning@portlandmaine.gov

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

PROJECT NAME:

The Cedars - Long Term and Assisted Living Memory Care Facility

PROPOSED DEVELOPMENT ADDRESS:

630 Ocean Avenue, Portland, ME 04103

CHART/BLOCK/LOT (s): 174 A013 **Applicable Zone**: R-3, R-5

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: The Cedars c/o Kathy Callnan Business Name, if applicable: JHA Assisted Living, Inc. and Cedars Nursing Care, Inc. Address: 630 Ocean Avenue City/State : Portland, Maine Zip Code: 04103	**Applicant Contact Information** Work # 207.221.7000 Home# Cell # Fax# e-mail: kcallnan@thecedarsportland.org
Owner – (if different from Applicant) Name: JHA Services, Inc. Address: 630 Ocean Avenue City/State : Portland, ME Zip Code: 04103	**Owner Contact Information** Work # 207.221.7000 Home# Cell # Fax# e-mail: kcallnan@thecedarsportland.org
Billing Information Name: Cedars Nursing Care, Inc. Address: 630 Ocean Avenue City/State : Portland, ME Zip Code: 04103	**Billing Information** Work # 207.221.7000 Cell # Fax# e-mail:kcallnan@thecedarsportland.org
Designated person/person(s) for uploading to e-Plan: Name: Michael Guethle e-mail: michael.guethle@wright-pierce.com Name: Alex Toye e-mail: alex.toye@actionpact.com Name: e-mail:	

RIGHT, TITLE OR INTEREST:

The property is owned by the applicant, property deeds are attached.

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

VICINITY MAP: (Please attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use.)

EXISTING USE: Describe the existing use of the subject property.

The existing use on the property is Institutional: Long Term Care and Intermediate Care Facility

PROPOSED USE: Describe the proposed use of the subject property

The proposed uses are an expansion of the existing uses:

Institutional: Long Term Care and Intermediate Care Facility

TYPE OF CONDITIONAL USE PROPOSED (Refer To Specific Provisions Of Land Use Code Authorizing The Proposed Conditional Use).

R-3 Zoning District: Section 14-88 (c) 2.a. and 2.b.

R-5 Zoning District: Section 14-118 (b) 2.a. and 2.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--88 and 14-118

Address any specific conditional use standards for the specific use contained in the zoning code in the written submission.

APPLICATION FEES:

___ Conditional Use Review ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

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

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov
(Please be sure to designate a person who will be responsible for uploading documents and drawings.)
This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:
Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.
Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions
Tab 3 - Preparing and uploading revised drawings and documents

Applying Online Instructions

5. When ready, upload your files and documents into the following folders:
"Application Submittal – Drawings"
"Application Submittal – Documents"

6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
X		1	Completed Application Form
X		1	Cover letter stating the nature of the project.
X		1	Evidence of right, title and interest.
X		1	Written Submittals that address the conditional use standards of Sec. 14-474.
X		1	Written submittals that address any applicable standards of review contained in the zoning code for the specific use.
X		1	A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet and containing the information required for the applicable level of site plan review.
X		1	An accompanying site plan application, as applicable.

APPLICANT SIGNATURE:

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

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

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

Signature of Applicant:	Date:
Kathryn Callnan	12/21/17

WRIGHT-PIERCE
Engineering a Better Environment
70 YEARS 1947 - 2017

WATER
WASTEWATER
STORMWATER
INFRASTRUCTURE

December 21, 2017
W-P Project No. 13682A

Barbara Barhydt,
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

Subject: The Cedars – Long Term and Assisted Living Memory Care Facility Expansion
Conditional Use Permit – Portland, Maine

Dear Ms Barhydt:

The Cedars long term care facility, located at 630 Ocean Avenue in Portland, Maine, is proposing an expansion and redevelopment of a portion of its facilities. The project is largely driven by the evolution of the care model with a shift towards the household model of care delivery and private rooms for residents. The existing long term care facility at the Hoffman Center has semi-private rooms and will be converted to three households with private rooms. The 40 displaced beds will be moved to the proposed new facility and two household will be created, occupying two floors of the building. A new 20 bed assisted living memory care household will occupy the first floor of the new facility as well.

The Assisted Living/Memory care represents an expansion of services and beds for the campus. The new facility will be located on the campus, near the intersection with Ocean Avenue and Rainbow Mall Road, and will have a footprint of approximately 15,000 s.f. The Hoffman Center renovations will not add to the existing building but will be interior renovations.

Parking improvements associated with the proposed project, are designed to accommodate the City Code requirements for the expanded institutional use, the AL Memory Care household, and to replace any parking spaces that are displaced by the new building. Site demolition will include the removal of an administrative building, parking areas, trees, and lawn space.

Landscaping is proposed around the perimeter of the site and other areas adjacent to proposed improvements. Landscaping will include trees, shrubs, ornamental grasses and lawns areas.

The existing drainage system will largely remain in place and in some cases upgraded with new underdrains, structures, and pipe. The drainage upgrades will include revisions to the existing detention basins, new underdrained soil filters and new storm drain structures to accommodate the site revisions and the new facility.

Sincerely,
WRIGHT-PIERCE

Jan Wiegman, P.E.
Project Manager
Jan.wiegman@wright-pierce.com
JBSW/kos

Section 2: Evidence of Right, Title, and Interest

2.0 Existing Deeds

A list of deeds and easements for the parcels for this project have been attached to this section.

WARRANTY DEED
(Maine Statutory Short Form)

KNOW ALL PERSONS BY THESE PRESENTS, that JHA Properties, Inc., a Maine nonprofit corporation, of Portland, County of Cumberland, and State of Maine, for consideration paid, grants to JHA Assisted Living, Inc., a Maine nonprofit corporation organized and existing under the laws of the State of Maine, and having its principal place of business at Portland, in the County of Cumberland, and State of Maine, whose mailing address is 630 Ocean Avenue, Portland, Maine, with **WARRANTY COVENANTS**, the land in Portland, County of Cumberland, State of Maine, described as follows: The Unit ("Unit") designated as Number 3 of the Cedars Condominium located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium"), together with the Unit's undivided percentage interest in the Common Elements of the Condominium as set forth in the Declaration, created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006 and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property hereby conveyed and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

IN WITNESS WHEREOF, it, the said JHA Properties, Inc., has caused this deed to be signed and sealed in its corporate name by Kathryn Callnan, its President/Chief Executive Officer, thereunto duly authorized, this 1st day of May, 2014.

Received
Recorded Register of Deeds
May 06,2014 09:12:50A
Cumberland County
Pamela E. Lovley

WITNESS:

JHA Properties, Inc.

By: Kathryn Callnan
Name: Kathryn Callnan
Title: President/Chief Executive Officer

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. May 1, 2014

Then personally appeared the above named Kathryn Callnan, President/Chief Executive Officer of said Corporation, as aforesaid, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of said Corporation, before me,

LYNNE A. BURR
Notary Public-Maine
My Commission Expires
December 05, 2016

Attorney at Law/Notary Public

SEAL

AMENDMENT TO DECLARATION OF COVENANTS AND RESTRICTIONS

THIS AMENDMENT TO DECLARATION OF COVENANTS AND RESTRICTIONS is made this 30th day of June, 2006 by, Cedars Nursing Care Center, Inc., and JHA Properties, Inc., both Maine non-profit corporations having a place of business at 630 Ocean Avenue, Portland, Cumberland County, Maine, 04103, (herein collectively referred to as the "Declarants") and the State of Maine Department of Environmental Protection, a governmental agency having a place of business in Augusta, Kennebec County, Maine, and a mailing address of 17 State House Station, Augusta, Maine 04333-0017 (referred to as the "MDEP"), pursuant to MDEP Natural Resource Protection Act Project Number 97-441-S (formerly Tier #T-00441-TE-A-N), dated September 26, 1997 (collectively referred to as "Order"), as amended by the MDEP Order #L-22483-TG-B-M, dated February 20, 2006 (hereinafter referred to as "New Order"), relating to preservation of portions of an approximately ten (10) acre parcel of land near 630 Ocean Avenue, Portland, Maine.

RECITALS

WHEREAS, the Declarants made a Declaration of Covenants and Restrictions, dated March 27, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75 (the "Original Declaration"), pursuant to MDEP Natural Resource Protection Act Project Number 97-441-S (formerly Tier #T-00441-TE-A-N), dated September 26, 1997 (collectively referred to as "Order"), relating to preservation of three certain parcels of land bounded and described as set forth on Exhibits A and A-1 to the Original Declaration and respectively described therein (and herein) as "Mitigation Parcel A," "Mitigation Parcel B" and "Mitigation Parcel C;"

WHERAS, MDEP Natural Resource Protection Act Project Number 97-441-S (formerly Tier #T-00441-TE-A-N) was amended by MDEP Order #L-22483-TG-B-M, dated February 20, 2006 (hereinafter referred to as "New Order");

WHEREAS, the Site Plan Location Permit issued by the City of Portland, Maine, Permit No. _____, dated September 13, 2005, and the application of JHA Assisted Living, Inc. for a MDEP Natural Resources Protection Act permit, Application No. DEP #L-22483-TE-B-M both contemplate (1) that certain portions of the property included in Mitigation Parcel A and Mitigation Parcel B as set forth in the Original Declaration would be released from the Original Declaration by amendment to the legal descriptions of said Mitigation Parcel A and Mitigation Parcel B and (2) that additional mitigation parcels would be created in replacement thereof;

WHEREAS, the Declarants have executed and delivered a Declaration of Covenants and Restrictions of even date herewith creating the two additional mitigation parcels (designated as "Mitigation Parcel A-1" and "Mitigation Parcel D," both as shown on Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, revised April 5, 2006, and to be recorded in the Cumberland County Registry of Deeds;

WHEREAS, Declarant Cedars Nursing Care Center, Inc., holds title to Mitigation Parcel A as described in the Original Declaration by virtue of a certain real property situated in Portland, Maine, described in a deed from Sidney J. Haijar to The Jewish Home for the Aged, dated April 24, 1987, and recorded in Book 7732, Page 282 at the Cumberland County Registry of Deeds and to certain real property situated in Portland, Maine, described in a deed from JHA Services, Inc., to Cedars Nursing Care Center, Inc., dated March 27, 1988, and recorded in Book 13696, Page 315 at the Cumberland County Registry of Deeds, all of which real property is subject to a certain Loan Agreement and Mortgage given by Cedars Nursing Care Center, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of May 1, 1993, recorded in the Cumberland County Registry of Deeds in Book 10717, Page 311;

WHEREAS, Declarant JHA Properties, Inc., holds title to Mitigation Parcel B as described in the Original Declaration by virtue of a deed from JHA Services, Inc., to JHA Properties, Inc., dated March 27, 1998, recorded in Book 13696, Page 317 at the Cumberland Country Registry of Deeds, which real property is subject to a certain Loan Agreement and Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of March 1, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 1 and as amended and supplemented by a Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of October 9, 1998, and recorded in the Cumberland County Registry of Deeds in Book 14221, Page 222;

WHEREAS, the New Order permits the Declarant to fill 16,018 square feet of forested freshwater wetlands and for the after-the-fact filling of 1,000 square feet of forested freshwater wetlands in order to construct an Independent Living Facility, subject to the conditions set forth therein;

WHEREAS, pursuant to the Natural Resources Protection Act, Title 38 M.R.S.A. Section 480-A et seq. and Chapter 310 of regulations promulgated by the MDEP (the "Wetland Protection Rules") and in satisfaction of the New Order, Declarants desire by this Amendment to Declaration of Covenants and Restrictions, to amend the description of Mitigation Parcel A and Mitigation Parcel B as described in the Original Declaration as more particularly set forth herein and to confirm their agreement that the Original Declaration, as so amended, may be enforced by the MDEP;

NOW, THEREFORE, Cedars Nursing Care Center, Inc., and JHA Properties, Inc., as Declarants, and MDEP, hereby covenant and agree as follows:

1. Declarants and the MDEP hereby AMEND the description of Mitigation Parcel A to read as set forth on **Exhibit I** attached hereto and made a part hereof and hereby RELEASE from the Original Declaration the following released area from said Mitigation Parcel A as described in the Original Declaration:

> A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point lying N 40°48'48" E a distance of One Hundred Fifty-Three and 38/100 (153.38) feet from the southerly corner of Mitigation Parcel A as described in a deed recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75; **thence, from said point of beginning,** N 38°27'46" W a distance of Eight-Four and 24/100 (84.24) feet to a point; thence N 55°39'58" E a distance of Six and 40/100 (6.40) feet to a point; thence S 83°16'49" E a distance of Thirty-Three and 51/100 (33.51) feet to a point; thence S 58°44'00" E a distance of Eight and 31/100 (8.31) feet to a point; thence S 34°11'12" E a distance of Twenty-Six and 44/100 (26.44) feet to a point; thence S 12°22'27" E a distance of Twenty-Four and 54/100 (24.54) feet to a point; thence S 40°48'48" W a distance Twenty and 47/100 (20.47) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described released easement area contains 2,121 square feet and lies over a portion of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282, and is a portion of Mitigation Parcel A as described in a Declaration of Covenants and Restrictions recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75.

2. Declarants and MDEP hereby AMEND the description of Mitigation Parcel B to read as set forth on **Exhibit II** attached hereto and made a part hereof and hereby RELEASE from the Original Declaration the following the following released area from said Mitigation Parcel B as described in the Original Declaration:

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point lying the following two courses and distances from said Ocean Avenue and the easterly corner of land now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282: thence N 33°52'30" W by said land of Cedars Nursing Care Center, Inc. a distance of One Hundred Sixty-Four and 46/100 (164.46) feet to a 5/8" capped iron rod ("PLS 509") and land now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in said Registry in Book 13696, Page 315; thence N 52°41'19" W by said land of Cedars Nursing Care Center, Inc. a distance of Fifty-Three and 55/100 (53.55) feet to said point of beginning; **thence, from said point of beginning,** S 35°08'49" W a distance of Nineteen and 01/100 (19.01) feet to a point; thence S 62°52'24" E a distance of Sixteen and 66/100 (16.66) feet to a point; thence S 10°12'08" E a distance of Twenty-Three and 48/100 (23.48) feet to a point; thence N 66°31'23' W a distance of Twenty-One and 47/100 (21.47) feet to a point; thence N 25°23'48' E a distance of Seventeen and 68/100 (17.68) feet to a point; thence N 64°36'12" W a distance of Eighty-Two and 00/100 (82.00) feet

to a point; thence S 25°23'48" W a distance of Eighteen and 39/100 (18.39) feet to a point; thence N 89°17'25" W a distance of Thirty-Six and 41/100 (36.41) feet to a point; thence N 19°30'34" E a distance of Sixty-Eight and 29/100 (68.29) feet to a point; thence N 01°46'29" W a distance of Thirty-Four and 09/100 (34.09) feet to a point; thence N 46°36'49" E a distance of Eighty-Seven and 87/100 (87.87) feet to a point; thence S 82°01'39" E a distance of Seventeen and 23/100 (17.23) feet to a point; thence S 33°39'21" E a distance of Twenty-Three and 77/100 (23.77) feet to a point; thence S 03°35'26" W a distance of Sixty-Three and 84/100 (63.84) feet to a point; thence S 67°26'24" E a distance of Sixty and 83/100 (60.83) feet to a point; thence S 24°08'41" E a distance of Thirty and 34/100 (30.34) feet to a point; thence N 83°22'48" W a distance of Eleven and 21/100 (11.21) feet to a point; thence N 78°14'02" W a distance of Twenty-Eight and 91/100 (28.91) feet to a point; thence S 35°08'49" W a distance of Thirty-Two and 24/100 (32.24) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described released easement area contains 15,956 square feet and lies over portions of property now or formerly of Cedars Nursing Care Center, Inc. as described in deeds recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282 and Book 13696, Page 315; also lying over a portion of property now or formerly of JHA Properties , Inc. as described in a deed recorded in said Registry in Book 13696, Page 317. The above-described released easement area is a portion of Mitigation Parcel B as described in a Declaration of Covenants and Restrictions recorded in said Registry in Book 13709, Page 75.

Declarants hereby confirm all other covenants and restrictions in the Original Declaration

Any provision contained in the Original Declaration or in this Amendment to Declaration of Covenants and Restrictions may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of all of the Property subject thereto and by the MDEP.

Each provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions, and any agreement, promise, covenant and undertaking to comply with each provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions, shall be deemed a covenant running with the land as a burden and upon the title to the property subject thereto.

Invalidity or unenforceability of any provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions in whole or in part shall not affect the validity of enforceability of any other provision or any valid and enforceable part of a provision of the Original Declaration as amended by this Amendment to Declaration of Covenants and Restrictions.

This Amendment to Declaration of Covenants and Restrictions shall be governed by and interpreted in accordance with the laws of the State of Maine.

IN WITNESS WHEREOF, each of the Declarants has caused this Amendment to Declaration of Covenants to be signed and sealed in its corporate name by its duly authorized officer as of the day and year first above written.

CEDARS NURSING CARE CENTER, INC.

By: Kathryn J. Callnan
Kathryn J. Callnan
Its: President

JHA PROPERTIES, INC.

By: Kathryn J. Callnan
Kathryn J. Callnan
Its: President

STATE OF MAINE
Cumberland, ss.

April 24, 2006

Personally appeared before me the above named Kathryn J. Callnan, President of Cedars Nursing Care Center, Inc., and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said non-profit corporation.

Sylvia Gill
Notary Public
Print Name: Sylvia Gill
Commission Expires: 10/21/2006

STATE OF MAINE
Cumberland, ss.

April 24, 2006

Personally appeared before me the above named Kathryn J. Callnan, President of JHA Properties, Inc., and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said non-profit corporation.

Sylvia Gill
Notary Public
Print Name: Sylvia Gill
Commission Expires: 10/21/2006

MAINE HEALTH AND HIGHER EDUCATIONAL FACILTIES AUTHORITY (the "Authority") joins herein for purposes of

(1) consenting to the execution and delivery of the foregoing Amendment to Declaration of Covenants and Restrictions, and

(2) agreeing, for itself and its successors and assigns, that the mortgage lien and other rights of the Authority under (a) that certain Loan Agreement and Mortgage, given by Cedars Nursing Care Center, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of May 1, 1993, recorded in the Cumberland County Registry of Deeds in Book 10717, Page 311 and/or (b) that certain Loan Agreement and Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of March 1, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 1, and as amended and supplemented by a Mortgage given by JHA Properties, Inc., to the Maine Health and Higher Educational Facilities Authority, dated as of October 9, 1998, and recorded in the Cumberland County Registry of Deeds in Book 14221, Page 222, shall be subject and subordinate to the Declaration of Covenants and Restrictions, dated March 27, 1998, recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75, as amended by the foregoing Amendment to Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, Maine Health and Higher Educational Facilities Authority has caused this Amendment to Declaration of Covenants and Restrictions to be signed and sealed in its corporate name by its duly authorized officer as of the day and year first above written.

MAINE HEALTH AND HIGHER EDUCATIONAL FACILTIES AUTHORITY

By: _____
Robert O. Lenna
Its Executive Director

STATE OF MAINE
Kennebec, ss.

JUNE 29th, 2006

Personally appeared before me the above named Robert O. Lenna, Executive Director of Maine Health and Higher Educational Facilities Authority and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Maine Health and Higher Educational Facilities Authority.

Jo-Ellen P. King
Notary Public
Print Name: JO-ELLEN P. KING
Commission Expires: OCTOBER 27, 2011

1110838.1

Jo-Ellen P. King
Notary Public, Maine
My Commission Expires
October 27, 2011

THE STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION HEREBY JOINS IN THE RELEASE AND AMENDMENT AS SET FORTH ABOVE AND HEREBY ACKNOWLEDGES THE FOREGOING:

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____
Name: ANDREW FISK
Title: BUREAU DIRECTOR

STATE OF MAINE
Kennebec, ss.

May 26, 2006

Personally appeared before me the above named Andrew Fisk, Director of the Maine Department of Environmental Protection, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of the Maine Department of Environmental Protection.

Lynn Bachelder
Notary Public Lynn Bachelder
Print Name: _____
Commission Expires: 4/10/11

EXHIBIT I

DESCRIPTION OF MITIGATION PARCEL A - REVISED

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point being the southerly corner of Mitigation Parcel A as described in a deed recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75;

Thence N 57°43'44" W a distance of Twenty-Four and 95/100 (24.95) feet to a point;

Thence N 20°00'29" E a distance of Sixty-Nine and 06/100 (69.06) feet to a point;

Thence N 88°05'33" W a distance of Thirty-Nine and 67/100 (39.67) feet to a point;

Thence N 52°36'18" W a distance of Thirty-Two and 69/100 (32.69) feet to a point;

Thence N 25°47'25" W a distance of Twenty-Nine and 33/100 (29.33) feet to a point;

Thence N 60°36'26" E a distance of Sixteen and 83/100 (16.83) feet to a point;

Thence N 68°16'52" E a distance of One Hundred and 11/100 (100.11) feet to a point;

Thence N 55°39'58" E a distance of Nineteen and 41/100 (19.41) feet to a point;

Thence S 38°27'46" E a distance of Eighty- Four and 24/100 (84.24) feet to a point;

Thence S 40°48'48" W a distance of One Hundred Fifty-Three and 38/100 (153.38) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described easement contains 14,972 square feet and lies over a portion of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282. The above described easement is a portion of Mitigation Parcel A as described in a Declaration of Covenants and Restrictions recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75.

Reference is made to "Mitigation Parcel A—Revised" as shown on the Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, to be recorded in the Cumberland County Registry of Deeds, for a depiction of Mitigation Parcel A as revised by this Amendment.

EXHIBIT I

DESCRIPTION OF MITIGATION PARCEL A - REVISED

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point being the southerly corner of Mitigation Parcel A as described in a deed recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75;

Thence N 57°43'44" W a distance of Twenty-Four and 95/100 (24.95) feet to a point;

Thence N 20°00'29" E a distance of Sixty-Nine and 06/100 (69.06) feet to a point;

Thence N 88°05'33" W a distance of Thirty-Nine and 67/100 (39.67) feet to a point;

Thence N 52°36'18" W a distance of Thirty-Two and 69/100 (32.69) feet to a point;

Thence N 25°47'25" W a distance of Twenty-Nine and 33/100 (29.33) feet to a point;

Thence N 60°36'26" E a distance of Sixteen and 83/100 (16.83) feet to a point;

Thence N 68°16'52" E a distance of One Hundred and 11/100 (100.11) feet to a point;

Thence N 55°39'58" E a distance of Nineteen and 41/100 (19.41) feet to a point;

Thence S 38°27'46" E a distance of Eighty- Four and 24/100 (84.24) feet to a point;

Thence S 40°48'48" W a distance of One Hundred Fifty-Three and 38/100 (153.38) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described easement contains 14,972 square feet and lies over a portion of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282. The above described easement is a portion of Mitigation Parcel A as described in a Declaration of Covenants and Restrictions recorded in the Cumberland County Registry of Deeds in Book 13709, Page 75.

Reference is made to "Mitigation Parcel A—Revised" as shown on the Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, to be recorded in the Cumberland County Registry of Deeds, for a depiction of Mitigation Parcel A as revised by this Amendment.

EXHIBIT II

DESCRIPTION OF MITIGATION PARCEL B - REVISED

A certain easement located northwesterly of, but not adjacent to, Ocean Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point, said point lying N 33°52'30" W by land now or formerly of Cedars Nursing Care Center, Inc. as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282, a distance of One Hundred Thirty-Two and 37/100 (132.37) feet from said Ocean Avenue and the easterly corner of said land of Cedars Nursing Care Center, Inc.;

Thence S 58°09'19" W a distance of Eleven and 06/100 (11.06) feet to a point;

Thence N 66°31'23" W a distance of Forty-Six and 92/100 (46.92) feet to a point;

Thence N 10°12'08" W a distance of Twenty-Three and 48/100 (23.48) feet to a point;

Thence N 62°52'24" W a distance of Sixteen and 66/100 (16.66) feet to a point;

Thence N 35°08'49" E a distance of Fifty-One and 25/100 (51.25) feet to a point;

Thence S 78°14'02" E a distance of Twenty-Eight and 91/100 (28.91) feet to a point;

Thence S 83°22'48" E a distance of Eleven and 21/100 (11.21) feet to a point;

Thence S 24°08'41" E a distance of Forty-One and 40/100 (41.40) feet to a point;

Thence S 03°56'26" E a distance of Thirty and 30/100 (30.30) feet to a point;

Thence S 58°09'19" W a distance of Nineteen and 47/100 (19.47) feet to the point of beginning.

Bearings are referenced to magnetic north 1924.

The above described easement contains 5,277 square feet and lies over portions of property now or formerly of Cedars Nursing Care Center, Inc. as described in a deeds recorded in the Cumberland County Registry of Deeds in Book 7732, Page 282 and book 13696, Page 315; also lying over a portion of property now or formerly of JHA Properties , Inc. as described in a deed recorded in said Registry in Book 13696, Page 317. The above described easement is a portion of Mitigation Parcel B as described in a Declaration of Covenants and Restrictions recorded in said Registry in Book 13709, Page 75.

Reference is made to "Mitigation Parcel B—Revised" as shown on the Cedars Condominiums Recording Plat/Condominium Plan ALTA/ACSM Land Title Survey prepared by Titcomb Associates, dated September 8, 2005, to be recorded in the Cumberland County Registry of Deeds, for a depiction of Mitigation Parcel B as revised by this Amendment.

Received
Recorded Register of Deeds
Jun 30,2006 01:31:55P
Cumberland County
John B OBrien

DECLARATION OF CONDOMINIUM

OF

CEDARS CONDOMINIUMS

Portland, Maine

June 30, 2006

DECLARATION OF CONDOMINIUM
OF
CEDARS CONDOMINIUMS
PORTLAND, MAINE

THIS DECLARATION OF CONDOMINIUM is made this 30th day of June 2006, by and between JHA Properties, Inc. a Maine non-profit corporation, its successors and assigns ("JHA Properties"), and Cedars Nursing Care Center, Inc., a Maine non-profit corporation, its successors and assigns ("Cedars"; together with JHA Properties, the "Declarants"), each with a place of business at 630 Ocean Avenue, Portland, Maine 04103, as the owners in fee simple of the Real Estate (as hereinafter defined).

ARTICLE I
SUBMISSION

Section 1.1. Property. Declarants hereby submit the real estate described in Exhibit A attached hereto and made a part hereof (the "Real Estate") situated in the City of Portland, County of Cumberland and State of Maine, together with and subject to all easements, rights and appurtenances thereto belonging and the Buildings (as hereinafter defined) thereon (collectively, the "Property") to the provisions of Chapter 31 of Title 33 of the Maine Revised Statutes Annotated, as the same may be amended from time to time, known as the Maine Condominium Act (the "Act") and hereby creates with respect to the Property a condominium to be known as "Cedars Condominiums" (the "Condominium"). The Condominium consists of the land described in Exhibit A and those Units (as hereinafter defined) listed in Exhibit B, attached hereto and made a part hereof, and depicted on the Plat (as hereinafter defined).

The submission of the Real Estate to the Condominium shall create three (3) Condominium Units, as more particularly described herein, which upon recording of the Declaration shall be owned in fee by the Declarants as follows:

(a) Unit No. 1 shall be owned in fee by Cedars, its successors and assigns, and JHA Properties, for itself and its successors and assigns, hereby **grants and releases** to Cedars, its successors and assigns all right, title and interest JHA Properties may have in and to Unit No.1 and the development rights associated therewith.

(b) Unit No. 2 shall be owned in fee by Cedars, its successors and assigns, and JHA Properties, its successors and assigns, as tenants in common, in the following percentages:

(i) Cedars 33.6% ("Cedars' Tenancy-in-Common Interest"); and

(ii) JHA Properties 66.4% ("JHA Properties' Tenancy-in-Common Interest").

JHA Properties, for itself and its successors and assigns, hereby **grants and releases** to Cedars, its successors and assigns all right, title and interest JHA Properties may have in and to Cedars' Tenancy-in-Common Interest in Unit No.2 and the development rights associated therewith. Cedars, for itself and its successors and assigns, hereby **grants and releases** to JHA Properties, its successors and assigns all right, title and interest Cedars may have in and to JHA Properties' Tenancy-in-Common Interest in Unit No.2 and the development rights associated therewith.

(c) Unit No. 3 shall be owned in fee by JHA Properties, its successors and assigns, and Cedars, for itself and its successors and assigns, hereby **grants and releases** to JHA Properties, its successors and assigns all right, title and interest Cedars may have in and to Unit No.3 and any development rights associated therewith.

(d) In consideration of the rights and easements created under this Declaration each of the Declarants, for itself and its successors and assigns, hereby **grants and releases** to the other all right, title and interest it may have in and to the following easements of record with respect to the Real Estate:

(i) Utility and Access Easement described as Parcel B in easement deed from Cedars Nursing Care Center, Inc., to JHA Services, Inc., dated May 25, 1990, and recorded in the Cumberland County Registry of Deeds, Book 9188, Page 115, as amended and modified Short Form Quitclaim Deed from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 17, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 319, and by Easement Modification, between JHA Services, Inc. and Cedars Nursing Care Center, Inc., dated April 1, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13708, Page 305 (said deed dated May 25, 1990, as so modified being the "Granting Deed");

(ii) Emergency Access Road Easement described as Parcel C in the Granting Deed;

(iii) Parking Easement, Utility and Access Easement and Loop Road Easement retained as Items 1, 2 and 3 of Parcel C in the Granting Deed;

(iv) Access Easement in easement deed from JHA Properties, Inc., to Cedars Nursing Care Center, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 321;

(v) Access Easement in easement from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 325; and

(v) Agreement and Reciprocal Easement Deed, between Cedars Nursing Care Center, Inc., and JHA Properties, Inc., dated as of March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 331.

Section 1.2. Maximum Number of Units. The maximum number of Units the Declarants reserve the right to create is three (3).

Section 1.3. Address of Condominium. The address of the Condominium is:

Cedars Condominiums
630 Ocean Avenue
Portland, Maine 04103

ARTICLE 2
DEFINITIONS

Section 2.1. Terms Defined in the Act. Capitalized terms not otherwise defined in this Declaration or in the Plat, shall have the meanings specified or used in the Act.

Section 2.2. Terms Specifically Defined in this Declaration. In addition to the terms defined above, the following terms shall have the following meanings in this Declaration, the Bylaws, and the Plat:

(a) "Act" has the meaning set forth in Section 1.1.

(b) "Association" means the Unit owners' association of the Condominium, which shall be known as the Cedars Condominiums Owners Association.

(c) "Budget" has the meaning set forth in Section 13.1(a).

(d) "Buildings" (or in the singular, a "Building") means any residential, commercial, long term care, service or recreational structure or other improvement now existing or hereafter constructed on the Real Estate.

(e) "Bylaws" means the document having that name and providing for the governance of the Association, pursuant to Section 1603-106 of the Act, as such document may be amended from time to time.

(f) "Cedars" has the meaning set forth in introductory paragraph of this Declaration.

(g) "Cedars' Tenancy-in-Common Interest" has the meaning set forth in Section 1.1(b).

(h) "Common Elements" (or in the singular, a "Common Element") means those parts of the Property either described in the Act as being common elements or described in this Declaration or in the Plat as being common elements.

(i) "Common Expenses" means expenditures made by or financial liabilities of the Association together with any allocations to reserves.

(j) "Condominium" means the condominium described in Section 1.1.

(k) "Condominium Documents" means the Declaration, the Plat, Bylaws and Rules and Regulations.

(l) "Declarants" has the meaning set forth in introductory paragraph of this Declaration.

(m) "Declaration" means this document, as the same may be amended from time to time.

(n) "Development Rights" means those rights, if any, which the Declarants have reserved to themselves as set forth in Article 14 and elsewhere in this Declaration.

(o) "Eligible Mortgage Holder" means the holder of a recorded first mortgage on a Unit which has requested in writing that the Association notify it of actions by the Association upon which such mortgage holders are entitled to vote or whose consent is required under this Declaration.

(p) "Executive Board" means the executive board of the Association.

(q) "JHA Properties" has the meaning set forth in introductory paragraph of this Declaration.

(r) "JHA Properties' Tenancy-in-Common Interest" has the meaning set forth in Section 1.1(b).

(s) "Identifying Number" means the number assigned to a Unit in the Plat.

(t) "Insurance Trust Agreement" means that certain agreement, if any, between the Association and the Insurance Trustee providing for the management and disbursement of insurance proceeds in accordance with Section 9.2 hereof.

(u) "Insurance Trustee" means that certain entity responsible for the management and disbursement of insurance proceeds pursuant to the Insurance Trust Agreement, if any.

(v) "Limited Common Elements" (or in the singular, a "Limited Common Element") means those parts of the Property either described in the Act as being limited common elements or described herein or in the Plat as being limited common elements.

(w) "Monthly Assessment" means the Unit owner's share of the anticipated Common Expenses, allocated by Unit, for each month of the Association's fiscal year as reflected in the budget adopted by the Executive Board for such year.

(x) "Mortgagee" means the holder of any recorded first mortgage encumbering one or more of the Units.

(y) "Percentage Interest" means the undivided interest in the Common Elements appurtenant to a Unit, as set forth on Exhibit B attached hereto, as the same may be amended from time to time.

(z) "Plat" means the Cedars Condominiums Recording Plat/Condominium Plan/ALTA/ASCM/Land Title Survey, made for JHA Properties, Inc., & Cedars Nursing Care Center, Inc., JHA Assisted Living, Inc., prepared by Titcomb Associates, dated September 8, 2005, and revised April 5, 2006, recorded in the Cumberland County Registry of Deeds in Plan Book 206 at Page 430 as the same may be amended from time to time, reduced photocopies of which are attached hereto as Exhibit C.

(aa) "Property" has the meaning set forth in Section 1.1.

(bb) "Real Estate" has the meaning set forth in Section 1.1.

(cc) "Record" means to record in the Cumberland County Registry of Deeds.

(dd) "Rules and Regulations" means such rules and regulations as are promulgated by the Declarants or the Executive Board from time to time with respect to the use of all or any portion of the Property.

(ee) "Special Assessment" means a Unit owner's share of any assessment made by the Executive Board in addition to the Monthly Assessment.

(ff) "Special Declarant Rights" means those rights which the Declarants have reserved to themselves as set forth in Article 14 and elsewhere in this Declaration.

(gg) "Unit" means a physical portion of the Condominium created by this Declaration or any amendment thereto and designated for separate ownership or occupancy, the boundaries of which are described in Article 3 or in any amendment creating such Unit.

Section 2.3. Provisions of the Act. The provisions of the Act shall apply to and govern the operation and governance of the Condominium, except to the extent that contrary provisions, not prohibited by the Act, are contained in one or more of the Condominium Documents.

ARTICLE 3
UNIT BOUNDARIES AND MAINTENANCE RESPONSIBILITIES

Section 3.1. Unit Boundaries.

(a) The boundary lines of each Unit are formed by the following planes:

(1) the upper boundary shall be a horizontal plane at an elevation of one hundred and thirty-five feet (135) above sea level (determined by reference to City of Portland datum: masonry nail in Utility Pole #82 located on Ocean Avenue (elevation=70.90) as shown on the Plat),

(2) the lower boundary shall be a horizontal plane at an elevation of forty-five (45) feet above sea level; and

(3) the vertical boundaries shall be perpendicular planes located three (3.00) feet outside the perimeter of the footprint of the building located or to be located within said Unit as shown on the Plat, each projected (A) horizontally to meet the projection of the adjacent vertical planes and (B) downward and upward to meet the upper and lower horizontal boundaries; except that, at those locations where the outside surface of an exterior wall of a Building in one Unit is adjacent to the outside surface of an exterior wall of a Building in another Unit, the vertical boundary of each Unit shall be a vertical plane that is equidistant between the outside of the finish material forming the exterior walls of the Buildings in question, except that in the case of Unit No. 1, Unit No. 1 shall also include:

(i) The enclosed triangular structure on the first floor at the intersection of the north-facing exterior surfaces of the two Building wings at the north end of the Building in Unit No. 1, one wing that extends in a northwesterly direction and the other wing that extends in a northeasterly direction;

(ii) The enclosed triangular structure on the first floor at the intersection of the south-facing exterior surfaces of the two Building wings at the south end of the Building in Unit No. 1, one wing that extends in a southwesterly direction and the other wing that extends in a southeasterly direction; and

(iii) The enclosed vestibule at the entrance of Unit No. 1 on the east side of the Building in Unit No. 1.

NOTE: Although the foundations of each Building will be located as shown on the Plat, the vertical boundaries for each Unit described above are located outside of the perimeter of such foundations in order to accommodate roof eaves and overhangs and other building features that extend beyond such foundation perimeter.

(b) Each Unit consists of all portions of any Building that is located within the aforesaid boundary lines, except the air space displaced Common Elements extending into or within such Unit which serve other Unit(s) and/or the Common Elements, including without limitation chutes, flues, chases, ducts, wires, conduits and pipe runs as described in clause (a)(3) of this section. The finish material, such as plaster or drywall, and furring around chutes, flues, chases, ducts, conduits, pipe runs and similar structures containing wires, vents, pipes, utilities or services that serve another Unit or Units and/or the Common Elements, the Unit to include the thickness of such finish material around chutes, flues, chases, ducts, conduits, pipe runs and

similar structures but not the cavity within such wires, vents, pipes, utilities or services are located.

(c) Each Unit's Identifying Number is shown on the Plat.

Section 3.2. Relocation of Unit Boundaries; Subdivision of Unit. The owners of any Unit shall be permitted to (i) relocate boundaries between Units or (ii) subdivide a Unit in accordance with the procedures for an amendment of this Declaration as set forth in Article 16 below.

Section 3.3. Maintenance Responsibilities.

(a) The Association, through the Executive Board and as determined by the Unit owners, shall be responsible for (i) maintenance, repair and replacement of the Common Elements, but excluding the Limited Common Elements, and (ii) maintenance, repair and replacements as may be required for the functioning of or for the bringing of utilities, such as water, gas, electricity and sewer to all of the Units, all of which maintenance, repair and replacement shall be furnished by the Association as part of the Common Expenses.

(b) The Association, through the Executive Board and as determined by the Unit owners, shall be responsible for maintenance, repair and replacement of the Limited Common Elements at the cost and expense of the owners of the Unit or Units to which such Limited Common Elements are allocated.

(c) If damage is caused to (i) the Common Elements or (ii) any other part of the Condominium, in each case by any Unit owner, or guests, tenants, or invitees of such Unit owner for which maintenance, repairs and replacements shall be required that would otherwise be a Common Expense, such Unit owner shall pay for such damage and such maintenance, repairs and replacement as may be determined necessary or advisable by the Association. Each Unit owner shall be responsible for the cleanliness, including, but not limited to, ice and snow removal, of any Limited Common Element allocated to such Unit owner's Unit. In addition to the maintenance, repair and replacement of the Common Elements, the Association, through the Executive Board and upon the request of the Unit owners, shall arrange for or provide to each Unit owner trash and garbage removal service on a regular basis. The Executive Board, in its discretion, may provide the maintenance and other services described in this Section 3.2(a) either through its own employees or through independent contractors or both. The cost of the provision of such services shall be a Common Expense.

(d) Each Unit owner is responsible for the maintenance, repair and replacement of such Unit owner's Unit, including, without limitation, exterior glass windows, roofs, skylights, garage doors and other doors included within the Unit. Each Unit owner shall afford to the Association, and other Unit owners, and to their agents and employees, access through such Unit owner's Unit reasonably necessary for the maintenance, repair and replacement of the Common Elements and the shared Limited Common Elements.

(e) Charges for electric, sewer, water service, telephone and cable television service will be separately metered and each Unit owner will be responsible for the cost of such services furnished to such owner's Unit. Utilities that are not separately metered or billed by the respective utility companies and that are used by all of the Units shall be treated as part of the Common Expenses. Electricity for lighting of the Common Elements may be provided by the Association as part of the Common Expenses.

ARTICLE 4
DESCRIPTION AND ALLOCATION OF COMMON ELEMENTS AND LIMITED COMMON ELEMENTS

Section 4.1. Description of Common Elements. Common Elements shall include:

(a) Within Unit Boundaries. The following portions of any Building within the boundaries of a Unit that are not Limited Common Elements:(i) the portion of any chute, flue, duct, wire, conduit, bearing wall, bearing column or any other fixture within the designated boundaries of a Unit that serve, in whole or in part, another Unit or Units and/or the Common Elements, (ii) all driveways on the Property providing access to and from any public way, (iii) those parking areas not designated as Limited Common Elements on the Plat, (iv) any signage not physically attached to a Unit; (v) those portions identified and designated as Common Elements on the Plat, in each case including, by way of description but not limitation, and, if applicable, within the Units' boundaries to the extent that they are constructed:

(b) Land. All lands submitted to the Condominium as described herein, except land (i) directly under a Unit, which land shall be a Limited Common Element allocated to such Unit, and (ii) other Limited Common Elements, all subject to the easements set forth in Article 6 of this Declaration.

(c) Improvements. All improved surfaces, drives, driveways, curbs, sidewalks and parking spaces that are not Limited Common Elements, subject to the easements and provisions set forth in Article 6 of this Declaration.

(d) Ornamentals, Drainage System and Utilities. Lawn areas, drainage systems located on the Property, shrubbery, and waterways, and all conduits and utility lines over, on or under the Land that are not Limited Common Elements, subject to the easements and provisions set forth in Article 6 of this Declaration.

(e) Utilities. Connections for gas, electricity, light, telephone and water not owned by the public utility or other agencies providing such services, provided that any portion of such connections that serves only one or two of the Units shall be a Limited Common Element allocated with the Unit or Units so served.

(f) Lighting. Any exterior lighting or other facilities necessary to the upkeep and safety of the grounds.

(g) After-Constructed Improvements. All other improvements that may be constructed on the property except those improvements that are part of a Unit or a Limited Common Element.

(h) Certain Other Buildings and Improvements. The so-called "White House" located near Ocean Avenue and northeasterly of the entrance drive to the Condominium from Ocean avenue shall be a Common Element.

(i) Other Elements. All other elements of the Condominium rationally of common use and necessary to the existence, upkeep and safety thereof and, in general, all other devices or installations existing for common use that are not Limited Common Elements.

Section 4.2. Description of Limited Common Elements. Limited Common Elements shall include (i) at those locations where the outside surface of an exterior wall of a Building in one Unit is adjacent to the outside surface of an exterior wall of a Building in another Unit, any expansion joints connecting such exterior walls, and any expansion joints connecting the roofs of such Units, all of which shall be a Limited Common Element associated with both of such Units; (ii) the portion of any chute, flue, chase, duct, wire, conduit, bearing wall, bearing column or any other fixture lying within the designated boundaries of a Unit that serves less than all of the Units, which shall be Limited Common Elements associated with the Unit or Units so served, (iii) the portion of any connections for gas, electricity, light, telephone and water not owned by the public utility or other agencies providing such services that serves only one or two of the Units, which shall be a Limited Common Element associated with the Unit or Units so served or (iv) any structure, improvement or other property that is identified and designated as Limited Common Elements on the Plat, including, without limitation, the garages that are assigned as Limited Common Elements to Unit 3. Those portions of the Limited Common Elements serving only the Unit adjacent to such Limited Common Element are Limited Common Elements allocated only to the Unit which they serve. This allocation shall not be changed without the consent of the Unit owners served or benefited by such Limited Common Elements.

Section 4.3. [Intentionally Omitted.]

Section 4.4. [Intentionally Omitted.]

Section 4.5. Reserved Common Elements. The Executive Board shall have the power in its discretion from time to time to grant revocable licenses in designated Common Elements to the Association or to any Unit owners and to establish a reasonable charge to such Unit owners for the use and maintenance thereof. Such designation by the Executive Board shall not be construed as a sale or disposition of the Common Elements.

Section 4.6. Alteration of Common Elements by the Declarant. The Declarants reserve the right to modify, alter, remove or improve portions of the Common Elements, including without limitation, any equipment, fixtures and appurtenances, when in the Declarants' judgment it is necessary or desirable to do so, until the completion of all Units. Such rights do not include rights to add or remove real estate not deemed to be fixtures.

Section 4.7. Allocation of Common Elements. Each Unit owner shall acquire, as an appurtenance to each Unit, its Percentage Interest in the Common Elements as set forth on Exhibit B attached hereto, as the same may be amended from time to time. The said Percentage Interest shall not be divisible from the Unit to which it appertains and shall be deemed to be conveyed or encumbered with the Unit even though such interest is not expressly mentioned or described in the conveyance or other instrument. Except as otherwise permitted under the Act or this Declaration, the Percentage Interest of each Unit owner shall not be altered without the consent of all of the Unit owners expressed in an amendment to this Declaration duly recorded. Said Percentage Interests shall be used to allocate the division of proceeds, if any, resulting from any casualty, loss, eminent domain proceedings, common surplus, or from any other disposition of the Property.

Section 4.8. Allocation of Parking Spaces. The Declarant reserves the right, until the construction of all Units is completed, to allocate to particular Units as Limited Common Elements the parking spaces shown on the Plat that are not otherwise designated Limited Common Elements on said Plat. Such right shall be deemed a Development Right and shall be subject to the terms and conditions set forth in Article 14 of this Declaration. After the expiration of such Development Right pursuant to Article 14 of this Declaration, the Executive Board shall have the power in its discretion from time to time to so allocate those parking spaces.

ARTICLE 5
ALLOCATION OF PERCENTAGE INTERESTS IN COMMON EXPENSES AND VOTING RIGHTS

Section 5.1. Percentage Interests. Attached as Exhibit B hereto is a list of all Units by their Identifying Number and the Percentage Interest appurtenant to each Unit, together with an explanation of the formula by which such Percentage Interest is determined. All calculations on Exhibit B shall be conclusive and binding on all Unit owners, the Executive Board, the Association and any Mortgagees.

Section 5.2. Common Expenses. The liability allocated to each Unit for the Common Expense of the Condominium shall be the same percentage share as the Percentage Interest allocated to such Unit on Exhibit B.

Section 5.3. Allocation of Unit Owner's Voting Rights. Each Unit owner shall be entitled to one (1) vote for each Unit owned by such person to permit equality of voting power among the Units.

ARTICLE 6
EASEMENTS

Section 6.1. Utility Easements. The Units, Common Elements and Limited Common Elements shall be, and hereby are, made subject to easements in favor of the

Declarants, other Unit owners, appropriate utility and service companies, cable television 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 by this Section 6.1 shall include, without limitation, rights of the Declarants, any Unit owner 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, drainage ditches and pump stations, telephone wires and equipment, television equipment and facilities (cable or otherwise), electrical wires, conduits, and equipment and ducts and vents over, under, through, along and on the Units and Common Elements. Notwithstanding the foregoing provisions of this Section 6.1, any such easement through a Unit shall be located either in substantially the same location as such facilities or similar facilities existed at the time of the completion of the initial construction of the Buildings and other improvements within the affected Unit or so as not to materially interfere with the use or occupancy of such Buildings and other improvements by its occupants. With respect to any utility lines or equipment serving only the Condominium and located upon the Common Elements, the Executive Board shall have the right and power to assign the easement related to such Common Elements to any private or public utility company. The Executive Board shall also have the right and power to convey to any private or public utility company permits, licenses and easements over the Common Elements for the installation, maintenance, repair and replacement of utility poles, lines, wires and other equipment. In addition, the Executive Board shall have the right to grant permits, licenses and easements over the Common Elements for the building and maintenance of roads and for other purposes necessary for the proper operation of the Condominium.

Section 6.2. Maintenance of Surface Water Drainage. Declarants reserve for themselves and the Association an easement on, over and under those portions of the Common Elements not located within a Unit for the purpose of maintaining and/or correcting drainage of surface water in order to maintain reasonable standards of health, safety and appearance and to comply with and observe any conservation easement or declaration now or hereafter recorded with respect of the Property or any portion thereof. The easement created by this Section 6.2 expressly includes the right to cut any trees, bushes, or shrubbery, to grade the soil, or to take any other action reasonably determined to be necessary and otherwise in compliance with applicable standards of health, safety and appearance conservation easements or declarations. The Declarants or the Association, as the case may be, shall restore the affected property as closely to its original condition as is practicable.

Section 6.3. Common Elements Easements. The Common Elements (other than the Limited Common Elements) shall be, and hereby are, made subject to an easement in favor of the Unit owners and their invitees, employees, tenants and servants, the Association and the agents and employees of the Association for access, egress and ingress over, through and across each portion thereof, pursuant to such requirements and subject to such charges as the Executive Board may from time to time prescribe; *provided* that nothing contained herein shall create any access easement in favor of Unit owners with respect to such portions of the Common Elements that are not needed in order to gain access to one or more Units and as to which the Executive Board may from time to time determine it to be necessary or desirable to limit or control access

by Unit owners or the occupants of Units, or both, including, by way of illustration and not limitation, machinery and equipment rooms; *provided, further,* that every Unit owner shall have an unrestricted right of ingress and egress to such Unit owner's Unit.

Section 6.4. Declarant's Easements for Maintenance Repair and Renovation. The Units, Common Elements and Limited Common Elements are subject to an easement in favor of the Declarants for the purposes of construction, reconstruction, maintenance, repair, renovation, replacement or correction of the Common Elements or Limited Common Elements.

Section 6.5. Association's Easements for Maintenance, Repair and Renovation. The Units, Common Elements and the Limited Common Elements shall be and hereby are made subject to an easement in favor of the Association and the agents, employees and independent contractors thereof for the purpose of the inspection, upkeep, maintenance, repair and replacement of the Common Elements and the Limited Common Elements.

Section 6.6. Easements Burdening Common Elements and Limited Common Elements. The Common Elements and the Limited Common Elements shall be and hereby are made subject to the following easements in favor of the Units benefited:

(a) For the installation, repair, maintenance, use, removal and/or replacement of pipes, ducts, heating and air conditioning systems, electrical, telephone and other communication wiring and cables and all other utility lines and conduits which are part of or exclusively serve a single Unit and which pass across or through a portion of the Common Elements;

(b) For the installation, repair, maintenance, use, removal and/or replacement of overhead lighting fixtures, electrical receptacles and the like which are located in a portion of the ceiling, wall or floor adjacent to a Unit which is a part of the Common Elements; *provided that* the installation, repair, maintenance, use, removal or replacement of such fixtures, receptacles and the like does not unreasonably interfere with the common use of any part of the Common Elements or impair or structurally weaken any Building;

(c) 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 Element or Limited Common Element; and

(d) For the construction of improvements upon Limited Common Elements as such construction may be approved in writing by the Executive Board. Each Unit owner shall be liable to the Association for any damage to the Common Elements as the result of such Unit owner's exercise of the easement rights described in this paragraph (e).

Section 6.7. Structural Support Easements. To the extent necessary, each Unit shall have an easement for structural support over every other Unit, the Common Elements and the Limited Common Elements, and each Unit and the Common Elements shall be subject to an

easement for structural support in favor of every other Unit, the Common Elements and the Limited Common Elements.

Section 6.8. Easements Burdening Units and Limited Common Elements. The Units and the Limited Common Elements are hereby made subject to the following easements:

(a) In favor of the Association and its agents, employees and independent contractors, (i) for inspection of the Units and Limited Common Elements in order to verify the performance by Unit owners of all items of maintenance and repair for which they are responsible, (ii) for inspection, maintenance, repair and replacement of the Common Elements or the Limited Common Elements situated in or accessible from such Units or Limited Common Elements or both, (iii) for correction of emergency conditions in one or more Units or Limited Common Elements, or both, or casualties to the Common Elements, the Limited Common Elements and/or the Units, and (iv) to do any other work reasonably necessary for the proper maintenance of the Condominium, it being understood and agreed that the Association and its agents, employees and independent contractors shall take reasonable steps to minimize any interference with a Unit owner's use of his Unit resulting from the Association's exercise of any rights it may have pursuant to this Section 6.8; and

(b) In favor of the Unit owner benefited thereby and the Association, and their respective agents, employees and independent contractors, for the installation, repair, maintenance, use, removal and/or replacement of pipes, ducts, electrical, telephone, telegraph or other communication systems and all other utility lines and conduits which are part of the Common Elements and which pass across or through a portion of one or more Units.

(c) In favor of the Unit owner or owners benefited thereby and the Association and their respective patients, residents, tenants, invitees, agents, employees and independent contractors to the full extent from time to time required in order that the Units and the Buildings conform with all applicable life safety and other governmental and licensing requirements (i) for egress from Unit No. 1 through adjacent first floor corridors and hallways of the so-called "Service Connector" portion of Unit No. 3 to exterior exits located in said "Service Connector"; (ii) for egress from Unit No. 2 through adjacent first floor corridors and hallways in Unit No. 1 to exterior exits located in Unit No. 1; (iii) for egress from the exterior court yard area enclosed by the Buildings in Unit No. 1, Unit No. 2 and Unit No. 3, through the first floor corridors and hallways in the "Service Connector" portion of Unit No. 3 to exterior exits located in said Service Connector; and (iv) for egress from any Unit through adjacent corridors and hallways in any other for purposes of providing access to exits or other life safety features now or hereafter required for compliance with applicable life safety and other governmental and licensing requirements.

(d) In favor of the Unit owners benefited thereby and the Association and their agents, employees and independent contractors, for the installation, repair, maintenance, use, removal and/or replacement of walls, doors, jambs and doorframes in any corridor providing passage from one Unit to another in order to regulate or restrict passage between the Units

through such corridor (a "Corridor Separation Structure"), *provided that* (i) the Association shall be required to install a Corridor Separation Structure only at the written request of the Unit owner and Mortgagee of at least one of the Units in question; (ii) the costs of design and installation of a Corridor Separation Structure shall be born by the Unit owner or Unit owners requesting such Corridor Separation Structure; (iii) a Corridor Separation Structure shall be designed, installed, maintained and operated so that the requirements of all applicable life safety and other governmental and licensing requirements are satisfied; (iv) each Corridor Separation Structure shall be a Limited Common Element with the costs of maintenance, operation, repair, replacement and removal thereof allocated to the Units in question; and (v) a Corridor Separation Structure shall be removed only at the written request of the Unit owners and Mortgagees of both of the Units in question.

Section 6.9. Easements for Encroachments. If construction, reconstruction, repair, shifting, settlement or other movement of any portion of the Condominium results either in the Common Elements encroaching on any Unit, or in any Unit encroaching on the Common Elements or on any other Unit, a valid easement shall exist during the period of the encroachment for the encroachment and for the maintenance thereof.

Section 6.10. Duration of Easements. All easements, rights and restrictions described and mentioned in this Declaration are easements appurtenant, running with the land and the Property, including by way of illustration but not limitation, the Units, the Common Elements and the Limited Common Elements, and (except as expressly may be otherwise provided herein or in the instrument creating the same) shall continue in full force and effect until the termination of this Declaration.

Section 6.11. Certain Other Easements. The Property is subject to, and benefited by, the following easements:

(a) Snow Plowing Easement given by Cedars Nursing Care Center, Inc. to the City of Portland, dated April 17, 1990, and recorded in the Cumberland County Registry of Deeds, Book 9260, Page 236;

(b) Utility Easements given by Cedars Nursing Care Center, Inc. to Central Maine Power Company and New England Telephone and Telegraph Company, dated May 7, 1990 and September 5, 1990, and recorded in the Cumberland County Registry of Deeds respectively in Book 9162, Page 206 and Book 9306, Page 219;

(c) Utility Easements given by JHA Properties, Inc. to Central Maine Power Company, dated July 26, 1990, and recorded in the Cumberland County Registry of Deeds, Book 14382, Pages 187 and 188;

(d) Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. dated March 27, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13709, Page 75, as amended by Amendment to Declaration of Covenants and Restrictions, among the Maine Department of Environmental Protection, Cedars

Nursing Care Center, Inc. and JHA Properties, Inc., dated June ___, 2006, to be recorded in the Cumberland County Registry of Deeds;

(e) Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc., dated June ___, 2006, to be recorded in the Cumberland County Registry of Deeds;

(f) Certificate of Variance Approval, dated February 6, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13595, Page 182;

ARTICLE 7
RESTRICTIONS ON USE, SALE AND LEASE OF UNITS

Section 7.1. Use. The following restrictions shall apply to the use of the Condominium:

(a) The Units shall be used as part of an integrated campus providing skilled nursing care, assisted living residences and independent living residences, and such other uses as shall be determined from time to time by the Association through the Executive Board.

(b) No Unit owner may obstruct the Common Elements in any way. No Unit owner may store anything in or on the Common Elements other than in or on any Common Element storage area without the prior written consent of the Executive Board.

(c) No Unit owner may carry on any practice, or permit any practice to be carried on, which unreasonably interferes with the quiet enjoyment of the occupants of any other Unit. The Property is to be maintained in a clean and sanitary condition, and no Unit owner may place any garbage, trash or rubbish anywhere in the Property other than in a Unit owner's own Unit and in or on such parts of the Common Elements as may be designated for such purpose by the Executive Board.

(d) No Unit shall be used, occupied or kept in a manner that in any way increases the fire insurance premiums for the Property without the prior written consent of the Executive Board.

(e) The Executive Board may from time to time promulgate reasonable Rules and Regulations, not in conflict with the provisions of this Declaration, concerning the use and enjoyment of the Property. Copies of the then current Rules and Regulations and any amendments thereto shall be furnished to all Unit owners by the Association promptly after the adoption of such Rules and Regulations and any amendments thereto.

(f) The owner of a Unit shall be responsible for maintaining such Unit in good order and repair, at the expense of such owner, including (but not limited to) cleaning and replacing glass panes in any window serving such Unit.

(g) The owner of a Unit shall be responsible for the cleanliness of any Limited Common Element serving such Unit, at the expense of such Unit owner.

(h) Without the prior written consent of the Executive Board, the owner of a Unit shall not alter in any way any portion of such Unit owner's Unit that is part of the exterior facade of the Units, including by way of example, but not by way of limitation, roofing materials or design, exterior doors, siding type and color, and windows.

Section 7.2. Sale and Lease of Units.

A Unit owner, including but not limited to any Declarant, may sell or lease such Unit owner's Unit at any time and from time to time, *provided* that each tenant and lease shall be subject to and be bound by all of the covenants, restrictions and conditions set forth in the Condominium Documents.

ARTICLE 8
RIGHTS OF MORTGAGE HOLDERS, INSURERS AND GUARANTORS

Section 8.1. Subject to Declaration. Whether or not it expressly so states, any mortgage constituting a lien against a Unit and an obligation secured thereby shall provide generally that the mortgage and the rights and obligations of the parties thereto shall be subject to the terms and conditions of the Act, the Declaration, the Plat and any Rules and Regulations.

Section 8.2. Rights of Eligible Mortgage Holders.

(a) The Association shall send reasonable prior written notice by prepaid United States mail to Eligible Mortgage Holders of the consideration by the Association of the following proposed actions:

(1) The termination of the Condominium pursuant to Section 1602-118 of the Act;

(2) A change in the allocated interest of a Unit, a change in the boundaries of a Unit or a subdivision of a Unit;

(3) The merger or consolidation of the Condominium with another condominium;

(4) The conveyance or subjection to a security interest of any portion of the Common Elements;

(5) The proposed use of any proceeds of hazard insurance required to be maintained by the Association under Section 1603-113(a) of the Act for purposes other than the repair or restoration of the damaged property;

(6) The adoption of any proposed budget by the Executive Board under Section 1603-103(c) of the Act, and of the date of the scheduled Unit owners meeting to consider ratification thereof, which notice shall be accompanied by a summary of the proposed Budget; and

(7) Any default in the performance or payment by a Unit owner of any obligations under this Declaration, including, without limitation, default in the payment of Common Expense liabilities.

(b) In the event of any proposed actions described in clauses (1) through (5) of paragraph (a) of this Section 8.2, an Eligible Mortgage Holder shall have the right, but not the obligation, in place of the Unit owner to cast the votes allocated to that Unit or give or withhold any consent required of the Unit owner for such action by delivering written notice to the Association with a copy to the Unit owner prior to or at the time of the taking of the proposed action, which notice shall be sent by prepaid United States mail, return receipt requested, or by delivery in hand. Failure of the Eligible Mortgage Holder to so exercise such rights shall not constitute a waiver thereof and shall not preclude the Unit owner from exercising such right. In the event of any default described in subsection (a), paragraph (7) of this Section 8.2, the Eligible Mortgage Holder shall have the right, but not the obligation, to cure such default.

(c) An Eligible Mortgage Holder, or its representative, shall have the right to attend Association and Executive Board meetings for the purposes of discussing the matters described in paragraphs (1) through (6) of Section 8.2 (a).

Section 8.3. Rights of Mortgage Holders, Insurers or Guarantors.

(a) The Association shall send timely prior written notice of the following matters by prepaid United States mail to holders, insurers and guarantors of a mortgage on any Unit:

(1) Any condemnation or casualty loss that affects either a material portion of the Condominium or the Unit securing the mortgage;

(2) A lapse, cancellation or material modification of any insurance policy maintained by the Association; and

(3) Any proposed action that requires the consent of fifty-one percent (51%) of the Eligible Mortgage Holders.

(b) To receive such notice, the mortgage holder, insurer or guarantor shall send a written request therefor to the Association, stating its name and address and the Unit identifying number or address of the Unit on which it holds, insures or guarantees the mortgage.

Section 8.4. Liability for Use and Charges. Notwithstanding any term in Section 10.1 hereof to the contrary, any Mortgagee who obtains title to a Unit pursuant to the remedies provided in a mortgage for foreclosure of such mortgage or a deed in lieu of foreclosure shall not

be liable for such Unit owner's unpaid assessments or charges which accrue prior to the acquisition of title to such Unit by the Mortgagee, except to the extent otherwise provided for in the Act and except to the extent that such Mortgagee is liable as a Unit owner for the payment of such unpaid assessment or charge that is assessed against the Mortgagee as a result of all Unit owners being reassessed for the aggregate amount of such deficiency.

Section 8.5. Condemnation Rights. No provision of this Declaration shall give a Unit owner, or any other party, priority over any rights of the Mortgagee of a Unit pursuant to its mortgage in the case of a distribution to such Unit owner of insurance proceeds or condemnation award for loss to or a taking of one or more Units and/or Common Elements.

Section 8.6. Books and Records. Any Mortgagee shall have the right, exercisable by written notice to the Executive Board, to examine the books and records of the Association and to require that it be provided with a copy of each annual report of the Association and other financial data of the Association reasonably requested by such Mortgagee.

ARTICLE 9
INSURANCE

Section 9.1. Types and Amounts. The Association shall maintain at a minimum, as a Common Expense and to the extent reasonably available, the following types and amounts of insurance:

(a) Property insurance on the Common Elements, insuring against all risks of direct physical loss commonly insured against under the fire and extended coverage endorsement and such other insurance as the Executive Board deems necessary or desirable. The total amount of any insurance after application of any deductions shall not be less than 80% of the actual cash value of the insured property at the time the insurance is purchased and at each renewal date exclusive of land, foundations, excavation and other items normally excluded from property policies. The loss payable clause of such policy shall show the Association or the Insurance Trustee, if any, as a trustee for each Unit owner and each Mortgagee of a Unit. Such policy may also contain the standard mortgagee clause, naming each Mortgagee, its successors and assigns. If the Executive Board fails within sixty (60) days after the date of an insured loss to initiate a claim for damages recoverable under the policy or policies obtained pursuant to this paragraph (a), any Mortgagee may initiate such a claim on behalf of the Association.

(b) Liability insurance, including medical payments insurance, complying with the requirements of Section 9.2 hereof, covering all occurrences commonly insured against for death, bodily injury and property damage arising out of or in connection with the use, ownership or maintenance of the Common Elements. Such insurance policy shall contain a "severability of interest endorsement" or equivalent coverage which precludes the insurer from denying the claim of a Unit owner because of the negligent acts of the Association or another Unit owner. The amount of such liability insurance shall be at least $1,000,000.00 for bodily injury and property damage for any single occurrence. The scope and amount of coverage of all liability insurance policies shall be reviewed at least once each year by the Executive Board and may be changed in

its discretion, *provided* that such policies shall continue to comply with the requirements of this Section 9.1 and Section 9.2 hereof.

(c) If the insurance described in paragraphs (a) and (b) of this Section 9.1 is not reasonably available, the Association shall provide notice of the same to the Unit owners and shall carry any other insurance that will provide similar coverage that can be reasonably obtained.

(d) Such worker's compensation insurance as applicable laws may require.

(e) Insurance to satisfy the indemnification obligation of the Association set out in Section 10.2 hereof, if and to the extent reasonably available, including but not limited to insurance coverage commonly referred to as "directors and officers insurance".

(f) If at any time it is determined that all or any part of the Property lies within a special flood hazard area, a master or blanket policy of flood insurance covering the Property, including but not limited to, all Common Elements and Limited Common Elements, the Units and all improvements, fixtures and appliances contained within the Unit as of the date of settlement on the Unit or the value thereof, and building service equipment and common equipment, fixtures, personal property and supplies owned by the Association, but excluding any improvements or appliances subsequently added by a Unit owner and all other personal property of the Unit owner. The amount of any such flood insurance obtained pursuant to this paragraph (f) shall be equal to the lesser of one hundred percent (100%) of the insurable value of the property insured or the maximum coverage available under the appropriate National Flood Insurance Administration program. Such flood insurance policy may, at the option of the Association, contain a "deductible" provision in an amount not to exceed the lesser of $5,000 or one percent (1%) of the policy face amount. Funds to cover this amount shall be included in the Association reserve fund.

Section 9.2. Required Provisions. Insurance obtained by the Association shall be in accordance with the following provisions:

(a) Exclusive authority to adjust losses under policies hereafter in force on the Common Elements and the Limited Common Elements shall be vested in the Executive Board or its authorized representative.

(b) Each Unit owner may obtain additional insurance at his own expense; *provided, however*, that: (1) such policies shall not be invalidated by the waivers of subrogation required to be contained in policies required by this Declaration; and (2) no Unit owner shall be entitled to exercise his right to maintain insurance coverage in such a way as to decrease the amount which the Association may realize under any insurance policy which the Association may have in force on the Property at any particular time.

(c) With respect to the insurance policies described in paragraphs (a) and (b) of Section 9.1 issued to the Association and covering all or any part of the Property, the Association shall cause such policies to provide that:

(1) Each Unit owner is an insured person under such policies with respect to liability arising out of such Unit owner's ownership of an undivided interest in the Common Elements or membership in the Association.

(2) The insurer waives its right to subrogation under the policy against any Unit owner or members of such Unit owner's household.

(3) No act or omission by any Unit owner, unless acting within the scope of his authority on behalf of the Association, will void such policies or be a condition to recovery under such policies.

(4) If at the time of a loss under such policies 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.

(5) The liability of the insurer shall not be affected by, and the insurer shall not claim, any right of set-off, counterclaim, apportionment, proration, or contribution by reason of any other insurance obtained by or for any Unit owner.

(6) An insurer that has issued an insurance policy under this Article shall issue certificates or memoranda of insurance to the Association and, upon request, to any Unit owner or Mortgagee. Such policies may not be canceled nor may coverage thereunder be substantially changed (whether or not requested by the Executive Board) except by the insurer giving at least twenty (20) days prior written notice thereof to the Executive Board, the Insurance Trustee, if any, Unit owners, each holder of a first mortgage on a Unit, and every other party in interest who shall have requested such notice of the insurer;

(7) The insurer will recognize any Insurance Trust Agreement entered into by the Association.

Section 9.3. Additional Insurance. Nothing in this Declaration shall be construed to limit the authority of the Executive Board to obtain additional insurance which it deems advisable.

ARTICLE 10
UNITS SUBJECT TO CONDOMINIUM DOCUMENTS; EMINENT DOMAIN

Section 10.1. Applicability of Condominium Documents. Each present and future owner, tenant, occupant and holder of a mortgage on a Unit shall be subject to and shall comply with the provisions of the Act, and with the covenants, conditions and restrictions as set forth in the Condominium Documents and the deed to such Unit; *provided that*, nothing contained herein shall impose upon any tenant or holder of a mortgage on a Unit any obligation which the Act or one or more of the Condominium Documents, or both, make applicable only to Unit owners (including, without limitation, the obligation to pay assessments for Common Expenses). The acceptance of a deed or mortgage to any Unit, or the entering into of a lease or the entering into

occupancy of any Unit shall constitute an agreement that the provisions of the Act and the covenants, conditions and restrictions set forth in the Condominium Documents and the deed to such Unit are accepted and ratified by such grantee, holder of a mortgage on a Unit or tenant. All of such provisions shall be covenants running with the land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every deed, conveyance mortgage or lease thereof. Failure to comply with the covenants, conditions and restrictions set forth in the Condominium Documents and the deed to such Unit shall be grounds for an action to recover damages or for injunctive relief, or both, maintainable by the Executive Board on behalf of the Association or by an aggrieved Unit owner.

Section 10.2. Eminent Domain. Whenever all or part of the Common Elements shall be taken, injured or destroyed by eminent domain, each Unit owner shall be entitled to notice thereof and to participate in the proceedings incident thereto; *provided, however*, that the Association shall officially represent the Unit owners in such proceedings. In any proceedings for the determination of damages, such damages shall be determined for such taking, injury or destruction as a whole and not for each Unit owner's interest therein and any award for such damage shall be payable to the Association for the benefit of the Unit owners and of the Mortgagees.

ARTICLE 11
ASSOCIATION; EXECUTIVE BOARD OF THE ASSOCIATION

Section 11.1. The Association. The Association is the governing body for all Unit owners with respect to the administration, maintenance, repair, replacements, cleaning and management of the Common Elements. The membership of the Association shall at all times consist exclusively of all Unit owners. Each Unit owner shall automatically become and be a member of the Association as long as such person is a Unit owner and upon the termination of the interest of a Unit owner in the Condominium, such Unit owner's membership and any interest in the common funds of the Association shall thereupon automatically terminate and transfer and inure to the next Unit owner or Unit owners succeeding such Unit owner in interest. The Association shall have all of the powers granted pursuant to Section 1603-102 of the Act, including the powers to assign its right to future income.

Section 11.2. Members of the Executive Board.

(a) The initial Executive Board shall consist of three (3) members.

(b) There shall be no Declarant control period. The Unit owners (including the Declarants to the extent of any Units owned by a Declarant at that time) shall each have the right to appoint one person to be its designated representative on and a member of the Executive Board in accordance with the Bylaws. The members of the Executive Board so appointed shall serve until the first regular election of the Executive Board held at the next annual meeting of the Association held in accordance with the Bylaws; thereafter, members of the Executive Board shall be elected in accordance with the Bylaws. The Bylaws may provide for the members of the Executive Board to serve staggered terms.

(c) Subject to the terms and provision of the Act, this Declaration or the Bylaws, the Executive Board shall have the power to act on behalf of the Association. The Executive Board shall possess all of the duties and powers granted to the Executive Board by the Act.

Section 11.3. Disputes. In the event of any dispute or disagreement between any Unit owners relating to the Property, or any questions of interpretation or application of the provisions of the Condominium Documents, the determination thereof by the Executive Board shall be final and binding on each and all such Unit owners. 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 Section 11.3. All costs of obtaining such judgment shall be borne by the disputants, or in the absence of disputants, by the Association as a Common Expense.

Section 11.4. Abating and Enjoining Violations by Unit Owners. The violation of any Rules and Regulations adopted by the Executive Board, the breach of any provision contained in the Condominium Documents, the deed to any Unit, or the Act by any Unit owner or any tenant of such Unit owner, shall give the Executive Board the right, in addition to any other rights to which it may be entitled, to enjoin, abate or remedy by appropriate legal proceedings, either by law or in equity, the continuance of any such violation or breach.

Section 11.5. Limited Liability of the Executive Board. To the maximum extent permitted by applicable law, the Executive Board, and its members in their capacity as members, officers and employees:

(a) Shall not 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 Units, or from any of its pipes, drains, conduits, appliances, or equipment, or from any other place unless in each such instance such injury or damage has been caused by the willful misconduct or gross negligence of the Association or the Executive Board;

(b) Shall not be liable as a result of the performance of the Executive Board members' duties for any mistakes of judgment, negligence or otherwise, except for the Executive Board members' own willful misconduct or gross negligence;

(c) Shall have no 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;

(d) Shall not 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 such Unit owner or his tenants, employees, agents, customers or guests in a Unit, or in or

on the Common Elements or Limited Common Elements, except for the Executive Board members' own willful misconduct or gross negligence;

(e) Shall have no 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, except for the Executive Board members' own willful misconduct or gross negligence in the performance of their duties; and

(f) Shall have no 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 their performance of their duties, except for the Executive Board members' own willful misconduct or gross negligence.

Section 11.6. 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 attorneys' fees, reasonably incurred by or imposed upon the Executive Board Member in connection with any proceeding in which the Executive Board member may become involved by reason of the Executive Board member being or having been a member and/or officer of the Executive Board, or any settlement of any such proceeding, whether or not the Executive Board member is an Executive Board member, officer or both at the time such expenses are incurred, except with respect to any matter as to which such Executive Board member shall have been finally adjudicated in any action, suit or proceeding not to have acted in good faith in the reasonable belief that his or her action was in the best interests of the corporation or, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful; *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 still an Executive Board member at the time of settlement) approves such settlement and reimbursement as being in the best interests of the Association. The indemnification by the Unit owners set forth in this Section 11.6 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.

Section 11.7. 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 such complaints shall be defended by the Association. The Unit owners and the Eligible Mortgage Holders shall have no right to participate other than through the Association in such defense. Complaints of a nature specified in Section 3.3. hereof against one or more but less than all Unit owners shall be defended by such Unit owners who are defendants themselves and such Unit owners shall promptly give written notice of the institution of any such suit to the Association and to the holders of any mortgages encumbering such Units.

Section 11.8. Storage; Disclaimer of Bailee Liability. Neither the Executive Board, the Association, any Unit owner nor the Declarant shall be considered a bailee of any personal property stored on the Common Elements (including property located in storage areas on the Common Elements, including the Limited Common Elements), whether or not exclusive possession of the particular area is given to a Unit owner for storage 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.

ARTICLE 12
MANAGEMENT

The Association shall have the right to employ a professional, experienced managing agent who shall oversee the daily operation of the Condominium in accordance with the provisions of the Act and the Condominium Documents.

ARTICLE 13
ASSESSMENTS; LIABILITY OF UNIT OWNERS

Section 13.1. Power to Assess.

(a) The Association, acting through the Executive Board in accordance with the Bylaws, shall have the power to fix and determine, from time to time, the sums necessary and adequate to provide for the Common Expenses (based on the Budget for such fiscal period), including, but not limited to, such amounts as are necessary for (i) the maintenance, repair and replacement of the Common Elements and the Limited Common Elements, as set forth in Section 3.3(a) hereof, (ii) uncollectable assessments, (iii) budget deficits, (iv) such other reserves as are hereinafter described, (v) such additional reserves as the Executive Board shall deem necessary or prudent, and (vi) such other expenses as are specifically provided for in the Act, this Declaration, and the Bylaws. The Association may establish an adequate reserve fund for maintenance, repair and replacement of those Common Elements and Limited Common Elements for which the Association is responsible that are anticipated to require replacement, repair or maintenance on a periodic basis, and to cover any deductible amount for insurance policies maintained by the Association. If such reserve fund is established by the Association, the Association may fund it by the Monthly Assessments. Common Expenses, to the extent they are imposed, shall be assessed against each Unit in accordance with the allocation set forth in Section 5.2 above and Section 1602-107 of the Act. Charges incurred by the Association and related to Limited Common Elements shall be assessed against only those Units benefiting from the Limited Common Elements. After the adoption of the first annual proposed budged by the Executive Board, the Executive Board shall annually adopt a proposed budget (the "Budget"), and, within thirty (30) days of adoption shall provide a summary of the proposed Budget to all Unit owners, *provided that* the Association shall have no obligation to adopt the first Budget unless requested to do so by all of the Unit owners. The Executive Board shall also schedule a meeting of the

Unit owners to consider ratification of the Budget not less than fourteen (14) days nor more than thirty (30) days after the mailing of such summary. Unless at that meeting a majority of all of the Unit owners reject the Budget, the Budget is ratified, whether or not a quorum is present. In the event the Budget is not ratified, the current Monthly Assessment, if any, shall continue until the adoption of a new Budget is made at a meeting of the Association called for that purpose no sooner than fifteen (15) days nor later than thirty (30) days after the initial ratification meeting of the Unit owners. The Declarant shall pay the Monthly Assessment for Units owned by the Declarant in the same manner as the other Unit owners, beginning with the first Monthly Assessment as provided in Section 13.3 hereof.

(b) In addition to paragraph (a) of this Section 13.1, the following shall apply:

(1) Any Common Expense associated with the maintenance, repair or replacement of a Limited Common Element shall be assessed against the Unit or Units to which that Limited Common Element is assigned.

(2) Any payments, fees or charges for the use, rental or operation of any Common Element shall be applied first, to reduce the Common Expense relating to such Common Element and, second, any excess shall be applied to Common Expenses generally.

(3) Assessments to pay a judgment against the Association shall be a lien only against the Units in the Condominium at the time the judgment was entered, in proportion to their Common Expense liability.

(4) If any Common Expense is caused by the misconduct of any Unit owner, the Association may assess that expense exclusively against such Unit owner's Unit.

(5) If Common Expense liabilities are reallocated, Common Expense assessments and any installment thereof not yet due shall be recalculated in accordance with the reallocated Common Expense liabilities.

(6) Any Common Expense that is to be reimbursed by Unit owners according to use shall be paid as part of the Common Expense installment billed at the same time as the reimbursable expense, and for all purposes except allocation by Percentage Interest in the Common Elements, all such reimbursable expenses shall be treated as Common Expenses.

Section 13.2. Special Assessments. If the cash requirement estimated at the beginning of any fiscal year shall prove to be insufficient to cover the actual Common Expenses for such fiscal year for any reason (including by way of illustration and not limitation, any Unit owner's non-payment of its assessment or municipal assessments not yet assessed), the Executive Board shall have the power, at any time it deems necessary and proper, to levy one or more Special Assessments against each Unit owner. Special Assessments shall be due and payable in the manner and on the date set forth in the notice thereof.

Section 13.3. Payment of Assessments. Each Unit owner, including each Declarant to the extent a Declarant owns a Unit, shall pay all Monthly Assessments and Special Assessments levied by the Association in accordance with this Declaration and the Bylaws. Liability for such assessments shall be determined in accordance with Section 5.2 hereof. Such assessments shall begin accruing at the time of the creation of the Condominium and they shall be due and payable on a monthly basis as and if designated by the Executive Board. Assessments that are unpaid for over fifteen (15) days after the due date shall bear interest at the rate determined from time to time by the Executive Board from the due date until paid. In the sole discretion of the Executive Board, a late charge may be assessed against the delinquent Unit owner.

Section 13.4. New Assessments. After the initial assessment has been made by the Association, subsequent assessments shall be made by the Association annually on or before the anniversary date of the initial assessment or such other date as the Association may choose, based on the Budget adopted by the Association not later than sixty (60) days prior to the assessment. If the Executive Board shall fail to fix new Monthly Assessments for Common Expenses for the subsequent fiscal year before the expiration of any fiscal year, the Unit owners shall continue to pay the same sums they were paying for such Monthly Assessments during the fiscal year just ended and such sum shall be deemed to be the new Monthly Assessments for the succeeding fiscal year. If the Executive Board shall change the Monthly Assessment at a later date, the difference between the new Monthly Assessment, if greater, and the previous year's Monthly Assessment up to the effective date of the new Monthly Assessment shall be treated as if it were a Special Assessment under Section 13.2. hereof; thereafter each Unit owner shall pay the new Monthly Assessment. In the event the new Monthly Assessment is less than the previous year's Monthly Assessment, in the sole discretion of the Executive Board, the excess shall either be refunded to the Unit owners, credited against future Monthly Assessments or retained by the Association for reserves.

Section 13.5. No Exemption by Waiver. No Unit owner may exempt himself from liability for the Common Expenses by waiver of the enjoyment of the right to use any of the Common Elements or by the abandonment of such Unit owner's Unit or otherwise.

Section 13.6. Personal Liability of Unit Owners. All sums assessed by the Association as a Monthly Assessment or Special Assessment shall constitute the personal liability of the owner of the Unit so assessed and also, until fully paid, shall constitute a lien against such Unit pursuant to Section 1603-116 of the Act. Multiple owners of a Unit shall each be jointly and severally liable for all unpaid Monthly Assessments and Special Assessments. The Association may take such actions as are permitted by Section 1603-116 of the Act for failure to pay any assessment or other charges. The delinquent owner shall be obligated to pay (a) all expenses of the Executive Board, including reasonable attorneys' fees, incurred in the collection of the delinquent assessment by legal proceedings or otherwise, and (b) any amounts paid by the Executive Board for taxes or on account of superior liens or otherwise to protect its lien, which expenses and amounts, together with accrued interest, shall be deemed to constitute part of the delinquent assessment and shall be collectible as such.

Section 13.7. Liability of Purchaser of Unit for Unpaid Assessments.

(a) Upon the voluntary sale, conveyance or any other voluntary transfer of a Unit or any interest therein, the grantee thereof shall not be personally liable with the grantor thereof for all unpaid assessments for Common Expenses which are a charge against the Unit as of the date of consummation of the sale, conveyance or transfer, unless such grantee agrees to assume the obligation therefor; *provided, however*, except as provided in clause (b), a lien against the Unit so purchased for assessments imposed pursuant to this Declaration or the Act shall not be affected by such sale, conveyance or other transfer.

(b) Prior to or at the time of any conveyance of a Unit by Unit Owner, all unpaid assessments shall be paid in full. Any purchaser of a Unit shall be entitled to a written statement by the Association setting forth the accrued assessments for Common Expenses that are then unpaid, and such purchaser shall not be liable for, nor shall the Unit conveyed be subject to a lien for, accrued but unpaid assessments in excess of the amount therein set forth.

Section 13.8. Subordination of Certain Charges. The lien for any Monthly Assessments or any fees, charges, late charges, fines and interest that may be levied by the Association pursuant to Section 1603-102 of the Act shall be subordinate to any first mortgage lien recorded before or after such Monthly Assessment, fee, charge, late charge, fine or interest was due.

ARTICLE 14
SPECIAL DECLARANT RIGHTS AND DEVELOPMENT RIGHTS

Section 14.1. Special Declarant Rights and Development Rights. In addition to the easement rights reserved in Article 6, the Declarants reserve to themselves and for the benefit of their respective successors and assigns, and subjects the Property to, the right:

(a) to effect the construction of the Building and other improvements constituting Unit No. 2, in accordance with the description thereof set forth on the Plat.

(b) to effect an expansion of Unit No. 1, by (i) modifying the vertical boundaries thereof in the area of the single story structure attached to the west side of the Building constituting Unit No. 1 between the wing of said Building that extends southwesterly and the wing of said Building that extends in a northwesterly direction (the "Loading Structure"), as follows: (A) projecting in a northwesterly direction the vertical boundary that is three feet outside the southwest facing exterior wall of the Loading Structure that extends in a northwesterly direction from the northwest side of the southwesterly wing of said Building to the intersection of such projected vertical boundary with the extended vertical boundary described in clause (B); and (B) projecting the vertical boundary that is three feet outside the northwest facing fascia of overhanging roof of the Loading Structure that extends in a southwesterly direction from the westerly side of the Loading Structure to the intersection of such projected vertical

boundary with the projected vertical boundary described in clause (A); and (ii) constructing within the boundaries so modified additions to the Building and other improvements constituting Unit No. 1.

(b) until the construction of all Units is completed, to connect with and make use of utility lines, wires, pipes and conduits located on the Property for construction and sales purposes;

(c) until the construction of all Units is completed, to use the Common Elements for ingress and egress, for the repair and construction of Units and Common Elements, including, but not limited to, the movement and temporary storage of construction materials and equipment, and for the installation of signs and lighting for sales and promotional purposes; and

(d) to use easements through the Common Elements for the purposes of making improvements within the Condominium.

The real estate subject to these Development Rights and Special Declarant Rights is the Property.

Section 14.2 Amendment. This Article 14 shall not be amended without the written consent of the Declarants duly recorded in the Cumberland County Registry of Deeds.

ARTICLE 15
ASSIGNABILITY OF DECLARANT'S RIGHTS

The Declarants may assign any or all of their respective rights or privileges reserved or established by this Declaration or the Act in accordance with the provisions of the Act.

ARTICLE 16
AMENDMENT OF DECLARATION

Section 16.1. Amendments to Declaration. Except as otherwise provided herein or in Section 1602-117 of the Act, this Declaration may be amended only by unanimous vote or agreement of the Unit owners.

Section 16.2. Rights of Mortgagees. Approval of amendments of a material nature must be obtained from Eligible Mortgage Holders representing at least 51% of the votes of Units that are subject to mortgages held by Eligible Mortgage Holders. A change to any of the following, except where such change may be effected by the Declarants, the Association or certain Unit owners under the Act or this Declaration, are deemed to be material:

(a) voting rights;

(b) reallocation of interests in the Common Elements or Limited Common Elements, or rights to their use;

(c) boundaries of any Unit;

(d) convertibility of Units into Common Elements or Common Elements into Units;

(e) expansion or contraction of the Condominium, or the addition, annexation or withdrawal of property to or from the Condominium;

(i) insurance;

(j) restoration or repair of the Condominium (after a hazard damage or partial condemnation) in a manner other than that specified in the Condominium Documents;

(k) any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs; or

(l) any provisions that expressly benefit holders of mortgages on the Units.

The approval of an Eligible Mortgage Holder may be assumed when that Eligible Mortgage Holder has failed to submit a response to any written proposal for an amendment within thirty (30) days after the proposal is made. No amendment to the Condominium Documents shall diminish or impair the rights of the Declarants under the Condominium Documents without the prior written consent of the Declarants. No amendment may modify this Article 16 or the rights of any person hereunder. Except as specifically provided in the Condominium Documents, no provision of the Condominium Documents shall be construed to grant to any Unit owner, or to any other person, any priority over any rights of mortgagees of any Unit owner.

ARTICLE 17
TERMINATION

The Condominium may be terminated only by agreement of the Unit owners representing one hundred percent (100%) of the Percentage Interests. Termination of the Condominium will be governed by the provisions of Section 1602-118 of the Act.

ARTICLE 18
GENERAL PROVISIONS

Section 18.1. Headings. The headings used in this Declaration and any table of contents are inserted solely as a matter of convenience for the readers of this Declaration and shall not be relied upon or used in construing the effect or meaning of any of the provisions of this Declaration.

Section 18.2. Severability. The provisions of this Declaration shall be deemed independent and severable, and the invalidity or unenforceability of any provision or portion

thereof shall not affect the validity or enforceability of any other provision or portion hereof unless such deletions shall destroy the uniform plan of development and operation of the Condominium which this Declaration is intended to create.

Section 18.3. Applicable Law. This Declaration shall be governed by and construed according to the laws of the State of Maine.

Section 18.4. Interpretation. The provisions of this Declaration shall be liberally construed in order to effect Declarants' desire to create a uniform plan for development and operation of the Condominium. In the event of any conflict or discrepancy between this Declaration, the Bylaws and the Plat, the provisions of this Declaration shall govern.

Section 18.5. Effective Date. This Declaration shall become effective when it and the Plat have been recorded.

Section 18.6. Notices. All notices and other communications required or permitted to be given under or in connection with this Declaration shall be in writing and shall be deemed given when delivered in person or on the second business day after the day on which mailed by certified mail, return receipt requested, addressed to the address maintained in the register of current addresses established by the Association.

Section 18.7. Exhibits. All exhibits attached to this Declaration are hereby made a part of this Declaration.

Section 18.8. Pronouns. Wherever used, the singular number shall include the plural, the plural the singular and the use of any gender shall include all genders.

[The balance of this page is left blank intentionally. Signature page follows.]

IN WITNESS WHEREOF, the Declarants have caused this Declaration to be executed by their duly authorized representatives as of this 21 day of June, 2006.

JHA PROPERTIES, INC.

Witness

By: Kathryn J. Callnan, President

CEDARS NURSING CARE CENTER, INC.

Witness

By: Kathryn J. Callnan, President

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

June 21, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of JHA PROPERTIES, INC., a Maine non-profit corporation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said JHA PROPERTIES, INC.

Before me,

Lynne A. Burr, Notary Public
State of Maine
My Commission Expires 12/5/2009

Notary Public/Attorney at Law
Print Name: Lynne Burr
My commission expires: 2009

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

June 21, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of CEDARS NURSING CARE CENTER, INC., a Maine non-profit corporation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said CEDARS NURSING CARE CENTER, INC.,

Before me,

Lynne A. Burr, Notary Public
State of Maine
My Commission Expires 12/5/2009

Notary Public/Attorney at Law
Print Name: Lynne Burr
My commission expires: 2009

LIMITED JOINDER AGREEMENT OF MORTGAGEE

The undersigned, MAINE HEALTH AND HIGHER EDUCATIONAL FACILITIES AUTHORITY, a public body corporate and politic of the State of Maine, created and existing under the Constitution and the laws of the State of Maine, with a place of business at 3 University Drive, P.O. Box 2268, Augusta, Maine 04330 (herein called the "Mortgagee"), as holder of and mortgagee under the following instruments:

1. A certain Loan Agreement and Mortgage by JHA Properties, Inc., a Maine nonprofit corporation ("JHA Properties"), to the Mortgagee, dated as of March 1, 1998 and recorded in the Cumberland County Registry of Deeds in Book 13709, Page 1, and a certain Mortgage by JHA Properties, Inc., to the Mortgagee, dated as of October 9, 1998 and recorded in the Cumberland County Registry of Deeds in Book 14221, Page 222 (the "JHA Properties Mortgage"); and

2. A certain Loan Agreement and Mortgage by Cedars Nursing Care Center, Inc., a Maine nonprofit corporation ("Cedars"), to the Mortgagee, dated as of May 1, 1993 and recorded in the Cumberland County Registry of Deeds in Book 10717, Page 311 (the "Cedars Mortgage");

(herein the instruments described in paragraphs 1 and 2 above are sometimes collectively called the "Mortgages"), for itself and its successors and assigns, hereby

(i) **joins with** JHA Properties and Cedars (herein collectively called the "Declarants") in submitting the Property, as defined and described in this Declaration, separate portions of which are subject to the lien of one or the other of the Mortgages, to the provisions of the Maine Condominium Act, 33 M.R.S.A. Chapter 31, §§ 1601-101, et seq., as amended, for the sole and limited purposes of evidencing Mortgagee's consent as owner and holder of the Mortgages to the submission of the Property under this Declaration and to the creation and granting of those easements, uses, rights and privileges described in this Declaration and granting and releasing the liens, rights and interests described in clauses (ii) through (vi);

(ii) **grants and releases** to Cedars, its successors and assigns, all of Mortgagee's right, title and interest under the JHA Properties Mortgage in and to Unit No. 1 as created by this Declaration;

(iii) **grants and releases** to Cedars, its successors and assigns, and Properties, its successors and assigns, all of Mortgagee's right, title and interest under the Mortgages in and to Unit No. 2 as created by this Declaration and all Development Rights related to the construction of the Building and other improvements constituting Unit No. 2 in accordance with the description thereof set forth on the Plat;

(iv) **grants and releases** to JHA Properties, its successors and assigns, all of Mortgagee's right, title and interest under the Cedars_Mortgage in and to Unit No. 3 as created by this Declaration;

(v) **grants and releases** to JHA Properties and Cedars, their respective successors and assigns, all of Mortgagee's right, title and interest under either of the Mortgages in and to the following easements of record:

(A) Utility and Access Easement described as Parcel B in easement deed from Cedars Nursing Care Center, Inc., to JHA Services, Inc., dated May 25, 1990, and recorded in the Cumberland County Registry of Deeds, Book 9188, Page 115, as amended and modified Short Form Quitclaim Deed from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 17, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 319, and by Easement Modification, between JHA Services, Inc. and Cedars Nursing Care Center, Inc., dated April 1, 1998, and recorded in the Cumberland County Registry of Deeds, Book 13708, Page 305 (the "Granting Deed");

(B) Emergency Access Road Easement described as Parcel C in the Granting Deed ;

(C) Parking Easement, Utility and Access Easement and Loop Road Easement retained as Items 1, 2 and 3 in the Granting Deed;

(D) Access Easement in easement deed from JHA Properties, Inc., to Cedars Nursing Care Center, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 321;

(E) Access Easement in easement from Cedars Nursing Care Center, Inc., to JHA Properties, Inc., dated March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 325; and

(F) Agreement and Reciprocal Easement Deed, between Cedars Nursing Care Center, Inc., and JHA Properties, Inc., dated as of March 27, 1998 and recorded in the Cumberland County Registry of Deeds, Book 13696, Page 331; and

(vi) **expressly retains, excepts and reserves**, for itself and its successors and assigns, the lien of and all other rights under the Cedars Mortgage in and to Unit No. 1; and

(vii) **expressly retains, excepts and reserves**, for itself and its successors and assigns, the lien of and all other rights under the JHA Properties Mortgage in and to Unit No. 3;

PROVIDED, that such joinder and consent shall not be construed to make said Mortgagee, its successors and assigns, as mortgagee, the Declarant or to impose on it any of the obligations or liabilities of the Declarant under this Declaration, including, without limitation, any obligation or liability of any kind to any purchaser(s) of any condominium unit(s), and said Mortgagee makes no warranties or covenants to any person or party, express or implied, as to title, merchantability, fitness for any particular purpose, physical condition or otherwise as to the Condominium premises.

The Mortgagee hereby agrees that its lien on Unit No. 1 under the Cedars Mortgage and its lien on Unit No. 3 under the JHA Property Mortgage, all as excepted and reserved herein, shall be subject to the provisions of said Maine Condominium Act and shall attach to the Units and Percentage Interests created by this Declaration, as it may be amended. The Mortgagee further agrees that, in the exercise of its rights as mortgagee under the aforesaid Mortgages, the Mortgagee will recognize the establishment of a condominium by this Declaration of Condominium.

[The balance of this page is left blank intentionally. Signature page follows.]

IN WITNESS WHEREOF, the Mortgagee has caused this instrument to be executed and sealed in its corporate name by its officer thereunto duly authorized as of the date of the foregoing Declaration.

WITNESS:

MAINE HEALTH AND HIGHER EDUCATIONAL FACILITIES AUTHORITY

By: _____
Robert O. Lenna
Its Executive Director

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

June 29th, 2006

Personally appeared before me the above-named Robert O. Lenna, Executive Director of Maine Health and Higher Educational Facilities Authority, and acknowledged the foregoing instrument to be his free act and deed in said capacity, and the free act and deed of said Maine Health and Higher Educational Facilities Authority.

_____
Notary Public/Attorney-at-Law
Print Name: JO-ELLEN P. KING
My Commission Expires: OCTOBER 27, 2011

Jo-Ellen P. King
Notary Public, Maine
My Commission Expires
October 27, 2011

EXHIBIT A

PROPERTY DESCRIPTION

A certain lot or parcel of land lying on the northwesterly side of Ocean Avenue and the northeasterly terminus of Byfield Road in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point and the intersection of the northeasterly terminus of said Byfield Road with the northwesterly sideline of said Byfield Road;

Thence S 50°04'08" W by the northwesterly sideline of said Byfield Road a distance of Thirty and 45/100 (30.45) feet to a point and the easterly corner of land now or formerly of Christopher J. King and Elizabeth C. King as described in a deed recorded in the Cumberland County Registry of Deeds in Book 20322, Page 332;

Thence N 39°56'15" W by said land of King a distance of Ninety-Nine and 20/100 (99.20) feet to a point;

Thence S 52°11'01" W by said land of King; by land now or formerly of Barry E. Scott and Mary A. Scott as described in a deed recorded in said Registry in Book 2809, Page 26; and by land now or formerly of N. Penrose Hallowell IV as described in a deed recorded in said Registry in Book 15501, Page 236, a distance of Two Hundred Thirty-Nine and 65/100 (239.65) feet to a point and the northeasterly corner of land now or formerly of Brian R. Sheets and Gaye L. Sheets as described in a deed recorded in said Registry in Book 13242, Page 35;

Thence N 37°59'05" W by said land of Sheets a distance of Sixty and 00/100 (60.00) feet to a point and the southeasterly line of land now or formerly of John Tevanian and Thelma M. Tevanian as described in a deed recorded in said Registry in Book 3627, Page 59;

Thence N 52°11'01" E by said land of Tevanian a distance of One Hundred and 04/100 (100.04) feet to a point;

Thence N 37°52'24" W by said land of Tevanian a distance of Sixty-Four and 64/100 (64.64) feet to a point and the southerly corner of land now or formerly of Old Port Realty Corp. as described in a deed recorded in said Registry in Book 4013, Page 113;

Thence N 52°11'01" E by said land of Old Port Realty Corp. a distance of Six Hundred Sixty-Eight and 07/100 (668.07) feet to a point and land now or formerly of Ledgewood Owners Association as described in a deed recorded in said Registry in Book 4446, Page 125;

Thence S 58°38'42"E by said land of Ledgewood Owners Association a distance of Zero and 97/100 (0.97) feet to a point, said point herein designated as "Point A";

Thence Southeasterly by said land of Ledgewood Owners Association following a non- tangent curve to the right having a radius of Two Hundred Fifty-Two and 54/100 (252.54) feet an arc distance of Two Hundred Fifteen and 57/100 (215.57) feet to a point, said point being located S 69°09'08" E a distance of Two Hundred Nine and 08/100 (209.08) feet from said "Point A";

Thence S 44°41'54" E by said land of Ledgewood Owners Association a distance of One Hundred Thirty-Nine and 56/100 (139.56) feet to a capped 5/8" rebar (PLS #199);

Thence S 44°27'57" E by said land of Ledgewood Owners Association a distance of Two Hundred Ninety-Nine and 33/100 (299.33) feet to a 1" iron pipe;

Thence S 43°59'21" E by said land of Ledgewood Owners Association a distance of Seventy and 26/100 (70.26) feet to a point and the northwesterly sideline of said Ocean Avenue;

Thence S 35°36'51" W by said Ocean Avenue a distance of Fifty-One and 28/100 (51.28) feet to a point;

Thence S 40°42'51" W by said Ocean Avenue a distance of Four Hundred Twenty-Six and 00/100 (426.00) feet to a point and the easterly corner of land now or formerly of David H. Littlefield and Bonnie S. Littlefield as described in a deed recorded in said Registry in Book 4458, Page 44;

Thence N 47°24'30" W by said Littlefield a distance of One Hundred and 58/100 (100.58) feet to a capped 5/8" rebar (PLS #509);

Thence S 45°36'30" W by said land of Littlefield a distance of One Hundred and 00/100 (100.00) feet to a point and land now or formerly of Domenico Floridino and Anna Floridino as described in a deed recorded in said Registry in Book 3029, Page 521;

Thence N 47°19'15" W by said land of Floridino; by land now or formerly of Peter J. Molloy and Elizabeth D. Molloy as described in a deed recorded in said Registry in Book 16537, Page 279; by land now or formerly of Elizabeth F. Searles and Harold E. Searles as described in a deed recorded in said Registry in Book 3122, Page 381; by land now or formerly of Leslie E. Conley and Avis J. Conley as described in deeds recorded in said Registry in Book 2640, Page 412 and Book 2649, Page 394; and by the northeasterly terminus of said Byfield Road a distance of Four Hundred Eighty and 78/100 (480.78) feet to the point of beginning.

Bearings are based on magnetic north 1924.

The above described parcel contains 10.57 acres.

Reference is herein made to a plan entitled "Cedars Condominiums Recording Plat/Condominium Plan, ALTA/ACSM Land Title Survey Cedars Plan/ALTA/ASCM/Land Title Survey" made for JHA Properties, Inc., Cedars Nursing Care Center, and JHA Assisted Living, Inc. dated September 8, 2005, and revised April 5, 2006, made by Titcomb Associates.

EXHIBIT B

Unit Identifying Number	Percentage Interest
Unit 1	33.333%
Unit 2	33.333%
Unit 3	33.333%

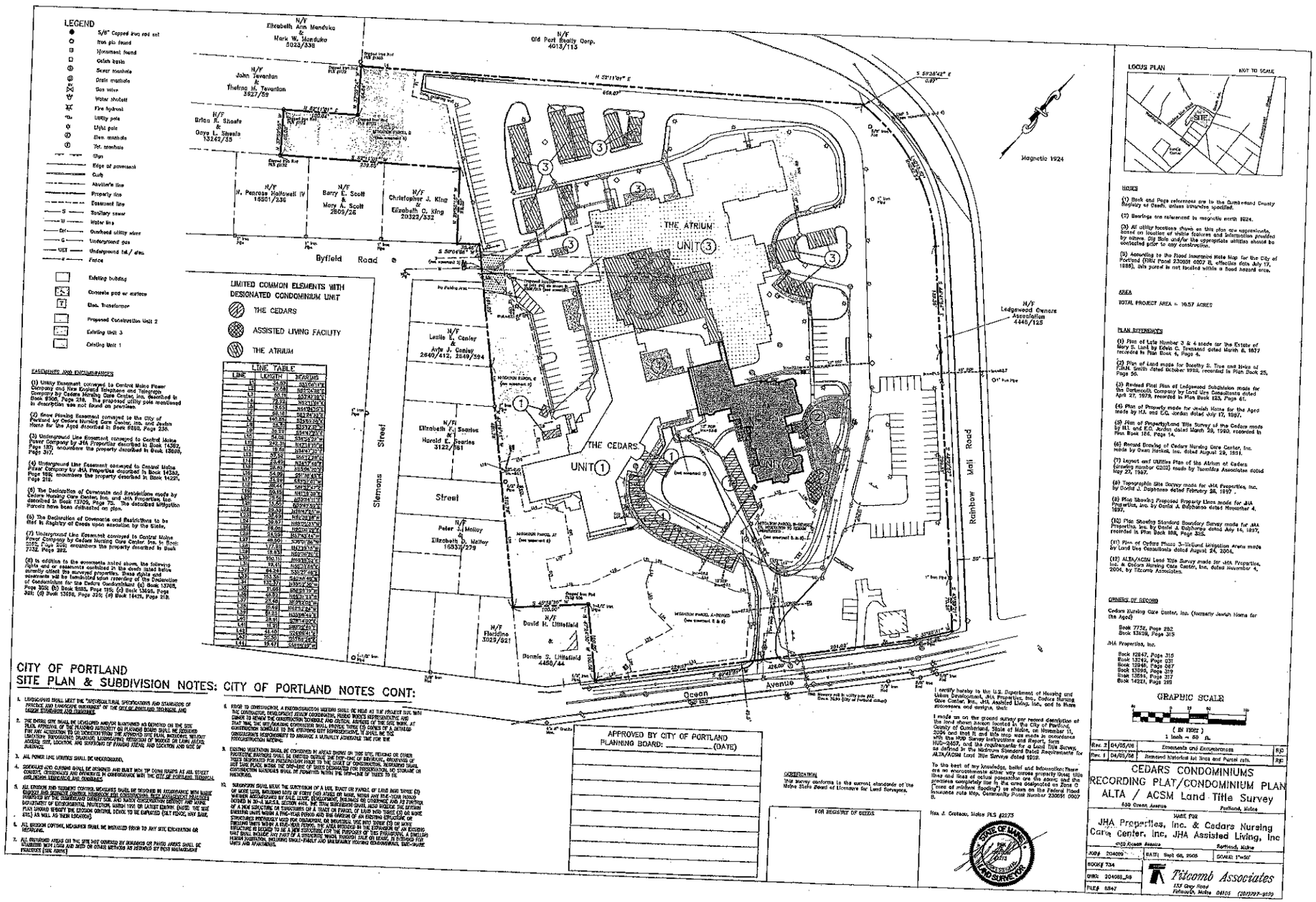
Formula Calculating Percentage Interest

All Units shall have an equal Percentage Interest to be calculated by (i) dividing one (1) by three (3).

Exhibit C

Doc#: 41828 Bk:24129 Pg: 315

Received
Recorded Register of Deeds
Jun 30,2006 01:45:01P
Cumberland County
John B OBrien



QUIT CLAIM DEED WITH COVENANT

KNOW ALL MEN BY THESE PRESENTS, that, CEDARS NURSING CARE CENTER, INC., a Maine non-profit corporation with a principal place of business in Portland, Cumberland County, Maine, for consideration paid grants to JHA ASSISTED LIVING, INC., a Maine non-profit corporation having a mailing address of 630 Ocean Avenue, Portland, Maine 04103, WITH QUIT CLAIM COVENANT its 33.6% (Thirty-Three and Six-Tenths Percent) tenancy-in-common interest in the following described property:

SEE EXHIBIT A ATTACHED HERETO
AND INCORPORATED HEREIN

WITNESS my hand and seal this 6th day of July, 2006.

MAINE REAL ESTATE TAX PAID

Signed, Sealed and Delivered
in the presence of

Witness

CEDARS NURSING CARE CENTER, INC.

By: Kathryn J. Callnan
Kathryn J. Callnan, President

State of New Hampshire
County of Hillsborough

July 6, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of Cedars Nursing Care Center, Inc., duly authorized, and acknowledged the foregoing instrument to be her free act and deed, and the free act and deed of Cedars Nursing Care Center, Inc.

Before me,

Notary Public
Print Name:
Commission Expires:

SEAL

SANDRA J. MORIN
Notary Public
My Commission Expires April 3, 2007

1141118.1

EXHIBIT A

The Unit ("Unit") designated as Number 2 of the Cedars Condominiums located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium") created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006, and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property hereby conveyed and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

Received
Recorded Register of Deeds
Jul 10,2006 02:40:15P
Cumberland County
John B OBrien

QUIT CLAIM DEED WITH COVENANT

KNOW ALL MEN BY THESE PRESENTS, that, JHA PROPERTIES, INC., a Maine non-profit corporation with a principal place of business in Portland, Cumberland County, Maine, for consideration paid grants to JHA ASSISTED LIVING, INC., a Maine non-profit corporation having a mailing address of 630 Ocean Avenue, Portland, Maine 04103, WITH QUIT CLAIM COVENANT its 66.4% (Sixty-Six and Four Tenths Percent) tenancy-in-common interest in the following described property:

SEE EXHIBIT A ATTACHED HERETO
AND INCORPORATED HEREIN

WITNESS my hand and seal this 27th day of September, 2006.

Signed, Sealed and Delivered
in the presence of

JHA PROPERTIES, INC.

Witness

By: Kathryn J. Callnan
Kathryn J. Callnan, President

State of Maine
County of Cumberland

September 27, 2006

Personally appeared the above-named Kathryn J. Callnan, President, of JHA Properties, Inc., duly authorized, and acknowledged the foregoing instrument to be her free act and deed, and the free act and deed of JHA Properties, Inc.

Before me,

Sylvia Gill

Notary Public
Print Name:
Commission Expires:

SYLVIA GILL
Notary Public, Maine
My Commission Expires October 21, 2013

MAINE REAL ESTATE TAX PAID

EXHIBIT A

The Unit ("Unit") designated as Number 2 of the Cedars Condominiums located at 630 Ocean Avenue, Portland, Cumberland County, Maine, ("Condominium") created pursuant to the provisions of the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, and set forth in Declaration of Cedars Condominiums, dated as of June 30, 2006, and recorded in Cumberland County Registry of Deeds in Book 24129, Page 276, as may be amended, and shown on the related plats and plans recorded in Plan Book 206, Page 430. The Unit is subject to and has the benefit of the Declaration, the Plats, Plans and the Act which are incorporated herein by reference, to which reference is hereby made for a more particular specification of the definition, location and description of the real property hereby conveyed and of the rights, obligations, easements, development rights, special Declarant rights, restrictions, covenants and conditions pertaining thereto.

Received
Recorded Register of Deeds
Oct 10,2006 11:34:34A
Cumberland County
John B OBrien

LEGEND

- 5/8" Capped iron rod set
- Iron pin found
- Monument found
- Catch basin
- Sewer manhole
- Drain manhole
- Gas valve
- Water shutoff
- Fire hydrant
- Utility pole
- Light pole
- Elec. manhole
- Tel. manhole
- Sign
- Edge of pavement
- Curb
- Abutter's line
- Property line
- Easement line
- Sanitary sewer
- Storm drain
- Water line
- Overhead utility wires
- Underground gas
- Underground tel./ elec.
- Underground tel./ elec./ cable
- Fence
- 1' contour
- 5' contour
- Concrete pad or walk
- Existing building
- Concrete pad or surface
- Elec. Transformer
- Existing Unit 3
- Existing Unit 1

LIMITED COMMON ELEMENTS WITH DESIGNATED CONDOMINIUM UNIT

- THE CEDARS
- ASSISTED LIVING FACILITY
- THE ATRIUM

LINE TABLE		
LINE	LENGTH	BEARING
L1	34.57	S33°08'11"E
L2	47.08	N62°24'26"E
L3	85.11	S53°47'19"E
L4	72.92	N52°11'01"E
L5	15.65	N44°04'15"E
L6	69.16	S83°24'33"E
L7	140.55	S54°59'56"E
L8	26.51	S35°12'37"W
L9	36.29	S54°47'23"E
L10	54.09	S34°54'22"W
L11	242.31	N47°19'15"W
L12	19.51	N34°47'32"E
L13	57.52	S55°12'28"E
L14	28.49	N34°17'48"E
L15	26.82	N65°06'20"E
L16	54.09	S51°38'43"E
L17	34.26	S33°57'01"W
L18	38.44	S51°57'47"E
L19	50.15	N41°16'39"E
L20	75.56	N23°34'11"E
L21	15.50	N55°49'59"E
L22	29.33	N25°47'25"W
L23	32.69	N52°36'18"W
L24	39.67	N88°05'33"W
L25	69.06	N20°00'29"E
L26	24.95	N57°43'44"W
L27	49.50	S35°01'56"W
L28	177.91	N47°19'15"W
L29	16.83	N60°36'26"E
L30	100.11	N68°16'52"E
L31	19.41	N55°39'58"E
L32	84.24	S38°27'46"E
L33	153.38	S40°48'48"W
L34	132.37	N33°52'30"W
L35	11.06	S58°09'19"W
L36	46.92	N66°31'23"W
L37	23.48	N10°12'08"W
L38	16.66	N62°52'24"W
L39	51.25	N35°08'49"E
L40	28.91	S78°14'02"E
L41	11.21	S83°22'48"E
L42	41.40	S24°08'41"E
L43	30.30	S03°56'26"E
L44	19.47	S58°09'19"W

EASEMENTS AND ENCUMBRANCES

(1) Utility Easement conveyed to Central Maine Power Company and New England Telephone and Telegraph Company by Cedars Nursing Care Center, Inc. described in Book 9306, Page 219. The proposed utility pole mentioned in description was not found on premises.

(2) Snow Plowing Easement conveyed to the City of Portland by Cedars Nursing Care Center, Inc. and Jewish Home for the Aged described in Book 9260, Page 236.

(3) Underground Line Easement conveyed to Central Maine Power Company by JHA Properties described in Book 14382, Page 187; encumbers the property described in Book 24129, Page 276.

(4) Underground Line Easement conveyed to Central Maine Power Company by JHA Properties described in Book 14382, Page 187; encumbers the property described in Book 24129, Page 276.

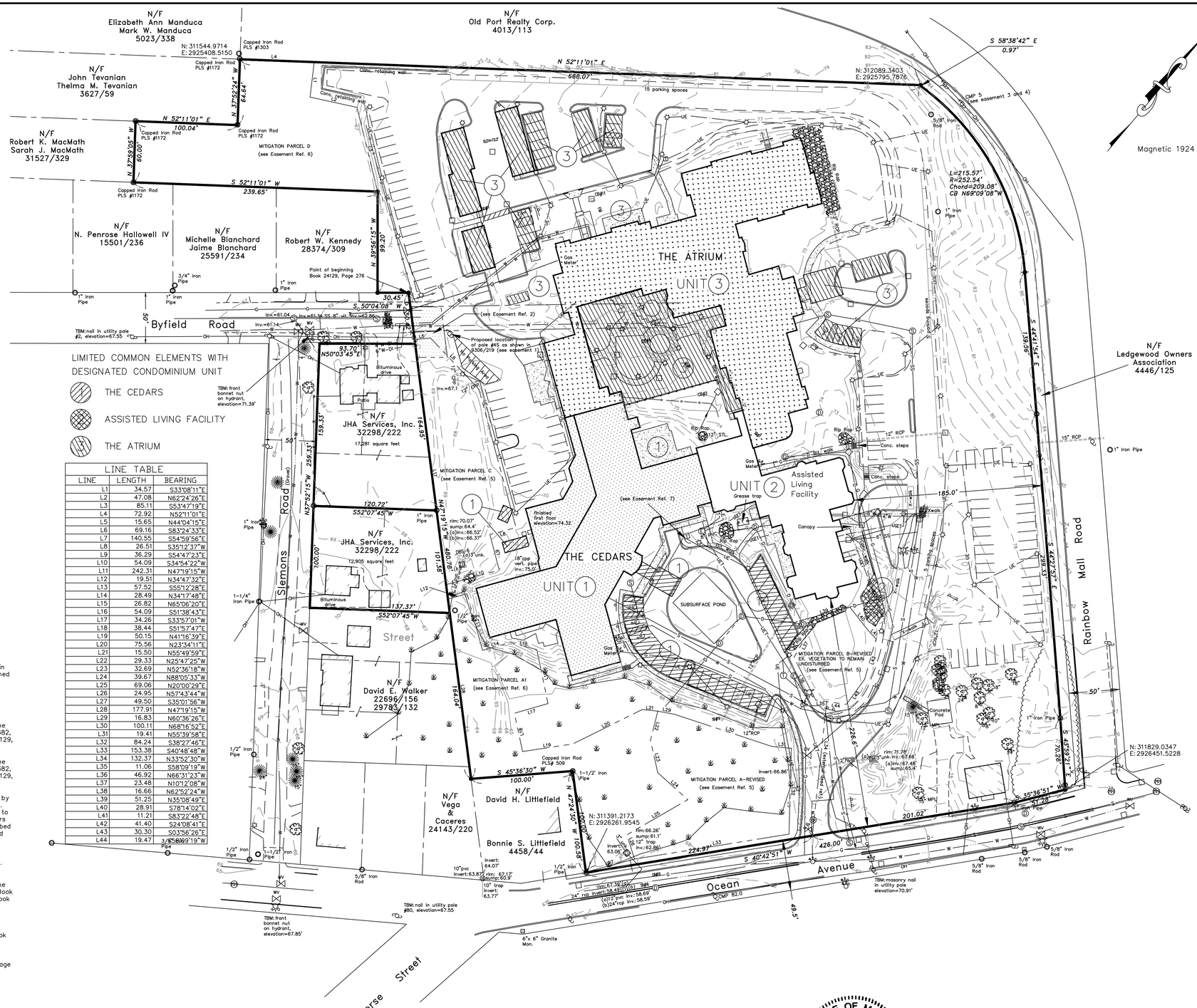
(5) The Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 13709, Page 75, and the Amendment to Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 24129, Page 254. The amended and unamended Mitigation Parcels have been delineated on plan.

(6) Declaration of Covenants and Restrictions made by Cedars Nursing Care Center, Inc. and JHA Properties, Inc. described in Book 24129, Page 265.

(7) Underground Line Easement conveyed to Central Maine Power Company by Cedars Nursing Care Center, Inc. in Book 9162, Page 206; encumbers the property described in Book 24129, Page 276.

(8) Certification of Variance Approval granted to Cedars Nursing Care Center, Inc., JHA Properties, Inc., and JHA Services, Inc. by the City of Portland in Book 13595, Book 182.

(9) Department of Environmental Protection Stormwater Standards and Conditions as set forth in Book 26415, Page 50.


N/F Elizabeth Ann Manduca Mark W. Manduca 5023/338
N/F John Tevanian Thelma M. Tevanian 3627/59
N/F Robert K. MacMath Sarah J. MacMath 31527/329
N/F N. Penrose Hallowell IV 15501/236
N/F Michelle Blanchard Jaime Blanchard 25591/234
N/F Robert W. Kennedy 28374/309
N/F Old Port Realty Corp. 4013/113
N/F Ledgewood Owners Association 4446/125
N/F JHA Services, Inc. 32298/222
17,281 square feet
N/F JHA Services, Inc. 32298/222
12,905 square feet
N/F David E. Walker 22696/156 29783/132
N/F Vega & Caceres 24143/220
N/F David H. Littlefield
Bonnie S. Littlefield 4458/44
N: 311544.9714 E: 2925408.5150
N: 312089.3403 E: 2925795.7876
N: 311829.0347 E: 2926451.5228
N: 311391.2173 E: 2926261.9545
Capped Iron Rod PLS #1303
Capped Iron Rod PLS #1172
N 52°11'01" E 668.07'
S 58°38'42" E 0.97'
N 37°52'24" W 64.64'
N 52°11'01" E 100.04'
N 37°39'05" W 60.00'
S 52°11'01" W 239.65'
N 39°56'15" W 99.20'
Point of beginning Book 24129, Page 276
S 50°04'08" W 30.45'
N 50°03'45" E 93.70'
S 52°07'45" W 120.72'
N 37°52'15" W 256.33'
N 47°19'15" W 680.78'
S 52°07'45" W 137.37'
S 45°36'30" W 100.00'
N 47°24'30" W 100.58'
S 40°42'51" W 426.00'
S 49°17'54" E 1154.96'
S 47°37'39" E 1226.67'
S 35°36'51" W 41.78'
L=215.57' R=252.54' Chord=209.08' CB N69°09'08"W
MITIGATION PARCEL D (see Easement Ref. 6)
MITIGATION PARCEL C (see Easement Ref. 5)
MITIGATION PARCEL A1 (see Easement Ref. 6)
MITIGATION PARCEL A-REVISED (see Easement Ref. 5)
MITIGATION PARCEL B-REVISED EX. VEGETATION TO REMAIN UNDISTURBED (see Easement Ref. 5)
Proposed location of pole #45 as shown in 9306/219 (see easement 1)
(see Easement Ref. 2)
(see Easement Ref. 7)
THE ATRIUM UNIT 3
THE CEDARS UNIT 1
UNIT 2 Assisted Living Facility
SUBSURFACE POND
Byfield Road
Slemons Road (Drive)
Street
Morse Street
Ocean Avenue
Mall Road
Rainbow
Magnetic 1924
LOCUS PLAN
NOT TO SCALE
Washington Avenue
Payson Park
Preble Street
Lunt's Corner
TBM: nail in utility pole #2, elevation=67.55
TBM: front bonnet nut on hydrant, elevation=71.39'
TBM: nail in utility pole #80, elevation=67.55
TBM: front bonnet nut on hydrant, elevation=67.85'
TBM: masonry nail in utility pole elevation=70.91'
4"x 6" Granite Mon.
CMP S (see easement 3 and 4)
5/8" Iron Rod
1" Iron Pipe
3/4" Iron Pipe
1/2" Iron Pipe
1-1/2" Iron Pipe
1-1/4" Iron Pipe
Capped Iron Rod PLS# 509
Bituminous drive
Patio
Gas Meter
Rip Rap
12" RCP
15" RCP
Conc. steps
Canopy
Concrete Pad
Grease trap
Finished first floor elevation=74.32
rim: 70.07' sump: 64.4' (a)inv.: 66.52' (b)inv.: 66.37'
rim: 71.79' (a)inv.: 67.66' sump: 63.4'
rim: 66.26' sump: 61.1' 12" trap inv.: 62.86'
Invert: 66.86'
Invert: 63.09'
Invert: 64.07'
rim: 67.17' sump: 60.9'
10" trap invert: 63.77'
10"pvc invert: 63.87'
18" cpp vert. pipe inv.: 75.0'
(a)12" pvc inv.: 58.69' (b)24" rcp inv.: 58.09'
24" rcp inv.: 58.09'
Invert: 67.39' (10")
Invert: 58.49' (10")
Invert: 67.39' (10")
Invert: 61.14 SS 8" wt. inv.=62.60
Inv.=61.04
Inv.=67.1
Inv.=61.34
Inv.=66.86
Inv.=66.84
Inv.=66.82
Inv.=66.80
Inv.=66.78
Inv.=66.76
Inv.=66.74
Inv.=66.72
Inv.=66.70
Inv.=66.68
Inv.=66.66
Inv.=66.64
Inv.=66.62
Inv.=66.60
Inv.=66.58
Inv.=66.56
Inv.=66.54
Inv.=66.52
Inv.=66.50
Inv.=66.48
Inv.=66.46
Inv.=66.44
Inv.=66.42
Inv.=66.40
Inv.=66.38
Inv.=66.36
Inv.=66.34
Inv.=66.32
Inv.=66.30
Inv.=66.28
Inv.=66.26
Inv.=66.24
Inv.=66.22
Inv.=66.20
Inv.=66.18
Inv.=66.16
Inv.=66.14
Inv.=66.12
Inv.=66.10
Inv.=66.08

Section 3: Compliance with Conditional Use Standards and Conditions

3.0 Conditional Use Standards

R-3:

Use: Institutional use as a long-term care facility is a conditional use in this zone. The applicant requests that the conditional use be granted for the proposed building on the basis that the use is consistent with the existing site and in compliance with the conditional use standards found in Section 14-474 and Section 14-88 (c) of the ordinance as demonstrated below.

Section 14-474 (c) 2.

a. The volume of traffic will be very similar to the current levels. The proposed facility will be adding approximately 8 to 9 staff during the daytime shift and there will be 20 additional beds at the facility. This will result in approximately 16 additional trips during the peak hour. The site will continue to be served by the single entrance on Ocean Avenue. Because the small increase in beds for the site we do not anticipate any changes in the deliveries to the site.
b. The proposed use will not create unsanitary or harmful conditions. The building will have mechanical systems located on the roof of the building and trash will be collected and stored at the dumpsters on the site behind the Hoffmann Building. Please see Section 15 for additional information regarding solid waste.
c. The orientation of the building is such that operational access to the building is from the main campus access drive which is internal to the site. There will be an activity area for residents along Rainbow Mall Road, but this area will be screened by a retaining wall, fence and landscaping. The parking lot will be screened from Rainbow Mall Road by landscaping. The portion of the building facing Ocean Avenue will be landscaped.

Section 14-88 (c)

b. The proposed use will displace a residential structure, the "White House" that has been used as offices by the Cedars since approximately 1991. It is not clear when it was last used as a residence. The proposed building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas are subject to mitigation easements for prior wetland impacts, and they will not be impacted by the proposed redevelopment.

Section 14-91 (a) off street parking: Parking shall be provided as required by Division 20. There will be an additional 14 spaces to accommodate the increase in staff during the day time shift and the 20 assisted living beds as required in Division 20.

R-5:

Use: Institutional use as a long-term care facility is a conditional use in this zone. The applicant requests that the conditional use be granted for the proposed building on the basis that the use is consistent with the existing site and in compliance with the conditional use standards found in Section 14-474 and Section 14-118 (b) of the ordinance. The following responses

Section 14-474 (c) 2.

d. The volume of traffic will be very similar to the current levels. The proposed facility will be adding approximately 7 to 8 staff during the daytime shift and there will be 20 additional beds at the facility. This will result in approximately 14 additional trips during the peak hour. The site will be served by the single entrance on Ocean Avenue. Because the small increase in beds for the site we do not anticipate any changes in the deliveries to the site.

e. The proposed use will not create unsanitary or harmful conditions. The building will have mechanical systems located on the roof of the building and trash will be collected in the garage and stored at the dumpsters on the site.

f. The orientation of the building is such that operational access to the building is from the main campus access drive which is internal to the site. There will be an activity area for residents along Rainbow Mall Road, but this area will be screened by a retaining wall, fence and landscaping. The parking lot will be screened from Rainbow Mall Road by landscaping. The portion of the building facing Ocean Avenue will be landscaped.

Section 14-118 (b)

b. The proposed use will displace a residential structure, the "White House" that has been used as offices by the Cedars since 1991. It is not clear when it was last used as a residence. The proposed building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas are subject to mitigation easements for prior wetland impacts, and no wetland impacts are proposed as part of the redevelopment.

Section 14-91 (a) off street parking: Parking shall be provided as required by Division 20. There will be an additional 13 spaces to accommodate the increase in staff during the day time shift and the 20 assisted living beds as required in Division 20.

Section 4: Compliance with Applicable Zoning Requirements

4.0 Existing Zones

The site exists within a R-3 and R-5 Zones. Compliance within these zones is indicated below:

R-3:

Use: Institutional use as a long-term care facility is a conditional use in this zone. The applicant requests that the conditional use be granted for the proposed building on the basis that the use is consistent with the existing site and in compliance with the conditional use standards found in Section 14-474 and Section 14-88 (c) of the ordinance as demonstrated below.

Section 14-474 (c) 2.

a. The volume of traffic will be very similar to the current levels. The proposed facility will be adding approximately 8 to 9 staff during the daytime shift and there will be 20 additional beds at the facility. This will result in approximately 16 additional trips during the peak hour. The site will continue to be served by the single entrance on Ocean Avenue. Because the small increase in beds for the site we do not anticipate any changes in the deliveries to the site.
b. The proposed use will not create unsanitary or harmful conditions. The building will have mechanical systems located on the roof of the building and trash will be collected and stored at the dumpsters on the site behind the Hoffmann Building. Please see Section 15 for additional information regarding solid waste.
c. The orientation of the building is such that operational access to the building is from the main campus access drive which is internal to the site. There will be an activity area for residents along Rainbow Mall Road, but this area will be screened by a retaining wall, fence and landscaping. The parking lot will be screened from Rainbow Mall Road by landscaping. The portion of the building facing Ocean Avenue will be landscaped.

Section 14-88 (c)

b. The proposed use will displace a residential structure, the "White House" that has been used as offices by the Cedars since approximately 1991. It is not clear when it was last used as a residence. The proposed building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas are subject to mitigation easements for prior wetland impacts, and they will not be impacted by the proposed redevelopment.

Section 14-91 (a) off street parking: Parking shall be provided as required by Division 20. There will be an additional 14 spaces to accommodate the increase in staff during the day time shift and the 20 assisted living beds as required in Division 20.

R-5:

Use: Institutional use as a long-term care facility is a conditional use in this zone. The applicant requests that the conditional use be granted for the proposed building on the basis that the use is consistent with the existing site and in compliance with the conditional use standards found in Section 14-474 and Section 14-118 (b) of the ordinance. The following responses

Section 14-474 (c) 2.

d. The volume of traffic will be very similar to the current levels. The proposed facility will be adding approximately 7 to 8 staff during the daytime shift and there will be 20 additional beds at the facility. This will result in approximately 14 additional trips during the peak hour. The site will be served by the single entrance on Ocean Avenue. Because the small increase in beds for the site we do not anticipate any changes in the deliveries to the site.

e. The proposed use will not create unsanitary or harmful conditions. The building will have mechanical systems located on the roof of the building and trash will be collected in the garage and stored at the dumpsters on the site.

f. The orientation of the building is such that operational access to the building is from the main campus access drive which is internal to the site. There will be an activity area for residents along Rainbow Mall Road, but this area will be screened by a retaining wall, fence and landscaping. The parking lot will be screened from Rainbow Mall Road by landscaping. The portion of the building facing Ocean Avenue will be landscaped.

Section 14-118 (b)

b. The proposed use will displace a residential structure, the “White House” that has been used as offices by the Cedars since 1991. It is not clear when it was last used as a residence. The proposed building cannot be located elsewhere on the Cedars campus without causing significant environmental impacts in the remaining undeveloped portions of the site. The wetland areas are subject to mitigation easements for prior wetland impacts, and no wetland impacts are proposed as part of the redevelopment.

Section 14-91 (a) off street parking: Parking shall be provided as required by Division 20. There will be an additional 13 spaces to accommodate the increase in staff during the day time shift and the 20 assisted living beds as required in Division 20.

Cedars Site Plan Dimensional Requirements				
Code	**Item**	**Proposed**	**Conditions R-5**	**Conditions R-3**
14-87, 14-88(c)2.a.	Permitted Uses	Institutional	Allowed with conditional permit	Allowed with conditional permit
14-90	Dimensions			
a	Lot Size	10.5 acres	2 acres	2 acres
c	Frontage	578 feet	50	50 Feet
d	Front Setback	25	20	25
	Side Setback (Street)	20	20	20
	Side Setback	Variable	14	16
	Rear Setback	No Change		25
e	Max. Lot Cover	20.3%	40%	35%
f	Min Lot Width	Varies; over 400’	90 feet	65 feet
g	Max Str. Height	35’	35 feet	35 feet
h	Units/Building	N/A	12 max	2 max
i-q	N/A	N/A		N/A
14-91	Others			
a	Parking	0	(See Div 20)	(See Div 20)
c	N/A	N/A	N/A	N/A
14-92-6	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
Parking			**From Division 20**	
Off-Street	Residential Use	N/A	2/Dwelling Unit	
	LT Care	4	4; 1/5 Beds	
	LT Care	9	9; 1/Employee during day shift	
14-526A	Bike Parking	4	2.6; 2/10 new required parking spaces	
	Motor/Scooter	1	1	

R E P O R T

15-1202 S

February 7, 2018

Explorations and Geotechnical Engineering Services

Proposed Long-Term Care Facility
The Cedars
630 Ocean Avenue
Portland, Maine 04103

Prepared For:
The Cedars
Attention: Kathryn Callnan
630 Ocean Avenue
Porland, Maine 04103

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039
T: 207-657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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15-1202 S

February 7, 2018

The Cedars
Attention: Kathryn Callnan
630 Ocean Avenue
Portland, Maine 04103

Subject: Explorations and Geotechnical Engineering Services
Proposed Long Term Care Building
630 Ocean Avenue
Portland, Maine 04103

Dear Kathryn:

In accordance with our revised Agreement, dated November 28, 2017, we have performed 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 Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information at the site in order to develop geotechnical recommendations relative to foundations, earthwork and pavement associated with the proposed construction. Our scope of services included test boring and test probe explorations, soils laboratory testing, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is located at The Cedars facility on Ocean Avenue in Portland, Maine. We understand development plans call for a new long-term care building in the northeast corner of The Cedars campus, adjacent to the intersection of Rainbow Mall Road and Ocean Avenue. We understand the building will be three-story, on-grade, and will occupy a plan footprint of approximately 15,100 SF. A finish floor elevation of 73.8 feet (project

datum) is proposed, requiring tapered cuts approaching 8 feet to achieve slab grade based on the existing and proposed topographic information provided. We understand retaining walls are proposed along the northerly and westerly sides of the building to support up to about 7 feet of grade change. A paved parking area extension is proposed on the westerly side of the existing paved parking area requiring tapered cuts of up to about 6 feet to achieve pavement grades. New under-drained soil filters are proposed on the southerly side of the proposed paved area and on the easterly side of the proposed building requiring several feet of cut to achieve grades.

Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Six test borings (B-101 through B-106) and nine auger probes (P-101 through P-109) were made at the site on January 19, 2018 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 plan provided by others and GPS equipment. Available locations for the explorations were somewhat limited by existing underground utilities as well as site structures and features. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the test boring explorations and a key to the notes and symbols used on the logs are attached in Appendix C. The elevations shown on the logs were estimated based on the topographic information shown on the "Exploration Location Plan". A table showing the approximate depths to refusal is shown below.

2.2 Field Testing

The explorations were drilled using a combination of hollow-stem and solid stem auger-boring techniques. The soils at the test borings were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. SPT blow counts are shown on the test boring logs. Soil sampling was not performed at the auger probes.

2.3 Laboratory Testing

Soil samples obtained from the test boring explorations were returned to our laboratory for further classification and testing. Moisture content test results are noted on the logs. The results of two laboratory soil gradation tests are attached in Appendix D.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

The ground surface was snow covered and frozen to variable depths at the time of exploration work. Thus, it was difficult to observe bedrock outcrops and to determine the surficial forest duff and topsoil thicknesses. We were able to observe what appears to be bedrock out crops in a few areas, as noted approximately on the Exploration Location Plan. We also observed bedrock within the basement of the existing office building at the corner of Rainbow Mall Road and Ocean Avenue. It appears the bedrock surface varies from about 4 to 5 feet below the ground surface surrounding the building.

Test borings B-101 through B-103 and auger probes P-101 through P-108 were made in the area of the proposed building. Borings B-101 through B-103 encountered a soils profile generally consisting of forest duff and topsoil overlying brown silty gravelly sand (fill) with some pieces of brick at boring B-101 overlying loose to medium dense brown silty sand with varying amounts of gravel overlying refusal surfaces (probable bedrock). These test borings and auger probes encountered refusal surfaces at depths varying from about 1 to 5.5 feet below the existing ground surface.

Test borings B-104 through B-106 and auger probe P-109 were made in the proposed parking lot expansion area west of the existing paved parking lot. These explorations encountered forest duff and topsoil overlying loose to dense brown silty sand with varying amounts or gravel overlying refusal surfaces (probable bedrock) varying from about 2.5 to 7 feet below the existing ground surface.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

Approximate depths and elevations to probable bedrock at the explorations are presented below.

Exploration Refusal Depth/Elevation Information			
Exploration No.	**Approx. Ground/Surface Elevation (ft)**	**Approx. Depth to Probable Bedrock (ft)**	**Approx. Elevation Probable Bedrock (ft)**
B-101	75	5.0	70.0
B-102	75	4.0	71.0
B-103	75	5.6	69.5
B-104	78	6.0	72.0
B-105	82.5	3.0	79.5
B-106	84	2.0	82.0
P-101	75	1.0	74.0
P-102	76	2.0	74.0
P-103	77	2.4	74.5
P-104	76	3.0	73.0
P-105	77.5	2.5	75.0
P-106	78.5	2.5	76.0
P-107	77.5	3.4	74.0
P-108	76	2.5	73.5
P-109	80	2.5	77.5

3.2 Groundwater

The soils encountered at the test borings were frozen to a depth of about 12 inches and were generally moist below the frozen soil. Groundwater likely becomes perched on the relatively impervious bedrock beneath the site. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations include:

- The prosed building and parking lot expansion areas are underlain by shallow bedrock. We recommend all overburden soils be removed to expose bedrock

across the proposed building pad and entrances. Blasting to remove bedrock to achieve subgrade elevation will be needed. Loose, weathered and over-blasted bedrock should be removed to expose sound intact bedrock. Care must be taken to limit over-blasting subgrades to help reduce the removal and replacement of loose blast rock. It was reported that blasting was performed during past construction at the facility; thus, loose and disturbed blast rock and disturbed soil may be encountered within the proposed construction areas.

- Spread footing foundations and slab-on-grade floors bearing on properly prepared subgrades appear suitable for the proposed building. Footings should bear on a compacted Crushed Stone (choke layer) overlying sound, intact bedrock. On-grade floor slabs should bear on at least 12-inches of compacted Structural Fill overlying compacted Crushed Stone (choke layer) overlying sound, intact bedrock.

- We anticipate paved area subgrades will be native silty sands or blasted bedrock. We recommend granular soil subgrades be densified prior to placing new fills. Where subgrades consist of blasted bedrock, we recommend a choke layer (Crushed Stone) be provided overlying sound intact bedrock prior to placing new fills.

- All topsoil and soils containing roots and organics, remnant structures and foundations and any loose over-blast rock must be completely removed from beneath the proposed building and paved areas prior to placing choke layer.

4.2 Site and Subgrade Preparation

We recommend that site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. All overburden above the bedrock, existing foundations and utilities and loose bedrock should be completely removed from areas of proposed building construction (including entrances) as well as retaining walls. As much vegetation as possible should remain outside the construction areas to lessen the potential for erosion and site disturbance.

Building Pad and Footings and Retaining Walls: As discussed, all overburden should be completely removed from beneath the proposed building area, entrances and retaining walls. 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). We recommend a choke stone layer consisting of about 4 inches of well graded crushed aggregate be compacted and worked into the bedrock subgrade with a vibratory roller-compactor to help fill any voids beneath areas of construction prior to placing new fills or concrete.

Paved and Utilities: Based on the findings at the explorations and the proposed finish pavement grades shown on the Exploration Location Plan, we anticipate paved area and utility subgrades will consist of bedrock and existing granular soil. Loose blast rock should be removed to expose sound, intact bedrock. We recommend a choke stone layer consisting of about inches of about 4 inches of crushed stone be compacted and worked into the bedrock surface prior to placing pavement base gravel and utility bedding material. Existing granular soil subgrades should be densified with a vibratory roller-compactor prior to placing new fills provided the soils are not wet.

4.3 Excavation and Dewatering

Excavation work will generally encounter uncontrolled fills, existing structures and foundations, existing utilities, silty sand soils and bedrock. Earthwork and grading activities should occur during drier, non-freezing weather of spring, summer and fall.

Based on the subsurface findings, we anticipate blasting and/or mechanical means will be required for bedrock removal. We recommend a licensed blasting contractor be engaged and should provide a detailed blasting plan. Drilling and blasting should be controlled to within about 12 inches of bottom of footings and within about 2 feet of bottom of slabs (or as needed for sub-slab utilities and interior foundations). Pre-blast surveys should be completed on surrounding structures, water supply wells 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 depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent

structures, utilities and roadways. The design and planning of blasting, excavations, excavation support systems, and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed buildings be supported on spread footings founded on compacted choke stone bearing on sound, intact bedrock. 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 (100 year AFI)	4.5 feet
Net Allowable Soil Bearing Pressure	4.0 ksf
Base Friction Factor	0.35
Total Unit Weight of Backfill	125 pcf
At-Rest Lateral Earth Pressure Coefficient	0.5
Internal Friction Angle of Backfill	30°
Seismic Soil Site Class	B (IBC 2015)
Estimated Total Settlement	½-inch
Differential Settlement	½-inch

4.5 Foundation Drainage

We recommend an underdrain system be installed adjacent to the outside edge of the perimeter footings. The underdrain pipe should consist of 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone and wrapped in non-woven geotextile fabric such as Mirafi 160N. The underdrain pipe must have 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 illustrated on the “Foundation Detail Sketch” attached in Appendix B.

4.6 Slab-On-Grade

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 120 pci (pounds per cubic inch) provided the slab is underlain by at least 12-inches of compacted Structural Fill placed over 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 radon venting system be installed within the Structural Fill layer beneath the slab.

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 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 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 shown on the "Foundation Detail Sketch" attached in Appendix B.

4.8 Fill, Backfill and Compaction

We recommend the following fill and backfill materials: recycled products must also be tested in accordance with applicable environmental regulations and approved by a qualified environmental consultant.

Common Borrow: Fill to raise grades in landscape areas should be non-organic compactable earth meeting the requirements of 2014 MaineDOT Standard Specification 703.18 Common Borrow.

Granular Borrow: Fill to raise grades beneath interior building slabs and paved areas, as well as to repair soft areas, should be sand or silty sand meeting the following gradation:

Granular Borrow		
Sieve Size	**Percent Finer by Weight**	
	Below Water	**Above Water**
6 inch	100	100
Portion Passing 3 inch Sieve		
3 inch	100	--
No. 40	0 to 70	0 to 70
No. 200	0 to 7	0 to 20

In our opinion, 2014 MaineDOT Standard Specification 703.19 Granular Borrow meets the requirements of Granular Borrow.

Structural Fill: Backfill for foundations, slab base material and fill below exterior entrance slabs 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
No. 40	0 to 30
No. 200	0 to 6

Crushed Stone: Crushed Stone, used beneath foundations for a choke layer and for underdrain aggregate should be washed ¾-inch crushed stone meeting the requirements of 2014 MaineDOT Standard Specification 703.22 Underdrain Backfill Material Type C.

Reuse of Site Soils: The non-organic on-site soils are unsuitable for reuse in building areas, but may be suitable for reuse as Common Borrow in paved and landscape areas, provided they are at a compactable moisture content at the time of reuse. On-site blast rock may be suitable for re-use provided it is crushed and mixed with a granular soil creating a material meeting the above gradation specifications.

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.

4.9 Segmental Retaining Wall

For the proposed site retaining walls, we recommend wet-cast segmental retaining walls (SRW), such as Redi-Rock. We recommend the facing blocks be founded on a minimum 6-inch thick leveling course of compacted Crushed Stone overlying a choke stone layer overlying sound, intact bedrock. For design of SRW walls, we recommend the following geotechnical parameters for design:

Geotechnical Parameters for Segmental Retaining Wall		
Wall Zone	**Unit Weight (pcf)**	**Friction Angle**
Reinforced Soil	130	34
Retained Soil	125	30
Foundation Soil	125	30

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 should be retained to perform a global stability analysis of the SRW and to review the SRW submittal if designed by others. We recommend SRW walls meet the requirements of 2014 MaineDOT Standard Specification 672 or 673.

4.10 Paved Areas

We anticipate paved areas will be subjected primarily to passenger vehicle and light delivery truck traffic with occasional heavy delivery truck traffic. Considering the site soils, and proposed usage, we offer the following pavement section for consideration.

FLEXIBLE (HMA) PAVEMENT SECTION – 2014 MaineDOT Standard Specs	
Pavement Layer	**Material Thickness**
MaineDOT 9.5 mm Hot Mix Asphalt	1 ½ inches
MaineDOT 19.0 mm Hot Mix Asphalt	2 ½ inches
MaineDOT 703.06 Aggregate Base Type A	6 inches
MaineDOT 703.06 Aggregate Subbase Type D	12 inches

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 this area. In the absence of full depth excavation of frost susceptible soils below paved areas 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.

4.11 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. 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 prior to bidding to determine that our earthwork, foundation 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 observe earthwork activities, the preparation of foundation bearing surfaces and pavement

subgrades, as well as to provide testing and IBC Special Inspection services for soils, concrete, steel, spray-applied fireproofing, structural masonry and asphalt 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.



Paul F. Kohler, P.E.
Senior Geotechnical Engineer

PFK:emw/tjb

APPENDIX A

Limitations

This report has been prepared for the exclusive use of The Cedars for specific application to the proposed Long-Term and Memory Care Facility at 630 Ocean Avenue in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

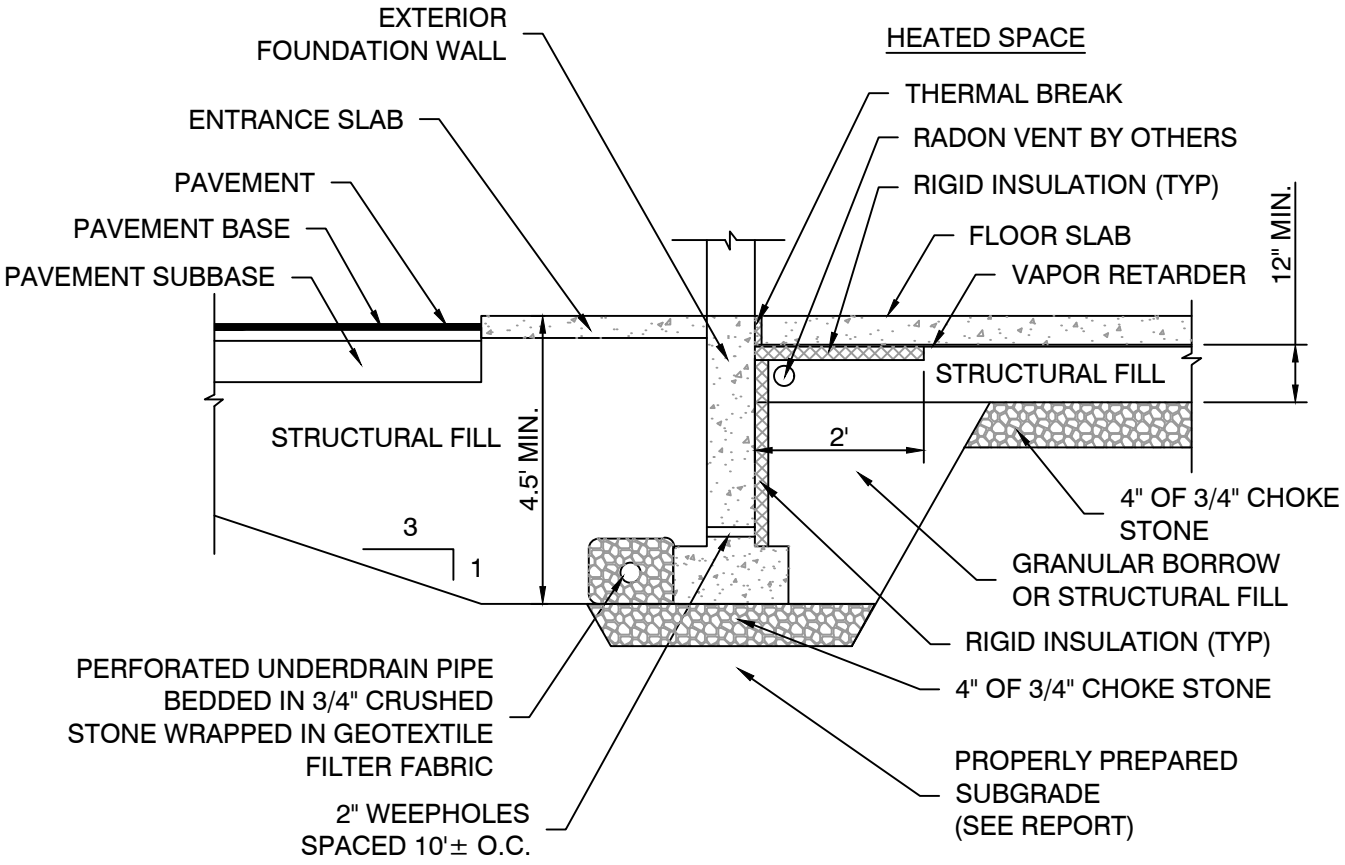
S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures


Rainbow Mall Road
1" Iron Pipe
15" RCP
N/F Ledgewood Owners
RECREATION AREA
RETAINING WALL
16' SIDE YARD SETBACK
ASSISTED LIVING AND LONG-TERM CARE FACILITY
3 STORY BUILDING, BUILDING FOOTPRINT=16,750 S.F., TOTAL BUILDING AREA=48,324 S.F.
EGRESS DOOR
BACK DOOR
FRONT DOOR
25' FRONT YARD SETBACK
ZONING LINE
B-101
B-102
B-103
B-104
B-105
B-106
P-101
P-102
P-103
P-104
P-105
P-106
P-107
P-108
P-109
Outcrop
UNDERDRAIN SOIL FILTER BASIN (USF-A)
UNDERDRAIN SOIL FILTER BASIN (USF-B)
DROP OFF AREA
MITIGATION PARCEL B-REVISED EX. VEGETATION TO REMAIN UNDISTURBED
(See Easement Ref. 5)
R5 ZONE
R3 ZONE
ASSISTED LIVING FACILITY
FFE=74.3
TOP CONTROL WALL=69.09
15" INV IN(RCP)=69.09
15" INV IN(PVC)=68.84
15" INV OUT=67.09
SUMP=65.2
(a) INV=69.81 15" CPP
(b) INV=69.76 15" CPP
(c) INV=69.71 18" PVC
(d) INV=69.91 8" PVC
(e) INV=69.91 12" CPP
SUMP=68.2
SUBSURFACE TOP CONTROL WALL=70.59
24" INV=65.89
15" INV=65.69
SUMP=64.4
24" cpp
15" RCP
MITIGATION PARCEL A-REVISED (see Easement Ref. 5)
THE ATRIUM
FFE=75.34
THE CEDARS
FFE=74.3
Ocean Avenue
CMP 82.0
12" PVC INV(a)=58.69
24" RCP INV(b)=58.59
12" TRAP INV=62.86
INV=63.06
SUMP=61.1
3"=UNKNOWN
1-1/2" Iron Pipe
Capped Iron Rod
N 47°24'30" W
100.58'
1/2" Iron Pipe
5/8" Iron Rod
Gas Meter
Grit. wave
Rip Rap
Ramp
Conc. steps
Conc. walk
GREASE TRAP
SAND FILTER
CANOPY
TRANSFORMER
L=215.52'
R=252.54'
Chord=209.88'
CB N69°09'08"W
S 44°27'52" E
S 41°59'21" E
S 40°42'15" W
S 42°00'00" W
139.56'
426.97'
79.2
76.80
77.50
73.32
73.60
73.80
73.65
73.51
73.26
73.46
73.55
73.60
73.75
71.25
X 71.25
X 73.32
X 73.26
X 73.51
X 73.46
X 73.55
X 73.60
X 73.75
X 73.80
X 73.65
X 73.51
X 73.46
X 73.26
X 73.32
X 71.25
X 73.60



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.

THE CEDARS

FOUNDATION DETAIL SKETCH

PROPOSED LONG TERM CARE FACILITY AND PARKING
630 OCEAN AVENUE
PORTLAND, MAINE

Job No.:	15-1202	Scale:	Not to Scale
Date :	01/30/2018	Sheet:	2

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APPENDIX C

Exploration Logs and Key

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: The Cedars
PROJECT: Proposed Long-Term Care Facility
LOCATION: 630 Ocean Avenue, Portland, Maine

BORING NO.: B-101
SHEET: 1 of 1
PROJECT NO. 15-1202
DATE START: 1/19/2018
DATE FINISH: 1/19/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 75' +/-
TOTAL DEPTH (FT): 5.0
LOGGED BY: Patrick Otto
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Scott Hollabaugh
DRILLING METHOD: Solid Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: N/A / 4 1/2 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140 / 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.87
HAMMER DROP (inch): 30 / 16
WATER LEVEL DEPTHS (ft): 1/19/2018 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										Topsoil and organics		
										0.5 Brown silty SAND with some pieces brick (FILL)		
			1D		2-3.3	16/9	5-16-50/4"			2.0 Medium dense, brown silty SAND, some gravel		
70	5									5.0 Refusal at 5.0 feet Auger refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 15-1202.GPJ SWCE TEMPLATE.GDT 2/7/18

S.W.COLE ENGINEERING, INC.

BORING LOG

CLIENT: The Cedars
PROJECT: Proposed Long-Term Care Facility
LOCATION: 630 Ocean Avenue, Portland, Maine

BORING NO.: B-102
SHEET: 1 of 1
PROJECT NO. 15-1202
DATE START: 1/19/2018
DATE FINISH: 1/19/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 75' +/-
TOTAL DEPTH (FT): 4.0
LOGGED BY: Patrick Otto
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Scott Hollabaugh
DRILLING METHOD: Solid Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: N/A / 4 1/2 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140 / 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.87
HAMMER DROP (inch): 30 / 16
WATER LEVEL DEPTHS (ft): 1/19/2018 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
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Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
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S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										Topsoil and organics		
										0.3 Brown silty gravelly SAND (FILL)		
			1D		2.5-3.4	11/9	10-50/5"	w =12.5 %		2.0 Medium dense, brown SAND, some silt, some gravel		
										4.0 Refusal at 4.0 feet Auger refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 15-1202.GPJ SWCE TEMPLATE.GDT 2/7/18

BORING LOG

CLIENT: The Cedars
PROJECT: Proposed Long-Term Care Facility
LOCATION: 630 Ocean Avenue, Portland, Maine

BORING NO.: B-103
SHEET: 1 of 1
PROJECT NO. 15-1202
DATE START: 1/19/2018
DATE FINISH: 1/19/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 75' +/-
TOTAL DEPTH (FT): 6.0
LOGGED BY: Patrick Otto
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Scott Hollabaugh
DRILLING METHOD: Solid Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: N/A / 4 1/2 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140 / 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.87
HAMMER DROP (inch): 30 / 16
WATER LEVEL DEPTHS (ft): 1/19/2018 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
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S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										Topsoil and organics		
										0.4 Brown silty gravelly SAND (FILL)		
			1D		2-4	24/12	3-2-3-2	w =19.7 %		2.0 Loose, brown silty SAND, trace gravel with root hairs		
										4.0 Brown silty SAND, some gravel		
70	5		2D		5.5-5.7	2/2	25/2"			5.6 Auguered into probable bedrock		
										6.0 Refusal at 6.0 feet Auger refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 15-1202.GPJ SWCE TEMPLATE.GDT 2/7/18

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: The Cedars
PROJECT: Proposed Long-Term Care Facility
LOCATION: 630 Ocean Avenue, Portland, Maine

BORING NO.: B-104
SHEET: 1 of 1
PROJECT NO. 15-1202
DATE START: 1/19/2018
DATE FINISH: 1/19/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 78' +/-
TOTAL DEPTH (FT): 6.9
LOGGED BY: Patrick Otto
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Scott Hollabaugh
DRILLING METHOD: Solid Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: N/A / 4 1/2 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140 / 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.87
HAMMER DROP (inch): 30 / 16
WATER LEVEL DEPTHS (ft): 1/19/2018 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/16	36-37-11-8	w =12.2 %		Topsoil and Organics		
										0.5 Medium dense, brown gravelly silty SAND (FILL)		
			2D		2-4	24/2	10-8-3-3			2.0 Medium dense to loose, brown silty gravelly SAND		
75												
	5		3D		5-6.3	15/8	4-24-50/3"			6.0 Auger into probable bedrock		
										6.9 Refusal at 6.9 feet Auger refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 15-1202.GPJ SWCE TEMPLATE.GDT 2/7/18

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: The Cedars
PROJECT: Proposed Long-Term Care Facility
LOCATION: 630 Ocean Avenue, Portland, Maine

BORING NO.: B-105
SHEET: 1 of 1
PROJECT NO. 15-1202
DATE START: 1/19/2018
DATE FINISH: 1/19/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 82.5' +/-
TOTAL DEPTH (FT): 3.0
LOGGED BY: Patrick Otto
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Scott Hollabaugh
DRILLING METHOD: Solid Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: N/A / 4 1/2 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140 / 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.87
HAMMER DROP (inch): 30 / 16
WATER LEVEL DEPTHS (ft): 1/19/2018 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-1.4	17/6	3-4-50/5"			Loose, Forest Duff and topsoil with organics		
										1.0 Probable brown silty gravelly SAND		
80										3.0 Refusal at 3.0 feet Auger refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 15-1202.GPJ SWCE TEMPLATE.GDT 2/7/18

BORING LOG

CLIENT: The Cedars
PROJECT: Proposed Long-Term Care Facility
LOCATION: 630 Ocean Avenue, Portland, Maine

BORING NO.: B-106
SHEET: 1 of 1
PROJECT NO. 15-1202
DATE START: 1/19/2018
DATE FINISH: 1/19/2018

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 84' +/- | **TOTAL DEPTH (FT):** 3.0 | **LOGGED BY:** Patrick Otto
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Solid Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** N/A / 4 1/2 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.87 | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL DEPTHS (ft): 1/19/2018 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-1.5	18/9	2-4-50			Loose, Forest Duff and topsoil with organics		
										1.0 Dense, rust brown-brown SAND and gravel, some silt		
										2.0 Auger into probable bedrock		
										3.0 Refusal at 3.0 feet Auger refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 15-1202.GPJ SWCE TEMPLATE.GDT 2/7/18

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

KEY TO 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.

APPENDIX D

Laboratory Test Results

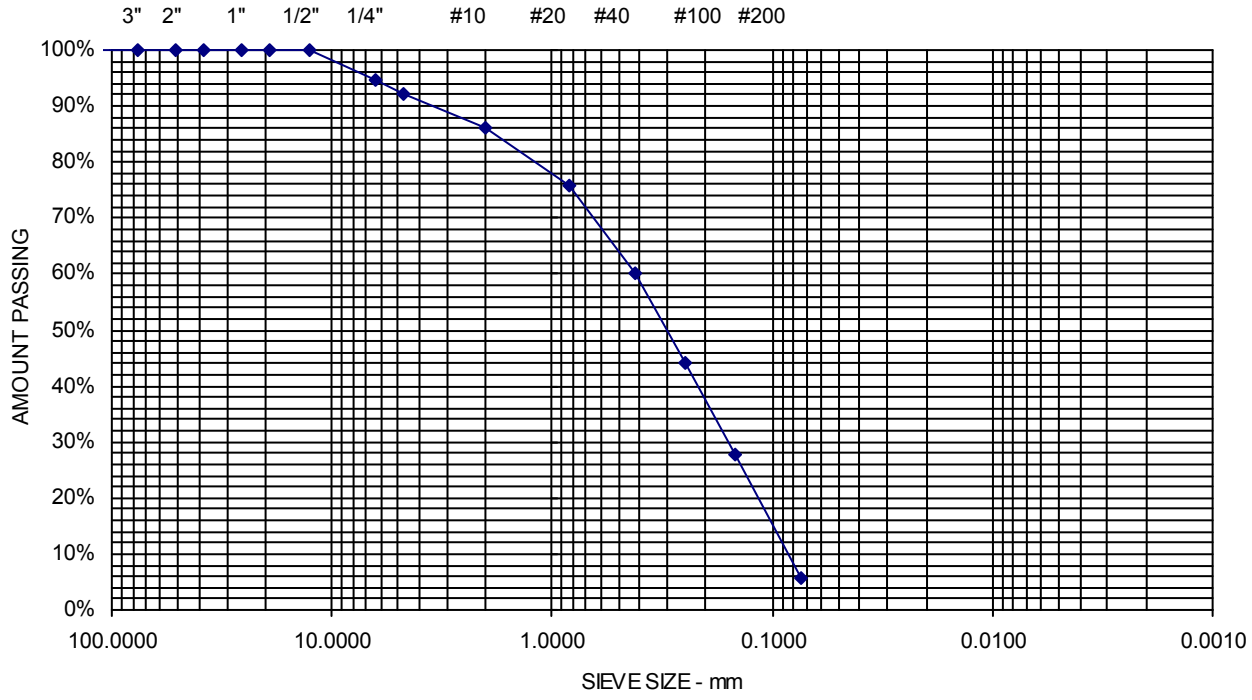
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND ME - LONG-TERM CARE FACILITY - GEOTECHNICAL ENGINEERING SERVICES	Project Number	15-1202
Client	THE CEDARS	Lab ID	23355G
		Date Received	1/30/2018
		Date Completed	1/31/2018
Material Source	**B-102 2D 2.5-3.4**	Tested By	PAUL SHAFFER

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"**	**100**	
19.0 mm	**3/4"**	**100**	
12.5 mm	**1/2"**	**100**	
6.3 mm	**1/4"**	**95**	
4.75 mm	**No. 4**	**92**	8% Gravel
2.00 mm	**No. 10**	**86**	
850 um	**No. 20**	**76**	
425 um	**No. 40**	**60**	86.3% Sand
250 um	**No. 60**	**44**	
150 um	**No. 100**	**28**	
75 um	**No. 200**	**5.7**	5.7% Fines



Comments: w = 12.5%

Sheet

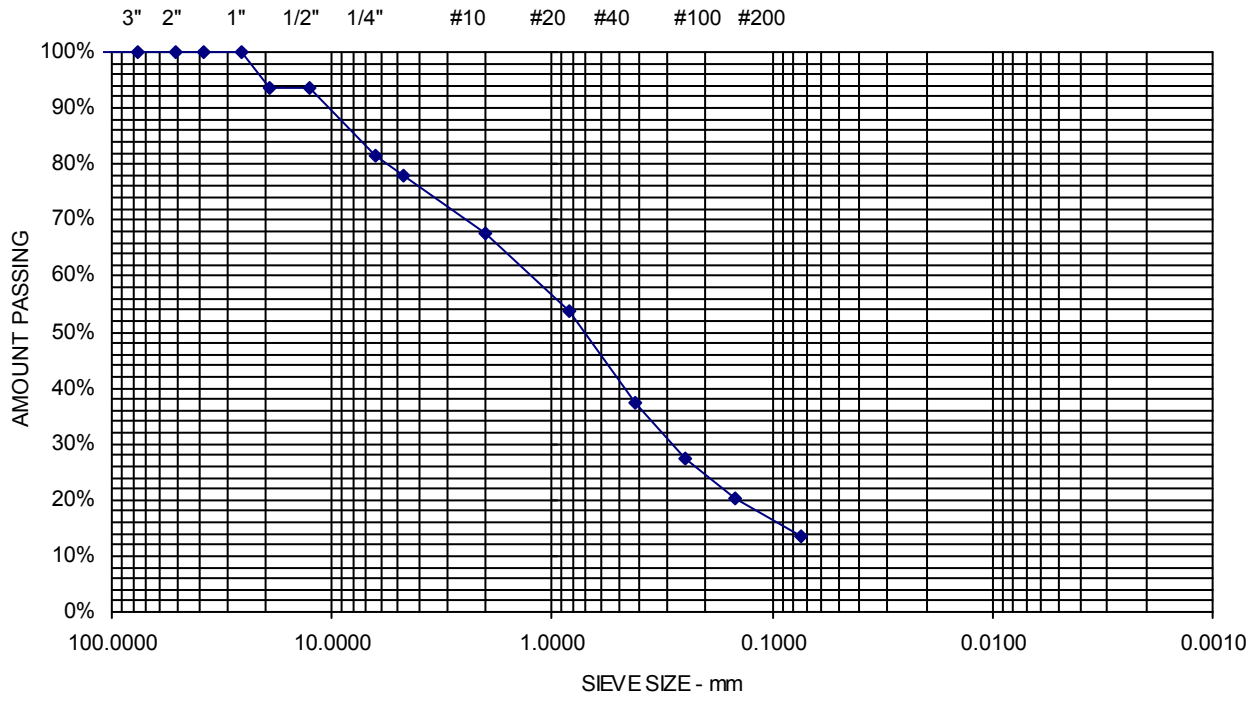
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND ME - LONG-TERM CARE FACILITY - GEOTECHNICAL ENGINEERING SERVICES	Project Number	15-1202
Client	THE CEDARS	Lab ID	23356G
		Date Received	1/30/2018
		Date Completed	1/31/2018
Material Source	**B-104 1D 0-2**	Tested By	PAUL SHAFFER

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"**	**100**	
19.0 mm	**3/4"**	**94**	
12.5 mm	**1/2"**	**94**	
6.3 mm	**1/4"**	**81**	
4.75 mm	**No. 4**	**78**	22.1% Gravel
2.00 mm	**No. 10**	**68**	
850 um	**No. 20**	**54**	
425 um	**No. 40**	**38**	64.4% Sand
250 um	**No. 60**	**27**	
150 um	**No. 100**	**20**	
75 um	**No. 200**	**13.5**	13.5% Fines



Comments: w = 12.2%

Sheet

WRIGHT-PIERCE
Engineering a Better Environment

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Topsham, ME 04086
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February 8, 2018
W-P Project No. 13682A

Mr. Matthew Grooms
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

Subject: The Cedars – Long Term and Assisted Living Memory Care Facility Expansion
Response to Preliminary Plan Comments

Dear Mr. Grooms:

We received comments from you on Monday, February 5, 2018 regarding the preliminary plan for the Cedars project at 630 Ocean Avenue. We have revised plans and building elevations to respond to the comments raised by staff and have prepared the following responses to the comments. Pleease note that only comments requiring a response have been listed.

1. Comments from Tom Errico regarding traffic:
    a. No response necessary.

2. Comments from Bruce Hyman:
    a. Comment: *An ADA-compliant pedestrian-way/sidewalk, a minimum of 5' in width, is to be provided on the north side of the driveway from the sidewalk on Ocean Avenue to the proposed new building's entrance - this may require moving the bicycle parking to be adjacent to the sidewalk.*
    Response: An ADA compliant sidewalk was added into the revised site plans from Ocean Avenue to the front of the proposed building along the North side of the entrance drive.
    b. Comment: *Efforts should be made to improve the ADA-accessibility of the existing sidewalk route on the south side of the driveway - there appears to be no existing curb ramp connecting a crosswalk across the existing driveway (see below) - construction activity is shown in this vicinity on the opposite side of the driveway (in the right foreground of the photo)*
    Response: The photo highlights an area of the existing site well outside the project limits. While we agree that the internal sidewalks should be as accessible as possible, this particular sidewalk is not within the scope of the project.
    c. Comment: *The sidewalk is to be extended (to extend past the bench) at the pedestrian crossing along/near the frontage of the existing Assisted Living facility as part of the construction of this sidewalk segment and crosswalk.*
    Response: The revised site plans show the internal sidewalk extending beyond the bench in the photo and the cross walk across the driveway being reduced in length as a result.

d. Comment: *It would be desirable to have more pedestrian connectivity/facilities between the new parking lot and other buildings without walking within parking lots and within the vehicular paths of driveways.*
Response: We anticipate that the turn over in the parking lot to be relatively low with employees as the primary users of the spaces. We have added a cross walk at the parking lot entrance, across the entrance road to a sidewalk on the south side of the entrance road.

e. Comment: *Detail Sheet C07, Crosswalk Layout: The applicant may want to consider a more visible crosswalk pattern similar to the city's standard: 24" stripes in width, 8' in length with 24" of spacing in between stripes - the detail shows 12" wide stripes rather than 24".*
Response: The detail has been revised to show a 24" wide cross walk stripe as recommended.

f. Comment: *General Neighborhood pedestrian circulation: The topic of the lack of a pedestrian route/sidewalk on Rainbow Mall Road was raised at the neighborhood meeting. The applicant does not directly own the frontage on the south side of Rainbow Mall Road but it should collaborate to the extent practicable with the Ledgewood Owners Association on planning for a sidewalk along it at least for the portion from Ocean Avenue to connect to the Ledgewood Drive sidewalk. This would potentially benefit some Cedars residents, staff and visitors to increase access and physical activity opportunities.*
Response: We have heard from some neighbors that a sidewalk on Rainbow Mall Road would be desirable. As pointed out in the comment Ledgewood Owners Association owns a strip of land adjacent to both sides of Rainbow Mall Road. We will discuss acquiring rights to construct a sidewalk but do not currently have rights to impact the land on either side of the road, so no sidewalk is shown on the plans.

3. Comments from Robert Thompson, Fire Department
   a. Comment: *Two knox boxes will be required for the building, one at the front entrance, and one at the rear entrance/utility area*
   Response: A Knox Box will be located at the front and rear entrance of the building. These will be shown and detailed on the building plans.

4. Comments from Engineering review Lauren Swett.
   a. Comment: *The plans should note a location for snow storage or provide a snow removal plan. The snow storage location should be sited outside of existing and proposed drainage courses.*
   Response: Snow storage will occur along the sides of the entrance roads and in the islands within the parking lots. Most of the existing site will not be altered as a result of this plan. The new parking areas will store snow at the north end of the parking lot outside the parking spaces. Snow will not be stored within stormwater treatment measures.
   b. Comment: *The soil filters do not have defined emergency overflow spillways. USF-A could overflow internal to the site; however, it appears that USF-B may overflow into Ocean Avenue. In the 25-year storm, the peak elevation calculated in the HydroCAD model indicates, that water levels may be higher than the soil filter berm and the elevation of the adjacent section of Ocean Avenue. The Applicant should address peak flow elevations, and*

provide for adequate emergency overflow to prevent the soil filter from draining into Ocean Avenue. (Note, this comment was not discussed at the January 30 meeting.)
Response: An emergency overflow spillway from the USF-B to the detention basin along the entrance drive has been added to the revised plans. This revision will address the concern over overflow water from impacting to Ocean Avenue.

c. Comment: *The Applicant should provide ability to serve letters for the project upon receipt from the utilities.*
Response: We have been pursuing ability to serve letters from the utilities and will submit the confirmation once received.

d. Comment: *The proposed disturbance exceeds one acre; therefore, a Maine Construction General Permit is required for this project.*
Response: A Maine Construction General Permit will be filed prior to the start of construction.

e. Comment: *A retaining wall is proposed around the site. Please note that a geotechnical evaluation including soil types and soil bearing capacities is required for retaining walls over three feet in height.*
Response: A geotechnical report addressing subsurface site conditions and design parameters for the retaining wall was recently completed and is attached.

f. Comment: *Please indicate the location of the 4" underdrain outlet behind the retaining wall, as shown on the Stoneterra Block Wall detail on Sheet C-9.*
Response: The underdrain behind the retaining wall will be connected to the stormdrain system within the site as shown on the revised plans.

g. Comment: *The Applicant should review for potential utility conflicts between underground electrical and proposed stormdrain infrastructure. In particular, note the location of CB4.*
Response: The utility lines have been relocated and the conflicts with the storm lines have been checked. The storm line has also been revised through this area.

5. Comments from Matthew Grooms, Planning Department:
   a. Comment: *Please provide renderings of the proposed building as it will be seen from on-street locations, specifically the intersection of Ocean Avenue and Rainbow Mall Road.*
   Response: Two building sections have been developed and included with the response submission that show sections through Rainbow Mall Road and through Ocean Ave.

   b. Comment: *As part of this expansion project, a private internal pathway should be provided with direct connection to the existing public sidewalk located along the property's Ocean Avenue frontage*.
   Response: A sidewalk has been added to the northern side of the entrance drive connecting Ocean Ave sidewalk with the front entrance of the building.

   c. Comment: *Please provide a geotechnical report detailing the necessity for blasting work as part of this project. Please note, if blasting is to occur, the project shall adhere to the standards of Article VIII of the land-use code and Section 3.7 of the City's Technical Manual.*
   Response: A geotechnical report addressing subsurface site conditions and design parameters for the retaining wall was recently completed and is attached. If blasting is required to complete the site work the blasting operations will adhere to City and State standards governing blasting and a blasting plan prepared.

d. Comment: *All proposed site lighting shall be illustrated on the site plan.*
Response: Site lighting is shown on the revised site plans.

e. Comment: *On the site plan, identify any improvements proposed within the areas labeled as 'recreation areas'. Please provide applicable details for proposed fencing as well.*
Response: The recreation areas are to be passive recreation areas that allow for the residents to access space outside. The space behind the building is designated for residents of the Memory Care household and will be a fenced area. The space behind the building will be grassed and in the future may include some gardening beds to allow for gardening activities for the residents.
The recreation space at the front of the building will be for the long term care patients and will have a patio area where residents may congregate outside. The space will have some landscaping around the perimeter of the patio to define the space.
A fence detail for the space behind the building has been shown on the revised plans.

f. Comment: *The City has reverted to cast-iron set-in-place detectable warning panels as opposed to replaceable panels. As the proposed panels are not located within the public right-of-way, please note that this is not a site plan review requirement.*
Response: The detail for the detectable warning devices at cross walks has been revised to show cast iron plates with the tactile warning surface.

g. Comment: *Utility capacity letters shall be provided when available. In the event that these are not available prior to the public hearing, their submission shall be made a condition of approval.*
Response: We are continuing to work with the utilities to obtain the ability to serve letters and will forward the letters to the planning staff once we receive them.

6. Comments from Urban Designer Catlin Cameron :

a. Comment: *Please provide renderings/views from the street*
Response: Included with this submission are sections through the site showing the building from Ocean Avenue and from Rainbow Mall Road.

b. Comment:*The project references historical styles not found in this context and also includes a mix of styles within one building.*
Response: The current Cedars campus is a mixture of architectural design elements located over 3 separate additions connected to each other. Heights vary from 2 to 3 stories, The original two-story structure utilizing brick and cast stone with brick quoins, arch fan windows, limited key stone accent and a monumental two story contemporary entry.
The other 3 story buildings (Ocher Inn and Atrium) are brick veneer, with cast stone, white siding and trim, porches and standing metal and shingled hip roofing. The atrium structure also has a monumental accent near the main entrance.

c. Comment:
Staff found that the architectural characteristics of the context are more simple than is found in the proposal. Staff suggest the applicant make revisions to simplify the overall design, for example (also see attached):

- *Use all brick siding rather than introduce clapboard*
- *Remove extraneous details such as the quoins, "key stones," fan windows*
- *Shutters are more appropriate for a small scale residential building but not*

for this large-scale institutional building
-The entrance canopy is quite contemporary compared with the style of the building – staff suggest revising the central balustrade to reflect that contemporary design of the canopy.

Response: Our design inspiration was to keep the base architectural design elements of brick veneer, cast stone, quoins, white siding and trim, white monumental entry and shingled hip roofs. The house hold model for resident care is the basis of design for this structure internally. A Front door off the porch, dining and living room, den, library, spa and outdoor seating are all part of the interior spatial uses. We want the exterior to be complimentary to the existing structures and add some residential design elements to be less institutional on the exterior of the structure.

7. Comments from Jeff Tarling:
    a. Comment: *Entrance-way landscape - how does the existing landscape blend into the new project. The final approval should show the details of the more formal ornamental landscape beds and limit of work.*
    Response: The entrance way landscaping will be refined at the time of final design.
    b. Comment: *Parking lot landscape - 'should meet parking lot landscape standards', the parking lot island appears to have a stormwater feature which is good, additional trees and shrubs could be used to meet parking lot standards. There appears to be room for a few trees, recommend Tupelo & or Red Maple 2" caliper size, (Tupelo is a slow growing native tree that tolerates wet conditions) and for shrubs Winterberry, Sweetern for examples. Ideally the island below would contain taller trees mentioned.*
    Response: The landscape plan will be revised with the final design to include additional plantings as suggested.
    c. Comment*: Rainbow Mall Road edge - The Rainbow Mall Road edge has been an important feature for the Cedar's since the original approval. The goal is to maintain a tree and vegetated edge that allows window views into to site for safety / security but maintains the wooded feel of the residential properties nearby.*

    From a quick review, it would be important to establish a limit of work and 'tree save' protection for the vegetation between the proposed project and Rainbow Mall, this should be a condition. The proposed tree and landscape treatment may need to be enhanced with additional trees and shrubs. A condition could be that if existing trees and vegetation is lost that additional plants be added. 'Tree Save' areas should be defined on site and part of the Pre-Construction meeting. This would included the usual requirements of not storing equipment or materials in or near the root zone of the tree save areas. Projection should include temporary construction fencing. The parking lot edge along Rainbow Mall Road could include low wooden guardrail along the edge to reduce vehicle encroachment into the buffer area. The Tree Protection web links below may be useful
    Response: The site plan has been revised to move the building and retaining wall forward 2’ additional feet to allow for more distance between the development and the 8’-10’ wide strip of land controlled by Ledgewood Condominiums and aid in the preservation of the trees in this strip.

Please find attached revised plans as noted in the responses above.

Sincerely,
WRIGHT-PIERCE

Jan Wiegman, PE
Project Manager
jwiegman@wright-pierce.com
Enclosures

cc: *Alex Toye*
Kathy Callnan

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March 20, 2018
W-P Project No. 13682A

Mr. Matthew Grooms
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

Subject: The Cedars – Long Term and Assisted Living Memory Care Facility Expansion
Response to Abutter and Staff Comments

Dear Mr. Grooms:

Throughout the planning process, The Cedars has sought to engage its neighbors and abutters, answer their questions, and meet the requirements set forth by the City of Portland. The comments we have received during the neighborhood meetings, both formal and informal, and the planning process fall into a few distinct categories, which are as follows:

1. Building Height
2. Building Location
3. Blasting Schedule and Protocol
4. Water Run-off
5. Landscaping
6. Construction Work-day Hours and Worker Parking Plan
7. Exterior Architectural Design Details

To begin, it is important to restate the rationale for the Project's Purpose and Need and its importance to the citizens of this region.

The existing site is developed as a campus for senior living that accommodates several levels of care, including independent living, assisted living, long term care and rehabilitative care. To remain viable as a campus dedicated to elder living, the organization must adapt to the marketplace expectations, evolving care models, and expand the continuum of care to include assisted living for memory care.

To remain viable, The Cedars must adapt and transform with the care expectations of the residents and their caretakers. There are three important drivers that The Cedars must meet: 1) current and future residents' desires to occupy private rooms in both the short-term stay rehabilitation setting as well as in long-term nursing care (almost all nursing rooms in the Cedars are currently semi-private/double occupant rooms); 2) current and future residents' desires to live in a home-like setting (the Household Model) as opposed to an institutional skilled nursing facility; 3) current and future residents' desires to have a Household that can accommodate the needs of the memory impaired so that residents do not have to leave The Cedars as a result of memory impairment. The third driver is especially important when it comes to the desires of couples in which one spouse may have memory loss while the other does not.

Satisfying these three key drivers is essential for The Cedars to be able to remain in the market, attract residents, maintain occupancy, and continue to fulfill The Cedars' mission of subsidizing those residents who do not have the resources to pay and rely on Medicaid.

The Household Model concepts will be applied to both the existing nursing building and the new buildings. Each Household has private resident rooms that are segmented into uniquely individualized households of twenty residents, complete with separate entry, living room, dining room, kitchen and gathering spaces. While there are the typical spaces as required by regulations, such as clean and soiled utility, charting room, medication preparation, spa, storage, etc., the floor plan is arranged so that it does not just feel like home; it is home.

The Household Model is not just an architectural solution, it is also an operational and cultural change that puts residents back in the driver's seat of their own lives. The Household Model provides a home environment where residents choose simple things like when they wake up in the morning, what they eat, and how they spend each day. While this may sound normal, many people are shocked to learn that institutional nursing home residents have almost no choice or control over how life unfolds. The Household Model returns to its residents the freedoms, choices, and spontaneity that we all take for granted.

The building program for the site includes the renovation of the existing Hoffmann long term care facility into single occupancy rooms and the creation of three households within the existing building. Creating Households and offering private rooms in the existing building will displace 40 beds from the existing Hoffman facility, which will be put in a new building that will require two households with 20 beds each. In addition, an assisted living – memory care unit configured in a household model will be added to meet the needs of elders and to extend the care offered at the facility. It is critical to the development plan and financial performance that 3 Households are built on the site. Without 3 Households, none of the key drivers can be met.

Each Household requires a floor area of 14,000 to 15,000 square feet and it is critical to the care delivery model that each Household has a distinct entity. A Household cannot be split between two floors because of accessibility for residents and the staffing. It would be problematic if residents had to get on an elevator for some services, such as meals, and staff would be required to attend to residents in the elevator. In addition, the single-floor concept supports the Household concept because all residents are in the same area and not divided by floor. This means that that there would have to be either a 3-story 15,000 square foot building or a 2-story building with a 30,000 square foot footprint on the first floor and 15,000 square feet on the second floor.

The existing site will only accommodate a single 15,000 square feet footprint while still accommodating the parking and access for the facility and respecting the wetland preservation areas on the site. In order to carry out the vital building program, the new facility needs to be a three-story building.

1. Building Height

We have received several comments regarding the building height and the desire to decrease the scale of the building.

Response:

As mentioned above, the building needs to be 3-stories tall in order to meet the needs of the aging Portland population, consumer demands, and the operational needs of The Cedars.

We reviewed the building height with the Zoning Administrator, Ann Machado, to ensure the building height met the City's requirements. She determined after reviewing the roofing plan for the mansard roof that the proposal complied with the 35' maximum height allowed in the R-3 zone. Her ruling was provided to the Planning staff by email for inclusion in the prior Planning Board work session.

The building height determination by the Zoning Administrator referenced above is in keeping with the same determination made for Cedars' other three-story building with the same mansard roof.

In addition to meeting the requirements, The Cedars is also trying to integrate the style and design elements of the existing buildings on campus which have similar mansard roofs and roof deck heights. We have included pictures of the existing buildings adjacent to project, on campus and a rendering of the Proposed building as an appendix.

2. Building Location

Several comments were received regarding the building location, and its proximity to Rainbow Mall Road.

Response:

At the neighborhood meeting and public workshop, it was discussed that the building was required to have a minimum setback distance from the abutting Ledgewood property. This original setback distance designed for the building was approximately 16' from the Ledgewood property. In order to address concerns, the building setback has been further extended to +/-18' in the most recent modification. It should also be noted that this setback is +/- 28' from the edge of the existing roadway right-of-way, and +/-37' from the existing edge of pavement.

The Cedars has had discussion with Ledgewood Owners Association regarding a new landscape buffer for the length of the Cedars property line along Rainbow Mall Road and is working on an agreement with the Association to allow the installation and maintenance of the buffer.

The siting of the proposed building was evaluated as part of the preliminary construction phase. The location in the eastern corner of the existing parcel was chosen because:

- It is not feasible to build higher on the existing buildings.
- The remaining undeveloped portions of the site are protected resources or do not have sufficient depth to accommodate the proposed building footprint.

- Original iterations of preliminary design also reviewed potentially placing the new building in a location outside of the existing parcel. A suitable site could not be acquired. From an operation perspective, keeping the building within the existing campus was also desirable.

3. Blasting Schedule and Protocol

The Cedars received feedback that a number of the neighbors were concerned that the impact of the blasting would damage their properties. One neighbor cited a previous experience in which blasting caused perceived or actual impacts.

Response:

At the neighborhood meeting and public workshop, the applicant responded to stated concerns that current blasting protocols were not required when abutters experienced issues in the past. The proposed construction will require a higher level of oversight and regulation than previous projects. The response typically provided to each concern regarding blasting indicated that a formal blasting plan would be completed, but that could not occur until the applicant had received and reviewed a Geotechnical Report that identifies probable subsurface conditions. The Geotechnical Report has been completed, and the following information on a Blasting Plan is available. Major items on how this information impacts neighbors and abutters include the following:

i. The City of Portland defines a Large Blast as any blasting plan that involves more than 300 Cubic Yards of ledge removal. The improved parking lot and building construction is anticipated to exceed this 300 Cubic Yard threshold, and as such the applicant will seek permitting for a Large Blast.
ii. A Large Blast requires notification of neighbors within 600 feet of the perimeter of the blasting site, with 10 days minimum notice.
iii. A pre-blast survey is required to be offered to the abutters and completed prior to blasting.
iv. Identification of utilities in the vicinity, and identification of drinking wells within 2,000 feet are required.
v. Maximum ground vibration limits are established for blasts near residential structures. The applicant is required to hire a seismologist to monitor the work.
vi. Blasting contractor is required to carry liability insurance coverage in a minimum amount of $2,000,000.

4. Water Run-off

The Cedars received feedback from one neighbor who had concerns about how water run-off might negatively impact them as a result of the Project.

Response:

A stormwater management plan has been developed that indicates the rate of stormwater runoff will not be increased in the 2-year, 10-year, and 25-year storm. Stormwater will be treated on-site in accordance with the Maine DEP's Chapter 500 standards for stormwater quality and quantity. Stormwater from the proposed development will be directed to the Ocean Avenue storm drain system.

5. Landscaping

The Cedars received multiple comments about the landscape plan from both abutters and the City of Portland.

Comment #1 – There should be a requirement to have a tree berm along Rainbow Mall Road.

Response:

Updated Landscape Plan and Details have been provided that show additional landscape screening along the Rainbow Mall Road corridor.

Comment #2 – Entrance-way landscape - How does the existing landscape blend into the new project? The final approval should show the details of the more formal ornamental landscape beds and limit of work.

Response:

The existing entrance-way ornamental landscape beds and entrance sign are shown on the plans. Existing vegetation protection zone has been delineated around these beds and conditional notes regarding protection / replacement of existing vegetation damaged during construction have been added to the plans. The new project street trees screen the new building while maintaining the prior approved landscape aesthetic at the entrance to the campus.

Comment #3 – Parking lot landscape - 'should meet parking lot landscape standards'. Suggestions were made as to the species of the plantings.

Response:

The landscape plan has been revised to include additional plantings with some of the species suggested, to meet the City's parking lot landscape standards. City codes require (2) trees (or (1) tree and (3) shrubs) per every 5 parking spaces. Landscape islands are required between every 40 contiguous parking spaces. There are a total of 61 new parking spaces and no more than 23 are contiguous. 15 new trees and 53 new shrubs are proposed around the perimeter of these parking areas. Existing tree stands also surround a significant portion of these parking areas.

Comment #4 –The Rainbow Mall Road edge has been an important feature for the Cedar's since the original approval. The goal is to maintain a tree and vegetated edge that allows window views into to site for safety / security but maintains the wooded feel of the residential properties nearby.

Request for temporary construction fencing and a possible guardrail along the edge.

Response:

The site plan has been revised to move the building and retaining wall forward 2 additional feet to allow for more distance between the development and the 8'-10' wide strip of land controlled by Ledgewood Condominiums. The area immediately adjacent to the new building and parking lot where existing vegetation (including several invasive plant species) will be removed due to construction, will

be replanted as indicated on the plans. An existing vegetation protection zone has been delineated for the remainder of the buffer area along Rainbow Mall Road and conditional notes regarding protection / replacement of existing vegetation damaged during construction have been added to the plans. New understory shrubs have also been added to this area to enhance the existing mature tree buffer. Proposed vertical curbing at the edges of the parking lots is in place to protect adjacent vegetation from vehicle encroachment.

Comment #5– Tree Planting Details – Revised tree planting specifications, The International Society of Arboriculture (ISA) have released improved tree and shrub planting details and spec sheets that no longer modify the sub-base beneath the planting in most situations. Recommendation that the Project revise the spec sheet in the Landscape Details to reflect these changes.

Response:

The landscape details have been revised showing no modification to the sub-base beneath the plantings.

6. Construction Work-Day and Parking

A comment indicating that work should start after 8:00 AM and end before 4:00 PM was made.

Response:

Construction activities will be limited to the times identified in the City Code. As indicated in Section 17-18 of the City Code: "Within the R- zones, from September 1st to May 31st, no person shall engage in construction activities generating noise exceeding fifty (50) decibels, between the hours of 7:00 p.m. and 7:00 a.m., of the following day within five hundred (500) feet of any building used for residential, hospital or nursing home purposes. From June 1st to August 31st construction activity may continue until 8:00 p.m. Any other language notwithstanding, no construction activity shall begin before 8:00 a.m. on a Saturday, Sunday or legal holiday".

The contractor has indicated that the typical work day hours will occur between 7:30 am – 4:00 pm. Additionally, Blasting cannot occur before 9:00 am or after 4:00 pm.

A comment was made about construction vehicle parking during prior construction projects in the region has been a hassle.

Response:

The applicant's construction manager is arranging offsite parking for the majority of construction workers and there will be a limited amount of construction parking and staging area on the site.

7. Exterior Architectural Details

There were some concerns regarding the architectural style of the new 3-story building and whether it should look more institutional, blend in with the surrounding neighborhood, or match The Cedars existing buildings on campus.

Response:

The current Cedars campus is a mixture of architectural design elements located over 3 separate additions connected to each other. Heights vary from 2 to 3 stories. The original two-story structure (Hoffman Center) utilized brick and cast stone with brick quoins, arch fan windows, limited key stone accent, a mansard roof and a monumental two story contemporary entry.

The Osher Inn (assisted living facility) was also designed with the same elements of the two buildings to either side (Hoffman Center and Atrium) including brick veneer, cast stone, white siding and a mansard roof.

The other 3 story building (Atrium) is also brick veneer, with cast stone, white siding and trim, porches and shingled mansard roofing. The Atrium structure also has a monumental accent near the main entrance. We have included pictures of the existing buildings adjacent to project, on campus, and a rendering of the Proposed building as an appendix.

Our design inspiration was to keep the base architectural design elements of brick veneer, cast stone, quoins, white siding and trim, white monumental entry and shingled sloping mansard roofs. The Household model for resident care is the basis of design for this structure internally. A front door off the porch, dining and living room, den, library, spa and outdoor seating are all part of the interior spatial uses. The exterior design is meant to be complementary to the existing structures, and include elements from the surrounding neighborhood, with elements that are more residential and less institutional.

Sincerely,
WRIGHT-PIERCE

Jan Wiegman, PE
Project Manager
jwiegman@wright-pierce.com
Enclosures

cc: *Alex Toye*
Kathy Callnan

MEMORANDUM OF AGREEMENT
between
LEDGEWOOD OWNERS ASSOCIATION
and
THE CEDARS
**

This Memorandum of Agreement is made and entered into on this 16th day of April, 2018 by and between the Ledgewood Owners Association (LOA), a seventy eight unit condominium association, whose President's address is 8 Cushing Ct., Portland, ME, 04103 and The Cedars, an institutional long-term care facility, whose address is 630 Ocean Ave., Portland, ME, 04103, for the purpose of establishing a common landscape plan for abutting land bordering Rainbow Mall Rd.

1. THE CEDARS PROJECT

The Cedars plans to remove a two-story house at the corner of Ocean Ave. and Rainbow Mall Rd. The building, which serves as an administrative office, will be demolished and replaced with an assisted living and long-term facility with a building footprint of 15,108 square feet and a total building area of 45,108 square feet. The development will include reconfiguring on-site parking and adding an additional 13 parking spaces. The project is planned for a May 2018 start date and will continue for more than 12 months.

2. THE CEDARS PROJECT CHANGES AFTER THE COMMUNITY AND PLANNING BOARD WORKSHOP

At the urging of community and Planning Board members, the project architect is seeking a way to lower the 49'8" overall height of the building and mansard roof. After discussions with members of the LOA, the site engineers for this project have agreed to move the proposed building two feet farther away from the Rainbow Mall Road, referencing the original plan submitted to the Board on February 13.

3. THE CEDARS LANDSCAPE AND VEGETATION PLAN FOR THE RAINBOW MALL ROAD AREA

The City of Portland owns a 50' right of way from the center of Rainbow Mall Rd. and the section from the curb line to the edge of the ROW, approximately 9' outside of the pavement. The Cedars' land abuts a 10' to 11' wide section of land owned by LOA. The development plans place a retaining wall (two to seven feet high) along the Rainbow Mall side of the proposed building. The Cedars has a 7' deep area of land from the LOA border to the retaining wall, or to the edge of the existing parking area.

The LOA and The Cedars hereby agree that the 7' of The Cedars land abutting the LOA land, and the 10' to 11' of LOA land, will be included in a common landscaping and vegetation plan for this space. The Cedars landscape architects will work with LOA to develop a tree and bush removal plan for these areas. Any trees that are identified as worth keeping will be marked and appropriate measures will be taken to preserve the root systems. With LOA input and agreement, The Cedars landscape architect will develop a plan for new trees and shrubs for this area. The Cedars will be responsible for all costs involved in tree and vegetation removal and for new plantings, for as long as The Cedars remains in operation or until any amendment to the site plan approval occurs, after consultation between the parties.

4. MAINTENANCE OF TREES AND BUSHES IN THE LOA AND THE CEDARS ABUTTING LAND

The Cedars agrees to be responsible for the cost and to arrange for the maintenance and care of all trees, bushes, planting beds and ground cover in the LOA 10' to 11' land and The Cedars 7' abutting land. Such vegetation shall

have seasonal pruning, leaf removal, appropriate insect protection measures, and mulching. The Cedars, at their cost in perpetuity, will remove any new or old plantings that die and replace with similar new plantings with the input of LOA concerning the type and height of the replacement plantings.

5. Easements

LOA agrees to provide any reasonably required easement to allow the Cedars to install, manage and maintain the plantings. In addition, LOA will grant any reasonably required easement, subject to the review and approval of LOA's legal counsel, to allow the Cedars to establish underground utility access in this area at the Cedars' sole expense. Such easements will be in recordable form, will run with the land, and require the Cedars to repair the surface of the easement area after installation of the underground utilities, and provide for The Cedars to indemnify LOA for any damages caused by The Cedars, its agents, and employees.

**attached to a map of the proposed edition as mentioned in this MOA, yellow strip indicating the LOA property.

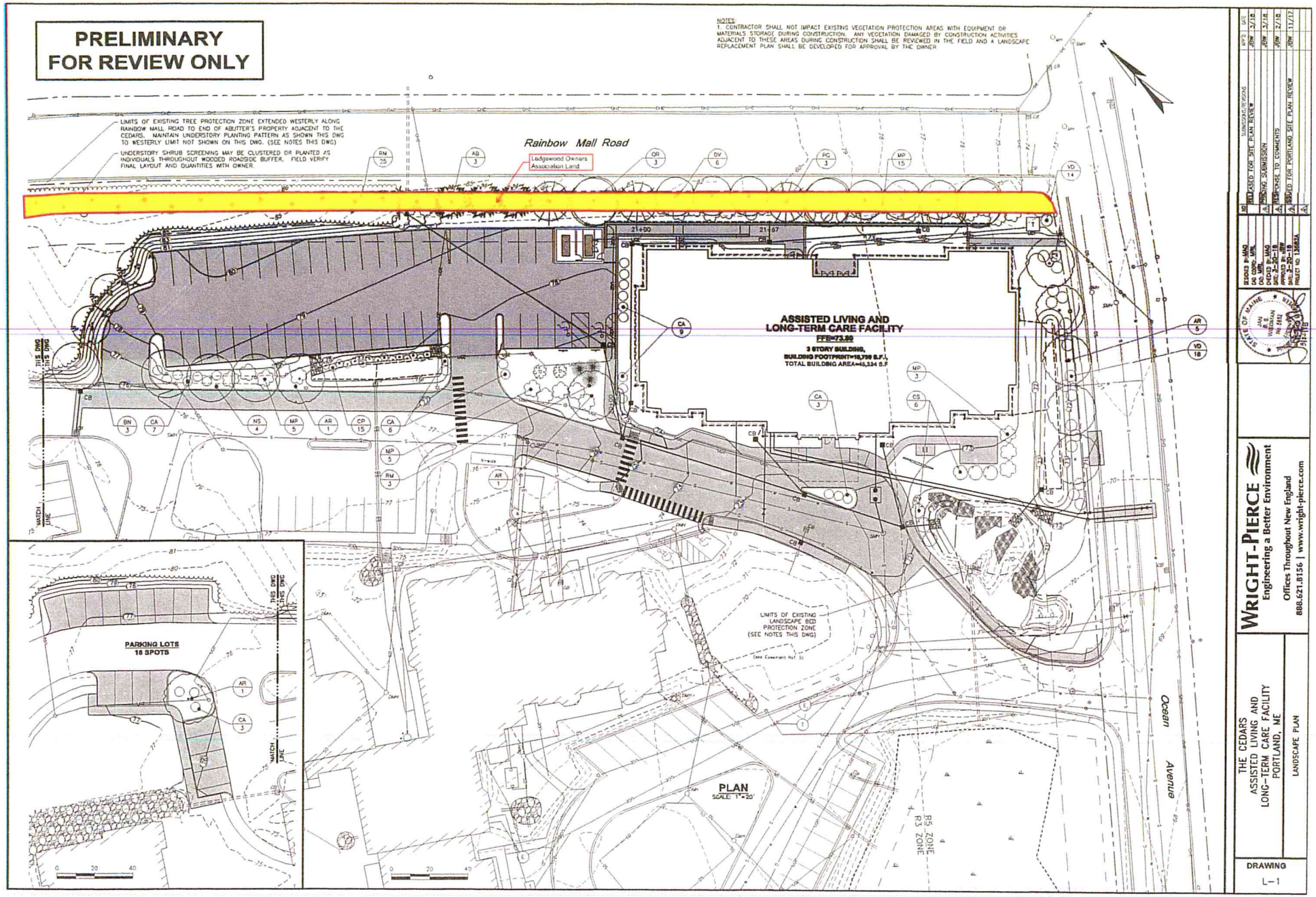
Douglas McCown, President
Ledgewood Owners Association

4/16/18
Date

Cedars Nursing Care Center, Inc.

4/16/18
Date

PRELIMINARY
FOR REVIEW ONLY



NO	RELEASED FOR SITE PLAN REVIEW	APP'D	DATE
		JRM	3/18
1	PERMIT SUBMISSION	JRM	3/18
2	RESPONSE TO COMMENTS	JRM	2/19
3	ISSUED FOR PORTLAND SITE PLAN REVIEW	JRM	11/19
4			

DESIGNED BY: MMO
DRAWN BY: MPL
CHECKED BY: MMO
DATE: 2-20-18
APPROVED BY: JRM
DATE: 2-20-18
PROJECT NO. 13582A

STATE OF MAINE · JAMES R. WEBSTER · 8811 · REGISTERED LANDSCAPE ARCHITECT

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THE CEDARS
ASSISTED LIVING AND LONG-TERM CARE FACILITY
PORTLAND, ME

LANDSCAPE PLAN

DRAWING
L-1

January 30, 2018
630 Ocean Avenue: The Cedars Long-Term Care and Assisted Living Facility

RE: Neighborhood Certification

I, Kathy Callnan, hereby certify that a neighborhood meeting was held on January 29, 2018 at the Hoffman Center in The Cedars at 630 Ocean Avenue, Portland from 6:30 PM to 8:00PM.

I also certify that on January 18, 2018, invitations were mailed to the following:

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

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.

Please note that items 1 and 2 of the above list was provided to our office by the Planning Division.

Signed,

Kathryn Callnan

Kathy Callnan
President and CEO, The Cedars

Attached to this certification are:

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

75 Washington Avenue, Suite 202
Portland, ME 04101
Phone: 207.761.2991 | Fax: 207.761.2978

the cedars
Your life. Your community.

630 Ocean Avenue, Portland, ME 04103
phone: 207-221-7000 / fax: 207-772-6038
www.thecedarsportland.org

January 18, 2018

Dear Neighbor:

The Cedars is considering a change in the way it delivers long term care that will necessitate constructing an additional building on The Cedars Portland Campus. Our care model will be shifting towards a Household model of care and will create households of approximately 20 residents centered around shared living spaces. As a result of this shift in care, a new building will be needed to maintain the number of residents that are currently on the campus. As an additional service The Cedars will also be adding an assisted living – memory care facility to be housed in the same new long term care building.

We have initiated the City of Portland Site Plan review process to review the site plans. As part of the review process, we will be holding a neighborhood meeting to present the plans and solicit input for the planning process. At the meeting we will explain the project and have plans of the site and building. We currently do not have any meeting dates set with the Planning Board for the project.

The Cedars is committed to being an excellent neighbor to the City of Portland, and to meeting the needs of elderly citizens and their families. We invite you to join us for a neighborhood meeting to discuss our plans.

Meeting Location:	**The Hoffman Center, 630 Ocean Avenue, Portland, Maine (The first building on the left when you enter the community)**
Meeting Date:	**Monday January 29, 2018**
Meeting Time:	**6:30 PM**

If you are unable to attend our meeting but wish to remain informed of the project, please call us and indicate that you wish to be on our mailing list. Thank you for your interest!

Sincerely,

Kathryn Callnan
President and CEO

Sam L. Cohen Healthcare Center

Neighborhood Meeting

January 29, 2018

Name	Address
Michael Guethle	75 Washington Ave 04003
Mark Manduca	861 Washington Ave 04103
Jeff Henthorn	9 Edgecomb Ct.
Stephanie Crockett	3 Fieldstone Ct.
Mary Anne Wallace	9 Bramhall
[illegible] Wallace	9 Bramhall Terr.
Steve Kazilions	7 Applebee / 865 Washington 04103
Karen Picucci	24 Providence St.
Jan Valente	20 Providence St.
Leslie Merrill	5 Edgecomb Ct.
Dana Lesniak	629 Ocean Ave
Elizabeth Wise	20 Grafton St.
Jeanette Haskell	Wellstone (me Properties)
Steve Chicoute	[illegible] 672 Ocean
Maryann Piacentino	17 Grafton St.
Jo-Anne Walton	15 Wellstone Dr.
Sally Waite	44 Wellstone Dr
Mary Puglisi	16 Byfield Rd
Bernard Zike	16 By Field Rd
Jackie Nelson	12 Graham Terrace
Wayne St Peter	12 Graham Terrace
Mary Lou Condon	ATRIUM

NEIGHBORHOOD MEETNG MINUTES

Meeting Date: January 29, 2018
Location: 630 Ocean Avenue; The Cedars Hoffman Center
Project Number: 13682A

Presenters: Kathy Callnan (The Cedars); Alex Toye (Action Pact Design)
Owners representatives present at Meeting: John Watson (The Cedars); Angie Hunt (The Cedars); Tracy Ericson (The Cedars); Martin Dickmann (Action Pact Design); Karl Bacon (PM Construction); Michael Guethle (Wright-Pierce); Jan Wiegman (Wright-Pierce);
Attendees: Attached

A neighborhood meeting for The Cedars Long-Term Care and Assisted Living Facility was conducted to inform the abutting community and interested members of the public about the proposed project. The presentation was completed in PowerPoint format, with discussion of plans and other pertinent project information provided within the slides. Approximately 25 members of the public attended the meeting. The general outline of the introductory presentation is indicated below:

- Introduced Project Team
- Discussed Organization History and the Project
- Discussed the Need for the project
- Reviewed Household Model of service delivery
- Reviewed Site Layout and Building Design
- Discussed Parking Requirements, Site Building, Screening/Landscaping
- Discussed Project Floor Layout and Site Uses
- Discussed Building Façade and Matching Site Uses, and Setback

The meeting format was designed to include the presentation first, followed by questions by attendees. However, several questions were asked during the presentation, particularly following the building design and site layout review. The main presenter was Alex Toye, architect, with discussion on the facility history provided by Kathy Callnan and discussion on the household model provided by Martin Dickmann. All questions and associated responses are indicated below:

- Question on how much staff would be added from the project, and how many parking spaces would be added. Applicant provided discussion on how the proposed project meets the City requirements for the number of additional parking spaces.
- Question on the setback from Rainbow Mall Road. Applicant provided discussion that project has a 16-foot setback from the property boundary, and that there is additional distance between the pavement edge and the property boundary.
- Question on corner with Ocean Avenue and Rainbow Mall Road and how this intersection is perceived to be a blind corner. Discussion provided that a traffic study has been completed. The applicant will remove vegetation obstructions within the site to allow for improvemnts to site

distance . There may be other obstructions that are outside the property line that the Cedars have no control over. Site lines will be reviewed at the intersection if they have not already been reviewed in the traffic report.

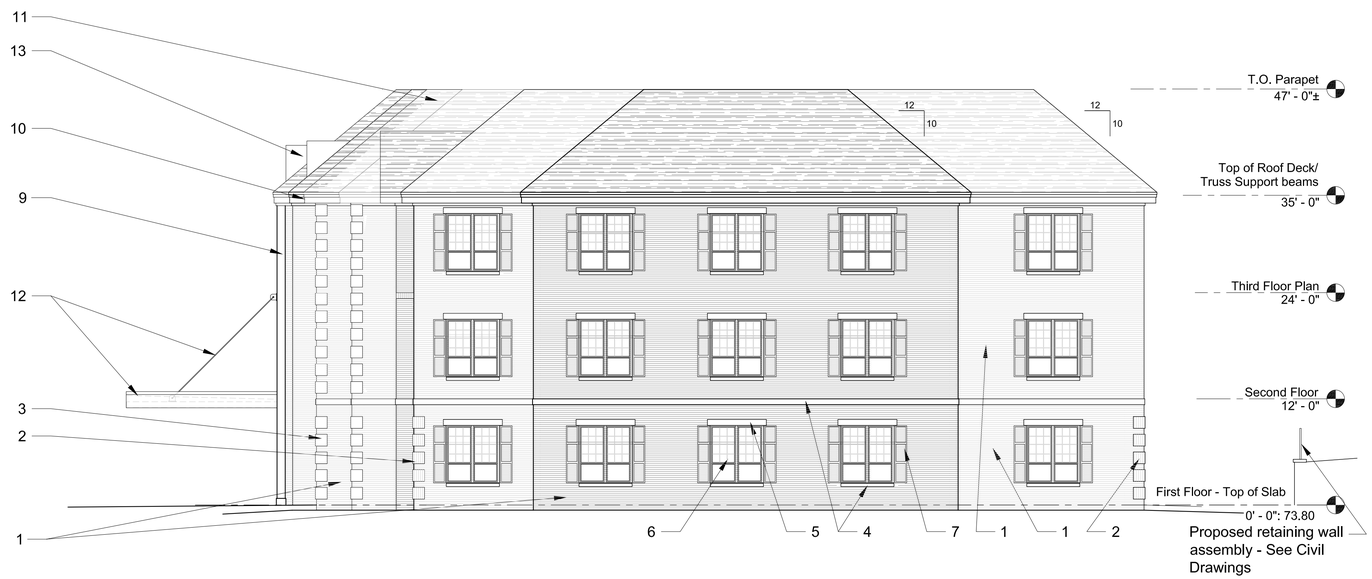
- Question about existing driveway access to house to be removed. Applicant provided clarification that the driveway will be removed and landscaped.
- Question about if any ledge removal or blasting will occur on the project. Applicant provided answer that a geotechnical report is being developed, and from that report we will review a need for blasting versus other methods of ledge removal.
- Concern from audience that blasting damaged water pipes during previous construction that occurred on-site and in the area, and discussion on how blasting impacted the abutters. Applicant noted that blasting will not be confirmed until the final geotechnical report is completed.
- Question from abutter on Providence Street: Current employees are parking on Providence Street. Applicant provide discussion that a conversation will be had with employees about existing parking on site.
- Question on where construction crew will park. Applicant responded that project contractor is looking for off-site parking and construction management plan will not allow parking on side streets.
- A concern was noted about trucks associated with construction may Providence Street, and concern about mitigating traffic. Discussion that construction would be 12 months for completing the new building, with an additional 12 months of interior improvements to the Hoffman Center. Truck routes would be identified in the Construction Management Plan.
- Question on roof height and how it fits into the scale of the existing site. Discussion on how there is no variance, that the proposed building height is meets the zoning requirements, that the building is not taller than tallest buildings on campus, that the mansard roof will screen HVAC and other buildings.
- Question from abutter that the site may not fit into the surrounding buildings on the campus, and that the tall roof may create glare ice on the Rainbow Mall Road corridor. Response from Architect that a Visual Sight Line Study will be conducted to ensure that building height does not have substantial negative impacts. Discussion that several alternative locations were evaluated and this one had the least impacts to environment and was feasible.
- Question to why project was not developed on Slemons or Byfield Road. Discussion that there was a concern to not developing onto abutting residential uses and to retain the site within its existing campus and not to extend an institutional envelope into residential neighborhoods.
- Concern that parking is not adequate on the existing campus and concern that construction will be frustrating for disturbances to the neighbors. Response that the facility is hearing the concerns of the public and that construction activities will be completed with care.
- Discussion that there is not a sidewalk on Rainbow Mall Road, followed by a response from the applicant that the Cedars does not own Rainbow Mall Road and that we can bring this point up to the City.
- Discussion that the building will not fit into the surrounding community, and that it is difficult to move these facilities in the residential community. Response from applicant that the building will be screened and that there is an interest to not extend the campus into the residential neighborhood.

- Question followed by confirmation that the new building will not add more than 22 residences to the facility.
- Concerns about the drainage and the site wetlands. Applicant provided response that the facility will be designed in accordance with the state's requirements for surface runoff and wetland impacts.
- Confirmation from the applicant that The Cedars pays stormwater and other taxes.
- Concern raised saying that an off-site building foundation was fractured and windows broken from blasting in the past. Response that blasting will not be confirmed until following the geotechnical report and that any blasting will be completed within state guidelines including conducting pre-blast surveys of structures.
- Concern that previous projects on Ocean Avenue makes stormwater in backyard locations worse. Response that stormwater controls are being designed.
- Concern that construction noise needs to begin at 8:30-5:00. Response that construction will be completed during hours allowable by the City code.
- Concern that any damage from blasting needs to be repaid or repaired, followed by confirmation that any blasting, if required, will be completed in accordance with state regulations.
- Concern that the roof height needed a variance or was given a waiver. Discussion that the roof variance was not needed due to confirming the roof height requirements with City staff.
- Comment from public that the expansion should be above the existing building rather than a free standing building. Response this is not a feasible approach for a variety of reasons.
- Concern that developing along the corner of Ocean Avenue is not consistent with abutting community, and that there is a need for additional screening and abutting locations. Additional concern that parking locations are being developed in wooded areas and creating more stormwater runoff concerns. Applicant provided brief discussion on how stormwater controls and screening are proposed.
- Concern that retaining wall excavation will impact trees on abutting properties. Response that these cuts would be limited to the project site.
- Concern that the neighborhood meeting is too late for meaningful input and that the neighborhood meeting is happening prior to obtaining permits and needs to be earlier. Applicant provided clarification that the meeting cannot occur until the project is defined, and clarification that no permits had been obtained.
- Question on blasting protocol. Applicant again provided confirmation that if blasting is required the project will follow state and local requirements.
- Applicant provided comment that questions can be forwarded to the Cedars or continue to discuss at planning workshop or planning board hearing.
- Question on what the facility's intent is with the abutting properties in the Slemons/Byfield corridor. Applicant provided response that buildings may be rented in the future.
- Comment from public that the site used to be wooded, and now the facility blends in more than a large housing development would.
- Question regarding the height of the mansard roof and if the roof height could be and allow for continued screening of mechanicals. Discussion from the applicant that it could reflect poorly on the aesthetics of the mansard roof.

- One comment from the public that the building looks nice, and a statement of appreciation for hosting the meeting.
- Comment from applicant that sidewalk or other off-site improvements that may be part of approval would occur in conjunction with planned project.



FRONT ELEVATION



RIGHT SIDE ELEVATION - (facing Ocean Ave,)

Proposed Material Legend

1.	Brick Veneer	Deep Red with accents to complement existing campus
2.	Brick Quoines	Deep Red
3.	Cast Stone Quoines	White/beige to complement existing campus
4.	Cast Stone Sill/trim	White/beige to complement existing campus
5.	Cast Stone Lintel/Keystone	White/beige to complement existing campus
6.	Al. Clad Wood or Fiberglass Windows	White with grills
7.	Fixed Shutters	Dark Color
8.	Cementatious Lap Siding (N/A)	White and/or accent color
9.	Cementatious Trim	White or accent color
10.	Pre-finished Soffit/Fascia	White or accent color
11.	Architectural Tab- Shingles	Color to complement existing campus
12.	Metal Cladded Port Cochere/Steel supports	White or accent color
13.	Eye-brow Dormer w/ Colored roofing	Color to complement roof or existing campus
14.	Pre-finished insulated door	Color to complement brick color

* All Brick/Cast Stone *

action pact design group

423 WESTPORT ROAD
KANSAS CITY, MISSOURI
64111
816.359.3898

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the cedars
Your life. Your community.

New Standalone Healthcare & Assisted Living Memory Care Facility for:
The Cedars
630 Ocean Avenue
Portland, Maine 04103

JOB NO 14-006c
DATE: 04.24.2018

ISSUE RECORD:
For P & Z Review

REVISIONS:
02.08.2018 - original submittal
03.20.2018: re-submittal/section

Proposed Building Elevations

A1.01



FRONT ELEVATION



RIGHT SIDE ELEVATION - (facing Ocean Ave,)

Proposed Material Legend

1.	Brick Veneer (N/A)	Deep Red with accents to complement existing campus
2.	Brick Quoines (N/A)	Deep Red
3.	Cast Stone Quoines (N/A)	White/beige to complement existing campus
4.	Cast Stone Sill/trim (N/A)	White/beige to complement existing campus
5.	Cast Stone Lintel/Keystone (N/A)	White/beige to complement existing campus
6.	Al. Clad Wood or Fiberglass Windows	White with grills
7.	Fixed Shutters	Dark Color
8.	Cementatious Lap Siding	White and/or accent color
9.	Cementatious Trim	White or accent color
10.	Pre-finished Soffit/Fascia	White or accent color
11.	Architectural Tab- Shingles	Color to complement existing campus
12.	Metal Cladded Port Cochere/Steel supports	White or accent color
13.	Eye-brow Dormer w/ Colored roofing	Color to complement roof or existing campus
14.	Pre-finished insulated door	Color to complement brick color

* All Siding *

action pact design group

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the cedars
Your life. Your community.

New Standalone Healthcare & Assisted Living Memory Care Facility for:
The Cedars
630 Ocean Avenue
Portland, Maine 04103

JOB NO 14-006c
DATE: 04.24.2018

ISSUE RECORD:
For P & Z Review

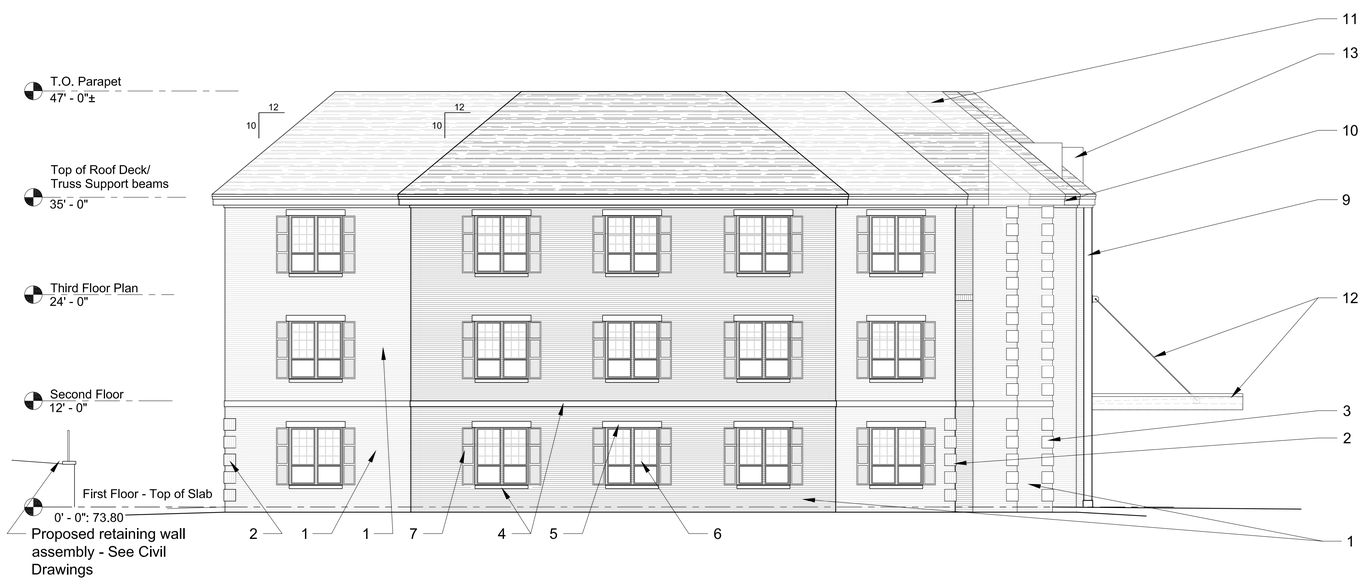
REVISIONS:
02.08.2018 - original submittal
03.20.2018: re-submittal/section

Proposed Building Elevations

A1.01



REAR ELEVATION - (facing River Mall Road)



LEFT SIDE ELEVATION - (facing Parking Lot/Atriums)

Proposed Material Legend

1.	Brick Veneer	Deep Red with accents to complement existing campus
2.	Brick Quoines	Deep Red
3.	Cast Stone Quoines	White/beige to complement existing campus
4.	Cast Stone Sill/trim	White/beige to complement existing campus
5.	Cast Stone Lintel/Keystone	White/beige to complement existing campus
6.	Al. Clad Wood or Fiberglass Windows	White with grills
7.	Fixed Shutters	Dark Color
8.	Cementatious Lap Siding (N/A)	White and/or accent color
9.	Cementatious Trim	White or accent color
10.	Pre-finished Soffit/Fascia	White or accent color
11.	Architectural Tab- Shingles	Color to complement existing campus
12.	Metal Cladded Port Cochere/Steel supports	White or accent color
13.	Eye-brow Dormer w/ Colored roofing	Color to complement roof or existing campus
14.	Pre-finished insulated door	Color to complement brick color

* All Brick/Cast Stone *

action pact design group

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LICENSED ARCHITECT
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4-12-18

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the cedars
Your life. Your community.

New Standalone Healthcare & Assisted Living Memory Care Facility for:
The Cedars
630 Ocean Avenue
Portland, Maine 04103

JOB NO 14-006c
DATE: 04.24.2018

ISSUE RECORD:
For P & Z Review

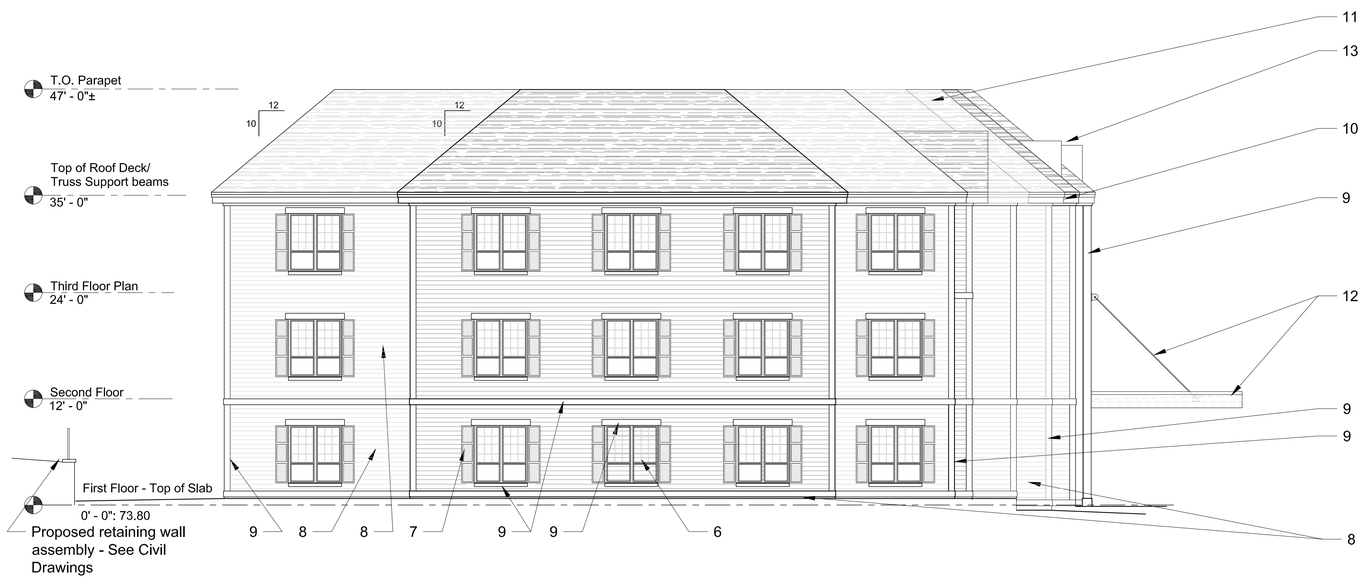
REVISIONS:
02.08.2018 - original submittal
03.20.2018: re-submittal/section

Proposed Building Elevations

A1.02



REAR ELEVATION - (facing River Mall Road)



LEFT SIDE ELEVATION - (facing Parking Lot/Atriums)

Proposed Material Legend

1.	Brick Veneer (N/A)	Deep Red with accents to complement existing campus
2.	Brick Quoines (N/A)	Deep Red
3.	Cast Stone Quoines (N/A)	White/beige to complement existing campus
4.	Cast Stone Sill/trim (N/A)	White/beige to complement existing campus
5.	Cast Stone Lintel/Keystone (N/A)	White/beige to complement existing campus
6.	Al. Clad Wood or Fiberglass Windows	White with grills
7.	Fixed Shutters	Dark Color
8.	Cementatious Lap Siding	White and/or accent color
9.	Cementatious Trim	White or accent color
10.	Pre-finished Soffit/Fascia	White or accent color
11.	Architectural Tab- Shingles	Color to complement existing campus
12.	Metal Cladded Port Cochere/Steel supports	White or accent color
13.	Eye-brow Dormer w/ Colored roofing	Color to complement roof or existing campus
14.	Pre-finished insulated door	Color to complement brick color

* All Siding *

action pact design group

423 WESTPORT ROAD
KANSAS CITY, MISSOURI
64111
816.359.3898

LICENSED ARCHITECT
ALEX TOMS
VA#0401473
4-12-18
STATE OF MAINE

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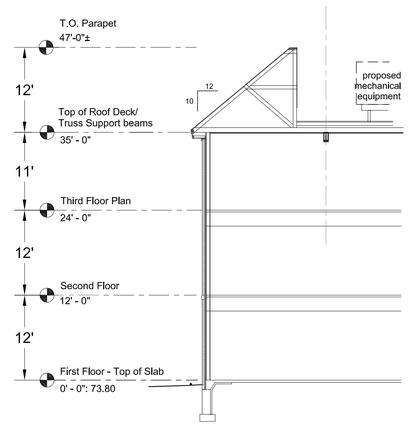
Proposed Building Elevations

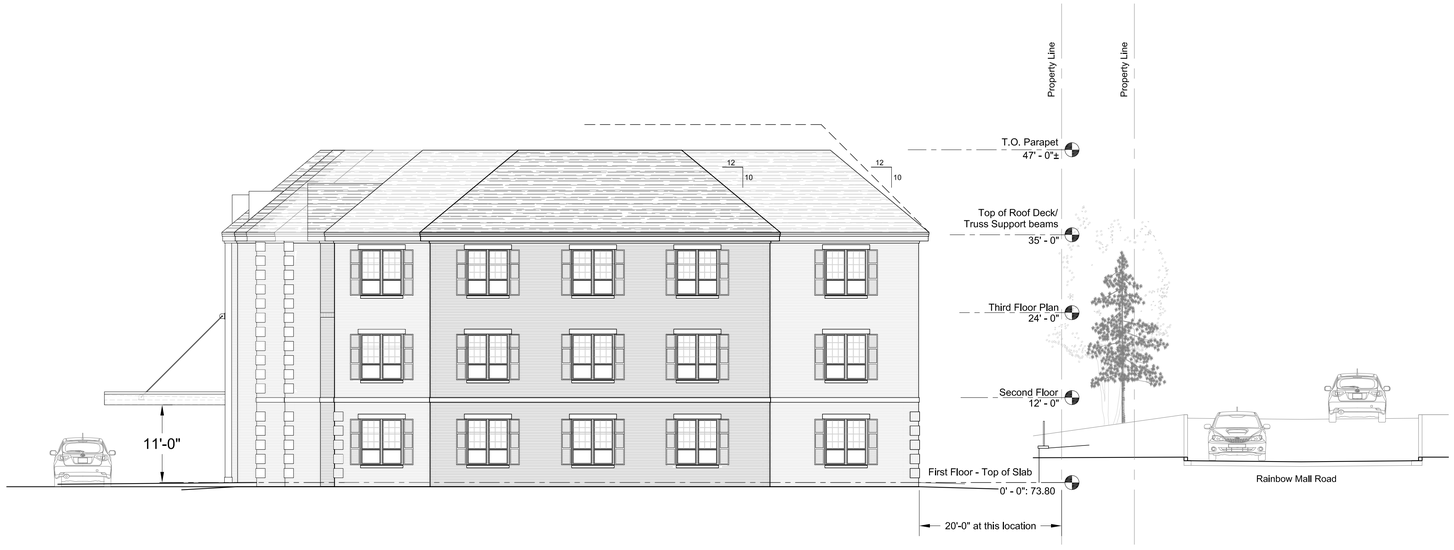
A1.02



FRONT ELEVATION



PARTIAL BUILDING SECTION



RIGHT SIDE ELEVATION - (facing Ocean Ave,)

action pact
design group

423 WESTPORT ROAD
KANSAS CITY, MISSOURI
64111
816.359.3898

LICENSED ARCHITECT
ALEX TOYE
ARC4473
STATE OF MAINE

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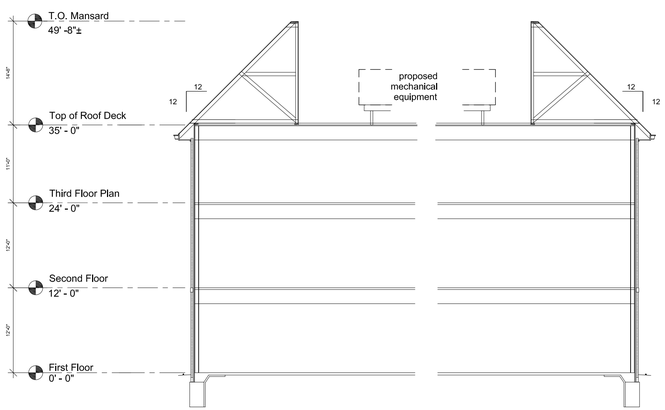
Building and
Street Sections

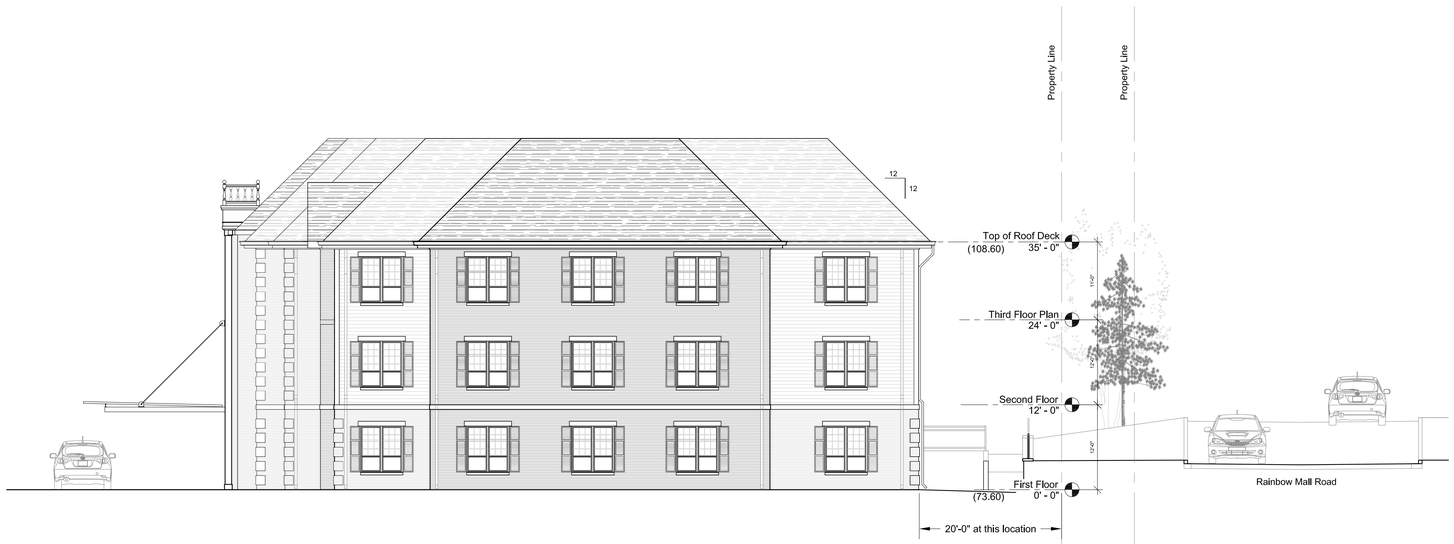
A1.03



FRONT ELEVATION



PARTIAL BUILDING SECTION



RIGHT SIDE ELEVATION - (facing Ocean Ave,)

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KANSAS CITY, MISSOURI
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816.359.3898

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ARC4473
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630 Ocean Avenue
Portland, Maine 04103

JOB NO 14-006c
DATE: 03.20.2018

ISSUE RECORD:
P & Z Review

REVISIONS:

3.20.18	ADDED SECTION

Building and Street Sections

A1.03



FRONT VIEW RENDERING



FRONT VIEW RENDERING



RIGHT SIDE/REAR RENDERING

* All Brick/Cast Stone *

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ALEX TOYE
ARC4473
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Portland, Maine 04103

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Proposed Building Elevations

A1.04



FRONT VIEW RENDERING



FRONT VIEW RENDERING



RIGHT SIDE/REAR RENDERING

* All Siding *

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64111
816.359.3898

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ALEX TOYE
ARC4473
STATE OF MAINE

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The Cedars

630 Ocean Avenue
Portland, Maine 04103

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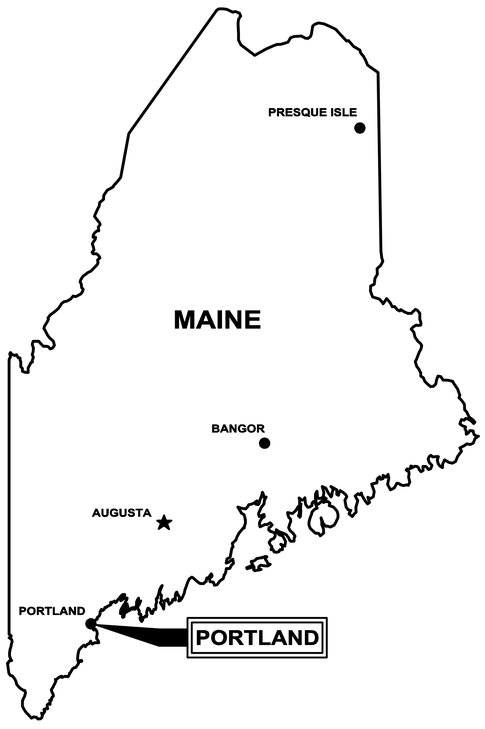
Proposed Building Elevations

A1.04

PERMIT DRAWINGS FOR

THE CEDARS
ASSISTED LIVING AND
LONG-TERM CARE FACILITY
PORTLAND, ME

FEBRUARY 2018



DRAWING INDEX

GENERAL

-----	COVER SHEET

CIVIL

C–1	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
C–2	OVERALL EXISTING CONDITIONS PLAN
C–3	EXISTING CONDITIONS AND DEMOLITION PLAN
C–4	OVERALL SITE LAYOUT PLAN
C–5	SITE LAYOUT AND UTILITIES PLAN
C–6	SITE GRADING AND EROSION CONTROL PLAN
C–7	DETAILS I
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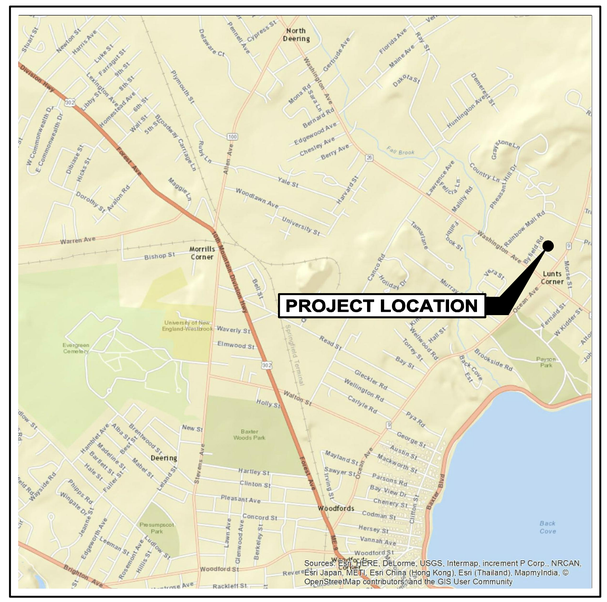
L–1	LANDSCAPE PLAN
L–2	LANDSCAPE DETAILS

STATE OF MAINE
JAN B. S. WIEGMAN
No. 5852
REGISTERED PROFESSIONAL ENGINEER
2/14/18

PROJECT OWNERS

CEDARS NURSING CARE CENTER, INC
JHA ASSISTED LIVING, INC
630 OCEAN AVE
PORTLAND, ME 04103



LOCATION PLAN
SCALE: 1"=2,000'

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FOR REVIEW _____

FOR BIDDING _____

WP PROJECT No. 13682A

LAST SAVED BY: MATT.LAPIERRE 2/8/2018 2:57 PM

GENERAL NOTES

1. THE CONTRACTOR IS REFERRED TO SECTION 01050 OF THE SPECIFICATIONS REGARDING COORDINATION WITH OTHERS, INCLUDING RESPONSIBILITIES AND RELATED COSTS.

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

ELECTRIC:	STORM DRAINS:	WATER & SANITARY SEWER:
CENTRAL MAINE POWER CO. 83 EDISON DRIVE AUGUSTA, ME 04336 207–623–3521	CITY OF PORTLAND PUBLIC WORKS 55 PORTLAND ST. PORTLAND, ME 04104 207–874–8801	PORTLAND WATER DISTRICT 225 DOUGLASS STREET PO BOX 3553 PORTLAND, MAINE 04101
TELEPHONE:	**DIG SAFE:**	**GAS:**
FAIRPOINT COMMUNICATIONS 5 DAVIS FARM ROAD PORTLAND, ME 04103 207–878–0854	TEL. 1–800–225–4977	UNITIL 1075 FOREST AVE PORTLAND, ME 04103 207–541–2508

3. ALL EXISTING SEWER, STORM DRAIN, WATER AND NATURAL GAS LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING SEWERS, STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW SEWER OR WHEN NOT SHOWN OR INDICATED.

4. THE CONTRACTOR MAY ENCOUNTER ASBESTOS CEMENT PIPE DURING EXECUTION OF THE WORK. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF OSHA AND ALL OTHER FEDERAL, STATE AND LOCAL REGULATIONS WHEN HANDLING, REMOVING AND DISPOSING OF ASBESTOS CEMENT PIPES. A BID ITEM HAS BEEN INCLUDED IN THE BID FORM TO ESTABLISH A UNIT PRICE FOR THE REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PIPE.

5. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.

6. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48–HOUR NOTIFICATION TO APPROPRIATE UTILITY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES

7. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL.

8. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH MDOT REQUIREMENTS.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE PORTLAND POLICE DEPARTMENT (874–8479) AND PORTLAND FIRE DEPARTMENT (874–8400) ARE TO BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPEC. SECTION 01570.

10. MAINE STATE HIGHWAYS: THE FOLLOWING ROADWAYS FALL WITHIN THE JURISDICTION OF THE MAINE DEPARTMENT OF TRANSPORTATION (MDOT). ALL WORK CONDUCTED WITHIN THESE ROADWAYS MUST CONFORM TO MDOT STANDARDS AND ROAD OPENING PERMIT. MAINE STATE HIGHWAYS WITHIN THE PROJECT AREA ARE AS FOLLOWS:

    RTE. 9 OCEAN AVENUE

11. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL BUILDING PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

12. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS–OF–WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.

13. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE TO THE PLANS. TEST PITS ARE REQUIRED WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG PRIOR TO CONNECTING PROPOSED SEWERS TO EXISTING SEWERS. THE RESULTS OF TEST PITS DUG TO DETERMINE EXISTING SEWER ELEVATIONS AND LOCATIONS WILL BE REPORTED TO THE ENGINEER. ADJUSTMENTS TO INVERTS, LENGTHS, AND SLOPES OF PROPOSED SEWER MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED LINES AND STRUCTURES AS SHOWN ON THE DRAWINGS. THE LAYOUT PLAN SHALL BE REVIEWED BY THE ENGINEER PRIOR TO CONSTRUCTION. THE HORIZONTAL ALIGNMENT OF THE NEW SEWERS AND FORCE MAINS MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM. ORIENTATION IS GRID NORTH MAINE STATE PLANE COORDINATE SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL ELEVATION REFERENCE INFORMATION PRIOR TO USE IN CONSTRUCTION.

14. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING PROPERTY LINES ON STATE OR COUNTY–OWNED PROPERTY OR EASEMENTS. ALL GRUBBINGS AND EXCESS EXCAVATED MATERIAL ARE THE PROPERTY OF THE CONTRACTOR AND WILL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION. ALL DISTURBED EARTH SURFACES ARE TO BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL IS TO BE IN A MANNER THAT WILL MINIMIZE EROSION. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE EXCAVATED MATERIAL AT A SITE PROVIDED BY HIM WHICH IS IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS. MATERIALS AND METHODS USED FOR TEMPORARY EROSION CONTROL SHALL BE AS SPECIFIED BY THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PREPARED BY THE MAINE SOIL AND WATER CONSERVATION COMMISSION. REFER TO SPECIFICATION SECTION 02270.

16. COMPACTION TESTS SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

17. OPEN TRENCHES MUST BE BACKFILLED AT THE END OF THE WORKDAY.

18. CONTRACTOR SHALL CONTROL DUST TO A TOLERABLE LIMIT AS OUTLINED IN SPECIFICATION SECTION 01562. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH AND DEBRIS ON PUBLIC STREETS OUTSIDE THE PROJECT AREA. STREETS OPENED TO THE PUBLIC SHALL BE KEPT SWEPT AND FREE OF DEBRIS.

19. WHEREVER PROPOSED STRUCTURES ARE LOCATED PARTLY WITHIN A PAVED AREA AND PARTLY IN A NON–PAVED AREA, A BITUMINOUS CONCRETE PAVED APRON 2–FEET WIDE SHALL BE SUPPLIED AROUND THE PROPOSED COVER. PAVEMENT SHALL SLOPE AWAY FROM THE COVER.

20. ALL MANHOLES ARE 4 FOOT DIAMETER, ECCENTRIC CONE TOP, UNLESS OTHERWISE NOTED. THE INVERTS SHOWN ARE AT THE INSIDE FACE OF THE MANHOLE.

21. INSULATE OVER ANY GRAVITY SEWER OR FORCE MAIN PIPE WHEN COVER IS LESS THAN 7.5 FT, OR THERE IS LESS THAN 2 FT BETWEEN THE SEWER OR FORCE MAIN AND A CULVERT.

22. ALL ROAD CROSS SLOPES SHALL PITCH PER DETAIL. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. ALL VEGETATED AREAS ABOVE MEAN HIGH WATER ELEVATION THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH RIPRAP SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED AT NO ADDITIONAL EXPENSE TO THE OWNER.

23. INITIAL PAVING SHALL BE CONDUCTED WITHIN TWO WEEKS OF COMPLETION OF PLACEMENT OF FINAL BACKFILL UNLESS OTHERWISE AUTHORIZED BY ENGINEER. INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF 2 MONTHS BEFORE FINAL PAVEMENT IS PLACED. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY HIS OPERATIONS AT NO EXPENSE TO THE OWNER. THIS WORK IS TO BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MAINE.

25. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

26. SEE APPENDIX A OF THE SPECIFICATIONS FOR BORING LOGS. THESE ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

27. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

CIVIL DEMOLITION NOTES

1. REFER TO THE EXISTING SITE PLAN, DRAWING C–2 AND C–3, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO DRAWING C–4 FOR LIMITS OF WORK.

2. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFIC INFORMATION REGARDING DEMOLITION AND REMOVAL. THIS DRAWING IS FOR USE AS GENERAL GUIDANCE ONLY.

3. REFER TO SPECIFICATION SECTION 01010, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.

4. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPES AND CONDUIT DESIGNATED AS "ABANDONED" MAY BE REMOVED IF THE CONTRACTOR SO CHOOSES. IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED AND THE NEW ENDS OF ABANDONED PIPE CAPPED, OR PLUGGED WITH CONCRETE.

5. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5 FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED.

6. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION FOR HIS USE. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON–SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER.

8. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.

9. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL PROCESS FLOWS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY OR PUMPED BYPASSES AND OTHER MEANS OF MAINTAINING FLOW SHALL BE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES OR BYPASSES WITH THE OWNER AND ENGINEER.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND HIS DEWATERING OPERATIONS.

11. CONTRACTOR IS REFERRED TO SPECIFICATION SECTION 01050 FOR COORDINATION WITH OTHERS.

CIVIL ABBREVIATIONS

&	AND
ø, DIA	DIAMETER
#, NO	NUMBER
APP'D	APPROVED
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
LBS	POUNDS
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W/	WITH
W	POTABLE WATER

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
–122–	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
8"S	SEWER	8"S
4"FM	SEWER FORCE MAIN	4"FM
4"G	GAS	4"G
4"W	WATER	8"W
15"SD	STORM DRAIN	15"SD
6"UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
UGE	UNDERGROUND ELECTRIC	UGE
OHE	OVERHEAD ELECTRIC	OHE
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
124.6	SPOT ELEVATION	134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	GATE VALVE	
	CURB STOP	
	YARD HYDRANT	
	HYDRANT	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	FLOODPLAIN	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP–2	TEST PIT	
B–3	TEST BORING	
P–4	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	

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NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
2	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD COORD: MRL
CAD: MRL
CHECKED BY: MAG
DATE: 2–8–18
APPROVED BY: JBW
DATE: 2–8–18
PROJECT NO: 13682A

STATE OF MAINE · JAN B.S. WIEGMAN · No. 5862 · REGISTERED PROFESSIONAL ENGINEER

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THE CEDARS
ASSISTED LIVING AND
LONG–TERM CARE FACILITY
PORTLAND, ME

GENERAL NOTES, LEGEND AND ABBREVIATIONS

DRAWING
C–1

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PLAN REFERENCES

(1) PLAN OF LOTS NUMBER 3 & 4 MADE FOR THE ESTATE OF MARY S. LUNT BY EDWIN C. TOWNSEND DATED MARCH 8, 1877 RECORDED IN PLAN BOOK 4, PAGE 4.

(2) PLAN OF LAND MADE FOR DOROTHY S. TRUE AND HEIRS OF F.W.H. SMITH DATED OCTOBER 1929, RECORDED IN PLAN BOOK 25, PAGE 50.

(3) REVISED FINAL PLAN OF LEDGEWOOD SUBDIVISION MADE FOR THE DARTMOUTH COMPANY BY LAND USE CONSULTANTS DATED APRIL 27, 1979, RECORDED IN PLAN BOOK 123, PAGE 61.

(4) PLAN OF PROPERTY MADE FOR JEWISH HOME FOR THE AGED MADE BY H.I. AND E.C. JORDAN DATED JULY 17, 1987.

(5) PLAN OF PROPERTY/LAND TITLE SURVEY OF THE CEDARS MADE BY H.I. AND E.C. JORDAN DATED MARCH 29, 1990, RECORDED IN PLAN BOOK 186, PAGE 14.

(6) RECORD DRAWING OF CEDARS NURSING CARE CENTER, INC. MADE BY OWEN HASKELL, INC. DATED AUGUST 29, 1991.

(7) LAYOUT AND UTILITIES PLAN OF THE ATRIUM AT CEDARS (DRAWING NUMBER C202) MADE BY TSOMIDES ASSOCIATES DATED MAY 27, 1997.

(8) TOPOGRAPHIC SITE SURVEY MADE FOR JHA PROPERTIES, INC. BY DANIEL J. DALPHONSO DATED FEBRUARY 28, 1997 .

(9) PLAN SHOWING PROPOSED PROPERTY LINES MADE FOR JHA PROPERTIES, INC. BY DANIEL J. DALPHONSO DATED NOVEMBER 4, 1997.

(10) PLAN SHOWING STANDARD BOUNDARY SURVEY MADE FOR JHA PROPERTIES, INC. BY DANIEL J. DALPHONSO DATED JULY 14, 1997, RECORDED IN PLAN BOOK 198, PAGE 325.

(11) PLAN OF CEDARS PHASE 3–WETLAND MITIGATION AREAS MADE BY LAND USE CONSULTANTS DATED AUGUST 24, 2004.

(12) ALTA/ACSM LAND TITLE SURVEY MADE FOR JHA PROPERTIES, INC. & CEDARS NURSING CARE CENTER, INC. DATED NOVEMBER 4, 2004, BY TITCOMB ASSOCIATES.

(13) CEDARS CONDOMINIUMS RECORDING PLAT/CONDOMINIUM PLAN ALTA/ACSM LAND TITLE SURVEY MADE FOR JHA PROPERTIES, INC., CEDARS NURSING CARE CENTER, INC. AND JHA ASSISTED LIVING, INC. BY TITCOMB ASSOCIATES DATED SEPTEMBER 8, 2005 AND REVISED THROUGH APRIL 5, 2006, RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 206, PAGE 430.

OWNERS OF RECORD

UNIT 1 CEDARS NURSING CARE CENTER, INC.; BOOK 24129, PAGE 276

UNIT 2 JHA ASSISTED LIVING, INC.; BOOK 24446, PAGE 225 AND BOOK 24155, PAGE 29

UNIT 3 JHA ASSISTED LIVING, INC.; BOOK 31484, PAGE 147

NOTES

(1) BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE SPECIFIED.

(2) BEARINGS ARE REFERENCED TO MAGNETIC NORTH 1924.

(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.

(5) ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR THE CITY OF PORTLAND (FIRM PANEL 230051 0007 B, EFFECTIVE DATE JULY 17, 1986), THIS PARCEL IS NOT LOCATED WITHIN A FLOOD HAZARD AREA.

(6) COORDINATE VALUES SHOWN ARE BASED ON BASED ON THE MORSE AND KIDDER STREET CSO PROJECT PROVIDED TO THE CITY OF PORTLAND BY TITCOMB ASSOCIATES.

(7) ELEVATIONS ARE BASED ON THE CITY OF PORTLAND DATUM.

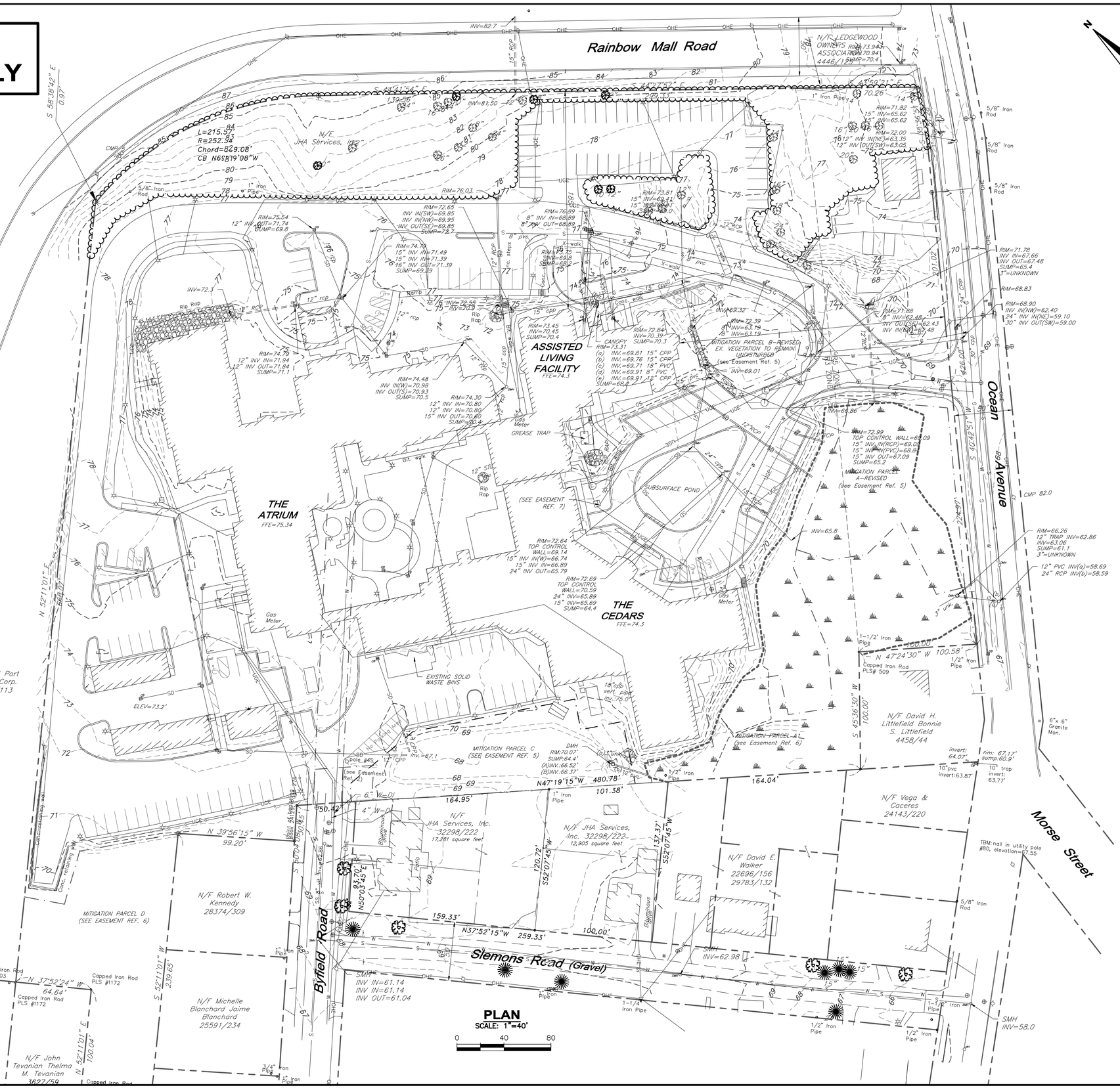
(8) SLEMONS ROAD IS AN UNACCEPTED, CONTINUED STREET.

(9) WETLANDS DELINEATED BY OTHERS, FIELD LOCATED BY TITCOMB ASSOCIATES.

AREA

TOTAL PROJECT AREA = 460,350 SQUARE FEET / 10.57 ACRES

PARKING COUNT
143 PARKING SPACES
18 GARAGE PARKING
10 HANDICAP PARKING SPACES



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NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
2	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD DRAWN BY: MRL
CAD CODED BY: MRL
CHECKED BY: MAG
DATE: 2-8-18
APPROVED BY: JBW
DATE: 2-8-18
PROJECT NO: 13682A

STATE OF MAINE
JAN B. S. WIEGMAN
No. 5852
REGISTERED PROFESSIONAL ENGINEER
2/7/18

THE CEDARS
ASSISTED LIVING AND LONG-TERM CARE FACILITY
PORTLAND, ME

OVERALL EXISTING CONDITIONS PLAN

DRAWING
C–2

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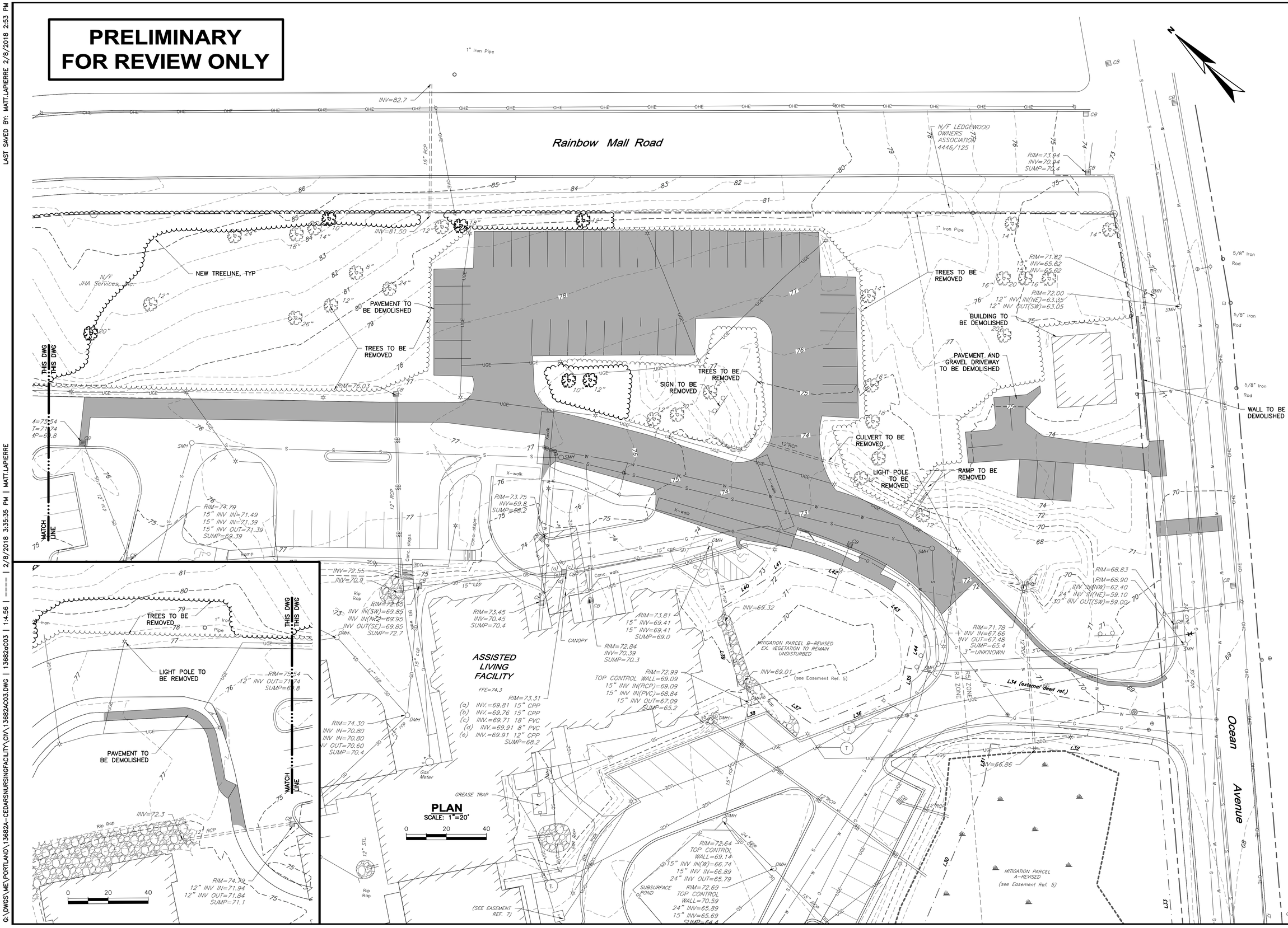
PRELIMINARY
FOR REVIEW ONLY

PLAN
SCALE: 1"=20'

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	RESPONSE TO COMMENTS	JBW	2/18
1	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17
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3			
4			

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CAD: MRL
CHECKED BY: MAG
DATE: 2-8-18
APPROVED BY: JBW
DATE: 2-8-18
PROJECT NO: 13682A

STATE OF MAINE
JAN B.S. WIEGMAN
No. 5852
LICENSED PROFESSIONAL ENGINEER
2/7/18

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THE CEDARS
ASSISTED LIVING AND
LONG-TERM CARE FACILITY
PORTLAND, ME

EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING
C-3

LAST SAVED BY: MATT.LAPIERRE 2/8/2018 2:53 PM

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SITE PARKING COUNT				
	SPACES	GARAGE	HANDICAP	TOTAL SPACES
EXISTING	142	18	10	170
PROPOSED	153	18	12	183

EXISTING BUILDING FOOTPRINT=81,114 SF

PROPOSED FACILITY FOOTPRINT=16,108 SF

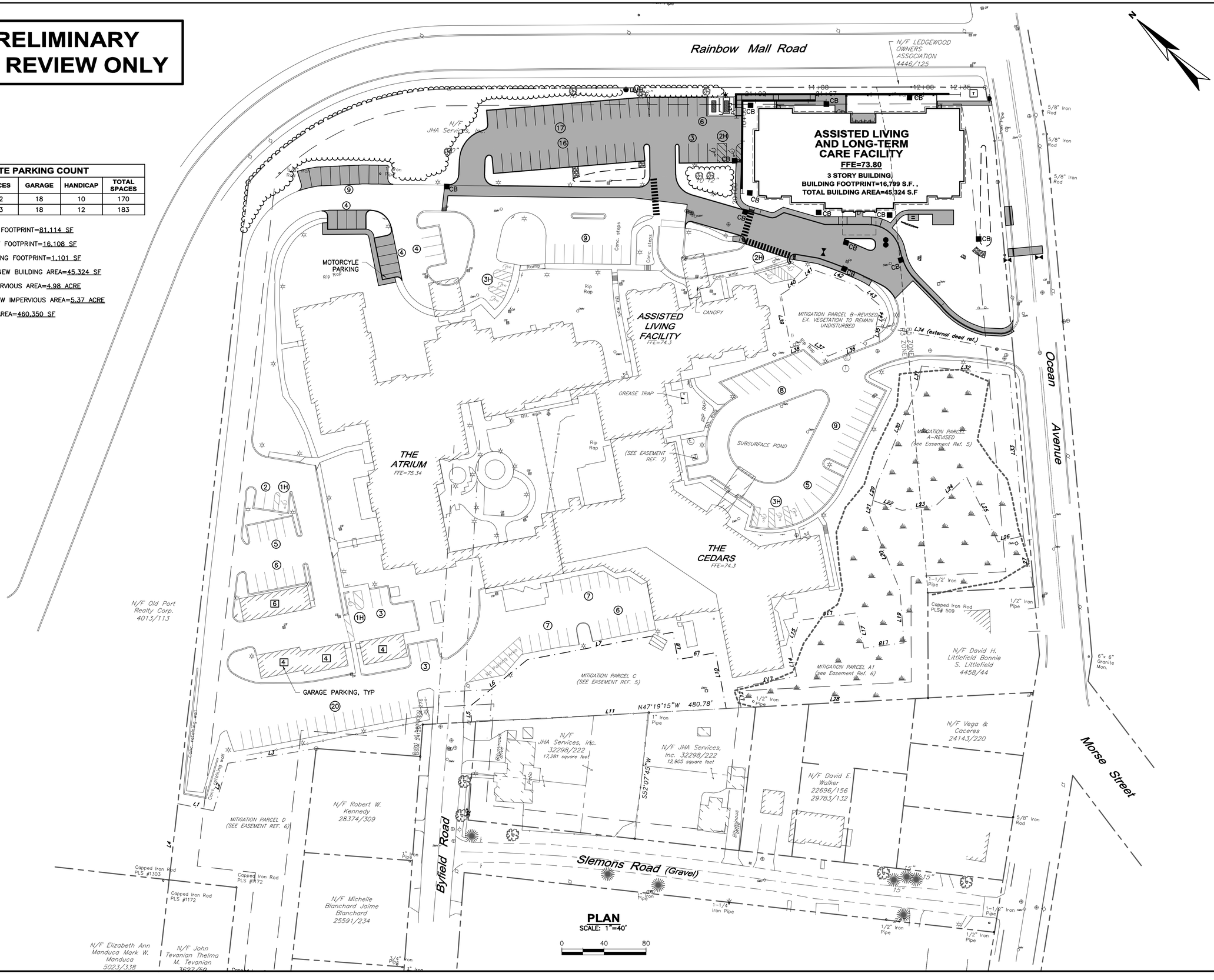
DEMOLISHED BUILDING FOOTPRINT=1,101 SF

PROPOSED TOTAL NEW BUILDING AREA=45,324 SF

EXISTING SITE IMPERVIOUS AREA=4.98 ACRE

PROPOSED SITE NEW IMPERVIOUS AREA=5.37 ACRE

TOTAL SITE LAND AREA=460,350 SF



NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	RESPONSE TO COMMENTS	JBW	2/18
1	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17
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3			
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STATE OF MAINE
JAN B.S. WIEGMAN
No. 5852
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2/17/18

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THE CEDARS
ASSISTED LIVING AND
LONG-TERM CARE FACILITY
PORTLAND, ME

OVERALL SITE LAYOUT PLAN

DRAWING
C-4

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Rainbow Mall Road

1" Iron Pipe

INV=82.7

15" RCP

DMH

INV=81.50

GENERATOR ENCLOSURE

RECREATION AREA=1,647 SF

STONETERRA BLOCK RETAINING WALL #1, SEE DETAIL C-9

16' SIDE YARD SETBACK

STOCKADE FENCE, SEE DETAIL C-10

RIM=73.94
INV=70.94
SUMP=70.4

TRANSFORMER

PARKING LOT
33 SPOTS

17@9'=153'

16@9'=144'

6@9'=54'

3@9'=27'

RETAINING WALL

EGRESS DOOR

ROOF OVERHANG

UGE

BACK DOORS

RIM=71.82
15" INV=65.62
15" INV=65.62

RIM=72.00
12" INV IN(NE)=63.35
12" INV OUT(SW)=63.05
SV2713397 EXISTING WATER SERVICE TO 650 OCEAN AVENUE (DEMOLISHED). RETIRE PER PWD STANDARDS. SHUT AND CUT SERVICE AT MAIN, PULL SERVICE BOX AT STREET LINE.

STONETERRA BLOCK RETAINING WALL #2, SEE DETAIL C-9

ASSISTED LIVING AND LONG-TERM CARE FACILITY

FFE=73.80

3 STORY BUILDING,
BUILDING FOOTPRINT=16,799 S.F.,
TOTAL BUILDING AREA=45,324 S.F

2" W (DOMESTIC) TESTABLE DCVA AFTER METER

6" W (FIRE) TESTABLE DCVA ON FIRE SERVICE

DOWNSPOUT, TYP

6" SEWER

GAS

FRONT DOOR

6" SEWER

RIP RAP APRON

RIM=76.03

UNDERDRAIN SOIL FILTER BASIN (USF-A)

UNDERDRAIN SOIL FILTER BASIN (USF-B)

12"X6"TAPPING SLEEVE AND GATE VALVE

2" SERVICE SADDLE

6" GATE VALVE

2" CURB STOP

25' FRONT YARD SETBACK

SIGN

2 DERO BIKE RACKS, SEE DETAIL C-10

DETECTABLE WARNING PLATE

DROP OFF AREA

1,000 GALLON GREASE TRAP

ZONING LINE

MITIGATION PARCEL B-REVISED
EX. VEGETATION TO REMAIN
UNDISTURBED

(see Easement Ref. 5)

L34 (external deed ref.)

MITIGATION PARCEL
A-REVISED
(see Easement Ref. 5)

R5 ZONE
R3 ZONE

Ocean Avenue

5/8" Iron Rod

THIS DWG

MATCH LINE

RIM=74.79
15" INV IN=71.49
15" INV IN=71.39
15" INV OUT=71.39
SUMP=69.39

RIM=75.54
12" INV OUT=71.74
SUMP=69.8

RIM=74.79
12" INV IN=71.94
12" INV OUT=71.84
SUMP=71.1

INV=72.3

PARKING LOTS
18 SPOTS

2@9'=18'

7@9'=63'

4@9'=36'

MOTORCYCLE AND SCOOTER PARKING

INV=72.55
INV=70.9

RIM=72.65
INV IN(SW)=69.85
INV IN(NW)=69.95
INV OUT(SE)=69.85
SUMP=72.7

RIM=74.30
INV IN=70.80
INV IN=70.80
INV OUT=70.60
SUMP=70.4

RIM=73.45
INV=70.45
SUMP=70.4

RIM=73.81
15" INV=69.41
15" INV=69.41
SUMP=69.0

RIM=72.84
INV=70.39
SUMP=70.3

RIM=72.99
TOP CONTROL WALL=69.09
15" INV IN(RCP)=69.09
15" INV IN(PVC)=68.84
15" INV OUT=67.09
SUMP=65.2

RIM=73.31
(a) INV.=69.81 15" CPP
(b) INV.=69.76 15" CPP
(c) INV.=69.71 18" PVC
(d) INV.=69.91 8" PVC
(e) INV.=69.91 12" CPP
SUMP=68.2

ASSISTED LIVING FACILITY

FFE=74.3

CANOPY

GREASE TRAP

Gas Meter

RIM=72.64
TOP CONTROL WALL=69.14
15" INV IN(W)=66.74
15" INV IN=66.89
24" INV OUT=65.79

SUBSURFACE POND

RIM=72.69
TOP CONTROL WALL=70.59
24" INV=65.89
15" INV=65.69

RIM=68.83
RIM=68.90
INV IN(NW)=62.40
24" INV IN(NE)=59.10
30" INV OUT(SW)=59.00

RIM=71.78
INV IN=67.66
INV OUT=67.48
SUMP=65.4
3"=UNKNOWN

INV=66.86

INV=69.01

INV=69.32

PLAN
SCALE: 1"=20'

0 20 40

0 20 40

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
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STATE OF MAINE
JAN B.S. WIEGMAN
NO. 5552
REGISTERED PROFESSIONAL ENGINEER
2/8/2018

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THE CEDARS
ASSISTED LIVING AND
LONG-TERM CARE FACILITY
PORTLAND, ME

SITE LAYOUT AND UTILITIES PLAN

DRAWING
C-5

PRELIMINARY FOR REVIEW ONLY

NOTE:
PLACE INLET PROTECTION OVER ALL CATCH BASINS DOWN SLOPE OF ANY UNSTABLIZED SURFACES PRIOR TO CONSTRUCTION. DO NOT REMOVE UNTIL ENTIRE TRIBUTARY LOCATIONS ARE STABILIZED.

Rainbow Mall Road

Ocean Avenue

ASSISTED LIVING AND LONG-TERM CARE FACILITY
FFE=73.80
3 STORY BUILDING,
BUILDING FOOTPRINT=16,799 S.F.,
TOTAL BUILDING AREA=45,324 S.F

ASSISTED LIVING FACILITY
FFE=74.3

FLAT TOP DMH-1
RIM=83.25
15" INV IN=81.50
15" INV OUT=76.5

CB-14
RIM=76.00
12" SD, S=0.005', CONFIRM INVERT IN DOWN-SLOPE CB AND CONFIRM INVERT OUT PRIOR TO ORDERING MANHOLE

EXISTING CB "D"

CB-2
RIM=76.75
15" INV IN=73.3
15" INV OUT=72.0

CB-11 (TYPE F)
RIM=73.20
6" INV IN=69.91
8" INV IN=69.91
12" INV OUT=69.81

CB-12 (TYPE F)
RIM=72.80
6" INV IN=69.45
12" INV IN=69.45
12" INV OUT=69.35

CB-3 (TYPE F)
RIM=73.2
6" INV IN=68.95
12" INV IN=68.95
12" INV OUT=68.85

CB-7 (TYPE F)
RIM=73.25
6" INV IN=69.5
12" INV OUT=69.0

CB-10 (TYPE F)
RIM=72.80
6" INV IN=70.2
8" INV OUT=70.3

CB-9
RIM=73.0
12" INV OUT=69.0

CB-8
RIM=72.00
4" INV IN=68.08
12" INV OUT=67.5

CB-4
RIM=75.35
12" INV IN=68.77
15" INV IN=69.2
15" INV OUT=68.67

CB-5
RIM=72.4
12" INV IN=68.5
15" INV IN=68.28
18" INV OUT=68.18

CB-6
RIM=72.1
12" INV IN=68.5
18" INV IN=67.92
18" INV OUT=67.82

CB-13
CONSTRUCT CURB INLET

EXISTING CB "C"
REPLACE WITH DMH COVER

CB-1
RIM=73.94
INV=70.94
SUMP=70.4

CB-15
RIM=71.82
15" INV=65.62
15" INV=65.62

DMH-2
RIM=72.00
12" INV IN(NE)=63.35
12" INV OUT(SW)=63.05

DMH-1
RIM=74.79
15" INV IN=71.49
15" INV IN=71.39
15" INV OUT=71.39
SUMP=69.39

DMH
RIM=73.75
INV=69.8
SUMP=68.2

DMH
RIM=73.45
INV=70.45
SUMP=70.4

DMH
RIM=73.81
15" INV=69.41
15" INV=69.41
SUMP=69.0

DMH
RIM=72.84
INV=70.39
SUMP=70.3

DMH
RIM=72.99
TOP CONTROL WALL=69.09
15" INV IN(RCP)=69.09
15" INV IN(PVC)=68.84
15" INV OUT=67.09
SUMP=65.2

DMH
RIM=73.31
(a) INV.=69.81 15" CPP
(b) INV.=69.76 15" CPP
(c) INV.=69.71 18" PVC
(d) INV.=69.91 8" PVC
(e) INV.=69.91 12" CPP
SUMP=68.2

DMH
RIM=74.30
12" INV IN=70.80
12" INV IN=70.80
15" INV OUT=70.60
SUMP=70.4

DMH
RIM=72.64
TOP CONTROL WALL=69.14
15" INV IN(W)=66.74
15" INV IN=66.89
24" INV OUT=65.79

DMH
RIM=72.69
TOP CONTROL WALL=70.59
24" INV=65.89
15" INV=65.69
SUMP=64.4

DMH
RIM=74.79
12" INV IN=71.94
12" INV OUT=71.84
SUMP=71.1

DMH
INV=72.55
INV=70.9

DMH
INV=72.3

DMH
INV=69.32

DMH
INV=69.01
(see Easement Ref. 5)

DMH
INV=66.86

DMH
RIM=72.85
INV IN(SW)=69.85
INV IN(N&E)=69.95
INV OUT(SE)=69.85
SUMP=72.7

DMH
RIM=71.78
INV IN=67.66
INV OUT=67.48
SUMP=65.4
3"=UNKNOWN

DMH
RIM=74.94
INV=71.74
SUMP=69.8

DMH
RIM=76.03

DMH
RIM=74.79
15" INV IN=71.49
15" INV IN=71.39
15" INV OUT=71.39
SUMP=69.39

DMH
INV=81.66

DMH
INV=82.7

SMH
RIM=68.83

SMH
RIM=68.90
INV IN(NW)=66.40
24" INV IN(N)=59.10
30" INV OUT(S)=59.00

SMH
INV=67.4

SMH
INV=67.4

SMH
INV=67.4

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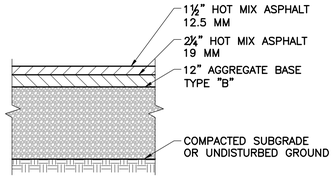
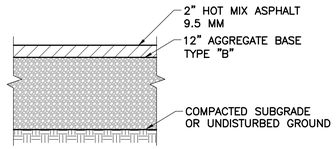
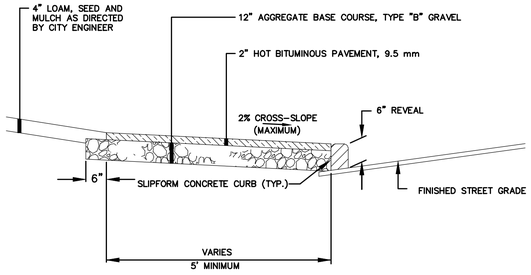


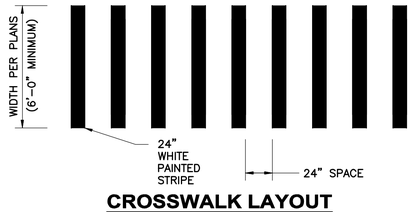
PARKING LOT/ROADWAY PAVEMENT
SCALE: "NTS"



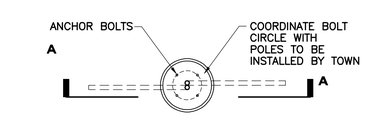
WALKWAY PAVEMENT
SCALE: "NTS"



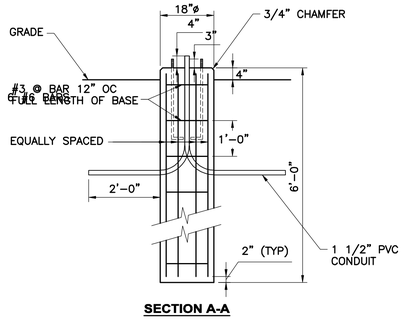
BITUMINOUS SIDEWALK
SCALE: NTS



CROSSWALK LAYOUT
SCALE: NTS

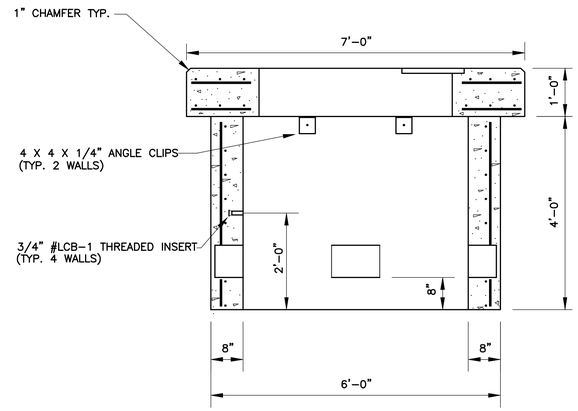


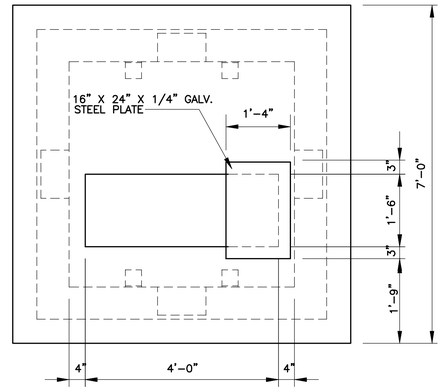
PLAN



SECTION A-A

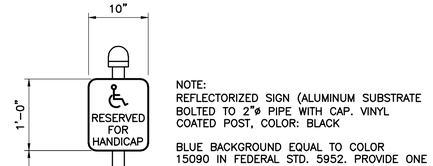
POLE BASE
SCALE: NTS





TRANSFORMER PAD DETAIL
SCALE: NTS

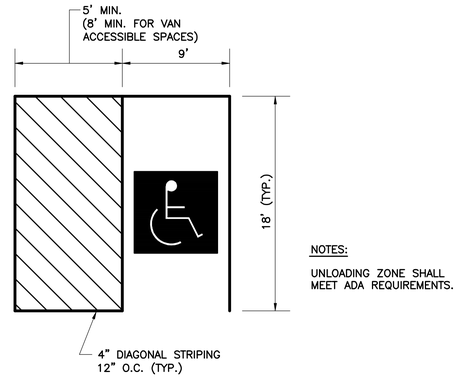
NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. REINFORCING: PAD #4'S @ 12" O.C. E.W. E.F. BASE 1-MAT OF #4'S @ 12" O.C.
3. AS PER CENTRAL MAINE POWER COMPANY SPECIFICATIONS.
4. 1-8" X 12" KNOCKOUT PROVIDED EACH WALL.



NOTE:
REFLECTORIZED SIGN (ALUMINUM SUBSTRATE BOLTED TO 2"ø PIPE WITH CAP. VINYL COATED POST, COLOR: BLACK

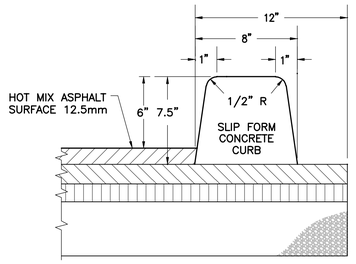
BLUE BACKGROUND EQUAL TO COLOR 15090 IN FEDERAL STD. 5952. PROVIDE ONE "VAN" ACCESSIBLE SIGN. HIGHWAY WHITE SYMBOL AND TEXT.

HANDICAP SIGN
SCALE: NTS

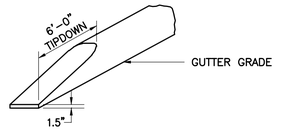


NOTES:
UNLOADING ZONE SHALL MEET ADA REQUIREMENTS.

HANDICAP PARKING
SCALE: NTS



SLIPFORM CONCRETE CURB
SCALE: NTS



TIP DOWN WITH SIDEWALK

SLIPFORM CONCRETE CURB
SCALE: NTS

NOTES: (DUCT BANK DETAIL)

1. DIMENSIONS TYPICAL FOR ALL DUCT BANKS, UNLESS OTHERWISE NOTED.
2. THIS TYPICAL DUCT BANK SECTION HAS BEEN SHOWN AS AN EXAMPLE OF THE REQUIREMENTS FOR THE UNDERGROUND INSTALLATION FOR THE DUCT BANK SYSTEM. THIS DENOTES SPECIFIC SPACING, CONCRETE ENCASEMENT, REINFORCING, ETC. REQUIRED FOR DUCT BANK INSTALLATIONS. THE SPECIFIC CONDUIT SIZING AND NUMBERS HAVE BEEN SHOWN BY EACH SPECIFIC DUCT BANK SECTION.
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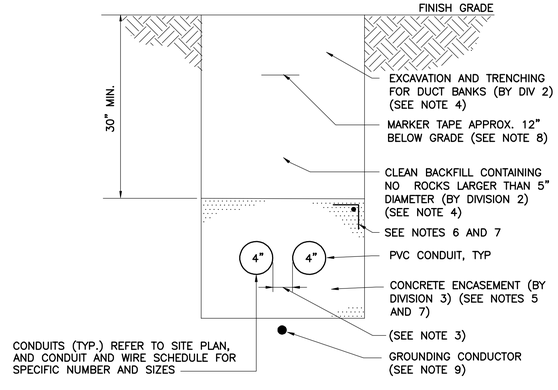
8. INSTALL MARKER TAPE THE ENTIRE LENGTH OF EACH DUCT BANK.
9. TYPICAL SPACING BETWEEN CONDUITS SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
10. A CONTINUOUS #4/0 BARE COPPER GROUND CONDUCTOR SHALL BE PROVIDED AND ROUTED BENEATH ALL DUCT BANKS (AND ELECTRICAL MANHOLES IF APPLICABLE) IN ORDER TO ELECTRICALLY BOND ALL BUILDING SERVICES AND EQUIPMENT TO THE SAME POTENTIAL.



TYPICAL TELEPHONE DUCT BANK DETAIL
(REFER TO NOTES BELOW FOR ADDITIONAL REQUIREMENTS)

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
0	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD COORD: MRL
CAD: MRL CHECKED BY: MAG
DATE: 2-8-18 APPROVED BY: JBW
DATE: 2-8-18 PROJECT NO: 13682A

STATE OF MAINE JAN WIESMAN 5852 REGISTERED PROFESSIONAL ENGINEER 2/8/18

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DETAILS I

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C-7

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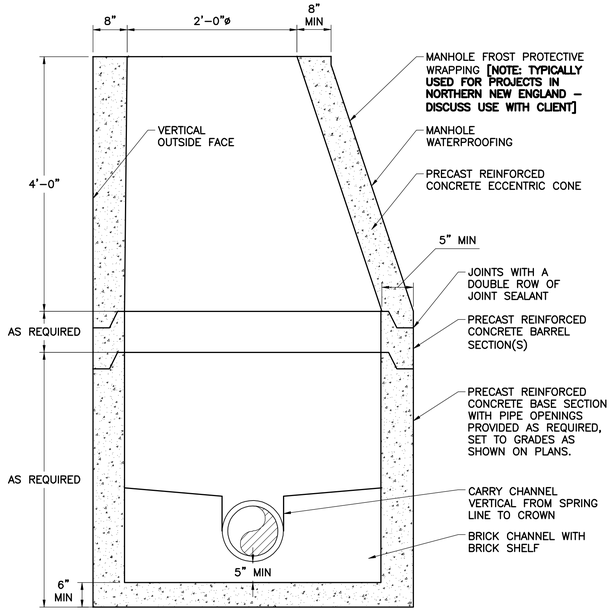
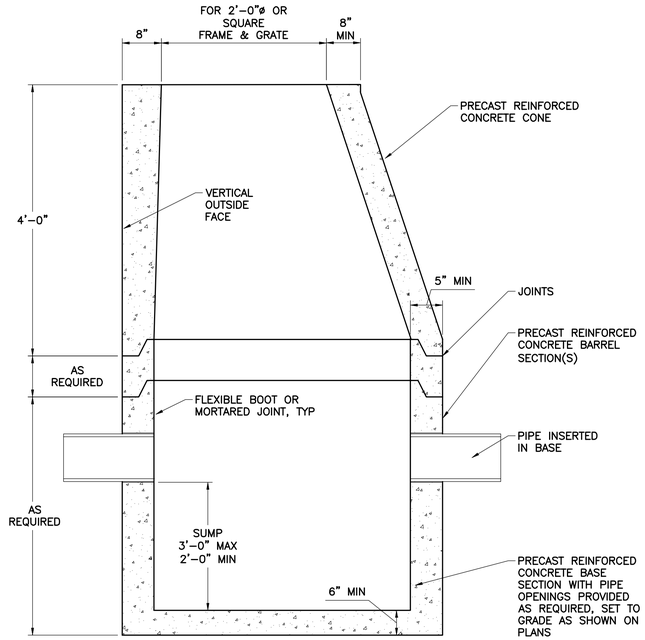


NOTES:
1. MANHOLE CHANNELS REQUIRING A CHANGE IN DIRECTION ARE TO BE BUILT ON A SMOOTH CURVE OF THE LONGEST POSSIBLE RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW.
2. USE A FLAT SLAB TOP MANHOLE WHEN THE HEIGHT DIFFERENCE BETWEEN THE HIGHEST INVERT AND RIM IS LESS THAN 6'-0" AND WHEN MANHOLE DIAMETER IS GREATER THAN 4'-0".

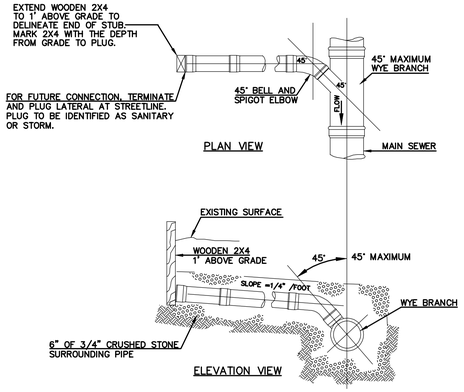
TYPICAL 4-FT MANHOLE
SCALE: "NTS"



NOTE: USE FLAT SLAB TOP CATCH BASIN WHERE REQUIRED TO MATCH GRADE

4-FT CATCH BASIN
SCALE: NTS

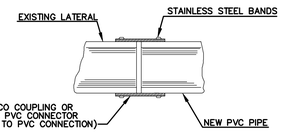
NOTE:
LOCATION / WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.



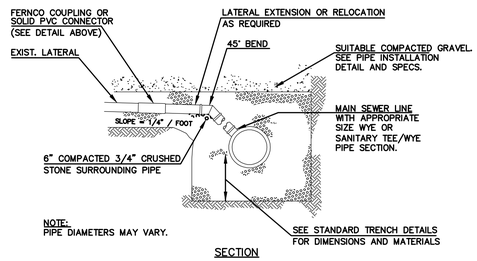
TYPICAL HOUSE LATERAL TEE/WYE CONNECTION
SCALE: NTS

NOTE:
LOCATIONS AND ELEVATIONS OF STUBS SHOWN ON THE PLANS ARE TO BE CONSIDERED AS APPROXIMATE AND MAY BE ADJUSTED AS DIRECTED TO SUIT FIELD CONDITIONS.

HOUSE CONNECTIONS AND CATCH BASINS CONNECTIONS TO THE 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 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".

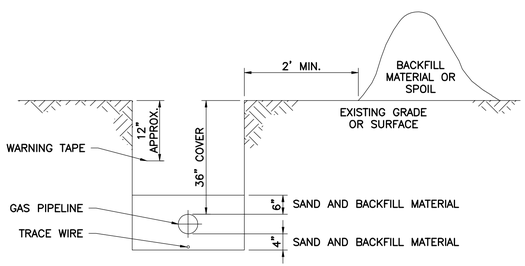


FERNCO COUPLING FOR REPAIR OR REPLACEMENT



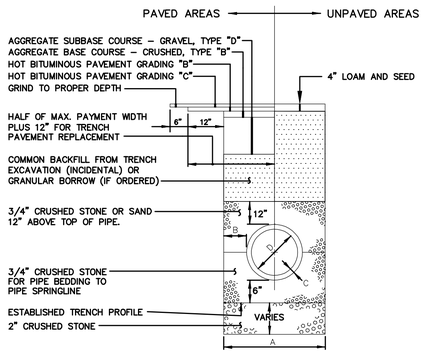
SECTION

TYPICAL EXISTING SEWER LATERAL CONNECTION
SCALE: NTS



GAS PIPELINE TRENCH INSTALLATION
SCALE: NTS

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.



TYPICAL PIPE TRENCH INSTALLATION
SCALE: NTS

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
SCALE: NTS

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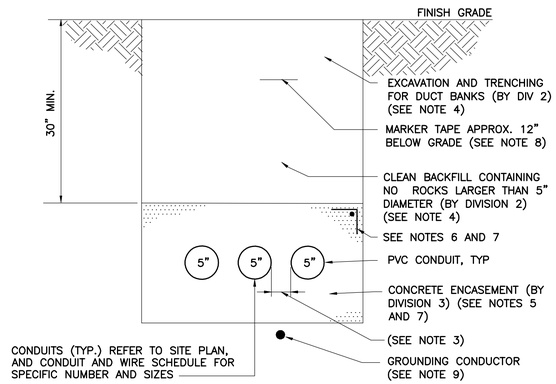
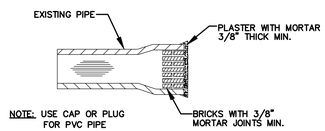


TYPICAL ELECTRICAL DUCT BANK DETAIL
(REFER TO NOTES BELOW FOR ADDITIONAL REQUIREMENTS)



MASONRY PLUG
SCALE: NTS

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NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
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CAD COORD: MRL
CAD: MRL
CHECKED BY: MAG
DATE: 2-8-18
APPROVED BY: JBW
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PROJECT NO: 13682A

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DETAILS II

DRAWING
C-8

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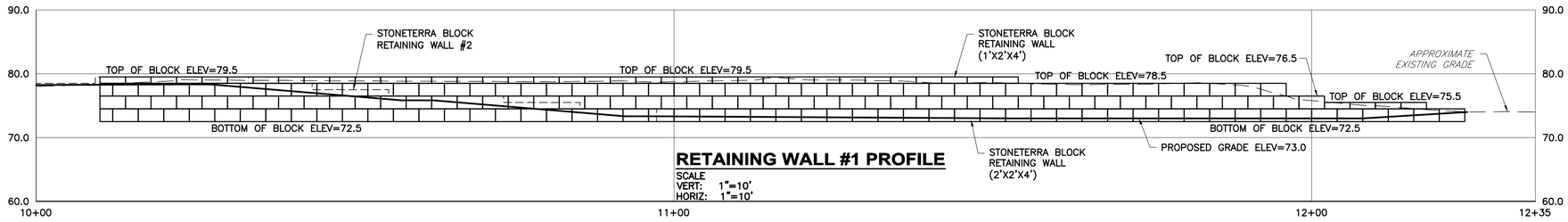
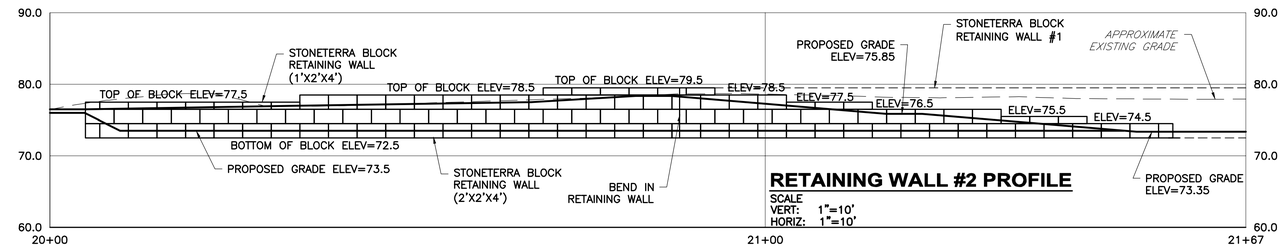


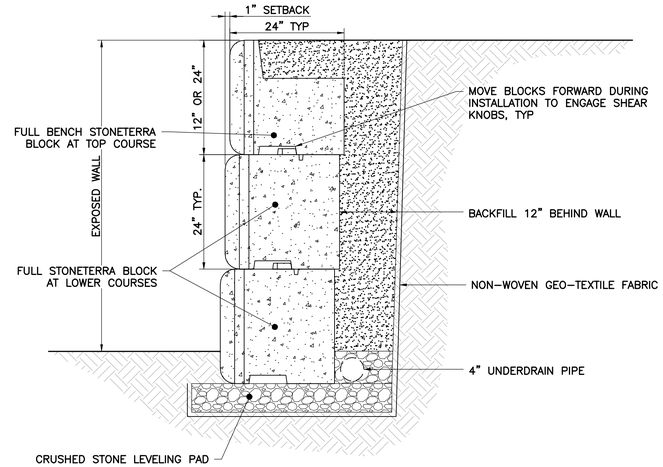
RETAINING WALL #1 PROFILE

SCALE
VERT: 1"=10'
HORIZ: 1"=10'



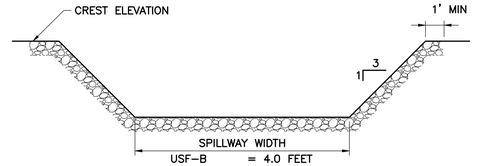
RETAINING WALL #2 PROFILE

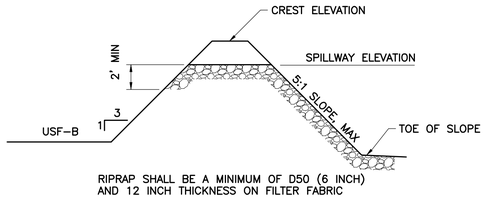
SCALE
VERT: 1"=10'
HORIZ: 1"=10'



STONETERRA BLOCK WALL

SCALE: NTS

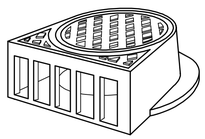




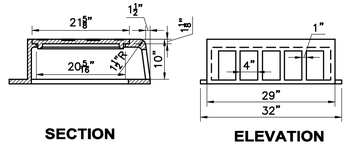
RIPRAP SHALL BE A MINIMUM OF D50 (6 INCH) AND 12 INCH THICKNESS ON FILTER FABRIC

UNDERDRAIN SOIL FILTER SPILLWAY

SCALE: NTS



ISOMETRIC VIEW



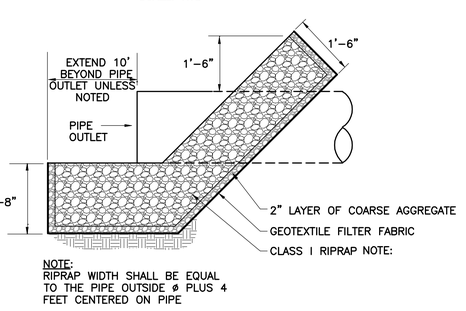
SECTION ELEVATION

CURB INLET

SCALE: "NTS"

NOTE:

1. USE NEENAH FOUNDRY CURB INLET R-3305 – OR EQUAL AS APPROVED BY ENGINEER



NOTE:
RIPRAP WIDTH SHALL BE EQUAL TO THE PIPE OUTSIDE ø PLUS 4 FEET CENTERED ON PIPE

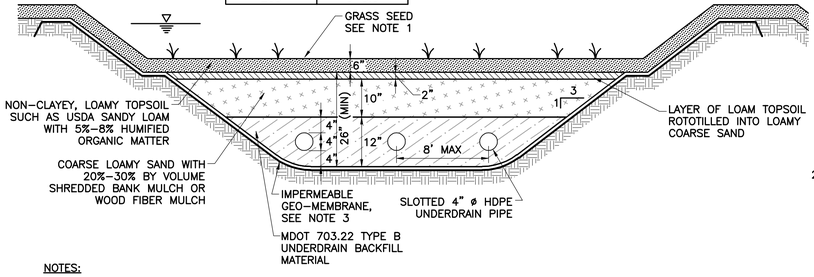
PIPE OUTLET RIPRAP

SCALE: NTS

TABLE I	
SPECIFICATIONS FOR LOAMY COARSE SAND	
SEIVE #	% PASSING BY WEIGHT
10	85–100
20	70–100
60	15–40
200	8–15
200 CLAY SIZE	<2.0

TABLE II	
MDOT 703.22 TYPE B UNDERDRAIN BACKFILL	
SEIVE #	% PASSING BY WEIGHT
1"	95–100
0.5"	75–100
4	50–100
20	15–80
50	0–15
200	0–5.0

TABLE III	
SEED MIXTURE	
CREEPING RED FESUCE	20 LBS/ACRE (0.5 LBS/1,000 S.F.)
TALL FESCUE	20 LBS/ACRE (0.5 LBS/1,000 S.F.)
BIRDSFOOT TREFOIL	8 LBS/ACRE (0.2 LBS/1,000 S.F.)



NOTES:

1. GRASS SEED MIXTURE SHALL BE DROUGHT TOLERANT CONSERVATION MIX.
2. PLACE FILTER MEDIA AND LOAM TOPSOIL ONLY AFTER SITE HAS BEEN STABILIZED.
3. IMPERMEABLE GEO-MEMBRANE SHALL BE 4 LDRE OR HDPE IMPERMEABLE LINER OF AT LEAST 20 MIL. THICKNESS.
4. UNDERDRAIN PIPE SHALL SLOPE AT 0.0050 MIN. (SEE DRAWING C-6)

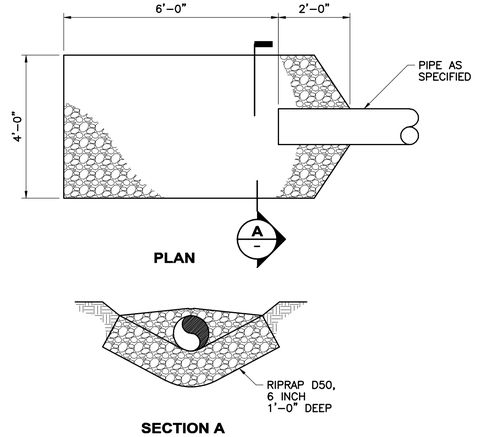
UNDERDRAIN SOIL FILTER CONSTRUCTION

NTS

UNDERDRAIN SOIL FILTER TABLE					
(A) SOIL FILTER REFERENCE	(B) ELEVATION OF SOIL FILTER	(C) OVERFLOW STRUCTURE (OS)	(D) RIM ELEVATION OUTLET STRUCTURE	(E) UNDERDRAIN INVERT ELVATION	MIN SURFACE AREA AT SOIL FILTER ELEVATION (SF)
USF A	76.00	YES	77.00	73.83	580
USF B	70.25	YES	72.00	68.08	715

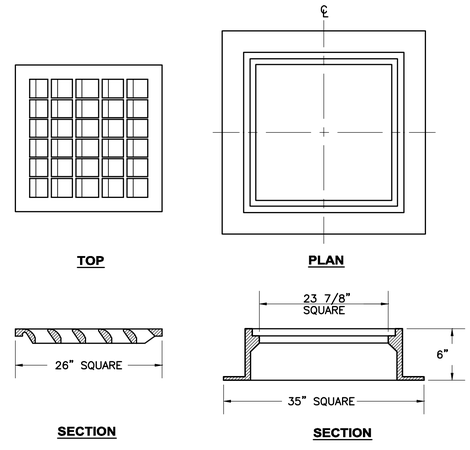
UNDERDRAIN CONSTRUCTION, TESTING AND SUBMITTAL NOTES:

1. CONSTRUCTION OVERSIGHT: INSPECTION OF THE FILTER BASIN MUST BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. ALL MATERIAL INTENDED FOR THE FILTER BASIN MUST BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THE MATERIAL CONFORMS TO ALL DEP SPECIFICATIONS. AT A MINIMUM, INSPECTIONS WILL OCCUR:
   - 1.1. AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED (NOT BACKFILLED);
   - 1.2. AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE SOIL FILTER MEDIA;
   - 1.3. AFTER THE SOIL FILTER MEDIA HAS BEEN INSTALLED, SEEDED AND MULCHED; AND
   - 1.4. AFTER ONE YEAR, TO INSPECT VEGETATION AND MAKE CORRECTIONS.
2. TESTING AND SUBMITTALS: THE SOURCE OF EACH COMPONENT OF THE SOIL FILTER MEDIA NEEDS TO BE IDENTIFIED PRIOR TO CONSTRUCTION. ALL RESULTS OF FIELD AND LABORATORY TESTING MUST BE SUBMITTED TO THE DEP FOR APPROVAL.
   - 2.1. MEDIA SOURCE: SAMPLES OF EACH TYPE OF MATERIAL SHOULD BE BLENDED FOR THE MIXED FILTER MEDIA AND
   - 2.2. UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM
   - 2.3. THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIREMENTS WILL BE DETERMINED BY THE TESTING LABORATORY.
   - 2.4. SIEVE ANALYSIS: A SIEVE ANALYSIS CONFORMING TO ASTM C136 SHOULD BE PERFORMED ON EACH TYPE OF THE SAMPLE MATERIAL.
   - 2.5. PERMEABILITY TESTING: TESTING THE PERMEABILITY OF THE SOIL FILTER MEDIA MIXTURE IS RECOMMENDED WITH THE MIXTURE AT A MEASURED BULK DRY DENSITY OF 90–92% BASED ON ASTM D698."



STONE INLET APRON

SCALE: NTS



CASCADE GRATE AND FRAME

SCALE: NTS

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
2	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
DRAWN BY: MRL
CHECKED BY: MAG
DATE: 2-8-18
CAD DWG FILE: MRL
APPROVED BY: JBW
DATE: 2-8-18
PROJECT NO: 13682A

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DETAILS III

DRAWING
C-9

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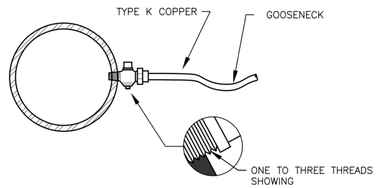
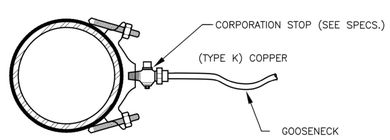
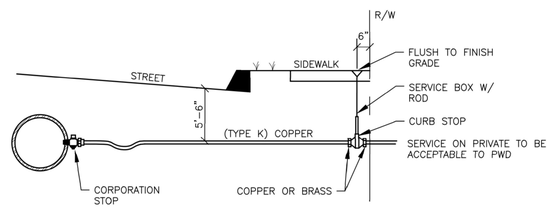


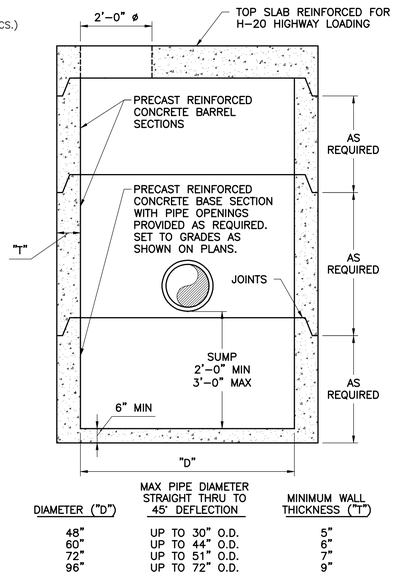
SERVICE TAP
(3/4" AND 1" C.C. THREAD)



SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)



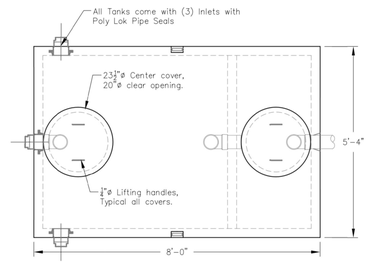
TYPICAL SERVICE CONNECTION



DIAMETER ("D")	MAX PIPE DIAMETER STRAIGHT THRU TO 45° DEFLECTION	MINIMUM WALL THICKNESS ("T")
48"	UP TO 30" O.D.	5"
60"	UP TO 44" O.D.	6"
72"	UP TO 51" O.D.	7"
96"	UP TO 72" O.D.	9"

FLAT SLAB TOP CATCH BASIN
SCALE: "NTS"

1000 Gallon 2 Comp. Grease Trap
Weight: 9,200 lbs.
Item # 8827

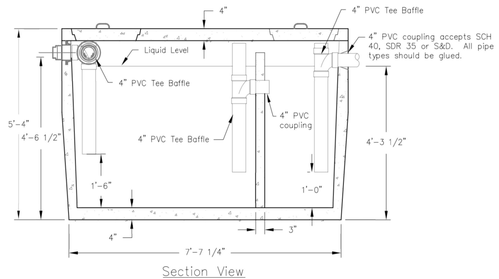


Plan View

General Notes:

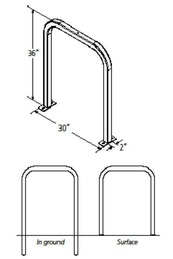
Concrete Specifications:
1) 4000 psi @ 28 Days
2) 4%-6% Entrained Air
3) Tank Penetrations are Integrally cast
4) All joints sealed with butyl rubber joint sealant

Grease Trap Information:
1) Tanks Should be pumped as needed
2) Access covers should have risers to bring cover access to grade.
3) Tanks can be vacuum tested at an additional cost



Section View

GREASE TRAP DETAIL
SCALE: NTS



Product Dero Downtown Rack
As manufactured by Dero Bike Racks

Capacity 2 Bikes

Materials 2" x 2" x 3/16" tube

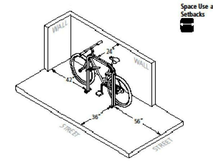
Finishes An after fabrication hot dipped galvanized finish is standard. 250 TGIC powder coat colors, a thermoplastic coating and a stainless steel option are also available.

Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Sandblast
2. Iron phosphate pretreatment
3. Epoxy primer electrostatically applied
4. Final thick TGIC polyester powder coat

Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.

A rubbery PVC Dip is also available

Installation Methods **In ground mount** is embedded into concrete base. Specify in ground mount for this option.
Foot Mount has two 2.5"x6"x.25" feet with two anchors per foot. Specify foot mount for this option.
Rail Mounted Downtown Racks are bolted to two parallel rails which can be left freestanding or anchored to the ground. Rails are heavy duty 3"x1.4"X3/16" thick galvanized mounting rails. Specify rail mount for this option.



Space Use and Setbacks **Wall Setbacks:**
For racks set parallel to a wall:
Minimum: 24"
Recommended: 36"

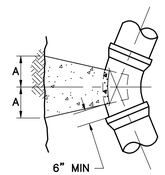
For racks set perpendicular to a wall:
Minimum" 28"
Recommended: 42"

Distance Between Racks:
Minimum: 24"
Recommended: 36"

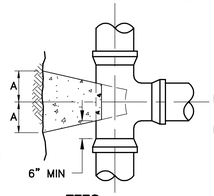
Street Setbacks:
Minimum: 24"
Recommended: 36"

DERO BIKE RACK DETAIL
NOT TO SCALE

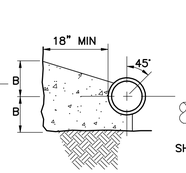
PRELIMINARY FOR REVIEW ONLY



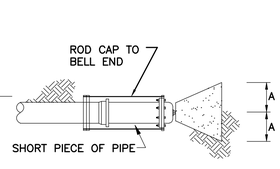
ALL BENDS



TEES



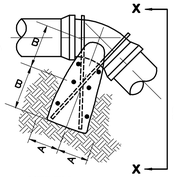
ELEVATION



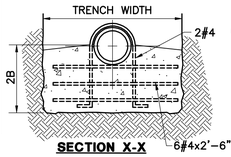
CAP

NOTES

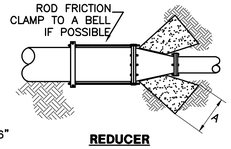
1. THRUST BLOCK SIZES SHOWN ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF AND TEST PRESSURES OF 180 PSI.
2. ALL BENDS, TEES, WYES, HYDS. & DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
3. RODDING MAY BE REQUIRED



VERTICAL BENDS



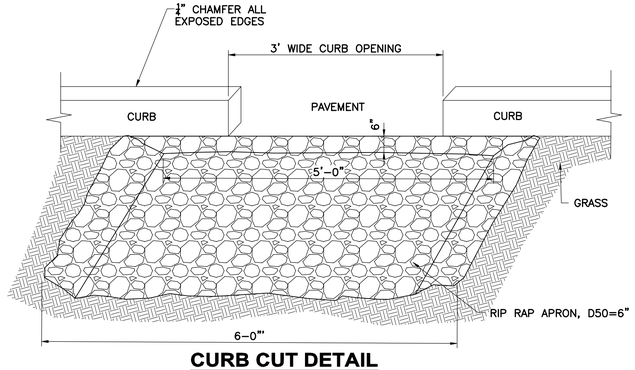
SECTION X-X



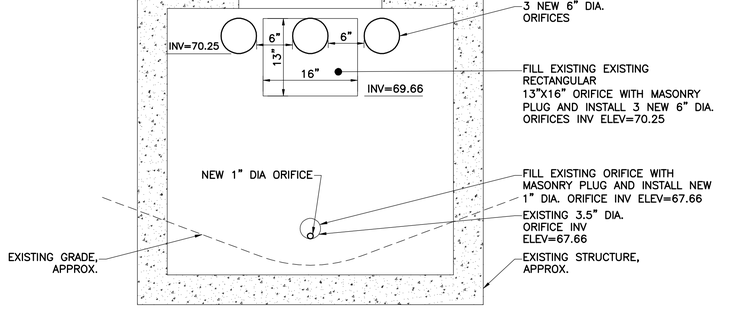
REDUCER

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		VERTICAL BEND (DOWN)		PLUG		REDUCER	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
6"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
8"	20"	15"	14"	12"	9"	9"	9"	6"	18"	12"	33"	24"	14"	14"	18"	12"
10"	21"	21"	18"	15"	15"	9"	9"	9"	20"	18"	40"	27"	16"	16"	20"	18"
12"	27"	24"	23"	15"	15"	12"	12"	9"	25"	18"	48"	30"	18"	18"	25"	18"
16"	37"	30"	30"	21"	21"	15"	13"	12"	32"	24"	57"	36"	22"	22"	32"	24"

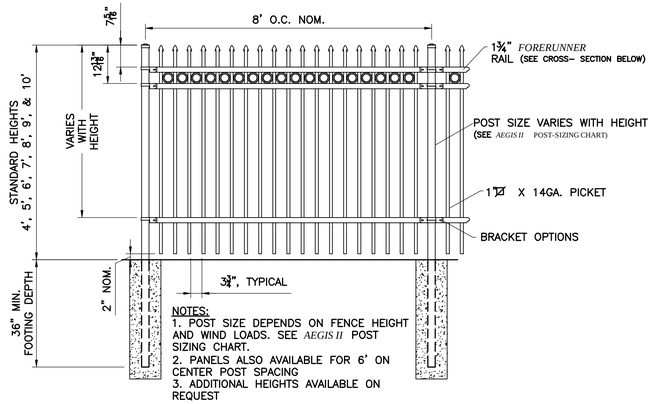
THRUST BLOCKS
NTS



CURB CUT DETAIL
NOT TO SCALE

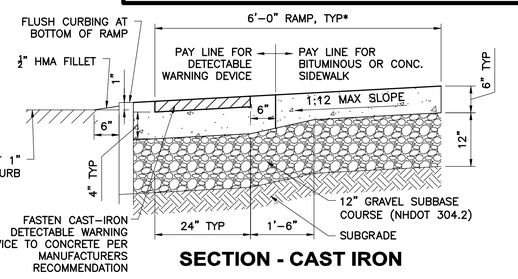


MODIFICATIONS TO EXISTING STRUCTURE "A" DETAIL
SCALE: "NTS"

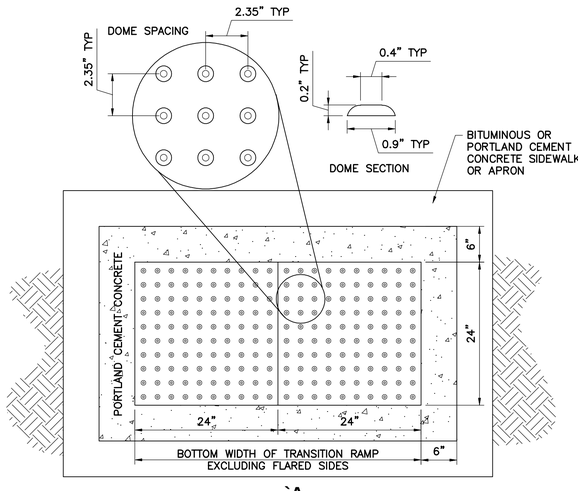


NOTES:
1. POST SIZE DEPENDS ON FENCE HEIGHT AND WIND LOADS. SEE *AEGIS II* POST SIZING CHART.
2. PANELS ALSO AVAILABLE FOR 6' ON CENTER POST SPACING
3. ADDITIONAL HEIGHTS AVAILABLE ON REQUEST

AEGIS II CLASSIC 3-RAIL W/RINGS DETAIL
SCALE: "NTS"



SECTION - CAST IRON



NOTE:
1. ALL DETECTABLE WARNING DEVICES SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG). 2'x2', 2'x4' AND RADIUS DEVICES ARE ACCEPTABLE.
2. INSTALL DETECTABLE WARNING DEVICES AT ALL ROADWAYS, HIGH USE ACCESS WAYS, OR AT THE DIRECTION OF THE ENGINEER.
3. ALL DEVICES SHALL HAVE A MIN. 6" WIDTH PORTLAND CEMENT CONCRETE SURROUND REGARDLESS OF THE SURROUNDING WALK OR APRON MATERIAL.

RECTANGULAR CAST IRON HANDICAP DETECTABLE WARNING DEVICE DETAIL
SCALE: NTS

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
2	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17
3			
4			
5			
6			

DESIGNED BY: MAG
DRAWN BY: MRL
CHECKED BY: MRL
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DATE: 2-8-18
APPROVED BY: JBW
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PROJECT NO: 13682A

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DETAILS IV

DRAWING
C-10

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EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES", MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH 2003.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES", MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DATED MARCH 2003.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
4. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH RIPRAP OR OTHER STRUCTURAL MEANS.
7. IF FINAL SEEDING AND SODDING IS NOT EXPECTED PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY ANNUAL RYEGRASS SEEDING AND MULCHING ON ROUGH GRADED SUBSOIL TO PROTECT THE SITE AND DELAY PERMANENT LOAMING, FINE GRADING, AND SEEDING OR SODDING UNTIL SPRING.
8. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
12. STABILIZATION SCHEDULE BEFORE WINTER:

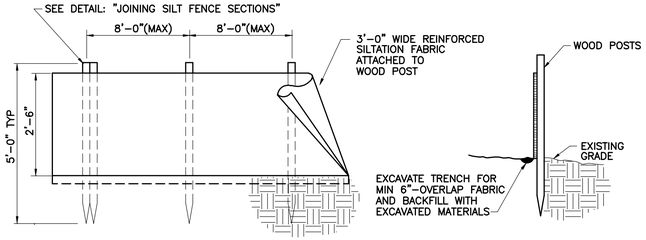
SEPTEMBER 15	ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. SLOPES 3:1 OR GREATER TO BE STABILIZED WITH EROSION CONTROL MATTING AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND MULCHED.
OCTOBER 1	ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR EROSION CONTROL BLANKET.
NOVEMBER 15	ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.
DECEMBER 1	ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.

EROSION CONTROL - WINTER CONSTRUCTION

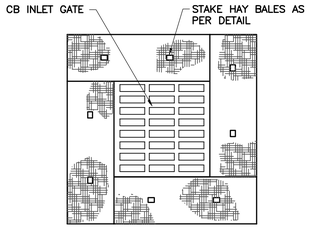
1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED SUCH THAT THE AREA CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES 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 AND IS SMOOTH, THEN THE AREA MUST BE STABILIZED WITH MULCH. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
7. THE APPLICATION OF MULCH TO FINE GRADED AREAS WILL BE STABILIZED AS FOLLOWS:
   - A) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION, CHEMICAL TACK OR WOOD CELLULOSE FIBER.
   - B) 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 GRATER THAN 8%.
   - C) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
8. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
9. DURING WINTER CONSTRUCTION PERIODS ALL SNOW SHALL BE REMOVED FROM AREAS OF MULCHING PRIOR TO PLACEMENT.

EROSION CONTROL - WETLAND NOTES

1. WETLANDS AND SURFACE WATERS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
2. IF THE WORK INCLUDES CROSSING OF WETLANDS AND/OR STREAMS, THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WORKING IN THESE AREAS
3. ANY WETLAND CROSSING WORK SHALL BE COMPLETED BETWEEN THE PERIOD OF MAY 1 AND SEPTEMBER 30
4. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION WITHIN OR ADJACENT TO WETLAND AREAS.
5. WETLAND VEGETATIVE LAYERS SHALL BE REMOVED AND SALVAGED FOR RESTORATION OF THE DISTURBED AREAS.
6. STORAGE AREAS FOR WETLAND MATERIALS SHALL BE PROPERLY PROTECTED AGAINST EROSION.
7. SEEDING OF THE DISTURBED AREAS WITHIN WETLAND AREAS SHALL UTILIZE MIXTURES APPROPRIATE FOR WETLAND AREAS AS OUTLINED IN THE SPECIFICATIONS.

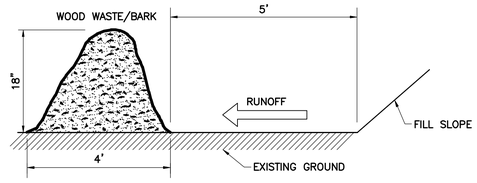


SILT FENCE INSTALLATION DETAIL
SCALE: "NTS"

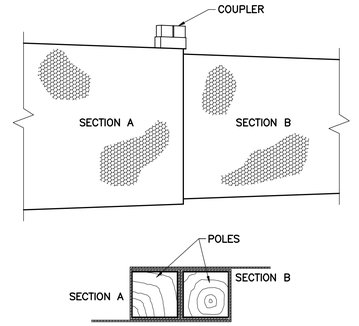


NOTE:
EMBED HAYBALES MINIMUM OF 4".

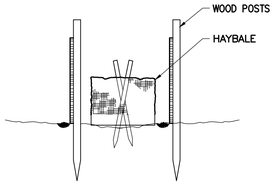
HAY BALE CB INLET PROTECTION
SCALE: "NTS"



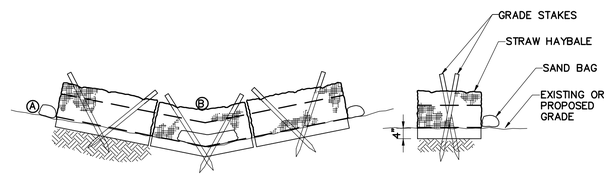
WOOD WASTE/BARK FILTER BERM
SCALE: "NTS"



JOINING SILT FENCE SECTIONS
SCALE: "NTS"

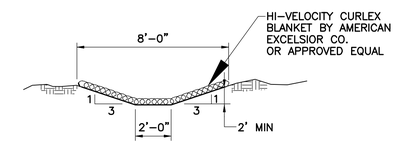


COMBINATION SILT FENCE AND HAY BALE BARRIER
SCALE: "NTS"

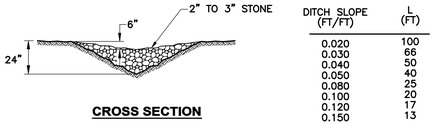


EROSION CHECK TO BE STRAW HAYBALES SECURED TO THE GROUND WITH TWO 4' LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT (A) AT LEAST 6 INCHES ABOVE OVERFLOW AT (B)

STRAW HAY BALE CHECK DAM
SCALE: "NTS"

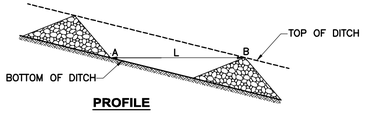


EROSION CONTROL MATTING - DITCHES
SCALE: "NTS"



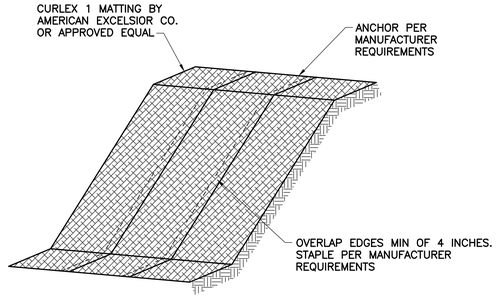
DITCH SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

CROSS SECTION



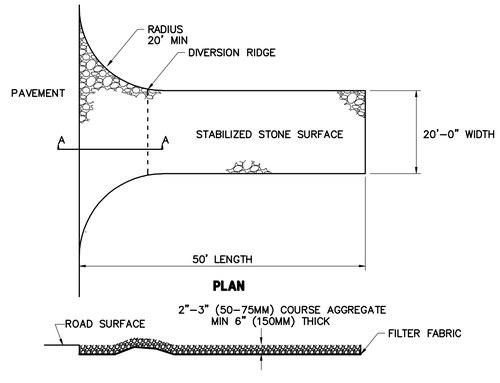
PROFILE

STONE CHECK DAM DETAIL
SCALE: "NTS"



INSTALL ON SLOPES 3:1 OR GREATER

EROSION CONTROL MATTING - SLOPES
SCALE: "NTS"



SECTION A-A

(TEMPORARY, TO BE REMOVED PRIOR TO FINAL SITE PAVING)

STABILIZED CONSTRUCTION ENTRANCE
NTS

PRELIMINARY FOR REVIEW ONLY

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RESPONSE TO COMMENTS	JBW	2/18
2	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD COORD: MRL
CAD: MRL
CHECKED BY: MAG
DATE: 2-8-18
APPROVED BY: JBW
DATE: 2-8-18
PROJECT NO: 13682A

STATE OF MAINE JAN B.S. WIEGMAN No. 5862 REGISTERED PROFESSIONAL ENGINEER 2/8/18

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THE CEDARS
ASSISTED LIVING AND LONG-TERM CARE FACILITY
PORTLAND, ME

EROSION CONTROL NOTES AND DETAILS

DRAWING
C-11

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PRELIMINARY FOR REVIEW ONLY

Rainbow Mall Road

Ocean Avenue

Morse Street

Byfield Road

Stemons Road (Gravel)

HrB

HrC

Sn

7S

8S

3SP

4P

7P

6P

5S

6S

3P

(See Easement Ref. 5)

4S

9P

10P

1S

1P

1SP

178' SF

2S

2P

178' SF

N47°19'15"W 480.78'

(See Easement Ref. 2)

2SP

3S

190' SF

S52°07'45"W

TBM: nail in utility pole #80, elevation=87.55

4SP

N

0 40 80

PLAN
SCALE: 1"=40'

LEGEND

- WATERSHED
- TC FLOW PATH
- FLOW ARROW
- 1SP — STUDY POINT
- 1S — WATERSHED
- SOIL BOUNDARY
- 2P — POND

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
DRAWN BY: MRL
CAD OPR: MRL
CHECKED BY: MAG
DATE: 11-15-17
APPROVED BY: JBW
DATE: 11-15-17
PROJECT NO: 13682A

STATE OF MAINE — JAN B.S WIEGMAN No. 5852 — LICENSED PROFESSIONAL ENGINEER — 11/15/17

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PORTLAND, ME

PRE-DEVELOPMENT PLAN

DRAWING
PRE

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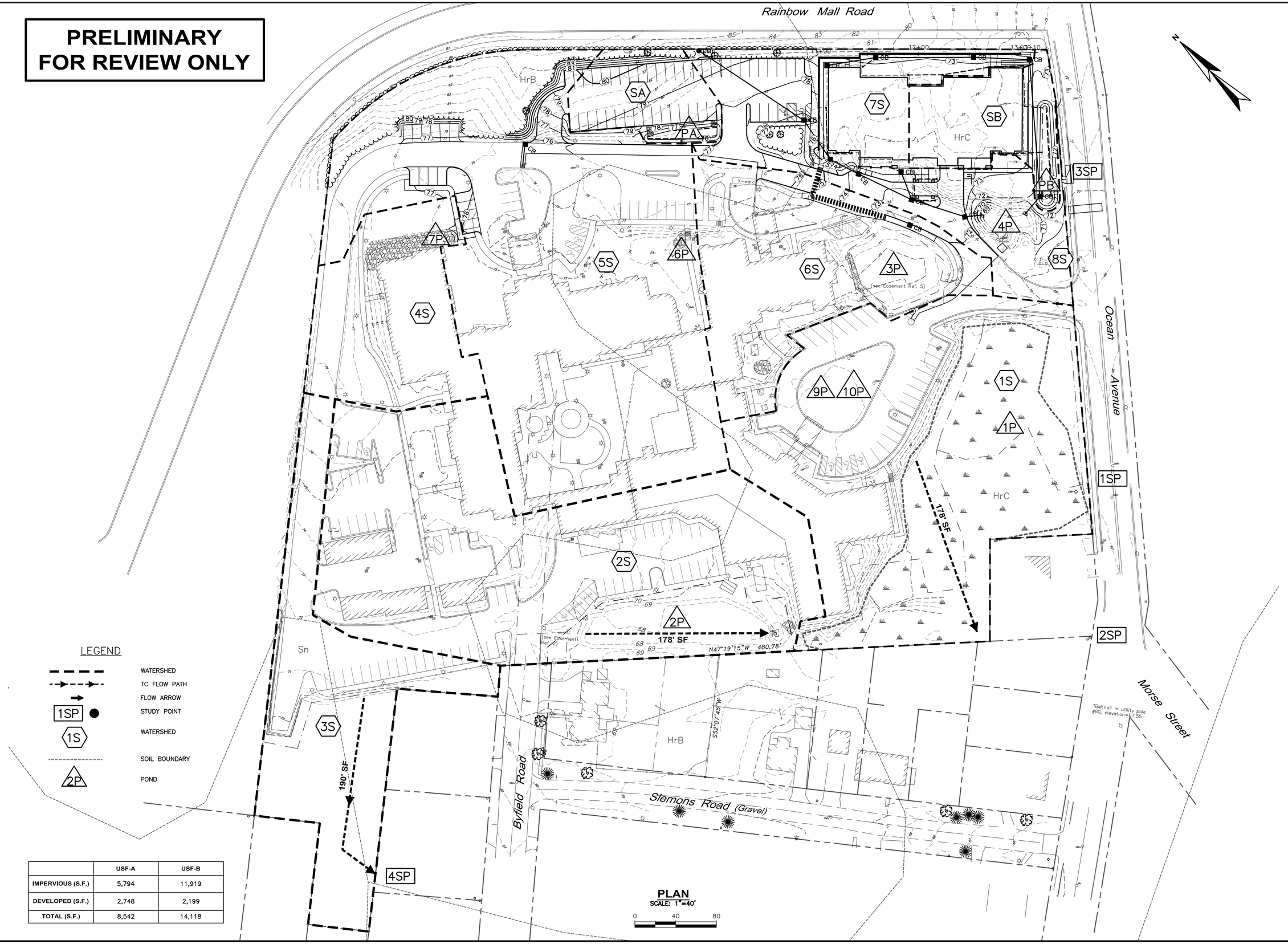

LEGEND

- WATERSHED
- TC FLOW PATH
- FLOW ARROW
- 1SP — STUDY POINT
- 1S — WATERSHED
- SOIL BOUNDARY
- 2P — POND

	USF-A	USF-B
IMPERVIOUS (S.F.)	5,794	11,919
DEVELOPED (S.F.)	2,748	2,199
TOTAL (S.F.)	8,542	14,118

PLAN
SCALE: 1"=40'
0 40 80

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD DRAWN BY: MRL
CHECKED BY: MAG
DATE: 11-15-17
APPROVED BY: JBW
DATE: 11-15-17
PROJECT NO: 13682A

STATE OF MAINE JAN B.S. WIEGMAN No. 5852 LICENSED PROFESSIONAL ENGINEER 11-15-17

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THE CEDARS
ASSISTED LIVING AND
LONG-TERM CARE FACILITY
PORTLAND, ME

POST-DEVELOPMENT PLAN

DRAWING
POST

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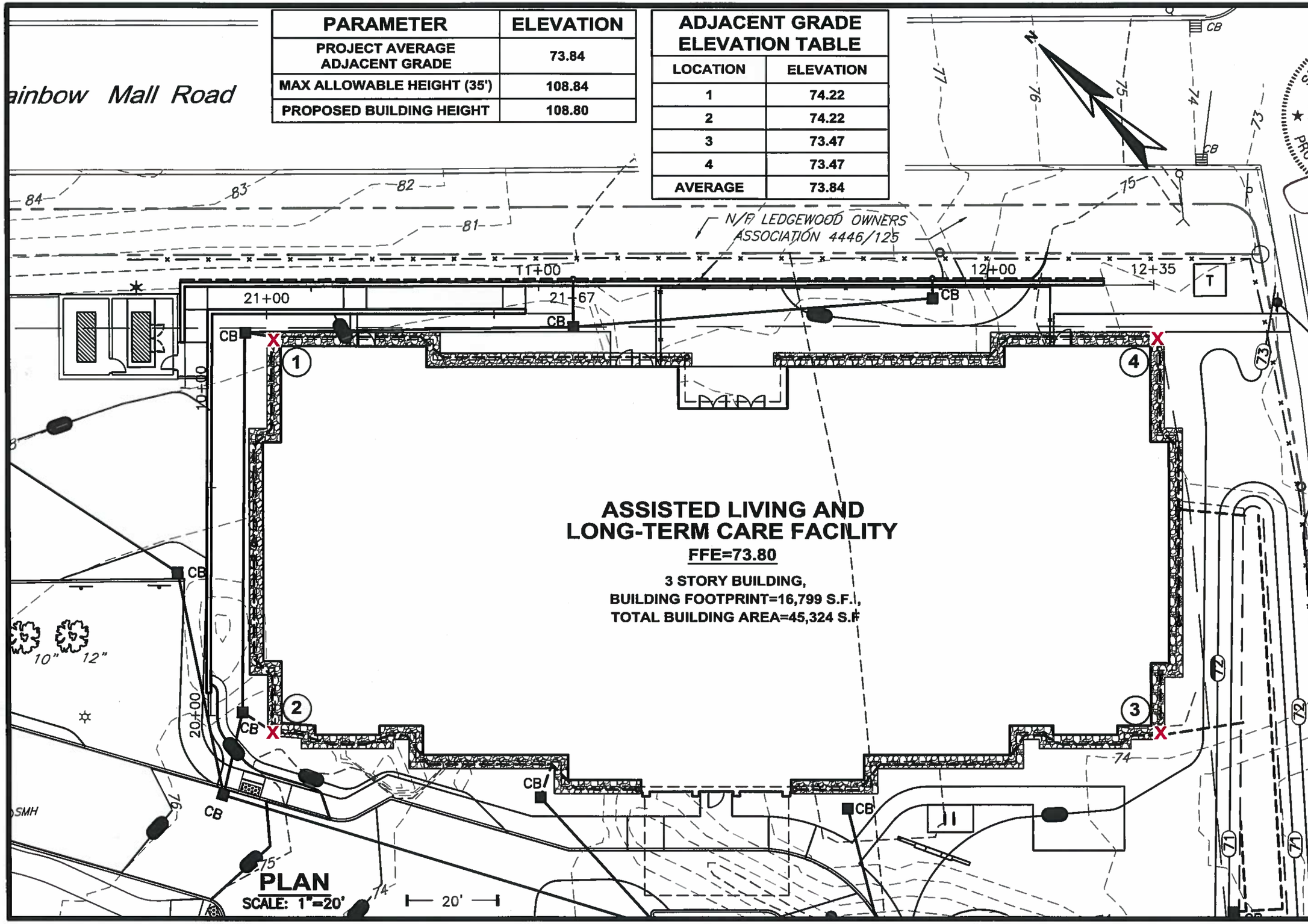
PARAMETER	ELEVATION
PROJECT AVERAGE ADJACENT GRADE	73.84
MAX ALLOWABLE HEIGHT (35')	108.84
PROPOSED BUILDING HEIGHT	108.80

ADJACENT GRADE ELEVATION TABLE	
LOCATION	ELEVATION
1	74.22
2	74.22
3	73.47
4	73.47
AVERAGE	73.84



STATE OF MAINE
JAN B. S. WIEGMAN
No. 5852
LICENSED PROFESSIONAL ENGINEER
4-11-18

NO.	REVISIONS	DRAWN BY	APP'D
1			
2			
3			

FIGURE: 1

ADJACENT BUILDING GRADES
REFERENCE: DWG C-6

THE CEDARS
ASSISTED LIVING AND LONG-TERM CARE FACILITY
PORTLAND, ME

PROJ NO: 13682A
DATE: APRIL 2018

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PRELIMINARY FOR REVIEW ONLY

NOTES:
1. CONTRACTOR SHALL NOT IMPACT EXISTING VEGETATION PROTECTION AREAS WITH EQUIPMENT OR MATERIALS STORAGE DURING CONSTRUCTION. ANY VEGETATION DAMAGED BY CONSTRUCTION ACTIVITIES ADJACENT TO THESE AREAS DURING CONSTRUCTION SHALL BE REVIEWED IN THE FIELD AND A LANDSCAPE REPLACEMENT PLAN SHALL BE DEVELOPED FOR APPROVAL BY THE OWNER.

LIMITS OF EXISTING TREE PROTECTION ZONE EXTENDED WESTERLY ALONG RAINBOW MALL ROAD TO END OF ABUTTER'S PROPERTY ADJACENT TO THE CEDARS. MAINTAIN UNDERSTORY PLANTING PATTERN AS SHOWN THIS DWG TO WESTERLY LIMIT NOT SHOWN ON THIS DWG. (SEE NOTES THIS DWG)

UNDERSTORY SHRUB SCREENING MAY BE CLUSTERED OR PLANTED AS INDIVIDUALS THROUGHOUT WOODED ROADSIDE BUFFER. FIELD VERIFY FINAL LAYOUT AND QUANTITIES WITH OWNER.

Rainbow Mall Road

ASSISTED LIVING AND LONG-TERM CARE FACILITY
FFE=73.80
3 STORY BUILDING,
BUILDING FOOTPRINT=16,799 S.F.,
TOTAL BUILDING AREA=45,324 S.F

LIMITS OF EXISTING LANDSCAPE BED PROTECTION ZONE (SEE NOTES THIS DWG)
(see Easement Ref. 5)

PARKING LOTS
18 SPOTS

PLAN
SCALE: 1"=20'

Ocean Avenue

R5 ZONE
R3 ZONE

MATCH LINE — THIS DWG

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RELEASED FOR SITE PLAN REVIEW	JBW	3/18
2	PRICING SUBMISSION	JBW	3/18
3	RESPONSE TO COMMENTS	JBW	2/18
4	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD COORD.: MRL
CAD: MRL CHECKED BY: MAG
DATE: 3-20-18
APPROVED BY: JBW
DATE: 3-20-18
PROJECT NO: 13682A

STATE OF MAINE — JAN B. WIEGMAN — No. 5852 — LICENSED PROFESSIONAL ENGINEER

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THE CEDARS
ASSISTED LIVING AND LONG-TERM CARE FACILITY
PORTLAND, ME

LANDSCAPE PLAN

DRAWING
L-1

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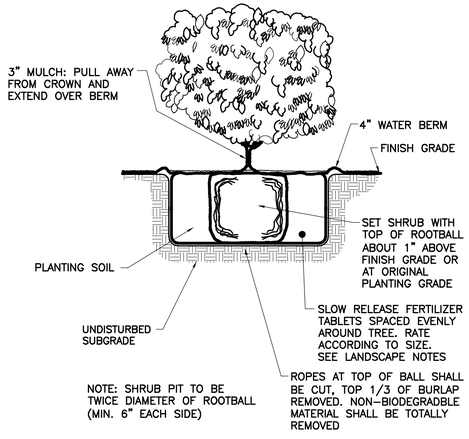
PLANT LIST

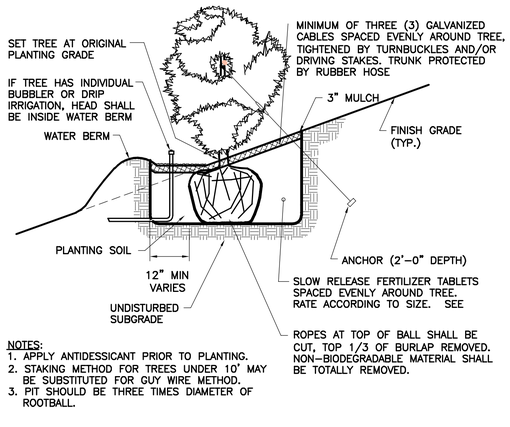
KEY	QTY	*SCIENTIFIC NAME* COMMON NAME	SIZE	SPACING	ROOTING	NOTES
		TREES				
AB	3	*ABIES BALSAMEA* BALSAM FIR	5'-6' HT	15' O.C.	B&B	SPACING PER PLANS
AR	8	*ACER RUBRUM 'KARPICK'* KARPICK RED MAPLE	2" CAL	25' MIN.	B&B	SPACING PER PLANS
BN	3	*BETULA NIGRA* RIVER BIRCH	6'-7' HT CLUMP	25' O.C.	B&B	AS SHOWN ON PLANS
NS	4	*NYSSA SYLVATICA ' GREEN GABLE'* GREEN GABLE BLACK TUPELO	1.5" CAL	25' O.C.	B&B	AS SHOWN ON PLANS
OV	6	*OSTRYA VIRGINIANA* AMERICAN HOPHORNBEAMPLE	1.5" CAL	30' O.C.	B&B	AS SHOWN ON PLANS
PG	3	*PICEA GLAUCA* WHITE SPRUCE	5-6' HT	15' O.C.	B&B	SPACING PER PLANS
QR	3	*QUERCUS RUBRA* RED OAK	2" CAL	PER PLANS	B&B	AS SHOWN ON PLANS
		SHRUBS				
CA	28	*CLETHRA ALNIFOLIA 'RUBY SPICE'* RUBY SPICE CLETHRA	15-18" HT	PER PLANS	B&B/CONT	SEE PLANS
CP	15	*COMPTONIA PEREGRINA* SWEETFERN	15-18" HT	PER PLANS	B&B/CONT	SEE PLANS
CS	6	*CORNUS ALBA 'SIBIRICA'* REDTWIG DOGWOOD	15-18" HT	PER PLANS	B&B/CONT	SEE PLANS
MP	28	*MYRICA PENSYLVANICA* NORTHERN BAYBERRY	15-18" HT	PER PLANS	B&B/CONT	SEE PLANS
RM	28	*RHODODENDRON MAXIMUM* ROSEBAY RHODODENDRON	15-18" HT	PER PLANS	B&B/CONT	SEE PLANS
VD	32	*VIBURNUM DENTATUM* ARROWWOOD VIBURNUM	15-18" HT	PER PLANS	B&B/CONT	SEE PLANS
		OTHER				
		MULCH				3" MIN DEPTH ALL PLANT BEDS

PLANTING NOTES

1. ALL NEW PLANTING MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF THE HIGHEST SPECIMEN QUALITY.
2. ALL NEW PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN UNLESS OTHERWISE NOTED ON THE PLANT LIST.
3. THE GENERAL CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
4. THE GENERAL CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND REPORT ANY CONFLICTS TO THE ENGINEER.
5. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING. TREES SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS THEY BORE TO PREVIOUS GRADE.
6. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE LANDSCAPE ARCHITECT/ENGINEER PRIOR TO COMMENCEMENT OF PLANTING.
7. ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED, PRUNED AND FERTILIZED PER THE SPECIFICATIONS.
8. ALL LAWN AREAS DISTURBED BY CONSTRUCTION OPERATIONS INSIDE AND OUTSIDE THE LIMIT OF WORK SHALL BE LOAMED AND SEEDED AS SPECIFIED.
9. ALL PLANT BEDS ARE TO RECEIVE THREE INCHES (3") OF SHREDDED BARK MULCH AS SPECIFIED.
10. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE LANDSCAPE ARCHITECT/ENGINEER.
11. ALL AREAS TO BE SEEDED SHALL RECEIVE SOIL PREPARATION AS SPECIFIED PRIOR TO SEEDING, UNLESS OTHERWISE NOTED ON PLAN.
12. PREPARE ALL TREE PITS WITH PLANTING SOIL TO A MINIMUM DEPTH MATCHING THE DEPTH OF TREE ROOT BALLS.
13. ALL AREAS TO BE SEEDED WITH LAWN MIX AND THE ROADSIDE MIX SHALL RECEIVE 6" TOPSOIL PRIOR TO SEEDING.



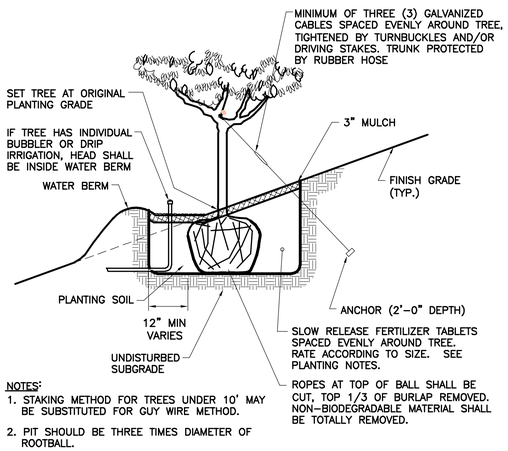
SHRUB INSTALLATION DETAIL
NTS



NOTES:
1. APPLY ANTIDESSICANT PRIOR TO PLANTING.
2. STAKING METHOD FOR TREES UNDER 10' MAY BE SUBSTITUTED FOR GUY WIRE METHOD.
3. PIT SHOULD BE THREE TIMES DIAMETER OF ROOTBALL.

TREE INSTALLATION ON SLOPE: CONIFER
NTS

PRELIMINARY FOR REVIEW ONLY



NOTES:
1. STAKING METHOD FOR TREES UNDER 10' MAY BE SUBSTITUTED FOR GUY WIRE METHOD.
2. PIT SHOULD BE THREE TIMES DIAMETER OF ROOTBALL.

TREE INSTALLATION ON SLOPE: DECIDUOUS
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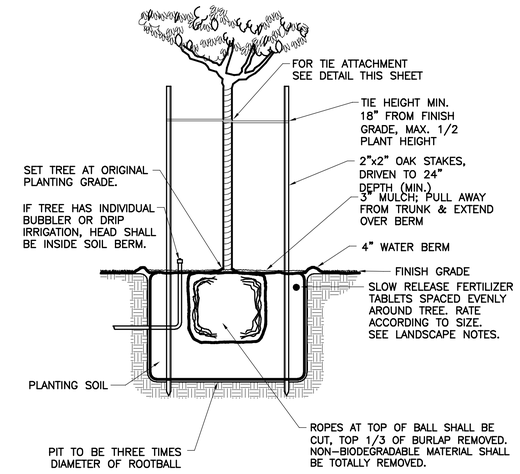

TREE INSTALLATION: UNDER 10'
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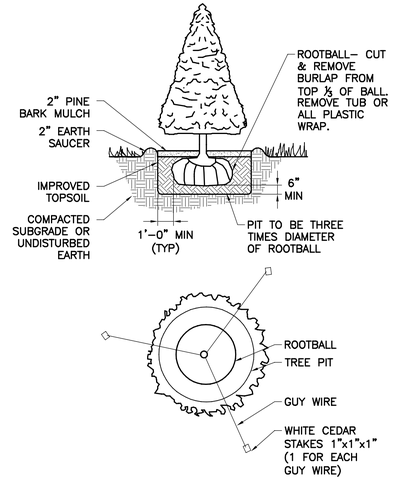

TREE PLANTING ON EVEN GRADE: CONFIRER
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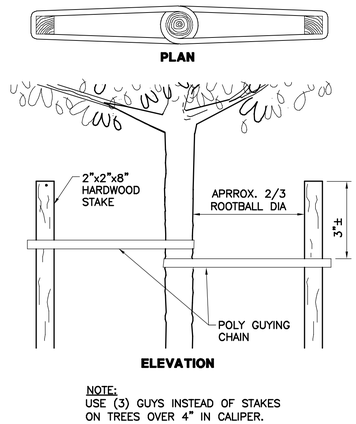

NOTE:
USE (3) GUYS INSTEAD OF STAKES ON TREES OVER 4" IN CALIPER.

POLY GUYING
NTS

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	RELEASED FOR SITE PLAN REVIEW	JBW	3/18
2	PRICING SUBMISSION	JBW	3/18
3	RESPONSE TO COMMENTS	JBW	2/18
4	ISSUED FOR PORTLAND SITE PLAN REVIEW	JBW	11/17

DESIGNED BY: MAG
CAD COORD: MRL
CAD: MRL
CHECKED BY: MAG
DATE: 3-20-18
APPROVED BY: JBW
DATE: 3-20-18
PROJECT NO: 13682A

STATE OF MAINE JAN S. WIERZBICKI No. 5862 REGISTERED LANDSCAPE ARCHITECT 3/20/2018

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Planning Board Report
Portland, Maine

25 Monument Street, 5-Unit Condominium
Level III Site Plan and Subdivision (2017-242)
Monument Partners, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: April 24, 2018	Prepared by: Matthew Grooms, Planner Date: April 20, 2018

I. INTRODUCTION

Monument Partners, LLC has submitted a Level III Site Plan and Subdivision application for a new five-unit residential condominium on a 9,989 square foot parcel located at 25 Monument Street within the Munjoy Hill Neighborhood. This property is surrounded by single and multi-family housing and is located within the R-6 Residential zone and B-1 Neighborhood Business zone. The proposed development involves demolition of an existing three-unit multifamily structure and then construction of a new four-story building with ground-floor structured parking.



Figure 1: Subject parcel and zoning information

The Planning Board will review the application for compliance with the site plan, subdivision and Housing Replacement standards. This project was submitted on October 10, 2017, which is prior to the Council's action to enact the Interim Overlay Zoning and so this project is not subject to the interim provisions. A Planning Board workshop was held on March 27, 2018, and since that meeting, the applicant has submitted final plans to address Board and staff feedback.

A total of 257 notices were sent to property owners within 500 feet of the site and a legal ad ran in the April 16th and 17th 2018 editions of the Portland Press Herald.

Applicant: Jeff Kane, Monument Partners, LLC
Consultants: Anne Callendar, Whipple Callendar Architects; Casco Bay Engineering; John Schwanda, Owen Haskell INC; Bill Welch, Bernstein Shur; Tom Hanson, Bernstein Shur.

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Compact Spaces – To allow five (5) compact parking spaces in an off-street parking lot of fewer than ten (10) spaces Staff Comments: The review staff recommends a waiver as the drive aisle widths meet city standards and auto-turn analysis proves that maneuvering is acceptable.	Technical Manual, Section 1.14, requiring that parking lots of 10 or fewer spaces contain only standard sized parking spaces
Review	**Applicable Standards**
Site Plan	Section 14-526
Subdivision	Section 14-497

III. PROJECT DATA

Existing Zoning	R-6 Residential, B-1 Neighborhood Business
Existing Use	Residential (3-units)
Proposed Use	5 Residential Units
- Bedroom Mix	5 three-bedroom units
Parcel Size	9,989 SF

	Existing	Proposed	Net Change
Building Footprint	1,700 SF	5,240 SF	3,540 SF
Building Floor Area	2,706 SF	20,122 SF	17,416 SF
Impervious Surface Area	4,786 SF	5,686 SF	900 SF
Parking Spaces	9	8	-1
Bicycle Parking Spaces	0	5	5
Estimated Cost of Project	$4,700,000		

IV. EXISTING CONDITIONS

The proposed project site is located on Monument Street between St. Lawrence Street and Atlantic Street and is at present occupied by a three-family building and accessory garage structure. This principle building is set back approximately 40' feet from the front property line and the garage is located to the rear of the priniciple building. As indicated by the applicant, both structures are in poor physical condition.

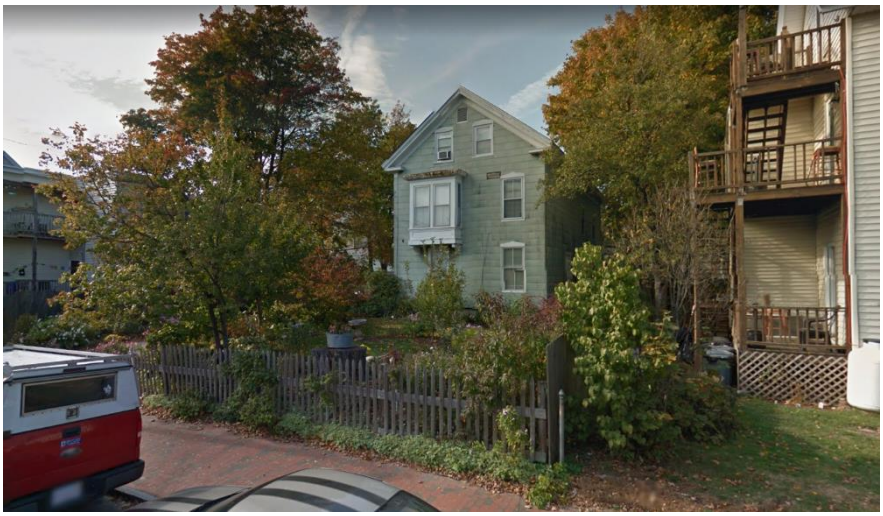

Figure 2: Existing building on-site. To be demolished under this proposal

The site itself features extensive vegetation located along the property's frontage and around the site's perimeter. In regards to grading, the site gently slopes from the rear of the property towards Monument Street with a grade differential of approximately four (4) feet, between 146' and 142' feet above mean sea level. Stormwater sheet flows across the site towards Monument Street, where it discharges into the city's storm drain through a catch basin located in the center of Monument Street.

V. PROPOSED DEVELOPMENT

The development is proposed as a new, five-unit residential condominium, composed entirely of three-bedroom units housed within a four-story building, measuring approximately 45' feet in height. The ground-floor will provide structured parking for all residents, floors two and three will contain two residential units each and the fourth floor will contain one larger residential unit. All five units will possess one or more balconies and a portion of the building's roof is proposed as a common-area deck. To access these units and common-area, the proposed building features an elevator and stair-tower centrally located within the building that would be accessible through either the garage or via the pedestrian entrance. The pedestrian entrance itself is set back away from the street and features a raised and covered porch which runs along the westerly façade of the building between the street and door.

In regards to site circulation, the existing driveway and curb cut will be shifted slightly to the east and will provide access to the structured parking located at ground level. Once shifted, the curbing and sidewalk will be replaced to match existing conditions along Monument Street. Within the structured parking area, eight (8) parking spaces are proposed, at a rate of 1.6 spaces per unit, consisting of two (2) standard sized spaces, one (1) handicap parking space, and five (5) compact parking spaces. The R-6 does not require parking spaces for the first three (3) units and so the requirement for off-street parking is two (2) spaces.

Along the perimeter of the site, the applicant is proposing extensive vegetation, including a mixture of trees, perennials and shrubs. The property line itself is delineated by an existing 6' foot cedar stockade fence installed by an abutter, which runs along the westerly and northerly property lines. Along the easterly property line, a new black aluminum fence, measuring 4.5' feet in height is proposed. As required by the site plan ordinance, at least 30% of trees 10" DBH or greater are being preserved on-site, these being located at the rear of the property and incorporated into the overall landscaping plan. A total of three (3) Cockspur Thornless Hawthorn are being proposed as street trees. To the west of the building, a small landscape garden is being proposed that would be accessible to property residents.

With this development, it is proposed that existing utility connections will be upgraded to accommodate more intensive use. The existing 1.5" water line is being discontinued and replaced with a new 6" fire line and 2" domestic connection. Similarly, the existing overhead electric line will be removed and replaced by a new underground line in accordance with both the site plan and subdivision ordinance. The existing gas line will remain, though a new sewer connection is proposed. Given that new impervious surface totals less than 1,000 square feet, no stormwater infrastructure is required.

Since the March 27th workshop, it was determined that the proposed building required a second form of ingress/egress. In response to the building code, the applicant is now proposing a second stair tower at the rear of the building that will provide access between the ground level and the fourth story dwelling unit as required under the IBC. This change slightly increases lot coverage to 57%, still under the required 60% figure.

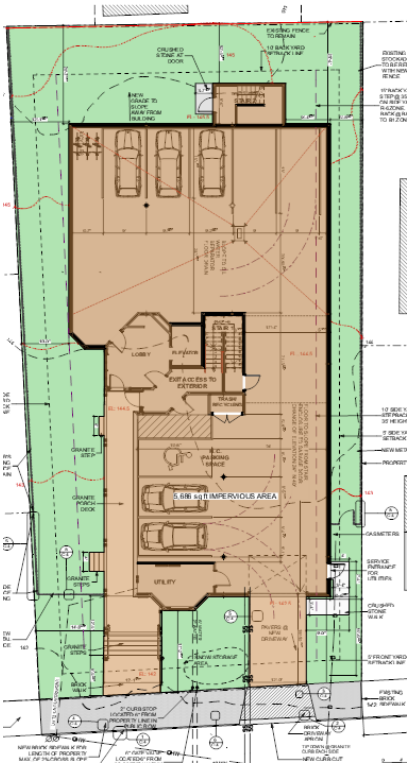

Figure 3: Proposed Site Plan showing covered parking

A. Housing Replacement Compliance

Under Division 29, the loss of three (3) or more dwelling units within a five-year period triggers the City's housing preservation and replacement ordinance. The existing building located at 25 Monument Street is a three-unit structure, and as such qualifies under these requirements. If housing were to be replaced by a non-residential use, then a developer would either be required to reconstruct the number of units being demolished or pay a fee in lieu as defined under Section 14-483(i). At 25 Monument Street, a three-unit building is being replaced by a five-unit building with units that are comparable in size to the units being lost, thus the project meets the Housing Replacement standards. The applicant is required to post either a performance guarantee or a letter of credit in an amount equal to the housing replacement fee in lieu amount. This security is required before a demolition permit is issued and the applicant will have three years to secure certificates of occupancy for proposed units and the release of the guarantee. If not achieved, then the full amount due shall be provided to the City's Housing Trust Fund.



Figure 4: Architectural Elevation (Front of Building)

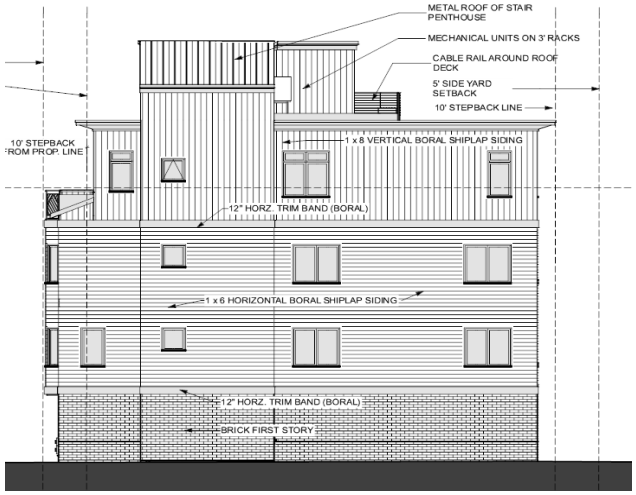

Figure 5: Architectural Elevation (Rear of Building)



Figure 6: Architectural Elevation (South Facade)

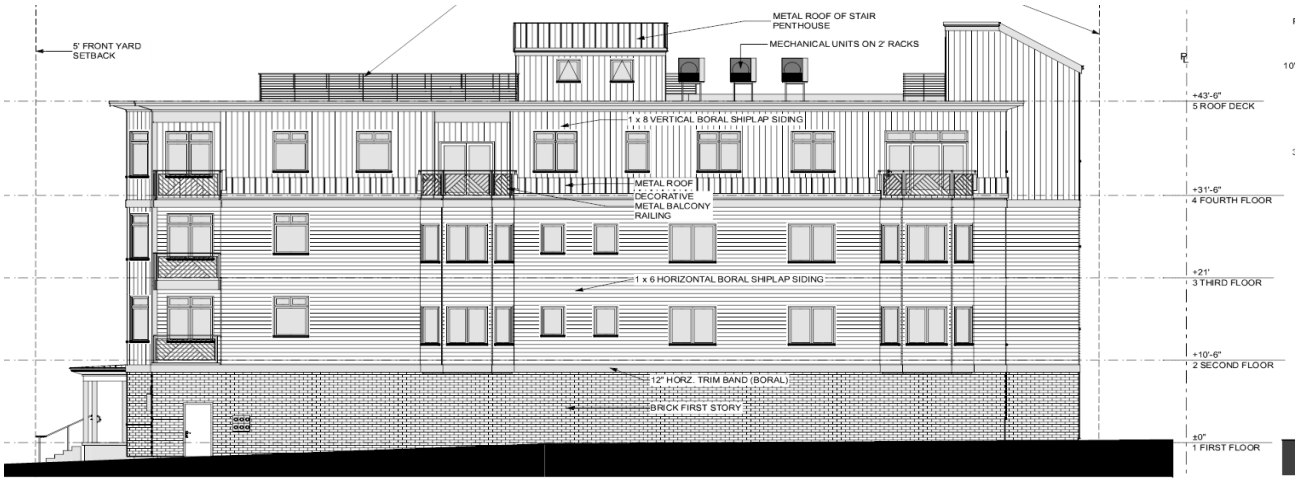

Figure 7: Architectural Elevation (North Facade)

VI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

As of the writing of this report, five (5) written comments have been received by the Planning Division. The concerns raised by abutters were primarily focused on building design, particularly the height and massing of the proposed building. A separate issue raised was the trend in demolition of existing buildings and replacement of more affordable residential units with luxury condominiums.

The applicant held a neighborhood meeting on November 1, 2017 and twenty-five (25) members of the public attended. At this meeting, members of the public asked questions regarding process, the possibility of including a workforce housing unit and preservation of on-site vegetation. In response, the applicant noted that the building would not be suitable to accommodate workforce housing and that three (3) trees located at the rear of the property would be preserved. Concerns raised were predominantly in response to the demolition of a historic structure, and construction of a building incongruous with the surrounding neighborhood. The applicant responded by describing the very poor condition of the existing building and by stating that additional renderings and elevations would be providing showing the scale of the proposed building as it relates to the surrounding context (Attachment F).

A. Planning Board Workshop (March 27, 2018)

The Planning Board held a workshop regarding this proposed project on March 27, 2018 and indicated general support for the project. In particular, members of Board expressed an appreciation for the modernized triple-decker building typology, and the generous landscaped garden area which, while only available for use by residents, was

considered to be a neighborhood amenity given its visual prevalence. The Board asked for additional renderings of the building showing views of the building from all angles and within its surrounding context. One member of the Board asked that the building's porch be opened up to feel more light and airy, and the Board generally recommended that the applicant continue to address design review comments. At the workshop, eight (8) members of the public spoke, requesting information regarding on-site landscaping and tree preservation, rear views of the building, building's height as it relates to surrounding context and history of the property. A few members of the public raised concerns with the emphasis on the building's garage as well as the number of stories.

In response to this feedback, the applicant has since provided updated plans and building renderings which more clearly demonstrate the building's compliance with zoning dimensional standards, and views of the building from all angles and in context. The plans have been updated to show exactly which existing trees are to be preserved and include tree protection measures. The overall design of the building has been modified only slightly in response to the design review comments, particularly in the simplification of the façade and the installation of a window at ground level. The building's porch remains unchanged, and the garage door has not been recessed as requested by the City's Urban Designer. Also, no additional information has been provided by the applicant in regards to the history of the property. As the property is not located within a historic district and is not known to be of historic significance, the applicant is not obligated to provide additional information.

VII. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

a. The owner of the property is Monument Partners, LLC. The applicant has provided a copy of a quitclaim deed of sale, recorded at the Cumberland County Registry of Deeds (Book 33797, Page 33), which demonstrates their right, title and interest in the property. (Attachment D)

b. As evidence to demonstrate sufficient financial and technical capacity, the applicant has provided a letter from Key Private Bank indicating that the applicant has sufficient funds to cover the estimated cost of the proposed project, $4,700,000. Similarly, information has been provided on the development team demonstrating the capacity to design and construct the project. (Attachment D)

VIII. ZONING ANALYSIS

The proposed project is a four-story residential condominium with five (5) units and eight (8) off-street parking spaces. The property is located primarily within the R-6 Residential zone, though a narrow strip of the property located at the rear of the site is within the B-1 Neighborhood Business zone. The standards of the R-6 apply to this project given that the standards of the R-6 are more restrictive than those of the B-1.

The proposed use, a five-unit condominium, is a permitted use within the R-6 and the project as proposed is fully compliant with all dimensional requirements of the R-6 at the time the application was submitted (this project is not subject to the Interim Overlay Zone). For off street parking, Division 20 requires no parking for the first three units and one parking space per unit for residential uses after the first three in the R-6 zone. Even though two parking spaces required, the applicant is proposing eight (8) parking spaces as shown on the site plan. The applicant has provided a written justification for the additional off-street parking based upon market conditions and unit size, which the staff finds acceptable.

IX. 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.

B. SUBDIVISION (Section 14-496)

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)
   Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the erosion and sediment control plans and details, and inspection and maintenance requirements and offers the following comment (Attachment 4):

- The applicant has noted that a silt fence will be installed along the Monument Street frontage. Additional silt fencing may be needed along the sides of the property to prevent sediment from running onto the abutting properties during construction. Silt fence should be provided around the construction material storage area located in close proximity to the abutter.

  Status: Additional silt fencing has been provided as requested. No further comment.

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
   The project will be served by a new 2-inch domestic service and 6-inch fire service drawn from the existing water main in Stevens Avenue. An 'Ability to Serve' letter was provided by the Portland Water District.

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
   The proposed project relocates the existing curb cut and driveway slightly to the east and will feature a 12' foot wide driveway and a garage entrance of 11.79' feet. The proposed relocation of the curb cut provides greater driveway separation of approximately 50' feet. Given the limited trip generation derived from a residential use, Tom Errico, P.E. with T.Y. Lin reviewed the proposal's details including access, parking, construction management plan and vehicle circulation, and has provided the following comments (Attachment 3):

   - The parking layout plan notes aisle width dimensions that do not meet City standards. The applicant should provide documentation that supports a waiver request.
     Status: The plans depict parking aisle widths that meet City standards. The plan does have a circulation area that is less than 15 feet but is not used for parking space maneuvering. A waiver is not required and accordingly, I find the project to be acceptable.

   - The applicant has provided a vehicle turn analysis that indicates vehicle circulation is feasible. I continue to review this information, but my initial review supports the conclusion that reasonable circulation can be provided. I would note that the building columns will present vehicle turn challenges.

     Status: The applicant has provided the requested analysis. The analysis indicates circulation is provided and I have no further comment.

   - I find the location and width of the driveway to be acceptable.

   - The project is proposing parking spaces that do not meet City standards for width and depth and thus a waiver is required. Given the results of the auto-turn analysis and that the aisle widths meet City standards, I support a waiver for the parking space reduced dimensions.

   - The construction management plan is not acceptable and the applicant shall revise the plan to conform to the City's standard template. I would note a detailed sidewalk closure detour route that is ADA compliant shall be noted.

     Status: An updated construction management plan has been provided and has been reviewed by Keith Gray, City Engineer with the Department of Public Works. His comments are as follows:

     - The CM Plan indicates security fence within Monument Street and the occupancy of parking spaces.
       - The security fence shall be moved back to the curb line.
       - Include additional detail on how many parking spaces are requested to be occupied, purpose and duration.
       - A note should be added to the Construction Management Plan indicating that, "Parking space(s) occupancy shall be limited to two at a time for the duration required to complete the current construction activity"
       - Provide additional details on pedestrian safety and signage during the sidewalk closure. Duration of closure?

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)
The applicant is proposing a new 4" sewer connection, which will need to be reviewed and approved by DPW. An 'ability to serve' letter shall be required and made a condition of approval. Lauren Swett, P.E. with Woodard and Curran has reviewed the proposed utility plan and offers the following comment:

   - The utility plan identifies an oil water separator floor drain in the rear portion of the garage. The Applicant should confirm that this will connect to the sewer. We recommend showing additional spot grades in the front section of the garage to ensure that drainage is able to get to the floor drain.

5. Comprehensive Plan (Section 14-497 (a) 9)
The development has been designed to be consistent with the City's Master Plan, adopted in June of 2017.

B. 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- see Subdivision discussion regarding traffic congestion and site circulation above.

   b. Sidewalks
   The applicant is proposing to replace curbing and sidewalk disturbed as a result of shifting the curb cut and driveway. The driveway apron has been revised to be surfaced in brick in accordance with city standards and information regarding maximum cross slopes for sidewalks and driveways has been provided.

   c. Public Transit Access
   The public transit requirements do not apply to this project.

   d. Parking
   Eight (8) parking spaces are being proposed, including two (2) standard parking spaces, one (1) handicap parking space and five (5) compact parking spaces. These spaces are located at ground level within the proposed building away from public view.

   The City's Technical Manual requires that parking lots of fewer than ten (10) spaces, include only standard sized parking spaces. A waiver of this requirement has been requested and is supported by the City's consulting traffic engineer.

   e. Bicycle Parking
   The proposal includes a bicycle storage room with space for more than five (5) bicycles which meets the site plan standard requiring a minimum of two bicycle parking spaces for every five dwelling units.

2. Environmental Quality Standards
   f. Preservation of Significant Natural Features
   There are no known significant natural features on the site.

   g. Landscaping and Landscape Preservation
   A landscaping plan was submitted as part of the application. The plan shows three street trees, three site trees to be preserved at the rear of the site, and a mixture of new trees, shrubs and perennials grouped around the perimeter of the project site. An existing 6' foot cedar stockade fence installed by an abutter is located along the westerly and northerly property lines, and a new 4.5' black aluminum fence is proposed along the easterly property line.

   Jeff Tarling, the City Arborist, has reviewed the proposed landscaping plan finds it to be in compliance with the city's site landscaping requirements (Attachment 5). A total of five (5) street trees are required, three (3) of which are being provided on-site. The applicant has agreed to pay a fee in lieu for the remaining two (2) trees, calculated at a rate of $400 per tree, for a total

contribution of $800.

h. Water Quality, Storm Water Management and Erosion Control
Once developed, this site will feature 860 additional square feet of impervious surface and a combined total of 5,646 square feet. Under Section 5(II)(c) of the City's Technical Manual, it states that a stormwater management plan addressing Maine DEP Chapter 500 General and Flooding standards is not required for new subdivisions which add less than 1,000 square feet of additional impervious surface. As a result, no stormwater management infrastructure is proposed to treat for stormwater quality or quantity. The applicant's plans show stormwater sheet flowing towards Monument Street, into the City's stormdrain.

Lauren Swett has reviewed the applicants plans and project details, and offers the following comments (Attachment 4):

- General Standard: The project will result in a de minimis increase in impervious area, less than 1,000 square feet. As such, the project is not required to include any specific stormwater management features for stormwater quality control.
    - Please clarify the new impervious on-site. The Level III site plan application indicates an increase in impervious area of 860 square feet while the table provided on sheet C.1 indicates an increase of 777 square feet.

      Status: With the addition of the rear stair tower, the amount of impervious surface has increased to 900 square feet, and the application has been revised to reflect this amount.

    - 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.

- The grading behind the building remains unclear. Some additional spot grades and flow arrows should be provided to ensure that water behind the building does not drain onto the adjacent properties. Please clarify proposed grading labels.

3. Public Infrastructure and Community Safety Standards
   i. Public Safety and Fire Prevention
   Mike Thompson, Division Chief of the Fire Prevention and Community Outreach Division, has reviewed the submitted plans and found them to be acceptable, noting the following points (Attachment 1):

   - 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. The address number must be on the street side of the building with numbers that are no less than six inches high.
   - This building will be required to be sprinkled.
   - Access is acceptable to the Fire Department.
   - There are adequate fire hydrants in the area.

   j. Availability and Adequate Capacity of Public Utilities
   The project will be served by the Portland Water District, City Department of Public Works, and underground/power/cable/communications. Evidence of utility capacity has been provided from the Portland Water District and will be required of other utility providers as well.

4. Site Design Standards
   k. Snow and Ice Loading
   Based upon the roof design, it is not anticipated that snow or ice loading will be a concern to pedestrians within the public right-of-way or on the applicant's property.

   l. View Corridors

This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

m. Historic Resources
The site is not located within a historic district or within 100 feet of a historic district, landmark or landscape and as a result, this project is not required to be reviewed by Historic Preservation and no additional information from the applicant is necessary.

n. Exterior Lighting
The applicant has submitted a lighting and photometric plan. The plan shows exterior light sconces and walkway lights with the covered porch, and sconces on either side of the garage entrance. All exterior site lighting including lighting of building entrances will be full cutoff with no light emitted above the horizontal plane and light trespass falls within the allowable limits as stipulated under Section 12 of the Technical Manual.

o. Noise and Vibration
Exterior mechanical equipment is to be roof-mounted, and centrally located on top of the building to minimize visibility from adjacent properties and public spaces. It is not anticipated that this equipment will result is adverse conditions related to noise and vibration.

p. Signage and Wayfinding
This standard does not apply to the proposal.

q. Zoning Related Design Standards
A design review according to the City of Portland Design Manual Standards was performed for the proposed new construction of a multi-family dwelling at 25 Monument Street. The review was performed by Caitlin Cameron, Urban Designer, Jeff Levine, Planning and Urban Development Director and Matthew Grooms, Planner. The project was reviewed against the R-6 Small Infill Development Design Principles & Standards (Appendix 7 of the Design Manual) as well as the Two-family, Special Needs Independent Living Units, Multiple-family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters (Section I of the Design Manual).B-1b Commercial Business Zones Standards (Section (d) of the Design Manual).



Figure 3: Updated building elevation showing context

Design Review Criteria:
The project was reviewed with the R-6 Alternative Design Review which has the following criteria:

a. Proposed design is consistent with all of the Principle Statements
b. The majority of the Standards within each Principle are met
c. The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale, materials, and siting, as well as the general character of the established neighborhood, thus Standards A-1 through A-3 shall be met.
d. The design plan is prepared by an architect registered in the State of Maine.

Findings of the Design Review:
The proposed design **passes** all of the criteria of the R-6 Alternate Design Review – some comments are provided below regarding areas of concern. However, one of the comments from the Planning Board was not addressed by the applicant.

Design Review Comments (red text denotes principles or standards that are not met):

At the workshop held March 27th, the Planning Board made the following comments related to design to be addressed by the applicant:

- Reduce the prevalence of the garage door – The applicant reduced the height of the garage door from 9' feet to 8' feet, though the door was not recessed. See F-6 Main Entries below for staff comment.
- How does the height of this building compare to the recent single family across the street? – 30 Monument Street is 40' to the upper deck. This project is taller than 40' (height and average grade information is missing from the elevation – please correct).

  Status: The building elevations have been updated to include height and average grade information.

Principle A Overall Context – **Met** – The mass and height of the proposal at the street is consistent and compatible with the surrounding residential context. The type is similar to other triple-decker and four-story multi-family buildings found in the neighborhood.

- A-1 Scale and Form: The scale of the project is compatible with the existing context – flat roof, bay window, façade plane changes with porches.
- A-2 Composition of Principal Facades: The composition of the front façade has a vertical proportion consistent with the residential character of the neighborhood. The flat roof, porches, and use of bay windows provide a composition referential to neighborhood architectural character.
- A-3 Relationship to the Street: The building has a relationship to the street consistent with the neighborhood which is setback a few feet to accommodate the bay projection, landscape, entry porch. The street wall varies here with some buildings set further back from the street.

Principle B Massing – **Met** – Most aspects of the building reflect the principle and the majority of the Standards are met by the proposed design.

- B-1 Massing: The proposed massing is generally consistent with the neighborhood using a vertical proportion and a bay projection with porches.
- B-2 Roof Forms: The flat roof form at the street is consistent with the surrounding context and the multi-family building type.
- B-3 Main Roofs and Subsidiary Roofs: There is a clear main roof form.
- B-4 Roof Pitch: Flat Roof
- B-5 Façade Articulation: The project employs balconies, bay window, recessed, and covered entry.
- B-6 Garages: Garage is integrated into the overall building form and there is living space above garage. Garage door is less than 40% of the façade width.

Principle C Orientation to the Street – **Met** – The project appropriately reflects the private/public relationship of residential buildings in this neighborhood. **The ground floor was revised to add one window to the mechanical room on the ground floor – no living space at the street of the ground floor.**

- C-1 Entrances: The main entry is far back from the street with a long porch – Emphasis should be on the entry rather than the garage door. A metal gate across the porch is inappropriate – if the space needs to be enclosed, bring the entrance to the front façade.
- C-2 Visual Privacy: Visual privacy is adequately addressed; No ground floor windows; Finished floor of residences exceeds 24" minimum above sidewalk; Porches are included in front façade design.
- C-3 Transition Spaces: The project shows a transition between the street and the front door with a setback, landscaping, and porch.

Principle D Proportion and Scale – **Met** – While the building is human-scaled, the proportions are slightly off because of the extra width created by the garage. The top floor and vertical support at the porch help draw a regulating line at the more contextual proportion.

- D-1 Windows: The majority of windows are rectangular with vertical proportion. The two-over-one window proportion is not contextual.

- D-2 Fenestration: The percent of fenestration on the front façades appear to meet the minimum 12% requirement.
- D-3 Porches: Porches extend at least 20% of front façade and meet the minimum dimensional requirements.

Principle E Balance –**Met** – The building façade composition creates a sense of balance with good use of overall and local symmetry.

- E-1 Window and Door Height: The majority of window and door head heights align along a common horizontal datum.
- E-2 Window and Door Alignment: The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- E-3 Symmetricality: Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – **Met** – The project employs several articulation methods to create visually interesting facades.

- F-1 Articulation: Project employs a cornice, expression lines, materials with texture and scale, and porch details that provide shadow lines.
- F-2 Window Types: Two window types.
- F-3 Visual Cohesion: There are excessive variations in materials disrupting the visual cohesion, creating awkward proportions, creating a façade more complex and busy than found in the context. Two materials – the railing and the vertical shiplap - contribute to the busy character of the building and break the façade inappropriately for the building type and context. Staff suggest only one material orientation (vertical or horizontal) should be applied consistently through the upper floors. The railing should be simplified, taking cues from the neighboring character.
- F-4 Delineation between Floors: Floors are delineated with material changes and porches.
- F-5 Porches, etc.: The porches are well integrated into the massing of the building. However, the design of the railing does not meet the standard – the style is overly complex, not integrated into the overall building character or the character found in context. In addition, the design of the entry porch feels boxy and lacking detail compared with the rest of the building. The cornice profile for that porch roof is adding to the heaviness of that design.
- F-6 Main Entries: The main entry is set back from the street – emphasis should be on the entry rather than the garage door. Staff suggest bringing the enclosed entry closer to the street, aligned with the front façade and activated the ground floor by using the bay as lobby space. Porch width may need to be revised to accommodate this. Additionally, one solution is to recess the garage door back from the front façade wall to lessen its visual prominence.
- F-7 Articulation Elements: Project includes a cornice projecting at least 6"; there does not appear to be trim or corner boards; offsets meet 12" minimum; pronounced cornice.

Principle G Materials – **Met** - The dominant neighborhood materials are small-scale residential choices such as clapboard, shingle, and brick – though usually fewer materials, simpler design than proposed.

- G-1 Materials: Clapboard and brick are in keeping with the residential context. Vertical orientation of siding is less common.
- G-2 Material and Façade Design: The brick at the ground floor with clapboard above is an appropriate placement according to their nature.
- G-3 Chimneys: Not applicable
- G-4 Window Types: Two window types used.
- G-5 Patios and Plazas: Landscape plan indicates concrete pavers.

XII. 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 April 24, 2018 for application 2017-243 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning

1. The Planning Board finds, based upon the consulting traffic engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Standard (Section 1.14), requiring that parking areas of fewer than ten (10) spaces contain only standard sized parking spaces, to [waive/not waive] the Technical Manual Standard (Section 1.14) to permit three (3) compact parking spaces.

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 April 24, 2018 for application 2017-243 relevant to the City of Portland Subdivision standards; and the testimony presented at the Planning Board hearing, the Planning Board **[finds/does not find]** that the plan is in conformance with the subdivision standards of the land use code, subject to the following conditions of approval that must be met prior to the signing of the plat unless otherwise stated:

1. The applicant shall revise the recording plat to include subdivision waivers and conditions as approved by the Planning Board. The plat shall be reviewed for approval by Corporation Counsel and the Department of Public Works.
2. Prior to the issuance of a Certificate of Occupancy, the applicant shall provide draft condominium documents for review and approval by Corporation Counsel and the Planning Authority.

C. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on April 24, 2018 for application 2017-243 relevant to the City of Portland Site Plan standards; and the testimony presented at the Planning Board hearing, the Planning Board **[finds/does not find]** that the plan is 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 issuance of any building permits unless otherwise stated:

1. The applicant shall provide applicable 'utility to serve' letters for electrical and waste water service and shall coordinate with DPW regarding installation of a new sewer connection.
2. Final plans submitted for review by the Planning Authority shall be stamped by a professional engineer licensed in the State of Maine.
3. The Utility, Grading and Erosion Control Plan shall be updated to provide spot grades as requested in the review memo from Woodard and Curran dated April 20, 2018.
4. The Utility Plan shall be updated to show the connection between the Oil Water Separator Drain and the proposed sewer connection.
5. A total of five (5) street trees are required for this project, with three (3) being provided on site. A fee in lieu calculated at a rate of $400 per tree shall be provided for a total contribution of $800.
6. The applicant shall provide evidence of compliance with applicable Fire Department standards, namely the addressing requirement for the property.
7. Prior to the issuance of the demolition permit, the applicant shall submit a performance guarantee or letter of credit in an amount as required under Section 14-483(i) for the replacement of three (3) residential units. This performance guarantee shall be held until certificates of occupancy are issued for the five (5) units being proposed, or for a period of three (3) years, at which point, if certificates of occupancy for the five (5) proposed units have not been issued, will be absorbed into the City's Housing Trust Fund.
8. The applicant shall provide an updated construction management plan that addresses review comments from DPW, particularly:
   a. Location of construction fencing to be relocated to curb.
   b. Information regarding number of on-street parking spaces to be occupied and duration of occupation.
   c. Details regarding pedestrian safety and temporary signage for sidewalk closure.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Final Planning Comments
2. Final Design Review Comments

3. Final Traffic Review Comments
4. Final Peer Review Comments
5. Landscape Review Comments
6. Preliminary Planning and Fire Comments
7. Preliminary Design Review Comments
8. Preliminary Traffic Review Comments
9. Preliminary Peer Review Comments
10. Construction Management Review Comments
11. Pedestrian Infrastructure Review Comments
12. Public Comment
    a. Karen Snyder (10.30.17)
    b. Karen Snyder (11.07.17)
    c. Rob Whitten (11.20.17)
    d. Matt Dodge (3.27.18)
    e. Laurence Gross (4.14.18)

APPLICANT'S SUBMITTALS

A. Application Form
B. Project Description and Zoning Assessment
C. Right, Title & Interest
D. Financial and Technical Capacity
E. 25 Monument Street Design Standards Review
F. Neighborhood Meeting Notes
G. 25 Monument Street Ability to Serve Letters
H. Mechanical Roof Units Spec Sheets
I. HVAC Emissions Standards
J. Solid Waste Management
K. Geotechnical Report
L. 25 Monument Street – Street Trees
M. Construction Management Narrative
N. Construction Management Plan – Erosion Control
O. Parking Waiver
P. Parking Memo Regarding Zoning Analysis

PLANS

Plan 1. Cover Sheet
Plan 2. Boundary Survey
Plan 3. Site Plan
Plan 4. Landscape Plan
Plan 5. Architectural Perspectives and Plans
Plan 6. Architectural Elevations
Plan 7. AutoTurn Analysis
Plan 8. Plat Plan
Plan 9. Mechanical Roof Plan
Plan 10. Site Lighting
Plan 11. Utility Plan & Details
Plan 12. Driveway & Sidewalk Details
Plan 13. Monument Rendering A
Plan 14. Monument Rendering B
Plan 15. Monument Rendering C
Plan 16. Monument Rendering D
Plan 17. Monument Rendering E

Planning and Urban Development Department
Planning Division

April 20, 2018

Jeff Kane
Monument Partners, LLC
380 Sixth Street, South
Naples, FL 34102

Anne Callendar
Whipple Callender Architects
PO Box 1276
Portland, ME 04104

RE: Staff Review Comments for 25 Monument Street – 5-unit condominium (2017-243) – Planning Board Review

Project Name:	25 Monument Street	Project ID:	(2017-234)
Project Address:	25 Monument Street	CBL:	338-K-004
Applicant:	Monument Partners, LLC		
Planner:	Matthew Grooms		

Dear Mr. Kane and Ms. Callender,

Thank you for submitting a Level III Site Plan and Subdivision application for the demolition of an existing three-unit residential building and construction of a five-unit residential condominium at 25 Monument Street predominantly within the R-6 residential zone and partially within the B-1 neighborhood business zone. This project is being reviewed as a final plan subject to the following applicable Land Use Code provisions:

- Site Plan Ordinance, Article V
- Subdivision Ordinance, Arcticle IV
- Division 7, R-6 and R-6A Residential Zones
- Division 9, B-1 and B-1b Neighborhood Business Zones
- Division 20, Off-Street Parking Standards

Final Plan for Planning Board Review: Staff Review Comments

I. Site Plan Standards

1. At present the ADA accessible entrance to the building is through the garage and across the internal driveway. Would the applicant consider making the principal entrance ADA accessible?

   Status: No changes made, though this is not a requirement.

2. From the provided site plan, it is difficult to determine what portion of the existing sidewalk is being replaced. Please provide a limit of work line and clearly identify areas for reconstruction.

   Status: Site plan has been updated to include more relevant details and information regarding sidewalk reconstruction. No further comment.

3. With the final submission, the applicant shall provide a plan showing plant numbers, sizes and locations on the property. Tree save protection measures should similarly be identified on the plan and in narrative form.

   Status: The Landscaping Plan has been updated and provides more detailed information regarding plant species, sizes and locations. Tree save measures are also identified. No further comment.

4. In speaking with the City Arborist, three of the street trees provided on site qualify as street trees. A total of two additional street trees or acceptable alternative shall be provided.

   Status: The applicant has agreed to a financial contribution of $800 for the two additional required street trees. No further comment.

5. All applicable 'ability to serve' letters shall be provided with the final plan submission or shall be made a condition of approval if not supplied.

   Status: Provision of 'ability to serve' letters has been made a condition of approval. No further comment.

6. The location of site lighting and appropriate details have been provided. A photometric plan is also required which demonstrates acceptable light trespass.

   Status: Photometric Plan has been provided showing acceptable light trespass. No further comment.

7. The applicant shall provide details for fencing being proposed on-site.

   Status: Fencing was installed by abutter and is to be maintained by abutter. No further comment.

II. Zoning Review

8. Building elevations shall provide height measurements so as to determine compliance with R-6 height maximums. Similarly, while the required stepback is provided, it is not clear if the stepback is provided at the required height, or if the stepback is at least 10 feet from the property line.

   Status: Building elevations have been updated and demonstrate compliance with the R-6 dimensional requirements. No further comment.

9. Does the proposed lot coverage of 56% take into account the covered porch? Please note, under zoning, this area of the site counts towards that requirement.

Status: Lot coverage calculations have been updated to include porches and the rear stair tower now proposed at the rear of the property. Lot coverage is approximately 57%, within the 60% limitation permitted. No further comment.

III. Subdivision Review

10. When available, a copy of the condo docs shall be provided for review by Corporation Counsel.

    Status: Provision of condominium documents has been made a condition of approval. No further comment.

11. The subdivision plat should indicate the stepback line as well as setback lines.

    Status: The applicant will be required to provide an updated recording plat as a condition of approval. No further comment.

Additional Submittals Required:

Please upload the digital plans and documents to address staff comments. Upon receipt of the revised material, the City of Portland will review the additional plans and information for conformance with applicable ordinances. Please be aware that an application expires within 120 days of the date upon which this written request for additional information was made and only *one set of revised plans* may be submitted for review.

If you have any questions, feel free to contact me at (207) 874-8725 or by email at mgrooms@portlandmaine.gov.

Sincerely,
Matthew Grooms
Planner

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill & Multi-family Design Review – 25 Monument Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Thursday, April 12, 2018

A design review for the proposed multi-family project at 25 Monument Street was conducted according to the *City of Portland Design Manual* Standards by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Jeff Levine, Department Head, within the Planning Division of the Planning & Urban Development Department. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Findings of the Design Review:
The proposed design **passes** all of the criteria of the *R-6 Alternate Design Review* – some comments are provided below regarding areas of concern. However, one of the comments from the Planning Board was not addressed by the applicant.

Design Review Comments *(red text denotes principles or standards that are not met)**:***

At the workshop held March 27th, the Planning Board made the following comments related to design to be addressed by the applicant:

- Reduce the prevalence of the garage door – Applicant did not make revisions to address this comment. See F-6 Main Entries below for staff comment.
- How does the height of this building compare to the recent single family across the street? – 30 Monument Street is 40' to the upper deck. This project is taller than 40' (height and average grade information is missing from the elevations – please correct).

Principle A Overall Context – Met – The mass and height of the proposal at the street is consistent and compatible with the surrounding residential context. The type is similar to other triple-decker and four-story multi-family buildings found in the neighborhood.

- *A-1 Scale and Form:* The scale of the project is compatible with the existing context – flat roof, bay window, façade plane changes with porches.
- *A-2 Composition of Principal Facades:* The composition of the front façade has a vertical proportion consistent with the residential character of the neighborhood. The flat roof, porches, and use of bay windows provide a composition referential to neighborhood architectural character.
- *A-3 Relationship to the Street:* The building has a relationship to the street consistent with the neighborhood which is setback a few feet to accommodate the bay projection, landscape, entry porch. The street wall varies here with some buildings set further back from the street.

Principle B Massing – Met – Most aspects of the building reflect the principle and the majority of the Standards are met by the proposed design.

- *B-1 Massing:* The proposed massing is generally consistent with the neighborhood using a vertical proportion and a bay projection with porches.
- *B-2 Roof Forms:* The flat roof form at the street is consistent with the surrounding context and the multi-family building type.
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear main roof form.
- *B-4 Roof Pitch:* Flat roof
- *B-5 Façade Articulation:* The project employs balconies, bay window, recessed, and covered entry.
- *B-6 Garages:* Garage is integrated into the overall building form and there is living space above garage. Garage door is less than 40% of the façade width.

Principle C Orientation to the Street –Met – The project appropriately reflects the private/public relationship of residential buildings in this neighborhood. **The ground floor was revised to add one window to the mechanical room on the ground floor – no living space at the street of the ground floor.**

- *C-1 Entrances:* The main entry is far back from the street with a long porch – Emphasis should be on the entry rather than the garage door.
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; No living space on ground floor; Finished floor of residences exceeds 24" minimum above sidewalk; Porches are included in front façade design.
- *C-3 Transition Spaces:* The project shows a transition between the street and the front door with a setback, landscaping, and porch.

Principle D Proportion and Scale – Met – While the building is human-scaled, the proportions are slightly off because of the extra width created by the garage. The top floor and vertical support at the porch help draw a regulating line at the more contextual proportion.

- *D-1 Windows:* The majority of windows are rectangular with vertical proportion. The two-over-one window proportion is not contextual.
- *D-2 Fenestration:* The percent of fenestration on the front façades appear to meet the minimum 12% requirement.
- *D-3 Porches:* Porches extend at least 20% of front façade and meet the minimum dimensional requirements.

Principle E Balance –Met – The building façade composition creates a sense of balance with good use of overall and local symmetry.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – Met – The project employs several articulation methods to create visually interesting facades.

- *F-1 Articulation:* Project employs a cornice, expression lines, materials with texture and scale, and porch details that provide shadow lines.

- *F-2 Window Types:* Two window types.
- *F-3 Visual Cohesion:* There are excessive variations in materials disrupting the visual cohesion, creating awkward proportions, creating a façade more complex and busy than found in the context. Two materials – the railing and the vertical shiplap - contribute to the busy character of the building and break the façade inappropriately for the building type and context. Staff suggest only one material orientation (vertical or horizontal) should be applied consistently through the upper floors. The railing should be simplified, taking cues from the neighboring character.
- *F-4 Delineation between Floors:* Floors are delineated with material changes and porches.
- *F-5 Porches, etc.:* The porches are well integrated into the massing of the building. However, the design of the railing does not meet the standard – the style is overly complex, not integrated into the overall building character or the character found in context. In addition, the design of the entry porch feels boxy and lacking detail compared with the rest of the building. The cornice profile for that porch roof is adding to the heaviness of that design.
- *F-6 Main Entries:* The main entry is set back from the street – emphasis should be on the entry rather than the garage door. Staff suggest bringing the enclosed entry closer to the street, aligned with the front façade and activated the ground floor by using the bay as lobby space. Porch width may need to be revised to accommodate this. Additionally, one solution is to recess the garage door back from the front façade wall to lessen its visual prominence.
- *F-7 Articulation Elements:* Project includes a cornice projecting at least 6"; there does not appear to be trim or corner boards; offsets meet 12" minimum; pronounced cornice.

Principle G Materials –Met - The dominant neighborhood materials are small-scale residential choices such as clapboard, shingle, and brick – though usually fewer materials, simpler design than proposed.

- *G-1 Materials:* Clapboard and brick are in keeping with the residential context. Vertical orientation of siding is less common.
- *G-2 Material and Façade Design:* The brick at the ground floor with clapboard above is an appropriate placement according to their nature.
- *G-3 Chimneys:* Not applicable
- *G-4 Window Types:* Two window types used.
- *G-5 Patios and Plazas:* Landscape plan indicates concrete pavers.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

25 Monument Street - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Apr 19, 2018 at 10:01 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Matt – I have reviewed the updated application materials and offer the following Final Traffic Comments as a status update of prior comments.

- The parking layout plan notes aisle width dimensions that do not meet City standards. The applicant should provide documentation that supports a waiver request.

  Status: The plans depict parking aisle widths that meet City standards. The plan does have a circulation area that is less than 15 feet, but is not used for parking space maneuvering. A waiver is not required and accordingly, I find the project to be acceptable.

- The applicant has provided a vehicle turn analysis that indicates vehicle circulation is feasible. I continue to review this information, but my initial review supports their conclusion that reasonable circulation can be provided. I would note that the building columns will present vehicle turn challenges.

  Status: The applicant has provided the requested analysis. The analysis indicates reasonable circulation is provided and I have no further comment.

- I find the location and width of the driveway to be acceptable.

  Status: I have no further comment.

- The construction management plan is not acceptable and the applicant shall revise the plan to conform to the City's standard template. I would note a detailed sidewalk closure detour route that is ADA compliant shall be noted.

  Status: It is my understanding that Keith Gray will be providing final comments.

<u>Additional Comments</u>

- **The project is proposing parking spaces that do not meet City standards for width and depth and thus a waiver is required. Given the results of the auto-turn analysis and that the aisle width meets City standards, I support a waiver for the parking space reduced dimensions.**

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
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"One Vision, One Company"

COMMITMENT & INTEGRITY
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MEMORANDUM

TO: Matt Grooms, Planner
FROM: Lauren Swett, PE
DATE: April 20, 2018
RE: 25 Monument Street, Level III Site Plan Application

Woodard & Curran has reviewed the updated Level III Site Plan Application for the proposed development located at 25 Monument Street in Portland, Maine. The project involves the demolition of an existing two (2) family house and construction of a five (5) unit building.

Documents Reviewed by Woodard & Curran

- Updated plans, dated April 19, 2018, prepared by Whipple-Callender Architects, on behalf of Monument Partners, LLC.

Comments

1) Final plans must be stamped by a professional engineer (Section 14-527, sub-section (f) of the City of Portland Land Use Ordinance).
2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
      - The Applicant has noted that silt fence will be installed along the Monument Street frontage. Additional silt fencing may be needed along the sides of the property to prevent sediment from running onto the abutting properties during construction. Silt fence should be provided around the construction material storage area located in close proximity to the abutter.
   b) General Standard: The project will result in a de minimis increase in impervious area, less than 1,000 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 a de minimis increase in impervious area of less than 1,000 square feet. As such, the project is not required to include specific stormwater management features to control the rate or quantity of stormwater runoff from the site.
3) The utility plan identifies an oil water separator floor drain in the rear portion of the garage. The Applicant should confirm that this will connect to the sewer. We recommend showing additional spot grades in the front section of the garage to ensure that drainage is able to get to the floor drain.
4) The grading behind the building remains unclear. Some additional spot grades and flow arrows should be provided to ensure that water behind the building does not drain onto the adjacent properties. Please clarify proposed grading labels.
5) Locations of foundation and roof drains should be identified.

Att. 5

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

25 Monument Street Tree & Landscape Review

Jeff Tarling <jst@portlandmaine.gov> Mon, Feb 5, 2018 at 4:42 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Errico Thomas <thomas.errico@tylin.com>

Hi Matt -

In review of the proposed project at 25 Monument Street the landscape plan submitted by Anthony Muench LA. The tree and landscape plan concepts
work well as they contain a mix of wood fencing, trees, shrubs and herbeaus
plantings that will help as a buffer along with adding interest to the site.

A condition for the final approval should show plant numbers, sizes and location on the plot. The landscape plan as submitted is well thought out and appropriate for the project, fine tuning the plant details would be good for the final approval along with 'tree save' protection measures spelled out. This helps us with post development inspection.

Three of the trees along the sidewalk could qualify for street-trees.

Thanks,

Jeff

Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

Planning and Urban Development Department
Planning Division

February 16, 2018

Jeff Kane
Monument Partners, LLC
380 Sixth Street, South
Naples, FL 34102

Anne Callendar
Whipple Callender Architects
PO Box 1276
Portland, ME 04104

RE: Staff Review Comments for 25 Monument Street – 5-unit condominium (2017-243) – Planning Board Review

Project Name:	25 Monument Street	Project ID:	(2017-234)
Project Address:	25 Monument Street	CBL:	338-K-004
Applicant:	Monument Partners, LLC		
Planner:	Matthew Grooms		

Dear Mr. Kane and Ms. Callender,

Thank you for submitting a Level III Site Plan and Subdivision application for the demolition of an existing three-unit residential building and construction of a five unit residential condominium at 25 Monument Street predominantly within the R-6 residential zone and partially within the B-1 neighborhood business zone. This project is being reviewed as a preliminary plan subject to the following applicable Land Use Code provisions:

- Site Plan Ordinance, Article V
- Subdivision Ordinance, Arcticle IV
- Division 7, R-6 and R-6A Residential Zones
- Division 9, B-1 and B-1b Neighborhood Business Zones
- Division 20, Off-Street Parking Standards

Final Plan for Planning Board Review: Staff Review Comments

I. Site Plan Standards

1. At present the ADA accessible entrance to the building is through the garage and across the internal driveway. Would the applicant consider making the principal entrance ADA accessible?
2. From the provided site plan, it is difficult to determine what portion of the existing sidewalk is being replaced. Please provide a limit of work line and clearly identify areas for reconstruction.

3. The construction details for the driveway are to be modified to reflect updated details by DPW in plan view and cross-section to show the provision of an ADA-compliant pedestrian access route of 5' minimum denoting a maximum 2% cross-slope. The updated details (3) are attached; the appropriate detail for the site conditions should be selected.
4. The construction detail for the brick sidewalk is to be modified to show a maximum 2% cross-slope for its entire width.
5. With the final submission, the applicant shall provide a plan showing plant numbers, sizes and locations on the property. Tree save protection measures should similarly be identified on the plan and in narrative form.
6. In speaking with the City Arborist, three of the street trees provided on site qualify as street trees. A total of two additional street trees or acceptable alternative shall be provided.
7. All applicable 'ability to serve' letters shall be provided with the final plan submission or shall be made a condition of approval if not supplied.
8. The location of site lighting and appropriate details have been provided. A photometric plan is also required which demonstrates acceptable light trespass.
9. The applicant shall provide details for fencing being proposed on-site.

II. Zoning Review

10. Building elevations shall provide height measurements so as to determine compliance with R-6 height maximums. Similarly, while the required stepback is provided, it is not clear if the stepback is provided at the required height, or if the stepback is at least 10 feet from the property line.
11. Does the proposed lot coverage of 56% take into account the covered porch? Please note, under zoning, this area of the site counts towards that requirement.
12. As required under Division 29. Housing Preservation and Replacement, upon approval of the project, the applicant will be required to post a performance guarantee or letter of credit in an amount equilvalent to the amount the applicant would have been required to contribute to the City's Housing Trust Fund if that option had been pursued (subsection g of this division). This security will be held until completion of the project and issuance of a Certificate of Occupancy.

III. Subdivision Review

13. When available, a copy of the condo docs shall be provided for review by Corporation Counsel.
14. The subdivision plat should indicate the stepback line as well as setback lines.

IV. Fire Review

15. The main entrance of the building must be the address fro the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address. The address number must be on the street side of the building with numbers that are no less than six inches high.
16. This building will be required to be sprinkled.
17. Access is acceptable to the Fire Department
18. There are adequate fire hydrants in the area.

Additional Submittals Required:

Please upload the digital plans and documents to address staff comments. Upon receipt of the revised material, the City of Portland will review the additional plans and information for conformance with applicable ordinances. Please be aware that an application expires within 120 days of the date upon which this written request for additional information was made and only *one set of revised plans* may be submitted for review.

If you have any questions, feel free to contact me at (207) 874-8725 or by email at mgrooms@portlandmaine.gov.

Sincerely,
Matthew Grooms
Planner

Electronic Distribution:
Tuck O'Brien, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Jennifer Thompson, Associate Corporation Counsel
Anne Machado, Zoning Administrator
Captain Keith Gautreau, Fire
Keith Gray, DPW
Jeff Tarling, City Arborist
Tom Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard & Curran

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill & Multi-family Design Review – 25 Monument Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Monday, January 29, 2018

A design review for the proposed multi-family project at 25 Monument Street was conducted according to the *City of Portland Design Manual* Standards by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Jeff Levine, Department Head, within the Planning Division of the Planning & Urban Development Department. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Findings of the Design Review:
The proposed design **does not pass** all of the criteria of the *R-6 Alternate Design Review* – some comments are provided below regarding areas of concern.

Design Review Comments *(red text denotes principles or standards that are not met)**:***

Principle A Overall Context – Met – The mass and height of the proposal at the street is consistent and compatible with the surrounding residential context. The type is similar to other triple-decker and four-story multi-family buildings found in the neighborhood.

- *A-1 Scale and Form:* The scale of the project is compatible with the existing context – flat roof, bay window, façade plane changes with porches.
- *A-2 Composition of Principal Facades:* The composition of the front façade has a vertical proportion consistent with the residential character of the neighborhood. The flat roof, porches, and use of bay windows provide a composition referential to neighborhood architectural character. The number and placement of materials is excessive and adds too much complexity in a context that is simple in form, roof lines, and materials. See further comments below on this.
- *A-3 Relationship to the Street:* The building has a relationship to the street consistent with the neighborhood which is setback a few feet to accommodate the bay projection, landscape, entry porch. The street wall varies here with some buildings set further back from the street.

Principle B Massing – Met – Most aspects of the building reflect the principle and the majority of the Standards are met by the proposed design.

- *B-1 Massing:* The proposed massing is generally consistent with the neighborhood using a vertical proportion and a bay projection with porches.
- *B-2 Roof Forms:* The flat roof form at the street is consistent with the surrounding context and the multi-family building type.
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear main roof form.

- *B-4 Roof Pitch:* The roof pitch is more shallow than allowed.
- *B-5 Façade Articulation:* The project employs balconies, bay window, recessed, and covered entry.
- *B-6 Garages:* Garage is integrated into the overall building form and there is living space above garage. Garage door is less than 40% of the façade width.

Principle C Orientation to the Street –Partially Met – The project appropriately reflects the private/public relationship of residential buildings in this neighborhood. However, the ground floor includes no windows, living space, or entrances at the street to "enhance the pedestrian friendliness and sociability of the streetscape." Staff suggest addressing this concern by bringing the enclosed entry closer to the street, aligned with the front façade, and activate the ground floor by using the bay as lobby space.

- *C-1 Entrances:* The main entry is far back from the street with a long porch – Emphasis should be on the entry rather than the garage door. A metal gate across the porch is inappropriate – if the space needs to be enclosed, bring the entrance to the front façade.
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; No ground floor windows; Finished floor of residences exceeds 24" minimum above sidewalk; Porches are included in front façade design.
- *C-3 Transition Spaces:* The project shows a transition between the street and the front door with a setback, landscaping, and porch.

Principle D Proportion and Scale – Met – While the building is human-scaled, the proportions are slightly off because of the extra width created by the garage. The top floor and vertical support at the porch help draw a regulating line at the more contextual proportion.

- *D-1 Windows:* The majority of windows are rectangular with vertical proportion. The two-over-one window proportion is not contextual.
- *D-2 Fenestration:* The percent of fenestration on the front façades appear to meet the minimum 12% requirement.
- *D-3 Porches:* Porches extend at least 20% of front façade and meet the minimum dimensional requirements.

Principle E Balance –Met – The building façade composition creates a sense of balance with good use of overall and local symmetry.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

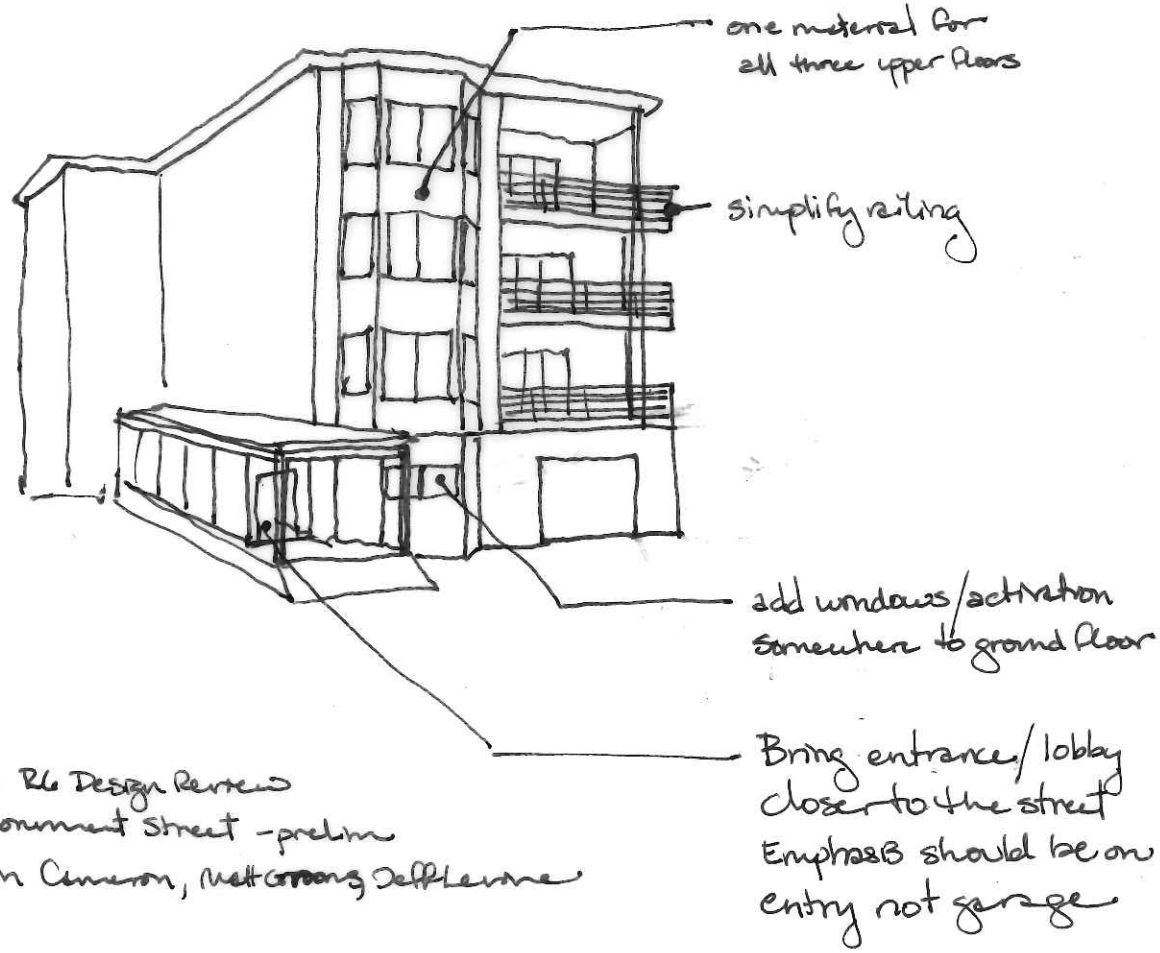
Principle F Articulation – Partially Met – The project employs several articulation methods to create visually interesting facades. However, the number and placement of materials creates a busy façade and is inconsistent with the character of the context.

- *F-1 Articulation:* Project employs a cornice, expression lines, materials with texture and scale, and porch details that provide shadow lines. Is there trim or corner boards? How will the corners be detailed?
- *F-2 Window Types:* Two window types.

- *F-3 Visual Cohesion:* There are excessive variations in materials disrupting the visual cohesion, creating awkward proportions, creating a façade more complex and busy than found in the context. Two materials – the railing and the vertical shiplap - contribute to the busy character of the building and break the façade inappropriately for the building type and context. Staff suggest only one material orientation (vertical or horizontal) should be applied consistently through the upper floors. The railing should be simplified, taking cues from the neighboring character.
- *F-4 Delineation between Floors:* Floors are delineated with material changes and porches. The delineation between the third and fourth floors is excessive with the material change.
- *F-5 Porches, etc.:* The porches are well integrated into the massing of the building. However, the design of the railing does not meet the standard – the style is overly complex, not integrated into the overall building character or the character found in context. In addition, the design of the entry porch feels boxy and lacking detail compared with the rest of the building. The cornice profile for that porch roof is adding to the heaviness of that design.
- *F-6 Main Entries:* The main entry is set back from the street – emphasis should be on the entry rather than the garage door. Staff suggest bringing the enclosed entry closer to the street, aligned with the front façade and activated the ground floor by using the bay as lobby space. Porch width may need to be revised to accommodate this.
- *F-7 Articulation Elements:* Project includes a cornice projecting at least 6"; there does not appear to be trim or corner boards; offsets meet 12" minimum; pronounced cornice.

Principle G Materials – Partially Met - The dominant neighborhood materials are small-scale residential choices such as clapboard, shingle, and brick. There is an excessive number of materials – the predominant context is that of simplicity.

- *G-1 Materials:* Clapboard and brick are in keeping with the residential context. Vertical orientation of siding is less common.
- *G-2 Material and Façade Design:* The brick at the ground floor with clapboard above is an appropriate placement according to their nature. The bay does not need a difference material orientation to be effective as an articulation/massing element.
- *G-3 Chimneys:* Not applicable
- *G-4 Window Types:* Two window types used.
- *G-5 Patios and Plazas:* Landscape plan indicates concrete pavers.



1/29/18 R6 Design Review
25 Monument Street - prelim
Caitlin Cameron, Matt Groom, Jeff Levine

Att. 8

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

25 Monument Street - Preliminary Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Mar 22, 2018 at 1:38 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Matt – I have reviewed the application materials and offer the following Preliminary Traffic Comments.

- The parking layout plan notes aisle width dimensions that do not meet City standards. The applicant should provide documentation that supports a waiver request.
- The applicant has provided a vehicle turn analysis that indicates vehicle circulation is feasible. I continue to review this information, but my initial review supports their conclusion that reasonable circulation can be provided. I would note that the building columns will present vehicle turn challenges.
- I find the location and width of the driveway to be acceptable.
- The construction management plan is not acceptable and the applicant shall revise the plan to conform to the City's standard template. I would note a detailed sidewalk closure detour route that is ADA compliant shall be noted.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

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

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Matt Grooms, Planner
FROM: Lauren Swett, PE & Craig Sweet, PE
DATE: February 1, 2018
RE: 25 Monument Street, Level III Site Plan Application

Woodard & Curran has reviewed the Level III Site Plan Application for the proposed development located at 25 Monument Street in Portland, Maine. The project involves the demolition of an existing two (2) family house and construction of a five (5) unit building.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, prepared by Whipple-Callender Architects, on behalf of Monument Partners, LLC.
- Plan Sheets 1-7, dated October 17, 2017, prepared by Whipple-Callender Architects, on behalf of Monument Partners, LLC.
- Plan sheets C.2 and C.3, dated January 25, 2018, prepared by Whipple-Callender Architects, on behalf of Monument Partners, LLC.

Comments

1) The application is preliminary. Woodard & Curran will perform a review of the Final Application upon receipt of those documents. The following comments reflect items that should be included as part of the Final Application.
2) Final plans must be stamped by a professional engineer (Section 14-527, sub-section (f) of the City of Portland Land Use Ordinance).
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: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
      - The Applicant has noted that silt fence will be installed along the Monument Street frontage. Additional silt fencing may be needed along the sides of the property to prevent sediment from running onto the abutting properties during construction. Silt fence should be provided around the construction material storage area located in close proximity to the abutter.
   b) General Standard: The project will result in a de minimis increase in impervious area, less than 1,000 square feet. As such, the project is not required to include any specific stormwater management features for stormwater quality control.
      - Please clarify the new impervious area onsite, the Level III Site Plan application indicates an increase in impervious area of 860 square feet while the table provided on sheet C.1 indicates an increase of 777 square feet.
      - 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 de minimis increase in impervious area of less than 1,000 square feet. As such, the project is not required to include specific stormwater management features to control the rate or quantity of stormwater runoff from the site.
4) The utility plan identifies an oil water separator floor drain in the rear portion of the garage. The Applicant should confirm that this will connect to the sewer. We recommend showing additional spot grades in the front section of the garage to ensure that drainage is able to get to the floor drain.

5) Based on the proposed contours, it appears that the intent for drainage behind the building is to drain to a shallow swale that will direct water around the sides of the building. Some additional spot grades and flow arrows should be provided to ensure that water behind the building does not drain onto the adjacent properties.
6) Locations of foundation and roof drains should be identified.
7) It is unclear if the existing sewer service is being reused, or if a new service is proposed. Please clarify and provide confirmation from the City of Portland Department of Public Works of ability to serve.
8) Engineering details in conformance with the City of Portland Technical Manual should be provided, including granite curbing, sidewalk, pavement repair, etc.
9) An ability to serve letter from the Portland Water District has been provided. The Applicant should ensure that the water service information on the plans provided to the City has not been changed since the December 5, 2017 plans were approved by the Portland Water District.
10) Per the City of Portland's current sidewalk material policy, driveway aprons must be constructed of the same material as the adjacent sidewalks. It is unclear on the plans if this is the case. A brick sidewalk apron should be provided, and the plans should include a detail.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

25 Monument Street - Construction Management Plan

Keith Gray <kgray@portlandmaine.gov> Fri, Apr 20, 2018 at 2:38 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hello,

The following comments/concerns are in regards to the provided Construction Management Plan dated 1/25/18.

- The CMPlan indicates security fence within Monument Street and the occupancy of parking spaces.
  - The security fence shall be moved back to the curb line.
  - Include additional detail on how many parking spaces are requested to be occupied, purpose and duration.
  - A note should be added to the CMPlan indicating that, "Parking space(s) occupancy shall be limited to two at a time for the duration required to complete the current construction activity".
  - Provide additional details on pedestrian safety and signage during the sidewalk closure. Duration of closure?

Thank you,
Keith

[Quoted text hidden]

--
Keith D. Gray, PE
City Engineer
Engineering Services Manager
Dept. of Public Works
City of Portland Maine

207.874.8834
kgray@portlandmaine.gov

Att. 11

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

PEZ.2017-243: 25 Monument Street - Final Comments - Street/Streetscape/Accessibility

Bruce Hyman <bhyman@portlandmaine.gov> Thu, Apr 19, 2018 at 10:33 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Lauren Swett <lswett@woodardcurran.com>, Keith Gray <kgray@portlandmaine.gov>, Barbara Barhydt <bab@portlandmaine.gov>

My final comments for 25 Monument Street are:

- the final site plan (Sheet C.1) and sidewalk detail (Sheet C.4-4, sidewalk cross-section) shall indicate a maximum 2% cross-slope for the new brick sidewalk to make them consistent and reinforce ADA-compliance among the various plans
- the final sidewalk and driveway details (Sheet C.4-3, driveway cross-section) shall indicate a maximum 2% cross-slope for the brick driveway (similar to the driveway plan view detail) for a minimum of 5' of width at the back of sidewalk for the pedestrian access route to make them consistent and reinforce ADA-compliance among the various plans.

Please don't hesitate to contact me if you or the applicant have any questions about the above comments.

Bruce
--
Bruce Hyman
Transportation Program Manager
Transportation Division

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

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

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

Project Name:	Monument Partners Condominums
Proposed Development Address:	25 Monument Street
Project Description:	New Residential Building:4-stories, 5 Condominiums, with
Chart/Block/Lot:	16-D-9
Preliminary Plan	
Final Plan	

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

APPLICANT

Name:	Jeff Kane
Business Name:	Monument Partners LLC
Address:	380 Sixth Street, South
City/State:	Naples, FL
Zip Code:	34102
Work #:	207-775-2696 x 105
Home #:	n/a
Cell #:	(207) 210-1245
Fax #:	n/a
E-mail:	jeffkane.jdk@gmail.com

OWNER

Name:	Monument Partners LLC
Address:	380 Sixth Street, South
City/State:	Naples, FL
Zip Code:	34102
Work #:	n/a
Home #:	n/a
Cell #:	(207) 210-1245
Fax #:	n/a
E-mail:	jeffkane.jdk@gmail.com

AGENT/REPRESENTATIVE

Name:	Anne Callender, Whipple | Callender Architects
Address:	PO Box 1276
City/State:	Portland ME
Zip Code:	04104
Work #:	207-775-2696 x 105
Home #:	n/a
Cell #:	n/a
Fax #:	207-775-3631
E-mail:	anne@whipplecallender.com

BILLING (to whom invoices will be forwarded to)

Name:	Jeff Kane
Address:	380 Sixth Street, South
City/State:	Naples, FL
Zip Code:	34102
Work #:	n/a
Home #:	n/a
Cell #:	(207) 210-1245
Fax #:	n/a
E-mail:	jeffkane.jdk@gmail.com

ENGINEER

Name:	Casco Bay Engineering
Address:	424 Fore Street
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-842-2800
Home #:	n/a
Cell #:	n/a
Fax #:	207-842-2828
E-mail:	ericd@cascobayengineering.com

SURVEYOR

Name:	John Schwanda, PLS; Owen Haskell Inc.
Address:	390 US Route One, Unit 10
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-774-0424 x 30
Home #:	n/a
Cell #:	n/a
Fax #:	207-774-0511
E-mail:	jschwanda@owenhaskell.com

ARCHITECT

Name:	Anne Callender, Whipple | Callender Architects
Address:	PO Box 1276
City/State:	Portland, ME
Zip Code:	04104
Work #:	207-775-2696 x 105
Home #:	n/a
Cell #:	n/a
Fax #:	207-775-3631
E-mail:	anne@whipplecallender.com

ATTORNEY

Name:	Bill Welch and Tom Hanson, Bernstein Shur
Address:	PO Box 9729
City/State:	Portland, ME
Zip Code:	04104-5029
Work #:	207-774-1200
Home #:	n/a
Cell #:	n/a
Fax #:	207-770-2590
E-mail:	wwelch@bernsteinshur.com

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Anne Callender
E-mail:	anne@whipplecallender.com
Name:	
E-mail:	
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☐	Stormwater Quality	$250.00
☑	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [5] x $25.00 each	$ 125.00
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 1375

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

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

TOTAL AREA OF SITE	9,989	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	8,700	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)	4,786	sq. ft.
Impervious Area (Total Proposed)	5,686	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	1,700	sq. ft.
Building Footprint (Total Proposed)	5,368	sq. ft.
Building Floor Area (Total Existing)	2,705	sq. ft.
Building Floor Area (Total Proposed)	20,122	sq. ft.
ZONING		
Existing	R6	
Proposed, if applicable	n/a	
LAND USE		
Existing	Residential	
Proposed	Residential	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	3	
# of Residential Units (Total Proposed)	5	
# of Lots (Total Proposed)	1	
# of Affordable Housing Units (Total Proposed)	0	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	0	
# of Two-Bedroom Units (Total Proposed)	0	
# of Three-Bedroom Units (Total Proposed)	5	
PARKING SPACES		
# of Parking Spaces (Total Existing)	9	
# of Parking Spaces (Total Proposed)	8	
# of Handicapped Spaces (Total Proposed)	1	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	5+	
ESTIMATED COST OF THE PROJECT	$4,700,000	

VI. APPLICANT SIGNATURE

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

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

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

Signature of Applicant:	Anne Callender
Date:	10/10/2017

25 MONUMENT STREET
PORTLAND

DESCRIPTION OF PROJECT

The program for this site consists of a new 5 unit building to replace a dilapidated 2 family house. The building will have a parking level at grade, two 2000 sq. ft. +- apartments on the second level, two 2000 sq. ft. +- apartments on the third level, and a 4000 +- sq. ft. apartment on the fourth level. A small basement storage room and a roof deck will serve all occupants.

The building meets all Portland zoning requirements and design standards. No waivers are requested. Substitution of street trees where infeasible to be approved by city arborist.

25 Monument St. is in the R-6 zone.

Dimensional requirements will be met. Area calculations and set-back lines are shown on the cover page of the drawings.

Dimensional Requirements:
Lot size 2000 sf +
Min dwelling size 725 sf+
Front yard setback 5' + from property line
(A greater front yard setback is encouraged by the design standards and provided here.)
Rear yard setback: 10' from property line
Side yard setbacks 5' from property line
Setbacks above 35': 10' from property line
Maximun lot coverage: 60%
Maximum height: 45' (exclusive of roof deck/mechanical/stair and elevator enclosure)
Landscaped open area 20%

Per subdivision requirements, 30% of trees 10" DBH will be kept.
Street trees: Where one street tree per unit is not feasible due to narrow street frontage, the applicant requests that plantings within view of sidewalk be approved by city arborist.

Off street parking required: 2 spaces plus 2 bicycle storage plus 2-wheeled vehicle storage.
This building will have parking spaces for two full sized cars, 6 compact cars, and 10 or more bicycles or two wheeled vehicles, all enclosed on the first level. Auto turn analysis is included in this submittal.
Minimum driveway width for one-way traffic: 12'

SHORT FORM WARRANTY DEED

MELINDA Y.M. MCCLURE, of Portland, Maine, **RAYMOND A. MORROW** of Portland, Maine, **ESTHER M. MORROW** (f/k/a Esther M. Keister), of South Portland, Maine, and **MARY V. CARD**, of Topsham, Maine (collectively, the "Grantors"), FOR CONSIDERATION PAID, grant to **MONUMENT PARTNERS, LLC**, a Maine limited liability company, with a mailing address of 380 6th Street South Naples, FL 34102 (the "Grantee"), with WARRANTY COVENANTS, certain real property, together with any improvements thereon, located at 25 Monument Street, City of Portland, County of Cumberland, Maine and more particularly described as follows:

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

Beginning at the easternmost corner of the land now or formerly of Christopher Coose and Lisa Silverman (see Book 12732, Page 50) on the northwesterly side of Monument Street, which point is located 100.00 feet northeasterly of the point of intersection of the northwesterly sideline of Monument Street and the northeasterly sideline of St. Lawrence Street, all as shown on "ALTA/NSPS Land Title Survey 25 Monument Street, Portland, Maine made for Monument Partners, LLC dated January 13, 2017 Owen Haskell, Inc. Job no. 2016-378p";

Thence, N 53°16' 17" W by said land and by the land now or formerly of Laurence W. Gross and Barbara E. Colby (Book 30580, Page 89 and Book 33076, Page 101) a distance of 141.35 feet to the land of 118 Congress Street Condominiums;

Thence, N 37° 52' 58" E by said land 18.51 feet to the land now or formerly of Eben Albert-Knopp (Book 26803, Page 278);

Thence, N 38° 51' 27" E by said land and by the land now or formerly of John & Carolyn Whitaker (Book 32921, Page 151) a distance of 56.35 feet to the land now or formerly of Atlantic Street Condominium;

Thence, S 50° 24' 16" E by said land and by the land now or formerly of Atlantic Street Properties, LLC (Book 32772, Page 230) a distance of 138.48 feet to Monument Street;

Thence, S 36° 14' 35" W by Monument Street 67.89 feet to the point of beginning.

For Grantors source of title see Deed of Distribution by Personal Representative from Melinda Yvonne Morrow McClure, Personal Representative of the Estate of Mary Viola Morrow to Melinda Y.M. McClure, Raymond A. Morrow, Esther M. Keister, and Mary V. Card dated April 30, 2014 and recorded at the Cumberland County Registry of Deeds in Book 31472, Page 99 and Deed from Timothy J. Keister to Esther M. Keister dated March 9, 2015 and recorded at the Cumberland County Registry of Deeds in Book 32134, Page 38.

MAINE REAL ESTATE TAX PAID

WITNESS our hands and seals on this 31st day of January, 2017.

Witness — Melinda Y.M. McClure

Witness — Raymond A. Morrow

Witness — Esther M. Morrow

Witness — Mary V. Card

State of Maine
County of Cumberland, ss January 31, 2017

PERSONALLY APPEARED the above-named Melinda Y.M. McClure, Raymond A. Morrow, Esther M. Morrow and Mary V. Card and acknowledged the foregoing instrument to be their free act and deed.

Before me,

Notary Public/Attorney At Law
Commission Expires:
Print Name: William M. Welch

Received
Recorded Register of Deeds
Jan 31,2017 12:45:54P
Cumberland County
Nancy A. Lane

Key Private Bank

investments | trust | banking

One Canal Plaza, 2nd Floor
Portland, ME 04101

September 5, 2017

To Whom It May Concern:

This letter confirms that as of 9/05/17, Monument Partners LLC has at Key Bank, N.A., the funds to cover the estimated project cost listed in the site plan for 25 Monument Street.

Melissa Rodrigue

Melissa Rodrigue, Vice President
Relationship Manager
Key Private Bank
One Canal Plaza
Portland, ME 04101
207-874-7054
Melissa_Rodrigue@keybank.com

Key Private Bank is part of KeyBank National Association (KeyBank). Bank and trust products are provided by KeyBank, Member FDIC and Equal Housing Lender. Credit products are subject to credit approval. Investment and insurance products are:

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Key Private Bank does not give legal advice.

ADL3546

DESIGN STANDARDS REVIEW
Assessment of development's consistency with applicable design standards contained in Section 14-526 and in City of Portland Design Manual for 25 Monument Street Portland.

Project
25 Monument Street
Portland

New 5 Unit Apartment Building

Zone
The site is located in an R-6 zone.

Design Standards

Principle A: Overall Context

A building design shall contribute to and be compatible with the predominant character-defining architectural features of the neighborhood.

A-1 Scale and form must relate to those found in residential building within 2 block radius…

Buildings within 2 blocks are mostly multifamily. Two and a half story wood framed apartment buildings are common. Most of the roof-scapes have been changed to accommodate more capacity. The oldest date from the early 1800s and the newest from a year or two ago. The largest building on the same block is a 12 unit 36,000 s.f. apartment building built in 2014. This building fits between the extremes and is consistent in scale and form with it's nearest neighbors.

A-2 Relate the composition of the new building façade, -rhythm, size, orientation and proportions of window and door openings - to those of its neighbors…

This building is L –shaped, with the narrowest portion of the L facing Monument Street. That portion is similar in width and height to several of the flat roofed multi-unit buildings in the two block radius. Window and door openings are larger than those in the oldest buildings but no larger than those in the newer buildings.

A-3 Relationship to the Street: Respect the rhythm, spacing and orientation of residential structures along streets w/in2 blocks…

The front L of this building will be even with the side of the building to the east of it and further back (20'+-) on the site than those facades nearby that abut the sidewalk. A wide stoop with wide steps face the street and a landscaped zone abuts the sidewalk. The intent is to create a stoop with steps wide enough to sit on comfortably. A transparent metal fence set back from the steps will delineate the more private zone from the public zone. Both zones will be visible and landscaped.

Principle B: Massing

B-1 Massing should be harmonious with the massing of existing buildings…

This building's L-shape breaks the massing down into two parts. Set backs in the enclosed portion of the building to accommodate balconies and set-backs on the third floor to suite the zoning ordinance further break down the massing scale. Its mass is consistent with other multi-unit buildings nearby and much smaller than the 12 unit building previously mentioned on the same block.

B-3 Roof Forms shall refer to the architectural forms found w/in 2 blocks…

This building's roofs are flat except where the massing steps back on the third floor. 14 of the buildings with a 2-block radius have flat roofs.

B-4 Gable roofs…

B-4 is not applicable to this building.

B-5 Façade Articulation: Provide variety in the massing by incorporating two or more of the following…

2. Balconies
3. Recessed entries
4. Covered porches
5. Bay windows

All are incorporated in this building.

B-6 Garages, if integrated into the building form, must have a door no larger than 40% of the building's overall width.

This building's garage is 12 wide, which is 24% of the Monument St. façade width.

Principle C: Orientation to the Street

C-1 Emphasize and orient the main entrance to the street…

As described above, the main entrance faces the street. A wide granite stepped stoop with porch roof above invites occupants to pass out candy on Halloween night.

C-2 Visual privacy of occupants…

Is assured, as the apartments start on the second floor level.

C-3 Transition spaces…

Have been described above.

Principle D: Proportion and Scale

D-1 The majority of windows shall be rectangular and vertically proportioned…

Windows in this building are rectangular. Wide picture windows with transom lights are used in the public spaces where we want view and light; smaller casement windows without transom lights are used in bathrooms and bedrooms. None of the windows are double hung, as found in the older buildings of the neighborhood. The wider windows in this building serve a purpose, both to gain light and view and to represent the technology of the 21st century. Efforts have been made to arrange these windows in a pleasing rhythm on the façade.

D-2 Fenestration… shall be at least 12% of the total façade area…

Windows in the street façade of this building make up 17% of the front façade.

D-3 Porches shall extend horizontally for 20% of the front façade…

The stoop of this building is 6' wide (12%) of the street façade and 50' deep. A wider porch, or an entrance door on the street façade are impossible to accomplish on this building due to the need for a first floor parking level and an entry/stair/elevator core that serves units from the center of the building.

Principle E: Balance

E-1 Window and door heights must align…

Door headers are 6'8" throughout this building. Window headers are 6' 8" or one transom window size higher than 6' 8", so that window frames align horizontally.

E-2 The majority of windows shall align vertically…

Wherever possible, this has been done.

E-3 Symmetricality: primary windows shall be symmetrically aligned around building's centerline.

This building's composition is intended to be balanced but not symmetrical.

Principle F Articulation

F-1 Triim, reveals, etc, shall be consistent to the style of the building…

Trim is consistent and fairly minimal on this building. It is not intended to be historical, but of its time.

F-2 Window types

See above.

F-3 Visual cohesion

Brick and granite sheath the first floor; lapped horizontal siding the second and third floor; lapped vertical siding the top floor. The building is designed to appear lighter as it goes up.

F-4 Delineation between floors…

Is provided by consistent trim on the balconies and change in siding orientation on the top floor.

F-5 Porches, railings etc. …shall be integrated into the overall composition…

Railings in this building will be made of steel shapes set in panels between posts at consistent intervals. The shapes may be welded mesh or die cut panels or bars in a pattern. They will be consistent throughout the building.

F-6 Maine Entries…

See above.

F-8 Articulation

1. Eaves and rakes shall have min. projection of 6". This building has 2' cornices.
2. Façade trim shall be 4" min. Windows on this building have no trim. Porch trim is wider than 4".
3. There are no offsets.
4.

Principle G: Materials

G-1 Materials shall be harmonious with surrounding buildings…

This building has brick base and lapped siding on the upper levels, (similar to surrounding buildings.)

G-2 Materials shall be true to their nature

If thin brick is used, it will not in any location show as thin.

G-3 Chimnies

Do not exist in this building

G-4 Window types

See above.

G-5 Patios and Plazas

Not applicable.

WHIPPLE | CALLENDER ARCHITECTS

Neighborhood Meeting Minutes
Development of 25 Monument Street, Portland

Wednesday, November 1, 2017 at 6 pm, East End Community Center

Attending:
Anne Callender, Whipple-Callender Architects, Portland
Craig Cooper, Rainbow Builders, Cape Elizabeth
Jeff Kane, property owner, Falmouth
Jennifer Morrow, 21 Quebec St #1, Portland
Larry Gross, 93 St. Lawrence St, Portland
Cindie Greaton, 95 Atlantic St #2, Portland
Coral McCracken, 645 Congress St, Portland
Jay Norris, 172 Eastern Promenade, Portland
Karen Snyder, 72 Waterville St, Portland
Gary (illegible), 14 Monument St, Portland
Jacob Halpert, 74 Atlantic St, Portland
Stacy Mitchell, 74 Atlantic St, Portland
Donalee Santoro, 72 Munjoy St #4, Portland
George Fennell 130 Eastern Promenade #3, Portland
John Whitaker, 104 Congress St, Portland
Maggy Wolf, 27 St. Lawrence St, Portland
Jayne Hurley, 11 St. Lawrence St, Portland
Will Williams, 24 St. Lawrence St, Portland
Pamela Day, 25 Waterville St, Portland
George Rheault, 28 Hanover St, Portland
Tica Douglas, 11 Munjoy St, Portland
Barbara Beckelman, 118 Congress St, Portland
Susan Koen, 118 Congress St, Portland
two people declined to sign in

6-6:15 – informal viewing of elevation and plans

6:15 – Jeff Kane introduces himself and speaks of he and his wife's long connection to Maine and their desire to be good neighbors. The building, as designed by Whipple-Callender Architects, is fully compliant with city regulations without any variances. It will include five units including one that the Kanes will live in, two on each of the first two floors and owner unit on the top floor.

Anne Callender explained that the building will be well within the setbacks, slightly shorter than the allowable height, contextually appropriate with bays, porches, divided windows, gardens, renovated brick sidewalks, brick lower level and wood siding above. Besides the architectural features, the mass will be broken up with variation in textures and color. Lot coverage will be approximately 56% below the 60% allowed, with 40% gardens above the 20% required. Eight off-street parking places will be provided for residents in the lower level along with storage.

PO Box 1276 Portland Maine 04104 207-775-2696 Fax 207-775-3631

Questions/concerns from the audience included:

What is the timetable? A spring start is desired but depends on permitting.

Will the gardens be for neighborhood use? No but will be shared by all the residents.

Several questions about the preservation of trees on the site. Audience members desire the maximum preservation of the green canopy. Several trees will need to be removed to make way for the construction activity. The property owner is planning to limb up and preserve three trees along back border and will plant several new trees.

There is a request for the property owner to consider workforce/affordable housing. Although the cost of the units is not yet determined, it is expected that with the cost of purchasing and preparing the property and building costs of approximately $300/sq ft that the units will not be not be appropriate for workforce housing.

Craig Cooper noted that Jeff Kane was not a developer and he was constructing this building for his own residence and enjoyment.

A question about whether the building could be sunk by 5' to reduce the overall height was addressed by the builder and architect. It cannot be given the height of the street and drainage concerns. The architect and builder expect to tie into city storm sewers so not extra water will impact the area.

The mass of the building in the context of the neighborhood is a concern for many. Architectural renderings will be revised to more accurately portray the scale of the surrounding buildings. Examples of buildings of similar mass exist within the neighborhood will be documented.

The removal rather than the restoration or renovation of a historic home is also a concern. The home is not original to the site but was moved there from elsewhere in Portland. The builder speaks to the unsafe condition of the home and foundation and his opinion that it is not a good candidate for restoration or renovation. It was not up to code and sided with asbestos shingles. The previous inefficient and run-down three units will be replaced with five tight, energy-efficient units.

The preference for building on empty lots is expressed by an audience member.

Preserving historical buildings and recent zoning changes are wider issues that may be addressed at the district meeting.

Several audience members welcomed us to the neighborhood and expressed their support of the project as they were leaving the meeting.

The meeting ends at 7:05 pm.


COLOR YOUR PLATE


COLOR
YOUR
PLATE

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

December 4, 2017

David Latham
Casco Bay Engineering
424 Fore Street #3A
Portland, ME 04101

Re: 25 Monument Street, PO
Ability to Serve with PWD Water

Dear Mr. Latham:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on November 17, 2017. Based on the information provided per plans dated December 5, 2017, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service and 2-inch domestic service may be installed from the water main in Monument Street. The service should enter through the properties frontage on Monument Street at least 10-feet from any side property lines.

- The existing property is currently served with a 1.5-inch copper domestic water service and must be terminated as part of the project by shutting the corporation valve and cutting the pipe from the water main.

- 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.

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

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

Existing Site Service

According to District records, the project site does currently have existing water service. A 1.5-inch diameter copper domestic service line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 6-inch diameter cast iron water main in Monument Street and a public fire hydrant located approximately 100 feet from the site. The most recent static pressure reading was 54 psi on March 16, 2017.

Public Fire Protection

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

Domestic Water Needs

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

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

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

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

M-SERIES

SUBMITTAL DATA: MXZ-3C30NAHZ2

MULTI-INDOOR INVERTER HEAT-PUMP SYSTEM

MITSUBISHI ELECTRIC

Job Name:	
System Reference:	Date:



Outdoor Unit: MXZ-3C30NAHZ2

25 Monument Street
Typical Mechanical Roof
Top Unit

ACCESSORIES

- ☐ 3/8" x 1/2" Port Adapter (MAC-A454JP-E)
- ☐ 1/2" x 3/8" Port Adapter (MAC-A455JP-E)
- ☐ 1/2" x 5/8" Port Adapter (MAC-A456JP-E)
- ☐ 1/4" x 3/8" Port Adapter (PAC-493PI)
- ☐ 3/8" x 5/8" Port Adapter (PAC-SG76RJ-E)
- ☐ M-NET Adapter (PAC-IF01MNT-E)
- ☐ Airflow Guide (PAC-SH96SG-E)

(For data on specific indoor units, see the MXZ-C Technical and Service Manual.)

Specifications			Model Name
Unit Type			MXZ-3C30NAHZ2
Cooling* (Non-ducted / Ducted)	Rated Capacity	Btu/h	28,400 / 27,400
	Capacity Range	Btu/h	6,000 - 28,400
	Rated Total Input	W	2,272 / 2,661
Heating at 47°F* (Non-ducted / Ducted)	Rated Capacity	Btu/h	28,600 / 27,600
	Capacity Range	Btu/h	7,200 - 36,000
	Rated Total Input	W	2,096 / 2,187
Heating at 17°F* (Non-ducted/Ducted)	Rated Capacity	Btu/h	18,000 / 16,500
	Maximum Capacity	Btu/h	28,600 / 27, 600
	Rated Total Input	W	1,991 / 1,993
Heating at 5°F*	Maximum Capacity	Btu/h	28,600
Energy Star® (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)			Yes
Electrical Requirements	Power Supply	Voltage, Phase, Hertz	208 / 230V, 1-Phase, 60 Hz
	Recommended Fuse/Breaker Size	A	40
	MCA	A	30.5
Voltage	Indoor - Outdoor S1-S2	V	AC 208 / 230
	Indoor - Outdoor S2-S3	V	DC ±24
Compressor			DC INVERTER-driven Twin Rotary
Fan Motor (ECM)		F.L.A.	2.43
Sound Pressure Level	Cooling	dB(A)	54
	Heating		58
External Dimensions (H x W x D)		In / mm	41-9/32 x 37-13/32 x 13 1048 x 950 x 330
Net Weight		Lbs / kg	189 / 86
External Finish			Munsell No. 3Y 7.8/11
Refrigerant Pipe Size O.D. — Eight Ports	Liquid (High Pressure)	In / mm	1/4 / 6.35
	Gas (Low Pressure)		A:1/2 / 12.7 ; B,C: 3/8 / 9.52
Max. Refrigerant Line Length		Ft / m	230 / 70
Max. Piping Length for Each Indoor Unit		Ft / m	82 / 25
Max. Refrigerant Pipe Height Difference	If IDU is Above ODU	Ft / m	49 / 15
	If IDU is Below ODU		49 / 15
Connection Method			Flared/Flared
Refrigerant			R410A

*** Rating Conditions per AHRI Standard:**

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
Cooling | Outdoor: 95° F (35° C) DB / W.B. 23.9° C (75° F)

Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

Heating at 17° F | Indoor: 70° F (21° C) DB
Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

Specifications are subject to change without notice.

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SPECIFICATIONS: MXZ-3C30NAHZ2, contd.

OPERATING RANGE:

	Outdoor
Cooling	D.B. 14 to 115° F [D.B. −10 to 46° C]*1
Heating	W.B. -13 to 65° F [W.B. −25 to 18° C]

*1. D.B. 5 to 115° F [D.B. −15 to 46° C], when an optional Air Outlet Guide is installed.

ENERGY EFFICIENCIES:

Indoor Unit Type	SEER	EER	HSPF	COP @ 47°F	COP @ 17°F
Non-ducted (06 + 06 + 09)	18.0	12.5	11.0	4.00	2.65
Ducted and Non-ducted	17.00	11.40	10.40	3.85	2.58
Ducted (09 + 09 + 09)	16.0	10.3	9.8	3.70	2.50

NOTES:

- Minimum of two Indoor Units must be connected to the MXZ-3C30NAHZ2.
- Minimum installed capacity cannot be less than 12,000 Btu/h.
- Total connected capacity must not exceed 130% of outdoor unit capacity.
- System can operate with only one Indoor Unit turned on.
- Information provided at 208/230V.
- For Reference:
  - MXZ-C Technical & Service Manual for detailed specifications and additional information per Indoor Unit Combination.
  - MXZ Series Multi-Zone Indoor/Outdoor Combination Table for allowed unit combinations.

MVZ CONNECTION RULES:

- Only 1 MVZ may be used on any system.
- When an MVZ is connected, total connected capacity must be 100% or less.
- When an MVZ is connected, no P-Series indoor units can be used (PCA, PLA, or PEAD).

Notes:

Specifications are subject to change without notice.

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MXZ-3C30NAHZ2 OPERATIONAL PERFORMANCE

NON-DUCTED:

# of indoor unit	Total Nominal Capacity (x1000 Btu/h)	Total Indoor Unit Capacity (Btu/h)	Operational Performance for Indoor Unit Combinations (Unit A + Unit B + Unit C)	Cooling Capacity Range (Btu/h) Heating Capacity Range (Btu/h)		
				Unit A	Unit B	Unit C
1	6	6,000 7,400	6	6,000 7,400	-	-
1	9	9,000 11,000	9	9,000 11,000	-	-
1	12	12,000 14,400	12	12,000 14,400	-	-
1	15	14,000 18,000	15	14,000 18,000	-	-
1	18	17,200 21,600	18	17,200 21,600	-	-
1	24	22,500 22,600	24	22,500 22,600	-	-
2	12	12,000 14,800	6 + 6	6,000 7,400	6,000 7,400	-
2	15	15,000 18,400	6 + 9	6,000 7,400	9,000 11,000	-
2	18	18,000 22,000	6 + 12	6,000 7,500	12,000 14,500	-
2	21	20,000 22,000	6 + 15	6,000 6,400	14,000 15,600	-
2	24	23,000 23,000	6 + 18	5,900 5,900	17,100 17,100	-
2	30	24,000 24,000	6 + 24	5,100 5,900	18,900 18,100	-
2	18	18,000 22,000	9 + 9	9,000 11,000	9,000 11,000	-
2	21	20,000 22,000	9 + 12	8,600 9,500	11,400 12,500	-
2	24	23,000 23,000	9 + 15	9,000 8,700	14,000 14,300	-
2	27	24,000 24,000	9 + 18	8,200 8,100	15,800 15,900	-
2	33	24,000 24,000	9 + 24	6,900 7,900	17,100 16,100	-
2	24	23,000 23,000	12 + 12	11,500 11,500	11,500 11,500	-
2	27	24,000 24,000	12 + 15	11,100 10,700	12,900 13,300	-
2	30	24,000 24,000	12 + 18	9,900 9,600	14,100 14,400	-
2	36	24,000 24,000	12 + 24	8,300 9,300	15,700 14,700	-
2	30	24,000 24,000	15 + 15	12,000 12,000	12,000 12,000	-
2	33	24,000 24,000	15 + 18	10,800 10,900	13,200 13,100	-
2	36	24,000 24,000	18 + 18	12,000 12,000	12,000 12,000	-
3	18	18,000 22,000	6 + 6 + 6	6,000 7,300	6,000 7,300	6,000 7,300
3	21	21,000 25,800	6 + 6 + 9	6,000 7,400	6,000 7,400	9,000 11,000
3	24	24,000 28,400	6 + 6 + 12	6,000 7,200	6,000 7,200	12,000 14,000
3	27	26,000 28,400	6 + 6 + 15	6,000 6,400	6,000 6,400	14,000 15,600
3	30	28,400 28,600	6 + 6 + 18	5,800 5,800	5,800 5,800	16,700 17,000
3	36	28,400 28,600	6 + 6 + 24	4,900 5,700	4,900 5,700	18,500 17,300

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MXZ-3C30NAHZ2 OPERATIONAL PERFORMANCE, contd.

NON-DUCTED:

# of indoor unit	Total Nominal Capacity (x1000 Btu/h)	Total Indoor Unit Capacity (Btu/h)	Operational Performance for Indoor Unit Combinations (Unit A + Unit B + Unit C)	Cooling Capacity Range (Btu/h) Heating Capacity Range (Btu/h)		
				Unit A	Unit B	Unit C
3	24	24,000 28,400	6 + 9 + 9	6,000 7,100	9,000 10,600	9,000 10,600
3	27	28,400 28,400	6 + 9 + 12	6,300 6,400	9,500 9,500	12,600 12,500
3	30	28,400 28,600	6 + 9 + 15	5,900 5,800	8,800 8,600	13,700 14,100
3	33	28,400 28,600	6 + 9 + 18	5,300 5,300	7,900 7,900	15,200 15,400
3	30	28,400 28,600	6 + 12 + 12	5,700 5,800	11,400 11,400	11,400 11,400
3	33	28,400 28,600	6 + 12 + 15	5,300 5,300	10,700 10,300	12,400 12,900
3	36	28,400 28,600	6 + 12 + 18	4,800 4,900	9,700 9,500	13,900 14,200
3	36	28,400 28,600	6 + 15 + 15	5,000 4,900	11,700 11,900	11,700 11,900
3	27	28,400 28,400	9 + 9 + 9	9,500 9,500	9,500 9,500	9,500 9,500
3	30	28,400 28,600	9 + 9 + 12	8,500 8,600	8,500 8,600	11,400 11,300
3	33	28,400 28,600	9 + 9 + 15	8,000 7,900	8,000 7,900	12,400 12,900
3	36	28,400 28,600	9 + 9 + 18	7,300 7,200	7,300 7,200	13,900 14,200
3	33	28,400 28,600	9 + 12 + 12	7,700 7,900	10,300 10,300	10,300 10,300
3	36	28,400 28,600	9 + 12 + 15	7,300 7,200	9,700 9,500	11,400 11,900
3	36	28,400 28,600	12 + 12 + 12	9,500 9,500	9,500 9,500	9,500 9,500

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MXZ-3C30NAHZ2 OPERATIONAL PERFORMANCE, contd.

DUCTED:

# of indoor unit	Total Nominal Capacity (x1000 Btu/h)	Total Indoor Unit Capacity (Btu/h)	Operational Performance for Indoor Unit Combinations (Unit A + Unit B + Unit C)	Cooling Capacity Range (Btu/h) Heating Capacity Range (Btu/h)		
				Unit A	Unit B	Unit C
1	9	9,000 10,900	9	9,000 10,900	-	-
1	12	12,000 13,600	12	12,000 13,600	-	-
1	15	15,000 18,000	15	15,000 18,000	-	-
1	18	17,200 21,600	18	17,200 21,600	-	-
1	24	22,600 24,000	24	22,600 24,000	-	-
2	18	18,000 21,800	9 + 9	9,000 10,900	9,000 10,900	-
2	21	21,000 22,800	9 + 12	9,000 10,100	12,000 12,700	-
2	24	24,000 24,000	9 + 15	9,000 9,100	15,000 14,900	-
2	27	24,000 24,000	9 + 18	8,200 8,000	15,800 16,000	-
2	33	24,000 24,000	9 + 24	6,800 7,500	17,200 16,500	-
2	24	24,000 24,000	12 + 12	12,000 12,000	12,000 12,000	-
2	27	24,000 24,000	12 + 15	10,700 10,300	13,300 13,700	-
2	30	24,000 24,000	12 + 18	9,900 9,300	14,100 14,700	-
2	36	24,000 24,000	12 + 24	8,300 8,700	15,700 15,300	-
2	30	24,000 24,000	15 + 15	12,000 12,000	12,000 12,000	-
2	33	24,000 24,000	15 + 18	11,200 10,900	12,800 13,100	-
2	36	24,000 24,000	18 + 18	12,000 12,000	12,000 12,000	-
3	27	27,000 27,400	9 + 9 + 9	9,000 9,100	9,000 9,100	9,000 9,100
3	30	27,400 27,600	9 + 9 + 12	8,200 8,500	8,200 8,500	11,000 10,600
3	33	27,400 27,600	9 + 9 + 15	7,500 7,600	7,500 7,600	12,500 12,500
3	33	27,400 27,600	9 + 12 + 12	7,500 7,900	10,000 9,900	10,000 9,900
3	36	27,400 27,600	12 + 12 + 12	9,100 9,200	9,100 9,200	9,100 9,200
3	36	27,400 27,600	9 + 9 + 18	7,000 6,900	7,000 6,900	13,400 13,700
3	36	27,400 27,600	9 + 12 + 15	6,900 7,100	9,100 8,800	11,400 11,700

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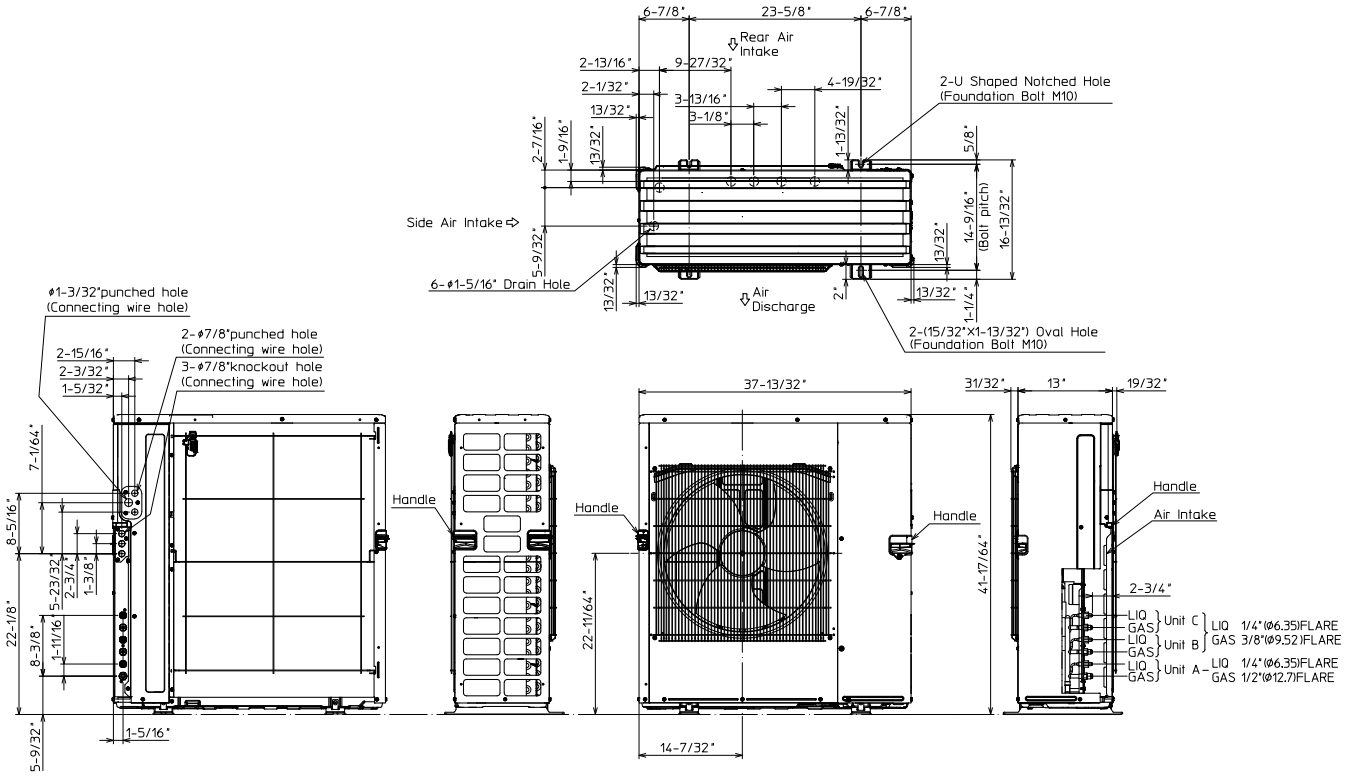
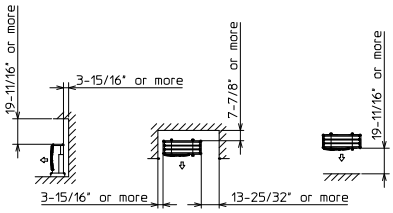
DIMENSIONS: MXZ-3C30NAHZ2

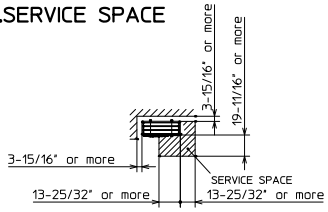
Unit: inch (mm)

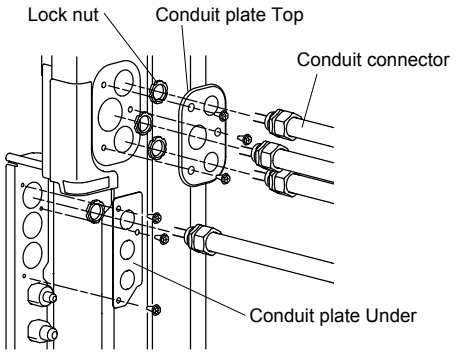


1.FREE SPACE



2.SERVICE SPACE





MITSUBISHI ELECTRIC
COOLING & HEATING

1340 Satellite Boulevard. Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

FORM# MXZ-3C30NAHZ2 for Multiple Indoor Unit Styles - 201611

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MITSUBISHI ELECTRIC
COOLING & HEATING

P-SERIES

SUBMITTAL DATA: PKA-A12HA4 & PUY-A12NHA4 (-BS)

12,000 BTU/H WALL-MOUNTED AIR-CONDITIONING SYSTEM

Job Name:	Location:	Date: 10/10/2017
Purchaser:	Engineer:	
Submitted to:	For ☐Reference ☐Approval ☐Construction	
System Designation:	Schedule No.:	



Indoor Unit: PKA-A12HA4



Outdoor Unit: PUY-A12NHA4 (-BS)

25 Monument Street
Elevator Mechanical
Roof Top Unit

GENERAL FEATURES

- Wall-mounted indoor unit for residential and commercial applications
- Shiny-white–exterior plastic; compact design
- Quiet operation—both indoor and outdoor units
- Self-check function—integrated diagnostics
- Limited warranty: five years parts and seven years compressors

UNIT OPTION

☐ Standard Model……..PUY-A12NHA4
☐ Sea Coast (BS) Model……..PUY-A12NHA4-BS

ACCESSORIES

Indoor Unit

☐ Mini Condensate Pump (SI3100-230, 230V)
☐ L-Connector Pipe (PAC-SC84PI; for left side unit piping installation)

Outdoor Unit

☐ Drain Pan (PAC-SG63DP)
☐ Drain Socket (PAC-SG61DS)
☐ Three-pole Disconnect Switch (TAZ-MS303)
☐ Wind Baffle (WB-PA1)
☐ Air Outlet Guide (PAC-SG58SG)
☐ Mounting Base (DSD-400N)
☐ Mounting Pad (ULTRILITE1)
☐ Wall-mounting Brackets (CWMB1)

Controller Options

☐ Wireless Wall-mounted Remote Controller Kit (MHK1)**
☐ Portable Central Controller (MCCH1)**
☐ Outdoor Air Sensor (MOS1)**
☐ Wired Wall-mounted Controller (PAR-31MAA)**
☐ Simple MA Remote Controller (PAC-YT53CRAU)**

**See Submittal for information on each option.

☐ M-NET Adapter (PAC-SF81MA)
☐ CN51 Connector for Multiple Remote Controller Adapters/Duct Fan Controller (PAC-725AD)
☐ CN32 Connector for Remote On/Off (PAC-715AD)
☐ Remote Temperature Sensor (PAC-SE41TS)
☐ Remote Operation Adapter - Display and On/Off (PAC-SF40RM)
☐ Hand-held Wireless Remote Controller (PAR-FL32MA; req. PAR-FA32MA-E)
☐ Wireless Signal Receiver Module (PAR-FA32MA-E)
☐ Lockdown Bracket for Hand-held Controller (RCMKP1CB)
☐ Control/Service Tool (PAC-SK52ST)

R410A INVERTER

SEACOAST PROTECTION

- External Outer Panel: Phosphate coating + Acrylic-Enamel coating
- Fan Motor Support: Epoxy resin coating (at edge face)
- Separator Assembly ; Valve Bed: Epoxy resin coating (at edge face)
- Screws (used outer side): Zinc nickel coating 5μm + Polyvinylidene chloride coating

"Blue Fin" treatment is an anti-corrosion treatment that is applied to the condenser coil to protect it against airborne contaminants..

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SPECIFICATIONS: PKA-A12HA4 & PUY-A12NHA4 (-BS)

Cooling*
Rated Capacity . . . . . 12,000 Btu/h
Minimum Capacity . . . . . 6,000 Btu/h
SEER . . . . . 15.2 Btu/h/W
EER . . . . . 10.1 Btu/h/W
Total Input . . . . . 1,190 W

*** Rating Conditions per AHRI Standard**
Cooling | Indoor: 80º F (27º C) DB / 67º F (19º C) WB
Cooling | Outdoor: 95º F (35º C) DB / 75º F (24º C) WB

Electrical Requirements
Power Supply . . . . . 208 / 230V, 1-Phase, 60 Hz
Recommended Fuse/Breaker Size . . . . . 15 A

Voltage
Indoor - Outdoor S1-S2 . . . . . AC 208 / 230V
Indoor - Outdoor S2-S3 . . . . . DC ±24V

OPERATING CONDITIONS

		Indoor Intake Air Temp.	Outdoor Intake Air Temp.
Cooling	Maximum	95º F (35º C) DB 71º F (22º C) WB	115º F (46º C) DB
	Minimum	67º F (19º C) DB 57º F (14º C) WB	0º F** (-18º C) DB

** With optional wind baffle accessory installed. If not installed, the minimum temperature will be 23º F (-5º C) DB.

Indoor Unit
MCA . . . . . 1 A
Blower Motor (ECM) . . . . . 0.33 F.L.A.
Blower Motor Output . . . . . 30 W
Airflow (Lo - Mid - Hi) . . . . . 320 - 370 - 425 Dry CFM
290 - 335 - 380 Wet CFM
Air Filter . . . . . Polypropylene Honeycomb
Sound Pressure Level (Lo - Mid - Hi) . . . . . 36 - 40 - 43 dB(A)
SHF 0.81
Moisture Removal . . . . . 2.0 pt./h

DIMENSIONS	UNIT INCHES / MM
W	35-3/8 / 898
D	9-13/16 / 249
H	11-5/8 / 295

Weight . . . . . 29 lbs. / 13 kg
External Finish . . . . . Munsell No. 1.0Y 9.2 / 0.2
Field Drainpipe Size O.D. . . . . 5/8" / 16 mm

Outdoor Unit
Compressor . . . . . DC Inverter-driven Twin Rotary
MCA . . . . . 13 A
MOCP . . . . . 15 A
Fan Motor (ECM) . . . . . 0.35 F.L.A.
Sound Pressure Level
Cooling . . . . . 46 dB(A)

DIMENSIONS	INCHES / MM
W	31-1/2 / 800
D	11-13/16 + 7/8 / 300 + 23
H	23-5/8 / 600

Weight . . . . . 82 lbs. / 37 kg
External Finish . . . . . Munsell No. 3Y 7.8 / 1.1
Refrigerant Type R410A
Refrigerant Pipe Size O.D.
Gas Side . . . . . 1/2" / 12.7 mm
Liquid Side . . . . . 1/4" / 6.35 mm
Max. Refrigerant Pipe Length . . . . . 100' / 30 m
Max. Refrigerant Pipe Height Difference . . . . . 100' / 30 m
Connection Method . . . . . Flared

Notes:

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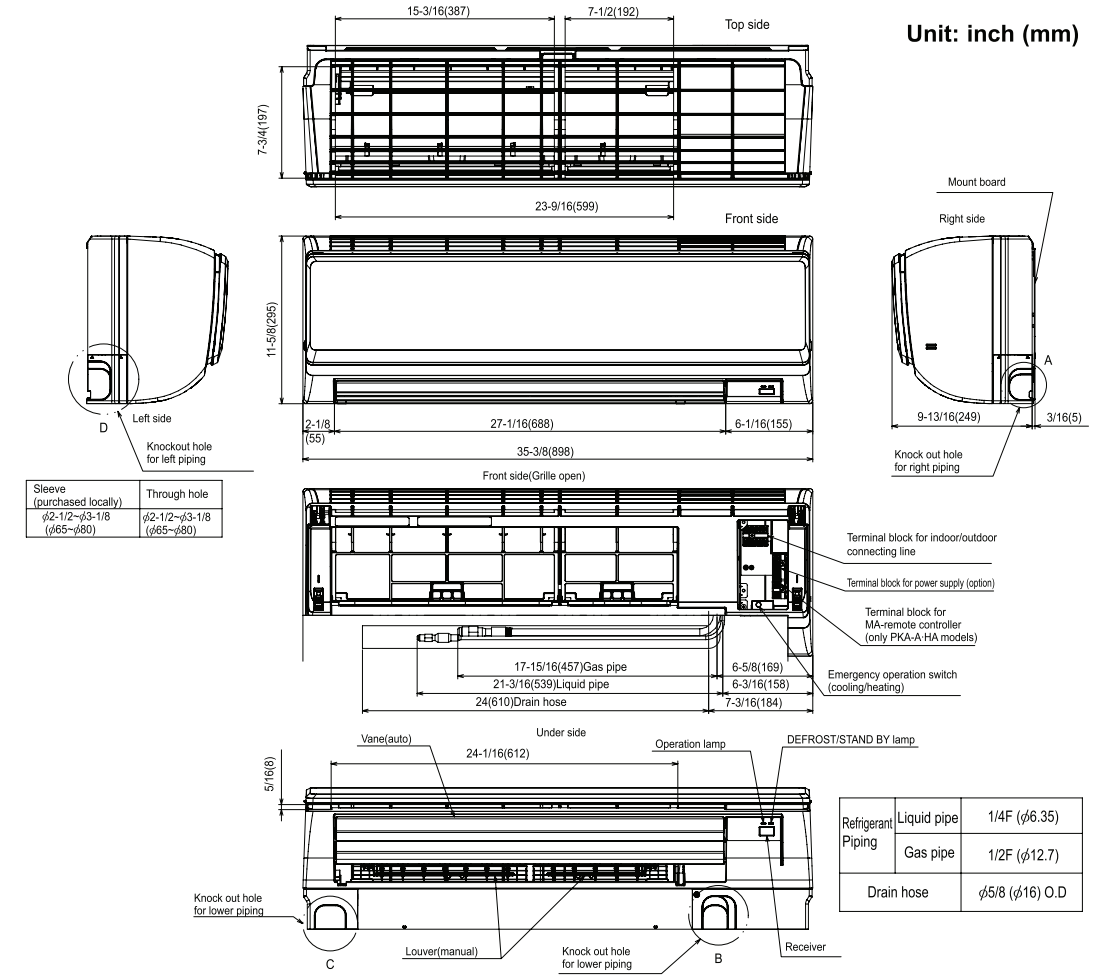
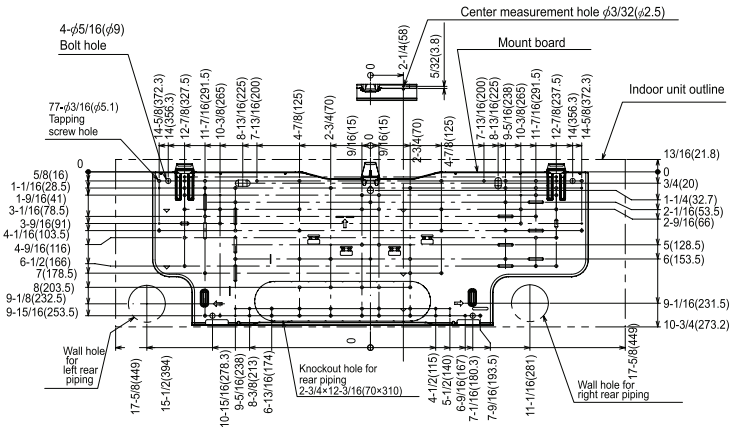
DIMENSIONS: PKA-A12HA4

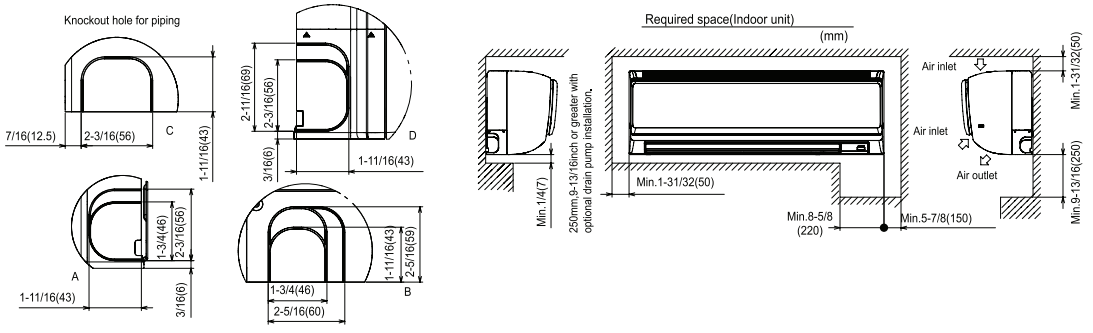
Unit: inch (mm)



Sleeve (purchased locally)	Through hole
ϕ2-1/2~ϕ3-1/8 (ϕ65~ϕ80)	ϕ2-1/2~ϕ3-1/8 (ϕ65~ϕ80)

Refrigerant Piping	Liquid pipe	1/4F (ϕ6.35)
	Gas pipe	1/2F (ϕ12.7)
Drain hose		ϕ5/8 (ϕ16) O.D





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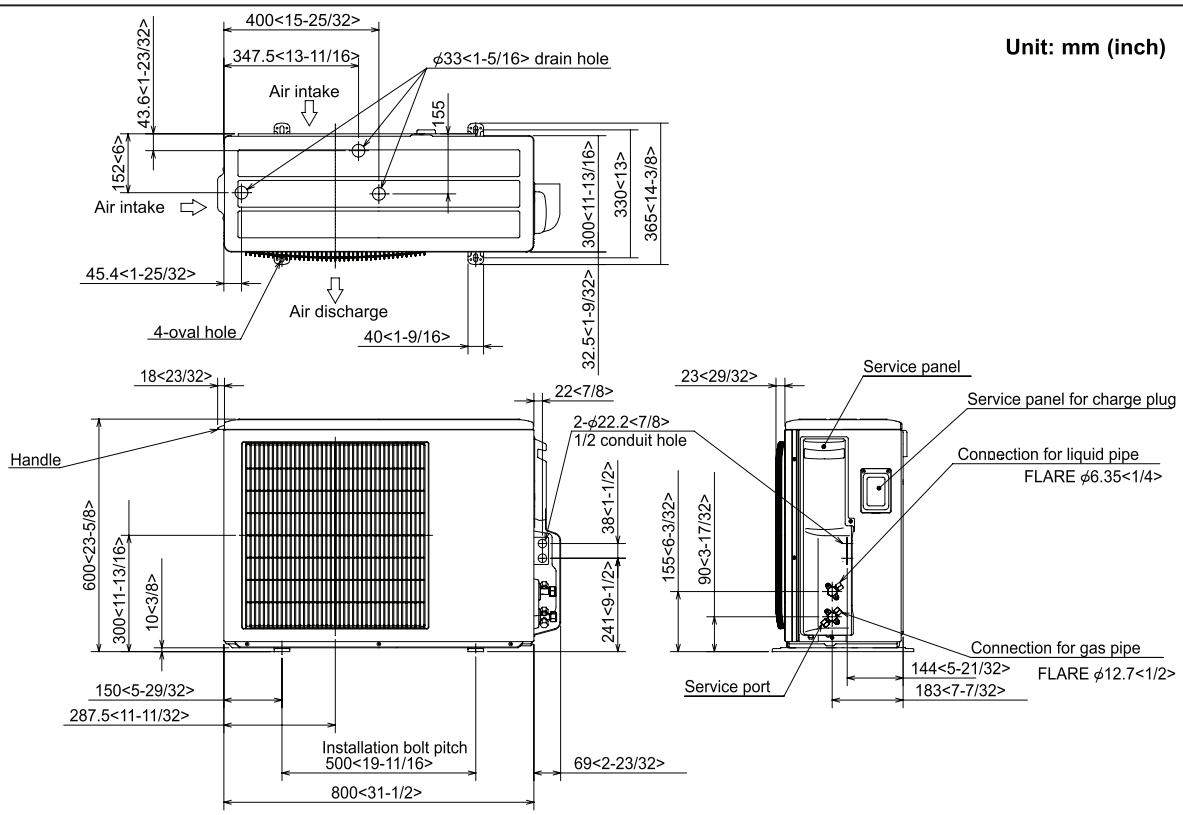
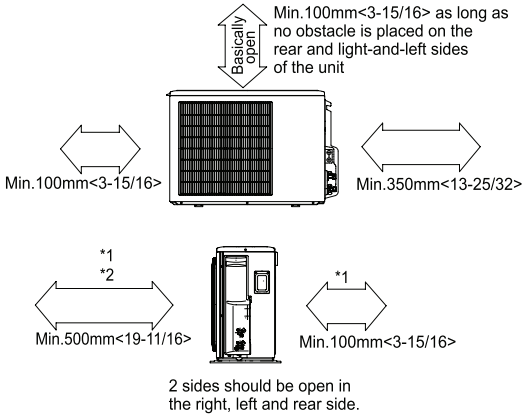
DIMENSIONS: PUY-A12NHA4 (-BS)

Unit: mm (inch)

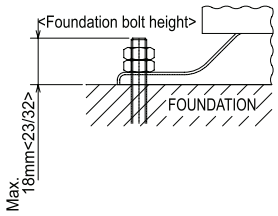


Clearance space around the outdoor unit



FOUNDATION BOLTS

Please secure the unit firmly with 4 foundation M10<W3/8> bolts. (Bolts, washers and nut must be purchased locally.)



PIPING-WIRING DIRECTION

Piping and wiring connection can be made from the rear direction only.

Minimum installation space for outdoor unit

*1 In the place where short cycle tends to occur, cooling and heating capacity and power consumption might get lowered 10%. Air outlet guide (optional) will help them improve.

*2 If air discharges to the wall, the surface might get stained.

FORM# PKA-A12HA4 - PUY-A12NHA4 (-BS) - 201311

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Suwanee, GA 30024
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Toll Free: 800-433-4822
www.mehvac.com

HVAC Emissions

The new building located at 25 Monument Street will include heat pumps which are emissions free, 100% electric. Supplementary heat in the units will also be electric.

The garage, located on the first floor, will have a couple of gas fired unit heaters manufactured by Reznor which meet the ANSI emissions standard for gas fired unit heaters. This standard requires carbon monoxide (CO) emissions to be below 400 ppm.

REZNOR®

Separated Combustion, Low Static Commercial/Industrial Unit Heaters

Model UDAS



Sizes 30-125 carry an additional approval for use in residential garage/workshops under CSA International Requirement 10.96 - U.S. and CR96-0005 - Canada

25 Monument St
Gas fired Unit Heater
for Garage/First floor

CSA 2.6b

ANSI Z83.8b

DESCRIPTION

Reznor® V3 Series Model UDAS gas-fired separated combustion unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. All sizes are approved for commercial/industrial installations. Sizes 30-125 carry an additional approval for use in attached residential garage/workshop application. Model UDAS heaters are designed for 82-83% thermal efficiency and are approved for installation in the United States and Canada by the Canadian Standards Association (CSA).

Reznor® V3 Series unit heaters have a refreshing new appearance with a glossy white cabinet finish and less visible hardware. Each size cabinet is easily suspended from either 2 or 4 suspension points. Or, an optional hanger kit for Sizes 30-125 allows for ceiling mounting. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a "G" terminal to the low voltage strip, along with the new design of the circuit board, allows for fan only operation (without adding relays). All units have a factory installed gas line nipple to the exterior of the cabinet for easy gas service connection.

The preeminent new internal feature is the TCORE² ® heat exchanger and single burner combustion system. Other standard features include a single-stage gas valve, multi-try direct spark ignition with timed lockout, pressure switch to verify vent flow, resiliently isolated venter motor, venter wheel with improved housing, resiliently isolated axial fan and motor assembly, a high temperature limit control, interlock door switch, and a built-in disconnect switch. Sizes 30-125 also include a flame rollout safety switch. Operation is controlled through an integrated circuit board. The circuit board monitors heater operation and has LED diagnostic indicator lights to identify abnormalities in control functions.

The 1ST ever separated combustion system in the commercial/industrial heating industry **was introduced on a Reznor heater** in the 1960s, and that proven technology is continued in this new separated combustion product. Model UDAS separated combustion units require installation of a specially designed combustion air/vent system including the unique concentric adapter box that allows for only one building penetration for both the vent and combustion air.

The new V3 Series unit heaters are designed to provide all the features you expect in a Reznor heater plus improved efficiency, easier installation, and a new look ***~ both inside and out.*** Look for the unique white unit with no visible front and bottom hardware, deep red louvers, black side handle, and angled corner to know you have a genuine Reznor unit by Thomas & Betts.

STANDARD FEATURES

- Sizes 30-400 certified for commercial/industrial heating application
- Sizes 30-125 carry an additional approval for use in residential garage/workshop heating applications
- 82-83% Thermal efficient ***~ TOP in its class!***
- 50-60°F Rise range
- TCORE² titanium stabilized aluminized steel heat exchanger
- Patented [A] single burner combustion system including a one-piece burner assembly
- 115/1/60 Supply voltage
- 115 Volt open fan motor with internal overload protection
- Transformer for 24-volt controls
- Integrated circuit board with diagnostic indicator lights
- Multi-try direct ignition with timed lockout
- Fan relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 9,000 ft. elevation ⊘)
- Vibration/noise isolated fan and venter motors
- Sealed control compartment houses all electrical components
- 2-pt ***and*** 4-pt Suspension ***~ standard on all sizes***
- Built-in disconnect switch (20A @ 115V Rating)
- External terminal strip for 24-volt wiring
- Sealed junction box for supply wiring
- External gas connection
- Fully gasketed door panel with safety door switch
- Full fan guard ***~ engineered for safety***
- Improved cabinet design with less visible hardware

[A] U.S. Patent No. 6,889,686.

OPTIONAL FEATURES - FACTORY INSTALLED

- Single-stage, propane gas valve (field adjustable for operation to 9,000 ft. elevation [B])
- Two-stage natural gas or propane gas valve - Sizes 60-400
- 409 or 316 Stainless steel heat exchangers
- Totally enclosed fan motor (Sizes 30-250, 115V only)

ACCESSORIES - FIELD INSTALLED

- Horizontal or Vertical Combustion Air/Vent Kit including concentric adapter [C]
- Thermostat
- Thermostat guard with locking cover
- Vertical louvers
- Downturn nozzle kits
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Ceiling suspension kit - Sizes 30-125
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves

[B] Pressure switch change required for installations above 6,000 ft.
[C] Selection of either a horizontal or vertical combustion air/vent kit is required.

TECHNICAL DATA

Model UDAS

Size		30	45	60	75	100	125	150	175	200	225	250	300	350	400
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	(kw/h)	(8.8)	(13.2)	(17.6)	(22.0)	(30.8)	(35.2)	(44.0)	(51.3)	(58.6)	(65.9)	(73.3)	(87.9)	(102.6)	(117.2)
Thermal Efficiency (%)		82	83	83	83	83	83	83	83	83	83	83	83	83	83
Output Heating Capacity [D]	BTUH	24,600	37,350	49,800	62,250	87,150	99,600	124,500	145,250	166,000	186,750	207,500	249,000	290,500	332,000
	(kw/h)	(7.2)	(10.9)	(14.6)	(18.2)	(25.5)	(29.2)	(36.5)	(42.6)	(48.7)	(54.7)	(60.8)	(73.0)	(85.1)	(97.3)
Gas Connection (inches) [E]	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection [F] (inches diameter)		4	4	4	4	4	4	5	5	5	5	5	6	6	6
Combustion Air Inlet [F] (inches diameter)		4	4	4	4	4	4	6	6	6	6	6	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full Load Amps (115 volt)		1.9	2.4	2.4	3.3	3.9	5.1	3.8	3.8	4.6	7.5	7.5	11.0	11.0	11.0
Maximum Over Current Protection (115V) [G]		15	15	15	15	15	15	15	15	15	15	15	20	20	20
Normal Power Consumption (watts)		109	155	155	217	276	354	392	392	491	747	747	1086	1086	1086
Discharge Air Temperature Rise (°F)		50	55	60	60	60	60	60	60	60	60	60	60	60	60
Air Volume	CFM	456	629	769	961	1345	1537	1921	2242	2562	2882	3202	3843	4483	5123
	(M^3/min)	(12.9)	(17.8)	(21.8)	(27.2)	(38.1)	(43.5)	(54.4)	(63.5)	(72.5)	(81.6)	(90.7)	(108.8)	(126.9)	(145.1)
Discharge Air Opening Area	ft^2	0.96	0.96	1.25	1.25	2.01	2.01	2.56	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	(M^2)	(0.09)	(0.09)	(0.12)	(0.12)	(0.19)	(0.19)	(0.24)	(0.24)	(0.24)	(0.33)	(0.33)	(0.45)	(0.45)	(0.45)
Output Velocity	FPM	475	656	616	770	668	763	752	877	1003	820	911	802	936	1069
	(M/min)	(145)	(200)	(188)	(235)	(204)	(233)	(229)	(267)	(306)	(250)	(278)	(244)	(285)	(326)
Fan Motor HP [H]	Open	0.02	0.03	0.03	0.06	1/30	1/20	1/6	1/6	1/6	1/4	1/4	1/2	1/2	1/2
	Enclosed	0.06	0.06	0.06	0.06	1/20	1/20	1/4	1/4	1/4	1/4	1/4	1/2	1/2	1/2
Fan Motor	RPM	1550	1550	1550	1550	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
Fan Diameter	inches	10	10	12	12	16	16	18	18	18	20	20	24	24	24
Sound Level	dba @ 15 ft	40	40	40	49	54	55	51	52	53	56	56	59	61	62
Approximate Net Weight	lbs	55	60	68	73	97	102	173	188	188	204	216	270	295	307
	(kg)	(25)	(27)	(31)	(33)	(44)	(46)	(78)	(85)	(85)	(93)	(98)	(122)	(134)	(139)
Approximate Ship Weight	lbs	63	68	76	81	120	125	206	221	221	247	259	323	348	360
	(kg)	(29)	(31)	(34)	(37)	(54)	(57)	(93)	(100)	(100)	(112)	(117)	(147)	(158)	(163)

[D] CSA rating for altitudes to 2000 ft.
[E] Size shown is for gas connection to a single stage gas valve, not supply line size.
[F] Smaller and/or larger vent and combustion air pipe diameters may be allowed; refer to the Venting Installation Manual for Separated Combustion Units, Form I-V-SC. If vent diameter is different from vent connection, reducer/enlargers will be field-required.
[G] MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.
[H] All other information in this table is based on a heater equipped with a standard 115 volt open fan motor.

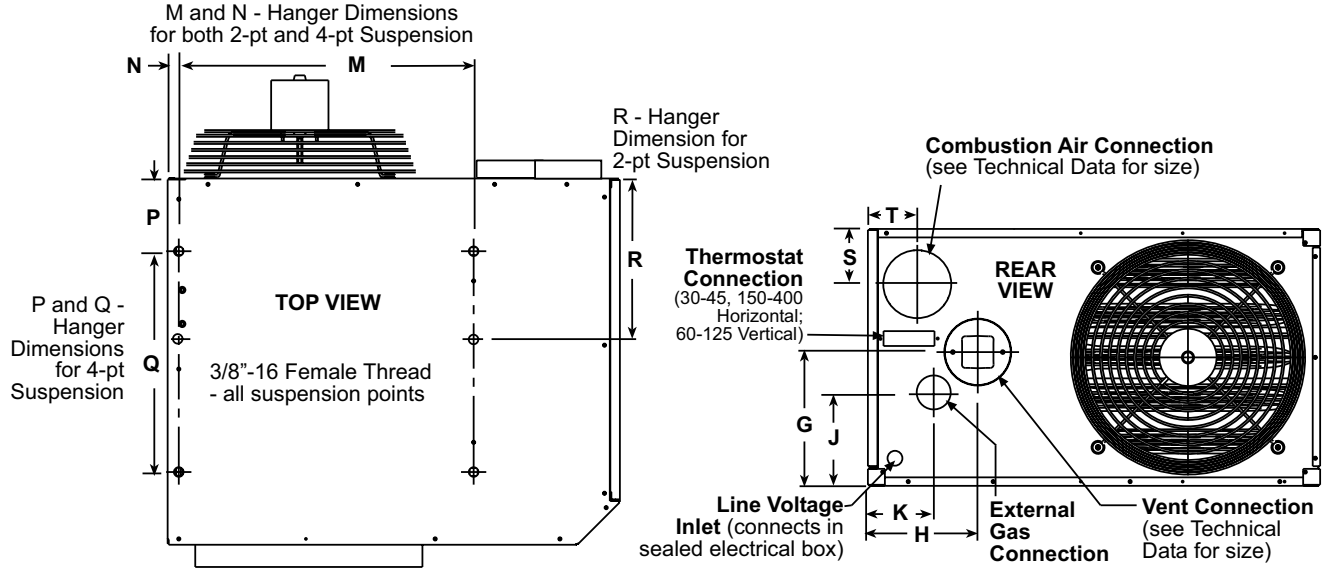
For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UDAS). These models use air from outside the space for combustion. This will help reduce the build up of contaminates on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

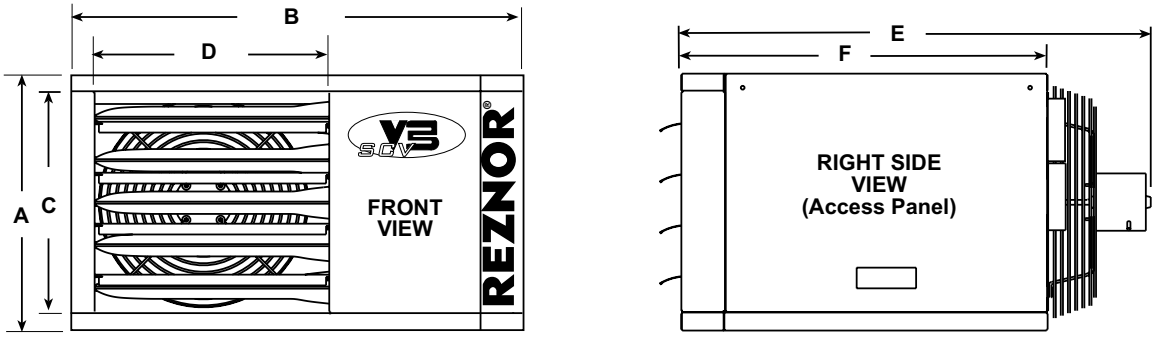
DIMENSIONS

Model UDAS ±1/16" (2mm)

Size	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T
30, 45	12 1/8	26 5/8	10	13 13/16	26	21 9/16	5 3/16	6 1/2	2 11/16	3 7/8	17 3/8	11/16	4 5/16	13	9 9/16	2 15/16	2 15/16
60	15 1/8	26 5/8	13	13 13/16	27	21 9/16	7 7/8	6 1/2	5 1/2	3 7/8	17 3/8	11/16	4 5/16	13	10 1/2	3 1/4	2 15/16
75	15 1/8	26 5/8	13	13 13/16	27 5/8	21 9/16	7 7/8	6 1/2	5 1/2	3 7/8	17 3/8	11/16	4 5/16	13	10 1/2	3 1/4	2 15/16
100	23 1/8	26 5/8	21	13 13/16	28 5/8	21 9/16	14 1/2	6 1/2	8 3/4	3 7/8	17 3/8	11/16	4 5/16	13	10 1/2	4 5/8	2 15/16
125	23 1/8	26 5/8	21	13 13/16	29 3/8	21 9/16	14 1/2	6 1/2	8 3/4	3 7/8	17 3/8	11/16	4 5/16	13	10 1/2	4 5/8	2 15/16
150, 175, 200	20 1/8	38 3/16	16	23	42	35 3/8	8 1/2	8 1/4	5 7/16	6 1/2	25 11/16	1 3/8	8 3/16	22 3/16	16 3/8	4 1/8	8 5/16
225, 250	26 1/8	38 3/16	22	23	42	35 3/8	13 1/16	8 13/16	9	6 1/2	25 11/16	1 3/8	8 3/16	22 3/16	15 5/8	5 9/16	8 5/16
300, 350, 400	34 1/8	41	30	23	42	35 3/8	17 1/16	9	11 13/16	7 5/16	27 11/16	1 3/8	8 3/16	22 3/16	16 3/16	9 1/16	8 9/16

Size	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T
30, 45	(308)	(676)	(254)	(351)	(660)	(548)	(132)	(165)	(68)	(98)	(441)	(17)	(110)	(330)	(243)	(75)	(75)
60	(384)	(676)	(330)	(351)	(686)	(548)	(200)	(165)	(140)	(98)	(441)	(17)	(110)	(330)	(267)	(83)	(75)
75	(384)	(676)	(330)	(351)	(702)	(548)	(200)	(165)	(140)	(98)	(441)	(17)	(110)	(330)	(267)	(83)	(75)
100	(587)	(676)	(533)	(351)	(727)	(548)	(368)	(165)	(222)	(98)	(441)	(17)	(110)	(330)	(267)	(117)	(75)
125	(587)	(676)	(533)	(351)	(746)	(548)	(368)	(165)	(222)	(98)	(441)	(17)	(110)	(330)	(267)	(117)	(75)
150, 175, 200	(511)	(970)	(406)	(584)	(1,067)	(899)	(216)	(210)	(138)	(165)	(652)	(35)	(208)	(564)	(416)	(105)	(211)
225, 250	(664)	(970)	(559)	(584)	(1,067)	(899)	(332)	(224)	(229)	(165)	(652)	(35)	(208)	(564)	(397)	(141)	(211)
300, 350, 400	(867)	(1,041)	(762)	(584)	(1,067)	(899)	(433)	(229)	(300)	(186)	(703)	(35)	(208)	(564)	(411)	(230)	(217)





CLEARANCE FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel [J]		Non-Access Side		Bottom [K]		Rear [L]	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	1	25	6	152	18	457	1	25	1	25	18	457
150-400	4	102	6	152	18	457	2	51	1	25	18	457

[J] Access Panel clearance is required for service clearance to controls
[K] Suspend the heater so that the bottom is a minimum of 5' (1.5M) above the floor.
[L] Rear clearance is required for air movement. Rear clearance should be measured from the fan motor.
Refer to Reznor web site www.RezSpec.com for venting/inlet air requirements for Reznor Separated Combustion Units

Solid Waste Management

The new building located at 25 Monument Street will include a 78 sf. trash/ recycling room on the first floor. In addition, the owner plans to contract with Troiano Waste Services for a weekly removable of solid waste.

R E P O R T

17-1218 S

December 6, 2017

Explorations and Geotechnical Engineering Services

Proposed Housing
25 Monument Street
Portland, Maine

Prepared For:
Whipple-Callendar Architects
Attn: John Whipple
136 Pleasant Avenue
Portland, ME 04103

Prepared By:
S. W. Cole Engineering, Inc.
287 Portland Road
Gary, Maine 04039
T: {207-657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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17-1218 S

December 6, 2017

Whipple-Callendar Architects
Attn: John Whipple
136 Pleasant Avenue
Portland, ME 04103

Subject: Explorations and Geotechnical Engineering Services
Proposed Housing Structure
25 Monument Street
Portland, Maine

Dear John:

In accordance with our Proposal, dated October 18, 2017, we have performed 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 Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

Our scope of services included six test boring explorations, soils laboratory testing, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

We understand the site consists of a rectangular, 0.229 acre lot located at 25 Monument Street in Portland, Maine. The site is currently occupied by a multi-story residential wood-framed structure with a full basement with associated garage, driveway, and landscape areas. Existing grades generally slope down to the southeast, towards Monument Street, varying from about elevation 146 to 142 feet (project datum).

We understand proposed construction includes razing the existing site structures in favor of a new multi-story housing structure with ground level heated parking below. We anticipate parking space will have a concrete slab. We understand the building will be rectangular in shape, occupying a plan footprint of about 5,650 SF. Driveway access to the ground level parking will be provided off of Monument Street. Proposed structural loading and finish grades are not available at this time, however we anticipate proposed finish floor elevation to be within 1 to 2 feet of existing grades.

Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Six test borings (B-1 through B-6) were made at the site on November 7, 2017 by S. W. Cole Explorations, LLC, a subsidiary of S. W. Cole Engineering, Inc. (S.W.COLE). The exploration locations were selected and established in the field by S.W.COLE using measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the explorations and a key to the notes and symbols used on the logs are attached in Appendix C. The elevations shown on the logs were estimated based on topographic information shown on the "Exploration Location Plan".

2.2 Field Testing

The test borings were drilled using solid-stem and hollow-stem augers. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) techniques. SPT blow count results are shown on the logs.

2.3 Laboratory Testing

Soil samples obtained from the explorations were returned to our laboratory for further classification and testing. Soil moisture content test results are noted on the logs. The results of a two soil gradation tests are attached in Appendix D.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

In general, the explorations encountered topsoil (lawn) or sand and gravel (driveway) overlying fill overlying native sand overlying glacial till. The principal strata encountered are summarized below; refer to the attached logs for more detailed descriptions of the subsurface findings.

Surficial: Borings B-1 through B-3 encountered several inches of sand and gravel fill overlying uncontrolled fill. Borings B-4 through B-6 encountered about 6 to 10 inches of topsoil with organics overlying uncontrolled fill.

Uncontrolled Fill: Each of the borings encountered loose to medium dense fill below the surficial material. The fill appears to vary in thickness from about 2 to 5 feet at the exploration locations and generally consists of dark brown silty sand with varying amounts of gravel and brick with some cobbles (uncontrolled fill). The fill was observed to extend to depths of about 4 to 5 feet below the ground surface at borings B-1, B-2 and B-4. Organics were observed in the fill at borings B-2, B-4 and B-6. It is likely that the fill at borings B-3, B-5 and B-6 may be thicker, but may consist of on-site native soils as the darker color soil and brick were only observed to depths of about 2 feet below the ground surface.

Sands: Underlying the fill, the explorations generally encountered medium dense to very dense sand with varying amounts of silt, gravel and some cobbles extending to depths of about 8 feet below the existing ground surface.

Till: Below the sandy soils, the explorations encountered dense to very dense glacial till consisting of silty sand with varying amounts of gravel and some cobbles.

Refusal: The explorations were terminated in the dense glacial till soil (not refusal) at depths of 17 feet below the existing ground surface.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

3.2 Groundwater

The soils encountered at the test borings were moist to wet from the ground surface. Saturated soils were encountered at depths varying from 10 to 13 feet at explorations B-1, B-2, B-4 and B-6. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations include:

- Spread footing foundations and a slab-on-grade floors bearing on properly prepared subgrades appear suitable for the proposed building. Footings should bear on densified, native non-organic sandy soils or compacted Structural Fill. On-grade floor slabs should bear on at least 12-inches of properly compacted Structural Fill overlying densified, native non-organic sandy soils.

- All topsoil, remnant structures, foundations, fill and debris must be completely removed from beneath the proposed building area and entrance slabs and backfilled with properly compacted Structural Fill. The existing basement area will need to be backfilled with compacted Structural Fill or Granular Borrow.

- Uncontrolled fills including brick was encountered at the explorations. We recommend all pavement subgrades be proof-rolled prior to placing pavement gravels. Stumps, wood and soils with organics, if encountered would require complete removal and replacement with compacted Structural Fill or additional sub-base gravel. Given the site is a developed, urban lot, remnant structures, fills and utilities should be expected to be encountered during excavation.

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. As much

vegetation as possible should remain outside the construction areas to lessen the potential for erosion and site disturbance.

Building Pad and Footings: As discussed, the site was previously developed. Foundation remnants and fill with organics and construction debris were encountered at the explorations. Uncontrolled fills, relic structures, foundations and debris must be completely removed from beneath the proposed building and entrance slabs. 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 over-excavated areas beneath footings should be backfilled with compacted Structural Fill or Granular Borrow. The void left from the existing basement area should be backfilled with compacted Structural Fill or Granular Borrow beneath slab areas. All subgrades should be proof-rolled and densified with several passes of a vibratory roller-compactor weighing at least 5 tons prior to placing new fills.

Paved and Utilities: Uncontrolled fill with organics should be completely removed. Uncontrolled granular fills should be proof-rolled and densified with several passes of a vibratory roller-compactor weighing at least 5 tons. Areas that become soft or continue to yield after densification should be removed and replaced with compacted Structural Fill or additional sub-base gravel or pipe bedding, as appropriate.

4.3 Excavation and Dewatering

Excavation work will generally encounter uncontrolled fills, remnant structures and native sandy soils. Earthwork and grading activities should occur during drier, non-freezing weather of Spring, Summer and Fall. Sumping and pumping dewatering techniques should be adequate to control groundwater in excavations, if encountered. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed buildings be supported on spread footings founded on densified native sandy soils or compacted Structural Fill placed on densified native sandy soils or compacted Granular Borrow in over-excavated areas. 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 (100 year AFI)	4.5 feet
Net Allowable Soil Bearing Pressure	3.5 ksf
Base Friction Factor	0.35
Total Unit Weight of Backfill	125 pcf
At-Rest Lateral Earth Pressure Coefficient	0.5
Internal Friction Angle of Backfill	30°
Seismic Soil Site Class	D (IBC 2009)
Estimated Total Settlement	1-inch or less
Differential Settlement	½-inch or less

4.5 Foundation Drainage

We recommend an underdrain system be installed adjacent to the outside edge of the perimeter footings. The underdrain pipe should consist of 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone and wrapped in non-woven geotextile fabric, such as Mirafi 160N or equal. The underdrain pipe must have 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 illustrated on the “Foundation Detail Sketch” attached in Appendix B.

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 placed over 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 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 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 shown on the "Foundation Detail Sketch" attached in Appendix B.

4.8 Fill, Backfill and Compaction

We recommend the following fill and backfill materials: recycled products must also be tested in accordance with applicable environmental regulations and approved by a qualified environmental consultant.

Common Borrow: Fill to raise grades in landscape areas should be non-organic compactable earth meeting the requirements of 2014 MaineDOT Standard Specification 703.18 Common Borrow.

Granular Borrow: Subgrade fill to raise grades in the existing basement area, beneath slab areas can be sand or silty sand meeting the requirements of 2014 MaineDOT Standard Specification 703.19 Granular Borrow or Structural Fill.

Structural Fill: Backfill for foundations, slab base material, material below exterior entrances slabs and subgrade fill in the existing basement area 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 6

Crushed Stone: Crushed Stone, used for underdrain aggregate should be washed ¾-inch crushed stone meeting the requirements of 2014 MaineDOT Standard Specification 703.22 Underdrain Backfill Material Type C.

Reuse of Site Soils: The uncontrolled fill containing organics and construction debris are unsuitable for reuse in building and paved areas, but may be suitable for reuse as Common Borrow in landscape areas, provided they are at a compactable moisture content at the time of reuse. The non-organic granular fill without construction debris and the native sandy soils may be suitable for use as Granular Fill to raise grades within the existing basement area provided they are at a moisture content at the time of placement.

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.

4.9 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. 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.

4.10 Paved Areas

We anticipate paved areas will be subjected primarily to passenger vehicle and light delivery truck traffic. Considering the site soils, and proposed usage, we offer the following pavement section for consideration.

FLEXIBLE (HMA) PAVEMENT SECTION – 2014 MaineDOT Standard Specs	
Pavement Layer	**Material Thickness**
MaineDOT 9.5 mm Hot Mix Asphalt	1 ¼ inches
MaineDOT 19.0 mm Hot Mix Asphalt	2 ¼ inches
MaineDOT 703.06 Aggregate Base Type A	6 inches
MaineDOT 703.06 Aggregate Subbase Type D	12 inches

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 this area. In the absence of full depth excavation of frost susceptible soils below paved areas 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.

4.11 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents prior to bidding to determine that our earthwork, foundation and pavement recommendations have been properly interpreted and implemented.

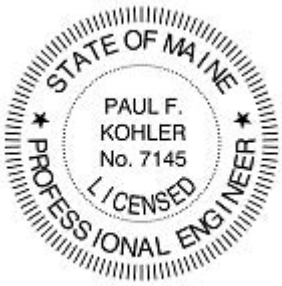
A soils and concrete testing program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to observe earthwork activities, the preparation of foundation bearing surfaces and pavement subgrades, as well as to provide testing and IBC Special Inspection services for soils, concrete, steel, spray-applied fireproofing, structural masonry and asphalt 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.



Paul F. Kohler, P.E.
Senior Geotechnical Engineer

PFK:mas

APPENDIX A

Limitations

This report has been prepared for the exclusive use of Whipple-Callendar Architects for specific application to the proposed *housing structure located at 25 Monument Street in Portland, Maine*. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

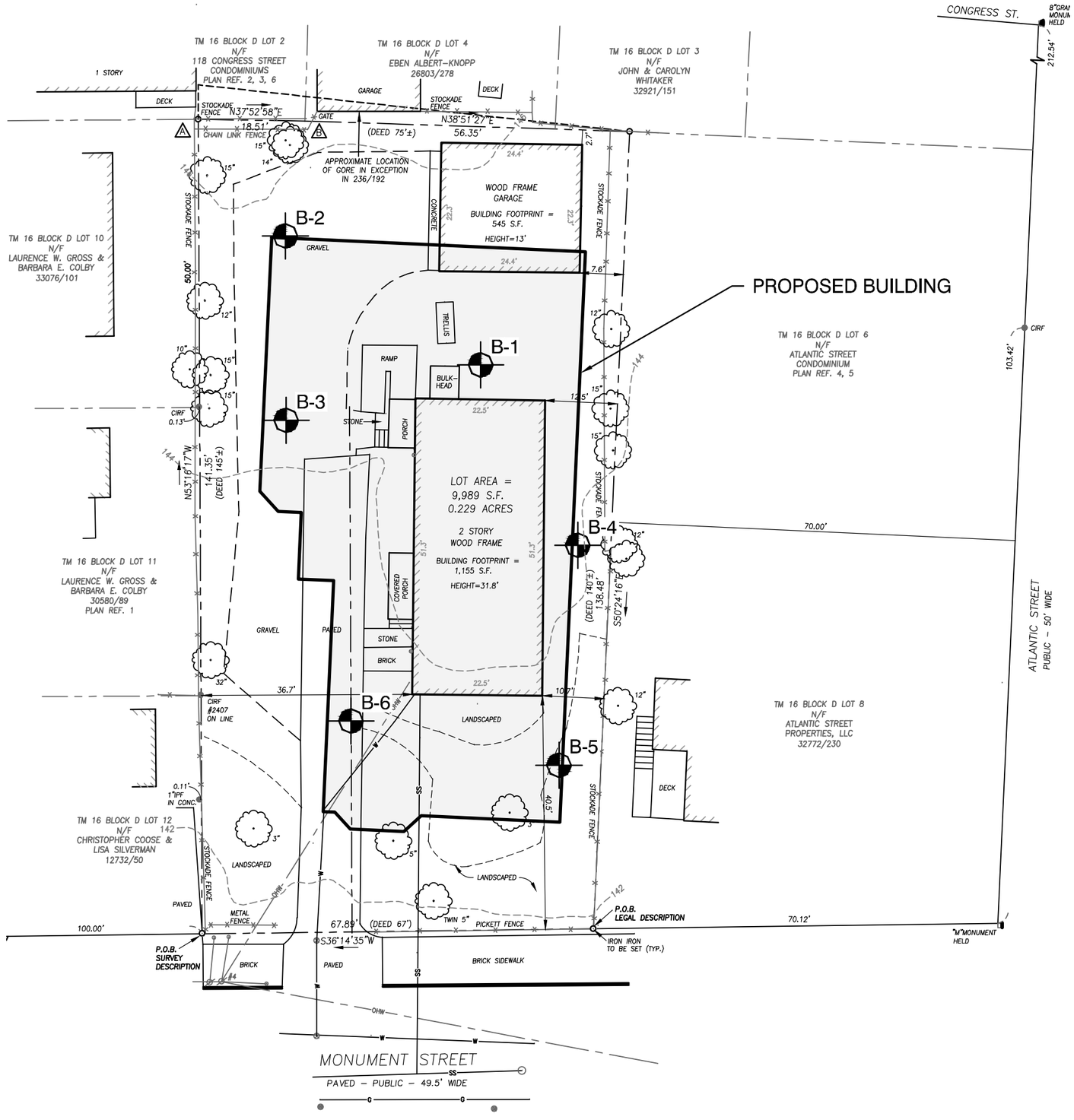
Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures



LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=10' SCALE PLAN OF THE SITE ENTITLED "ALTA / NSPS LAND TITLE SURVEY," PREPARED BY OWEN HASKELL, INC., DATED JANUARY 13, 2017, REVISED JANUARY 18, 2017.
2. TOPOGRAPHIC CONTOURS AND PROPOSED BUILDING OUTLINE WERE OVERLAID ON THE ABOVE REFERENCED PLAN FROM A SCALE PLAN OF THE SITE ENTITLED "PROPOSED SITE PLAN," PREPARED BY WHIPPLE CALLENDER ARCHITECTS, DATED NOVEMBER 9, 2017 AND PROVIDED AS A PORTABLE DOCUMENT FORMAT (PDF) FILE.
3. THE BORINGS WERE LOCATED IN THE FIELD BY MEASUREMENTS FROM EXISTING SITE FEATURES.
4. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
5. 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 20 40 Feet

S.W.COLE ENGINEERING, INC.

WHIPPLE CALLENDER ACHITECTS

EXPLORATION LOCATION PLAN

PROPOSED HOUSING
25 MONUMENT STREET
PORTLAND, MAINE

Job No.:	17-1218	Scale:	1" = 20'
Date :	11/27/2017	Sheet:	1

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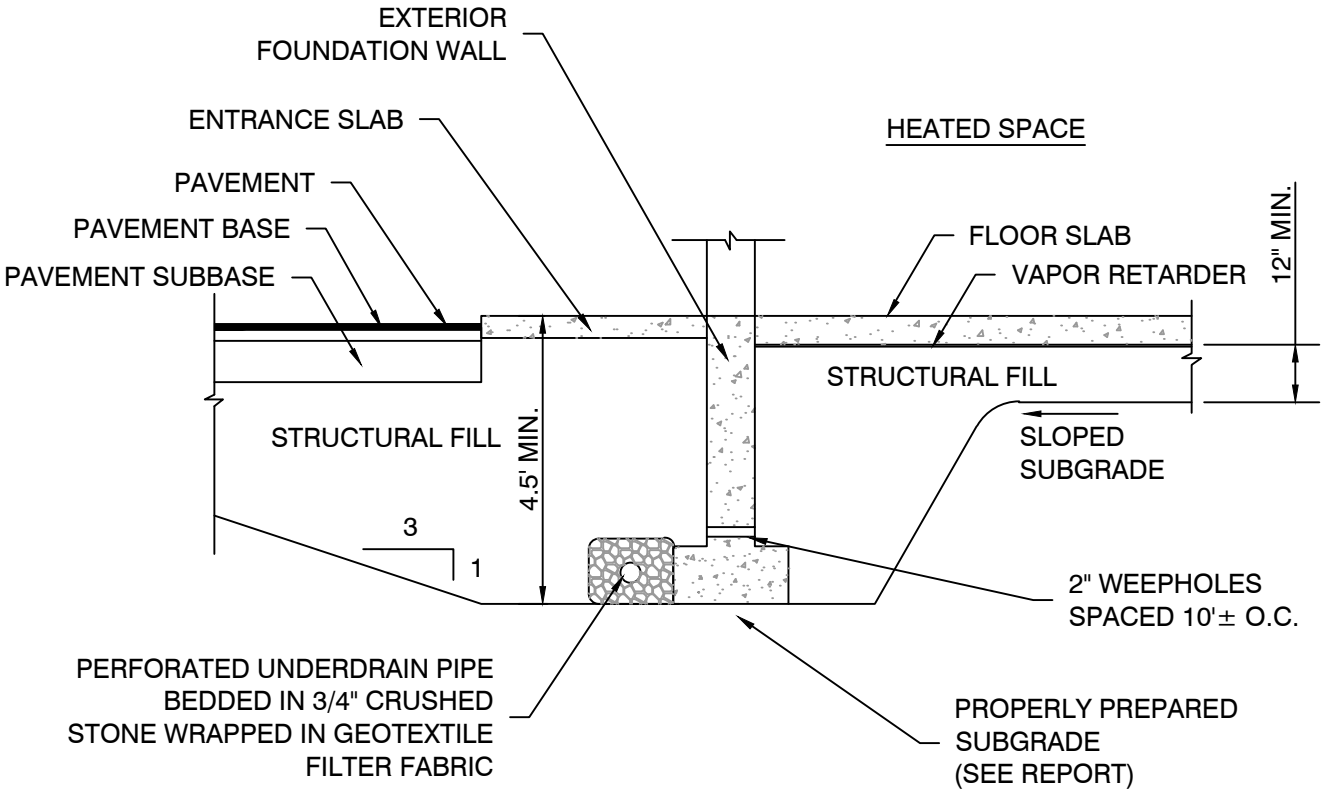

NOTE:

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.

WHIPPLE CALLENDER ACHITECTS

FOUNDATION DETAIL SKETCH

PROPOSED HOUSING
25 MONUMENT STREET
PORTLAND, MAINE

Job No.:	17-1218	Scale:	Not to Scale
Date :	11/16/2017	Sheet:	2

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APPENDIX C

Exploration Logs and Key

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: Whipple Callender Architects
PROJECT: 25 Monument St
LOCATION: 25 Monument St, Portland, ME

BORING NO.: B- 1
SHEET: 1 of 1
PROJECT NO. 17-1218
DATE START: 11/7/2017
DATE FINISH: 11/7/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 145' +/- | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): ▽ 135.20 ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling; D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector; S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/12	2-2-3-2			Loose dark brown silty SAND with brick (fill)		
			2D		2-4	24/12	3-4-4-6					
										4.0		
140	5		3D		5-7	24/14	19-25-35-50			Very dense gray gravelly SAND, some silt, some cobbles		
										8.0		
										Very Dense brown gravelly silty SAND, some cobbles (glacial till)	▽	
135	10		4D		10-12	24/18	15-25-30-35					
										14.0		
130	15		5D		15-17	24/20	19-25-31-32			Very dense brown silty SAND, some gravel (glacial till)		
										17.0		
										Bottom of Exploration at 17.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-1218.GPJ SWCE TEMPLATE.GDT 12/5/17

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: Whipple Callender Architects
PROJECT: 25 Monument St
LOCATION: 25 Monument St, Portland, ME

BORING NO.: B- 2
SHEET: 1 of 1
PROJECT NO. 17-1218
DATE START: 11/7/2017
DATE FINISH: 11/7/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 145.5' +/- | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): ▽ 132.50 ft Soils wet to saturated at approx 13 ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling; D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector; S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
145			1D		0-2	24/10	8-7-20-17			Medium dense dark brown gravelly silty SAND with brick (fill)		
			2D		2-4	24/12	8-14-35-15	w =6.7 %		2.0 Medium dense grayish-brown silty SAND with brick, some cobbles, peices of wood (fill)		
140	5		3D		5-5.6	7/4	21-25/1"			5.0 Dense brown silty SAND with gravel and cobbles		
										8.0 Dense becoming Very dense grayish-brown SAND and silt, some gravel, some clay (glacial till)		
135	10		4D		10-12	24/24	16-17-17-25				▽	
130	15		5D		15-16.9	23/16	20-27-36-50/5"					
										17.0 Bottom of Exploration at 17.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-1218.GPJ SWCE TEMPLATE.GDT 12/5/17

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: Whipple Callender Architects
PROJECT: 25 Monument St
LOCATION: 25 Monument St, Portland, ME

BORING NO.: B- 3
SHEET: 1 of 1
PROJECT NO. 17-1218
DATE START: 11/7/2017
DATE FINISH: 11/7/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 144.5' +/- | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/4	9-8-5-10			Medium dense dark brown silty SAND, some gravel, with brick (fill)		
			2D		2-4	24/16	10-8-8-15	w =2.3 %		2.0 Medium dense light brown gravelly SAND, some silt, some cobbles		
140	5		3D		5-5.8	10/4	18-50/4"					
135	10		4D		10-12	24/18	18-36-40-39			8.0 Very dense grayish-brown gravelly SAND and silt, trace clay (glacial till)		
130	15		5D		15-15.9	11/10	25-50/5"			17.0 Bottom of Exploration at 17.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-1218.GPJ SWCE TEMPLATE.GDT 12/5/17

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: Whipple Callender Architects
PROJECT: 25 Monument St
LOCATION: 25 Monument St, Portland, ME

BORING NO.: B- 4
SHEET: 1 of 1
PROJECT NO. 17-1218
DATE START: 11/7/2017
DATE FINISH: 11/7/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 144' +/- | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): ▽ 133.50 ft Soils wet to saturated at approx 10.5 ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling; D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector; S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/6	2-2-3-2			0.5 Topsoil with organics Loose dark brown silty SAND with organics, some gravel (fill)		
			2D		2-4	24/1	4-4-4-3					
140										4.0 Very dense light brown SAND and gravel, some silt		
	5		3D		5-7	24/16	18-24-31-38	w =1.8 %				
										8.0 Dense becoming very dense grayish-brown silty SAND, some gravel, trace clay (glacial till)		
135												
	10		4D		10-12	24/20	13-16-15-18				▽	
130												
	15		5D		15-17	24/20	20-30-33-30					
										17.0 Bottom of Exploration at 17.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-1218.GPJ SWCE TEMPLATE.GDT 12/5/17

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: Whipple Callender Architects
PROJECT: 25 Monument St
LOCATION: 25 Monument St, Portland, ME

BORING NO.: B- 5
SHEET: 1 of 1
PROJECT NO. 17-1218
DATE START: 11/7/2017
DATE FINISH: 11/7/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 143' +/- | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/12	8-7-6-4			Topsoil with organics		
										0.8 Medium dense dark brown silty SAND and brick (fill)		
			2D		2-4	24/16	4-5-10-10			2.0 Medium dense brown gravelly SAND, trace silt, some cobbles		
140												
	5		3D		5-6.7	20/10	15-12-15-50/2"					
135										8.0 Dense brown silty SAND, some gravel, trace clay (glacial till)		
	10		4D		10-12	24/24	15-18-30-30					
130										12.0 Very dense gray SAND and silt, trace gravel, trace clay (glacial till)		
	15		5D		15-17	24/24	20-25-30-39	w =7.7 %				
										17.0 Bottom of Exploration at 17.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-1218.GPJ SWCE TEMPLATE.GDT 12/5/17

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: Whipple Callender Architects
PROJECT: 25 Monument St
LOCATION: 25 Monument St, Portland, ME

BORING NO.: B- 6
SHEET: 1 of 1
PROJECT NO. 17-1218
DATE START: 11/7/2017
DATE FINISH: 11/7/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 143' +/- | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Scott Hollabaugh | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): ▽ 131.80 ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling; D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector; S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/16	6-8-10-12			0.5 Topsoil with organics Medium dense brown gravelly silt SAND, some silt, some brick, some cobbles (fill)		
140			2D		2-4	24/10	12-10-13-10			2.0 Medium dense light brown SAND, some silt, some gravel		
	5		3D		5-7	24/20	14-18-25-27			4.0 Medium dense to dense brown gravelly SAND, some silt		
135										8.0 Dense to very dense brown silty SAND, some gravel, trace clay (glacial till)		
	10		4D		10-12	24/18	18-24-23-27				▽	
130												
	15		5D		15-17	24/14	15-20-25-23					
										17.0 Bottom of Exploration at 17.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 6

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

KEY TO 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.

APPENDIX D

Laboratory Test Results

S.W.COLE ENGINEERING, INC.

Report of Gradation

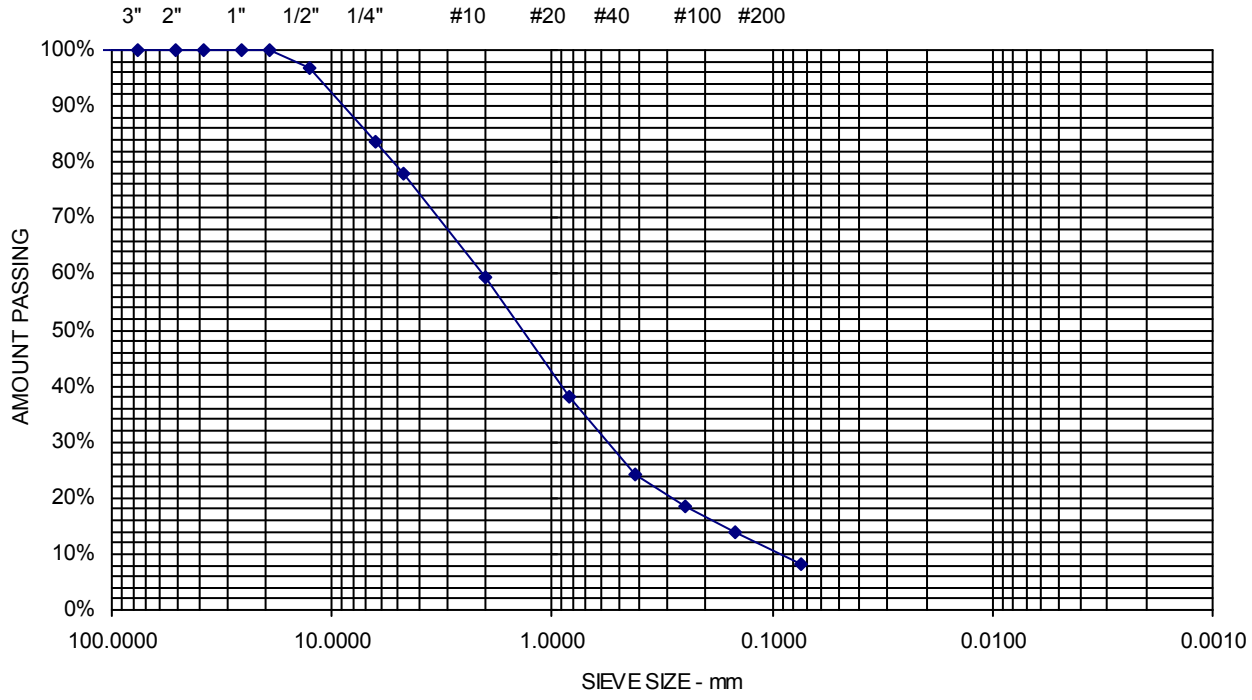
ASTM C-117 & C-136

Project Name: PORTLAND ME - PROPOSED HOUSING STRUCTURE - GEOTECHNICAL ENGINEERING SERVICES
Client: WHIPPLE - CALLENDER ARCHITECTS

Material Source: **B-3 2D 2-4**

Project Number: 17-1218
Lab ID: 23135G
Date Received: 11/15/2017
Date Completed: 11/17/2017
Tested By: TIMOTHY STOREY

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"**	**100**	
19.0 mm	**3/4"**	**100**	
12.5 mm	**1/2"**	**97**	
6.3 mm	**1/4"**	**84**	
4.75 mm	**No. 4**	**78**	22.2% Gravel
2.00 mm	**No. 10**	**59**	
850 um	**No. 20**	**38**	
425 um	**No. 40**	**24**	69.5% Sand
250 um	**No. 60**	**18**	
150 um	**No. 100**	**14**	
75 um	**No. 200**	**8.2**	8.2% Fines



Comments: w = 2.3%

Sheet

S.W.COLE ENGINEERING, INC.

Report of Gradation

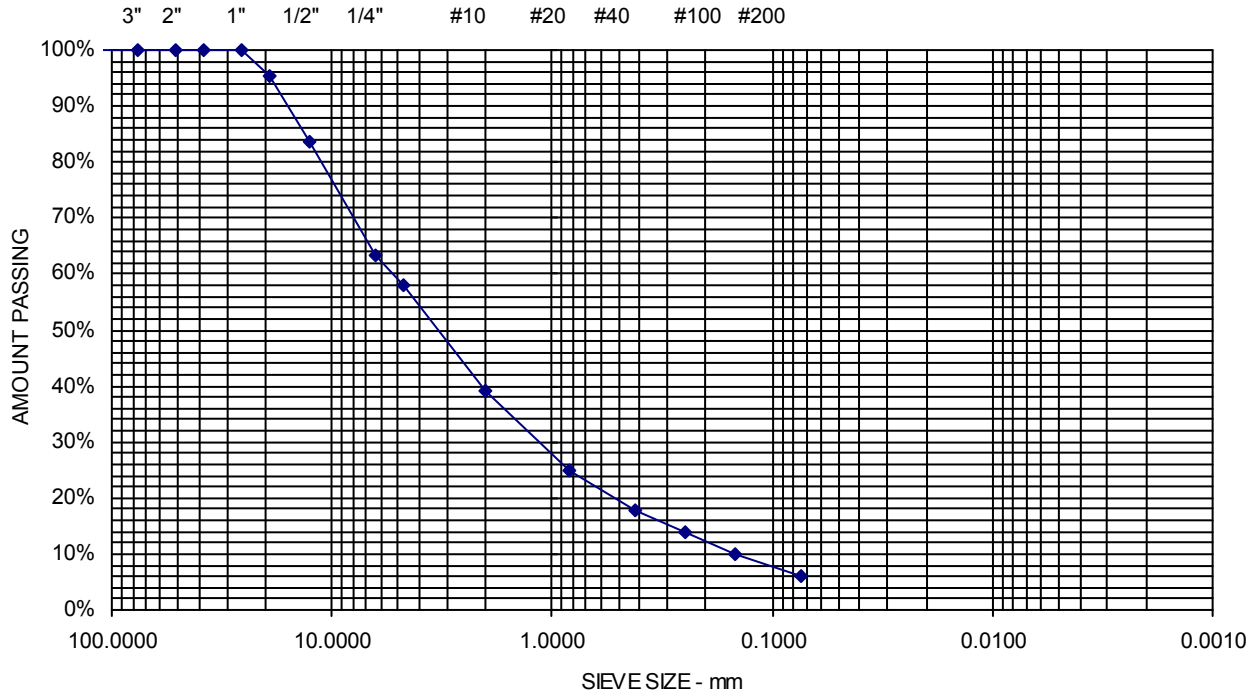
ASTM C-117 & C-136

Project Name: PORTLAND ME - PROPOSED HOUSING STRUCTURE - GEOTECHNICAL ENGINEERING SERVICES
Client: WHIPPLE - CALLENDER ARCHITECTS

Material Source: **B-4 3D 5-7**

Project Number: 17-1218
Lab ID: 23136G
Date Received: 11/15/2017
Date Completed: 11/17/2017
Tested By: TIMOTHY STOREY

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"**	**100**	
19.0 mm	**3/4"**	**95**	
12.5 mm	**1/2"**	**84**	
6.3 mm	**1/4"**	**64**	
4.75 mm	**No. 4**	**58**	42% Gravel
2.00 mm	**No. 10**	**39**	
850 um	**No. 20**	**25**	
425 um	**No. 40**	**18**	52% Sand
250 um	**No. 60**	**14**	
150 um	**No. 100**	**10**	
75 um	**No. 200**	**6.0**	6% Fines



Comments: w = 1.8%

Sheet

STREET TREES & ABILITY TO SERVE MEMO

The new building located at 25 Monument Street will include the planting of 3 new street trees as shown on L.1. The owner will pay $400 each for two additional trees as an alternate to the five required trees as discussed with Jeff Tarling, City Arborist.

We have already submitted the "ability to serve" from the Portland Water District and the Sewer approval is part of the planning board process.

DOCUMENT M

Construction Management Plan
25 Monument Street, Portland, Me
Monument Partners, LLC Applicant

A. Construction Management Principals

Rainbow Construction Inc, the Construction Manager, will minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities. Demolition of the existing building and site work will be performed by L.P. Murray & Sons. Rhodes Concrete is the subcontractor for the foundation and concrete work. Work will be performed Monday through Friday excluding holidays, beginning at 7 am and ending at 6 pm daily. The work site will be closed to pedestrian access throughout the construction with a temporary fence along Monument Street.

B. Development Review of Construction Management Plan

The Construction Management Plan minimizes impacts to areas surrounding the building/construction site and will be the primary considerations in the process.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, Monument Partners LLC and Rainbow Construction shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include:

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and storm water system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual. We are not expecting to do any blasting.

D. Construction Administration and Communication

The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust.

1. Contact person for Rainbow Construction is Craig Cooper 207-799- 3051 (office) or 207- 831-3004 (cell) and who is available 24 hours. Back up contact person is James Foley (Rainbow Construction Supervisor) is 207-807-2742
2. Construction Signage posted on the site with Contact Information for Contractor
3. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. Rainbow Construction proposes the construction schedule as follows:

   April 2018: Demo existing building and excavate site
   May 2018: Pour foundation, piers and slab per construction documents.
   June-November 2018: Completed all rough framing with water tight roof installed.
   November- February 2018: Rough-in of all subcontractors including but not limited to electrical, plumbing, HVAC, security, and sprinkler systems. Also we will complete the finish exterior siding and trim.
   March-April 2018: Complete all rough-in inspections, installation of insulation and sheetrock.
   May-December 2018: Installation of all interior finishes including but not limited to the elevator, flooring, tile, painting, trim work, cabinets, countertops electrical and plumbing fixtures.
   January 2019: Project is substantially complete. Seek Certificate of Occupancy.

2. Hours of Construction. Work will be performed Monday through Friday excluding holidays, beginning at 7 am and ending at 6 pm daily.

3. Material Deliveries: Monday through Friday excluding holidays, beginning at 7 am and ending at 6 pm daily to the job site.

F. Security & Public Safety

1. The Construction Management Plan includes temporary fence along Monument Street and access gates at Monument Street with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program.
   - Construction debris will not be accumulated within the building.
   - Construction debris will be removed from building on a daily basis and disposed of in construction site dumpster. Dumpster will be removed and replaced when full.
   - Large commercial fire extinguishers will be available on site and locations added as building floors are constructed.
   - Existing building to be demolished has had hazardous material abated
   - Existing building to be demolished has had existing utilities turned off and disconnected.
   - Construction personal have been trained in fire prevention and fire fighting protocol. Fire hydrant is available within 50 feet of site and fire department building is located within 500 feet of the building site.
   - Development of a pre-fire plan with the local fire department
   - Rapid communication

- Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
- Any construction activities that require fuel sources or combustible materials, all precautions will be taken to protect workers harm and buildings from damage.

4. Blasting. There is no expectation for the need to perform blasting activities at this site.
5. Any temporary security lighting fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Contractor will obtain through the Street Opening Clerk at the Department of Public Works all permits required to excavate and install utilities to the building. At no time will construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Contractor will obtain required permits for new connections and abandonment of existing connections through the Street Opening Clerk at the Department of Public Works.

3. Traffic Control Plans: A construction barrier system will be utilized at the street to separate the construction activity from the public street and sidewalk. Signage stating sidewalk closure will be used on the construction fencing. Sidewalk will be closed to pedestrian traffic to protect the general public from construction activity. The sidewalk on the opposite side of the street is available for pedestrians. The section of street between St. Lawrence Street and Atlantic is level so sight distances and visibility of pedestrians and bicyclists activity should not be impacted.

   We will request for the purpose of construction activity the use of public parking spaces and the blockage of the portion of sidewalk for the length of the property. Contractor will file for an occupancy permit with the Department of Public Works.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

- **a.** Regular trash and debris removal by Rainbow Construction. Dumpsters from Troiano's Waste Services, Inc will be located on site and emptied as needed.
- **b.** Street cleaning and damage controls
- **c.** Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris
- **d.** Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code and Section 25-129 on Noise, dust and debris.

e. Rodent Control will be provided, if needed, by a professional exterminator and consistent with Chapter 22 of the City Code.

f. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone. Work to be performed by L.P. Murray and Sons.
1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or site lines with the piles of snow.
3) Clear all walks & ramps with the work zone
4) Sand or Salt as needed
5) Clear all basin or drainage to help snow melt
6) This would include Monday-Friday Sat/Sunday/Holidays

I. Erosion Control and Preservation of Trees

1. Rainbow Construction Inc. shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. Rainbow Construction Inc shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan within the area of construction.
3. The storage of materials is identified on construction management plan on C3.

J. Construction Staging Area

1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.

K. Parking During Construction

Rainbow Construction Inc. shall reserve the street parking spaces located directly in front of the property at 25 Monument Street and will obtain the proper parking permits for them.

Once the first floor has been constructed, the interior of the garage will be used for parking of construction vehicles.

EROSION AND SEDIMENTATION NOTES

1. THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR DEALING WITH SOIL EROSION AND SEDIMENTATION DURING AND AFTER PROJECT CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARD AND SPECIFICATIONS FOR EROSION PREVENTION AS CONTAINED IN THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: "MAINE EROSION AND SEDIMENT CONTROL BMPs" PUBLISHED BY THE MAINE DEP, LATEST EDITION.

GENERAL EROSION AND SEDIMENTATION CONTROL PRACTICES

1. EROSION/SEDIMENT CONTROL DEVICES
   THE FOLLOWING EROSION SEDIMENTATION CONTROL DEVICES ARE PROPOSED FOR CONSTRUCTION ON THIS PROJECT. INSTALL THESE DEVICES AS INDICATED ON THE PLANS.

1.1 SILT FENCE: SILT FENCE WILL BE INSTALLED ALONG THE DOWN GRADING EDGES OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS STABILIZED. IN AREAS WHERE STORMWATER DISCHARGES THE SILT FENCE WILL BE REINFORCED WITH HAY BALES TO HELP MAINTAIN THE INTEGRITY OF THE SILT FENCE AND TO PROVIDE ADDITIONAL TREATMENT.

1.2 HAY BALES TO BE PLACED IN LOW FLOW DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES. DO NOT PLACE HAY BALES IN FLOWING WATER OR STREAMS.

1.3 STRAW AND HAY MULCH; USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH BY ITSELF CAN BE USED ON SLOPES LESS THAN 15% IN SUMMER AND 8% IN WINTER. ALL OTHER SLOPES MUST BE COVERED WITH JUTE MESH OVER MULCH, OR CURLEX II OR EXCELSIOR MAY BE USED IN PLACE OF JUTE MESH AND MULCH OVER LOAM AND SEED.

2. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES
   PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:

2.1 SILTATION FENCE ALONG THE DOWNGRADIENT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE SITE IS 85% REVEGETATED.

2.2 HAY BALES PLACED AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.

2.3 PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION AS FOLLOWS:

- A. SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
- B. AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES. SEE ITEM 3 IN CONSTRUCTION PHASE NOTES BELOW.
- C. STABILIZE STOCKPILES WITHIN 15 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
- D. SURROUND STOCKPILE SOIL WITH SILTATION FENCE AT BASE OF PILE.

2.4 ALL DENUDED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA SHALL RECEIVE MULCH WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL OR WITHIN 15 DAYS AFTER COMPLETING THE ROUGH GRADING OPERATIONS. IN THE EVENT THE CONTRACTOR COMPLETES FINAL GRADING AND INSTALLATION OF LOAM AND SOD WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE, IS NOT REQUIRED.

2.5 IF WORK IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15, ALL DENUDED AREAS ARE TO BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.

2.6 TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE HAS BEEN STABILIZED OR IN AREAS WHERE PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

3. PERMANENT EROSION CONTROL MEASURES
   THE FOLLOWING PERMANENT CONTROL MEASURES ARE REQUIRED BY THIS EROSION/SEDIMENTATION CONTROL PLAN:

3.1 ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SEEDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

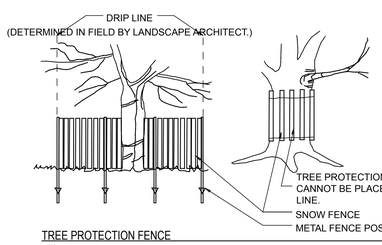
CONSTRUCTION PHASE

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

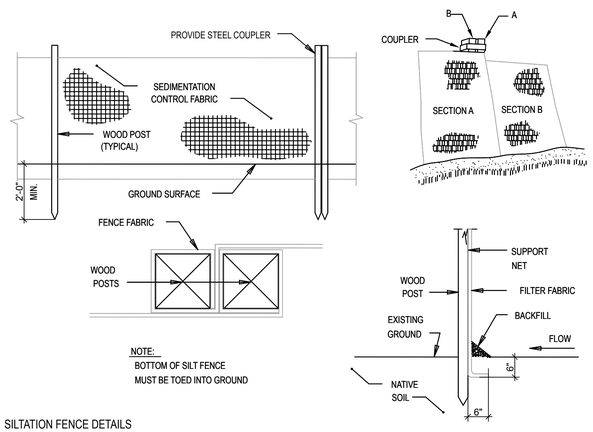
1. ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION WILL BE CLEARED AND LEFT IN AN UNTREATED OR UNVEGETATED CONDITION. IF FINAL GRADING, LOAMING AND SEEDING WILL NOT OCCUR WITHIN 15 DAYS, SEE ITEM NO. 4.
2. PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SILT FENCING AND/OR HAY BALES WILL BE INSTALLED AT THE TOE OF SLOPE AND IN AREAS AS LOCATED ON THE PLANS TO PROTECT AGAINST ANY CONSTRUCTION RELATED EROSION. IMMEDIATELY FOLLOWING CONSTRUCTION OF CULVERTS AND SWALES, RIP RAP APRONS SHALL BE INSTALLED, AS SHOWN ON THE PLANS.
3. TOPSOIL WILL BE STOCKPILED WHEN NECESSARY IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION AND WILL BE KEPT AS FAR AS POSSIBLE FROM THE EXISTING DRAINAGE COURSE.
   A. TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
4. ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE EITHER:
   A. TREATED WITH ANCHORED MULCH IMMEDIATELY
5. ALL GRADING WILL BE HELD TO A MAXIMUM 2:1 SLOPE WHERE PRACTICAL. ALL SLOPES WILL BE STABILIZED WITH PERMANENT SEEDING, OR WITH STONE, WITHIN 5 DAYS AFTER FINAL GRADING IS COMPLETE. (SEE POST-CONSTRUCTION REVEGETATION FOR SEEDING SPECIFICATION.)

EROSION CONTROL DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS TO BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK NO AREAS MAY BE LEFT UNSTABILIZED OVER THE WEEKEND.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. 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 1000 S.F. (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH. NOTE: AN AREA IS ALSO CONSIDERED STABLE IF SODDED, COVERED WITH GRAVEL (PARKING LOTS) OR STRUCTURAL SAND.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES 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 1 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. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW, DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY, SILT FENCE OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS SHOWN ON THE DESIGN DRAWINGS. NOTE: DORMANT SEEDING SHOULD NOT BE ATTEMPTED UNLESS SOIL TEMPERATURE REMAINS BELOW 50 DEGREES AND DAY TIME TEMPERATURES REMAIN IN THE 30'S.
7. 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 THAN 8%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELSIOR OR CURLEX.
8. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1 THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
9. BETWEEN THE DATES OF OCTOBER 15 TO NOVEMBER 1, WINTER RYE IS RECOMMENDED FOR STABILIZATION. AFTER NOVEMBER 1, WINTER RYE IS NOT EFFECTIVE. AROUND NOVEMBER 15 OR LATER, ONCE TEMPERATURES OF THE AIR AND SOIL PERMIT, DORMANT SEEDING IS EFFECTIVE.
10. IN THE EVENT OF SNOWFALL (FRESH OR CUMULATIVE) GREATER THAN 1 INCH DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM THE AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.



TREE PROTECTION FENCE
NTS

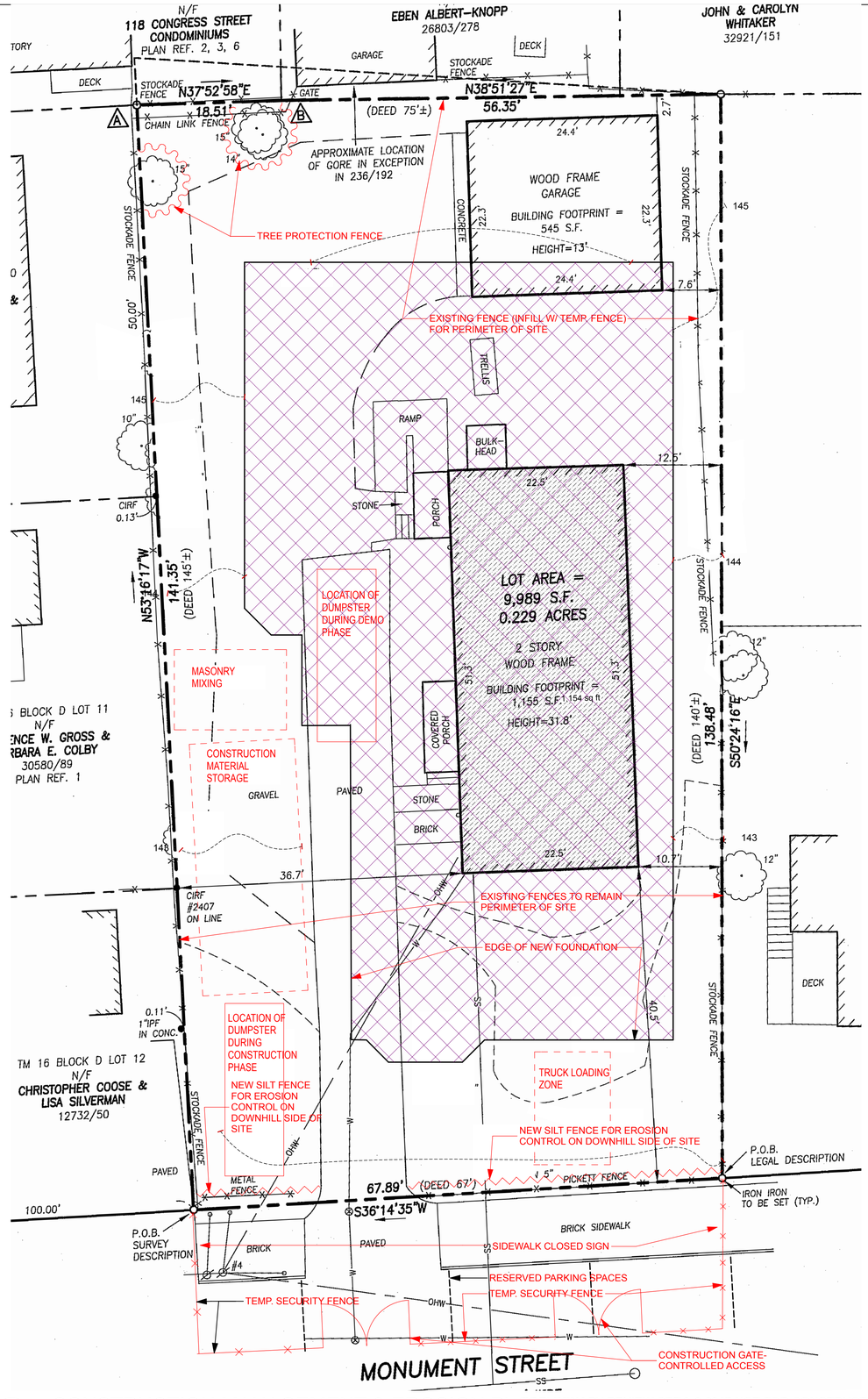


NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND

SILTATION FENCE DETAILS
NTS NTS

SILTATION FENCE INSTALLATION

1. EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM. JOIN SECTION AS SHOWN ABOVE.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCO THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPLISHED BY AN INTERCEPTION DITCH.
5. BARRIER SHALL BE MIRAFI SILT FENCE OR APPROVED EQUAL.



1 / C.3 CONSTRUCTION MANAGEMENT & EROSION PLAN

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

PRELIMINARY REVIEW SET 9-6-2017 NOT FOR CONSTRUCTION

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF WHIPPLE CALLENDER ARCHITECTS. IT SHALL NOT BE USED FOR ANY OTHER PURPOSE THAT FOR WHICH IT IS SPECIFICALLY FURNISHED

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MARK	DESCRIPTION	DATE

DATE: 1/25/18
CHECKED BY: AEC, JWW
DRAWN BY: JR, AEC, JWW
JOB: 17-KEE
SHEET: CONSTRUCTION MANAGEMENT PLAN & EROSION CONTROL DETAILS

C.3

25 MONUMENT STREET
PORTLAND

Parking Waiver Request

The number of parking required in a R-6 zone on the Peninsula per City of Portland, Code of Ordinances, Section 14-331 Division 20 is one (1) space per unit except that no parking shall be required for the first three units in theR-6 Residential Zone. 25 Monument is to be a five (5) unit building requiring only two spaces.

The Technical Manual requires that any parking lot with 10 or fewer spaces shall contain standard sized parking spaces. We request a waiver from the Technical Standards to provide three 9' x 15' spaces and three 8.5' x 15' spaces instead of the 9' x 18' standard size spaces. There will be one handicap accessible spot that will be 9'x18". The 15' depth (and 8' width) is acceptable under the compact parking description. See Technical Manual Section 1.14 below:

14. **1.14. PARKING LOT AND PARKING SPACE DESIGN**

Refer to Division 20 of the City Land Use Code (Sections 14-331 to 14-350) for zoning ordinance requirements concerning the number of parking spaces required for off-street parking.

Parking spaces shall meet the following dimensional requirements:

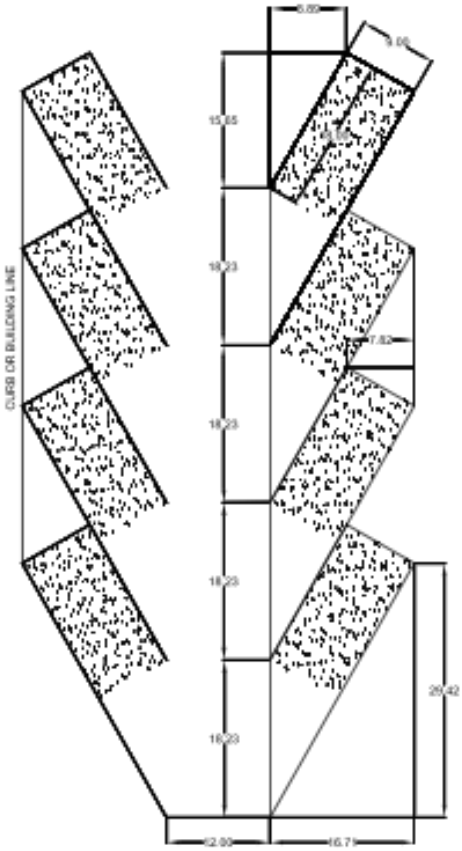
- Standard parking space: 9 feet wide by 18 feet long.
- Compact parking space: 8 feet wide by 15 feet long.
- Motorcycle/motorized scooter parking space: 4 feet wide by 8 feet long.

Any parking lot with 10 or fewer spaces shall contain standard sized parking spaces. Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces.

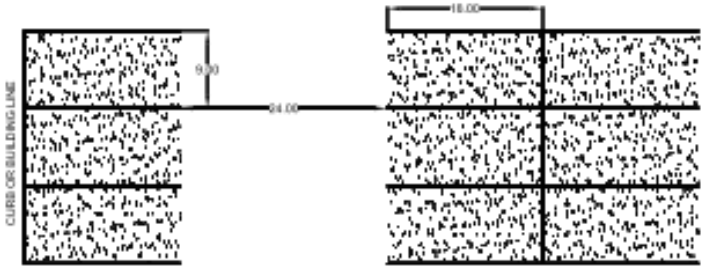
Parking lot layout shall conform to Figures I-28 thru I-32.

Vehicular access shall be provided by one or more aisles. Minimum widths of aisles are illustrated in Figures I-28 thru I-31.

The aisle width in our project behind 90 degree parking is 24' in conformance with Figure I-27 of the Technical Manual. The drive aisle behind the stairs/elevator core is 14'-6". According to the traffic analysis done by Maine Traffic Resources, this is sufficiently sized as a single lane drive.



30° PARKING @ 9' x 18'



90° PARKING @ 9' x 18'

STANDARD PARKING SPACES

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE: I-27
	STANDARD PARKING SPACES		

25 MONUMENT STREET
PORTLAND

Parking Memo re: Zoning Analysis

The number of parking required in a R-6 zone on the Peninsula per City of Portland, Code of Ordinances, Section 14-331 Division 20 is one (1) space per unit except that no parking shall be required for the first three units in theR-6 Residential Zone. 25 Monument is to be a five (5) unit building requiring only two spaces.

Four of the dwelling units at 25 Monument Street are going to be roughly 1,950 square feet in size and the owner of the property will be occupying the top floor dwelling unit that is 3,680 square feet in size. There is a market expectation for this size unit of a minimum of one parking space each with a desire of two parking spaces each for a total of 10 spaces. The space available for cars on the site is 8 and we would like to build to that capacity.

Google Groups

25 Monument New Development Plan- Opposition to another Teardown

Karen Snyder <karsny@yahoo.com> Oct 30, 2017 1:33 PM
Posted in group: **Planning Board**

Hi,

I am voicing my opposition of yet another property on Munjoy Hill being torn down due to the following reasons:

- The scale of the proposed structure does not fit the scale of the surrounding buildings.
- The architecture is not compatible with the architecture style of surrounding buildings on Munjoy Hill
- More affordable rental units being removed from the housing market to replace with hi luxury condos.

I am very concerned that the Planning Board and Planning Department do not ensure that these developers are adhering to Chapter 14 Land Usage Zoning Ordinance. It is not that complicated.

It clearly states multiple times in the Chapter 14 Land Usage Zoning Ordinance that the new developments "shall be designed to be compatible with the architecture style of the building and preserve the single-family appearance of the building"

Section 14-66 page 51 section e, d...
Section 14-78 page 66, section d
etc

Please see attached photo of 25 Monument After pic.
Does that seem in scale and has a compatible architecture style?

This is just another reason why the R6 Zone change needs to be changed back.

Regards,
Karen Snyder

Attachment:
Monument_25_Before.JPG
Monument_25_After.jpg





Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

11/7/2017 Week - Efforts for Saving Munjoy Hill Neighorhood

Karen Snyder <karsny@yahoo.com> Tue, Nov 7, 2017 at 8:02 AM
Reply-To: Karen Snyder <karsny@yahoo.com>
To: Mary Casale <dirtgirl1@aol.com>, Douglas Martica <tica1529@gmail.com>, "Maggy W." <mswnola@gmail.com>, Pa Ag <pagopian1@yahoo.com>, Pamela Day <pday2304@gmail.com>, Pam Macomber <pam@ninestonesspa.com>, Barbara Vestal <vestal@chesterandvestal.com>, Ian Jacob <iancasperjacob@gmail.com>, Rob Whitten <rob@whittenarchitects.com>, Berry Manter <berrymanter@yahoo.com>, Peter Macomber <pbm@macomber.com>, Carol and Richard Stillwell <rstillwell@maine.rr.com>, Peter Murray <pmurray@gwi.net>, Jayne Hurley <jhurley@cspinet.org>, Stacy Mitchell <stacy.ilsr@gmail.com>
Cc: Jmy <jmy@portlandmaine.gov>

Hi All,

Since all of you were either at the Neighborhood Meetings for 25 Monument and/or 24 St. Lawrence last week, you realized that not one of us surrounding property owners was happy with both or either proposed development designs.

We ALL need to be consistent and voice our opinions to the city this week the following ways:

Action #1: Please send email to City-Planning Board/Planning Dept regarding 25 Monument and/or 24 St. Lawrence Neighborhood meeting (separate emails if you do both)

Send to: planningboard@portlandmaine.gov, jlevine@portlandmaine.gov, sgo@portlandmaine.gov; jmy@portlandmaine.gov
Copy: Anyone you wish and if you want Councilor Belinda Ray bsr@portlandmaine.gov

Action #2: Attend and voice your concern at the District 1 Meeting this Wedensday, 11/8/2017 at 6:30pm at East End Community School
- Please voice your concern at this meeting.

Action #3: Please send this email to anyone else you know that needs to get involved with this. The more of us Munjoy Hill property owners/tenants that group together to voice our concern, the more they will take notice.

If there are any questions, concerns or issues, please do not hesitate to contact me.

Regards,
Karen Snyder
72 Waterville

Google Groups

24 St.Lawrence St, 25 Monument Street

Rob Whitten <rob@whittenarchitects.com> Nov 20, 2017 9:54 AM
Posted in group: **Planning Board**

Hello,

My wife, Robin F. Whitten, and I live at 23 St. Lawrence Street on Munjoy Hill. We are very concerned about the proposed demolition of 24 St. Lawrence Street and 25 Monument Street. Both are viable structures that could be renovated and improved. They are part of the fabric of our neighborhood.

Please include us in the public notification list for the pending Planning Board Workshops for both structures.

Thank you.

Sincerely, Rob.

Rob Whitten / AIA

Whitten Architects
207.774.0111 x101
37 Silver Street
Portland, Maine 04101
www.whittenarchitects.com

Google Groups

24 st Lawrence/25 monument objections

Matt Dodge <mdodge18@gmail.com> Mar 27, 2018 5:52 PM
Posted in group: **Planning Board**

Hello there,

I am just writing to share my objection to the two proposed developments at the addresses listed in this emails subject line. These are both completely out of scale to their surroundings and will have the effect of lowering, not raising, building values in the neighborhood. As a decade long resident of the hill, I am a little pretended every time I turn a corner in my once idyllic neighborhood to find one of these towering monstrosities glaring back. They are not only out of scale for their surroundings, but both proposed developments used the same currently en vogue condo architecture that in no way fits with the unique character of this neighborhood.

I'll leave the specific design and scale criticisms to rest and just pose this question instead: how little self-confidence do you, the planning board, have in this city? It seems to me that over the last decade or so, you've willing jumped into business with every developer who bats an eye at this once-struggling port city. The thing is: we're not that city anymore. We're on the way up, with a increasingly national profile on the quality of our food, culture and way of life. We can afford to be choose about who we choose to let reshape the face of this city, do it OUR way, and not just lift our skirts for every developer who rolls in town towns with a MA or NY plate. Why risk those implacable charms by going the same route as every other city in America? Condo-fuming at a breakneck pace in the race for...what exactly... making sure every American city looks exactly alike? Portland has the chance to retain some of the charm, the authenticity, that put it on the map in the first place, yet at every turn you seem to go the easy route, take the money and give very little thought about the lasting impact it has on a community. Please, once again, just approach these sorts of developments with the knowledge that YOU (elected officials who should be reflecting the will of their constituents) have the power here. YOU can decide what this city is going to look like and you don't have to take every offer that comes across the table. For once, just say enough is enough, and take a stand. Your kids won't thank you for your part in the homogenizing of America cities, and neither will we, those who are watching it happen.

Thanks,
Matt Dodge
67 North St

Sent from my iPhone

Google Groups

25 Monument St

Laurence Gross <laurence.gross@icloud.com> Apr 14, 2018 5:45 PM
Posted in group: **Planning Board**

To: Planning Board

From: Laurence Gross, owner of 89/91 & 93/95 St Lawrence St (Abutter to proposed 25 Monument St development)

RE: Comments on proposed redevelopment of 25 Monument St.

I am writing after reading the staff memo prepared on March 23, 2018 by Matthew Grooms, City Planner to clarify statements made in the memo describing the Proposed Development (Section V of the memo) . In the this section and under the Landscaping and Landscape Preservation section later in the memo, Mr. Grooms mentions a six foot cedar fences to the north and west of the property. I want to make clear to the Planning Board that the new section of cedar fence (approximately 100 feet in length) to the west of 25 Monument St. belongs to me. I am responsible for maintaining it. It is not on the subject property, and therefore should not be considered as part of this development.

However, there is a dilapidated section of old fencing that abuts my fence that needs to be replaced. As an abutter, **I would ask that the fencing chosen to replace the dilapidated section match the style and height of my newer existing cedar fence for aesthetic purposes**.

In this same section the memo notes that at least 30% of trees 10" DBH or greater are being preserved on-site along the rear of the property. This means two Norway maples, considered an invasive species, will be preserved. At the same time, four large (35-50’ high) oak and maple trees located along the western property line that abut my two St Lawrence St properties and provide shade and shielding from the existing and proposed building will be removed. **I would like at least one of these four trees, a white oak, to be preserved to maintain existing shielding and shade.** The tree is located almost on the property line and should survive any construction related disturbances. An additional benefit of preserve more of the large trees along the western property line would be to offer a sense of scale and proportion that helps to minimize the height and mass impact of the proposed new building, which may help it to integrate better with the streetscape and neighborhood .

Thank you for considering my comments and concerns.

MONUMENT PARTNERS, LLC

25 MONUMENT STREET, PORTLAND, ME

DEVELOPERS:

MONUMENT PARTNERS, LLC

STRUCTURAL ENGINEERS:

CASCO BAY ENGINEERING
424 FORE STREET
PORTLAND, ME 04101
207 842 2800

ARCHITECTS:

WHIPPLE CALLENDER
P.O. BOX 1276
PORTLAND, ME 04104
207 775 2696

MECHANICAL & ELECTRICAL ENGINEERS:

BENNETT ENGINEERING
P.O. BOX 297
FREEPORT, ME 04032
207 865 1800

CONSTRUCTION MANAGER:

RAINBOW CONSTRUCTION
150 OCEAN HOUSE ROAD
CAPE ELIZABETH, ME 04107
207 799 3051

LANDSCAPE ARCHITECT:

ANTHONY MUENCH
94 COMMERCIAL STREET
PORTLAND, ME 04101
207 761 6621

CIVIL ENGINEER:

CASCO BAY ENGINEERING
424 FORE STREET
PORTLAND, ME 04101
207 842 2800

PROJECT DATA & CODES

PORTLAND ZONING CODE

		REFERENCE
R6 Multifamily dwellings		
Dimensional requirements		14-139
Minimum lot size: 2,000 sf	25 Monument lot size: **9,989 sf**	
Minimum dwelling unit: 725 sf	Proposed: Four Units: **1,950 sf** each, One Unit **3,670**	
Street Frontage: 20 ft	25 Monument lot size: **67 ft**	
Minimum front yard setback: 5 ft	Proposed front yard setback: varies with min. **15'-8"** to bay	
Minimum rear yard setback: 10 ft	Proposed rear yard setback: **15'-2" ft**	
Minimum side yard setback: 5 ft	Proposed side yard setback: South **10 ft**, North **6.5 ft**	
Landscaped open space: 20%	Proposed open space: **43%**	
Maximum lot coverage: 60%	Proposed lot coverage: **56.5%**	
Maximum height: 45'	Proposed height: **43'-6"**	
Structure Setbacks	Portions of a structure above 35 ft shall be no closer than 10 ft from the side property line and no closer than 15 ft from the rear property line when such property line abuts a residential zone.	
Definitions		
Subdivision shall also include the division of a new structures on a tract or parcel of land into three (3) or more dwelling units		
Height Limits		
Roof structure. Roof structures for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, water tanks may be erected above the height of limitation herein prescribed for buildings.		14-430
Parking		
No spaces required for first three (3) dwelling units, two parking spaces required	Parking for 7 or 8 cars provided depending on Handicap Parking need	Section 20: 14-332.1 ex.(k).4
Uses requiring off-street bicycle parking		14-332.3
Off-street parking for bicycles required	Parking of bicycles provided	

BUILDING INFORMATION

SQUARE FOOTAGE:	TOTAL BUILDING: 20,122 SF
BASEMENT:	1,128 SF: STORAGE, ELEVATOR MACHINE ROOM
1ST FLOOR:	4,764 SF: PARKING, LOBBY, UTILITY ROOMS
2ND FLOOR:	4,744 SF: TWO DWELLING UNITS
3RD FLOOR:	4,744 SF: TWO DWELLING UNITS
4TH FLOOR:	4,266 SF: ONE DWELLING UNIT
ROOF:	840 SF ROOF DECK, MECHANICAL EQUIPMENT, ELEVATOR PENTHOUSE

WATER MAINS: Monument Street, 25 feet from property line to the north

SITE ACCESS: Monument Street

RELEVANT CODES

INTERNATIONAL BUILDING CODE - 2015 (MUBEC) — REFERENCE

USE & OCCUPANCY:

IBC: R-2 (APT FLOORS 2-4)	Residential Group R-2	310.4
IBC: S2 (PARKING - FLOOR 1)	Low Hazard Storage	311.3

CONSTRUCTION TYPES:

IBC Type VA	R-2: Type VA: allowable number of stories above ground: 4 with automatic sprinkler system installed in accordance with 903.3.1.1 or 903.3.1.2 for S13R	Table 504.4

BUILDING AREA:

R-2, Type VA Construction	Allowable area for single occupancy, multi-story building: [12,000+(7000x0)]x4= 48,000	506.2.3 & Table 506.2
	One hour separation is required between R-2 and S-2 occupanies as an accessory occupancy	Table 508.4

R-2 SPECIAL REQUIREMENTS: 420

Separation Walls	Walls separating dwelling units shall be constructed as Fire Partitions in accordance with Section 708	420.2
Horizontal Separation	Floor assemblies separating dwelling units shall be constructed as Horizontal Assemblies in accordance with Section 711	420.3
Automatic Sprinkler Systems	Group R occupancies shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.2.8	420.5
Fire Alarm Systems	Fire alarm systems shall be provided in R-2 in accordance with Section 907.2.8	420.6
Smoke Alarm System	Single or multiple station smoke alarms shall be provided in R-2 in accordance with Section 907.2.11	420.6

FIRE RESISTANT RATINGS Type VA Construction:

Structual Frame:	1 hour	Table 601
Bearing Walls (exterior & interior):	1 hour	Table 601
Nonbearing walls and partitions:	Exterior: 5≤X<10: 1 hour	Table 602
Nonbearing walls and partitions:	Exterior: 10≤X<30: 1 hour	Table 602
Nonbearing walls and partitions:	Interior: 0 hours	Table 601
Floor construction & secondary members: 1 hour		Table 601
Roof construction & secondary members: 1 hour		Table 601

FIRE PARTITONS:

Corridor fire partitions (non-bearing): 1/2 hour		Table 1020.1 & 708.1.3
Corridor doors: .33 hour in 1- hour wall		Table 716.5
Corridor doors to have smoke control		716.5.3.1
Shaft enclosures: fire-resistant rating of not less than 2 hours where connecting 4 stories or more.		713.4
	Shaft enclosures shall be constructed as fire barriers in accordance with 707	713.5

FIRE PROTECTION:

Automatic Sprinkler Supevisory Service		901.6.1
NFPA 13R Sprinkler System	Group R occupancies up to and including 4 stories and less than 60' in height and protection to include exterior balconies	903.3.1.2
Fire alarm control unit supervision		903.4
Class 1 standpipe in stairwells		905.3.1.1 & 905.4
Portable fire extinguishers required		906.1.1
Manual fire alarm system is required		907.2.9.1.1
Fire alarm and smoke alarms systems required in Group R-2		907.2.9.2
Visual alarm notification:	provide dwelling units in R-2 the capacity to support visible alarm appliances	907.5.2.3.3
	provide in all public use and common use areas	907.5.2.3.1
Single and multi- station smoke alarms required		907.2.9.2
Fire department connections required (as directed by local fire dept.)		

MEANS OF EGRESS:

R-2 OCCUPANT LOAD (RESIDENTIAL)		
Second & Third Floors	Proposed Units: 1,950 sf each / 200 = 9.75 people per unit, 19.5 per floor	Table 1004.1.2
Fourth Floor	3,670 sf / 200 = 18.35 people occupancy	
Roof Deck area	840 sf / 200 = 4.2 people occupancy	
S-2 OCCUPANT LOAD (PARKING)		
First Floor	4,611 sf / 200 = 23 people	
Spaces with One Exit or Exit Access	R-2, maximum load of 10 people, maximum common path of egress travel: 125 feet with sprinkler system	Table 1006.2.1
Stories with One Exit or Access to One Exit for R-2 Occupancies	Basement, first, second, or third story above grade plane, maximum of 4 dwelling units per floor, maximum common path of egress travel distance: 125 feet	Table 1006.3.2(1)
Single Exits	Rooms, areas, and spaces complying with Section 1006.2.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to	1006.3.2
Two Exits	Fourth Story above grade plane and higher require 2 exits	Table 1006.3.2(1)
Minimum Stair Width	44" except stairways serving an occupant load of less than 50 shall have a width of not less than 36".	1011.2 + 1011.2.1
Exit Discharge to a public way through an Egress Court	minimum width of 44" required width, 7 feet required height, where less than 10 feet in width the egress court walls shall have no less than 1-hour fire-resistance-	1028.4

ACCESSIBLE MEANS OF EGRESS:

Accessible means of egress required		1009
Elevator as part of an accessible means of egress		1009.4
	Areas of Refuge not required in buildings equipped throughout with an automatic sprinkler system	1009.4 ex. 2
	Two way communication system required at each elevator landing	1009.8

NFPA 101 - 2009

USE & OCCUPANCY:

New Apartment Building		6.1.8.1.5
Storage	Enclosed Garage: Ordinary hazard	6.1.13.1 + 6.2.2.3
Separation between occupanicies is 2 hours (reduced to 1 hour because sprinklered & supervised		Table 6.1.14.4.1.b
Residential above Storage permitted where sprinklered		30.1.2.3

CONSTRUCTION TYPES:

NFPA type V 111		Table A.8.2.1.2

FIRE RESISTANT RATINGS Type V 111 Construction:

Exterior Bearing Walls	1 hour
Interior Bearing Walls	1 hour
Columns	1 hour
Foor-Ceiling Assemblies	1 hour
Roof - Ceiling Assemblies	1 hour
Interior Nonbearing Walls	0 hours
Exterior Nonbearing Walls	0 hours

REQUIREMENTS:

Apartment Building	No Special Requirements	30.1.6
Storage Occupancy	No Special Requirements	42.1.6

STAIRS:

Where total occupant load of all stories served by the stair is fewer than 50, **minimum width is 36"** (with projections no more than 4-1/2 inches at or below handrail height on each side.		7.2.2.2.1.2(A)
	Secondary Stair Occupant load = 23 (Fourth Floor and Roof only)	
Where total occupant load of all stories served by the stair is greater than 50 and less than 2000, **minimum width is 44"** (with projections no more than 4-1/2 inches at or below handrail height on each side.		7.2.2.2.1.2(B)
	Main Stair Occupant load = 62	
Max height of risers 7"		Table 7.2.2.2.1.1(a)
Min height of risers 4"		
Min tread depth 11"		
Min. headroom 6'-8"		
Max. height between landings 12'		
Landings shall have a dimension, measured in the direction of travel, that is not less than the width of the stair.		7.2.2.3.2.3
Handrails	Not less than 34" and not greater 38" above the tread	7.2.2.4.4.1
	Provide min. 2 1/4" min. clearance between rail & wall.	7.2.2.4.4.5
Stairway signage shall comply with 7.2.2.5.4.1 parts A thru M		7.2.2.5.4

AREA OF REFUGE:

Consisting of a story protected by supervised automatic sprinkler system shall have:		7.2.12.1.1
	1. Each elevator landing provided with two-way communicating system to fire command center or central control point	
	2. Directions for use of Two-way Communication System	
	3. Two-way Communication System includes both audible and visible signals	

SINGLE MEANS OF EGRESS ALLOWED: 30.2.4.4

A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided all of the following conditions are met:

1. Fewer than four dwellings units per story
2. Building has approved supevised sprinkler system
3. Exit stairway does not serve more than one-half story below the level of exit discharge.
4. Travel distance from entrance door of any dwelling unit to an exit does not exceed 35 feet.
5. Exit stairway is completely enclosed and has a min. 1 hour fire rating
6. All openings between exit stariway and building have self-closing doors and min. 1 hour fire rating.
7. All corridors serving as access to exits have min. 1 hour fire rating.
8. Horizontal & vertical separation having a min. 1/2 hour fire rating is provided between dwelling units

FIRE PARTITONS:

Trash Room & Storage Rooms Outside of Dwelling Units	1 Hour and sprinklered	Table 30.3.2.1
Corridor Walls	1/2 Hour (sprinklered)	30.3.6.1.2
Corridor Doors	20 min. rated (.33 hours), Self- closing and self latching	30.3.6.2.1 + 30.3.6.2.3
Dwelling Unit Demising Walls	1/2 hour (sprinklered)	30.3.7.2

SCOPE OF WORK

NEW FOUR STORY BUILDING (20,122 SQ. FT) WITH GROUND LEVEL GARAGE FOR EIGHT CARS. TWO HOUSING UNITS EACH ON 2ND AND 3RD FLOOR, WITH PENTHOUSE UNIT ON 4TH FLOOR.

LIST OF DRAWINGS

A.0	TITLE SHEET
C. 1	PROPOSED & EXISTING SITE PLAN
C.2	CIVIL DETAILS
C.3	EROSION CONTROL
C.4	DRIVEWAY & SIDEWALK DETAILS
L. 1	LANDSCAPE PLANS
A. 1	FLOOR PLANS, RENDERING
A.2	EXTERIOR ELEVATIONS
A.3	SITE LIGHTING
M1.6	ROOF MECHANICAL PLAN

VICINITY MAP



PORTLAND MAINE — NO SCALE

PLANNING BOARD REVIEW SET
NOT FOR CONSTRUCTION

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF WHIPPLE CALLENDER ARCHITECTS. IT SHALL NOT BE USED FOR ANY OTHER PURPOSE THAT FOR WHICH IT IS SPECIFICALLY FURNISHED

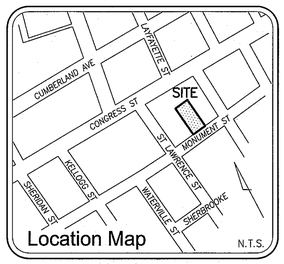
MONUMENT PARTNERS, LLC
PORTLAND, ME
25 MONUMENT STREET

WHIPPLE CALLENDER ARCHITECTS
136 PLEASANT AVE.
PORTLAND, ME 04103
P 207.775.2696
F 207.775.3631
www.whipplecallender.com

MARK	DESCRIPTION	DATE

DATE: 4/18/18
CHECKED BY: AEC, JNW
DRAWN BY: JR, AEC, JNW
JOB: 17-KEE
SHEET TITLE: TITLE SHEET

A.0



Legend:

- CAPPED IRON ROD SET
- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- WATER VALVE OR SHUTOFF
- GAS VALVE
- DECIDUOUS TREE
- FENCE
- CURB
- LANDSCAPED AREA
- OHW — OVERHEAD WIRES
- W — WATER LINE
- G — GAS LINE
- SS — SANITARY SEWER
- CONC. — CONCRETE
- L/S — LANDSCAPED AREA
- CIRF — CAPPED IRON ROD FOUND
- IPF/IRF — IRON PIPE OR ROD FOUND
- P.O.B. — POINT OF BEGINNING
- 000/000 — DEED BOOK AND PAGE
- N/F — NOW OR FORMERLY
- A — POSSIBLE ENCROACHMENT

Plan References:

1. "RECORDING PLAT AT 89 ST. LAWRENCE STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD LAWRENCE W. GROSS DECEMBER 8, 2015 OWEN HASKELL, INC. JOB NO. 2014-011P"

2. "STANDARD BOUNDARY SURVEY ON 118 CONGRESS STREET, PORTLAND, MAINE MADE FOR THERIAULT/LANDMAIN ASSOCIATES JULY 13, 1998 OWEN HASKELL, INC. JOB NO. 98168P" REVISED 10-25-13.

3. "CONDOMINIUM PLAN 118 ON MUNJOY HILL, 118 CONDOMINIUMS, LLC, 118 CONGRESS STREET, PORTLAND, ME NOVEMBER 13, 2013 PINKHAM & GREER" RECORDED IN PLAN BOOK 215, PAGE 240.

4. "CONDOMINIUM PLAT ATLANTIC STREET CONDOMINIUMS 94 ATLANTIC STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD ATLANTIC STREET DEVELOPMENT, LLC NOVEMBER 15, 2006 OWEN HASKELL, INC. JOB NO. 99103P" RECORDED IN PLAN BOOK 207, PAGE 175.

5. "STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY ON ATLANTIC STREET, PORTLAND, MAINE MADE FOR EDWARD & KAREN WALSH JUNE 3, 1999 OWEN HASKELL, INC. JOB NO. 99103P" REVISED 6/18/99.

6. "PLAN OF LAND IN PORTLAND, MAINE SURVEYED FOR STANDARD OIL COMPANY OF NEW YORK DEC. 1926 BY E. C. JORDAN & CO."

Notes:

1. OWNER OF RECORD: MELINDA Y.M. MCCLURE, RAYMOND A. MORROW, ESTHER M. MORROW, AND MARY V. CARD, 54 ASPEN AVENUE, SOUTH PORTLAND, MAINE; CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 32134, PAGE 38 AND BOOK 31472, PAGE 99.

2. LOCUS IS SHOWN AS PORTLAND PROPERTY MAP 16 BLOCK D LOT 9.

3. BEARINGS ARE GRID NORTH AS BASED ON MARKERS FOUND ON PLAN REFERENCE 1 AND COORDINATES PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.

4. THE 1852 EXCEPTION (236/192) SEEMS TO INDICATE THAT THE REAR LINE SHOULD BE PARALLEL TO MONUMENT STREET. HOWEVER, THE DEED IN 1850 OF THIS PARCEL SAYS IT IS BOUNDED BY A CONTEMPLATED STREET. A REAR LINE PARALLEL WITH MONUMENT STREET DOES NOT MATCH THE DIMENSIONS FOR THE LOTS ON CONGRESS STREET, WHEREAS THE LINE SHOWN HEREON MATCHES THE DIMENSIONS ON THE ABUTTING DEEDS AND PLAN REF.5.

5. NO EVIDENCE WAS OBSERVED OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS, RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS. NO PROPOSED CHANGES IN STREET LINES ARE KNOWN BY THIS SURVEYOR.

6. UNDERGROUND UTILITIES MARKED BY DIGSMART.

7. FENCES: FENCE ALONG COOSE AND SILVERMAN, FROM STREET TO IPF, IS OWNED BY MCCLURE ET.AL., REMAINDER IS NOT; FENCE ALONG GROSS AND COLBY APPEARS TO BE THEIRS; STOCKADE FENCE ALONG 118 CONGRESS STREET CONDOMINIUMS APPEARS TO BE THEIRS; CHAINLINK FENCE AND GATE AT ALBERT-KNOPP APPEARS TO BELONG TO MCCLURE ET.AL.; FENCE ALONG ALBERT-KNOPP AND WHITAKER APPEAR TO BE THEIRS; FENCE ALONG ATLANTIC STREET PARCELS BELONGS TO MCCLURE ET.AL., PARTLY ON PROPERTY LINE.

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.

Flood Zone Note:

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 230051 0014B, WHICH BEARS AN EFFECTIVE DATE OF JULY 17, 1986 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

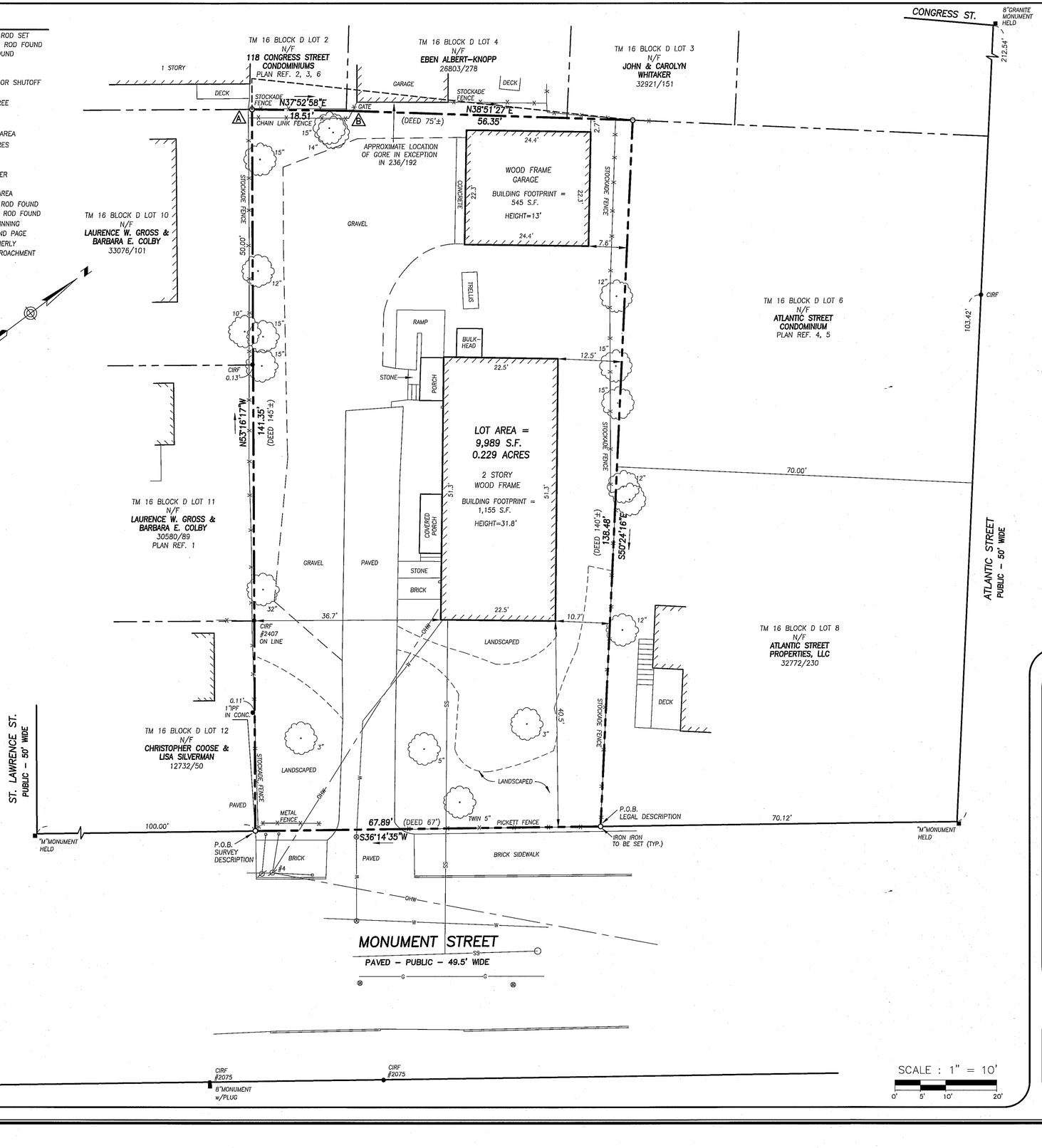
Zoning Information:

NONE PROVIDED BY TITLE INSURER

Possible Encroachments:

A CHAINLINK FENCE ONTO ABUTTER 0.6'±

B GATE ONTO ABUTTER



SCALE : 1" = 10'

0' 5' 10' 20'

Legal Description

A CERTAIN LOT OR PARCEL OF LAND WITH THE BUILDINGS THEREON LOCATED ON MONUMENT STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND THE STATE OF MAINE, MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHERLY CORNER OF A LOT OF LAND CONVEYED BY WILLIAM HOLT TO ONE DOW, ON THE NORTHWESTERLY SIDE OF A CONTEMPLATED STREET AS NOW FENCED, DESIGNED TO BE THE CONTINUATION OF MONUMENT STREET: THENCE RUNNING NORTHWESTERLY ON THE LINE OF SAID DOW'S LAND AND LAND BELONGING TO THE WIDOW BRAZIER ONE HUNDRED AND FORTY FEET TO JUDAH LUNT'S LAND; THENCE SOUTHWESTERLY BY SAID LUNT'S LAND AND LAND BELONGING TO ONE CARLETON SEVENTY-FIVE FEET TO THOMAS WARREN'S LAND; THENCE SOUTHEASTERLY ON THE LINE OF SAID WARREN'S LAND OR LAND RECENTLY OWNED BY HIM, ONE HUNDRED AND FORTY-FIVE FEET TO THE AFORESAID CONTEMPLATED STREET; THENCE NORTHEASTERLY ON THE LINE OF SAID STREET SIXTY-SEVEN FEET TO THE FIRST BOUND, EXCEPTING FROM SAID PREMISES THE PORTION CONVEYED BY THE CITY OF PORTLAND TO SAMUEL L. CARLETON BY QUITCLAIM DEED, DATED MARCH 26, 1852, AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 236, PAGE 192.

Survey Description

A CERTAIN PARCEL OF LAND SITUATED ON THE NORTHWESTERLY SIDE OF MONUMENT STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, AND STATE OF MAINE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE EASTERNMOST CORNER OF THE LAND NOW OR FORMERLY OF CHRISTOPHER COOSE AND LISA SILVERMAN (SEE BOOK 12732, PAGE 50) ON THE NORTHWESTERLY SIDE OF MONUMENT STREET, WHICH POINT IS LOCATED 100.00 FEET NORTHEASTERLY OF THE POINT OF INTERSECTION OF THE NORTHWESTERLY SIDELINE OF MONUMENT STREET AND THE NORTHEASTERLY SIDELINE OF ST. LAWRENCE STREET, ALL AS SHOWN ON "ALTA/NSPS LAND TITLE SURVEY 25 MONUMENT STREET, PORTLAND, MAINE MADE FOR MONUMENT PARTNERS, LLC DATED JANUARY 13, 2017 OWEN HASKELL, INC. JOB NO. 2016-378P";
THENCE, N 53° 16' 17" W BY SAID LAND AND BY THE LAND NOW OR FORMERLY OF LAURENCE W. GROSS AND BARBARA E. COLBY (BOOK 30580, PAGE 89 AND BOOK 33076, PAGE 101) A DISTANCE OF 141.35 FEET TO THE LAND OF 118 CONGRESS STREET CONDOMINIUMS;
THENCE, N 37° 52' 58" E BY SAID LAND 18.51 FEET TO THE LAND NOW OR FORMERLY OF EBEN ALBERT-KNOPP (BOOK 26803, PAGE 278);
THENCE, N 38° 51' 27" E BY SAID LAND AND BY THE LAND NOW OR FORMERLY OF JOHN & CAROLYN WHITAKER (BOOK 32921, PAGE 151) A DISTANCE OF 56.35 FEET TO THE LAND NOW OR FORMERLY OF ATLANTIC STREET CONDOMINIUM;
THENCE, S 50° 24' 16" E BY SAID LAND AND BY THE LAND NOW OR FORMERLY OF ATLANTIC STREET PROPERTIES, LLC (BOOK 32772, PAGE 230) A DISTANCE OF 138.48 FEET TO MONUMENT STREET;
THENCE, S 36° 14' 35" W BY MONUMENT STREET 67.89 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED LAND IS THE SAME LAND AS DEPICTED HEREON AND THE SAME LAND AS DESCRIBED IN THE DEEDS INTO THE CURRENT OWNERS RECORDED IN BOOK 32134, PAGE 38, AND IN BOOK 31472, PAGE 99.

Schedule B Section 2 Exceptions:

CHICAGO TITLE INSURANCE COMPANY
COMMITMENT TITLE NO. 121516-01 EFFECTIVE DATE: DECEMBER 12, 2016

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. NON SURVEY ITEM

2. RIGHTS, FACTS, INTERESTS OR CLAIMS OF PRESENT TENANTS, LESSEES OR PARTIES IN POSSESSION WHICH ARE NOT SHOWN BY THE PUBLIC RECORDS, BUT WHICH COULD BE ASCERTAINED BY AN INSPECTION OF SAID LAND OR BY MAKING INQUIRY OF PERSONS IN POSSESSION THEREOF. NON SURVEY ITEM

3. ANY LIABILITY FOR MECHANICS' OR MATERIALMEN'S LIENS. NON SURVEY ITEM
4. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, ADVERSE CIRCUMSTANCE OR OTHER STATE OF FACTS AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE SURVEY OF THE LAND. THE TERM "ENCROACHMENT" INCLUDES ENCROACHMENTS OF EXISTING IMPROVEMENTS LOCATED ON THE LAND ONTO ADJOINING LAND, AND ENCROACHMENTS ONTO THE LAND OF EXISTING IMPROVEMENTS LOCATED ON ADJOINING LAND. SEE "POSSIBLE ENCROACHMENTS"

5. REAL ESTATE TAXES AND ASSESSMENTS. NON SURVEY ITEM

6. WATER AND SEWER CHARGES. NON SURVEY ITEM

7. THE EXACT ACREAGE OR SQUARE FOOTAGE OF THE LAND WILL NOT BE INSURED.
LOT AREA = 9,989 S.F. OR 0.229 ACRES

8. 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 ADJACENT STREETS, ROADS AND WAYS. NO PORTION OF THE LAND DESCRIBED IN THE SURVEY DESCRIPTION IS LOCATED WITHIN MONUMENT STREET.

9. RIGHTS OF THE TENANTS IN POSSESSION AT WILL OR UNDER UNRECORDED LEASES.
NON SURVEY ITEM

ALTA / NSPS Land Title Survey

25 Monument Street
Portland, Cumberland County, Maine
Made for
Monument Partners, LLC

Surveyor's Certification

TO: MONUMENT PARTNERS, LLC AND CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 11, 13, 14, 16, 17, 19 AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 11, 2017.

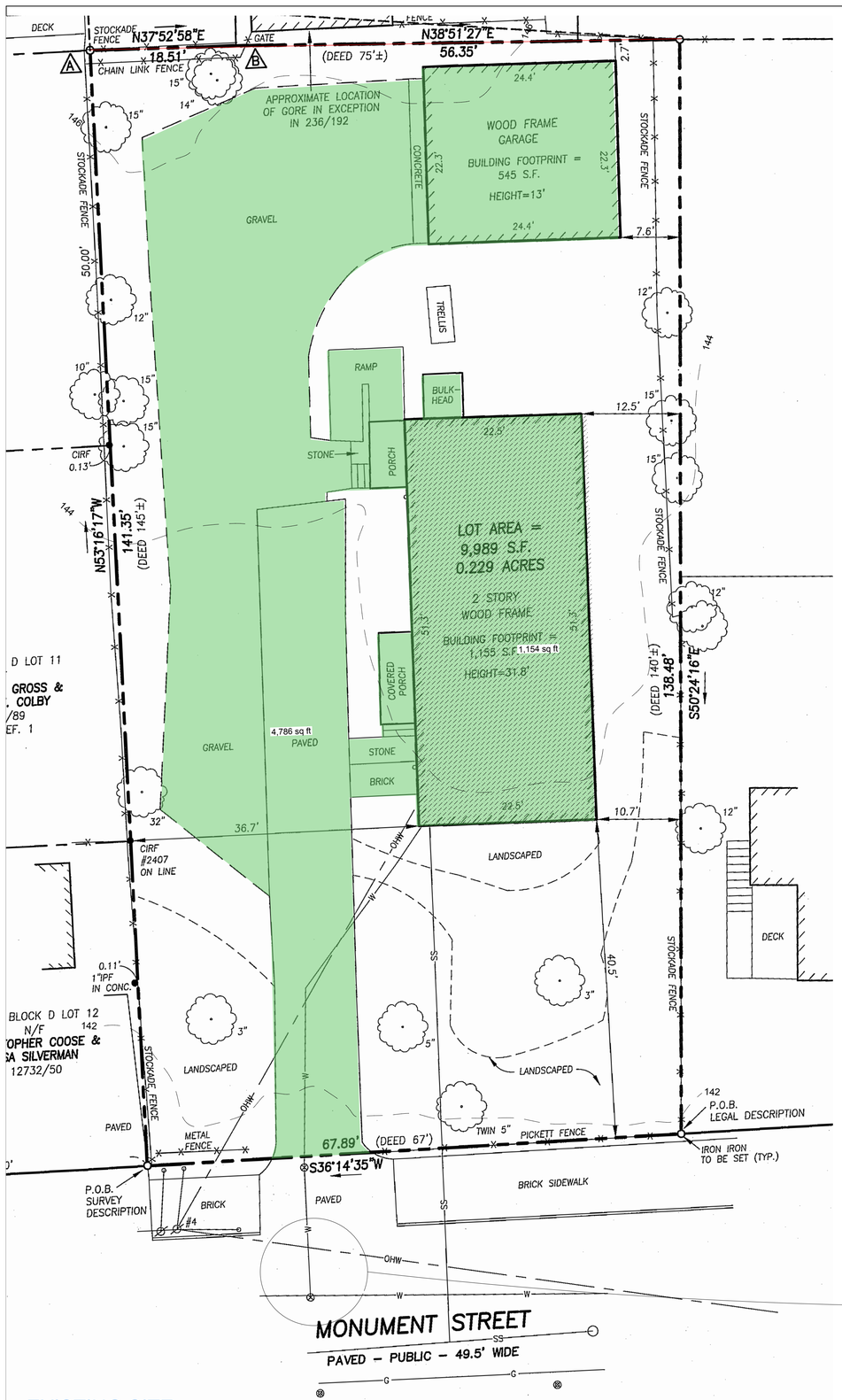
JOHN C. SCHWANDA
PROFESSIONAL LAND SURVEYOR NO. 1252
IN THE STATE OF MAINE

DATE OF PLAT OR MAP: JANUARY 13, 2017
REVISION DATE: JANUARY 18, 2017

STATE OF MAINE — JOHN C. SCHWANDA — NO. 1252 — REGISTERED LAND SURVEYOR

OHI JOB NO. 2016-378P

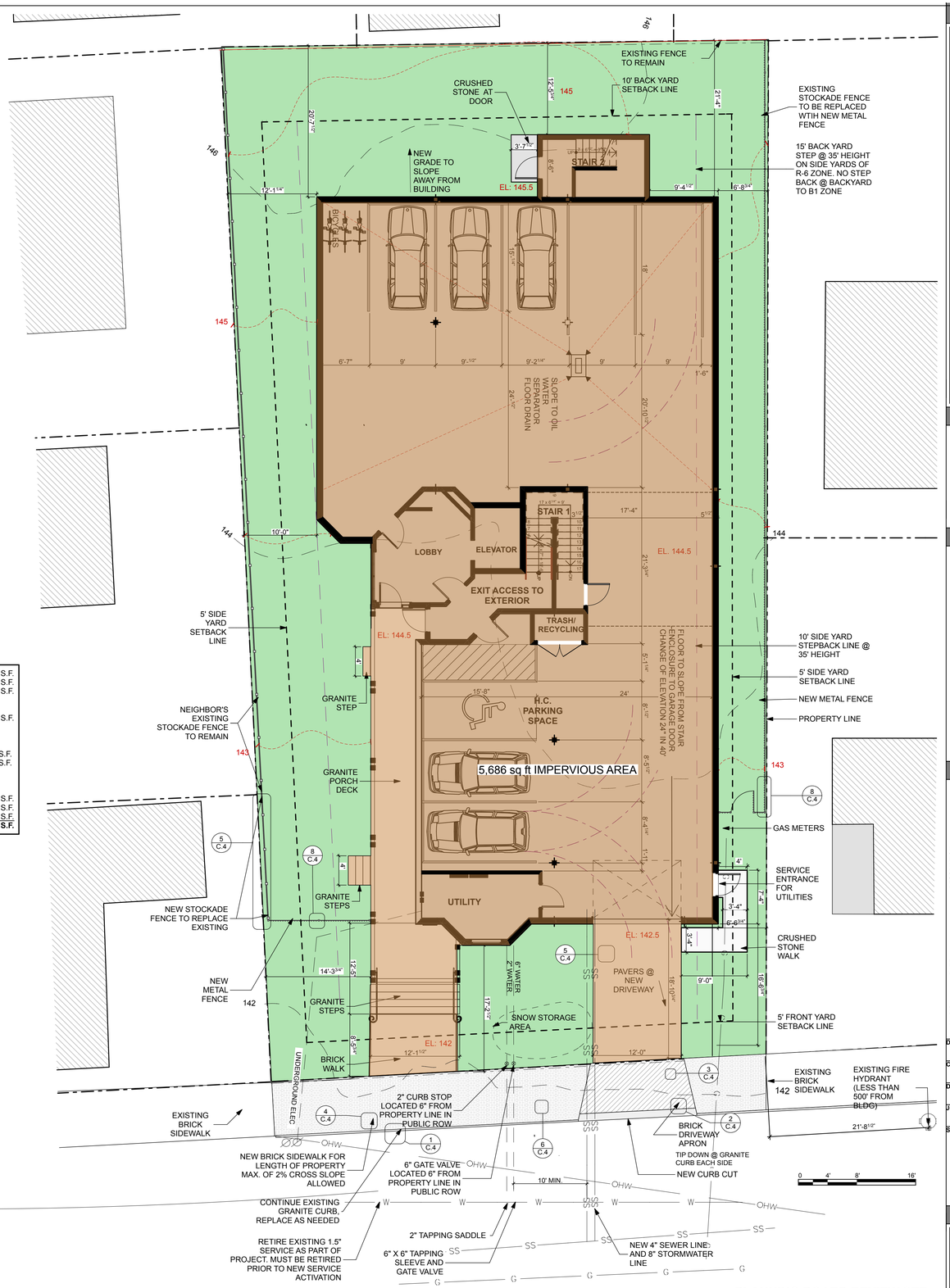
OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10
FALMOUTH, MAINE 04105
Tel. (207) 774-0424 www.owenhaskell.com



EXISTING SITE

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

TOTAL SITE AREA:	9,989 S.F.
EXISTING IMPERVIOUS AREA:	4,786 S.F.
NEW IMPERVIOUS AREA: (INCLUDES DRIVEWAYS, WALKWAY BUT NOT CRUSHED STONE PATH)	5,686 S.F.
NET DIFFERENCE:	900 S.F.
LOT COVERAGE: (INCLUDES COVERED PORCH)	57%
ALLOWABLE MAX. LOT COVERAGE:	60%
LANDSCAPED OPEN SPACE:	4303 S.F.
REQUIRED (20%)	1996 S.F.
GARAGE OPENING	12'
ALLOWED 40% OF FACADE:	19'
BUILDING FOOTPRINT	5,368 S.F.
PAVING	318 S.F.
OPEN SPACE	4,303 S.F.
TOTAL LOT SIZE	**9,989 S.F.**



PROPOSED SITE

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

PLANNING BOARD REVIEW SET
NOT FOR CONSTRUCTION

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF WHIPPLE CALLENDER ARCHITECTS. IT SHALL NOT BE USED FOR ANY OTHER PURPOSE THAT FOR WHICH IT IS SPECIFICALLY FURNISHED

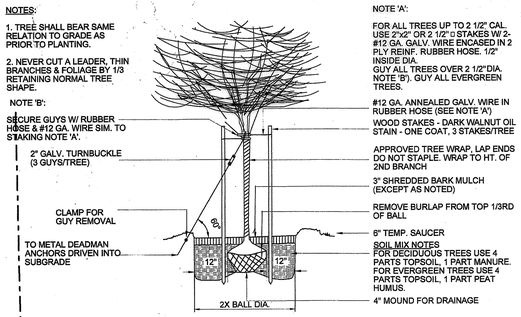
MONUMENT PARTNERS, LLC
25 MONUMENT STREET
PORTLAND, ME

WHIPPLE CALLENDER ARCHITECTS
136 PLEASANT AVE.
PORTLAND, ME 04103
P 207.775.2696
F 207.775.3631
www.whipplecallender.com

MARK	DESCRIPTION	DATE

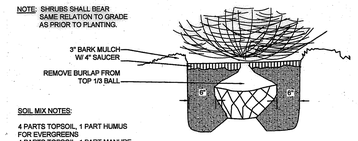
DATE: 4/19/18
CHECKED BY: AEC, JWW
DRAWN BY: JR, AEC, JWW
JOB: 17-KEE
SHEET TITLE: EXISTING & PROPOSED SITE PLAN

C.1



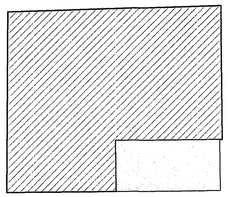
1 / L-1 NTS

TREE PLANTING DETAIL



2 / L-1 NTS

SHRUB PLANTING DETAIL



PLANTING NOTES

1. The contractor shall supply all plants in quantities sufficient to complete the work shown on plan. Any discrepancies between quantities shown on plant list and those required by this drawing shall not entitle contractor to additional renumeration.
2. Any plant substitutions must be approved by the owner.
3. Any tree or shrub which comes over or under any utility shall be relocated on the site by the landscape architect.
4. All lawn areas to have 6" of topsoil unless noted otherwise.
5. All trees and shrubs shall be placed in the designated areas as shown on the plan and before planting shall be approved by the landscape architect.
6. The contractor shall relocate any tree or shrub as directed by the landscape architect.
7. All plant material installed shall meet the specifications of the American Standard for Nursery Stock (latest edition) as set forth by the American Association of Nurserymen.
8. The landscape contractor shall replace or repair to original condition any and all utilities, paving, curbing, etc., damaged as a result of their operations at no additional cost to the owner.

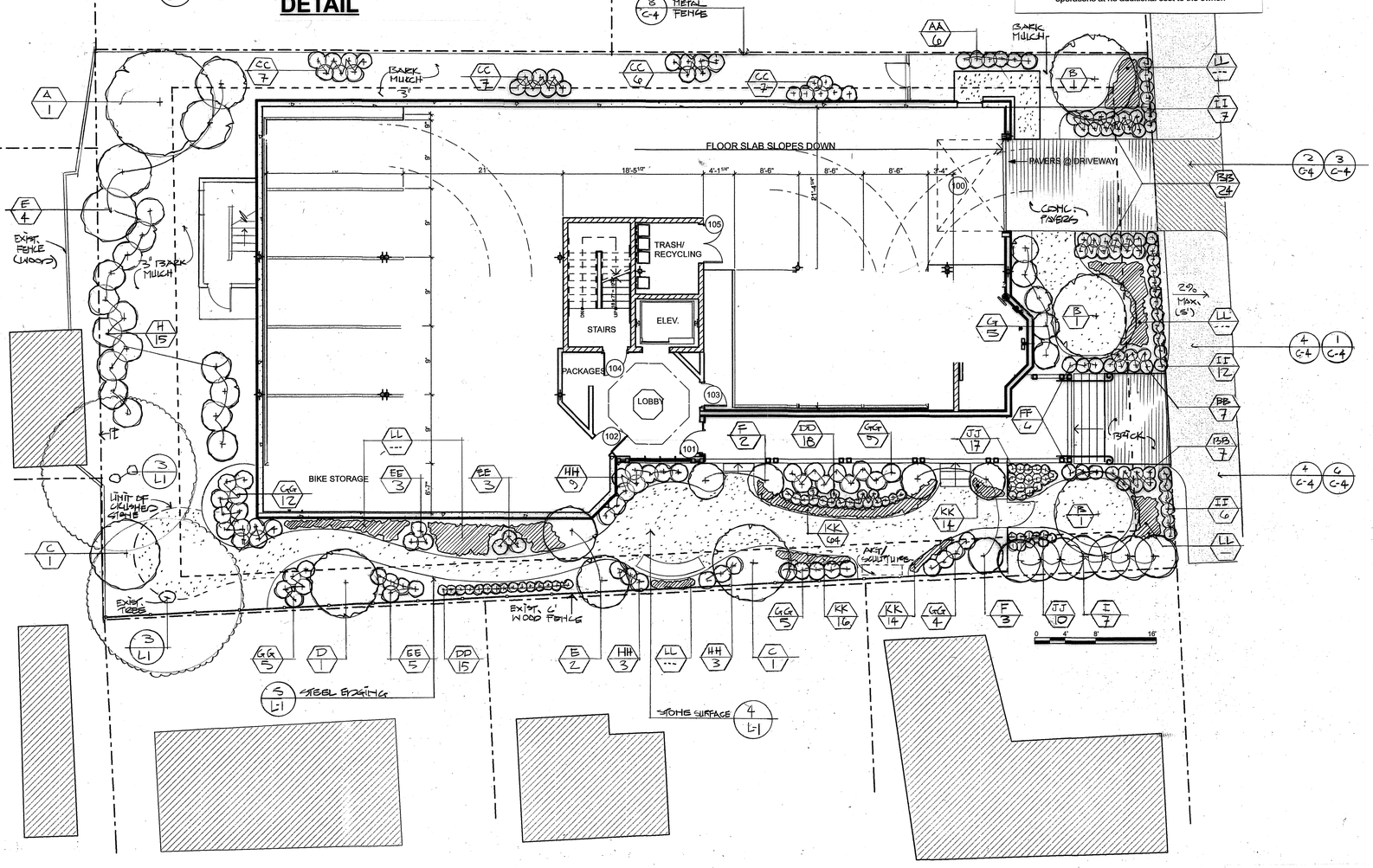
PLANT LIST

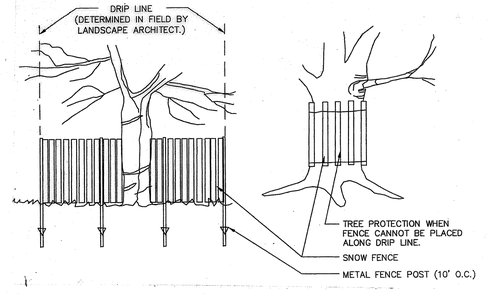
TREES & SHRUBS

KEY	COMMON & BOTANICAL NAME	SIZE	ROOT	QTY	NOTES
A	SHADBLOW AMELANCHER X.GRANDIFLORA 'Autumn Brilliance'	6-7' Ht.	B&B	1	
B	COCKSPUR THORNLESS HAWTHORN C. CRUSGALLI var. INERMIS	2" Dia.	B&B	3	
C	PAGODA DOGWOOD C. ALTERNIFOLIA	6-8' Ht.	B&B	2	
D	CORNELIAN CHERRY C.MAS	5-6' Ht.	B&B	1	
E	MOHICAN VIBURNUM V. LANTANA 'Mohican'	4-5' Ht.	B&B	6	
F	SHASTA VIBURNUM V. PLICATUM Var. TOMENTOSUM 'SHASTA'	3'-4' HT.	B&B	5	
G	SHASTA VIBURNUM V.PLICATUM VAR. Tomentosum 'Summer Snowflake'	#5	B&B	5	
H	COMPACT REDTWIG DOGWOOD C. SERICEA 'Isanti'	#2	Cont.	15	
I	AMUR PRIVET L. AMURENSIS	#5	Cont.	7	

PERENNIALS

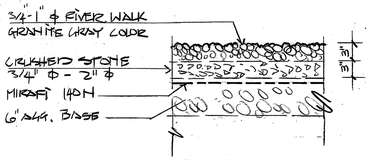
			QTY	NOTES
AA	SWITCH GRASS PANICUM VIRGATUM ' Cheyenne Sky'	——	6	"
BB	DAYLILY VAR. HEMEROCALLIS	PTD	38	BLOOM IN JULY THRU SEPT 18" O.C.
CC	HOSTA 'BIG DADDY'	——	27	
DD	ASTILBE FALSE SPIREA VAR.		33	
EE	LADY FERN FILIX-FEMINA	——	11	
FF	MAIDEN HAIR FERN ADIANTUM PEDATUMLAVEN	CONT.	6	
GG	HAY SCENTED FERN DENNSTAEDTIA PUNCTILOBA	CONT.	35	
HH	OSTRICH FERN MATTEUCCIA STRUTHIOPTERIS	CONT.	15	
II	LAVENDER LAVANDULA ANGUSTIFOLIUM 'Hidcote superior'	——	25	
JJ	PERIWINKLE VINCA MINOR	——	27	
KK	WILD GINGER ASARUM CANADENSE	——	123	@ 9" O.C.
	ECHINACEA PHLOX RUDBECKIA CAMPANULA	——		MIXED VARIETY





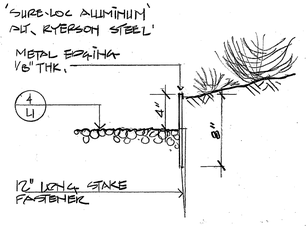
3 / L-1 NTS

TREE PROTECTION DETAIL



4 / L-1 NTS

STONE SURFACE DETAIL



5 / L-1 NTS

STEEL EDGING DETAIL

Anthony Muench Landscape Architect
94 Commercial Street Portland, Maine 04101 207.761.6621
amuench@maine.rr.com

REGISTERED LANDSCAPE ARCHITECT ANTHONY MUENCH No. 7 3-19-18 State of Maine

PLANNING BOARD REVIEW SET
NOT FOR CONSTRUCTION

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MONUMENT PARTNERS, LLC
25 MONUMENT STREET PORTLAND, ME

WHIPPLE CALLENDER ARCHITECTS

136 PLEASANT AVE.
PORTLAND, ME 04103
P 207.775.2696
F 207.775.3631
www.whipplecallender.com

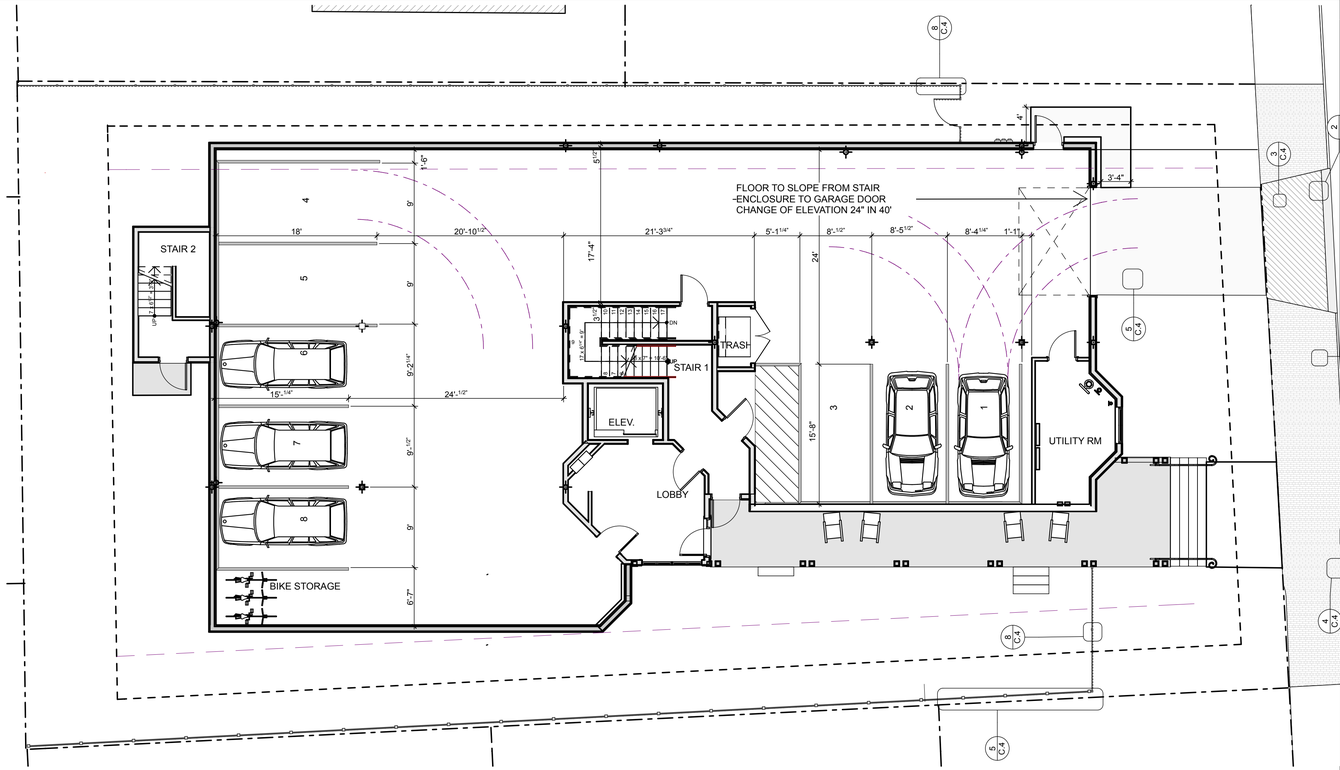
MARK	DATE	DESCRIPTION
	3-19-18	P.B. SUBMISSION

DATE: 1/8/18
CHECKED BY: AEC, JWW
DRAWN BY: JR, AEC, JWW
JOB: 17-KEE
SHEET TITLE: LANDSCAPE PLAN

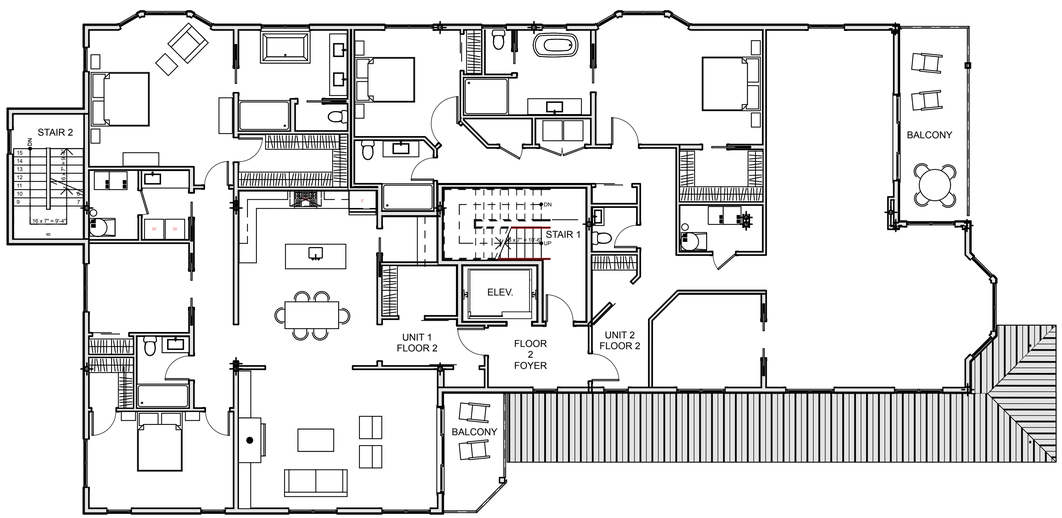
L.1



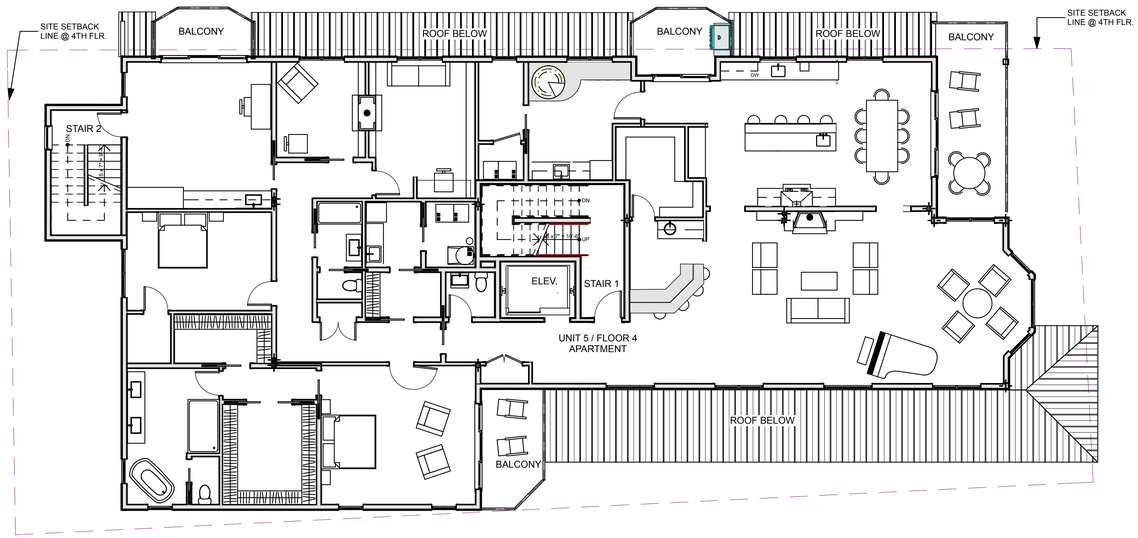
1 A.1 25 MONUMENT STREET VIEW



2 A.1 FIRST FLOOR
SCALE: 1/8" = 1'-0"



3 A.1 TYPICAL PLAN (SECOND & THIRD FLOORS)
SCALE: 1/8" = 1'-0"



4 A.1 FOURTH FLOOR PLAN
SCALE: 1/8" = 1'-0"

PLANNING BOARD REVIEW SET
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MONUMENT PARTNERS, LLC
25 MONUMENT STREET
PORTLAND, ME

WHIPPLE
CALLENDER
ARCHITECTS

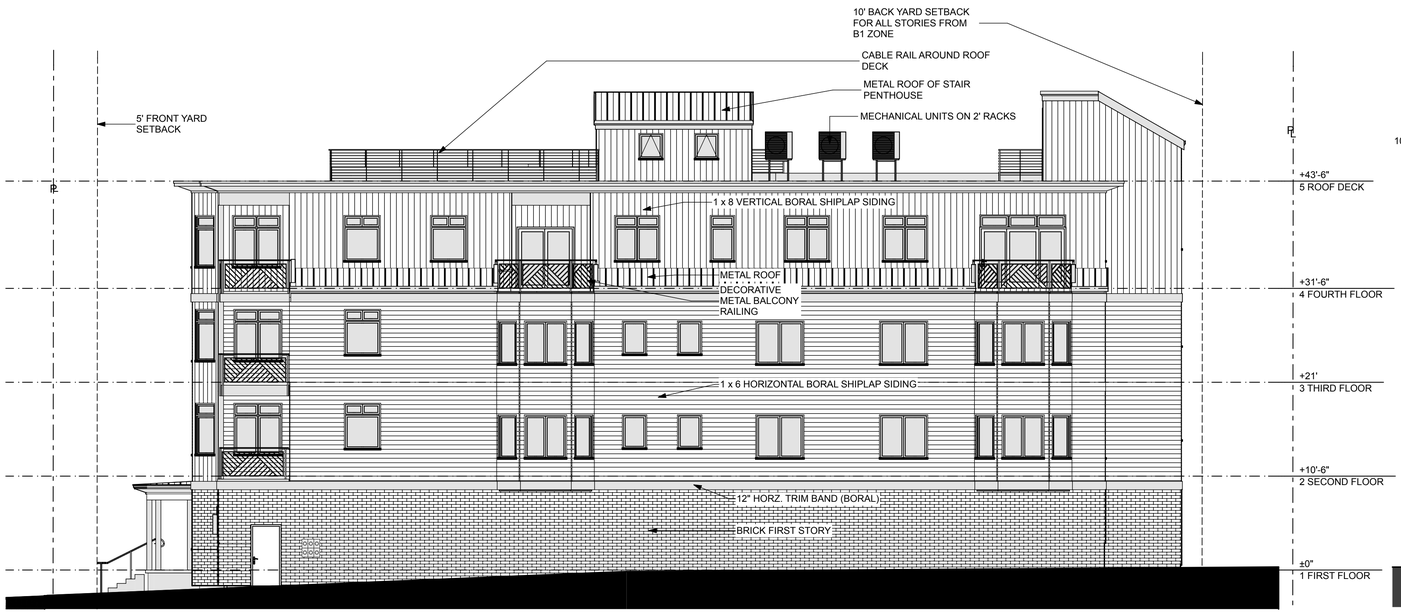
136 PLEASANT AVE.
PORTLAND, ME 04103
P 207.775.2696
F 207.775.3631
www.whipplecallender.com

MARK	DATE	DESCRIPTION

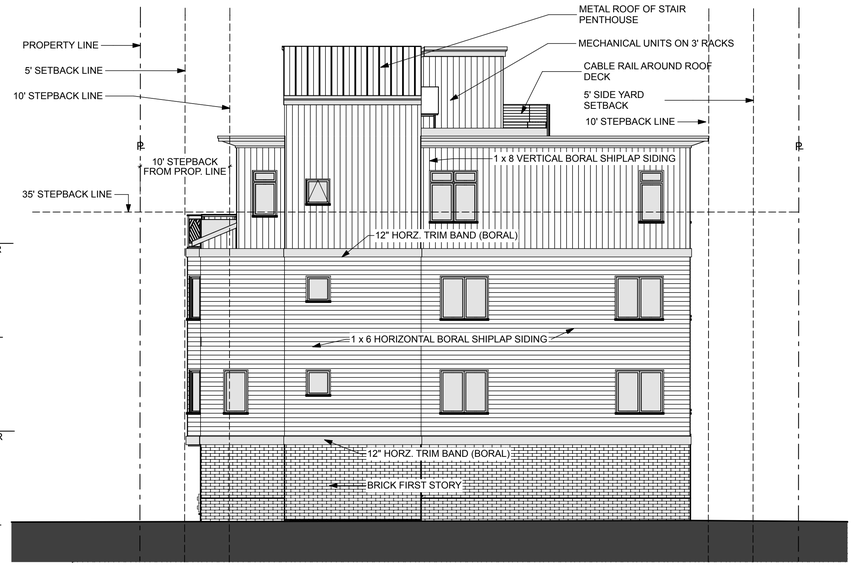
DATE: 4/18/18
CHECKED BY: AEC, JNW
DRAWN BY: JR, AEC, JNW
JOB: 17-KEE
SHEET TITLE: FIRST FLOOR PLAN TYPICAL FLOOR PLAN, FOURTH FLOOR PLAN & RENDERING

A.1

A.1 FLOOR PLANS - Plotted on 4/18/18 at 9:07 PM by Jane Callender, File Path: RIM Design/MPA Proposal.pat, RIM Space: 2015.ces 19.24.47 Template:



1 A.2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 A.2 WEST ELEVATION
SCALE: 1/8" = 1'-0"



3 A.2 EAST ELEVATION
SCALE: 1/8" = 1'-0"



4 A.2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

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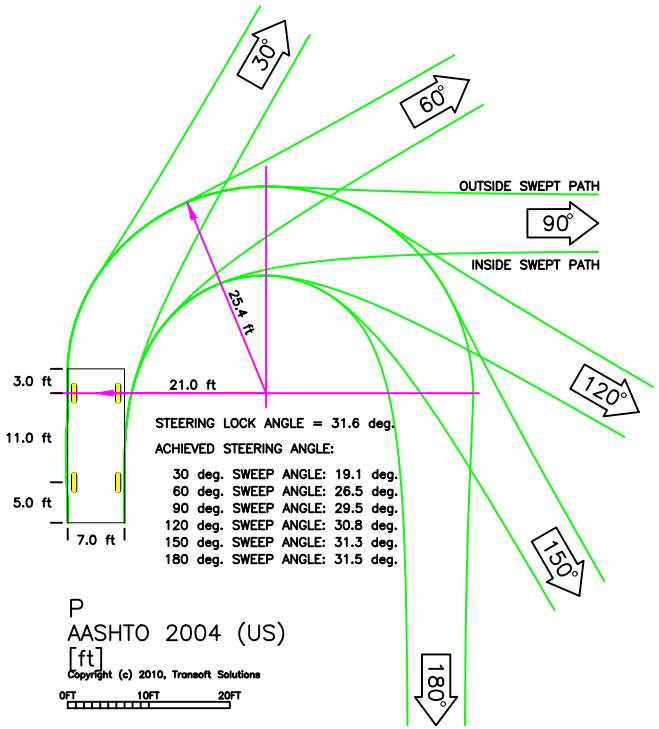
PORTLAND, ME 04103
P 207.775.2696
F 207.775.3631
www.whipplecallender.com

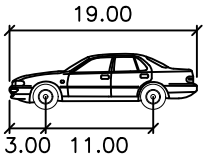
MARK	DATE	DESCRIPTION

DATE: 4/19/18
CHECKED BY: AEC, JAW
DRAWN BY: JR, AEC, JAW
JOB: 17-KEE
SHEET TITLE: EXTERIOR ELEVATIONS

A.2

A.2 EXTERIOR ELEVATIONS - Plotted on 4/19/18 at 11:44 AM by Jane Callender, File Path: P:\Current WIP\1 Professional - P\M Design WIP\1 Professional - P\M Design 2016\case 10-21-17 Temp.rvt





P	feet
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Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

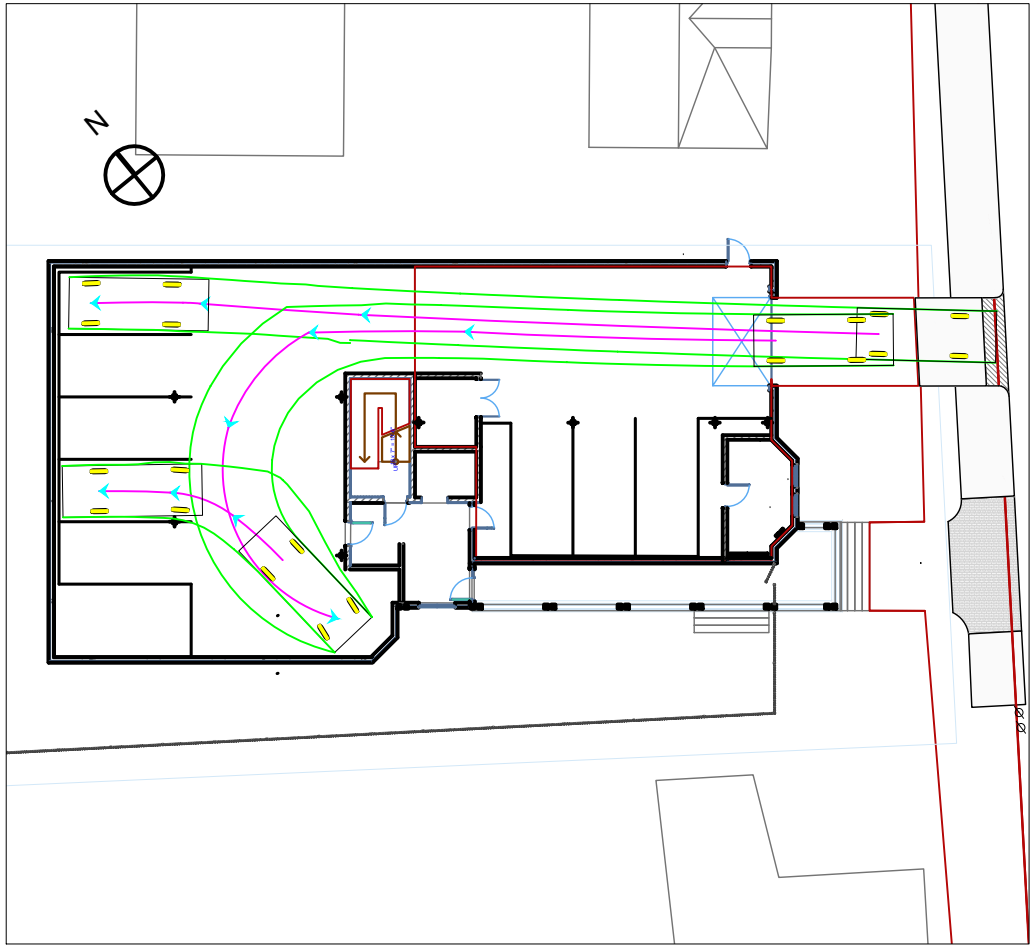
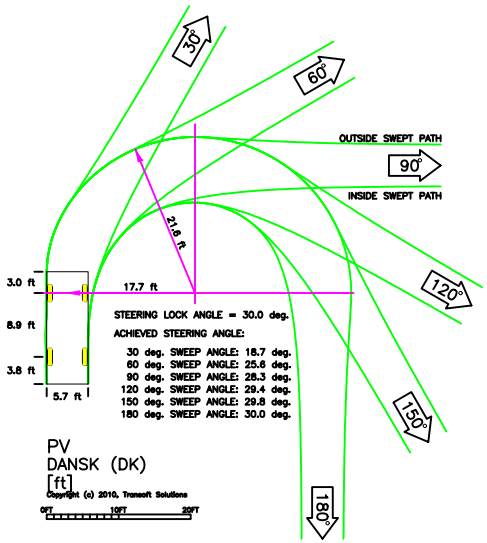
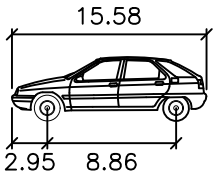


Figure 1

Large Car @ 5 mph
Portland, Maine
September 21, 2017

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





PV	feet
Width	: 5.74
Track	: 5.41
Lock to Lock Time	: 6.0
Steering Angle	: 30.0

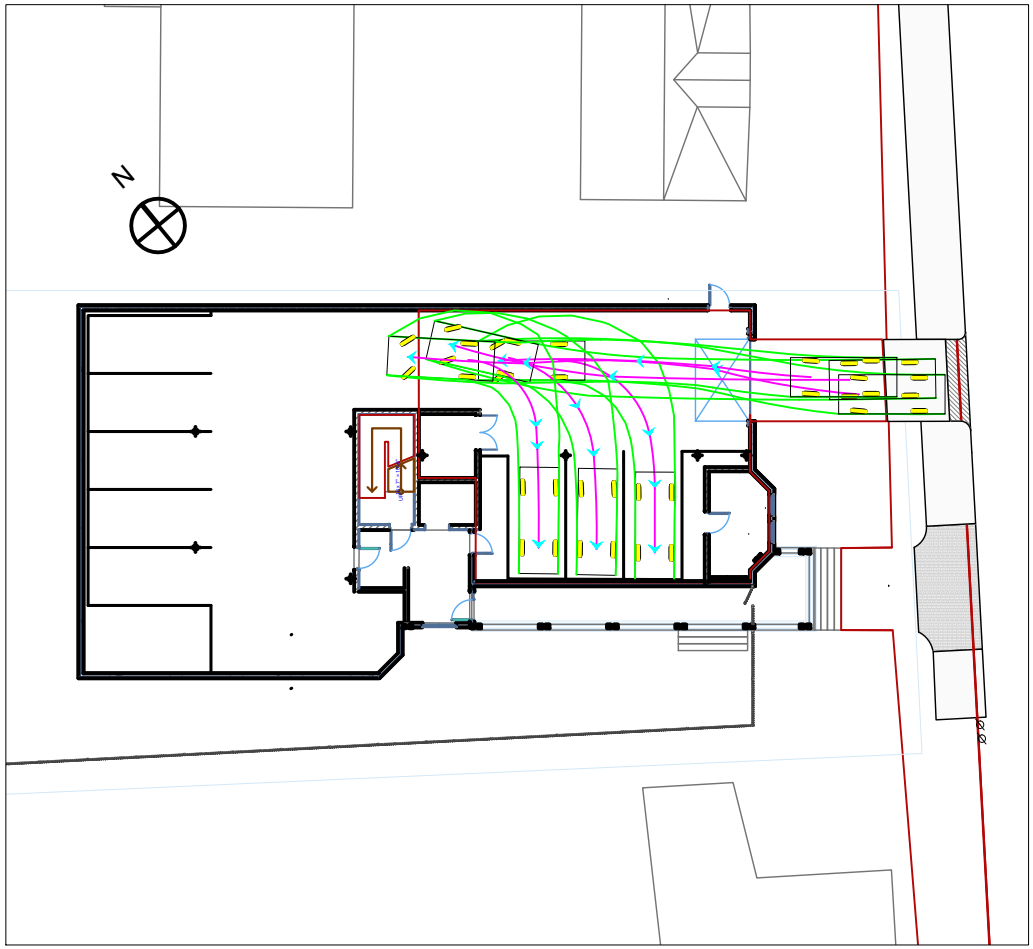
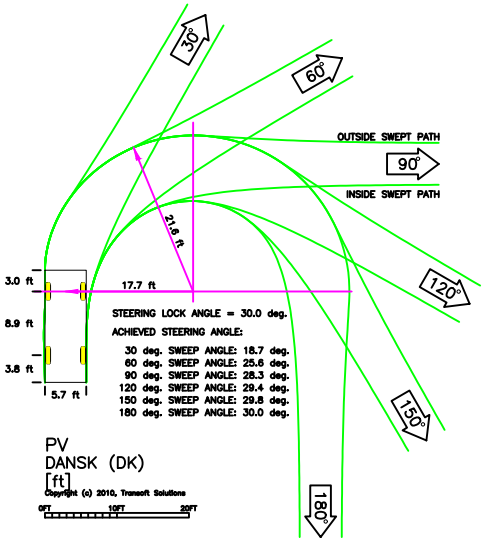
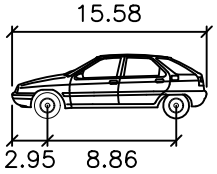


Figure 2

Small Car @ 5 mph
Portland, Maine
September 21, 2017

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





PV	feet
Width	: 5.74
Track	: 5.41
Lock to Lock Time	: 6.0
Steering Angle	: 30.0

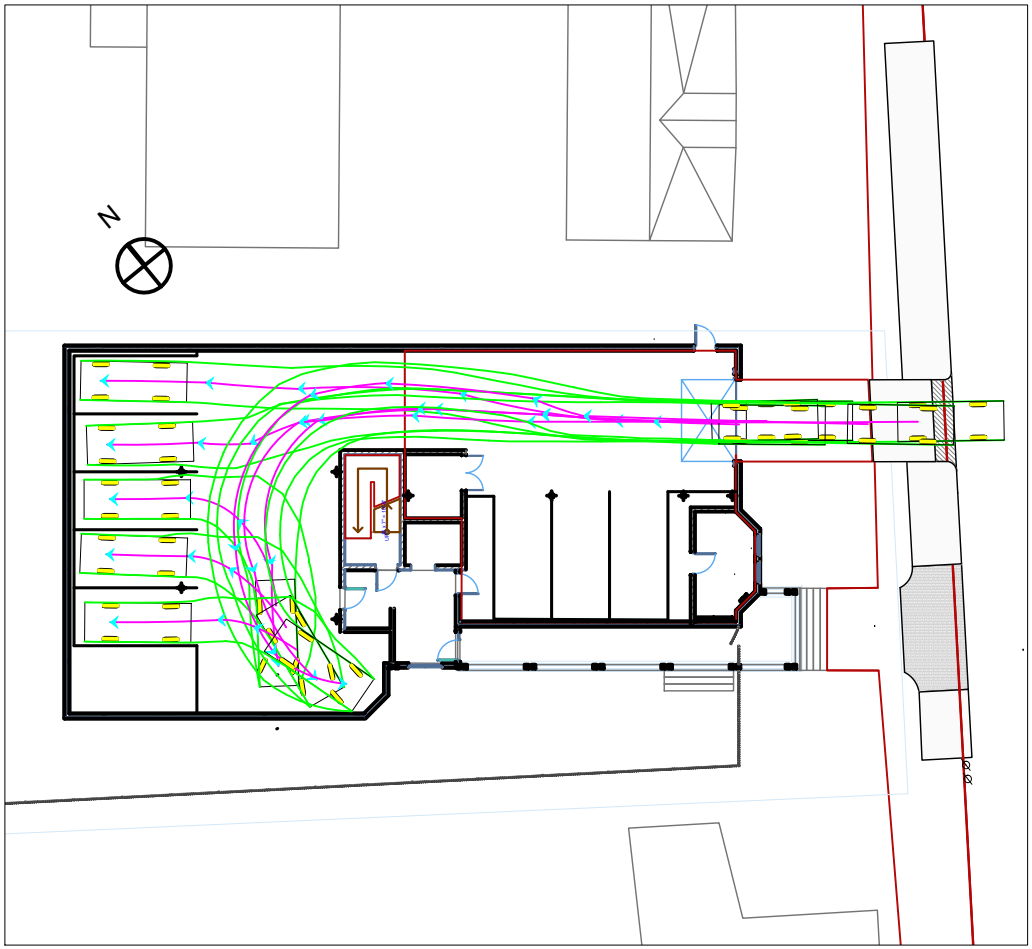


Figure 3

Small Car @ 5 mph
Portland, Maine
September 21, 2017

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

Plan References:

1. "RECORDING PLAT AT 89 ST. LAWRENCE STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD LAWRENCE W. GROSS DECEMBER 8, 2015 OWEN HASKELL, INC. JOB NO. 2014-011P"

2. "STANDARD BOUNDARY SURVEY ON 118 CONGRESS STREET, PORTLAND, MAINE MADE FOR THERIAULT/LANDMANN ASSOCIATES JULY 13, 1998 OWEN HASKELL, INC. JOB NO. 98168P" REVISED 10-25-13.

3. "CONDOMINIUM PLAN 118 ON MUNJOY HILL, 118 CONDOMINIUMS, LLC, 118 CONGRESS STREET, PORTLAND, ME NOVEMBER 13, 2013 PINKHAM & GREER" RECORDED IN PLAN BOOK 215, PAGE 240.

4. "CONDOMINIUM PLAT ATLANTIC STREET CONDOMINIUMS 94 ATLANTIC STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD ATLANTIC STREET DEVELOPMENT, LLC NOVEMBER 15, 2006 OWEN HASKELL, INC. JOB NO. 99103P" RECORDED IN PLAN BOOK 207, PAGE 175.

5. "STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY ON ATLANTIC STREET, PORTLAND, MAINE MADE FOR EDWARD & KAREN WALSH JUNE 3, 1999 OWEN HASKELL, INC. JOB NO. 99103P" REVISED 6/18/99.

6. "PLAN OF LAND IN PORTLAND, MAINE SURVEYED FOR STANDARD OIL COMPANY OF NEW YORK DEC. 1926 BY E. C. JORDAN & CO."

7. "ALTA/NSPS LAND TITLE SURVEY, 25 MONUMENT STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR MONUMENT PARTNERS, LLC" JANUARY 13, 2017, REVISION DATE: JANUARY 18, 2017 BY OWEN HASKELL, INC.

8. "MONUMENT PARTNERS, LLC, 25 MONUMENT STREET, PORTLAND,M ME" OCTOBER 10, 2017 BY WHIPPLE CALLENDER ARCHITECTS

Notes:

1. OWNER / APPLICANT: MONUMENT PARTNERS, LLC, 380 6TH STREET, SOUTH NAPLES, FLORIDA; CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 33797, PAGE 33.

2. LOCUS IS SHOWN AS PORTLAND PROPERTY MAP 16 BLOCK D LOT 9.

3. BEARINGS ARE GRID NORTH AS BASED ON MARKERS FOUND ON PLAN REFERENCE 1 AND COORDINATES PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.

4. THE 1852 EXCEPTION (236/192) SEEMS TO INDICATE THAT THE REAR LINE SHOULD BE PARALLEL TO MONUMENT STREET. HOWEVER, THE DEED IN 1850 OF THIS PARCEL SAYS IT IS BOUNDED BY A CONTEMPLATED STREET. A REAR LINE PARALLEL WITH MONUMENT STREET DOES NOT MATCH THE DIMENSIONS FOR THE LOTS ON CONGRESS STREET, WHEREAS THE LINE SHOWN HEREON MATCHES THE DIMENSIONS ON THE ABUTTING DEEDS AND PLAN REF.5.

5. UNDERGROUND UTILITIES MARKED BY DIGSMART.

6. FENCES: FENCE ALONG COOSE AND SILVERMAN, FROM STREET TO IPF, IS OWNED BY MCCLURE ET.AL., REMAINDER IS NOT; FENCE ALONG GROSS AND COLBY APPEARS TO BE THEIRS; STOCKADE FENCE ALONG 118 CONGRESS STREET CONDOMINIUMS APPEARS TO BE THEIRS; CHAINLINK FENCE AND GATE AT ALBERT-KNOPP APPEARS TO BELONG TO MCCLURE ET.AL.; FENCE ALONG ALBERT-KNOPP AND WHITAKER APPEAR TO BE THEIRS; FENCE ALONG ATLANTIC STREET PARCELS BELONGS TO MCCLURE ET.AL., PARTLY ON PROPERTY LINE.

7. THERE ARE NO WETLANDS, FLOOD PLAINS OR SHORELAND ZONES ON THE PROPERTY.

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.

Flood Zone Note:

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 230051 0014B, WHICH BEARS AN EFFECTIVE DATE OF JULY 17, 1986 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

Zoning Information:

ZONING DISTRICT: R6 - RESIDENTIAL 6

ZONING REQUIREMENTS: DIMENSIONAL STANDARDS TO BE IN ACCORDANCE WITH THE APPROVED ZONE AS SHOWN BELOW:

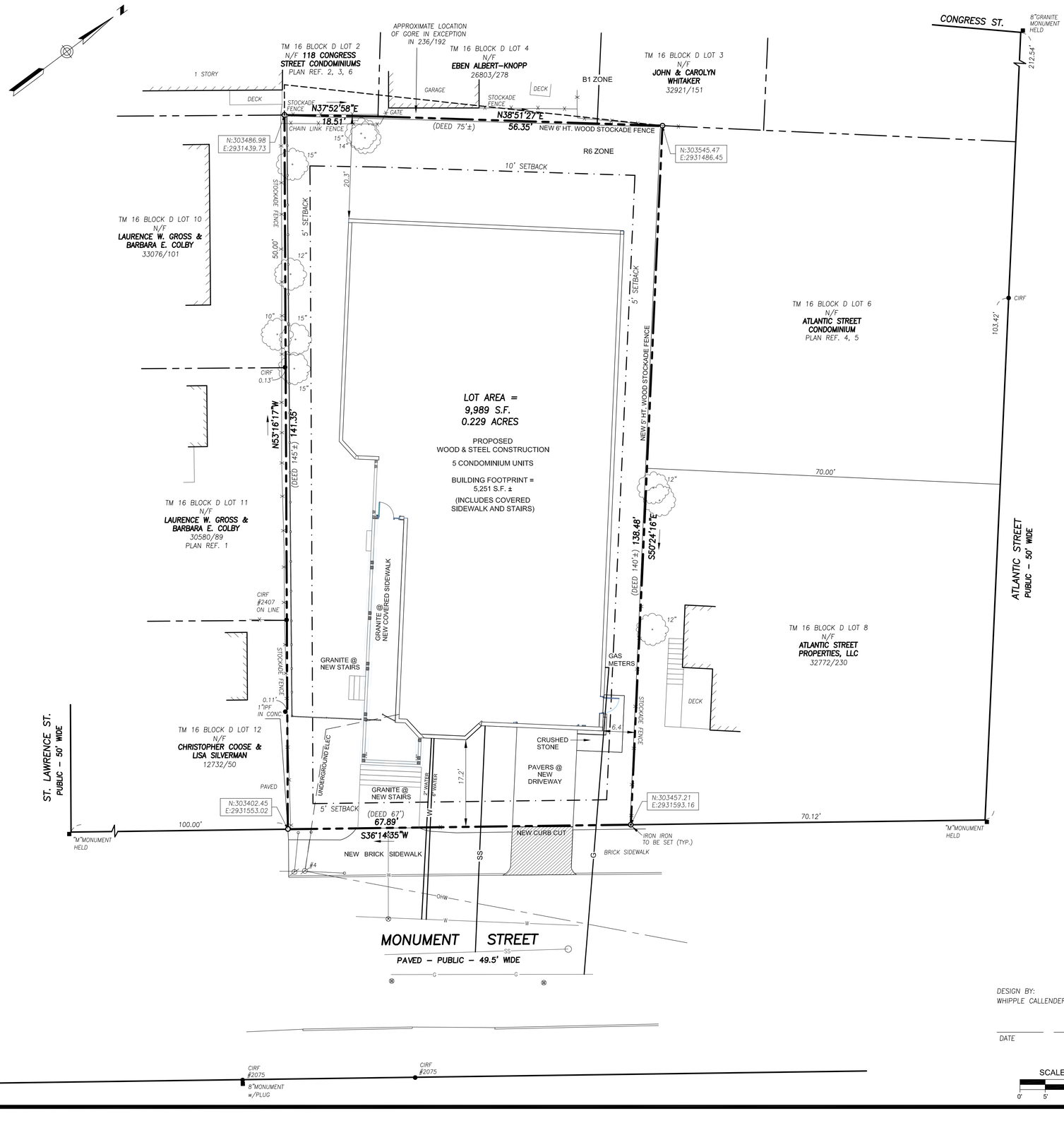
DIMENSIONAL STANDARDS	REQUIRED (R6)	PROVIDED
MINIMUM LOT SIZE	2,000 S.F.	9,989 S.F.
MINIMUM LOT AREA PER DWELLING	725 S.F.	1,248 S.F.
MINIMUM STREET FRONTAGE	20 FEET	67 FEET
MINIMUM FRONT YARD SETBACK	5 FEET	17.2 FEET
MINIMUM SIDE SETBACK	5 FEET	6.4 FEET
MINIMUM REAR SETBACK	10 FEET	20.3 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	43.5 FEET
MAXIMUM LOT COVERAGE	60%	56%
BUILDING		5,251 S.F.
PAVEMENT		328 S.F.
OPEN SPACE		4,410 S.F.
TOTAL LOT SIZE		9,989 S.F.

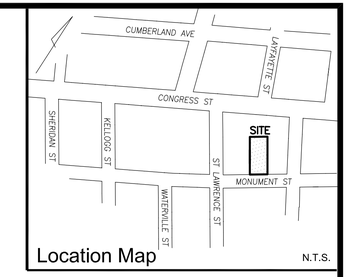
PROPOSED USE: 5 CONDOMINIUM UNIT BUILDING WITH 8 CAR GARAGE

PARKING SUMMARY:

REQUIRED PARKING
PARKING RATIO: 1 SPACE / UNIT
TOTAL: 4 SPACES

PROVIDED PARKING
PARKING GARAGE: 8 SPACES





Legend

- CAPPED IRON ROD SET
- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- WATER VALVE OR SHUTOFF
- GAS VALVE
- DECIDUOUS TREE
- CONC. CONCRETE
- L/S LANDSCAPED AREA
- CIRF CAPPED IRON ROD FOUND
- IPF/IRF IRON PIPE OR ROD FOUND
- P.O.B. POINT OF BEGINNING
- 000/000 DEED BOOK AND PAGE
- N/F NOW OR FORMERLY
- FENCE
- CURB
- LANDSCAPED AREA
- OHW OVERHEAD WIRES
- W WATER LINE
- G GAS LINE
- SS SANITARY SEWER

APPROVED BY THE
CITY OF PORTLAND PLANNING BOARD

DATE

Certificate: FOR BOUNDARY & EXISTING CONDITIONS

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.

JOHN C. SCHWANDA, PLS #1252

DEC. 12, 2017
DATE

STATE OF MAINE
JOHN C. SCHWANDA 1252
PROFESSIONAL LAND SURVEYOR

DESIGN BY:
WHIPPLE CALLENDER ARCHITECTS

DATE

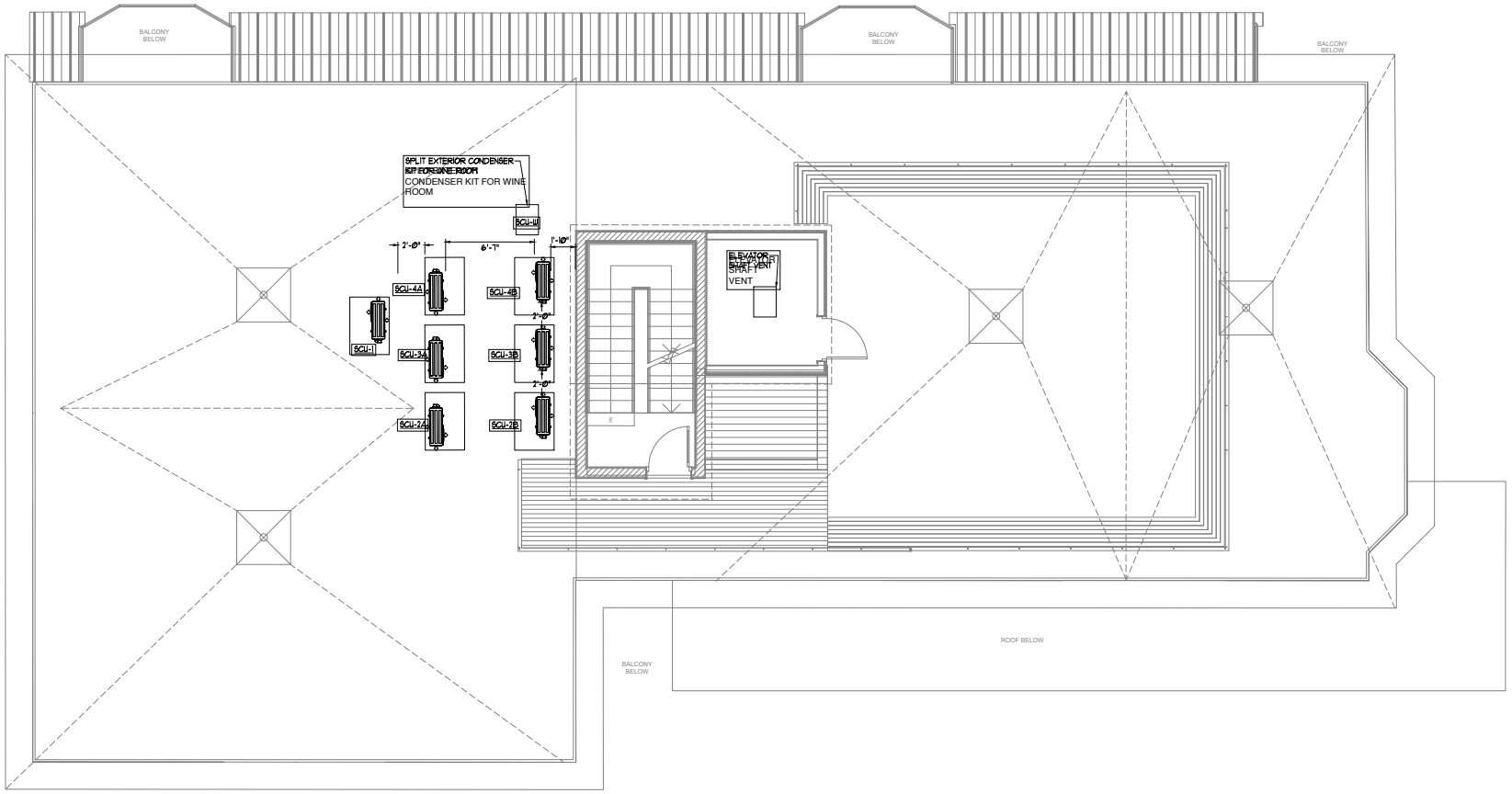
SCALE : 1" = 10'

0' 5' 10' 20'

SUBDIVISION PLAN
AT
25 MONUMENT STREET
PORTLAND, MAINE
MADE FOR RECORD OWNER
MONUMENT PARTNERS, LLC
PORTLAND, MAINE

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: RS / JLW	DATE: DEC. 12, 2017	JOB NO.	2016-378P
CHECKED BY: JCS	SCALE: 1" = 10'	DRWG. NO.	1



N

NOT FOR CONSTRUCTION

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF WHIPPLE CALLENDER ARCHITECTS. IT SHALL NOT BE USED FOR ANY OTHER PURPOSE THAT FOR WHICH IT IS SPECIFICALLY FURNISHED

BENNETT ENGINEERING
MECHANICAL • ELECTRICAL
(207) 865-9475

MONUMENT 2nd ARTNERS
25 MONUMENT STREET PORTLAND, MAINE

PRELIMINARY NOT FOR CONSTRUCTION
(PRELIMINARY NOT FOR CONSTRUCTION)

WHIPPLE CALLENDER ARCHITECTS
136 PLEASANT AVE.
PORTLAND, ME 04103
P 207.775.2696
F 207.775.3631
www.whipplecallender.com

MARK	DATE	DESCRIPTION

DATE: 12/05/17
CHECKED BY: SPD
DRAWN BY: MEB
JOB: 17-KEE

SHEET TITLE: ROOF MECHANICAL PLAN

M1.6

UNIT HEATER PERFORMANCE SCHEDULE

TAG	SERVES	GAS INPUT MBH	HEAT OUTPUT BTU/HR	OUTPUT VELOCITY FPM	ELECTRICAL			MOUNTING	MFG/MN
					VOLTS	PH	AMPS		
UH-1	GARAGE	125	99,600	763	115	1	5.1	CEILING	REZNOR UDAS 125

PROVIDE WITH TWO-STAGE NATURAL GAS VALVE, HORIZONTAL COMBUSTION AIR/VENT KIT, AND WALL MOUNTED THERMOSTAT

LOUVER PERFORMANCE SCHEDULE

TAG	AIR FLOW (CFM)	SP LOSS (IN.WG)	AIR VEL. (FPM)	FREE AREA (SQFT)	DRAINABLE (Y) OR (N)	BLADE ANGLE & FRAME DEPTH	DIMENSIONS		BASIS OF DESIGN: GREENHECK	
							W	H	SERVICE	MODEL
L-1	2350	0.03	100	0.88	Y	4"	24	48	GARAGE	ELF637BDX
L-2	-	-		0.88	Y	4"	18	18	ERV DISCHARGE	ESD

WITH KYNAR FINISH, COLOR BY ARCHITECT

FAN PERFORMANCE SCHEDULE

TAG	AIRFLOW (CFM)	T.S.P (IN.WG)	NOISE (SONES)	RPM	DRIVE	ELECTRICAL REQUIREMENTS					BASIS OF DESIGN = PANASONIC "WhisperGreen Select", Greenheck (G)		
						HP	BHP	WATTS	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
EF-1	80	0.25	0.4	-	DIRECT	-	-	11.0	-	120/1/60	BATHROOMS (MULTIPLE)	CEILING	FV-05-11VK1
EF-2	100	0.25	0.4	-	DIRECT	-	-	11.0	-	120/1/60	-	CEILING	FV-05-11VK1
EF-3	200	0.5	3	1400	DIRECT	-	-	54.4	0.45	120/1/60	REFUSE/GARAGE (CONTINUOUS)	CEILING	SP-A190
EF-4	2750	0.09	7.2	1048	DIRECT	1/4	0.22	164	1.4	120/1/60	GARAGE (INTERMITTENT)	SIDEWALL	(G) SEI-18-429-B4

EF-1: PROVIDE HUMIDITY SENSOR AND TIME DELAY MODULES, EF-1 FAN AND LIGHT SHALL BE INDEPENDENTLY CONTROLLED
EF-3: PROVIDE WITH MODEL GC 16X3 HOODED WALL CAP
EF-4: PROVIDE VARI-GREEN CONTROLS, CONTROLLED BY CO/NO2 SENSOR AND SPACE OCCUPANCY SENSORS. FAN SHALL OPERATE BASED ON OCCUPANCY OR ELEVATED LEVELS OF CO OR NO2.

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	SAN	VENT	CW	HW
P-1	FLOOR MOUNTED WATER CLOSET	3"	2"	1/2"	-
P-2	COUNTERTOP LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"
P-2A	WALL MOUNTED LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"
P-3	TUB	2"	1 1/2"	1/2"	1/2"
P-3A	SHOWER	2"	2"	1/2"	1/2"
P-3B	SHOWER	2"	2"	1/2"	1/2"
P-3C	SHOWER	2"	2"	1/2"	1/2"
P-3D	SHOWER	2"	2"	1/2"	1/2"
P-4	DOUBLE BOWL KITCHEN SINK	2"	1 1/2"	1/2"	1/2"
P-4A	SINGLE BOWL KITCHEN SINK	2"	1 1/2"	1/2"	1/2"
P-4B	BAR SINK	2"	1 1/2"	1/2"	1/2"
P-5		-	-	1/2"	-
P-6	WASHING MACHINE HOOK-UP	2"	1 1/2"	1/2"	1/2"
P-7	LAUNDRY SINK	2"	1 1/2"	1/2"	1/2"
FD-1	FLOOR DRAIN (W/ TRAP PRIMER)	2"	1 1/2"	-	-
FPHB	FREEZE PROOF HOSE BIBB	-	-	3/4"	-

MINIMUM SIZE OF BELOW SLAB SANITARY & VENT PIPING SHALL BE 2".
PROVIDE TRAP PRIMERS ON FLOOR DRAINS, CONNECT TO NEAREST FIXTURE.
UNITS SCHEDULED MAY REPRESENT MULTIPLE UNITS, COORDINATE WITH DRAWINGS.
* - PROVIDE DISHWASHER CONNECTIONS, PIPING AND CONNECT TO DISHWASHER

WINE CELLAR COOLING UNIT PERFORMANCE SCHEDULE

* AT 90°F AMBIENT

TAG	TOTAL COOLING (MBH)*	TOTAL HEATING (MBH)	REFRIGERANT	APPROX. REFRIG. CHARGE	MINIMUM AMBIENT TEMP (°F)	FOOTPRINT DIMENSION (INCHES)	OPERATING WEIGHT (LBS)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN = WHISPERKOOL			
								MCA	MAX FUSE	V/PH/HZ	COMP. STAGING	SOUND (BEL)	SERVICE	MODEL
SAC-W	36.0	-	R-134A	-	-	16x15.5x10	56	6.8	20	115/1/60	-	65	WINE COOLING	CEILING MOUNT

WINE CELLAR EQUIPMENT TO BE VERIFIED BY A WINE STORAGE PROFESSIONAL. EQUIPMENT SHALL BE CAPABLE OF COOLING ROOM DOWN TO 55°F

SPLIT - SYSTEM HEAT PUMP INDOOR UNIT PERFORMANCE SCHEDULE

* AT 95°F AMBIENT, 80°F DB, 67°F WB
** AT 47°F AMBIENT

TAG	NOMINAL COOLING (MBH)*	NOMINAL HEATING CAPACITY (MBH)**	AIRFLOW (CFM)	CORRECTED CAPACITY (BTUH @ -10°F)	COND. DRAIN (IN)	SOUND RATING (DB)	WEIGHT (LBS)	REFRIGERANT PIPE SIZE (IN)		ELECTRICAL REQUIREMENTS		BASIS OF DESIGN: MITSUBISHI		
								LIQUID	GAS	MCA	MAX FUSE	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
SAC-1	12	-	370		5/8"	40	29	1/4"	1/2"	1.0	-	208/1/60	ELEVATOR	WALL	PKA-A12HA4
SAC-2AA	12	13.600			5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 2A	DUCTED	
SAC-2AB	15	18.000			5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 2A	CASSETTE	
SAC-2BA	12	13.600			5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 2B	DUCTED	
SAC-2BB	15	18.000			5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 2B	CASSETTE	
SAC-3AA	12	13.600		1188	5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 3A	DUCTED	
SAC-3AB	15	18.000		1122	5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 3A	CASSETTE	
SAC-3BA	12	13.600			5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 3B	DUCTED	
SAC-3BB	15	18.000			5/8"			1/4"	3/8"	1.0		208/1/60	UNIT 3B	CASSETTE	
SAC-4A	8.4	10.900	350	9,248	5/8"	36	36	1/4"	3/8"	1.0	-	208/1/60	KITCHEN	CASSETTE	SLZ-KA09NA4RLTH
SAC-4B	8.4	10.900	350	9,248	5/8"	36	36	1/4"	3/8"	1.0	-	208/1/60	LIVING/DINING	CASSETTE	SLZ-KA09NA4RLTH
SAC-4C	8.4	10.900	350	7,475	5/8"	36	36	1/4"	3/8"	1.0	-	208/1/60	FOYER	CASSETTE	SLZ-KA09NA4RLTH
SAC-4DA	11.5	8,140	350	9,278	5/8"	33	50	1/4"	3/8"	1.0	-	208/1/60	OFFICE5	DUCTED	SEZ-KD12NA4RLTH
SAC-4DB	11.5	8,140	350	9,507	5/8"	33	50	1/4"	3/8"	1.0	-	208/1/60	BEDROOM5	DUCTED	SEZ-KD12NA4RLTH

HEAT PUMP OUTDOOR UNIT PERFORMANCE SCHEDULE

TAG	TOTAL COOLING (MBH)	REFRIGERANT	EER	MINIMUM AMBIENT TEMP (°F)	HEATING CAPACITY (Btuh @ 47F)	OPERATING WEIGHT (LBS)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN: MITSUBISHI			
							MCA	MOCP	V/PH/HZ	-	SOUND (BEL)	SERVICE	MODEL
* SCU-1	12	R-410A	10.1	-13	-	-	-	15	208/1/60	-	46	SAC-1	PUY-A12NA4
* SCU-2A	28.4	R-410A	11.4	-13	28,600	-	-	40	208/1/60	-	58	SAC-1A, 1B, 1C	MXZ-3C30NAHZ2-RI
* SCU-2B	28.4	R-410A	11.4	-13	28,600	-	-	40	208/1/60	-	58	SAC-1A, 1B, 1C	MXZ-3C30NAHZ2-RI
* SCU-3A	28.4	R-410A	11.4	-13	28,600	-	-	40	208/1/60	-	58	SAC-1A, 1B, 1C	MXZ-3C30NAHZ2-RI
* SCU-3B	28.4	R-410A	11.4	-13	28,600	-	-	40	208/1/60	-	58	SAC-2A, 2B	MXZ-3C30NAHZ2-RI
* SCU-4A	28.4	R-410A	11.4	-13	28,600	-	-	40	208/1/60	-	58	SAC-1A, 1B, 1C	MXZ-3C30NAHZ2-RI
* SCU-4B	28.4	R-410A	11.4	-13	28,600	-	-	40	208/1/60	-	58	SAC-1A, 1B, 1C	MXZ-3C30NAHZ2-RI

@ - AT ARI CONDITIONS OF 95°F AMBIENT / 67°F INDOOR WB. PROVIDE 24"H. STANDS FOR THE OUTDOOR UNITS.
* - PROVIDE W/LOW AMBIENT CONTROLS & WIND BAFFLE

MECHANICAL AND PLUMBING SYMBOLS AND ABBREVIATIONS LEGEND

NOTE - USE SYMBOLS AND ABBREVIATIONS AS APPLICABLE FOR THIS MECHANICAL DRAWING SET.
SOME SYMBOLS AND ABBREVIATIONS IN THIS LEGEND MAY NOT APPLY.

SYMBOL	DESCRIPTION
CA	COMPRESSED AIR PIPING (CA)
C	CONDENSATE DRAIN PIPING (C)
CWR	CHILLED WATER RETURN PIPING (CWR)
CWS	CHILLED WATER SUPPLY PIPING (CWS)
FOR	FUEL OIL RETURN PIPING (FOR)
FOS	FUEL OIL SUPPLY PIPING (FOS)
G	GAS PIPING (G)
HWR	HOT WATER RETURN PIPING (HWR)
HWS	HOT WATER SUPPLY PIPING (HWS)
RL	REFRIGERANT LIQUID PIPING (RL)
RG	REFRIGERANT GAS PIPING (RG)
	SANITARY PIPING BELOW FLOOR (SAN)
	SANITARY PIPING ABOVE FLOOR (SAN)
	SANITARY VENT PIPING
RWL	RAINWATER LEADER ABOVE SLAB (RWL)
	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	RECIRCULATED HOT WATER PIPING (RHW)
	PIPE CAP
	DIRECTION OF FLUID FLOW
	ELBOW UP
	ELBOW DOWN
	PIPE TEE UP
	PIPE TEE DOWN
	PIPE REDUCER
	PIPE WITH GUIDE
	PIPE WITH ANCHOR
	BUTTERFLY VALVE
	OS & Y GATE VALVE
	BACKFLOW PREVENTER (BFP)
	CHECK VALVE
	BALANCING VALVE (ADJUSTABLE)
	AUTOMATIC FLOW CONTROL VALVE
	RELIEF VALVE (RV)

SYMBOL	DESCRIPTION
	BALL VALVE
	BALL VALVE
C	3/4" BALL VALVE WITH 3/4" HOSE END
	GATE VALVE
	PRESSURE REDUCING VALVE
	FUSIBLE VALVE
	STRAINER W/BLOWDOWN BALL VALVE
	2-WAY CONTROL VALVE
	SOLENOID VALVE
	3-WAY CONTROL VALVE
	3-WAY CONTROL VALVE (TOP VIEW)
	2 BUTTERFLY VALVES W/SINGLE ACTUATOR
	BUTTERFLY VALVE W/ACTUATOR
	TRIPLE-DUTY VALVE
	UNION
	PIPE FLANGE
	PUMP WITH FLANGES
	BASE MOUNTED PUMP
	CARTRIDGE TYPE INLINE PUMP
	VERTICAL INLINE PUMP
FC	FLEXIBLE PIPE CONNECTION (FC)
	PITCH DOWN
	PETCOCK
	FLOW METER
	PRESSURE GAGE WITH GAGE COCK
	THERMOMETER IN WELL
	WATER FLOW SWITCH
	PRESSURE SWITCH OR SENSOR
	IMMERSION TEMPERATURE SENSOR
	DUCT MOUNTED SMOKE DETECTOR
	ROOM TEMPERATURE SENSOR
	THERMOSTAT OR SENSOR ON WALL

SYMBOL	DESCRIPTION
	T-STAT OR SENSOR W/ TAMPERPROOF GUARD
	MANUAL AIR VENT
	NOTE TAG (NUMBER)
	AIR DEVICE TAG (LETTER) WITH CFM
	ROOM NUMBER
	TURNING VANES
	DUCT W/MANUAL DAMPER
	DUCT W/FLEXIBLE CONNECTION (FC)
	LAGGED DUCT
	DUCT W/ACOUSTIC LINING
	DUCT W/SQUARE-TO-ROUND TRANSITION
	FLEXIBLE DUCT
MOD	MOTOR OPERATED DAMPER
	AIRFLOW OUT
	AIRFLOW IN
	DIAMETER OR FLAT OVAL
	FIRE DAMPER
	ROUND OR FLAT OVAL DUCT DOWN
	ROUND OR FLAT OVAL DUCT UP
	SUPPLY DIFFUSER
	RETURN GRILLE
	STEAM TRAP
	WATER HAMMER ARRESTOR
AAV	AUTOMATIC AIR VENT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU-*	AIR HANDLING UNIT TAG
AMS	AIRFLOW MONITORING STATION
AMPS	AMPERES
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
AS-*	AIR SEPARATOR TAG
ATC	AUTOMATIC TEMPERATURE CONTROL

ABBREVIATION	DESCRIPTION
B-*	BOILER TAG
BD-*	BYPASS DAMPER TAG
BFP-*	BACKFLOW PREVENTER TAG
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CBD	COUNTER BALANCED DAMPER
CC-*	COOLING COIL TAG
CFM	CUBIC FEET PER MINUTE
CHLR-*	CHILLER TAG
CO	CLEANOUT
CUH-*	CABINET UNIT HEATER TAG
CP-*	CIRCULATING PUMP TAG
CT-*	COOLING TOWER TAG
Cv	VALVE COEFFICIENT
CW	COLD WATER
CWS/R	CHILLED WATER SUPPLY AND RETURN
DB	DRY BULB
dB RE	DECIBELS RELATIVE TO
DC	DOUBLE CHECK
DCA	DOUBLE CHECK ATMOSPHERIC
DEG F	DEGREES FAHRENHEIT
DIA	DIAMETER
DW	DOWN IN WALL
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EDC-*	ELECTRIC DUCT COIL TAG
EER	ENERGY EFFICIENCY RATIO
EF-*	EXHAUST FAN TAG
EFF	EFFICIENCY
EG-*	EXHAUST GRILLE TAG
ER-*	EXHAUST REGISTER TAG
ESP	EXTERNAL STATIC PRESSURE
ET-*	EXPANSION TANK TAG

ABBREVIATION	DESCRIPTION
EWB	ENTERING WET BULB
EUH-*	ELECTRIC UNIT HEATER TAG
EWT	ENTERING WATER TEMPERATURE
EXG	EXISTING
EXH	EXHAUST
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FD-*	FLOOR DRAIN TAG
FLA	FULL LOAD AMPS
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPHB	FROST PROOF HOSE BIBB
FPM	FEET PER MINUTE
FS-*	FLOOR SINK TAG
FT	FEET
FTR-*	FINTUBE RADIATION TAG
GA	GAGE
GAL	GALLONS
GFUH-*	GAS FIRED WATER HEATER TAG
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH-*	GAS UNIT HEATER TAG
HC-*	HEATING COIL TAG
HP	HORSEPOWER
HRV-*	HEAT RECOVERY VENTILATOR TAG
HW	HOT WATER
HWS/R	HOT WATER SUPPLY AND RETURN
I=B+R	INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS
IFUH-*	INDIRECT FIRED WATER HEATER TAG
IN.	INCHES
IV-*	INTAKE VENT TAG
L-*	LOUVER TAG
LAT	LEAVING AIR TEMPERATURE

ABBREVIATION	DESCRIPTION
LB	POUNDS
LD-*	LINEAR DIFFUSER TAG
LTH-W/R	LOW TEMPERATURE HOT WATER
LRA	LOCKED ROTOR AMPS
LWCO	LOW WATER CUTOUT
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSANDS OF BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
NC	NOISE CRITERION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
O.D.	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
OFRWL	OVERFLOW RAINWATER LEADER
OFUH-*	OIL FIRED WATER HEATER TAG
OFRD	OVERFLOW ROOF DRAIN
OPD	OVERCURRENT PROTECTIVE DEVICE
P-*	PLUMBING FIXTURE TAG
PENETN	PENETRATION
PF-*	PADDLE FAN TAG
PSI/A	POUNDS PER SQUARE INCH ABSOLUTE
PSI/G	POUNDS PER SQUARE INCH GAGE
PVC	POLYVINYL CHLORIDE (PIPE)
RA	RETURN AIR
RD	ROOF DRAIN
RDE	RECOMMENDED DUAL ELEMENT FUSE AMPS
RFH-*	RADIANT FLOOR MANIFOLD TAG
RHW	RECIRCULATED HOT WATER
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RPS	REVOLUTIONS PER SECOND

ABBREVIATION	DESCRIPTION
RPZ	REDUCED PRESSURE ZONE
RR-*	RETURN REGISTER TAG
RTU	ROOM TEMPERATURE SENSOR
RV	RELIEF VALVE
RWL	RAINWATER LEADER
SA	SUPPLY AIR
SAN	SANITARY (DRAIN & WASTE)
SD	SMOKE DAMPER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SP	STATIC PRESSURE
SP-*	SUMP PUMP TAG
SR-*	SUPPLY REGISTER TAG
SQFT	SQUARE FEET
ΔT	TEMPERATURE DIFFERENTIAL
TEMP.	TEMPERATURE
TCP	TEMPERATURE CONTROL PANEL
TMV-*	THERMOSTATIC MIXING VALVE TAG
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH-*	UNIT HEATER TAG
U.N.O.	UNLESS NOTED OTHERWISE
VAV-*	VARIABLE AIR VOLUME BOX TAG
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY INVERTER DRIVE
VTR	VENT THRU ROOF
V/PH/HZ	VOLTS/PHASES/HERTZ
WB	WET BULB
WCO	WALL CLEANOUT
WG	WATER GAGE
WPD	WATER PRESSURE DROP
WSA	WIRE SIZING AMPS
WTD	WATER TEMPERATURE DROP
W/	WITH
ZD-*	ZONE DAMPER TAG

N

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MECHANICAL • ELECTRICAL
(207) 885-9175

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25 MONUMENT STREET
PORTLAND, MAINE

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WHIPPLE CALLENDER ARCHITECTS
136 PLEASANT AVE.
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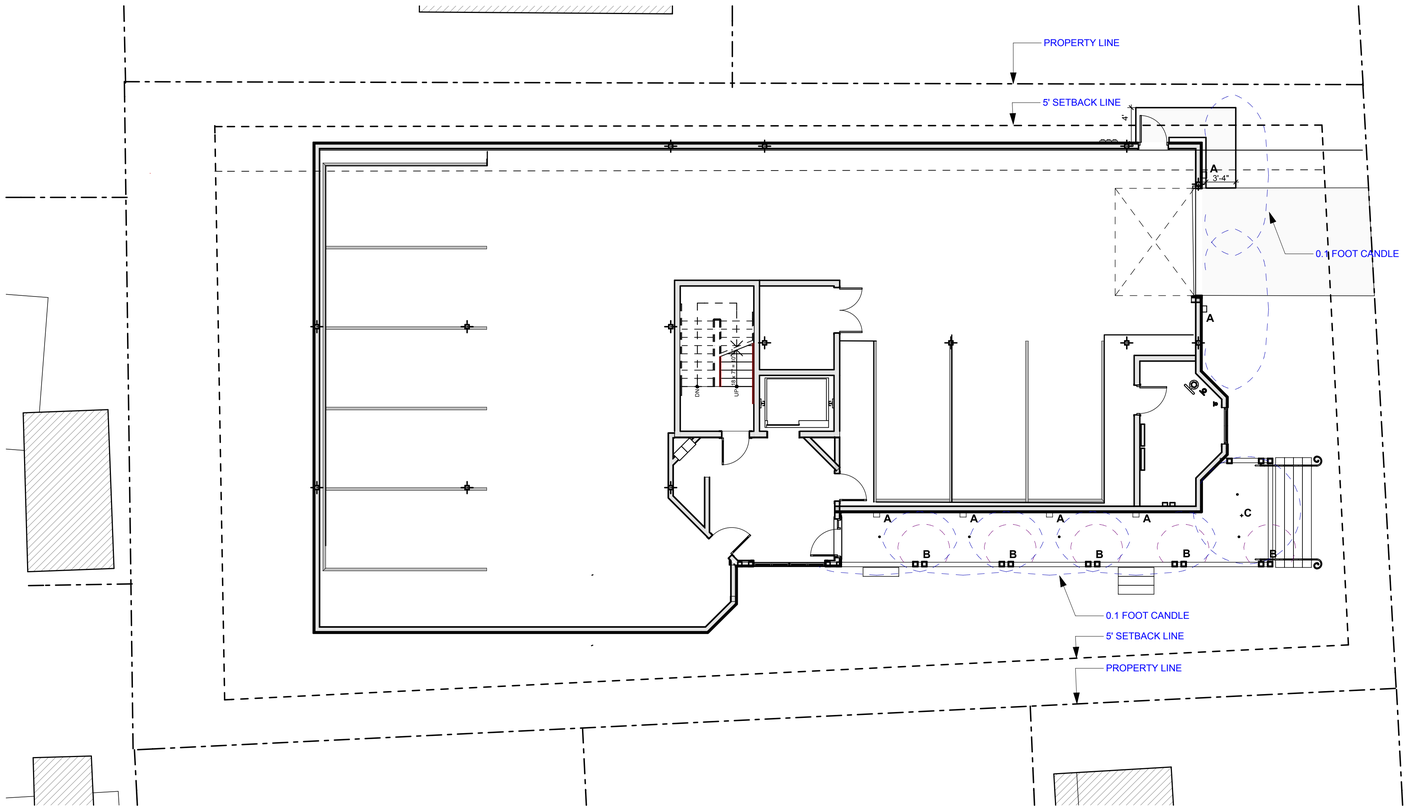
F 207.775.3631
www.whipplecallender.com

MARK	DATE	DESCRIPTION

DATE: 12/05/17
CHECKED BY:
DRAWN BY:
JOB: 17-KEE
SHEET TITLE:



2
A.3

SITE LIGHTING PLAN

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

outdoor

LED

pier 60 outdoor

DESCRIPTION
The decorative metal grid on this indoor/outdoor fixture provides a delicate balance of light and shadow. Includes (1) replaceable 9.6 watt 2700K LED module.ADA compliant. 120v.

WEIGHT
4.52lb / 2.05kg ±







ORDERING INFORMATION

type	model	finish	lamp	wet location
LW LED	**639**	**BZ** bronze **SI** silver	**LED** LED Module 9.6w 120v	**W** wet location

FIXTURE TYPE: _____

JOB NAME: _____

LBL

7400 Linder Avenue
Skokie, Illinois 60077

T 847.626.6300
F 847.626.6350

www.lbllighting.com

EXTERIOR LIGHT SCONCE TYPE A: 639 BZ LED W

Specification Sheet / Wall Mount / L36

[MP LIGHTING]



L36

Application Exterior/interior wall, stair and walkway.
Recommended Projects – Commercial, Institutional, Retail, Clinic, Hospitality, Religious, Educational, Architecture.

IP 66

Mounting Mounts to horizontal orientated single gang box only. Box opening must be 2 3/8" wide by 2" tall minimum. Suggested boxes include Scrapper P.S. Blank and Bonville BC1110 (Junction box not included).

Electrical Integral Non Dimmable Driver 120V - 3W (350mA) and or 120V - 6W (700mA)
Integral Dimming Factory for Integral Driver 120V / 277V – 6W
120V with Phase Dimmer and or 0-10V –
*For other inquires please consult factory for remote driver options.

Power Consumption 4.0 Watt (at 350 mA, 3.0 Watt)
8.0 Watt (at 700mA, 6.0 Watt)

Light Output 3.0 Watt, 13lm
6.0 Watt, 28lm
*For photometric data, see page 02

Warranty 5 years limited warranty.
Estimated useful life of LED is 50,000 hours.

Material Anodized aluminum and polycarbonate lens. RoHS compliant.

Weight 1.40ls (0.636kg).

Approval cULus CE

DISCLAIMER Misfunction and damage to product due to improper dimming system installation or misuse will not be covered under warranty. Only DC Drivers are recommended for dimming systems. Consult MP Lighting for recommended drivers.

MP Lighting reserves the right, at its sole discretion, at any time and without notice, to make design changes to any of our products.

Type:

Project:

Modified:

Quantity:

Notes:

Order Guide

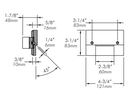
Example: L36-3-W500-MA

Code	Wattage	Color	Finish
L36 -		**W30** -	
	3 = 3W **6** = 6W	**W500** = 3000K, 80+CRI	**MA** = matte clear anodized **BK** = black powder coating **SWC** = white powder coating **SWC*** = like white antimicrobial **CSA** = crystal clear antimicrobial
			*Antimicrobial finishes used as applied **Minimum order required for antimicrobial finish

Specification Sheet / Wall Mount / L36

[MP LIGHTING]

Dimension:

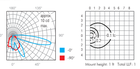


PHOTOMETRIC DATA:

3.0W, 3000K

Polar Candela Distribution

Lumen: 13lm

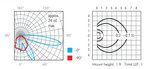


Illuminance at a Distance

6.0W, 3000K

Polar Candela Distribution

Lumen: 28lm



Illuminance at a Distance

WALKWAY LIGHT TYPE B: L36-6-W0-SWC

LITHONIA LIGHTING®

Catalog Number

Notes

Type

FEATURES & SPECIFICATIONS

INTENDED USE — The 6" Wafer-Thin LED recessed downlight with remote driver box combines high quality light output and efficiency while eliminating the yard light housing for competitive affordability. The innovative wafer-slim Type IC design allows easy installation for new construction or remodel from below the ceiling without the requirement of a yard light housing. The LED module maintains at least 70% light output for 36,000 hours. These LED Wafer downlights are intended for closets, attics, hallways, bathrooms, kitchens, basements, soffits, entryways, porches, garages, stairwells, corridors, nursing/retirement homes, condos, elevators, apartments, and any other small areas.

CONSTRUCTION — Ideal for shallow ceiling plenum since a yard light housing is NOT required. A total driver and fixture - approved for direct contact with insulation. Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. Round fixture with integral edge-lit LED's. Steel spring clip for easy installation. Pleenum rated cable connector to connect from module to remote driver box. Isolated driver integrated inside steel remote box with four 3/8" knockouts with slots for pryout. Not suitable for pulling wires.

PATENT PENDING.

INSTALLATION — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 6" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation. Pleenum rated cable connector to connect from module to remote driver box. Suitable for installation in it rigid and drop ceiling applications.

OPTICS — Wafer-Thin downlight edge-lit LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space. Utilized 3000K and 4000K color temperature LEDs.

ELECTRICAL — Connect directly to 120V power supply via provided UL recognized driver. High efficient driver with power factor >.9. Ambient operating temperature: -40°F (-40°C) to +104°F (+40°C). Dimming down to 10% (See page 2 for recommended dimmers). Standard input wattage is 13W, 7W lumens per watt.

LISTINGS — CSA certified to US and Canadian safety standards. ENERGY STAR® certified product. Wet location. Air Tight certified in accordance with ASTM E283-2004.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Wafer LED Recessed Downlight

WF6

6" LED Module

IC/Non-IC

New Construction/Remodel

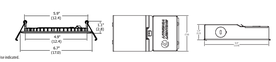




Specifications

Aperture: 4.9 (12.4)
Ceiling opening: 6 (15.2)
Overlap trim: 6.7 (17)
Height: 1.1 (2.8)

All dimensions are inches (centimeters) unless otherwise indicated.



ORDERING INFORMATION For shortest lead times, configure product using **standard options (shown in bold).** **Example:** WF6 LED 30K MW

WF6			
Series	**Lamp**	**CCT/CRI/"R" Lumens***	**Finish**
WF6 6" wafer-thin LED downlight	**LED** LED	**30K** 3000K/80CRI/10W/1020L **40K** 4000K/80CRI/10.6W/1200L	**MW** Matte white **MB** Matte black **BN** Brushed nickel **ORB** Oil-rubbed bronze
	LL LED Low Lumen LED	**27K** 2700K/80CRI/12.7W/780L **30K** 3000K/80CRI/13.6W/867L **40K** 4000K/80CRI/12.9W/944L	

Accessories: Order as separate catalog number.
WF6 FRMKT2 6" new construction pan, retail pack of 12
WF6B BA Remodel pan bar, retail pack of 4
WFEK3/8 6' TTH cable
WFEK3/8 D 10' TTH cable
WFEK2P/8 J 20' TTH cable



Notes
1 Total system delivered lumens.

DOWNLIGHTING WF6

EXTERIOR RECESSED LED TYPE C

PLANNING BOARD REVIEW SET
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MARK	DESCRIPTION	DATE

DATE: 3/20/18

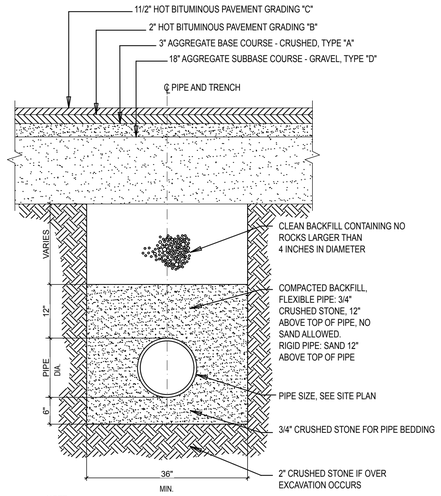
CHECKED BY: AEC, JWW

DRAWN BY: JR, AEC, JWW

JOB: 17-KEE

SHEET TITLE: EXTERIOR LIGHTING

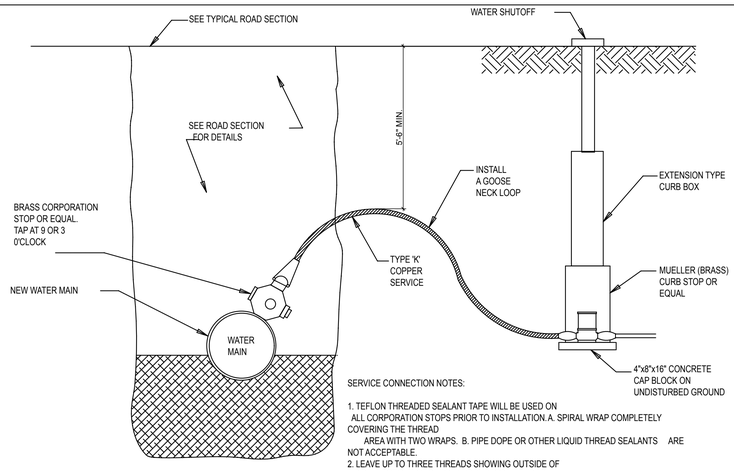
A.3



NOTE:
ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED BY THE CITY.

TYPICAL UNDERGROUND PIPE TRENCH SECTION

NTS



SERVICE CONNECTION NOTES:

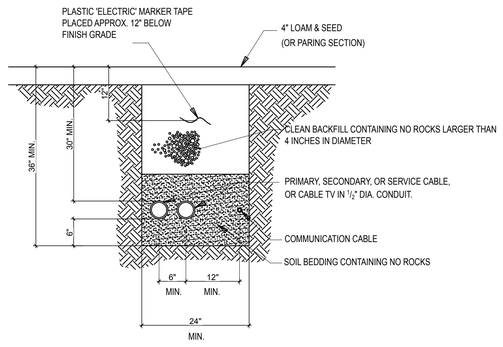
1. TEFLON THREADED SEALANT TAPE WILL BE USED ON ALL CORPORATION STOPS PRIOR TO INSTALLATION A. SPIRAL WRAP COMPLETELY COVERING THE THREAD AREA WITH TWO WRAPS. B. PIPE DOPE OR OTHER LIQUID THREAD SEALANTS ARE NOT ACCEPTABLE.
2. LEAVE UP TO THREE THREADS SHOWING OUTSIDE OF PIPE. A TORQUE OF 35 POUNDS IS RECOMMENDED.

TYPICAL SERVICE CONNECTION

NTS

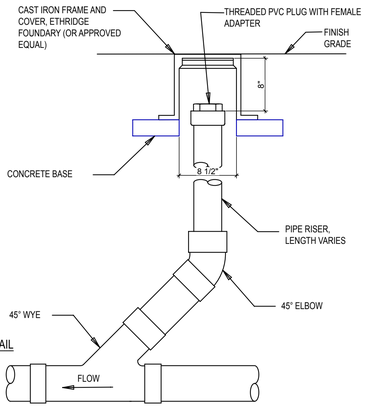
GENERAL NOTES

1. CONTRACTOR SHALL CONFIRM ALL PIPE SIZES WITH THE CITY WATER DISTRICT.
2. WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE CITY WATER DISTRICT STANDARDS.
3. CONTRACTOR SHALL STUB NEW SERVICES AT THE EDGE OF THE R.O.W. IN THE MIDDLE OF EACH LOT, UNLESS OTHERWISE NOTED ON THE PLAN/PROFILES.
4. FINAL LOCATION OF ALL BLOW OFF VALVES, SHUT OFF VALVES, STREET BOXES AND HYDRANT VALVES SHALL BE IN ACCORDANCE WITH THE CITY WATER DISTRICT.



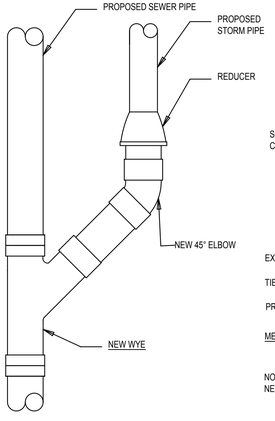
TYPICAL UNDERGROUND WIRE TRENCH SECTION

NTS

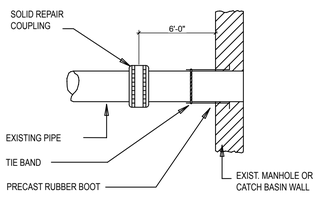


SEWER CLEANOUT SECTION DETAIL

NTS

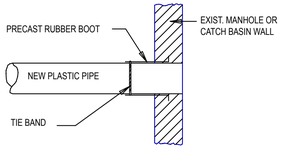


NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET. NEW HOLES MUST BE CORE DRILLED INTO MANHOLE. NO JACK HAMMERING OR SAW CUTTING IS ALLOWED TO CONNECT THE PIPE.



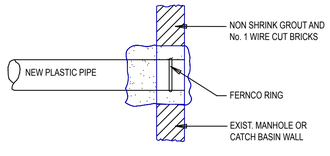
METHOD 1 - EXISTING OR NEW PIPE INTO NEW STRUCTURE

NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET. NEW HOLES MUST BE CORE DRILLED INTO MANHOLE. NO JACK HAMMERING OR SAW CUTTING IS ALLOWED TO CONNECT THE PIPE.



METHOD 2 - NEW CONSTRUCTION

NOTE:
EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY USE ANY COMBINATION OF JACK HAMMERING AND SAW CUTTING THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.

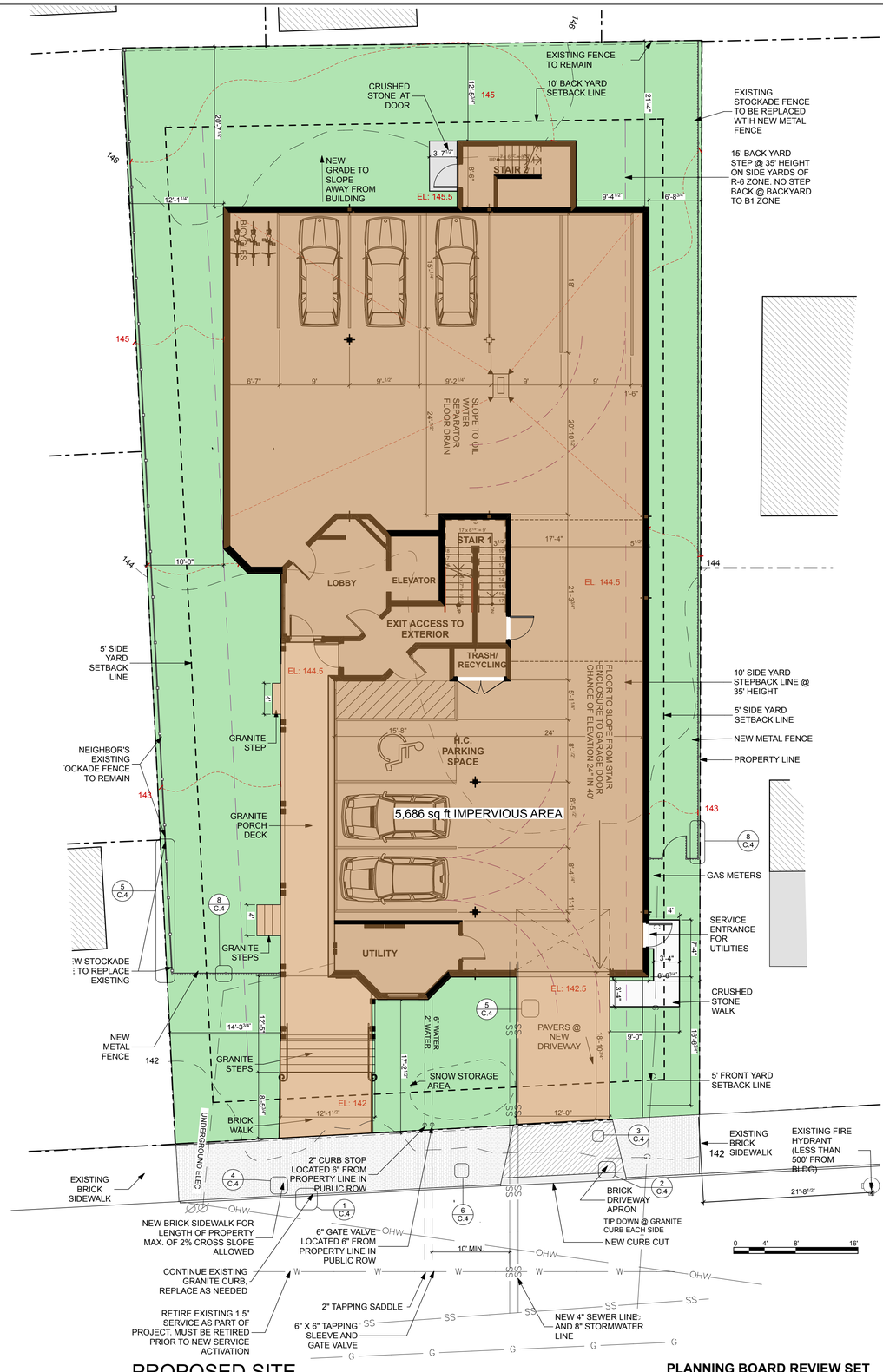


METHOD 3 - NEW PIPE INTO EXISTING STRUCTURE

NOTE:
NEW SEWER PIPE MUST BE PRESSURE TESTED AFTER INSTALLATION IS COMPLETE. SEWER DISTRICT STAFF MUST BE PRESENT DURING TESTING AND MUST INSPECT ALL STRUCTURES AND PIPING BEFORE THEY ARE BACK FILLED.

SEWER CONNECTION DETAILS

NTS



PROPOSED SITE

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

PLANNING BOARD REVIEW SET
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P 207.775.2696
F 207.775.3631
www.whipplecallender.com

MARK	DATE	DESCRIPTION

DATE: 4/19/18
CHECKED BY: AEC, JMW
DRAWN BY: JR, AEC, JMW
JOB: 17-KEE
SHEET TITLE: CIVIL DETAILS OF SEWER, WATER, & TRENCHES

C.2

C:\CIVIL DETAILS.dwg, Plotted on 4/19/18 at 10:01 PM by Jess Callender, File Path: P:\M Design\2018_Design\ 18-24-17 Tenement\

EROSION AND SEDIMENTATION NOTES

1. THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR DEALING WITH SOIL EROSION AND SEDIMENTATION DURING AND AFTER PROJECT CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARD AND SPECIFICATIONS FOR EROSION PREVENTION AS CONTAINED IN THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: "MAINE EROSION AND SEDIMENT CONTROL BMPs" PUBLISHED BY THE MAINE DEP, LATEST EDITION.

GENERAL EROSION AND SEDIMENTATION CONTROL PRACTICES

1. EROSION/SEDIMENT CONTROL DEVICES
   THE FOLLOWING EROSION SEDIMENTATION CONTROL DEVICES ARE PROPOSED FOR CONSTRUCTION ON THIS PROJECT. INSTALL THESE DEVICES AS INDICATED ON THE PLANS.

1.1 SILT FENCE: SILT FENCE WILL BE INSTALLED ALONG THE DOWN GRADING EDGES OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS STABILIZED. IN AREAS WHERE STORMWATER DISCHARGES THE SILT FENCE WILL BE REINFORCED WITH HAY BALES TO HELP MAINTAIN THE INTEGRITY OF THE SILT FENCE AND TO PROVIDE ADDITIONAL TREATMENT.

1.2 HAY BALES TO BE PLACED IN LOW FLOW DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES. DO NOT PLACE HAY BALES IN FLOWING WATER OR STREAMS.

1.3 STRAW AND HAY MULCH; USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH BY ITSELF CAN BE USED ON SLOPES LESS THAN 15% IN SUMMER AND 8% IN WINTER. ALL OTHER SLOPES MUST BE COVERED WITH JUTE MESH OVER MULCH, OR CURLEX II OR EXCELSIOR MAY BE USED IN PLACE OF JUTE MESH AND MULCH OVER LOAM AND SEED.

2. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES
   PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:

2.1 SILTATION FENCE ALONG THE DOWNGRADIENT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE SITE IS 85% REVEGETATED.

2.2 HAY BALES PLACED AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.

2.3 PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION AS FOLLOWS:

- A. SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
- B. AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES. SEE ITEM 3 IN CONSTRUCTION PHASE NOTES BELOW.
- C. STABILIZE STOCKPILES WITHIN 15 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
- D. SURROUND STOCKPILE SOIL WITH SILTATION FENCE AT BASE OF PILE.

2.4 ALL DENUDED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA SHALL RECEIVE MULCH WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL OR WITHIN 15 DAYS AFTER COMPLETING THE ROUGH GRADING OPERATIONS. IN THE EVENT THE CONTRACTOR COMPLETES FINAL GRADING AND INSTALLATION OF LOAM AND SOD WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE, IS NOT REQUIRED.

2.5 IF WORK IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15, ALL DENUDED AREAS ARE TO BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.

2.6 TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE HAS BEEN STABILIZED OR IN AREAS WHERE PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

3. PERMANENT EROSION CONTROL MEASURES
   THE FOLLOWING PERMANENT CONTROL MEASURES ARE REQUIRED BY THIS EROSION/SEDIMENTATION CONTROL PLAN:

3.1 ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SEEDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

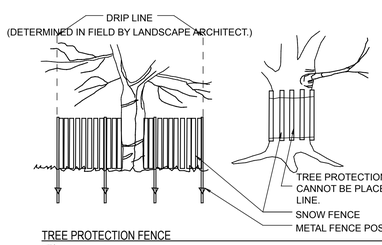
CONSTRUCTION PHASE

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

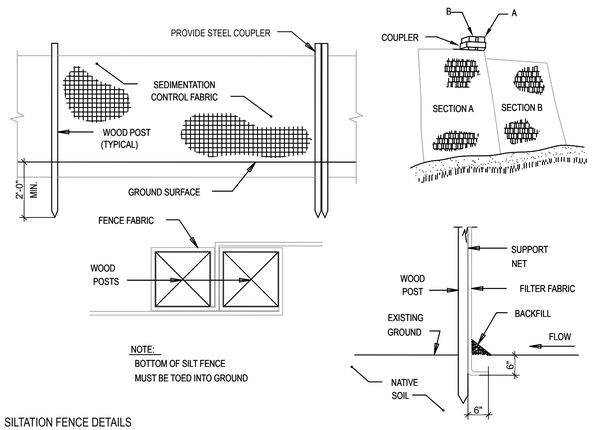
1. ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION WILL BE CLEARED AND LEFT IN AN UNTREATED OR UNVEGETATED CONDITION. IF FINAL GRADING, LOAMING AND SEEDING WILL NOT OCCUR WITHIN 15 DAYS, SEE ITEM NO. 4.
2. PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SILT FENCING AND/OR HAY BALES WILL BE INSTALLED AT THE TOE OF SLOPE AND IN AREAS AS LOCATED ON THE PLANS TO PROTECT AGAINST ANY CONSTRUCTION RELATED EROSION. IMMEDIATELY FOLLOWING CONSTRUCTION OF CULVERTS AND SWALES, RIP RAP APRONS SHALL BE INSTALLED, AS SHOWN ON THE PLANS.
3. TOPSOIL WILL BE STOCKPILED WHEN NECESSARY IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION AND WILL BE KEPT AS FAR AS POSSIBLE FROM THE EXISTING DRAINAGE COURSE.
   A. TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
4. ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE EITHER:
   A. TREATED WITH ANCHORED MULCH IMMEDIATELY
5. ALL GRADING WILL BE HELD TO A MAXIMUM 2:1 SLOPE WHERE PRACTICAL. ALL SLOPES WILL BE STABILIZED WITH PERMANENT SEEDING, OR WITH STONE, WITHIN 5 DAYS AFTER FINAL GRADING IS COMPLETE. (SEE POST-CONSTRUCTION REVEGETATION FOR SEEDING SPECIFICATION.)

EROSION CONTROL DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS TO BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK NO AREAS MAY BE LEFT UNSTABILIZED OVER THE WEEKEND.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. 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 1000 S.F. (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH. NOTE: AN AREA IS ALSO CONSIDERED STABLE IF SODDED, COVERED WITH GRAVEL (PARKING LOTS) OR STRUCTURAL SAND.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES 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 1 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. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW, DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY, SILT FENCE OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS SHOWN ON THE DESIGN DRAWINGS. NOTE: DORMANT SEEDING SHOULD NOT BE ATTEMPTED UNLESS SOIL TEMPERATURE REMAINS BELOW 50 DEGREES AND DAY TIME TEMPERATURES REMAIN IN THE 30'S.
7. 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 THAN 8%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELSIOR OR CURLEX.
8. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1 THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
9. BETWEEN THE DATES OF OCTOBER 15 TO NOVEMBER 1, WINTER RYE IS RECOMMENDED FOR STABILIZATION. AFTER NOVEMBER 1, WINTER RYE IS NOT EFFECTIVE. AROUND NOVEMBER 15 OR LATER, ONCE TEMPERATURES OF THE AIR AND SOIL PERMIT, DORMANT SEEDING IS EFFECTIVE.
10. IN THE EVENT OF SNOWFALL (FRESH OR CUMULATIVE) GREATER THAN 1 INCH DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM THE AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.



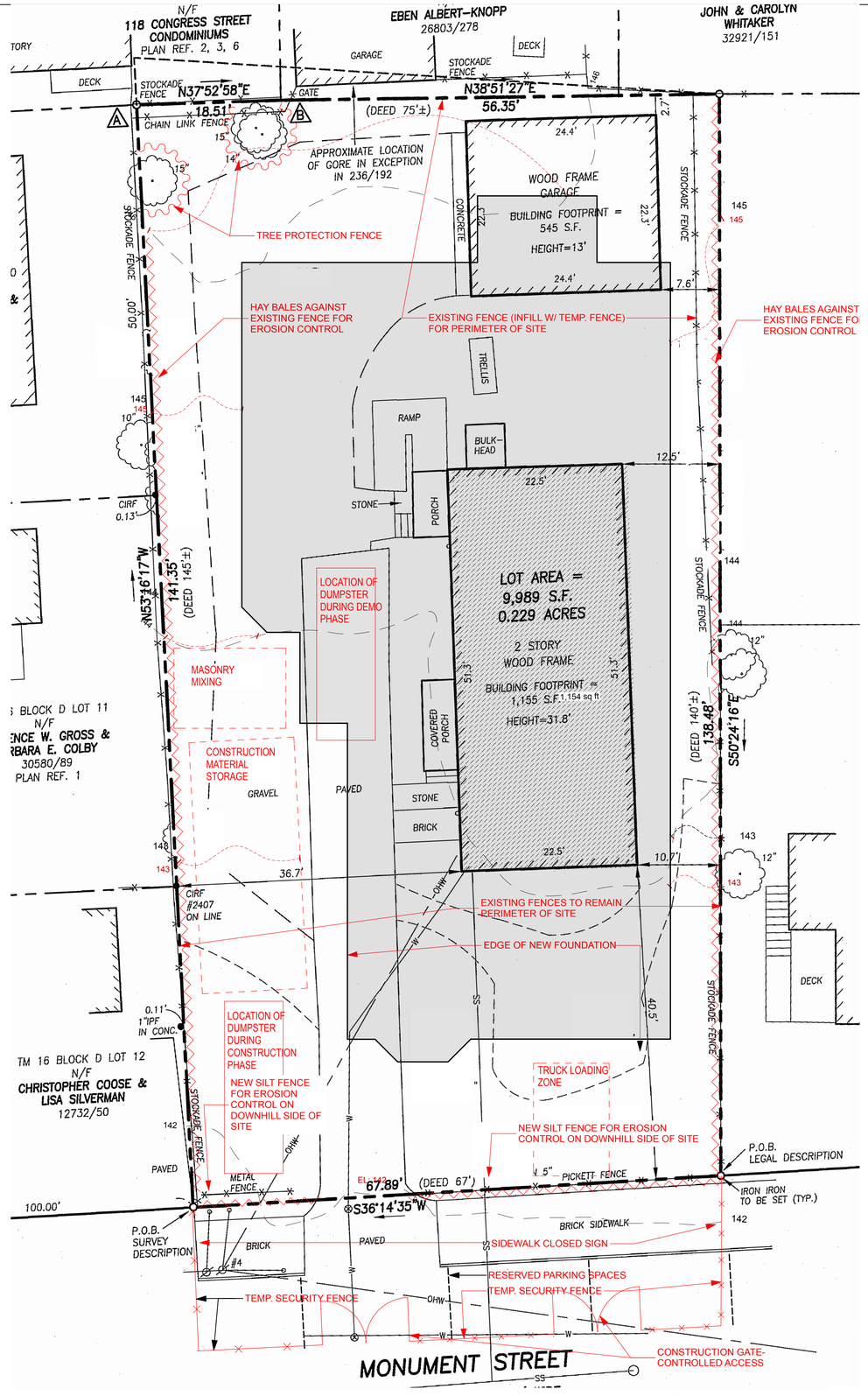
TREE PROTECTION FENCE
NTS



SILTATION FENCE DETAILS
NTS NTS

SILTATION FENCE INSTALLATION

1. EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM. JOIN SECTION AS SHOWN ABOVE.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCO THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPLISHED BY AN INTERCEPTION DITCH.
5. BARRIER SHALL BE MIRAFI SILT FENCE OR APPROVED EQUAL.



1 C.3 CONSTRUCTION MANAGEMENT & EROSION PLAN
SCALE: 1/8" = 1'-0"

PRELIMINARY REVIEW SET 3-18-18 NOT FOR CONSTRUCTION

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MONUMENT PARTNERS, LLC
25 MONUMENT STREET PORTLAND, ME

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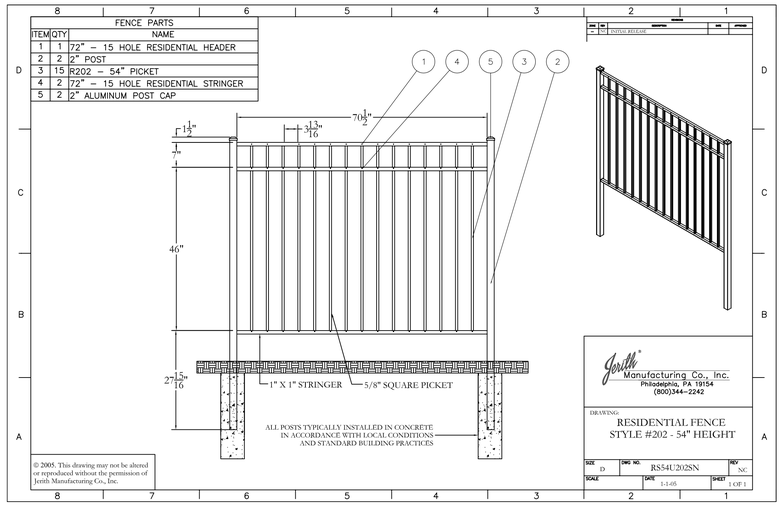
MARK	DATE	DESCRIPTION

DATE: 4/18/18
CHECKED BY: AEC, JWW
DRAWN BY: CL, JR, AC, JW
JOB: 17-KEE
SHEET TITLE: CONSTRUCTION MANAGEMENT AND EROSION CONTROL

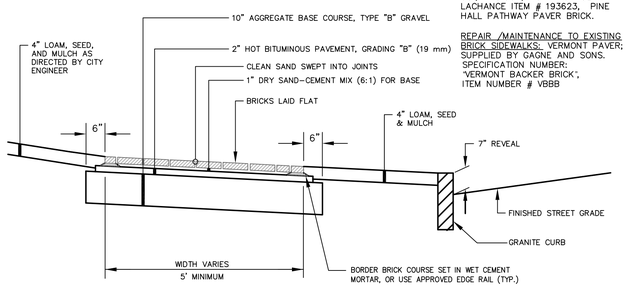
C.3



8 C.4 BLACK ALUMINUM FENCE

NOT TO SCALE

NOTE: MAX. 2% CROSS SLOPE



BRICKS TO BE USED:

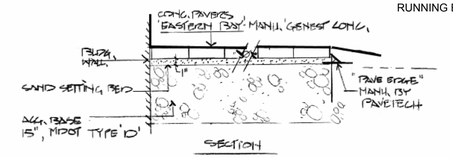
NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: 'VERMONT BACKER BRICK', ITEM NUMBER # VBBB

4 C.4 BRICK SIDEWALK WITH BITUMINOUS BASE

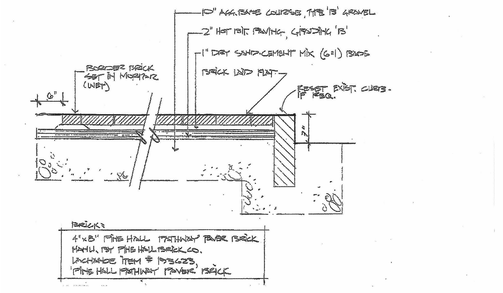
NOT TO SCALE

PAVERS SIZE TO BE 4 3/4" WIDE BY 9 1/2" LONG BY 2 3/8" TALL "EASTERN BAY STONE" BY GENEST CONCRETE INC. ,COLOR TO BE GRANITE BLEND IN A RUNNING BOND PATTERN.



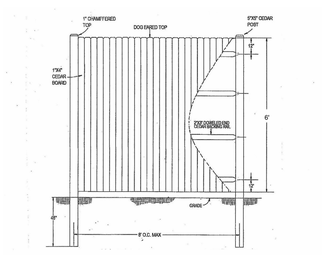
5 C.4 CONCRETE PAVER DETAIL

NOT TO SCALE



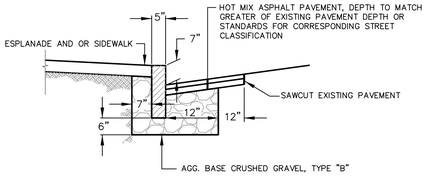
6 C.4 BRICK PAVING DETAIL FOR WALK RECONSTRUCTION

NOT TO SCALE



7 C.4 WOOD STOCKADE FENCE

NOT TO SCALE

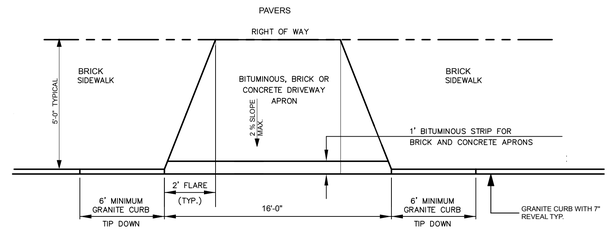


VERTICAL GRANITE CURB CROSS SECTION

1 C.4 VERT. GRANITE CURB INSTALLATION IN EXISTING STREETS

NOT TO SCALE

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.



2 C.4 BRICK DRIVEWAY APRON LAYOUT

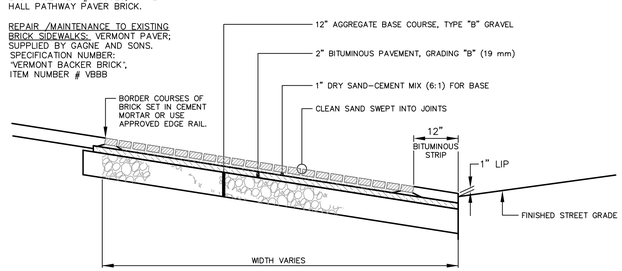
NOT TO SCALE

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

NOTE: MAX. 2% CROSS SLOPE AT DRIVEWAY WHERE SIDEWALK CROSSES DRIVEWAY. PROVIDE A MINIMUM WIDTH OF 5' FOR PEDESTRIAN TRAVEL



3 C.4 BRICK DRIVEWAY APRON WITH BITUMINOUS BASE

SCALE: 1" = 1'-0"

PLANNING BOARD REVIEW SET
NOT FOR CONSTRUCTION

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F 207.775.3631
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MARK	DATE	DESCRIPTION

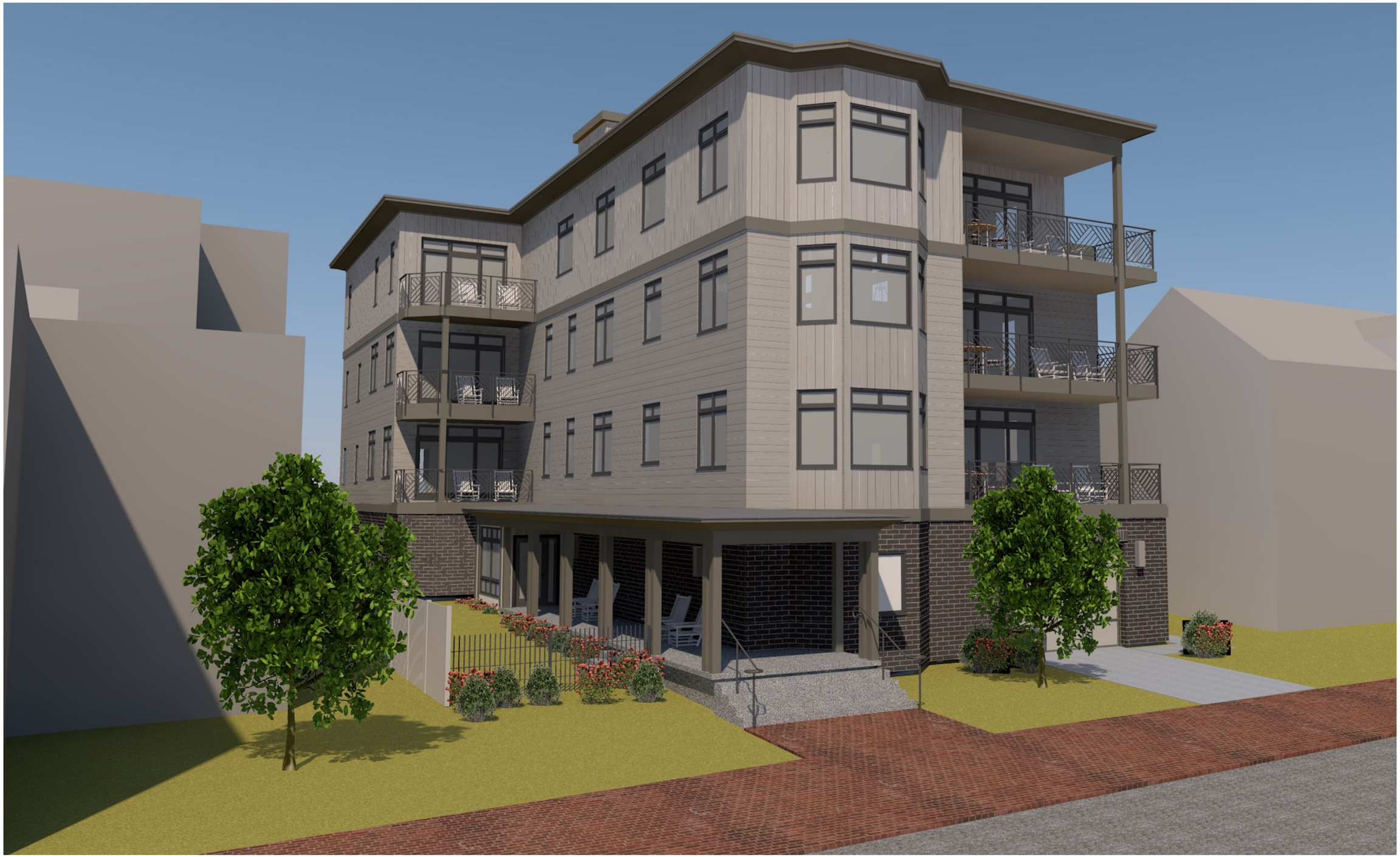
DATE: 4/19/18
CHECKED BY: AEC, JNW
DRAWN BY: JR, AEC, JNW
JOB: 17-KEE
SHEET TITLE: DRIVEWAY & SIDEWALK DETAILS, FENCING

C.4

C:\PROJECTS\MONUMENT PARTNERS\17-KEE\CAD\17-KEE_C4.DWG - Plotted on 4/19/18 at 10:00 PM by Amy Callender, File Path: P:\M Partners\HOA Consolidated - P\M Copies\Working 18.04.17 Temporary

JOB: MONUMENT PARTNERS, LLC
SCALE:

DATE: 3/21/18
DESCRIPTION:



25 MONUMENT STREET VIEW

WHIPPLE | CALLENDER ARCHITECTS
PO BOX 1276 PORTLAND, ME 04104

JOB: MONUMENT PARTNERS, LLC
DATE: 3/21/18
SCALE:
DESCRIPTION:



25 MONUMENT STREET VIEW

WHIPPLE | CALLENDER ARCHITECTS
PO BOX 1276 PORTLAND, ME 04104



STREET VIEW FROM ST. LAWRENCE STREET

4/19/18

WHIPPLE | CALLENDER ARCHITECTS
PO BOX 1276
PORTLAND, ME 04104
207.775.2696

MONUMENT PARTNERS, LLC
25 MONUMENT STREET, PORTLAND ME



STREET VIEW FROM ATLANTIC STREET

4/19/18

WHIPPLE | CALLENDER ARCHITECTS
PO BOX 1276
PORTLAND, ME 04104
207.775.2696

MONUMENT PARTNERS, LLC
25 MONUMENT STREET, PORTLAND ME



25 MONUMENT STREET RENDERING

4/19/18

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PO BOX 1276
PORTLAND, ME 04104
207.775.2696

MONUMENT PARTNERS, LLC

25 MONUMENT STREET, PORTLAND ME

PLANNING BOARD REPORT
PORTLAND, MAINE

415 Cumberland Avenue
Building Renovation: Commercial & Residential
Level III Site Plan and Subdivision Plan
2018-011
Applicant: 415 CA, LLC.

Submitted to Portland Planning Board Public Hearing Date: April 24, 2018	Prepared by: Christian Roadman Date: April 20, 2018

I. INTRODUCTION

The owner of 415 Cumberland Avenue seeks to renovate the property's existing building to include two commercial and eight residential units. The Planning Board previously approved property renovations / building conversion for this site in 2016 and 2015, but neither previous project came to fruition.

The current proposed project includes some exterior work, such as window infill, installation, replacement, and refurbishment; installation of cement board siding; installation of a metal side entrance canopy; and creation of a small rooftop deck. However, most of the proposed work will impact the interior of the building.

The property is not within a historic district, nor the downtown pedestrian overlay district, but it is within 100 feet of the Congress Street historic district. As such, this project's review process includes historic preservation advisory review. The Planning Department sent 189 notices of this agenda item to property owners within 500 feet of the site. Notice of this item also appeared in legal advertisements on April 16 and April 17, 2018.

Applicant: Sam Reiche, 415 CA, LLC
Consultants: Walsh Engineering Associates (Thomas Greer, P.E.); Downeast Surveying & Development (Elwood Ellis); Archetype Architects (Barry Yudaken)

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
None	n.a.
Review	**Relevant Code**
Site Plan	*Section 14-526*
Subdivision	*Section 14-497*

III. PROJECT DATA

Existing Zoning	B-3c Downtown Business, R-6 Residential
Existing Use	Commercial
Proposed Use	Commercial and Residential
Proposed Development Program	2 Commercial Units, 8 Residential Units
- Bedroom Mix	One Studio, Four 1-Bedroom, Three 2-Bedroom
Parcel Size	6,098 sq. ft.

	Existing	*Proposed*	*Net Change*
Building Footprint (sq. ft.)	4,929	4,929	0
Building Floor Area (sq. ft.)	15,820	15,820	0

Impervious Surface Area (sq. ft.)	5,762	5,786	24
Parking Spaces	6	6	0
Bicycle Parking Spaces	0	4	4
Estimated Cost of Project	$800,000		

IV. EXISTING CONDITIONS

Located at the corner of Forest and Cumberland Avenues, the property includes one existing building. Property records list the building as constructed in 1900, but it includes a more recent, wooden clapboard addition. Within that addition, a garage holds sufficient space for six tandem-parked cars.

415 Cumberland is immediatelty surrounded by buildings of a variety of styles and uses, including two apartment buildings, a parking garage, and the YMCA. The YMCA shares access, as well as an easement to, a pedestrian way between that building and 415 Cumberland.

The existing building is located on a slope, providing the basement level with frontage on Forest Avenue and the first floor with frontage on Cumberland Avenue.

V. PROPOSED DEVELOPMENT

The applicant intends to establish two commercial spaces, one on the basement level (with Forest Avenue frontage) and one on the first floor (with Cumberland Avenue frontage). Plans include two residential units on the first floor, five on the second floor, and one unit at the penthouse level. The penthouse unit will include access to a new, fenced roof deck.

The proposed renovations include window infill, installation, and replacement, new cement-board siding, and installation of a metal canopy over the side entrance. No proposed changes impact the existing building's footprint. A fence and code-entry gate will block public access to the space between the building at 415 Cumberland and the YMCA. The applicant proposes to provide this code to the YMCA in order to facilitate access by that organization.

Commercial tenants are not specified in the application, and the residential units are intended for rental. There is no elevator in the building, nor will one be installed. The six tandem parking spaces inside the garage will be retained, and four bicycle parking spaces will be provided via two bicycle racks.

VI. PUBLIC COMMENT / NEIGHBORHOOD MEETING

The applicant team held a neighborhood meeting for the project on March 14, 2018 at 415 Cumberland Street, which four people attended. Submitted notes represent feedback as positive, and reflect desire for the project to proceed (in contrast with the previous two development efforts).

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

The applicant submitted a quitclaim deed evidencing ownership of the property in question, as well as documentation of easements granted both to and from the YMCA next door. The proposed project maintains the YMCA's emergency exit into and away from the space between the two buildings.

A letter signed by Roger C. Levesque, Executive Vice President at Gorham Savings Bank, attests to the applicant's "experience and financial capacity to successfully finance and complete the proposed property improvements." The estimated project cost is $800,000.

VIII. ZONING ANALYSIS

The majority of the property at 415 Cumberland Avenue is located within the B-3c downtown business zone, while approximately 20 feet of the property's northwest area is located in the R-6 residential zone (this area includes proposed apartments, but not the proposed commercial spaces). No additional parking is required for the project in either zone, and the six tandem-parked garage spaces will remain. Staff find the proposed project in conformance with zoning requirements.

IX. DEVELOPMENT REVIEW

A. SUBDIVISION (Section 14-497)

The proposed development prompts review for conformance with relevant standards of Portland's subdivision ordinance and applicable regulations.

Will Not Result in Undue Water and Air Pollution; Will Not Result in Undue Soil Erosion
Staff find the proposed project in conformance with this standard.

Sufficient Water Available
The applicant provided a capacity to serve letter from the Portland Water District.

Will Not Cause Unreasonable Traffic Congestion
Staff find the proposed project in conformance with this standard.

Will Provide for Adequate Sanitary Sewer and Stormwater Disposal; Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage
The applicant provided a wastewater capacity application, but no response from the Department of Public Works. Staff recommends that confirmation of adequate capacity be included as a condition of approval.

Scenic Beauty, Natural, Historic, Habitat and other Resources
Staff find the proposed project will not have an adverse effect on the scenic or natural beauty of the area.

Comprehensive Plan
Staff find the proposed project compatible with the Comprehensive Plan, which includes the following applicable goals:

- "create economic prosperity by growing Portland's tax and employment base"
- "encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods"

B. SITE PLAN (Section 14-526)

The proposed development prompts review for conformance with relevant standards of Portland's site plan ordinance and applicable regulations.

Transportation Standards

Traffic Impacts; Parking; Construction Management Plan
As mentioned above, neither the B-3c zone nor the R-6 zone require one parking space per dwelling unit in this instance. The proposed project is not anticipated to significantly impact surrounding street systems, access, or circulation. Tom Errico, consulting traffic engineer, provided comments regarding parking and construction management intended to minimize any impact.

- Tandem parking spaces shall be designated for the residential units only (or low turnover use) to minimize backing maneuvers onto Forest Avenue.
- The applicant submitted a general construction management plan, but a condition of approval shall require greater detail, including:
    - Pedestrian detour plan minimizing sidewalk impact
    - Construction material delivery / truck plan minimizing sidewalk and vehicle lane impact
    - Information on contractor parking such that public on-street parking is not impacted.

ADA Access
Bruce Hyman, the City's transportation program manager, expressed concern regarding the condition and grade of the sidewalk and driveway along Forest Avenue. As a condition of approval, existing and proposed grades shall be submitted for review and approval by the Planning Authority.

The applicant submitted an accessibility review finding that a range of accessibility measures were not required for this project. Staff shared this document with the Permitting and Inspections Department for review and input. Code Enforcement Officer Jeanie Bourke flagged the following statement for confirmation by the applicant: "complete change in occupancy does not apply as the entire building is not changing to Residential. Therefore an accessible entrance, and accessible route, and accessible parking is not required." Additionally, the most recent set of plans were not yet available. Staff suggests review and acceptance of ADA compliance by the Permitting and Inspections Department as a condition of approval, and that any required modifications to the site plan shall be reviewed and approved by the Planning Authority.

Environmental Quality Standards

The proposed project is not anticipated to significantly impact natural features or water quality. As it is located on a fully developed site, the project was not subject to additional stormwater controls.

Two existing street trees are to be maintained, and two new street trees are proposed.

Because the project proposes eight residential units, four street trees required under the City's Technical Standards are required. Applicant payment of the fee-in-lieu for four street trees is suggested as a condition of approval.

Public Infrastructure and Community Safety Standards

Division Chief Mike Thompson noted that the Fire Department has adequate capacity in the area for this project. During the application process, the applicant communicated with staff in the Permitting and Inspections Department to facilitate compliance with relevant standards.

Site Design Standards

The proposed project is not anticipated to create significant issues related to snow and ice loading, exterior lighting, noise and vibration. Waste/recycling materials are proposed to be screened by a new fence, and stored in the space between 415 Cumberland and the YMCA (while still allowing passage).

Proposed site changes are consistent with B-3c and multifamily design standards, subject to approval by Deb Andrews, the City's historic preservation program manager. Due to its location within 100 feet of the Congress Street historic district, the project prompted advisory historic preservation design review.

Ms. Andrews commented that new windows should match the existing windows in material, muntin configuration and profile, color, and operation. This is of particular importance on elevations in which new and existing windows will be present.

Additionally, Ms. Andrews requested a detail of the metal canopy proposed over the Forest Avenue entrance. Proposed window details, as well as the proposed metal canopy detail, should be submitted for review and approval by Ms. Andrews as a condition of approval.

XII. PROPOSED MOTIONS

A. 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 April 24, 2018 for application 2017-011 (415 Cumberland Avenue) relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [is / is not] in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat:

1. Confirmation of adequate wastewater capacity shall be provided to and reviewed by City staff.

B. DEVELOPMENT REVIEW

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on April 24, 2018 for application 2017-011 (415 Cumberland Avenue) 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, which must be met prior to issuance of a building permit:

1. Proposed window specifications and the proposed metal canopy detail shall be submitted for review and approval by historic preservation staff.
2. The applicant shall submit additional information pertaining to construction management, including: Pedestrian detour plan minimizing sidewalk impact; construction material delivery and truck plan minimizing sidewalk and vehicle lane impact; and, information on contractor parking such that public on-street parking is not impacted.
3. Existing and proposed grades of the property's sidewalk and driveway along Forest Avenue shall be submitted for review and approval by the Planning Authority.
4. The applicant shall ensure ADA accessibility compliance, to be reviewed and accepted by staff in the building and permitting department. Any required modifications to the site plan shall be reviewed and approved by the Planning Authority.
5. The applicant shall pay into the City's street tree, at a cost of $400 per tree, to account for each of the four trees not provided per the City's Technical Standards.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

A. NEIGHBORHOOD MEETING MATERIALS
B. CONSULTING TRAFFIC ENGINEEER COMMENTS 4-19-18
C. CONSULTING CIVIL ENGINEER EMAIL COMMENTS 3-1-18
D. HISTORIC PRESERVATION REVIEW COMMENTS 3-20-18
E. FIRE STAFF COMMENTS 3-7-18
F. DPW COMMENT 4-20-18
G. CODE ENFORCEMENT OFFICER COMMENT 4-2-18
H. TRANSPORTATION PROGRAM MANAGER COMMENTS 3-30-18

APPLICANT'S SUBMITTALS

1. COVER LETTER
2. LEVEL III APPLICATION
3. WASTEWATER APPLICATION
4. LAND USE CONFORMANCE NARRATIVE
5. FINANCIAL CAPABILITY
6. DEED
7. EMAIL TO CITY WASTEWATER FOR ABILITY TO SERVE
8. EMAIL TO PWD – REQUEST FOR ABILITITY TO SURVE
9. PWD ABILITY TO SERVE DETERMINATION
10. UPDATED COVER LETTER
11. ACCESSIBILITY EVALUATION
12. ADA RAMP PHOTO
13. EASEMENT INFORMATION
14. EXTERIOR LIGHT CUTSHEETS

PLANS

A. FLOOR PLANS
B. ELEVATIONS
C. LANDSCAPE PLAN
D. SITE PLAN
E. DEMOLITION PLAN & DETAILS
F. CONSTRUCTION MANAGEMENT PLAN NARRATIVE

G. SUBDIVISION PLAN
H. SURVEY PLAN

Att. A

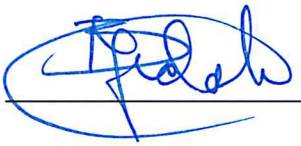
Neighborhood Meeting Certification

415 Cumberland Avenue

I, Barry Yudaken hereby certify that a neighborhood meeting was held on March 14, 2018 at 415 Cumberland Street @ 5:30 pm.

I also certify that on March 1, 2018 invitations were mailed to all addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development and the residents on the "interested parties" list.

Signed,



March 15, 2018

Attached to this certification are
1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

A R C H E T Y P E

March 1, 2018

Dear Neighbor:

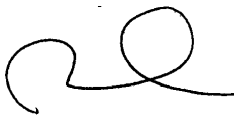
Please join us for a neighborhood meeting as we share plans for the construction at 415 Cumberland Avenue into seven (7) residential units and two (2) commercial units.

Meeting Location: 415 Cumberland Avenue, ME 04101
Meeting Date: Wednesday March 14, 2018
Meeting Time: 5:30 PM

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

If you have any questions, please email Sam Reiche at reiche.sam@gmail.com.

Sincerely,



David Lloyd
Maine Licensed Architect

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

48 Union Wharf, Portland, Maine 04101 (207) 772–6022• Fax (207) 772–4056

Archetype, P.A.
48 Union Wharf
Portland, ME 04101

Place
Stamp
Here

Neighborhood Meeting Notes

415 Cumberland Avenue

3/15/2018

Presenters:

- Barry Yudaken Architect, Archetype Architects
- Sam Reiche, Developer

We held the Neighborhood meeting yesterday evening at 5:30pm. The meeting was held at 415 Cumberland Avenue.

4 people attended the meeting. Sam Reiche spoke about the building, it's history, and his experience as a developer and spoke about how this project would be good for Portland. I spoke about the design proposal and explained to those who attended what the design intentions were and why certain decisions were taken.

Everyone was very positive and said it looked like a good project. They were less concerned about the design details and more concerned that the project would not proceed, as twice before they have seen proposals for the building and then twice before those projects never materialized.

When I asked for any comments at the end of the meeting, none were made. I did record two comments made during discussion before I specifically asked. One was "It would be nice if the business space became a coffee shop" and the other was "It's nice to see apartments being proposed again rather than condo's and its good for the city."

End of Notes

SIGN UP SHEET

415 Cumberland Street

14-Mar-18

	Name	Address
1	Ron Spinella	371 Cumberland Ave
2	Emma Moser	70 Forest Ave.
3	Susan McCluskey	25 Paris St.
4	George Rheault	28 Hanover St.
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26		

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

415 Cumberland Avenue - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Apr 19, 2018 at 11:19 AM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>

Hi Christian – the following represents my Final Traffic Comments:

- The tandem parking spaces shall be designated for the residential units only (or for low turnover use) to ensure that backing maneuvers onto Forest Avenue are minimized given vehicle and pedestrian traffic levels.

- The applicant has submitted a general construction management plan. A condition of approval shall require greater detail on the following items:
    - Sidewalk impacts are expected with construction activity. A detailed pedestrian detour plan that minimizes sidewalk impacts shall be provided for review and approval.
    - Greater detail is required as it relates to construction material deliveries and how trucks will impact traffic conditions on Forest Avenue. A detail plan shall be provided for review and approval. It will be critical that sidewalk and vehicle lanes are not significantly impacted.
    - The Plan shall provide information on contractor parking such that public on-street parking is not impacted.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

Att. C

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

415 Cumberland

Jean Fraser <jf@portlandmaine.gov> Thu, Mar 1, 2018 at 1:40 PM
To: Christian Roadman <croadman@portlandmaine.gov>, "Hyman, Bruce" <bhyman@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>
Cc: "Errico, Thomas" <thomas.errico@tylin.com>

fyi re your reviews

---------- Forwarded message ----------
From: **Lauren Swett** <lswett@woodardcurran.com>
Date: Thu, Mar 1, 2018 at 11:54 AM
Subject: 415 Cumberland
To: Jean Fraser <jf@portlandmaine.gov>

Hi Jean,

I took a look at the submission for 415 Cumberland from yesterday's meeting, to see if there is anything that would require a civil review.

They have already made their utility improvements, and they are waiting on confirmation of final ability to serve.

Site work is very minimal. They don't have a standard site plan, just a subdivision plat which calls out both existing and new proposed features and a landscaping plan. I do have a few questions:

- Street view identifies that there is a tree in the sidewalk on Cumberland Avenue. The plan doesn't show that it exists and/or is being removed.
- The existing ADA ramp at the corner is shown in sort of an odd way – the curb line should be drawn to show the location of the ramp tactile warning strip.
- The light pole shown on the subdivision plat is a traffic light pole with a mast arm. I'm not sure if the plat should identify that.
- The plat shows the ROW line on Cumberland crossing features out of the sidewalk (bottom step and the mulch planter areas). I'm assuming that is the existing condition, but I'm wondering if that needs to be addressed on the plat.
- At the southern corner of the building (plan northwest corner), they are showing a new walkway of pavers. This crosses the sidewalk, and I'm guessing that wouldn't be acceptable to the City.

Let me know if you have any questions.

Thanks,

Lauren

Lauren Swett, P.E.

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

Commitment & Integrity Drive Results

www.woodardcurran.com

--
Jean Fraser, Planner
City of Portland
874 8728

Conversation with Deb Andrews, 3/20/2018, re. 415 Cumberland Avenue

Request details on new windows. What are the materials? Windows should feature simulated divided lites with applied exterior muntins, at a minimum. Also, which windows will be repaired/replaced?

Request details regarding window moldings: will brick moldings be replicated in aluminum trim on other, new windows?

Why are two windows on the northwest elevation not the same height as all other windows on the northwest elevation and Forest Avenue elevation? Ideally these will match.

Request clarity / detail regarding the penthouse / mezzanine. What changes are being made, if any, and what materials are being used. Are the proportions of the existing windows changing?

Request details regarding finishes. Painted finish of Hardie plank should not be high contrast, nor should relationship of trim to body of building be high contrast.

What is reveal / ttw of Hardie plank? (Reveal should be less than 6.")

Hardie plank should be installed smooth side out (please note on plans).

Exhaust vents should be painted to match surrounding material (brick or Hardie plank siding).

Hardie plank at top of building parapets on Forest Avenue and southwest elevations seem strange – the treatments / bands along the top of the building's middle section should be continued.

Will garage doors be replaced? If so, materials / details requested.

Request details regarding proposed new door on Forest Avenue, especially regarding material and panelization.

Coal chute should be retained, not removed or covered.

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2018-011

Date: 4/20/2018

Comments Submitted by: Robert Thompson/Fire on 3/7/2018

We suggest a meeting with Jason Grant in Building Inspections to review the building requirements related to separations, exit requirements, sprinkler and alarm system requirements, ADA, etc, for this project

Comments Submitted by: Robert Thompson/Fire on 3/7/2018

The Fire Department has adequate hydrant capacity in the area for this project, and access to the building is adequate.

Att. F

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

415 Cumberland Avenue (corner of Forest Ave) - Driveway Cross-slope

Keith Gray <kgray@portlandmaine.gov> Fri, Apr 20, 2018 at 3:04 PM
To: Bruce Hyman <bhyman@portlandmaine.gov>
Cc: Jennifer Ladd <jwl@portlandmaine.gov>, Michael Farmer <mfarmer@portlandmaine.gov>, Christian Roadman <croadman@portlandmaine.gov>

Hello,

DPW position is that the driveway apron shall be reconstructed in conformance with technical standards. That being said, the apron should match into the existing sidewalk conditions which appear to be in excess of 2 percent cross slope. We do not want a case where the apron is 2% matching into 4-10% grades creating an even steeper grade. We would require existing and proposed grades for analysis.

Thank you,
Keith
[Quoted text hidden]
--
Keith D. Gray, PE
City Engineer
Engineering Services Manager
Dept. of Public Works
City of Portland Maine

207.874.8834
kgray@portlandmaine.gov

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

415 Cumberland Avenue

Jeanie Bourke <jmb@portlandmaine.gov> Mon, Apr 2, 2018 at 1:02 PM
To: Barbara Barhydt <bab@portlandmaine.gov>
Cc: Christian Roadman <croadman@portlandmaine.gov>, Jason Grant <jgrant@portlandmaine.gov>

Hi all,

My apologies for the delay in looking at this, jumping on it first thing this morning. I have some comments on the Accessibility Evaluation that you can share with Archetype:

Residential Apartments

Note 6 as it pertains to Chap. 10 Change of Occupancy in IEBC 2015, Section 1012.8. As this requires compliance with Section 705, they will need to evaluate the following as stated in 705.1, "A facility that is altered shall comply with...705.1.1 through 705.1.14, and Chapter 11 of the IBC unless it is technically infeasible", so, pending any exceptions to this, it also needs to be addressed for Accessible Entrances per Sec. 1105.1.7 Dwelling units and sleeping units.

In terms of the plans, we have met with Barry Yudaken on 2 occasions to review the code implications. I just got an email from him last Thursday with some proposed changes in the design, to have the penthouse be a separate unit instead of part of the 2nd (3rd) floor unit. Jason and I will need to take a look at the latest plans for compliance.

I will let you know, thanks.

Jeanie

Jeanie Bourke
Code Enforcement Officer/Plan Reviewer
Team Leader

City of Portland
Permitting and Inspections Department
389 Congress St. Rm 315
Portland, ME 04101
jmb@portlandmaine.gov
(207)874-8715

On Thu, Mar 29, 2018 at 2:17 PM, Barbara Barhydt <bab@portlandmaine.gov> wrote:
[Quoted text hidden]

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

PEZ 2018-011: Building Conversion, 415 Cumberland Avenue

Bruce Hyman <bhyman@portlandmaine.gov> Fri, Mar 30, 2018 at 3:55 PM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Jeff Tarling <jst@portlandmaine.gov>

Good afternoon, Christian,

Below are my preliminary comments on the materials submitted to date on the site plan and accompanying materials related to bicycle, pedestrian, streetscape and accessibility topics:

- the city arborist should weigh in the adequacy of the existing tree wells within the sidewalk - they do not meet current dimensional requirements (typically 4'x7') but should be sized appropriately, if adjusted, to maintain the width for pedestrian accessibility along the sidewalk (5' ideal minimum)
- the curb ramp is to be updated to achieve full ADA-compliance and meet existing Technical Standards - I've attached the curb ramp configuration provided to the previous applicant's project team for this location - the current standard for the detectable warning panel within the curb ramp is cast iron with a 4" concrete border and is available from DPW if needed
- the layout and dimensions for the 2 bicycle racks need to be checked for adequacy - the minimum clearance (O.C) are: from the building, 30"; between racks is 36" and from the edge of the driveway is 24". Sufficient clearance from the exterior gas service and bollards also need to be considered. It appears the bike racks would also block access to the external stairway from the 2nd floor without going onto the adjacent property. Other locations on-site or within the sidewalk on either Forest and/or Cumberland Avenue can also be considered to make them more functional and not block this access.
- the ADA-compliance of the sidewalk and driveway along the project's frontage on Forest Avenue should be confirmed for cross-slope (maximum 2% cross-slope for a minimum of 5' of width) and condition.

Please let me know if you have any questions related to these topics
--
Bruce Hyman
Transportation Program Manager
Transportation Division

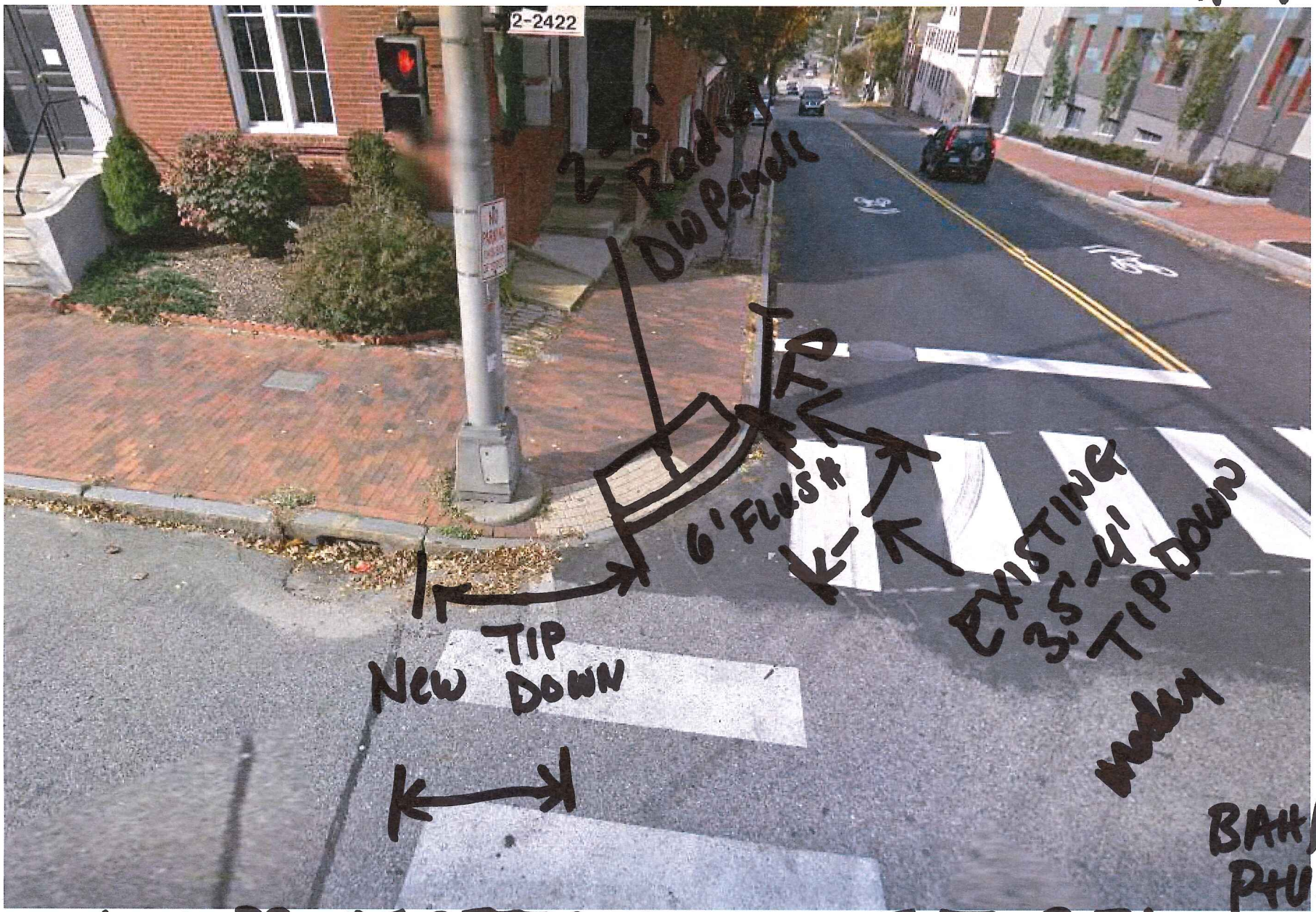
Department of Planning & Urban Development
389 Congress Street
Portland, Maine 04101
(207) 874-8717 phone

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

415CumberlandAve_CurbRampProposed_Sept22-16 (1).pdf
652K

415 Cumberland Ave: Curb Ramp Mods

9/22/16



WILL PROVIDE BETTER ALIGNMENT TO BOTH RECEIVING CROSSWALKS

Att. 1

WALSH
ENGINEERING ASSOCIATES, INC.

File 17164

January 16, 2018

Ms. Jean Fraser
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 415 Cumberland Avenue, 415 CA, LLC

Dear Jean,

We are pleased to submit the attached application for 415 Cumberland Avenue. This site has been previously approved by the City for redevelopment. The current project is very similar. It includes two commercial spaces and seven residential units.

This project will add vitality to the downtown district with more residents and places to work. This is in conformance with the City's Comprehensive Plan.

Previous plans required the upgrading of some utilities to make the project viable. Those have been completed. We have requested utility letters to confirm that, and will forward them to you when received.

There is a very light touch to the site. We will be completing the following items:

- Adding two trees to the front of the building on Cumberland Avenue.
- Removing the fire escape and HVAC unit in the alley of Cumberland Avenue.
- Removing and replacing the fencing and gates between this building and the YMCA.
- Adding trash containers in the area between this building and the YMCA.

With these improvements the site will be at current City Standards.

The majority of the work will be on the inside of the building. This will be a complete renovation of the inside. The existing basement area has parking for 6 vehicles. This area will be used to stage the construction project.

Please review our application and let me know if you need anything else.

Respectfully,

Thomas S. Greer, P.E.
Walsh Engineering Associates, Inc.

cc. Sam Reiche, Barry Yudaken, File
Enc.

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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

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

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

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

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

Project Name:	415 Cumberland Avenue
Proposed Development Address:	415 Cumberland Avenue
Project Description:	Convert Existing Building to 7 Residential Units and 2 Commercial Units
Chart/Block/Lot:	036 G033001
Preliminary Plan	x
Final Plan	

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

APPLICANT

Name:	Sam Reiche
Business Name:	415 CA, LLC
Address:	25 Edgehill Rd
City/State:	Brookline MA
Zip Code:	02445
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	reiche.sam@gmail.com

OWNER

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

AGENT/REPRESENTATIVE

Name:	Walsh Engineering Associates, Inc. (Thomas S. Greer, PE)
Address:	One Karen Drive, Suite 2A
City/State:	Westbrook, ME
Zip Code:	04092
Work #:	207-553-9898
Home #:	
Cell #:	
Fax #:	
E-mail:	tgreer@walsh-eng.com

BILLING (to whom invoices will be forwarded to)

Name:	415 CA, LLC (Sam Reiche)
Address:	25 Edgehill Rd
City/State:	Brookline MA
Zip Code:	02445
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	reiche.sam@gmail.com

ENGINEER

Name:	Walsh Engineering Associates, Inc. (Thomas S. Greer, P.E.)
Address:	One Karen Drive, Suite 2A
City/State:	Westbrook, ME
Zip Code:	04092
Work #:	207-553-9898
Home #:	
Cell #:	
Fax #:	
E-mail:	tgreer@walsh-eng.com

SURVEYOR

Name:	D.S.D. Downeast Surveying & Development (Elwood Ellis)
Address:	PO Box 6234
City/State:	China Village, ME
Zip Code:	04926
Work #:	207-968-2507
Home #:	
Cell #:	
Fax #:	
E-mail:	

ARCHITECT

Name:	Archetype Architects (Barry Yudaken)
Address:	48 Union Wharf
City/State:	Portland, ME
Zip Code:	04101
Work #:	(207) 772-6022
Home #:	
Cell #:	
Fax #:	
E-mail:	yudaken@archetypepa.com

ATTORNEY

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

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Thomas S. Greer
E-mail:	tgreer@walsh-eng.com
Name:	Rita J. Sawyer
E-mail:	rita@walsh-eng.com
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☐	Stormwater Quality	$250.00
☑	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [9] x $25.00 each	$ 225.00
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 1,975.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

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

TOTAL AREA OF SITE	6,098	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	25	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	5,762	sq. ft.
Impervious Area (Total Proposed)	5,787	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	4929	sq. ft.
Building Footprint (Total Proposed)	4929	sq. ft.
Building Floor Area (Total Existing)	15,820	sq. ft.
Building Floor Area (Total Proposed)	15,820	sq. ft.
ZONING		
Existing	B3c	
Proposed, if applicable	B3c	
LAND USE		
Existing	Commercial	
Proposed	Commercial & Residential	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	0	
# of Residential Units (Total Proposed)	7	
# of Lots (Total Proposed)	0	
# of Affordable Housing Units (Total Proposed)	0	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	3	
# of Two-Bedroom Units (Total Proposed)	4	
# of Three-Bedroom Units (Total Proposed)	0	
PARKING SPACES		
# of Parking Spaces (Total Existing)	6	
# of Parking Spaces (Total Proposed)	6	
# of Handicapped Spaces (Total Proposed)	0	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	4	
ESTIMATED COST OF THE PROJECT	$800,000.00	

VI. APPLICANT SIGNATURE

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

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

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

Signature of Applicant:	
Date: 1/16/18	FORD SAMUEL REICHE MANAGER, 415 CA LLC

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
n/a		1	Written requests for waivers from site plan or technical standards, if applicable.
x		1	Evidence of financial and technical capacity
n/a		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
x		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
x		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
n/a		Proposed grading and contours;	
x		Existing structures with distances from property line;	
x		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
n/a		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
n/a		Preliminary infrastructure improvements;	
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.	

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: January 16, 2018

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

Site Address: 415 Cumberland Avenue

Chart Block Lot Number: 036/G033001

Proposed Use: Residential / Commercial (Retail)
Previous Use: Residential / Commercial
Existing Sanitary Flows: unknown GPD
Existing Process Flows: none GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
Forest Avenue / Cumberland Avenue

Site Category		
	Commercial *(see part 4 below)*	x
	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: Jean Fraser Phone: (207) 874-8728
Owner/Developer Name: 415 CA, LLC (Sam Reiche)
Owner/Developer Address: 25 Edgehill Road, Brookline, MA 02445
Phone: Fax: E-mail: reiche.sam@gmail.com
Engineering Consultant Name: Walsh Engineering Associates, Inc.
Engineering Consultant Address: One Karen Drive, Ste 2A, Westbrook, ME 04092
Phone: 207-781-5242 Fax: 207-781-4245 E-mail: tgreer@walsh-eng.com

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

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 2,090 GPD
Peaking Factor/ Peak Times: 7-8 am and 6-8 pm
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)* 270x7 + 2x100 = 2,090

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: n/a

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: n/a GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

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

CONFORMANCE TO LAND USE ORDINANCE STANDARDS
415 Cumberland Avenue
File: 17164

DIVISION 12. B-3, B-3b AND B-3c DOWNTOWN BUSINESS ZONES

Sec. 14-216. Purpose.

(a) The purposes of the B-3 and B-3b downtown business zones are to:

(3) Encourage increased housing opportunity downtown for a diverse residential population;

This project provides residential development downtown.

(5) Encourage excellence in urban design;

This project maintains the excellent building creating the downtown fabric.

(6) Preserve and capitalize on the unique character and historic fabric of the downtown through the encouragement of reuse of significant existing structures;

This project maintains the 1900's architecture.

(9) Provide adequate parking and transportation facilities which promote accessibility, enhance and encourage development opportunity, and enhance and protect the pedestrian environment;

This project provides the 6 spaces, 4 required.

Sec. 14-217. Permitted uses.

(a) The following uses are permitted in the B-3, B-3b and B-3c zones:

1. Residential:

a. Attached single-family, two-family and multifamily dwellings;

This is a permitted multi-family dwelling.

2. Business:

a. General and business offices;
b. Professional offices;
c. Personal services;
d. Offices of building tradesmen;

o. Business services;

These are the likely uses for the commercial space in the building.

(b) The following additional restrictions shall apply in the PAD overlay zone, which shall be located on the streets listed below and as further delineated on the PAD overlay zone map, a copy of which is on file in the office of planning and urban development:

The building is not in the PAD overlay zone.

Sec. 14-218. Conditional uses.

We do not expect the uses in the building to be conditional uses.

Sec. 14-219. Prohibited uses.

Uses not enumerated in sections 14-217 and 14-218 as either permitted uses or conditional uses are prohibited. (Ord. No. 241-91, 3-11-91)

The uses in the building will be permitted uses.

Sec. 14-220. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the B-3, B-3b and B-3c zones shall meet the following requirements:

Below is a chart showing compliance with the dimensional standards.

ZONE CHART		
Zone: B3c - Downtown Business Zone Permitted Uses: Residential, Business & Professional Offices, Personal Services, Tradesman Offices		
Space Standards	Required	Proposed Total Subdivision
Minimum Lot Size	None	6,098 Sq. Ft.
Minimum Street Frontage	15'	121.90'
Maximum Setback	5'	0
Minimum Yard dimensions	None	0
Minimum Lot width	None	121.90'
Maximum Lot Coverage	100%	81%
Minimum Building Height	35'	Existing No change
Maximum Building Height	40'	Existing No change

Sec. 14-221. Other requirements and standards.

(a) Downtown urban design guidelines: All development as defined in article V, all building and site alterations, and all provision of landscaping or other pedestrian amenities shall be consistent with the Downtown Urban Design Guidelines. Amendments to the Downtown Urban Design Guidelines may be made by the Planning Board and shall be filed with the city clerk. Such amendments shall become effective forty-five (45) days after the date of filing with the city clerk, unless vetoed in whole or in part by the city council within that time.

(b) Off-street parking and loading: Off-street parking and loading are required as provided in division 20 and division 21 of this article.

This project provides 6 parking spaces in accordance with Division 20.

(c) Signs: Signs shall be subject to the provisions of division 22 of this article. In addition, signs within the pedestrian activities district (PAD) overlay zone or in areas designated as PAD encouragement areas, as shown on the pedestrian activities district map, a copy of which is on file in the department of planning and urban development, shall be consistent with the Downtown Urban Design Guidelines.

Signs will be approved by the future tenants as required.

(d) Exterior storage: There shall be no exterior storage, with the exception of receptacles for solid waste disposal which are not visible from a public street. Such receptacles shall be shown on the approved site plan.

There will be no outdoor storage available.

(e) Storage of vehicles: No more than one (1) unregistered vehicle shall be stored outside for a period in excess of thirty (30) days.

No unregistered vehicles will be stored on site.

(f) Shoreland and flood plain management regulations: If the lot is located in a shoreland zone or in a flood hazard zone, then the requirements of division 26 and/or division 26.5 shall apply.

This project is not located in the shoreland zone.

(g) Downtown arts program: All new development subject to section 14-851 shall make provision for participation in the public arts program.

We do not anticipate the building will be subject to the public arts program.

(h) Relocation of displaced residents: Any development which results in the displacement of residents of dwelling units currently located on the development site shall meet the requirements of sections 14-861 through 14-864.

We do not anticipate displacing any residents.

(i) Historic resources: The exterior design of proposed or renovated structures located within historic districts shall be subject to the provisions of article IX (historic preservation) of this chapter. The exterior design of proposed or renovated structures located adjacent to historic districts or historic resources shall be subject to section 14-526(d) 5, b. (Ord. No. 241-91, 3-11-91; Ord. No. 240-09/10, 6-21-10; Ord. No. 278-09/10, 7-19-10)

This project is within 100 feet of a Historic District. It does maintain the 1900's architecture.

Sec. 14-221.1. External effects.

Every use in the B-3, B-3b and B-3c zones shall be subject to the following requirements:

(a) Enclosed structure: The use shall be operated within a completely enclosed structure, except for those uses customarily operated in the open air.

This project will operate within the building.

(b) Noise: The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently within the B-3 and B-3b zones shall not exceed fifty-five (55) decibels on the A scale between the hours of 9:00 p.m. and 7:00 a.m., and sixty (60) decibels on the A scale between 7:00 a.m. and 9:00 p.m. at the boundaries of any lot nor within publicly accessible pedestrian open space, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ1).

The HVAC system will operate within the sound levels.

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

The uses in the building will not generate significant vibration.

(d) Heat: Heat shall be imperceptible without instruments at lot boundaries. Heating elements which are intended to melt snow and ice shall be placed within sidewalk paving only when approved by the department of parks and public works.

No external heat generators are included in the project.

(e) Glare, radiation or fumes: Glare, radiation or fumes shall be imperceptible without instruments at lot boundaries.

There are no items included in the project that will generate glare or fumes.

(f) Smoke: Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

There are no generators of smoke included in the project.

(g) Materials or wastes: No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All material which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in closed containers and in accordance with section 14-221(d). Areas attracting large numbers of birds, rodents or insects are prohibited.

All wastes will be handled with the appropriate enclosures.

Gorham
SAVINGS BANK
Banking is believing℠

December 15, 2017

To Whom It May Concern:

I am pleased to inform you it is my opinion Sam Reiche and 415 CA, LLC have the experience and financial capacity to successfully finance and complete the proposed property improvements located at 415 Cumberland Avenue, Portland. Sam Reiche has been a longstanding client of Gorham Savings Bank and has always handled his relationship with Gorham Savings in an exemplary fashion.

Please let me know if I can be of further assistance. If you have any questions, please email me at rlevesque@gorhamsavingsbank.com or by phone at (207) 222-1491.

Sincerely,

Roger C. Levesque
Executive Vice President

Doc#: 32871 Bk:34152 Pg: 38

MAINE REAL ESTATE TAX PAID

QUITCLAIM WITH COVENANT DEED
(Maine Statutory Short Form)

KNOW ALL PERSONS BY THESE PRESENTS, THAT, **M & A LOWCOUNTRY INVESTMENTS, LLC** a South Carolina limited liability company, for consideration paid GRANT to **415 CA, LLC** a Maine Limited Liability Company with a mailing address of 25 Edgehill Road, Brookline, MA 02445 with QUITCLAIM COVENANT, the land more specifically described in the attached Exhibit A, and incorporated hereto by reference.

Being the same premises conveyed to the Grantor herein by deed dated March 2, 2016 from 415 Cumberland, LLC and recorded in the Cumberland County Registry of Deeds in Book 32953, Page 37.

IN WITNESS WHEREOF, ANDREW KRAUS as Manager of M & A Lowcountry Investments, LLC, has set his hands and seals this 12 day of July, 2017.

Signed, sealed, and delivered in the presence of:

Witness

M & A Lowcountry Investments, LLC

Andrew Kraus, Manager

State of Maine
County of Cumberland

July 12, 2017

Then personally appeared the abovenamed Andrew Kraus as Manager of M & A Lowcountry Investments, LLC and acknowledged the foregoing to be his free act and deed and the free act and deed of M & A Lowcountry Investments, LLC.

Before me,

~~Notary Public~~/Attorney at Law
Print Name: Samantha J. Adams

EXHIBIT A

A certain lot or parcel of land with the buildings thereon situated on the westerly corner of Cumberland Avenue and Forest Avenue in Portland, and bounded and described as follows:

Beginning at the intersection of the southwesterly sideline of Forest Avenue with the northwesterly side of Cumberland Avenue;

Thence, northwesterly by said Forest Avenue one hundred twenty-two (122) feet to the land conveyed by Albert S. Rines to the Young Men's Christian Association of the City of Portland (hereinafter "Portland YMCA") by deed dated November 2, 1923 and recorded in the Cumberland County Registry of Deeds in Book 1153, Page 136;

Thence, southwesterly by said land conveyed to the Portland YMCA as aforesaid fifty (50) feet more or less to an angle in said land of the Portland YMCA;

Thence, southeasterly by said land of the Portland YMCA twenty-two (22) feet, more or less, to land now or formerly of Enoch C. Richards;

Thence, southeasterly by said land of Richard one hundred (100) feet, more or less, to Cumberland Avenue;

Thence northeasterly by said Cumberland Avenue fifty (50) feet, more or less, to the corner and the point of beginning.

Including herein and hereby conveying the right-of-way and other easements described in deed by the Portland YMCA to R. Hight Rines, dated September 16, 1925 and recorded in said Registry in Book 1212, Page 217.

The above described premises are conveyed subject to the right-of-way and other easements described in deed of R. Hight Rines to the Portland YMCA, dated September 16, 1925 and recorded in said Registry in Book 1212, Page 215.

Received
Recorded Register of Deeds
Jul 12,2017 11:26:29A
Cumberland County
Nancy A. Lane

From: Rita Sawyer
To: Brad Roland (brad@portlandmaine.gov)
Cc: tgreer@walsh-eng.com
Subject: 17164-415 Cumberland Avenue
Date: Tuesday, January 16, 2018 1:02:00 PM
Attachments: C1.0 SUBDIVISION PLAN 1 OF 2.pdf
C1.1 SUBDIVISION PLAN 2 OF 2.pdf
C1.2 LANDSCAPE PLAN.pdf
Wastewater Application.pdf

Brad,

Attached is information to request an Wastewater Ability to Serve Letter.

Rita J. Sawyer
Walsh Engineering Associates, Inc.
One Karen Drive, Suite 2A | Westbrook ME 04092
Tel: 207.553.9898 | Fax: 207.692.2273
Email: rita@walsh-eng.com
www.walsh-eng.com

From: Rita Sawyer
To: "Robert Bartels (MEANS@PWD.org)"
Cc: tgreer@walsh-eng.com
Subject: 17164-415 Cumberland Avenue
Date: Tuesday, January 16, 2018 1:40:00 PM
Attachments: C1.0 SUBDIVISION PLAN 1 OF 2.pdf
C1.1 SUBDIVISION PLAN 2 OF 2.pdf
C1.2 LANDSCAPE PLAN.pdf
415 Cumberland Ave-Peak Flow Based on Fixture Count_2017.xls

Attached is information to request an Ability to Serve Letter.

Rita J. Sawyer
Walsh Engineering Associates, Inc.
One Karen Drive, Suite 2A | Westbrook ME 04092
Tel: 207.553.9898 | Fax: 207.692.2273
Email: rita@walsh-eng.com
www.walsh-eng.com

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

January 18, 2018

Tom Greer, P.E.
Walsh Engineering Associates, Inc.
One Karen Drive, Suite 2A | Westbrook ME 04092

Re: 415 Cumberland Avenue, PO
Ability to Serve with PWD Water

Dear Mr. Greer:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on January 16, 2018. Based on the information provided per plans dated January 16, 2018, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- 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 1.5-inch service) or removing the 6-inch gate valve and capping the tapping sleeve (for the 6-inch service).

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

Existing Site Service

According to District records, the project site does currently have existing water service. A 1.5-inch diameter copper domestic and 6-inch ductile iron fire service line provide water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of these services.

Water System Characteristics

According to District records, there is an 12-inch diameter CI water main in Cumberland Avenue and a public fire hydrant located approximately 200 feet from the site. Recent flow data is available in this area. The most recent static pressure reading was 78 psi on February 11, 2016.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

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

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

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

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

WALSH
ENGINEERING ASSOCIATES, INC.

File 17164

April 17, 2018

Mr. Christian Roadman
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 415 Cumberland Avenue, 415 CA, LLC

Dear Christian,

Below are the responses to the Staff comments of April 3rd.

This project will add vitality to the downtown district with more residents and places to work. This is in conformance with the City's Comprehensive Plan.

Planning / Zoning

1. *Please provide additional information / documentation regarding the YMCA's easement on your property, as well as your plans to preserve that institution's access.*
   The easement has been uploaded for your review. Please note the gate will be keypad operated and compliant with ADA Standards as noted on C1.2.
2. *The content of the landscaping plan uploaded in January does not match the landscaping identified on the Site Plan uploaded in March. Please revise and ensure consistency between the two documents.*
   The Landscape Plan is shown on C1.2. It shows the two new trees and relocation of some of the existing plantings.
3. *Please clarify the number of units proposed for your project, as well as the rooftop access available to any unit. Will the top unit be part of / connected to a unit below? Please also clarify the design of any guardrails / fencing on the roof, and also clarify any roof access from the rooftop unit. I understand that the applicant team has been in contact with permitting / inspections reviewers regarding these items. Please keep planning staff apprised of such life safety-related discussions and any proposed changes they prompt (also see comment 25 below).*
   There will be 8 units. The Architect and the City Code Office have an understanding of the project, and how it meets the safety codes.
4. *Mechanical equipment must be selected and approved prior to issuance of an occupancy permit. Please identify the location and any screening of this equipment.*
   The selection of the mechanical equipment will be provided to the City for review.
5. *Please provide cut sheets of exterior lighting fixtures.*

Cut sheets for the exterior lighting are provided.

6. *The provided survey includes half the interior parking spaces detailed on the site plan. Please ensure consistency between documents and revise.*
   The survey has been revised.
7. *Please provide floor plans of the existing building, and clarify the existing number of units / commercial spaces. This may impact parking analysis.*
   There are 8 residential units and 2 commercial units. The parking data is on sheet C1.1 and C1.2.

Bicycle, Pedestrian, Streetscape, and Accessibility (Bruce Hyman, Transportation Program Manager)

8. *The curb ramp is to be updated to achieve full ADA-compliance and meet existing Technical Standards. Please see attached curb ramp configuration provided to the previous applicant's project team for this location. The current standard for the detectable warning panel with the curb ramp is cast iron with a 4" concrete border and is available from DPW if needed.*
   The curb ramp has been updated to current standards, see photo. The city mark up is an old photograph of the corner.
9. *The layout and dimensions for the two bicycle racks need to be checked for adequacy. The minimum clearance (O.C.) are: from the building, 30"; between racks, 36"; and from the edge of the driveway, 24." Sufficient clearance from the exterior gas service and bollards also must be considered. It appears the bike racks would also block access to the external stairway from the second floor without going onto the adjacent property. Other bicycle rack locations on-site or within the sidewalk on either Forest and / or Cumberland Avenue can also be considered to make them more functional and not block this access.*
   The bicycle racks have been revised. One is located on Forest Avenue and one off Cumberland Avenue.
10. *The ADA compliance of the driveway, including that section of sidewalk, on Forest Avenue should be confirmed for cross-slope (maximum 2% cross-slope for a minimum of 5' of width) and condition.*
    The existing drop from the garage floor to Forest Avenue averages 10%. It is not possible to flatten the 5' wide section of the walk and still have access to the garage. No work is planned for this section of the site.

Historic Preservation (Deb Andrews, Historic Preservation Program Manager)

11. *Please provide details on new windows. What are the materials? Windows should feature simulated divided lites with applied exterior muntins, at a minimum. Also, please identify which windows will be repaired and which will be replaced.*
    The intent is to replace the 2nd floor windows in the brick building (residential units) and refurbish the 1st floor windows in the brick building (commercial spaces). All proposed windows in the clapboard building will be new. The revised elevations indicate which

existing windows will be refurbished and which will be replaced. The replaced windows will be aluminum clad windows with simulated divided lights. We have received quotes for replacement windows from Pella, Sierra Pacific, and Weathershield, and the replacement windows will be supplied by one of these manufacturers.

12. *Please provide details regarding window moldings: will brick moldings be replicated in aluminum trim on other, new windows?*

    Existing brick molds to be painted and remain in place or refurbished windows and resued where windows are replaced. New windows in the new openings will have the selected window manufacturer's standard brick mold.

13. *Why are two windows on the northwest elevation a different height than all other windows on that elevation and the Forest Avenue elevation? Ideally these will all match.*

    These two windows are located in kitchens and the sills are higher to allow for the kitchen counters. Currently the section of the elevation with these two windows is treated differently from the remainder of the elevation. The lower level is brick and not concrete, the gutters and rooflines are different, and there is a vertical trim board separating the two areas. We intend to maintain a trim board separating the two areas and this will mitigate the difference in sill heights.

14. *Please provide more clarity / detail regarding the penthouse / mezzanine. What changes are being made, if any, and what materials are being used? Are the proportions of the existing windows changing?*

    An aluminum fence system is being added to the flat roof outside the penthouse to demarcate an outside area to the penthouse. This is set well back from the roof edges and will not be visible from street level. The sidewalls of the dormers and the walls of the clerestory will be finished with hardie plank lap siding. The lower roof will remain as existing (membrane waterproofing system) and the upper roof will remain a shingle roof.

15. *Please provide details regarding finishes. The painted finish of Hardie plank should not be high contrast, nor should the relationship of trim to the body of the building be high contrast.*

    The color selected for the new siding (see attachment and revised plans) is James Hardie Color Aged Pewter. This is a midrange tone and will not contrast with the white trim as much as a darker color would.

16. *Please specify the reveal / ttw of the Hardie plank. It should be less than 6."*

    We have called out for a 5" exposure on the siding.

17. *Hardie plank shall be installed smooth side out. Please note this on plans.*

    Noted on Plans.

18. *Exhaust vents shall be painted to match the surrounding material (brick or Hardie plank siding). Please note this on plans.*

    Noted on Plans.

19. *Hardie plank at the top of the building parapets on the Forest Avenue and southwest elevations seems strange – the treatments / bands along the top of the building's middle section should be continued.*

    This has been revised on the drawings to show hardie plank lap siding below the trim

and hardie panel above the trim.

20. *Please identify if garage doors will be replaced. If so, materials and details must be specified.*
    The existing garage doors will be repainted.
21. *Please provide details regarding the proposed new door on Forest Avenue, especially regarding material and panelization.*
    The existing door is to remain and be repainted.
22. *The coal chute on the Forest Avenue elevation shall be retained, not removed or covered. Please show this on plans.*
    Noted on Plans.

Civil Engineering (Lauren Swett, P.E., Civil Engineering Consultant)

23. *The existing ADA ramp at the corner is shown in an odd way – the curb line should be drawn to show the location of the ramp tactile warning strip.*
    Attached is the current ramp configuration.
24. *The plat shows the ROW line on Cumberland crossing features out of the sidewalk (bottom step and the mulch planter areas). That may be the existing condition, but also may need to be addressed on the plat.*
    A license agreement note has been added.

Fire (Division Chief Robert Thompson)

25. *We suggest a meeting with Jason Grant in Building Inspections to review the building requirements related to separations, exit requirements, sprinkler and alarm system requirements, egress distance for deck, ADA, etc, for this project. This is recommended for investigation by the applicant now, to ensure the project meets Life Safety codes. This can help avoid a need for changes to meet codes after any site plan approval.*
26. *The Fire Department has adequate hydrant capacity in the area for this project, and access to the building is adequate.*
    We have met twice with Jason Grant and Jeanie Bourke to review the building and life safety codes. We are waiting for Jason to confirm alarm and fire panel requirements for a building with 3 entrances.

Please review our application and let me know if you need anything else.

Respectfully,

Thomas S. Greer, P.E.
Walsh Engineering Associates, Inc.

cc. Sam Reiche, Barry Yudaken, File
Enc.

A R C H E T Y P E

Accessibility Review for the Proposed Alterations to 415 Cumberland Avenue
415 Cumberland Avenue
Portland ME 04101

The building will be renovated to include 7 Apartments (R-2, Residential Use) located on the 2nd floor in the portion of the project on Cumberland Avenue, and located on the 2nd & 3rd floors in the portion of the project facing Forest Avenue. These Apartments will have 6 dedicated parking spaces in the Lower Level garage.
The 1st floor on Cumberland Avenue will remain office space (B, Business Use), and the small Lower Level space will remain Mercantile (M, Mercantile Use) and Garage (S-2, Storage Use).

For the purposes of clarity, and because different Accessibility codes apply, the Residential Use apartments and the Business Use offices will be reviewed separately.

Residential Use Apartments

1. MAINE HUMAN RIGHTS ACT
   The project is not financed with public funds, nor does it have more than 20 units, and is therefore not "Public Housing" and Accessible Units are not required. (Maine Revised Statutes, 4582-C, 1. F, 2 and 3.B).
   The cost of the alterations will not exceed 75% of the replacement cost of the completed facility and therefore cannot be considered to be "new construction." For this reason the conditions pertaining to "Covered Multifamily Dwellings" do not apply, including the requirement for an accessible route into and through the building. (Maine Revised Statutes, 4582-C, 1. E, 2 and 3.A).

2. 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
   The Apartments are not constructed by, on behalf of, or for the use of a Public Entity and therefore do not have to comply with the requirements of 2010 ADA. (Section 35.151 of 28 CFR Part 35, 35.151 b and Subpart D of 28 CFR Part 36, 36.402 b).

3. IEBC 2015, CHAPTER 7, SECTION 705, ALTERATIONS—LEVEL 1
   Type B dwelling units required by Section 1107 of the IBC 2015 are not required to be provided in existing buildings (Section 705, 705.1 exception 3).
   Type A accessible units are not required where there are less than 20 units (IBC 2015, 1107.6.2.2.1).

4. IEBC 2015, CHAPTER 8, SECTION 806, ALTERATIONS—LEVEL 2
   Required to comply with Section 705 (see item 3 above).
   806.2 an accessible route shall be provided where a stair or escalator is added where none existed before. The stairs exist, but are being reconfigured to meet egress and life safety codes. An accessible route is not required.

5. IEBC 2015, CHAPTER 9, SECTION 906, ALTERATIONS—LEVEL 3
   Required to comply with Section 705 (see item 3 above) and Section 806 (see item 4 above)
   In Group R-2, Type B dwelling units required by Section 1107 of the IBC 2015 are not required to be provided in existing buildings where first certificate for occupancy was issued before March 115, 1991.

6. IEBC 2015, CHAPTER 10, CHANGE OF OCCUPANCY
   1012.8 Accessibility.
   1012.8.1 Partial Change in Occupancy requires compliance with Section 705 (see item 3 above), Section 806 (see item 4 above), and Section 906 (see item 5 above).
   1012.8.2 Complete Change in Occupancy does not apply as the entire building is not changing to Residential. Therefore an accessible entrance, an accessible route, and accessible parking is not required.

7. THE FAIR HOUSING ACT
   The Fair Housing Act does not apply to buildings built for first occupancy before March 1991.

Business Use Offices

8. 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
   Alterations made to provide an accessible path of travel to the altered area will be deemed to be disproportionate where the cost exceeds 20% of the cost of the alteration to the primary function area. The cost of adding an accessible path of travel (elevator, ramps will be structurally and technically infeasible in this existing building) will far exceed 20% of the alterations to the office areas, which will basically be the provision of an accessible unisex toilet in the office areas. Therefore the accessible path of travel is not required. (Section 36.403 f of Subpart D of 28 CFR Part 36).

9. MAINE HUMAN RIGHTS ACT
   Maine Revised Statutes, 4594-G, Public Accommodations or Commercial Facilities refers to the provisions of 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN Sections 36.401 to 36.406. see item 1 above.

10. IEBC 2015, CHAPTER 7, SECTION 705, ALTERATIONS—LEVEL 1
    An accessible entrance and route to the primary function area is not required where the cost of providing the route exceeds 20% of the cost of the alteration to the primary function area. (705.1.1 and 705.2 exception 1).

11. IEBC 2015, CHAPTER 8, SECTION 806, ALTERATIONS—LEVEL 2
    806.2 an accessible route shall be provided where a stair or escalator is added where none existed before. The stairs exist, but are being reconfigured to meet egress and life safety codes. An accessible route is not required.

12. IEBC 2015, CHAPTER 9, ALTERATIONS—LEVEL 3
    Required to comply with Section 705 (see item 3 above) and Section 806 (see item 4 above)

13. IEBC 2015, CHAPTER 10, CHANGE OF OCCUPANCY
    1012.8 Accessibility.
    1012.8.1 Partial Change in Occupancy requires compliance with Section 705 (see item 3 above), Section 806 (see item 4 above), and Section 906 (see item 5 above).
    912.8.2 Complete Change in Occupancy does not apply as the entire building is not changing to Residential. Therefore an accessible entrance, an accessible route, and accessible parking is not required.

Based on the foregoing accessibility evaluation, the proposed alterations and change of occupancy meets all relevant code criteria. The altered building will not require accessible entrances or routes through the building. Accessible or adaptable dwelling units are not required and accessible parking is not required.


Att. 12

Att. 13

peared the above-named Martin H. Lyden and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Harry L. Cram Justice of the Peace.

Received September 29, 1925 at 3h, P.M., and recorded according to the original.

Pride & to Pride S.J.C.

STATE OF MAINE.

CUMBERLAND, ss. CLERK'S OFFICE
SUPREME JUDICIAL COURT
PORTLAND, SEPTEMBER 28, 1925.

I, Linwood F. Crockett, Clerk of said Supreme Judicial Court, do hereby certify that Frank O. Pride of Windham, in the County of Cumberland and State of Maine, has filed in the office of the Clerk of said Court a Petition against Leon H. Pride and the person or persons unknown, claiming as heirs, devisees or assigns or in some other way by, through or under Enoch Shaw late of said Windham, deceased, in which the title to certain real estate is involved, which said real estate is described as follows, to wit:

"A certain parcel of land situated in Windham, being a part of lot numbered Four in the fourth and last division of lands in said Windham, viz: all that part of said lot number four, which lies on the north westerly side of the County road leading from Windham Upper Corner to Gray Corner, containing fifteen acres, more or less." A plan of the said fourth and last division of lands in said Windham is recorded in said Registry in Plan Book 6 at Page 9.

The Petition is sworn to September 28th, A. D. 1925, and filed in the Clerk's Office of said Court, September 28th, A. D. 1925.

IN WITNESS WHEREOF I hereunto set my hand and affix the seal of said Court this twenty-eighth day of September, A. D. 1925.

COURT SEAL

Linwood F. Crockett, Clerk.

Received September 29, 1925 at 3h,5m, P.M., and recorded according to the original.

Rines to Y.M.C.A. Deed

KNOW ALL MEN BY THESE PRESENTS, That whereas R. Hight Rines of Portland in the County of Cumberland and State of Maine, and The Young Men's Christian Association of Portland, Maine, a corporation organized and existing under the laws of Maine, are the owners of adjoining lots of land on the southerly side of Forest Avenue in said Portland, the land owned by said The Young Men's Christian Association of Portland, Maine being the same conveyed to it by Albert S. Rines by deed dated November 2, 1923, recorded in Cumberland County Registry of Deeds, Book 1153, Page 136, and the land owned by said R. Hight Rines being the same acquired by him as devisee under the will of said Albert S. Rines, and

Whereas the said The Young Men's Christian Association of Portland, Maine is about to construct a building upon its lot and the said R. Hight Rines and the said The Young Men's Christian Association of Portland, Maine desire to establish a passageway extending southerly from Forest Avenue between their said lots of

land, the same to be located in part upon land of said Rines and in part upon land of said The Young Men's Christian Association of Portland, Maine,

NOW, THEREFORE, I, the said R. Hight Rines, in consideration of One Dollar ($1.00) and other valuable considerations to me in hand paid by said The Young Men's Christian Association of Portland, Maine, the receipt whereof is hereby acknowledged, do hereby give, grant, sell and convey unto the said The Young Men's Christian Association of Portland, Maine, its successors and assigns forever, a right of way in common with myself, my heirs and assigns, at all times and for all purposes, over a strip of land bounded and described as follows, viz: Beginning at a point in the southerly side line of Forest Avenue in said Portland one hundred fifteen and sixty-five hundredths (115.65) feet from the intersection of the southerly side line of said Forest Avenue and the westerly side line of Cumberland Avenue; thence southerly at right angles to said Forest Avenue forty-nine and eighty-six hundredths (49.86) feet to land of said The Young Men's Christian Association of Portland, Maine; thence westerly by land of said The Young Men's Christian Association of Portland, Maine two and one tenth (2.1) feet; thence northerly by land of said The Young Men's Christian Association of Portland, Maine, fifty (50) feet to a point on the southerly side line of Forest Avenue, thence easterly by said southerly side line of said Forest Avenue six and thirty-five hundredths (6.35) feet to the point of beginning.

Said strip of land with another strip of land adjoining the same on the west and south and also adjoining other land belonging to me on the south, said second strip being more particularly described in deed from The Young Men's Christian Association of Portland, Maine, to me, dated September 16, 1925, and to be recorded herewith, are to make a passageway to be used in common by said The Young Men's Christian Association of Portland, Maine, and myself and our respective heirs, successors and assigns, both for passageway purposes and fully for light and air, provided, however, that said The Young Men's Christian Association of Portland, Maine, shall have the right to construct and maintain a fire proof stairway five feet in width, extending northerly into said passageway from the rear line of said passageway to a point not more than fifteen (15) feet northerly from the southerly side line of the strip of land belonging to me hereinbefore more particularly described, and provided, further, that cornices, belt courses or other architectural features upon the building which said The Young Men's Christian Association of Portland, Maine is about to construct upon its lot may project into said passageway for a distance of not more than fifteen (15) inches beyond the foundation wall of said building, and such stairway and such projection of cornices, belt courses or other architectural features shall not be considered as an encroachment upon said passageway or said easement for light and air, and I do hereby grant unto said The Young Men's Christian Association of Portland, Maine, its successors and assigns, the

right to construct and maintain such stairway and projections.

And I hereby except and reserve to myself, my heirs and assigns, a similar right with reference to the projection into said passageway of cornices, belt courses or other architectural features upon any building or buildings which may hereafter be constructed by myself, my heirs or assigns, upon said land now owned by me adjoining said passageway, provided, however, that such projection shall not interfere with said fireproof stairway.

TO HAVE AND TO HOLD the same to the said The Young Men's Christian Association of Portland, Maine, its successors and assigns forever.

U.S.I.R. 50¢ R.H.R. 9/16/25

IN WITNESS WHEREOF, I, the said R. Hight Rines, being unmarried, have hereunto set my hand and seal this 16th day of September in the year of our Lord one thousand nine hundred and twenty-five.

Signed, Sealed and Delivered
in presence of

Kate B. White R. Hight Rines Seal

State of Maine Cumberland, ss. September 16, 1925.

Then personally appeared the above named R. Hight Rines and acknowledged the foregoing instrument to be his free act and deed.

Before me,

John F. Dana
Justice of the Peace.

Received September 30, 1925 at 10h,32m, A.M., and recorded according to the original.

Y.M.C.A. to ~~Rines~~ Deed

KNOW ALL MEN BY THESE PRESENTS, That WHEREAS The Young Men's Christian Association of Portland, Maine, a corporation organized and existing under the laws of Maine, and R. Hight Rines of said Portland in the County of Cumberland and State of Maine, are the owners of adjoining lots of land on the southerly side of Forest Avenue in said Portland, the land owned by said R. Hight Rines being the same acquired by him as devisee under the will of Albert S. Rines, and the land owned by said The Young Men's Christian Association of Portland, Maine being the same conveyed to it by said Albert S. Rines by deed dated November 2, 1923, recorded in Cumberland County Registry of Deeds, Book 1153, Page 136, and

WHEREAS the said The Young Men's Christian Association of Portland, Maine is about to construct a building upon its said lot and the said The Young Men's Christian Association of Portland, Maine and R. Hight Rines desire to establish a passageway extending southerly from Forest Avenue between their said lots of land, the same to be located in part upon land of said The Young Men's Christian Association of Portland, Maine, and in part upon land of said R. Hight Rines,

NOW, THEREFORE, the said The Young Men's Christian Association of Portland, Maine, in consideration of One Dollar ($1.00) and other valuable considerations to it in hand paid by said R. Hight Rines, the receipt whereof is hereby acknowledged,

right to construct and maintain such stairway and projections.

And I hereby except and reserve to myself, my heirs and assigns, a similar right with reference to the projection into said passageway of cornices, belt courses or other architectural features upon any building or buildings which may hereafter be constructed by myself, my heirs or assigns, upon said land now owned by me adjoining said passageway, provided, however, that such projection shall not interfere with said fireproof stairway.

TO HAVE AND TO HOLD the same to the said The Young Men's Christian Association of Portland, Maine, its successors and assigns forever.

U.S.I.R. 50¢ R.H.R. 9/16/25

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Signed, Sealed and Delivered
in presence of

Kate B. White R. Hight Rines Seal

State of Maine Cumberland, ss. September 16, 1925.

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Before me,

John F. Dana
Justice of the Peace.

Received September 30, 1925 at 10h,32m, A.M., and recorded according to the original.

Y.M.C.A. to ~~Rines~~ Deed

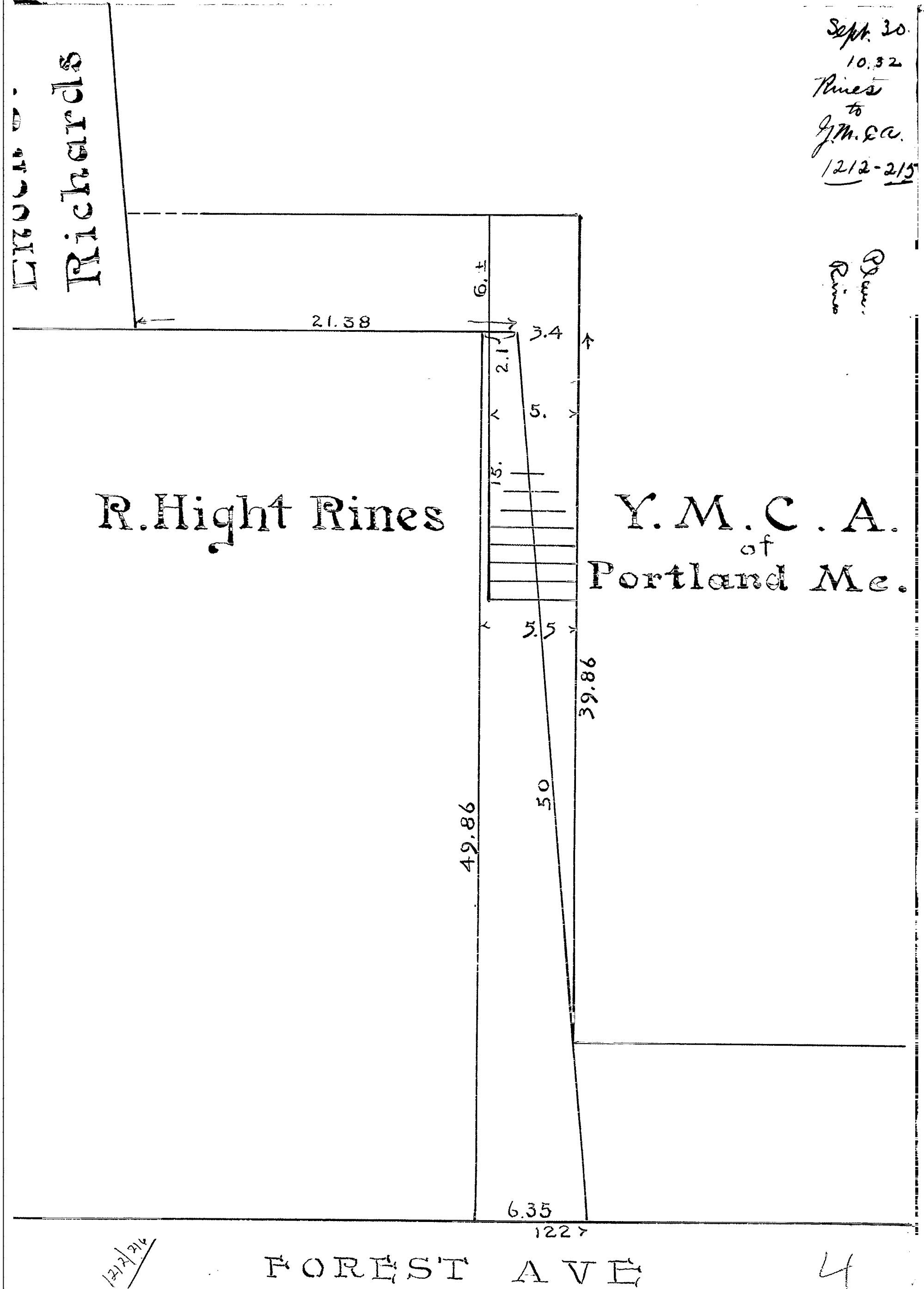
KNOW ALL MEN BY THESE PRESENTS, That WHEREAS The Young Men's Christian Association of Portland, Maine, a corporation organized and existing under the laws of Maine, and R. Hight Rines of said Portland in the County of Cumberland and State of Maine, are the owners of adjoining lots of land on the southerly side of Forest Avenue in said Portland, the land owned by said R. Hight Rines being the same acquired by him as devisee under the will of Albert S. Rines, and the land owned by said The Young Men's Christian Association of Portland, Maine being the same conveyed to it by said Albert S. Rines by deed dated November 2, 1923, recorded in Cumberland County Registry of Deeds, Book 1153, Page 136, and

WHEREAS the said The Young Men's Christian Association of Portland, Maine is about to construct a building upon its said lot and the said The Young Men's Christian Association of Portland, Maine and R. Hight Rines desire to establish a passageway extending southerly from Forest Avenue between their said lots of land, the same to be located in part upon land of said The Young Men's Christian Association of Portland, Maine, and in part upon land of said R. Hight Rines,

NOW, THEREFORE, the said The Young Men's Christian Association of Portland, Maine, in consideration of One Dollar ($1.00) and other valuable considerations to it in hand paid by said R. Hight Rines, the receipt whereof is hereby acknowledged,

Sept. 30.
10.32
Rines
to
Y.M.C.A.
1212-215

Plan.
Rines



1212/214

4

Scale: 1 Inch = 5 Feet

Percy H. Richardson C.E.

does hereby give, grant, sell and convey unto the said R. Hight Rines, his heirs and assigns forever, a right of way in common with itself, its successors and assigns, at all times and for all purposes over a strip of land bounded and described as follows, viz: Beginning at a point on the easterly side line of the property which Albert S. Rines conveyed to said The Young Men's Christian Association of Portland, Maine, by deed dated November 2, 1923, recorded in Cumberland County Registry of Deeds, Book 1153, Page 136, said point being ten and five tenths (10.5) feet southerly from the southerly side line of Forest Avenue measured by said easterly side line; thence southerly at right angles to said southerly side line of Forest Avenue forty-six and five tenths (46.5) feet, more or less, to the face of the brick building to be erected by said The Young Men's Christian Association of Portland, Maine; thence easterly at right angles to said last described line by the face of said building to be erected by said The Young Men's Christian Association of Portland, Maine, and the prolongation thereof, twenty-five (25) feet, more or less, to land of Enoch C. Richards; thence northerly by said land of said Richards six and five tenths (6.5) feet, more or less, to land of R. Hight Rines; thence westerly by the southerly side line of said land of R. Hight Rines twenty-one and thirty-eight hundredths (21.38) feet, more or less, to a corner in said R. Hight Rines' land; thence northerly by said land of R. Hight Rines forty (40) feet, more or less, to the point of beginning.

Said strip of land with another strip of land adjoining the same on the east and more particularly described in deed from R. Hight Rines to The Young Men's Christian Association of Portland, Maine, dated September 16, 1925, and to be recorded herewith, are to make a passageway to be used in common by said R. Hight Rines and The Young Men's Christian Association of Portland, Maine, and their respective heirs, successors and assigns, both for passageway purposes and fully for light and air, provided, however, that said The Young Men's Christian Association of Portland, Maine, shall have and does hereby except and reserve to itself, its successors and assigns, the right to construct and maintain a fireproof stairway five (5) feet in width extending northerly into said passageway from the rear line of such passageway to a point not more than fifteen (15) feet northerly from the southerly side line of the above mentioned strip of land described in said deed from R. Hight Rines to The Young Men's Christian Association of Portland, Maine.

And provided, further, that cornices, belt courses or other architectural features upon the building which said The Young Men's Christian Association of Portland, Maine is about to construct upon its lot may project into said passageway for a distance of not more than fifteen (15) inches beyond the foundation wall of said building. Such stairway and such projection of cornices, belt courses or other architectural features shall not be considered as an encroachment upon said passage-

way or said easement for light and air, and the said The Young Men's Christian Association of Portland, Maine excepts and reserves to itself, its successors and assigns, the right to make such projection.

And the said The Young Men's Christian Association of Portland, Maine does hereby grant unto the said R. Hight Rines, his heirs and assigns, a similar right with reference to the projection into said passageway of cornices, belt courses or other architectural features upon any building or buildings which may hereafter be constructed by said R. Hight Rines, his heirs or assigns, upon said land now owned by him adjoining said passageway, provided, however, that such projection shall not interfere with said fireproof stairway.

TO HAVE AND TO HOLD the same to the said R. Hight Rines, his heirs and assigns forever. U.S.I.R. 50¢ Y.M.C.A. 9/16/25

IN WITNESS WHEREOF, the said The Young Men's Christian Association of Portland, Maine has caused this instrument to be sealed with its corporate seal and signed in its corporate name by George F. West, its President, thereunto duly authorized, this sixteenth day of September in the year of our Lord one thousand nine hundred and twenty-five.

Signed, Sealed and Delivered
in presence of

Ralph M. Somerville

THE YOUNG MEN'S CHRISTIAN ASSOCIATION
OF PORTLAND, MAINE Corporate Seal
By George F. West
President.

State of Maine County of Cumberland, ss. September 25, 1925.

Then personally appeared the above named George F. West, President of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,
George W. Sturgis
Notary Public Notarial Seal

Received September 30, 1925 at 10h,33m, A.M., and recorded according to the original.

STATE OF MAINE

CUMBERLAND, ss.

CLERK'S OFFICE
SUPREME JUDICIAL COURT
PORTLAND, SEPTEMBER 29, A.D.1925.

Pettigrew& to MacCreadie S.J.C.

I, Linwood F. Crockett, Clerk of said Supreme Judicial Court, do hereby certify that Robert H. MacCreadie, otherwise known as Robert H. McCready, of Danforth, in the County of Washington and State of Maine, and Gilbert H. Ward, of St. Petersburg, in the County of Pinellas and State of Florida, have filed in the office of the Clerk of said Court a Bill in Equity against Johanna Pettigrew and John W. Lane or their heirs or legal representatives and all persons claiming, by, through or under them, the said Johanna Pettigrew and John W. Lane, the names and addresses of all of whom are to the plaintiffs unknown, in which the title to certain real

PROGRESS LIGHTING™

A

Project:

Fixture Type:

Location:

Contact:

P563000 3IN Wall Mount Downlight Cylinder

Wall mounted · Wet location listed PROGRESS LED

P563000-143-30K

Description:

Sleek, cylindrical forms in elegant finish selections. Die-cast aluminum wall brackets and heavy-duty aluminum framing. Fade and chip-resistant. UL listed for wet locations. Can be used indoor or outdoor. Ideal for residential and commercial applications.

Specifications:

- Graphite (-143) (Painted)
- Aluminum constructionClear
- 3" LED wall mount downlight cylinder
- This sleek, contemporary cylinder is ideal for indoor or outdoor applications
- A Graphite finish complements a variety of exteriors
- Warm white, 3000K, color temperature, 90 CRI
- 919 lumens, 77 lumens per watt
- Die Cast Aluminum construction with durable powder coated finish
- Dimmable to 10% brightness with many Forward Phase (Triac) dimmers
- covers a standard 4" octagonal recessed outlet box
- Mounting strap for outlet box included
- 6" of wire supplied
- ENERGY STAR® qualified
- Meets California Title 24 JA8-2016

Performance:

Number of Modules	1
Input Power	12w
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW	907/75 (LM-79)
CCT	3000 K
CRI	90 CRI
Life (hours)	50,000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15 Class B
Min. Start Temp	-10 °C
Max. Operating Temp	40 °C
Warranty	5 year warranty
Labels	CSA Wet location listed
	ENERGY STAR® qualified
	Meets California Title 24 JA8-2016

Images:



Dimensions:

Width: 4-1/2
Depth: 5-1/2"
Height: 5-5/8"
H/CTR: 3"

PROGRESS LIGHTING™

B

Project:

Fixture Type:

Location:

Contact:

P6341 Flood Light With Motion

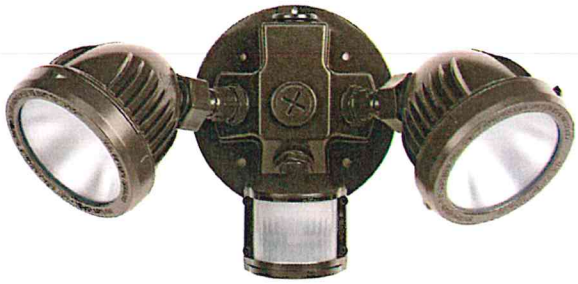
Wall mounted • Wet location listed PROGRESS LED

P6341-2030K

Description:

The two-light Security light with motion sensor is ideal for residential and commercial applications. Each tempered glass head has over 1,000 lumens and is adjustable. The motion sensor has 180 degree coverage, center focus range to 72 feet, Time On, Sensitivity and Distance adjustment with Night/Day or night operation. This fixture saves energy and maintenance over traditional lighting sources.

Images:



Specifications:

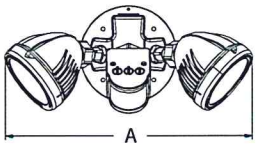
- Antique Bronze (-20) (Powder Coat Paint)
- Die-cast aluminum construction
- Tempered glass lens
- Two adjustable heads
- 180 degree motion sensor.
- 2104 lumens, 79 lumens/watt.
- Time On, Sensitivity and Distance adjustment.
- Backplate covers a standard 4" octagonal recessed outlet box
- Mounting strap for outlet box included
- 6" of wire supplied
-

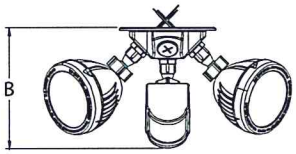
Performance:

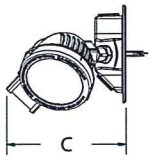
Number of Modules	2
Input Power	26.6w
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW	2104/79 (LM-79) per module
CCT	3000 K
CRI	83
Life (hours)	60,000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15 Class B
Min. Start Temp	-20 °C
Max. Operating Temp	40 °C
Warranty	5 year warranty
Labels	cCSAus Wet location listed

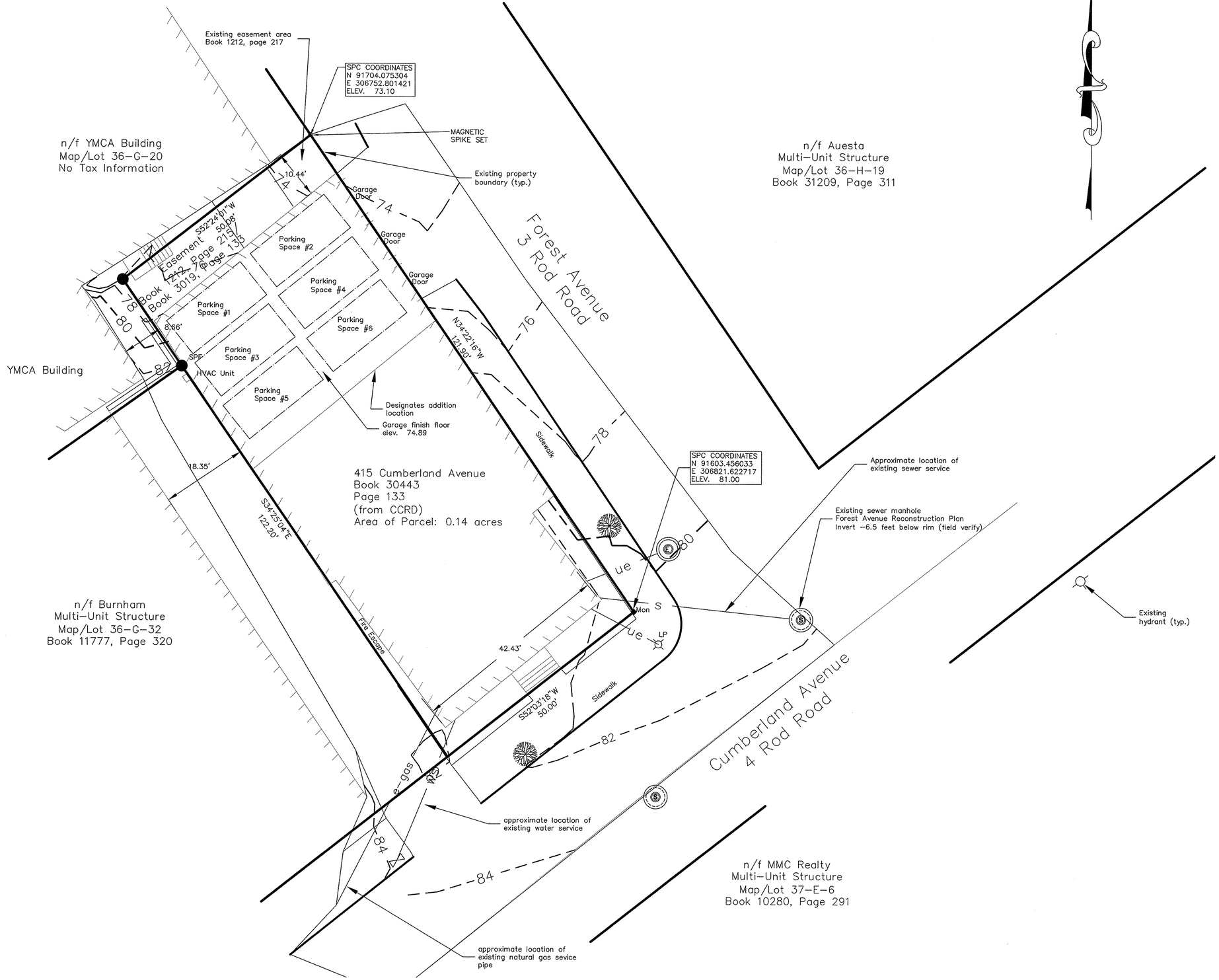
Dimensions:

(A) Width: 12-3/4"
(C) Depth: 5"
(B) Height: 6-1/2"









NO.	REVISIONS	DATE
1	Plan revisions	10/22/15
2	Plan revisions	07/14/16
3	Plan revisions	07/21/16
4	Revised Owner & Project Name	03/20/18
5	Add Parking Spaces per City Review	04/16/18

OWNER
415 CA, LLC
25 EDGEHILL ROAD
BROOKLINE, MA 02445

DATE: 06/18/16
SCALE 1" = 10'

PROJECT:
415 CUMBERLAND AVENUE
415 CUMBERLAND AVENUE, PORTLAND, MAINE
BOUNDARY & TOPOGRAPHIC SURVEY

ADDRESS: 415 Cumberland Avenue
CITY: Portland
COUNTY: Cumberland
STATE: Maine

D. S. D.
DOWNEAST SURVEYING & DEVELOPMENT
ELWOOD ELLIS, P.L.S. # 1176
P.O. BOX 234
CHINA, MAINE 04926
(207) 968-2507
MEMBER MAINE SOCIETY OF LAND SURVEYORS

This plan was prepared by Downeast Surveying and Development for a specific use. Downeast Surveying and Development assumes no liability for any unauthorized additions, deletions or alterations made to this plan.

1 OF 1
SHEET NUMBER

STATE OF MAINE
ELWOOD ELLIS
1176
REGISTERED
LAND SURVEYOR

NOT VALID UNLESS
EMBOSSED HERE

GENERAL NOTES

1. OWNER/DEVELOPER: 415 CA, LLC, 25 EDGEHILL RD, BROOKLINE, MA. 02445, RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, BK 34152, PG 38, DATED JULY 12, 2017.
2. ENGINEER: WALSH ENGINEERING ASSOCIATES, INC., 28 VANNAH AVEUNE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC AND BOUNDARY INFORMATION TAKEN FROM SURVEY PROVIDED BY: DOWNEAST SURVEYING & DEVELOPMENT, P.O. BOX 6234, CHINA VILLAGE, MAINE 04926, TITLED "415 CUMBERLAND, LLC SUBDIVISION PLAT", DATED 12/14/17.
5. UTILITY INFORMATION TAKEN FROM PLAN BY: ACORN ENGINEERING, INC., TITLED "UTILITY PLAN", DATED 10/12/16, PORTLAND WATER DISTRICT RECORDS AND CITY OF PORTLAND ENGINEERING DEPART RECORDS.
6. ZONE: B3C, DOUNTOUN BUSINESS ZONE
   PROPOSED USE: GENERAL BUSINESS & PROFESSIONAL OFFICES, PERSONAL SERVICES, TRADESMAN OFFICES, RESIDENTIAL
7. TAX MAP REFERENCE: MAP 036 LOT G033001
8. TOTAL PARCEL = 0.14 ACRES
9. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 811 OR 1-888-DIG-SAFE.
10. UNITS TO BE SERVICED BY EXISTING PUBLIC WATER, SEWER, AND GAS FROM CUMBERLAND OR FOREST AVENUES.
11. POWER, TELEPHONE AND CABLE SERVICES ARE UNDERGROUND FROM FOREST AVENUE.
12. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. THE SUBJECT PARCEL KNOWN AS 415 CUMBERLAND AVENUE IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
14. DETAILS OF STREET TREES ARE INCLUDED ON THE SITE PLAN AS PART OF THE APPROVAL FOR 415 CUMBERLAND AVENUE SITE PLAN. TWO STREET TREES ARE PLANNED.
15. FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0014 B, EFFECTIVE DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
16. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON THIS SHEET UNDER SNOW CLEARANCE NOTES.
17. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION AS REQUIRED. ANY MONUMENTATION DAMAGED BY CONSTRUCTION IS TO BE REPLACED.
18. ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION 2016.
19. THE FIRST FLOOR RE-USE SPACE IS TO REMAIN AS COMMERCIAL USE.
20. PROJECT PROPOSES TO LOCATE OUTDOOR STORAGE FOR FOUR (4) BICYCLES ON THE SOUTH SIDE OF THE BUILDING.

CITY OF PORTLAND SITE PLAN NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE OVERHEAD.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

WAIVERS

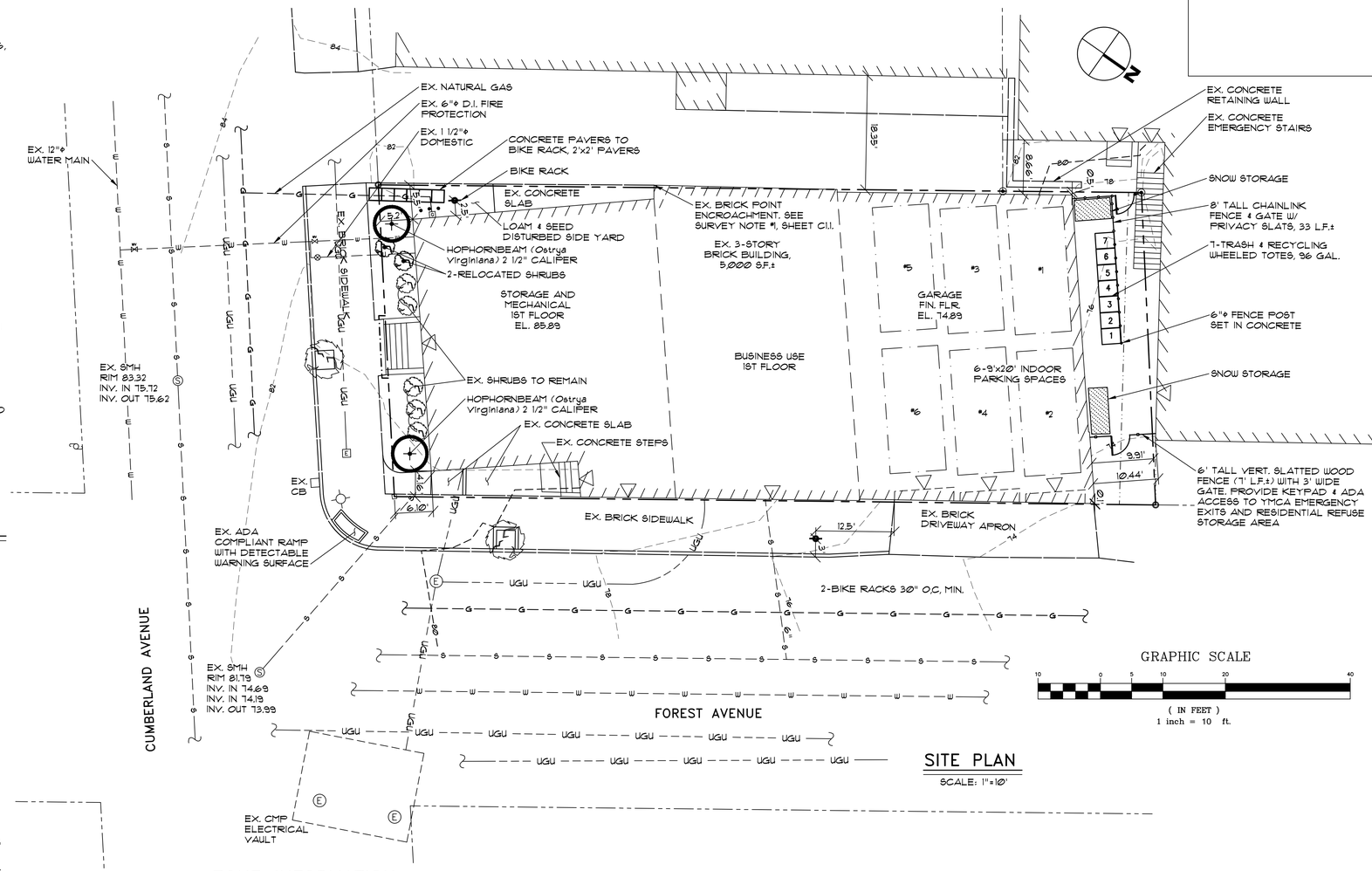
1. NONE REQUESTED

PROJECT DRAWING LIST

C1.0	SUBDIVISION RECORDING PLAT SHEET 1 OF 2
C1.1	SUBDIVISION RECORDING PLAT SHEET 2 OF 2
C1.2	SITE PLAN
C1.3	DEMOLITION PLAN & SITE DETAILS
	SURVEY PLAN
A1.01	FLOOR PLANS
A2.01	ELEVATIONS OF COMMERCIAL AREAS

IMPERVIOUS INFORMATION

EXISTING IMPERVIOUS	5,762 SQ. FT.
PROPOSED IMPERVIOUS	24 SQ. FT.
NET IMPERVIOUS	5,786 SQ. FT.



SITE PLAN

SCALE: 1"=10'

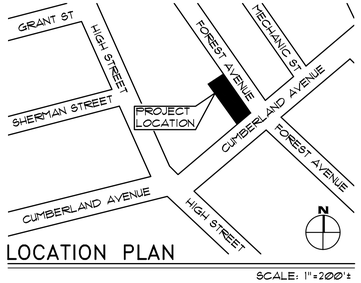
ZONE INFORMATION

ZONE: B3C, DOWNTOWN BUSINESS
PERMITTED USE: RESIDENTIAL, BUSINESS & PROFESSIONAL OFFICES, PERSONAL SERVICES, TRADESMAN OFFICES

SPACE STANDARDS	REQUIRED	PROPOSED TOTAL SUBDIVISION
MINIMUM LOT SIZE	NONE	6,098 SQ. FT.
MINIMUM STREET FRONTAGE	15 FEET	121.90 FEET
MAXIMUM SETBACK	5 FEET	0 FEET
MINIMUM YARD	NONE	0 FEET
MINIMUM LOT WIDTH	NONE	121.90 FEET
MAXIMUM LOT COVERAGE (BUILDINGS)	100%	81%
MINIMUM BUILDING HEIGHT	35 FEET	EX. NO CHANGE
MAXIMUM BUILDING HEIGHT	40 FEET	EX. NO CHANGE

PARKING INFORMATION

EXISTING VEHICLE SPACES:	6
8 UNITS PROPOSED:	
FIRST 3 UNITS:	0
REMAINING UNITS, 1 PER UNIT:	5
TOTAL VEHICLE SPACES REQUIRED:	5
TOTAL PROVIDED:	6
BIKE SPACES REQUIRED:	
2 BIKE SPACES PER 5 DWELLING UNITS	
8 UNITS PROPOSED = 8/2.5:	3.2
PROVIDED	4



LOCATION PLAN

SCALE: 1"=200'±

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EASEMENT
- EDGE OF PAVEMENT
- CURB
- 80 CONTOURS
- BUILDING
- G GAS LINE
- S SANITARY SEWER
- UGU UNDERGROUND UTILITY
- W WATER LINE
- ELECTRIC PULLBOX
- E ELECTRIC MANHOLE
- S SEWER MANHOLE
- GAS METER
- UTILITY POLE
- LIGHT SIGNAL SUPPORT
- GATE VALVE
- HYDRANT
- MONUMENT
- MAGNETIC SPIKE
- STEEL PIN
- SHRUB
- BOLLARD

PROPOSED

- BICYCLE RACK
- WOOD FENCE
- CHAINLINK FENCE
- FENCE GATE
- STREET TREE
- 7 DUMPSTERS
- CONCRETE PAVERS
- SNOW STORAGE

WALSH
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ph: 207.553.9898 | www.walsh-eng.com

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STATE OF MAINE
THOMAS S. GREER No. 4206
LICENSED PROFESSIONAL ENGINEER
4/17/18

415 CUMBERLAND AVENUE

415 CUMBERLAND AVENUE
PORTLAND, MAINE

415 CA, LLC
25 EDGEHILL ROAD
BROOKLINE, MA 02445

Rev.	Date	Description	Drawn	Check
1	3/26/18	REV'D PER PRELIM. CITY REVIEW	JDC	TSG
2	4/ /18	REV'D PER CITY REVEW	JDC	TSG

Sheet Title:
SITE PLAN

Job No.:	17164	Sheet No.:
Date:	1/16/18	C1.2
Scale:	AS SHOWN	
Drawn:	RJS	
Checked:	TSG	

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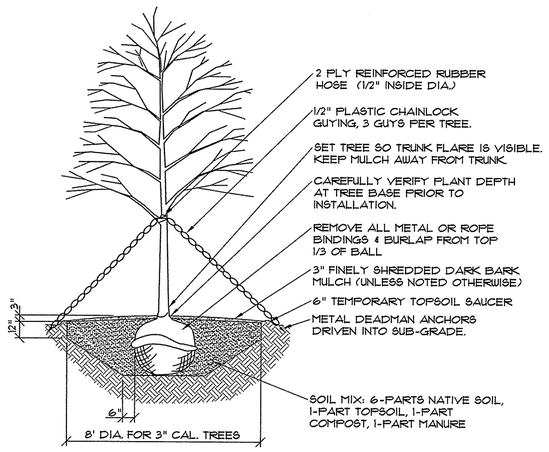
LANDSCAPE NOTES

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:

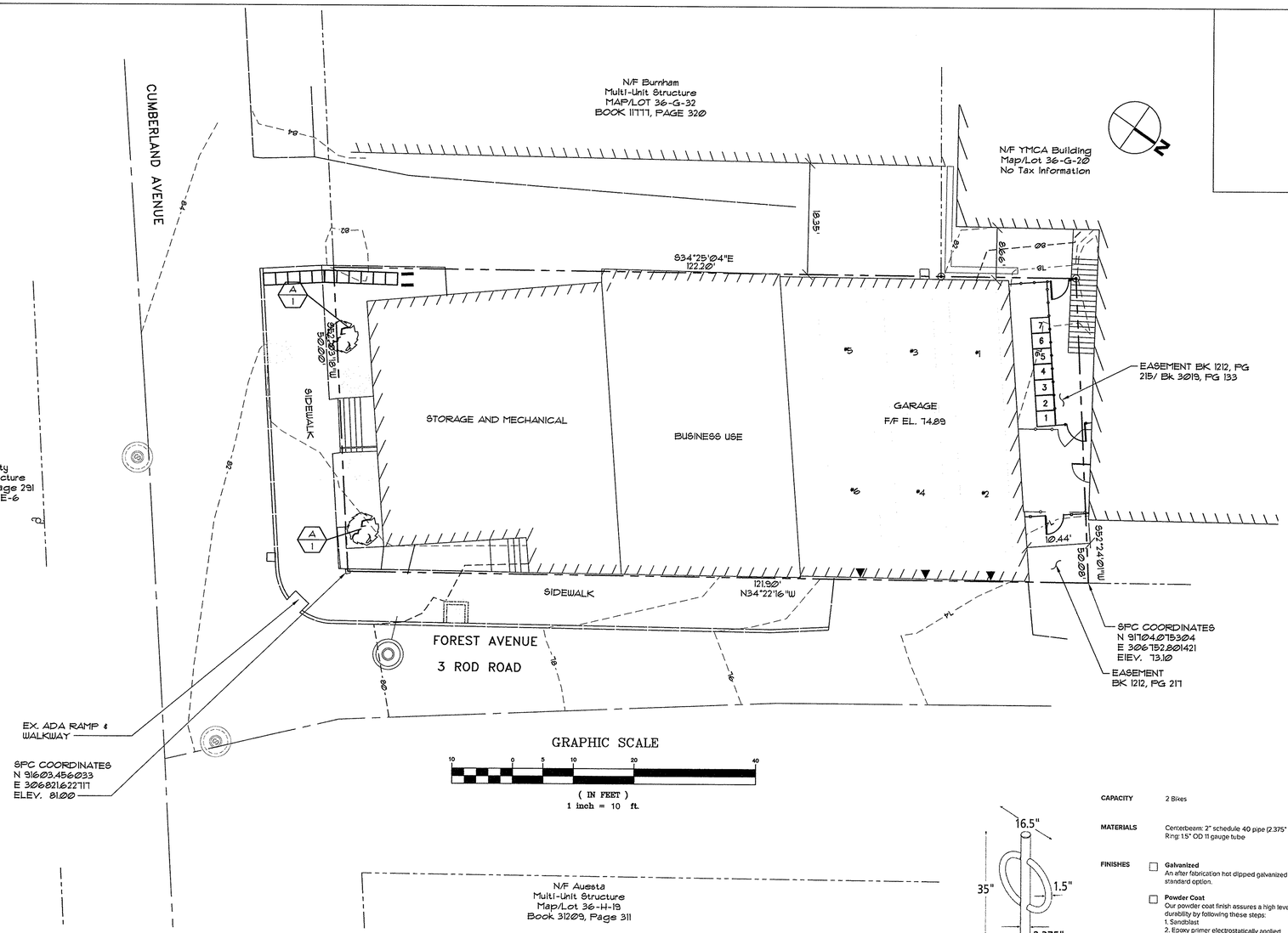
1. LAWNS: SHALL BE WATERED, FERTILIZED AND MOWN ON A REGULAR BASIS ACCORDING TO SEASON AND RAINFALL, TO PRODUCE A STRONG TURF OF 80% MIN. COVERAGE WITHIN THE FIRST YEAR, FREE FROM SIZABLE THIN OR BARE SPOTS. REGRADING AND RESEEDING WILL BE PERFORMED ON BARE SPOTS UNTIL COVERAGE IS COMPLETE.
2. TREES & 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.



NOTES:
1. PRUNE ALL DEAD AND BROKEN BRANCHES. RETAIN NATURAL SHAPE, NEVER CUT LEADER.
2. IN LEDGE CONDITIONS, BLASTING SHALL BE 10' DIA AND 4' BELOW TREE HOLE BOTTOM GRADE.

2 DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



PLANT LIST

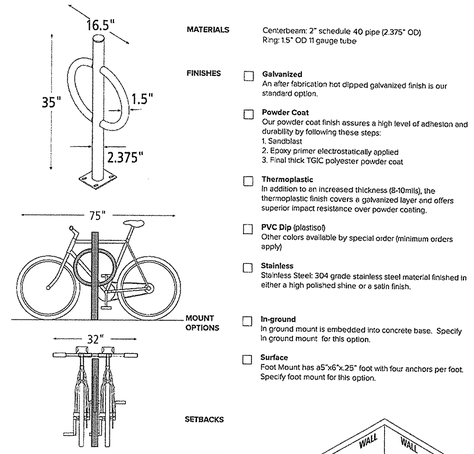
A = SYMBOL; 12 = QUANTITY

SYMBOL	COMMON NAME/BOTANICAL NAME	SIZE	QUANTITY	ROOT	NOTES
A	Hophornbeam / Ostrya Virginiana	2 1/2" Cal.	2	B&B	

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- 80 CONTOURS
- BUILDING
- G GAS LINE
- S SANITARY SEWER
- UGT UNDERGROUND TELEPHONE
- UGU UNDERGROUND UTILITY
- W WATER LINE
- E ELECTRIC MANHOLE
- S SEWER MANHOLE
- UTILITY POLE
- CHAINLINK FENCE
- GATE VALVE



CAPACITY 2 Bikes

MATERIALS Centerbeam: 2" schedule 40 pipe (2.375" OD)
Ring: 1.5" OD 11 gauge tube

FINISHES

- ☐ **Galvanized** — An after fabrication hot dipped galvanized finish is our standard option.
- ☐ **Powder Coat** — Our powder coat finish assures a high level of adhesion and durability by following these steps: 1. Sandblast 2. Epoxy primer electrostatically applied 3. Final thick TGIC polyester powder coat
- ☐ **Thermoplastic** — In addition to an increased thickness (8-10mils), the thermoplastic finish covers a galvanized layer and offers superior impact resistance over powder coating.
- ☐ **PVC Dip** (plastisol) — Other colors available by special order (minimum orders apply)
- ☐ **Stainless** — Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.

MOUNT OPTIONS

- ☐ **In-ground** — In ground mount is embedded into concrete base. Specify in ground mount for this option.
- ☐ **Surface** — Foot Mount has a5"x6"x.25" foot with four anchors per foot. Specify foot mount for this option.

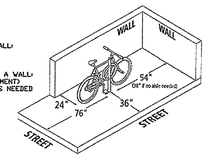
SETBACKS

FOR RACKS SET PARALLEL TO A WALL:
MINIMUM: 12"
RECOMMENDED: 24"

FOR RACKS SET PERPENDICULAR TO A WALL:
MINIMUM: 35" (CENTERLINE MEASUREMENT)
RECOMMENDED: 38" (54" IF AISLE IS NEEDED BETWEEN BIKE AND WALL)

DISTANCE BETWEEN RACKS:
MINIMUM: 24"
RECOMMENDED: 38"

STREET SETBACKS:
MINIMUM: 36"



DERO BIKE HITCH AS MANUFACTURED BY DERO BIKE RACKS

BICYCLE RACK SPECIFICATION – BIKE HITCH (I-33a)

1

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ph: 207.553.9898 | www.walsh-eng.com

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STATE OF MAINE
THOMAS S GREER
No. 4206
LICENSED PROFESSIONAL ENGINEER

415 CUMBERLAND AVENUE
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PORTLAND, MAINE

415 CA, LLC
25 EDGEHILL ROAD
BROOKLINE, MA 02445

Rev.	Date	Description	Drawn	Check

Sheet Title:
LANDSCAPE PLAN & NOTES

Job No.:	17164
Date:	1/16/18
Scale:	AS SHOWN
Drawn:	RS
Checked:	TSG

Sheet No.: C1.2

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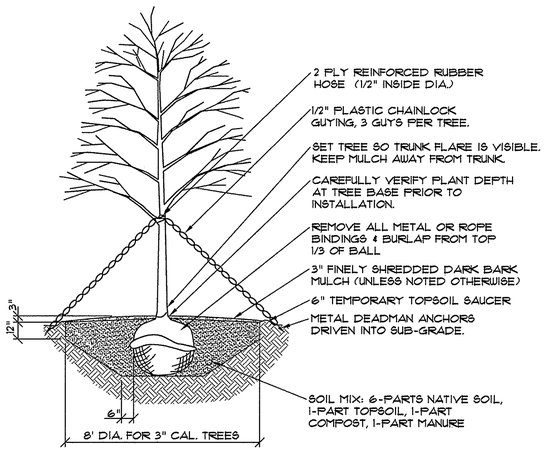

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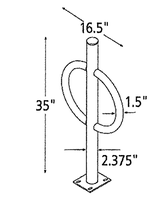
4 DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



CAPACITY 2 Bikes

MATERIALS Centerbeam: 2" schedule 40 pipe (2.375" OD)
Ring: 1.5" OD 11 gauge tube

FINISHES

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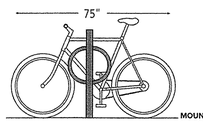
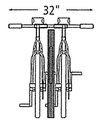
- ☐ **Powder Coat** Our powder coat finish assures a high level of adhesion and durability by following these steps: 1. Sandblast 2. Epoxy primer electrostatically applied 3. Final thick TGIC polyester powder coat
- ☐ **Thermoplastic** In addition to an increased thickness (8-10mils), the thermoplastic finish covers a galvanized layer and offers superior impact resistance over powder coating.
- ☐ **PVC Dip** (plastisol) Other colors available by special order (minimum orders apply)
- ☐ **Stainless** Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.



MOUNT OPTIONS

- ☐ **In-ground** In ground mount is embedded into concrete base. Specify in ground mount for this option.
- ☐ **Surface** Foot Mount has ø5"x6"x.25" foot with four anchors per foot. Specify foot mount for this option.



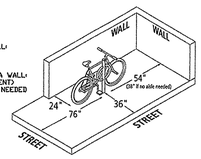
SETBACKS

FOR RACKS SET PARALLEL TO A WALL:
MINIMUM 12"
RECOMMENDED 24"

FOR RACKS SET PERPENDICULAR TO A WALL:
MINIMUM 35" (CENTERLINE MEASUREMENT)
RECOMMENDED: 38" (54" IF AISLE IS NEEDED BETWEEN BIKE AND WALL)

DISTANCE BETWEEN RACKS:
MINIMUM 24"
RECOMMENDED 38"

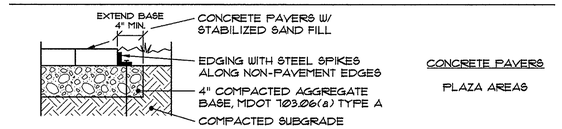
STREET SETBACKS:
MINIMUM 36"



DERO BIKE HITCH AS MANUFACTURED BY DERO BIKE RACKS

5 BICYCLE RACK SPECIFICATION – BIKE HITCH (1-33a)

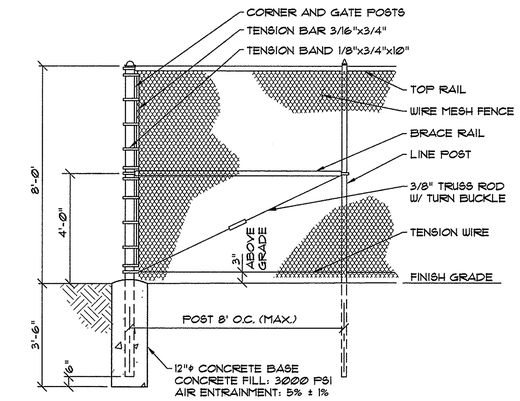
NOT TO SCALE



NOTES:
1. HMA = HOT MIX ASPHALT. MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

1 SCHEDULE OF SURFACE FINISHES

NOT TO SCALE



2 CHAINLINK FENCE SECTION

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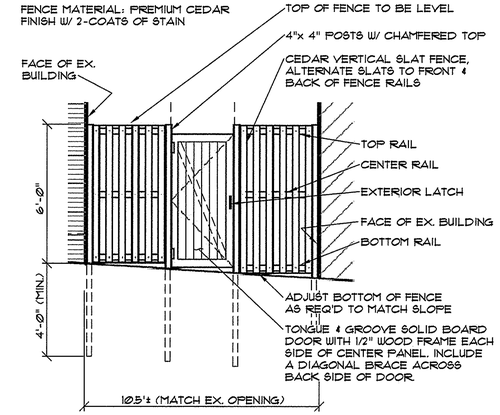
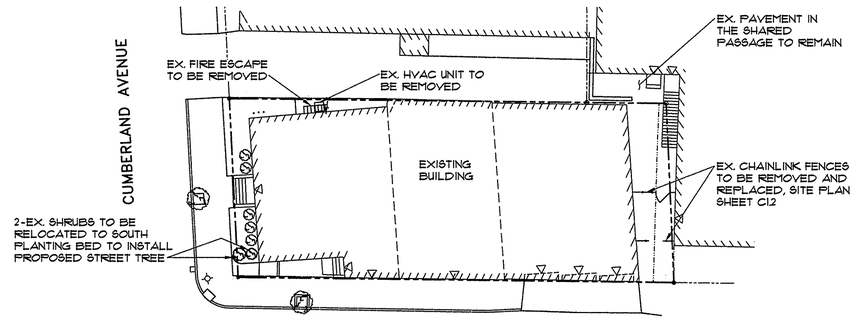


3 WOOD FENCE DETAIL

NOT TO SCALE



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DEMOLITION PLAN

SCALE: 1"=20'

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One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

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STATE OF MAINE · THOMAS S. GREER No. 4206 · LICENSED PROFESSIONAL ENGINEER · 3/19/18

415 CUMBERLAND AVENUE
415 CUMBERLAND AVENUE
PORTLAND, MAINE

415 CA, LLC
25 EDGEHILL ROAD
BROOKLINE, MA 02445

Rev.	Date	Description	Drawn	Check

Sheet Title:
DEMOLITION PLAN & SITE DETAILS

Job No.:	17164
Date:	3/20/18
Scale:	AS SHOWN
Drawn:	JDC
Checked:	TSG

Sheet No.: C1.3

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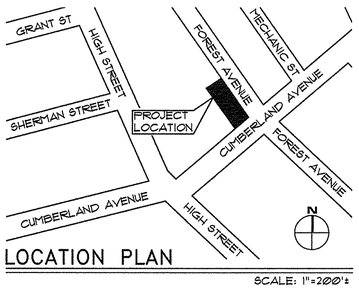
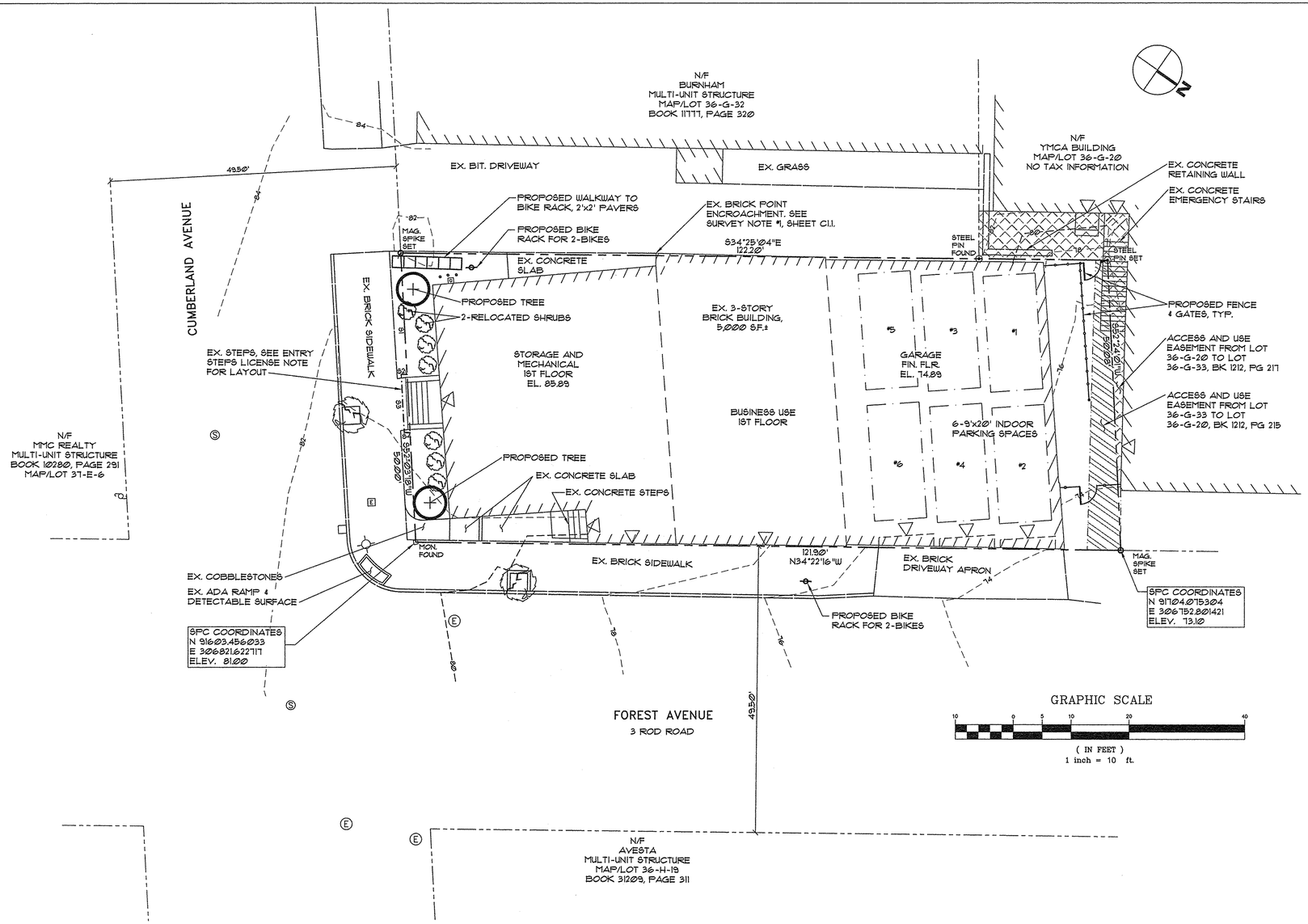


LOCATION PLAN

SCALE: 1"=200'±



LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EASEMENT
- EDGE OF PAVEMENT
- CURB
- 80 CONTOURS
- BUILDING
- BUILDING ENTRY/EGRESS
- E ELECTRIC PULLBOX
- E ELECTRIC MANHOLE
- S SEWER MANHOLE
- GAS METER
- UTILITY POLE
- LIGHT SIGNAL SUPPORT
- MONUMENT
- MAGNETIC SPIKE
- STEEL PIN
- SHRUB
- BOLLARD
- EASEMENT AREAS

PROPOSED

- BICYCLE RACK
- WOOD FENCE
- CHAINLINK FENCE
- FENCE GATE
- STREET TREE
- CONCRETE PAVERS

BUILDING UNIT USE SCHEDULE

APT. #	FLOOR LEVEL	FLOOR AREA (SF)
13	1ST	720
14	1ST	748
21	2ND	977
22	2ND	915
23	2ND	530
24	2ND	720
25	2ND	820
31	PENTHOUSE	900
RESIDENTIAL TOTAL		6,330
COMMERCIAL	@ 1ST	3,800
GARAGE	@	1,600
BASEMENT	@	1,550
COMMON AREA	@	750
COMMERCIAL TOTAL		7,700

ENTRY STEPS LICENSE

PROPOSED LICENSE:
FROM THE CITY OF PORTLAND TO
415 CA, LLC FOR ENTRY STEPS

LINE	BEARING	DISTANCE
S1	N 52°03'18" E	21.00'
S2	S 34°25'04" E	1.00'
S3	N 52°03'18" E	10.00'
S4	N 34°22'16" W	1.00'

SUBDIVISION PLAT, APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

DATE

WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

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STATE OF MAINE · THOMAS GREER No. 4206 · REGISTERED PROFESSIONAL ENGINEER · 4/17/18

STATE OF MAINE · ELWOOD ELLIS 1176 · REGISTERED PROFESSIONAL LAND SURVEYOR

415 CUMBERLAND AVENUE

415 CUMBERLAND AVENUE
PORTLAND, MAINE

415 CA, LLC
25 EDGEHILL ROAD
BROOKLINE, MA 02445

Rev.	Date	Description	Drawn	Check
1	3/20/18	REV'D PER PRELIM. CITY REVIEW	JDC	TSG
2	4/17/18	REV'D PER CITY REVIEW	JDC	TSG

Sheet Title:
SUBDIVISION RECORDING PLAT
SHEET 1 OF 2

Job No.:	17164
Date:	1/16/18
Scale:	AS SHOWN
Drawn:	RJS
Checked:	TSG

Sheet No.: C1.0

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CITY OF PORTLAND CONDITIONS OF APPROVAL

1. TO BE ADDED AT APPROVAL

CITY OF PORTLAND SUBDIVISION NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.
10. SUBDIVISION AT THE TIME OF APPROVAL IS DEFINED AS "SUBDIVISION SHALL MEAN THE DIVISION OF A LOT, TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE LOTS, INCLUDING LOTS OF FORTY (40) ACRES OR MORE, WITHIN ANY FIVE-YEAR PERIOD WHETHER ACCOMPLISHED BY SALE, LEASE, DEVELOPMENT, BUILDINGS OR OTHERWISE AND AS FURTHER DEFINED IN 30-A MRS.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."

SURVEY NOTES

1. BRICK POINTS ENCROACH ON LOT INDICATED AS MAP/LOT 36-G-32 BY LESS THAN 2 INCHES.
2. COORDINATE SYSTEM IS STATE PLANE COORDINATES, WEST ZONE.
3. VERTICAL DATUM IS USGS 1929. CUSTOM HOUSE STEPS 29 NGVD.
4. UTILITIES SHOWN ARE EXISTING.
5. THE EASEMENTS AS NOTED ARE FOR THE YMCA (1212-215) TO USE PART OF THIS PARCEL TO BUILD AND MAINTAIN A CONCRETE EXTERIOR EGRESS WITH ACCESS TO FOREST AVENUE.
6. IN BOOK 1212 PAGE 217 THE YMCA GRANTS THIS PARCEL USE OF THE PARCEL BELONGING TO THE YMCA BETWEEN THE STRUCTURES SUBJECT TO THE STAIRS AND EGRESS TO FOREST AVENUE.

WAIVERS

1. NONE REQUESTED

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.

ZONE INFORMATION

ZONE: B3C, DOWNTOWN BUSINESS
PERMITTED USE: RESIDENTIAL, BUSINESS & PROFESSIONAL OFFICES, PERSONAL SERVICES, TRADESMAN OFFICES

SPACE STANDARDS	REQUIRED	PROPOSED TOTAL SUBDIVISION
MINIMUM LOT SIZE	NONE	6,098 SQ. FT.
MINIMUM STREET FRONTAGE	15 FEET	121.90 FEET
MAXIMUM SETBACK	5 FEET	0 FEET
MINIMUM YARD	NONE	0 FEET
MINIMUM LOT WIDTH	NONE	121.90 FEET
MAXIMUM LOT COVERAGE (BUILDING)	100%	81%
MINIMUM BUILDING HEIGHT	35 FEET	EX. NO CHANGE
MAXIMUM BUILDING HEIGHT	40 FEET	EX. NO CHANGE

PARKING INFORMATION

EXISTING VEHICLE SPACES:	6
8 UNITS PROPOSED:	
FIRST 3 UNITS:	0
REMAINING UNITS, 1 PER UNIT:	5
TOTAL VEHICLE SPACES REQUIRED:	5
TOTAL PROVIDED:	6
BIKE SPACES REQUIRED:	
2 BIKE SPACES PER 5 DWELLING UNITS	
8 UNITS PROPOSED = 1/2.5:	3.2
PROVIDED	4

IMPERVIOUS INFORMATION

EXISTING IMPERVIOUS	5,762 SQ. FT.
PROPOSED IMPERVIOUS	24 SQ. FT.
NET IMPERVIOUS	5,786 SQ. FT.

GENERAL NOTES

1. OWNER/DEVELOPER: 415 CA, LLC, 25 EDGEHILL RD, BROOKLINE, MA. 02445, RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, BK 34152, PG 38, DATED JULY 12, 2017.
2. ENGINEER: WALSH ENGINEERING ASSOCIATES, INC., 28 VANNAH AVENUE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC AND BOUNDARY INFORMATION TAKEN FROM SURVEY PROVIDED BY: DOWNEAST SURVEYING & DEVELOPMENT, P.O. BOX 234, CHINA, MAINE 04926
   415 CUMBERLAND AVENUE
   415 CUMBERLAND AVENUE, PORTLAND, MAINE
   BOUNDARY & BOUNDARY SURVEY
   PLAN ISSUED 6/18/16 AND REVISED 3/20/18.
5. UTILITY INFORMATION TAKEN FROM PLAN BY: ACORN ENGINEERING, INC., TITLED "UTILITY PLAN", DATED 10/12/16, PORTLAND WATER DISTRICT RECORDS AND CITY OF PORTLAND ENGINEERING DEPART RECORDS.
6. ZONE: B3C, DOWNTOWN BUSINESS ZONE
   PROPOSED USE: GENERAL BUSINESS & PROFESSIONAL OFFICES, PERSONAL SERVICES, TRADESMAN OFFICES, RESIDENTIAL
7. TAX MAP REFERENCE: MAP 036 LOT G033001
8. TOTAL PARCEL = 0.14 ACRES
9. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 811 OR 1-888-DIG-SAFE.
10. UNITS TO BE SERVICED BY EXISTING PUBLIC WATER, SEWER, AND GAS FROM CUMBERLAND OR FOREST AVENUES.
11. POWER, TELEPHONE AND CABLE SERVICES ARE UNDERGROUND FROM FOREST AVENUE.
12. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. THE SUBJECT PARCEL KNOWN AS 415 CUMBERLAND AVENUE IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
14. DETAILS OF STREET TREES ARE INCLUDED ON THE SITE PLAN AS PART OF THE APPROVAL FOR 415 CUMBERLAND AVENUE SITE PLAN. TWO STREET TREES ARE PLANNED.
15. FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0014 B, EFFECTIVE DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
16. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON THIS SHEET UNDER SNOW CLEARANCE NOTES.
17. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION AS REQUIRED. ANY MONUMENTATION DAMAGED BY CONSTRUCTION IS TO BE REPLACED.
18. ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION 2016.
19. THE FIRST FLOOR RE-USE SPACE IS TO REMAIN AS COMMERCIAL USE.
20. PROJECT PROPOSES TO LOCATE OUTDOOR STORAGE FOR FOUR (4) BICYCLES ON THE SOUTH SIDE OF THE BUILDING.

SUBDIVISION PLAT, APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

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_____ DATE

WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

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STATE OF MAINE — THOMAS S. GREER — 10828 — REGISTERED PROFESSIONAL ENGINEER — 3/19/18

STATE OF MAINE — JOHN D. CLEMENTS — 11176 — REGISTERED LAND SURVEYOR — 3/17/2018

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Sheet Title:
SUBDIVISION RECORDING PLAT
SHEET 2 OF 2

Job No.:	17164
Date:	1/16/18
Scale:	AS SHOWN
Drawn:	RJS
Checked:	TSG

Sheet No.: C1.1

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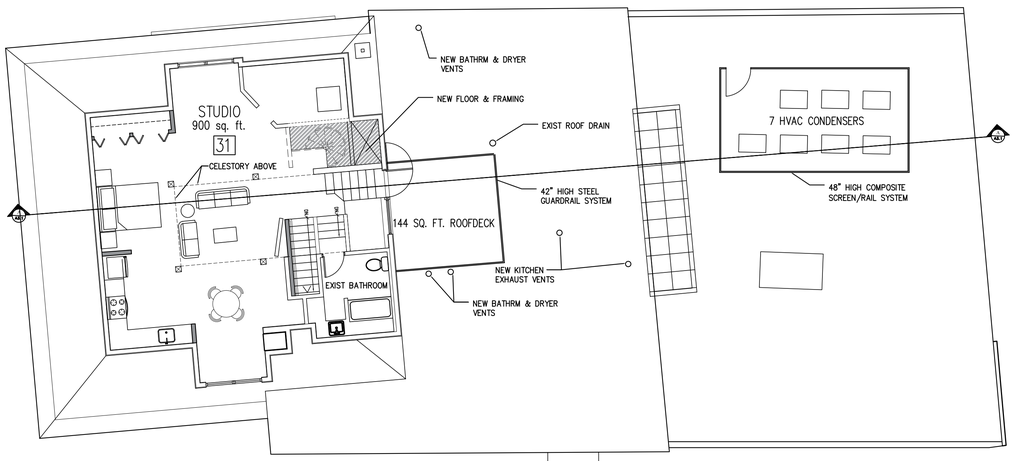
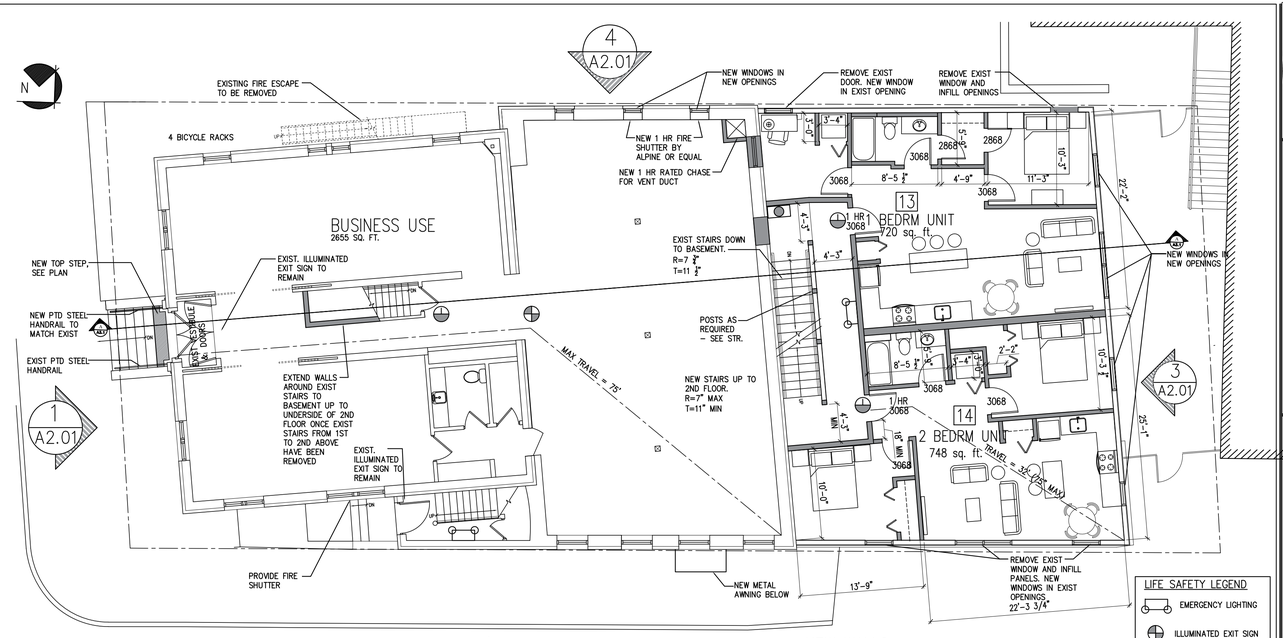
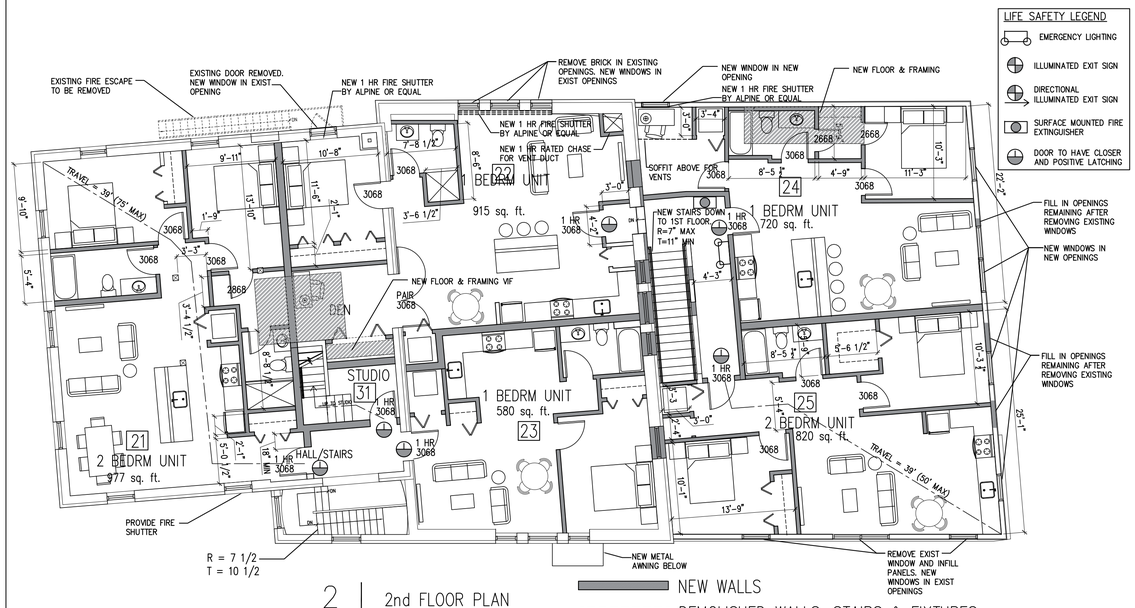


3 | PENTHOUSE FLOOR PLAN
1/8" = 1'-0"



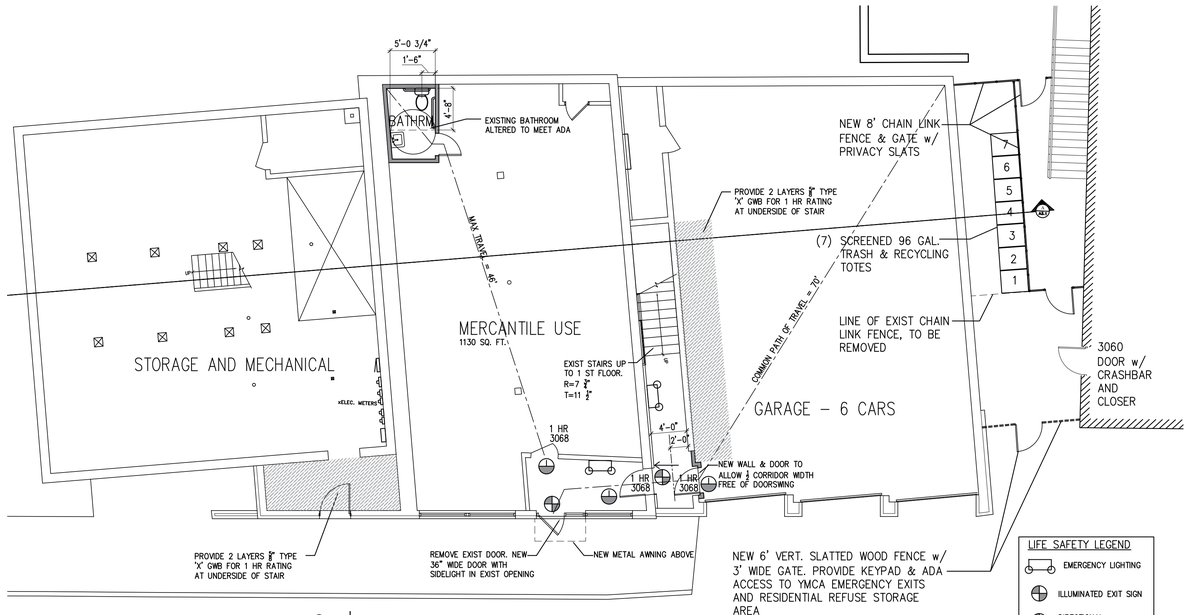
1 | 1st FLOOR PLAN
1/8" = 1'-0"

NEW WALLS
DEMOLISHED WALLS, STAIRS & FIXTURES
NEW FLOOR & FRAMING



2 | 2nd FLOOR PLAN
1/8" = 1'-0"

NEW WALLS
DEMOLISHED WALLS, STAIRS & FIXTURES
NEW FLOOR & FRAMING



0 | BASEMENT PLAN
1/8" = 1'-0"

LICENSED ARCHITECT
DAVID LLOYD
NO. 936
STATE OF MAINE

OWNER:

ARCHETYPE, P.A.
ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
415 CUMBERLAND AVENUE
PORTLAND, MAINE

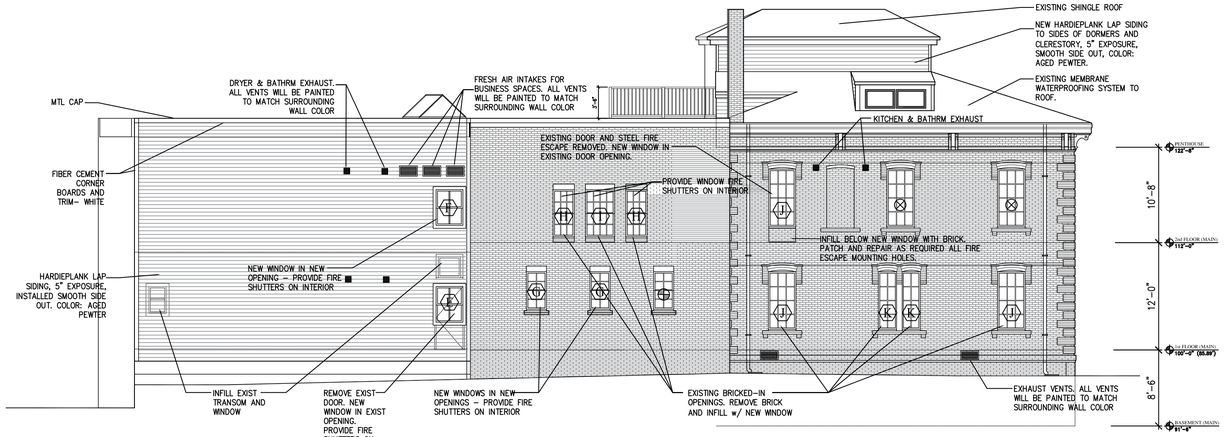
Revisions:

Scale
1/8" = 1'-0"

Date
12 April 2018

NEW FLOOR PLANS

A1.03



4 | SOUTH WEST ELEVATION
1/8" = 1'–0"

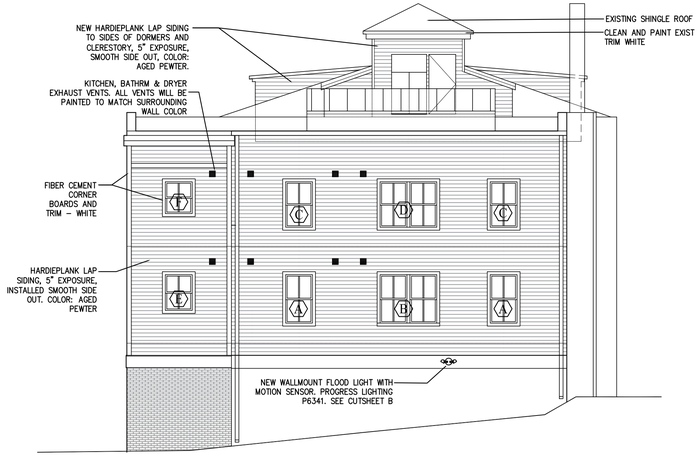
EXISTING WINDOW PROPOSED TREATMENT LEGEND

THE INTENT IS TO TREAT THE EXISTING WINDOWS AS DEMARCATED ON THE ELEVATION. CLOSER INSPECTION BY AN EXPERT MAY INDICATE THAT SOME WINDOWS INTENDED FOR REFURBISHMENT ARE NOT IN A GOOD ENOUGH CONDITION FOR REFURBISHMENT

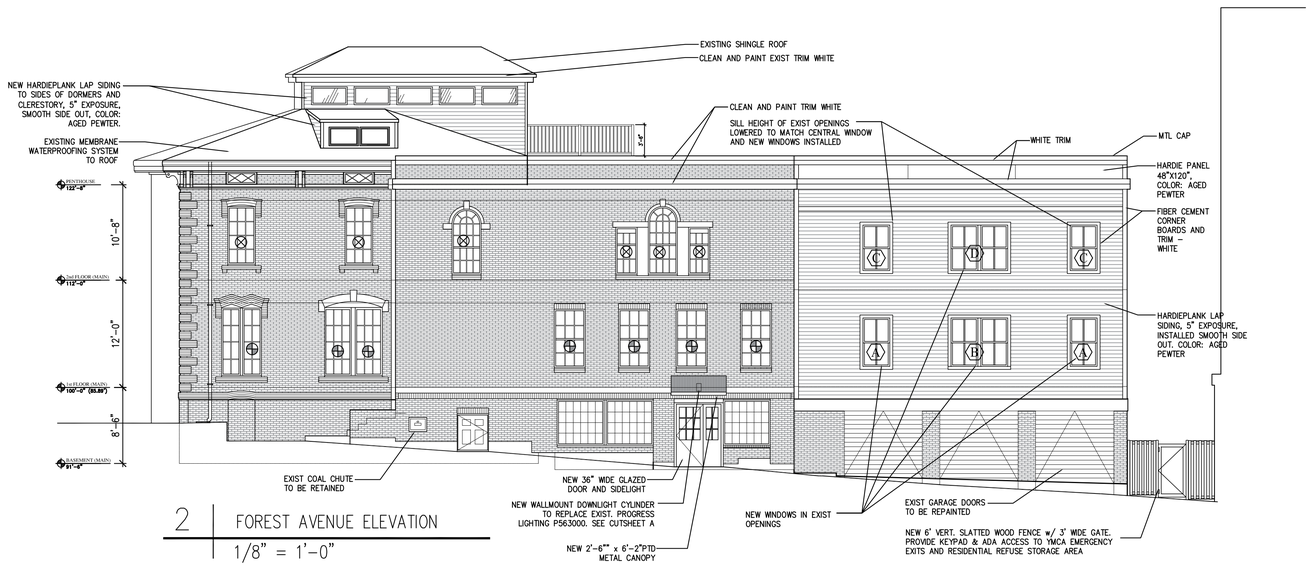
⊕ REFURBISHED EXIST WINDOW

⊗ EXIST WINDOW REPLACED WITH MATCHING NEW WINDOW

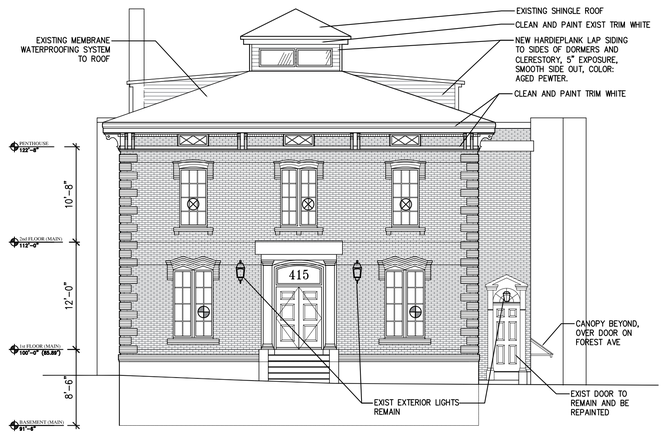
EXISTING BRICK MOLDS TO BE PAINTED AND REMAIN IN PLACE ON REFURBISHED WINDOWS AND REUSED WHERE WINDOWS ARE REPLACED. NEW WINDOWS IN NEW OPENINGS WILL HAVE THE SELECTED WINDOW MANUFACTURER'S STANDARD BRICKMOLD.



3 | NORTH WEST ELEVATION
1/8" = 1'–0"



2 | FOREST AVENUE ELEVATION
1/8" = 1'–0"



1 | CUMBERLAND AVENUE ELEVATION
1/8" = 1'–0"

LICENSED ARCHITECT
DAVID LLOYD NO. 936
STATE OF MAINE

OWNER:

ARCHETYPE, P.A.
ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
415 CUMBERLAND AVENUE
PORTLAND, MAINE

Revisions:

Scale 1/8" = 1'-0"

Date 12 April 2018

ELEVATIONS

A2.01