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

The Portland Planning Board will hold a meeting on November 27, 2018, Room 24, Basement Level of 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 PM

i. Level I Site Alteration and Conditional Use; 11 Pomeroy Street; Chabad of Maine, Applicant. (4:30 - 5:30 p.m. estimated time) The Planning Board will hold a workshop to consider a plan for conditional use review for a place of religious assembly to serve over 15 people within the existing single family house. There are no changes proposed to the existing structure. The applicant is proposing an increase in impervious surface to accommodate parking for 6 vehicles. The parcel is in the R-3 zone and is subject to review under Portland's conditional use review criteria and site plan standards.

ii. Level III Site Plan; 100 Fore Street; 100 Fore Street, LLC, Applicant. (5:30 – 6:30 p.m. estimated time) The Planning Board will hold a workshop to consider the redevelopment of 100 Fore Street. A portion of the existing building will be demolished and the remaining 9,100 sf will be renovated for a fitness center. A three-level parking garage (total of 539 parking spaces) and two floors of retail and office space above the parking are proposed. The building footprint is approximately 64,980 sf and the total building square footage is 278,237 sf. Access to the parking levels is proposed from Fore Street (across from Mountfort) and from a proposed easterly driveway off Fore Street that is proposed to meet city street standards. The 2.97 acre lot is located within the B-6 Eastern Waterfront zone and subject to review under Portland's site plan standards.

PUBLIC HEARING - 7:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. APPROVAL OF MINUTES CREATED FOR THE NOVEMBER 13, 2018 PLANNING BOARD MEETING. (THE MINUTES WERE CREATED BECAUSE AUDIO WAS NOT AVAILABLE DURING THE RECORDING OF THE MEETING.)

i. Minutes for 11-13-18

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON NOVEMBER 13, 2018:

i. Workshop - All members were present

ii. Public Hearing - All members were present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON NOVEMBER 13, 2018:

i. Zoning Text Amendment to the IR-1 and IR-2 Zones, Accessory Dwelling Unit, City of Portland, Applicant. Mazer moved and Stanley seconded a motion to find the proposed text amendments consistent with the comprehensive plan and to recommend the adoption of the amendments to the City Council. Vote: 7-0

ii. Level III Site Plan,Office building expansion, 90 Johnson Road, Transport Leasing Corp, Applicant. Mazer moved and Stanley seconded a motion to table the item to November 27 public hearing.Vote: 7-0

iii. Level III Subdivision Amendment, 94 Walnut Street JP Sheridan, LLC,, Applicant. Mazer moved and Stanley seconded a motion to approve the amended subdivision plat (to add 1 residential unit for a total of 4) with one condition of approval. Vote: 7-0. Mazer moved and Stanley seconded a motion to approve the amended site plan with one condition of approval. Vote: 7-0.

5. OLD BUSINESS

i. Level III Site Plan; 90 Johnson Road; Transport Leasing Corp., Applicant. (7:00 - 7:45 p.m. estimated time) The Planning Board will hold a public hearing to consider the redevelopment and expansion of the existing office/warehouse building. Two stories will be added to the existing 17,482 sf building for a total area of 39,546 sf for office space. Access to the 2.66 acre site will be from Johnson Road and City Line Drive and a parking area for 188 vehicles is proposed. The site is in the B-4 Commercial Business Zone and is subject to review under Portland's Site Plan Standards.

6. NEW BUSINESS

i. Confirmation of Waiver of Joint Meeting with Westbrook, Amended Subdivision Plan, Dirigo Center Developers, LLC, Applicant. (7:45 – 7:50 p.m. estimated time) The Planning Board will consider a request by the applicant to confirm the Planning and Urban Development Director's waiver of a joint meeting on an amended subdivision plan with lot line adjustments for the Dirigo Center, now known as Rock Row.

ii. Zoning Amendments, Marijuana Zoning, City of Portland, Applicant. (7:50 - 8:30 p.m. estimated time) The Planning Board will hold a public hearing to consider zoning text amendments regarding medical and adult use marijuana. The zoning amendments will address proposed uses, locations, dimensional standards and use standards for marijuana manufacturing, cultivation, testing and retail establishments. Zoning districts impacted by the text amendment include the B-2, B-2b, B-2c, B-3, B-3c, B-7, B-4, I-H, I-L, I-Lb, I-M and I-Mb.

iii. Level III Site Plan; 400 West Commercial Street; Phin Sprague, representing Canal Landing, LLC., Applicant. (8:30 - 9:00 p.m. estimated time) The Planning Board will hold a public hearing to consider the development of Phase IV (Building E) at Canal Landing. The proposal is for an 80 x 150 (12,000 sf) maintenance building (marine repair services) to be located on the 5.99 acre shorefront property near the new travel lift basin. The proposed building height is 72 ft, thus it is subject to conditional use standards of the WPDZ. The application is also subject to review an as amendment to the Site Location Permit and Portland's site plan and shoreland zoning standards.

iv. Level III Site Plan; 325 St. John Street, Robert Mahoney, representing Dunkin Brands, Inc., Applicant. (9:00 p.m. estimated time) The Planning Board will hold public hearing on a proposal to demolish the existing building (a restaurant) on the 30,239 sf site and construct a 2,277 sf Dunkin Donuts restaurant building with a drive-through window. The site is located in the B-2 zone and is subject to review under Portland's site plan, conditional use for a drive-through, and delegated review for a Traffic Movement Permit (TMP). As part of the TMP the project proposes a center turn lane in St John Street to improve overall safety.

Memorandum
Planning and Urban Development Department
Planning Division

To:	Sean Dundon, Chair, and Members of the Portland Planning Board
From:	Christian Roadman, Planner
Date:	11/20/2018
Re:	Single Family Home / Place of Assembly | 11 Pomeroy Street | Chabad Lubavitch of Maine, Inc.
Project #:	PL-000058-2018 and CU-000057-2018 CBL: 193 E001
Meeting Date:	November 27, 2018



Area context of 11 Pomeroy Street, which is outlined in teal.

I. INTRODUCTION

Chabad Lubavitch of Maine owns a building in an R-3 zone used for religious assembly and as a home for the organization's rabbi and family. Per the City's Land Use Code, gatherings may include 15 non-permanent residents before a building's use is considered a "place of assembly." At present, the building is simply considered a single family home.

According to Chabad of Maine, the number of worshipers attending services has increased to a typical 15 – 20 people, prompting their application for conditional use as a place of assembly. Additionally, the applicant estimates that larger

gatherings of 25 – 35 people occur during special events approximately eight times a year. The applicant also seeks the ability to grow further, to 25 maximum regular worshipers and 50 maximum attendees for special events. Designation as a place of assembly, which must be approved by the Planning Board, allows for more than 15 non-permanent residents to gather.

The applicant's proposed exterior changes (attachment P3) are minimal: to meet parking requirements for a place of assembly, the organization proposes to add parking on site. However, the change of use spurs additional fire access and life safety concerns that necessitate additional site and interior changes. For example, life safety codes likely necessitate a commercial kitchen, and the Fire Department seeks improved access (to at least two sides of the home) from Pomeroy Street. The Fire Department access comments (attachment 3) were received shortly before the completion of this report, and partly stem from additional information uploaded by the applicant team on November 16 (attachment G). Fire Department and life safety code-mandated changes may result in upgrades to the building and additional impervious surface. Additional impervious surface may trigger level II site application requirements. Planning staff expect revisions from the applicant team to address these issues.

The applicant seeks Planning Board review of the proposed place of assembly under the R-3 conditional use standards, as well as the general conditional use standards in Section 14-474 of the City's Land Use Code. The site plan (attachment P3) for the proposed project will also be reviewed by the Planning Board as part of this application.

II. SITE HISTORY

Chabad of Maine received a Level II site plan approval to pave Pomeroy Street and a separate level I minor residential application approval to construct the single family home in 2013. Both of these changes were reviewed at a staff level; neither triggered a Planning Board hearing. The building was finished in 2015.

Chabad of Maine received a building permit for a 2-story addition to the single family home in 2017. Including the addition, the house is 7,605 square feet, and is located on a 73,821 square foot (1.69 acre) lot. Permits for the building addition were reviewed and issued by the Department of Permitting and Inspections.

Previously (2004-2005) Chabad of Maine received approval for a single family home and synagogue on site. The applicant did not post the required performance guarantee, and the plan / approval expired in 2007.



East-facing image of the site in May 2018. Pomeroy Street is on the left side of the image. 11 Pomeroy Street is in the center. (image: Pictometry)

Applicant: Chabad Lubavitch of Maine, Inc.
Consultants: Sevee and Maher Engineers, Tom Federle (lawyer)

III. REQUIRED REVIEWS

Review	Relevant Code
Site Plan	*Section 14-526*
Conditional Use	*Section 14-474*

IV. PROJECT DATA

Existing Zoning	R-3 Residential Zone
Existing Use	Single Family Home
Proposed Use	Place of Assembly / Single Family Home
Parcel Size	73,821

	Existing	*Proposed*	*Net Change*
Building Footprint (sq. ft.)	~3,071	~3,701	0
Building Floor Area (sq. ft.)	7,605	7,605	0
Impervious Surface Area (sq. ft.)	7,500	8,475	975
Parking Spaces	1	8	7
Bicycle Parking Spaces	0	0	0

V. PUBLIC COMMENT

By the time of this writing, the Planning Division received eight written comments (attachments PC1 – PC8), as well as phone calls and visits to the department by neighbors expressing concern about the project. Though the property is currently classified as a single family home, area residents noted other activities advertised on the Chabad of Maine website, including a kids camp and room rentals. Area residents also expressed concerns regarding traffic, parking, and stormwater impacts. Previous expansion of uses on site, and the potential for growth, also caused concern.

VI. RIGHT, TITLE, INTEREST / FINANCIAL CAPACITY

The applicant submitted a warranty deed (attachment B) as evidence of ownership of the property in question.

A letter from King H. Weinstein of King Real Estate in Old Orchard Beach stated that King Real estate agreed to underwrite and provide financing for the parking area expansion and other related improvements (attachment C).

VII. ZONING ANALYSIS

As stated above, the building at 11 Pomeroy Street was permitted as a single family home, and Chabad of Maine seeks a conditional use approval for a place of assembly. Places of assembly in the R-3 residential zone are sized by maximum floor area and must be located on a corresponding minimum acreage. While the overall building is 7,605 square feet, the existing assembly space for services is 900 square feet. Thus, it is categorized as a small assembly space requiring a minimum lot size of .5 acre (which the existing lot exceeds).

The applicant is required to provide one parking space per 125 feet of gathering space. Assuming the gathering space calculation of 900 square feet, seven parking spaces must be provided. The applicant proposed eight spaces, to be achieved with the existing garage parking space, striping of existing pavement, and by adding new parking spaces next to the existing driveway.

Places of assembly are considered to be an institutional use in the R-3 residential zone, subject to conditional use review and approval by the Planning Board. The proposed use must meet the following standards, which are

accompanied by the applicant's corresponding responses (sourced from attachment F):

a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas;

   Response: "The current classification of the property and structure is a single family home and place of religious assembly with less than 15 attendees. The existing structure provides adequate space and needs for the increase in attendance to just over 15 attendees that Chabad of Maine has seen over the last few years. Therefore, there will be no expansion to the site or structure."

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter;

   Response: "Chabad of Maine will continue to use the existing site as a place of religious assembly similar to the use of the facility in the past."

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;

   Response: "Not applicable."

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter;

   Response: "A copy of the site plan is attached with this application."

Conditional uses are also subject to standards in 14-474 of the Land Use Code. The proposed use must "not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zoning district." Specific requirements are listed below, and accompanied by the applicant's relevant responses from their initial project narrative (attachment F).

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;

   Response: "Chabad of Maine does not generate a vehicle demand substantially greater than that generated by surrounding uses. In fact, attendees at Chabad House are prohibited from driving a vehicle on the days when attendance is at its highest . . . . As a result, very little vehicle traffic occurs. Consequently, an inordinate expanse of pavement is not required to accommodate vehicles. Finally, Chabad of Maine's hours of operation are not out of keeping with those of surrounding uses."

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter;

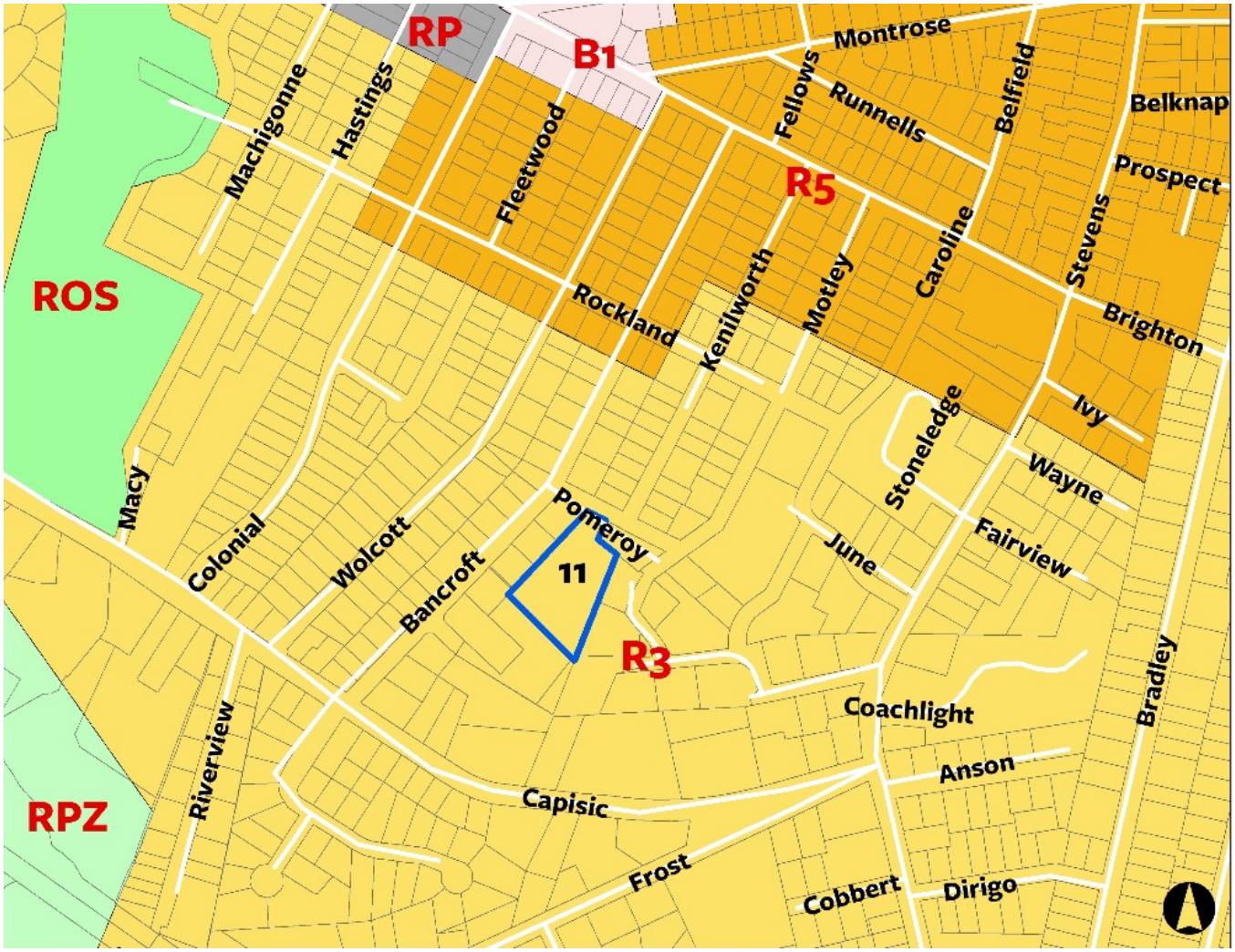
   Response: "The proposed use is a place of religious assembly. Originally the existing structure was built for a single family home and place of religious assemble with less than 15 attendees. The current increase in worshippers has had no effect on the existing wastewater system and will not create any unsanitary or

harmful conditions. In fact, the requirements for preparation of kosher foods makes the Chabad House one of the few places in Maine sufficiently sanitary for the dietary requirements of its followers."

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.

Response: "The operation of Chabad of Maine, including its location on its lot, screening from abutters, landscaping, lack of signage, etc. results in not having a substantially greater effect or impact on surrounding properties than those associated with other allowable uses in the zone."

Consulting traffic engineer Tom Errico's comments (attachment 1) are also relevant in addressing impacts. His comments are included under Transportation Standards, below.



Zoning context of proposed 11 Pomeroy project. The project parcel is outlined in blue.

VIII. DEVELOPMENT REVIEW

A. SITE PLAN (Section 14-526)

The proposed level I site alteration prompts review for conformance with relevant standards of Portland's site plan

ordinance and applicable regulations.

1. Transportation Standards

a) Impact on Surrounding Street Systems; Access and Circulation; Parking

The applicant's proposal involves the addition of approximately 975 square feet of impervious surface (gravel), and reorganization of 400 square feet of existing impervious surface, to create eight parking spaces on their property. Gravel is not permitted per the City of Portland's technical standards, so a different parking surface should be proposed by the applicant for the proposed new impervious surface.

Tom Errico, the City's consulting traffic engineer, provided initial comments on the project (attachment 1) reproduced below.

- I do not expect the project will generate traffic levels that would create unreasonable traffic congestion or safety problems. Final trip generation projections will need to be estimated to confirm this conclusion.

- Parking demand estimates and how vehicles will be accommodated during events will need to be documented and reviewed. A parking management plan will be required.

2. Environmental Quality Standards

a) Preservation of Significant Natural Features; Water Quality, Stormwater Management, and Erosion Control

As stated above, the project as currently proposed includes approximately 975 square feet of impervious surface. Consulting civil engineer Lauren Swett expressed (attachment 2) that she does not have specific concerns with the existing proposal. However, comments from the Fire Department (attachment 3) indicate a need for additional pavement. Changes to the site design will affect Ms. Swett's review.

b) Landscaping and Landscape Preservation

The applicant states (attachment F) that "parking has been designed such that existing plantings installed under the previous approved site plan will be protected," which "will leave a significant buffer around the building to screen the project the same as existing conditions." Site plan changes mandated by the Fire Department (addressed below) may affect landscape review.

3. Public Infrastructure and Community Safety Standards

a) Public Safety and Fire Prevention

Planning staff, the applicant team, and staff from the City's Permitting and Inspection Department met November 8 to discuss life safety codes that may be triggered with a change of use to place of assembly. Those conversations are separate from the Planning Board's purview, but nonetheless related and ongoing.

Division Chief Mike Thompson provided site plan comments (attachment 3) on November 20 regarding fire access to the property in question that necessitate significant changes to the proposed site plan (attachment P3). His comments, reproduced below, respond in part to additional information uploaded by the applicant team (attachment G) on November 16.

- Our preference would be for parking on Pomeroy Street to be limited to one side of the street.
- The access driveway, from Pomeroy Street to the building, shall be required to be a minimum of twenty feet (20') wide for its entire length.
- Access lanes shall be engineered and maintained to support the weight of emergency vehicles during all weather conditions.
- Paved emergency access lanes shall be provided on a minimum of two sides of all structures. With this existing structure our preference would be the three story section facing Bancroft Street.

b) Consistency with City Master Plans

This category is generally not applicable, though a passage from the City's Comprehensive Plan speaks to the tension between maintaining a neighborhood's character with accommodating various functions and resources:

"While the city's neighborhoods should collectively support residents with a complete range of services and all are expected to accommodate a share of Portland's growth and development, policies should encourage the distinct qualities of each. This does not imply freezing neighborhoods as they are, but allowing change that is compatible with current development patterns."

4. Site Design Standards

a) Historic Resources

The proposed project is not located within a historic district, nor is it expected to impact historic resources.

b) Exterior Lighting

The applicant does not propose an increase in lighting as part of the proposed project.

c) Signage and Wayfinding

The applicant does not propose additional signage as part of the proposed project.

d) Zoning Related Design Standards

The R-3 zone does not have associated design standards, and proposed exterior work for this project is limited to parking and pavement-related items.

IX. NEXT STEPS

The applicant is expected to:

- Update the proposed project plans by incorporating Planning Board feedback
- Update the proposed project plans to address the workshop memo and reviewers' comments
- Proceed to a public hearing or a second workshop

REPORT ATTACHMENTS

1. T Errico Comments 11-16-18
2. L Swett Comments 11-20-18
3. Chief Thompson Comments 11-20-18

PUBLIC COMMENT

PC1. Judy Gailen 9-6-18
PC2. Kristine and Rick Jacobs 9-9-18
PC3. Jonathan Matt 9-10-18
PC4. Jeff Emerson 9-11-18
PC5. Jonathan Matt 9-12-18
PC6. Douglas Babkirk 9-12-18
PC7. Jessica Teesdale 9-23-18
PC8. Bill Green 10-17-18

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Deed
C. Financial Capacity
D. Level 1 - Site Alteration Application
E. Conditional Use Application
F. Project Narrative
G. Memo – Summary of Uses 11 Pomeroy St

PLANS

P1. Cover
P2. Existing Conditions
P3. Site Plan
P4. Erosion Control Notes and Site Details
P5. General Notes
P6. 1st Floor Uses Plan
P7. 2nd Floor Uses Plan
P8. 3rd Floor Uses Plan
P9. Bath House Addition Uses Plan

Att. 1

Portland Maine | Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

11 Pomeroy Street - Initial General Traffic Comments

2 messages

Tom Errico <thomas.errico@tylin.com> Fri, Nov 16, 2018 at 8:59 AM
To: Christian Roadman <croadman@portlandmaine.gov>

Hi Christian – I have generally reviewed project information and the following are my initial traffic comments.

- I do not expect the project will generate traffic levels that would create unreasonable traffic congestion or safety problems. Final trip generation projections will need to be estimated to confirm this conclusion.

- Parking demand estimates and how vehicles will be accommodated during events will need be documented and reviewed. A parking management plan will be required.

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"

Christian Roadman <croadman@portlandmaine.gov> Fri, Nov 16, 2018 at 9:56 AM
To: Tom Errico <thomas.errico@tylin.com>

Thank you!

--
Christian Roadman
Planner
207.874.8984

Planning & Urban Development Department
389 Congress Street
Portland, Maine 04101

[Quoted text hidden]

2 attachments



image001.gif
2K



image001.gif
2K

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Fire-Related Comments for 11 Pomeroy Comments

Lauren Swett <lswett@woodardcurran.com> Tue, Nov 20, 2018 at 1:09 PM
To: Christian Roadman <croadman@portlandmaine.gov>

Thanks for the update Christian.

Based on what has already been submitted, I do not have any specific concerns. Depending on how they address the comments with regards to fire access, this will result in a change in impervious surface that will likely require that the applicant meet both the General and Flooding Standards for new impervious surface proposed at the site. As additional information comes in, I will review.

Thanks,

Lauren

From: Christian Roadman <croadman@portlandmaine.gov>
Sent: Tuesday, November 20, 2018 10:32 AM
To: Lauren Swett <lswett@woodardcurran.com>
Subject: Fwd: Fire-Related Comments for 11 Pomeroy Comments

[Quoted text hidden]

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

Portland Maine | Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

11 Pomeroy Comments?

Robert Thompson <rmt@portlandmaine.gov> Tue, Nov 20, 2018 at 8:12 AM
To: Christian Roadman <croadman@portlandmaine.gov>

Hi Christian,

I'll add these comments in Energov, but wanted to get them to you now:

1) Our preference would be for parking on Pomeroy Street to be limited to one side of the street.
2) The access driveway, from Pomeroy Street to the building, shall be required to be a minimum of twenty feet (20') wide for its entire length.
3) Access lanes shall be engineered and maintained to support the weight of emergency vehicles during all weather conditions.
4) Paved emergency access lanes shall be provided on a minimum of two sides of all structures. With this existing structure our preference would be the the three story section facing Bancroft Street.

Please feel free to contact me if you have any questions or concerns.

Thank you,
Mike

[Quoted text hidden]

--
Robert M. Thompson
Division Fire Chief
Portland Fire Department
(207) 874-8400
rmt@portlandmaine.gov

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com
smemaine.com

August 14, 2018

Barbara Barhydt
City of Portland
Planning and Transportation Division
389 Congress Street, 4th Floor
Portland, Maine 04101

Subject: Chabad Lubavitch of Maine, Inc.
Place of Religious Assembly
11 Pomeroy Street, Portland, Maine
Level I Site Plan and Conditional Use Application

Dear Ms. Barhydt:

On behalf of Chabad of Maine (Chabad of Maine), Sevee & Maher Engineers, Inc. (SME) has prepared a Level I Site Plan and Conditional Use Application for the Chabad of Maine Place of Religious Assembly at 11 Pomeroy Street in Portland, Maine. The Chabad of Maine has been operating as a place of religious assembly with less than 15 worshippers and was classified as a single-family home under the most recent City approvals. This application serves to revise the land use to a Place of Religious Assembly to address a minor increase of worshippers to just over 15. The current building is adequate to accommodate this minor increase and does not result in an expansion to the use of the building. No increase in worshippers at the site is anticipated.

As part of the change in land use, a Conditional Use permit is required for a place of religious assembly in the R3 Residential Zone. The Conditional Use application is included in this package.

Site improvements will be limited to conform to the City Land Use Ordinance requirements. In total there will be an increase in impervious area for parking of approximately 975 square feet. This requires a Level I Site Alteration Development Review permit from the City.

The applications and supporting information are included in this application page. If you have any further questions or concerns feel free to contact me.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Daniel P. Diffin, P.E., LEED AP BD+C
Principal/Project Manager

Attachments

APPENDIX A

DEED

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **MOSHE WILANSKY** and **CHANA WILANSKY** of Portland, Maine, for consideration paid, GRANTS TO **CHABAD LUBAVITCH OF MAINE, INC.**, a Maine non-profit corporation whose mailing address is 101 Craigie Street, Portland, ME 04102, with WARRANTY COVENANTS, the premises situated in the City of Portland, County of Cumberland and State of Maine, described as follows:

A certain lot or parcel of land located on the southwesterly sideline of Pomeroy Street, so-called, in the City of Portland, County of Cumberland and State of Maine; said parcel being more particularly described as follows:

Beginning at an 1/2" iron rod found on the southwesterly sideline of said Pomeroy Street at the southeasterly corner of land now or formerly of Kriston Briggs;

Thence South 46° 11' 30" East along the southwesterly sideline of said Pomeroy Street a distance of 269.44 feet to a capped iron rod found (PLS #1278) and the northerly sideline of Motley Street, so-called;

Thence South 71° 08' 30" West along the northerly sideline of said Motley Street a distance of 58.71 feet to a point;

Thence in a general southwesterly direction along the northerly sideline of said Motley Street and along a circular curve to the left, circumscribed by a radius of 218.81 feet, an arc length of 44.47 feet to a capped iron rod found (PLS #1278) and land now or formerly of Joshua James and Tamara Rainsford Krieger; said capped iron rod found being South 65° 19' 13" West a tie distance of 44.39 feet from said previous capped iron rod found;

Thence North 34° 26' 02" West along the land of said Krieger a distance of 86.47 feet to a capped 5/8" iron rod found (PLS #1172);

Thence South 38° 44' 24" West along the land of said Krieger, along land now or formerly of the Redlon Park Homeowner's Association, and along land now or formerly of Nancy A. Roy a distance of 350.00 feet to a point and remaining land of Stuart B. Herrick, Jr.;

Thence North 28° 05' 22" West along the remaining land of Stuart B. Herrick, Jr. a distance of 286.03 feet to a point and land now or formerly of Thomas and Melody Lussier;

Thence North 60° 18' 30" East along the land of said Lussier, along land now or formerly of Roger and Donna Gendron, along land now or formerly of Jean Gilpatrick and along land of said Briggs a distance of 350.00 feet to the point of beginning.

The above-described parcel contains 87,924 square feet. All bearings refer to Magnetic North as observed in 1973.

Reference is made to an unrecorded plan entitled Plan of Property, Bancroft Street, Portland, Maine, dated July 31, 1986, by R.P. Titcomb Associates, Inc. (Job #8660), as revised by unrecorded plan entitled Standard Boundary Survey and existing Conditions Plan for Stuart B. Herrick, Jr., dated March 2004, by BH2M (Job #03217).

Being the same premises conveyed to the Grantors herein by Warranty Deed of Stuart B. Herrick, Jr. dated May 28, 2004 and recorded in the Cumberland County Registry of Deeds at Book 21341, Page 37.

IN WITNESS WHEREOF, the said Moshe Wilansky and Chana Wilansky have caused this instrument to be signed and sealed on June 15, 2004.

Witness

Moshe Wilansky

to both
Witness

Chana Wilansky

State of Maine
Cumberland, ss.

June 15, 2004

Then personally appeared the above-named Moshe Wilansky and/or Chana Wilansky and acknowledged the foregoing instrument to be his/her/their free act and deed.

Before me,

SEAL

Notary Public, State of Maine

Print Name: Karen Belton

My commission expires 08/26/06

Received
Recorded Register of Deeds
Jun 15,2004 11:22:22A
Cumberland County
John B OBrien

f:\home\nancy\current\wilansky, mose & chana\warranty deed to chabad.doc

APPENDIX B

FINANCIAL CAPACITY

KRE

KING REAL ESTATE

198 SACO AVENUE • P.O. BOX W • OLD ORCHARD BEACH, MAINE 04064

March 23, 2018

City of Portland
Planning Department
Congress Street
Portland, Me 04101

To whom it may concern:

Please be advised that the Chabad Lubavitch is planning to expand its parking area and other related improvements to the property located at 11 Pomeroy Street. We have agreed to underwrite and provide financing for this project.

The funds are on deposit with Saco Biddeford Savings Bank and can be verified by contacting Bryan Christoforo at 602-7348. Please feel free to contact me with any questions.

Sincerely,
KING REAL ESTATE

King H. Weinstein

198 Saco Avenue
Old Orchard Beach, Me 04064

Level I – Site Alteration
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 I: Site Alteration Development includes:

- Alteration of a watercourse or wetland as defined in Section 14-47 of the City Code.
- Alteration of a site. The disturbance of land areas of less than one (1) acre that are stripped, graded, grubbed, filled or excavated. The Planning Authority shall exempt from review the loam and seeding of lawns and the cumulative placement of less than fifteen (15) cubic yards of fill on any lot provided such loaming or placement does not alter a drainage course, swale, wetland or redirect water onto adjoining property and does not violate any other provision of the Portland City Code or state or federal law. "Disturbed area" does not include routine maintenance, but does include re-development and new impervious areas.
- The construction of any temporary or permanent parking area, paving of existing unpaved surface parking areas between 1,000 and 7,500 sq. ft., or creation of other impervious surface areas between 1,000 and 7,500 sq. ft.
- The rehabilitation or reconstruction, but not new construction, of piers, docks, wharves, bridges, retaining walls, and other structures located within the shoreland zone.
- A site alteration in which vehicle access is proposed from more than one (1) street.

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:	Chabad Lubavitch of Maine, Inc.
Proposed Development Address:	11 Pomeroy Street
Project Description:	Bring site into conformance with the standards for a place of religious assembly.
Chart/Block/Lot:	193/E1/1

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

APPLICANT

Name:	Rabbi Wilansky
Company Name:	Chabad of Maine
Address:	11 Pomeroy Street
City/State:	Portland, Maine
Zip Code:	04102
Work #:	(207) 871-8947
Home #:	
Cell #:	
Fax #:	
E-mail:	rabbi@chabadofmaine.com

OWNER

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

AGENT/REPRESENTATIVE

Name:	Daniel P. Diffin
Company Name:	Sevee and Maher Engineers, Inc.
Address:	4 Blanchard Road
City/State:	Cumberland, Maine
Zip Code:	04021
Work #:	(207) 829-5016
Home #:	
Cell #:	
Fax #:	
E-mail:	dpd@smemaine.com

BILLING (to whom invoices will be forwarded to)

Name:	Rabbi Wilansky
Company Name:	Chabad of Maine
Address:	11 Pomeroy Street
City/State:	Portland, Maine
Zip Code:	04102
Work #:	(207) 871-8947
Home #:	
Cell #:	
Fax #:	
E-mail:	rabbi@chabadofmaine.com

ENGINEER

Name:	Daniel P. Diffin
Company Name:	Sevee and Maher Engineers
Address:	4 Blanchard Road
City/State:	Cumberland, Maine
Zip Code:	04021
Work #:	(207) 829-5016
Home #:	
Cell #:	
Fax #:	
E-mail:	dpd@smemaine.com

SURVEYOR

Name:	Robert Libby
Company Name:	BH2M
Address:	
City/State:	Gorham, Maine
Zip Code:	04038
Work #:	(207) 839-2771
Home #:	
Cell #:	
Fax #:	
E-mail:	rlibby@bh2m.com

ARCHITECT

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

ATTORNEY

Name:	Tom Federle
Company Name:	Federle Law
Address:	254 Commercial Street
City/State:	Portland, Maine
Zip Code:	04101
Work#:	
Home#:	
Cell#:	
Fax#:	
E-mail:	tom@federlelawmaine.com

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Daniel Diffin
E-mail:	dpd@smemaine.com

Name:	Nicholas Thompson
E-mail:	nmt@smemaine.com

Name:	
E-mail:	

III. APPLICATION FEE

J Level 1 Site Alteration	$200.00
TOTAL APPLICATION FEE DUE:	$200

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)

PROJECT DATA

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

Total Area of Site	73,821	sq. ft.
Proposed Total Disturbed Area of the Site	1,475	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)	7,500	sq. ft.
Impervious Area (Total Proposed)	8,475	sq. ft.
Parking Spaces		
# of Parking Spaces (Total Existing)	1 (Garage of Singe Family Home)	
# of Parking Spaces (Total Proposed)	8	
# of Handicapped Spaces (Total Proposed)	1	

Level 1 Site Alteration			
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
NA		1	Evidence of state and/or federal approvals, if applicable
X		1	Written assessment of proposed project's compliance with applicable zoning requirements
X		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
NA		1	Written requests for waivers from site plan or technical standards, if applicable.
X		1	Evidence of financial and technical capacity
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;	
NA		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;	
NA		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	

Site Plan Standards for Review of Level I: Site Alteration

Level I: Site alteration plans shall only be subject to the following site plan standards, as applicable, as contained in section 14-526:

(a) Transportation standards:
1. Impact on surrounding street systems,
2. Access and circulation, and
4. Parking

(b) Environmental quality standards
1. Preservation of significant natural features,
2. Landscaping and landscape preservation, and
3. Water quality, stormwater management and erosion control.

(c) Public infrastructure and community safety standards.
1. Consistency with city master plans.

(d) Site design standards
5. Historic resources,
6. Exterior lighting,
8. Signage and wayfinding, and
9. Zoning related design standards.

Except as provided in article III, or to conditions imposed under section 14-526(e) only, or to those submission requirements set forth in section 14-527 as relate solely thereto.

PORTLAND FIRE DEPARTMENT
SITE REVIEW
FIRE DEPARTMENT CHECKLIST

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

1. Name, address, telephone number of applicant.
2. Name address, telephone number of architect
3. Proposed uses of any structures [NFPA and IBC classification]
4. Square footage of all structures [total and per story]
5. Elevation of all structures
6. Proposed fire protection of all structures
   - ***As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)***

7. Hydrant locations

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 I Site Alteration 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:	[illegible]
Date:	4-9-18

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:

Chabad Lubavitch of Maine, Inc.

PROPOSED DEVELOPMENT ADDRESS:

11 Pomeroy Street, Portland, Maine 04102

CHART/BLOCK/LOT (s): **193/E1/1** **Applicable Zone:** **R-3** __ __ __

CONTACT INFORMATION:

Applicant - must be owner, Lessee or Buyer Name: Business Name, if applicable: Chabad Lubavitch of Maine, Inc. Address: 11 Pomeroy Street City/State : Portland, Maine Zip Code: 04102	**Applicant Contact Information** Work# (207) 871-8947 Home# Cell# Fax# e-mail: rabbi@chabadofmaine.com
Owner - (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** Work# Home# Cell# Fax# e-mail:
Billing Information Name: Chabad of Maine Address: 11 Pomeroy Street City/State : Portland, Maine Zip Code: 04102	**Billing Information** Work# Cell# Fax# e-mail:
Designated person/person(s) for uploading toe- Name: Daniel Diffin e-mail: dpd@smemaine.com Name: Nicholas Thompson e-mail: nmt@smemaine.com Name: e-mail:	

RIGHT, TITLE OR INTEREST:

Deed Ownership (CCRD 21417/198)
(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.

Place of religious assembly and instruction. Residence for Rabbi and family

PROPOSED USE: Describe the proposed use of the subject property
(Same as above)

TYPE OF CONDITIONAL USE PROPOSED (Refer To Specific Provisions Of Land Use Code Authorizing The Proposed Conditional Use).

14-88 (c) 3. Place of Religious Assembly

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 (c) 3.
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.
		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:
Rollie [illegible]	4-9-18

CITY OF PORTLAND, MAINE
PLANNING BOARD
LEVEL I SITE ALTERATION DEVELOPMENT REVIEW
AND
CONDITIONAL USE APPLICATION

Prepared for

CHABAD LUBAVITCH OF MAINE, INC.
PLACE OF RELIGIOUS ASSEMBLY

11 Pomeroy Street
Portland, Maine

April 2018
Revised August 2018

SME
SEVEE & MAHER ENGINEERS

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, P.O. Box 85A, Cumberland, ME 04021 • Tel 207.829.5016 • Fax 207.829.5692 • smemaine.com

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CITY OF PORTLAND, MAINE
PLANNING BOARD
LEVEL I SITE ALTERATION DEVELOPMENT REVIEW
AND
CONDITIONAL USE APPLICATION

1.0 PROJECT DESCRIPTION

This application package is being submitted to update the land use of the Chabad of Maine at 11 Pomeroy Street in Portland. The existing building was constructed with the intent to serve as a place of religious assembly for less than 15 worshippers and as a result is currently classified with a land use as a single-family home. Since then, the amount of worshippers at Chabad of Maine has increased to just over 15 worshippers. As a result, the land use will require the building and site to meet the requirements in the City's Land Use Ordinance for a place of religious assembly in the R3 Residential District. The proposed use is a conditional use in this zone and requires a Conditional Use for Planning Board Review Development Review application submission.

With the change to the land use, the project will be required to meet the parking standards for place of religious assembly instead of a single family home. The standard is to provide a parking space for every 125 feet of assembly space in the building. An analysis of the building uses was completed and it was determined that there was 900 square feet of existing assembly space. The required number of parking spaces is eight spaces to accommodate the existing assembly space.

To provide these spaces, Chabad of Maine will expand parking on the east side of the entrance drive and restripe existing paved areas as dedicated parking. This will increase the amount of parking on site to eight (8) spaces total. Additional details are shown on Drawing C-102 in the attached drawing set.

The parking expansion will result in approximately 975 square feet of additional impervious area and redevelopment of approximately 396 square feet of existing paved area. To address this a Level I Site Alteration Development Review has been submitted for staff review.

The following is a description of the project's compliance with the application and zoning requirements.

2.0 FINAL PLAN – LEVEL I SITE ALTERATION REVIEW REQUIREMENTS

This application package has been prepared in accordance with the City of Portland Land Use Ordinance and the Level I Site Alteration Development Review Application. To address the submission requirements, the Applicant has provided the following:

State and/or Federal Permits – Not required for this project.

Right, Title and Interest – See copies of Deed included in Appendix A.

Evidence of Financial Capacity – See letter of financing provided in Appendix B.

Evidence of Technical Capacity – The Owners have hired qualified professionals to assist in the design, bidding and construction administration for this project as detailed on the application form.

Boundary Survey and Site Plan – See attached drawing set.

3.0 ARTICLE V. - SITE PLAN

The following demonstrate the project's compliance with Section 14-526 Site Plan Standards.

14-526 (a) Transportation Standards

The existing facility is accessed from a single entrance off Pomeroy Street. The entrance is the only driveway entrance off Pomeroy Street currently. In the past the facility has been used as a place of religious assembly for less than 15 attendees, but has currently grown to approximately just over 15 attendees. However, even with the growth in worshippers there is no anticipated

increase in impact to the surrounding street system, as attendees are prohibited from bringing a vehicles on days when attendance is at its highest.

The drive and parking area are adequately sized to provide safe access and circulation.

The site improvements will consist of construction of 975 square feet of new impervious area for six dedicated parking spaces, and the redefinition of an existing paved area as two parking spaces. This will create 8 total spaces to serve the 900 square feet of religious assembly present in the building. In addition, there is a single garage parking space for use by the Rabbi of the Chabad of Maine who currently lives in the building. These parking spaces are being added to address the requirements in the Land Use Ordinance, there is no increase in worshippers anticipated.

14-526 (b) Environmental Quality Standards

A. Preservation of Significant Natural Features

The parking expansion east of the drive will occur in lawn areas already cleared under the previous permit. Grading in the area will be steepened to accommodate leveling the parking areas.

B. Landscaping and Landscape Preservation

The parking has been designed such that existing plantings installed under the previous approved site plan will be protected. These plantings are shown on Drawing C-101 and Drawing C-102 in the attached drawing set. This will leave a significant buffer around the building to screen the project the same as existing conditions.

C. Water Quality, Stormwater Management, and Erosion Control

The proposed development disturbs approximately 1,200 square feet (approximately 0.03 acres). Erosion control measures have been identified on Drawing C-102 and Drawing C-300 and comply with the requirements of this section.

With the minor nature of the development, there will be minimal increase in stormwater runoff. In this case, the stormwater will drain to a large flat wetland area that will mitigate any increase in runoff. Therefore, there will be no adverse impacts to downstream drainage or abutters from this project.

14-526 (c) Public Infrastructure and Community Safety Standards

Consistency with City Master Plans
Pomeroy Street does not appear in available City Master Plans.

D. Public Safety and Fire Prevention

The fire protection for the building will be similar to that approved in the previous site plan application. Access for fire trucks will be down the existing driveway as it is in existing conditions.

E. Availability and Adequate Capacity of Public Utilities

The Chabad of Maine has been operating as a place of religious assembly of less than 15 attendees and even with the small growth in worshippers has had no issues with the capacity of the public utilities serving the site. This project is a slight increase of use of the facility, and a reclassification of the current use. However, no increase in demand is anticipated for the building utilities.

14-526 (d) Site Design Standards

A. Historic Resources

There are no designated landmarks or historical resources in the area of the parking expansion.

B. Exterior Lighting

There is no increase in the exterior lighting proposed. The use of the building will not increase beyond what exists currently.

C. Signage and Wayfinding

No additional signage is proposed.

D. Zone Related Design Standards

There is no change to the existing development proposed.

4.0 PORTLAND FIRE DEPARTMENT SITE REVIEW CHECKLIST

There is no change to the building design, construction, or fire protection proposed as part of this project. This is a reclassification of a land use with minor site improvements.

5.0 CONDITIONAL USE FOR PLANNING BOARD REVIEW DEVELOPMENT REVIEW

This application package has been prepared in accordance with the City of Portland Land Use Ordinance and the conditional use standards of Section 14-88 and 14-474, including the following.

14-88 (c) Conditional Uses

a. The current classification of the property and structure is a single family home and place of religious assembly with less than 15 attendees. The existing structure provides adequate space and needs for the increase in attendance to just over 15 attendees that Chabad of Maine has seen over the last few years. Therefore, there will be no expansion to the site or structure.

b. Chabad of Maine will continue to use the existing site as a place of religious assembly similar to the use of the facility in the past.

c. Not Applicable

d. A copy of the site plan is attached with this application

e. Not Applicable. Chabad of Maine is a place of religious assembly not a community hall.

14-474 (c) Conditions for Conditional Use -Standards

a. Chabad of Maine does not generate a vehicle demand substantially greater than that generated by surrounding uses. In fact, attendees at Chabad House are prohibited from driving a vehicle on the days when attendance is at its highest. The current s number of attendees is approximately just over 15 and no growth in membership is anticipated. As a result, very little vehicle traffic occurs. Consequently, an inordinate expanse of pavement is not required to accommodate vehicles. Finally, Chabad of Maine's hours of operation are not out of keeping with those of surrounding uses.

b. The proposed use is a place of religious assembly. Originally the existing structure was built for a single family home and place of religious assembly with less than 15 attendees. The current increase in worshippers has had no effect

on the existing wastewater system and will not create any unsanitary or harmful conditions. In fact, the requirements for preparation of kosher foods makes the Chabad House one of the few places in Maine sufficiently sanitary for the dietary requirements of its followers.

c. The operation of Chabad of Maine, including its location on its lot, screening from abutters, landscaping, lack of signage, etc. results in not having a substantially greater effect or impact on surrounding properties that those associated with other allowable uses in the zone.

APPENDIX A

DEED

SME
SEVEE & MAHER
ENGINEERS

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **MOSHE WILANSKY** and **CHANA WILANSKY** of Portland, Maine, for consideration paid, GRANTS TO **CHABAD LUBAVITCH OF MAINE, INC.,** a Maine non-profit corporation whose mailing address is 101 Craigie Street, Portland, ME 04102, with WARRANTY COVENANTS, the premises situated in the City of Portland, County of Cumberland and State of Maine, described as follows:

A certain lot or parcel of land located on the southwesterly sideline of Pomeroy Street, so-called, in the City of Portland, County of Cumberland and State of Maine; said parcel being more particularly described as follows:

Beginning at an 1/2" iron rod found on the southwesterly sideline of said Pomeroy Street at the southeasterly corner of land now or formerly of Kriston Briggs;

Thence South 46° 11' 30" East along the southwesterly sideline of said Pomeroy Street a distance of 269.44 feet to a capped iron rod found (PLS #1278) and the northerly sideline of Motley Street, so-called;

Thence South 71° 08' 30" West along the northerly sideline of said Motley Street a distance of 58.71 feet to a point;

Thence in a general southwesterly direction along the northerly sideline of said Motley Street and along a circular curve to the left, circumscribed by a radius of 218.81 feet, an arc length of 44.47 feet to a capped iron rod found (PLS #1278) and land now or formerly of Joshua James and Tamara Rainsford Krieger; said capped iron rod found being South 65° 19' 13" West a tie distance of 44.39 feet from said previous capped iron rod found;

Thence North 34° 26' 02" West along the land of said Krieger a distance of 86.47 feet to a capped 5/8" iron rod found (PLS #1172);

Thence South 38° 44' 24" West along the land of said Krieger, along land now or formerly of the Redlon Park Homeowner's Association, and along land now or formerly of Nancy A. Roy a distance of 350.00 feet to a point and remaining land of Stuart B. Herrick, Jr.;

Thence North 28° 05' 22" West along the remaining land of Stuart B. Herrick, Jr. a distance of 286.03 feet to a point and land now or formerly of Thomas and Melody Lussier;

Thence North 60° 18' 30" East along the land of said Lussier, along land now or formerly of Roger and Donna Gendron, along land now or formerly of Jean Gilpatrick and along land of said Briggs a distance of 350.00 feet to the point of beginning.

The above-described parcel contains 87,924 square feet. All bearings refer to Magnetic North as observed in 1973.

Reference is made to an unrecorded plan entitled Plan of Property, Bancroft Street, Portland, Maine, dated July 31, 1986, by R.P. Titcomb Associates, Inc. (Job #8660), as revised by unrecorded plan entitled Standard Boundary Survey and existing Conditions Plan for Stuart B. Herrick, Jr., dated March 2004, by BH2M (Job #03217).

Being the same premises conveyed to the Grantors herein by Warranty Deed of Stuart B. Herrick, Jr. dated May 28, 2004 and recorded in the Cumberland County Registry of Deeds at Book 21341, Page 37.

IN WITNESS WHEREOF, the said Moshe Wilansky and Chana Wilansky have caused this instrument to be signed and sealed on June 15, 2004.

Witness

Moshe Wilansky

Witness

Chana Wilansky

State of Maine
Cumberland, ss.

June 15, 2004

Then personally appeared the above-named Moshe Wilansky and/or Chana Wilansky and acknowledged the foregoing instrument to be his/her/their free act and deed.

Before me,

SEAL

Notary Public, State of Maine

Print Name: Karen Belton

My commission expires 08/26/06

Received
Recorded Register of Deeds
Jun 16,2004 11:22:22A
Cumberland County
John B OBrien

f:\home\nancy\current\wilansky, mose & chana\warranty deed to chabad.doc

APPENDIX B

FINANCIAL CAPACITY

SME
SEVEE & MAHER
ENGINEERS

KRE

KING REAL ESTATE

198 SACO AVENUE • P.O. BOX W • OLD ORCHARD BEACH MAINE 04064

March 23, 2018

City of Portland
Planning Department
Congress Street
Portland, Me 04101

To whom it may concern:

Please be advised that the Chabad Lubavitch is planning to expand its parking area and other related improvements to the property located at 11 Pomeroy Street. We have agreed to underwrite and provide financing for this project.

The funds are on deposit with Saco Biddeford Savings Bank and can be verified by contacting Bryan Christoforo at 602-7348. Please feel free to contact me with any questions.

Sincerely,
KING REAL ESTATE

King H. Weinstein

198 Saco Avenue
Old Orchard Beach, Me 04064

Att. G

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com
smemaine.com

MEMO TO: Christian Roadman, Planner, City of Portland

FROM: Daniel P. Diffin, P.E., LEED AP BD+C/Nick Thompson

DATE: November 15, 2018

SUBJECT: **CHABAD OF MAINE SUMMARY OF USES**
11 POMEROY ST
PORTLAND, MAINE

SME is providing this memo to summarize our discussion and observations from a meeting with Rabbi Wilansky at 11 Pomeroy St in Portland, Maine on Friday, October 19, 2018. The purpose of the meeting was to review the layout of the building and identify the current and future uses for each room.

The first floor first floor has an assembly space, dining area, kitchen, and a small one-person office. The assembly space is used for worship and typically has 15 to 20 people, with a maximum of 25 desired in the future. The dining area and a concrete outdoor patio area are used to gather after worship. The kitchen space is used primarily for preparation of family meals. In addition, there is a weekly gathering of 4 to 5 people during which they bake Halal bread for their families.

There are up eight times per year that the use of the worship space on the first floor may be larger than 25 people. Generally, this occurs on special occasions and religious holidays such as Yom Kippur, New Year, Rosh Hashanah, and Pass-over. These occasions could also include special guest speakers. Typically, these gatherings are between 25 and 35 people, but the long-term plan is to have a maximum of fifty people in the future.

The second-floor west wing has a master bedroom and three bedrooms with one bathroom used by the Rabbi's family only. There is a computer room and library used by children during kids camp the last week of June and first week of July in which 10 to 15 kids are on site for the morning. The east wing of the second floor has two bedrooms and a bathroom used as a suite for family visiting or the occasional visitor to the area. Donations for the suite by visitors are accepted, but not required.

The third floor has an office for the Rabbi on the north wing of the house and storage directly across the house on the south wing. Three bedrooms and a bathroom occupy the middle of the third floor and this area is used by guests and family visiting the area. The east wing of the third floor has a children's gathering areas used during kids camp and two times a month, on Monday's, for kids arts and crafts. Typical attendance at arts and crafts is 10 kids.

SME
SEVEE & MAHER
ENGINEERS

Chabad of Maine is an outreach program and events advertised on the website and mailers may not necessarily take place on site. Twenty to twenty-five worshipers are expected during typical services. The exception is holidays and guest speakers, 8 to 10 times a year, when there could potentially be a maximum of fifty people on site.

Additional information on the uses for each of the rooms is provided on the attached figures.

Attachments: 1st Floor Plan
2nd Floor Plan
3rd Floor Plan
Bath House Addition Plan

Google Groups

Chabad House application

Judy Gailen <judy@judygailendesigns.com> Sep 6, 2018 11:39 AM
Posted in group: **Planning Board**

I am writing in response to the postcard I just received about the request for conditional use at the Chabad House on Pomeroy St.

I recently came across this brochure that I received (because I am Jewish and was a member of a temple and the JCA) as they were building the "house" (and I put that in quotations, because it was never meant to be just a single family house, no matter what they said).
I always meant to to submit it with the question, " Is this what you ask for when you are building a single family home? This is a temple, and it has always been the idea to build a temple, and I feel like it was deceptively presented from the very beginning. I cannot believe that the city did not realize what they were doing. The postcard says no changes to the structure are proposed, but they have been building all summer.



Chabad Lubavitch of Maine is celebrating 28 years of serving the Jewish communities of Maine with dedication and pride. Our programs, some of which are highlighted in this publication, are at the forefront of Jewish culture and learning. From educational programs to social services and everything in between, all of our activities are a reflection of our commitment to strengthen Judaism and Jewish families in Maine. We are an open and welcoming community. Our success in this mission is a direct result of your generosity, encouragement and participation.

As we look toward the future of Jewish life in Maine, we have recognized the need to expand our facilities in order to better serve the escalating needs of a growing population. We have nearly completed construction on a 2.2 acre property in Brighton Corner, a few blocks away from Stevens Avenue. The the physical edifice is completed on a three story facility with a sanctuary and study hall, classrooms, hospitality suites, office space, activity rooms, a sukkah plaza and a full service kitchen and dining room. This Chabad House is set on a beautiful property surrounded by woods just off Bancroft Street.

This will be a new Center for Jewish Life in Maine. We are in the midst of applying for grants and donations to realize the fulfillment of this reality. This publication serves as a summary of our plan for the completed facility. We hope that you will consider supporting this important and exciting project by significantly contributing to our Building Campaign Fund. More importantly, we hope to see you and your family enjoying the warmth and beauty of Jewish life by participating in some of our enriching programs. We reach out to you as full time and also summer residents of Maine, visitors to Maine, and proactive Jewish community leaders who seek to strengthen and enrich Jewish communal life. By investing in the growth of Jewish life in Maine today, we are assured a strong foundation for tomorrow.

With warm wishes to you and your family,

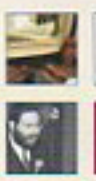
Rabbi Moshe and Chana Wilansky



Dear Rabbi,

Please accept our small gift as a token of appreciation for an amazing work that you do and for helping us so many times. May you, your family and congregation have a joyous and healthy year.

— IS

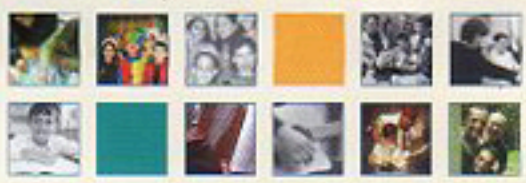


Dear Rabbi Wilansky,

Thank you for volunteering your time to make candles with us. We liked using different wax this year. The beeswax felt cool and smelled good. We used our candles in our menorahs and they burned beautifully.

Happy Chanukah!

Levey Day School
Portland Maine



Dear Rabbi Wilansky

Thank you for your time and dedication to our community here at the Cedars. We truly appreciate your presence with your family during Chanukah and all the Jewish holidays.

Cedars Nursing Home

FEATURES

Imagine a place where Jews from all walks of life can come together and experience the joy of their heritage; where we can bask in the warmth of community life and share joyous occasions; where the environment is as welcoming as your own home, and the friendships formed last forever; where each person can learn, and grow as one chooses; where we can discover together what makes us unique and transmit this uniqueness to our children.

- **2,500 square feet of community space**
- **A large Social Hall that can accommodate community celebrations**
- **Meeting rooms for lectures, seminars and community gatherings**
- **Private study/library for individual-and group learning**
- **Classrooms for adult education classes**
- **500-square-foot space to house our extensive children's programs**
- **Kosher kitchen and Passover kitchen**
- **Administrative offices**
- **State of the Art Playground**
- **Sukkah Plaza**

Let's Complete
our dream
Together

☐ Campus Dedication	$300,000
☐ Building Dedication	$250,000
☐ Sanctuary	$100,000
☐ Library	$100,000
☐ Main Entrance	$75,000
☐ Social Hall	$72,000
☐ Kosher Kitchen	$50,000
☐ Hospitality Suite	$50,000
☐ Rabbi's Study	$50,000
☐ Tree of Life Display	$36,000

☐ Sefer Torah	$36,000
☐ Computer Lab	$36,000
☐ Hospitality Room (2)	$25,000
☐ Playground	$25,000
☐ Passover Kitchen	$20,000
☐ Coat Room	$18,000
☐ Platform (Bimah)	$18,000
☐ Landscaping	$18,000
☐ Classroom	$18,000
☐ Camp/Game Room	$18,000

☐ Holy Ark	$18,000
☐ Lobby Furniture	$12,000
☐ Study Furnishings	$10,000
☐ Lavor-Sanctuary	$10,000
☐ Yahrzeit Board	$10,000
☐ Founder Sponsor	$7,200
☐ Ner Tamid (Lamp)	$5,000
☐ Tallis Rack	$5,000
☐ Chazan's Lectern	$5,000
☐ Office Furnishings (4)	ea. $5,000

☐ Offices	ea. $5,000
☐ Builder Sponsor	$3,600
☐ Sanctuary Seating	$3,600
☐ Front Entrance Mezuzah	$1,800
☐ Prayer Book Cabinet	$1,800
☐ Sponsor	ea. $1,800
☐ Supporter Sponsor	ea. $1,000
☐ Tree of Life Leaf	ea. $360
☐ Memorial Plaque	$360
☐ Mezuzahs	ea. $250

✔ **Yes**, I am pleased to sponsor the above dedication [please select option(s) from above] in honor of: _____.

I hereby pledge to pay a total of $_____ (please select payment option:) ☐ in Full or ☐ in ____ installments over ____ months/years.
(Maximum of 5 years for dedications over $10,000; 3 years for dedications over $3,600; 1 year for all other dedications)

Name: _____ Last Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Tel: (____) _____ E-mail: _____

Credit Card #: _____ Exp Date: ____ / ____ Security Code _____

Billing Address: _____ City: _____ State: _____ Zip: _____

Amount: $ _____ Other Donation Your Choice: $ _____ Signature: _____

Let's Complete our dream Together

Please complete and detach this form and mail it to the address on the reverse.









Let's Complete our dream Together

Chabad House Lubavitch of Maine

Address: 101 Craigie Street, Portland, ME 04102

T: 207.871.8947 F: 760.875.8947

E: rabbi@chabadofmaine.com W: Chabadofmaine.com

Google Groups

PL-000058-2018 11 Pomeroy Street Portland Maine

KMRAJACOBS JACOBS <kmrajacobs@outlook.com> Sep 9, 2018 3:04 PM
Posted in group: **Planning Board**

Hello,

I would like to express my concerns before this plan is approved.

This is a quiet residential neighborhood and I feel that opening this up to a place of worship of 15+ individuals is a tremendous mistake.

There is enough traffic using Bancroft Street as a cut through between Brighton Avenue and Capisic Street without adding more.

The residents at 11 Pomeroy Street are plentiful enough and have already added 3 - 5 vehicles on an already crowded street.

I would ask that you consider the re-zoning carefully before approving.

Kristine & Rick

Google Groups

Chabad of Maine

Jonathan Matt <Jonathan.Matt@rmsmortgage.com> Sep 10, 2018 2:19 PM
Posted in group: **Planning Board**

Hello,

I live on Redlon Park Rd which is adjacent to the Chabad of Maine facility. I received notification that this facility has applied for a change of use. My response is "… well of course it has!". The permitting of this facility has been a charade from the beginning. No one who researched what "Chabad" is ever believed this was a private home and the change of use application confirms that it was never intended to be a private home. Any fair minded person looking at its website (https://www.chabadofmaine.com/) would agree that calling it anything other than a hotel is semantic hairsplitting.

This commercial facility has caused a great deal of stress and anger to the residents that surround it. I feel the city has been cowed by fear of being called anti-Semitic to detriment of this residential neighborhood. Only a mile away is the beautiful new Jewish Community Center which is situated as it should be in a commercial zone.

Please do not approve this change, stand up for the law and the people you serve.

Thank you,

Jonathan Matt

RMS Residential Mortgage Services
We'll Guide You Home

Jonathan Matt
Data Warehouse Architect
Residential Mortgage Services, Inc.
24 Christopher Toppi Drive | South Portland, ME 04106
☎ 207-775-6105 x20105
207-808-4105
207-358-2316
Jonathan.Matt@rmsmortgage.com
www.RMSmortgage.com

NMLS# 1760; Equal Housing Opportunity

BEWARE OF WIRE FRAUD: During your transaction with us, RMS will NEVER ask you, via email, text or mobile app to wire or send funds to ANYONE, including a title company. DO NOT COMPLY WITH EMAIL, TEXT OR MOBILE APP BASED INSTRUCTIONS TO WIRE FUNDS! Contact your RMS representative by telephone instead.

Google Groups

Chabad of Maine Change of Use Request

Jeff D. Emerson <jdemerson@northendgroup.com> Sep 11, 2018 5:02 AM
Posted in group: **Planning Board**

I am a resident of Redlon Park Road which is adjacent to the Chabad of Maine (Chabad) on Pomeroy Street. Chabad has applied to the City of Portland for a change of use permit. I oppose this application.

- The change of use application, for Chabad to expand its scope beyond the limit of 15 non-family members present at any one time on its site (a limit placed on it by the City of Portland (City) and in Section 14-90 of the Land Use Code), is precisely the "incrementalism" to which I referred in my December 1, 2017 e-mail to Tom Federle, Chabad's attorney. A copy of that e-mail is included in the attached collection of documents (it is the first document). As you can see, from this partial file of documents, there is a long history with Chabad and its incrementalism
- This incrementalism was entirely predictable once the City permitted the construction of a mixed use 8,000 square foot property in a residential neighborhood. Indeed, the first example of incrementalism was the increase in size of the structure to 10,000 square feet, also permitted by the City
- Chabad has been engaged in religious services, provision of kosher meals, lodging and summer camps as evidenced by its web site. None of these activities was specifically permitted by the City. None of these activities is appropriate to a residential neighborhood. All of these activities are examples of incrementalism
- If the City authorizes this change of use we reasonably can expect more examples of incrementalism which are unlikely to comport with a residential neighborhood
- Part of the application would include, as I understand it, a tax exempt status for Chabad. If granted, this would add insult to injury as I will be paying for Chabad's expansion and services in a residential neighborhood
- Less than one (1) mile from Chabad is a large Jewish Community Center, appropriately sited in a commercial area. Why do we need an expanded Chabad in a residential neighborhood?

Let me be very clear: I am Jewish. I understand Chabad and its mission. I support Chabad--but not in a residential neighborhood. In my e-mail to Tom Federle I noted that I want what all people want: a good neighbor. Chabad has not been a good neighbor; any expansion of Chabad in its facility or its services will change fundamentally the nature of its neighborhood and is inappropriate to a residential neighborhood. It is particularly inappropriate when there is a large Jewish Community Center at Congress and Stevens less than one (1) mile from Chabad. We cannot un-ring the bell for Chabad, its facility or its (current) services. But it would be totally inappropriate for the City to permit the change of use. The expansion of Chabad, in size and services, needs to stop now.



Jeff D. Emerson

President

NorthEnd Group LLC

18 Redlon Park Road

Portland, ME 04102

Tel: (240) 752-7143

Efax: (207) 221-1159

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Jeff D. Emerson

From: Jeff D. Emerson
Sent: Friday, December 01, 2017 6:47 AM
To: 'Tom Federle'
Cc: 'Tuck O'Brien'; Doug Babkirk
Subject: Chabad of Maine

Tom, thank you for visiting with me yesterday about Chabad of Maine (CM). It was a cordial, reasonable and productive discussion. As I told you, we cannot un-ring the bell for the construction of the Chabad House, its size or services which it provides, however inappropriate the City of Portland may have been in permitting it. I am willing to accept the status quo, albeit I do take exception to an 8,000 to 10,000 square foot dwelling, providing religious and commercial services, which is exempt from taxes (which means that I am paying for it).

You asked me what the Redlon Park Road neighbors want. I said that I am not in the habit of speaking for other people but, speaking for myself, I want what all people want: good neighbors. Specifically, as the *quid pro quo* for my acceptance of the Chabad House, I want

- No further increase in the size of CM beyond that which already is approved and permitted by the City of Portland
- No increase in the services which CM offers beyond those services (kosher meals, religious services, lodging and summer camp for kids) which CM currently offers
- A commitment not to purchase other homes in the CM neighborhood for the purposes of incorporating them in the CM activities
- Honoring the no more than 15 non-Wilansky family members at CM at any one-time restriction which was imposed by the City of Portland and as codified in, *inter alia*, Section 14-90 of the Land Use Code

We discussed the incrementalism which the Chabad of Maine seemingly has pursued: from an application to build a Single-Family Residence to a Chabad House with religious and commercial services to an application for Change of Use and tax-exempt status. I would not consider the Chabad of Maine to be a good neighbor if it continues down this path of incrementalism.

Finally, we discussed my suggestion that the Rabbi should invite his neighbors (not just from Redlon Park Road) to the Chabad House as a way to demystify it and as an opportunity for us to talk and exchange our respective thoughts and concerns. You thought that this was a good idea.

The Rebbe, Rabbi Menachim Schneerson, of righteous memory, would frequently quote the Maimonidean adage: Each person should see himself as though the entire world is in delicate balance and, with but **one deed**, he or she can tip the scales for good. Let's work together to tip the scales for good.

Jeff

Jeff D. Emerson

President

Jeff D. Emerson

From: Jeff D. Emerson
Sent: Thursday, September 14, 2017 8:51 AM
To: 'ARL@portlandmaine.gov'
Cc: Doug Babkirk
Subject: Chabad of Maine

Importance: High

Dear Ms. LaChance,

It is my understanding that the City of Portland (City) is re-assessing its approval of an expansion of the facility of Chabad of Maine. I am the Treasurer of the Redlon Park Association (Association); several association members' homes abut the Chabad of Maine. I also am Jewish and well-informed about Chabads. So, let me be very clear about where I stand on this issue: it is inappropriate for the City to have permitted the construction of an 8,000 square foot facility in a residential neighborhood which is used for, inter alia, religious services, lodging and summer camps for children. Having done so, over the objection of the Association, the City attorneys parsed their way to a rationale by saying that the use of the Chabad of Maine facility would be limited to no more than fifteen (15) non-family members at any one time. It is unclear how, or even if, this limit is enforced.

Now the Association has learned that the City has approved an expansion of the Chabad of Maine facility by more than 2,000 square feet. This makes the facility (it is not a home) larger than any residential building in the area by at least a factor of two. That alone should have been sufficient reason for caution in permitting the expansion. However, if you go to the Chabad of Maine web site (http://www.chabadofmaine.com) , you will observe that it advertises services for food, lodging, day care and other services not appropriate to a residential neighborhood.

The Chabad of Maine facility already is built. It already is serving people kosher meals, providing lodging and religious services. That bell cannot be un-rung. But I urge the City to reign in the activities of the Chabad of Maine now by declining the permit for expansion and by enforcing the City's determination that no more than fifteen non-family members can be there at any one time.



Jeff D. Emerson

President
NorthEnd Group LLC
18 Redlon Park Road
Portland, ME 04102

tel: (240) 752-7143
efax: (207) 221-1159
e-mail: jdemerson@northendgroup.com

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Jeff D. Emerson

From: Jeff D. Emerson
Sent: Thursday, July 20, 2017 2:20 PM
To: 'jrioux@portlandmaine.gov'
Cc: Doug Babkirk; 'bbatson@portlandmaine.gov'
Subject: Portland Chabad House

Importance: High

Dear Jon,

This e-mail is a follow-up to Doug Babkirk's call to you this morning (and subsequent e-mail) inquiring about the permitted use of the City of Portland Chabad House property at 11 Pomeroy Street. Doug is President of the Redlon Park Road Association and I am its Treasurer.

Our concern focuses on the originally permitted use of the property as a single residence that now is advertised online and acting as a Chabad House with communal activities, a day youth camp and **paid accommodations** for visiting guests.

The URL for accommodations at the Portland Chabad House, which is in a residential neighborhood and which abuts homes in the Redlon Park Road Association neighborhood, is:

http://www.chabadofmaine.com/templates/articlecco_cdo/aid/304355/jewish/Accommodation-Info.htm

We now understand that the City recently has permitted a two-story addition to the Chabad residence/Center which will increase daily activities and overnight lodging capacity and traffic in a residential zone of Portland.

This simply is outrageous. Initially the City issued a permit for an 8,000-square foot personal residence which already was several times larger than any other residence in the abutting neighborhoods. Then the City agreed to permit the use of 11 Pomeroy as a commercial and religious establishment provided that no more than 15 non-family members were present at the Chabad House at any one time. Now the City apparently is agreeing to permit the substantial expansion of the Chabad House which clearly, by its own web site, is a commercial and religious establishment.

This is an unacceptable use of a residentially zoned area. We expect the City to deny any further construction at 11 Pomeroy Street and to investigate the current use of the Chabad House in light of the City ordinances and zoning regulations. We will appreciate your prompt response to this request.

Jeff

Jeff D. Emerson

President
NorthEnd Group LLC
18 Redlon Park Road
Portland, ME 04102

Jeff D. Emerson
18 Redlon Park Road
Portland, ME 04102

Helen Donaldson
City of Portland
389 Congress Street
Portland, Maine 04101

April 16, 2016

RE: Residence at 11 Pomeroy Street

Dear Ms. Donaldson:

We write to you on behalf of the Redlon Park Association (the Association) and its members who are residents of Redlon Park Road in Portland. As you know, the Association has long been interested in the zoning for, and construction of, a single family home at 11 Pomeroy Street. That property abuts one or more existing homes in the Association.

The Association took no position with respect to the zoning for, or construction of, a single family home on that site, though we would note that it is an unusually large single family home relative to the size of homes in the neighborhood. However, the Association does note that the zoning in this neighborhood is limited to single family homes. We understand this limitation to mean that the home is for the principal residence of one family and is not intended for any other uses, especially commercial uses.

The Association has reason to believe that the property is being used as a Chabad House (http://www.chabad.org/centers/default_cdo/aid/117638/jewish/Chabad-Lubavitch-of-Maine.htm) which means that religious services are conducted there. We are concerned that the strain on neighborhood resources may become significant, including but not limited to, foot and vehicle traffic. In addition, since the road and driveway were built the amount of still water pooling in the woods from the construction has doubled due to poor drainage. This issue alone should require an inspection by the City. We request that the City of Portland take such steps as may be necessary and advisable to ensure that the use of this property is limited to a dwelling exclusively for use as a single family home.

We are happy to discuss this matter with you or your designate. You may contact me at (240) 752-7143 or at jdemerson@northendgroup.com. If I have not heard from you within ten (10) days of the date of this letter I will call you.

Thank you.

Sincerely,



Jeff D. Emerson
Treasurer
Redlon Park Association

cc: Ed Suslovic

Jeff D. Emerson

From: Doug Babkirk <doug.babkirk@maine.edu>
Sent: Thursday, July 20, 2017 6:11 PM
To: Jeff D. Emerson
Subject: Fwd: 11 Pomeroy Street

She did not address the issue of running a hotel in a single residence
Perhaps a meeting with the woman she recommended is in order

Sent from my iPhone

Begin forwarded message:

> **From:** "Jeff D. Emerson" <jdemerson@northendgroup.com>
> **Date:** July 20, 2017 at 2:29:41 PM EDT
> **To:** Doug Babkirk <doug.babkirk@maine.edu>
> **Subject: FW: 11 Pomeroy Street**
>
> **From:** Barbara Barhydt [mailto:BAB@portlandmaine.gov]
> **Sent:** Tuesday, June 24, 2014 11:50 AM
> **To:** Jeff D. Emerson <jdemerson@northendgroup.com>
> **Cc:** Ann Machado <AMACHADO@portlandmaine.gov>; Alex Jaegerman <AQJ@portlandmaine.gov>; Helen Donaldson <HCD@portlandmaine.gov>; Jeff Levine <JLEVINE@portlandmaine.gov>; Marge Schmuckal <MES@portlandmaine.gov>; Philip DiPierro <PD@portlandmaine.gov>
> **Subject:** Re: 11 Pomeroy Street
>
> Dear Mr. Emerson:
>
> Thank you for your e-mail regarding 11 Pomeroy Street.
>
> The application approved for 11 Pomeroy Street is for a single family home and for the extension of Pomeroy Street to serve the home. The permits for construction were issued last week. The site is within the Residential R-3 zone, which permits single family homes and planned residential developments.
>
> Please note that the R-3 zone does include other uses that are called conditional uses. Conditional uses require additional review by the Planning Board or the Zoning Board of Appeals. A place of assembly is one of the institutional uses that requires conditional use review by the Planning Board. If such a use were to be proposed for this site, the applicant would be required to submit an application and the request would be considered by the Planning Board at a public hearing. There are limitations regarding the size of such facilities that are proposed on local streets (refer to Section 14-90 in the Land Use Code, http://www.portlandmaine.gov/DocumentCenter/Home/View/1080) . Also, please note that the zoning ordinance defines a place of religious assembly as a gathering of more than 15 people beyond the immediate family. The definition is as follows:
>
> *Place of assembly:* A building or portion of a building used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly. This definition shall not include buildings or portions of buildings used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly

where fifteen (15) or fewer people, not including the permanent residents of a single family dwelling, assemble.

If you have concerns about the use of the property once construction is complete and the building is occupied, then you may submit your concerns and any evidence to Marge Schmuckal, Zoning Administrator, and to me.

Thank you.

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
>>> "Jeff D. Emerson" <jdemerson@northendgroup.com> Friday, June 20, 2014 5:06 PM >>>
Dear Ms. Barhydt,

I write to you as a concerned citizen who owns property at 18 Redlon Park Road in an area near to 11 Pomeroy Street where Rabbi Moshe Wilansky apparently has been approved to construct a rather large dwelling. As you may know, Rabbi Wilansky heads Chabad of Maine in Portland. I met with Rabbi Wilansky last year and I have reason to believe, based on that meeting and other information and belief, that Rabbi Wilansky may intend to use the dwelling as a Chabad House, as well as his personal residence. A Chabad House would be used for religious services and to offer visiting Jews a place where they may have a kosher meal and stay overnight. I have no problem with Chabad House. But I do not think that it is appropriate in a residential community.

My understanding from Nell Donaldson is that the property at 11 Pomeroy Street is zoned for a single family dwelling. Consequently, I request that the City of Portland take such steps as may be necessary and advisable to ensure that any dwelling built on this property is limited exclusively to use as a single family home. Thank you.

Jeff D. Emerson

President
NorthEnd Group LLC
18 Redlon Park Road
Portland, ME 04102

tel: (240) 752-7143
efax: (207) 221-1159
e-mail: jdemerson@northendgroup.com

Confidentiality Notice: This e-mail transmission may contain confidential or legally privileged information that is intended only for the individual or entity named in the e-mail address. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or reliance on

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND
BUILDING PERMIT

This is to certify that
CHABAD LUBAVITCH OF MAINE INC

Located at
11 POMEROY ST

PERMIT ID: 2017-00377 **ISSUE DATE:** 04/26/2017 **CBL:** 193 E001001

has permission to **Construction of two-story addition 21' x 26'**
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 hour notice is required.	A final inspection must be completed before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

N/A
Fire Official

/s/ Greg Gilbert
Building Official

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
THERE IS A PENALTY FOR REMOVING THIS CARD

Approved Property Use - Zoning
single family dwelling

Building Inspections
Use Group: **Type:**
Single Family Residence
ENTIRE
MUBEC / 2009 IRC

Fire Department

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703
or email: buildinginspections@portlandmaine.gov

Check the Status of Permit or Schedule an Inspection at
http://www.portlandmaine.gov/planning/permitstatus.asp

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the City of Portland Inspections Division for the inspections listed below. Appointments must be requested 48 to 72 hours in advance. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that are attached to this permit.**
- **Permits expire in 6 months if the project is not started or ceases for 6 months.**
- **If the inspection requirements below are not followed, then additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**
- **Per Section 107.3.1 of the Maine Uniform Building and Energy Code (MUBEC), one set of printed approved stamped construction documents will be kept at the site of work and open to inspection by building officials.**

REQUIRED INSPECTIONS:

Setbacks and Footings Prior to Pouring
Foundation/Backfill
Close-in Plumbing/Framing
Electrical - Residential
Final Inspection

The project cannot move to the next phase prior to the required inspection and approval to continue.

If the permit requires a certificate of occupancy, it must be paid and issued to the owner or designee before the space may be occupied.

PERMIT ID: 2017-00377 **Located at:** 11 POMEROY ST **CBL:** 193 E001001

City of Portland, Maine - Building or Use Permit
389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Date Applied For:	CBL:
2017-00377	03/23/2017	193 E001001

Proposed Use:	Proposed Project Description:
Same: Single Family	Construction of two-story addition 21' x 26'

Dept: Zoning **Status:** Approved w/Conditions **Reviewer:** Christina Stacey **Approval Date:** 04/07/2017
Ok to Issue: ✔

Note: R-3 zone
Front setback 25' min - addition >150' scaled - OK
Rear setback 25' min - addition >150' scaled - OK
Side setback 14' min - Left - addition >70' scaled - OK
Right - addition >100' scaled - OK
Lot coverage is <35%
Max height 35' - addition 25' grade to peak - OK

Conditions:

1) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
2) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

Dept: Building Inspecti **Status:** Approved w/Conditions **Reviewer:** Greg Gilbert **Approval Date:** 04/26/2017
Ok to Issue: ✔

Note:

Conditions:

1) For conditioned space- insulation shall comply with the IECC, 2009 (Maine State Energy Codes).
2) Roof Trusses may not be used unless engineered drawings are submitted to and approved by Inspections Department
3) R401.2 Requirements. Foundation construction shall be capable of accommodating all loads according to Section R301and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403.
Foundation Drainage: Fabric, Damp proofing shall comply with Section R405 & R406, see attachment.
4) All construction shall comply with City Code Chapter 10.
All smoke detectors and smoke alarms shall be photoelectric.
Hardwired Carbon Monoxide alarms with battery backup are required on each floor.
A sprinkler system is recommended but not required.
5) Separate permits are required for any electrical: plumbing, sprinkler, fire alarm, HVAC systems, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
6) This permit is approved based upon information provided by the applicant or design professional. Any deviation from the final approved plans requires separate review and approval prior to work.

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

Permitting and Inspections Department
Michael A. Russell, MS, Director

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 04/26/17

General Building Permit Application

Project Address: 11 Dowery Street

Tax Assessor's CBL: 193 (Chart #) E (Block #) 1 (Lot #) **Cost of Work: $** #30,000-

Proposed use (e.g., single-family, retail, restaurant, etc.): Single Family

Current use: Single Family **Past use, if currently vacant:**

○ **Commercial** ○ **Multi-Family Residential** ○ **One/Two Family Residential**

Type of work (check all that apply):

☐ New Structure	☐ Foundation Only	☐ Change of Ownership - Condo Conversion
☒ Addition	☐ Fence	☐ Change of Use
☐ Alteration	☐ Pool - Above Ground	☐ Change of Use - Home Occupation
☐ Amendment	☐ Pool - In Ground	☐ Radio/Telecommunications Equipment
☐ Shed	☐ Retaining Wall	☐ Radio/Telecommunications Tower
☐ Demolition - Structure	☐ Replacement Windows	☐ Tent/Stage
☐ Demolition - Interior	☐ Commercial Hood System	☐ Wind Tower
☐ Garage - Attached	☐ Tank Installation/Replacement	☐ Solar Energy Installation
☐ Garage - Detatched	☐ Tank Removal	☐ Site Alteration

Project description/scope of work (attach additional pages if needed):
construction of a 2 story addition - approximately 21'x26'

Applicant Name: Charland Cubavitch **Phone:** (207) 650-8295

Address: 11 Dowery Street **Email:**

Lessee/Owner Name (if different): **Phone:** (____) ____ - ____

Address: **Email:**

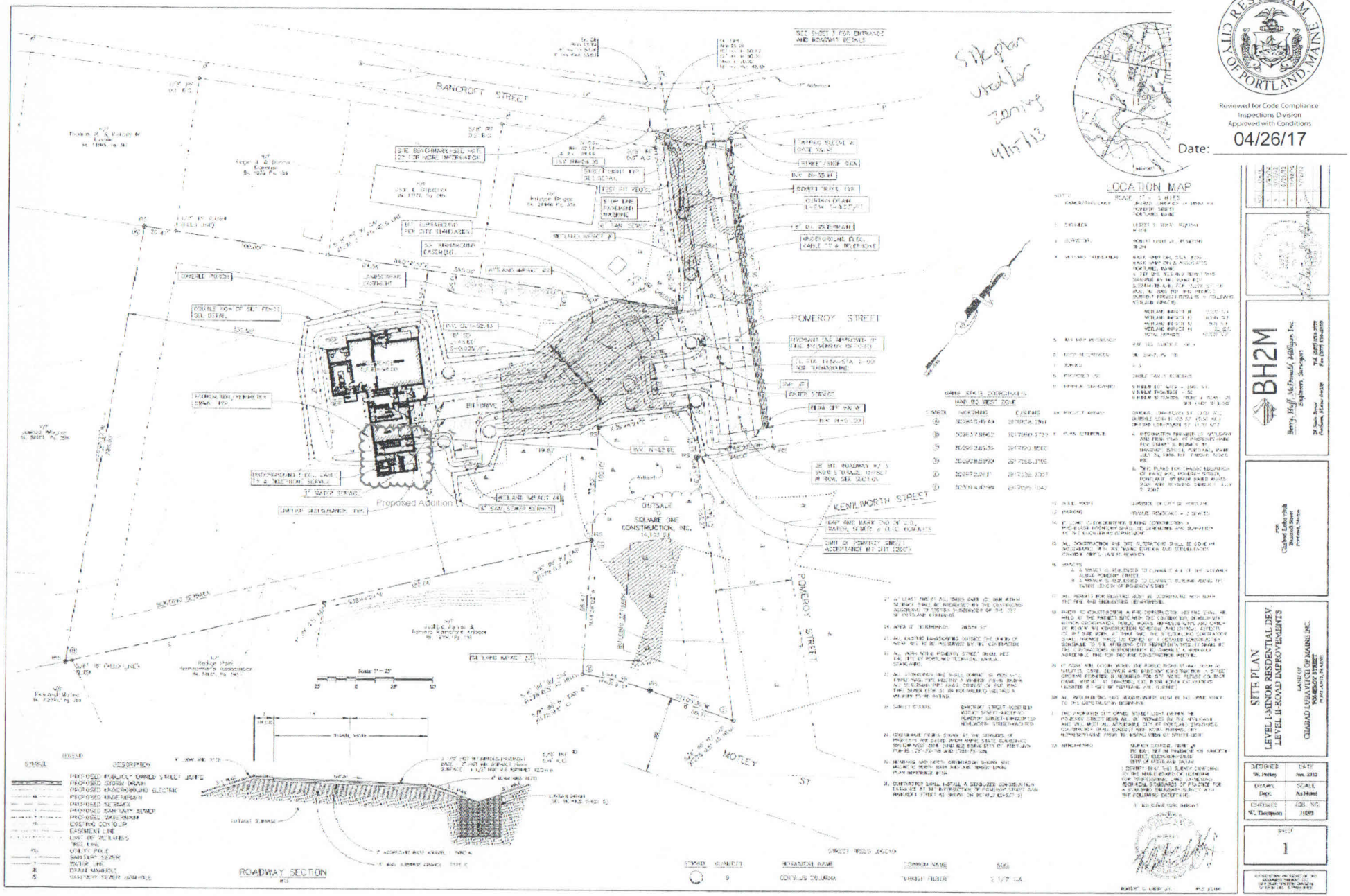
Architect
Contractor Name (if different): Gleason Architects **Phone:** (653) 772-7370

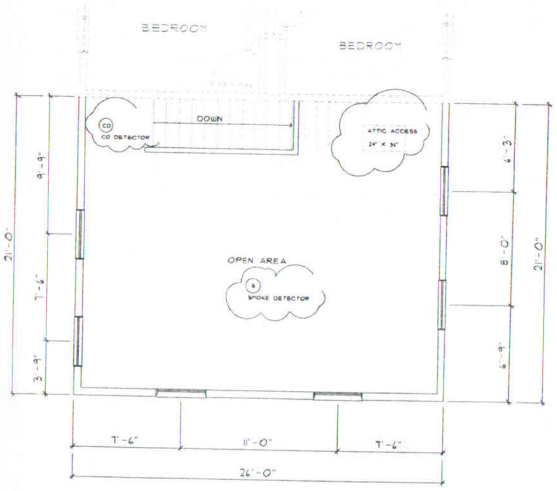
Address: P.O. Box 546 Stratham, NH **Email:** gleasonarchitects@gmail.com

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 Code Official'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.

Signature: architect for the owner Date: 3/22/17

Review of this application will not begin until the permit payment is received. This is not a permit. Work may not commence until the permit is issued.

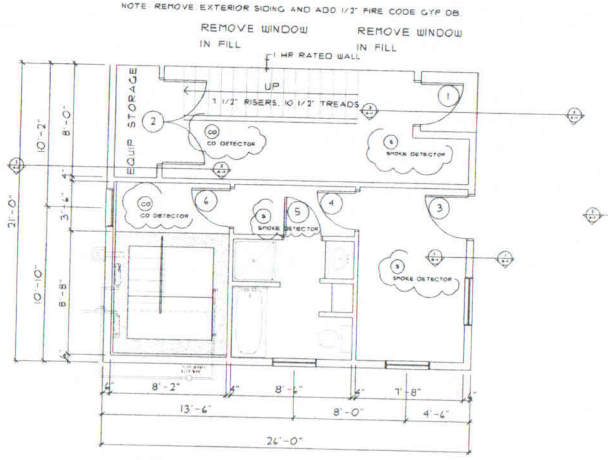

BANCROFT STREET
POWERS STREET
KENILWORTH STREET
MOREY ST
OUTSALE
SQUARE ONE CONSTRUCTION, INC.
14,123 SF
Proposed Addition
BH DRIVE
SEE SHEET 3 FOR ENTRANCE AND ROADWAY DETAILS
SITE BENCHMARKS SEE NOTE 25 FOR MORE INFORMATION
EXISTING BUILDING #2
DATE: VA 36
STREET / LAMP POST
EXISTING STREET TYP.
CURBING DRAIN
L=214 T=3.67 FT
8" DI WATERMAIN
UNDERGROUND ELEC., CABLE TV & TELEPHONE
CONCRETE PORCH
DOUBLE ROW OF SILT FENCE SIL DETAIL
INV. 0.71=READ
8" DI
L=4.00%
WETLAND IMPACT #2
LANDSCAPE EASEMENT
EXISTING BUILDING #1
1 STORY FRAME
FFE=54.00
UNDERGROUND ELEC., CABLE TV & TELEPHONE
1" WATER SERVICE
LIMITED SIDEWALK TYP.
WETLAND IMPACT #4
8" SAN. SEWER SERVICE
POWERS STREET
PROPOSED GAS APARTMENT TYP. (SEE PRESENTATION PLANS)
EL. 58.14=ESTA. 2+00 FOR ENGINEERING
8" DI
ENTER STREET
RIDGE OF VALLEY
INV. N=62.86
25' WT. ROADWAY W/ 5 SHADE STREETS, SEE PROFILE IN ROW, SEE SECTION
WETLAND IMPACT #3
8" SAN. SEWER SERVICE
LIMIT OF PAVEMENT STREET ACCEPTANCE BY CITY (2007)
CAPE COD BERM END OF CURB, TAPERS TO GUTTER & FLUSH CURB
SAWCUT EXISTING PAVEMENT
EXISTING SIDEWALK
PUBLIC PARKS & Forever Wild Area
WETLAND IMPACT #1
Scale 1"=25'
25 0 25' 50
Reserve Plain Homeowner's Association
Ferry Road Marina
Scale: 1"=5'
ROADWAY SECTION
STREET TREES LEGEND
SYMBOL QUANTITY BOTANICAL NAME COMMON NAME SIZE
9 CORNUS COLUMNA 'SARGENT FILBERT' 2 1/2" CA.
LOCATION MAP
SCALE: 1" = 5 MILES
SITE PLAN
LEVEL 1 & 2 ADDITIONS
LAND OF
CIUDAD LIVING AT MAINE, INC.
POWERS STREET
PORTLAND, MAINE
BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 04/26/17
DESIGNED
DRAWN
CHECKED
SCALE
As Noted
DATE
Jan. 2017
PROJECT NO.
1109
SHEET
1



SECOND FLOOR PLAN

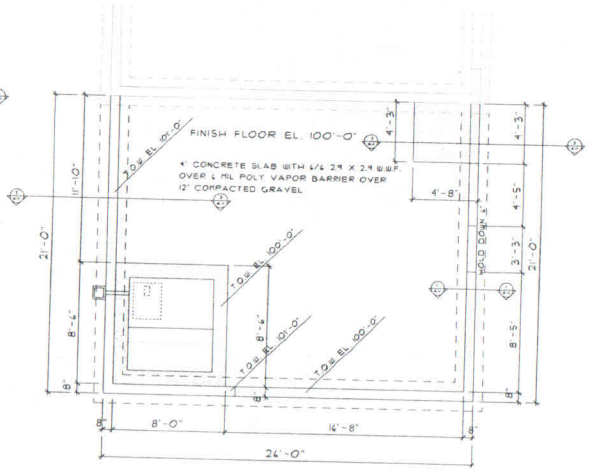
SCALE: 1/4" = 1'-0"

NOTE: REMOVE EXTERIOR SIDING AND ADD 1/2" FIRE CODE GYP DB.



FIRST FLOOR PLAN

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

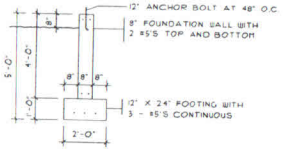


FOUNDATION PLAN

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

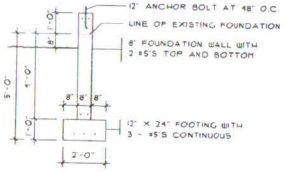
NOTES

1. THE HEADERS FOR THE WINDOWS TO BE 3 - 2X8'S WITH TWO JACK STUDS EACH SIDE
2. THE DOOR HEADER WILL BE 3 - 2X10'S WITH TWO JACK STUDS EACH SIDE.



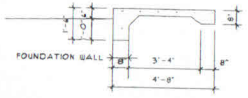
1 FOUNDATION DETAIL

SCALE: 3/8" = 1'-0"



2 FOUNDATION DETAIL AT MIKVAH

SCALE: 3/8" = 1'-0"



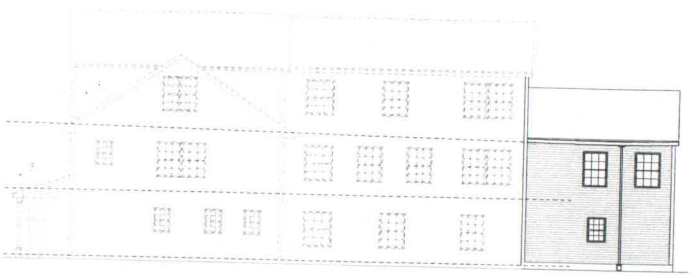
3 FOUNDATION DETAIL AT ENTRY

SCALE: 3/8" = 1'-0"



FRONT ELEVATION

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



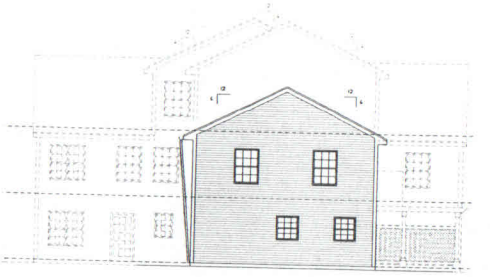
RIGHT SIDE ELEVATION

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



LEFT SIDE ELEVATION

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



REAR ELEVATION

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

NO.	DESCRIPTION OF REVISION	DATE
1	REVISED PER CODE	04/20/17

04/20/17

NEW RESIDENCE

11 POMEROY STREET
PORTLAND, MAINE

Gleason Architects
P.O. BOX 596
STRATHAM, NEW HAMPSHIRE 03885
603 772-7370

ARCHITECT

ENGINEER

DATE: 02/15/17

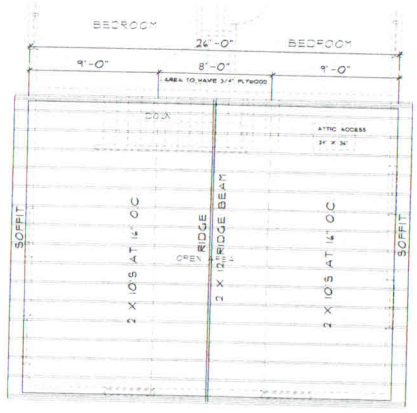
PROJECT NO. 201618

SHEET NO.

A-1

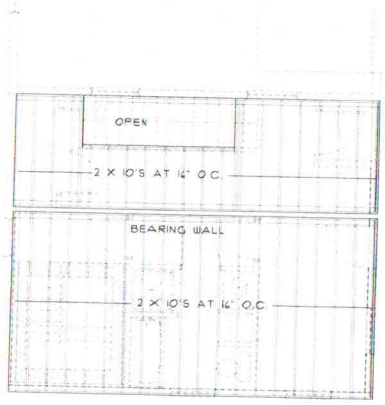
OF SHEETS

1. Perimeter foundations drainage was planned but illustrated on the drawings. The drains will be "extended 12" beyond the outside edge of the footings, 6" above the top of the footing covered with a filter membrane. These lines will drain to daylight or a drywell which will be located on site.
2. The anchor bolts were indicated but not defined or illustrated on the drawings. These will be a maximum of 6' on center, the plans reflect 4' on center and 12" from each corner. They will be ½" diameter, 12" steel bolts with a bend at the embedded end and be in the concrete foundation wall at least 7".
3. The design load of the roof is 50 psf ground snow load.
4. The roof framing will be 2 X 10's at 16" o.c. as is illustrated on the drawings.
5. The sheathing will be 5/8" T & G, exterior grade plywood or equal and be nailed at 12" o.c..
6. The roof sheathing will be nailed with 1 ¾" galvanized roofing nails, 4" on center on the edges, 8" on center on support members.
7. The window schedule is illustrated on the drawings.
8. The roof will have ice and water shield 4' from the roof edges at the fascia and minimum of 15 pound felt under the architectural asphalt shingles.
9. The stair cross section is illustrated on the drawings.
10. The C/O monitor will be located in each bedroom and have a battery back-up.
11. The fire separation detail for the wall between the garage and the house is illustrated on the drawings.
12. Windows to be ALLSIDE CUSTOM



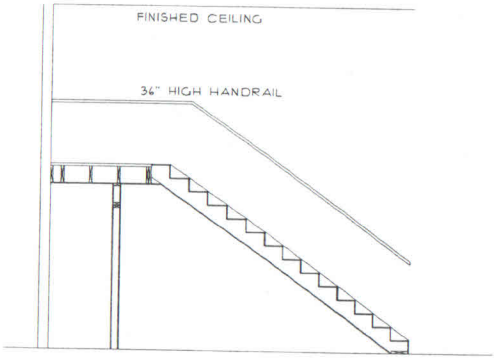
ROOF FRAMING PLAN

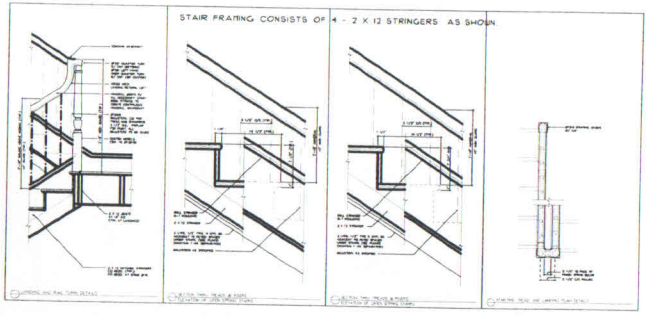
SCALE: 1/4" = 1'-0"

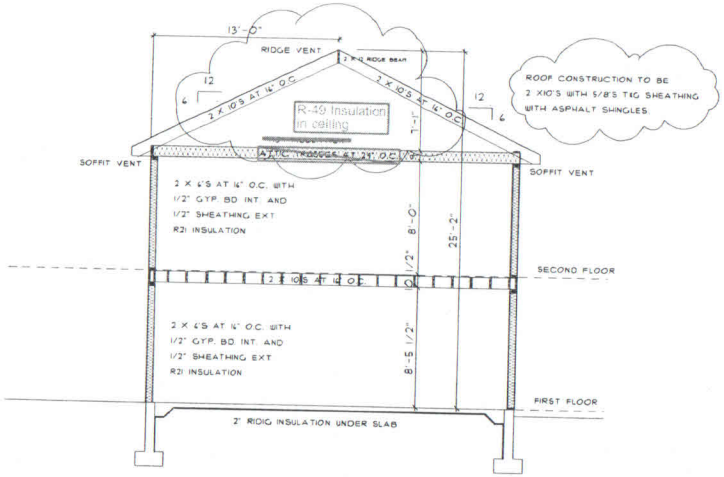


SECOND FLOOR FRAMING PLAN

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







BUILDING SECTION

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

NO.	DESCRIPTION OF REVISION	DATE
1	REVISED PER CODE	04/20/17

04/26/17

NEW RESIDENCE

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PORTLAND, MAINE

Gleason Architects
P.O. BOX 596
STRATHAM, NEW HAMPSHIRE 03885
603 772-7370

ARCHITECT

ENGINEER

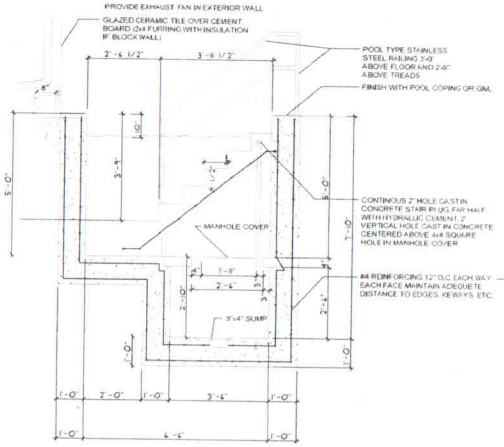
DATE 02/15/17

PROJECT NO. 201618

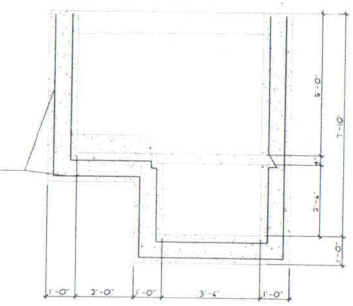
SHEET NO.

A-2

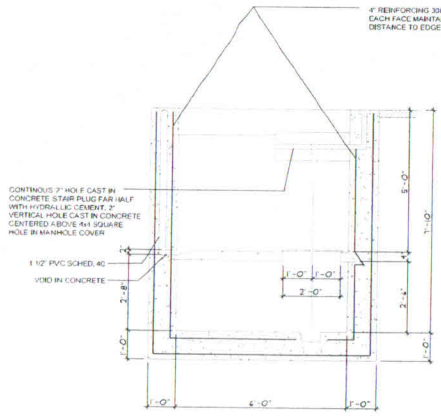
OF SHEETS



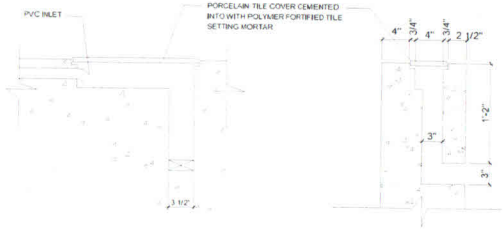
1 MIKVAH SECTION
SCALE: 1/2" = 1'-0"



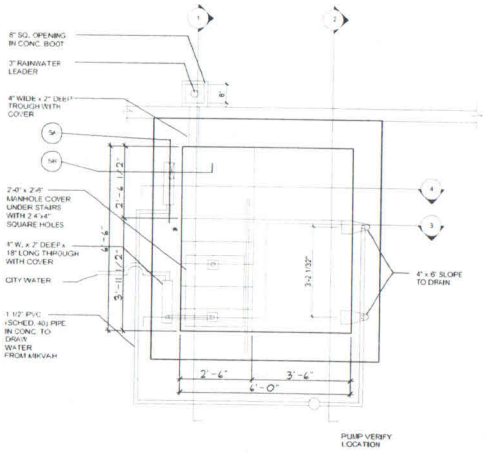
2 MIKVAH SECTION
SCALE: 1/2" = 1'-0"



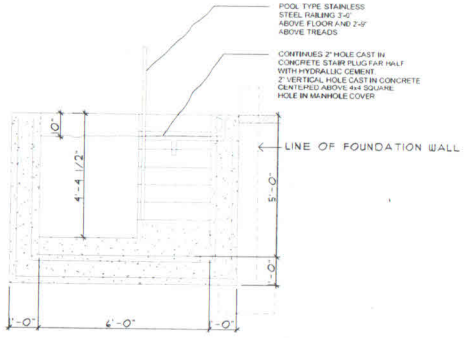
3 MIKVAH SECTION
SCALE: 1/2" = 1'-0"



5A TROUGH SECTION
SCALE: 1 1/2" = 1'-0"



MIKVAH PLAN
SCALE: 1/2" = 1'-0"



4 MIKVAH SECTION
SCALE: 1/2" = 1'-0"

5B TROUGH SECTION
SCALE: 1 1/2" = 1'-0"

NO.	DESCRIPTION OF REVISION	DATE
1	REVISED PER CODE	04/20/17

04/20/17

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Gleason Architects
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603 772-7370

ARCHITECT

ENGINEER

DATE: 02/15/17

PROJECT NO. 201618

SHEET NO.

A-3

OF SHEETS

Google Groups

Re: Comments regarding Rabbi Wilansky's change of use permit request for 11 Pomeroy Street

Jonathan Matt <jmatt001@maine.rr.com>
Posted in group: **Planning Board**

Sep 12, 2018 10:00 PM

Well done Doug! I like the fact that you recorded the noise.

On Sep 12, 2018, at 5:47 PM, Douglas Babkirk <doug.babkirk@maine.edu> wrote:

September 12, 2018

To: Portland Planning Board
Jon Jennings
Greg Mitchell
Tuck O'Brien
Brian Batson

From: Douglas Babkirk, 55 Redlon Park Road

Re: Rabbi Wilansky's request for change of use permit (Plan # PL-000058-2018)

As a ten-year resident of Redlon Park, and neighbor to the Chabad House of Maine at 11 Pomeroy Street, I am writing to request that the change of use permit be denied. To approve the permit would sanction the expansion of scheduled worship, lodging and youth activities at the home that was approved as a private residence in 2014 in an R-3 zone that allows for conditional activities. Three areas of concern underlie my request:

Expansion to housing overnight guests

1. The facility has expanded beyond a private residence to serving as a quasi hotel charging "donations" for overnight lodging as described on the Chabad House of Portland Maine website: https://www.chabadofmaine.com/templates/articlecco_cdo/aid/3338110/jewish/Reservations-at-Chabad.htm.
2. When I telephoned this spring to inquire about the number of guests the House could accommodate, Mrs. Wilansky informed me they could serve 15 and expand to 18 if needed. This was before the current two-story addition was under construction. The traffic, parking and outdoor activities relative to such a year-round lodging facility is unacceptable in a residential neighborhood.

Noise Levels of On-Site Activities

1. Since the Chabad House arrival, we have experienced as neighbors living within 300 feet of the property:
    - Loud outdoor recreation noise after sunset by children playing basketball and other games outside of the Chabad House. The website outlines year-round youth activities: https://www.chabadofmaine.com/templates/articlecco_cdo/aid/2905574/jewish/Camp-Gan-Israel.htm
    - Construction activity beginning at 7am on Sundays this summer that ceased upon my request

- Children screaming and playing so loudly in the daytime that I sent a recording to Tuck O'Brien to confirm the noise. He said he would make a site visit to the property but I never heard back from him regarding his findings.

Traffic congestion

1. It is my understanding that most of the Orthodox worshipers who attend services do not drive vehicles to the Chabad House, yet there have been events at the facility when cars have filled the parking area, both sides of the short, dead end Pomeroy Street and spilled into Bancroft Street. Such congestion is a potential safety hazard if fire department vehicles had to maneuver on these streets.

By approving a change of use permit for the Chabad House, the Planning Board would condone these past and current practices that have significantly stretched, if not ignored, the approved conditional use in 2014 as a place of worship for 15 or fewer people. By expanding the religious events capacity and allowing the guest lodging and scheduled youth activities to continue, the Planning Board would set a poor precedent in the future for other taxpayers who request changes in use within the residential neighborhoods of Portland as well as open the door to possible future change of use requests by Rabbi Wilansky.

Please do not approve this change of use request so that we may maintain the residential Rosemont neighborhood that we have without expanded large group activities and guest lodging facilities.

September 12, 2018

To: Portland Planning Board
Jon Jennings
Greg Mitchell
Tuck O'Brien
Brian Batson

From: Douglas Babkirk, 55 Redlon Park Road

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Google Groups

Pomeroy St. Proposal?

jessica teesdale <teamteesdale@me.com> Sep 23, 2018 11:34 AM
Posted in group: **Planning Board**

When is the planning board meeting for the Pomeroy St. proposal# PL-000058-2018? The Citizen self serve portal is unavailable currently. I have not received any response from the questions I sent regarding this project.
RE: Pomeroy St. Level 1 site alteration and Conditional Use application plan # PL-000058-2018
I received a postcard notification that we are within 500 ft of the proposed site. Chabad of Maine was built as a "single family home" with 16 bedrooms and 14 bathrooms. The Chabad is advertised already online as a Hotel.
This is from the Chabad of Maine website:
https://www.chabadofmaine.com/templates/articlecco_cdo/aid/304355/jewish/Accommodation-Info.htm
This house is anything but a single family home.
Here are the questions I have:
1.What impact will this change have on the traffic and parking in our quiet neighborhood?
2. Will Pomeroy street remain Public access? Can anyone park there?
3. Is the application proposing to change the Zone status? Will this remain zone R-3?
4. will the approval of this application open any doors for zone change in the future?
5. How will this effect property taxes for the surrounding properties?
5. Is Chabad of Maine a business profiting from hotel style accommodations?
6. How large will the assemblies be? What is the maximum capacity for an assembly?
7. Does this effect the value of my home.
8.Will paving more of the woods have an environmental impact on the water in our basements?
9.When will final decision be made about this?

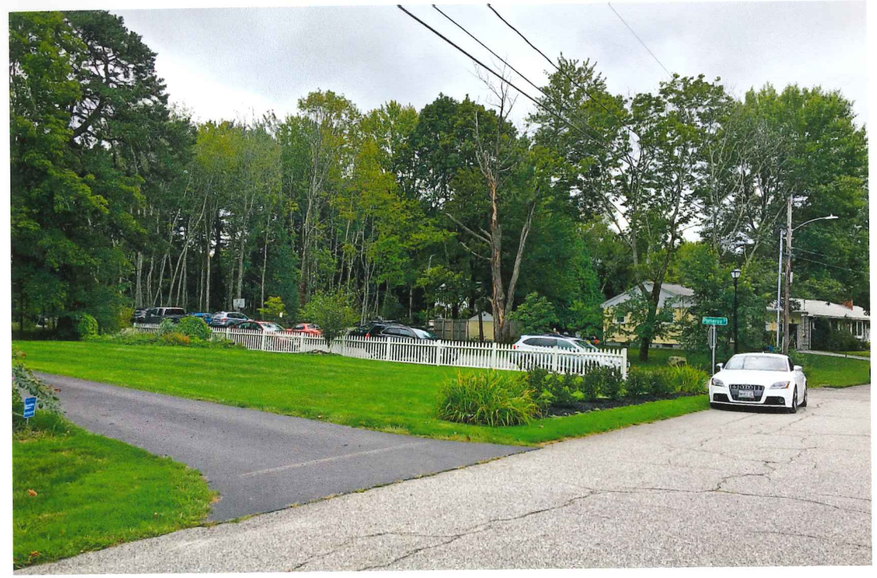
We live in a quiet residential neighborhood. This is not the ideal location for increased traffic, a hotel, or regular large assemblies. I was against such a large building going in that site back when it was proposed and built against the will of the neighborhood. The neighborhood knows that the Chabad of Maine is a place of Worship, and has been since the building was built. We have nothing against having religious neighbors. We have concerns about the size and scope of the business that is operating out of the “single family” home.
Every neighbor I spoke to so far would sign a petition to limit any changes that would increase traffic, effect property value, and bring business into our quiet pocket neighborhood.
This type of building/business model would be much better suited for Brighton Ave, or even Capisic St.
Thank you for taking the time to listen. Please advise on what steps you think we should take as a neighborhood to organize and get answers to our questions. Should I forward this directly to the planning board?
Jessica Teesdale

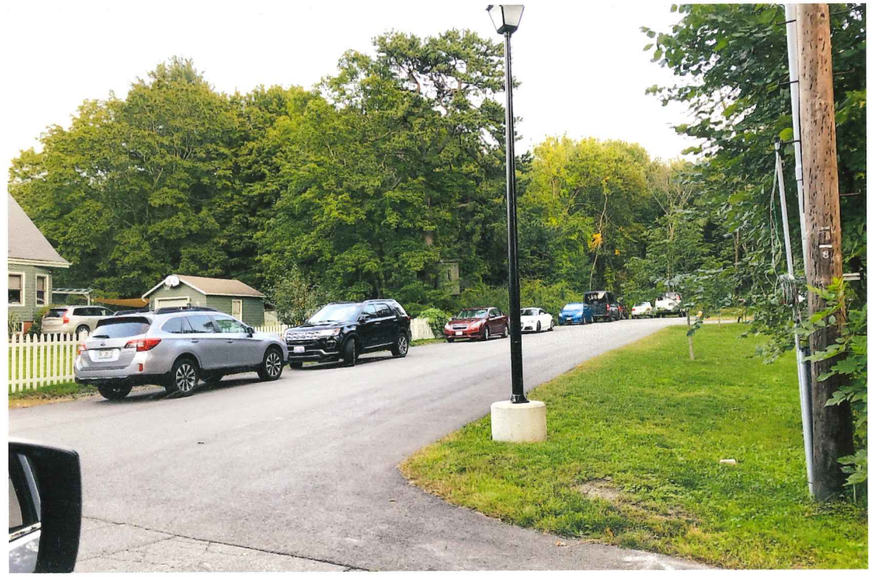
IMPORTANT NOTICE FROM CITY OF PORTLAND PLANNING DIVISION

IN THE VICINITY OF 11 POMEROY ST

To residents and property owners: Chabad of Maine, has submitted a Level I Site Alteration application and a Conditional Use application for a place of assembly at 11 Pomeroy Street. The applicant is seeking a conditional use review for a place of religious assembly serving over 15 people within the existing single family home. No changes to the existing structure are proposed. The site plan has an increase in impervious surface of 975 sf to accommodate parking for 6 vehicles. The 73,821 sf parcel is in the R-3 zone. The proposal is subject to Portland's conditional use review criteria and site plan standards. In accordance with the Portland Land Use Ordinance, notices of receipt of a Level I Site Alteration application must be sent to property owners located within 500 ft. of the subject property (or 1,000 ft. if the property is located in an Industrial Zone). This application will be reviewed administratively by City Staff. This is the only notice you will receive.

A project and plan summary is available for viewing on the Citizen Self Service Portal (https://egweb.portlandmaine.gov/energovprod/selfservice), by referencing Plan Number PL-000058-2018. Written comments should be submitted to planningboard@portlandmaine.gov. If you have any questions regarding the proposal, please contact Christian Roadman, Planner, by phone at 207-874-8984 or e-mail at croadman@portlandmaine.gov





SO. MAINE P&DC 040

CITY OF PORTLAND
PLANNING AND URBAN DEPARTMENT
389 CONGRESS ST.
PORTLAND ME 04101



TO: GREEN WILLIAM D VN VET & RUTH L GREEN JTS
22 ROCKLAND AVE
PORTLAND ME 04102

Sept. 19, 2018
Pomeroy St

Sept. 19, 2018
Pomeroy St

https://mail.aol.com/webmail/getPart?uid=347127658&partic

Chabad

from page 1

is needed to accurately reflect the increase to more than 15 worshippers at the site, which also offers lodging and summer camps. The home is in an R-3 zone, where places of assembly are allowed as a conditional use.

According to the application, more than 15 worshippers regularly attend services at Chabad of Maine, which is also expanding to two floors totaling 1,000 square feet.

The change of use will also require Chabad to add eight more parking spaces to meet parking standards, according to the application filed by Sevee & Mahar Engineers.

"However, even with the growth in worshippers there is no anticipated increase in impact to the surrounding street system, as attendees are prohibited from bringing a vehicle on days when attendance is at its highest," the application notes.

While Wilansky said relations with immediate neighbors are good, Chabad and its expansion have drawn objections from residents of the Redlon Park subdivision which sits behind the Pomeroy Street property.

Jeff Emerson, who is treasurer of the neighborhood association, said his communications with city officials have reflected his own concerns. What he worries about is the city allowing incremental growth by Chabad that is not consistent with the residential setting.

"Chabad has been engaged in religious services, kosher meals, lodging and summer camps as evidenced by its website," Emerson said in a Sept. 5 email. "None of these activities was specifically permitted by the city. All of these activities are examples of incrementalism."

Wilansky bought the property in 2004, according to the deed, and the home was completed in 2015.

While objecting to allowing the incremental growth, Emerson also said he was concerned because the religious place of assembly designation would make the site tax exempt. It is now valued at $574,000, according to city records, and taxed at more than $12,900.

"Which means that, as it grows in size and services, my neighbors and I are paying for it," he said.

David Harry can be reached at 781-3661 ext. 110 or dharry@theforecaster.net. Follow him on Twitter: @DavidHarry8.

https://mail.aol.com/webmail/en-us/tablet

the Portland FORECA

www.theforecaster.n

September 12, 2018

News of The City of Por



DAVID HARRY / THE FORECASTE

Rabbi Moshe Wilansky of Chabad of Maine is seeking a zoning change to make this home at 11 Pomeroy St. i Portland a religious place of assembly.

Neighbors wary about religious center's growth

By David Harry

PORTLAND — A single-family home in the Rosemont section of the city could be redesignated as a place of religious assembly.

Chabad of Maine, part of an Orthodox Jewish, Hasidic movement known for its outreach, is based at 11 Pomeroy St. For nearly a year, it has considered seeking the conditional use change in its neighborhood.

The change will require Planning Board approval.

Rabbi Moshe Wilansky on Sept. 5 said the change will not mean an increase in activities, and said he wants to continue being a good neighbor.

The conditional use change

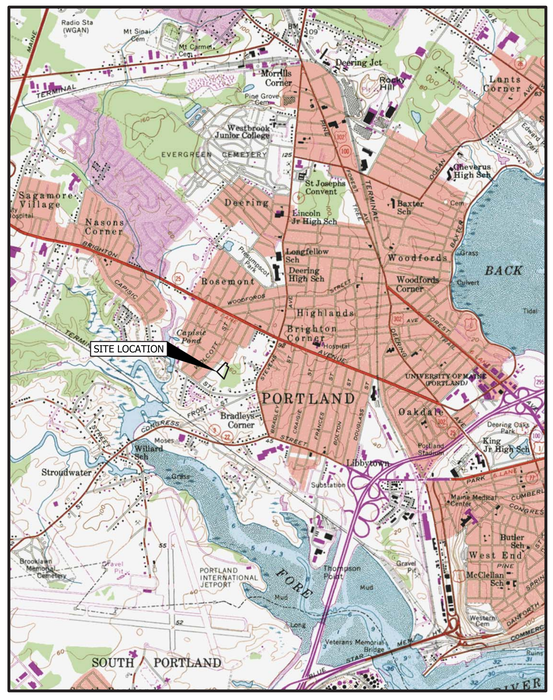
Chabad, Page 2

Bill Gileen
723-8619
607-6756

CHABAD LUBAVITCH OF MAINE, INC.
SITE PLAN APPLICATION
PORTLAND, MAINE

TITLE	DWG NO
COVER SHEET	
GENERAL NOTES, LEGEND, AND ABBREVIATIONS	C-100
EXISTING CONDITIONS PLAN	C-101
SITE PLAN	C-102
EROSION CONTROL NOTES AND SITE DETAILS	C-300

LOCATION MAP

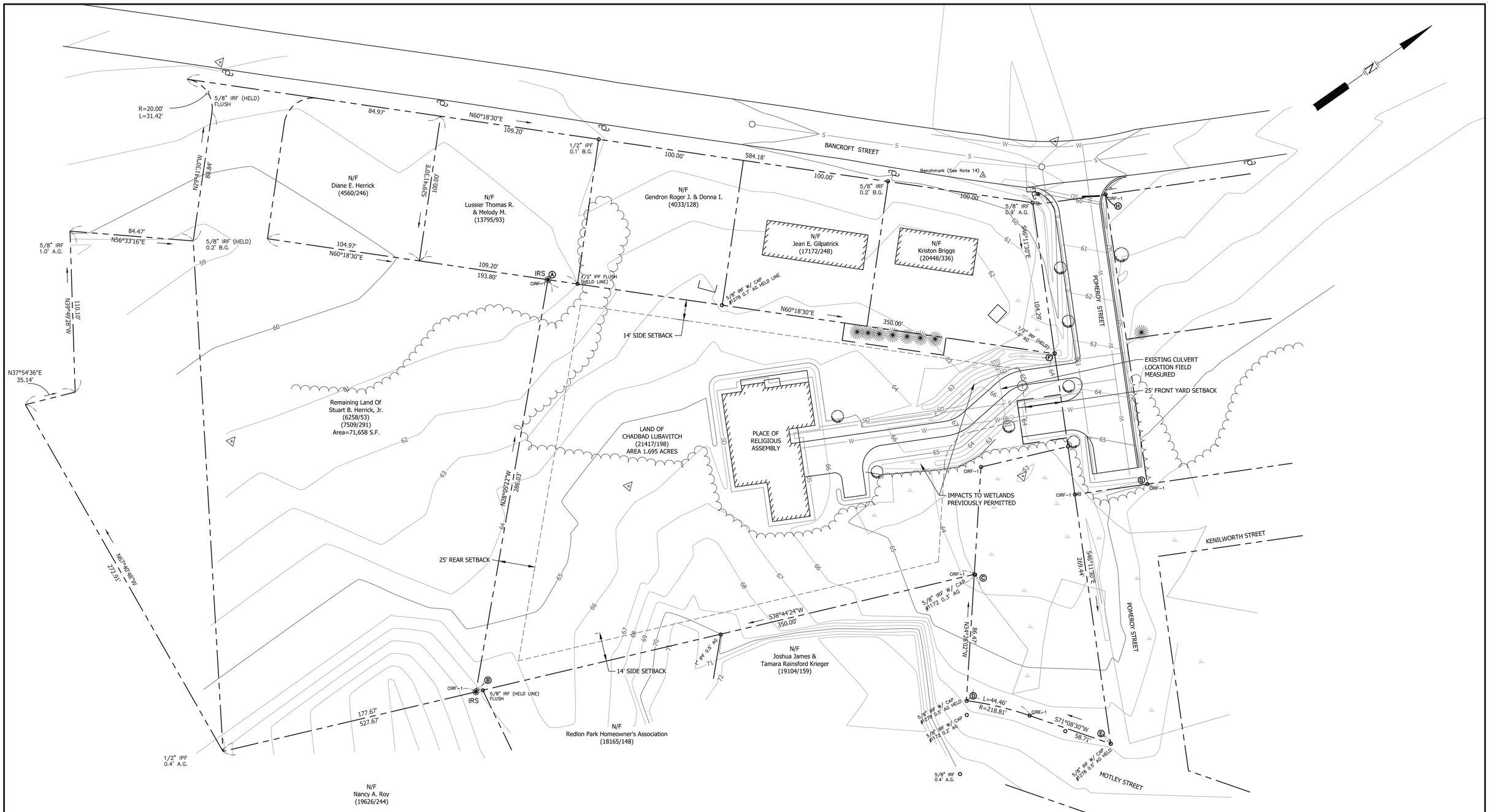


SME
SEVEE & MAHER
ENGINEERS

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

STATE OF MAINE
DANIEL R. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER



NOTES:

1. BASEMAP ADAPTED FROM PLAN ENTITLED "AMENDED SITEPLAN" BY BH2M, BERRY, HUFF, MCDONALD, MILLIGAN INC. GORHAM, MAINE DATED NOVEMBER, 2017 AND SURVEY PERFORMED BY ROBERT LIBBY, JR OF BH2M GORHAM, MAINE, DATED NOVEMBER, 2017.
2. WETLANDS BOUNDARY INFORMATION FROM SURVEY PERFORMED BY MARK HAMPTON & ASSOCIATES, PORTLAND, MAINE, DATED AUGUST 16, 2005.

REV.	BY	DATE	STATUS
	DPD	4/2018	ISSUED TO CITY FOR REVIEW

STATE OF MAINE
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CHABAD LUBAVITCH OF MAINE, INC.
SITE PLAN APPLICATION
PORTLAND, MAINE

EXISTING CONDITIONS PLAN

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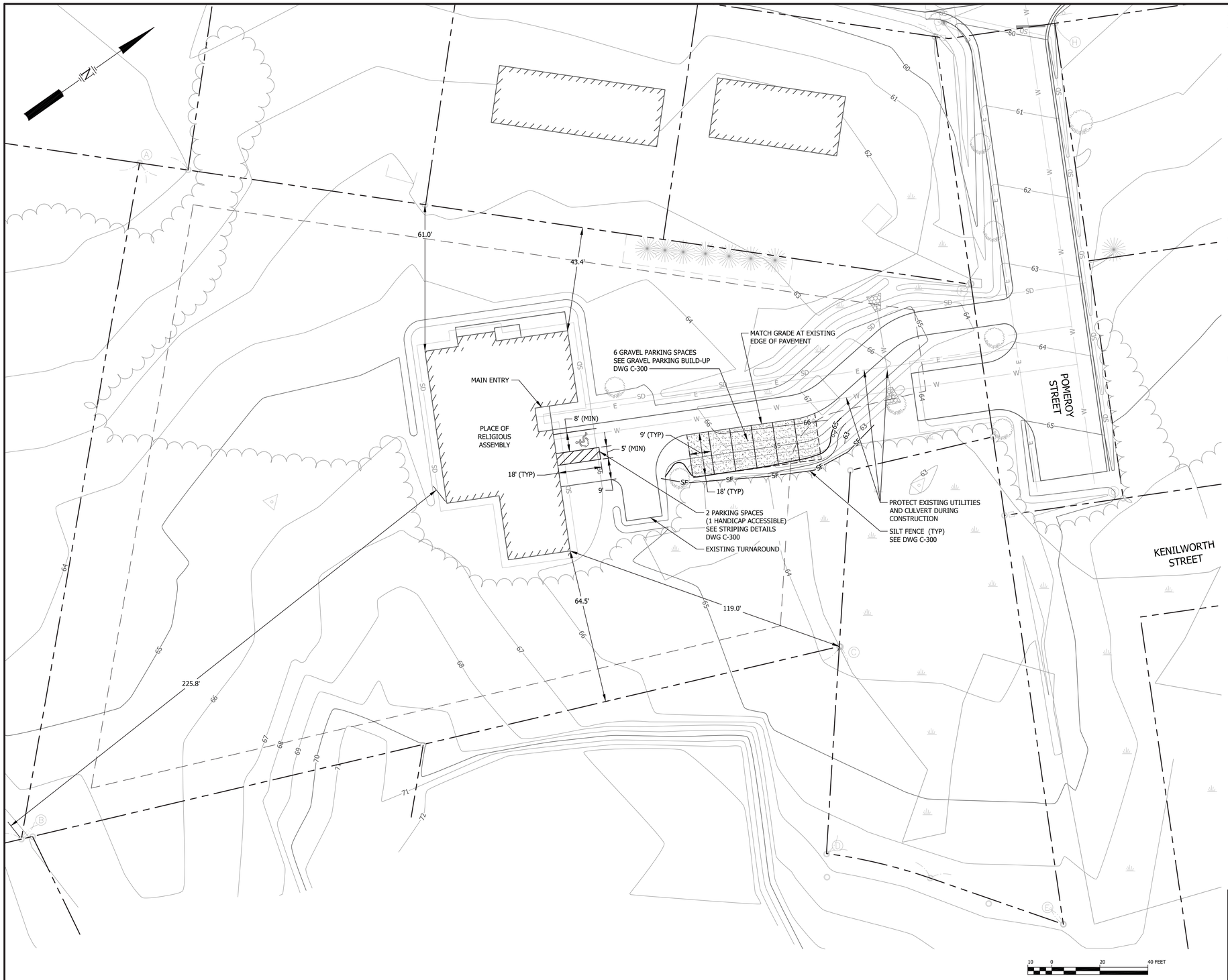
DESIGN BY:	DPD
DRAWN BY:	BWB
DATE:	3/2018
CHECKED BY:	JTR
LMN:	EXCON
CTB:	SME-STD

JOB NO. 18060 DWG FILE BASE

C-101



ZONING NOTES:

1. PROPERTY OWNER/APPLICANT:
   CHABAD LUBAVITCH OF MAINE INC.
   11 POMEROY STREET
   PORTLAND, MAINE 04101
2. LOT INFORMATION - CHART/BLOCK/LOT: 193/E1/1
3. ZONING DISTRICT: R-3 - RESIDENTIAL 3
4. ZONING REQUIREMENTS: DIMENSIONAL STANDARDS TO BE IN ACCORDANCE WITH THE APPROVED ZONE AS SHOWN BELOW:

   DIMENSIONAL STANDARDS

	REQUIRED (R3)	PROVIDED
MINIMUM LOT SIZE (SMALL PLACE OF ASSEMBLY)	0.5 ACRES	1.7 ACRES
MINIMUM STREET FRONTAGE	50 FEET	165 FEET
MINIMUM FRONT YARD SETBACK	25 FEET	108 FEET
MINIMUM SIDE SETBACK	14 FEET	43 FEET
MINIMUM REAR SETBACK	25 FEET	130 FEET
MAXIMUM BUILDING HEIGHT	35 FEET	<35 FEET
MAXIMUM LOT COVERAGE	35%	12%

5. PROPOSED USE: PLACE OF RELIGIOUS ASSEMBLY
6. THERE ARE NO WETLAND IMPACTS PROPOSED WITH THIS PROJECT.
7. PARKING SUMMARY:

   REQUIRED PARKING
   PARKING RATIO: 1 SPACE PER 125 SF OF RELIGIOUS ASSEMBLY SPACE
   PROPOSED ASSEMBLY SPACE = 900 SF
   TOTAL SPACES REQUIRED = 7.2 (8 SPACES)

   PROVIDED PARKING
   PARKING GARAGE: 8 SPACES
8. THERE ARE NO CHANGES TO SITE UTILITIES PROPOSED

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STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER
5/16/18

CHABAD LUBAVITCH OF MAINE, INC.
SITE PLAN APPLICATION
PORTLAND, MAINE

SITE PLAN

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: BWB
DATE: 3/2018
CHECKED BY: JTR
LMN: LMN
CTB: SME-STD

JOB NO. 18060 DWG FILE BASE

C-102

EROSION CONTROL NOTES:

A. GENERAL

1. All soil erosion and sediment control will be done in accordance with: (1) the Maine Erosion and Sediment Control Handbook: Best Management Practices, Maine Department of Environmental Protection (MEDEP), October 2016.

2. The site Contractor (to be determined) will be responsible for the repair/replacement/maintenance of all erosion control measures until all disturbed areas are stabilized.

3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance will be temporarily stabilized within 7 days of the disturbance.

4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.

5. Any suitable topsoil will be stripped and stockpiled for reuse as directed by the Owner. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. In any event, stockpiles will not be located within 100 feet of wetlands and will be at least 50 feet upgradient of the stockpile's perimeter silt fence. The sideslopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with Aroostook rye, annual or perennial ryegrass within 7 days of formation, or temporarily mulched.

B. TEMPORARY MEASURES

1. STABILIZED CONSTRUCTION ENTRANCE/EXIT

A crushed stone stabilized construction entrance/exit will be placed at any point of vehicular access to the site, in accordance with the detail shown on this sheet.

2. SILT FENCE

a. Silt fence will be installed prior to all construction activity, where soil disturbance may result in erosion. Silt fence will be erected at locations shown on the plans and/or downgradient of all construction activity.

b. Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

c. Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

d. Sediment deposits will be removed after each storm event if significant build-up has occurred or if deposits exceed half the height of the barrier.

3. STONE CHECK DAMS

Stone check dams will be installed in grass-lined swales and ditches during construction.

4. BARK MULCH SEDIMENT BARRIER

a. Where approved, bark mulch sediment barriers may be used as a substitute for silt fence. See the details in this drawing set for specifications.

b. Rock Filter Berms: To provide more filtering capacity or to act as a velocity check dam, a berm's center can be composed of clean crushed rock ranging in size from the french drain stone to riprap.

5. TEMPORARY SEEDING

Stabilize disturbed areas that will not be brought to final grade for a year or less and reduce problems associated with mud and dust production from exposed soil surface during construction with temporary vegetation.

6. TEMPORARY MULCHING

Use temporary mulch in the following locations and/or circumstances:

- In sensitive areas (within 100 feet of streams, wetlands and in lake watersheds) temporary mulch will be applied within 7 days of exposing spill or prior to any storm event.
- Apply temporary mulch within 14 days of disturbance or prior to any storm event in all other areas.
- Areas which have been temporarily or permanently seeded will be mulched immediately following seeding.
- Areas which cannot be seeded within the growing season will be mulched for over-winter protection and the area will be seeded at the beginning of the growing season.
- Mulch can be used in conjunction with tree, shrub, vine, and ground cover plantings.
- Mulch anchoring will be used on slopes greater than 5 percent in late fall (past October 15), and over-winter (October 15 - April 15).

The following materials may be used for temporary mulch:

a. Hay or Straw material shall be air-dried, free of seeds and coarse material. Apply 2 bales/1,000 sf or 1.5 to 2 tons/acre to cover 90% of ground surface.

b. Erosion Control Mix: It can be used as a stand-alone reinforcement:
- on slopes 2 horizontal to 1 vertical or less;
- on frozen ground or forested areas; and
- at the edge of gravel parking areas and areas under construction.

c. Erosion control mix alone is not suitable:
- on slopes with groundwater seepage;
- at low points with concentrated flows and in gullies;
- at the bottom of steep perimeter slopes exceeding 100 feet in length;
- below culvert outlet aprons; and around catch basins and closed storm systems.

d. Chemical Mulches and Soil Binders: Wide ranges of synthetic spray-on materials are marketed to protect the soil surface. These are emulsions that are mixed with water and applied to the soil. They may be used alone, but most often are used to hold wood fiber, hydro-mulches or straw to the soil surface.

e. Erosion Control Blankets and Mats: Mats are manufactured combinations of mulch and netting designed to retain soil moisture and modify soil temperature. During the growing season (April 15 to October 15) use mats indicated on drawings or North American Green (NAG) S75 (or mulch and netting) on:
- the base of grassed waterways;
- steep slopes (15 percent or greater); and
- any disturbed soil within 100 feet of lakes, streams, or wetlands.

During the late fall and winter (October 15 to April 15) use heavy grade mats indicated on drawings for NAG SC250 on all areas noted above plus use lighter grade mats NAG S75 (or mulch and netting) on:
- sideslopes of grassed waterways; and moderate slopes (between 8 and 15 percent).

C. TEMPORARY DUST CONTROL

To prevent the blowing and movement of dust from exposed soil surfaces, and reduce the presence of dust, use water or calcium chloride to control dusting by preserving the moisture level in the road surface materials.

D. CONSTRUCTION DE-WATERING

1. Water from construction de-watering operations shall be cleaned of sediment before reaching wetlands, water bodies, streams or site boundaries. Utilize temporary sediment basins, erosion control soil filter berms backed by staked hay bales, A Dirt Bag 55" sediment filter bag by ACF Environmental, or other approved Best Management Practices (BMP's).

2. In sensitive areas near streams or ponds, discharge the water from the de-watering operation into a temporary sediment basin created by a surrounding filter berm of uncompacted erosion control mix immediately backed by staked hay bales (see the site details). Locate the temporary sediment basin at lease 100 feet from the nearest water body, such that the filtered water will flow through undisturbed vegetated soil areas prior to reaching the water body or property line.

E. PERMANENT MEASURES

1. Riprapped Aprons: All storm drain pipe outlets and the inlet and outlet of culverts will have riprap aprons to protect against scour and deterioration.

2. Topsoil, Seed, and Mulch: All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, seeded, and mulched.

Seeded Preparation: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used. Grade the site as needed.

a. Seeding will be completed by August 15 of each year. Late season seeding may be done between August 15 and October 15. Areas not seeded or which do not obtain satisfactory growth by October 15, will be seeded with Aroostook Rye or mulched. After November 1, or the first killing frost, disturbed areas will be seeded at double the specified application rates, mulched, and anchored.

PERMANENT SEEDING SPECIFICATIONS

Mixture:	Roadside (lbs/acre)	Lawn (lbs/acre)
Kentucky Bluegrass	20	55
White Clover	5	0
Creeping Red Fescue	20	55
Perennial Ryegrass	5	15

b. Mulch in accordance with specifications for temporary mulching.

c. If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site.

3. Ditches and Channels: All ditches on-site will be lined with North American Green S75 erosion control mesh (or an approved equal) upon installation of loam and seed.

F. WINTER CONSTRUCTION AND STABILIZATION

1. Winter excavation and earthwork will be completed so as to minimize exposed areas while satisfactorily completing the project. Limit exposed areas to those areas in which work is to occur during the following 15 days and that can be mulched in one day prior to any snow event. All areas will be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded, and mulched.

Install any added measures necessary to control erosion/sedimentation. The particular measure used will be dependent upon site conditions, the size of the area to be protected, and weather conditions.

To minimize areas without erosion control protection, continuation of earthwork operations on additional areas will not begin until the exposed soil surface on the area being worked has been stabilized.

2. Natural Resource Protection: During winter construction, a double-row 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 will be protected a minimum distance of 100 feet on either side from the resource.

3. Sediment Barriers: During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

4. Mulching:

- All areas will be considered to be denuded until seeded and mulched. Hay and straw mulch will be applied at a rate of twice the normal accepted rate.
- Mulch will not be spread on top of snow.
- After each day of final grading, the area will be properly stabilized with anchored hay or straw or erosion control matting.
- Between the dates of November 1 and April 15, all mulch will be anchored by either mulch netting, emulsion chemical, tracking or wood cellulose fiber.

5. Soil Stockpiling: Stockpiles of soil or subsoil will be mulched for over-winter protection with hay or straw at twice the normal rate or with a 4-inch layer of erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpiles shall not be placed (even covered with mulch) within 100 feet from any natural resources.

6. Seeding: Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas will receive 4 inches of loam and seed at an application rate of three times the rate for permanent seeding. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75 percent catch) will be revegetated by replacing loam, seed, and mulch.

If dormant seeding is not used for the site, all disturbed areas will be revegetated in the spring.

7. Maintenance: Maintenance measures will be applied as needed during the entire construction season. After each rainfall, snow storm, or period of thawing and runoff, the site Contractor will perform a visual inspection of all installed erosion control measures and perform repairs as needed to ensure their continuous function.

Following the temporary and/or final seeding and mulching, the Contractor will, in the spring, inspect and repair any damages and/or bare spots. An established vegetative cover means a minimum of 85 to 90 percent of areas vegetated with vigorous growth.

G. OVER-WINTER CONSTRUCTION EROSION CONTROL MEASURES

1. Stabilization of Disturbed Soil: By October 15, all disturbed soils on areas having a slope less than 15 percent will be seeded and mulched. If the Contractor fails to stabilize these soils by this date, then the Contractor shall stabilize the soil for late fall and winter, by using either temporary seeding or mulching.

2. Stabilization of Disturbed Slopes: All slopes to be vegetated will be completed by October 15. The Owner will consider any area having a grade greater than 15 percent (6.5H:1V) to be a slope. Slopes not vegetated by October 15 will receive one of the following actions to stabilize the slope for late fall and winter:

a. Stabilize the soil with temporary vegetation and erosion control mesh.
b. Stabilize the slope with erosion control mix.
c. Stabilize the slope with stone riprap.

3. Stabilization of Ditches and Channels: All stone-lined ditches and channels to be used to convey runoff through the winter will be constructed and stabilized by November 15. Grass-lined ditches and channels will be complete by September 15. Grass-lined ditches not stabilized by September 15 shall be lined with either sod or riprap.

H. MAINTENANCE PLAN

1. Routine Maintenance: Inspection will be performed as outlined in the project's Erosion Control Plan. Inspection will be by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities will include checking erosion controls for accumulation of sediments.

I. Housekeeping

1. Spill prevention. Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

4. Debris and other materials. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

5. Trench or foundation de-watering. Trench 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 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 by the department.

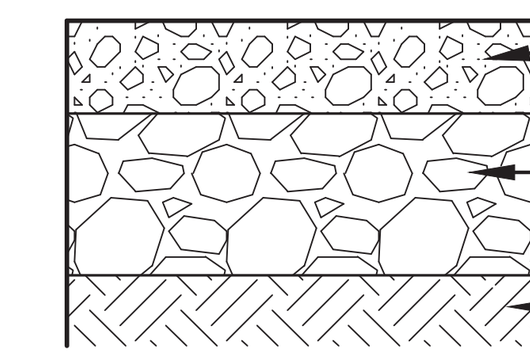
6. Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges.

7. Additional requirements. Additional requirements may be applied on a site-specific basis.

J. CONSTRUCTION SEQUENCE

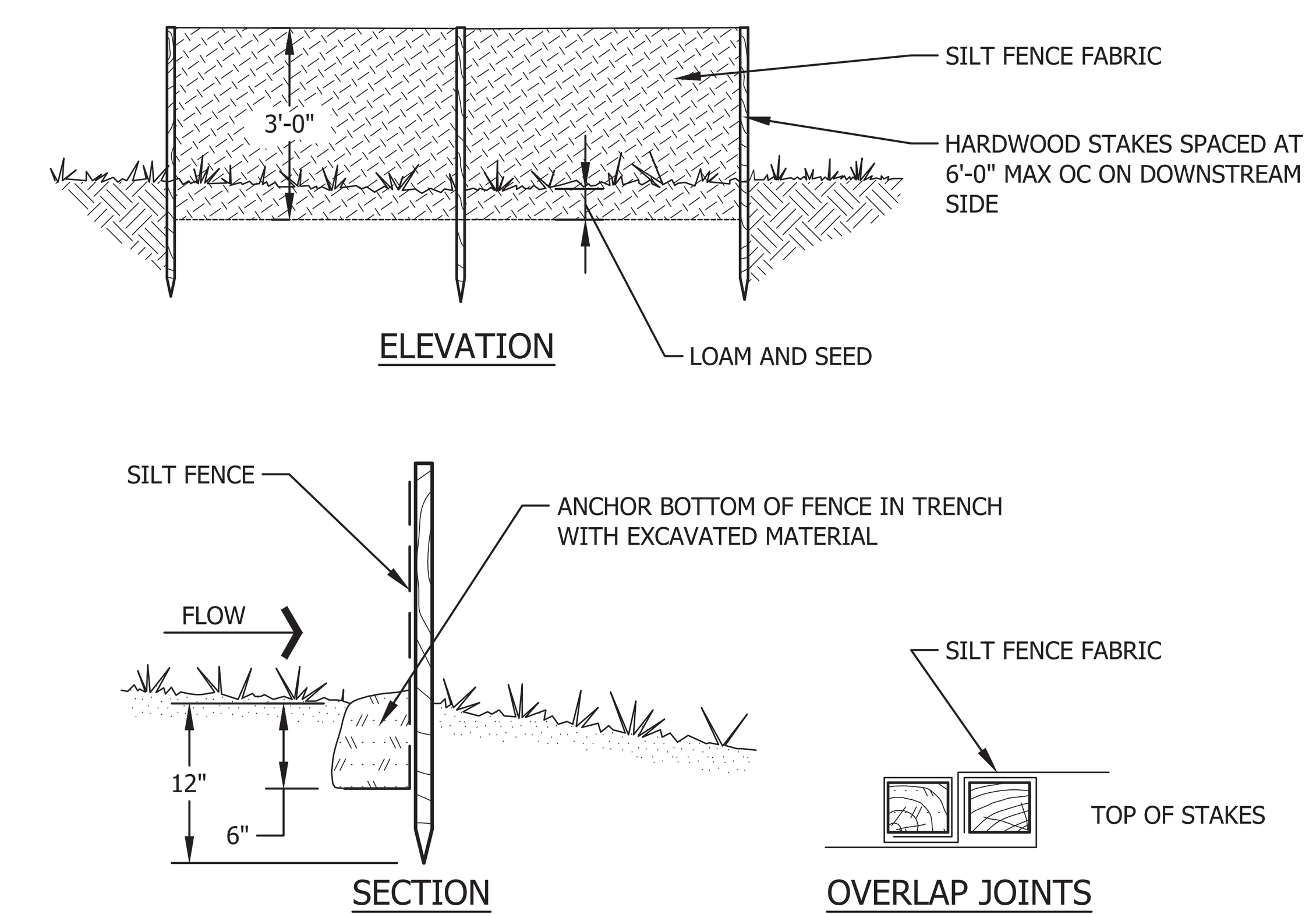
In general, the expected sequence of construction for each phase is provided below. Construction is proposed to start in Spring 2018 and be complete in Summer 2018.

- Mobilization
- Install temporary erosion control measures
- Clearing and grubbing
- Site Grading
- Construct, parking and
- Site stabilization, loam and seed,
- Remove temporary erosion control measures

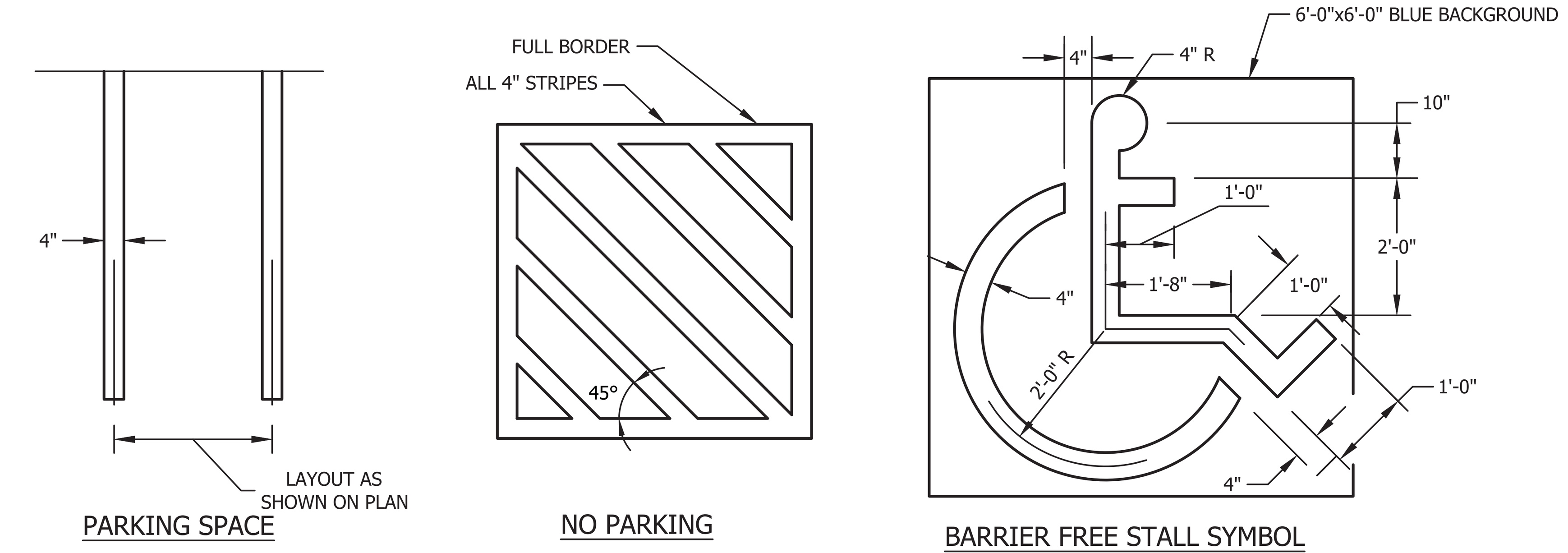


NOTES:
1. MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

GRAVEL PARKING BUILD-UP
NTS

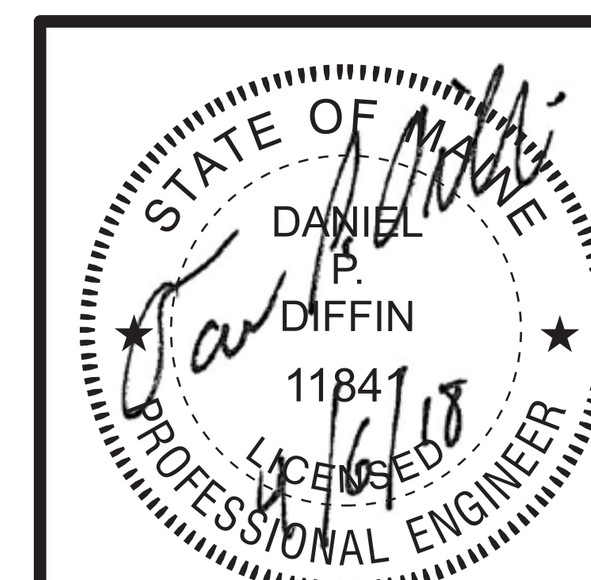


SILT FENCE
NTS



STRIPING DETAILS
NTS

REV.	BY	DATE	STATUS
	DPD	4/2018	ISSUED TO CITY FOR REVIEW



CHABAD LUBAVITCH OF MAINE, INC.
SITE PLAN APPLICATION
PORTLAND, MAINE

EROSION CONTROL NOTES AND SITE DETAILS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: BWB
DATE: 3/2018
CHECKED BY: JTR
LMN: NONE
CTB: SME-STD

JOB NO. 18060 DWG FILE DETAILS

C-300

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GENERAL SITE NOTES:

1. EXCAVATE AND STOCKPILE ON-SITE TOPSOIL. TOPSOIL IS TO REMAIN THE PROPERTY OF THE OWNER DURING CONSTRUCTION, AND SHALL NOT BE REMOVED FROM THE SITE. AFTER FINAL LOAM AND SEED EXCESS TOPSOIL SHALL BE REMOVED FROM SITE BY CONTRACTOR.
2. PAVEMENT EDGES SHALL BE TRUE TO LINE. SAWCUT EXISTING PAVEMENT IN SMOOTH STRAIGHT LINE WHERE NEW PAVEMENT JOINS, PROVIDE TACK COAT LAYER AS SPECIFIED.
3. PROVIDE TRAFFIC CONTROL SIGNAGE AND STRIPING AS SHOWN AND IN ACCORDANCE WITH U.S.D.O.T. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDOT MOST RECENT VERSION).

GRADING NOTES:

1. ADD 4" LOAM, SEED AND MULCH TO DISTURBED AREAS UNLESS OTHERWISE NOTED. PROVIDE EROSION CONTROL MESH ON ALL SLOPES STEEPER THAN 3:1, AND ALONG DITCH CHANNELS.
2. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. REMOVE SEDIMENTS FROM THE SITE. PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.
3. PLACE TEMPORARY SOIL STABILIZATION WITHIN 7 DAYS OF INITIAL DISTURBANCE. PLACE PERMANENT SOIL STABILIZATION WITHIN 7 DAYS OF FINAL GRADING.

UTILITY NOTES:

1. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION IS NOT GUARANTEED. VERIFY SITE CONDITIONS INCLUDING TEST PITS FOR LOCATIONS AND INVERTS OF UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
2. COORDINATE WORK ON UTILITY LINES OR WITHIN ROAD RIGHT-OF-WAY WITH THE UTILITY COMPANIES AND CITY ROAD DEPARTMENT AND STATE MDOT.
3. ALL PIPING AND DRAINAGE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL.

SURVEYOR'S REFERENCE NOTES

1. INFORMATION PROVIDED BY APPLICANT AND FROM PLAN OF PROPERTY MADE FOR STUART B. HERRICK JR., BANCROFT STREET, PORTLAND, MAINE JULY 31, 1986, R.P. TITCOMB ASSOC. INC.
2. "SITE PLANS FOR CHABAD LUBAVITCH OF MAINE INC., POMEROY STREET, PORTLAND", BY BH2M DATED MARCH 2004 WITH REVISIONS THROUGH JULY 2, 2007.
3. SURVEY CONTROL POINT #9:
   PK NAIL SET IN PAVEMENT ON BANCROFT STREET, ELEVATION=58.89, CITY OF PORTLAND DATUM.

DIG SAFE NOTES:

PRIOR TO EXCAVATION, VERIFY THE UNDERGROUND UTILITIES, PIPES, STRUCTURES AND FACILITIES. PROVIDE THE FOLLOWING MINIMUM MEASURES:

1. PRE-MARK THE BOUNDARIES OF PLANNED EXCAVATION WITH WHITE PAINT, FLAGS OR STAKES, SO UTILITY CREWS KNOW WHERE TO MARK THEIR LINES.
2. CALL DIG SAFE, AT 811, AT LEAST THREE BUSINESS DAYS - BUT NO MORE THAN 30 CALENDAR DAYS - BEFORE STARTING WORK. DO NOT ASSUME SOMEONE ELSE WILL MAKE THE CALL.
3. IF BLASTING, NOTIFY DIG SAFE AT LEAST ONE BUSINESS DAY IN ADVANCE.
4. WAIT THREE BUSINESS DAYS FOR LINES TO BE LOCATED AND MARKED WITH COLOR-CODED PAINT, FLAGS OR STAKES. NOTE THE COLOR OF THE MARKS AND THE TYPE OF UTILITIES THEY INDICATE. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
5. CONTACT THE LANDOWNER AND OTHER "NON-MEMBER" UTILITIES (WATER, SEWER, GAS, ETC.). FOR THEM TO MARK THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
6. RE-NOTIFY DIG SAFE AND THE NON-MEMBER UTILITIES IF THE DIGGING, DRILLING OR BLASTING DOES NOT OCCUR WITHIN 30 CALENDAR DAYS, OR IF THE MARKS ARE LOST DUE TO WEATHER CONDITIONS, SITE WORK ACTIVITY OR ANY OTHER REASON.
7. HAND DIG WITHIN 18 INCHES IN ANY DIRECTION OF ANY UNDERGROUND LINE UNTIL THE LINE IS EXPOSED. MECHANICAL METHODS MAY BE USED FOR INITIAL SITE PENETRATION, SUCH AS REMOVAL OF PAVEMENT OR ROCK.
8. DIG SAFE REQUIREMENTS ARE IN ADDITION TO TOWN, CITY, AND/OR STATE DOT STREET OPENING PERMIT REQUIREMENTS.
9. FOR COMPLETE DIG SAFE REQUIREMENTS, CALL THE PUC OR VISIT THEIR WEBSITE.
10. IF YOU DAMAGE, DISLOCATE OR DISTURB ANY UNDERGROUND UTILITY LINE, IMMEDIATELY NOTIFY THE AFFECTED UTILITY. IF DAMAGE CREATES SAFETY CONCERNS, CALL THE FIRE DEPARTMENT AND TAKE IMMEDIATE STEPS TO SAFEGUARD HEALTH AND PROPERTY.
11. ANY TIME AN UNDERGROUND LINE IS DAMAGED OR DISTURBED OR IF LINES ARE IMPROPERLY MARKED, YOU MUST FILE AN INCIDENT REPORT WITH THE P.U.C. FOR AN INCIDENT REPORT FORM VISIT WWW.STATE.ME.US/MPUC OR CALL THE PUC AT 1-800-452-4699.

TYPICAL ABBREVIATIONS:

ACCMP	ASPHALT COATED CMP
ACP	ASBESTOS CEMENT PIPE
AC	ACRE
AGG	AGGREGATE
ALUM	ALUMINUM
APPD	APPROVED
APPROX	APPROXIMATE
ARMH	AIR RELEASE MANHOLE
ASB	ASBESTOS
ASP	ASPHALT
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AZ	AZIMUTH
BCCMP	BITUMINOUS COATED CMP
BM	BENCH MARK
BIT	BITUMINOUS
BLDG	BUILDING
BOT	BOTTOM
BRG	BEARING
BV	BALL VALVE
CB	CATCH BASIN
CEN	CENTER
CEM LIN	CEMENT LINED
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CLASS
CONC	CONCRETE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CS	CURB STOP
CTR	CENTER
CU	COPPER
CY	CUBIC YARD
D	DEGREE OF CURVE
DBL	DOUBLE
DEG OR °	DEGREE
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIA OR ☐	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DR	DRAIN
DWG	DRAWING
EA	EACH
EG	EXISTING GROUND OR GRADE
ELEC	ELECTRIC
EL	ELEVATION
ELB	ELBOW
EOP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
EST	ESTIMATED
EXC	EXCAVATE
EXIST	EXISTING
FI	FIELD INLET
FG	FINISH GRADE
FBRGL	FIBERGLASS
FDN	FOUNDATION
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FPS	FEET PER SECOND
FT OR '	FEET
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HYD	HYDRANT
ID	INSIDE DIAMETER
IN OR "	INCHES
INV	INVERT
INV EL	INVERT ELEVATION
LB	POUND
LC	LEACHATE COLLECTION
LD	LEAK DETECTION
LF	LINEAR FEET
LOC	LOCATION
LT	LEACHATE TRANSPORT
MH	MANHOLE
MJ	MECHANICAL JOINT
MATL	MATERIAL
MAX	MAXIMUM
MFR	MANUFACTURE
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
NITC	NOT IN THIS CONTRACT
NTS	NOT TO SCALE
N/F	NOW OR FORMERLY
NO OR #	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVE
PD	PERIMETER DRAIN
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PT	POINT OF TANGENT
PERF	PERFORATED
PP	POWER POLE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RAD	RADIUS
REQD	REQUIRED
RT	RIGHT
RTE	ROUTE
S	SLOPE
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SMH	SANITARY MANHOLE
ST	STREET
STA	STATION
SY	SQUARE YARD
TAN	TANGENT
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPORARY
TYP	TYPICAL
UD	UNDERDRAIN
V	VOLTS
VA TEE	VALVE ANCHORING TEE
VERT	VERTICAL
WG	WATER GATE
W/	WITH
W/O	WITHOUT
YD	YARD

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	BUILDING	
	EDGE OF PAVEMENT	
	CURB	
100	CONTOUR	100
	SPOT GRADE	114.23
X	FENCE	X
	TIMBER GUARD RAIL	
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
	CATCH BASIN	
	DRAINAGE MANHOLE	
SS	SANITARY SEWER LINE	SS
Ⓢ	SANITARY SEWER MANHOLE	
	UTILITY POLE	
UGU	UNDERGROUND UTILITY	UGU
	TRANSFORMER	T
	LIGHT POLE	
	WALL MOUNTED LIGHT	
W	WATER LINE	W
	WATER GATE VALVE	
	HYDRANT	
G	GAS LINE	G
	SIGN	
	RIPRAP	
	HEADWALL	
	RETAINING WALL	
	TREELINE	
TP12-11	TEST PIT	
SB13-102	BORING	
A13-108	AUGER PROBE	
	CONCRETE	
	GRAVEL	

EROSION CONTROL LEGEND

SF SILT FENCE

REV.	BY	DATE	STATUS
	DPD	4/2018	ISSUED TO CITY FOR REVIEW

STATE OF MAINE — DANIEL J. DIFFIN — 11841 — LICENSED PROFESSIONAL ENGINEER

CHABAD LUBAVITCH OF MAINE, INC.
SITE PLAN APPLICATION
PORTLAND, MAINE

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	BWB
DATE:	3/2018
CHECKED BY:	JTR
LMN:	NONE
CTB:	SME-STD

JOB NO. 18060.00 DWG FILE GEN-NOTES C-100

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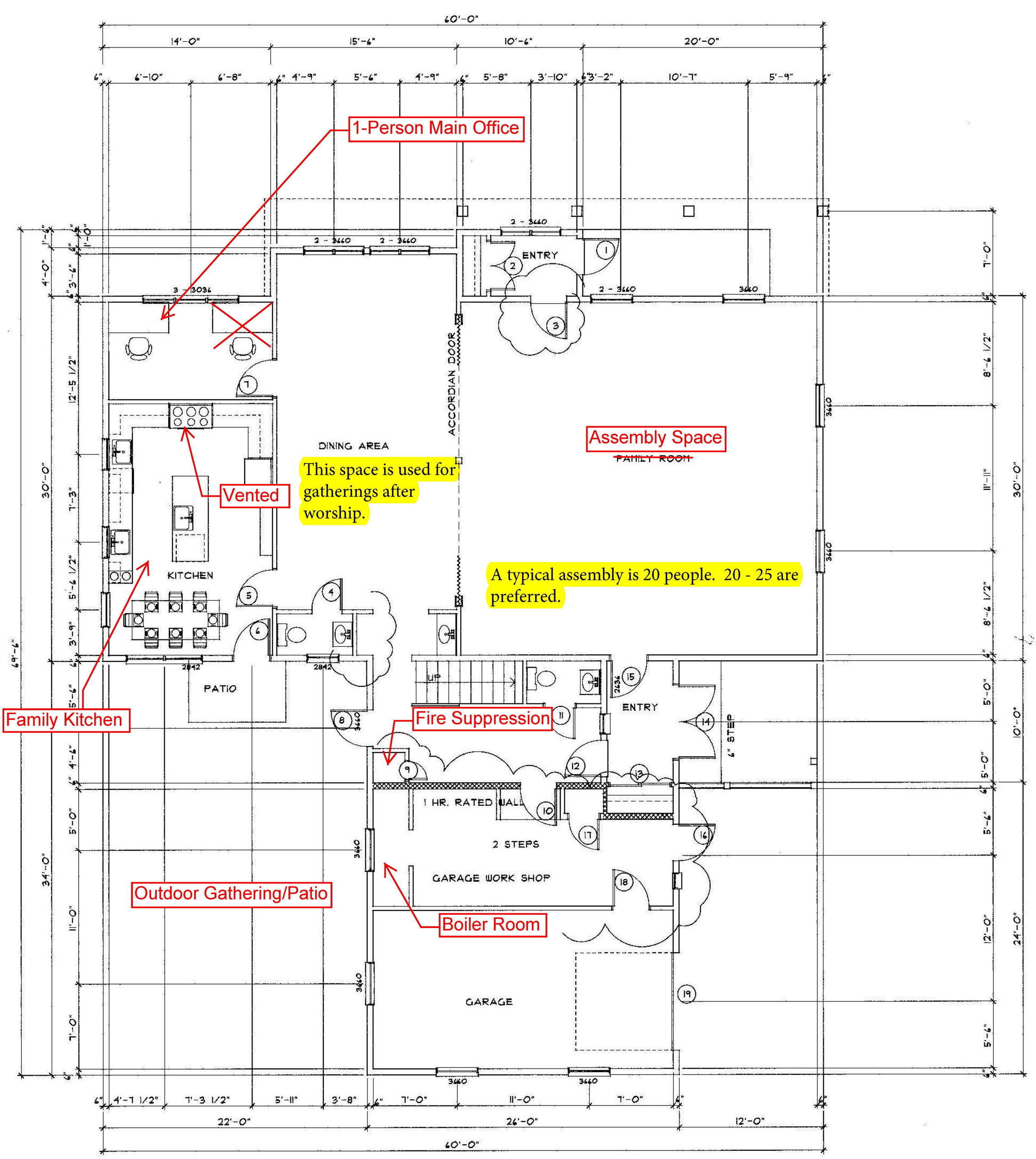
RESURGAM
CITY OF PORTLAND, MAINE
Inspections Division
Date: 03/11/15

R SCHEDULE

K	WIDTH	HEIGHT	REMARKS
FIRST FLOOR			
1.	3'-0"	7'-0"	ENTRY DOOR
2. PR.	2'-0"	6'-8"	CLOSET
3.	3'-0"	6'-8"	ENTRY DOOR
4.	2'-4"	6'-8"	BATHROOM
5.	3'-0"	6'-8"	KITCHEN
6.	2'-4"	6'-8"	ENTRY
7.	2'-4"	6'-8"	STUDY
8.	3'-0"	6'-8"	ENTRY DOOR
9.	2'-4"	6'-8"	CLOSET
10.	3'-0"	6'-8"	TO GARAGE - 20 MIN. RATED
11.	2'-4"	6'-8"	BATHROOM
12.	3'-0"	6'-8"	ENTRY
13. PR.	2'-4"	6'-8"	CLOSET - SLIDER
14. PR.	3'-0"	6'-8"	ENTRY
15.	3'-0"	6'-8"	ENTRY
16.	2'-0"	6'-8"	CLOSET
17.	3'-0"	7'-0"	ENTRY
18.	8'-0"	8'-0"	OVERHEAD DOOR
SECOND FLOOR			
20.	2'-8"	6'-8"	TV ROOM - 20 MIN. RATED DOOR
21. PR.	2'-4"	6'-8"	CLOSET
22.	2'-8"	6'-8"	BEDROOM
23.	2'-4"	6'-8"	CLOSET
24.	2'-8"	6'-8"	BEDROOM
25. PR.	3'-0"	6'-8"	CLOSET
26.	2'-4"	6'-8"	SLIDER - DECK
27.	2'-4"	6'-8"	BATHROOM
28.	2'-0"	6'-8"	BATHROOM
29.	2'-4"	6'-8"	BATHROOM
30.	2'-8"	6'-8"	BEDROOM
31. PR.	2'-8"	6'-8"	CLOSET - SLIDER
32.	2'-4"	6'-8"	BATHROOM
33.	2'-8"	6'-8"	BEDROOM
34. PR.	2'-0"	6'-8"	CLOSET - SLIDER
35.	3'-0"	6'-8"	HALLWAY
36.	2'-8"	6'-8"	BATHROOM
37.	2'-8"	6'-8"	BEDROOM
38. PR.	2'-0"	6'-8"	CLOSET - SLIDER
39.	2'-8"	6'-8"	BEDROOM
40. PR.	2'-0"	6'-8"	CLOSET - SLIDER
41.	2'-4"	6'-8"	CLOSET
42.	2'-8"	6'-8"	BEDROOM
43.	2'-0"	6'-8"	CLOSET
44.	2'-8"	6'-8"	BATHROOM
45.	2'-4"	6'-8"	BATHROOM
46.	2'-8"	6'-8"	BEDROOM
47. PR.	2'-4"	6'-8"	CLOSET - SLIDER
48.	2'-4"	6'-8"	BATHROOM
49.	2'-4"	6'-8"	BATHROOM
THIRD FLOOR			
50.	3'-0"	6'-8"	STORAGE AREA
51.	3'-0"	6'-8"	STORAGE AREA
52.	2'-4"	6'-8"	BATHROOM
53. PR.	2'-4"	6'-8"	CLOSET
54.	2'-4"	6'-8"	BATHROOM
55.	2'-8"	6'-8"	BEDROOM
56. PR.	2'-4"	6'-8"	CLOSET - SLIDER
57.	2'-8"	6'-8"	BEDROOM
58. PR.	2'-4"	6'-8"	CLOSET - SLIDER
59.	2'-8"	6'-8"	BEDROOM
60.	2'-4"	6'-8"	CLOSET - SLIDER
61.	3'-0"	6'-8"	GAME ROOM

[redacted]

PDF's Revised by Sevee and Maher Engineers 10/24/2018



FIRST FLOOR PLAN

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

SHEET NO. A-2 OF SHEETS	ENGINEER DATE: 04/15/12 PROJECT NO. 20120	ARCHITECT

Gleason Architects
P.O. BOX 596
STRATHAM, NEW HAMPSHIRE 03885
603 772-7370 FAX. NO. 603 772-6044

NEW RESIDENCE
11 POMEROY STREET
PORTLAND, MAINE

NO.	DESCRIPTION OF REVISION	DATE
1	CHANGED FLOOR PLAN	10/25/13
2	REVISED PERMIT SET	06/09/14
3	AS BUILT - CHANGES	02/23/15

PDF's Revised by Sevee and Maher Engineers 10/24/2018

RESURGAM, MAINE
CITY OF PORTLAND, MAINE
Inspections Division
Date: 03/11/15

[redacted]

DOOR SCHEDULE

MARK	DOOR WIDTH	DOOR HEIGHT	REMARKS
FIRST FLOOR			
1.	3'-0"	7'-0"	ENTRY DO
2. PR.	2'-0"	6'-8"	CLOSET
3.	3'-0"	6'-8"	ENTRY DO
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8.	3'-0"	6'-8"	ENTRY DO
9.	2'-6"	6'-8"	CLOSET
10.	3'-0"	6'-8"	TO GARAG
11.	2'-6"	6'-8"	BATHROOM
12.	3'-0"	6'-8"	ENTRY
13. PR.	2'-6"	6'-8"	CLOSET -
14. PR.	3'-0"	6'-8"	ENTRY
15.	3'-0"	6'-8"	ENTRY
16.	2'-0"	6'-8"	CLOSET
17.	3'-0"	7'-0"	ENTRY
18.	3'-0"	7'-0"	OVERHEAD
19.	8'-0"	8'-0"	
SECOND FLOOR			
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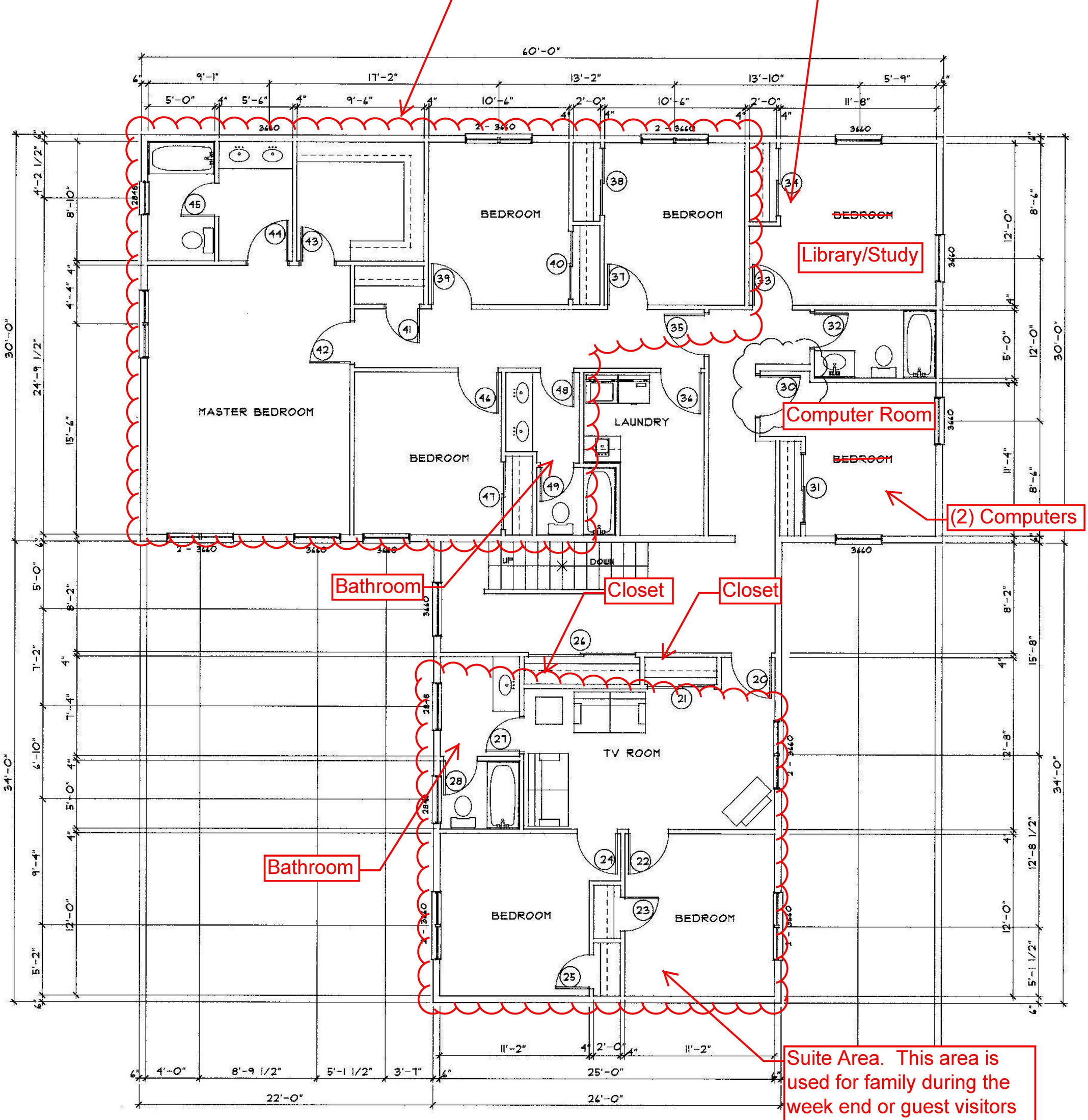
52.	2'-6"	6'-8"	BATHROOM
53. PR.	2'-6"	6'-8"	CLOSET
54.	2'-6"	6'-8"	BATHROOM
55.	2'-6"	6'-8"	BEDROOM
56. PR.	2'-6"	6'-8"	CLOSET - SLIDER
57.	2'-8"	6'-8"	BEDROOM
58. PR.	2'-6"	6'-8"	CLOSET - SLIDER
59.	2'-8"	6'-8"	BEDROOM
60.	2'-6"	6'-8"	CLOSET - SLIDER
61.	3'-0"	6'-8"	GAME ROOM

Family Living Area

Library is used primarily during kids camp the last week of June and first week of July. Attendance at the camp is approximately 15 kids, 4 of which are family. The kids are on site from 9-12am and are off site on a field trip in the afternoon.



SECOND FLOOR PLAN

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

SHEET NO. A-3 OF SHEETS	ENGINEER DATE: 04/15/12 PROJECT NO. 201207	ARCHITECT	**Gleason Architects** P.O. BOX 596 STRATHAM, NEW HAMPSHIRE 03885 603 772-7370 FAX. NO. 603 772-6044

NEW RESIDENCE

11 POMEROY STREET
PORTLAND, MAINE

NO.	DESCRIPTION OF REVISION	DATE
1	CHANGED FLOOR PLAN	10/25/13
2	REVISED PERMIT SET	06/09/14
3	AS BUILT - CHANGES	02/23/15

PDF's Revised by Sevee and Maher Engineers 10/24/2018

RESURGAM. CITY OF PORTLAND, MAINE

Inspections Division

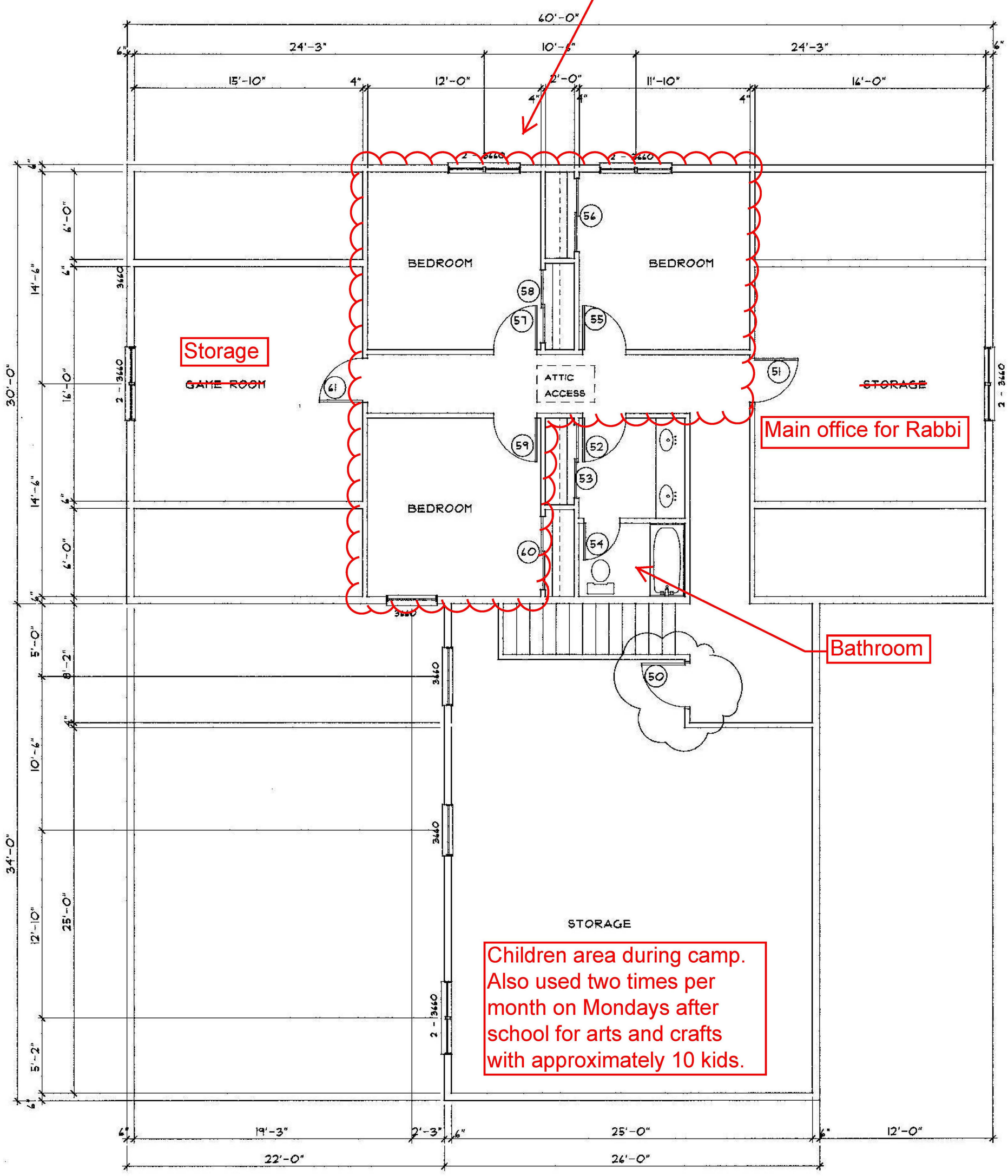
Date: 03/11/15

DOOR SCHEDULE

MARK	DOOR WIDTH	DOOR HEIGHT	REMARKS
FIRST FLOOR			
1.	3'-0"	7'-0"	ENTRY DOOR
2. PR.	2'-0"	6'-8"	CLOSET
3.	3'-0"	6'-8"	ENTRY DOOR
4.	2'-6"	6'-8"	BATHROOM
5.	3'-0"	6'-8"	KITCHEN
6.	2'-6"	6'-8"	ENTRY
7.	2'-6"	6'-8"	STUDY
8.	3'-0"	6'-8"	ENTRY DOOR
9.	2'-6"	6'-8"	CLOSET
10.	3'-0"	6'-8"	TO GARAGE - 20 MIN. RATED
11.	2'-6"	6'-8"	BATHROOM
12.	3'-0"	6'-8"	ENTRY
13. PR.	2'-6"	6'-8"	CLOSET - SLIDER
14. PR.	3'-0"	6'-8"	ENTRY
15.	3'-0"	6'-8"	ENTRY
16.	2'-0"	6'-8"	CLOSET
17.	3'-0"	7'-0"	ENTRY
18.	8'-0"	8'-0"	OVERHEAD DOOR
SECOND FLOOR			
20.	2'-8"	6'-8"	TV ROOM - 20 MIN. RATED DOOR
21. PR.	2'-4"	6'-8"	CLOSET
22.	2'-8"	6'-8"	BEDROOM
23.	2'-4"	6'-8"	CLOSET
24.	2'-8"	6'-8"	BEDROOM
25.	3'-0"	6'-8"	CLOSET
26. PR.	2'-6"	6'-8"	SLIDER - DECK
27.	2'-6"	6'-8"	BATHROOM
28.	2'-0"	6'-8"	BATHROOM
29.	2'-4"	6'-8"	BATHROOM
30.	2'-8"	6'-8"	BEDROOM
31. PR.	2'-8"	6'-8"	CLOSET - SLIDER
32.	2'-4"	6'-8"	BATHROOM
33.	2'-8"	6'-8"	BEDROOM
34. PR.	2'-0"	6'-8"	CLOSET - SLIDER
35.	3'-0"	6'-8"	HALLWAY
36.	2'-8"	6'-8"	BATHROOM
37.	2'-8"	6'-8"	BEDROOM
38. PR.	2'-0"	6'-8"	CLOSET - SLIDER
39.	2'-8"	6'-8"	BEDROOM
40. PR.	2'-0"	6'-8"	CLOSET - SLIDER
41.	2'-4"	6'-8"	CLOSET
42.	2'-8"	6'-8"	BEDROOM
43.	2'-0"	6'-8"	CLOSET
44.	2'-8"	6'-8"	BATHROOM
45.	2'-4"	6'-8"	BATHROOM
46.	2'-8"	6'-8"	BEDROOM
47. PR.	2'-4"	6'-8"	CLOSET - SLIDER
48.	2'-4"	6'-8"	BATHROOM
49.	2'-4"	6'-8"	BATHROOM
THIRD FLOOR			
50.	3'-0"	6'-8"	STORAGE AREA
51.	3'-0"	6'-8"	STORAGE AREA
52.	2'-6"	6'-8"	BATHROOM
53. PR.	2'-4"	6'-8"	CLOSET
54.	2'-6"	6'-8"	BATHROOM
55.	2'-8"	6'-8"	BEDROOM
56. PR.	2'-6"	6'-8"	CLOSET - SLIDER
57.	2'-6"	6'-8"	BEDROOM
58. PR.	2'-8"	6'-8"	CLOSET - SLIDER
59.	2'-6"	6'-8"	BEDROOM
60.	2'-6"	6'-8"	CLOSET - SLIDER
61.	3'-0"	6'-8"	GAME ROOM

[redacted]

Bedrooms used by family during the summer months and week ends.



Storage

Main office for Rabbi

Bathroom

Children area during camp. Also used two times per month on Mondays after school for arts and crafts with approximately 10 kids.

THIRD FLOOR PLAN

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

SHEET NO.	A-4
OF SHEETS	
PROJECT NO.	201207
DATE:	04/15/12
ENGINEER	
ARCHITECT	

Gleason Architects

P.O. BOX 596
STRATHAM, NEW HAMPSHIRE 03885
603 772-7370 FAX. NO. 603 772-6044

NEW RESIDENCE

11 POMEROY STREET
PORTLAND, MAINE

NO.	DESCRIPTION OF REVISION	DATE
1	CHANGED FLOOR PLAN	10/25/13
2	REVISED PERMIT SET	06/09/14
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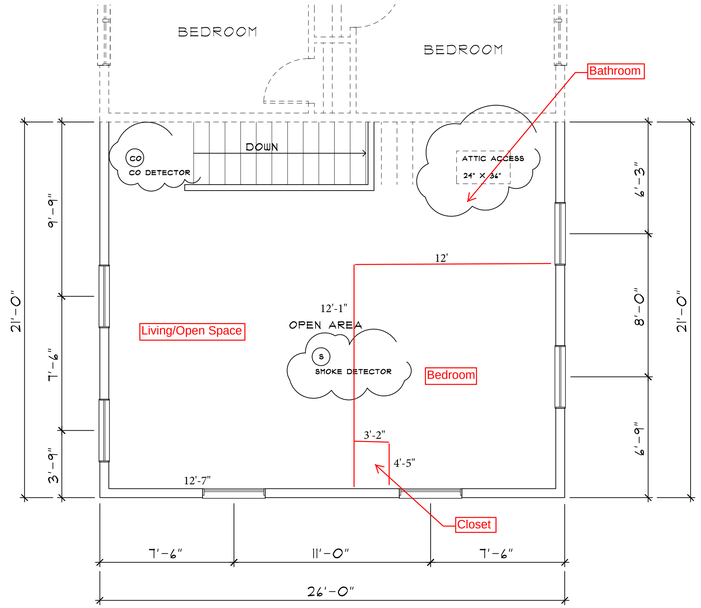
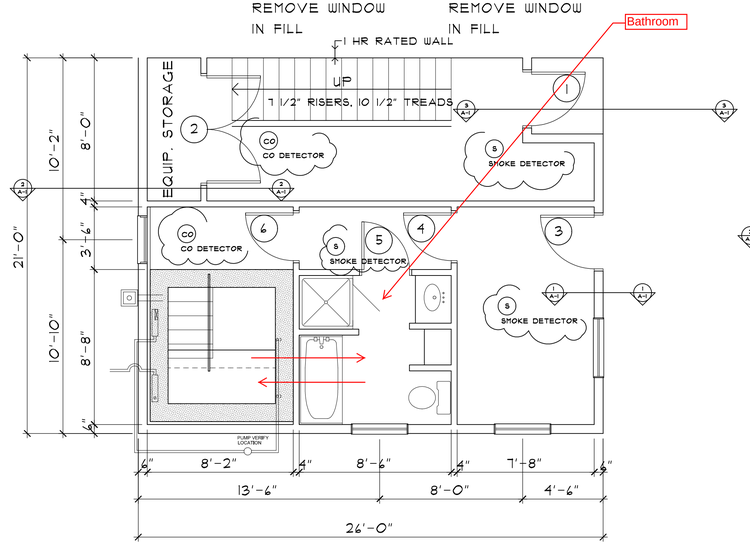


SECOND FLOOR PLAN

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

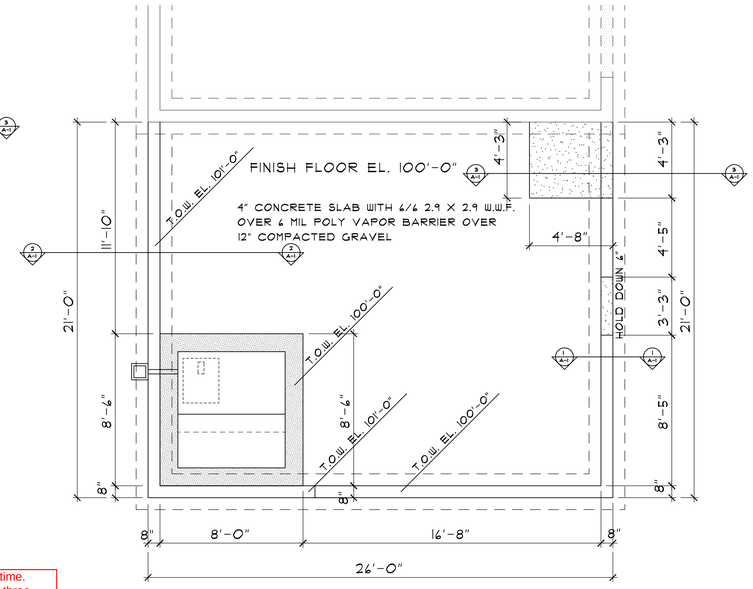
NOTE: REMOVE EXTERIOR SIDING AND ADD 1/2" FIRE CODE GYP DB.



FIRST FLOOR PLAN

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

Bath house is used by one person at a time. Three to four people a week and two to three uses a day. Could be the same person using the bath house throughout the day.

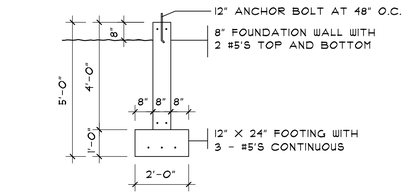


FOUNDATION PLAN

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

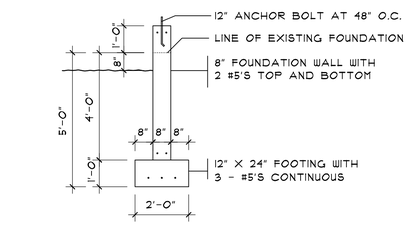
NOTES:

1. THE HEADERS FOR THE WINDOWS TO BE 3 - 2X8'S WITH TWO JACK STUDS EACH SIDE.
2. THE DOOR HEADER WILL BE 3 - 2X10'S WITH TWO JACK STUDS EACH SIDE.



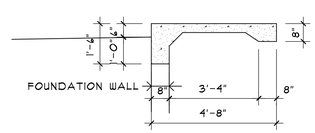
1 FOUNDATION DETAIL

SCALE: 3/8" = 1'-0"



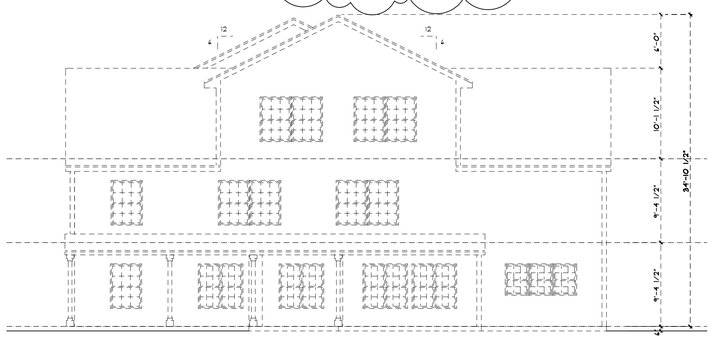
2 FOUNDATION DETAIL AT MIKVAH

SCALE: 3/8" = 1'-0"



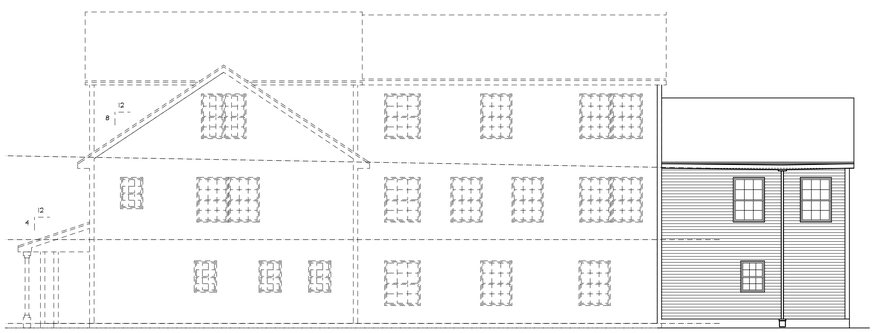
3 FOUNDATION DETAIL AT ENTRY

SCALE: 3/8" = 1'-0"



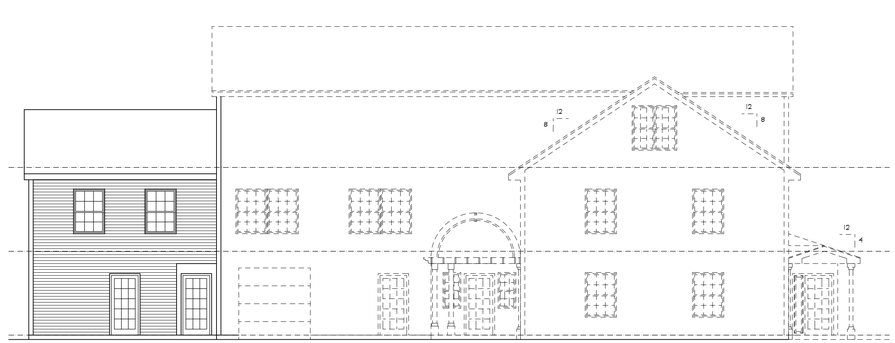
FRONT ELEVATION

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



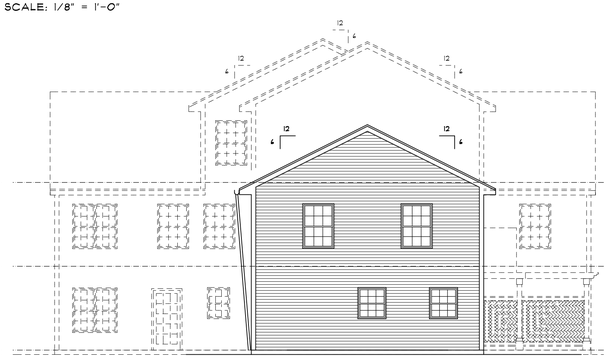
RIGHT SIDE ELEVATION

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



LEFT SIDE ELEVATION

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



REAR ELEVATION

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

NO.	DESCRIPTION OF REVISION	DATE
1	REVISED PER CODE	04/20/17

Reviewed for Code Compliance Inspections Division Approved Date: 04/26/17

NEW RESIDENCE

11 POMEROY STREET
PORTLAND, MAINE

Gleason Architects
P.O. BOX 596
STRATHAM, NEW HAMPSHIRE 03885
603 772-7370

ARCHITECT

ENGINEER

DATE: 02/15/17

PROJECT NO. 201618

SHEET NO.

A-1

OF SHEETS

PDF Revised by Sevee and Maher Engineers 10/24/2018

MEMORANDUM
PLANNING AND URBAN DEVELOPMENT DEPARTMENT
PLANNING DIVISION

To: Sean Dundon, Chair, and Members of the Portland Planning Board
From: Christine Grimando, Senior Planner
Date: November 21, 2018
Re: 100 Fore Street
Project #: PL-000358-2018
CBL: 019 A010
Meeting Date: November 27, 2018

I. INTRODUCTION

100 Fore Street, LLC has applied to the Planning Board with a Level III site plan review of a proposed three-level parking garage with two levels of commercial office space above on a 2.97-acre lot, mixed uses along Fore Street, and renovation of a portion of an existing building for a fitness center. The Planning Board previously held a workshop on October 23rd focused primarily on design.

The newest application materials reflect substantial changes to site layout and building design. The following provides a new design review in response to revisions made by the applicant since October, as well as updated comments regarding transportation, circulation and site access. The November 27th workshop serves as a continuation of design review and the overall site layout. Many of the updates, recently received, are still being reviewed by City staff and third-party reviewers. Full comments will be reflected in full at a subsequent Planning Board meeting.

Notice of this workshop appeared in the *Portland Press Herald* on November 16 and November 17, 2018. Notices were sent to 172 property owners within 500 feet and to the interested citizens list.

Applicant: 100 Fore Street, LLC
Consultants: Stantec Consulting Services, Archetype PA, Cianbro, ALA Landscape Architecture

II. REQUIRED REVIEWS

Waiver Requests	*Applicable Standards*
Public Transit Access: requesting not to be required to construct transit facilities	Site Plan 14-526(a)3., Public Transit Access
# of Bicycle Parking Spaces: requesting waiver until TDM is brought forward	Site Plan 14-526(a)4.b, Location and Required Number of Bicycle Parking Spaces
Landscape Preservation: negligible existing landscaping to preserve	Site Plan 14-526(b)2, Landscape Preservation

Review	*Applicable Statute*

Site Plan	Section 14-526

III. PROJECT DATA

Existing Zoning	B-6/B-6 Height Overlay
Existing Use	Surface Parking (136 spaces), single story building with multiple tenants (29,675 sf).
Proposed Use	Structured parking, office, retail.
Proposed Development Program	Three-level parking garage (539 spaces total) with two levels of commercial office space and ground floor retail: Ground Level Parking 64,980 (182 Spaces) Level 1 Parking 64,320 (178 Spaces) Level 2 Parking 64,490 (179 Spaces) Level 3 Commercial Office 42,980 Level 4 Commercial Office 39,190 Total 275,960 SF Additional Street Level Retail 3,808 SF
Parcel Size	2.97-acre lot

	Existing	*Proposed*	*Net Change*
Building Footprint	29,675 SF	74,080 (64,980+9,100)SF	44,405 SF
Building Floor Area	29675 SF	288,868 SF	259,193 SF
Impervious Surface Area	9,103 SF	9,103 SF	0 SF
Parking Spaces	140 (including 4 handicap spaces)	539	399
Bicycle Parking Spaces		Waiver request to defer bicycle spaces until TDM.	
Estimated Cost of Project	$23 - $31 million		

IV. CONTEXT

The parcel is in the B-6 zone and is surrounded by residential, waterfront and mixed-use zones. The B-6, though it is not a waterfront zone, grew out of recommendations for the Eastern Waterfront for a mixed-use zone that was compatible with waterfront uses and the nearby Eastern Waterfront Port Zone (EWPZ). The B-6, encompassing 100 Fore Street, occupies the upland, mixed-use portion of the Eastern Waterfront, and has no marine-dedicated requirements, though it allows for supportive services, such as fuel storage and marine supply stores. 100 Fore Street is also abutted by the R-6 zone and the residential neighborhoods of Munjoy Hill, and the IS-FBC zone, a neighborhood with both residential and commercial uses. The Eastern Waterfront includes the Ocean Gateway Marine Passenger Terminal; 58 Fore Street/Portland Company site, recently approved for a master development plan and the site of a new historic district; a marina; and a sailing school. The area is the locus of significant planning initiatives, public investment, and private development. Examples of public initiatives to support the Eastern Waterfront and surrounding area include: a road and utility extension of Thames Street, new public open space and waterfront access in the location of the Amethyst Lot, and a study to improve transportation and circulation for the Commercial Street corridor. Examples of private development recently completed or underway include the WEX headquarters (1 Hancock), redevelopment of the Shipyard Brewery site (86 Newbury Street), the Ocean Gateway Garage addition (167 Fore Street), and the AC Hotel (158 Fore Street).

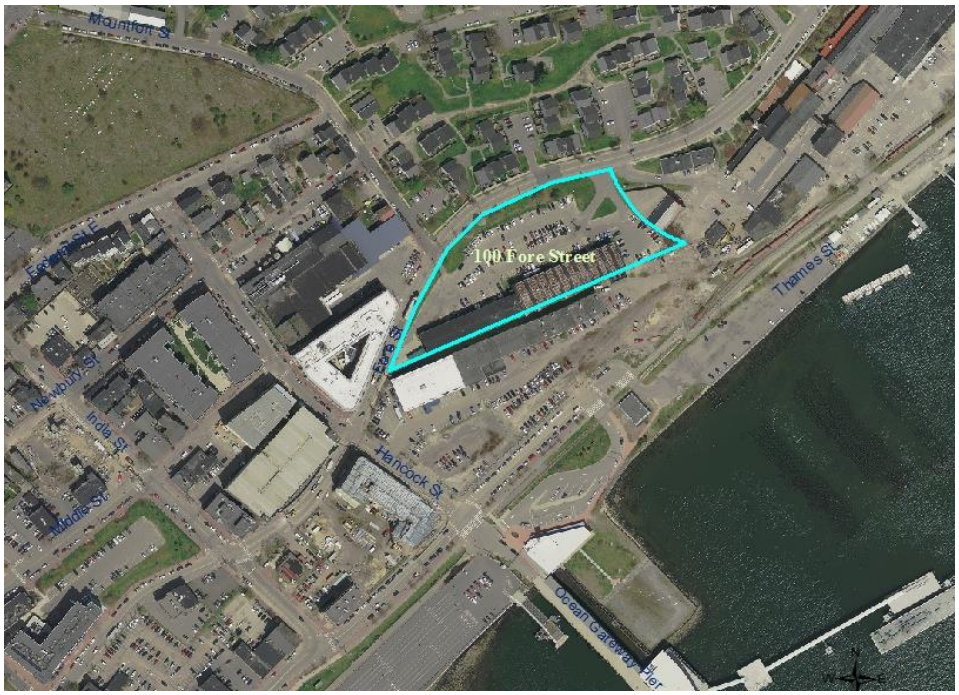


Figure 1. Aerial view, 100 Fore Street and surroundings

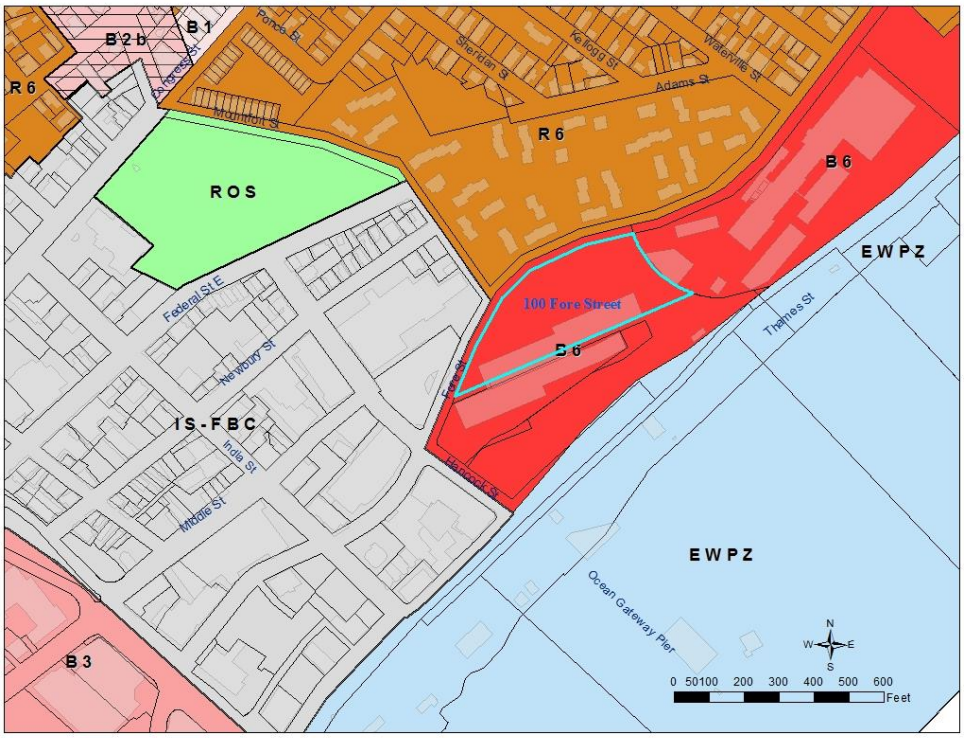


Figure 2, Zoning Context

V. PROPOSED DEVELOPMENT

The proposed development includes a three-level parking garage with two levels of commercial office space above and retail on Fore Street. Currently an active site with office, retail and commercial services, and surface

parking, the existing one-story building will be partially demolished. Approximately 9,100 sf of the existing building is proposed to be retained for redevelopment as a fitness center to serve employees at 1 Hancock Street. Also included in the proposal is a design that anticipates a future street connection from the Thames Street extension to Fore Street.

VI. PUBLIC COMMENT

The Planning Division has received three public comments on the 100 Fore Street application. Comments include concerns with the addition of new parking spaces, increased traffic congestion, parking as a use in a space that might otherwise provide housing, the economic and environmental necessity of reducing the city's auto dependency, and the blocking of views of the waterfront.

A neighborhood meeting will be scheduled.

VII. DESIGN

The applicant has made significant changes to the building design, materials, color palette, and landscape design. Revised renderings are included in Plan 29 - Plan 33. The applicant has met with Planning staff to discuss changes based on previous feedback, as well as direction given at the Planning Board workshop. A full design review memo from Caitlin Cameron, Urban Designer, is included as Attachment 5.



Figure 3, Rendering from Fore Street

VIII. TRANSPORTATION, ACCESS, & CIRCULATION

Combined Traffic Movement Permit

This project is part of a district Transportation Movement Permit, submitted to the MaineDOT in early November. This Eastern Waterfront Transportation District application is a collaborative effort, initiated and coordinated by the Department of Planning & Urban Development, to put forward a robust and holistic approach to traffic management in an area undergoing numerous substantial developments in a relatively short period of time. The co-applicants (Figure 4) include the Shipyard site redevelopment (86 Newbury Street), WEX, 100 Fore Street, and the City-owned parcel between Thames Street (in the interim referenced as 0 Thames Street).

The application will also require a Transportation Demand Management plan (TDM).



Figure 4, Eastern Waterfront TMP participating properties

Fore Street Connector

The Fore Street Connector has been substantially redesigned, in consultation with City staff and the owners of 58 Fore Street in order to achieve a road design on the 100 Fore Street property that seamlessly integrates with City street standards, the anticipated buildout of 58 Fore Street, the remaining design of the connector road to Thames Street, and the final design of the Thames Street extension. Though there still may be final modifications to the layout shown on the most recent site plan (Plan 5), the latest design is a significant update to the overall layout of the project.

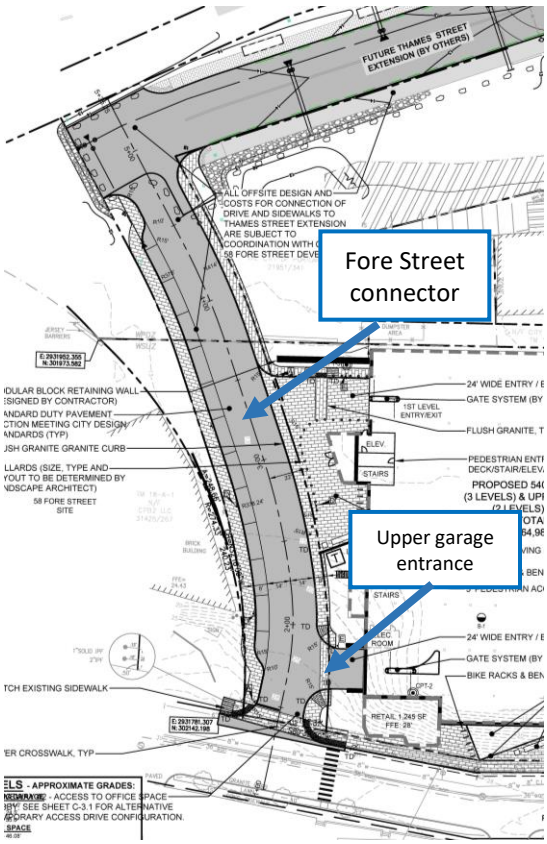


Figure 5, Fore Street connector

Site Circulation & Access

Both Tom Errico, providing traffic engineering review, and Bruce Hyman, Transportation Program Manager, have expressed concern about the traffic and pedestrian safety implications of the uppermost garage entrance, nearest to Fore Street. The applicant stated at the previous workshop that this was an entrance not anticipated to generate a great number of trips, but the applicant should, at the November 27th workshop, address this concern more thorough with an explanation of alternatives that were considered, possible mitigation of safety impacts, and the anticipated impact of full

build-out of the Fore Street connector on traffic circulation patterns.

Bruce Hyman has provided other comments (Attachment 6) regarding the site design, including use of parking spaces for the fitness center, bicycle parking requirements, sidewalk widths, turning radii, curb ramp designs, inconsistencies across some plan sheets, and other access and circulation items that should be incorporated as changes into the final plan set.

XIV. NEXT STEPS

1. Applicant to address staff comments and additional comments of the Planning Board;
2. Applicant to prepare final plan submission, including site plan submittal requirements for review by the Planning Authority and Planning Board; and
3. Hold a follow-up Planning Board workshop or Public Hearing.

XV. ATTACHMENTS

Planning Board Report Attachments

1. Civil Engineer Review (memo from Lauren Swett 10/19/2018)
2. Traffic Engineer review (memo from Thomas Errico 10/19/2018)
3. Urban Design review (memo from Caitlin Cameron 10/19/2018)
4. Review Memo for 10-23 Workshop (memo from Christine Grimando 10/19/2018)
5. Urban Design review (memo from Caitlin Cameron 11/21/2018)
6. Transportation Program Manager review (memo from Bruce Human 11/21/2018)

Applicant's Submittals

A. Level III Site Plan Application
B. Cover Letter
C. Project Description
D. Zoning Assessment
E. Right, Title & Interest
F. Financial Capacity
G. Technical Capability
H. Waiver Requests
I. Transportation
J. Environmental and Stormwater
K. Public Infrastructure & Safety
L. Site Design
M. Environmental & Landscape Features
N. Construction
O. Architectural Narrative

Plans

Plan 1 Cover Sheet
Plan 2 General Notes
Plan 3 Topographic Survey
Plan 4 Existing Conditions and Demolition
Plan 5 Site Plan
Plan 6 Grading, Drainage, Erosion Control
Plan 7 Grading Plan
Plan 9 Site Cross Section 1

Plan 9 Site Cross Section 2
Plan 10 Site Cross Section 3
Plan 11 Access Road Profile
Plan 12 Existing Demo
Plan 13 Levels 1 & 2 Ramps
Plan 14 Utility Plan
Plan 15 Landscape Site Sidewalk Details
Plan 16 Stormdrain Utility Details
Plan 17 Pavement Erosion Control Details
Plan 18 Miscellaneous Utility Details
Plan 19 Miscellaneous Details
Plan 20 Layout & Materials Plan
Plan 21 Plantings Plan
Plan 22 Site Details
Plan 23 Site Details
Plan 24 Site Details
Plan 25 Planting Details
Plan 26 Building Elevations
Plan 27 Building Elevations
Plan 28 Building Elevations
Plan 29 Fore Street rendering
Plan 30 Fore Street Lower rendering
Plan 31 Fore Thames with Future Building rendering
Plan 32 Fore Thames rendering
Plan 33 Upper Fore rendering
Plan 34 Ground Level Parking
Plan 35 Elevated Parking 1
Plan 36 Elevated Parking 2
Plan 37 Office 1
Plan 38 Office 2
Plan 39 Lighting 0
Plan 40 Lighting 1
Plan 41 Lighting 2
Plan 42 Site Lighting

Public Comment
PC1 Manter (10-23-2018)
PC2 Day (10-23-2018)
PC3 Milneal (10-23-2018)

Portland Maine | Yes. Google's good here.

Christine Grimando <cdg@portlandmaine.gov>

100 Fore Street

Lauren Swett <lswett@woodardcurran.com> Fri, Oct 19, 2018 at 11:39 AM
To: Christine Grimando <cdg@portlandmaine.gov>

Hi Christine,

I have not had a chance to upload my preliminary comments to Energov, but will this afternoon. My comments at this stage are relatively general:

- The application is preliminary and we will plan to do a complete review of the final submission. There are some big picture coordination questions that exist that may modify the project.
- A stormwater management plan has not been provided. The narrative notes that the project will meet the Basic and General Standards, but does not address the Flooding Standards. Please provide additional discussion on the Redevelopment Standard, and how all of the stormwater standards are being met. While the project may not meet the impervious thresholds to require compliance with the flooding standard, the Applicant should verify that downstream utilities have the capacity to manage the anticipated stormwater runoff and drainage from the site.
- Confirmation of utility ability to serve will be required.
- Significant coordination is required for the access driveway to the east of the site. It is unclear from these plans how stormwater from the project site and the future Thames Street extension to Fore Street will interact with infrastructure that is currently being proposed. The plans as currently submitted show improvements on properties owned by the Applicant and the City, and clarity is necessary on who will be completing the different components of work.
- The applicant has noted that grading north of the building along Fore Street is “TBD.”
- Existing Catch basins in the small parking area at the western garage entrance are noted to be adjusted or replaced as necessary. Additional information on what these basins are for and what they connect to is necessary. Grading in this parking lot is also incomplete (see 15 contour in center of lot).

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

*Licensed in Maine and Wisconsin

Commitment & Integrity Drive Results

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M.ASCE

Chair, Leader Training Committee

American Society of Civil Engineers

http://regions.asce.org/leader-training-committee/

Portland Maine | Yes. Google's good here.

Christine Grimando <cdg@portlandmaine.gov>

100 Fore Street - Initial Traffic Comments

Christine Grimando <cdg@portlandmaine.gov> Fri, Oct 19, 2018 at 1:33 PM
To: Christine Grimando <cdg@portlandmaine.gov>

From: **Tom Errico** <thomas.errico@tylin.com>
Date: Fri, Oct 19, 2018 at 8:35 AM
Subject: 100 Fore Street - Initial Traffic Comments
To: Christine Grimando <CDG@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Hi Christine – I have conducted an initial review of application materials and offer the following traffic comments.

- The Applicant has conducted a trip generation analysis and concluded the project does not meet requirements for a Traffic Movement Permit given project details and trip credits for existing land uses. However, I continue to review the review methods used, which will ultimately determine whether the project will meet Traffic Movement Permit thresholds. Items needing further review include:
    - Specific reductions for existing traffic generation from the site is being reviewed. The reduction of Hamilton Marine is based on an earlier peak hour (3:30-4:30PM) and this may be inflated as compared to the typical commuter peak hour. Specific time-of-day peak hour generation from Hamilton Marine will be further reviewed. A similar review will be conducted for IBec Creative/Jade Integrated Health where 9.6 trips per 1,000SF was recorded (this is a very high trip rate per 1,000SF).
    - Use of a Shared Use Trip Reduction Factor (15%) needs further review given future area characteristics and anticipated tenant details.
    - Use of a Mode Share Reduction Factor of (12.8%) needs further review given project TDM details and gaining a better understanding of ITE trip generating assumptions and what level of alternative modes activity was in place at the site surveyed (ITE is not likely to provide this information).
    - An understanding of the number of employees may help to confirm expected trip generation. It is my understanding the office building will have 350 employees.
- The following summarizes some initial site plan comments.
    - The number of driveways to the site seems excessive. I am concerned about corner clearance to the level 2 garage entrance; the provision of a very wide driveway to the Gym Building (and spacing to the abutting driveway); and the angle of the driveway to the Ground level garage.
    - Information on how each parking level will be managed shall be provided. Given the lack of interior circulation, the parking garage lacks opportunities for optimal sharing of the parking supply.
    - If the Fore Street connector becomes a City Street, the Applicant should provide information on how the proposed roadway configuration would fit in the future public right-of-way and what would the ultimate full cross-section consist of.
    - The Fore Street connector roadway is proposed to be 28-feet wide. On-Street parking is to be prohibited. Determination on the appropriate right-of-way should be performed.
    - The Applicant should provide details on how will truck deliveries be accommodated.
    - Crosswalks should be provided across Fore Street at the Fore Street connector road intersection.
    - The Applicant shall provide width dimensions for all driveways.
    - The southerly Fore Street curb alignment has sharp angle points. Adjustments may make sense and review with DPW staff is suggested.
    - The Applicant shall provide a detailed parking demand/supply analysis.
    - Accommodation of Fire vehicles in the connector road drop off area further crowds this area. Depending on the outcome of Fire Department feedback, alternatives should be explored.

- Further traffic analysis is needed where the access drives intersect with Fore Street.

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"

Planning and Urban Development Department
Planning Division

Subject: B6 Design Review – 100 Fore Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, October 16, 2018

The preliminary review of the proposed garage, office, and retail building at 100 Fore Street was conducted by Caitlin Cameron, Urban Designer, Christine Grimando, Senior Planner, and Shukria Wiar, Planner. The following memo reflects general comments and concerns about the project and frame the areas that would benefit from discussion and feedback during the first Planning Board workshop.

Design Review Criteria:
The Site Plan application is subject to the policies and standards listed below.

- Eastern Waterfront Master Plan - *Design Guidelines for the Eastern Waterfront*
- City of Portland Design Manual – *(g) EWPZ Eastern Waterfront Port Zone and B6 Eastern Waterfront Mixed Use Zone*

More information is needed to evaluate the proposal:

- Diagram showing entrance locations, circulation
- Renderings and images showing the building in context
- Material samples or images

Staff Comment and Topics for Discussion:
Eastern Waterfront design standards: All major and minor development reviewed under the provisions of the eastern waterfront zones shall be designed to support the development of this urban neighborhood as a dense, mixed-use, pedestrian friendly neighborhood.

Staff identified areas of focus for the design review discussion and request Planning Board feedback:

- **Contextual Design**
  The site is below the Munjoy South development and the residential Munjoy Hill neighborhood defined by single family, two-family, and triple decker residential buildings, a small, pedestrian-scale street grid, and a "cinque terre" approach (meaning the development pattern follows the topography with Congress Street as the high point "spine" and Fore Street as the low point). The site is adjacent to the eastern waterfront and Portland Company site which currently includes a mix of transportation, industrial, and tourism uses and building typologies but is yet to be fully developed. And to the west is the India Street neighborhood with a mix of historic and contemporary mixed-use, hotel, and residential buildings of varying heights and scales. Most immediately across the street will be the recently approved office building at the Shipyard site with seven stories and a glass curtain wall and brick façade.

Recent projects have been strongly oriented towards the water and create a design character using high levels of fenestration and curtain wall. Successful design in this area will provide respectful transitions between and recognition of the patterns found within these varying contexts. However, there is latitude to define a new and contemporary pattern of development and possibly a waterfront facing approach. The 100 Fore design proposes to continue that emerging trend for contemporary development on the waterfront.

- Defining Context: What should be considered the context? The eastern waterfront area is being defined by new mid-rise buildings of 4-7 stories, often with large footprints, and contemporary styles. The site is downhill from the Munjoy South development which is not considered to be appropriate urban residential design and is likely to be redeveloped. The building is commercial mixed-use and should reflect that use in its character and scale (rather than drawing from residential character nearby). Staff view this as a transitional site but Fore Street context does include long, mid-rise buildings with active frontage. Staff suggest that the relationship to Fore Street is the most critical and that context should be the most examined. The building should continue to build up the urban street wall and pattern of development established by previous developments and what is proposed at the Portland Company adjacent.
- Contextual Characteristics: Though the scale, use, and style of the surrounding buildings varies, the traditional context is defined by buildings with clear orientation, simple material palettes, strong street walls, and simple forms. The lack of a consistent, distinct context provides freedom for the new development but the current iteration of this proposal lacks cohesiveness, or a clear orientation and design concept. Staff recommend revisions that simplify the design in these ways.
- Relationship to the Street: The relationship to the street is another way in which buildings relate to context. The site complexities and zoning dimensional standards are causing the massing/height of this building to be pushed away from the street. The result is a one-story building on Fore Street. As an urban, mixed-use building, the street façade calls for more height, articulation, activity, and direct orientation. Given the site and zoning constraints, staff agree with the design decision to focus the entrances in a node at the west corner of the building. The curve of Fore Street creates a strong sight line towards this corner of the building – this should be more strongly acknowledge in the design massing, orientation, and concept.
- Orientation: Is it appropriate for a mid-block building to have such a strong waterfront orientation? The building feels schizophrenic in its orientation, trying to both face the water but meet the requirements of enhancing the streetscape. The street wall suffers with this approach (as described above). The design standards emphasize density, mixed-uses, and pedestrian friendliness. Though the character of streetscape on Fore is still being developed, staff believe new designs should create a Fore Street context that does convey an urban, mixed-use, pedestrian-friendly street and likely provides more street orientation.

- **Building Composition (placement, orientation, massing, articulation, and materials)**

The building includes a two-story parking plinth, office uses on the upper floors with circulation towers as anchoring elements, and retail spaces at the ground level at Fore Street. The building smartly uses the grade change to bury the parking. The design approach to Fore Street establishes a new street wall with a one-story garage and liner building. The building includes an entrance plaza at the western corner with concentration of retail, office entry, landscape and

plaza space. The material palette varies from garage and retail level – more solid treatment with storefronts at the retail spaces – compared with the highly transparent office trays that varying in massing. The circulation towers are expressed in solid materials attempting to anchor the floating glass box of the office spaces.

- Hierarchy and Massing: The project places the tallest masses away from the street, interior to the site. There is a significant amount of massing variation between the garage mass, the office plates which move in and out, and the circulation towers. The one-story height at the street does not feel urban especially given the 4-6 story new developments nearby. Staff are concerned that the overall massing, building organization, and material placement do not convey a clear concept or hierarchy and confuse the legibility of the building. Simplification and a clear organizing and design concept should be pursued.

- Orientation: There is not a clear orientation and the massing is placed downhill away from the street. The street edge is an important component of the site and should not be ignored. The two end retail spaces appropriately hold the corners of the building and help define the urban space. The entry plaza at the western corner seems a logical node around which to orient the building forms and massing. Staff agree that creating a street wall is appropriate for this urban site, but the form, uses, height as proposed are all in question at this street interface. That being said, the building face should not strictly follow the curve of Fore Street.

- Materials: Many of the new buildings in this immediate context propose high levels of fenestration and curtain walls. Staff are not opposed to the use of curtain wall here but there are too many materials and the placement is not helping the building to have a clear hierarchy, orientation, or relationship to the context or street. Consider, also, the material relationship of the garage with the street.

- **Pedestrian Environment**

  Fore Street: The interface with Fore Street comes with a set of challenges. Fore Street is not a major pedestrian street and does not currently include high levels of retail or mixed-uses and activity. Fore Street is also a challenging building/pedestrian environment interface given its curves and grade changes; convex street walls are not conducive to friendly pedestrian environments. This long building façade is also north-facing. Staff would like to discuss viable options for this interface that will result in comfortable, appropriately scaled and active space that provides a viable amenity or use given the context and zoning requirements.

  The convex curve in the road and the design of the parking structure result in left over space that is not suitable for retail. Staff support the current plan which shows retail spaces at the two corners of the building – these appear to be viable spaces and are the most visible locations. It is appropriate to square off the wall to the street and create a space between the garage and the sidewalk. Some incidental uses could be housed here – bike storage, for example. Another strategy may be a structure that defines space without full interior enclosure (similar to the pergola suggested at the entrance plaza node). An outdoor plaza and landscaped area is another option – would this space get used as a north-facing space? In any scenario, staff agree that the garage wall must be reconsidered to have more visual interest, articulation, and possibly height.

  Entrance Plaza: Staff support the design direction that places an entrance plaza on the western edge of the site. The curve of the road, the grades, and the building program (retail and office

entrance) make this location a logical node. This point is prominent and visible as one approaches on Fore Street. This design approach further helps mediate the grade changes and to bury and screen the lower level of surface parking. The plaza space should be comfortable and functional and the building design should clearly convey that this is the primary entrances. Staff suggest that future iterations of the design continue in the direction of emphasizing this active node in the landscape design as well as the building architecture.

General design comments for PB workshop!

More height at street

Simplify massing, orientation, hierarchy, materials



10/16/18 Design Review
ccameron, cgrimando
swiar

activation strategies on Fore St.

emphasize this corner/ entrance plaza
↳ massing, ↳ materials
↳ height ↳ plaza design

MEMORANDUM
PLANNING AND URBAN DEVELOPMENT DEPARTMENT
PLANNING DIVISION

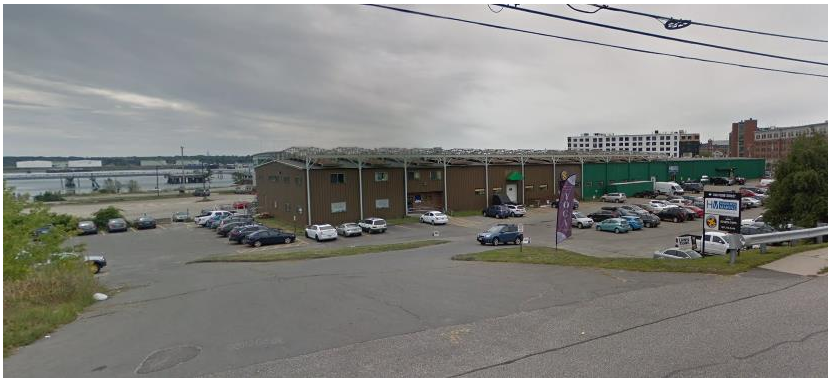
To:	Sean Dundon, Chair, and Members of the Portland Planning Board
From:	Christine Grimando, Senior Planner
Date:	October 19, 2018
Re:	100 Fore Street
Project #:	PL-000358-2018
CBL:	019 A010
Meeting Date:	October 23, 2018

I. INTRODUCTION

100 Fore Street, LLC has applied to the Planning Board with a Level III site plan review of a proposed three-level parking garage with two levels of commercial office space above on a 2.97-acre lot, mixed uses along Fore Street, and renovation of a portion of an existing building for a fitness center. Certain elements of the application are still forthcoming, such as those related to traffic and landscape design, and therefore the comments below do not represent final review of the proposal. The October 23rd workshop provides an opportunity for the Planning Board to provide direction to the applicant on the project on such issues as building design and transportation.

100 Fore Street recently received a zoning map change to the B-6 Height Overlay, reviewed by the Planning Board in July and August 2018, and approved by the City Council in September 2018. The change was, in part, to allow the possibility of structured parking in combination with other uses, as proposed and as envisioned by the Eastern Waterfront Masterplan. The project also beings to provide infrastructure and programmatic elements in the areas of two corridors envisioned in the Eastern Waterfront Masterplan.





Figures 1 & 2. Top Image, 100 Fore Street from Fore looking east. Bottom image, 100 Fore St. from Fore looking south.

Notice of this hearing appeared in the *Portland Press Herald* on October 10 and October 13, 2018. Notices were sent to 172 property owners within 500 feet and to the interested citizens list.

Applicant: 100 Fore Street, LLC
Consultants: Stantec Consulting Services, Archetype PA, Cianbro, ALA Landscape Architecture

II. REQUIRED REVIEWS

Waiver Requests	*Applicable Standards*
Public Transit Access: requesting not to be required to construct transit facilities	Site Plan 14-526(a)3., Public Transit Access
# of Bicycle Parking Spaces: requesting waiver until TDM is brought forward	Site Plan 14-526(a)4.b, Location and Required Number of Bicycle Parking Spaces
Landscape Preservation: negligible existing landscaping to preserve	Site Plan 14-526(b)2, Landscape Preservation

Review	*Applicable Statute*
Site Plan	Section 14-526

III. PROJECT DATA

Existing Zoning	B-6/B-6 Height Overlay
Existing Use	Surface Parking (136 spaces), single story building with multiple tenants (29,675 sf).
Proposed Use	Structured parking, office, retail.
Proposed Development Program	Three-level parking garage (539 spaces total) with two levels of commercial office space and ground floor retail: Ground Level Parking 64,980 (182 Spaces) Level 1 Parking 64,320 (178 Spaces) Level 2 Parking 64,490 (179 Spaces) Level 3 Commercial Office 42,980 Level 4 Commercial Office 39,190 Total 275,960 SF Additional Street Level Retail 3,808 SF
Parcel Size	2.97-acre lot

	Existing	*Proposed*	*Net Change*
Building Footprint	29,675 SF	74,080 (64,980+9,100)SF	44,405 SF
Building Floor Area	29675 SF	288,868 SF	259,193 SF
Impervious Surface Area	9,103 SF	9,103 SF	0 SF
Parking Spaces	140 (including 4 handicap spaces)	539	399
Bicycle Parking Spaces		Waiver request to defer bicycle spaces until TDM.	
Estimated Cost of Project	$23 - $31 million		

IV. CONTEXT

The parcel is in the B-6 zone and is surrounded by residential, waterfront and mixed-use zones. The B-6, though it is not a waterfront zone, grew out of recommendations for the Eastern Waterfront for a mixed-use zone that was compatible with waterfront uses and the nearby Eastern Waterfront Port Zone (EWPZ). The B-6,

encompassing 100 Fore Street, occupies the upland, mixed-use portion of the Eastern Waterfront, and has no marine-dedicated requirements, though it allows for supportive services, such as fuel storage and marine supply stores. 100 Fore Street is also abutted by the R-6 zone and the residential neighborhoods of Munjoy Hill, and the IS-FBC zone, a neighborhood with both residential and commercial uses. The Eastern Waterfront includes the Ocean Gateway Marine Passenger Terminal; 58 Fore Street/Portland Company site, recently approved for a master development plan and the site of a new historic district; a marina; and a sailing school. The area is the locus of significant planning initiatives, public investment, and private development. Examples of public initiatives to support the Eastern Waterfront and surrounding area include: a road and utility extension of Thames Street, new public open space and waterfront access in the location of the Amethyst Lot, and a study to improve transportation and circulation for the Commercial Street corridor. Examples of private development recently completed or underway include the WEX headquarters (1 Hancock), redevelopment of the Shipyard Brewery site (86 Newbury Street), the Ocean Gateway Garage addition (167 Fore Street), and the AC Hotel (158 Fore Street).

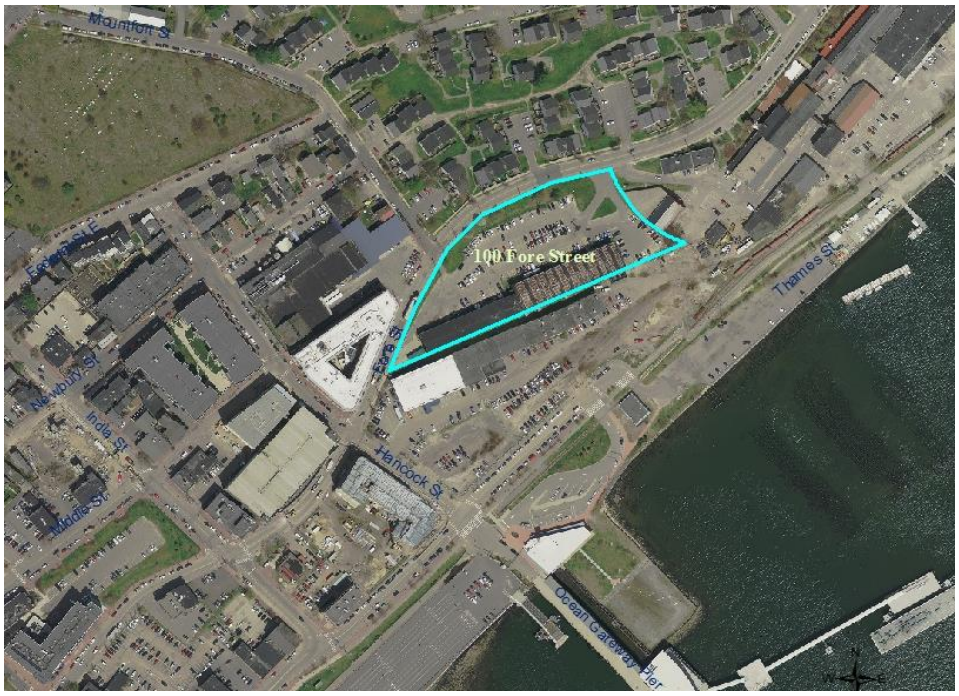


Figure 3. Aerial view, 100 Fore Street and surroundings

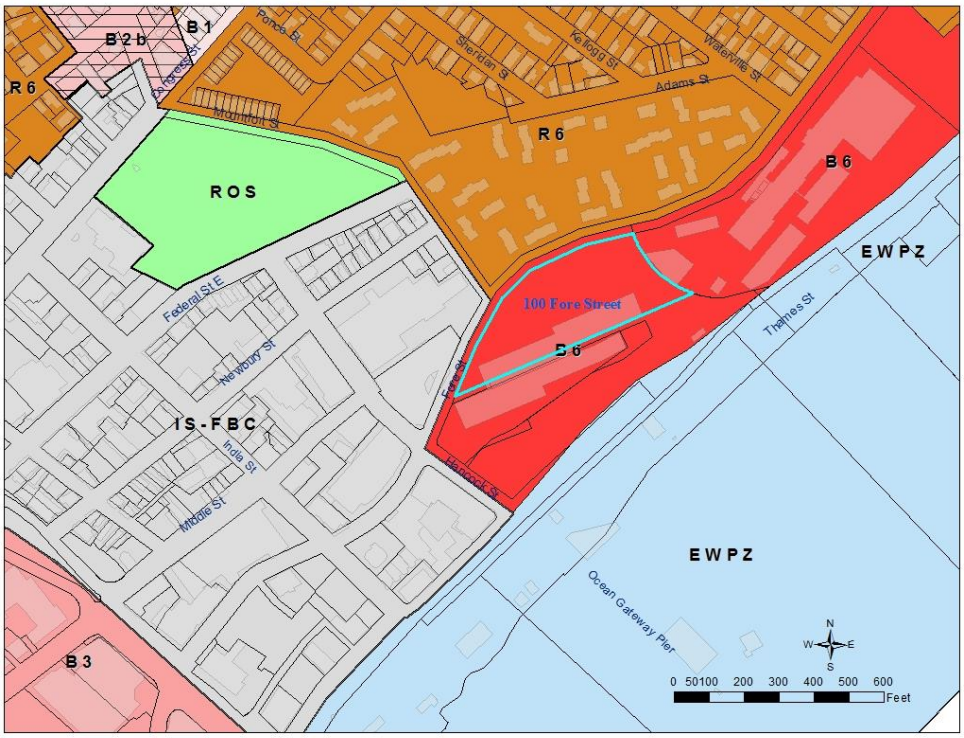


Figure 4, Zoning Context

V. PROPOSED DEVELOPMENT

The proposed development includes a three-level parking garage with two levels of commercial office space above and retail on Fore Street. Currently an active site with office, retail and commercial services, and surface parking, the existing one-story building will be partially demolished. Approximately 9,100 sf of the existing building is proposed to be retained for redevelopment as a fitness center to serve employees at 1 Hancock Street. Also included in the proposal is a design that anticipates a future street connection from the Thames Street extension to Fore Street.

VI. PUBLIC COMMENT

The Planning Division has received no public comments on the 100 Fore Street application as of this writing. A neighborhood meeting is currently being scheduled.

VII. RIGHT, TITLE, & INTEREST

The application includes a quitclaim deed as evidence of right, title, and interest (Attachment E).

VIII. FINANCIAL & TECHNICAL CAPACITY

The estimated cost of the project is $23 - $31 million. The applicant has provided a letter from the Bank of New Hampshire attesting to their financial capacity (Attachment F).

IX. ZONING ANALYSIS

Staff has conducted a zoning analysis with respect to the B-6 zone. Staff request that the applicant confirm that the final design of the proposed building meets maximum height requirements of the B-6 Height Overlay.

X. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527)

A number of submission items are still needed before final review of the application can occur, including cross sectional drawings for driveways, paved areas and sidewalks; turning templates for delivery vehicles; location of snow storage/disposal areas; site landscaping specifications; a stormwater management and drainage plan; location, dimensions and specifications of HVAC and mechanical equipment and associated screening; existing soil conditions and locations of test pits and borings; a TDM plan.





Figure 5, 100 Fore Street, two views looking east on Fore Street.

XII. SITE PLAN REVIEW (Section 14-526)

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

1. *Transportation Standards*

   a. *Impact on Surrounding Street Systems.* The application includes a traffic assessment and narrative in Attachment I, Transportation. Thomas Errico has provided initial comments on the need for a traffic movement permit, traffic assessment methodology, spacing and quantity of driveways, parking, and design of the connector road in Attachment 2.

   b. *Access and Circulation*

   The proposed site plan shows vehicular access to the site from Fore Street, including vehicular access to the building to the west and two building entrances on the east side of the building where the current access to the site is, reconstructed to meet City street standards and designed to be able to connect to the Thames Street ext. Pedestrian access is also shown as provided on the east and the west facades of the building, with no primary pedestrian entrance yet shown along the building's front façade along it's only street frontage. An existing drive to the existing building to the west of the site is proposed to be maintained for loading purposes.

   The design for the connector road from Fore Street to Thames is included on the site plan, with a proposal to construct the portion on the 100 Fore Street property, directly serving this site to City street standards. The remainder of the connection to the Thames Street ext. is not on the applicant's property and not proposed as part of the site plan, but as the design of this segment of the road has

ramifications for the remainder, discussion of the needs of the ultimate design is appropriate in the context of this review.

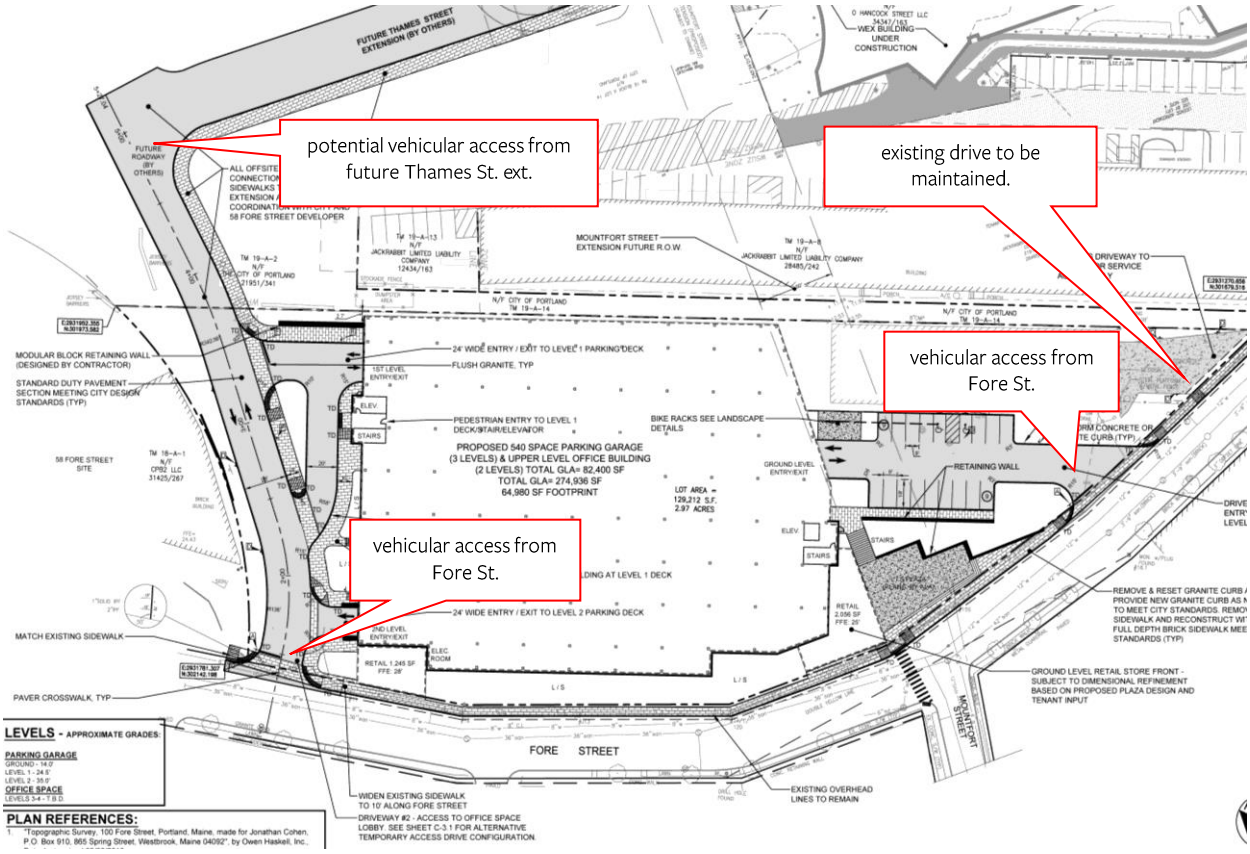


Figure 6, 100 Fore Street Site Plan vehicular access

The existing sidewalks along Fore Street are quite narrow, and the applicant proposes to widen the sidewalk to 10' in some areas and replace the existing concrete sidewalk with brick, an improvement in an area with quite narrow sidewalks. The width of sidewalks shown on the site plan are variable, and the final application should address ADA compliance along Fore Street and along internal sidewalks. In regard to the connector road, sidewalks should be depicted on facing sides of the road in the final site plan layout. In addition, improvements to sidewalks and new crosswalk placement, as part of the Shipyard redevelopment where Mountfort Street intersects Fore Street, should be reflected in future submission materials so that pedestrian circulation to the site can be fully evaluated.

The anticipated connection between Fore Street and the Thames St. ext. and the Mountfort Street extension have been anticipated elements of neighborhood permeability in the Eastern Waterfront since planning efforts in the early 2000s and they continue to be maintained as elements on the B-6 Building Height Overlay (Figure 7). Though a full connection to the Thames Street ext. in the Fore Street connector area is not proposed by this development, a valuable piece of infrastructure is added by this project's easterly access drive.

The notes of the B-6 Height Overlay indicate the site plan review process will determine precise layout

and design of the Mountfort Street ext. The Mountfort Street ext. runs across an area of steep grade changes and through existing building, driveways and parking, and so the potential for vehicular access to Thames Street in this area is limited. However, no new buildings are permitted, and the project proposes some ways Mountfort Street extension area could begin to be used for pedestrian circulation and neighborhood permeability. How design of this space now might be compatible with the rest of the corridor as adjacent properties redevelop is an important topic in the review of this application. Though the full corridor can't be planned for in the scope of this review, this is an opportunity to begin that process.

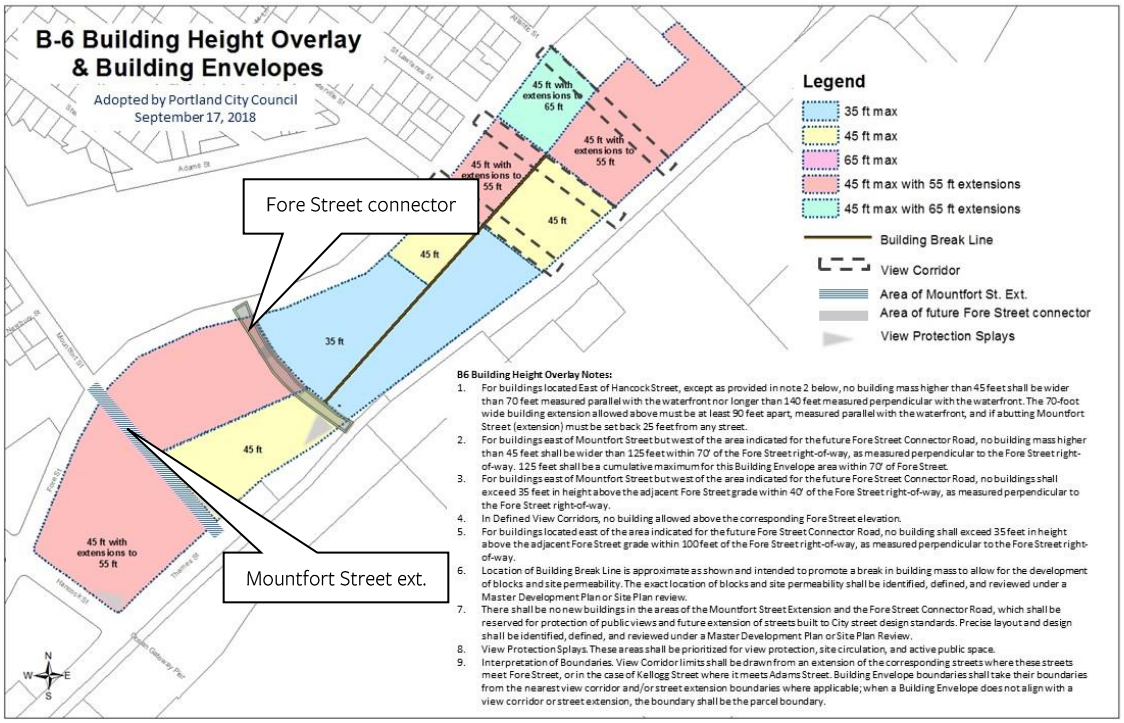


Figure 7

c. *Public Transit Access*

The applicant has requested a waiver from 14-526(a).3, which requires that a commercial development of this size construct a transit facility where the development is proposed along an existing public transit route on a local principal or minor arterial roadway and the nearest existing transit shelter and/or bus pullout on the route is ¼ mile (1,320 feet) or more away from the closest primary building on the site, measured along rights-of-way. Waiver criteria for this requirement: that some or all of the required improvements cannot reasonably be made due to site constraints and/or insufficient right of way width; or that the development is not anticipated to generate public transit usage due to particular characteristics or proposed use of the development. Due to the project being less than 1,000 from the nearest bus stop, a waiver is not required for this item.

d. *Parking*

The plan includes 539 parking spaces to serve the uses on-site, to serve parking needs at 1 Hancock Street (WEX), and to serve other users. Division 20 of the City's Land Use Code establishes the parking requirements for the B-6 zone. For projects 50,000 sf+ the Planning Board sets the parking requirement based on a parking analysis and based on the recommendation of the City transportation engineer. Developments proposing to exceed minimum parking requirements by more than 10% have to

demonstrate through a parking analysis that the amount of parking is appropriate for the proposed use of the site. More information is needed on the parking allocation for 100 Fore uses, WEX and other users before this standard can be evaluated.

e. *Bicycle parking*
The bicycle parking requirement is for 40+ spaces for this site. The application states that bicycle parking will be provided internally and externally, and some locations of racks are proposed. The applicant has requested a waiver for total number, finalized locations and rack specifications until the TDM plan for this site is completed. Finalization of this requirement might also be considered as a condition of approval, since the request is not for a waiver from the standard altogether, but primarily involves timing.

f. *Transportation Demand Management*
A TDM plan is required for all commercial or institutional uses of 50,000 sf or more total floor area. A TDM plan has not yet been submitted, but the application indicates one is being prepared.

2. *Environmental Quality Standards*
   a. *Preservation of Significant Natural Features/Landscape Preservation*
   The site contains no significant natural features to preserve. The applicant has demonstrated there are no qualifying significant natural features to preserve, and has requested a waiver from this standard. Staff recommends this waiver be withdrawn, since the standard doesn't apply to the site.

   b. *Landscaping*
   The applicant has submitted some conceptual plans showing landscaping along the Fore Street façade, entrance drives, and surface parking areas. Concept plans show street trees, a green roof, and vegetative screening of portions of the parking lot. The applicant has not yet submitted a formal landscaping plan, though the applicant indicates they are coordinating with the City Arborist.

   c. *Water Quality/Storm Water Management/Erosion Control*
   Existing conditions on the site are nearly entirely impervious with a limited drainage system. Runoff goes into catch basin inlets and sheet flows off the property. The applicant is proposing a roof drainage system that will connect to the Fore Street sewer, with provisions for future sewer separation. Green roofs and other water quality measures are proposed. Preliminary comments from Lauren Swett note that a stormwater management plan has not yet been required, more grading information is needed and the need for coordination of stormwater improvements with future infrastructure (full comments, Attachment 1:

- *A stormwater management plan has not been provided. The narrative notes that the project will meet the Basic and General Standards, but does not address the Flooding Standards. Please provide additional discussion on the Redevelopment Standard, and how all of the stormwater standards are being met. While the project may not meet the impervious thresholds to require compliance with the flooding standard, the Applicant should verify that downstream utilities have the capacity to manage the anticipated stormwater runoff and drainage from the site.*
- *Significant coordination is required for the access driveway to the east of the site. It is unclear from these plans how stormwater from the project site and the future Thames Street extension to Fore Street will interact with infrastructure that is currently being proposed. The plans as currently submitted show improvements on properties owned by the Applicant and the City, and clarity is necessary on who will be completing the different components of work.*
- *The applicant has noted that grading north of the building along Fore Street is "TBD."*
- *Existing Catch basins in the small parking area at the western garage entrance are noted to be adjusted or replaced as necessary. Additional information on what these basins are for and what they connect to is necessary. Grading in this parking lot is also incomplete (see 15 contour in center of lot).*

3. Public Infrastructure and Community Safety Standards

a. *Consistency with Related Master Plans*
The project is generally deemed consistent with related master plans.

b. *Public Safety and Fire Prevention*
The site provides access from Fore Street for emergency vehicles and may eventually from Thames Street, as well. The Fire Department is still reviewing the application.

c. *Availability and Capacity of Public Utilities*
Ability to serve letters from Unitil and Spectrum have been received, and evidence of capacity to serve from PWD and CMP are required before final approval. Discussions to coordinate placement of utility poles underground in this area are underway, but as of now the application proposes utilizing existing poles.

4. Site Design Standards

a. *Massing, Ventilation, and Wind Impact*
The bulk, location, or height of the proposed buildings are not likely to result in health or safety problems from a reduction in ventilation to abutting structures.

b. *Shadows*
The project is not anticipated to result in shadows on publicly accessible open space.

c. *Snow and Ice Loading*
The project is not anticipated to result in snow or ice accumulation on public ways or adjacent properties.

d. *View Corridors*
The site design standard for view corridors references not obstructing public views identified in the *Downtown Vision View Corridor Protection Plan*. This project meets this standard, as it is not in the vicinity of any of the downtown view protection corridors. The project is in the B-6 Height Overlay, which includes provisions for maintaining areas for future connections between Thames Street and Fore Street, which have the effect of protecting views from public ways along these corridors.

e. *Historic Resources*
The site is within 100 feet of a historic landmark, district, or landscape. The application has been forwarded to the Historic Preservation Program for an assessment of general compatibility with the Portland Company Local Historic District.

f. *Exterior Lighting*
An exterior lighting plan has been submitted.

g. *Noise and Vibration*
The application indicates that HVAC venting will be directed through building roof mounted units or on the ground adjacent to the building (Attachment L, Site Design), though it does not yet show the location of HVAC, mechanical equipment, and associated screening.

h. *Signage and Wayfinding*
The application asks that approval of commercial signage for the project be subject to a condition of approval (Attachment L, Site Design).

i. *Zoning-Related Design Standards*
Design Standards for the B-6 state that development in the zones *shall be designed to support the development of dense, mixed-use neighborhoods with attractive, safe and convenient street level pedestrian environments as demonstrated by compliance with all applicable design standards listed in the Design Manual* (14-526(d).9). It goes on to state that monolithic massing should be avoided, site permeability encouraged, and that larger buildings are concerned, attention given to horizontal and vertical massing. The B-6 is reviewed under the design guidelines for the Eastern Waterfront.

Caitlin Cameron, Urban Designer has included a memo with preliminary comments on the design of the project in Attachment 3.

XIII. CONDITIONAL USES

Structured parking garage is a conditional use in the B-6 zone (14-270(a).2.b), subject to conditional use standards. General conditional use standards (14-474.(c).2) include a demonstration that the proposed use will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zoning district; the volume and type of traffic and hours would not be substantially greater than would occur for a permitted use; the proposed use won't create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and 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.

Standards specific to this use in the B-6 zone include a requirement for the incorporation of first floor retail space or other active mixed use (other than parking) along all street frontages. This standard may be waived provided that garages display architecture that enhances the pedestrian experience and disguises the parking use to the extent possible; that the grade or character of the street won't support retail or first floor mixed use in the foreseeable future; that the first floor of the garage is set back a minimum of 35 feet and the design doesn't impede conversion to mixed-use in the future and is not used for surface parking; that a minimum of 20 feet of depth and nine feet of finished floor clearance could in

the future be converted. The full length of the building along Fore Street likely cannot support continuous retail development, and partial retail paired with another dynamic treatment of the remainder of the front façade may be a positive alternative for this site. The applicant has not requested a waiver for this section, and one may not be needed depending on the final building design and development program. When an active use and/or treatment of the length of frontage between the two retail corners along Fore Street is identified, there can be a full evaluation of the project for consistency with this section.

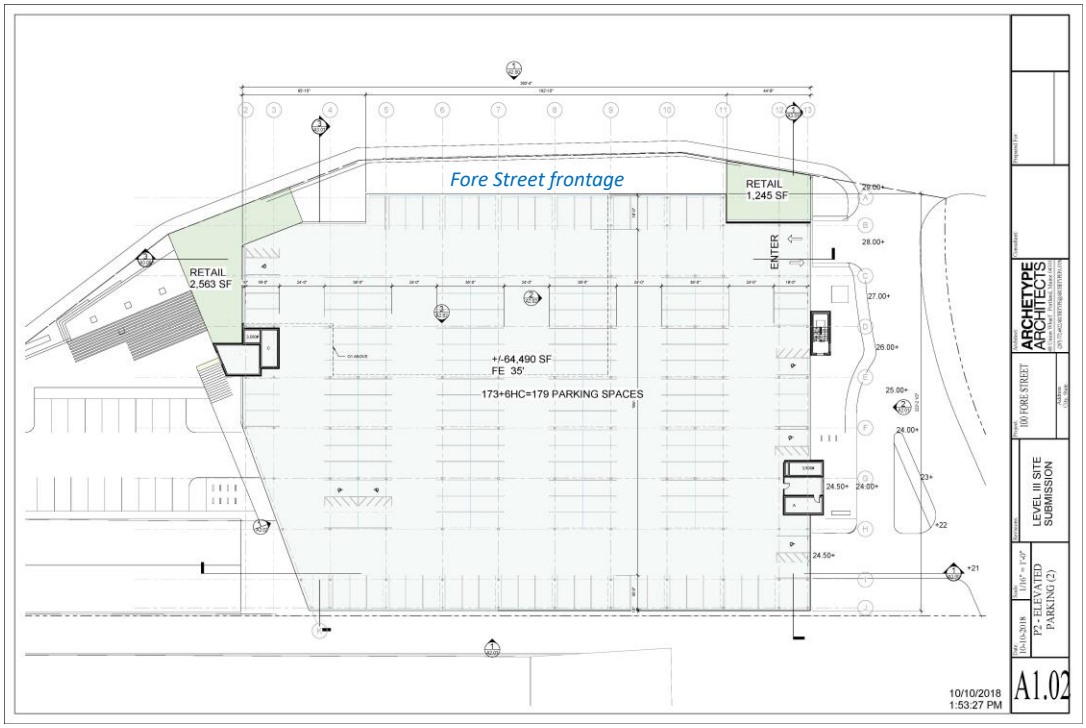


Figure 8, Fore Street frontage, Plan 18

XIV. NEXT STEPS

1. Applicant to address staff comments and additional comments of the Planning Board;
2. Applicant to prepare final plan submission, including site plan submittal requirements for review by the Planning Authority and Planning Board; and
3. Hold a follow-up Planning Board workshop or Public Hearing.

XV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Civil Engineer Review (memo from Lauren Swett 10/19/2018)
2. Traffic Engineer review (memo from Thomas Errico 10/19/2018)
3. Urban Design Review (memo from Caitlin Cameron 10/19/2018)

APPLICANT'S SUBMITTALS

A. Level III Site Plan Application
B. Cover Letter
C. Project Description
D. Zoning Assessment
E. Right, Title & Interest
F. Financial Capacity

G. Technical Capability
H. Waiver Requests
I. Transportation
J. Environmental and Stormwater
K. Public Infrastructure & Safety
L. Site Design
M. Environmental & Landscape Features
N. Construction

PLANS

Plan 1 Cover Sheet
Plan 2 General Notes
Plan 3 Topographic Survey
Plan 4 Existing Conditions and Demolition
Plan 5 Site Plan
Plan 6 Grading, Drainage, Erosion Control
Plan 7 Site Cross Section 1
Plan 8 Site Cross Section 2
Plan 9 Site Cross Section 3
Plan 10 Utility Plan
Plan 11 Landscape Site Sidewalk Details
Plan 12 Stormdrain Utility Details
Plan 13 Details
Plan 14 Miscellaneous Utility Details
Plan 15 Miscellaneous Details
Plan 16 Ground Level Parking
Plan 17 Elevated Parking 1
Plan 18 Elevated Parking 2
Plan 19 Office 1
Plan 20 Office 2
Plan 21 Lighting 0
Plan 22 Lighting 1
Plan 23 Lighting 2
Plan 24 Lighting Site
Plan 25 Building Elevations and Renderings (10-17-2018)

Planning and Urban Development Department
Planning Division

Subject: B6 Design Review – 100 Fore Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Monday, November 19, 2018

The preliminary review of the proposed garage, office, and retail building at 100 Fore Street was conducted by Caitlin Cameron, Urban Designer, Christine Grimando, Senior Planner, and Shukria Wiar, Planner. The following memo reflects general comments and concerns about the project and frame the areas that would benefit from discussion and feedback during the first Planning Board workshop.

Design Review Criteria:
The Site Plan application is subject to the policies and standards listed below:

- Eastern Waterfront Master Plan - *Design Guidelines for the Eastern Waterfront*
- City of Portland Design Manual – *(g) EWPZ Eastern Waterfront Port Zone and B6 Eastern Waterfront Mixed Use Zone*

Outstanding Information:
More information is needed to evaluate the proposal.

- Diagram showing entrance locations, site circulation
- Coordinate the plans with the renderings
- Renderings and images showing the building in context and street experience
- Material samples or images

Staff Review Comments:
Since the first workshop, in response to the comments to simplify the design and provide more hierarchy, the applicant made revisions to the material treatments, roof lines, and some of the massing of the towers but there are no changes to the overall massing or internal organization of the project. The project uses the strategy of two retail spaces that bookend a landscape plaza on Fore Street. This means the office and garage entrances and bulk of the office building are away from the street, interior to the block. The primary office entrance is located mid-block on the new connector road leaving Fore Street interface primarily residential and plaza spaces.

Eastern Waterfront design standards: All major and minor development reviewed under the provisions of the eastern waterfront zones shall be designed to support the development of this urban neighborhood as a dense, mixed-use, pedestrian friendly neighborhood.

Contextual Design
The site is below the Munjoy South development and the residential Munjoy Hill neighborhood. The site is adjacent to the eastern waterfront and Portland Company site which currently includes a mix of

transportation, industrial, and tourism uses and building typologies but is yet to be fully developed. And to the west is the India Street neighborhood with a mix of historic and contemporary mixed-use, hotel, and residential buildings of varying heights and scales. Most immediately across the street will be the recently approved office building at the Shipyard site with seven stories and a glass curtain wall and brick façade.

Recent projects have been strongly oriented towards the water and create a design character using high levels of fenestration and curtain wall. Successful design in this area will provide respectful transitions between and recognition of the patterns found within these varying contexts. However, there is latitude to define a new and contemporary pattern of development and possibly a waterfront facing approach. The 100 Fore design proposes to continue that emerging trend for contemporary development oriented towards the waterfront.

- Defining Context: The eastern waterfront is being defined by new mid-rise buildings of 4-7 stories, often with large footprints, and contemporary styles. Though this site is directly downhill from the Munjoy South development, that development is not considered to be appropriate urban residential design and is not drawn from as a context driver. Staff view this as a transitional site but Fore Street context does already include long, mid-rise buildings with active frontage**. The building is commercial mixed-use and should reflect that use in its character and scale. Staff suggest that the building relationship to Fore Street is critical to the urban design approach of this project. The building should continue to build up the urban street wall and pattern of development established by previous developments. Consideration should also be given to what is proposed at the Portland Company adjacent – a four-story mixed-use office building with a contemporary design.**
- Contextual Characteristics: Though the scale, use, and style of the surrounding buildings varies, the traditional context is defined by buildings with clear orientation, simple material palettes, strong street walls, and simple forms. **Previously, staff commented that the project lacks cohesiveness, a clear orientation and design concept. Staff recommended revisions that simplify the design in these ways, consciously design the building interface with Fore Street, and provide clear hierarchy and legibility.**
- Relationship to the Street: The relationship to the street is another way in which buildings relate to context. The site complexities and zoning dimensional standards cause the massing/height of this building to be pushed away from the street. The result is a one-story building on Fore Street. **Given that the zoning does not allow more of the office building massing to be on Fore Street**, the design of the components (retail, plaza, garage wall) facing Fore Street are very important to activate and provide an appropriate scale and street wall edge. More specifically, as an urban, mixed-use building, the street façade calls for appropriate height, articulation, activity, and orientation of storefronts and entrances.

  Given the site and zoning constraints, staff agree with the design decision to create a plaza node at the west corner of the building. The curve of Fore Street creates a strong sight line towards this corner of the building – **the design concept, massing, and orientation continue to emphasize this corner appropriately.** However, this circulation tower and building entrance are not considered the main entrance to the garage or office building creating some of the confused hierarchy and legibility to the building design. Staff believe new buildings should create a Fore Street context that conveys an urban, mixed-use, pedestrian-friendly street and provides an orientation to the street.

Building Composition (placement, orientation, massing, articulation, and materials)

The design standards emphasize density, mixed-uses, and pedestrian friendliness.

The building includes a two-story parking plinth, office uses on the upper floors with circulation towers as anchoring elements, and retail spaces at the ground level at Fore Street. The building smartly uses

the grade change to bury the parking. The design approach to Fore Street establishes a new street wall with a one-story garage and liner retail buildings. The building includes a plaza at the western corner with concentration of retail, office/garage egress, landscape, and plaza space. **The material palette was revised to be more simple** – predominantly curtain wall for the office, circulation towers are expressed in solid materials to anchor the floating glass box of the office spaces. A perforated metal wall is proposed as the screen between the garage and Fore Street with plaza and landscape treatments to soften that edge. The towers at the west plaza were also revised to bring more emphasis to this corner and urban space.

- Orientation: The building has multiple orientations - the office building massing is placed downhill away from the street with an orientation to the connector street and the waterfront. But the street edge is an important component to meet the design goals of an urban, mixed-use, and dense urban environment. Staff agree that creating a strong and active street wall is appropriate for this urban site. The entry plaza at the western corner also seems a logical node around which to orient the building forms and massing given the grades, sight lines, and curved street frontage. All of these considerations cause the building to have multiple orientations. Given that condition, the hierarchy and legibility of the different uses becomes critical (see the comments below). The retail spaces on Fore Street need revision to have a clearer orientation and strengthen that street presence (whether to the plaza spaces or Fore Street). The principal entrance for the office building should be emphasized and clearly visible from multiple vantages.
- Hierarchy and Massing: The project places the tallest masses away from the street, interior to the site. There is a significant amount of massing variation between the garage mass, the office plates which move in and out, and the circulation towers. Given the complexity of the massing, it is important to use other design elements to give hierarchy and contextuality to the project. Previous comments asked for simplification and a clear organizing and design concept. The simplification of the materials and use of the vertical tower elements help to do this. Areas for more revision include the height and design of the Fore Street interface, and the hierarchy of the primary building entrance.
- Entrances: The principal office entrance is on the new connector road. The revised design is uses a tower with curtain wall with an angled wall to emphasize this entrance given its location on a side street, mid block. There is still not enough emphasis or clear hierarchy for this entrance. The canted wall makes sense as a design move to orient this entrance tower towards Fore Street and also allow this building component to be visible from Thames Street. However, the curtain wall and tower height do not do enough to mark this as the primary entrance – the material treatment is the same as the rest of the office building and the height competes with the secondary circulation tower on the same façade. The entrance tower should become more distinct using materials, height, possibly a canopy. Some suggestions include introducing a canopy above the entrance, using a special material with similar treatment as the perforated wall on Fore Street, reducing the height of the secondary circulation tower to provide a clearer sense of hierarchy. Staff would like to see a rendering view from Fore Street that shows the view down the connector road towards the building entrance.
- Retail: The retail design is not distinct from the office and does not adequately convey the use. Revise the two retail bays to use best practices of storefront design with grounded base, thoughtful entrance placement, and more directional orientation to legibly convey the entrances and uses. The entrances for the retail spaces should be visible from the

pedestrian approaches and also help to activate Fore Street. The one-story height at the street does not feel urban especially given the 4-6 story new developments nearby .The height of the retail bays is too short in proportion to the rest of the building, the street, and that these are the principal facades facing the street – revise to create more height with parapets, green wall, or similar.

- Materials: Many of the new buildings in this immediate context propose high levels of fenestration and curtain walls. Staff are not opposed to the use of curtain wall here but there is concern about light pollution and drawn shades – how will that be addressed? The material palette and placement was simplified and staff agree that these changes improve the contextuality, legibility, hierarchy, and overall building design.

Pedestrian Environment

Fore Street: Fore Street is a challenging building/pedestrian environment interface given its curves and grade changes; convex street walls are not conducive to friendly pedestrian environments. This long building façade is also north-facing. The convex curve in the road and the design of the parking structure result in left over space that is not suitable for retail. **Staff support the proposal to locate retail spaces at the two corners of the building on Fore Street** – these appear to be viable spaces and are the most visible locations helping with the **activation of the street**. The two end retail spaces appropriately hold the corners of the building and help define the urban space. It is also appropriate to square the garage wall to the street and create a space between the garage and the sidewalk.

Staff have the following questions or comments:

- Plaza Design: The plaza space is north-facing and narrow. The back face of this space is a parking garage. These challenges should be carefully considered in trying to make an active space. **The retail uses, benches, and bicycle parking will help activate here** and the material treatment of the wall is an important factor to making the space **visually interesting and comfortable.** Consider:
  - Who will use the plaza space? Is the north-facing plaza space viable or comfortable?
  - Benches may not be appropriate or useful here – consider seating height walls instead.
  - What are the proposed paving, transitions, and materials?
  - Where are street lights placed? Conflicting information on the plans. Lights should not interfere with the sidewalk or plaza seating.
  - The bicycle racks are placed in logical and convenient locations, however, there are too many racks shown. Some covered and secure bicycle parking should be provided inside the garage.
  - The perforated screen wall is a creative solution to screen the garage and provide visual interest. The idea appears to be most successful at night.
    - How will metal look during the day without the light feature?
    - Interaction or integration of this feature wall not resolved with the retail bays and entrances.
    - Consider using this material approach on the entrance tower to visually tie this element across the building but also to better mark the entrance as a distinct feature.
  - Retail: The proposed entrance locations for the retail is unclear and does not necessarily reflect the sight lines and circulation patterns.

- Revise the entrance locations – oriented to Fore Street or the West Plaza for the west retail; two entrances are usually not desirable in retail. Possibly provide a corner entry at the east retail to make visible from both directions.
- Clearly define front and side facades for the retail. For example, treat the connector street façade as a side façade to help differentiate the office from retail uses and to bring legibility to building entrances.

Landscape: Landscape is appropriately used to soften the plazas space and provide screening in other locations. The landscape and sidewalk design at Fore Street and the connector road needs revision to align with pedestrian circulation patterns. There appear to be conflicts with the street light and tree locations. The planter area should be scaled back so as to not block the pedestrian desire line from the crosswalk across Fore Street down the connector road. What are the edge treatments on the planted areas? In addition, the planter should have a defined edge and serve as a grade transition on the side of the retail space. Consider moving the street tree and street light possibly inside the planter to be more viable and reduce conflicts in sidewalk area. The transformer should be located in a more hidden or screened location – this is too prominent to the street.

West Plaza: Staff support the design direction that places a plaza on the western edge of the site. Since the first workshop, the applicant clarified that this plaza is not the primary entrance to the garage or office building. The curve of the road, the grades, and the building program (retail and office entrance) make this location a logical node. This point is prominent and visible as one approaches on Fore Street. This design approach further helps mediate the grade changes and to bury and screen the lower level of surface parking. The plaza space should be comfortable and functional and the building design should clearly convey entrances.



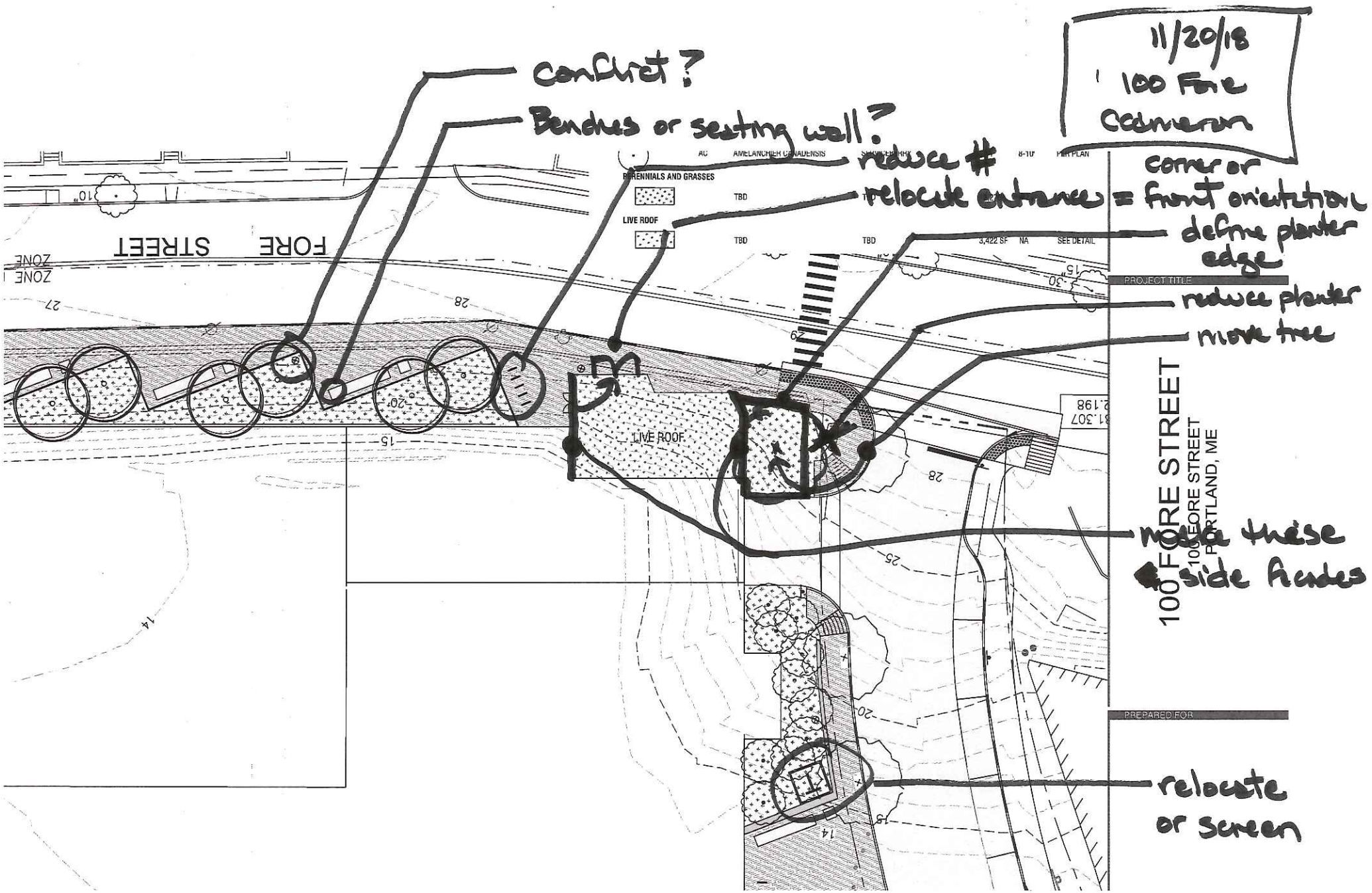
reduce height = hierarchy

distinct retail storefront w/ taller height and a base

differentiate this principal entrance from the rest of bldg = hierarchy
- canopy, special materials, height, angled wall

treat this like a side facade

11/20/18 100 Fore
kcameron


11/20/18
100 Fore
Cedarron
Conflict?
Benches or seating wall?
reduce #
relocate entrance
= front orientation
corner or
define planter edge
reduce planter
move tree
make these side facades
relocate or screen
PERENNIALS AND GRASSES
LIVE ROOF
TBD
3,422 SF
NA
SEE DETAIL
FORE STREET
ZONE
LIVE ROOF
PROJECT TITLE
100 FORE STREET
100 FORE STREET
PORTLAND, ME
PREPARED FOR

Portland Maine | Yes. Google's good here.

Christine Grimando <cdg@portlandmaine.gov>

100 Fore Street: Workshop Comments on Public Realm/Sidewalk/Transportation

Christine Grimando <cdg@portlandmaine.gov> Wed, Nov 21, 2018 at 2:43 PM
To: Christine Grimando <cdg@portlandmaine.gov>

---------- Forwarded message ---------
From: **Bruce Hyman** <bhyman@portlandmaine.gov>
Date: Wed, Nov 21, 2018 at 2:10 PM
Subject: 100 Fore Street: Workshop Comments on Public Realm/Sidewalk/Transportation
To: Christine Grimando <cdg@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Caitlin Cameron <ccameron@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>

Good afternoon, Christine,

The following are my comments on the latest sets of plans for 100 Fore Street

- I remain concerned about the impact on the streetscape/pedestrian accessibility/public realm on the close proximity of the entrance/exit of the 2nd/top level of the parking garage to Fore Street due to the interface of grades of the proposed connector road from Fore Street and the parking garage entrance/exit (approx. 15%).
- The corner radii of the driveway off of Fore Street to the ground level parking garage should be adjusted to be smaller or turning templates provided to justify how large they are - the driveway width at the property line appears to be approximately 35'.
- The location of light fixtures/poles appears to be inconsistent across drawings - on some plans their location creates pinch points along the Fore St in relationship to utility poles.
- Detectable Warning Panels are not required across driveways as shown on Fore Street driveways.
- The curb ramp at the SW corner of Fore St and the proposed connector road should be split into two distinct curb ramps.
- The clear sidewalk width along Fore Street is to be a minimum of 6' wide - the plans state "existing overhead lines to remain" - if so, a minimum sidewalk width of 8' is to be provided along the entire project frontage.
- If on-street parking is to be provided, I suggest consideration of the reduction in the curb to curb width of the proposed connector road to 32' from the proposed 36'.
- The applicant is to provide justification for the 18 surface parking lots at the ground floor parking garage entrance and gym.
- The applicant shall explain the location/distribution and number of bicycle parking spaces provided in relation to building entrances and the opportunity for covered/secure bicycle parking as described in the Technical Manual:
    - "Section 1.15.1. Bicycle parking intended for long-term use (residential or full-time employee parking) shall be provided under covered areas and/or in secure storage lockers."
    - "1.15.3. Commercial, Industrial (requiring more than ten (10) bicycle parking spaces):
        - ** A minimum of ten percent (10%) of required bicycle parking shall be provided within fifty (50) feet of the main egress point of the structure, or shall be no further from such entry than the nearest five (5) non- handicapped parking spaces.
        - ** Where there is more than one structure on a site, or where a structure has more than one main entrance, the parking shall be distributed to adequately serve all structures or main entrances."

Please don't hesitate to contact me if you or the applicant have any questions about my comments

Best regards,

Bruce.
--
Bruce Hyman
Transportation Program Manager
Transportation Division

Department of Planning & Urban Development
389 Congress Street

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

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes to the left

General Application Documents

Checklist	Items to be Provided
Yes NA Plan ✔	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes NA Plan ✔	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes NA Plan ✔	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes NA Plan ✔	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes NA Plan ✔	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes NA Plan ✔ ✔	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS, if applicable • Evidence of existing easements and any proposed easements
Yes NA Plan ✔	WAIVER REQUESTS • Written request for waiver describing request and reason. Waiver Table
Yes NA Plan ✔	FINANCIAL CAPABILITY • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA Plan ✔	TECHNICAL CAPABILITY • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Please submit each document as a separate PDF file.

TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ✔ ✔	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
Yes NA Plan ✔ ✔	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
Yes NA Plan ✔ ✔	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ✔	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ✔ ✔	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ✔ ✔	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ✔ ✔	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ✔	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ✔	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ✔ ☐ ✔	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ✔ ☐ ✔	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ✔ ☐ ✔	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ✔	**Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔ ✔	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔ ✔	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

SITE DESIGN	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appendix 1)

Yes NA Plan ☐ ✔ ☐	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes NA Plan ✔ ☐ ☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ✔ ☐ ☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ✔ ☐ ☐	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes NA Plan ✔ ☐ ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan	
Check list	
Yes NA Plan ✔ ☐ ☐	**Construction Management Plan** • Construction Management Document and Plan

Level II and Level III Site Plan Checklist

Please upload the following drawings with the listed details into e-Plan as separate pdfs.

☑ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☑ **Existing Conditions**

- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☑ **Proposed Site Plan**

- Ground floor area, and grade elevations for all buildings

☑ **Access, Circulation, and Parking**

- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☑ **Site Considerations**

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☑ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

☑ **GRADING and DRAINAGE PLAN** including:

- Existing grades and drainage
- Proposed grades
- Proposed stormwater management meeting Technical Manual (Section 5) standards
- Location and proposed alteration of a water course
- Preservation or alteration of wetlands

☑ **EROSION CONTROL**

- Must be in compliance with Technical Manual, Section 5

☑ **LANDSCAPE PLAN** including:

- Existing vegetation to be preserved and preservation measures
- Proposed landscaping and buffers
- Planting schedule

☐ **RECORDING PLAT**, if applicable

- IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)

☑ **ARCHITECTURAL PLANS & RENDERINGS** including:

- Exterior building elevations, color renderings, illustrations of all sides
- Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening
- Provide context drawings, if applicable (Design Manual, page 1)
- Floor plans

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

October 9, 2018

Ms. Christine Grimando
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Application for Level III Site Plan Application
100 Fore Street
Tax Map 019/Block A/10

Dear Christine:

On behalf of **100 Fore Street, LLC** (Applicant), our office is pleased to provide the uploaded submission materials for a Level III Site Plan Application. This submission package is intended to meet the City's Level III Site Plan Submission requirements as outlined in the Level III Site Plan Checklist as well as Section 14-526 of the Code of Ordinances. This submission was contemplated during the recent Eastern Waterfront Overlay zoning language changes approved by the City Council which were based upon the recommendation of the Portland Planning Board. These changes relate to the measurement of building height, specifically associated with the property at 100 Fore Street. The proposed project was further contemplated when the City of Portland transferred property to 0 Hancock LLC for the development of the WEX Corporate headquarters building (now under construction and expected completion December 2018). At that time, the Applicant discussed and committed to the development of a parking garage/office complex at the 100 Fore Street site. The Applicant has assembled a team consisting of Archetype PA, Cianbro, ALA Landscape Architecture and Stantec to assist with plan development and permitting.

PROJECT OVERVIEW

100 Fore Street LLC is proposing a three-level parking garage with two levels of commercial office space above on a 2.97-acre lot located at 100 Fore Street. The site is identified as Lot 10 on Tax Map 19, Block A. The site is currently in the B6 Commercial Business Zone and Eastern Waterfront Overlay District. The site contains a single approximately 29,675 SF single story building that has contained multiple tenants, including the Hamilton Marine retail store and Xpress Copy. The existing site also contains 136 parking spaces and various utilities including water, sewer, gas and power services from Fore Street. The existing site has two driveways off Fore Street. The majority of the existing building will be demolished to make way for the proposed five story building. Approximately 9,100 SF of the existing building, located at its west end, will be retained and refurbished to provide a private fitness center for staff of the office building and those of the new building at 1 Hancock Street (WEX Headquarters).

The new building development will include a three-level parking garage with two upper levels for office space for a total of five floors. The overall building footprint will be approximately 64,980± SF. Each of the floors will have the following sizes:

Description	Size (SF) (parking count)
Ground Level Parking	64,980 (182 Spaces)
Level 1 Parking	64,320 (178 Spaces)
Level 2 Parking	64,490 (179 Spaces)
Level 3 Commercial Office	42,980
Level 4 Commercial Office	39,190
Total	**275,960 SF (539 Spaces)**
Additional Street Level Retail	3,808 SF

The new 539-space three (3) level parking garage will require three access locations, as each parking deck will require independent access as there will be no interior access ramps. The ground level lot will be accessed from a new driveway located just west and opposite the Mountfort Street intersection along Fore Street. The first and second level decks will be accessed from the site's proposed easterly driveway. The 28' wide easterly driveway will be constructed to satisfy City street standards as it may ultimately be extended to cross City land to the south and connect to the proposed Thames Street Extension, tentatively scheduled for construction by the City of Portland in 2019 or thereabouts. It is expected that Unified Parking Partners or a similar operator will actively manage the garage operations including directional signage, security, ticketing and related issues. The building will contain three (3) stairwells and two full building elevators located on each end of the building. The proposed office tenants are expected to lease spaces in the garage and spaces will also be open for public parking. There will also be 19 regular surface parking spaces on the site to provide a total of 559 parking spaces on the property. Per section 14-332, the parking requirements for the 82,400 SF office will be 206 spaces, thus leaving approximately 352 spaces for other lease tenants (including street level retail) and public parking in the nearby vicinity.

The site improvements include the following:

- Removal and resetting of granite curb and new Brick sidewalk to replace the existing concrete sidewalk along the Fore Street Right of Way.
- Construction of an easterly entrance off Fore Street, nearly in the same location as an existing driveway. The new driveway will be designed to allow for its continuation southerly to the City owned parking lot and to the end of the proposed Thames Street Extension. The Easterly driveway will also provide access into the Level 1 and Level 2 parking decks as well as pedestrian access to an interior lobby containing the elevator and stairwell. It is likely that the upper two floors of the parking garage will be dedicated to the office tenants and potentially offsite office tenants.

- Construction of a new driveway off Fore Street, located just west of the Mountfort/ Fore Street intersection. This new driveway will provide access to the ground level surface parking and also the ground level garage parking area. The ground level parking may be dedicated to not only on and offsite office tenants, but for general public parking (subject to fees). A third, existing driveway at the far west end of the property, will remain in use to provide access to the end of the existing building to remain, since there is a loading door on the building that will remain available for use.
- New utilities for water supply, sewer, natural gas, power, and communications will be extended into the new building. There are existing utilities that serve the building space to remain and these will be evaluated for continued use for the fitness center. If necessary, these existing utilities may be upgraded. There are existing overhead utilities for power and communications along Fore Street that are adequate to serve the new facility. A new underground power service will be extended from the street to a pad mount transformer and secondary service into the building. Swaney lighting has prepared a site lighting package that is included in the submission materials.
- The Fore Street Sidewalk along the site frontage currently consists of granite curbing and concrete. The concrete sidewalk will be removed and new brick sidewalk will be installed along the length of the street frontage. The sidewalk will also be widened from an existing width of about 5' to 8'-10'. ALA Landscape Architecture is working on advancing the streetscape and possible plaza elements with an emphasis on the pedestrian connectivity within the area characterized as a future corridor connecting an extension of Mountfort street towards the waterfront. The easterly side of the site is also an area of advanced landscape treatment given the location of various building entrances and the potential for a future vehicular and pedestrian connectivity to Thames Street Extension.
- The ability to provide street level retail space along the Fore Street frontage remains subject to continued consideration and design refinement. Additional information pertaining to the small retail component of the design will be provided in upcoming uploads associated with this application.

CLOSURE

As outlined in the Level III Site Plan submission requirements and checklist, we will upload the following materials:

- General Application Documents
  - Project Description
  - Level III Application Checklist
  - Right, Title and Interest
  - Zoning Assessment
  - Existing and/or Proposed Easements
  - Waiver Request and Waiver Table

  - Financial Capacity
  - Technical Capability
- Transportation
  - Transportation Narrative
  - Traffic Assessment by Traffic Solutions
- Environmental and Landscape Features
  - Narrative to Address Standards
- Environmental and Stormwater
  - Narrative to Address Standards
- Public Infrastructure and Safety
  - Narrative to Address Standards
- Site Design
  - Narrative to Address Standards
- Construction Management Plan
- Site Plans

On behalf of the 100 Fore Street, LLC, we look forward to your continued assistance on the project and we look forward to the next available workshop meeting with the Planning Board. As is required, once we complete the Planning Board workshop, the applicant will be conducting a Neighborhood Meeting. We anticipate this meeting will be conducted prior to the Public Hearing.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

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

Attachments

c: Jonathan Cohen, 100 Fore Street LLC
Bill Hopkins, Archetype
Jonathan Dicentes, Cianbro

GENERAL APPLICATON DOCUMENT

PROJECT DESCRIPTION

PROJECT OVERVIEW

100 Fore Street proposes to construct a mixed used building consisting of a three level 540 space parking garage with approximately 82,400 SF of office space with the two additional levels atop the garage. Additional street level retail is currently being considered in accordance with 14-270(a)(2).b of the code, although the applicant may ultimately seek a waiver of these requirements. The property is located along the south side of Fore Street generally between Hancock Street to the west and the former Portland Company site at 58 Fore Street to the east. The prospective development site currently contains an existing single level 29,675 ± SF commercial building that includes office and retail space. There are also 136 paved parking spaces on the property that benefit onsite lease tenants and several offsite lease tenants. The project is guided by the Eastern Waterfront Master Plan and is designed to allow permeability and accessibility across the site. This is evidenced by the site design that contemplates the extension of the easterly driveway to connect with a future Thames Street Extension, between the site and the Fore River frontage. The site design also includes prohibition of building space within a designated area characterized as an extension of the Mountfort Street right of way, that would extend from Fore Street to the southerly boundary line. Recent zoning language amendments to the Eastern Waterfront Overlay district, allow for the project height proposal.

Within a portion of the office space WEX has agreed on a long-term commitment to lease space in the building. Additional office tenant(s) are yet to be named.

PROJECT PURPOSE AND NEED

The property is a prime location for a mixed-use development to include structured parking and additional upper floor office space. The site can take advantage of proximity to the heavy foot and car traffic from the Old Port as well as expansive views of the harbor and accessibility to the City's adjacent east end parks and waterfront walking paths.

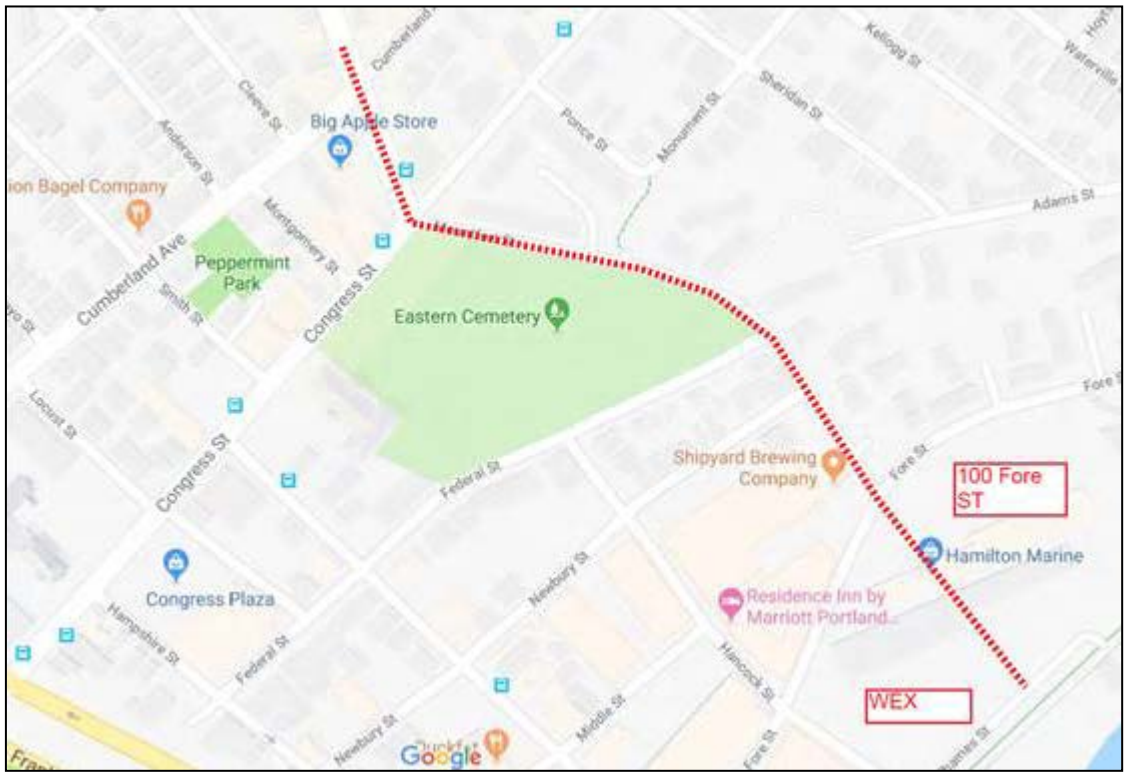
The advantages of the Property are highlighted in the Eastern Waterfront Master Plan (the "EWMP") and the site is best suited to be densely developed with office and parking space surrounded by pedestrian pathways and public plazas and amenities. A great benefit to the site is the natural slope of the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

The proposed project is for a 275,960 SF, 5-story mixed-use building with a 64,980± SF footprint. The bottom three floors will contain the parking areas and the upper two floors will contain the office space. As shown in the building architectural plans, the office spaces each step back from the Fore Street frontage in a manner that satisfies

the recently enacted Eastern Waterfront Overlay district setback requirements. The office uses will bring hundreds of jobs to the City of Portland and will provide meaningful benefits to the City's economy and tax base. The parking garage will provide needed parking capacity for onsite and offsite office uses, and various lease tenants in the area.

The 100 Fore Street site and the Ocean Gateway Garage can accommodate, at a minimum, replacement parking for 53 City parking spaces and 117 public parking spaces lost as a result of the sale of the WEX Property at 1 Hancock Street.

Pedestrian and Public Outdoor Space: The project creates the opportunity for higher density and more pedestrian and public outdoor space, including sidewalk extensions as outlined in the EWMP. Most importantly the opportunity for pedestrian linkage between the City owned land off the end of Thames Street and Fore Street will be provided through sidewalks along the easterly driveway as well as from the Fore Street frontage opposite Mountfort Street through a dedicated view corridor to the south property boundary. This view corridor ultimately contemplates a future connection to Thames Street and the waterfront, that at a minimum, might provide pedestrian access and corridor linkage from Washington Avenue, Mountfort Street to Thames Street.



Public green spaces to the east side and off the northwest corner of the building are contemplated that will create new walkable areas through the site and landscaping which additionally helps buffer users from traffic and also enhance the site vernacular and aesthetic appearance. A public square could create a strong entrance to any retail portion of the property which would be along the Fore Street frontage. The plaza would be a prime space to include plantings, street furniture, public art or a monument. The plaza will transition down via stairs, ramps or combination to match the grade crossing of the ground level parking garage and ultimately extend through to the south

boundary. The design will leave opportunity for that future connectivity through to Thames Street.

Transportation: The EWMP conveys a strong interest in development promoting multiple types of transportation. As one tenant for the property, WEX would bring with it hundreds of employees who would be able to take full advantage of the proximity of systems already in place, including the nearby ferry terminal, the walking and biking trail along the eastern waterfront and the bus routes in the vicinity which include the METRO Route 1 at the east end of Fore Street[1] and Route 8 on India Street. As part of this application process, the Development Team including the Applicant and WEX representatives are working with Cushman Transportation Consulting, LLC to prepare a Transportation Demand Management Plan similar to the plan for the 1 Hancock Street site that will help WEX and other office tenants make best use of the site and the transportation systems available in the greater Portland area.

In addition to the systems already in place, bicycle storage will be added to the property, with exterior storage and racks in the plazas and entry locations, along with interior storage in the Garage and possibly the fitness center.

The Community benefits provided by the project include the following:

- The Project will contribute to the redevelopment and revitalization of the area;
- The Project will provide a quality office use destination to complement other mixed-use activities in the nearby vicinity; and
- The Project will provide additional parking capacity in the area. The applicant's parking facilities will amount to a total of 1,278 parking spaces between the Gateway Garage (720 spaces) and onsite (558 spaces).
- The Project will incorporate exterior site enhancements for outside Plaza space, landscaping, and related site amenities.

EXISTING CONDITIONS

The total site area is 129,212 SF (2.97 acres) and the property contains an existing single story metal clad building. The site is bounded to the north by Fore Street, to the east by the former Portland Company site, and to the south by a narrow strip (16' wide) of undeveloped grassed land owned by the City. Further to the south side is the existing office building owned by Jackrabbitt LLC and the now under construction WEX corporate headquarters. Additional City land and surface parking will remain southeast of the site. The site's historic use includes the Grand Truck Railroad yard that consisted of multiple tracks and portions of various structures. The site also contains paved surface parking for approximately 136 vehicles.

Existing utilities currently service the existing building and these, except for the power are expected to remain in service. Generally, public utilities for water, sewer, gas, power, and communications are located within Fore Street and will be extended into the new building. The existing overhead lines located along the site frontage will be raised once CMP sets new taller poles on the street.

[1] There is a bus stop at the corner of Atlantic and Fore Street approximately 1000 feet east of the site.

General site preparation is anticipated to be straightforward to include site grading, new utilities, drainage, building construction and site surface improvements for sidewalk restoration and landscaping. Early foundation preparation may involve the installation of piles to support traditional concrete foundations. It is anticipated that old abandoned foundations and related pipes may be encountered during the course of construction and appropriate actions will be taken to address these conditions.

Existing topography is relatively flat in the parking areas with elevations ranging from approximately 13.0 to over 28.0 based on NGVD 1929 vertical Datum. Fore Street rises from west to east along the site frontage and the westerly elevation is about 18.0 and the easterly elevation is about 30.0'. The existing building finish floor elevation is about 17.0'. The lot is internally draining, meaning the lowest portion of the site is towards the east end of the site and the higher grades are around the perimeter. It is believed the several onsite catch basins likely tie into the combined sewer in Fore Street, although the structures are in poor condition and can't be readily inspected. The site improvements will involve ground disturbance over the entire site. Summit GeoEngineering has been engaged to assist with a geotechnical investigation. Their initial findings include identifying soft marine clay soils underlying the site. The preliminary recommendations include the use stone filled piers or piles to aid with addressing long term settlement potential.

The site is not within the Shoreland Zone of the Fore River. This portion of the Fore River is tidally influenced and has a mean annual high tide elevation of 7.4 (NGVD 1929) and a 100-year FEMA flood elevation of 10.0 (NGVD1929). Tidal information as determined by Owen Haskell, land surveyor is defined as follows:

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

The building finish floor elevation within the ground level parking area will be 14.00' (NGVD29) thus placing it greater than 2' above the 100-year flood level.

Photographs of the existing site conditions are contained at the end of this narrative.

ACCESS CONDITIONS

The new 539-space three (3) level parking garage will require three access locations, as each parking deck will require independent access as there will be no interior access ramps. The ground level lot will be accessed from a new driveway located just west and opposite the Mountfort Street intersection along Fore Street. The first and second level decks will be accessed from the site's proposed easterly driveway. The easterly driveway will be constructed to satisfy City street standards as it may ultimately be extended to cross City land to the south and connect to the proposed Thames Street Extension, tentatively scheduled for construction by the City of Portland in 2019 or thereabouts. It is expected that Unified Parking Partners or similar operator will actively manage the garage operations including directional signage and related issues. The proposed office tenant is expected to lease spaces in the garage and spaces will also be open for public parking. Per section 14-332, the parking requirements for the 82,400

SF office will be 206 spaces, thus leaving approximately 352 spaces for other lease tenants and public parking in the nearby vicinity.

UTILITIES

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

- Public water supply is available in Fore Street. A 6" fire service and a 4" domestic water service are proposed off an existing 8" water main in Fore Street. Existing fire hydrants are available within 500 feet of the site. The PWD may install a new water main in the easterly driveway to extend to Thames Street Extension and if completed, the site's water services will extend off this new main.
- A sanitary sewer service will tie into the existing 36" combined gravity sewer within Fore Street. A grease tank will also be installed for the benefit of oil-water separation from the garage spaces. A wastewater capacity request has been sent to the City's Public Works Division as part of this application.
- Three phase power is available from Fore Street directly along the site frontage. A new transformer pad will be installed adjacent the new building and within the sidewalk on the east side of the site and underground secondary power will be extended into the building.

TOPOGRAPHY AND DRAINAGE

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

The proposed building will have finish floor elevations established at elevation 14.00' which places it greater than 2 feet above the nearby Fore River 100-year flood elevation.

SOILS/GEOTECHNICAL REVIEW

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









GENERAL APPLICATION DOCUMENT

ZONING ASSESSMENT

See attached Zoning Assessment Table and additional information provided in cover letter.

ZONING ANALYSIS Relevant Zone(s) B-6 Urban Commercial Business Zone and Eastern Waterfront Mixed Zone

All Projects:

	Required	Proposed
Lot Size	None	2.97 ac.
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	N/A	737.67'
Front Yard Minimum	N/A	6"
Front Yard Maximum	10'	10'
Rear Yard	N/A	10'
Yard Right	N/A	N/A
Yard Left	N/A	N/A
Side Street Setback	N/A	71'
Step Back	N/A	N/A
Maximum Lot Coverage	100%	80.0%
Minimum Lot Coverage	N/A	N/A
Maximum Height	See Note 1	See Note 1
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	206	559
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

Note 1 - See City Council Order 68-18/19 dated September 17, 2018. Building plans by Archetype PA adhere to City Council action on building height.

Planned Residential Unit Developments (PRUD) Requirements NOT APPLICABLE

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable) NOT APPLICABLE

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

GENERAL APPLICATION DOCUMENTS

RIGHT, TITLE & INTEREST

A Quitclaim Deed from Hope 1, LLC to 100 Fore Street, LLC was executed on January 6, 2017 for the subject property. The Deed attached to this document was recorded in the Cumberland County Registry of Deeds as Book 33748; page 1.

Recorded in the Cumberland County
Registry of Deeds on 1/6/17 in Book 33748, Page 1

SHORT FORM QUITCLAIM DEED WITH COVENANT

HOPE 1, LLC, a Maine limited liability company with a place of business in Portland, Maine ("Grantor") FOR CONSIDERATION PAID, grants to **100 FORE STREET, LLC**, a Maine limited liability company with a mailing address of P.O. Box 910, Westbrook, Maine 04098-0910 ("Grantee") with QUITCLAIM COVENANT, certain real property, with any improvements thereon and all rights and easements appurtenant thereto, located at or near 100 Fore Street, Portland, Cumberland County, Maine, and more particularly described on **Exhibit A** attached hereto and made a part hereof.

The conveyance herein is made subject to all easements, covenants, restrictions and agreements of record, to the extent in effect and applicable, to leases and licenses disclosed to Grantee, and to real estate taxes not yet due and payable.

Being the same premises conveyed to the Grantor by Quitclaim Deed with Covenant from Avidity Partners, LLC, Trustee of the FOL Liquidation Trust, dated January 19, 2005, and recorded in the Cumberland County Registry of Deeds in Book 22261, Page 50.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed and delivered by its duly-authorized Chief Operating Officer below this 6th day of January, 2017.

WITNESS:

Tom S. Hanson

Hope 1, LLC

By: _____
George Cacoulidis
Duly authorized Chief Operating Officer

State of Maine
County of Cumberland

January 6, 2017

PERSONALLY APPEARED before me the above-named George Cacoulidis, Chief Operating Officer of Hope 1, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

TS Hanson

Name: Tom S. Hanson
~~Notary Public~~/Attorney at Law
Commission Expires N/A

EXHIBIT A

A certain lot or parcel of land with the buildings thereon situated on the Southerly side of Fore Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

> Beginning on the Southerly side line of Fore Street at the Northwest corner of the premises conveyed to Frank J. Gaziano et al. by Canadian National Railway Company by deed dated November 1, 1973 and recorded in the Cumberland County Registry of Deeds in Book 3502, Page 247;

Thence N 79°-46' E along said premises conveyed to Frank J. Gaziano, et al. and along land now or formerly of Canadian National Railway 742.42 feet to an iron pipe on the Westerly boundary of land now or formerly of The Portland Company;

Thence Northwesterly along land of The Portland Company, on a curve to the right whose radius is 274.33 feet, 248.66 feet to an iron pipe on the Southerly side line of Fore Street, said iron pipe being distant 240.23 feet to a bearing of N 32°-18' W from the iron pipe at the terminus of the last described line;

Thence by the following courses and distances along the Southerly side line of Fore Street;

S 89°-32'-30" W	143.31 feet to an iron pipe;
S 78°-29'-30" W	172.03 feet to an iron pipe;
S 58°-36'-30" W	109.63 feet to an iron pipe;
S 42°-27' W	157.24 feet to an iron pipe;
S 35°-40' W	155.46 feet to the point of beginning.

GENERAL APPLICATON DOCUMENT

FINANCIAL CAPACITY

The Applicant has adequate financial resources to undertake this project as identified in the letter from Bank of New Hampshire which accompanies this submission.

CONSTRUCTION COST ESTIMATE

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

- Construction Cost: $22 to 30 million
- Soft Costs: $200,000 to $400,000
- **Total Costs: $23 to $31 million**

Bank of New Hampshire

September 28, 2018

City of Portland, Maine
389 Congress Street
Portland, Maine 04101

RE: Financial Capacity – 100 Fore Street project

To Whom It May Concern:

Jonathan Cohen is a client in good standing with Bank of New Hampshire. Mr. Cohen demonstrates both the financial capacity as well as the industry experience necessary to purchase, develop, construct, own and operate commercial real estate projects such as the contemplated parking garage and office building planned for the 100 Fore Street site in Portland.

If there are any questions regarding this matter, please do not hesitate to contact me at deering@banknh.com or (603) 527-3349.

Sincerely,

Jeremiah C. Deering
Senior Vice President
Commercial Banking Team Leader

GENERAL APPLICATION DOCUMENT

TECHNICAL CAPABILITY

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

Civil Engineer	Stephen Bushey, P.E. Stantec 482 Payne Road Scarborough, ME 04074 (207) 887-3478 – Work (207) 883-3355 – Fax stephen.bushey@stantec.com
Architect	Bill Hopkins Archetype, PA 48 Wharf Street Portland, ME 04101 (207) 772-6022 – Work (207) 772-4056 – Fax hopkins@archetypepa.com
Surveyor	John Swan Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, ME 04105 (207) 774-0424 – Work (207) 774-0511 – Fax jswan@ownehaskell.com
Landscape Architect	Nick Aceto, PLA ASLA ALA Landscape Architecture (207) 221-3390 – Work na@acetola.com
Traffic Engineer	Bill Bray Traffic Solutions 235 Bancroft Street Portland, ME 04102 207.774.3603 trafficsolutions@maine.rr.com
Geotechnical Consultant	William Peterlein, P.E. Summit Geoengineering Services 145 Lisbon Street, Suite 601 Lewiston, ME 04240 (207) 576-3313 – Work bpeterlein@summitgeoeng.com
Electrical Engineer	ES Boulos 45 Bradley Drive Westbrook, Maine 04092 207.464.3706 Attn: Bob Goulet Bgoulet@Esboulos.Com

The team of consultants retained has expertise and experience in the design of similar commercial projects. Resumes of key personnel for development team can be provided upon request.

GENERAL APPLICATION DOCUMENT

WAIVER REQUESTS

The Accompanying Waiver Table provides a description of the applicable waiver requests and supporting evidence for these requests.

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
14-526 Site Plan Standards *(a) Transportation Standards* *3. Public Transit Access:*	*d. Waiver: All or some of this standard may be waived if the Reviewing Authority determines one or more of the following:* *(i) That some or all of the required improvements cannot reasonably be made due to site constraints and/or insufficient right of way width; or* *(ii) That the development is not anticipated to generate public transit usage due to particular characteristics or proposed use of the development.*	A waiver of any further transit related activities is requested given the proximity of existing transit measures to the development.	There is an existing METRO stop located at Ocean Gateway which is less than 1000 foot distance from the site as well as a stop at the intersection of Congress and Mountfort Street.
14-526 Site Plan Standards *(a) Transportation Standards* *4. Parking:* *b. Location and Required Number of Bicycle Parking Spaces*	*ii. Waiver: The reviewing authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to characteristics or uses such as elderly or disabled persons housing or industrial uses located in outlying areas.*	The applicant is requesting a waiver of the number of spaces, until the findings and full TDM Plan are more fully developed.	The project will provide various bike racks and secure storage spaces for bicycles. The location of these racks will be both within the exterior spaces, such as near entrances and also within the new building and the proposed fitness center space.

14-526 Site Plan Standards *(b) Environmental Quality Standards* *2. Landscaping and Landscape Preservation:* *a. Landscape Preservation*	(iv) Waiver: Where the applicant can demonstrate that preservation of existing vegetation would compromise development of the site, the Reviewing Authority may permit the substitution of replacement landscaping in other areas of the site, and/or a financial contribution to the City of Portland Tree Fund for an amount proportionate to the cost of trees removed, as described below: (a) For each tree required to be preserved that is removed and is greater than 16" in caliper DBH, two (2) replacement trees of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual). (b) For each tree required to be preserved that is removed and is between ten (10) and sixteen (16) inch DBH, one (1) replacement tree of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual). (c) Where the planting of replacement trees on the site is not feasible, the applicant shall contribute an amount proportionate to the cost of required replacement trees to the City of Portland Tree Fund, as detailed in Section 4 of the Technical Manual.		There are no existing landscape features or elements at the site. A substantial amount of new landscaping will be provided to the site. No specific vegetation protection required on the site.

TRANSPORTATION

The following statements are provided in accordance with the Section 14-526 of the ordinance.

TRANSPORTATION

(a) Transportation Standards

Transportation Analysis – Traffic Impact (14-526 (a) 1)

- *Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts*
- *Traffic Impact Study (Technical Manual, Section 1) if applicable*

1. *Impact on Surrounding Street Systems:*

   The surrounding street system consists of Fore Street. The proposed use is considered consistent with the zoning and objectives identified in various City reports; therefore, we believe it results in no significant impact to the surrounding street system. There will be two primary driveways into the site from Fore Street and each will have sight distance in each direction exceeding 200 feet. The easterly driveway will also function as a connector street to the future Thames Street Extension thus offering improved secondary access through the site as well as the adjacent City property and the 58 Fore Street property.

2. *Traffic Impact Study*

   A Traffic Assessment has been prepared by Traffic Solutions on September 25, 2018 and this assessment included trip generation and accident information for the site and surrounding area. The assessment concludes that the development is expected to generate a total of 81 new trips in the morning and 72 trips in the evening peak hour, thus a Traffic Movement Permit is not triggered.

   Any further traffic assessment is subject to the City's peer review.

Access and Circulation (14-526 (a) 2 a)

- *Access and internal circulation, addressing ADA access*
- *Access and egress impacts on traffic flows*
- *Description and use of drive-up features, if applicable*

3. *Access and Circulation:*
   a. Site Access and Circulation.

   (i) Vehicular access to the site is provided on the westerly and easterly ends of Fore Street at two locations. A new driveway located just west of the Mountfort/Fore Street intersection will provide access to the ground level parking to a small number of surface parking spaces. The easterly drive is

basically using the existing driveway and reconstructing it to meet City standards and to allow its future extension to the Thames Street Extension, south of the site. The easterly drive will have access to the 1st and 2nd levels of the parking garage and also to the main elevator/stairwell lobby for pedestrian access into the building. A third drive in to the site will consist of an existing curb opening and access to loading area at the west end of the existing building to remain. The owner is seeking to maintain the availability of the loading space to this building.

(ii) We believe the primary points of access will not conflict with any existing turning movements on Fore Street and the existing traffic flow on nearby streets. Ultimately the flow of traffic is expected to improve with the extension of Thames Street and the connection to Fore Street, thus the applicant's cooperation in allowing the through connection to Thames Street should be viewed as substantial contribution to the overall area circulation planning effort.

(iii) Not applicable as there are no drive through features proposed.

Loading and Servicing (14-526 (a) 2 b)

- *Loading and servicing needs, route and travel way geometrics for deliveries*
- *Turning templates for delivery vehicles, if applicable*

2. *Access and Circulation:*
   b. Loading and Servicing:

(i) Adequate provisions are made at the site for periodic loading from panel trucks to service the proposed uses. The site provides a clear area in front of an at grade at various points of the building for servicing and loading vehicles. Larger delivery vehicle access is not required for the new building, although the applicant requests approval to retain the existing curb cut/ driveway to access the loading area at the end of the existing building to remain.

Sidewalks (14-526 (a) 2 c)

- *Sidewalks and condition along street frontages and internal walkways*
- *Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)*

2. *Access and Circulation:*
   c. Sidewalks:

(i) The project will provide new brick sidewalks along Fore Street to replace the existing concrete sidewalks. New brick sidewalk will be provided along the easterly drive and this sidewalk is expected to ultimately be extended by the City to connect to the Thames Street Extension.

Public Transit (14-526 (a) 3), if applicable

- *Existing available transit services*
- *Proposed site plan design details, such as easement, pad base, and shelter*

3. Public Transit Access.

a. The project will include two floors of commercial space and three floors of parking. The development is not proposed along an existing public transit route to the best of our understanding although the METRO Route 1 and Route 8 are within 1,000 feet of the site.

b. There is an existing METRO stop located at Ocean Gateway which is less than 1000 foot distance from the site as well as a stop at the intersection of Congress and Mountfort Street.

c. A waiver of any further transit related activities is requested given the proximity of existing transit measures to the development.

Off-Street Parking: Vehicle & Motorcycle/Scooter (14-526 (a) 4 a and c)

- *Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements*
- *Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan*

4. Parking.
a. Location and Required Number of Vehicle Parking Spaces.
c. Motorcycles and Scooter Parking.

i. Off-street parking will be provided within the three floors of the building. The Applicant is proposing to provide 539 parking spaces within the garage and this amount exceeds the amount required under City code for the proposed office use. Between this site and the Ocean Gateway Garage, which are under common ownership, there will be 1,278 parking spaces under the control of the applicant. These parking facilities will meet the needs of the uses at 1 Hancock Street (WEX), the office uses at 100 Fore Street (including one level for additional WEX space), and various leases that the owner has in place for other area businesses and private parking needs.

ii. The Applicant and one tenant, WEX, are currently working with Cushman Transportation Consulting on the preparation of a Transportation Demand Management (TDM) plan that will look to implement various strategies for reducing the project's overall parking needs and traffic impacts in general. A complete TDM Plan was made part of the 1 Hancock Street development and the applicant's team will look to supplement that TDM plan to apply to the proposed office use at 100 Fore Street.

iii. Please see above.

iv. Parking aisles and dimensions will meet the applicable standards.

v. All new surface parking shall be paved.

The site plan has been developed to allow safe passage and parking for motorcycles and scooters in the garage or within the surface parking lot.

Bicycle Parking (14-526 (a) 4 b)

- *Address bicycle parking requirements and identify locations on-site*
- *Construction details for bike racks (Technical Manual, Section 1)*

4. Parking.
b. Location and Required Number of Bicycle Parking Spaces.

The project will provide various bike racks and secure storage spaces for bicycles. The location of these racks will be both within the exterior spaces, such as near entrances and also within the new building and the proposed fitness center space. Per Code Section 14-526 a.4.b (i) (b), the required number of bike spaces is 43 spaces, thus the Applicant is seeking a waiver of this required number of spaces, until the findings and full TDM plan are more fully developed.

Snow Storage (14-526 (a) 4 d)

- *Management plan for snow removal and locate snow storage areas on plans*

4. Parking.
d. Snow Storage.

i. Limited snow storage will be provided along the outside perimeter of the site (this will suffice for small storm events and temporary storage only).

ii. Snow removal and off-site disposal may be required for this site. The applicant will contract with a local snow removal company to perform these services.

iii. Snow removal from the top parking deck will involve pushing snow off the deck into a safe zone where removal into dump trucks can take place. This will also be completed under a private snow removal contract.

Traffic Demand Management (TDM) (14-526 (a) 5), if applicable

- *Develop TDM with Trip Reduction Targets and Strategies*

5. Transportation Demand Management (TDM).

a. A Transportation Demand Management (TDM) Plan will be prepared and submitted for Planning review within the upcoming application review period. Cushman Transportation Consulting is currently assisting in this effort.

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Preliminary Traffic Assessment

100 Fore Street Office Development Project

(September 25, 2018)

INTRODUCTION

100 Fore Street, LLC is proposing to construct a 77,000 square foot office building and a multi-level parking garage that includes 2,000 square feet of retail space at 100 Fore Street in the City of Portland. The garage structure will be three-floors with approximately 600 parking spaces. The subject property is identified as Lot 10 on City Tax Map 19, Block A.

Existing uses on the 2.97-acre development site include a 30,000 square foot single level multi-tenant retail/office building and a surface parking lot with a total of 136 spaces. The site currently is accessed from two driveway openings off Fore Street located at each end of the property. The current development plan demolishes the majority of the existing building displacing all of the existing building tenants. Approximately, 9,000sf of the existing building will be re-developed as a private fitness facility for tenants of the proposed office building.

The new 600 space three (3) level parking garage will require three access locations, as each parking deck will require independent access as there will be no interior access ramps. The ground level lot will be accessed from a new driveway located just west and opposite the Mountfort Street intersection along Fore Street. The first and second level decks will be accessed from the site's proposed easterly driveway. The easterly driveway will be constructed to satisfy City street standards as it may ultimately be extended to cross City land to the south and connect to the proposed Thames Street Extension, tentatively scheduled for construction by the City of Portland in 2019 or thereabouts. It is expected that Unified Parking Partners or similar operator will actively manage the garage operations including directional signage and related issues. The proposed office tenant is expected to lease spaces in the garage and spaces will also be open for public parking. Per section 14-332, the parking requirements for the 77,000 sf office will be 193 spaces, thus leaving approximately 407 spaces for other lease tenants and public parking in the nearby vicinity.

TRIP GENERATION

Proposed Development: The proposed multi-tenant office building project will include the following uses:

- Multi-tenant Office Space – 77,000 square feet

- Retail Space – 2,000 square feet
- Private Fitness Facility Space – 8,800 square feet [1]

NOTE: [1] The proposed fitness center space is provided exclusively for the tenants of the proposed 100 Fore Street Office Building and new building at 1 Hancock Street; therefore, additional or "new" vehicle trips are not generated by the proposed space.

Trip generation for the proposed multi-tenant office building was determined based upon trip tables presented in the seventh edition of the Institute of Transportation Engineers "**TRIP GENERATION**" handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category.

The following trip rates were used to calculate trip generation for the proposed project:

Land Use #710 – General Office Building (77,000sf)

AM Peak Hour $Ln(T) = 0.80\ Ln(X) + 1.55$

PM Peak Hour $T = 1.12(X) + 78.81$

Land Use #714 – Specialty Retail (2,000sf)

AM Peak Hour = 2.71trips/1,000sf floor area [2]

PM Peak Hour = 2.71trips/1,000sf floor area

NOTE: [2] The ITE publication doesn't provide a trip rate for the AM peak hour; the estimate of trip generation for this land-use in the "morning" peak hour is based upon the trip rate noted for the PM peak hour.

Table 1, as follows, presents the estimated peak hour trip generation for the proposed 100 Fore Street Office Building project:

Table 1
100 Fore Street
Peak -Hour Trip Generation Estimates

Proposed Building Use	AM Peak Hour Trips	PM Peak Hour Trips
General Office	152 trips	165 trips
Specialty Retail	5 trips	5 trips
TOTAL Trips	**157 trips**	**170 trips**

The proposed office building project can be expected to generate a total of **157** trips during the "*morning*" peak hour and **170** vehicle trips in the "*evening*" peak hour.

Existing Site Trip Generation Credit: A total of four building tenants most recently occupied the existing 30,000 square foot building located on the 100 Fore Street site. The tenants and the approximate building space occupied are listed as follows:

Hamilton Marine = 20,000 square feet
Express Copy = 5,000 square feet
IBec Creative = 2,500 square feet

Jade Integrated Health = 2,500 square feet

Peak hour trip generation estimates were prepared for the existing building tenants based upon the following processes:

Hamilton Marine – A manual traffic count was conducted on Wednesday, August 29, 2018 that recorded all vehicle trips both entering and exiting the Hamilton Marine Retail Store during the morning and afternoon peak commuter hours. From a summary of the data, it was determined that the AM peak hour falls between 8:45 and 9:45 AM with a total of 22 vehicle trips recorded. The PM peak hour occurred between 3:30 and 4:30 PM with a total of 44 trips recorded.

Express Copy – Land-Use Code 110 General Light Industrial estimates a print shop can be expected to generate a total of 5 trips during both peak hour time periods.

IBec Creative /Jade Integrated Health – Manual traffic data was recorded at the common entry door to both building tenants on Wednesday September 19, 2018. A summary of the data shows a total of 21 vehicle trips were recorded in the morning peak hour (8:00 to 9:00 AM) and 24 trips were measured between 4:30 and 5:30 PM, the evening peak hour.

Table 2 provides a summary of the peak hour trips generated by the existing building tenants for both peak hour time periods.

Table 2
100 Fore Street
Existing Tenant - Peak Hour Trip Generation

Existing Building Tenant	AM Peak Hour Trips	PM Peak Hour Trips
Hamilton Marine	22 trips	44 trips
Express Copy	5 trips	5 trips
IBec/ Jade Integrated Health	21 trips	24 trips
TOTAL Trips	**48 trips**	**73 trips**

The existing site tenants generated a total of **48** vehicle trips in the AM peak hour and **73** trips in the PM peak hour.

Shared Use Trip Adjustment: A portion of the trips generated by the tenant space in the multi-tenant building will visit or travel to multiple destinations within the general geographic area of the proposed building. These multipurpose trips, if not accounted for, overestimate the traffic impact of the proposed site.

The City approved a trip reduction value of 15% for the 0 Hancock Street office building project presently under construction. Remaining consistent with the prior approval process, a shared use trip reduction value of 15%, or 16 trips in the morning peak hour and 15 trips in the evening peak hour, was applied.

Other Development Trip Reduction: Employees of the office building are expected and will be encouraged thru the implementation of a comprehensive Transportation Demand Management

Plan, to utilize other modes of transportation traveling to/from the proposed new site at 100 Fore Street. These other transportation modes include: transit, ridesharing, bicycle travel or walking. A trip reduction value of 12.8% was applied; again, consistent with the Other Modes reduction value approved for the 0 Hancock Street development. It should also be noted the April 18, 2018 Preliminary Traffic Assessment report prepared for the proposed Shipyard Re-development Project applied a 15% Other Modes reduction value to the proposed non-residential site uses. Accordingly, a trip reduction of 12 trips in the morning peak hour and 10 trips in the evening peak hour is applied to account for other modes of travel by employees of the proposed office building.

"Net" Site Trip Generation: The "*net*" change in peak hour trip generation for the proposed 100 Fore Street office building site is determined by subtracting the trip credits discussed in the previous sections of the report from the total trip generation estimates prepared for the proposed office building project. Table 3, below, summarizes that process:

Table 3
Peak Hour Trip Generation
Adjustment Summary

	AM Peak Hour	PM Peak Hour
Total Site Trip Generation	157 trips	170 trips

Site Trip Adjustments	AM Peak Hour	PM Peak Hour
- Existing Site Trip Reduction	-48	- 73
- Shared-use Adjustment	-16	-15
- Other Modes Adjustment	- 12	-10
Total Adjusted New Peak Hour Trips	**81 trips**	**72 trips**

As presented in the previous table, the proposed 100 Fore Street office building project is projected to generate a total of 81 new trips in the AM peak hour and 72 new trips during the PM peak hour. The site is therefore forecast to generate considerably less than 100 vehicle trips during either peak hour time period. As a result, a MaineDOT Traffic Movement Permit for the proposed site isn't required.

ROADWAY SAFETY

The Maine Department of Transportation's (MDOT) Accident Records Section provided the latest three-year (2015 through 2017) crash data for the following street segments in the general vicinity of the proposed project site:

Franklin Arterial – Middle Street to Commercial Street
India Street – Congress Street to Commercial Street

Hancock Street/Middle Street to Commercial Street/Thames Street
Mountfort Street – Congress Street to India Street
Middle Street – Franklin Arterial to Hancock Street
Fore Street – Franklin Arterial to Mountfort Street
Commercial Street – Franklin Arterial to India Street
Thames Street – India Street to Hancock Street

MaineDOT's safety audit is summarized as follows and attached as an appendix to the report:

2015 -2017 Traffic Accident Summary

Location	Total Crashes	Critical Rate Factor
1. Franklin Arterial @ Commercial Street	10	0.53
2. Franklin Arterial @ Fore Street	7	0.37
3. Franklin Arterial @ Middle Street	20	1.00
4. Congress Street @ India Street	11	0.70
5. Federal Street @ India Street	3	0.96
6. India Street @ Newbury Street	2	0.65
7. India Street @ Middle Street	5	1.39
8. India Street @ Fore Street	1	0.20
9. Fore Street @ Mountfort Street	1	0.33
10. Mountfort Street @ Congress Street	10	0.63
11. Federal Street @ Mountfort Street	1	1.08
12. Mountfort Street @ Newbury Street	1	1.13
13. Fore Street @ Hancock Street	3	1.21
14. Hancock Street @ Thames Street	1	0.53
15. Middle Street @ Hampshire Street	1	0.62
16. India Street @ Newbury Street	2	0.65
17. Franklin Arterial btw. Commercial Street and Fore Street WB	1	0.48
18. Franklin Arterial btw. Fore Street and Middle Street WB	1	0.43
19. Franklin Arterial btw. Middle Street and Fore Street EB	1	0.43
20. Franklin Arterial btw. Fore Street and Commercial Street EB	2	0.86
21. India Street btw. Congress Street and Federal Street	1	0.31
22. India Street btw. Federal Street and Newbury Street	4	1.85
23. India Street btw. Newbury Street and Middle Street	1	0.43
24. Fore Street btw. India Street and Hancock Street	1	0.36
25. Fore Street btw. Franklin Arterial and India Street	5	1.43
26. Middle Street btw. Franklin Arterial and Hampshire Street	3	1.03
27. Middle Street btw. Hampshire Street and India Street	1	0.92
28. Commercial Street btw. Franklin Arterial and India Street/Thames Street	6	1.28
29. Fore Street btw. Mountfort Street and Hancock Street	4	1.31
30. Mountfort Street btw. Congress Street and Federal Street	3	1.09
31. Mountfort Street btw. Newbury Street and Fore Street	5	4.80
32. Hancock Street btw. Fore Street and Middle Street	1	1.07

The MDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents and,***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the chart shows, there are no high crash locations within the expanded study area.

SUMMARY

1. The proposed 100 Fore Street office building site is forecast to generate a total of 157 unadjusted trips in the "*morning*" peak hour and an additional 170 unadjusted trips in the "*evening*" peak hour.

2. The actual increase in trips generated by the proposed office site is considerably less with appropriate reductions applied for existing site generated trips, shared trips and other modes of travel. The noted site trip adjustments reduce the actual "new" vehicle trips generated by the site to a total of 81 trips in the morning peak hour and 72 trips in the evening peak hour.

3. The proposed site is forecast to generate less than 100 new vehicle trips during either peak hour time period, accordingly, the proposed project will not be required to file for and obtain a MaineDOT Traffic Movement Permit.

4. MaineDOT's most current roadway safety data (2015 through 2017) for the street system serving the proposed site shows there are no high crash locations in the defined area.

5. A detailed traffic impact study will be completed for the proposed site that evaluates the project's traffic impacts on nearby intersections including, at a minimum, the following locations:
    a. Mountfort Street @ Fore Street
    b. Fore Street @ Hancock Street
    c. Fore Street @ India Street
    d. All proposed site access driveways



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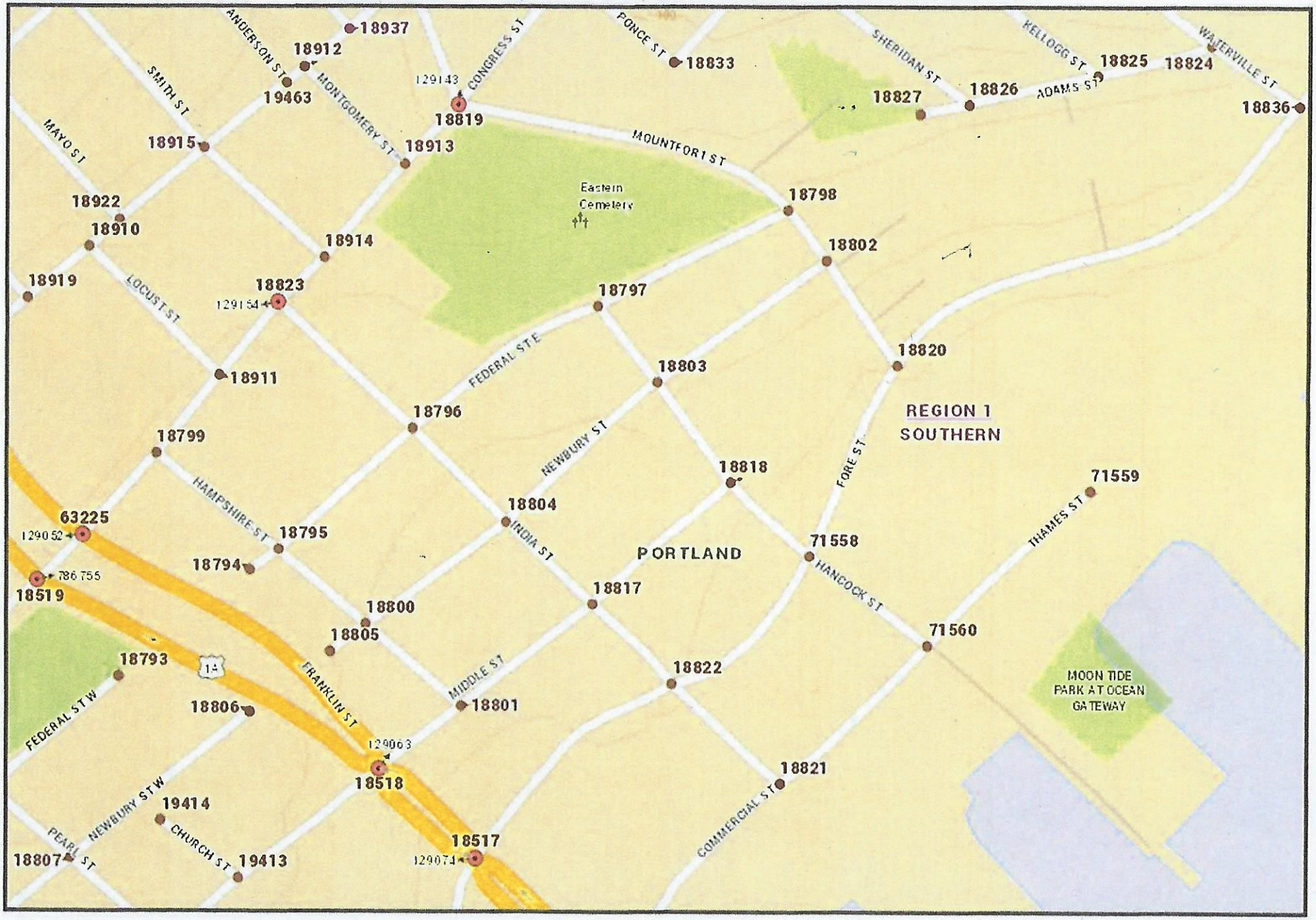

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0.1 Miles

1 inch = 0.07 miles

Date: 8/14/2017
Time: 9:16:53 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

Franklin St Middle St area in Portland

REPORT PARAMETERS

Year 2015, Start Month 1 through Year 2017 End Month: 12

Route: **0001A**	Start Node: **15397**	Start Offset: **0**	☐ Exclude First Node
	End Node: **18518**	End Offset: **0**	☐ Exclude Last Node
Route: **001AS**	Start Node: **18518**	Start Offset: **0**	☑ Exclude First Node
	End Node: **18517**	End Offset: **0**	☑ Exclude Last Node
Route: **001AS**	Start Node: **18517**	Start Offset: **0**	☑ Exclude First Node
	End Node: **15397**	End Offset: **0**	☑ Exclude Last Node
Route: **0561000**	Start Node: **18823**	Start Offset: **0**	☐ Exclude First Node
	End Node: **18821**	End Offset: **0**	☐ Exclude Last Node
Route: **0560286**	Start Node: **18822**	Start Offset: **0**	☑ Exclude First Node
	End Node: **18517**	End Offset: **0**	☑ Exclude Last Node
Route: **0560286**	Start Node: **71558**	Start Offset: **0**	☑ Exclude First Node
	End Node: **18822**	End Offset: **0**	☑ Exclude Last Node
Route: **0560286**	Start Node: **18820**	Start Offset: **0**	☐ Exclude First Node
	End Node: **71558**	End Offset: **0**	☑ Exclude Last Node
Route: **0560505**	Start Node: **18518**	Start Offset: **0**	☑ Exclude First Node
	End Node: **18817**	End Offset: **0**	☑ Exclude Last Node
Route: **0560505**	Start Node: **18817**	Start Offset: **0**	☑ Exclude First Node
	End Node: **18818**	End Offset: **0**	☑ Exclude Last Node
Route: **0560344**	Start Node: **18818**	Start Offset: **0**	☐ Exclude First Node
	End Node: **71560**	End Offset: **0**	☐ Exclude Last Node

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

Franklin St Middle St area in Portland

REPORT PARAMETERS

Year 2015, Start Month 1 through Year 2017 End Month: 12

Route: **0561001**	Start Node: **15397**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **18821**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0560524**	Start Node: **18819**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **18820**	End Offset: **0**	☑ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
15397	0001A - 11.81	Int of COMMERCIAL ST FRANKLIN ST MAINE STATE PIER	9	10	0	1	0	4	5	50.0	4.912	0.68	1.28	0.00
												Statewide Crash Rate:	0.74	
18518	0001A - 11.95	Int of FRANKLIN ST MIDDLE ST	9	20	0	0	1	6	13	35.0	5.305	1.26	1.26	0.00
												Statewide Crash Rate:	0.74	
18517	0001A - 11.89	Int of FORE ST FRANKLIN ST	9	7	0	0	1	2	4	42.9	4.920	0.47	1.28	0.00
												Statewide Crash Rate:	0.74	
18796	0561000 - 0.08	Int of FEDERAL ST E INDIA ST	2	3	0	0	0	1	2	33.3	2.124	0.47	0.49	0.00
												Statewide Crash Rate:	0.16	
18823	0561000 - 0	Int of CONGRESS ST INDIA ST	9	11	0	0	1	3	7	36.4	3.875	0.95	1.35	0.00
												Statewide Crash Rate:	0.74	
18817	0561000 - 0.18	Int of INDIA ST MIDDLE ST	2	5	0	0	1	1	3	40.0	2.569	0.65	0.47	1.39
												Statewide Crash Rate:	0.16	
18804	0561000 - 0.13	Int of INDIA ST NEWBURY ST	2	2	0	0	0	0	2	0.0	2.096	0.32	0.49	0.00
												Statewide Crash Rate:	0.16	
18822	0561000 - 0.23	Int of FORE ST INDIA ST	2	1	0	0	0	1	0	100.0	4.377	0.08	0.41	0.00
												Statewide Crash Rate:	0.16	
18821	0561000 - 0.29	Int of COMMERCIAL ST INDIA ST THAMES ST	2	0	0	0	0	0	0	0.0	2.941	0.00	0.45	0.00
												Statewide Crash Rate:	0.16	
18820	0560286 - 0.28	Int of FORE ST MOUNTFORT ST	2	1	0	0	1	0	0	100.0	2.189	0.15	0.46	0.00
												Statewide Crash Rate:	0.15	
18801	0560505 - 0.33	0509221 POR,MIDDLE,HAMPSHIRE ST	2	1	0	0	0	0	1	0.0	1.004	0.33	0.53	0.00
												Statewide Crash Rate:	0.14	
18818	0560344 - 0.09	Int of HANCOCK ST MIDDLE ST	2	0	0	0	0	0	0	0.0	0.542	0.00	0.59	0.00
												Statewide Crash Rate:	0.14	
71560	0560344 - 0.19	Int of HANCOCK ST THAMES ST	2	1	0	0	0	1	0	100.0	1.236	0.27	0.51	0.00
												Statewide Crash Rate:	0.14	
71558	0560344 - 0.13	Int of FORE ST HANCOCK ST	2	3	0	0	0	1	2	33.3	1.664	0.60	0.50	1.21
												Statewide Crash Rate:	0.15	
18802	0560524 - 0.17	Int of MOUNTFORT ST NEWBURY ST	2	1	0	0	0	0	1	0.0	0.495	0.67	0.59	1.13
												Statewide Crash Rate:	0.14	
18819	0560524 - 0	Int of CONGRESS ST, MOUNTFORT ST, WASHINGTON AV	9	10	0	0	0	0	10	0.0	3.933	0.85	1.34	0.00
												Statewide Crash Rate:	0.74	
18798	0560524 - 0.14	Int of FEDERAL ST E MOUNTFORT ST	2	1	0	0	0	0	1	0.0	0.524	0.64	0.59	1.08
												Statewide Crash Rate:	0.14	
Study Years: 3.00		**NODE TOTALS:**		77	0	1	5	20	51	33.8	44.706	0.57	0.60	0.95

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
15397	18517	3123025	0 - 0.08	0001A - 11.81	0.08	2	1	0	0	0	1	0	100.0	0.00091	366.82	765.02	0.00
Int of COMMERCIAL ST FRANKLIN ST MAINE STATE PIER				US 1A											Statewide Crash Rate: 218.74		
18517	18518	3118954	0 - 0.06	0001A - 11.89	0.06	2	1	0	0	0	0	1	0.0	0.00104	321.32	741.01	0.00
Int of FORE ST FRANKLIN ST				US 1A											Statewide Crash Rate: 218.74		
18517	18518	3118912	0 - 0.06	001AS - 2.08	0.06	2	1	0	0	1	0	0	100.0	0.00103	322.20	741.51	0.00
Int of FORE ST FRANKLIN ST				US 1AS											Statewide Crash Rate: 218.74		
15397	18517	3100256	0 - 0.08	001AS - 2.14	0.08	2	2	0	0	0	0	2	0.0	0.00105	634.20	738.62	0.00
Int of COMMERCIAL ST FRANKLIN ST MAINE STATE PIER				US 1AS											Statewide Crash Rate: 218.74		
18796	18823	3106811	0 - 0.08	0561000 - 0	0.08	2	1	0	0	0	0	1	0.0	0.00159	209.04	665.06	0.00
Int of FEDERAL ST E INDIA ST				RD INV 05 61000											Statewide Crash Rate: 218.74		
18796	18804	3130049	0 - 0.05	0561000 - 0.08	0.05	2	4	0	0	0	0	4	0.0	0.00095	1402.83	756.87	1.85
Int of FEDERAL ST E INDIA ST				RD INV 05 61000											Statewide Crash Rate: 218.74		
18804	18817	3122291	0 - 0.05	0561000 - 0.13	0.05	2	1	0	0	0	0	1	0.0	0.00104	319.15	739.79	0.00
Int of INDIA ST NEWBURY ST				RD INV 05 61000											Statewide Crash Rate: 218.74		
18817	18822	3106813	0 - 0.05	0561000 - 0.18	0.05	2	0	0	0	0	0	0	0.0	0.00111	0.00	728.90	0.00
Int of INDIA ST MIDDLE ST				RD INV 05 61000											Statewide Crash Rate: 218.74		
18821	18822	3106816	0 - 0.06	0561000 - 0.23	0.06	2	0	0	0	0	0	0	0.0	0.00142	0.00	685.41	0.00
Int of COMMERCIAL ST INDIA ST THAMES ST				RD INV 05 61000											Statewide Crash Rate: 218.74		
18517	18822	3106667	0 - 0.11	0560286 - 0.45	0.11	2	5	0	0	0	0	5	0.0	0.00227	732.76	514.00	1.43
Int of FORE ST FRANKLIN ST				RD INV 05 60286											Statewide Crash Rate: 174.88		
71558	18822	4047689	0 - 0.08	0560286 - 0.37	0.08	2	1	0	0	0	0	1	0.0	0.00168	197.98	555.21	0.00
Int of FORE ST HANCOCK ST				RD INV 05 60286											Statewide Crash Rate: 174.88		
18820	71558	4047688	0 - 0.09	0560286 - 0.28	0.09	2	4	0	0	0	0	4	0.0	0.00189	703.93	538.80	1.31
Int of FORE ST MOUNTFORT ST				RD INV 05 60286											Statewide Crash Rate: 174.88		
18518	18801	194025	0 - 0.06	0560505 - 0.27	0.06	2	3	0	0	0	2	1	66.7	0.00076	1312.51	1276.78	1.03
Int of FRANKLIN ST MIDDLE ST				RD INV 05 60505											Statewide Crash Rate: 407.65		
18801	18817	194399	0 - 0.06	0560505 - 0.33	0.06	2	1	0	0	0	0	1	0.0	0.00022	1548.39	1680.04	0.00
0509221 POR,MIDDLE,HAMPSHIRE ST				RD INV 05 60505											Statewide Crash Rate: 407.65		
18817	18818	194423	0 - 0.08	0560505 - 0.39	0.08	2	0	0	0	0	0	0	0.0	0.00038	0.00	1512.63	0.00
Int of INDIA ST MIDDLE ST				RD INV 05 60505											Statewide Crash Rate: 407.65		
71558	18818	4047715	0 - 0.04	0560344 - 0.09	0.04	2	1	0	0	0	0	1	0.0	0.00018	1847.17	1719.40	1.07
Int of FORE ST HANCOCK ST				RD INV 05 60344											Statewide Crash Rate: 407.65		
71560	71558	4047714	0 - 0.06	0560344 - 0.13	0.06	2	0	0	0	0	0	0	0.0	0.00046	0.00	1442.59	0.00
Int of HANCOCK ST THAMES ST				RD INV 05 60344											Statewide Crash Rate: 407.65		
15397	18821	3106035	0 - 0.11	0561001 - 0	0.11	2	6	0	0	0	0	5	0.0	0.00268	745.48	581.29	1.28
Int of COMMERCIAL ST FRANKLIN ST MAINE STATE PIER				RD INV 05 61001											Statewide Crash Rate: 218.74		
18798	18819	194394	0 - 0.14	0560524 - 0	0.14	2	3	0	0	0	0	3	0.0	0.00071	1417.05	1301.85	1.09
Int of FEDERAL ST E MOUNTFORT ST				RD INV 05 60524											Statewide Crash Rate: 407.65		

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
18798	18802	194393	0 - 0.03	0560524 - 0.14	0.03	2	0	0	0	0	0	0	0.0	0.00015	0.00	1748.98	0.00
Int of FEDERAL ST E	MOUNTFORT ST			RD INV 05 60524											Statewide Crash Rate: 407.65		
18802	18820	194401	0 - 0.05	0560524 - 0.17	0.05	2	5	0	0	0	0	3	0.0	0.00021	8124.93	1691.75	4.80
Int of MOUNTFORT ST	NEWBURY ST			RD INV 05 60524											Statewide Crash Rate: 407.65		
Study Years: 3.00				**Section Totals:**	1.48		40	0	0	1	3	33	10.0	0.02174	613.28	379.97	1.61
				Grand Totals:	1.48		117	0	1	6	23	84	25.6	0.02174	1793.84	521.86	3.44

ENVIRONMENTAL AND STORMWATER

The following statements are provided in accordance with the submission checklist and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)

- *Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable*
- *Erosion control plan and measures*
- *Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable*
- *Subsurface sanitary sewage disposal and groundwater protection*

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The site currently contains a very limited drainage system consisting of several shallow catch basin inlets. The structures have not been maintained and are partially plugged and their outlets not exposed for examination, so it is uncertain where the structures might drain, although it is likely they connect to the existing sewer in Fore Street. The majority of the site consists of sheet flow conditions that results in runoff shedding towards the property edges and towards the southeast corner of the lot, where sheeting runoff appears to simply flow onto the City's gravel parking lot. Runoff from a portion of the existing building roofs appears to sheet onto the adjacent City property along the southerly property boundary. The proposed project will result in an insignificant impact to the site's drainage regime since the pre and post impervious areas will be relatively unchanged. The current proposal includes new roof drainage systems that will connect to the Fore Street sewer. The roof drainage will be separated from the domestic plumbing all the way out to the street thus allowing future connections to be possible if/when the sewer in the street is separated. It may also be possible to connect the new building roof drainage to a proposed large diameter (60") separated drainage system that is currently contemplated to run from Fore Street along the site's easterly side, southerly to an outfall into the river, as depicted on design plans prepared by Woodard & Curran, on behalf of the City.

(ii) Not applicable

(iii) Not applicable

(iv) The site's drainage conditions will remain basically unchanged as the site is nearly all developed under current conditions. The development team will continue to review and coordinate connection to a proposed City

separated drainage line to extend from Fore Street down the easterly side of the site to the Fore River outfall.

b. *Flooding Standards:*

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

c. Not applicable.

d. Not applicable.

e. Construction at the site will be required to follow Local, State and Federal regulations and will be undertaken under the supervision of a suitably qualified environmental professional. Post-construction activities at the site do not pose a risk of groundwater contamination.

f. The project will be connected to the public sanitary sewer system which is adequately sized for the anticipated project flows. Provisions to connect the building roof drainage into a future separated drainage system within the easterly driveway with a routing and discharge to the Fore River remains under review and discussion with City officials.

PUBLIC INFRASTRUCTURE AND SAFETY

The following statements are provided in accordance with the submission and Section 14-526 of the ordinance.

(c) Public Infrastructure and Community Safety Standards.

Consistency with City Master Plans (14-526 (c) 1)

- *Identify consistency with master plans*
- *Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable*

1. *Consistency with City Master Plans:*

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

   b. Sanitary sewer flows from the development will go to the Portland WWTP.

Public Safety and Fire Prevention (14-526 (c) 2)

- *Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)*
- *Emergency vehicle access*
- *Address consistency with public safety standards (Technical Manual, Section 3)*
- *Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist*

2. *Public Safety and Fire Prevention:*

   a. The site has been designed to promote a safe and welcoming office environment.

   b. The site provides access from Fore Street for emergency vehicles.

   c. Fire hydrants are located adjacent to the property along the existing streets. The building will be fully sprinklered. A summary letter to Division Chief Thompson is included at the end of this section.

Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)

- *Electrical services, including providing underground services*
- *Identify existing and proposed connections for public utilities and required public utility upgrades*
- *Sewer line connections are required, if there is a main within 200 feet*
- *Proposed solid waste management facilities on-site and management for the site*
- *Written evidence of the ability to serve from utility companies, as applicable*

a. The Applicant is securing letters from the applicable utilities stating their ability to serve the site. The project will require new or updated electrical, gas, sewer, and water services to the site.

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

c. All new utility infrastructures from the existing overhead lines will meet the provisions of the Technical Manual.

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

e. All new sewer and stormwater infrastructure will meet City standards. Backflow prevention and an oil water separator for the garage deck drainages will be provided.

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

Attached are ability to serve letters from Unitil and Spectrum. We are continuing to work on coordination with the PWD and CMP and will forward these letters to the planning office upon receipt.

Unitil
natural gas

September 25, 2018

Stephen Bushey, P.E. Associate
Stantec Consulting Services, Inc.
482 Payne Rd.
Scarborough, ME 04074

Re: 100 Fore St., Portland, Maine

Dear Stephen,

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

Unitil has 6 inch steel natural gas main on Fore St. and can serve the proposed office building and parking garage with natural gas; expected load of 3,000 CFH is what was estimated by Chris Jordan of Johnson and Jordan and is the load that we evaluated.

As the project progresses, please send me the breakdown of natural gas equipment so that the information can be added to our records. 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

From: Pelletier, Mark
To: Daniell, Celina
Subject: RE: 100 Fore Street - Portland ABS Request
Date: Thursday, September 27, 2018 1:30:42 PM

Celina,

Spectrum Cable has both Coax and fiber on the existing pole lines on Fore St and Mountfort Rd surrounding your project.
Spectrum Cable, We will require one 4 inch conduit swept up above final grade and against the riser pole and swept up above finished floor in elec room. 1/4in pull rope in place.

Any costs if any would be discussed with the company requesting our services, Whether coax or fiber. Any reworking or upgrade needed(if Any) will be done when a have a request of by a tenant.

Spectrum Cable can provide services to this project when services are requested.

Mark

From: Daniell, Celina [mailto:Celina.Daniell@stantec.com]
Sent: Monday, September 24, 2018 2:03 PM
To: Pelletier, Mark <Mark.Pelletier@charter.com>
Cc: Bushey, Stephen <Stephen.Bushey@stantec.com>
Subject: 100 Fore Street - Portland ABS Request

Attached please find an Ability to Serve request for the above referenced project.

If you have any questions with regards to the information submitted, please contact our office.

Thank you,

Celina Daniell
Senior Technical Assistant

Direct: 207 887-3469
Fax: 207 879-0896
Celina.Daniell@stantec.com

Stantec
482 Payne Road Scarborough Court
Scarborough ME 04074-8929 US

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

September 24, 2018

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

Subject: Proposed Land Development
100 Fore Street, Portland, Maine
Request for Ability to Serve Letter

Dear Brad:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at 100 Fore Street in Portland, Maine. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 10 according to the City of Portland Tax Assessor's Maps. We would like to verify the City's wastewater division has ability to provide wastewater capacity for the project and to determine any impact fees.

The project will consist of construction of a new multi-level parking garage and additional office space, with size and use summarized as follows:

Space	Use (SF)
Parking Garage	600 spaces
Office Use (770 Employees)	77,000 SF
Ground Level Retail Space (10 employees)	4,000 SF

We note a portion of the existing building will be demolished to make way for the garage and office building. A portion of the existing building area that contains the Hamilton Marine retail space will be partially demolished and the remaining interior renovated for the development of a private gymnasium space. We expect that the existing sanitary sewer service connection will remain in place to serve this renovated building space.

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

Building – Parking Garage/Office	Design Flow (GPD)
Parking Garage 600 spaces @ 1 gpd/space	600
Office – 770 Employees @ 12 gpd/employee	9,240
Retail Space – 10 Employees @ 12 gpd/employee	120
Total Parking Garage/Office/Retail	**9,960**

Based on this amount of flow, we trust that the existing sanitary sewer system in Fore Street has adequate capacity to serve this project. We understand that the City has long range plans for the separation of the combined system within Fore Street. This may involve the installation of a large storm drain pipe that will extend from Fore Street down the easterly side of the 100 Fore property to the Thames Street Extension and ultimately to a new outfall within the Amethyst Site. This separation project would ultimately free up capacity in the existing Fore Street sewer system.

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

Sincerely,

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

Attachment: Wastewater Application

v:\2108\active\210801622\civil\admin\working_documents\utility letters\abs_portland_roland_20180924.docx

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: 09/24/2018

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

Site Address: 100 Fore Street

Chart Block Lot Number: Map 19/Block A/Lot 10

Proposed Use: Parking Garage / Office
Previous Use: Office/Retail
Existing Sanitary Flows: * GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
36" combined sewer interceptor in Fore Street
*Have requested records from PWD

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

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

2. Please, Submit Contact Information.

City Planner's Name: Christine Grimando Phone:
Owner/Developer Name: Jonathan Cohen - 100 Fore Street LLC
Owner/Developer Address: P.O. Box 910, Westbrook, ME 04098-0910
Phone: 207.776.0304 Fax: E-mail: jcohen@a-d-w.bix
Engineering Consultant Name: Stephen R. Bushey, PE - Stantec
Engineering Consultant Address: 482 Payne Road - Scarborough, ME 04074
Phone: 207.887.3478 Fax: 207.883.3376 E-mail: stephen.bushey@stantec.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: 450 employees x 12 gpd/employee = 5,400 GPD
Peaking Factor/ Peak Times:
Specify the source of design guidelines: *(i.e. "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)*

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: 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.

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

October 10, 2018

Division Chief Robert Thompson
City of Portland Fire Department
380 Congress Street
Portland, Maine 04101

Subject: 100 Fore Street
Fire Safety Checklist

Dear Chief Thompson:

In accordance with instructions in the City's Level III Site Plan and Subdivision Review packet, please find enclosed the drawings necessary for your review of the proposed multi-level parking garage and commercial office building on 100 Fore. As part of the building design, the architect will retain a third-party Fire Protection Engineer to review NFPA 101. We have listed each item in your checklist below, followed by our response.

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

   100 Fore Street, LLC
   Attn: Jonathan Cohen
   PO Box 910
   Westbrook, ME 04092

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

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

   Johnson & Jordan
   18 Mussey Road
   Scarborough, ME 04074
   207.883.8345
   Attn: Chris Jordan

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

Building	IBC Code	NFPA Code	Sprinkler
Office Building/Assembly Construction Type II-A (protected, noncombustible)	S-2, B	2009	Yes NFPA13

*Systems designed to meet NFPA

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

Building	Footprint Area (SF)
First Floor (ground) – Parking	64,424
Second Floor – Parking	64,235
Third Floor – Parking	64,877
Fourth Floor – Office	42,900
Fifth Floor – Office	39,500
Total	275,936

5. *Elevation of all structures.*

   Architectural building elevations accompany this letter and they show the various locations of door openings, etc. around the building perimeter.

6. *Proposed fire protection of all structures.*

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

7. *Hydrant locations.*

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

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

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

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

   The accompanying site plan depicts the site's access conditions that include access to two or more sides of the buildings.

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

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

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

Street	Width
Fore Street	38'

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

City of Portland Technical Manual – Section 3 Public Safety

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

Supporting Evidence: Not applicable.

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

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

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

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

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

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

Supporting Evidence: The building will be provided with exterior doors that will be within 50' of a Fire Department access route, namely Fore Street and the easterly driveway connecting Fore Street to Thames Street Extension.

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

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

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

Supporting Evidence: The proposed elevator will be designed to satisfy this requirement.

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

Supporting Evidence: Currently, the project location is 100 Fore Street. The applicant will work with the City's Public Services Division to confirm that this will remain the street address to meet City standards.

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

Regards,

STANTEC CONSULTING SERVICES INC.

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

Attachments

c: Planning Authority

V:\2108\active\210801622\civil\admin\permitting\local\Site Plan\ltr_thompson_fire_20181010.docx

SITE DESIGN

The following statements are provided in accordance with the submission and Section 14-526 of the ordinance.

(d) Site Design Standards.

Massing, Ventilations and Wind Impact (14-526 (d) 1)

- *Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable.*
- *Bulk, location or height impacts on adjoining structures*
- *Identify and locate HVAC equipment and venting away from public spaces and residential properties*
- *Identify screening and manufacturing specifications for noise, if applicable*

1. *Massing, Ventilation and Wind Impact:*

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

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

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

Shadows (14-526 (d) 2), if applicable

- Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

2. *Shadows:*

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

Snow and Ice Loading (14-526 (d) 3)

- *Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways.*

3. *Snow and Ice Loading:*

   a. The proposed building has been designed and located such that accumulated snow and ice will not fall onto adjacent properties or public ways. Snow will be

removed from the upper level parking deck and will require contracted services to remove from the property, when required.

View Corridors (14-526 (d) 4), if applicable

- *Protection of designated view corridors (Portland Design Manual, Appendix 1)*

4. *View Corridors:*
   a. The project entails construction of a multi-story building at the site in manner that is compliant with the Downtown Vision View Corridor protection plan, the B6 Urban Commercial Business Zone, and Eastern Waterfront Mixed Zone plans and objectives. Specific site measures to preserve the Mountfort Street corridor through to Thames Street has been made. In addition, the easterly driveway maintained an access and view corridor from Fore Street to Thames Street.

Historic Resources (14-526 (d) 5), if applicable

- *Identify developments within Historic Districts or affecting Designated Landmarks*
- *Certificate of Appropriateness or other evidence*
- *Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required*
- *Address preservation and documentation of Archaeological Resources*

5. *Historic Resources:*
   a. The development is not located in a historic district, historic landscape district or City designated landmark.
   b. The development is not located adjacent to or within 100 feet of a designated landmark, historic district, or historic landscape district.
   c. There are no known archaeological resources on the site

Exterior Lighting (14-526 (d) 6)

- *Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)*
- *Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)*

6. *Exterior Lighting:*
   a. Site Lighting
      (i) All new exterior lighting at the site will be full cutoff with no light emitted above the horizontal plane, and in accordance with Section 12 of the Technical Manual. A photometric Lighting Plan has been developed by Swaney Lighting demonstrating illumination levels throughout the site consistent with City Standards and is included with submission package.

   b. Architectural and Specialty Lighting
      (i) Not applicable to the project.

c. Street Lighting

(i) There are existing street lights along Fore Street. The accompanying lighting materials include the installation of new City standard street lights along Fore Street.

Noise and Vibration (14-526 (d) 7)

- *Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements*

7. Noise and Vibration:

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

Signage and Wayfinding (14-526 (d) 8), if applicable

- *Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff*
- *Proposed commercial and directional signage on site*

8. Signage and Wayfinding:

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

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

(ii) Proposed commercial signage is still being designed and subject to a condition of approval.

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

Zone Related Design Standards (14-526 (d) 9)

- Address Historic Preservation Design Review, if applicable
- Address any applicable design review standards by zone
- Address submission requirements from Design Manual, page 1, addressing neighborhood context
- Description of exterior materials, color, finish, and samples

9. Zoning Related Design Standards:

Information provided by Archetype, PA:

"The project proposed for 100 Fore Street includes 5 levels of use – 3 levels of parking, including parking on grade, as well as 2 levels of office space. Once

above grade, the shape of the building is defined by existing parameters set up by the city in the B-6 height overlay zone and proposed roads. The perimeter is defined by Fore Street, the property line, Mountfort Extension and the proposed connector road between Fore Street and Thames Street Extension. The height of the building is defined by the recently amended zoning in the B-6 height overlay zone.

Once these parameters are applied, the shape is carved out from the allowable mass. The parking levels above grade maximize the buildable area allowed within this perimeter and the design benefits from the existing site condition of the 14'-16' grade change. This allows the larger portion of the mass to be buried into the slope as it relates to Fore Street so that only one level of parking is at an elevation similar to that of Fore Street. Where the parking meets Fore Street, it will be framed on either corner with retail. Between the retail and at the northwest corner is more formal landscaping. It should be noted the space between the two retail spaces is of sufficient depth to be filled in with more retail at a future date.

Once above the top parking level, the building use transitions to office. At this point the mass no longer maximizes the allowable footprint, it now is carved out to create wings of approximately 125' width which is appropriate for the use. On top of the stepping created by this use limitation, there has been a setback put in place for how the building relates to Fore Street in terms of height. The mass is not to exceed 35' in height above the adjacent Fore Street elevation within 40' of the Fore Street right-of-way. This keeps the building sensitive to its surrounding neighbors and how it relates in scale to the streetscape.

Now that the building mass and uses have been determined, we can understand approximately what the size of the 3 uses will be. The three levels of parking allow the project +/-560 parking spaces. This is a very beneficial use to the surrounding neighborhood. Parking in the area is currently maxed out and most of the available

spaces are located in surface level lots. Being that the area is in close proximity to the waterfront and situated between the old port and the east end residential and commercial zone, it is a prime area for new development and park systems and is greatly underutilized as surface level parking. By stacking and concealing our spaces our project helps to alleviate the need for parking in the area in a way that is consistent with the desires of the B-6 zone, the Eastern Waterfront Master Plan and Portland's Comprehensive Plan.

The two office levels proposed create approximately 80,000 S.F. of rentable space. This use reflects changes that have been occurring in this area of Portland recently. As mentioned previously, our location is in a prime location for development being one block from the waterfront and in between the Old Port and the East End. Portland is a prospering city and the peninsula has strong commercial and residential districts but room for growth in the office realm is limited within the historic district whereas this waterfront zone that includes the new hotels and WEX allows for office use to expand along with the rest of the city and take advantage of sites that were not the best and highest use for the area such as the surface level lots and single story industrial buildings.

Finally, the retail space offers 3000-4000 S.F. of space that allow the project to interact more with the public domain. Fore Street is a main connection between

the residential and commercial districts on the peninsula and the distance between them means it is a prime route not only for vehicular traffic but also for foot and bike traffic. This makes it an ideal spot for some smaller retail spaces that act as an extension from the Old Port and easy access from residences.

The three uses together create a project that is mixed-use which is the most desirable use for the area. The project balances the need for good architectural planning with financial viability and produces a project that helps alleviate parking problems in the neighborhood while producing much needed tax revenue and jobs and blending into the city at the pedestrian scale."

Architectural renderings are included with this section.

ENDURA SERIES

WALL/BUILDING MOUNT

Cat.#	
Job	Type

BEACON design . performance . technology

Approvals

SPECIFICATIONS

Intended Use:
The Endura is a ceiling surface mounted or pendant mounted parking structure luminaire with a field replaceable LED light-engine & optical bezel system. Internal components are totally enclosed in a rain-tight and corrosion-resistant die cast aluminum housing. The Endura Luminaire is CSA certified and suitable for damp locations (wet location available on request).

Construction:
- Die cast aluminum two-piece housing
- Shape of the top housing is designed as a bird nesting deterrent
- Die cast main (thermal) housing provides direct-heat exchange between the LED light engine and the cool outdoor air
- Main housing is designed with heat dissipating fins for LED thermal management without the use of metallic screens, cages, or fans
- Main and top housings are designed to hinge open for easy mounting and easy access

LED/Optics:
- Endura luminaire is supplied with an optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system
- Two-piece silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED
- Endura comes standard with 70 CRI
- Cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED

Electrical:
- 120V through 277V, 50 Hz to 60 Hz
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600 VAC at 50°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Surge protection - 20kA

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

Installation:
- Top housing is designed with various bolt patterns for mounting to a recessed, surface or rigid-pendant hung ceiling junction box and rigid stem (provided by others)
- After mounting the top housing to the junction box, the main housing is designed to hang and hinge closed after connecting the male and female quick connectors
- Mounting design permits a simple retrofit to existing parking structure luminaires that utilize surface mount or recessed junction boxes

Finish
- IFS polyester powder-coat electro-statically applied and thermocured.
- IFS finish consists of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, ovendry off, and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds

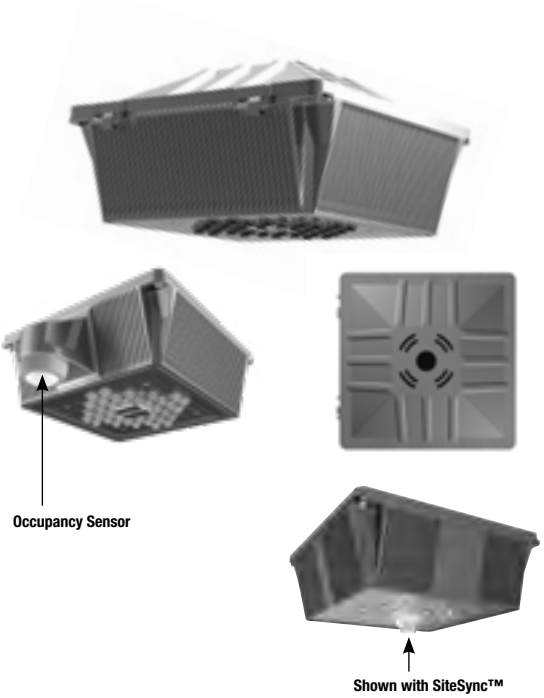
Listings:
- The luminaire shall bear a CSA label and be marked suitable for damp locations (standard). Luminaire may be specified for wet locations.
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate Turtle Friendly spec available at: http://www.beaconproducts.com/products/endura

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

CERTIFICATIONS/LISTINGS

C SP US

PRODUCT IMAGE(S)



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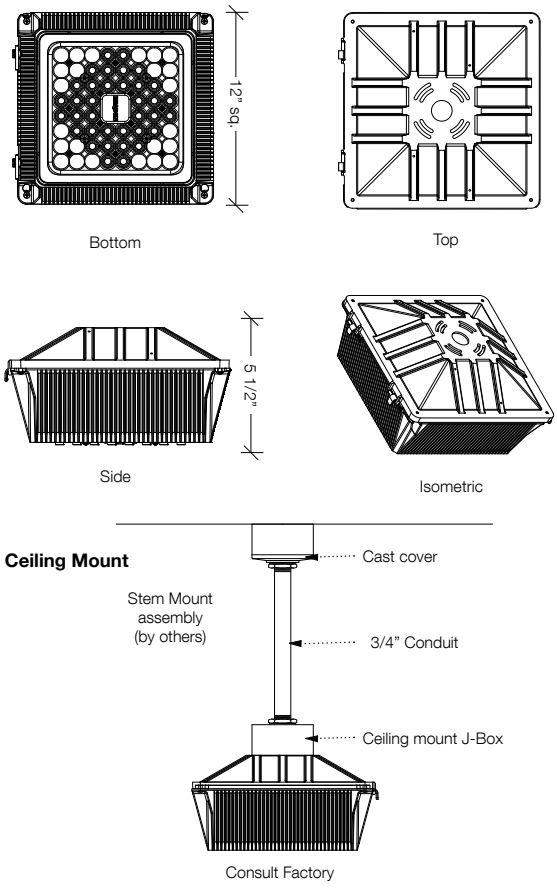

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HUBBELL Lighting

ORDERING INFORMATION ORDERING EXAMPLE: EDR/36L-80/5K7/5W/UNV/GENI-02/BL

SERIES		ENGINE-WATTS		CCT/CRI[11]	
EDR	Endura	24L-27	27 Watts - LED array	3K7	3000K, 70 CRI
		24L-55	55 Watts - LED array	4K7	4000K, 70 CRI
		36L-80	80 Watts - LED array	5K7	5000K , 70 CRI (std.)
		48L-110	110 Watts - LED array		

OPTICS	
5R	Type V, rectangular
5W	Type V, wide
5QM	Type V, square medium
5QN	Type V, square narrow
5QW	Type V, square wide

HIGHER MOUNTING APPLICATIONS	
2X2	Type V Concentrated Spot
4X4	Type V Concentrated Narrow
5X5	Type V Concentrated Medium
5X3	Type V Concentrated Rectangular

VOLTAGE	
UNV	120-277V
120	120V
208	208V
240	240V
277	277V
347	347V
480	480V

ELECTRICAL OPTIONS	
PEC-120	photocell, button 120V
PEC-208	photocell, button 208V
PEC-240	photocell, button 240V
PEC-277	photocell, button 277V
2PF[1,2,8]	Dual power feed
BPC[4,8]	Cold weather battery pack
BP[4,8]	0° C battery pack

CONTROL OPTIONS	
GENI-XX[5,9]	Energeni
SWP[6,9]	SiteSync Wireless Pre-Commission
SWPM[6,7,9]	SiteSync Wireless Pre-Commission w/ Motion Detection

FINISH	
BL	Black textured
DB	Dark bronze
GYS	Light gray smooth
PS	Platinum silver
WH	White textured

SENSOR OPTIONS	
MOB[3,7,9]	Occupancy Sensor (33% or 50% dimming
OCS[9,10]	Occupancy Sensor (on/off)

[1] Not available on 24L-27
[2] Not available @347V or 480V input
[3] Not available on 48L-110
[4] 36L-80 only
[5] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[6] Must specify group and zone information at time or order. See www.hubbell-automation.com/products/sitesync/ for further details.
[7] Specify time delay; dimming level and mounting height.
[8] Not available with SWP or SWPM control options
[9] Not available with other control or sensor options
[10] Specify mounting height
[11] This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://cdn.beaconproducts.com/content/products/specs/specs_files/Endura_turtle_LED_spec_sheet.pdf

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

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

Examples: EDR/24L-55/4K7/5W/UNV/SWP/BL — SiteSync only
EDR/24L-55/4K7/5W/UNV/SWPM-20F/BL — SiteSync with Motion Control

MOB ORDERING INFORMATION: When ordering a fixture with a dimming occupancy sensor (MOB), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

EDR/24L-55/4K7/5R/UNV/MOB - 1 to 30 min. - 33% or 50% - ?? / BL

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

Accessories and Services (Ordered Separately)

Catalog Number	Description
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ If needed, an additional Bridge Node can be ordered.

SiteSync



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

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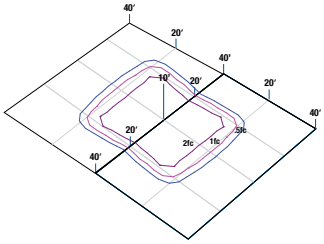
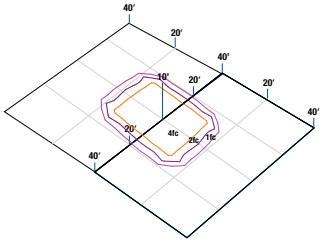
PHOTOMETRICS

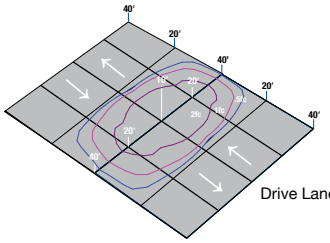
Type V Square Medium
EDR-48L-110-5QM



Type V Square Narrow
EDR-48L-110-5QN



Type V Rectangular
EDR-48L-110-5R



Drive Lane Direction

PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	350mA	27W	2X2	3567	129	N/A	N/A	N/A	3640	131	N/A	N/A	N/A	3278	118	N/A	N/A	N/A
			4X4	3490	126	N/A	N/A	N/A	3561	129	N/A	N/A	N/A	3207	116	N/A	N/A	N/A
			5QM	3275	118	2	0	0	3341	121	2	0	0	3010	109	2	0	0
			5QN	3072	111	2	1	2	3135	113	2	1	2	2824	102	2	1	2
			5R	3330	120	2	1	2	3398	123	2	1	2	3061	110	2	1	2
			5W	3309	119	2	1	1	3376	122	2	1	1	3041	110	2	1	1
			5X3	3300	119	N/A	N/A	N/A	3367	122	N/A	N/A	N/A	3033	109	N/A	N/A	N/A
			5X5	3373	122	N/A	N/A	N/A	3441	124	N/A	N/A	N/A	3100	112	N/A	N/A	N/A
24	700mA	55W	2X2	6611	121	N/A	N/A	N/A	3746	124	N/A	N/A	N/A	6076	111	N/A	N/A	N/A
			4X4	6468	119	N/A	N/A	N/A	6600	121	N/A	N/A	N/A	5944	109	N/A	N/A	N/A
			5QM	6069	111	2	0	1	6193	114	2	0	1	5578	102	2	0	1
			5QN	5694	104	3	1	2	5810	107	3	1	2	5233	96	3	1	2
			5R	6172	113	3	1	3	6298	116	3	1	3	5673	104	3	1	3
			5W	6132	113	3	1	1	6257	115	3	1	1	5636	103	3	1	1
			5X3	6115	112	N/A	N/A	N/A	6240	114	N/A	N/A	N/A	5621	103	N/A	N/A	N/A
			5X5	6251	115	N/A	N/A	N/A	6378	117	N/A	N/A	N/A	5745	105	N/A	N/A	N/A
36	700mA	80W	2X2	9916	121	N/A	N/A	N/A	10119	124	N/A	N/A	N/A	9114	112	N/A	N/A	N/A
			4X4	9702	119	N/A	N/A	N/A	9900	121	N/A	N/A	N/A	8917	109	N/A	N/A	N/A
			5QM	9103	111	3	0	1	9289	114	3	0	1	8367	102	3	0	1
			5QN	8541	105	4	1	3	8715	107	4	1	3	7850	96	4	1	3
			5R	9258	113	3	2	3	9447	116	3	2	3	8509	104	3	2	3
			5W	9198	113	3	2	2	9386	115	3	2	2	8454	103	3	2	2
			5X3	9173	112	N/A	N/A	N/A	9360	115	N/A	N/A	N/A	8431	103	N/A	N/A	N/A
			5X5	9376	115	N/A	N/A	N/A	9568	117	N/A	N/A	N/A	8617	105	N/A	N/A	N/A
48	700mA	110W	2X2	13222	121	N/A	N/A	N/A	13492	123	N/A	N/A	N/A	12152	111	N/A	N/A	N/A
			4X4	12936	118	N/A	N/A	N/A	13200	120	N/A	N/A	N/A	11889	108	N/A	N/A	N/A
			5QM	12138	110	3	0	2	12386	113	3	0	2	11156	102	3	0	2
			5QN	11388	104	4	2	3	11620	107	4	2	3	10466	96	4	2	3
			5R	12344	113	3	2	3	12596	116	3	2	3	11345	104	3	2	3
			5W	12264	112	4	2	2	12514	115	4	2	2	11272	103	4	2	2
			5X3	12231	112	N/A	N/A	N/A	12480	114	N/A	N/A	N/A	11241	103	N/A	N/A	N/A
			5X5	12501	114	N/A	N/A	N/A	12757	117	N/A	N/A	N/A	11490	105	N/A	N/A	N/A

[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

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HUBBELL Lighting

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	350mA	120	27	0.2
			277		0.1
			347		0.1
			480		0.1
24	2	700mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.94	0.91	434,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

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VIPER S OPTICS STRIKE

SMALL VIPER LUMINAIRE

Cat.#	
Job	Type

BEACON design . performance . technology

Approvals

SPECIFICATIONS

Intended Use:

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

Construction:

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

Electrical:

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

Controls/Options:

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

Installation:

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

Finish:

- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 2604 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Certifications/Ratings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Certified to UL 1598, UL 8750 and CSA C22.2 No.250.0
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://www.beaconproducts.com/products/vipersmall

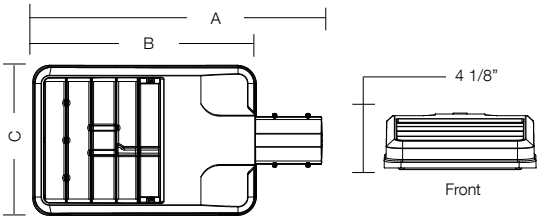
Warranty:

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

PRODUCT IMAGE(S)

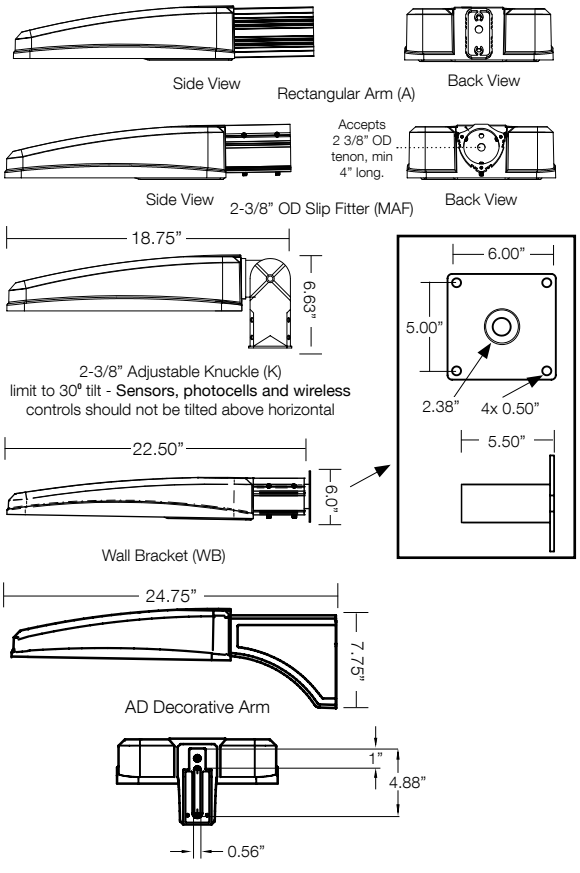


DIMENSIONS



A	B	C	Weight:	EPA
21.75" (552 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



CERTIFICATIONS/LISTINGS

C US

*3000K and warmer CCTs only

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HUBBELL Lighting

ORDERING INFORMATION ORDERING EXAMPLE: VPS/24L-55/4K7/4W/UNV/A/DBT/7PR-TL/GENI-04/BC

VPS										

SERIES
- **VPS** Viper

LED ENGINE
- **24L-55** 55W, LED array
- **36L-65** 65W, LED array
- **36L-80** 80W, LED array
- **48L-110** 110W, LED array
- **60L-136** 136W, LED array

CCT/CRI[7]
- **3K7** 3000K, 70 CRI
- **4K7** 4000K, 70 CRI
- **5K7** 5000K, 70 CRI

ROTATION
- Leave blank for no rotation
- **L[5]** Optic rotation left
- **R[5]** Optic rotation right

VOLTAGE
- **UNV** 120-277V
- **120** 120V
- **208** 208V
- **240** 240V
- **277** 277V
- **347** 347V
- **480** 480V

COLOR
- **BL** Black Textured
- **DB** Dark Bronze Textured
- **GYS** Light Gray Smooth
- **PS** Platinum Silver Smooth
- **WH** White Textured
- **CC** Custom Color

OPTIONS
- **F** Fusing
- **BSP** Bird Spikes
- **BC** BacksheidId (available for FR, 2, 3, 4, 4W Optics)

DISTRIBUTION
- **FR** Type 1/Front Row
- **2** Type 2
- **3** Type 3
- **4** Type 4
- **4W** Type 4 Wide
- **5QM** Type 5QM
- **5R** Type 5R (rectangular)
- **5W** Type 5W (round wide)
- **TC** Tennis Court

MOUNTING
- **A** Rectangular Arm (formerly RA) for square or round pole
- **MAF** Mast Arm Fitter (formerly SF2) for 2-3/8" OD horizontal arm
- **K** Knuckle (formerly PK2) limit to 45° tilt or 2-3/8" OD horizontal arm or vertical tenon
- **WB** Wall Bracket
- **AD** Universal Arm for square pole
- **AD3** Universal Arm for 2.4"-4.1" round pole
- **AD4** Universal Arm for 4.2" -5.3" round pole
- **AD5** Universal Arm for 5.5" -5.9" round pole
- **AD6** Universal Arm for 6.0"-6.5" round pole

CONTROL OPTIONS
- **7PR** 7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)
- **7PR-SC** 7-Pin Receptacle w/Shorting Cap
- **7PR-TL** 7-Pin Receptacle w/Twist Lock photo control
- **SCP/_F[1,2,6]** Programmable Occupancy Sensor w/ daylight control (120-277 volts only)
- **GENI-XX[3]** ENERGENI
- **SWP[1,4]** SiteSync Pre-Commission
- **SWPM[1,2,4]** SiteSync Pre-Comm w/ Sensor

HOUSE SIDE SHIELD ACCESSORIES
- **HSS/VP-S/90-FB/XXX** 90° shield front or back
- **HSS/VP-S/90-LR/XXX** 90° shield left or right
- **HSS/VP-S/270-FB/XXX** 270° shield front or back
- **HSS/VP-S/270-LR/XXX** 270° shield left or right
- **HSS/VP-S/360/XXX** Full shield

(Replace XXX with notation for desired finish color)
(Refer to page 5 for shield images)

MOUNTING ACCESSORIES
- **VPL-AD-RPA3** 2.4"-4.1" Round Pole Adapter for AD arm
- **VPL-AD-RPA4** 4.2"-5.3" Round Pole Adapter for AD arm
- **VPL-AD-RPA5** 5.5"-5.9" Round Pole Adapter for AD arm
- **VPL-AD-RPA6** 6.0"-6.5" Round Pole Adapter for AD arm

[1] Not available with other wireless control or sensor options
[2] Specify mounting height; 8=8' or less, 40=9' to 40'
[3] Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table and options. Not available with sensor or SiteSync options.
[4] Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for further details. Order at least one SiteSync interface Accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
[5] Only available with 1A, 2, 3, 4, 4W and 5R distributions
[6] Order at least one SCP-REMOTE per project location to program and control the occupancy sensor.
[7] This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://cdn.beaconproducts.com/content/products/specs/specs_files/Viper_Small_LED_turtle_spec_sheet.pdf

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

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

Examples: VPS/24L-55/4K7/3/UNV/A/DBT/SWP/ SiteSync only
VPS/24L-55/4K7/3/UNV/A/DBT/SWPM-40F/ SiteSync with Motion Control

Accessories and Services (Ordered Separately)

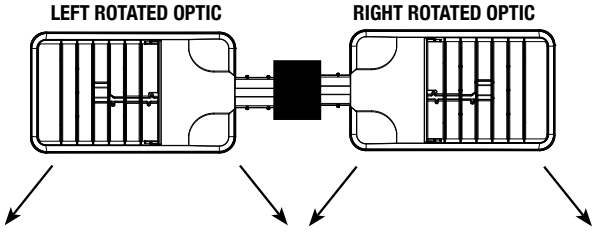
Catalog Number	Description
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SCP-REMOTE	Remote Control for SCP/_F option. Order at least one per project to program and control
SW7PR+	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXOFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE® Lighting Control

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.



SiteSync 7-Pin Module


SW7PR

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does no interface with occupancy sensors

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PERFORMANCE DATA

# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
				LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	700 mA	55W	FR	6357	118	1	0	1	6486	120	1	0	1	5804	107	1	0	1
			2	6132	114	1	0	1	6257	116	1	0	2	5599	104	1	0	1
			3	6015	111	1	0	2	6137	114	1	0	2	5492	102	1	0	2
			4	5921	110	1	0	2	6034	112	1	0	2	5400	100	1	0	2
			4W	5805	108	1	0	2	5921	110	1	0	2	5282	98	1	0	2
			5QM	6022	112	2	0	1	6145	114	2	0	1	5499	102	2	0	1
			5R	6063	112	3	0	3	6187	115	3	0	3	5536	103	3	0	3
			5W	5908	109	3	0	1	6028	112	3	0	1	5908	102	3	0	1
			TC	6183	115	1	0	1	6309	118	1	0	1	5645	105	1	0	1
36	560 mA	65W	FR	7864	121	1	0	1	8041	124	1	0	1	7189	111	1	0	1
			2	7586	117	1	0	2	7757	119	1	0	2	6934	107	1	0	2
			3	7441	114	1	0	2	7609	117	1	0	2	6802	105	1	0	2
			4	7317	110	1	0	2	7482	112	1	0	2	6688	100	1	0	2
			4W	7325	113	1	0	2	7490	115	1	0	2	6696	103	1	0	2
			5QM	7450	115	3	0	1	7618	117	3	0	1	6810	105	3	0	1
			5R	7501	115	3	0	3	7670	118	3	0	3	6857	105	3	0	3
			5W	7309	112	3	0	2	7473	115	3	0	2	6681	103	3	0	1
36	700 mA	80W	FR	9535	118	1	0	1	9730	120	1	0	1	8706	107	1	0	1
			2	9197	114	1	0	2	9385	116	1	0	2	8398	104	1	0	2
			3	9022	111	1	0	2	9206	114	1	0	2	8238	102	1	0	2
			4	8871	110	1	0	2	9052	112	1	0	2	8100	100	1	0	2
			4W	8707	108	1	0	2	8881	110	1	0	2	7923	98	1	0	2
			5QM	9033	112	3	0	1	9217	114	3	0	1	8248	102	3	0	1
			5R	9095	112	3	0	3	9280	115	3	0	3	8304	103	3	0	3
			5W	8861	109	3	0	2	9043	112	3	0	2	8092	100	3	0	2
			TC	9275	115	1	0	1	9464	118	1	0	1	8468	105	1	0	1
48	700 mA	110W	FR	12713	118	1	0	1	12973	120	2	0	1	11608	107	1	0	1
			2	12263	114	2	0	2	12513	116	2	0	2	11197	104	2	0	2
			3	12029	111	2	0	2	11275	114	2	0	2	10984	102	1	0	2
			4	11828	110	1	0	3	12069	112	1	0	3	10800	100	1	0	2
			4W	11609	108	1	0	3	11841	110	1	0	3	10564	98	1	0	3
			5QM	12044	112	3	0	2	12290	114	3	0	2	10997	102	3	0	1
			5R	12126	112	3	0	3	12374	115	3	0	3	11072	103	3	0	3
			5W	12126	109	4	0	2	12057	112	4	0	2	10789	100	4	0	2
			TC	12366	115	1	0	2	12619	118	1	0	2	11290	105	1	0	2
60	700 mA	136W	FR	15891	117	2	0	2	16216	120	2	0	2	14511	107	2	0	1
			2	15329	113	2	0	2	15642	116	2	0	2	13997	103	2	0	2
			3	15037	111	2	0	3	15344	113	2	0	3	13730	101	2	0	3
			4	14784	109	1	0	3	15086	111	1	0	3	13500	100	1	0	3
			4W	14511	108	2	0	4	14802	110	2	0	4	13205	98	2	0	3
			5QM	15055	111	3	0	2	15362	114	3	0	2	13747	102	3	0	2
			5R	15158	112	4	0	4	15469	114	4	0	4	13841	102	4	0	4
			5W	14781	109	4	0	2	15083	111	4	0	2	13495	100	4	0	2
			TC	15458	115	1	0	2	15834	118	1	0	2	14113	105	1	0	2

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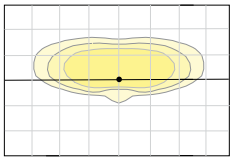
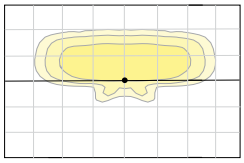
PHOTOMETRICS

Type FR - Front Row/Auto Optic



Type 2



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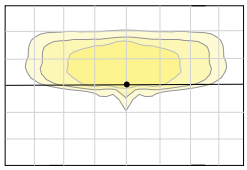
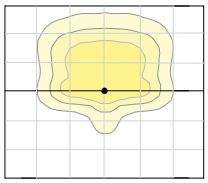
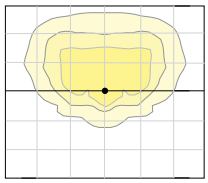


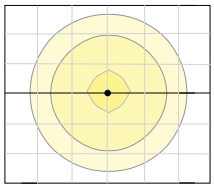
Type 4



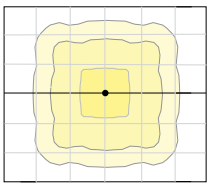
Type 4W



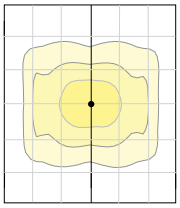
Type 5W



Type 5QM



Type 5R



[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-use environment and application.

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	560 mA	120	65	0.65
			277		0.28
			347		0.22
			480		0.16
		700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

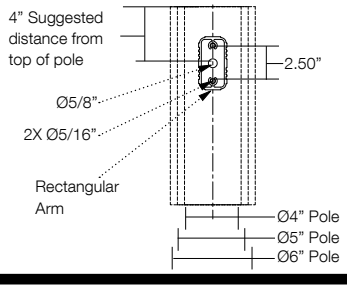
PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>377,000

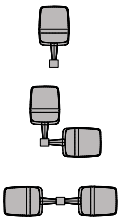
[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

DRILL PATTERN

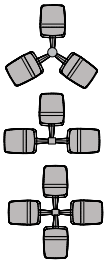
RECTANGULAR ARM (A)
Compatible with Pole drill pattern B4



EPA



Config.	EPA
1	.67
2 @ 90°	1.06
2 @ 180°	1.34



Config.	EPA
3 @ 120°	1.68
3 @ 90°	1.73
4 @ 90°	2.12

TENON TOP POLE BRACKET ACCESSORIES (Order Separately)

(2 3/8" OD tenon)

Catalog Number	Description
SETAVP-XX	Square tenon adapter (4 at 90º) for A - Rectangular Arm mounting option only
RETAVP-XX	Round tenon adapter (4 at 90º) for A - Rectangular Arm mounting option only
TETAVP-XX	Hexagonal tenon adapter (4 at 90º) for A - Rectangular Arm mounting option only
SETA2XX	Square tenon adapter (4 at 90º) for AD - Universal Arm mounting option only
RETA2XX	Round tenon adapter (4 at 90º) for AD3 - Universal Arm mounting option only
TETA2XX	Hexagonal tenon adapter (3 at 120º) for AD - Universal Arm mounting option only

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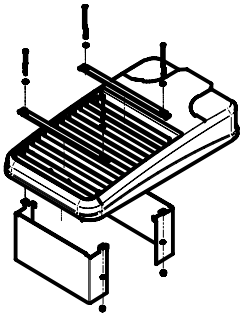
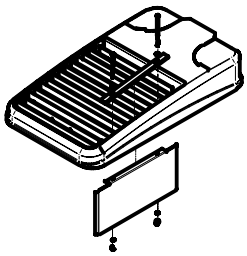
HUBBELL Lighting

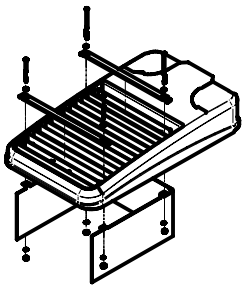
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



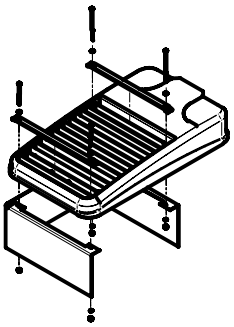
HSS/VP-S/90-FB/XXX
90° shield front or back
(2 shields shown)



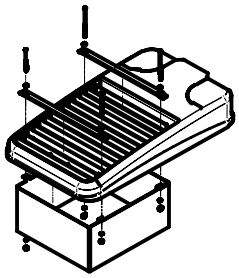
HSS/VP-S/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



HSS/VP-S/270-FB/XXX
270° shield front or back
(1 shield shown in back orientation)

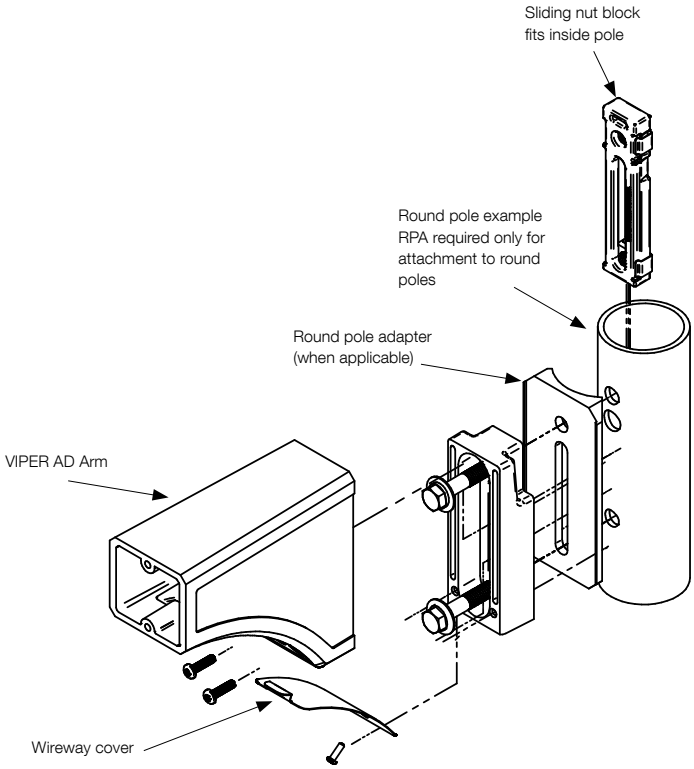


HSS/VP-S/270-LR/XXX
270° shield left or right
(1 shield shown in right orientation)

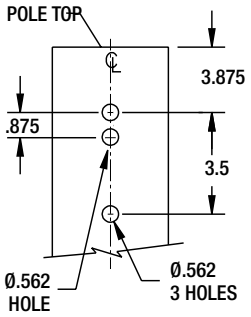


HSS/VP-S/360/XXX
Full shield (1 shield shown)

AD ARM MOUNTING INSTRUCTIONS



DECORATIVE ARM (AD)
Compatible with pole drill pattern S2



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GEOPAK SERIES SIZE 1 LED

Architectural Wallpack

TRP1/RDI1/QSP1

NEW

Cat.#	
Job	Type

HUBBELL Outdoor Lighting

Approvals

SPECIFICATIONS

APPLICATIONS

- Small sized architectural wallpacks in three stylish shapes with molded contours to accentuate building architecture. Provides excellent illumination in energy-saving LED systems.
- Back box accessory available for surface conduit application.

Construction:

- Housing is made from die-cast aluminum with a hinged back-plate for ease of installation and maintenance.
- The LED bezel and trim-plate are made of stainless steel.
- Five powder coat standard finishes, plus custom color options.
- Wet Location Listed to UL924 and UL1598 Standard.

LED:

- 12 high power LEDs delivering up to 3,000 lumens.
- Up to 118 lumens per watt
- Type II, III and IV distributions for a wide variety of applications.
- Zero uplight (U0), dark sky, neighbor friendly

Electrical:

- 120-277 operation, 50/60Hz
- 0-10V dimming driver standard
- 10kA surge protector
- Photocell and occupancy sensor options available for complete on/off and dimming control

Battery Backup:

- Intergral Battery Backup provides emergency lighting for the required 90 minute path of egress.
- Includes a long-life Lithium Iron Phosphate battery with optional battery heater for cold temperature application.
- Utilizes 4 LEDs in emergency mode with 657 lumens. Each of the 4 LEDs in emergency are designed to function independently in the unlikely event of a single LED malfunction
- Spectron® self-testing/self-diagnostic electronics are included standard
- Independent dedicated driver and LED array for battery/emergency mode operation.

Installation:

- Universal plate for mounting to standard 3 1/2" and 4" square electrical boxes. All connections are made from connections at the rear of the unit.
- Optional back-box accessory available for surface conduit application. See BB-Geo accessories.

Listings:

- UL 1598 listed for use in wet locations
- Drivers IP66 and RoHS compliant
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org

Warranty:

- For more information visit:

http://www.hubbelloutdoor.com/resources/warranty/

PRODUCT IMAGE(S)

GEOPAK



Trapezoid



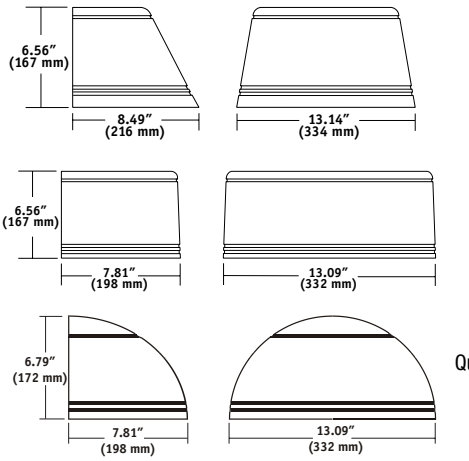
Round



Quartersphere

Powered by DUALLITE

DIMENSIONS



SHIPPING INFORMATION

Catalog Number	Weight (lbs)	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
TRP1	11.5	17.0	9.9	10.0
RDI1	11.5	18.0	11.0	9.25
QSP1	10.5	17.0	9.6	10.5

CERTIFICATIONS/LISTINGS

C US

*3000K and warmer CCTs only

ORDERING INFORMATION

ORDERING EXAMPLE: TRP-12L-20-4K-3-1-BL-SCP-EH

HOUSING	VERSION	WATTAGE	CCT/CRI	DISTRIBUTION	VOLTAGE	FINISH	CONTROL OPTIONS	OPTIONS
TRP1 Trapezoid	**12L** 12 LEDS	**15** 15 watts	**3K7** 3000K, 70CRI	**2** Type II	**U** 120-277	**BL** Black	**PCU** Button Photocell	**F**[4] Fusing (only available with STD fixture configuration, 120-277V only)
RDI1 Radius		**20** 20 watts	**4K7** 4000K, 70CRI	**3** Type III	**1** 120	**DB** Bronze	**SCP**[2,3] Programmable Motion Sensor	**E**[1] Battery Pack (0˚C)
QSP1 Quartersphere		**30** 30 watts	**5K7** 5000K, 70CRI	**4** Type IV	**2** 208	**GR** Gray	**SPECIFY SCP HEIGHT**	**EH**[1] Battery Pack (-30˚C) with heater
					3 240	**PS** Platinum	**8F** Up to 8ft mount height	
					4 277	**WH** White	**20F** Up to 20ft mount height	
						CC Custom		

[1] Voltage specific (120 or 277V only)
[2] Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only
[3] PCU option not applicable, included in sensor
[4] Must specify input voltage (120, 208, 240 or 277)

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ACCESSORIES - Order separately

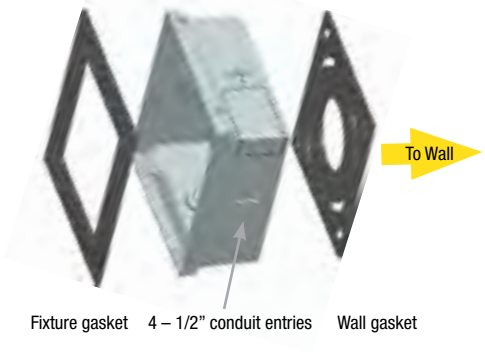
Catalog Number	Description
SCP-REMOTE[2]	Remote control for SCP option. Order at least one per project to program and control.
BB-GEO-XX	Back box with 4 - 1/2" threaded conduit holes, specify finish by replacing "XX" with finish selection, eg. Dark Bronze "DB"

[2] Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V-277V only



BB-GEO-XX – Mounted to luminaire

BB-GEO-XX



PERFORMANCE DATA (AC/Standard Configurations)

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
12	350mA	13.9	2	1635	118	1	1	1	1577	113	1	1	1	1497	108	1	1	1
			3	1613	116	1	0	1	1556	112	1	0	1	1477	106	1	0	1
			4	1607	116	0	0	1	1550	111	0	0	1	1471	106	0	0	1
	500mA	19.9	2	2268	114	1	1	1	2176	109	1	1	1	2077	104	1	1	1
			3	2245	113	1	0	1	2140	108	1	0	1	2049	103	1	0	1
			4	2229	112	0	0	1	2150	108	0	0	1	2041	103	0	0	1
	700mA	28.2	2	2942	104	1	1	1	2885	102	1	1	2	2721	96	1	1	1
			3	2912	103	1	0	1	2836	101	1	0	1	2685	95	1	0	1
			4	2892	103	1	0	1	2789	99	1	0	1	2674	95	1	0	1

Electrical Data

Input Power Consumption

Drive Current (mA)	Input Voltage (V)	System Power (w)	Current (Amps)
350mA	120	13.9	0.12
	277		0.05
500mA	120	19.9	0.17
	277		0.07
700mA	120	28.2	0.24
	277		0.10

Battery backup units consume additional power during charging (maximum 32.2 watts for E, 50.7 watts for EH)

Projected Lumen Maintenance

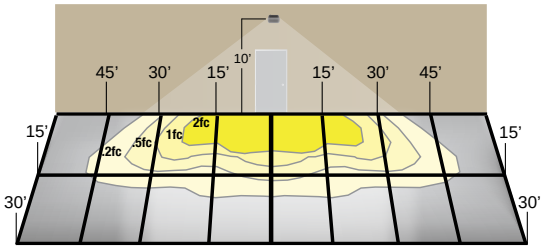
Ambient Temp.	Operating Hours 0	25,000	50,000	TM-21-11[1] 60,000	100,000	L70 (hours)
25°C/77°F	1.00	0.98	0.97	0.95	0.91	>345,000
40°C/104°F	1.00	0.96	0.95	0.92	0.87	>268,000

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

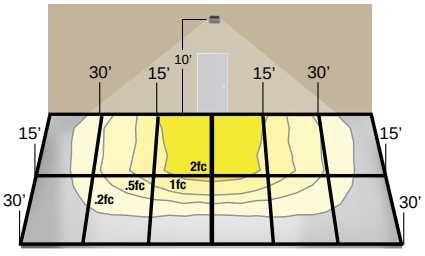
AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99
50° C	122° F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PHOTOMETRIC REPORTS
(30w, 4000K shown)



TYPE II



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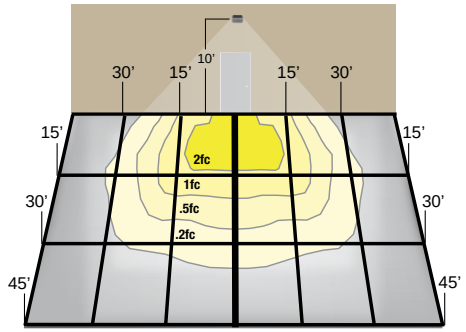

TYPE IV (Forward throw)

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GeoPak - Battery Back Up

Functional Circuitry: Transient surge protection device on AC input. Upon failure of the normal utility power, an LED driver is automatically activated to power the emergency LEDs. Upon resumption of normal utility power, the LED driver is turned off, and the battery is recharged through a micro-controller based 3-stage charger. The battery is a maintenance-free Lithium Iron Phosphate (LiFePo) type. A low voltage battery disconnect (LVD) feature protects the battery from severe damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. The optional heater features a heating wrap and thermostat to maintain optimal battery temperature during charge or discharge. The GeoPak includes the following features:

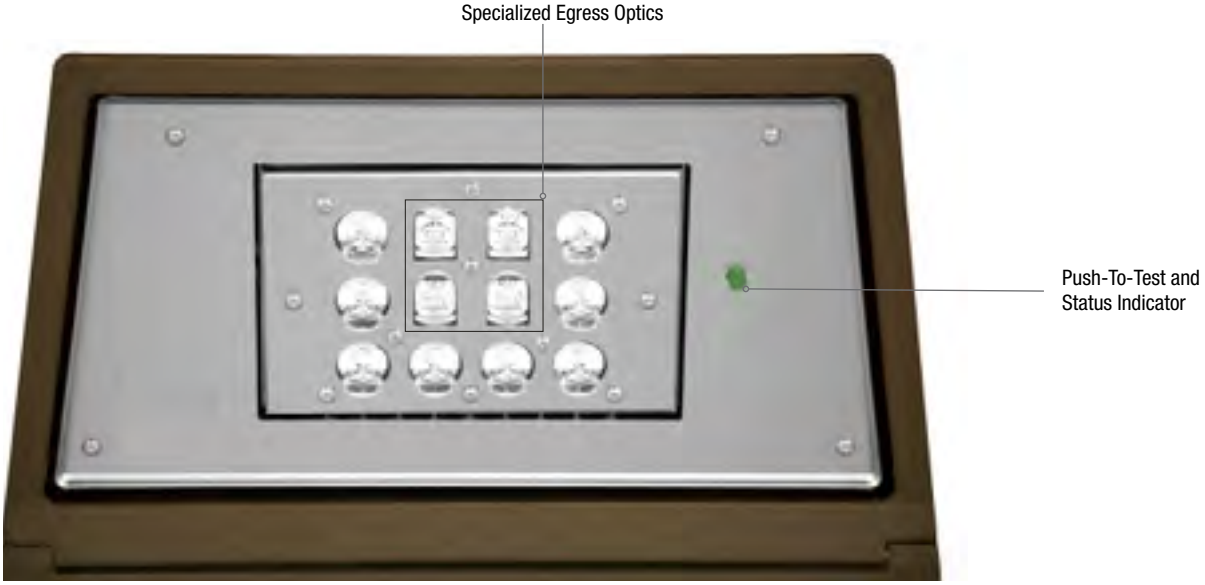
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Self-diagnostics monitors LED status, LED driver circuit, battery capacity and charger function and displays any fault detection by means of a flashing code.
- Self-Test feature runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status.
- User initiated 1, or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage).
- Battery backup units consume 6 watts when charging a dead battery and 2 watts during maintenance charging. EH (units with a heater) consume up to an additional 8 watts when charging if the battery temp is lower than 10°C

Emergency Photometric Performance (1 fc average .1 fc minimum)

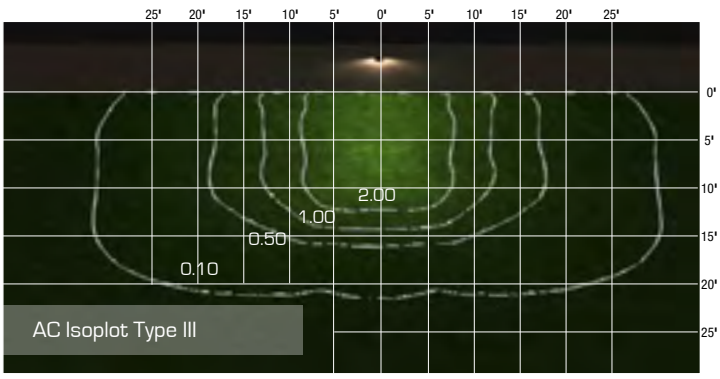
28’ multi-unit spacing at 10’ MH with 0/30/10 reflectances on a 6’ path

26’ x 10’ single unit coverage at 10’ MH with 0/30/10 reflectances

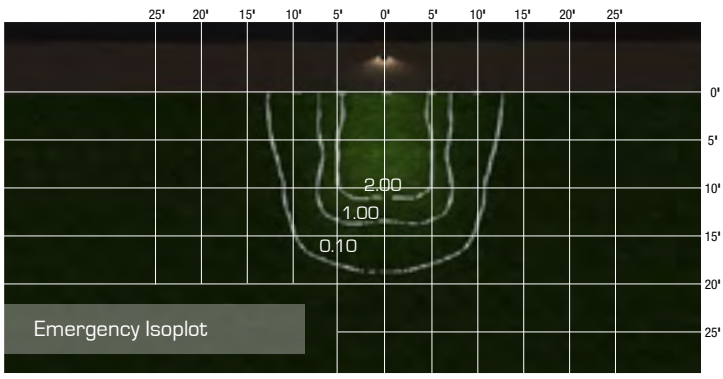
6’ x 19’ forward throw coverage at 10’ MH with 0/30/10 reflectances



Normal Mode



Emergency Mode



Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions.

Diagrams for illustration purposes only, please consult factory for application layout.

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ENVIRONMENTAL AND LANDSCAPE FEATURES

The following statements are provided in accordance with the Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Preservation of Significant Natural Features (14-526 (b) 1), if applicable

- *Trees, plants, habitats listed on State or Federal list of endangered or threatened*
- *High and moderate value waterfowl and wading habitat*
- *Aquifers on Casco Bay Islands*
- *Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)*
- *Proposed preservation areas and protection measures*
- *Documentation from environmental consultants, determinations from applicable state agencies*

1. *Preservation of Significant Natural Features:*
    - The existing site retains no prominent significant natural features therefore no issue related to the preservation of these features applies.

Landscaping and Landscape Preservation (14-526 (b) 2 a)

- *Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)*
- *Protection measures of existing vegetation during construction*
- *Protection measures within Shoreland Zone, if applicable*

2. *Landscaping and Landscape Prevention:*
    a. *Landscape Preservation.*

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

        (ii) Not applicable.

        (iii) There is no specific vegetation protection required on the site.

        (iv) The Applicant will request a waiver from this standard.

        (v) Not applicable (not in Shoreland Zone).

Landscaping and Landscape Preservation (14-526 (b) 2 b i)

    a. *Screening and buffering of service areas and between non-residential and residential uses*
    b. *Planting plans with plant schedule and sizes*

2. Landscaping and Landscape Prevention:

b. Site Landscaping:

(i) Landscaped Buffers:

(a) There is an existing loading area at the end of the existing building to remain and this area will remain open. Any trash collection will be within a secure area that will contain solid screening in the form of a fence or wall system.

(b) The development is not subject to zoning setbacks or buffering requirements.

(c) Not applicable.

(d) Not applicable.

Landscaping and Landscape Preservation (14-526 (b) 2 b ii)

Parking Lot Landscaping, if applicable

- *Landscaped islands within parking areas (Technical Manual, Section 4)*

2. Landscaping and Landscape Preservation:

a. Site Landscaping.

(ii) Parking Lot Landscaping:

a) thru d) Parking lot and area landscaping will be provided for on the landscape plans by ALA Landscape Architecture. Landscape renderings are included with this section. A formal Landscape Plan will be submitted to the City.

Street Trees (14-526 (b) 2 b iii)

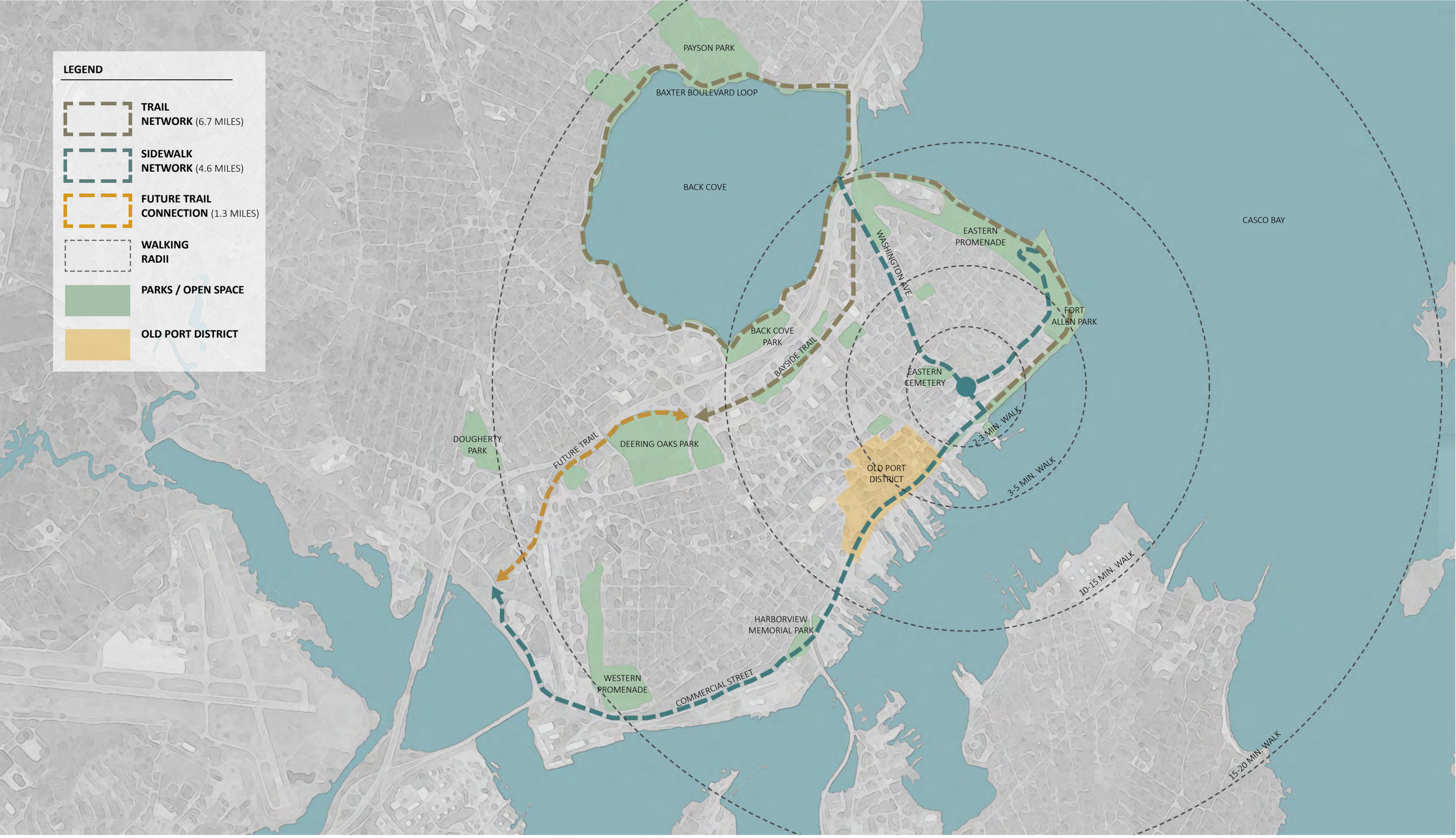
- *Existing Heritage or Feature Trees on site and measures to preserve*
- *Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable*

2. Landscaping and Landscape Preservation:

b. Site Landscaping.

(iii) Street Trees:

(a) The landscape architect will coordinate plantings with the City arborist.



100 FORE STREET | SITE CONTEXT
10.10.2018

ALA
LANDSCAPE ARCHITECTURE + URBAN DESIGN + GRAPHICS
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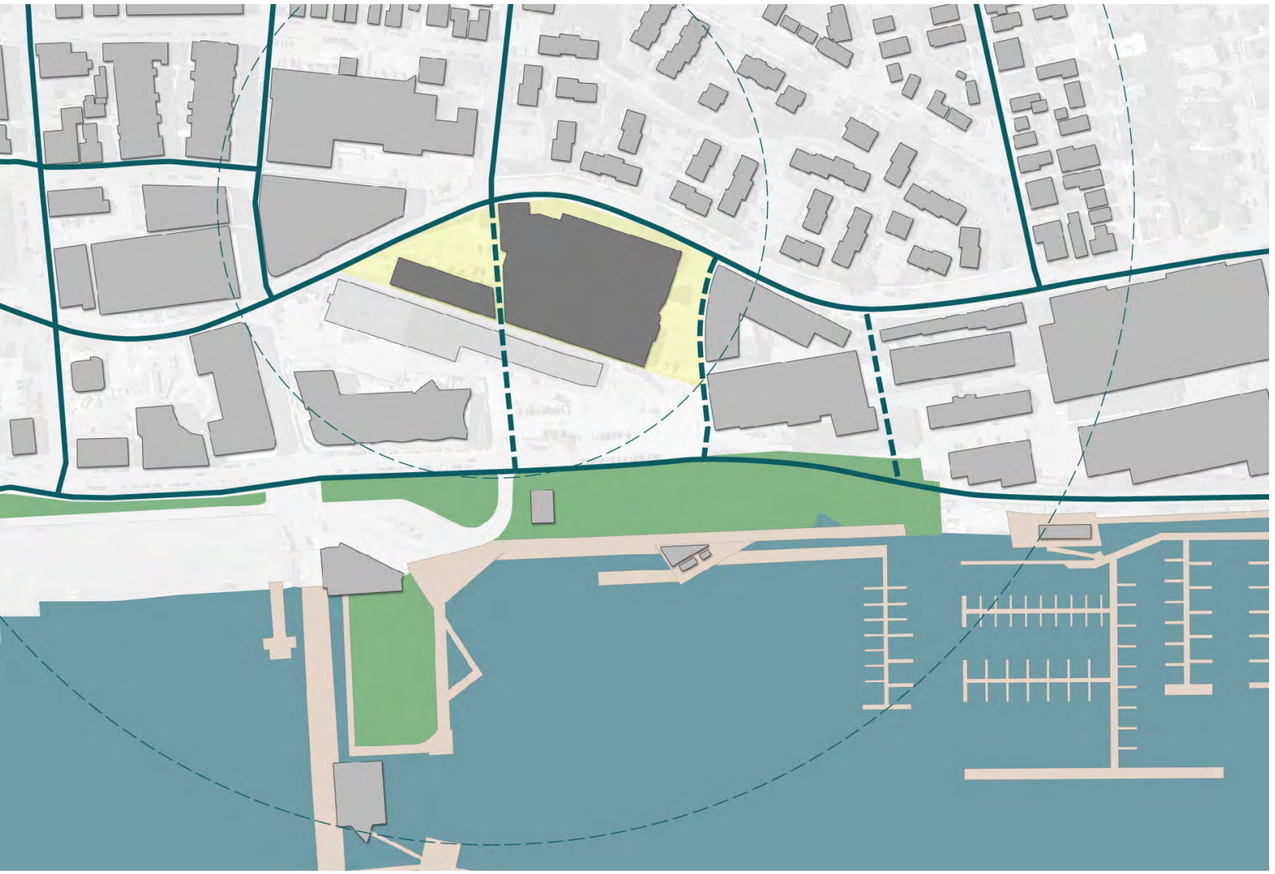
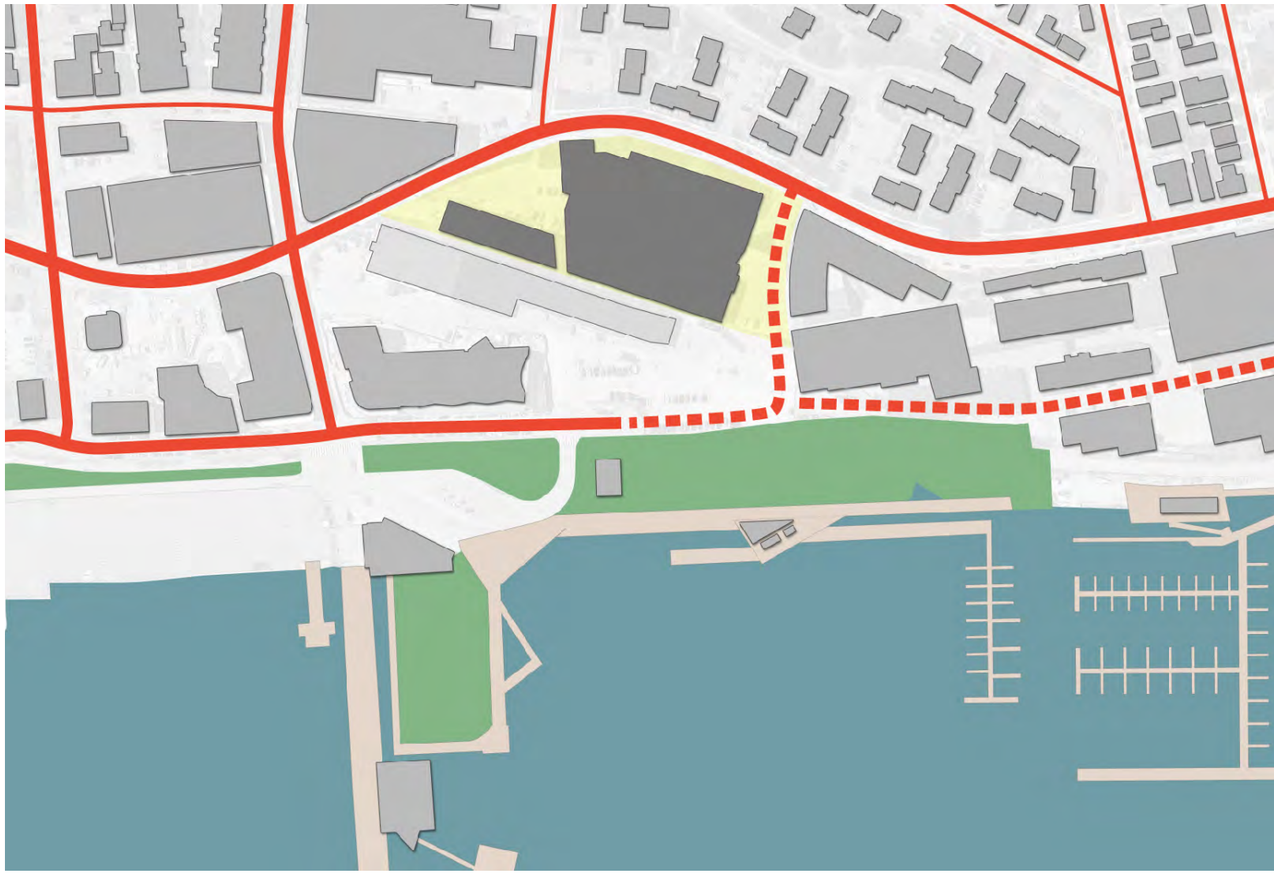


PEDESTRIAN CONNECTIVITY



VEHICULAR CONNECTIVITY

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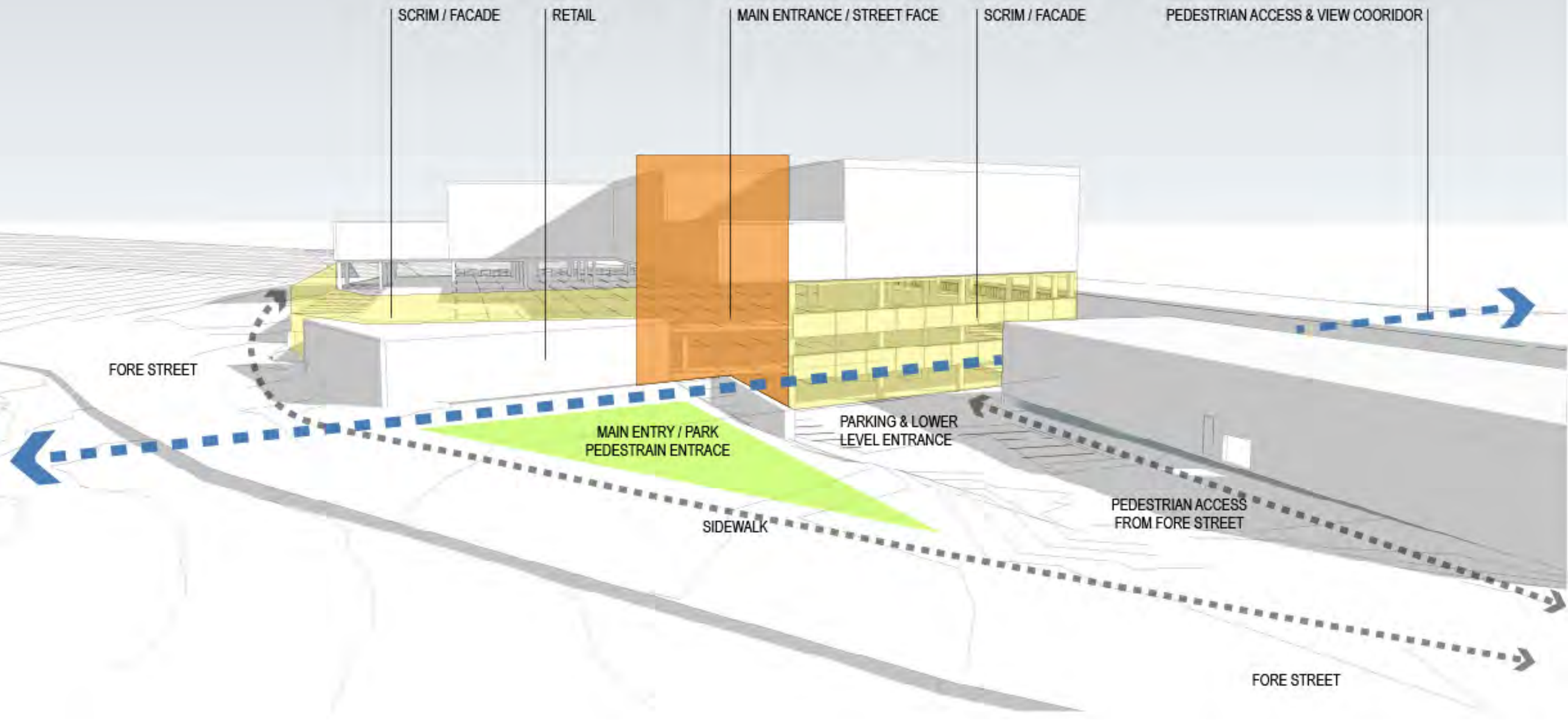

100 FORE STREET | SITE DIAGRAM
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100 FORE STREET | SITE PLAN
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GREENROOF W/ NATIVE LOW MAINT. PLANTS

SCRIM CONTINUES AT 2ND FLOOR
TO CONCEAL PARKING AND REINFORCE
STREET WALL ALONG FORE ST.

OPEN STEPS ALLOWS FLEXIBLE MOVEMENT ALONG PUBLIC SIDEWALK. GRADE SEPARATION AND PAVING MATERIAL CHANGE DELINEATES PUBLIC AND PRIVATE SPACE

STEPPED WALLS BREAK UP MASS OF WALL - OPENS VIEWS TO EAST

UPPER LEVEL ENTRY

SHADE STRUCTURE FRAMES VIEWS TO THE BAY AND PROVIDE A SENSE OF ENCLOSURE AND SHADE WHILE IMPLYING A CONTINUATION OF THE STREET WALL

SCRIM / SCREEN CONCEALS PARKING DECKS

GREEN ROOF PROVIDES FRAMED HORIZON FRAMING
VIEW TO CASCO BAY



100 FORE STREET | SOUTH ENTRY PLAZA VIEW
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100 FORE STREET | SITE PLAN NORTH ENTRY
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CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan has been prepared by Cianbro Corporation.

Construction Management Plan
100 Fore Street
Cianbro Corporation

This document and its subsequent attachments comprise The Construction Management Plan being submitted to the City of Portland for the 100 Fore Street Project, located at 100 Fore Street. This plan is being submitted by Cianbro Corporation on behalf of the Owner of the property, 100 Fore Street LLC. The Construction Management plan contains information pertaining to the overall planning and coordination of the project.
The 100 Fore Street Project involves a new three story parking garage with 2 levels of office space above that. Total of approximately 600 new parking spaces with one floor of office space approximately 42,870 sf and the other office space approximately 39,080. The footprint of the building is +/-67,450sf.

A. Construction Management Principles

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

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

B. Development Review of Construction Management Plan

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

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

Cianbro 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. Minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process.

The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood.

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

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

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

D. Construction Administration and Communication

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

Brian Larsen: Project Manager
(207) 614-4342
blarsen@cianbro.com

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

E. Construction Schedule

The preliminary construction schedule for the project starts in November of 2018 and runs through December of 2019.

A detailed construction schedule with be submitted as more information is received and put into the schedule.

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

F. Security & Public Safety

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

The fire safety program onsite will consist of the following:

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

G. Construction Permitting and Traffic Control Plans

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

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

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

H. Site Management and Controls

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

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

I. Erosion Control and Preservation of Trees

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

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

J. Construction Staging Area

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

A plan will be submitted showing the truck access route for deliveries to the site once Cianbro can sign up contractors and determine the best route to get trucks into the site.

K. Parking During Construction

Construction parking will be the responsibility of each contractor working on the project and will be off-site. Each contractor will make arrangements to get their team members to the site.

L. Special Measures as Necessary

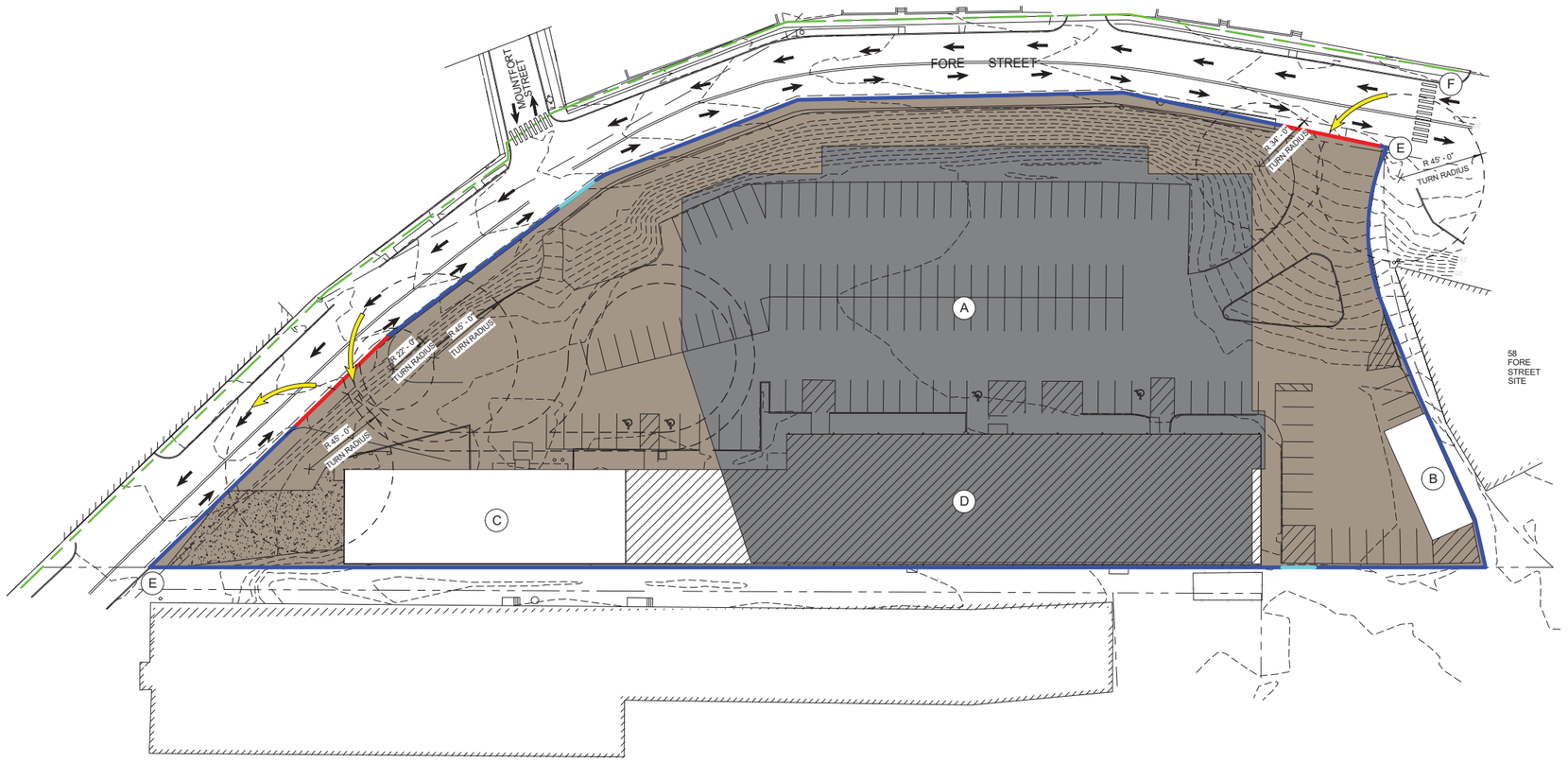
There will be no special measures necessary for this project.

Please do not hesitate to contact me with any comments, questions, or concerns regarding the 100 Fore Street Project and subsequent construction management plan.

Sincerely,

Brian Larsen
Project Manager
Building
CIANBRO
Mobile (207) 614-4342

EXHIBIT A



GRAPHIC KEY

- TRAFFIC FLOW
- PEDESTRIAN ACCESS
- JERSEY BARRIERS WITH FENCE PANELS
- CONSTRUCTION ACCESS GATE WITH SIGNAGE
- PERSONAL ACCESS GATE WITH SIGNAGE
- CONSTRUCTION ACCESS ONLY

LEGEND

- (A) PROPOSED BUILDING FOOTPRINT
- (B) LOCATION OF SITE OFFICE
- (C) EXISTING BUILDING TO REMAIN
- (D) EXISTING BUILDING TO BE DEMOLISHED
- (E) SIDE WALK ALONG CONSTRUCTION SITE CLOSED
- (F) CROSSWALK TO REROUTE PEDESTRIAN ACCESS

SIGNAGE AT ALL ACCESS GATES









NOTES:

CLIENT:
0 HANCOCK STREET, LLC

CIANBRO

PROJECT:
100 FORE STREET
100 FORE STREET
PORTLAND, ME 04101

Rev.	Description	Date

SCALE: 1/32" = 1'-0"
PROJECT NO:
ISSUE DATE: 10/05/18
CAD DWG:
DRAWN BY: MFP
CHK'D BY: LED

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FINAL DRAFT CAD LLC
203 Anderson Street, Portland, ME 04101
207-805-8786 | www.finaldraftcad.com

SHEET TITLE:
SITE LOGISTICS PLAN

L101

SHEET NO. 1 OF 1

A R C H E T Y P E

November 15, 2018

100 Fore Street Re-Submission

This submission includes revisions to the design based on input from the Planning Board workshop as well as following meetings to continue reviewing updates. The changes address the opinion that the first version was too complicated in its use of materials especially when used in addition to the complicated massing which is driven by the zoning. It was also decided that there was a general lack of hierarchy in the elements.

In response the concerns about materiality, the overall scheme has been simplified while the massing has remained generally the same, with some minor changes. We are still working with curtainwall and aluminum panel, but the major office massing has been all wrapped in curtainwall with the core and shaft elements carrying the aluminum panel in just one proposed color.

In terms of colors for both the glass and the aluminum panel, it was suggested that the building carry the same color scheme as the new Wex building going in on Thames Street in order to create a campus feel and we are open to that idea.

In the first Planning Board workshop the use of a stainless steel mess to wrap the garage was questioned, again the thought that the building was too complicated. That material has been removed and materials from the floors above are now carried down. There is one façade facing lower Fore where the curtainwall continues down across the garage levels with the spandrel to glazing ratio adjusting accordingly. On the elevation facing the water, the alucobond continues down with some ribbon window openings that transition into open air openings to allow for open garage calculations. It is also important to remember than if the city lot below develops per zoning, this elevation will be visually buried with the connector road elevation being the element which reads from Thames Street.

Massing-wise there have been some changes. The parapets were previously angled and now continue straight back to the center of the building at a continuous height. This allows them to create hierarchy with the masses they are on, one facing the water, one facing the city and one facing Munjoy hill, without adding more complication to the complicated massing. The main entry to the office building, located on the connector rd, has been pulled forward and angled from its footprint to the roof in order to allow for a glass wrap on it and to create faces that oriented up towards Fore Street and down towards Fore Street. It has become a prominent feature setting it apart from the other stair towers and creating hierarchy in elements.

The final area that has been updated but is still being worked on is the building's relationship to Fore Street at the property line. We have been working with the landscape architects to create a language that carries through the site elements into the building such as the angle that is taken from Mountfort Street and brought into the site and angles of the building facades. Previously the material treatment of the retail spaces were aluminum panel in a blue. Now the two bookends are treated differently, but each relating to the portion of the larger building they are in contact with. The southern portion is the gray aluminum panel pulled from the building reorienting from a

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

vertical stair element to the horizontal retail element and anchoring the building back into the slope. At the northern retail component, the curtainwall has been carried onto the street as the building cascades down with these full glass steps derived from the zoning requirement of a step back at Fore Street.

The screen used to cover the garage at this elevation has gone through several iterations and is currently a perforated metal panel that allows light into the garage during the day and would allow a nice pattern of light to compliment the site work linking the retail components. This panel is to continue onto the faces of the retail elements that face into the plaza to make a complete plaza design. The height of the wall against the garage is still being discussed.

Although there are still areas that need refining we believe the building has improved since the first workshop.

Sincerely,



William K. Hopkins
Registered Architect

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

PC1

Google Groups

Re: 100 Fore Street Level Site 3 Plan (540 parking spaces)

Berry Manter <berrymanter@yahoo.com> Oct 23, 2018 3:09 PM
Posted in group: **Planning Board**

To Whom it May Concern and Planning Board,

As an Eastern Promenade resident who's route through and out of the city to all destinations west and south is via Franklin Street. I have serious concerns about the impact of the added parking spaces and the work hour flow that this adds to the already bloated new business areas of India Street, new residences, and new hotels in the lower penninsula and waterfront. This represents, in combined total, a massive increase into Portland's already notable " urban rush hour" glut on this main thoroughfare in and out of the city. THIS is the time to think "FUTURE" vision of this city with longterm plans that accommodate growth.

Approving such massive parking slots ahead of creating progressive public transportation plans and placing parking locations closer to the marginal way/295 satellite lots is short sighted.

The second concern this presents is related to HOUSING. Look around the city at present. Count the parking garages of significant height, all with ocean views. These are already in great number. Such facilities replace and eliminate now desirable ground for future housing with walkable city access, which is what we all want and the city needs NOW, as noted by the current controversial transformation of Munjoy Hill where I reside.

PLEASE, NOW is the time for walkable housing and keeping the city commutable and clear of needless traffic glut — NO MORE INTOWN PARKING FACILITIES.

Thank you,

Berry Manter
46 Eastern Promenade
Portland

PC2

Google Groups

Proposed parking at 100 Fore Street

Pamela Day <pday2304@gmail.com> Oct 23, 2018 3:16 PM
Posted in group: **Planning Board**

Dear Planning Board Members:

We live at 25 Waterville Street in Portland. We are a very short distance from the current Hamilton Marina at 100 Fore Street. We strongly oppose putting almost 600 parking spaces on this site. Traffic in the area is already congested, especially in the summer, and street parking has become increasingly difficult. Already, people using the ferries or visiting the Old Port end up parking on our street.

In addition to its impact on traffic and parking, the idea of placing 600 parking places in this space, with its view of the waterfront, is quite incongruous with the mission of the Planning Board to preserve the waterfront for public use and enjoyment.

We urge the City and the Planning Board to pursue other options for parking, including shuttles from existing parking areas.

Sincerely,

Pamela Day & Michael Petit
25 Waterville St, Portland, ME 04101

PC3

Google Groups

Re: 100 Fore Street

Christian MilNeil <c.neal.milneil@gmail.com> Oct 23, 2018 3:24 PM
Posted in group: **Planning Board**

To the planning department and planning board:

If you haven't already, please take a look at the IPCC's "Summary for Policymakers" document from the recent "Special Report on Global Warming of 1.5 °C (SR15)":
http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

The most important takeaway is essentially that we (the City of Portland, along with every other public jurisdiction on Earth) need to cut emissions in half within the next 10 years, and completely by 2040, in order to preserve the conditions necessary for civilization:

 Screen Shot 2018-10-23 at 11.18.54 AM.png
And in fact, the jurisdictions that care about these impacts (and I would hope that the City of Portland is among them) will need to act even faster, and more dramatically, to compensate from a lack of action from other jurisdictions that don't take sufficient action.

In practical terms for us, this means continuing our work to reduce heating and cooling expenditures, and increasing our use of renewable energy, both on-site and from the grid. In those sectors the data suggest that Maine and Portland are more or less on track to meet the IPCC's requirements.

But building systems and electricity are each a small component of Maine's emissions – the biggest source of greenhouse gases here comes from motor vehicle tailpipes, and those emissions are still increasing statewide.

As a city, we need to shift from a place where 80% of trips are made by automobile to a place where 80% of trips are made on foot, bike or public transit. And, if we want to preserve the legal, ecological and economic systems that enable our city to exist, we need to do this *in the next 10 years*.

These are the laws of physics; let's now turn to the zoning laws of the City of Portland, where, contrary to the threats we face, businesses like Wex are still being required to build hundreds of parking spaces in a downtown location with abundant access to bike routes, walkable neighborhoods, buses and ferry routes.

I understand that the Planning Board does not have the authority to demand that Jonathan Cohen redesign his project for the car-free future we urgently need to build. And I don't expect Wex, a company in the business of facilitating gasoline purchases, to take bold leadership here.

Rather, this example, and the thousands of additional parking garage spaces currently being planned in our downtown, should serve as an urgent warning that the city's planning staff need to come up with new policies, *now*, that give our city a fighting chance of staying above water.

This case – where a developer is proposing a structure to hold 600 climate-baking machines in a location that will almost certainly be flooded by mid-century if other developers continue to follow the same example – serves as a clear wake-up call to how out-of-date and self-destructive Portland's current zoning and transportation policies are.

We need you to do better.

Yours,
Christian MilNeil
45 Smith Street

- - - - - - - - - - - - -
double u double u double u dot christianmilneil dot com

LEVEL III SITE DEVELOPMENT PLANS

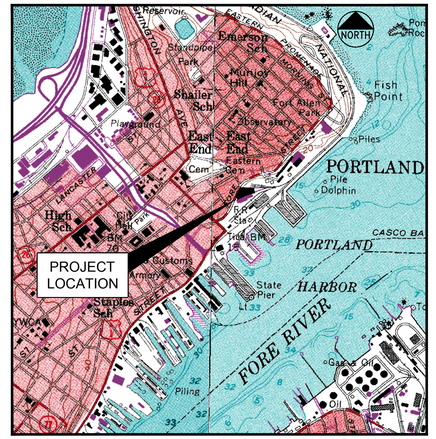
FOR A 539± SPACE PARKING GARAGE & COMMERCIAL OFFICE BUILDING (82,742 SF±) AND ANCILLARY RETAIL ON

100 FORE STREET PROPERTY

PORTLAND, MAINE

NOVEMBER 2018

PERMIT SET



LOCATION MAP
N.T.S.

TAX MAP - BLOCK - LOT (ADDRESS)

19-BLOCK A - LOT 10
CCRD BOOK 33748, PAGE 1
100 FORE STREET
PORTLAND, MAINE

CURRENT APPLICANT/DEVELOPER/OWNER

100 FORE STREET LLC
P.O. BOX 910
865 SPRING STREET
WESTBROOK, MAINE 04098-0910
ATTN: JONATHAN COHEN
CCRD BOOK 53748, PAGE 1

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* C-3.1 ALTERNATIVE PLAN
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C-6.4 MISCELLANEOUS DETAILS

* NOT INCLUDED IN THIS SUBMISSION

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

UTILITIES

WATER:
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22 DOUGLASS STREET
P.O. BOX 3553
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207.774.5961
CONTACT: ROBERT BARTELLS

SEWER / STREETS:
CITY OF PORTLAND
PUBLIC SERVICES DIVISION
55 PORTLAND STREET
PORTLAND, MAINE 04102
207.874.8846
CONTACT: BRAD ROLAND, P.E. -
SENIOR PROJECT ENGINEER

ELECTRIC:
CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
207.842.2367
CONTACT: JAMIE COUGH/PAUL DUPERRE

TELEPHONE:
CONSOLIDATED COMMUNICATIONS
5 DAVIS HILL FARM ROAD
PORTLAND, MAINE 04103
207.797.1866
CONTACT: PATRICK MORRISON

NATURAL GAS:
NORTHERN UTILITIES
1075 FOREST AVENUE
PORTLAND, MAINE 04103
207.541.2570
CONTACT: CRAIG CAMPBELL /
SCOTT CARPENTER
cell 207.650.6716

CABLE:
TIME WARNER CABLE/SPECTRUM
COMMUNICATIONS
115 JOHNSON ROAD
PORTLAND, MAINE 04102
207.253.2324
CONTACT: MARK PELLETIER

DIG SAFE:
CALL BEFORE YOU DIG
888.344.7233

PERMITS / APPROVALS

TYPE:	GOVERNING BODY:	STATUS/DATE ISSUED:
LOCAL		
SITE PLAN/LEVEL III APPROVAL:	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL, CONGRESS STREET PORTLAND, MAINE 04103 207.874.8722	LEVEL III SITE PLAN SUBMISSION FILED WEEK OF 10.08.18 UPDATED PLAN SUBMISSION FILED WEEK OF 11.05.18
BUILDING PERMIT:	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL, CONGRESS STREET PORTLAND, MAINE 04103 207.874.8900	TO BE FILED BY BUILDING CONTRACTOR
UTILITY / STREET OPENING PERMITS:	CITY OF PORTLAND PUBLIC SERVICES DIVISION 55 PORTLAND STREET PORTLAND, ME 04102 207.874.8801	TO BE FILED PRIOR TO CONSTRUCTION BY BUILDING CONTRACTOR
TRAFFIC MOVEMENT PERMIT:	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL, CONGRESS STREET PORTLAND, MAINE 04103	A TRAFFIC MOVEMENT PERMIT IS NOT REQUIRED TRAFFIC STUDY SUBMITTED AS PART OF LEVEL III APPLICATION - APPLICANT IS PARTICIPATING IN CITY SPONSORED AREA WIDE TMP AS OF NOV. 1, 2018

CONSULTANT LIST

CIVIL ENGINEER:
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482 PAYNE ROAD SCARBOROUGH COURT
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Archetype Architects
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HOPKINS@ARCHETYPEPA.COM

SURVEYOR:
Owen Haskell, Inc.
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207.774.0424
ATTN: RANDY LOUBIER

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45 BRADLEY DRIVE
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ATTN: WILLIAM PETERLEIN / MAT HARDISON

DESIGN BUILD LEADER:
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RICKERS WHARF MARINA FACILITY
PORTLAND, MAINE 04102
207.773.5852
CONTACT: JONATHAN DICENTES

LANDSCAPE ARCHITECT:
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PO BOX 3787
PORTLAND, ME 04101
207.221.3390
ATTN: NICK ACETO/SETH KIMBALL

TDM CONSULTANT:
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94 BECKETT STREET, 2ND FLOOR
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SARAH@SARAHCUSHMAN.COM

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207.886.8345
ATTN: CHRIS JORDAN
CJORDAN@JOHNSONAND JORDAN.COM

Stantec
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Tel. 207.883.3355
www.stantec.com

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Consultants
ARCHITECT
ARCHETYPE
LANDSCAPE ARCHITECT
ALA
SURVEYOR
OWEN HASKELL
CONTRACTOR
CIANBRO

Notes

Revision	By	Appd.	DATE
1 INTERNAL REVIEW	SRB	SRB	11.1.14
2 PROGRESS SET	SRB	SRB	11.1.09
3 LEVEL III SUBMISSION TO CITY	SRB	SRB	11.10.09
4 LEVEL III RE-SUBMISSION TO CITY	SRB	SRB	18.09.24
5 PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.09.14

File Name: 195350450_cov | PBF DWN. | DBS CHKD. | SRB DSGN. | 18.09.14 DATE
P.E. STEPHEN R. BUSHEY
Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
COVER SHEET

Project No. 210801622 | Scale N.T.S.

Sheet
C-1.0

V:\210\active\210801622\civil\cadd\permit\dwg\01622_cov.dwg plt\elliottaz 11/14/2018 3:16 PM

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 SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = STREET SIDE HYDRANT BONNET BOLT ON FORE STREET, ELEVATION 30.68, NGVD 1929 DATUM.
9. FEMA MAP COMMUNITY PANEL NUMBER 23005100014B. 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 AND BITUMINOUS CONCRETE CURB SHALL MEET THE REQUIREMENTS OF MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 609.03 AND 609.04 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, NATURAL GAS AND OVERHEAD POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.

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.

SITE PLAN REVIEW: (CONDITION OF APPROVAL)

1. TBD - WILL BE ADDED TO FINAL PLANS ISSUED PRIOR TO CONSTRUCTION.

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 ATTENTION OF 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 STRUCTURAL FILL OR GRAVEL BORROW PER THE GEOTECHNICAL REPORT. 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 THE MDOT 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.

UTILITY NOTES:

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED BETWEEN THE SITE WORK CONTRACTOR AND MEP 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 WITHCONSOLIDATED 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 CONSOLIDATED COMMUNICATIONS AND CABLE SERVICE WITH SPECTRUM 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.

EROSION CONTROL NOTES:

THE PROJECT SITE IS RELATIVELY SMALL AND WILL PRIMARILY FEATURE BELOW GROUND EXCAVATION THAT WILL RESULT IN AN INTERNALLY DRAINING RUNOFF PATTERN. NEARLY THE ENTIRE PROJECT SITE WILL BE STABILIZED BY ROOFTOP, PAVEMENT, OR BRICK SIDEWALKS.

THE PRIMARY EMPHASIS OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE IMPLEMENTED FOR THIS PROJECT IS AS FOLLOWS:

1. PLANNING THE PROJECT TO PROVIDE THE ABILITY TO CAPTURE ANY ERODED MATERIALS FROM THE WORK AREA ON THE SITE.
2. DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
3. RAPID STABILIZATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
4. PREVENTING SEDIMENT LADEN RUNOFF FROM ENTERING THE EXISTING STORM DRAIN NETWORK ON AND AROUND THE SITE.
5. KEEPING SURROUNDING STREETS FREE OF MUD AND DUST BY REGULARLY SWEEPING.

EROSION/SEDIMENTATION CONTROL DEVICES

AS PART OF THE SITE DEVELOPMENT THE CONTRACTOR WILL IMPLEMENT THE FOLLOWING EROSION AND SEDIMENT CONTROL DEVICES. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED HEREIN. FOR FURTHER REFERENCE, SEE THE "MAINE EROSION AND SEDIMENT CONTROL BMPS" HANDBOOK PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

1. SILTATION FENCE SHALL BE INSTALLED DOWN SLOPE OF ANY DISTURBED AREAS TO TRAP RUNOFF-BORNE SEDIMENTS UNTIL THE SITE IS REVEGETATED. THE SILT FENCE SHALL BE INSTALLED PER THE DETAIL PROVIDED IN THE PLAN SET AND INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THE CONTRACTOR SHALL MAKE REPAIRS IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE. PROPER PLACEMENT OF STAKES AND KEYING THE BOTTOM OF THE FABRIC INTO THE GROUND ARE CRITICAL TO THE FENCE'S EFFECTIVENESS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. THE SILTATION FENCE SHALL REMAIN IN PLACE AND PROPERLY MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED.
2. CATCH BASIN INLET PROTECTION: STONE SEDIMENT TRAPS OR A PREMANUFACTURED SILTSACK™ WILL BE INSTALLED AT CATCH BASIN INLETS TO PREVENT SILT FROM ENTERING THE STORM DRAIN SYSTEM. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. INLET PROTECTION SHALL REMAIN IN PLACE AND PROPERLY MAINTAINED UNTIL TRIBUTARY AREAS ARE PERMANENTLY STABILIZED.

TEMPORARY EROSION & SEDIMENTATION CONTROL MEASURES

ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. THE FOLLOWING ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. SILTATION FENCE AND CATCH BASIN INLET PROTECTION AS DESCRIBED ABOVE.
2. IF OPERATIONS DURING WET MONTHS RESULT IN TRACKING OF MUD OFF THE SITE ONTO PUBLIC ROADS, ROADS SHALL BE SWEPT AT LEAST ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. WHERE CHRONIC MUD TRACKING OCCURS, A STABILIZED CONSTRUCTION ENTRANCE SHOULD BE PROVIDED.
3. IF OPERATIONS DURING DRY MONTHS RESULT IN FUGITIVE DUST EMISSION, ADJACENT ROADS SHALL BE SPRAYED WITH WATER ONCE A WEEK OR MORE FREQUENTLY, AS NEEDED.
4. STABILIZE WITH MULCH OR OTHER NON-ERODIBLE COVER ANY SOILS THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS.
5. LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS MUST NOT BE STORED IN A MANNER THAT WILL CREATE A POLLUTANT SOURCE IF EXPOSED TO STORMWATER RUNOFF.

TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

THE FOLLOWING BASIC CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO ENSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES IS OPTIMIZED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SPECIFIC CONSTRUCTION SCHEDULE, WHICH SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.

NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE BY LIMITING THE DISTURBED AREA.

1. INSTALL PERIMETER SILTATION FENCE & CATCH BASIN INLET PROTECTION. THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE AND FUGITIVE DUST EMISSIONS DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS.
2. CLEAR AND GRUB THE WORK AREA FOR THE BUILDING, HAUL OFF THE LOAM, AND EXCAVATE FOR THE BUILDING FOUNDATION.
3. CONSTRUCT THE DRAINAGE SYSTEM.
4. INSTALL STONE AND HAY BALE CHECK DAMS AT ANY CONCENTRATED FLOW DISCHARGE POINTS.
5. INSTALL SIDEWALKS AND PAVEMENT AS DETAILED ON THE SITE PLANS.
6. REMOVE ALL TEMPORARY EROSION CONTROL DEVICES ONCE THE SITE IS STABILIZED.

PROVISIONS FOR MAINTENANCE OF THE EROSION/SEDIMENTATION CONTROL FEATURES

DURING CONSTRUCTION OF THE BUILDING AND ASSOCIATED SITE DEVELOPMENT THE CONTRACTOR SHALL BE REQUIRED TO PERFORM THE FOLLOWING:

1. INSPECTION OF THE PROJECT WORK SITE ON A WEEKLY BASIS AND AFTER EACH SIGNIFICANT RAINFALL EVENT (0.5 INCH OR MORE WITHIN ANY CONSECUTIVE 24-HOUR PERIOD) DURING CONSTRUCTION UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED. INSPECTION OF THE PROJECT WORK SITE SHALL INCLUDE:
   - IDENTIFICATION OF PROPER EROSION CONTROL MEASURE INSTALLATION IN ACCORDANCE WITH THE EROSION CONTROL DETAILS OR AS SPECIFIED HEREIN.
   - DETERMINE WHETHER EACH EROSION CONTROL MEASURE IS OPERATING PROPERLY. IF NOT, IDENTIFY DAMAGE TO THE CONTROL DEVICE AND DETERMINE REMEDIAL MEASURES.
   - IDENTIFY AREAS THAT APPEAR VULNERABLE TO EROSION AND DETERMINE ADDITIONAL EROSION CONTROL MEASURES THAT SHOULD BE USED TO IMPROVE CONDITIONS.
   - DETERMINE THE NEED TO SWEEP ADJACENT STREETS OR APPLY WATER FOR DUST CONTROL.

   ACCUMULATED SILT/SEDIMENT SHOULD BE REMOVED WHEN THE DEPTH OF SEDIMENT REACHES 50 PERCENT OF THE BARRIER HEIGHT. ACCUMULATED SILT/SEDIMENT SHOULD BE REMOVED FROM BEHIND SILT FENCING WHEN THE DEPTH OF THE SEDIMENT REACHES 6 INCHES.
2. IF INSPECTION OF THE SITE INDICATES A CHANGE SHOULD BE MADE TO THE EROSION CONTROL PLAN, EITHER TO IMPROVE EFFECTIVENESS OR CORRECT A SITE-SPECIFIC DEFICIENCY, THE INSPECTOR SHALL IMMEDIATELY IMPLEMENT THE CORRECTIVE MEASURE AND NOTIFY THE OWNER OF THE CHANGE.
3. THE CONTRACTOR SHALL KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. 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, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) 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 OWNER AND REGULATORY STAFF, AND A COPY MUST BE PROVIDED UPON REQUEST.
4. ONCE THE SITE HAS BEEN PERMANENTLY STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHOULD BE REMOVED.

PRELIMINARY - NOT FOR CONSTRUCTION

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.

ZONING SUMMARY TABLE:

B-6 Urban Commercial Business Zone and Eastern Waterfront Mixed Zone Dimensional Requirements

Description	B-6 Requirement	100 FORE STREET LLC
Minimum Lot Size	None	129,212 s.f.
Minimum Frontage	None	737.67'
Minimum Front Yard	None	0'
Minimum Side Yard	None	>10'
Minimum Rear Yard	None	>10'
Maximum Front Yard	10 Feet	Meets overlay standard
Maximum Lot Coverage	100%	< 90%
Maximum Building Height	SEE CITY COUNCIL ORDER 68-18/19	DESIGNED TO MEET RECENTLY ENACTED HEIGHT ALLOWANCES
Parking Retail Use	1 space per 200 s.f. of first floor area in excess of 2,000 s.f. not used for bulk storage	Retail 3,604 s.f. less 2,000 s.f. = 1,604/200 = 8 spaces
Parking Office Use	1 space per 400 s.f.	82,742 s.f./400 = 207 spaces
Total Spaces		559 spaces

GEOTECHNICAL

1. SEE FINDINGS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT - BY SUMMIT ENGINEERING SERVICES, DATED 00/00/18. PROJECT # 16063. THIS REPORT SHALL BE MADE PART OF THE CONSTRUCTION DOCUMENTS IN ITS ENTIRETY.
2. ALL FILL WITHIN THE BUILDING FOOTPRINT SHALL BE STRUCTURAL FILL; ALL FILL OUTSIDE OF THE BUILDING FOOTPRINT SHALL BE FOUNDATION BACK-FILL (MDOT 703.06 TYPE E), OR ¾" CRUSHED STONE AS APPROVED BY THE GEOTECHNICAL ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVALS OF UNSUITABLE SOILS AND ALL ABANDONED SUBSURFACE CONDITIONS INCLUDING FOUNDATIONS, PIPE, AND RELATED INFRASTRUCTURE ASSOCIATED WITH THE HISTORICAL SITE USE. NO EXTRA PAYMENT WILL BE MADE FOR REMOVALS AND REPLACEMENT WITH STRUCTURAL FILL OR GRAVEL BORROW.

LEGEND:

PROPOSED		EXISTING	
	BUILDING		IRON PIN FOUND (IPF) OR CAPPED IRON ROD FOUND (CIR)
	BUILDING (FLOORS ABOVE GROUND ENTRANCE)	E	ELECTRIC MANHOLE
	EDGE OF PAVEMENT		CATCH BASIN
	VERTICAL GRANITE CURB		SEWER MANHOLE
	BRICK SIDEWALK	D	DRAIN MANHOLE
	BRICK SIDEWALK	WSO	DOWN SPOUT
SMH1	SEWER MANHOLE		WATER VALVE
DMH1	DRAIN MANHOLE		WATER SHUTOFF
CB1 CB1	CATCH BASIN		UTILITY POLE
12"SD	STORM DRAIN		SIGN
6" G	GAS LINE		LIGHT POLE
12"SAN	SEWER LINE		ELECTRIC METER
8"W	WATER LINE		GAS METER
OHE/T/C	AERIAL POWER - TEL - CABLE		EDGE OF PAVEMENT
UGE/T/C	POWER - TEL - CABLE LINES		CURB (GRANITE, UNLESS NOTED)
	UTILITY POLE		EDGE OF GRAVEL
	CONIFER		TREE
			STUMP
		70	EXISTING CONTOUR
		(x=48.3)	SPOT GRADE
			PROPERTY LINE
			RIGHT OF WAY
		SD	STORM DRAIN
		S	SEWER
		W	UNDERGROUND WATER
		OHP	OVERHEAD UTILITY WIRES
			WOOD STOCKADE FENCE
		X	CHAIN LINK FENCE
	DECIDUOUS		GUARD RAIL
			EXISTING BUILDING
	SHRUB		

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482 Payne Road Scarborough Court
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Consultants

ARCHITECT
ARCHETYPE

LANDSCAPE ARCHITECT
ALA

SURVEYOR
OWEN HASKELL

CONTRACTOR
CIANBRO

Notes

No.	Revision	Date	By	Appd.
5	PROGRESS PRINTS RELEASED TO CONTRACTOR	18.09.14	SRB	YY.MM.DD
4	LEVEL III RESUBMISSION TO CITY	18.09.24	SRB	
3	LEVEL III SUBMISSION TO CITY	18.10.09	SRB	
2	PROGRESS SET	18.11.09	SRB	
1	INTERNAL REVIEW	18.11.14	SRB	

File Name: 195350450_gen	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
GENERAL NOTES & LEGEND

Project No. 210801622
Scale N.T.S.

Sheet
C-1.1

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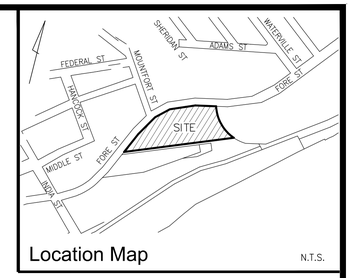
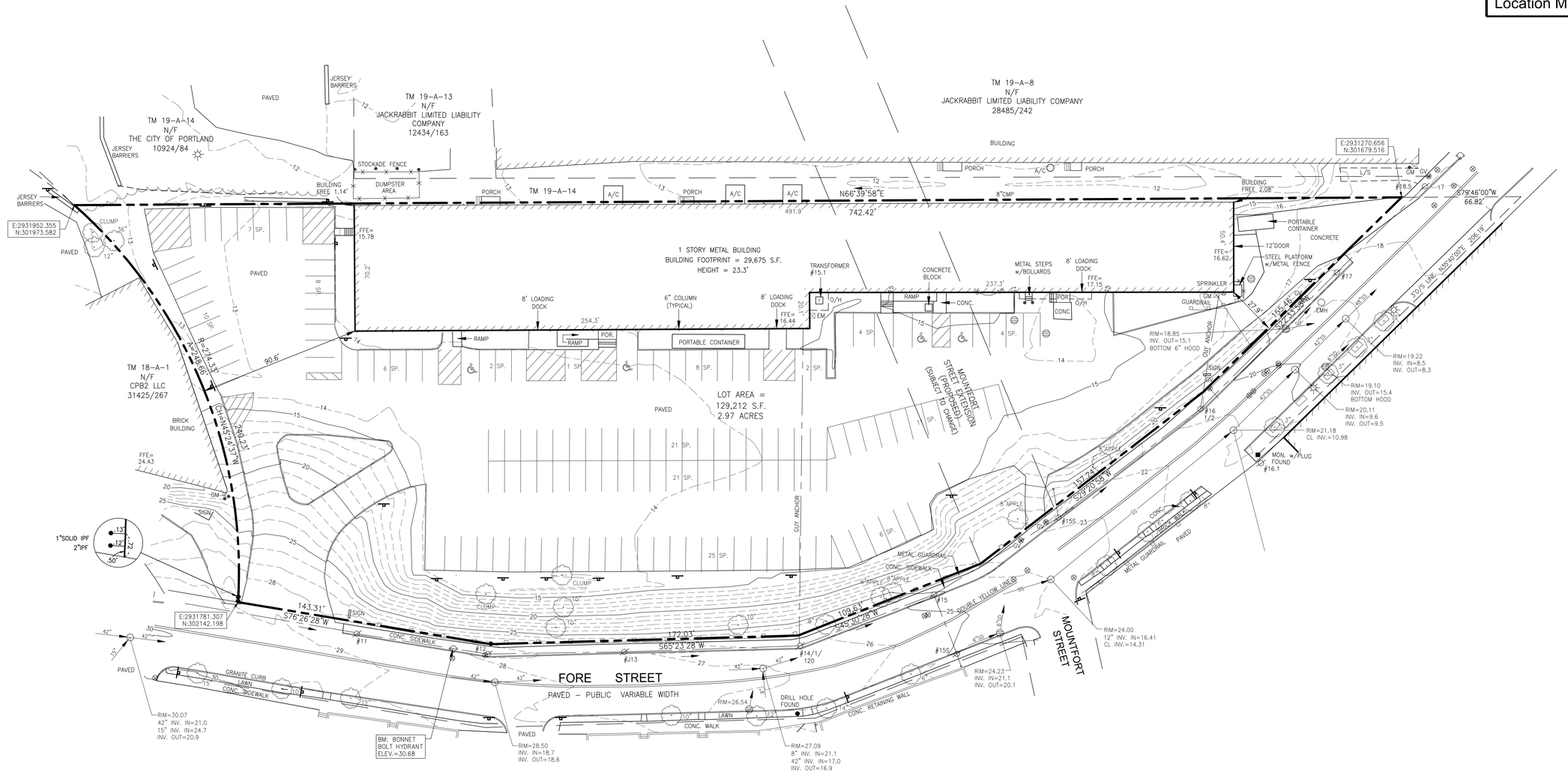
Legend

- MONUMENT FOUND
- IRON PIPE OR ROD FOUND
- GV GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- MANHOLE
- CATCH BASIN
- LIGHT POLE
- SIGN
- ELECTRIC OR GAS METER
- BOLLARD
- CURB
- GUARDRAIL
- OHW OVERHEAD WIRES
- FENCE
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK/PAGE
- CONC. CONCRETE
- O/H OVERHANG
- A/C AIR CONDITIONING UNIT
- POR. PORCH
- DECIDUOUS TREE



Location Map N.T.S.



SCALE : 1" = 30'

0' 15' 30' 60'

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.

Plan References:

1. "ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR CPB2 LLC" MAY 22, 2013 BY OWEN HASKELL, INC.

2. "PLAN OF LAND IN PORTLAND, MAINE FOR CROSBY GROUP" AUGUST 6, 1976 BY OWEN HASKELL, INC.

3. "ALTA/ACSM LAND TITLE SURVEY, 100 FORE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR NAI THE DUNHAM GROUP" SEPTEMBER 2, 2015 BY OWEN HASKELL, INC.

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

Notes:

1. OWNER OF RECORD: 100 FORE STREET LLC, P.O. BOX 910, WESTBROOK, MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 33748, PAGE 1.

2. PROPERTY IS SHOWN AS LOT 10 BLOCK A ON CITY OF PORTLAND'S ASSESSORS MAP 19.

3. UTILITY SHOWN ARE OBSERVED EVIDENCE ONLY.

4. THERE ARE 136 REGULAR PARKING SPACES AND 4 HANDICAP SPACES.

5. BEARINGS AND COORDINATES ARE BASED ON ON CITY OF PORTLAND CONTROL, STATE PLANE MAINE WEST, NAD83. CITY POINTS UTILIZED – 3000 N:301536.12 E:2931222.72 & 3023 N:301390.32 E:2931443.86 OCEAN GATEWAY PROJECT. VERTICAL BENCHMARK: 3' O/S MONUMENT CORNER OF HANCOCK STREET AND THAMES STREET ELEVATION 13.98' CITY DATUM.

REV. 2	9/06/18	ADDITIONAL TOPOGRAPHY
REV. 1	8/24/18	ADDED PROPOSED MOUNTFORT STREET EXTENSION

Topographic Survey

100 Fore Street

100 Fore Street, Portland, Maine

made for

Jonathan Cohen

P.O. Box 910, 865 Spring Street

Westbrook, Maine 04092

OWEN HASKELL, INC.

PROFESSIONAL LAND SURVEYORS

390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

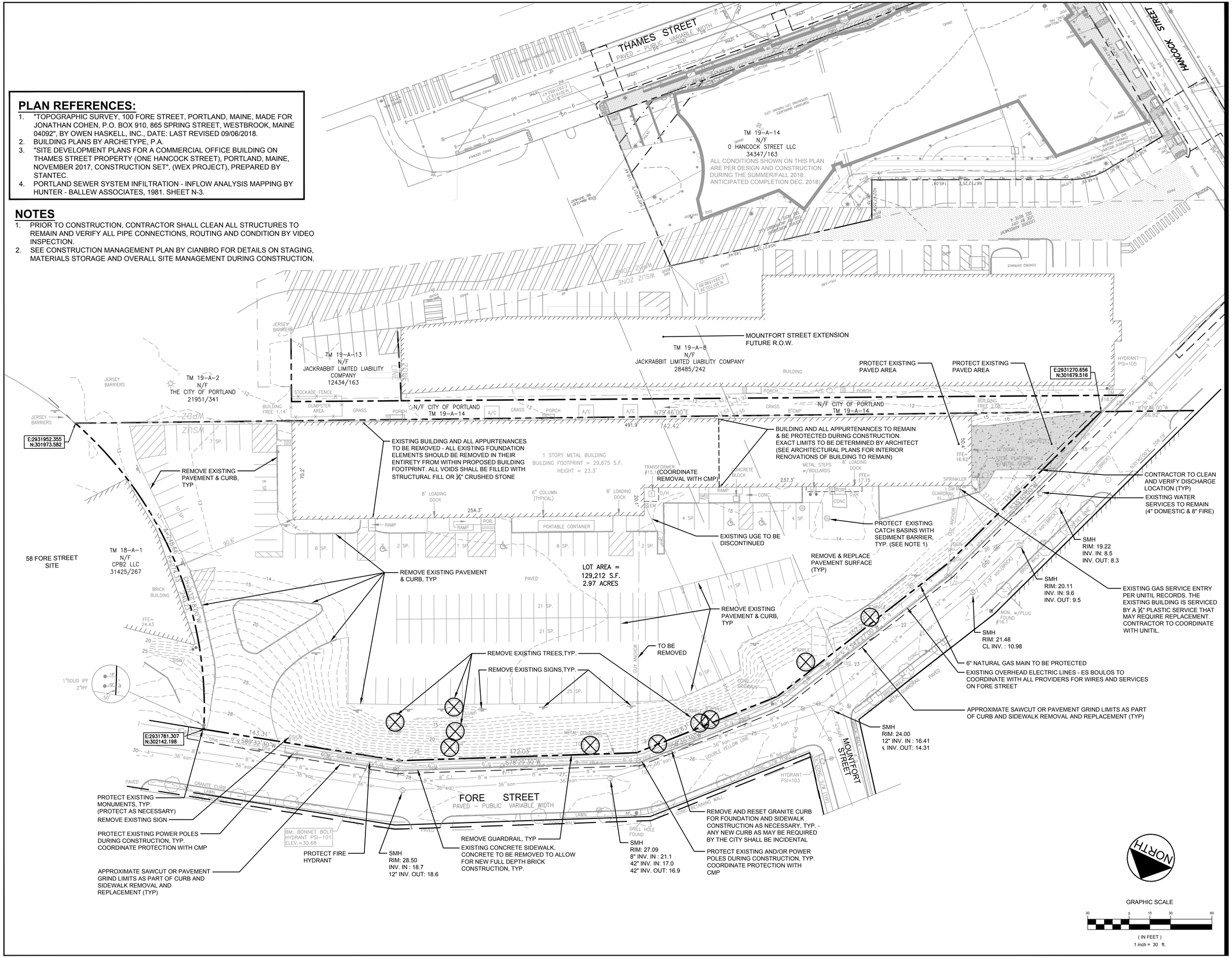
DRAWN BY:	RS / JLW	DATE:	DEC. 4, 2017	JOB NO.	2016-325 P
CHECKED BY:	EBC / RRL	SCALE:	1" = 30'	DRWG. NO.	1

PLAN REFERENCES:

1. "TOPOGRAPHIC SURVEY, 100 FORE STREET, PORTLAND, MAINE, MADE FOR JONATHAN COHEN, P.O. BOX 910, 865 SPRING STREET, WESTBROOK, MAINE 04092", BY OWEN HASKELL, INC., DATE: LAST REVISED 09/06/2018.
2. BUILDING PLANS BY ARCHETYPE, P.A.
3. "SITE DEVELOPMENT PLANS FOR A COMMERCIAL OFFICE BUILDING ON THAMES STREET PROPERTY (ONE HANCOCK STREET), PORTLAND, MAINE, NOVEMBER 2017, CONSTRUCTION SET", (WEX PROJECT), PREPARED BY STANTEC.
4. PORTLAND SEWER SYSTEM INFILTRATION - INFLOW ANALYSIS MAPPING BY HUNTER - BALLEW ASSOCIATES, 1981. SHEET N-3.

NOTES

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CLEAN ALL STRUCTURES TO REMAIN AND VERIFY ALL PIPE CONNECTIONS, ROUTING AND CONDITION BY VIDEO INSPECTION.
2. SEE CONSTRUCTION MANAGEMENT PLAN BY CIANBRO FOR DETAILS ON STAGING, MATERIALS STORAGE AND OVERALL SITE MANAGEMENT DURING CONSTRUCTION.



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Consultants

ARCHITECT
ARCHETYPE

LANDSCAPE ARCHITECT
ALA

SURVEYOR
OWEN HASKELL

CONTRACTOR
CIANBRO

Notes

OWNER OF RECORD:

100 FORE STREET LLC
P.O. BOX 910
WESTBROOK, ME 04098
CCRD BOOK 33748, PAGE 001

Revision	By	Appd.	YY.MM.DD
3 LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 01622_base	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
10-09-18
LICENSED
PROFESSIONAL ENGINEER

Client/Project

100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title

EXISTING CONDITIONS & DEMOLITION PLAN

Project No. 210801622

Scale 1" = 30'

Sheet

C-2.1

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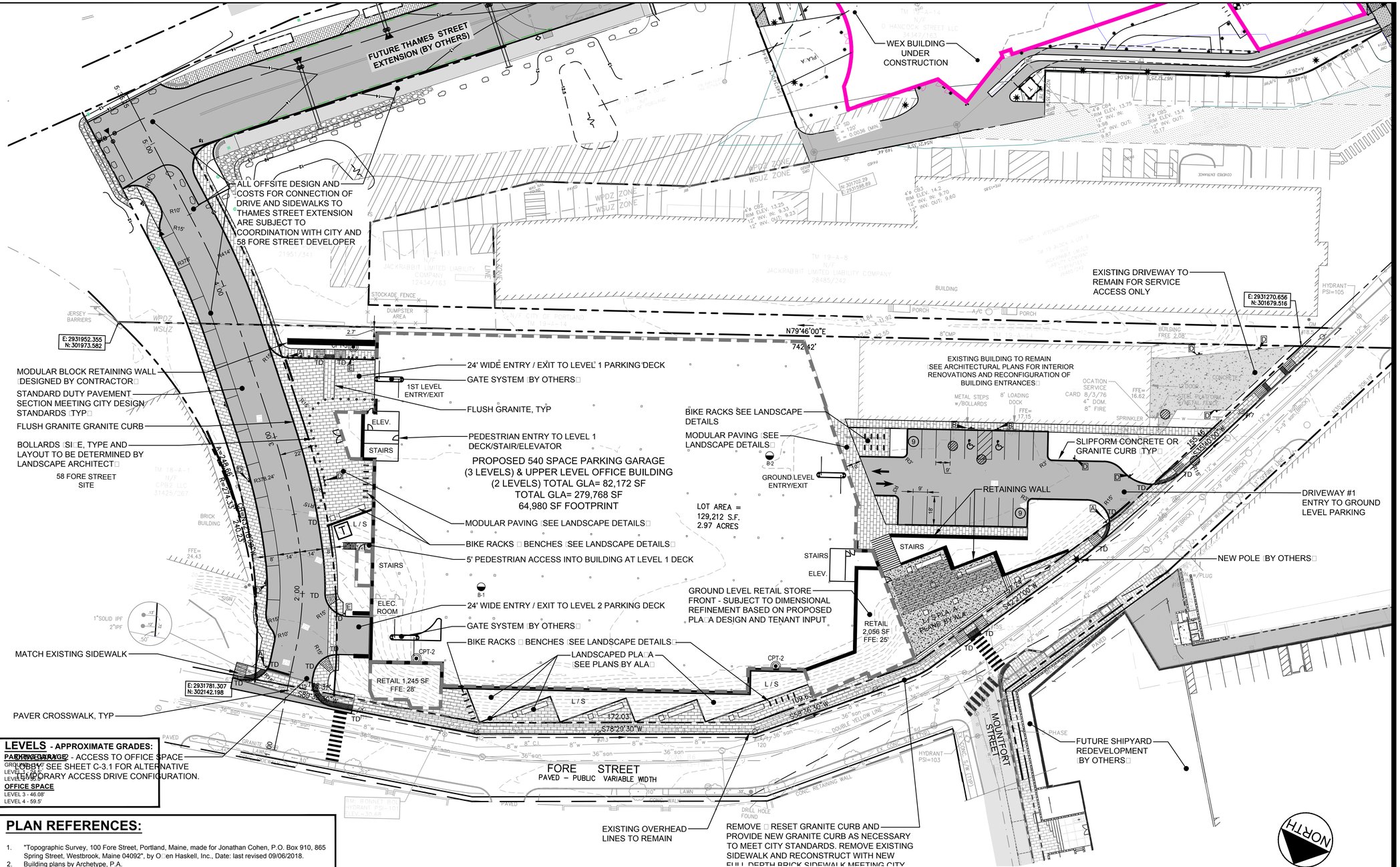

LEVELS - APPROXIMATE GRADES:

PARKING GARAGE
GROUND LEVEL - ACCESS TO OFFICE SPACE LOBBY SEE SHEET C-3.1 FOR ALTERNATIVE LEVEL 2 (LOWER) TEMPORARY ACCESS DRIVE CONFIGURATION.

OFFICE SPACE
LEVEL 3 - 46.08'
LEVEL 4 - 59.5'

PLAN REFERENCES:

1. "Topographic Survey, 100 Fore Street, Portland, Maine, made for Jonathan Cohen, P.O. Box 910, 865 Spring Street, Westbrook, Maine 04092", by O(en Haskell, Inc., Date: last revised 09/06/2018.
2. Building plans by Archetype, P.A.
3. "Site Development Plans for a commercial office building on Thames Street Property (One Hancock Street(, Portland, Maine, November 2017, Construction Set", (Wex pro ect(, prepared by Stantec.
4. Portland se(er system infiltration - inflo(analysis mapping by Hunter - Balle(associates, 1981. sheet N-3.
5. Utility Plan/Permit Set "Thames Street Extension Pro ect", made for the City of Portland Maine 04101, Plans by: Wood(ard (Curran, dated May, 2018.
6.

DIMENSIONAL RE(UIREMENTS FOR THE B-6 EASTERN WATERFRONT BUSINESS (ONE		
ITEM DESCRIPTION	LAND USE ORDINANCE RE(UIREMENT	PROPOSED
MIN. LOT SI(E	NONE	2.97 ACRES
MIN. FRONTAGE	NONE	737.67 FEET
MIN. FRONT SETBACK	NONE (BUILD TO KEY BLDG. ENVELOPES SHOWN ON B6 BLDG. HEIGHT OVERLAY (BLDG. ENVELOPES MAP(	6 INCHES ±
MIN. SIDE SETBACK	NONE	71 FEET
MIN. REAR SETBACK	NONE	10.67 FEET
MAX. BUILDING SETBACK FROM STREET LINE	10 FEET (BUILD TO KEY BLDG. ENVELOPES SHOWN ON B6 BLDG. HEIGHT OVERLAY (BLDG. ENVELOPES MAP(	6 INCHES ±
MIN. LENGTH OF BLDG. WALL RE(UIRED TO BE LOCATED ALONG STREET FRONTAGE OF LOT	70(OF LOT STREET FRONTAGE OR 25(OF BUILDING PERIMETER	30(OF BUILDING PERIMETER
MAX. LOT COVERAGE	100(	80% ±
MAX. BLDG. HEIGHT	SEE CITY COUNCIL ORDER 68-18/19	SEE ARCHITECTURAL PLANS FOR DETAILS

CURB LEGEND

	GRANITE CURB
TD	TIP DOWN

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

SIGN LEGEND

R1-1 24"x24" A	R7-8A 12"x6" B	18"x12" C	18"x12" D	24"x24" E
STOP	RESERVED PARKING 18"x12" R7-8	COMPACT CAR PARKING	NO PARKING	

OWNER:
100 FORE STREET LLC
P.O. BOX 910
865 SPRING STREET
WESTBROOK, MAINE 04098-0910
ATTN: JONATHAN COHEN

Stantec

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482 Payne Road Scarborough Court
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Tel. 207.883.3355
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ARCHITECT
ARCHETYPE
LANDSCAPE ARCHITECT
ALA
SURVEYOR
OWEN HASKELL
CONTRACTOR
CIANBRO

Notes

Revision	By	Appd.	YY.MM.DD
5. PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.09.14
4. LEVEL III RE-SUBMISSION TO CITY	SRB	SRB	18.09.24
3. LEVEL III SUBMISSION TO CITY	SRB	SRB	18.09.09
2. PROGRESS SET	SRB	SRB	18.08.29
1. INTERNAL REVIEW	SRB	SRB	18.11.09
	SRB	SRB	18.11.14

File Name: 195350450_SP	P&F	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

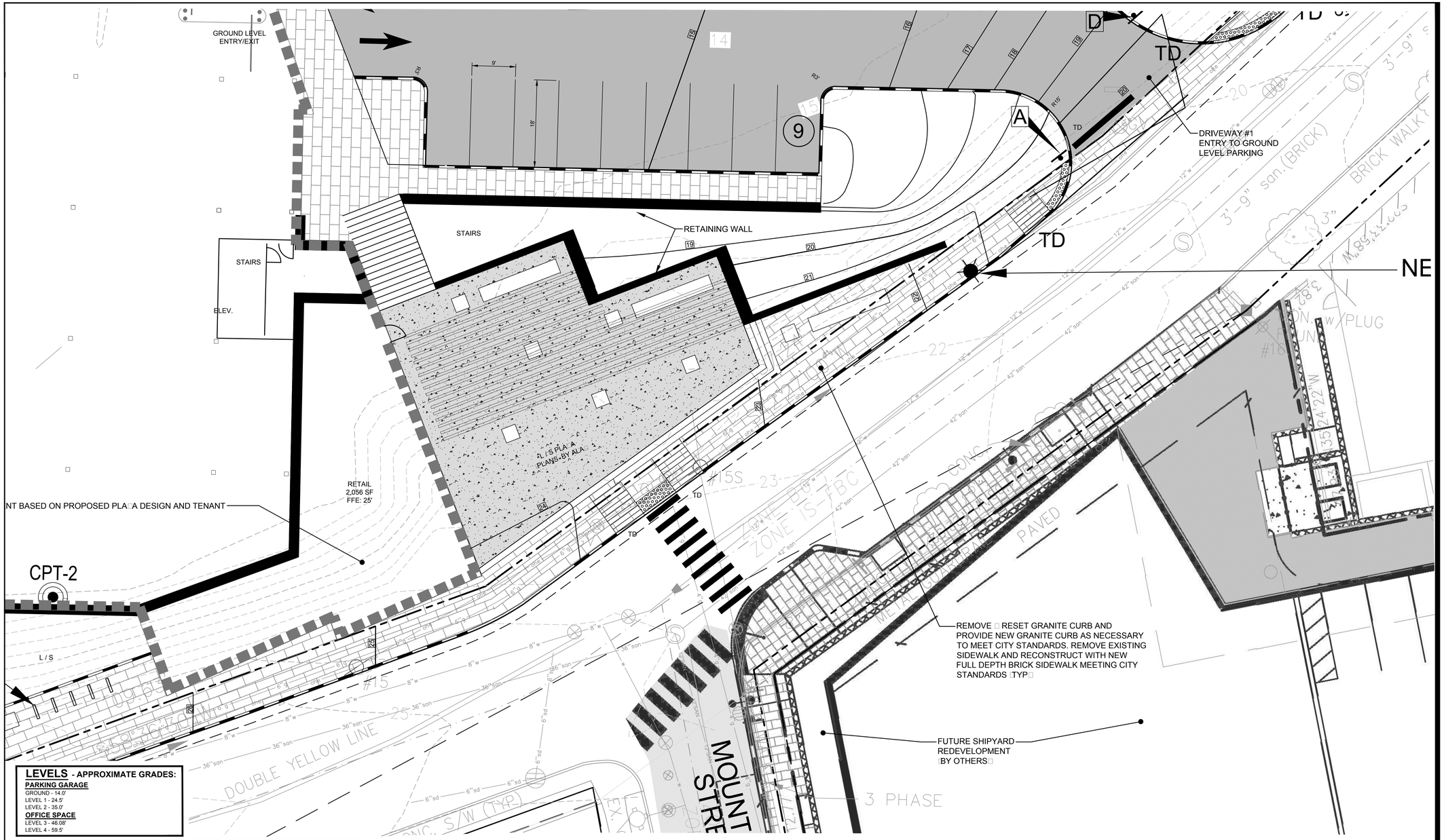
100 FORE STREET
PORTLAND, MAINE

Title
SITE LAYOUT PLAN

Project No. 210801622
Scale 1" = 30'

Sheet
C-3.0

V: 2108 active 210801622 civil cadd permit st -g 01622 -sp.st -g kbourassa 11/14/2018 5:01 PM



LEVELS - APPROXIMATE GRADES:

PARKING GARAGE
GROUND - 14.0'
LEVEL 1 - 24.5'
LEVEL 2 - 35.0'

OFFICE SPACE
LEVEL 3 - 46.08'
LEVEL 4 - 59.5'

PLAN REFERENCES:

1. "Topographic Survey, 100 Fore Street, Portland, Maine, made for Jonathan Cohen, P.O. Box 910, 865 Spring Street, Westbrook, Maine 04092", by O□en Haskell, Inc., Date: last revised 09/06/2018.
2. Building plans by Archetype, P.A.
3. "Site Development Plans for a commercial office building on Thames Street Property □One Hancock Street□, Portland, Maine, November 2017, Construction Set", □Wex pro ect□, prepared by Stantec.
4. Portland se□er system infiltration - inflo□ analysis mapping by Hunter - Balle□ associates, 1981. sheet N-3.
5. Utility Plan/Permit Set "Thames Street Extension Pro ect", made for the City of Portland Maine 04101, Plans by: Gorrill Palmer, dated May, 2018.

CURB LEGEND	
	GRANITE CURB
TD	TIP DOWN

DIMENSIONAL RE□UIREMENTS FOR THE B-6 EASTERN WATERFRONT BUSINESS □ONE

ITEM DESCRIPTION	LAND USE ORDINANCE RE□UIREMENT	PROPOSED
MIN. LOT SI□E	NONE	2.97 ACRES
MIN. FRONTAGE	NONE	737.67 FEET
MIN. FRONT SETBACK	NONE □BUILD TO KEY BLDG. ENVELOPES SHOWN ON B6 BLDG. HEIGHT OVERLAY □ BLDG. ENVELOPES MAP□	6 INCHES ±
MIN. SIDE SETBACK	NONE	71 FEET
MIN. REAR SETBACK	NONE	10.67 FEET
MAX. BUILDING SETBACK FROM STREET LINE	10 FEET □BUILD TO KEY BLDG. ENVELOPES SHOWN ON B6 BLDG. HEIGHT OVERLAY □ BLDG. ENVELOPES MAP□	6 INCHES ±
MIN. LENGTH OF BLDG. WALL RE□UIRED TO BE LOCATED ALONG STREET FRONTAGE OF LOT	70□ OF LOT STREET FRONTAGE OR 25□ OF BUILDING PERIMETER	30□ OF BUILDING PERIMETER
MAX. LOT COVERAGE	100□	80% ±
MAX. BLDG. HEIGHT	SEE CITY COUNCIL ORDER 68-18/19	SEE ARCHITECTURAL PLANS FOR DETAILS

GRAPHIC SCALE
10 0 5 10 20
□ IN FEET □
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

SIGN LEGEND

R1-1 24"x24" A	R7-8 18"x12" B	R7-8A 12"x6" B	18"x12" C	18"x12" D	24"x24" E
STOP	RESERVED PARKING		COMPACT CAR PARKING	NO PARKING	

OWNER:
100 FORE STREET LLC
P.O. BOX 910
865 SPRING STREET
WESTBROOK, MAINE 04098-0910
ATTN: JONATHAN COHEN

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ARCHETYPE
LANDSCAPE ARCHITECT
ALA
SURVEYOR
OWEN HASKELL
CONTRACTOR
CIANBRO

Notes

By	Appd.	YY.MM.DD	Revision
SRB	SRB	18.09.24	5 PROGRESS PRINTS RELEASED TO CONTRACTOR
SRB	SRB	18.10.09	4 LEVEL III RESUBMISSION TO CITY
SRB	SRB	18.09.24	3 LEVEL III SUBMISSION TO CITY
SRB	SRB	18.09.14	2 PROGRESS SET
SRB	SRB	18.11.09	1 INTERNAL REVIEW
SRB	SRB	18.11.14	

File Name: 195330430_SP | DWN: DBS | CHKD: SRB | DSGN: 18.09.12 DATE
P.E. STEPHEN R. BUSHEY
Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

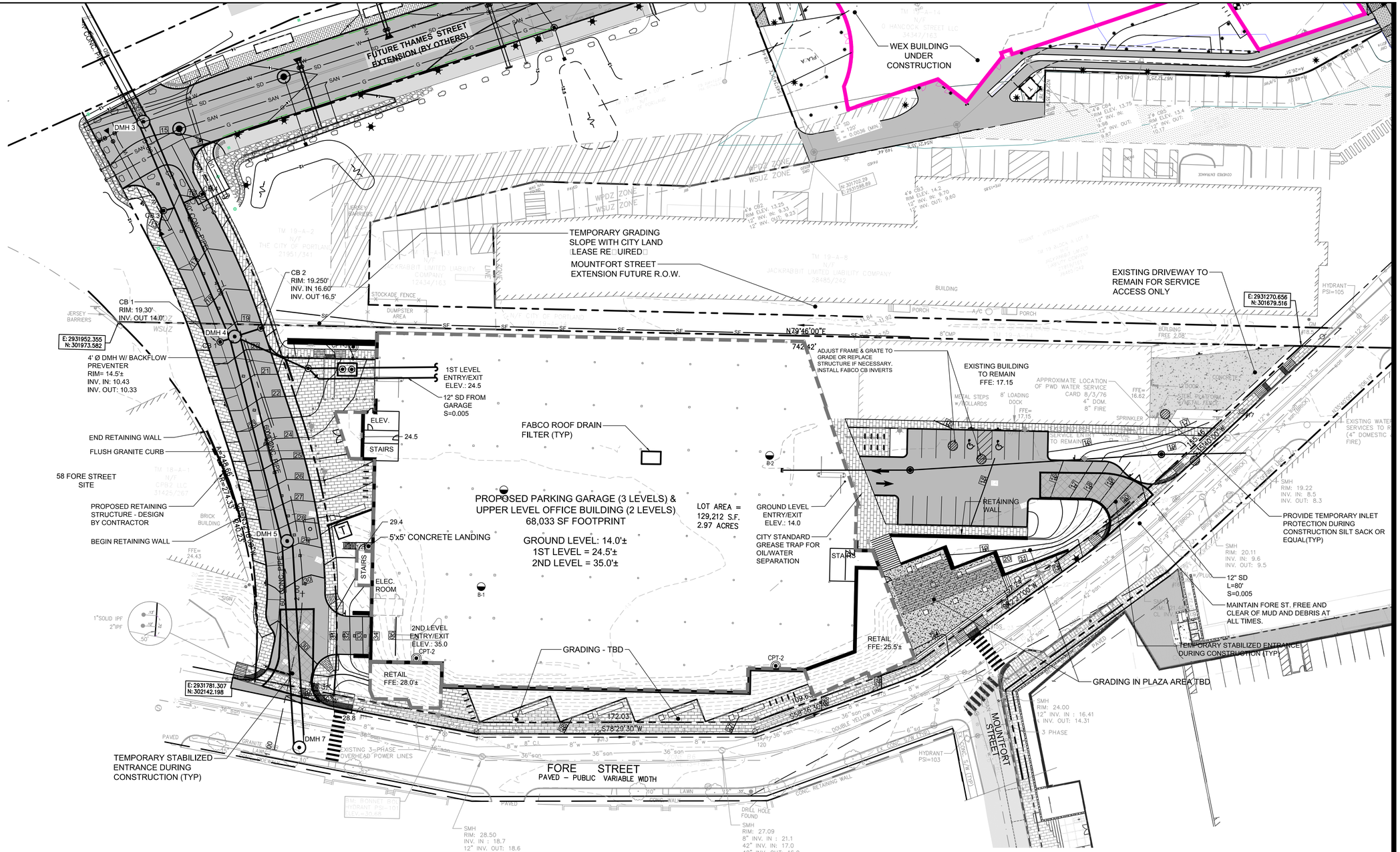
100 FORE STREET
PORTLAND, MAINE

Title
PLAZA SITE & GRADING PLAN BLOWUP

Project No. 210801622
Scale 1" = 10'

Sheet
C-3.1

V: 2108 active 210801622 civil cadd permit d g 01622 sp d g kbouraasa 11/14/2018 5:02 PM



LEVELS - APPROXIMATE GRADES:

PARKING GARAGE
GROUND - 14.0'
LEVEL 1 - 24.5'
LEVEL 2 - 35.0'
OFFICE SPACE
LEVEL 3 - 46.08'
LEVEL 4 - 59.5'

CURB LEGEND

═══	GRANITE CURB
TD ═══	TIP DOWN

PLAN REFERENCES:

1. "Topographic Survey, 100 Fore Street, Portland, Maine, made for Jonathan Cohen, P.O. Box 910, 865 Spring Street, Westbrook, Maine 04092", by O□en Haskell, Inc., Date: last revised 09/06/2018.
2. Building plans by Archetype, P.A.
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4. Portland se□er system infiltration - inflo□ analysis mapping by Hunter - Balle□ associates, 1981. sheet N-3.
5. Utility Plan/Permit Set "Thames Street Extension Pro□ect", made for the City of Portland Maine 04101, Plans by: Gorrill Palmer, dated May, 2018.

NORTH

GRAPHIC SCALE
30 0 15 30 60
□IN FEET□
1 inch = 30 ft.

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OWEN HASKELL
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Notes

Revision	By	Appd.	YY.MM.DD
5 PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
4 LEVEL III RE-SUBMISSION TO CITY	SRB	SRB	18.11.09
3 LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 195350450_SP	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

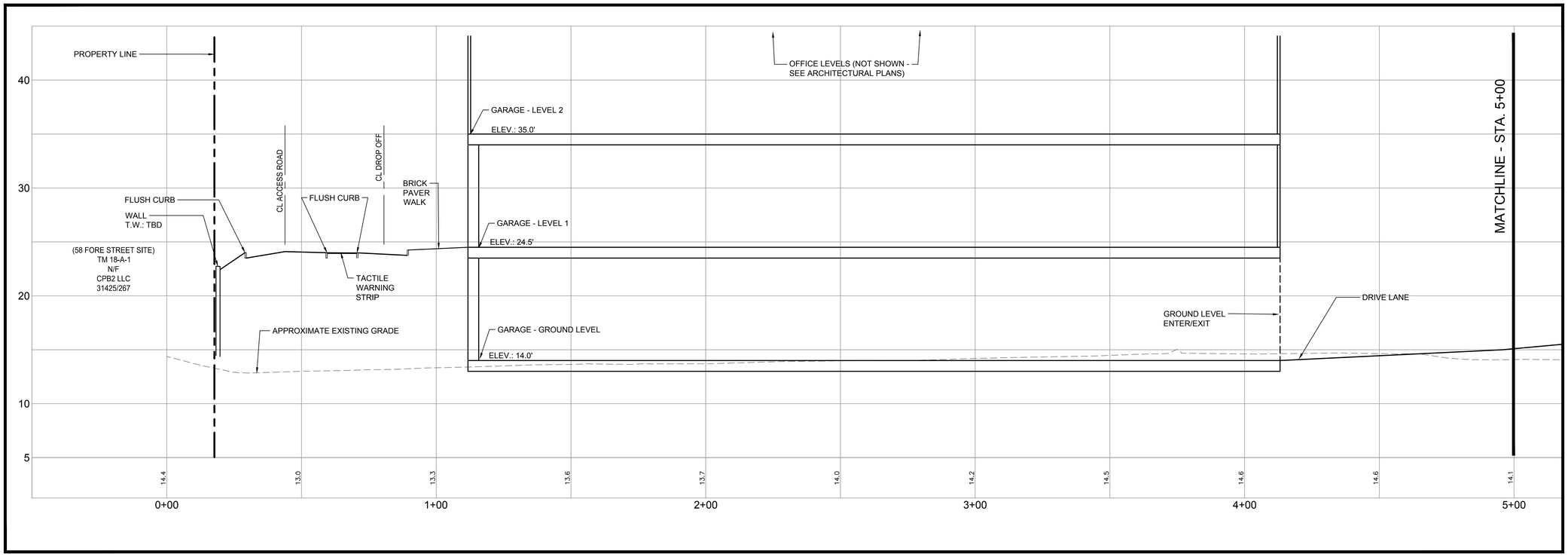
Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
GRADING, DRAINAGE AND EROSION CONTROL PLAN

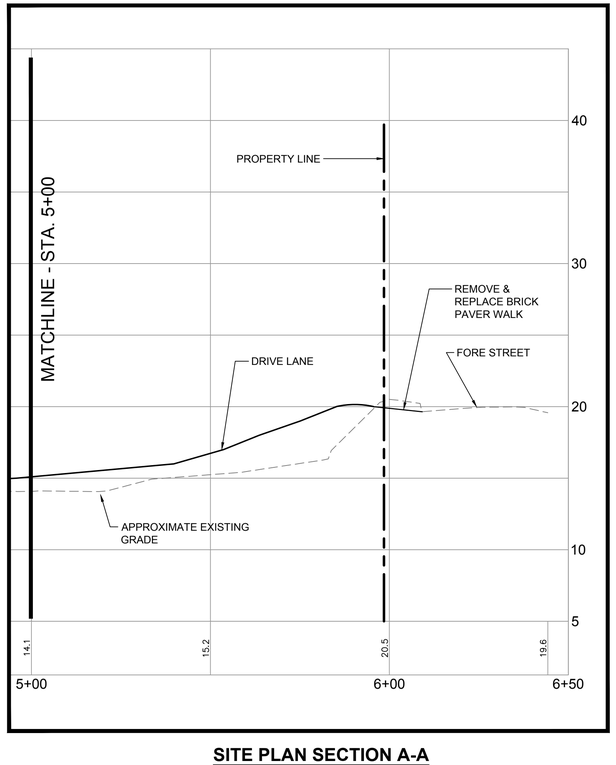
Project No. 210801622
Scale N.T.S.

Sheet
C-4.0



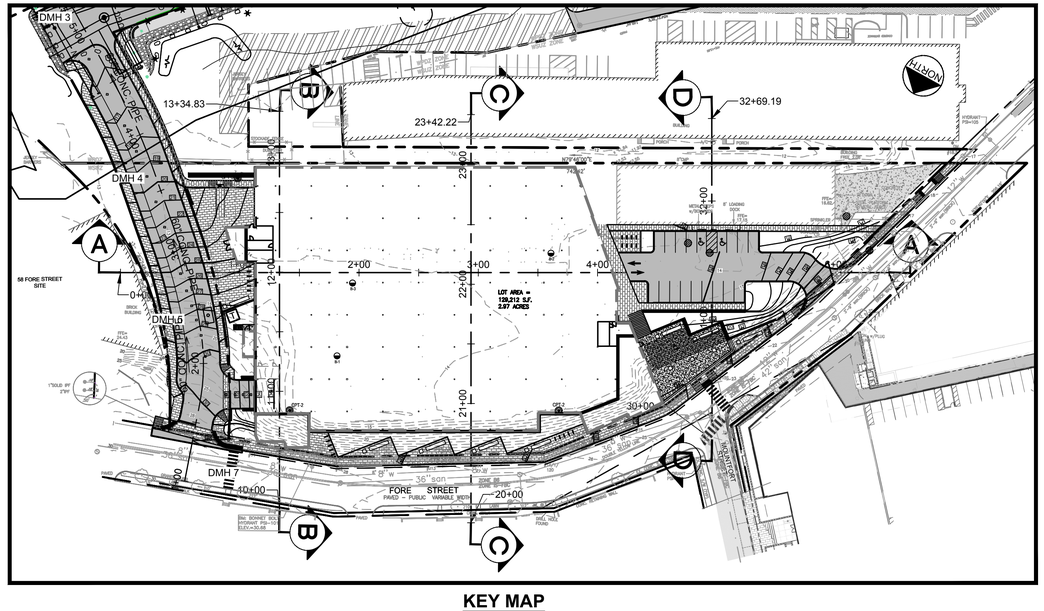
SITE PLAN SECTION A-A

HZ: 1" = 20'
VT: 1" = 4'



SITE PLAN SECTION A-A

HZ: 1" = 20'
VT: 1" = 4'



KEY MAP

HZ: 1" = 60'

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ALA

SURVEYOR
OWEN HASKELL

CONTRACTOR
CIANBRO

Notes

Revision	By	Appd.	YY.MM.DD
5 PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
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3 LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 01622_sections	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
SITE CROSS SECTIONS - SHEET 1 OF 3

Project No. 210801622

Scale

Sheet
C-4.1

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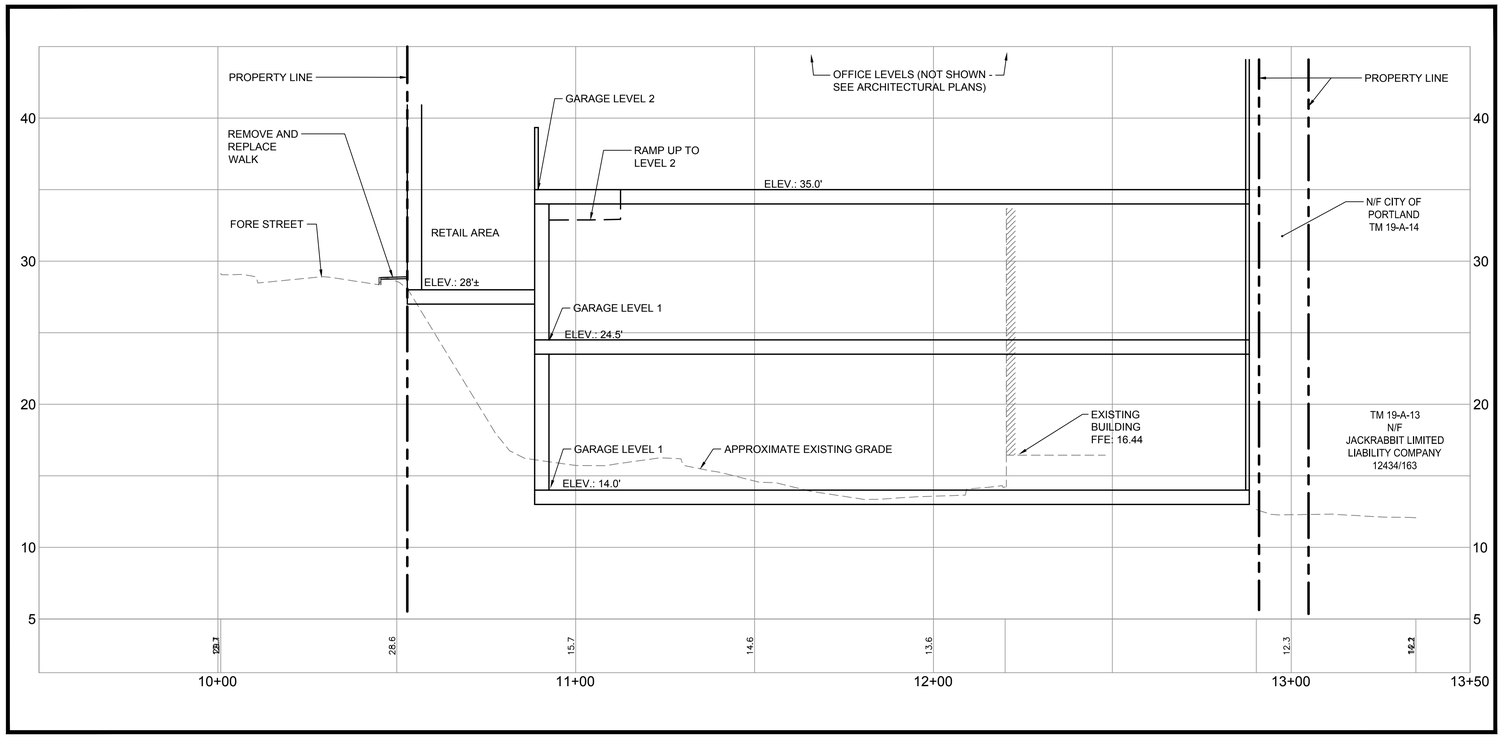
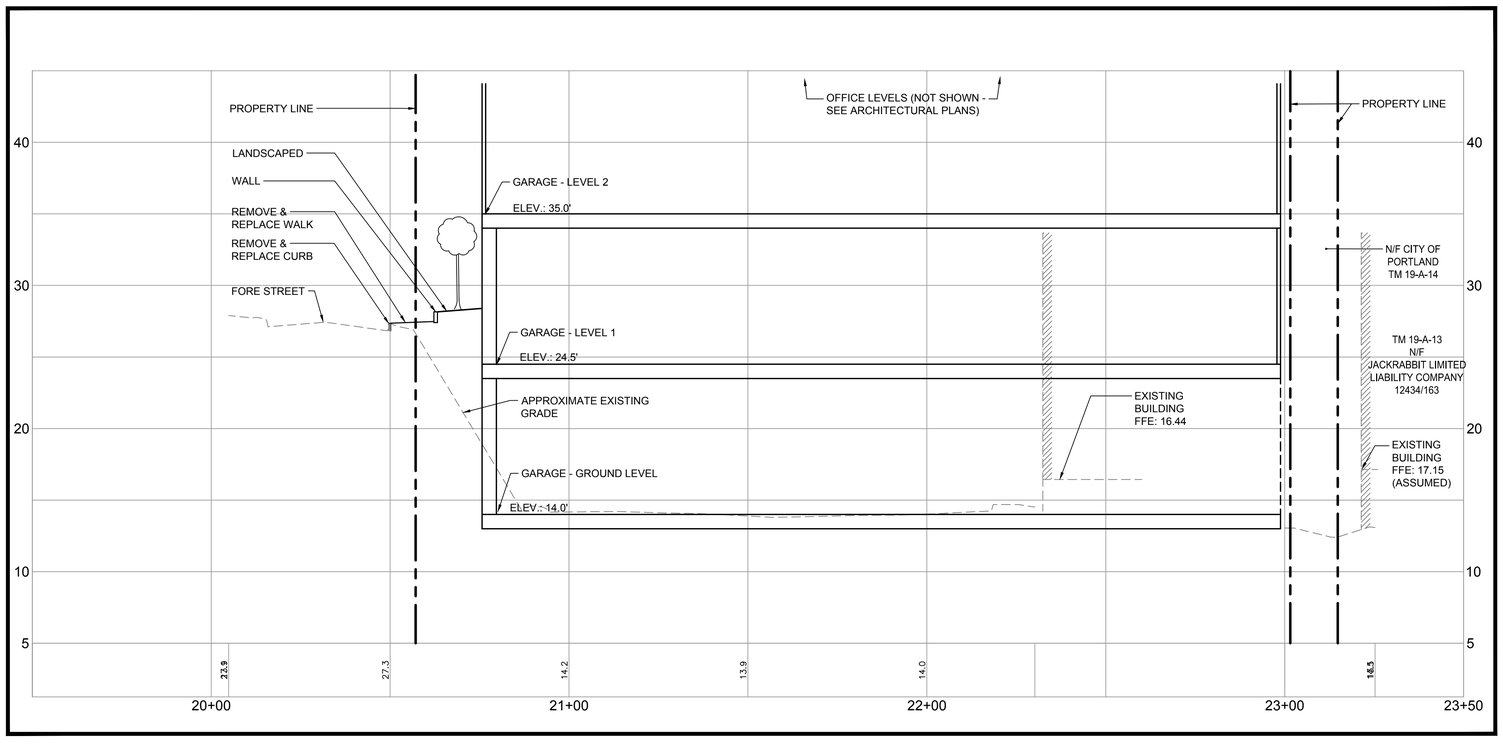


SITE PLAN SECTION B-B

HZ: 1" = 20'
VT: 1" = 4'



SITE PLAN SECTION C-C

HZ: 1" = 20'
VT: 1" = 4'

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ALA

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OWEN HASKELL

CONTRACTOR
CIANBRO

Notes

Revision	By	Appd.	YY.MM.DD
5 PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
4 LEVEL III RESUBMISSION TO CITY	SRB	SRB	18.11.09
3 LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 195350450_SP	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN:	CHKD:	DSGN:	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
SITE CROSS SECTIONS - SHEET 2 OF 3

Project No.
210801622

Scale

Sheet
C-4.2

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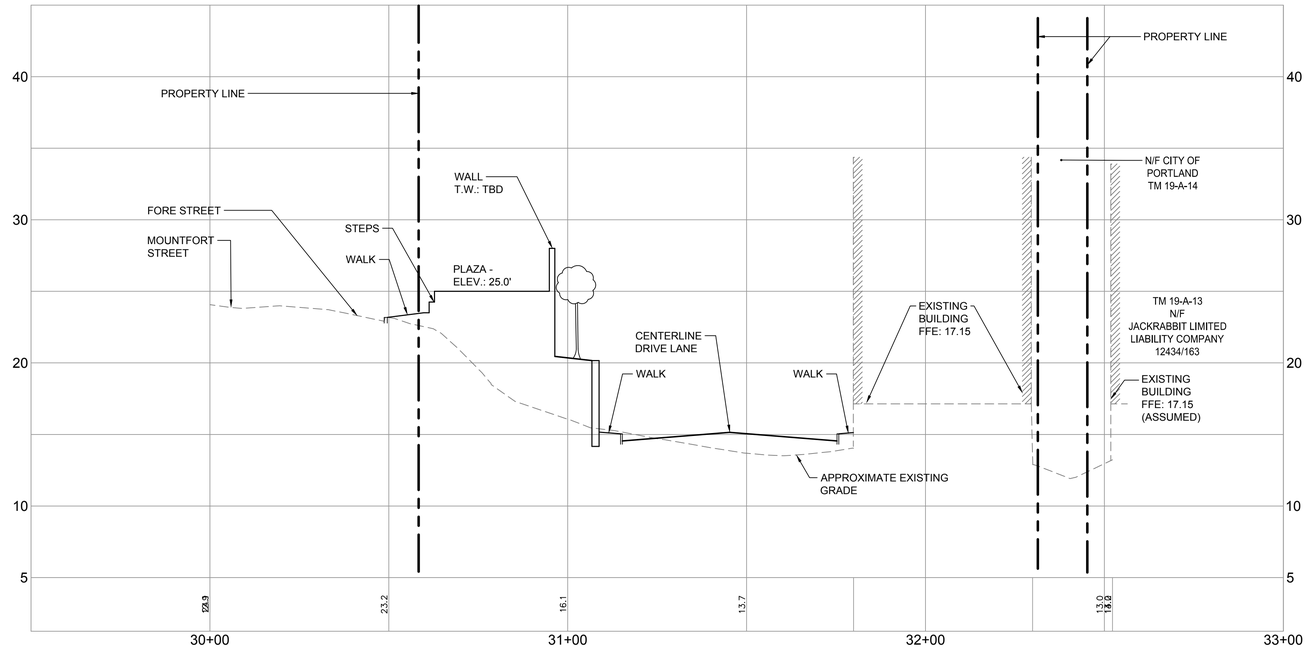

SITE PLAN SECTION D-D

HZ: 1" = 20'
VT: 1" = 4'

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ARCHETYPE

LANDSCAPE ARCHITECT
ALA

SURVEYOR
OWEN HASKELL

CONTRACTOR
CIANBRO

Notes

No.	Revision	By	Appd.	YY.MM.DD
5	PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
4	LEVEL III RESUBMISSION TO CITY	SRB	SRB	18.11.09
3	LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2	PROGRESS SET	SRB	SRB	18.09.24
1	INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 195350450_SP | P.E. STEPHEN R. BUSHEY | PBF DWN. | DBS CHKD. | SRB DSGN. | 18.09.14 DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
SITE CROSS SECTIONS - SHEET 3 OF 3

Project No. 210801622
Scale

Sheet
C-4.3

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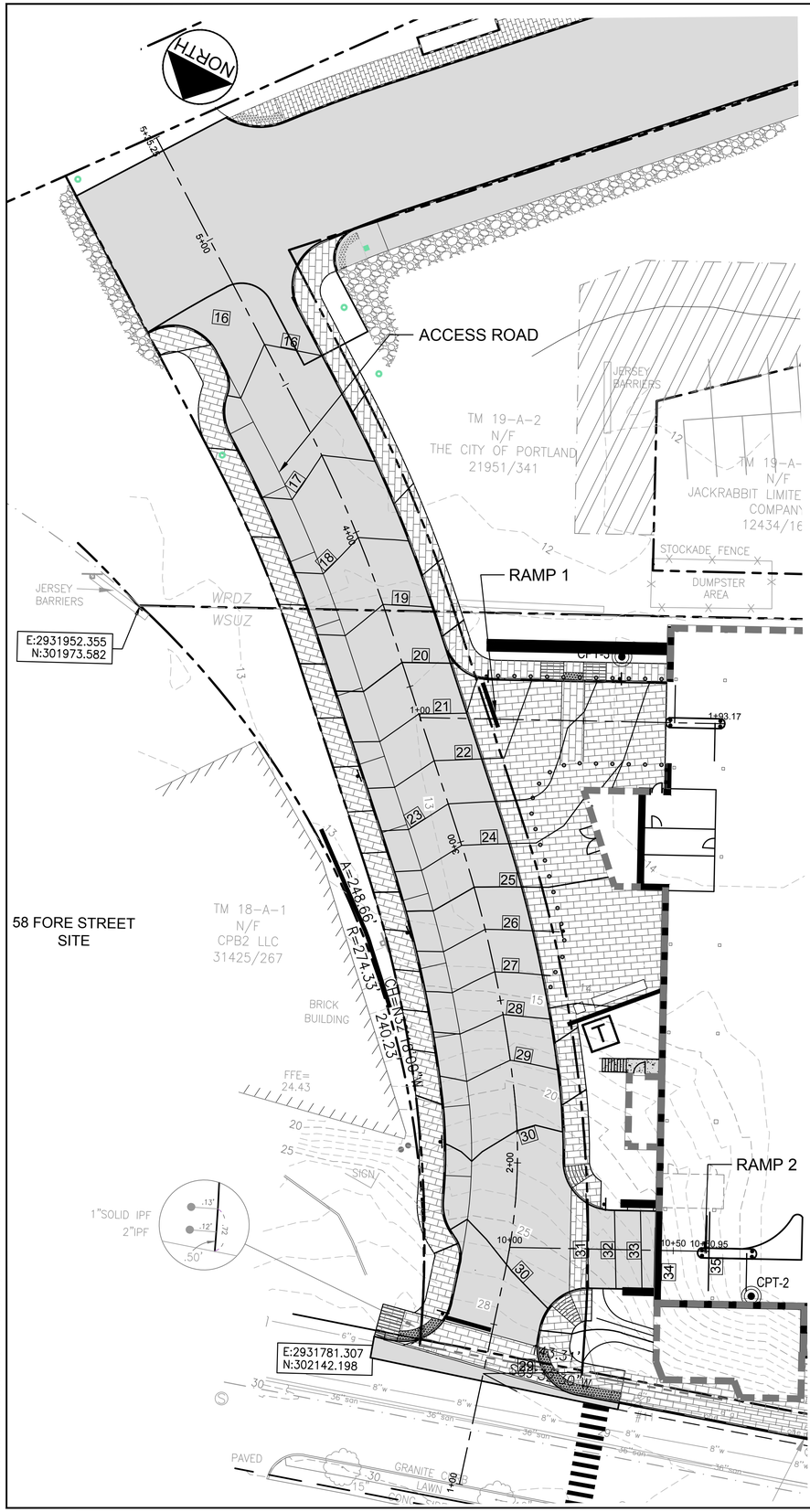

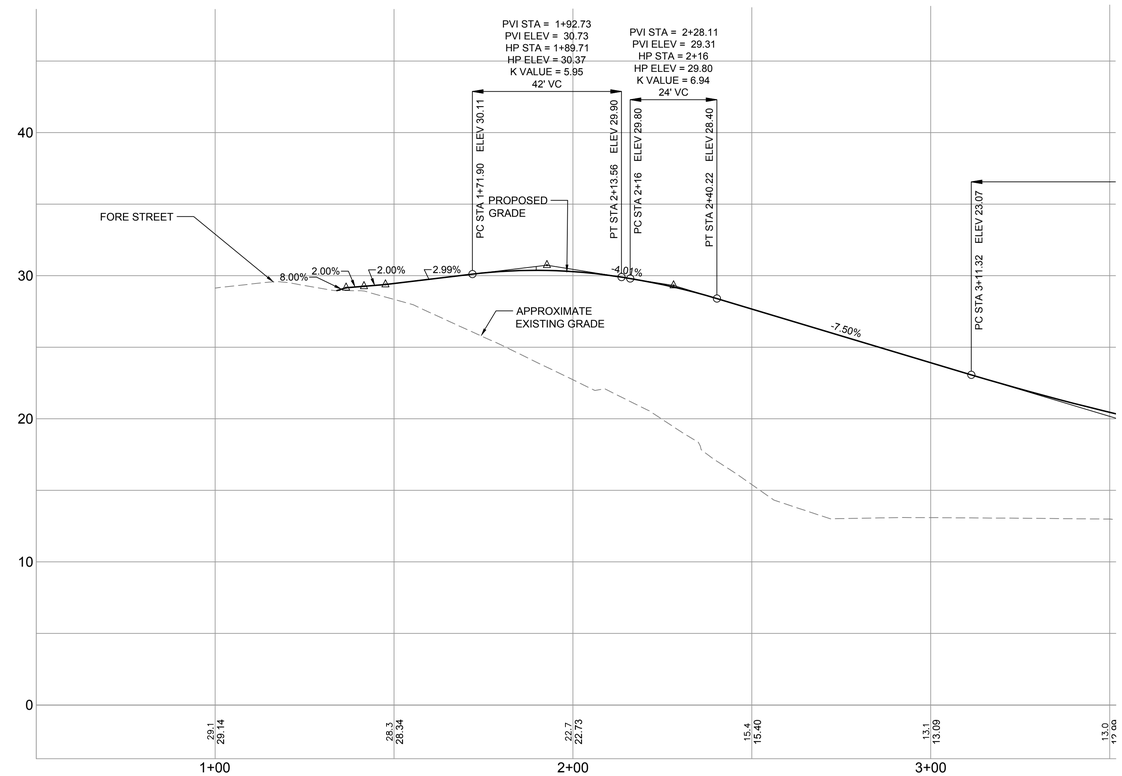

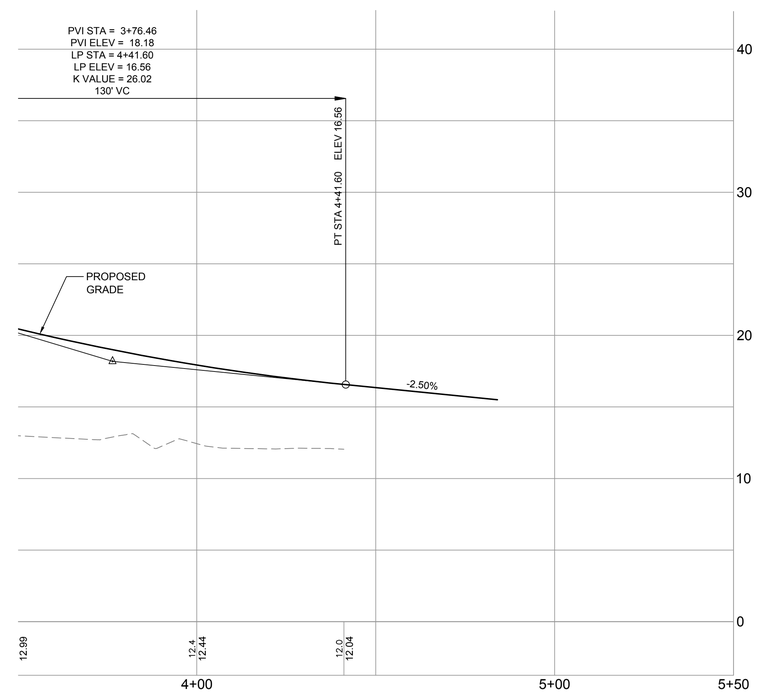

HZ SCALE: 1" = 20'
VT SCALE: 1" = 5'

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

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ARCHETYPE
LANDSCAPE ARCHITECT
ALA
SURVEYOR
OWEN HASKELL
CONTRACTOR
CIANBRO

Notes

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2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 195350450_SP	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
ACCESS ROAD PLAN AND PROFILE

Project No. 210801622
Scale N.T.S.

Sheet
C-4.4

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GEOTECHNICAL LEGEND

B-1 SUMMIT TEST BORING (NOV. 2-3, 2017)

CPT-1 SUMMIT CONE PENETRATION TEST AND LEDGE PROBE (NOV. 2, 2017)

TM 19-A-14
N/F
0 HANCOCK STREET LLC
34347/163

ALL CONDITIONS SHOWN ON THIS PLAN ARE PER DESIGN AND CONSTRUCTION DURING THE SUMMER/FALL 2018. ANTICIPATED COMPLETION DEC. 2018)

PROPOSED BUILDING (SEE ARCHITECTURAL/MEP PLANS FOR ALL INTERIOR UTILITIES LAYOUT) F.F.E. 14.75

TM 19-A-2
N/F
THE CITY OF PORTLAND
21951/341

TM 19-A-13
N/F
JACKRABBIT LIMITED LIABILITY COMPANY
12434/163

TM 19-A-8
N/F
JACKRABBIT LIMITED LIABILITY COMPANY
28485/242

TENANT – VETERAN'S ADMINISTRATION

TM 19 BLOCK A LOT 8
N/F
JACKRABBIT LIMITED LIABILITY COMPANY
21919/151
28485/242

N/F CITY OF PORTLAND
TM 19-A-14

EXISTING EQUIPMENT TO BE REMOVED (TYP)

APPROXIMATE LIMIT OF WORK

E:2931270.656
N:301679.516

PROTECT EXISTING CONCRETE AREA

E:2931952.355
N:301973.582

EXISTING BUILDING AND ALL APPURTENANCES TO BE REMOVED - ALL EXISTING FOUNDATION ELEMENTS SHOULD BE REMOVED IN THEIR ENTIRETY FROM WITHIN PROPOSED BUILDING FOOTPRINT. ALL VOIDS SHALL BE FILLED WITH STRUCTURAL FILL OR ¾" CRUSHED STONE

BUILDING AND ALL APPURTENANCES TO REMAIN & BE PROTECTED DURING CONSTRUCTION. EXACT LIMITS TO BE DETERMINED BY ARCHITECT (SEE ARCHITECTURAL PLANS FOR INTERIOR RENOVATIONS OF BUILDING TO REMAIN)

1 STORY METAL BUILDING
BUILDING FOOTPRINT = 29,675 S.F.
HEIGHT = 23.3'

REMOVE EXISTING PAVEMENT & CURB, TYP

(COORDINATE REMOVAL WITH CMP)

CONTRACTOR TO CLEAN CATCH BASIN AND VERIFY DISCHARGE LOCATION (TYP)

EXISTING WATER SERVICES TO REMAIN (4" DOMESTIC & 8" FIRE)

EXISTING CMP MANHOLE TO BE REUSED - COORDINATE WITH CMP.

PROTECT EXISTING CATCH BASINS WITH SEDIMENT BARRIER, TYP. (SEE NOTE 1)

EXISTING UGE TO BE DISCONTINUED

REMOVE & REPLACE PAVEMENT SURFACE (TYP)

58 FORE STREET SITE

TM 18-A-1
N/F
CPB2 LLC
31425/267

REMOVE EXISTING PAVEMENT & CURB, TYP

BORING (SEE SUMMIT GEOTECHNICAL REPORT)

LOT AREA =
129,212 S.F.
2.97 ACRES

SMH
RIM: 19.22
INV. IN: 8.5
INV. OUT: 8.3

SMH
RIM: 20.11
INV. IN: 9.6
INV. OUT: 9.5

EXISTING GAS SERVICE ENTRY PER UNITIL RECORDS. THE EXISTING BUILDING IS SERVICED BY A ¾" PLASTIC SERVICE THAT MAY REQUIRE REPLACEMENT. CONTRACTOR TO COORDINATE WITH UNITIL.

REMOVE EXISTING PAVEMENT & CURB, TYP. SALVAGE EXISTING GRAVEL WHERE POSSIBLE AND SUITABLE FOR REUSE

SMH
RIM: 21.48
CL INV.: 10.98

EXISTING CMP POLE TO BE REMOVED AND A NEW POLE RESET

TO BE REMOVED

REMOVE EXISTING TREES,TYP.

REMOVE EXISTING SIGNS,TYP.

6" NATURAL GAS MAIN TO BE PROTECTED

EXISTING OVERHEAD ELECTRIC LINES - ES BOULOS TO COORDINATE WITH ALL PROVIDERS FOR WIRES AND SERVICES ON FORE STREET

APPROXIMATE SAWCUT OR PAVEMENT GRIND LIMITS AS PART OF CURB AND SIDEWALK REMOVAL AND REPLACEMENT (TYP)

APPROXIMATE LIMIT OF WORK (TYP)

E:2931781.307
N:302142.198

SMH
RIM: 24.00
2" INV. IN : 16.41
4" INV. OUT: 14.31

86 NEWBURY STREET
(FUTURE DEVELOPMENT BY OTHERS - UNDER CONSTRUCTION FALL 2018)

FORE STREET
PAVED – PUBLIC VARIABLE WIDTH

PROTECT EXISTING MONUMENTS, TYP. (PROTECT AS NECESSARY)

REMOVE EXISTING SIGN

PROTECT EXISTING POWER POLES DURING CONSTRUCTION, TYP. COORDINATE PROTECTION WITH CMP

APPROXIMATE SAWCUT OR PAVEMENT GRIND LIMITS AS PART OF CURB AND SIDEWALK REMOVAL AND REPLACEMENT (TYP)

BM: BONNET BOLT
HYDRANT PSI=101
ELEV.=30.68

PROTECT FIRE HYDRANT

SMH
RIM: 28.50
INV. IN : 18.7
12" INV. OUT: 18.6

REMOVE GUARDRAIL, TYP

EXISTING CONCRETE SIDEWALK, CONCRETE TO BE REMOVED TO ALLOW FOR NEW FULL DEPTH BRICK CONSTRUCTION, TYP.

SMH
RIM: 27.09
8" INV. IN : 21.1
42" INV. IN: 17.0
42" INV. OUT: 16.9

REMOVE AND RESET GRANITE CURB FOR FOUNDATION AND SIDEWALK CONSTRUCTION AS NECESSARY, TYP. - ANY NEW CURB AS MAY BE REQUIRED BY THE CITY SHALL BE INCIDENTAL

PROTECT EXISTING AND/OR POWER POLES DURING CONSTRUCTION, TYP. COORDINATE PROTECTION WITH CMP

MOUNTFORT STREET

PLAN REFERENCES:

1. "TOPOGRAPHIC SURVEY, 100 FORE STREET, PORTLAND, MAINE, MADE FOR JONATHAN COHEN, P.O. BOX 910, 865 SPRING STREET, WESTBROOK, MAINE 04092", BY OWEN HASKELL, INC., DATE: LAST REVISED 09/06/2018.
2. BUILDING PLANS BY ARCHETYPE, P.A.
3. "SITE DEVELOPMENT PLANS FOR A COMMERCIAL OFFICE BUILDING ON THAMES
4. STREET PROPERTY (ONE HANCOCK STREET), PORTLAND, MAINE, NOVEMBER 2017, CONSTRUCTION SET", (WEX PROJECT), PREPARED BY STANTEC.
5. PORTLAND SEWER SYSTEM INFILTRATION - INFLOW ANALYSIS MAPPING BY HUNTER - BALLEW ASSOCIATES, 1981. SHEET N-3.
6. REFER TO GEOTECHNICAL REPORT BY SUMMIT GEOENGINEERING SERVICES PROJECT #16063, DATED 9/17/18.

NOTES

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CLEAN ALL DRAINAGE AND WASTEWATER STRUCTURES AND PIPES TO REMAIN AND VERIFY ALL PIPE CONNECTIONS, ROUTING AND CONDITION BY VIDEO INSPECTION.
2. SEE CONSTRUCTION MANAGEMENT PLAN BY CIANBRO FOR DETAILS ON STAGING, MATERIALS STORAGE AND OVERALL SITE MANAGEMENT DURING CONSTRUCTION.

NORTH

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

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

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Consultants

ARCHITECT
ARCHETYPE

LANDSCAPE ARCHITECT
ALA

SURVEYOR
OWEN HASKELL

CONTRACTOR
CIANBRO

Notes

OWNER OF RECORD:

100 FORE STREET LLC
P.O. BOX 910
WESTBROOK, ME 04098
CCRD BOOK 33748, PAGE 001

Revision	By	Appvd	DATE
5 PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
4 LEVEL III RE-SUBMISSION TO CITY	SRB	SRB	18.11.09
3 LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 01622_base	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
EXISTING CONDITIONS & DEMOLITION PLAN

Project No. 210801622
Scale 1" = 30'

Sheet
C-2.1

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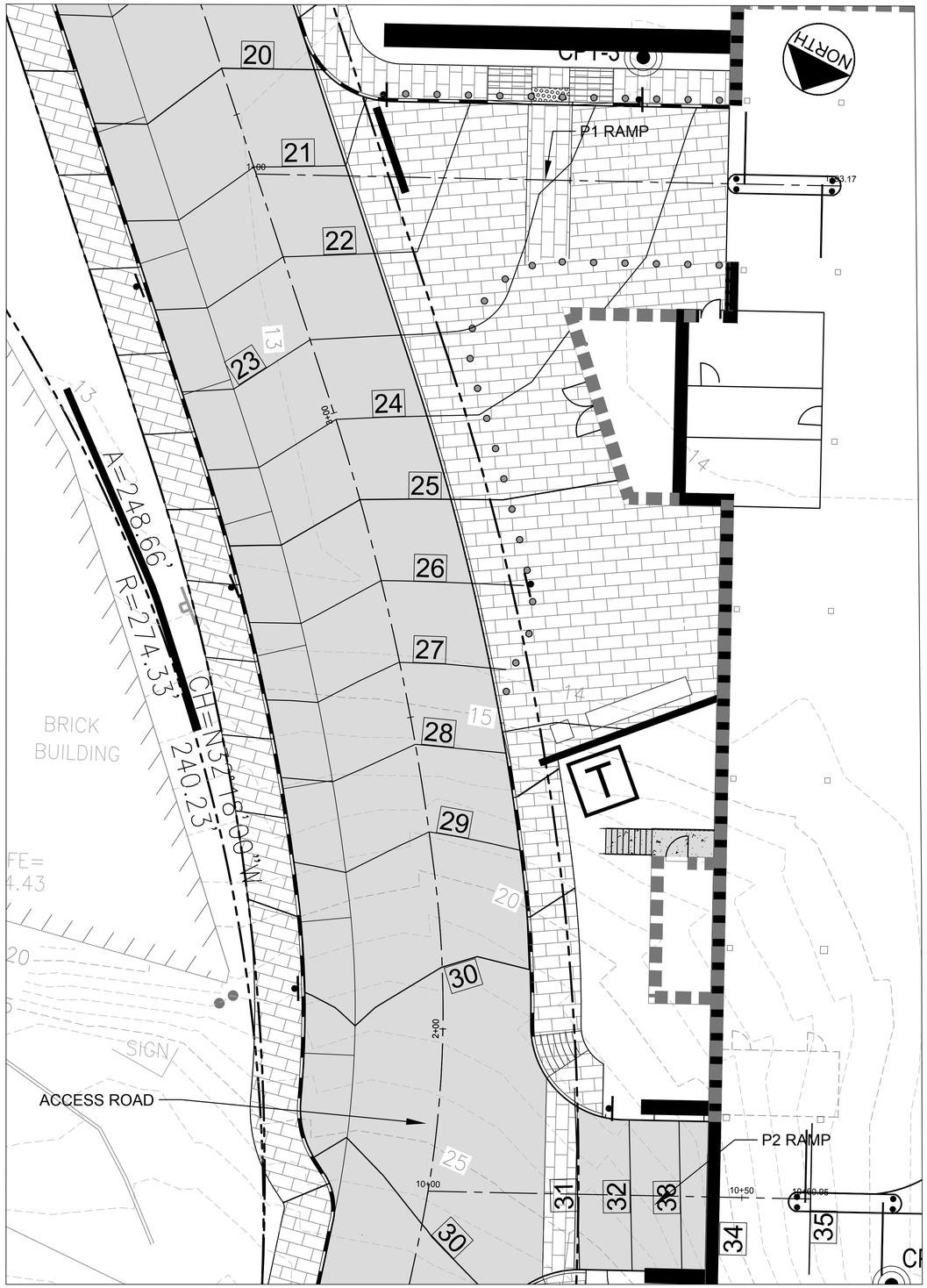
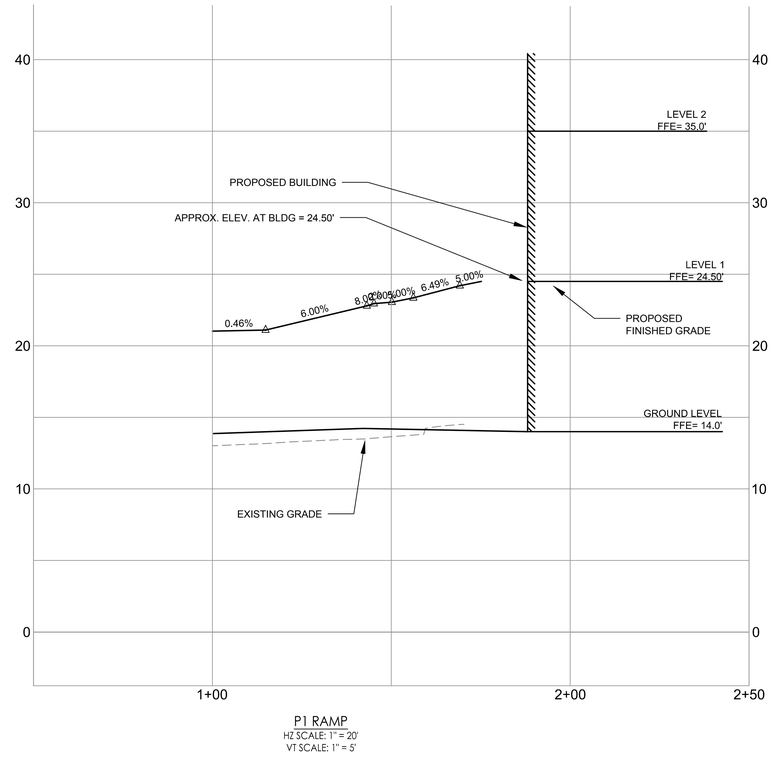
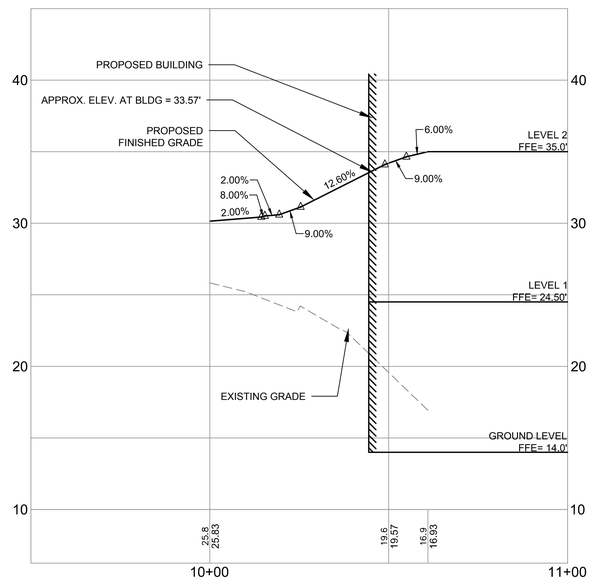




P1 RAMP
HZ SCALE: 1" = 20'
VT SCALE: 1" = 5'



P2 RAMP
HZ SCALE: 1" = 20'
VT SCALE: 1" = 5'

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ARCHETYPE
LANDSCAPE ARCHITECT
ALA
SURVEYOR
OWEN HASKELL
CONTRACTOR
CIANBRO

Notes

No.	Revision	By	Appd.	YY.MM.DD
5	PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
4	LEVEL III PRE-SUBMISSION TO CITY	SRB	SRB	18.11.09
3	LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2	PROGRESS SET	SRB	SRB	18.09.24
1	INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 195350450_SP	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
LEVEL 2 & LEVEL 3
RAMP PROFILES

Project No.
210801622

Scale
AS NOTED

Sheet
C-4.5

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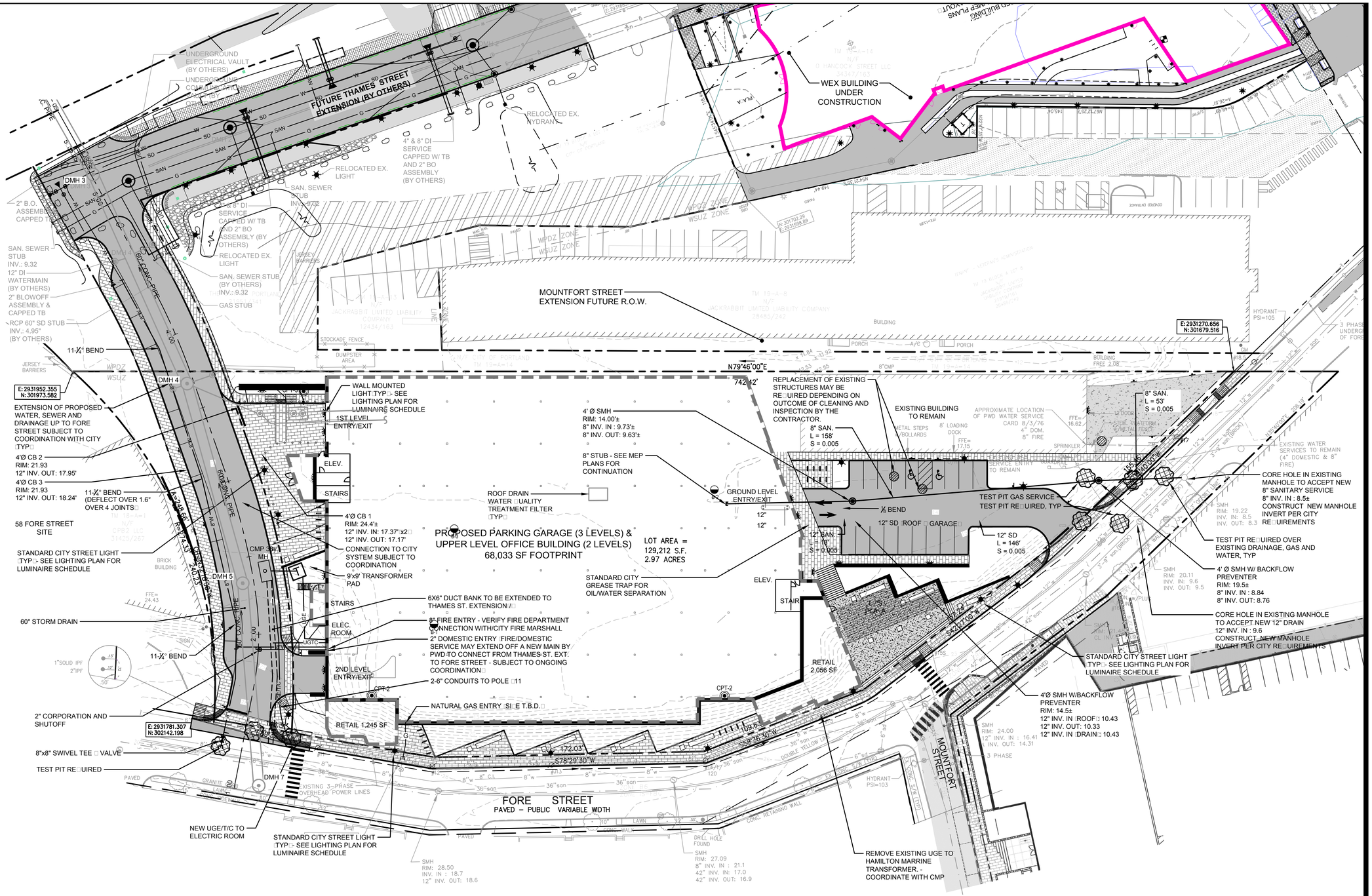

PLAN REFERENCES:

1. "Topographic Survey, 100 Fore Street, Portland, Maine, made for Jonathan Cohen, P.O. Box 910, 865 Spring Street, Westbrook, Maine 04092", by Owen Haskell, Inc., Date: last revised 09/06/2018.
2. Building plans by Archetype, P.A.
3. "Site Development Plans for a commercial office building on Thames Street Property One Hancock Street , Portland, Maine, November 2017, Construction Set", Wex project , prepared by Stantec.
4. Portland sewer system infiltration - inflow analysis mapping by Hunter - Ballew associates, 1981. sheet N-3.
5. Utility Plan/Permit Set "Thames Street Extension Project", made for the City of Portland Maine 04101, Plans by: Woodard Curran, dated May, 2018.
6.

UTILITY NARRATIVE:

1. EXISTING NATURAL GAS LOCATIONS PER CITY AS BUILT RECORDS' "UNITIL GAS DISTRIBUTION, 100 FORE STREET, PORTLAND MAINE", DATED 6/18/2018.
2. EXISTING WATER MAIN INFORMATION IS TAKEN FROM PORTLAND WATER DISTRICT RECORDS. 10 FORE STREET WATER SERVICE LOCATIONS ARE TAKEN FROM PWD WATER SERVICE CARD, DATED 08/03/76.
3. EXISTING SEWER INFORMATION PER CITY MAPPING. 100 FORE STREET SEWER SERVICE LOCATION IS UNKNOWN PER CITY RECORDS.
4. EXISTING POWER AND COMMUNICATIONS LOCATIONS WERE LOCATED IN FIELD BY OWEN HASKELL ON / /18.

PRELIMINARY - NOT FOR CONSTRUCTION

NORTH

GRAPHIC SCALE
30 0 15 30 60
IN FEET
1 inch = 30 ft.

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CONTRACTOR
CIANBRO

Notes

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1	INTERNAL REVIEW	SRB		18.09.14

File Name: 195350450_SP
P.E. STEPHEN R. BUSHEY
Permit-Seal

DWN.	CHKD.	DSGN.	DATE
DBS	SRB	SRB	18.09.12

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
UTILITY PLAN

Project No. 210801622
Scale 1" = 30'
Sheet C-5.0

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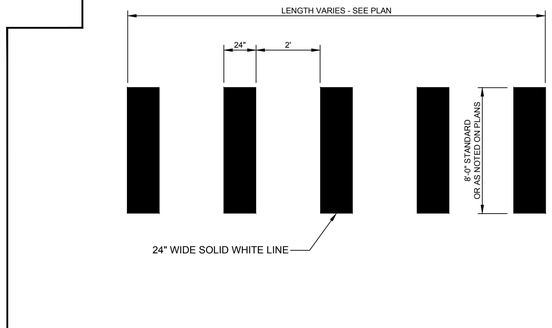
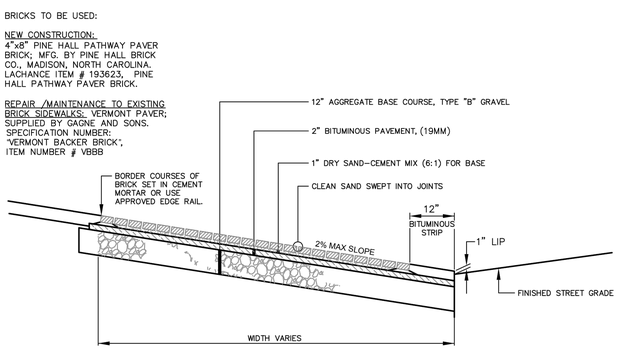
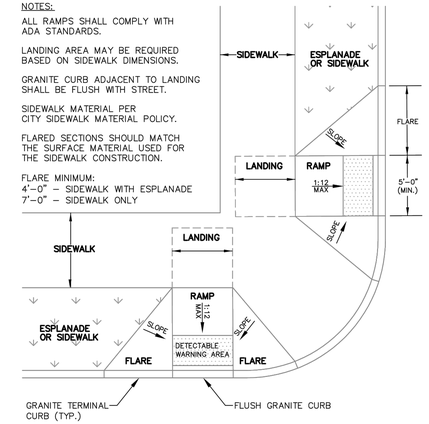


A CROSSWALK STRIPING DETAIL
N.T.S.



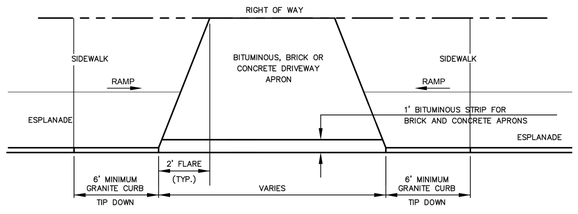
D BRICK DRIVEWAY APRON WITH BITUMINOUS BASE
N.T.S.



G PREFERRED SIDEWALK RAMP AT INTERSECTION
N.T.S.

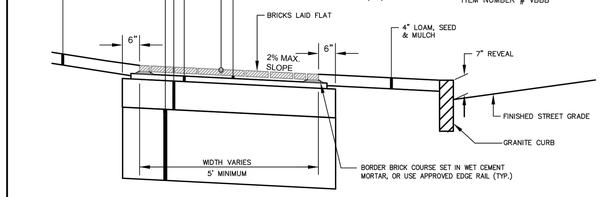
AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.



DRIVEWAY APRON LAYOUT
NOT TO SCALE

B DRIVEWAY APRON LAYOUT
N.T.S.

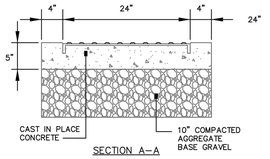


E BRICK SIDEWALK WITH BITUMINOUS BASE
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"

NOTES:

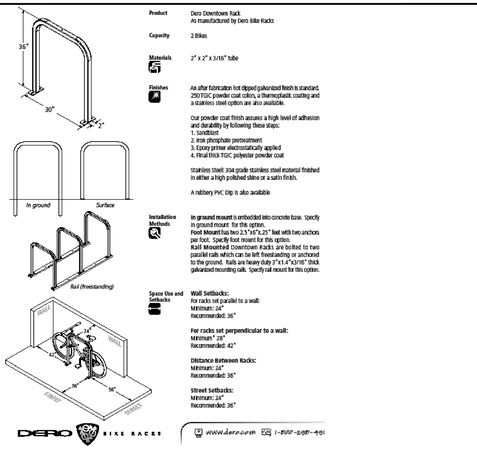
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM 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. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



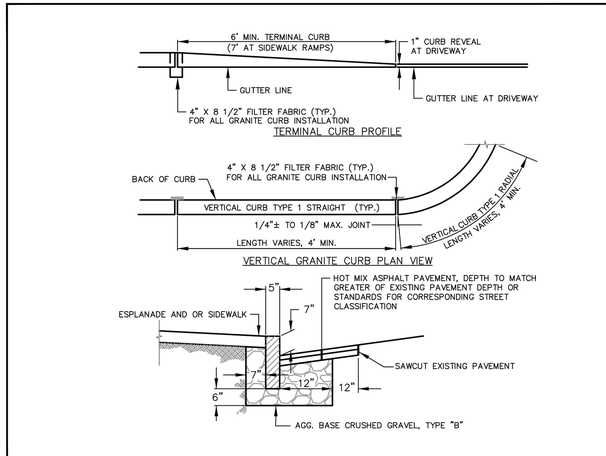
SECTION A–A

H SIDEWALK RAMP DETECTABLE WARNING PANEL
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"

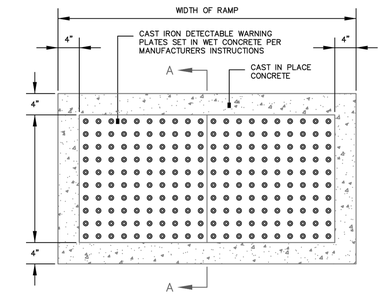


C BICYCLE RACK SPECIFICATION - DOWNTOWN RACK
N.T.S.



F VERTICAL GRANITE CURB INSTALLATION IN EXIST. STREETS
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL."



PLAN VIEW

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ALA
SURVEYOR
OWEN HASKELL
CONTRACTOR
CIANBRO

Notes

Revision	By	Appd.	DATE
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4 LEVEL III PS-SUBMISSION TO CITY	SRB		18.11.09
3 LEVEL III SUBMISSION TO CITY	SRB		18.10.09
2 PROGRESS SET	SRB		18.09.24
1 INTERNAL REVIEW	SRB		18.09.14

File Name: 210801622_det | PBF DWN. | DBS CHKD. | SRB DSGN. | 18.09.14 DATE
P.E. STEPHEN R. BUSHEY
Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
LANDSCAPE, SITE AND SIDEWALK DETAILS

Project No. 210801622
Scale N.T.S.

Sheet
C-6.0

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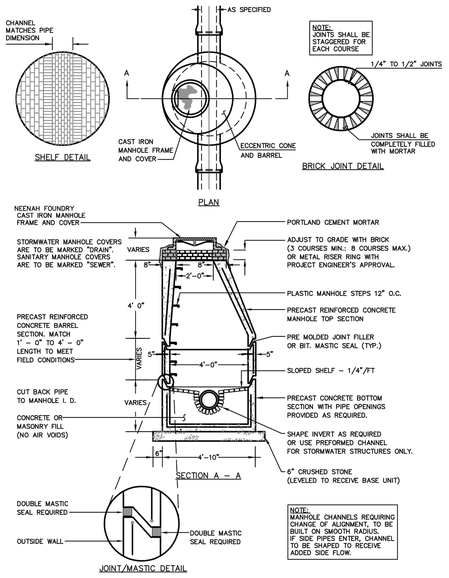
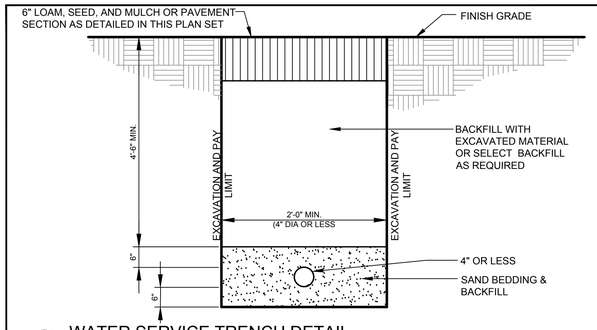


A PRECAST CONCRETE MANHOLE

N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"



B WATER SERVICE TRENCH DETAIL

N.T.S.

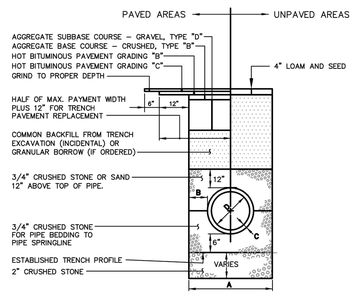
NOTES

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 6".
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

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

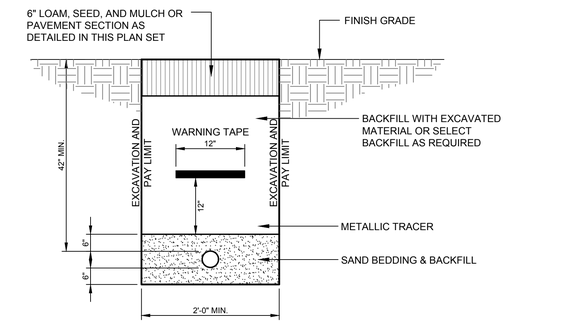
ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



D TYPICAL PIPE TRENCH INSTALLATION AND NOTES

N.T.S.

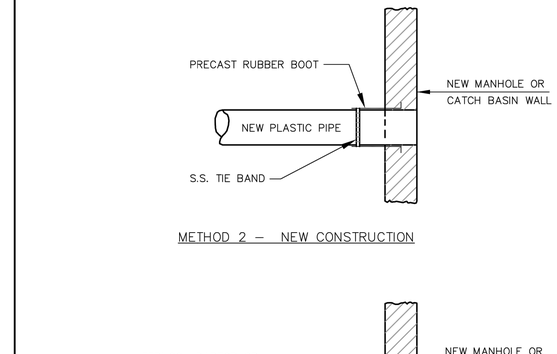
AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"



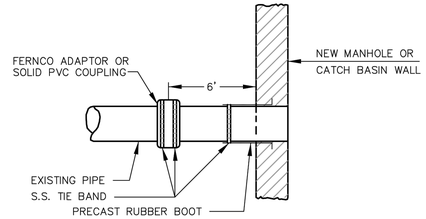
NOTE:
GAS LINE TO BE INSTALLED BY OTHERS. SITE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND BACKFILL OF THE GAS LINE AND PLACEMENT OF THE WARNING TAPES AND TRACER.

E GAS SERVICE TRENCH SECTION

N.T.S.



METHOD 2 – NEW CONSTRUCTION



METHOD 1 – EXISTING PIPE INTO NEW STRUCTURE

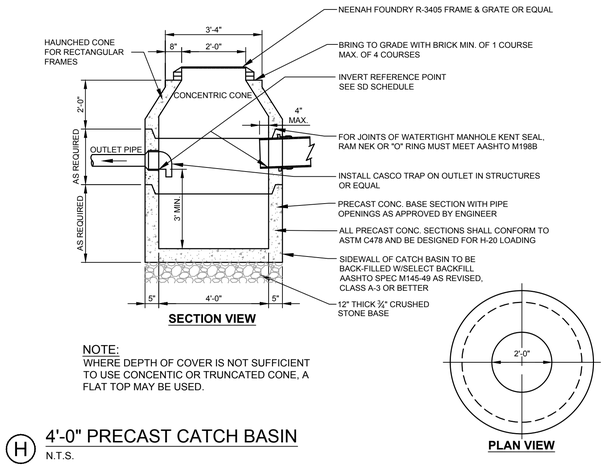
PLASTIC PIPE CONNECTIONS

NOT TO SCALE

H PLASTIC PIPE CONNECTION METHODS 1 & 2

N.T.S.

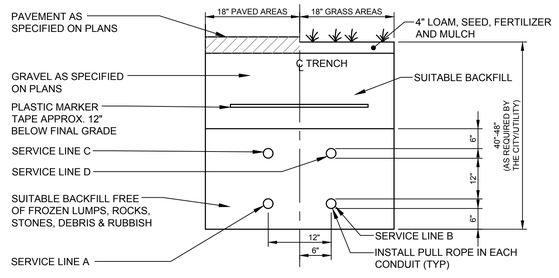
AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"



NOTE:
WHERE DEPTH OF COVER IS NOT SUFFICIENT TO USE CONCENTIC OR TRUNCATED CONE, A FLAT TOP MAY BE USED.

H 4'-0" PRECAST CATCH BASIN

N.T.S.



CONDUIT TYPE

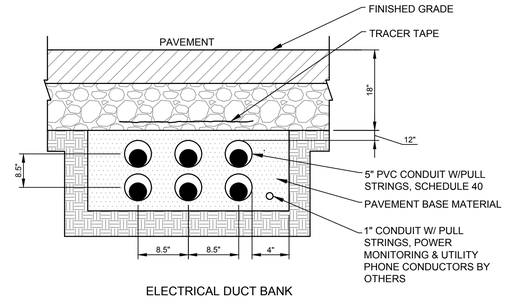
SERVICE	CONDUIT SIZE	GRASS AREAS	PAVED AREAS	UTILITY	REMARKS
A	2-6"	SCHEDULE 40 PVC ELECTRICAL GRADE	RIGID GALVANIZED STEEL, ASTM A120*	POWER	SEE NOTE
B	2-4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120*	TELEPHONE	SEE NOTE
C	2-4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120*	COMMUNICATION	SEE NOTE
D	2-4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120*	SPARES	SEE NOTE

*AS REQUIRED BY CITY /UTILITY

NOTES:
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10' ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS. COORDINATE WITH ELECTRICAL SITE PLANS BY E.S. BOULOS.
2. IN CITY RIGHT OF WAY, CONDUITS TO HAVE 36" MIN. COVER AND BE ENCASED WITH MIN. 3" CONCRETE ON ALL SIDES.

F UTILITY TRENCH - PRIMARY ELEC., TEL. & COMM.

N.T.S.



ELECTRICAL DUCT BANK
SIX ELECTRICAL DUCTS

NOTES:
1. CONDUIT BANK WILL EXTEND 5' BEYOND FOUNDATION WALL. CAP ALL CONDUITS.

I SECONDARY UNDERGROUND ELECTRIC CONDUIT BANK DETAIL

N.T.S.

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Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

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OWEN HASKELL

CONTRACTOR
CIANBRO

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Revision	By	Appd.	YY.MM.DD
5 PROGRESS PRINTS RELEASED TO CONTRACTOR	SRB	SRB	18.11.14
4 LEVEL III RESUBMISSION TO CITY	SRB	SRB	18.11.09
3 LEVEL III SUBMISSION TO CITY	SRB	SRB	18.10.09
2 PROGRESS SET	SRB	SRB	18.09.24
1 INTERNAL REVIEW	SRB	SRB	18.09.14

File Name: 210801622_det	PBF	DBS	SRB	18.09.14
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
STORMDRAIN AND UTILITY DETAILS

Project No. 210801622
Scale N.T.S.

Sheet
C-6.1

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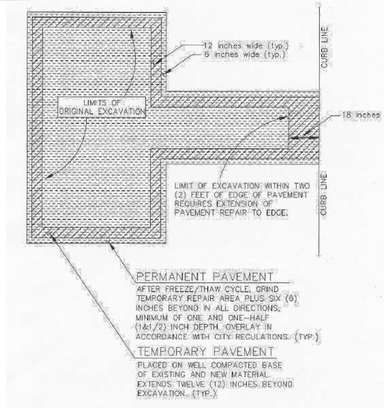
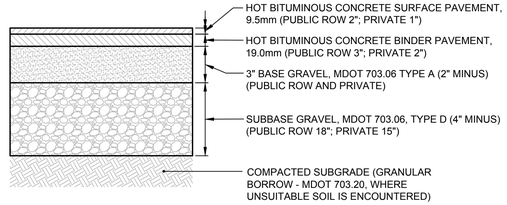


A PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR

A

AS OBTAINED FROM THE CITY OF PORTLAND "RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC RIGHT OF WAY"

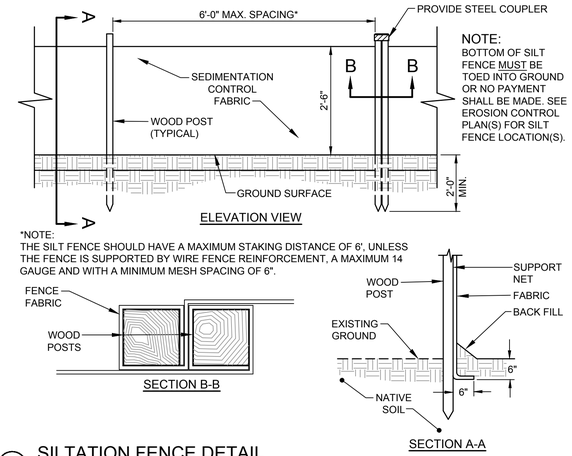


NOTES:

1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION AND/OR CITY OF PORTLAND TECHNICAL STANDARD, WHICHEVER IS MORE STRINGENT. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT.

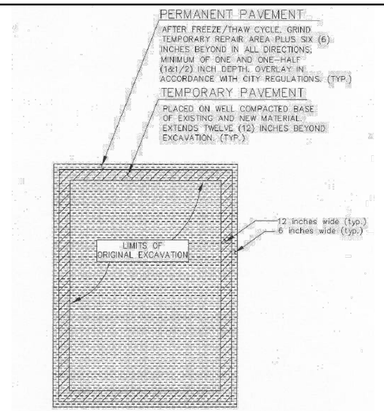
D BITUMINOUS CONCRETE PAVEMENT SECTION

N.T.S.



G SILTATION FENCE DETAIL

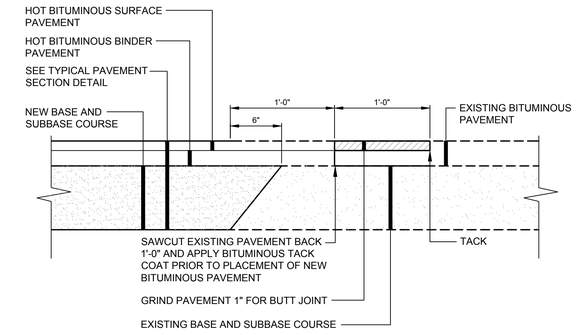
N.T.S.



B PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR

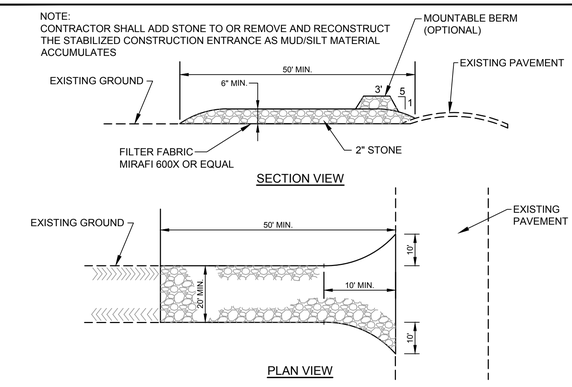
B

AS OBTAINED FROM THE CITY OF PORTLAND "RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC RIGHT OF WAY"



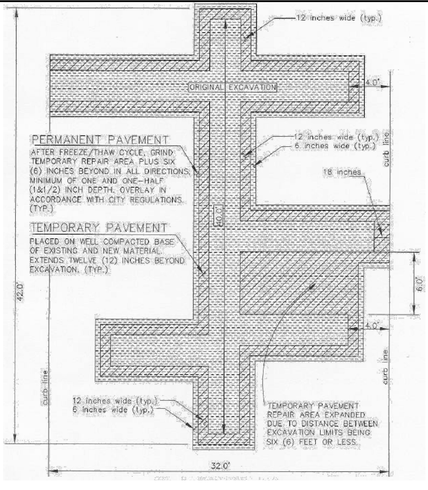
E PAVEMENT SAWCUT DETAIL

N.T.S.



H STABILIZED CONSTRUCTION ENTRANCE DETAIL

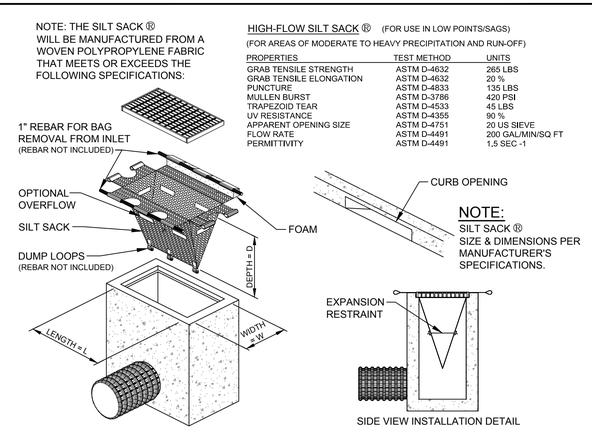
N.T.S.



C PLAN VIEW OF MAJOR EXCAVATION PAVEMENT REPAIR

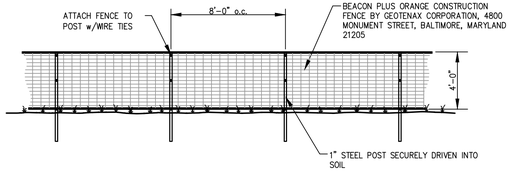
C

AS OBTAINED FROM THE CITY OF PORTLAND "RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC RIGHT OF WAY"



F SILT SACK® DETAIL & SPECIFICATIONS

N.T.S.



I ORANGE CONSTRUCTION FENCE DETAIL

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Client/Project
100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
PAVEMENT, EROSION AND MISCELLANEOUS DETAILS

Project No. 210801622
Scale N.T.S.

Sheet
C-6.2

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NOTES:

1. WEIGHT (APPROX):
   A) EMPTY W/CARTRIDGES: 50-LB (MAX)
   B) FULL OF WATER: 1800-LB (MAX)

2. MATERIAL:
   A) FILTER HOUSING AND COVER: HDPE, WHITE
   B) CARTRIDGE PLATE: 5052-H32 ALUMINUM ALLOY
   C) SUPPORT HARDWARE: CRES 300 SERIES OR EQUAL

3. PERFORMANCE CHARACTERISTICS (TYP):
   A) DEBRIS CAPACITY: 11.0 CU-FT
   B) FILTERED FLOW RATE: SEE TABLE 1
   C) BYPASS FLOW RATE: 3100 GPM (6.9 CFS)

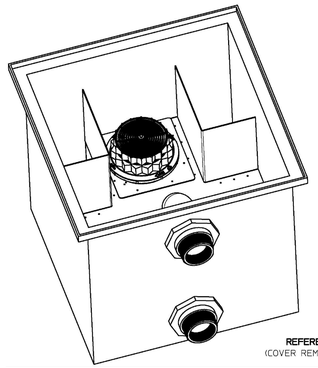
4. TYPICAL INSTALLATION: CUT DOWNSPOUT PIPE AND CONNECT THE 4" INLET AND OUTLET PIPES AS REQUIRED TO REDIRECT RAIN FLOW THROUGH THE FILTER BOX.

5. USE ONLY WITH FABCO REPLACEABLE MEDIA CARTRIDGES.

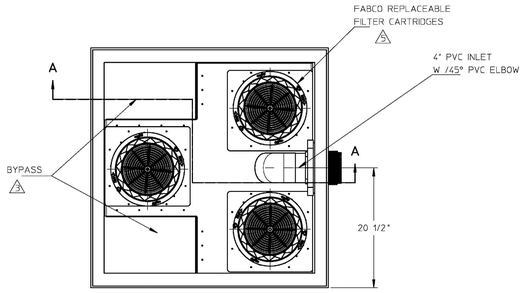
6. ALL TANK DIMENSIONS ARE REFERENCE AND VARY BY THE STANDARD ROTATIONAL MOLDING TOLERANCE OF ± 3%

TABLE 1 (3,5)
ADDITIONAL CARTRIDGE DESIGNS

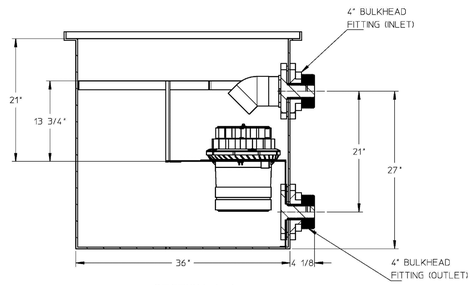
ORDER NUMBER	DESCRIPTION	COLOR CODE	FLOW RATE (TYP)
9718-1	STANDARD	RED	115 GPM (.26 CFS)
9718-2	BACTERIA	YELLOW	115 GPM (.26 CFS)
9718-3	HYDROCARBONS	BLUE	115 GPM (.26 CFS)
9718-4	HEAVY METALS	GREY	60 GPM (.13 CFS)
9718-5	STANDARD (SHORT)	MINT	115 GPM (.26 CFS)
9718-6	NUTRIENTS	GREEN	100 GPM (.22 CFS)
9718-7	HIGH FLOW	RED (MARKED)	260 GPM (.58 CFS)



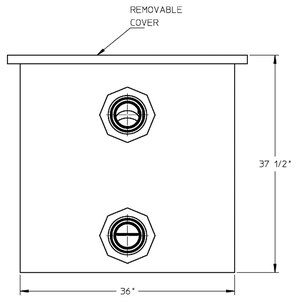
REFERENCE VIEW
(COVER REMOVED FOR CLARITY)



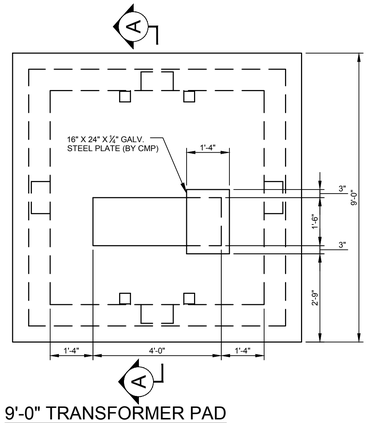
COVER REMOVED FOR CLARITY



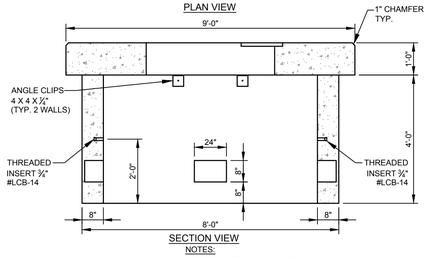
SECTION A-A



(A) FABCO DOWNSPOUT FILTER UNIT DETAIL
N.T.S.



(B) 9'-0" TRANSFORMER PAD
N.T.S.



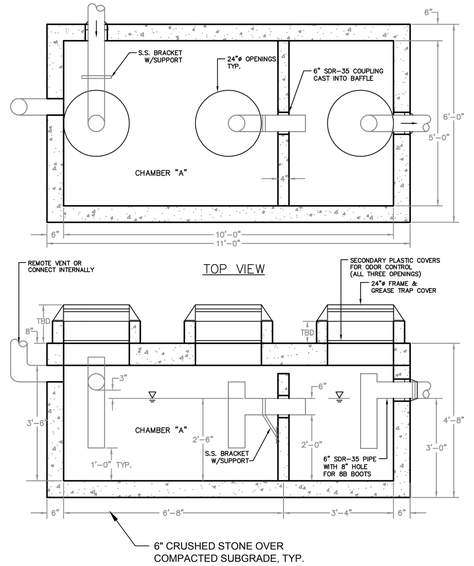
SECTION VIEW

NOTES:
1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 4,000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT.
2. AS PER CENTRAL MAINE POWER COMPANY SPECIFICATIONS.
3. ONE 8" x 24" KNOCKOUT PROVIDED EACH WALL.
4. FOR 750 - 5000 KVA THREE PHASE TRANSFORMER.
5. FINISH GRADE SHALL BE GRADED TO ALLOW SURFACE WATER TO FLOW AWAY FROM THE PAD.

DESIGN NOTES:
1. CONCRETE 5000 PSI AT 28 DAYS.
2. H-20 LOADING
3. JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT (ASSHTO M-19)
4. ALL TEES/BAFFLES PROVIDED BY PRECAST.

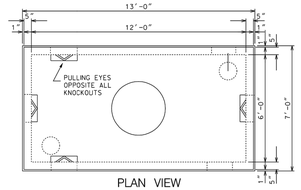
THIS STRUCTURE MUST DISCHARGE TO A CITY OF PORTLAND STANDARD MANHOLE WITH CHANNEL (CONTROL/SAMPLING MANHOLE).

FORMULA FOR SIZING THE TRAP: CHAMBER "A" (2/3 OF TANK VOLUME) MUST BE EQUIVALENT TO THE AVERAGE DAILY PROCESS FLOW FROM THE FACILITY WITH NO SANITARY OR OTHER EXTRANEOUS WASTES FLOWING THROUGH IT.

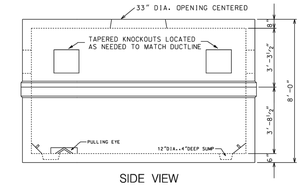


(C) GREASE TRAP (TO FUNCTION AS OIL / WATER SEPARATOR FOR GARAGE DRAINS)
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"

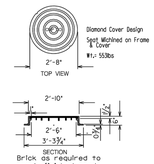


PLAN VIEW



SIDE VIEW

MANHOLE DETAIL
N.T.S.
(Ref.Type 38Y)



COVER DETAIL
N.T.S.

NOTES
1) Vault shall be designed to withstand H20 wheel loading with 6 inches of overburden. The design shall also meet the AASHTO design requirements of National Electrical Safety Code Section 323A. Provide shop drawings stamped by a State of Maine Registered Professional Engineer upon Request
2) Joints sealed with asphalt.
3) Mountings for cable racks etc. cast in wall by further plans or field located.
4) Manhole shall be set on a suitable gravel base.
5) Cables are to be racked along one wall only.

(D) CMP PRECAST CONCRETE 38Y MANHOLE (IF REQUIRED BY CMP)
N.T.S.

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100 FORE STREET LLC
WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
MISCELLANEOUS UTILITY DETAILS

Project No. 210801622
Scale N.T.S.

Sheet
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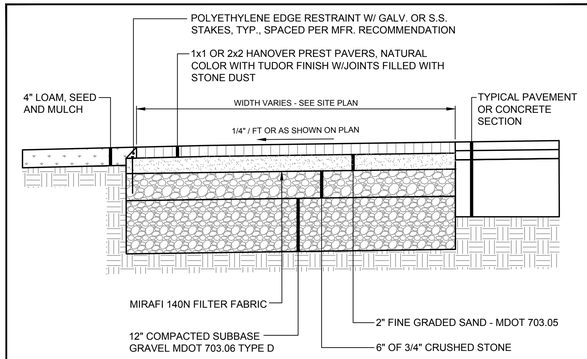
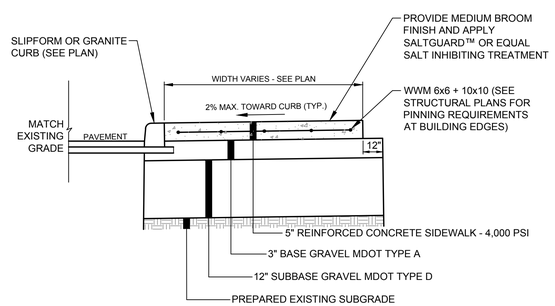
A VACANT
N.T.S.



B TYPICAL PAVER DETAIL
N.T.S.



NOTE:
INSTALL CONSTRUCTION JOINTS AT 12' SPACING.

C CONCRETE SIDEWALK DETAIL
N.T.S.

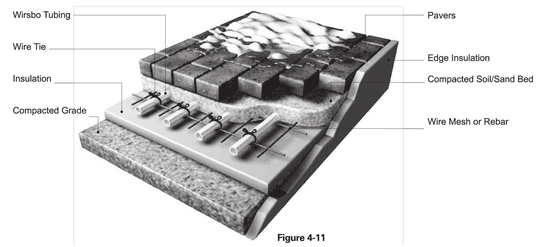


Figure 4-11

Pavers Over a Compactable Soil/Sand Bed

Application

This method is for designs with light vertical load requirements. With insulation, the heated area is isolated from high movement of energy from the system to the surrounding frozen soil. Response time is fairly quick and even faster if the system is idled.

Where Used

This installation is applicable to the following applications.

- Sidewalks
- Driveways
- Low-density roads

How to Install

There are two ways to install the tubing over the high-density insulation. As shown in **Figure 4-11**, secure the tubing to the wire mesh or rebar which has been placed over the high-density insulation board. In the alternative method, secure the tubing to the high-density insulation using Wirsbo plastic staples with the manual stapler.

Install vertical insulation along the entire edge down to the depth of the horizontal insulation. The insulation creates a thermal break between the heated area and the frozen ground.

After installing the tubing, cover with a compactable soil/sand bed (typically 2 to 3 inches) prior to applying pavers or bricks.

What to Look For

- Make sure the base material is properly compacted as specified by the project engineer.
- Verify whether a high water table or moist soil conditions exist within 8 to 10 vertical feet of the snow and ice melting system. If found, isolate the system from the moisture.
- Using approved insulation with vertical compressive strength is critical. Consult with the insulation manufacturer or project engineer for recommendations.
- Supply water temperatures for this application should be no higher than 150°F.

Control Strategy

Use the semi- or fully automatic strategy for this installation method.

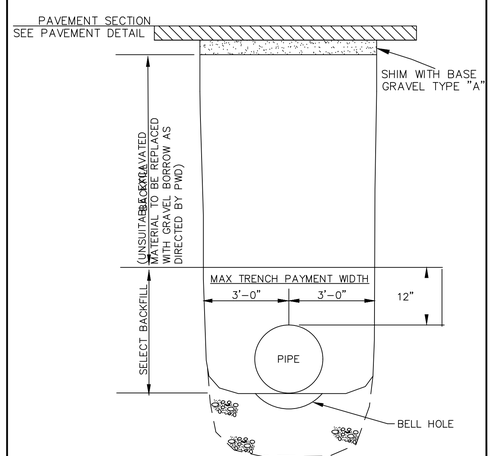
NOTE:

SNOWMELT SYSTEM INSTALLATION TO BE COORDINATED WITH MEP PLANS AND CITY OF PORTLAND PUBLIC WORKS (WHEN SYSTEM IS IN THE R.O.W.).

WIRSBO
Life. Safety. Comfort Systems

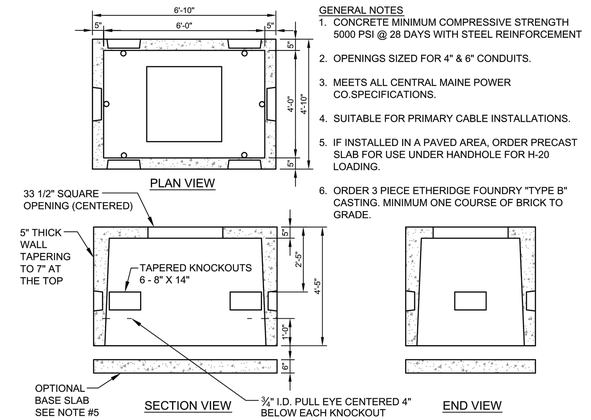
27

D SNOWMELT PAVER DETAIL (LOCATIONS T.B.D.)
N.T.S.



E TYPICAL WATER TRENCH DETAIL
N.T.S.

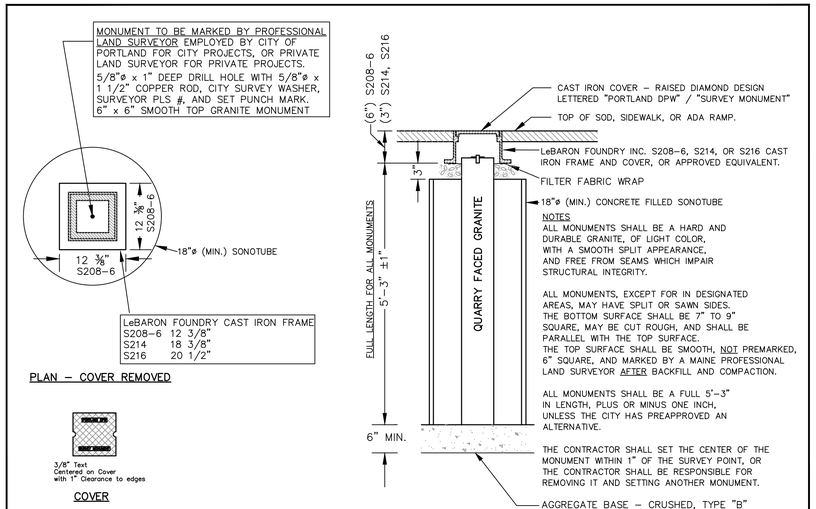
VACANT
N.T.S.



GENERAL NOTES

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 5000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT
2. OPENINGS SIZED FOR 4" & 6" CONDUITS.
3. MEETS ALL CENTRAL MAINE POWER CO.SPECIFICATIONS.
4. SUITABLE FOR PRIMARY CABLE INSTALLATIONS.
5. IF INSTALLED IN A PAVED AREA, ORDER PRECAST SLAB FOR USE UNDER HANDHOLE FOR H-20 LOADING.
6. ORDER 3 PIECE ETHERIDGE FOUNDRY "TYPE B" CASTING. MINIMUM ONE COURSE OF BRICK TO GRADE.

F SPLICE BOX DETAIL
N.T.S.



NOTES
ALL MONUMENTS SHALL BE A HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE, AND FREE FROM SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY.

ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7" TO 9" SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREMARKED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER BACKFILL AND COMPACTION.

ALL MONUMENTS SHALL BE A FULL 5'–3" IN LENGTH, PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE.

THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN 1" OF THE SURVEY POINT, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT.

G GRANITE STREET MONUMENT DETAIL
N.T.S.

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482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
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WESTBROOK, ME

100 FORE STREET
PORTLAND, MAINE

Title
MISCELLANEOUS DETAILS

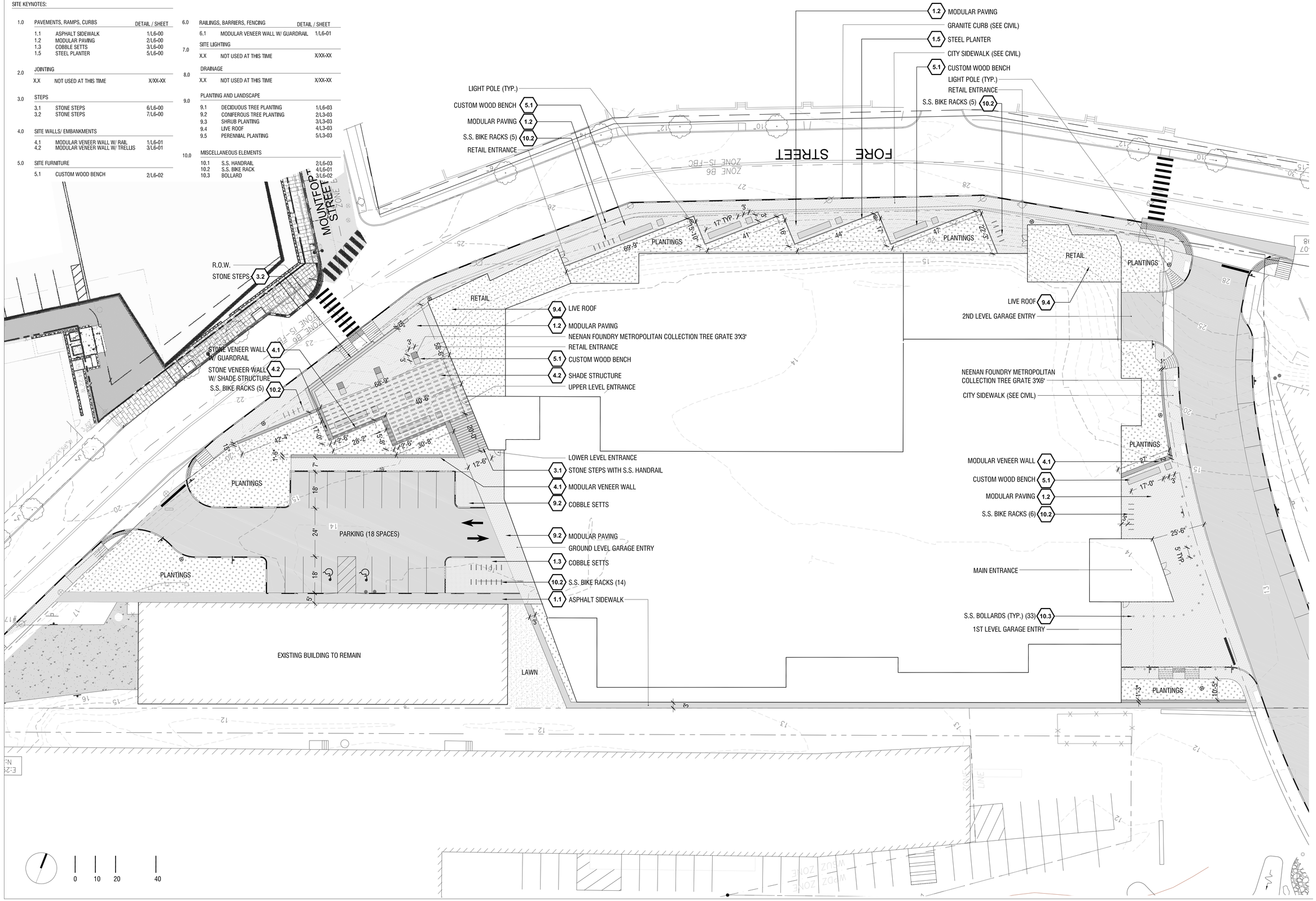
Project No. 210801622
Scale N.T.S.

Sheet
C-6.4

V:\210\active\210801622\civil\cadd\permit\dwg\01622_det.dwg plt:letter 11/14/2018 3:23 PM

SITE KEYNOTES:

			DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS		
	1.1	ASPHALT SIDEWALK	1/L6-00
	1.2	MODULAR PAVING	2/L6-00
	1.3	COBBLE SETTS	3/L6-00
	1.5	STEEL PLANTER	5/L6-00
2.0	JOINTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		
	3.1	STONE STEPS	6/L6-00
	3.2	STONE STEPS	7/L6-00
4.0	SITE WALLS/ EMBANKMENTS		
	4.1	MODULAR VENEER WALL W/ RAIL	1/L6-01
	4.2	MODULAR VENEER WALL W/ TRELLIS	3/L6-01
5.0	SITE FURNITURE		
	5.1	CUSTOM WOOD BENCH	2/L6-02
6.0	RAILINGS, BARRIERS, FENCING		DETAIL / SHEET
	6.1	MODULAR VENEER WALL W/ GUARDRAIL	1/L6-01
7.0	SITE LIGHTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
8.0	DRAINAGE		
	X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE		
	9.1	DECIDUOUS TREE PLANTING	1/L6-03
	9.2	CONIFEROUS TREE PLANTING	2/L3-03
	9.3	SHRUB PLANTING	3/L3-03
	9.4	LIVE ROOF	4/L3-03
	9.5	PERENNIAL PLANTING	5/L3-03
10.0	MISCELLANEOUS ELEMENTS		
	10.1	S.S. HANDRAIL	2/L6-03
	10.2	S.S. BIKE RACK	4/L6-01
	10.3	BOLLARD	3/L6-02



ACETO LANDSCAPE ARCHITECTS
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SEAL

PROJECT TITLE

100 FORE STREET
100 FORE STREET
PORTLAND, ME

PREPARED FOR

REVISIONS | DATE

ISSUE DATE:

LEVEL II SUBMISSION
TO CITY
NOVEMBER 15, 2018

SHEET TITLE

LAYOUT &
MATERIALS PLAN

SHEET INFORMATION

L 1-01

NOT FOR CONSTRUCTION

PLANTING LEGEND

SYMBOL	ABBR.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
TREES-DECIDUOUS						
	GT	GLEDITSIA TRIACANTHOS 'SKYCOLE'	SKYLINE HONEYLOCUST	3	4" CAL.	PER PLAN
	AF	ACER × FREEMANII 'ARMSTRONG'	ARMSTRONG RED MAPLE	8	3" CAL.	PER PLAN
	UA	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	11	3" CAL.	PER PLAN
	BP	BETULA PAPYRIFERA	WHITE BIRCH (MULTISTEM)	28	8-10'	PER PLAN
	AC	AMELANCHIER CANADENSIS	SERVICEBERRY	4	8-10'	PER PLAN
PERENNIALS AND GRASSES						
		TBD	TBD	2,276	#2	2' O.C.
LIVE ROOF						
		TBD	TBD	3,422 SF	NA	SEE DETAIL

FORE STREET

MOUNTFORT STREET

LIVE ROOF

LIVE ROOF

LAWN

0 10 20 40

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PLANTING PLAN

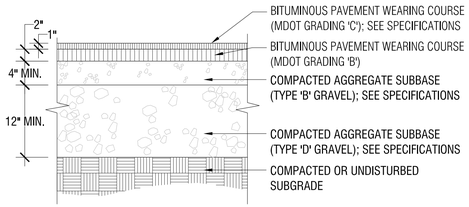
SHEET INFORMATION

L 3-00

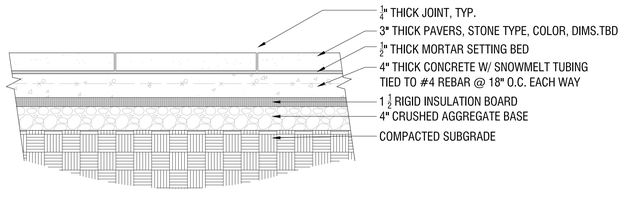
NOT FOR CONSTRUCTION

SITE KEYNOTES:

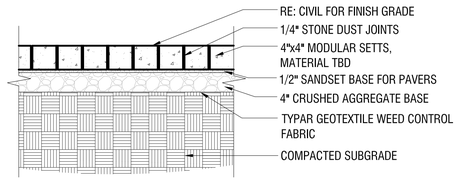
1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	ASPHALT SIDEWALK	1/L6-00	6.1	MODULAR VENEER WALL W/ GUARDRAIL	1/L6-01
1.2	MODULAR PAVING	2/L6-00	7.0	SITE LIGHTING	
1.3	COBBLE SETTS	3/L6-00	X.X	NOT USED AT THIS TIME	X/XX-XX
1.5	STEEL PLANTER	5/L6-00	8.0	DRAINAGE	
2.0	JOINTING		X.X	NOT USED AT THIS TIME	X/XX-XX
X.X	NOT USED AT THIS TIME	X/XX-XX	9.0	PLANTING AND LANDSCAPE	
3.0	STEPS		9.1	DECIDUOUS TREE PLANTING	1/L6-03
3.1	STONE STEPS	6/L6-00	9.2	CONIFEROUS TREE PLANTING	2/L3-03
3.2	STONE STEPS	7/L6-00	9.3	SHRUB PLANTING	3/L3-03
4.0	SITE WALLS/ EMBANKMENTS		9.4	LIVE ROOF	4/L3-03
4.1	MODULAR VENEER WALL W/ RAIL	1/L6-01	9.5	PERENNIAL PLANTING	5/L3-03
4.2	MODULAR VENEER WALL W/ TRELLIS	3/L6-01	10.0	MISCELLANEOUS ELEMENTS	
5.0	SITE FURNITURE		10.1	S.S. HANDRAIL	2/L6-03
5.1	CUSTOM WOOD BENCH	2/L6-02	10.2	S.S. BIKE RACK	4/L6-01
			10.3	BOLLARD	3/L6-02



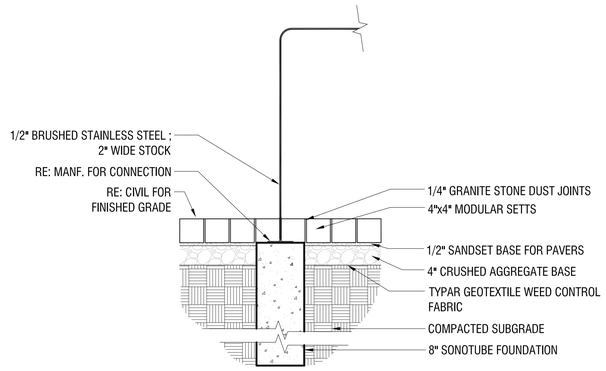
1 ASPHALT 1.2
1":1'-0"



2 MODULAR PAVING 1.3
1":1'-0"

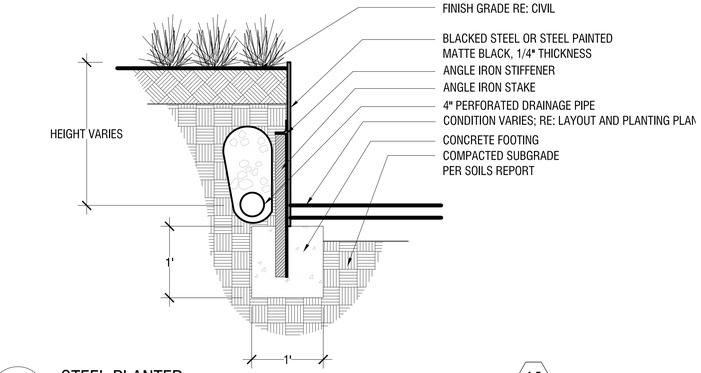


3 COBBLE SETTS 3.2
1":1'-0"

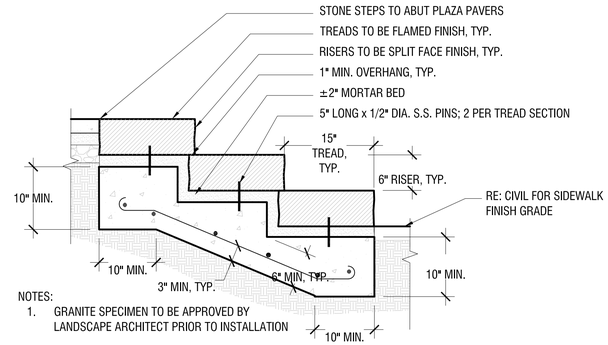


NOTES:
1. SONOTUBE FOOTING TO BE 4 FT. DEPTH OR BELOW FROST LINE, WHICHEVER IS GREATER

4 S.S. BIKE RACK 10.2
1":1'-0"

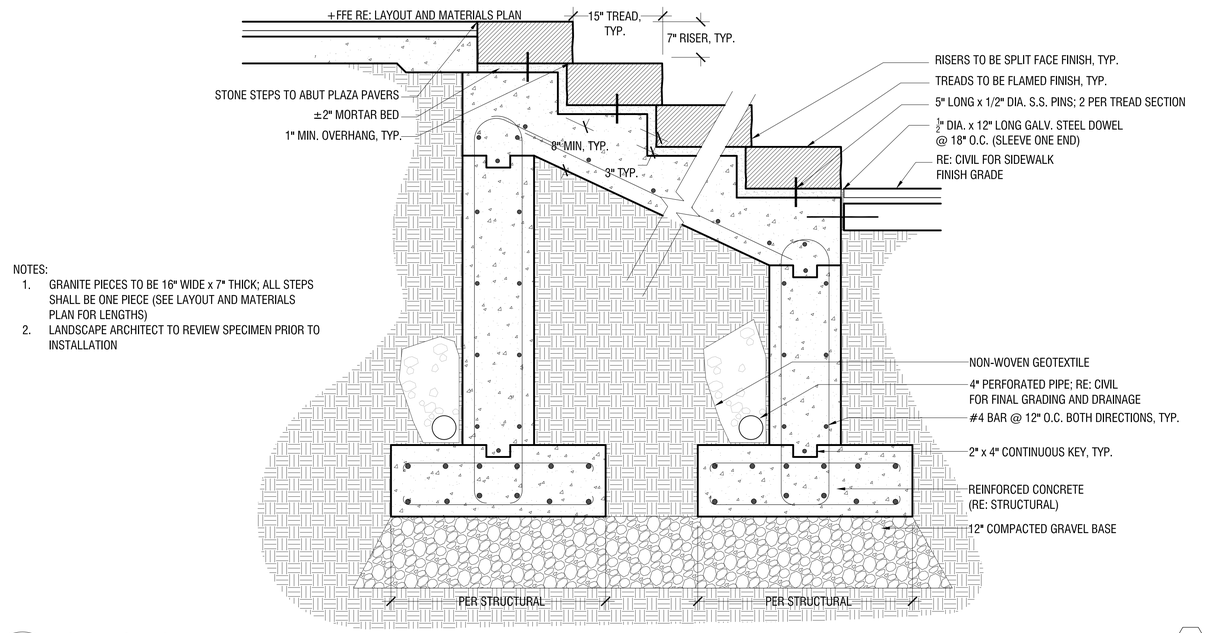


5 STEEL PLANTER 1.5
1":1'-0"



NOTES:
1. GRANITE SPECIMEN TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION

6 STONE STEPS 3.1
1": 2'-0"



NOTES:
1. GRANITE PIECES TO BE 16" WIDE x 7" THICK; ALL STEPS SHALL BE ONE PIECE (SEE LAYOUT AND MATERIALS PLAN FOR LENGTHS)
2. LANDSCAPE ARCHITECT TO REVIEW SPECIMEN PRIOR TO INSTALLATION

7 STONE STEPS 3.2
1": 2'-0"

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REVISIONS | DATE

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NOVEMBER 15, 2018

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SITE DETAILS

SHEET INFORMATION
L 6-00
NOT FOR CONSTRUCTION

SITE KEYNOTES:

1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	ASPHALT SIDEWALK	1/L6-00	6.1	MODULAR VENEER WALL W/ GUARDRAIL	1/L6-01
1.2	MODULAR PAVING	2/L6-00	7.0	SITE LIGHTING	
1.3	COBBLE SETTS	3/L6-00	X.X	NOT USED AT THIS TIME	X/XX-XX
1.5	STEEL PLANTER	5/L6-00	8.0	DRAINAGE	
2.0	JOINTING		X.X	NOT USED AT THIS TIME	X/XX-XX
X.X	NOT USED AT THIS TIME	X/XX-XX	9.0	PLANTING AND LANDSCAPE	
3.0	STEPS		9.1	DECIDUOUS TREE PLANTING	1/L6-03
3.1	STONE STEPS	6/L6-00	9.2	CONIFEROUS TREE PLANTING	2/L3-03
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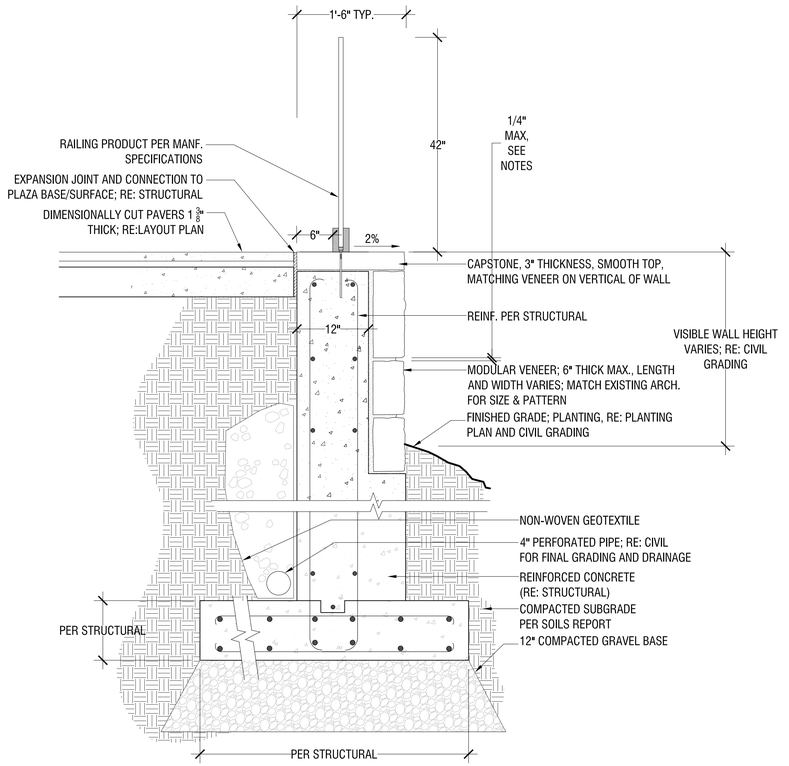
4.2	MODULAR VENEER WALL W/ TRELLIS	3/L6-01	10.0	MISCELLANEOUS ELEMENTS	
5.0	SITE FURNITURE		10.1	S.S. HANDRAIL	2/L6-03
5.1	CUSTOM WOOD BENCH	2/L6-02	10.2	S.S. BIKE RACK	4/L6-01
			10.3	BOLLARD	3/L6-02

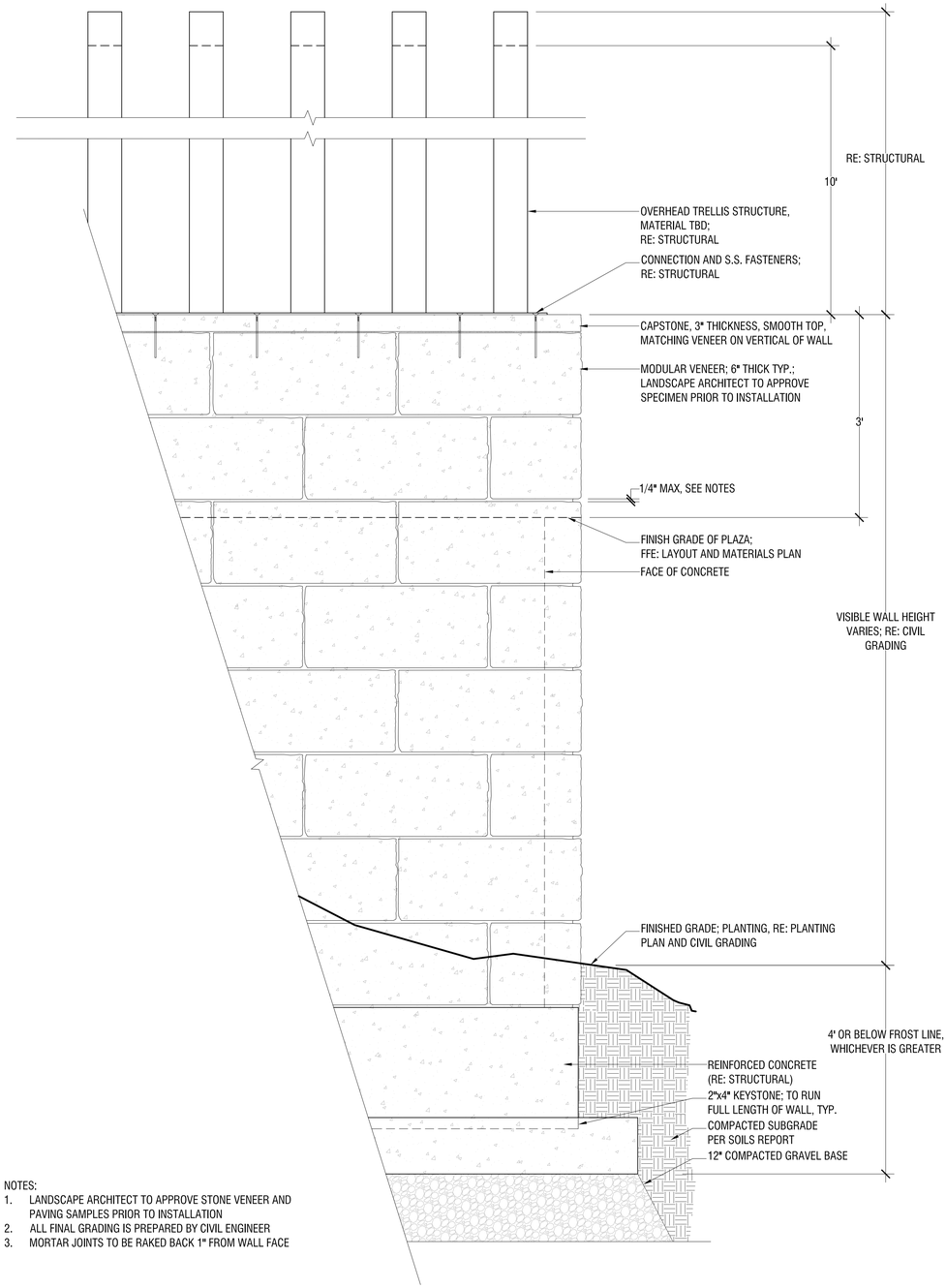


NOTES:
1. LANDSCAPE ARCHITECT TO APPROVE STONE VENEER AND PAVING SAMPLES PRIOR TO INSTALLATION
2. ALL FINAL GRADING IS PREPARED BY CIVIL ENGINEER
3. MORTAR JOINTS TO BE RAKED BACK 1" FROM WALL FACE

1 STONE VENEER WALL W/ RAIL

1":1'-0"

4.1



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2. ALL FINAL GRADING IS PREPARED BY CIVIL ENGINEER
3. MORTAR JOINTS TO BE RAKED BACK 1" FROM WALL FACE

2 STONE VENEER WALL W/ TRELLIS

1":1'-0"

4.2

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1.3	COBBLE SETTS	3/L6-00	X.X	NOT USED AT THIS TIME	X/XX-XX
1.5	STEEL PLANTER	5/L6-00	8.0	DRAINAGE	
2.0	JOINTING		X.X	NOT USED AT THIS TIME	X/XX-XX
X.X	NOT USED AT THIS TIME	X/XX-XX	9.0	PLANTING AND LANDSCAPE	
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3.1	STONE STEPS	6/L6-00	9.2	CONIFEROUS TREE PLANTING	2/L3-03
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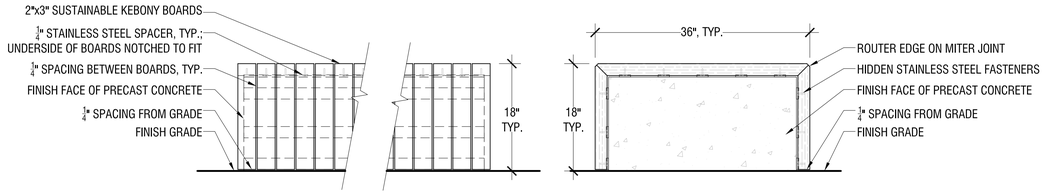
5.0	SITE FURNITURE		10.1	S.S. HANDRAIL	2/L6-03
5.1	CUSTOM WOOD BENCH	2/L6-02	10.2	S.S. BIKE RACK	4/L6-01
			10.3	BOLLARD	3/L6-02



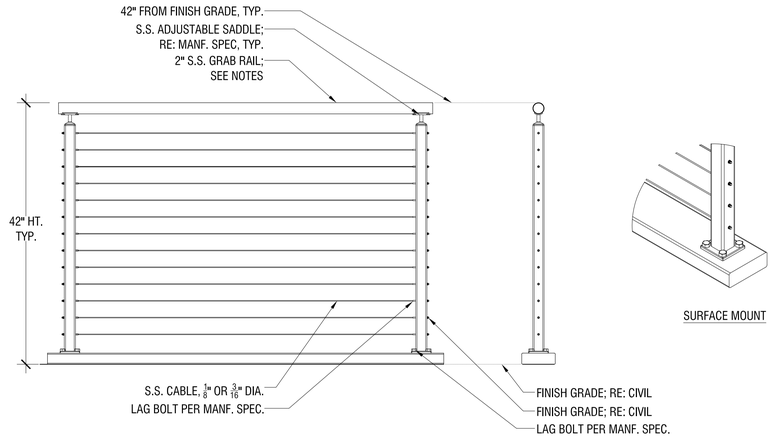
CROSS-SECTION ELEVATION

NOTE:
1. RE: LAYOUT AND MATERIALS PLAN FOR LENGTH AND LOCATION

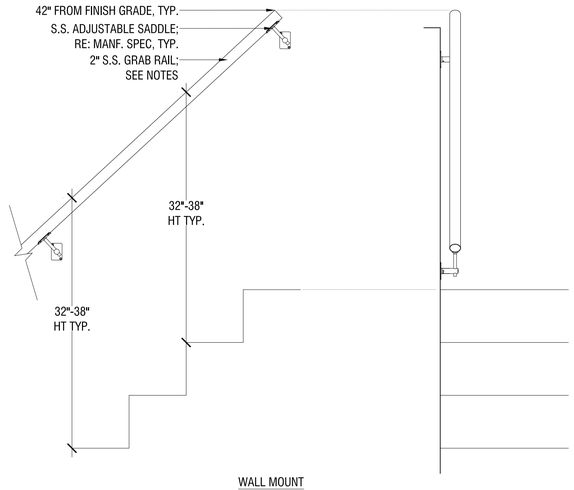
2 CUSTOM WOOD BENCH

1":1'-0"

5.1



SURFACE MOUNT



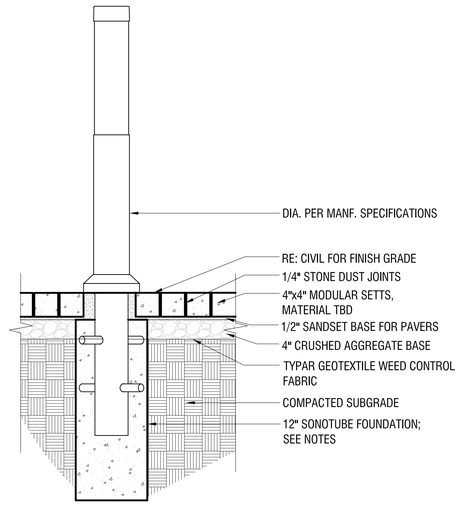
WALL MOUNT

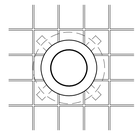
NOTES:
1. GRAB RAIL IS TO BE @ 42" HT. FROM NOSE OF EACH TREAD; PARALLEL TO ANGLE OF STAIRS
2. GUARD RAIL AND GRAB/HAND RAIL USE MANF. 'SC&R: STAINLESS CABLE AND RAILING' COMPANY

1 S.S. HANDRAIL

1":1'-0"

10.1





TOP VIEW

NOTES:
1. SONOTUBE FOOTING TO BE 4 FT. DEPTH OR BELOW FROST LINE, WHICHEVER IS GREATER

3 BOLLARD

1":1'-0"

10.3

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PREPARED FOR

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ISSUE DATE:

LEVEL II SUBMISSION
TO CITY
NOVEMBER 15, 2018

SHEET TITLE:

DETAILS

SHEET INFORMATION

L 6-02

NOT FOR CONSTRUCTION

SITE KEYNOTES:

			DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS		
	1.1	ASPHALT SIDEWALK	1/L6-00
	1.2	MODULAR PAVING	2/L6-00
	1.3	COBBLE SETTS	3/L6-00
	1.5	STEEL PLANTER	5/L6-00
2.0	JOINTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		
	3.1	STONE STEPS	6/L6-00
	3.2	STONE STEPS	7/L6-00
4.0	SITE WALLS/ EMBANKMENTS		
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7.0	SITE LIGHTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
8.0	DRAINAGE		
	X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE		
	9.1	DECIDUOUS TREE PLANTING	1/L6-03
	9.2	CONIFEROUS TREE PLANTING	2/L3-03
	9.3	SHRUB PLANTING	3/L3-03
	9.4	LIVE ROOF	4/L3-03
	9.5	PERENNIAL PLANTING	5/L3-03
10.0	MISCELLANEOUS ELEMENTS		
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	10.2	S.S. BIKE RACK	4/L6-01
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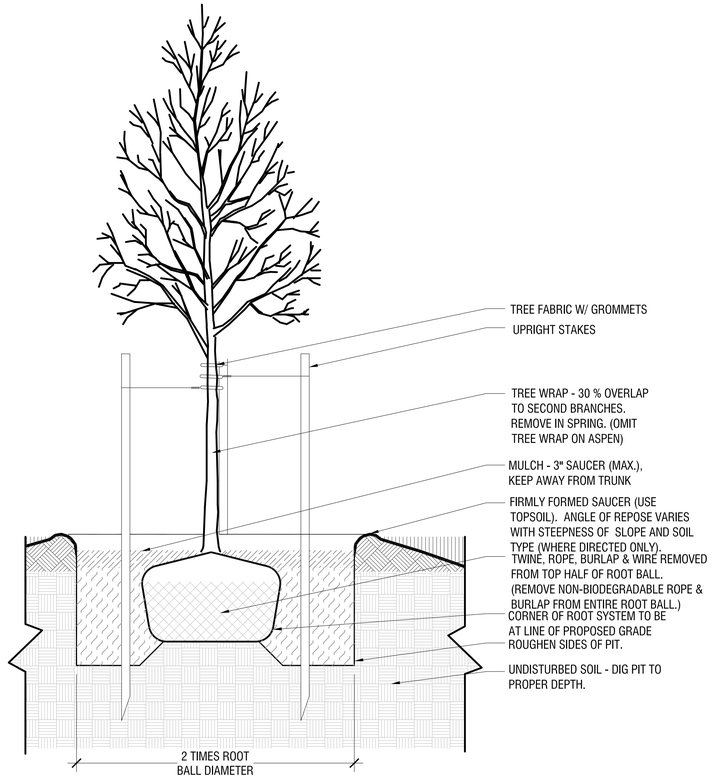
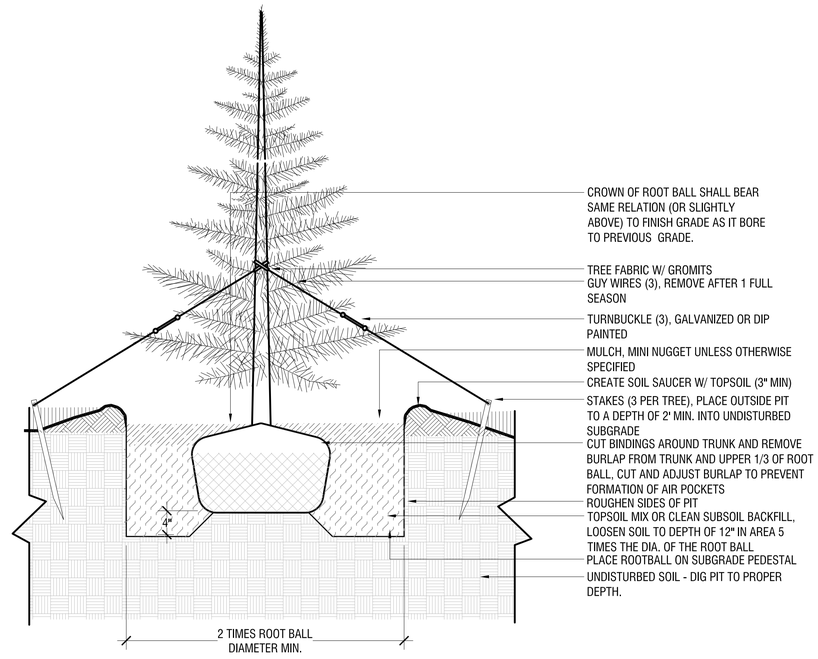


1 DECIDUOUS TREE PLANTING

9.1

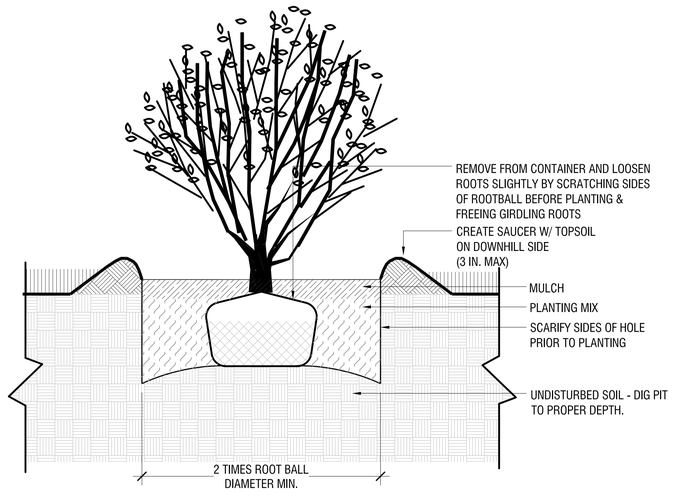
1":1'-0"



2 CONIFEROUS TREE PLANTING

9.2

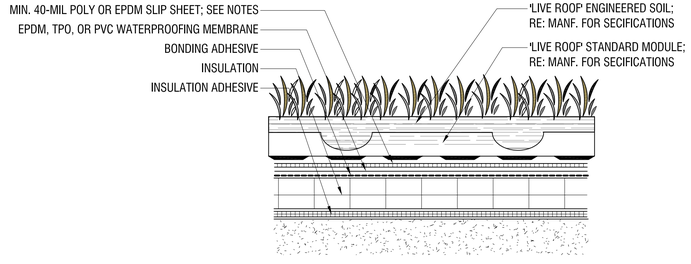
1":1'-0"



3 SHRUB PLANTING

9.3

1":1'-0"

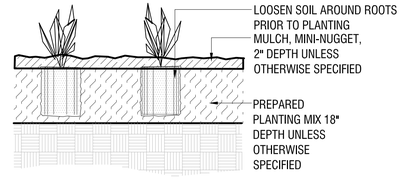


NOTES:
1. POLYPROPYLENE SHEET AND/OR EPDM SLIP SHEET EDGES SEAMED AND OVERLAPPED

4 LIVE ROOF

9.4

1":1'-0"



5 PERENNIAL PLANTING

9.5

1":1'-0"

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100 FORE STREET
PORTLAND, ME

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REVISIONS | DATE

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SHEET TITLE:

PLANTING DETAILS

SHEET INFORMATION

L 6-03

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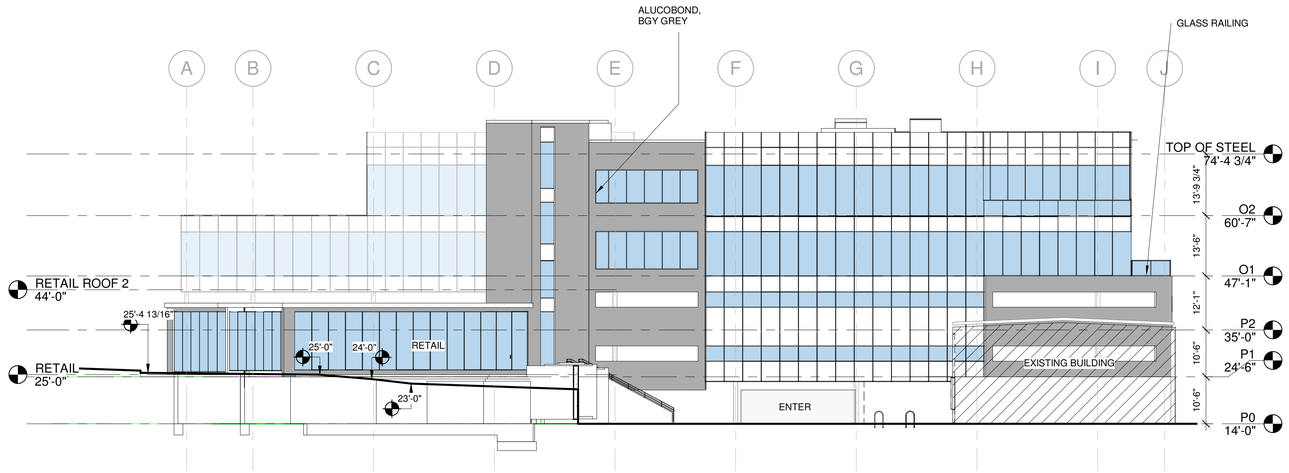
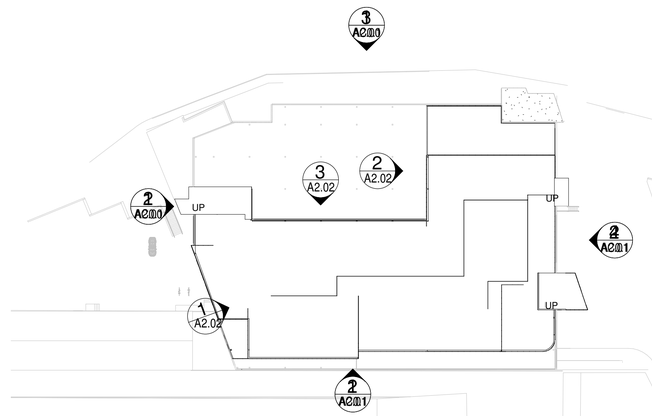
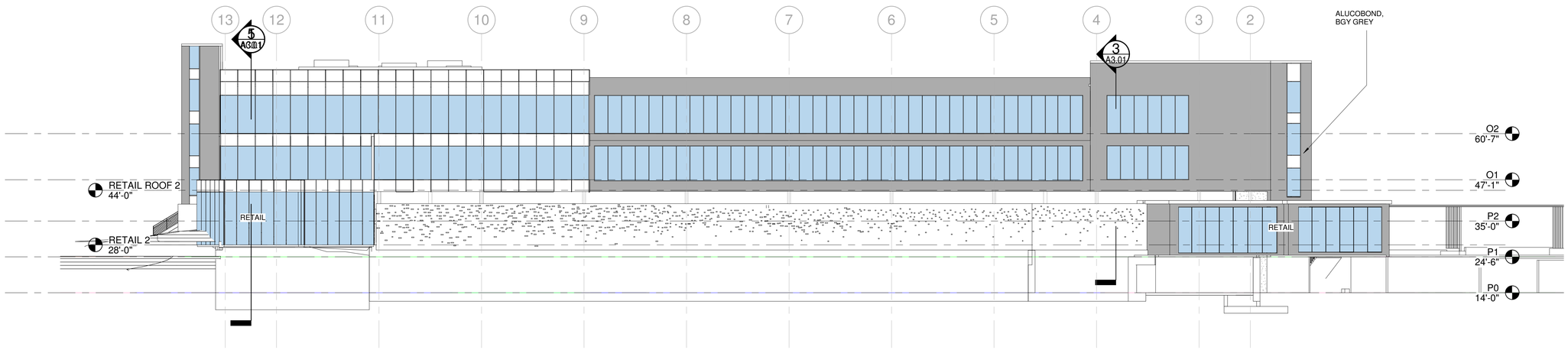


2 | WEST ELEVATION
1/16" = 1'-0"



3 | KEY PLAN
1" = 60'-0"



1 | NORTH ELEVATION
1/16" = 1'-0"

11/14/2018
3:12:00 PM

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

Consultant:

Prepared For:

Project:
100 FORE STREET
Address
City, State

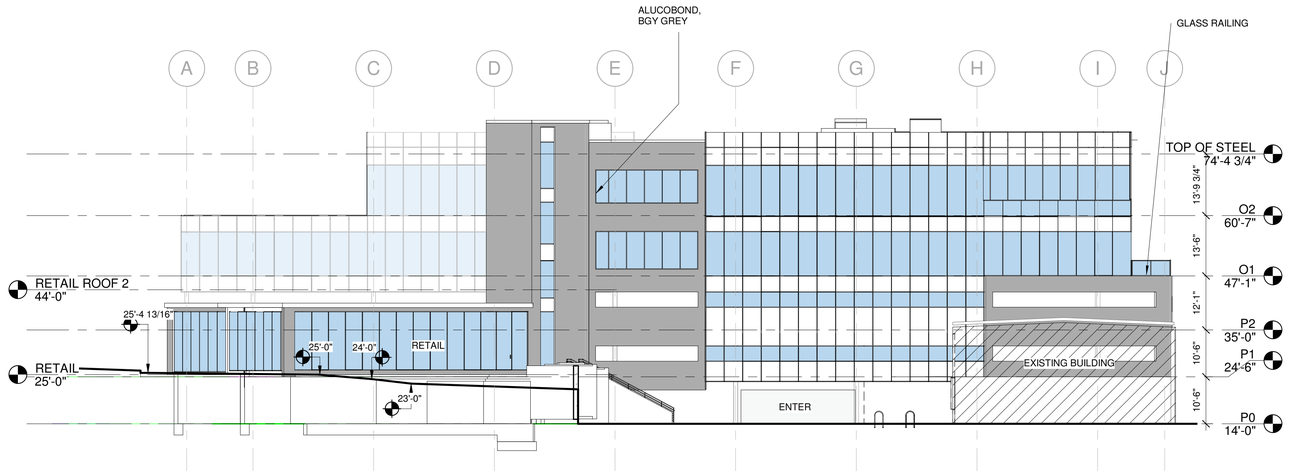
Revisions:
PROGRESS

Scale:
As indicated

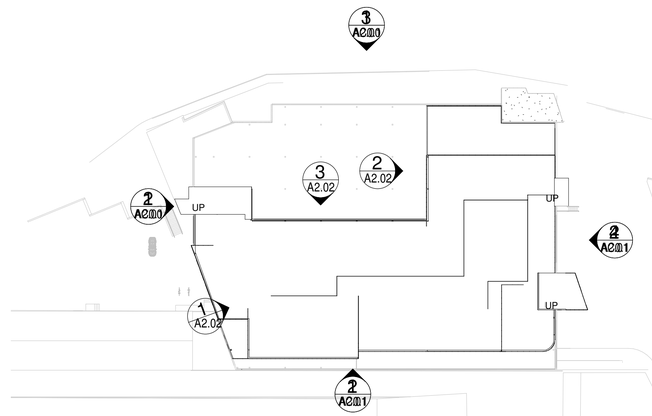
Date:
10-10-2018

BUILDING ELEVATIONS

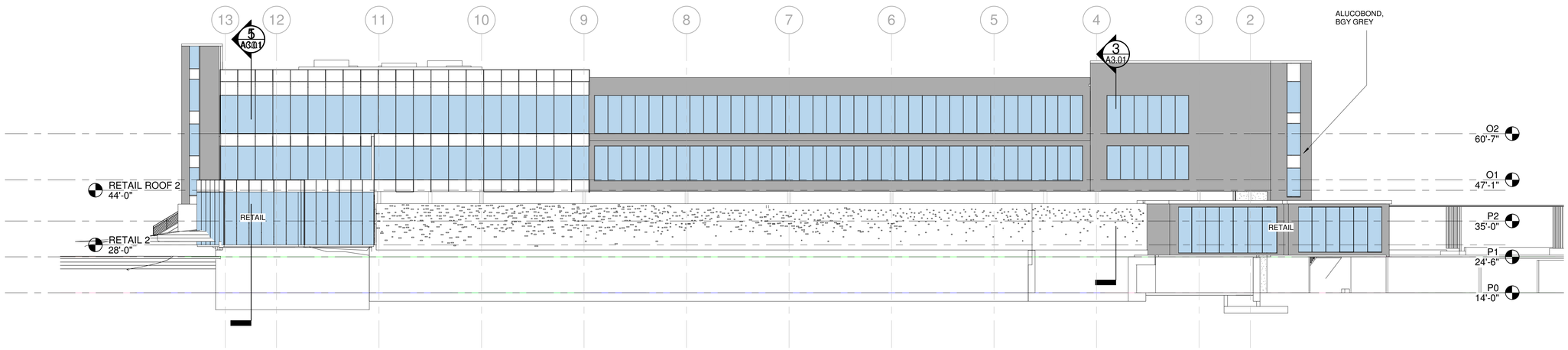
A2.00



2 | WEST ELEVATION
1/16" = 1'-0"



3 | KEY PLAN
1" = 60'-0"



1 | NORTH ELEVATION
1/16" = 1'-0"

11/14/2018
3:08:54 PM

Architect:
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48 Union Wharf Portland, Maine 04101
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Consultant:

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Project:
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Address
City, State

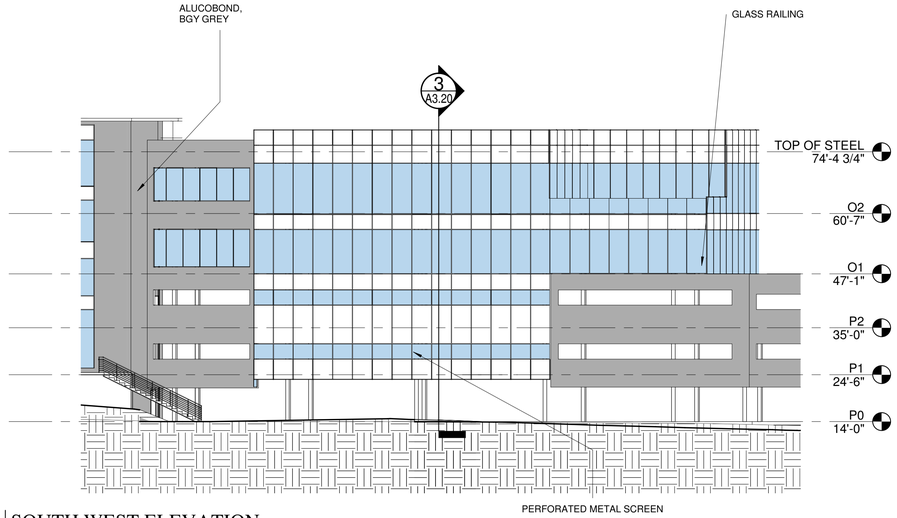
Revisions:
PROGRESS

Scale:
As indicated

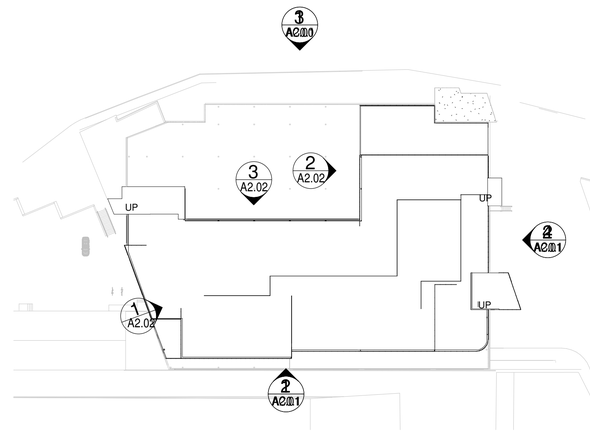
Date:
10-10-2018

BUILDING ELEVATIONS

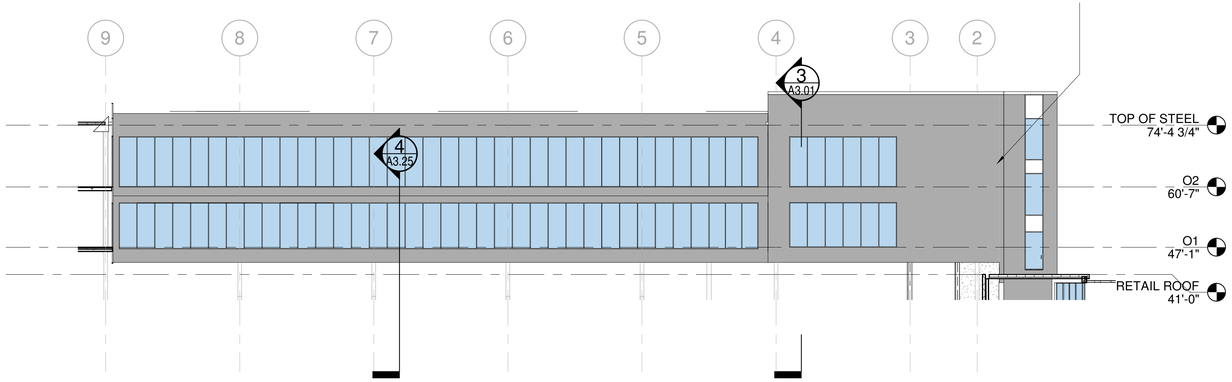
A2.00



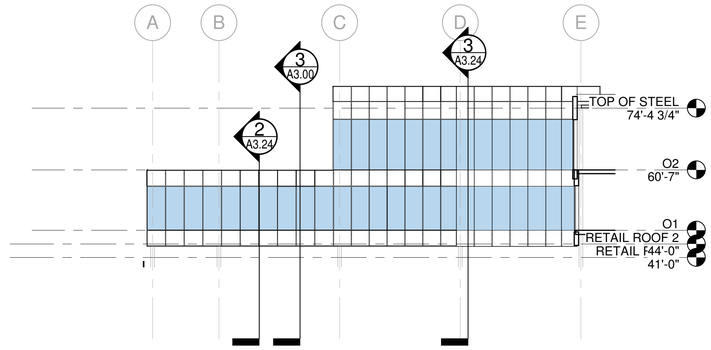
1 | SOUTH WEST ELEVATION
1/16" = 1'-0"



4 | KEY PLAN
1" = 60'-0"



3 | SOUTH OFFICE ELEVATION
1/16" = 1'-0"



2 | WEST OFFICE ELEVATION
1/16" = 1'-0"

11/14/2018
3:12:30 PM

Architect:
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Consultant:

Prepared For:

Project:
100 FORE STREET
Address
City, State

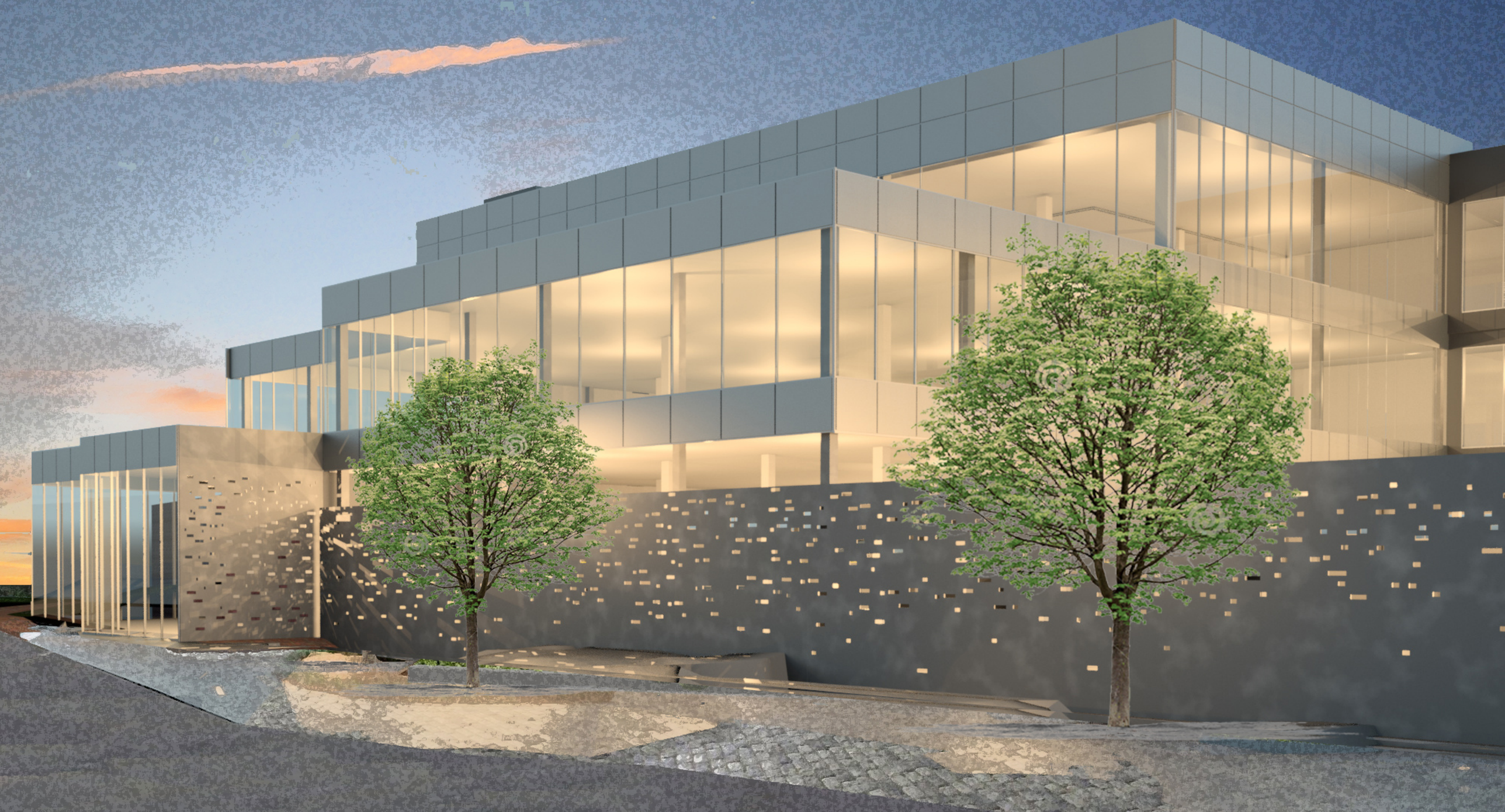
Revisions:
PROGRESS

Scale:
As indicated

Date:
10-10-2018

BUILDING ELEVATIONS

A2.02

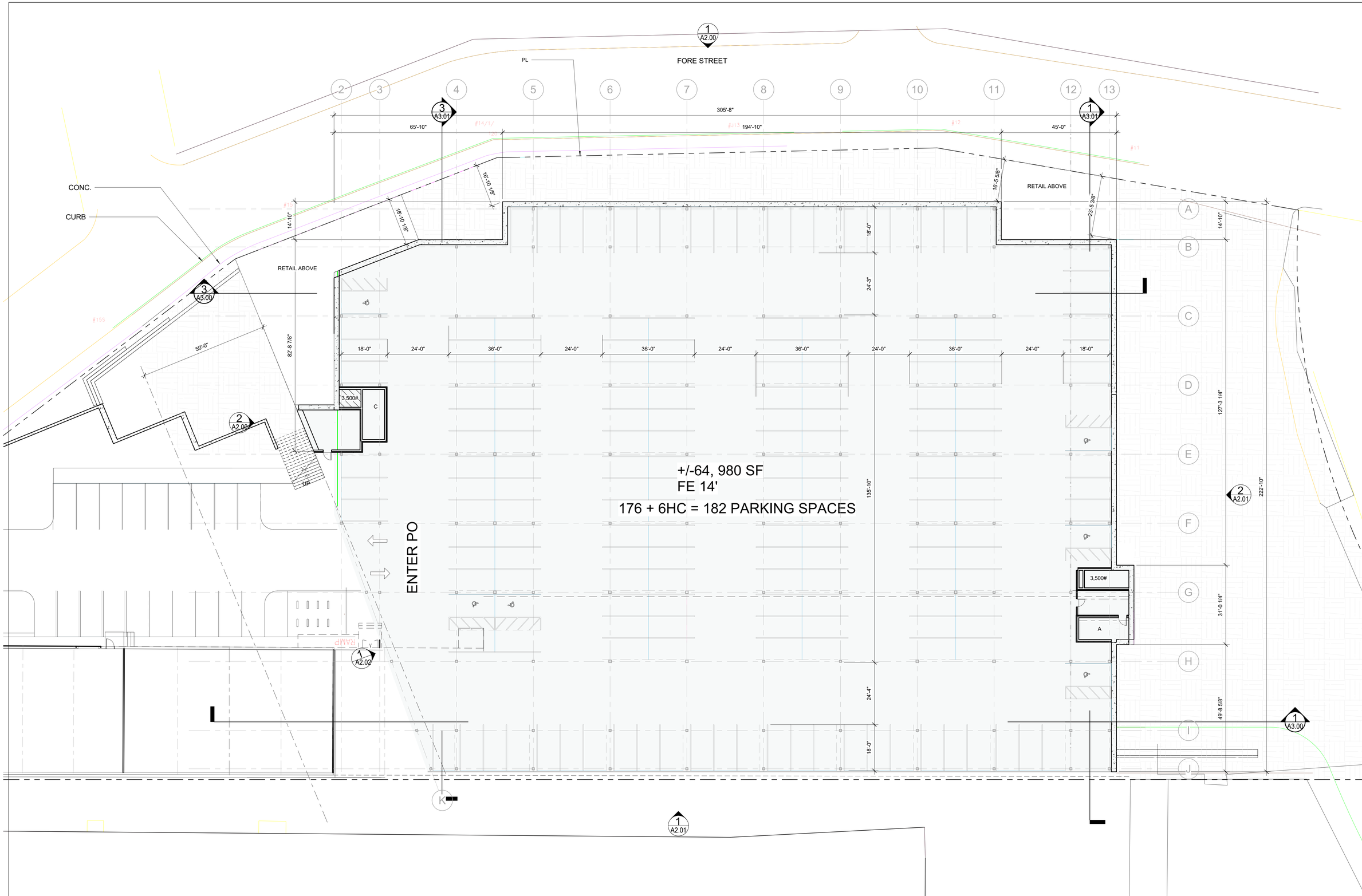



SIGNAGE
SIGNAGE


SIGNAGE


SIGNAGE


SIGNAGE



1 | PO - GROUND LEVEL
1/16" = 1'-0"

10/10/2018
1:52:06 PM

Prepared For:

Consultant:

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

Project:
100 FORE STREET

Address
City, State

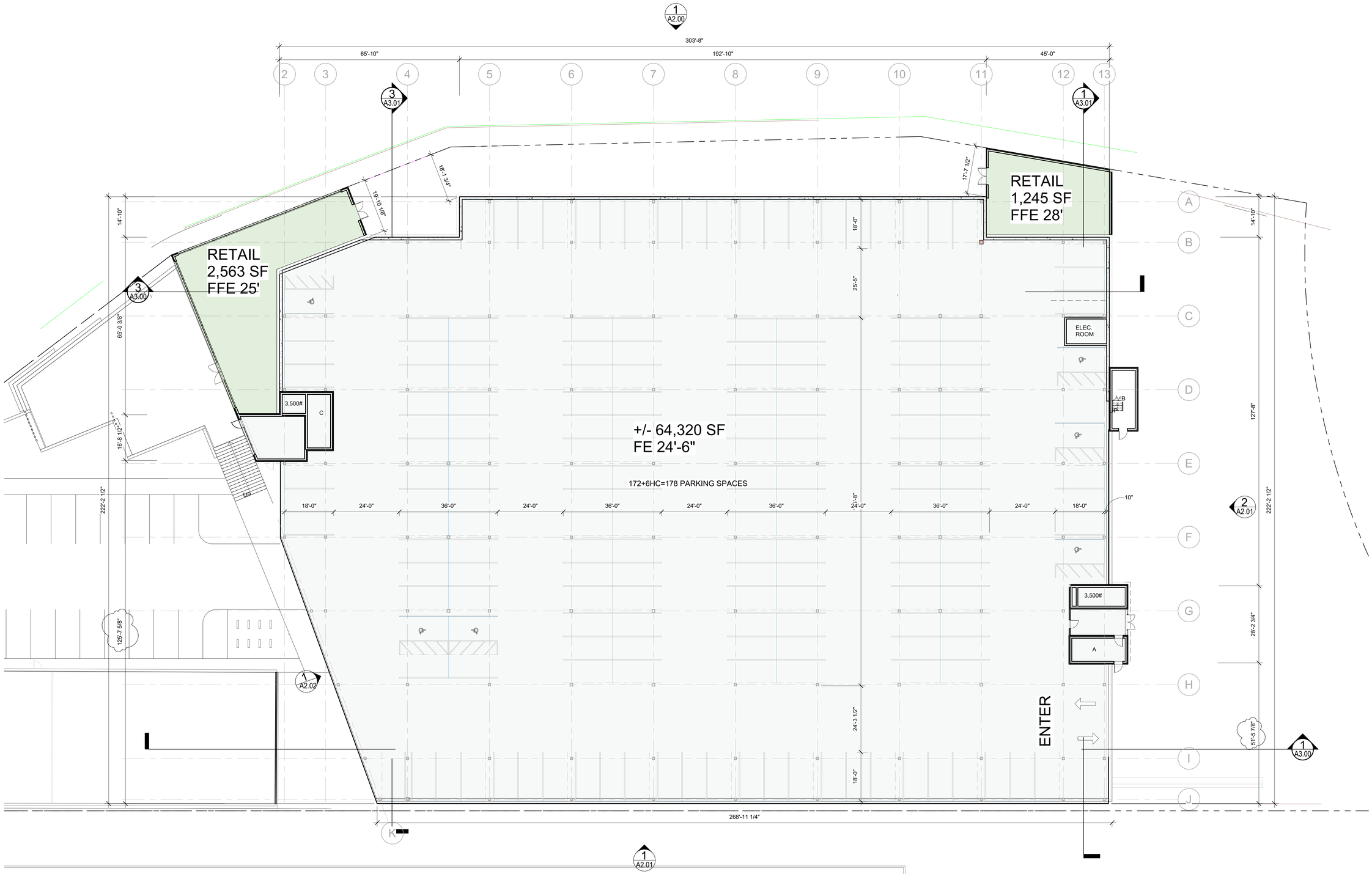
Revisions:
LEVEL III SITE SUBMISSION

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

Date:
10-10-2018

P0- GROUND LEVEL PARKING

A1.00



10/10/2018
1:52:57 PM

Prepared For:

Consultant:

Architect:
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Project:
100 FORE STREET
Address
City, State

Revisions:

1	Date 1	Revision 1

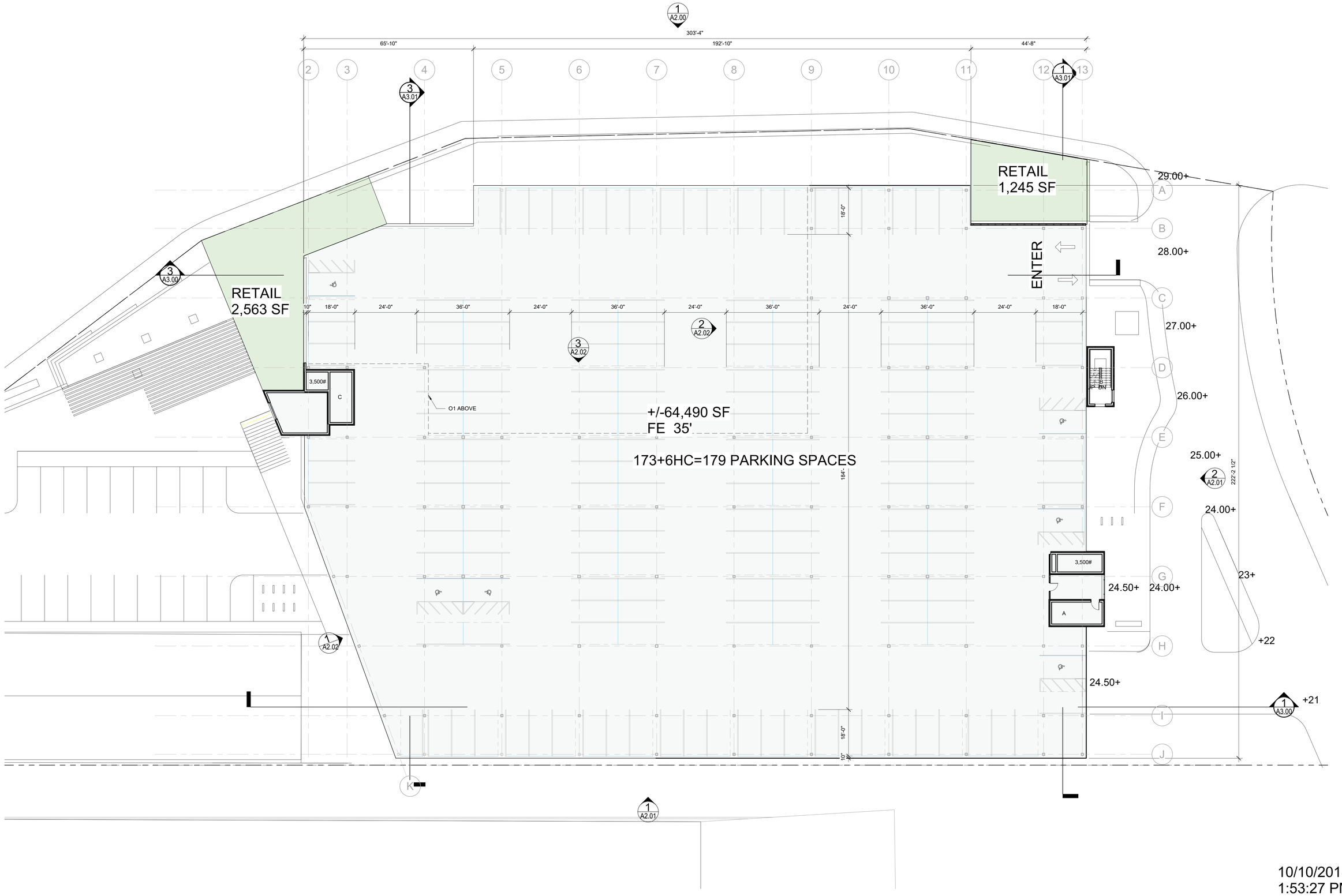
LEVEL III SITE SUBMISSION

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

Date: 10-10-2018

P1 -ELEVATED PARKING (1)

A1.01



10/10/2018
1:53:27 PM

Prepared For:

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Project:
100 FORE STREET

Address:
City, State

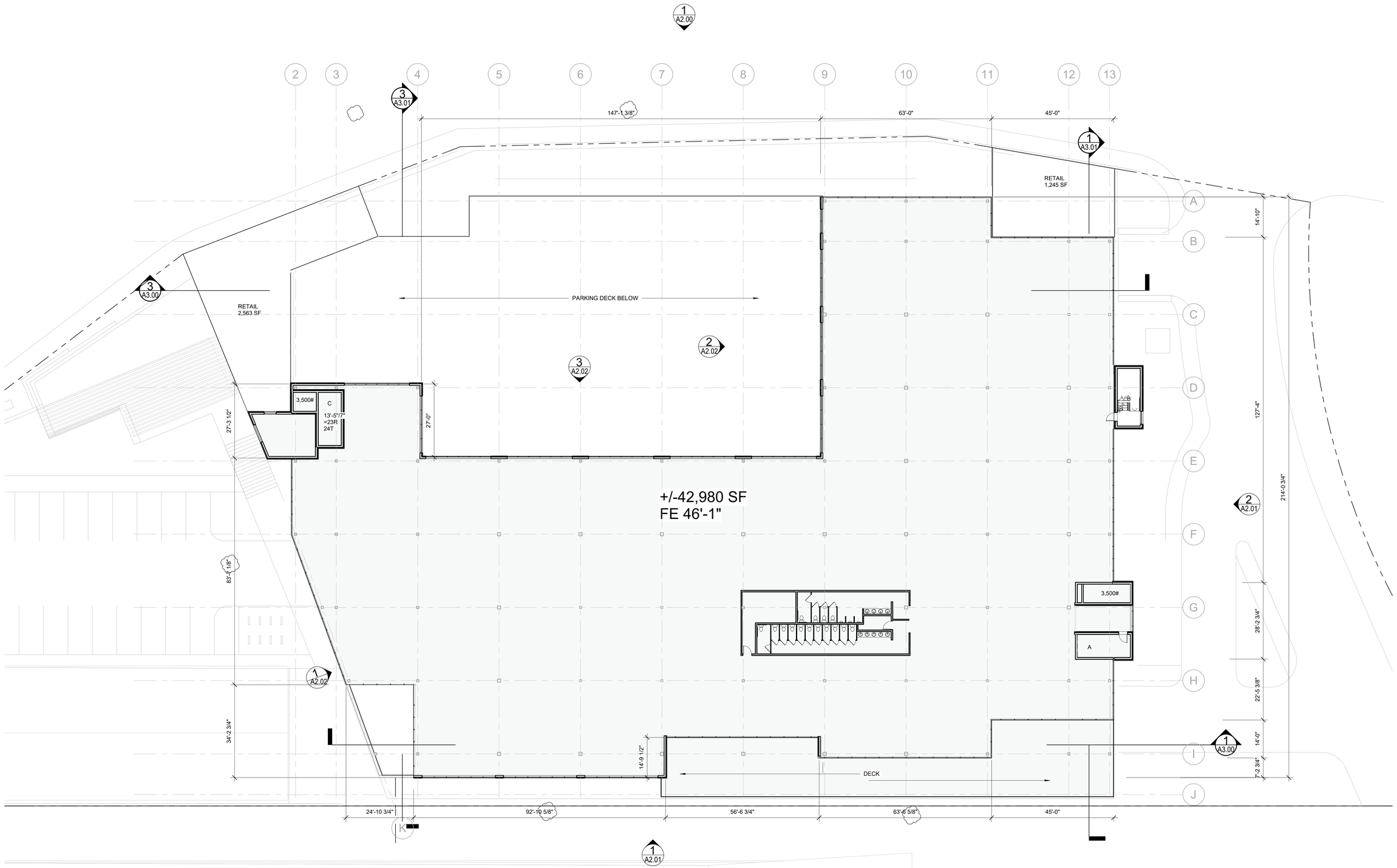
Revisions:
LEVEL III SITE SUBMISSION

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

Date: 10-10-2018

P2 - ELEVATED PARKING (2)

A1.02



1 | O1
1/16" = 1'-0"

10/10/2018
1:54:27 PM

Prepared For:

Address
City, State

Consultant:

Architect:
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(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
100 FORE STREET

Address
City, State

Revisions:

	Date	Revision
1	Date 1	Revision 1

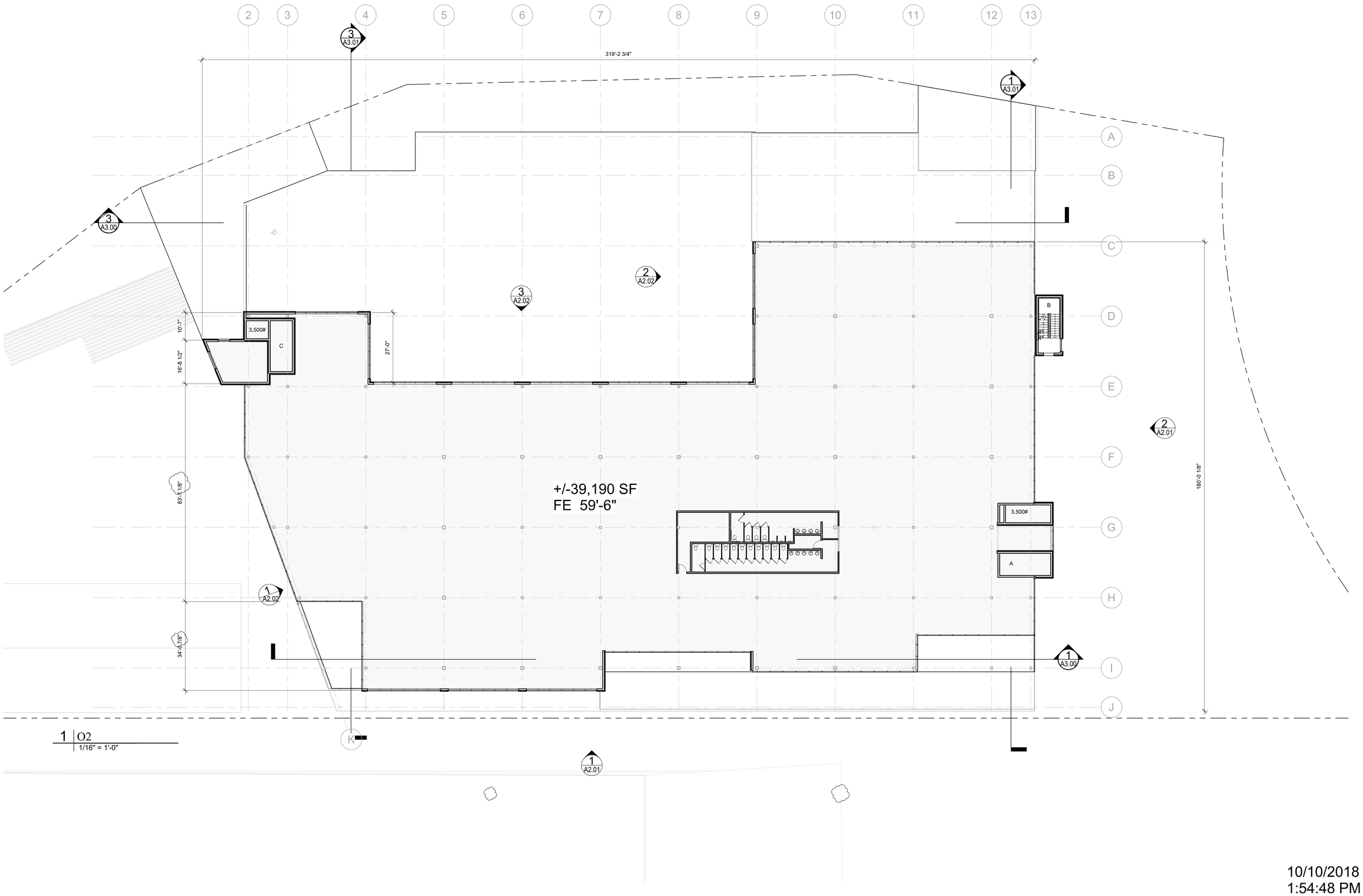
LEVEL III SITE SUBMISSION

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

Date: 10-10-2018

O1 - OFFICE (1)

A1.03



1 | O2
1/16" = 1'-0"

10/10/2018
1:54:48 PM

Prepared For:

Address
City, State

Consultant:

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

Project:
100 FORE STREET

Address:
City, State

Revisions:

	Date	Revision
1	Date 1	Revision 1

LEVEL III SITE SUBMISSION

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

Date: 10-10-2018

O2 - OFFICE (2)

A1.04

Calculation Summary					
Room Name	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
ground level_Floor	3.43	68.5	0.0	N.A.	N.A.
ENTRY	47.15	68.5	24.5	1.9	2.8
TYP DRIVE LANE	2.89	5.2	1.8	1.6	2.9

Room Summary	
Room Name	**Wall Ht.**
ground level	10

Luminaire Schedule (note fixture catalogue numbers are not complete)					
Tag	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
G3	7	12386	0.900	109.855	EDR-48L-110-4K7-5QM-U
W1	10	2140	0.900	19.9	TRP1-12L20-4K7-3
G1	38	3398	0.900	27.7	EDR-24L-27-4K7-5R-U
G2	6	3341	0.900	27.7	EDR-24L-27-4K7-5QM-U

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.
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6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
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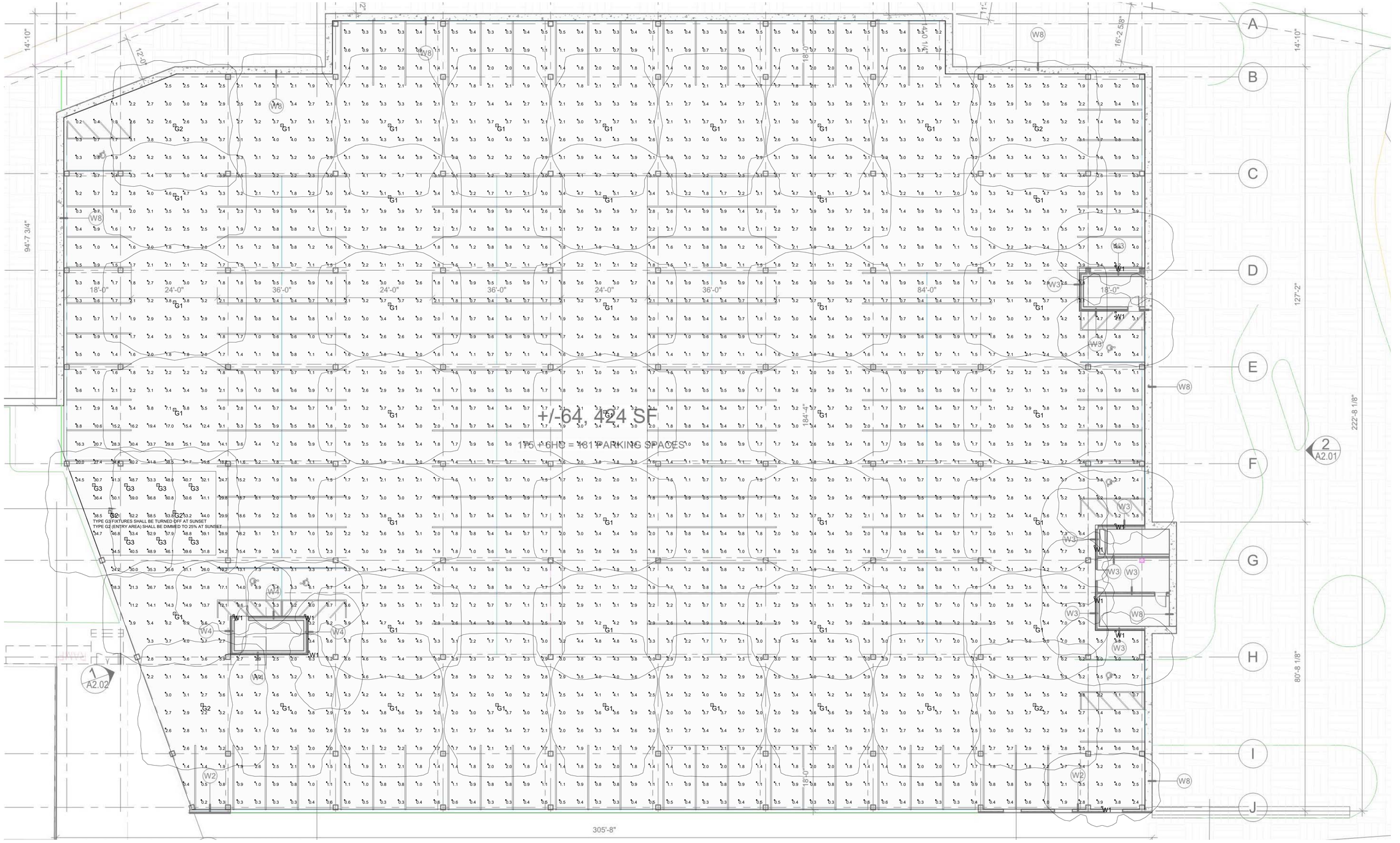

PLAN VIEW

TITLE
100 FORE STREET
PORTLAND, ME
PO-GROUND LEVEL - LIGHTING LAYOUT

GENERATED FOR: STANTEC

SCALE AS SHOWN

Page 1 of 1

Date:10/2/2018

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

REF. NO. PARK P0 - OPTION 1.AGI

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Calculation Summary					
Room Name	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
P1 level_Floor	3.60	76.3	0.0	N.A.	N.A.
ENTRY	49.91	76.3	29.7	1.7	2.6
TYP DRIVE LANE	2.78	5.4	1.7	1.6	3.2

Room Summary	
Room Name	**Wall Ht.**
P1 level	10

Luminaire Schedule (note fixture catalogue numbers are not complete)					
Tag	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
G3	8	12386	0.900	109.855	EDR-48L-110-4K7-5QM-U
W1	11	2140	0.900	19.9	TRP1-12L20-4K7-3
G1	39	3398	0.900	27.7	EDR-24L-27-4K7-5R-U
G2	5	3341	0.900	27.7	EDR-24L-27-4K7-5QM-U

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
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PLAN VIEW

GENERATED FOR: STANTEC
SCALE AS SHOWN

TITLE
100 FORE STREET
PORTLAND, ME
P1 LEVEL - LIGHTING LAYOUT

REF. NO. PARK P1 - OPTION 1.AGI
GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com
Date:10/3/2018
Page 1 of 1

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Calculation Summary					
Room Name	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
parking deck	3.43	75.1	0.1	34.3	751.0
OPEN DECK	1.45	3.1	0.4	3.6	7.8

Luminaire Schedule (note fixture catalogue numbers are not complete)					
Tag	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
G1	28	3398	0.900	27.7	EDR-24L-27-4K7-5R-U
G2	4	3341	0.900	27.7	EDR-24L-27-4K7-5QM-U
G3	8	12386	0.900	109.855	EDR-48L-110-4K7-5QM-U
S4B	5	3399	0.900	53.2	VP-S-24L-55-3K7-4W-BC
S5	2	5908	0.900	57.8907	VP-S-24L-55-3K7-5W
W1	10	2140	0.900	19.9	TRP1-12L20-4K7-3

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
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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.
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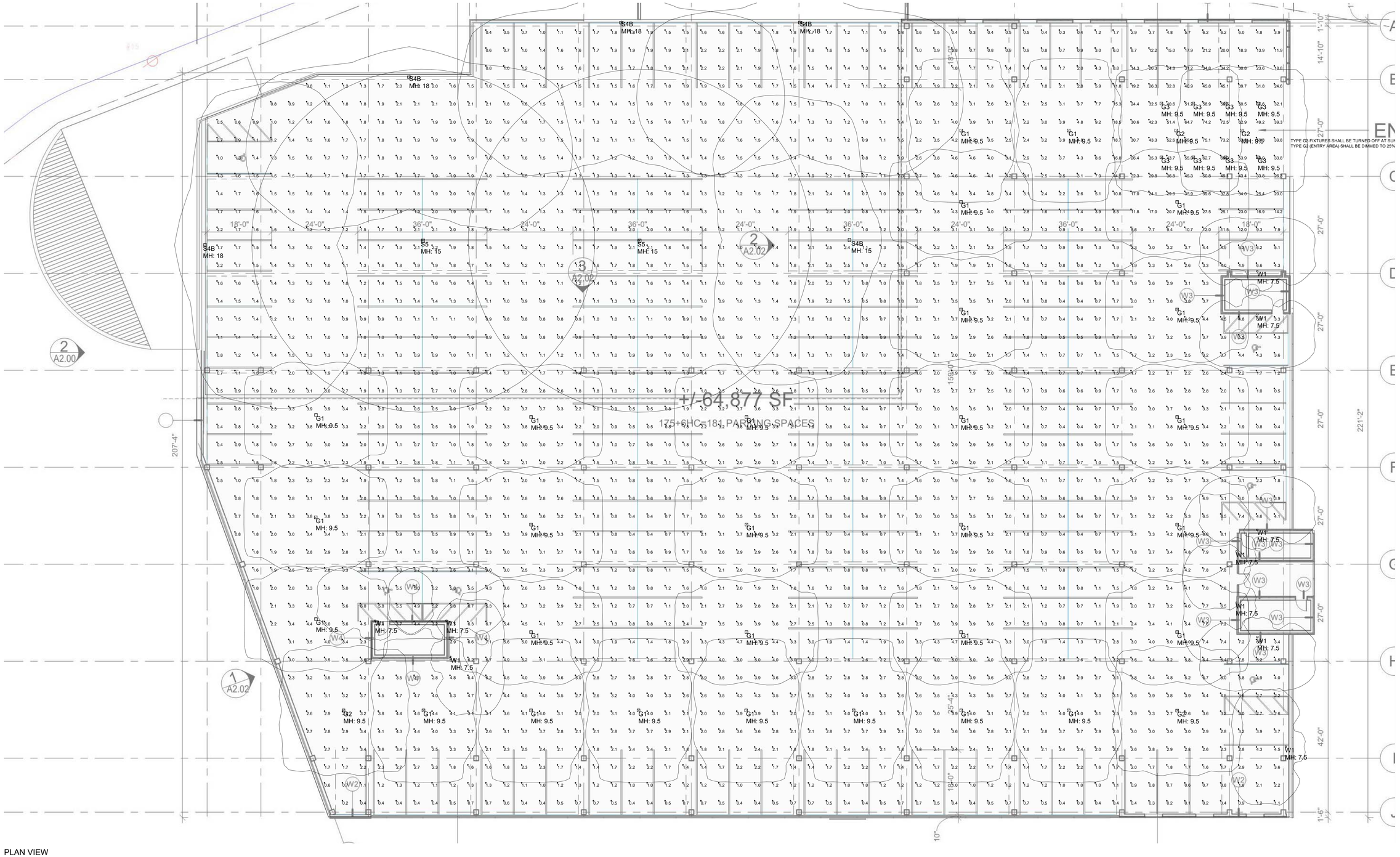

PLAN VIEW

TITLE
100 FORE STREET
PORTLAND, ME
P2 LEVEL - LIGHTING LAYOUT

GENERATED FOR:
STANTEC

SCALE AS SHOWN

Page 1 of 1

REF. NO. PARK P2 - OPTION 1.AGI

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Date:10/9/2018

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Calculation Summary					
Room Name	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
SITE	0.46	4.6	0.0	N.A.	N.A.
west parking	1.36	1.9	0.6	2.3	3.2

Luminaire Schedule (note fixture catalogue numbers are not complete)					
Tag	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
S3B	2	3758	0.900	54.88	VP-S-24L-55-3K7-3-BC
S4B	8	3399	0.900	53.2	VP-S-24L-55-3K7-4W-BC
W1	10	2140	0.900	19.9	TRP1-12L20-4K7-3
X5C	5	6220	0.900	109	ESL 110 4K AS X 7 DS

NOTES:
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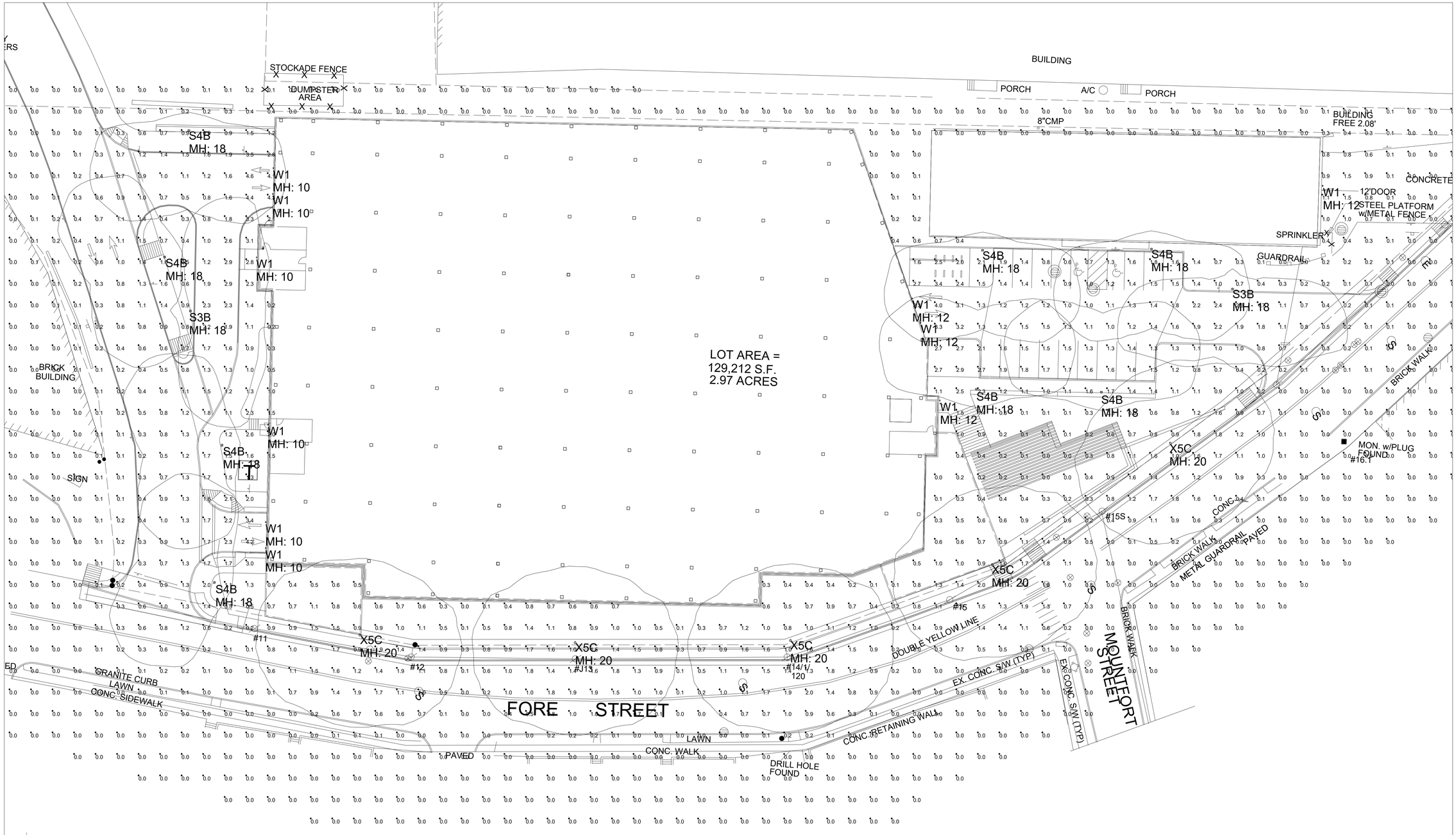

PLAN VIEW

TITLE
100 FORE STREET
PORTLAND, ME
SITE LIGHTING LAYOUT

GENERATED FOR: STANTEC
SCALE AS SHOWN
Page 1 of 1
Date:10/10/2018

REF. NO. site 10-6-18.AGI
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CITY OF PORTLAND, MAINE

PLANNING BOARD



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

PORTLAND PLANNING BOARD MEETING
Minutes – November 13, 2018

Attendance:

Workshop: All present
Public Hearing: All present

WORKSHOP – 4:30 p.m.

i. Level III Site Plan; 22 Bramhall Street; Maine Medical Center, Applicant.

Nell Donaldson provided a staff presentation on the proposed MMC expansion, including discussion of the transportation, stormwater, and utility improvements proposed by MMC. There was some discussion of METRO's plan to consolidate existing bus stops at Gilman and Weymouth Streets to the frontage of the new Congress Street building. .

Tom Errico, P.E, consulting traffic engineer, is reviewing the Traffic Movement Permit (TMP) for this project. He presented initial comments on the TMP application, including requests for additional information on potential improvements to address safety and operational issues within the study area. He noted that the section of Congress Street between Forest and Weymouth meets the State's criteria as a high crash location. The applicant is proposing a continuous center turn lane here; however, the staff is recommending a two-lane section, with associated pedestrian and bicycle improvements, to improve the safety of this segment. Steve Landry, MDOT, agrees that the safety issues must be addressed in this segment of Congress Street, but does not necessarily need to be a three-way section.

MMC representatives presented their proposal, focusing on transportation improvements and stormwater management and treatment. They presented a design for Congress Street including a center turn lane and questioned the merits of consolidating existing METRO stops to the frontage of the proposed hospital building.

The Board discussion included the following:

- A. Smith asked a question about a Fairpoint box which exists on the northwest corner of the site. MMC noted that this box cannot be removed, as it currently serves approximately 1,800 customers. B. Mazer asked staff whether METRO was moving away from bus pullouts. Staff indicated that this is the case, but that METRO is installing shelters where space allows.

- B. Mazer also asked how access to the entry loop will be controlled. MMC responded that there is queuing space for 11 vehicles within the entry loop, and that a valet will be positioned there to help monitor flow.
- B. Mazer asked about the TMP application and staff's request for additional information on trip-related changes over the past ten years. Mr. Errico responded that staff is waiting for this information, and that it will inform the size of the study area.
- B. Mazer raised a concern regarding left turns out of the entrance loop. Mr. Errico noted that the traffic model shows very good operations moving on to Congress Street. A sight line evaluation is pending.
- D. Eaton asked about other options for addressing safety concerns on Congress Street along the project frontage. The staff recommendations for complete street improvements are intended to promote slower speeds, promote multi-modal options, and Tom Errico anticipates the traffic volumes will be reduced in this section, particularly if Park becomes 2-way, depending on the outcome of the Libbytown Study.
- S. Dundon asked about the ADA shelter and METRO plans. Bruce Hyman reported that METRO is working on optimizing bus stop spacing system-wide. There are transit enhancements planned for Congress/St. John, and there are existing stops at Union Station Plaza and Weymouth Street; METRO has identified these two stops for potential consolidation. The Gilman Street location is not preferred.
- S. Dundon asked if there will be overhead utilities left post-construction. MMC responded that there would be no overhead utilities beyond Gilman.
- A. Smith requested that MMC develop alternatives to the three-way section they identified as their preferred design for Congress Street. He noted the design challenges in engineering a METRO shelter on a street incline and suggested that MMC continue to investigate the options for a transit facility in this location.
- D. Silk stated that a continuous center turn lane is not consistent with the vision for this area as a gateway to the city and could have a negative impact. He suggested trying to integrate bicycle lanes in both directions. He also noted that many cities are able to engineer bus shelters in areas with steep topography, and suggested that it would be a loss not to locate a shelter at a preferred location identified by METRO. He also noted that he does not support a waiver from the city's sidewalk material policy on the hospital building frontage.
- L. Whited strongly encouraged the MMC design team to work on a Congress Street design without a continuous center turn lane, and suggested that the bus shelter should be integrated on the MMC frontage as well. She advocated for making the hospital as accessible and welcoming as possible.
- D. Eaton suggested that MMC should maximize opportunities for alternatives to automobile trips and be as accommodating as possible to pedestrians and transit.
- M. Stanley noted that a continuous center turn lane does not make sense and is not friendly to non-vehicular modes. She suggested that the transit shelter is a design issue, but that there might be a way to integrate the shelter with the plaza. She stated that she is fine with the sidewalk material waiver request, but asked for details on the plaza hardscape.
- B. Mazer stated that he would encourage a wider sidewalk than a center turn lane and does not want to see a loss of on-street parking. He recommended that a bus shelter be placed on the MMC frontage. He noted that he supports the sidewalk material waiver request.

- S. Dundon stated that he appreciates MMC's undergrounding of utilities and their stormwater management approach. He suggested that he does not support a continuous center turn lane, and that MMC should instead focus on pedestrian experience.

Last, the Planning Board noted a public comment that had been received just prior to the meeting, and asked Mr. Errico to respond. Mr. Errico noted that according to traffic engineering conventions, garages are not deemed to generate trips in and of themselves; instead, it is the land uses associated with those garages (e.g. in this case, the hospital buildings) that do. He also spoke to concerns raised about the intersection of Valley Street and A Street, and noted that traffic volumes at this intersection are actually projected to decrease after MMC's short-term projects are complete. Staff noted that they have suggested a meeting with the St. John/Valley neighborhood representatives to discuss the TMP application in more detail.

ii. Zoning Amendments, Marijuana Zoning, City of Portland, Applicant.

Christine Grimando presented the proposed zoning text amendments to the Board. She outlined the regulations and discussed the more conservative approach of allowing the marijuana related businesses in the zones where medical marijuana facilities are currently permitted. The Board discussion included the following:

- M. Stanley asked if there is a cap on the number of businesses?
- B. Mazer asked if some of the regulations are burdensome, such as not being visible from the exterior of a building. Why are the hours of operation limited? Shouldn't the hours of operation reflect the general standards of each zone? Why create an added level of enforcement? Anne Torregrossa responded that the Police Department supports the shorter hours to address safety concerns.
- How will the small care givers function in the residential zones?
- Is the size cap large enough for retail?
- Target odor concerns that are associated with larger facilities and large grow facilities. Being pro-active and mitigating at least some of the uses with the 200 foot buffer for all 4 uses.

Public Comment:

1. Mark Barnett – Auburn resident, Higher Grounds Coffee Shop owner at 45 Wharf Street
    - The proposal prohibits delivery, which is being done currently.
    - How could Cannabis for adult use compete with the delivery from a licensed care giver?
    - Window issue, prohibiting all visibility of marijuana-related uses is unworkable.
    - The 200 feet of separation requirement from a residential zone will be difficult. Example is the Forest Avenue corridor.
    - Prohibition of other sale of materials is an issue. Take this into consideration.

Christine responded that deliveries are not allowed in the draft and that delivery is allowed for medical marijuana in the State regulations. The intent of the proposed amendments was to start small. Anne Torregrossa, Associate Corporation Counsel, stated that the conference she attended and the committee drafting the amendments felt it would cleaner and easier to monitor without the accessory uses. Starting with the dispensary model.

M. Stanley asked about related paraphernalia, other than food products. Should the regulations allow some related products and simply zero in on food. Staff agreed to revisit this standard. D. Silk asked about the product related items and the number of plants. How is this handled as a home occupation

within 500 ft of a school? Are there differences between small and large-scale operations? He raised concerns about odor. There were limited standards for odor in the draft amendment. Should the regulations address no smoking in public spaces. What happens with the pungent odor if some grows or uses in an apartment building? What are other municipalities doing, particularly in addressing pre-schools and schools? Is limiting the best way to limit odor? D. Eaton asked if the location restrictions constitute an overlay to prohibit and where are licensed caregivers located? Only dispensaries are licensed in the city, so we don't know where all the state licensed caregivers are located.

PUBLIC HEARING – 7:00 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATIONS AND REPORTS - none

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON October 23, 2018

The attendance is found on the November 13, 2018 agenda and was accepted as written by the Planning Board.

4. REPORT OF DECISIONS AT THE MEETING HELD ON October 23, 2018

The decisions are found on the November 13, 2018 agenda and were accepted as written by the Planning Board.

5. NEW BUSINESS

I. Zoning Text Amendment to the IR-1 and IR-2 Zones, Accessory Dwelling Unit, City of Portland, applicant.

Matthew Grooms presented the proposed text amendments that had been revised since the workshop. There were no public comments at the meeting. Homestart had submitted written support of the proposed amendments.

Decision: Mazer moved and Stanley seconded a motion to find the proposed text amendments consistent with the comprehensive plan and to recommend the adoption of the amendments to the City Council. Vote: 7-0

II. Level III Site Plan, Office building expansion, 90 Johnson Road, Transport Leasing Corp, Applicant.

The staff recommended tabling this item to the next meeting.

Decision: Mazer moved and Stanley seconded a motion to table the item to November 27 public hearing. Vote: 7-0

III. Level III Subdivision Amendment, 94 Walnut Street JP Sheridan, LLC, Applicant.

Shukria Wiar presented the changes to the subdivision and site plan that accommodate the addition of another residential unit for this project. The applicant concurred with Shukria's summary and did not add any additional information for this project that is under construction. There was no public comment.

Decision: Mazer moved and Stanley seconded a motion to approve the amended subdivision plat (to add 1 residential unit for a total of 4) with one condition of approval. Vote: 7-0. Mazer moved and Stanley seconded a motion to approve the amended site plan with one condition of approval. Vote: 7-0.

PLANNING BOARD REPORT
PORTLAND, MAINE

Building and Parking Lot Expansion
90 Johnson Road
Level III Site Plan
PL-000232-2018
Transport Leasing Corporation, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: November 27, 2018	Prepared by: Shukria Wiar Date: November 21, 2018

I. INTRODUCTION

Transport Leasing Corporation appears before the board for a public hearing on the development of an addition to the Charter Communication building and associated parking lot on a 2.66-acre site at 90 Johnson Road. Under the current proposal, the existing 17,482 SF office/warehouse building would be expanded with an addition of approximately 22,000 SF. The site is in the B4 Commercial Business Zone. Currently, the building space is used for both office and warehouse functions and according to the application, Charter Communication will continue these programs. The applicant's intention is to lease the new space to another office user. The development is no longer proposed in two phases.



Figure 1: Aerial of Proposed Site

The applicant requested a review and the Planning Board considered the preliminary submission at a Planning Board workshop on October 9th, 2018. This proposal is being reviewed as a final plan and subject to the Site Plan Ordinance of Land Use Code.

A total of 33 notices were sent to property owners within 500 feet of the site and a legal ad ran in the *Portland Press Herald* on November 5th and 6th, 2018.

II. REQUIRED REVIEWS

Waiver Requests	*Applicable Standards*
Public Transit Access- A waiver is requested given the proximity of existing transit measures to the development. Two transit shelters are located less than ¼ mile from the site and the two transit shelters are located on the Jetport Boulevard sidewalk.	14-526 Site Plan Standards (a) Transportation Standards (3) Public Transit Access

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

III. PROJECT DATA

Existing Zoning	B-4
Existing Use	Office and Warehouse
Proposed Use	Office and Warehouse
Parcel Size	2.66 acres

	Existing	*Proposed*	*Net Change*
Impervious Area	55,329 SF	98, 072 SF	42,743 SF
Building Footprint	17,842 SF	39,546 SF	21,704 SF
Building Floor Area	24,249 SF	42,511 SF	18,262 SF
Parking Spaces – Provided	42	175	
Parking Spaces – Required	96		
Bicycle Parking Spaces	0	10	10
Estimated Cost of Project	$3,900,000		

IV. BACKGROUND & EXISTING CONDITIONS

The project site, located at 90 Johnson Road, is approximately 2.67 acres and is comprised of two properties (1.68 and 0.99 acres respectively). The existing 20,260 SF single story building houses Charter Communications. The site has four access drives (at the two properties) with a total of forty-two (42) parking spaces. The site has frontage on Johnson Road and access on City Line Drive, which is a private roadway. The adjacent property at 68 Johnson Road was historically occupied by a single-family home but has since been demolished and the property is a grassed lot. Commercial uses abut the site on the southwest and cemeteries on both to the northeast and across Johnson Road.

At the October workshop, the Planning Board members had a number of concerns to be addressed in the final submission and staff has worked with the applicant to address these concerns:

- Development Buildout: Planning Board members were concerned that if Phase II (the building portion) does not go forward, what happens to the project/site?

  Staff Comments: The applicant is no longer phasing the project. The revised plan shows a single development, please refer to the Applicant's Attorney Matt Manahan letter, Attachment 6. City staff has recommended that if for some reason the building construction does not move forward, then portions of the existing parking lot be removed. The applicant has stated in their cover letter dated October 12th, 2018:

  > *Unless otherwise approved by the Planning Authority the applicant will agree to eliminate 16 parking spaces and 5,870 SF of impervious area from the existing parking surrounding the 90 Johnson Road building. The resultant parking supply will be 94 spaces.*

- Landscaping- there needs to be more landscaping on and round around the site.

  Staff Comments: The Planning Board members wanted to see a larger green space between the proposed parking and the back of the existing Johnson Road sidewalk. In order to accomplished this, the applicant has eliminated sixteen (16) of the perpendicular parking spaces and replaced with five parallel spaces. The revision generated a minimum 10′ pavement setback from the right of way line for a total of approximately twenty-three feet (23′) of landscaped area. The landscaping plan has been modified to provide five deciduous shades trees and twenty (20) small shrubs to match the currently landscaping now existing along the street frontage of 90 Johnson Road.

- Total Number of Parking Spaces: Justification why the applicant needs all the proposed parking spaces.

Staff Comments: The existing site has forty-two (42) parking spaces for the existing tenant, Charter Communication and the parking requirement per zoning is 46 spaces. The applicant states that eight-nine (89) spaces are needed for the existing businesses/uses on this site. The proposed building expansion requires ninety-six (96) spaces under zoning, but the applicant states a total of 175 parking spaces are the projected need for the uses. According to the applicant, the need for the larger amount is:

Periods when existing and new fleet vehicles arrive for servicing, new equipment fit ups, and training periods. They may have 80-100 additional vehicles at the site at which time the combined parking demand is at the capacity of the existing supply.

Personnel Training Periods - training may involve additional staff visiting the site for extended periods.

V. PROPOSED DEVELOPMENT

The applicant has now revised the applicant to a full development scheme. The proposed development project includes the expansion of the 17,234 SF one-story building to include a 1,574 SF addition on the first floor and the construction of second and third floor with 10,245 + SF on each level for a total of 20,490 SF. Vehicular access and circulation are proposed from City Line Drive and a right-turn egress only from Johnson Road. A total of 175 spaces will be provided for the project, of which six will be handicapped spaces. This will provide a ratio of six spaces per 1,000 SF of office space. The new parking area will be constructed prior to the building addition and consist primarily of porous asphalt pavement. The applicant is no longer proposing utilizing the parking lot for Jetport parking as an interim use.

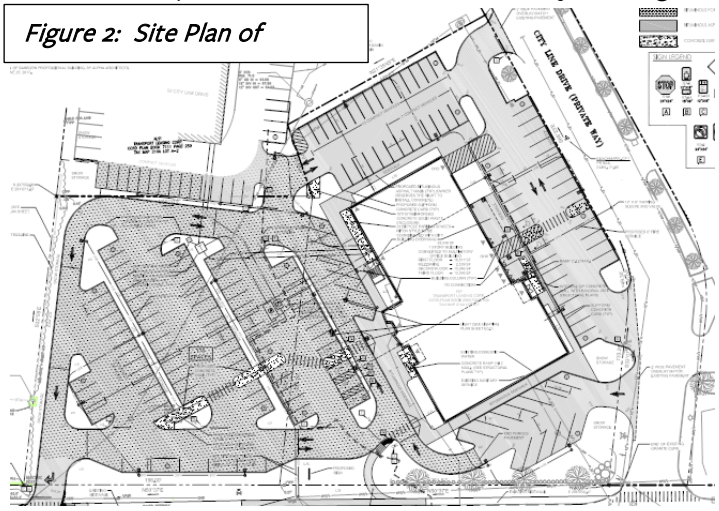


Figure 2: Site Plan of

The site plan shows a right turn exit only driveway, which is located within an existing curb opening that served the former residence at the property. The plan has been revised to show two of the driveways to be closed and introducing an internal circulation with access to the driveways on City Line Drive. The applicant is proposing to improve to the existing driveway with a sidewalk and curbing.



Figure 3: Aerial of Proposed

The applicant wants to have a tenant secured before submitting a traffic study. The applicant is seeking to conduct the traffic impact study once the tenant is known. This would allow them to project traffic demands, evaluate the Johnson Road access conditions, including potential adjustments to the existing median, the City Line Drive connection/operations, and the Jetport Boulevard signalized intersection. A site plan approval can be extended up to three (3) years from the date of approval and construction of the building would need to commence within that time frame to retain approvals. This approach for the traffic study may require the applicant to return to the Board for an amendment.

VI. PUBLIC COMMENT

Staff has not received any public comments on this application.

VII. RIGHT, TITLE, & INTEREST

The applicant has provided a release deed (Attachment I), recorded at the Cumberland County Registry of Deeds (Book 34653 Page 201), which demonstrates their right, title and interest in the property.

The estimated cost of the development is $ 3,900,000. The applicant has submitted a letter from Bangor Savings Bank, dated June 14, 2018 as demonstration of their financial and technical capacity to complete the proposed development.

VIII. ZONING ANALYSIS

The Planning staff performed a zoning review of the site development and the proposal meets the dimensional requirements of the B-4 zone. In addition, the applicant has addressed how the proposal meets the zoning requirements of Section 14-229.14 and Sec. 14-229.5 (Attachment R). Ann Machado, Zoning Administrator, has review the project and in her memo (Attachment 3) she addresses the uses and the parking requirement on this site, as well as Attorney Manahan's letter. Based on Ms. Machado, the parking requirement for the development is the following:

> *Section 14-332(j) requires one parking space for each 400 square feet, or major fraction thereof, of floor area used for offices. Section 14-332(i) requires one parking space for each 1,000 square feet of floor area, or major fraction thereof, for industrial use if the area is over 3,000 square feet.*
>
> *Based on the Parking Analysis dated October 12, 2018 from Stephen Bushey, the proposed warehouse area is 6463 sf, the proposed office area is 30633 sf, and the proposed common area is 5283 sf. Since section 14-332(j) includes all area associated with the office use, I have combined the office space and common space figures provided for a total of 35916 sf of office space. Under zoning, the warehouse space requires 6 parking spaces (6463/1000) and the office space requires 90 parking spaces (35916/400). The total number of parking spaces required by zoning is 96. The proposed 175 parking spaces exceeds the parking requirement outlined in section 14-332 for the proposed uses.*

IX. 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

   The Applicant is required to conduct a traffic impact study for this project. Tom Errico, Consultant Traffic Engineer has reviewed the project and has the following comments in regard to traffic study:

   > *The Applicant will be required to conduct a traffic impact study for the project. The key issue to be evaluated is the creation of a full movement driveway on Johnson Road, which has historically experienced safety problems. I would suggest that we schedule a meeting to identify the specific scope of the study.*
   >
   > *Status: The Applicant is suggesting that the traffic study be conducted at the time of Phase 2 (or when a tenant for the building expansion is identified). I continue to review this suggested condition, but as noted in comments below, I am concerned about access conditions on Johnson Road.*
   >
   > ***Status: A traffic study is required and shall be provided prior to issuance of a building permit. This should be noted as a Condition of Approval.***

The applicant has revised the plans to eliminate the second existing curb cut on Johnson Road, therefore addressing transportation concerns about the access and safety. According to the applicant, the project is expected to have an insignificant impact on traffic in the neighborhood, based on the limited intensity of use of building. Vehicle and loading circulation to the building are shown on the plan. The applicant states in their cover letter dated November 13, 2018, that "*a traffic study, and if necessary, Traffic Movement Permit, will be a condition of any approval and said Study or TMP, may require at a minimum, Staff review and if necessary, Planning Board Approval. These approvals may be linked to the issuance of a building permit or Certificate of Occupancy, which is to be determined by the Planning authority*".

b. Access and Circulation

There are three existing curb cuts on Johnson Road to the proposed site: two curb cuts to 68 Johnson Road and a curb cut that has been closed off to 90 Johnson Road (south). Revised plans have been submitted that show a single right-turn only exit drive on Johnson Road and will utilize the two full driveways on City Line Drive, the circulation will all be internal. The existing Johnson Road (south) curb opening will be eliminated by removing the existing paved apron and radial curbing and this will be replaced with curbing and sidewalk. The applicant wants to reserve the right to reconsider this driveway for future traffic circulation. Mr. Errico has reviewed the access and circulation on site and finds them acceptable. He recommends "*that a Condition of Approval regarding formal closure (curbing/loam/seeding) of the driveway apron be required. Final driveway conditions may be modified following the preparation of the traffic study*".

Mr. Hyman has reviewed the access and circulation (Attachment 7), and recommends the following:

> *For the final condition once the office building expansion takes place, a more direct, bi-directional sidewalk connection is to be designed.*
>
> *Detectable Warning Panels on the exit only driveway on Johnson Road are not required by ADA. If they are installed by the applicant, they are to meet the city's current standard of Cast Iron with a 4" concrete border. If not, the plans are to be revised; if they are used; a note or detail indicating the use of cast iron is to be provided.*

c. Public Transit Access

This standard requires that "commercial or institutional development of at least 20,000 square feet gross floor area, a transit facility shall be constructed". The applicant has requested a waiver of this standard, under the waiver criteria:

> *All or some of this standard may be waived if the Reviewing Authority determines one or more of the following: (i) That some or all of the required improvements cannot reasonably be made due to site constraints and/or insufficient right of way width; or (ii) That the development is not anticipated to generate public transit usage due to particular characteristics or proposed use of the development.*

The applicant states a "waiver is requested given the proximity of existing transit measures to the development. Two transit shelters are located less than ¼ mile from the site and the two transit shelters are located on the Jetport Boulevard sidewalk". City staff recommends the waiver as long as improvements are made to the existing bus stops. Bruce Hyman, Transportation Manager, offers the following comments:

> *Due to the site plan not extending to show the vicinity of the existing bus stop on City Line Drive and Jetport Blvd, I would like an explicit Condition of Approval to be that the applicant will make the inbound bus stop fully ADA-compliant by ensuring a full 5' x 8' bus stop landing*

area is provided at this location. This was a previous comment. Improvements to the outbound bus stop on Johnson Road are to be pending the outcome of the Traffic Study and/o Traffic Movement Permit.

d. Parking

A total of 175 spaces will be provided for the entire development, of which six will be handicapped spaces. The proposed building expansion requires ninety-six (96) spaces under zoning, but the applicant states a total of 175 parking spaces are needed. Section 14-526 (a)(4)(a)(iii) state:

> *Developments proposing to exceed minimum parking requirements by 10% or more must demonstrate through a parking analysis that the amount of parking is appropriate for the proposed use of the site.*

According to the applicant, the need for the larger amount is:

> *Periods when existing and new fleet vehicles arrive for servicing, new equipment fit ups, and training periods. They may have 80-100 additional vehicles at the site at which time the combined parking demand is at the capacity of the existing supply. Personnel Training Periods - training may involve additional staff visiting the site for extended periods.*

The parking lot will be constructed as a porous pavement surface, like the Dept of Human Services site nearby, and the drainage associated with the lot will ultimately flow into the Johnson Road storm drain system that ultimately discharges to the Stroudwater River, off Congress Street east of the site.

e. Transportation Demand Management (TDM)

According to the applicant, they are open to preparing a full traffic study and if necessary, a Traffic Movement Permit, once a tenant user is identified and in advance of the applicant seeking a building permit. Based on the application, the development does not need a Transportation Demand Management (TDM) as proposed. If the floorspace of the future building expansion brings the total to 50,000 SF or above, or if the uses are designed to accommodate 100 or more employees, a TDM plan will be required and submitted for review and approval prior to the issuance of a building permit. The applicant is aware that this may require reappearing before the Planning Board and aware that the City may revisit access conditions Johnson Road and City Line Drive at that time.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

There are no known existing heritage trees or significant natural features on the site.

b. Landscaping and Landscape Preservation

The preliminary plan had sixteen (16) perpendicular parking spaces located adjacent the City's right of way line. The Planning Board recommended a larger green space be created between the proposed parking and the back of the existing Johnson Road sidewalk. In order to accomplished this, the applicant has eliminated the perpendicular parking spaces and replaced with five parallel spaces. The outcome will generate a minimum 10' pavement setback from the right of way line for a total of approximately twenty-three feet (23') of landscape. The landscaping plan has been modified to provide five deciduous shades trees and twenty (20) small shrubs to match the existing landscaping now existing along the street frontage of the 90 Johnson Road site. Jeff Tarling, City Arborist, has reviewed the landscaping plan and recommends that the applicant:

> *...change the (7) Zelkova street trees to 'Springsnow' Crabapple due to the overhead utility lines. 'Spring Snow' are fruitless crabapples and should work well in this location.*

c. Water Quality, Storm Water Management and Erosion Control

The proposed development includes the renovations and expansion of the existing Spectrum office/warehouse building. The existing building will be renovated including a vertical expansion to go from one story to three stories. The existing parking area and drive will also be redeveloped into a more functional layout for the expanded use. The undeveloped grassed lot at 68 Johnson Road will include new development of a parking area and associated stormwater management and landscaping. A total of 175 parking spaces are proposed as part of the entire development. Stormwater management will primarily be in the form of porous pavement within the new parking area. The porous pavement will be similar to the porous pavement installed at the nearby State of Maine DHHS building off the Jetport Boulevard.

The proposed porous asphalt parking area will consist of materials that will provide both water quality treatment and stormwater runoff storage and control. Drainage patterns in the existing parking areas will remain basically unchanged. The new parking area will drain runoff to an existing municipal drainage system in Johnson Road, which ultimately conveys runoff northerly along Johnson Road and Congress Street to a culvert outlet located on Congress Street, opposite the cemetery entrance. From this point a natural drainage tributary conveys any water to the Stroudwater River and ultimately the Fore River.

Lauren Swett, Consultant Civil Engineer, reviewed the stormwater management study and plans, and finds it acceptable (Attachment 2).

3. Public Infrastructure and Community Safety Standards

a. Consistency with Master Plans

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

b. Public Safety and Fire Prevention

There seems to be adequate access to all four sides of the proposed building. Chief Robert Thompson, Fire Department, has reviewed the project and finds it acceptable.

c. Availability and Adequate Capacity of Public Utilities

There are existing electrical water, sewer, and gas services to the property from mains located in the abutting streets. The expansion will involve the installation of a sprinkler system to the building which involves a new fire supply water main off the PWD main in City Line drive. The existing building has a sanitary sewer service and the flows from the site ultimately discharge to the South Portland municipal wastewater collection, conveyance and treatment systems, per an inter-municipal agreement. The applicant has contacted all governing utility agencies and the ability to serve letters will need to be forwarded to the planning office upon receipt but prior to the issuance of a building permit for the addition.

4. Site Design Standards

a. Massing, Ventilation and Wind Impact

The height of the proposed addition is 57'-5" which is within the allowed height standards of 65'. The project will not result in any significant changes to the wind environment. The site is located near an airport and a cemetery. The adjoining development lots are owned by the applicant. There are no nearby developed lots that may be negatively impacted. According to the applicant, if HVAC venting is proposed, it will be directed through rooftop units and will not impact any adjacent public spaces.

b. Shadows

This standard does not apply since the building is not located near publicly accessible open space.

c. Snow and Ice Loading
The site and utility plan show designated snow and loading areas in the parking lot.

d. View Corridors
This standard does not apply since the development is not in a view corridor.

e. Historic Resources
The development is not located in a historic district, historic landscape district and is not a City designated landmark, and is not located adjacent to or within 100 feet of a designated landmark, historic district, or historic landscape district. There are no known archaeological resources on the site either.

f. Exterior Lighting
The applicant has submitted a lighting and photometric plan. The photometric plans show light pollution onto neighboring properties. There is light trespass at the property line onto the abutting parcel along the northly side and along Johnson Road. The lighting standard for light trespass is .1-foot candle at the property line and a light trespass of .4 to 3.7-foot candles is shown on the plan; therefore, the plan does not meet the light trespass standard. Since the property on northly side is a cemetery and there is no existing street lighting on Johnson Road, the light trespass is acceptable.

The majority of the proposed lighting fixtures meet the cut-off standards except the ParkPak fixture; that does not meet the full cut standard. In order for this to be a full cut off, the proposed fixture needs to be housed within the ceiling. All the LED fixtures proposed will have to be 3000K or less.

g. Noise and Vibration
All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment will have to be shown on the plans and meet state and federal emissions requirements. These should be located to the interior of the site and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof. The project noise levels shall be designed to meet the permitted levels as outlined in the B4 Zone.

h. Signage and Wayfinding
The applicant has submitted a signage and wayfinding plan for review and staff finds it acceptable.

i. Zoning Related Design Standards
The site is located in the B4 zone and there are no specific design standards that apply to this development.

X. STAFF RECOMMENTATION
Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed development.

XI. PLANNING BOARD MOTIONS
A. WAIVERS
On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on November 27, 2018 for application PL-000232-2018 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [waives/does not waive] the Site Plan standard (14-526 (a) (3)) Public Transit Access, requires a transit facility shall be constructed, to allow no new stransit facility given the proximity of

existing transit measures (two transit shelters are located less than ¼ mile from the site and the two transit shelters are located on the Jetport Boulevard sidewalk) to the development

B. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in Planning Board Report for the public hearing on November 27, 2018 for application PL-000232-2018 relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing that the Planning Board finds that the plan [**is** or **is not**] in conformance with the site plan standards of the land use code, subject to the following conditions:

TO BE MET PRIOR TO THE START OF SITE WORK:

1. That the applicant shall post a Performance Guarantee to cover the costs of the entire development improvements; and

2. Detectable Warning Panels on the exit only driveway on Johnson Road are not required by either by City standard or ADA and shall be removed.

TO BE MET PRIOR TO APPLYING FOR A BUILDING PERMIT FOR THE BUILDING ADDITION:

3. That the applicant shall provide a traffic study and trip generation estimate for the full project. If the analysis indicates an increase in traffic is generated in excess of 100 new peak hour trips, the applicant shall comply with all requirements of obtaining a Traffic Movement Permit, which includes Planning Board review; and

4. That the applicant shall advise the Planning Authority as to the floorspace and number of employees of the future building expansion. If the building expansion and use triggers a Transportation Demand Management Plan, then the applicant shall submit a TDM for review and approval; and

5. That the inbound bus stop shall be fully compliant with American with Disability Act (ADA) by ensuring a full 5′ x 8′ bus stop landing area at this location. The outbound bus stop on Johnson Road improvement shall be based on the conclusion of the Traffic Study and/or Traffic Movement Permit; and

6. That the applicant shall revise the final plans to provide a direct, bi-directional sidewalk connection to the development to be reviewed and approved by the Planning Authority; and

7. That the applicant shall formally close the driveway apron by the addition of curbing and loam/seeding the effect area as shown on the site plan. Any amendments to the driveway and access points are subject to review and approval as part of the traffic study; and

8. That the seven (7) Zelkova street trees on the landscaping plan shall be changed to 'Spring Snow' Crabapple due to the overhead utility lines and shown on the final plans; and

TO BE MET PRIOR TO THE ISSUANCE OF A BUILDING PERMIT:

9. That the all proposed lighting has be full cut off and the color temperature shall not be greater than 3000K. A revised lighting plan shall be submitted for review and approval by the Planning Authority; and

10. Confirmation of ability to serve water and sewer from PWD and DPS shall be forwarded to the Planning Authority; and

11. The developer/contractor/subcontractor must comply with conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and state guidelines. The owner/operator of the approved stormwater management system, and all assigns. shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements. A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Please submit final copies to both the Department of Planning and Urban Development and the Department of Public Works; and

PROJECT MONITORING:

12. If the building does not go forward with construction, the applicant will be required to remove sixteen of the existing parking spaces at the 90 Johnson Street site. The performance guarantee shall provide a cost estimate and sufficient funds for the pavement removal; and

13. The parking lot is accessory to the uses on the site and shall not be utilize by other entities, such as the Portland Jetport.

XII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Traffic Engineer review (memo from Thomas Errico, 11.20.2018)
2. Civil Engineer review (memo from Lauren Swett, 11.20.2018)
3. Zoning Administrator (memo from Ann Machado, 11.15.2018)
4. City Arborist (memo from Jeff Tarling, 11.20.2018)
5. Fire Department (memo from Robert Thompson, 11.20.2018)
6. Attorney Matt Manahan, dated 11.13.2018
7. Transportation Manager (memo from Bruce Hyman, 11.21.2018)

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Level III Development Revie Application
C. Certification Neighborhood Meeting
D. Construction Management Plan July2018
E. Environmental and Landscape Features
F. Environmental and Stormwater
G. Financial Capacity
H. Public Infrastructure and Safety
I. Right, Title, And Interest
J. Site Design
K. Stormwater Management Report
L. Transportation
M. Zoning Assessment
N. Waiver Requests
O. Wastewater Capacity Application
P. Lor_1_Barhydt_20180904_Final
Q. Lor_2_Barhydt_20180920_Final
R. Lor_3_barhydt_20181012_final
S. Lor_5_barhydt_20181025_final
T. Lor_6_barhydt_20181029_final
U. Lor_7_barhydt_20181113_final
V. Letter from Paul Bradbury To Mark Sanborn 09.20.2018

W. Elec cut sheets
X. fire_checklist

PLANS

Plan 1. c-1.0_cover sheet_general_notes_and_legend City Context Plan
Plan 2. c-2.0_3RD Amend Subdiv. 06.11.2014
Plan 3. c-2.1_existing_conditions_and_demolition_plan_phase1
Plan 4. c-2.2_existing_conditions_and_demolition_plan_phase2
Plan 5. c-3.1_site_layout_and_utility_plan_building_
Plan 6. c-3.2_signage_and_wayfinding_plan
Plan 7. c-3.3_construction_management_plan
Plan 8. c-4.0a_grading_and_drainage_plan_initial_construction
Plan 9. c-4.0b_grading_and_drainage_plan_building_phase
Plan 10. c-4.1_stormwater_management_plan
Plan 11. c-4.2_stormwater_management_plan_2of2
Plan 12. c-5.0_erosion_control_plan_phase1
Plan 13. c-5.1_erosion_control_plan_phase2
Plan 14. c-7.1_landscape_plan_building_phase
Plan 15. c-8.0_details
Plan 16. c-9.0_details
Plan 17. c-8.2_details
Plan 18. c-10.0_erosion_and_sediment_control_notes
Plan 19. c-11.0_pre-development_watershed_plan
Plan 20. c-12.0_post-development_watershed_plan
Plan 21. e-0.1
Plan 22. e-0.2
Plan 23. e-1.1
Plan 24. e-1.2
Plan 25. e-1.3
Plan 26. arch plans

Att. 1

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

90 Johnson Road - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Tue, Nov 20, 2018 at 10:50 AM
To: Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>

Hi Shukria – The following is a status update of previous preliminary traffic comments and represent final traffic comments.

October 3, 2018 Comments Status

- The Applicant will be required to conduct a traffic impact study for the project. The key issue to be evaluated is the creation of a full movement driveway on Johnson Road, which has historically experienced safety problems. I would suggest that we schedule a meeting to identify the specific scope of the study.

Status: The Applicant is suggesting that the traffic study be conducted at the time of Phase 2 (or when a tenant for the building expansion is identified). I continue to review this suggested condition, but as noted in comments below, I am concerned about access conditions on Johnson Road.

Status: A traffic study is required and shall be provided prior to issuance of a building permit. This should be noted as a Condition of Approval.

- The Applicant should provide information in support of the two driveways on Johnson Road. This item would be part of the traffic study.

Status: The current driveway configuration for the Phase 1 Parking Lot is not acceptable. A restricted right-turn entry/exit driveway may be permitted, but additional review is required.

Status: The plans have been revised and I find them to be acceptable (see below).

- I am concerned about the internal intersection near the main Johnson Road driveway. The Study would need to confirm vehicle backups into Johnson Road will not occur.

Status: This item is likely not an issue in Phase 1 with a possible turn restriction driveway. Further review is required.

Status: This issue shall be evaluated as part of the traffic study.

- The Applicant did provide a trip generation estimate and that projection seems inconsistent with the amount of parking provided. Trip generation methods will be discussed at the suggested scoping meeting.

Status: This issue is related to the conduct of the traffic study and I continue to review the request to postpone this work.

Status: This issue shall be addressed as part of the traffic study.

- Parking lot aisle widths do not meet City standards and the Applicant shall provide supporting documentation as part of a formal request for a waiver.

Status: It is difficult to assess waiver justification without specific tenant details. I continue to review this request.

Status: See below.

- Although not required by City ordinance, in my professional opinion a sidewalk on City Line Drive to Jetport Boulevard is needed to provide a safe walking connection to the sidewalk on Jetport Boulevard. I have observed pedestrians walking on City Line Drive, particularly during mid-day time periods.

Status: The Applicant does not support the installation of the suggested sidewalk. Given that City Line Drive is not a public street, the City does not appear to have a standard requiring the sidewalk. I continue to review conditions to ensure safe pedestrian conditions are provided.

Status: The Applicant does not support this installation. I have no further comment, although this issue may be part of the traffic study.

- The site plan notes back in angle parking on the north side of the building. Dimensions should be provided for these spaces and confirmation that this is the parking configuration proposed.

Status: The requested information has been provided and I have no further comment.

Status: I have no further comment.

- The Applicant should provide information on parking and circulation interaction with the abutting 52 City Line Drive site.

Status: I continue to review this issue.

Status: The Applicant has provided satisfactory information and I have no further comment.

October 26, 2018 Comments Status

- The Applicant should provide the right-turn exit only driveway on Johnson Road for Phase 1. No other driveways will be permitted for Phase 1. A traffic study will be required in conjunction with Phase 2 that will assess other driveway provisions on Johnson Road.

Status: The plans have been revised to address this comment. It is my recommendation that a Condition of Approval regarding formal closure (curbing/loam/seeding) of the driveway apron be required. Final driveway conditions may be modified following the preparation of the traffic study.

- An internal connection from the Phase 1 parking lot nearest Johnson Road to City Line Drive is suggested – for Phase 1.

Status: The plans have been revised and I find them to be acceptable.

- I do not support a waiver for parking lot aisle width.

Status: The plans have been revised and I have no further comment.

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.

Shukria Wiar <shukriaw@portlandmaine.gov>

90 Johnson Road

Lauren Swett <lswett@woodardcurran.com> Tue, Nov 20, 2018 at 1:17 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria,

The only thing that I was waiting for was the sewer ability to serve. I just did some looking through the different letters that have been sent in the past month, and I found it attached to the October 12 letter.

I have no further comments.

If you need anything else, let me know!

Lauren

From: Shukria Wiar <shukriaw@portlandmaine.gov>
Sent: Tuesday, November 20, 2018 12:26 PM
To: Lauren Swett <lswett@woodardcurran.com>
Subject: Re: FW: 90 Johnson Road

[Quoted text hidden]

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

Memo to Planning

90 Johnson Rd.

Site Plan – 232-2018 – Re: Parking Requirements

November 15, 2018

The site plan proposes to add an addition to the existing building to create a building with 42, 379 square feet of floor area, and to expand the parking area by adding a new parking lot with 188 spaces. The current proposed use is office and warehouse.

In the B-4 zone, a parking lot is not listed as a permitted use (section 14-229.11) or as a Conditional Use (section 14-22911.1). Since it is not allowed as a stand-alone use, it is only allowed as an accessory use to the proposed use of the building as office and warehouse. Section 14-332(j) requires one parking space for each 400 square feet, or major fraction thereof, of floor area used for offices. Section 14-332(i) requires one parking space for each 1,000 square feet of floor area, or major fraction thereof, for industrial use if the area is over 3,000 square feet.

Stephen Bushey responded to comments from Planning in a letter dated October 12, 2018. The parking analysis (Attachment B) provided the following numbers. The proposed warehouse area is 6463 sf, the proposed office area is 30,633 sf, and the proposed common area is 5,283 sf. Since section 14-332(j) includes all area associated with the office use, I have combined the office space and common space figures provided for a total of 35,916 sf of office space. Under zoning, the warehouse space requires 6 parking spaces (6463 /1000) and the office space requires 90 parking spaces (35,916/400). The total number of parking spaces required by zoning is 96. The proposed 188 parking spaces exceeds the parking requirement outlined in section 14-332 for the proposed uses.

At the bottom of page 7 of Mr. Bushey's letter Under Proposed Parking, it says that initially some of the parking may be used as overflow parking from the Jetport until the addition is built. As stated above a parking lot is not listed as a permitted use. The owner's attorney, Matthew Manahan, in a letter dated November 13, 2018 states that Jetport parking is a governmental use which is a permitted use under section 14-229.11(b)(1). If the parking lot was being built for the Jetport for off-site parking then Attorney Manahan might have an argument. The site plan application and follow-up material has stated that the parking lot is to serve the current use of the building and the increased parking requirement for the addition to the building. It is not stating that the use of the proposed parking lot is exclusively for Jetport Parking. At a minimum the Jetport would have to have a lease or some kind of agreement with the owner to operate the lot if the lot was going to be built as a stand-alone use for the Jetport. I'm still not sure that a stand-alone parking lot would be considered a governmental use. I leave that decision up to Corporation Counsel.

Attorney Manahan goes on to state in the second paragraph of his letter that the "Applicant is willing to restrict the use of the new parking area (comprising a total of 111 spaces initially and then ultimately 175 spaces upon completion of the building expansion) to tenants of the existing buildings on the Applicant's property until such time as the building expansion has been constructed, before completion of the building expansion". From this statement it appears that the idea of letting the Jetport use the parking lot in the interim is no longer being considered.

Finally, Attorney Manahan states that the applicant is not “proposing a “phased” development, but is simply planning to construct the parking lot first to be followed by construction of the building expansion within the next two years, pursuant to Site Plan approval…”.

The Site Plan application is to build an addition and an additional parking lot to serve the needs of the addition and use of the property. I have provided the parking requirements based on proposed square footage of the building with the addition broken down into office use and warehouse use. It is up to the Planning Board to decide how much parking the current use of the building needs and how much additional parking the addition will require depending on the use.

Ann Machado
Zoning Administrator

Att. 4

Portland Maine | Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

90 Johnson Road Tree & Landscape

Jeff Tarling <jst@portlandmaine.gov> Tue, Nov 20, 2018 at 12:43 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>

Hi Shukria -

In review of the proposed 90 Johnson Road project the revised tree and landscape plans are improved. The only suggested change would be to change the (7) Zelkova street trees to 'Springsnow' Crabapple due to the overhead utility lines. 'Spring Snow' are fruitless crabapples and should work well in this location.

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

PLAN CONDITIONS REPORT PL-000232-2018
FOR CITY OF PORTLAND

PLAN ADDRESS: 90 Johnson Rd
Portland, ME 04102

PARCEL: 214A A001001

APPLICATION DATE: 07/09/2018

SQUARE FEET: 0.00

DESCRIPTION: 90 Johnson Road - Proposed Expansion of an Existing Office/ Warehouse Building

EXPIRATION DATE:

VALUATION: $0.00

CONTACTS	Name	Company	Address
Agent/Representative	Stephen Bushey	Stantec	778 Main Street, Suite 8 So. Portland, ME 04106

Conditions Required

General

General Condition

The Fire Department has no site review comments for this project. There is sufficient access to the building and adequate fire hydrants in the area.

PIERCE ATWOOD LLP

MATTHEW D. MANAHAN

Merrill's Wharf
254 Commercial Street
Portland, ME 04101

P 207.791.1189
F 207.791.1350
C 207.807.4653
mmanahan@pierceatwood.com
pierceatwood.com

Admitted in: MA, ME, NH

November 13, 2018

Barbara Barhydt and Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101

Re: 90 Johnson Road, Transport Leasing Corp., Site Plan Application 232-2018

Dear Ms. Barhydt and Ms. Wiar:

On behalf of our client Transport Leasing Corp. (the Applicant), I am writing to provide assurance that although the Applicant intends to construct the proposed new parking area first (beginning this year and prior to construction of the proposed building expansion), the Applicant understands and acknowledges that Site Plan approval will require the Applicant to construct all portions of the proposed project, including the proposed building expansion.

In a November 8, 2018 memo the Zoning Administrator stated that the parking lot may not be used to provide overflow parking for the Portland Jetport because that parking use would not be accessory to the primary use of the Applicant's property. Although Jetport parking is a governmental use, and thus is an allowed principal use under Section 14-229.11(b)(1), the Applicant is willing to restrict use of the new parking area (comprising a total of 111 spaces initially[1] and then ultimately 175 spaces upon completion of the building expansion) to tenants of the existing buildings on the Applicant's property until such time as the building expansion has been constructed, before completion of the building expansion. Thus, not only would the parking lot be accessory to the existing building uses, it also would be part of the building expansion project approved on November 27, but not yet constructed.

In a November 8, 2018 email to you Associate Corporation Counsel Jennifer Thompson addressed the requirements for phased development, noting that "it doesn't appear that [the first, parking lot] phase can independently meet the standards in the site plan ordinance without there yet being a building to which the lot is accessory." She concluded, therefore, "that the first phase must be the building, not the parking." This will clarify that the Applicant is not proposing a "phased" development, but is simply planning to construct the parking lot first, to be followed by construction of the building expansion within the next two years, pursuant to the Site Plan approval the Applicant hopes to receive at the Planning Board's November 27, 2018 meeting. Even if it were considered to be part of a phased development, though, the parking lot would be allowed independently either as a

[1] There are 42 existing spaces on the site. The initial construction will include 69 new parking spaces yielding a new total of 111 spaces. These spaces will help address existing onsite parking demand resulting from existing tenant (Charter Communications) activities including their New England Regional training center where 40-50 additional persons may be occupying the building during a training week.

governmental use or as a use that is accessory to the existing uses on the property, for the reasons noted above.

Finally, the Applicant understands and acknowledges that Site Plan approval will be conditioned on preparation of a traffic study, and possibly a resulting need for a Traffic Movement Permit, prior to issuance of a building permit for construction of the building expansion.

Thank you for your consideration of this letter. Please let me know if you have any questions or need additional information.

Sincerely,



Matthew D. Manahan

cc: Ann Machado
Jennifer L. Thompson, Esq.
Stephen R. Bushey, P.E., Stantec
Mark Sanborn, Transport Leasing Corp.

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

90 Johnson Road: Final Sidewalk/Streetscape/Transportation Comments

Bruce Hyman <bhyman@portlandmaine.gov> Wed, Nov 21, 2018 at 9:45 AM
To: Shukria Wiar <shukriaw@portlandmaine.gov>, Barbara Barhydt <bab@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>

Good morning Shukria and Barbara,

- Due to the site plan not extending to show the vicinity of the existing bus stop on City Line Drive and Jetport Blvd, I would like an explicit Condition of Approval to be that the applicant will make the inbound bus stop fully ADA-compliant by ensuring a full 5' x 8' bus stop landing area is provided at this location. This was a previous comment. Improvements to the outbound bus stop on Johnson Road are to be pending the outcome of the Traffic Study and/o Traffic Movement Permit.
- For the final condition once the office building expansion takes place, a more direct, bi-directional sidewalk connection is to be designed.
- Detectable Warning Panels on the exit only driveway on Johnson Road are not required by ADA. If they are installed by the applicant, they are to meet the city's current standard of Cast Iron with a 4" concrete border. If not, the plans are to be revised; if they are used; a note or detail indicating the use of cast iron is to be provided.

Please do not hesitate to contact me if you or the applicant has any 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 ....



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

July 9, 2018

Ms. Barbara Barhydt
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Application for Level III Site Plan Application
90 Johnson Road
Tax Map 214A/Block A/Lot 1

Dear Barbara:

On behalf of **Transport Leasing Corp.** (Applicant), our office is pleased to provide the accompanying package of submission materials for a Level III Site Plan Application. This submission package is intended to meet the City's Level III Site Plan Submission requirements as outlined in the Level III Site Plan Checklist as well as Section 14-526 of the Code of Ordinances.

PROJECT OVERVIEW

Transport Leasing Corp. proposes to construct an expansion of their existing 17,482 SF office/warehouse building with an additional 22,064± SF to increase the building capacity for a Class A Office space within the 2.66 acres of land located at 90 Johnson Road. The site is currently in the B4 Commercial Business Zone. The building is currently occupied by Charter Communications (aka Spectrum or Time Warner Cable) and they use the space for both office and warehouse functions. Charter will shift these programs to other building space they already occupy on the City Line Drive Campus, if the applicant successfully leases the space to another office user.



Existing Site



Proposed Site

The development will also include new parking lot construction and ancillary site improvements including electrical utility upgrades, drainage etc., for the site. Approximately 3,500 SF of the existing building will be demolished to make way for some parking area on the north end of the site. The following is a summary of the existing and proposed building spaces:

Description	Size (SF)
Existing Ground Level	20,135
Existing Mezzanine	4,114
Total Existing	24,249
Proposed Ground Level	17,262
Proposed Mezzanine	4,757
Proposed Second Level	10,246
Proposed Third level	10,246
Total Proposed	42,511
Net Increase	18,262

Right, Title or Interest

The project site is currently owned by Transport Leasing Corp. and consists of 2.67 acres of land that is included in the City of Portland's Tax Assessors records as Tax Map 214A/Block A/Lots A001 and A003 and included in the June 2014 Subdivision Plan Prepared by Owen Haskell, Inc. A copy of the deed is included in Attachment B. The land has been under common ownership for a long period of time and includes City Line Drive, which is a private way, also owned and maintained by the Applicant.

Zoning Assessment

The project is located in the B4 Commercial Corridor Zone and the proposed general office use identified as an allowable use.

PERMITTED USES

- *General, business and professional offices*

➢ The following dimensional requirements apply in the B4 Commercial Corridor Zone with the applicable as provided information for the proposed layout:

B4 Space and Bulk Dimensional Requirements		
Dimensional Requirements	**Required**	**Provided**
Minimum Lot Size	10,000 SF	202,554 SF
Minimum Street Frontage	60'	447.82'
Minimum Front Yard	20'	41'±
Minimum Side Yard	12'	77'±
Minimum Rear Yard	20'	278'±
Minimum Lot Width	60'	448'±

B4 Space and Bulk Dimensional Requirements		
Maximum Building Height	65'	57"-5'±
Maximum Impervious Surface Ratio	80%	45.7%
Maximum Floor Area Ratio	0.65	0.34
Parking Spaces (1 spaces/400 SF)[1]	95	188

SHORELAND ZONING

The site is not located within the Shoreland Zoning District.

Existing development in the area includes the following:

- Charter Communications occupies the existing building at Lot 7.
- Lobsters Now occupies space within the existing building at 54 City Line Drive. The East Coast Christian Church also continues to control leased area within the 54 City line Drive building although they are not currently occupying the space.
- Canteen Services and SiteOne Landscape supply occupy space at 70 City Line Drive.
- The Portland Jetport and Department of Human Services are located east of the site along the Jetport Boulevard.
- Signalized access at the intersection of Johnson Road, Skyway Drive and the Jetport Boulevard is the primary connection to the Turnpike and points south in South Portland.

The Zoning Assessment table is included in Attachment C to this submission.

PROPOSED DEVELOPMENT

The development program includes the following components:

- Expansion of the remaining 17,234 SF building to include a 1,574 SF addition on the first floor; and
- Construction of a second and third floor to include 10,245 + SF of space on each level for a total of 20,490 SF.
- Vehicular access and circulation throughout the site will be from City Line Drive and Johnson Road. Left turns are prohibited from City Line Drive onto Johnson Road and there is a raised island in Johnson Road prohibiting this movement. Southbound traffic from the site or traffic to/from the Turnpike will typically flow thru the signalized intersection. Local traffic from Johnson Road will also use the signalized intersection or may turn left or right in/out of the proposed parking area, as the proposed access drives are located beyond the median island in Johnson Road.

[1] See Section 14-332 (j)

A total of 188 spaces will be provided for the project with six ADA spaces. This will provide a ratio of 5 spaces per 1,000 SF GLA as is typically required for Class A professional office space in the Portland region.

The site improvements include new parking area construction to consist primarily of porous asphalt pavement. Most of the existing parking area along City Line Drive and near Johnson Road will be rebuilt to make slight grades adjustments and to also provide a new pavement surface. Drainage patterns in the existing parking areas will remain basically unchanged. The new parking area will drain runoff to an existing municipal drainage system in Johnson Road, which ultimately conveys runoff northerly along Johnson Road and Congress Street to a culvert outlet located on Congress Street, opposite the cemetery entrance. From this point a natural drainage tributary conveys any water to the Stroudwater River and ultimately the Fore River. The proposed porous asphalt parking area will consist of materials that will provide both water quality treatment and stormwater runoff storage and control. This approach is nearly identical to the pavement section that was constructed at the Department of Human Services site off Jetport Boulevard, in South Portland, in 2014. The design of that porous pavement section was reviewed and approved by the Maine Department of Environmental Protection and the City of South Portland.



Department of Human Services – South Portland, ME
(Porous asphalt areas appear darker in the image and regular asphalt areas, primarily in the access drives, appear lighter in color. Source – Google™)

WAIVER REQUESTS

The table is included in Attachment D.

FINANCIAL CAPACITY

The Applicant has the means at its disposal for financing the proposed project. A letter from Bangor Savings Bank is included in Attachment E.

A breakdown of the preliminary project cost includes the following:

- Site Work <$900,000
- Structures $3,000,000+

These values are considered preliminary and approximate and are subject to change as actual contractor pricing is obtained. The applicant has owned and managed the property for greater than 30 years and they have maintained a tenant relationship with Charter/Time Warner Cable for greater than 15 years. The applicant should be considered as more than able to financial support the project.

TECHNICAL CAPACITY

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

Civil Engineer	Stephen R. Bushey, P.E. Stantec Consulting Services, Inc. 482 Payne Road Scarborough, ME 04074 (207) 887-3478 – Work (207) 756-9359– Cell stephen.bushey@stantec.com
Surveyor	Owen Haskell, Inc. John Swan 390 US Route 1 Falmouth, ME 04105 (207) 774-0424 – Work jswan@owenhaskell.com
Architect	Alpha Architects 17 Chestnut Street Portland, ME 04101 (207) 761-9500 Mark@alphaarchitects.com
Lighting/Electrical	Bartlett Design Inc. 942 Washington Street Bath, ME 04530 (207) 443-5447

The team of consultants retained has expertise and experience in the design of similar commercial projects. Resumes of key personnel for development team can be provided upon request.

The Applicant also has significant experience in the development and management of commercial projects having managed Transport Leasing for many years and specifically, owned and managed all of the property off City Line Drive over the course of several decades. The applicant should be considered an exemplary landlord and landowner, who have owned and managed commercial property in the Portland region highly successfully. They also own locally, commercial properties in Scarborough at 95 Pleasant Hill Road and Muzzy Road, among others.

STATE AND FEDERAL PERMITS

The project as presented does not require any additional Federal or State level site permits.

CLOSURE

Accompanying this cover letter are the following materials to complete Tab 1 – General Application Documents:

- Attachment A: Level III Site Plan Application Completed Checklist
- Attachment B: Right, Title and Interest
- Attachment C: Zoning Assessment
- Attachment D: Waiver Requests
- Attachment E: Financial Capability

In addition to the information listed above, we are also providing the following materials with our submission:

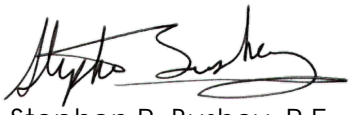
- Tab 2 – Transportation
- Tab 3 – Environmental and Landscape Features
- Tab 4 – Environmental and Stormwater
- Tab 5 – Public Infrastructure and Safety
- Tab 6 – Site Design
- Tab 7 – Construction Management Plan
- Plan Sheets

On behalf of the Transport Leasing Corp., we look forward to your continued assistance on the project and we look forward to the next available workshop meeting with the Planning Board. As is required, once we complete the Planning Board workshop, the applicant will be conducting a Public Informational Meeting. We anticipate this meeting will be conducted prior to the Public Hearing.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



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

Attachments

c: Mark Sanborn, Transport Leasing Corp.

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ATTACHMENT A

LEVEL III APPLICATION SUBMISSION CHECKLIST

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below

Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

Checklist	Items to be Provided
Yes ☑ NA ☐ Plan ☐	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes ☑ NA ☐ Plan ☐	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes ☑ NA ☐ Plan ☐	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes ☐ NA ☑ Plan ☐	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes ☑ NA ☐ Plan ☐	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes ☐ NA ☐ Plan ☑	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS, if applicable • Evidence of existing easements and any proposed easements
Yes ☑ NA ☐ Plan ☐	WAIVER REQUESTS • Written request for waiver describing request and reason. Waiver Table
Yes ☑ NA ☐ Plan ☐	FINANCIAL CAPABILITY • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☑ NA ☐ Plan ☐	TECHNICAL CAPABILITY • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Submit each Tab as one PDF file and bookmark the items as noted below

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☐ ✔	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ☐ ☐ ✔	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
Yes NA Plan ✔ ☐ ☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
Yes NA Plan ☐ ☐ ✔	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ✔ ☐ ☐	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☐ ☐ ✔	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☐ ☐ ✔	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☐ ☐ ✔	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ✔ ☐	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ☐ ☐ ✔	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ☐ ✔ ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ☐ ✔	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ☐ ☐ ✔	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

Tab 4 - ENVIRONMENTAL AND STORMWATER

Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔ ☐ ✔	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔ ☐ ✔	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

Tab 6 - SITE DESIGN	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ✔	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ☐ ✔ ☐	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ☐ ☐ ✔	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ☐ ☐ ✔	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appendix 1)

Yes NA Plan ☐ ✔ ☐	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes NA Plan ✔ ☐ ✔	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ✔ ☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ☐ ✔	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes NA Plan ☐ ✔ ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Check list	
Yes NA Plan ✔ ☐ ☐	**Construction Management Plan** • Construction Management Document and Plan

Level II and Level III Site Plan Checklist

Please upload the following drawings with the listed details into e-Plan

☑ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☑ Existing Conditions

- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☑ Proposed Site Plan

- Ground floor area, and grade elevations for all buildings

☑ Access, Circulation, and Parking

- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☑ Site Considerations

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☑ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

☑ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☑ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☐ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☐ RECORDING PLAT, if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☑ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

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

I, Steve Bushey, P.E. of Stantec, hereby certify that a Neighborhood Meeting was held on Thursday, August 16, 2018 at 5:00 P.M. at the development site at 90 Johnson Road, Portland, Maine for the proposed project located at 90 Johnson Road, Portland, Maine.

I also certify that on Friday, August 3, 2018 (which is at least ten (10) days prior to the Neighborhood Meeting) invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1,000 feet of a proposed industrial subdivision or industrial zone change.
2. Residents on the "interested parties" list.

Signed,

Stephen Bushey, P.E.

August 17, 2018
Date

Attached to this certification are:

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

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

August 3, 2018

Dear Neighbor:

Please join us for a Neighborhood Meeting to discuss the proposed expansion of the existing office/warehouse building at 90 Johnson Rod in Portland, Maine. The project includes interior renovations and an additional 22,064± SF of multi-story Class A Office Space.

Meeting Location:	**Conference Room (look for signs)** **90 Johnson Road** **Portland, Maine**
Meeting Date:	**Thursday, August 16, 2018**
Meeting Time:	**5:00 PM**

The City Code requires that property owners within 500 feet (except notices must be sent to property owners within 1,000 feet for industrial zoning map amendments and industrial subdivisions) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting in advance of our appearances before the Portland Planning Board for a Workshop and Public Hearing, as they consider the Level III Site Plan Application that has been submitted. 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. The meeting will last no more than 30-45 minutes.

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

Sincerely,

STANTEC CONSULTING SERVICES, INC.

Stephen R. Bushey, P.E.
Associate

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

ABUTTERS LIST FROM CITY OF PORTLAND - 90 JOHNSON ROAD PROPERTY - PL-000232-2018

PROPERTY OWNER	OWNER ADDRESS	CITY	STATE	ZIP
Brooklawn Memorial Pk	2002 Congress St	Portland	ME	04102
City Of Portland	389 Congress St	Portland	ME	04101
Maine Turnpike Authority	430 Riverside St	Portland	ME	04103
State Of Maine	16 State House Station	Augusta	ME	04333
Temple Beth El	400 Deering Ave	Portland	ME	04103
Transport Leasing Corp	58 Lowell Junction Rd	Andover	MA	01810

INTERESTED PARTIES LIST FROM CITY OF PORTLAND - 100 FORE STREET PROPERTY

First Name	Last Name	Company Name	Street Number	Street Name	City	State	Zip
Anthony	Donovan		27	Riverview Street	Portland	ME	04102
Barbara	Wood		125	Emery Street	Portland	ME	04102
Chris	Castelsky	Fairpoint Communications	521	East Morehead Street	Charlotte	NC	28202
David	Nowlin		215	Oxford Street	Portland	ME	04102
Deb	Keenan		28	Dorothy Street	Portland	ME	04103
Devon	Platte		26	North Street, #3	Portland	ME	04101
Edward	Suslovic	District 3	46	Kenwood Street	Portland	ME	04103
		Greater Portland Council of Governments	970	Baxter Blvd., 2nd Floor	Portland	ME	04103
Henry	Leclair		209	Range Road	Windham	ME	03087
Janice	Carpenter		9	W. Commonwealth Drive	Portland	ME	04103
Jennifer	Munson	City of Portland	389	Congress Street	Portland	ME	04101
Jesse	Thompson	Kaplan Thompson Architects	424	Fore Street	Portland	ME	04101
John	Leavitt	NE Regional Council of Carpenters	68	Bishop Street, Unit 1	Portland	ME	04103
Len	Anderson		543	Allen Avenue	Portland	ME	04103
Lynn	Clarkson		145	Marlborough Road	Portland	ME	04103
Mary	Griffity		6	E. Prom, Unit #2	Portland	ME	04103
Vahan	Tufankijan	Seaside Healthcare	850	Baxter Boulevard	Portland	ME	04103
Nancy	Bartlett			PO Box 7965	Portland	ME	04112
Pam	Burnside		64	Lester Drive	Portland	ME	04103
Paul	Dubois		1915	Congress Street	Portland	ME	04102
Peggy	Morin		66	Farnham Street	Portland	ME	04101
Philip	Haughey		1660	Soldiers Field Road	Boston	MA	02135
James	Sterling	Portland Society of Architects		PO Box 7305	Portland	ME	04112
Priscilla	LaVallee		190	US Route 1, Unit 2	Falmouth	ME	04105
Rebecca	Halla	Waste Management of Maine	2000	Forest Avenue	Portland	ME	04103
REP Benjami	Dudley III	District 30	9	Ponce Street	Portland	ME	04101
REP Glenn	Cummings	District 37	24	Nevens Street	Portland	ME	04103
Robert	Hains		1369	Hilltop Drive	Naples	FL`	34103

Neighborhood Meeting Sign-In Sheet
Project: 90 Johnson Road, Portland, Maine

Date: August 16, 2018
Time: 5:00 PM
Location: Conference Room, 90 Johnson Road, Portland, Maine

Name	Company	Telephone No.	Email Address
Steve Bushey	STANTEC	207-807-3478	482 Payne Road Scarboro
Laura Hodsdon	Bangor Savings Bank	207-571-2127	280 Fore Street, Portland
MARK H STANBORN	TLC	207-650-9506	95 PLEASANT HILL RD SCARB. ME
Dwight Stinson	TLC		

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

MEETING MINUTES

Project: **90 Johnson Road, Portland, Maine**

Job #: **210801617**

Date: **August 16, 2018 at 5:00 PM**

Location: **Conference Room, 90 Johnson Road, Portland, Maine**

Subject: **Neighborhood Meeting**

Attendees: **Please see attached sign-in sheet**

In accordance with the City of Portland Planning Board Requirements, Transport Leasing Corp. and Stantec conducted a Neighborhood Meeting for the proposed expansion of their existing 17,482 SF office/warehouse building with an additional 22,064 SF of Class A office space. The meeting was held on Thursday, August 16, 2018 at 5:00 P.M. Please see the attached meeting sign-in sheet for a list of people who attended the meeting.

It was a brief meeting as only representatives of the Owner attended the meeting. There were zero (0) abutters or members of the public at the meeting. No questions were asked.

Prepared by Steve Bushey

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TAB 7
Construction Management Plan
90 Johnson Road Office Building
Transport Leasing Corp.

This document and its subsequent attachments comprise The Construction Management Plan being submitted to the City of Portland for the 90 Johnson Road Office Building project at 90 Johnson Road. The Construction Management Plan contains information pertaining to the overall planning and coordination of the project.

The project involves the renovations and construction of a building expansion that will add 18,262 SF of building space onto an existing 24,249 SF building. The expansion includes an increase in building height to add two levels of office space above an existing structure. A portion of the upper level expansion will extend beyond the existing building footprint and be column supported. Site improvements include new porous pavement parking, utilities, and yard work.

A. Construction Management Principles

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

- The construction zone for the building will be fully secured with hard barriers/fencing preventing any access into the site by the public. Barriers are not expected to extend into the Public R.O.W.
- All construction activities will occur within the construction barriers/fencing to ensure the public is never exposed to any risks caused by the activities.
- There will be an onsite staging and unloading area for all deliveries which will prevent any impacts caused by offsite staging of trucks.
- All deliveries will be coordinated and scheduled to ensure that there is no offsite queuing required in Johnson Road or City Line Drive. The Owner plans to schedule as many deliveries as possible in the early morning to limit impact on the surrounding area.
- All construction activities will occur within normal daytime working hours to minimize impacts to the surrounding area.

B. Development Review of Construction Management Plan

The Owner will use a site-specific safety program for all team members who work on the construction site. The public will not be put at risk at any point throughout this project, as all work will be completed within the fenced off jobsite. At no point of the project will the public have access to this job site. Minimizing impacts to areas surrounding the building/construction site will be a primary consideration in the process.

The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood. Such a condition may involve a delay in commencement of construction, if necessary.

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

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

This project will require no anticipated public street openings for utility tie-ins. If found to be necessary, all required permits will be requested and granted by the Department of Public Works prior to any street openings occurring. MUTCD plans will be submitted to and approved by the City of Portland for any traffic disruptions caused by street openings or interruptions to Johnson Road or Jetport Boulevard traffic. City Line Drive is a private way owned and maintained by the applicant.

D. Construction Administration and Communication

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

Mark Sanborn
207.650.9506
mark@abcorental.com

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

E. Construction Schedule

The preliminary construction schedule for the project starts in Fall 2018 and runs through Spring 2019.

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

F. Security & Public Safety

See the Site Plans for fencing and barriers to be used to isolate the construction site from the public. All gates into the project may have Knox locking devices to allow for emergency access.

The fire safety program onsite will consist of the following:

- Fire extinguishers placed throughout the construction site for the duration of the project.

- The new fire alarm system installation will be ongoing throughout the project duration.
- All team members will be briefed on the emergency evacuation plan for the project site prior to starting work.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: This project will not require street openings on Johnson Road.

2. Sewer: This building will need to connect to the public sewer system via an existing on site service connection. All required permits will be submitted for and approved by the Sewer Connection Clerk at the Department of Public Works or City of South Portland Water Resource Protection Department.

3. Traffic Control Plans: There will be periods of time throughout the project where construction activity may impact the existing public street system although this is expected to be very limited. Prior to any interruptions, a MUTCD plan will be created and submitted to the City for approval. The MUTCD will ensure that traffic and safe passage for the public is maintained in a satisfactory manner.

H. Site Management and Controls

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

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

I. Erosion Control and Preservation of Trees

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

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

J. Construction Staging Area

All trucks will be unloaded within the construction site's footprint to avoid impacts on public traffic. An offsite marshalling area will not be required for this project. All materials will be stored onsite and, in a manner, to avoid impacts to site operations and emergency vehicle access to the property.

K. Parking During Construction

Construction parking will be provided onsite. No parking of construction vehicles will be allowed in the Johnson Road R.O.W.

L. Special Measures as Necessary

There will be no special measures necessary for this project.

Please do not hesitate to contact the applicant with any comments, questions, or concerns regarding the Johnson Road project and subsequent Construction Management Plan.

TAB 3 – ENVIRONMENTAL AND LANDSCAPE FEATURES

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 3 and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Preservation of Significant Natural Features (14-526 (b) 1), if applicable

- *Trees, plants, habitats listed on State or Federal list of endangered or threatened*
- *High and moderate value waterfowl and wading habitat*
- *Aquifers on Casco Bay Islands*
- *Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)*
- *Proposed preservation areas and protection measures*
- *Documentation from environmental consultants, determinations from applicable state agencies*

1. *Preservation of Significant Natural Features:*

   a. The existing site retains no prominent significant natural features therefore no issue related to the preservation of these features applies.

   b. Not applicable.

Landscaping and Landscape Preservation (14-526 (b) 2 a)

- *Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)*
- *Protection measures of existing vegetation during construction*
- *Protection measures within Shoreland Zone, if applicable*

2. *Landscaping and Landscape Prevention:*

   a. Landscape Preservation.

      (i) Landscaping has been provided for on the site plan. This include perimeter tree plantings to supplement existing landscaping, primarily along the Johnson Road frontage. Where necessary, the owners will provide grass cover to stabilize non-gravel or non-paved surfaces and add a few street trees for landscaping.

      (ii) Not applicable.

      (iii) Protection measures will be made for existing vegetation during construction.

      (iv) The Applicant will request a waiver from this standard.

Landscaping and Landscape Preservation (14-526 (b) 2 b)

a. *Screening and buffering of service areas and between non-residential and residential uses*
b. *Planting plans with plant schedule and sizes*

2. *Landscaping and Landscape Prevention:*

   b. *Site Landscaping:*

      (i) Landscaped Buffers:

         (a) There are no service or loading areas observable from nearby sidewalks or residential properties.

         (b) The development is not subject to zoning setbacks or buffering requirements.

         (c) Not applicable.

         (d) Not applicable.

Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable

- *Landscaped islands within parking areas (Technical Manual, Section 4)*

2. *Landscaping and Landscape Preservation:*

   a. Site Landscaping.

      (ii) Parking Lot Landscaping:

         a) thru d) Parking lot landscaping has been provided for on the site plans. Included in the landscaping are 34 trees and 34 shrubs and various perennial planting beds.

Street Trees (14-526 (b) 2 b iii)

- Existing Heritage or Feature Trees on site and measures to preserve
- Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

2. *Landscaping and Landscape Preservation:*

   b. Site Landscaping.

      (iii) Street Trees:

         (a) Five Zelkova Street trees are proposed along the Johnson Road frontage.

TAB 4 – ENVIRONMENTAL AND STORMWATER

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 4 and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)

- *Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable*
- *Erosion control plan and measures*
- *Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable*
- *Subsurface sanitary sewage disposal and groundwater protection*

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The project site is currently developed with an existing building and parking area. A full stormwater management report has been prepared to address the development's pre and post development stormwater quantity and quality conditions.

(ii) An Erosion & Sediment Control Plan has been prepared and is included with this submission.

(iii) Not applicable

(iv) See the Stormwater Management Report attached to this narrative for further information.

ATTACHMENT E

FINANCIAL CAPACITY

Bangor Savings Bank

You matter more.

June 14, 2018

Portland Planning Authority
4th Floor City Hall
Portland, Maine 04101

RE: Transport Leasing Corp - Financial Capability Support Letter

To Whom It May Concern:

On behalf of Bangor Savings Bank, I am pleased to provide this letter of support for Transport Leasing Corp. Based on our prior experience with Transport Leasing Corp and its principals, Mark and H. Scott Sanborn, we believe that they have the experience and wherewithal to finance the re-development of commercial real estate projects in the local market.

While this letter of support is not a commitment to lend, Bangor Savings Bank would welcome the opportunity to be a resource to Transport Leasing Corp for financing necessary in connection with new development projects. Transport Leasing Corp, Mark Sanborn and H. Scott Sanborn are highly valued clients of Bangor Savings Bank. All accounts are in good standing and being handled in a professional and satisfactory manner.

Please feel free to call me (207-571-2127) if I can be of assistance in any way.

Yours truly,

Laura Huddy

Laura Huddy
Senior Vice President
Commercial Lending Group

TAB 5 – PUBLIC INFRASTRUCTURE AND SAFETY

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 5 and Section 14-526 of the ordinance.

(c) Public Infrastructure and Community Safety Standards.

Consistency with City Master Plans (14-526 (c) 1)

- *Identify consistency with master plans*
- *Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable*

1. *Consistency with City Master Plans:*

   a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure plans. The site benefits from existing infrastructure to the existing building. The expansion will involve the installation of a sprinkler system to the building which involves a new fire supply water main off the PWD main in City Line drive. The existing building has a sanitary sewer service and the flows from the site ultimately discharge to the South Portland municipal wastewater collection, conveyance and treatment systems, per an inter-municipal agreement.

   b. Sanitary sewer flows from the development will go to the South Portland WWTP per an intra-municipal agreement.

Public Safety and Fire Prevention (14-526 (c) 2)

- *Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)*
- *Emergency vehicle access*
- *Address consistency with public safety standards (Technical Manual, Section 3)*
- *Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist*

2. *Public Safety and Fire Prevention:*

   a. The site has been designed to promote a safe and welcoming office environment.

   b. The site provides access from Johnson Road, City Line Drive and the Jetport Boulevard for emergency vehicles.

   c. There is an existing fire hydrant located at the entrance of City Line Drive off Johnson Road. The existing office building will be fully sprinklered. The proposed expansion will also be sprinklered according to NFPA regulations.

   d. A summary letter to Chief Pirone is included at the end of this section.

Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)

- *Electrical services, including providing underground services*
- *Identify existing and proposed connections for public utilities and required public utility upgrades*
- *Sewer line connections are required, if there is a main within 200 feet*

- *Proposed solid waste management facilities on-site and management for the site*
- *Written evidence of the ability to serve from utility companies, as applicable*

There are existing electrical water, sewer, and gas services to the property from mains located in the abutting streets. Our office has contacted all governing utility agencies and companies and will continue to coordinate the provision of new or updated services, as required throughout the design and construction phases of the project. The following sections outline current conditions and anticipated improvements associated with each system.

Electricity Supply/Communications

Bartlett Design has contacted Central Maine Power Company (CMP) regarding their ability to provide service to the site. Currently, there is overhead service to the existing building. The current proposal is to extend underground services to a new pad mount transformer to service the building. The applicant will continue to coordinate provision of power to the site with CMP. Similarly, communications and cable service will be coordinated with Consolidated and Charter.

Water

There is currently a single domestic water service to the existing building from the twelve-inch main in Johnson Road. The water fire service for the new office building will be run from the 12" main in City Line Drive. The size and locations of any new services will be confirmed once the detailed plumbing needs can be assessed. We are coordinating with the PWD on the service requirements. Once this has been established, a copy of the information will be submitted to the Planning Office.

Wastewater Disposal

There is an existing private sanitary sewer service from Johnson Road which the project site currently ties into.

Natural Gas

There is a gas main located within Johnson Road and City Line Drive and there is a service connection to the existing building. The applicant expects to have natural gas service into the expanded building.

Solid Waste

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

Ability to serve letters will be forwarded to the planning office upon receipt.

ATTACHMENT B

RIGHT, TITLE & INTEREST

A Release Deed from 68 Johnson Road, LLC to Transport Leasing Corp. was executed on February 8, 2018 for the subject property. The Release Deed included in this attachment was recorded in the Cumberland County Registry of Deeds as Book 34659; page 201. Transport Leasing Corp has owned parcel at CBL 214A A001001 since the late 1960's and the lot is identified on the Third Amended Subdivision plan CCRD Book 214, page 211.

DLN #1001840020952

RELEASE DEED

68 JOHNSON ROAD, LLC, a Maine limited liability company with a place of business in Scarborough, Maine, ("Grantor") in consideration of one dollar and other valuable consideration paid, releases to **TRANSPORT LEASING CORP.**, a Maine corporation with a mailing address of 95 Pleasant Hill Road, Scarborough, Maine 04074 ("Grantee") the land in the City of Portland, County of Cumberland and State of Maine and more specifically described as:

> Beginning at the northerly corner of the within described lot on Johnson Street; thence southwesterly along Johnson Street one hundred ninety-six (196) feet to a stake; thence at right angles to Johnson Street two hundred twenty-two and two tenths (222.2) feet southeasterly to a stake; thence northeasterly at right angles to the last mentioned line and parallel to said Johnson Street one hundred ninety-six (196) feet to land now or formerly of Lewis Skillings heirs; thence along the line of land now or formerly of said Skillings heirs two hundred twenty-two and two tenths (222.2) feet to the road at the point of beginning.
>
> The property is subject to a Notice of Layout and Taking by the State of Maine Department of Transportation recorded on October 24, 2000 in the Cumberland County Registry of Deeds in Book 15801, Page 296.
>
> Being the same premises conveyed to the grantor herein by deed from Warren C. Weeks and Anne T. Weeks dated September 15, 2009 and recorded in the Cumberland County Registry of Deeds in Book 27253, Page 38.

Also releasing to said Grantee, all of Grantor's right, title and interest in and to all air rights, water rights and any easements, rights-of-way or other interests in, on, under or to any land, highway, alley, street or right-of-way abutting or adjoining, the above described parcel.

IN WITNESS WHEREOF, the said Mark H. Sanborn, as Vice President of Transport Leasing Corp., the sole member of 68 Johnson Road, LLC has hereunto set his hand this 8th day of February, 2018.

Witness

68 JOHNSON ROAD, LLC,
a Maine limited liability company

By: TRANSPORT LEASING CORP.,
a Maine corporation
Its: Sole Member

By:
Name: MARK H SANBORN
Its: VICE PRESIDENT

DOC :7093 BK:34653 PG:202
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
02/14/2018, 08:24:33A
Register of Deeds Nancy A. Lane E-RECORDED

STATE OF Maine
COUNTY OF Cumberland February 8, 2018

Then personally appeared the above-named Mark H. Sanborn, as Vice President of Transport Leasing Corp., the sole member of 68 Johnson Road, LLC and acknowledged the foregoing instrument to be his free act and deed in said capacity, and the free act and deed of said company.

Before me,

Eben Adams

~~Notary Public~~ Attorney at law

Eben Adams

Typed or printed name of person taking acknowledgment

TAB 6 – SITE DESIGN

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 6 and Section 14-526 of the ordinance.

(d) Site Design Standards.

Massing, Ventilations and Wind Impact (14-526 (d) 1)

- *Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable.*
- *Bulk, location or height impacts on adjoining structures*
- *Identify and locate HVAC equipment and venting away from public spaces and residential properties*
- *Identify screening and manufacturing specifications for noise, if applicable*

1. *Massing, Ventilation and Wind Impact:*

    a. The project proposes reuse of part of an existing building as office space. The 57'-5" building height will be within the allowed height standards of 65'. The project will not result in any significant changes to the wind environment proximate to the site specifically as the site is located to the airfield which is a significantly large open expanse.

    b. The bulk location and height of the proposed building expansion is consistent with the B4 requirements and there are no nearby developed lots that may be negatively impacted. The applicant owns the nearby buildings and they are seeking to improve their overall property to best and highest use, as much as possible.

    c. HVAC venting, if necessary, will be directed through rooftop units and will not impact any adjacent public spaces.

Shadows (14-526 (d) 2), if applicable

- Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

2. *Shadows:*

    a. The proposed building at the site will not cast significant shadows onto neighboring properties, or block access to direct sunlight for structures utilizing solar energy. The Site Layout Plan and Grading and Drainage Plan show the proposed site improvements and their relationships to property lines. The grading plan shows the relative elevations of the building with respect to elevations along the property lines. The nearest building is located greater than 100 feet away from the site.

Snow and Ice Loading (14-526 (d) 3)

- *Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways.*

3. *Snow and Ice Loading:*

    a. The proposed building has been designed and located such that accumulated snow and ice will not fall onto adjacent properties or public ways.

View Corridors (14-526 (d) 4), if applicable

- *Protection of designated view corridors (Portland Design Manual, Appendix 1)*

4. *View Corridors:*

    a. The project entails reuse of the existing office building and expansion. There will be no significant changes to view corridors offered to adjacent properties. Nearby land uses include a cemetery and the airfield runway. Views from the nearby Maine DHHS Building are buffered by a forested area between the properties.

Historic Resources (14-526 (d) 5), if applicable

- *Identify developments within Historic Districts or affecting Designated Landmarks*
- *Certificate of Appropriateness or other evidence*
- *Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required*
- *Address preservation and documentation of Archaeological Resources*

5. *Historic Resources:*
    a. The development is not located in a historic district, historic landscape district or City designated landmark.
    b. The development is not located adjacent to or within 100 feet of a designated landmark, historic district, or historic landscape district.
    c. There are no known archaeological resources on the site

Exterior Lighting (14-526 (d) 6)

- *Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)*
- *Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)*

6. *Exterior Lighting:*
    a. Site Lighting
        (i) All new exterior lighting at the site will be full cutoff LED with no light emitted above the horizontal plane, and in accordance with Section 12

of the Technical Manual. Bartlett Design has completed a site lighting plans that are contained as part of the submission drawings.

b. Architectural and Specialty Lighting

(i) Not applicable to the project.

c. Street Lighting

(i) There are existing street lights along Johnson Road and City Line Drive. No changes are currently contemplated to the existing street light conditions.

Noise and Vibration (14-526 (d) 7)

- *Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements*

7. Noise and Vibration:

The project noise levels will be designed to meet the permitted levels as outlined in the B4 Zone. All HVAC and mechanical equipment is proposed to be mounted on the roof, or otherwise ground mounted and concealed from nearby properties. The property is located adjacent the Portland International Jetport, thus noise and vibration are considered a low priority relative to the adjacent land use.

Signage and Wayfinding (14-526 (d) 8), if applicable

- *Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff*
- *Proposed commercial and directional signage on site*

8. Signage and Wayfinding:

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

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

(ii) Proposed commercial signage is still being designed and subject to a condition of approval.

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

Zone Related Design Standards (14-526 (d) 9)

- Address Historic Preservation Design Review, if applicable
- Address any applicable design review standards by zone

- Address submission requirements from Design Manual, page 1, addressing neighborhood context
- Description of exterior materials, color, finish, and samples

9. *Zoning Related Design Standards:*

    a. The site is located in the B4 zone and there are no specific design standards that apply as outlined in Section 14-526 d.9.

Att. K

STORMWATER MANAGEMENT REPORT

90 JOHNSON ROAD PROPERTY
90 JOHNSON ROAD
PORTLAND, MAINE

PREPARED FOR

TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

PREPARED BY

STANTEC CONSULTING SERVICES, INC.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355

JULY 2018

TABLE OF CONTENTS

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Attachments

Attachment A – Predevelopment Watershed Plan
Attachment B – Post Development Watershed Plan
Attachment C – Predevelopment HydroCAD Computations
Attachment D – Post Development HydroCAD Computations
Attachment E – Water Quality Treatment Summary
Attachment F – Drawdown Computations
Attachment G – Redevelopment Computation
Attachment H – Stormwater Operations & Maintenance Manual

1.0 INTRODUCTION

Stantec Consulting Services, Inc. has been retained to prepare the following Stormwater Management analysis for the building and site expansion project at 90 Johnson Road in Portland, ME.

This Stormwater Management analysis has been prepared in accordance with Section 5 – Portland Stormwater Management of the City of Portland Technical Manual, last revised July 26, 2016. As required within Section 5, this project meets the Basic, General, and Flooding Standards as described in the Maine Department of Environmental Protection (MaineDEP) Chapter 500 Rules for Stormwater Management.

The purpose of this analysis is to identify what measures will be implemented to provide stormwater management for the proposed development specifically for water quality improvement, water quantity control, and erosion and sedimentation control. The analysis was prepared to ensure that the development will not result in any adverse effects to the environment, any natural resources, or to properties located downstream of the project site.

2.0 EXISTING SITE CONDITIONS

The project site, located at 90 Johnson Road, is approximately 2.67 acres and is comprised of two properties identified as Lot 1 and 3 on Map 214-A of the City of Portland Assessor's Map (1.68 and 0.99 acres respectively). The site is currently occupied by an approximately 20,260 SF single story building which houses Spectrum offices and warehouse space. The building is surrounded by parking and access drives with a total of 41 parking spaces currently provided. The adjacent property at 68 Johnson Road was historically occupied by a single-family home but has since been demolished several years ago and the property is currently a grassed lot.

The breakdown of the existing lot coverage is summarized in the table below.

Table 1
Existing Lot Coverage Summary

	Lot 1(90 Johnson)	Lot 3 (68 Johnson)
Roof (sf)	20,260	0
Other Impervious (sf)	34,784	285
Landscaped (sf)	18,137	38,251
Wooded (sf)	0	4,588
Total	73,181 SF (1.68 ac)	43,124 SF (0.99 ac)

A portion of the site's drainage is handled through a series of catch basins and storm drain pipes that discharge to a hydrodynamic separator and then to a vegetated underdrained soil filter. The grassed lot sheet flows towards the Brooklawn Cemetery with runoff being captured in two existing catch basins. All stormwater runoff from the site ultimately outlets to a public storm drain system within Johnson Road and Congress Street[1]. The Congress Street system outfalls

[1] See Congress Street & Johnson Road of Unum HO-3 Offsite Traffic Improvement plans by Sebago Technics, City Archive 00731_003__005 date 06-22-98

opposite the Cemetery entrance on Congress Street and is tributary to the Stroudwater and the Fore River. Per the Soils Conservation Service (SCS) Medium Intensity Soils mapping the site consists of Scantic, Lyman-Tunbridge, and Woodbridge soil groups. These are classified as Hydrologic Soil Group C and D.

3.0 PROPOSED SITE CONDITIONS

The proposed development includes the renovations and expansion of the existing Spectrum office/warehouse building. Spectrum occupies other building space on City Line Drive and may consolidate their operations. The applicant is seeking to update the building at 90 Johnson Road to Class A office space. The existing building will be renovated including a vertical expansion to go from one story to three stories. The existing parking area and drive will also be redeveloped into a more functional layout for the expanded use. The undeveloped grassed lot at 68 Johnson Road will include new development of a parking area and associated stormwater management and landscaping. A total of 188 parking spaces are proposed across the properties. Stormwater management will primarily be in the form of porous pavement within the new parking area. The porous pavement is intended to be much like the porous pavement installed at the nearby State of Maine DHHS building off the Jetport Boulevard. Proposed land coverage of the two lots is summarized in the table below:

Table 2
Proposed Lot Coverage Summary

	Lot 1	Lot 3
Roof (sf)	21,398	0
Other Impervious (sf)	41,153	35,521
Landscaped (sf)	10,630	6,785
Wooded (sf)	0	818
Total	73,181 SF	43,124 SF

Drainage patterns on site mostly remain the same in the post development condition. The portion of the project consisting of redevelopment continues to primarily drain to the existing vegetated underdrained filter adjacent to the project. The area that sheet flows to towards the cemetery property consists of the majority of the new parking area and is handled through porous pavement. This area will be drained through a series of subsurface underdrain pipes and it will discharge into the public storm drain system within Johnson Road.

The porous pavement section, as detailed in the plans, will contain the following materials section:

- 3" Porous Asphalt
- Choker Course Aggregate – Variable Thickness from 4" to 19"
- 12" Reservoir Course of 1.5" to 3" Crushed Stone
- 4" Filter Course
- 12" MDOT Type B aggregate course with collection underdrain.

4.0 REFERENCES

The following reference sources were used in preparation of the stormwater analysis:

1. *Stormwater Management for Maine Volume III – BMP Technical Design Manual*, MaineDEP
2. HydroCAD Stormwater Modeling Software, Version 10.00, build 20
3. *MaineDEP Erosion and Sediment Maine Erosion and Sediment Control BMP's,* October 2016 revision
4. *MaineDEP Chapter 500 Rules for Stormwater Management, June 2014 revision*
5. *Section 5 of the City of Portland Technical Manual Portland Stormwater Management*, July 2016 revision
6. *Chapter XX and XX of the City of Portland Code of Ordinances*
7. *U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey*

5.0 METHOD OF ANALYSIS

The hydrologic analysis for predevelopment and post development conditions has been conducted based upon the methodology contained in the USDA Soil Conservation Service's Technical Releases Nos. 20 and 55 (SCS TR-20 and TR-55). For Caribou, Maine, a 24-hour SCS Type II storm distribution was used for the analysis using the following storm frequencies and rainfall amounts:

Table 3
Hydrologic Analysis Parameters

Storm Event	24-Hour Rainfall
2-Year Storm	3.1 inches
10-Year Storm	4.6 inches
25-Year Storm	5.8 inches

The HydroCAD computer program was used in the analysis. This program allows critical points of the watershed to be analyzed using the SCS TR-20 methodology to calculate the anticipated conditions at these points. Drainage areas are defined with runoff curve numbers, times of concentration and travel time data based on methods outlined in the USDA TR-55 Manual. To assess storage and kinematic effects of runoff, the model uses reservoirs and pipes to imitate actual conditions. Specific hydrologic characteristics including travel times, storage capacity, and the effects of hydraulic head are considered for analysis with this program.

To model the watersheds, the drainage system is represented by a network consisting of three basic components:

- **Subcatchment:** A relatively homogenous area of land that drains into a single reach or pond. Each subcatchment generates a runoff hydrograph.
- **Reach:** A uniform stream, channel, or pipe that conveys water from one point to another reach or pond. The outflow of each reach is determined by a hydrograph routing calculation.
- **Pond:** A pond, swamp, dam, or other impoundment which fills with water from one or more sources and empties in a manner determined by a weir, culvert

or other device(s) at its outlet. A pond may empty into a reach or into another pond. The outflow of each pond is also determined by a hydrograph routing calculation.

6.0 EROSION AND SEDIMENTATION CONTROL (BASIC STANDARD)

Erosion and sedimentation control (ESC) will be accomplished for this project through the application of various temporary construction and permanent ESC BMPs as described in the MaineDEP Erosion and Sediment Control BMP Manual. BMPs proposed include but are not limited to the following:

- Stabilized construction entrance
- Siltation fence
- Temporary construction inlet protection
- Slope stabilization

The contractor will also be required to employ ESC BMPs for any on site material stockpiles as well as any areas left denuded for extended periods of time during construction.

The ESC plan for this project adheres to the requirements detailed in Appendix A of MaineDEP's Chapter 500 Rules for Stormwater Management.

7.0 WATER QUALITY MEASURES (GENERAL STANDARD)

The proposed development includes Stormwater BMPs to provide water quality treatment to onsite runoff as required within the General Standard of MaineDEP's Chapter 500 Rules for Stormwater Management. A portion of the project, described as Lot 1 above, is currently developed with an existing building and associated site features. Therefore, the rules for Redevelopment Projects as described in section 4.C.(2)(d)(i) of Chapter 500 have been applied to this portion of the project. The table below summarizes the redevelopment calculation and establishes the treatment level required for redevelopment activity within the project.

Redevelopment Treatment Summary	
Total Redevelopment Area (ac)	1.68
Existing Impact Rating	4.55
Proposed Impact Rating	4.65
Existing Ranked Impact	2.71
Proposed Ranked Impact	2.77
Resultant Ranked Impact Change	0.06
Redeveloped Area Treatment Designation (Site Law Project)	**60%**

The area described as Lot 3 is considered undeveloped since it has not been maintained and is essentially a meadow in the predevelopment condition. All development on this portion of the project will be considered new development and section 4.C.(2)(a)(i) of Chapter 500 defines the required treatment level.

All BMPs for this project have been designed per the MaineDEP Stormwater BMP Design Manual and previously MaineDEP accepted design measures for Porous surfaces. BMPs included in this project as well as their respective design criteria used are as follows:

Vegetated Underdrained Soil Filter: The existing filter adjacent to the site was originally designed to handle 2.5 acres of impervious area. The portion of the site that has been redeveloped remains tributary to the filter, but the total impervious area to the filter from the site has been reduced. For predevelopment conditions approximately 1.16 acres of impervious area drained to the filter. Approximately 1.03 acres of impervious area will drain to the filter in post development conditions. Therefore, the original design has been determined to be adequate without any modifications.

Manmade Porous Surfaces (Porous Pavement): Four areas constructed of porous pavement have been proposed for this project. The entire area is intended to be a direct entry system in order to provide enough storage within the reservoir layer for flood control. The only run-on provided will be from landscaped areas onto porous sections. The surface and associated section have been designed to the following criteria to provide water quality treatment to runoff:

- Treatment Volume: Storage of a 1" rainfall event has been provided for in the reservoir layer which consists of 12 inches of ¾" crushed stone with an assumed porosity of 40%.
- Minimum Surface Area: The surface area required for porous pavement is 20% of tributary impervious area.
- Drawdown Time: The WQV is required to be released over a 24-48 hour period. This criterion will be met by providing an orifice at the end of each collection pipe system.
- Storage for Flood Control: Storage for a 24 hour 25 year frequency storm event should be provided to meet flooding standards. This will be provided within the reservoir section and will be controlled through a 6" overflow pipe.

The two BMPs described above have been designed per MaineDEP's BMP Design Manual to meet all requirements established within MaineDEP's Chapter 500 Rules for Stormwater Management to meet the General Standard.

The table below summarizes the treatment levels provided for both redevelopment activities and new development for the proposed project.

Table 4
Treatment Summary

Description	Required	Provided
Treated New Impervious (%)	95%	98.77%
Treated New Developed (%)	80%	93.83%
Treated Redeveloped Impervious (%)	N/A	90.51%
Treated Redeveloped Developed (%)	60%	85.49%

8.0 STORMWATER MANAGEMENT FOR FLOOD CONTROL (FLOODING STANDARD)

The stormwater system for this project, consisting of the porous pavement reservoir layer has been designed to provide detention, and in turn, reduce peak discharge rates from stormwater runoff. Specifically, the 2, 10, and 25-year storm events have been analyzed for this project. Table 1 in Section 5 above summarizes rainfall amounts for each of the storm events analyzed. Table 2 below summarizes peak discharge rates for each storm event for the predevelopment and post development conditions:

Table 5
Comparison of Peak Discharge Rates at Point of Interest 1

Storm Event & Condition	POI 1 (cfs)	POI 2 (cfs)
2-Yr Predevelopment	1.36	2.31
2-Yr Post Development	0.09	2.19
Change in 2-Yr Peak Discharge Rate	**-1.27**	**-0.12**
10-Yr Predevelopment	2.77	3.91
10-Yr Post Development	0.19	3.35
Change in 10-Yr Peak Discharge Rate	**-2.58**	**-0.56**
25-Yr Predevelopment	3.96	6.04
25-Yr Post Development	0.27	5.11
Change in 25-Yr Peak Discharge Rate	**-3.69**	**-0.93**

Peak discharge rates for each storm event have been decreased from predevelopment to post development conditions for this project. Therefore, the Flooding Standard has been met.

9.0 MAINTENANCE AND GOOD HOUSEKEEPING MEASURES

The owner or the owner's representative will be responsible for maintenance of all permanent stormwater conveyance and treatment systems constructed as part of this project. Inspection, maintenance, and housekeeping action will adhere to Appendix B of MaineDEP's Chapter 500 Rules for Stormwater Management and includes but is not limited to:

- Inspection of infrastructure at regular intervals as established within Appendix B.
- Removal and proper disposal of sediment build up in conveyance systems and BMPs. This will include regular sweeping and vacuuming of the porous pavement surfaces.
- Replacement of any BMP or portion of BMP that is not operating correctly
- Proper documentation of all maintenance activity

The erosion and sediment control plan and maintenance plan have been established to meet the Basic Standard.

10.0 CONCLUSION

The stormwater management system for the proposed development will mitigate negative effects due to stormwater runoff generated from the development by reducing peak discharge rates, improving water quality of stormwater runoff

discharged from the project site, and eliminating potential erosion and sedimentation due to the development. As a result there will be no adverse effects to downstream conveyance systems of properties due to stormwater runoff from this project.

11.0 ATTACHMENTS

Attachment A – Predevelopment Watershed Plan

Attachment B – Post Development Watershed Plan

Attachment C – Predevelopment HydroCAD Computations

Attachment D – Post Development HydroCAD Computations

Attachment E – Water Quality Treatment Summary

Attachment F – Drawdown Computations

Attachment G – Redevelopment Computation

Attachment H – Stormwater Operations & Maintenance Manual

ATTACHMENT A

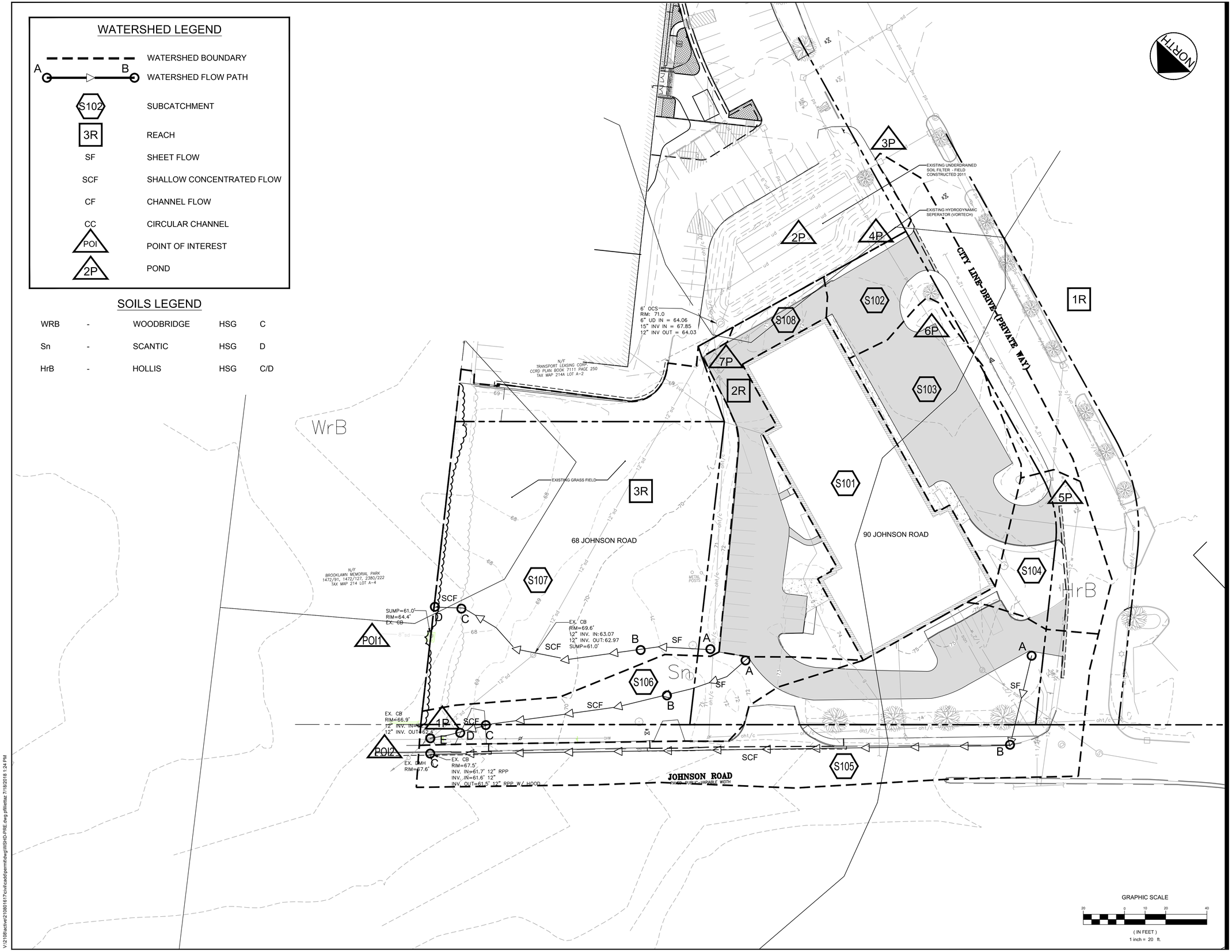
PREDEVELOPMENT WATERSHED PLAN

WATERSHED LEGEND

	WATERSHED BOUNDARY
A — B	WATERSHED FLOW PATH
S102	SUBCATCHMENT
3R	REACH
SF	SHEET FLOW
SCF	SHALLOW CONCENTRATED FLOW
CF	CHANNEL FLOW
CC	CIRCULAR CHANNEL
POI	POINT OF INTEREST
2P	POND

SOILS LEGEND

WRB	-	WOODBRIDGE	HSG	C
Sn	-	SCANTIC	HSG	D
HrB	-	HOLLIS	HSG	C/D



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No.	Revision	By	Appd.	YY.MM.DD
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.07.09
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.03.22

File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.03.22

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
07-09-18
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

PREDEVELOPMENT WATERSHED PLAN

Project No.	Scale
210801617	N.T.S.

Sheet

C-11.0

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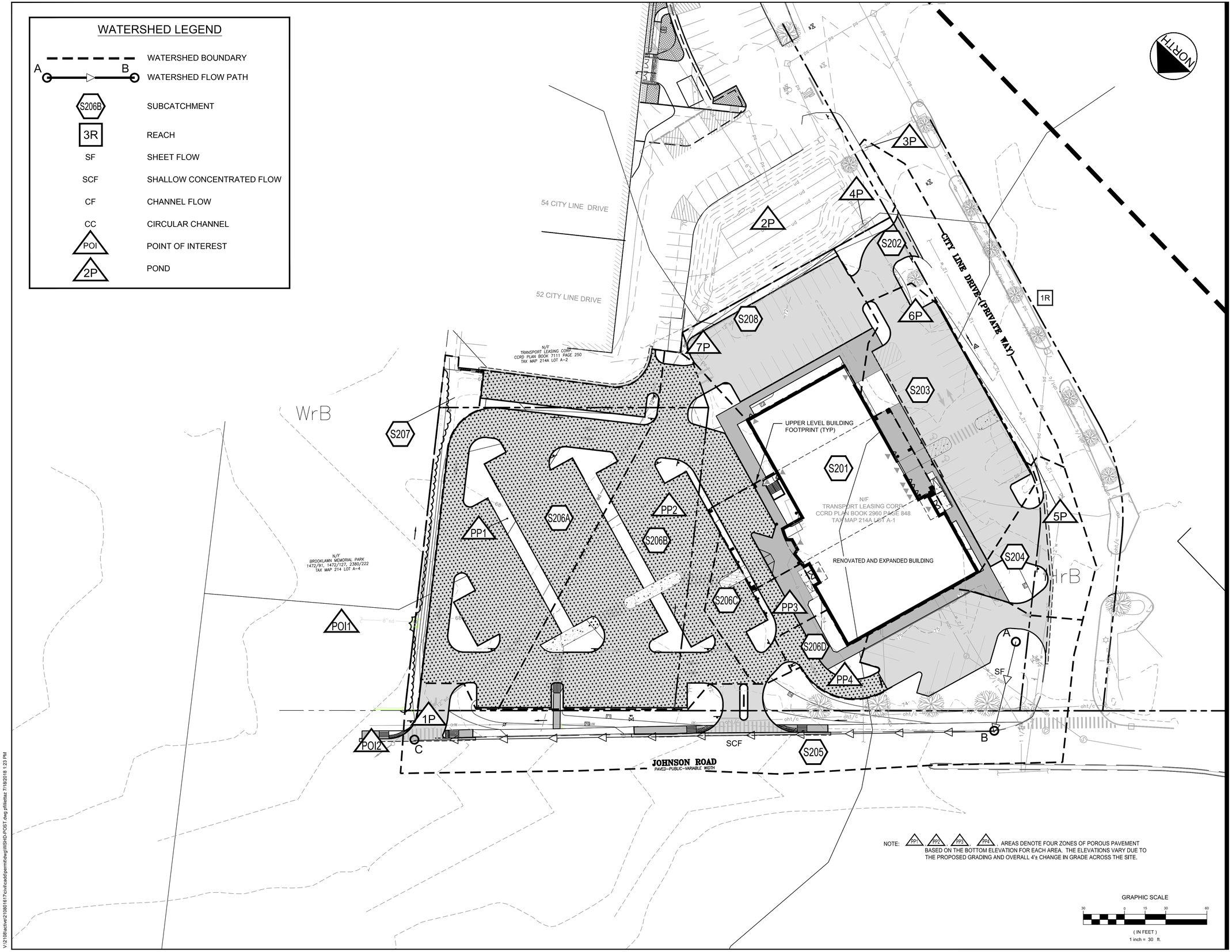
ATTACHMENT B

POST DEVELOPMENT WATERSHED PLAN

WATERSHED LEGEND

- WATERSHED BOUNDARY
- A — B: WATERSHED FLOW PATH
- S206B: SUBCATCHMENT
- 3R: REACH
- SF: SHEET FLOW
- SCF: SHALLOW CONCENTRATED FLOW
- CF: CHANNEL FLOW
- CC: CIRCULAR CHANNEL
- POI: POINT OF INTEREST
- 2P: POND



NOTE: PP1 PP2 PP3 PP4 AREAS DENOTE FOUR ZONES OF POROUS PAVEMENT BASED ON THE BOTTOM ELEVATION FOR EACH AREA. THE ELEVATIONS VARY DUE TO THE PROPOSED GRADING AND OVERALL 4'± CHANGE IN GRADE ACROSS THE SITE.

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

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Stantec

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Scarborough, Maine 04074-8929
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www.stantec.com

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No.	Revision	By	Appd.	YY.MM.DD
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.07.09
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.53.22

File Name:	PBF DWN.	SRB CHKD.	SRB DSGN.	18.05.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSBY
07-09-18
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY

90 JOHNSON ROAD, PORTLAND, MAINE

Title

POST DEVELOPMENT WATERSHED PLAN

Project No.	Scale
210801617	1" = 30'

Sheet

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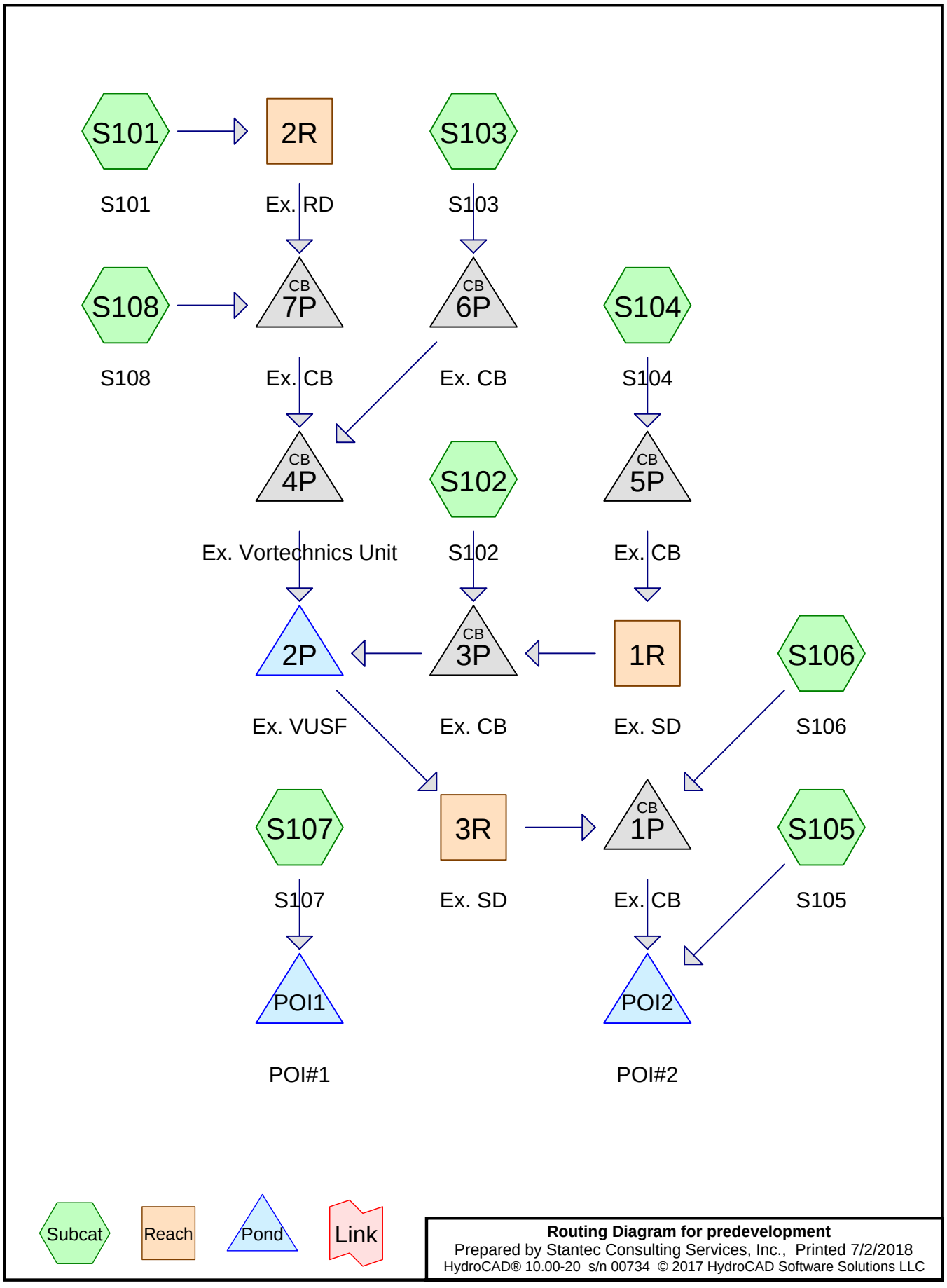
ATTACHMENT C

PREDEVELOPMENT HYDROCAD COMPUTATIONS



Routing Diagram for predevelopment
Prepared by Stantec Consulting Services, Inc., Printed 7/2/2018
HydroCAD® 10.00-20 s/n 00734 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.145	79	50-75% Grass cover, Fair, HSG C (S105)
0.049	84	50-75% Grass cover, Fair, HSG D (S105)
0.248	74	>75% Grass cover, Good, HSG C (S102, S103, S104, S107, S108)
1.124	80	>75% Grass cover, Good, HSG D (S102, S103, S106, S107, S108)
0.643	98	Paved parking, HSG C (S102, S103, S104, S105, S108)
0.794	98	Paved parking, HSG D (S102, S103, S105, S106, S108)
0.192	98	Roofs, HSG C (S101)
0.273	98	Roofs, HSG D (S101)
0.066	70	Woods, Good, HSG C (S107)
0.040	77	Woods, Good, HSG D (S106, S107)
3.573	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.293	HSG C	S101, S102, S103, S104, S105, S107, S108
2.280	HSG D	S101, S102, S103, S105, S106, S107, S108
0.000	Other	
3.573		**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	0.145	0.049	0.000	0.194	50-75% Grass cover, Fair	S105
0.000	0.000	0.248	1.124	0.000	1.372	>75% Grass cover, Good	S102, S103, S104, S106, S107, S108
0.000	0.000	0.643	0.794	0.000	1.437	Paved parking	S102, S103, S104, S105, S106, S108
0.000	0.000	0.192	0.273	0.000	0.465	Roofs	S101
0.000	0.000	0.066	0.040	0.000	0.105	Woods, Good	S106, S107
0.000	**0.000**	**1.293**	**2.280**	**0.000**	**3.573**	**TOTAL AREA**	

Summary for Subcatchment S101: S101

Runoff = 1.41 cfs @ 12.07 hrs, Volume= 0.111 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
11,879	98	Roofs, HSG D
8,381	98	Roofs, HSG C
20,260	98	Weighted Average
20,260		100.00% Impervious Area

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

Summary for Subcatchment S102: S102

Runoff = 0.76 cfs @ 12.07 hrs, Volume= 0.056 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
5,739	98	Paved parking, HSG D
3,723	98	Paved parking, HSG C
1,258	80	>75% Grass cover, Good, HSG D
1,230	74	>75% Grass cover, Good, HSG C
11,950	94	Weighted Average
2,488		20.82% Pervious Area
9,462		79.18% Impervious Area

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

Summary for Subcatchment S103: S103

Runoff = 0.78 cfs @ 12.07 hrs, Volume= 0.058 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
6,090	98	Paved parking, HSG C
4,098	98	Paved parking, HSG D
1,212	74	>75% Grass cover, Good, HSG C
897	80	>75% Grass cover, Good, HSG D
12,297	94	Weighted Average
2,109		17.15% Pervious Area
10,188		82.85% Impervious Area

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

Summary for Subcatchment S104: S104

Runoff = 0.52 cfs @ 12.07 hrs, Volume= 0.040 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
464	74	>75% Grass cover, Good, HSG C
7,115	98	Paved parking, HSG C
7,579	97	Weighted Average
464		6.12% Pervious Area
7,115		93.88% Impervious Area

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

Summary for Subcatchment S105: S105

Runoff = 1.71 cfs @ 12.14 hrs, Volume= 0.146 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
2,137	84	50-75% Grass cover, Fair, HSG D
6,297	79	50-75% Grass cover, Fair, HSG C
13,218	98	Paved parking, HSG D
10,736	98	Paved parking, HSG C
32,388	93	Weighted Average
8,434		26.04% Pervious Area
23,954		73.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
2.7	420	0.0167	2.62		**Shallow Concentrated Flow, B to C**
					Paved Kv= 20.3 fps
10.2	470	Total			

Summary for Subcatchment S106: S106

Runoff = 0.41 cfs @ 12.13 hrs, Volume= 0.033 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
1,431	98	Paved parking, HSG D
210	77	Woods, Good, HSG D
10,099	80	>75% Grass cover, Good, HSG D
11,740	82	Weighted Average
10,309		87.81% Pervious Area
1,431		12.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.19		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
3.9	165	0.0100	0.70		**Shallow Concentrated Flow, B to C**
					Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0400	4.06		**Shallow Concentrated Flow, C to D**
					Paved Kv= 20.3 fps
0.3	25	0.0400	1.40		**Shallow Concentrated Flow, D to E**
					Short Grass Pasture Kv= 7.0 fps
8.6	258	Total			

Summary for Subcatchment S107: S107

Runoff = 1.36 cfs @ 12.11 hrs, Volume= 0.105 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
33,773	80	>75% Grass cover, Good, HSG D
7,381	74	>75% Grass cover, Good, HSG C
2,860	70	Woods, Good, HSG C
1,518	77	Woods, Good, HSG D
45,532	78	Weighted Average
45,532		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
1.8	145	0.0370	1.35		**Shallow Concentrated Flow, B to C**
					Short Grass Pasture Kv= 7.0 fps
0.4	20	0.0300	0.87		**Shallow Concentrated Flow, C to D**
					Woodland Kv= 5.0 fps
7.1	215	Total			

Summary for Subcatchment S108: S108

Runoff = 0.86 cfs @ 12.07 hrs, Volume= 0.063 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
10,119	98	Paved parking, HSG D
330	98	Paved parking, HSG C
2,951	80	>75% Grass cover, Good, HSG D
506	74	>75% Grass cover, Good, HSG C
13,906	93	Weighted Average
3,457		24.86% Pervious Area
10,449		75.14% Impervious Area

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

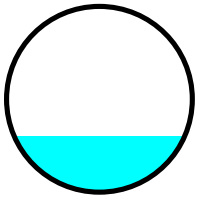
Summary for Reach 1R: Ex. SD

Inflow Area = 0.174 ac, 93.88% Impervious, Inflow Depth = 2.76" for 2-Yr event
Inflow = 0.52 cfs @ 12.07 hrs, Volume= 0.040 af
Outflow = 0.50 cfs @ 12.09 hrs, Volume= 0.040 af, Atten= 3%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.57 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 1.9 min

Peak Storage= 19 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.61 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 95.0' Slope= 0.0054 '/'
Inlet Invert= 67.11', Outlet Invert= 66.60'



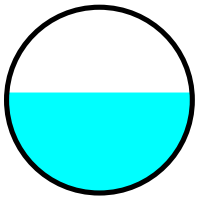
Summary for Reach 2R: Ex. RD

Inflow Area = 0.465 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-Yr event
Inflow = 1.41 cfs @ 12.07 hrs, Volume= 0.111 af
Outflow = 1.38 cfs @ 12.08 hrs, Volume= 0.111 af, Atten= 2%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.21 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 1.0 min

Peak Storage= 27 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.54'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.46 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 63.0' Slope= 0.0048 '/'
Inlet Invert= 67.20', Outlet Invert= 66.90'



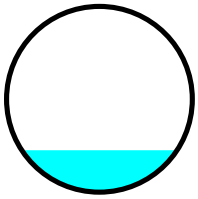
Summary for Reach 3R: Ex. SD

Inflow Area = 1.515 ac, 87.09% Impervious, Inflow Depth = 2.59" for 2-Yr event
Inflow = 0.28 cfs @ 13.58 hrs, Volume= 0.327 af
Outflow = 0.28 cfs @ 13.60 hrs, Volume= 0.327 af, Atten= 0%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.11 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 1.0 min

Peak Storage= 12 cf @ 13.59 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.52 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 94.0' Slope= 0.0050 '/'
Inlet Invert= 62.97', Outlet Invert= 62.50'



Summary for Pond 1P: Ex. CB

Inflow Area = 1.784 ac, 75.78% Impervious, Inflow Depth = 2.42" for 2-Yr event
Inflow = 0.60 cfs @ 12.13 hrs, Volume= 0.360 af
Outflow = 0.60 cfs @ 12.13 hrs, Volume= 0.360 af, Atten= 0%, Lag= 0.0 min
Primary = 0.60 cfs @ 12.13 hrs, Volume= 0.360 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 62.84' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.40'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.40' / 61.70' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.59 cfs @ 12.13 hrs HW=62.84' (Free Discharge)
1=Culvert (Inlet Controls 0.59 cfs @ 1.78 fps)

Summary for Pond 2P: Ex. VUSF

Inflow Area = 1.515 ac, 87.09% Impervious, Inflow Depth = 2.59" for 2-Yr event
Inflow = 4.25 cfs @ 12.08 hrs, Volume= 0.327 af
Outflow = 0.28 cfs @ 13.58 hrs, Volume= 0.327 af, Atten= 93%, Lag= 90.3 min
Primary = 0.28 cfs @ 13.58 hrs, Volume= 0.327 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.99' @ 13.58 hrs Surf.Area= 5,495 sf Storage= 6,804 cf

Plug-Flow detention time= 290.7 min calculated for 0.327 af (100% of inflow)
Center-of-Mass det. time= 290.6 min (1,066.3 - 775.7)

Volume	Invert	Avail.Storage	Storage Description
#1	66.50'	13,049 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.50	3,670	0	0
67.00	4,261	1,983	1,983
68.00	5,510	4,886	6,868
69.00	6,851	6,181	13,049

Device	Routing	Invert	Outlet Devices
#1	Primary	64.01'	**12.0" Round Culvert**
			L= 273.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 64.01' / 63.07' S= 0.0034 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.85'	**9.5" Vert. Orifice/Grate** C= 0.600
#3	Device 2	67.85'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	64.06'	**2.0" Vert. Orifice/Grate** C= 0.600
#5	Device 4	66.50'	**2.410 in/hr Exfiltration over Surface area above 64.06'**
			Excluded Surface area = 0 sf

Primary OutFlow Max=0.28 cfs @ 13.58 hrs HW=67.99' (Free Discharge)
└**1=Culvert** (Passes 0.28 cfs of 3.93 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 1.27 fps)
    └**3=Orifice/Grate** (Passes 0.07 cfs of 0.09 cfs potential flow)
  └**4=Orifice/Grate** (Orifice Controls 0.21 cfs @ 9.44 fps)
    └**5=Exfiltration** (Passes 0.21 cfs of 0.31 cfs potential flow)

Summary for Pond 3P: Ex. CB

Inflow Area = 0.448 ac, 84.88% Impervious, Inflow Depth = 2.57" for 2-Yr event
Inflow = 1.25 cfs @ 12.08 hrs, Volume= 0.096 af
Outflow = 1.25 cfs @ 12.08 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min
Primary = 1.25 cfs @ 12.08 hrs, Volume= 0.096 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.09' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.50'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.21 cfs @ 12.08 hrs HW=67.08' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.21 cfs @ 2.58 fps)

Summary for Pond 4P: Ex. Vortechnics Unit

Inflow Area = 1.067 ac, 88.02% Impervious, Inflow Depth = 2.60" for 2-Yr event
Inflow = 3.00 cfs @ 12.08 hrs, Volume= 0.231 af
Outflow = 3.00 cfs @ 12.08 hrs, Volume= 0.231 af, Atten= 0%, Lag= 0.0 min
Primary = 3.00 cfs @ 12.08 hrs, Volume= 0.231 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.15' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 66.60' / 66.50' S= 0.0033 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.91 cfs @ 12.08 hrs HW=68.10' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.91 cfs @ 3.70 fps)

Summary for Pond 5P: Ex. CB

Inflow Area = 0.174 ac, 93.88% Impervious, Inflow Depth = 2.76" for 2-Yr event
Inflow = 0.52 cfs @ 12.07 hrs, Volume= 0.040 af
Outflow = 0.52 cfs @ 12.07 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min
Primary = 0.52 cfs @ 12.07 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.95' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	68.54'	**12.0" Round Culvert** L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 68.54' / 67.21' S= 0.0171 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.50 cfs @ 12.07 hrs HW=68.94' (Free Discharge)
1=Culvert (Inlet Controls 0.50 cfs @ 1.70 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 0.282 ac, 82.85% Impervious, Inflow Depth = 2.45" for 2-Yr event
Inflow = 0.78 cfs @ 12.07 hrs, Volume= 0.058 af
Outflow = 0.78 cfs @ 12.07 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min
Primary = 0.78 cfs @ 12.07 hrs, Volume= 0.058 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.40' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.80'	**12.0" Round Culvert** L= 71.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.80' / 66.60' S= 0.0028 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.75 cfs @ 12.07 hrs HW=67.39' (Free Discharge)
1=Culvert (Barrel Controls 0.75 cfs @ 2.26 fps)

Summary for Pond 7P: Ex. CB

Inflow Area = 0.784 ac, 89.88% Impervious, Inflow Depth = 2.66" for 2-Yr event
Inflow = 2.23 cfs @ 12.08 hrs, Volume= 0.174 af
Outflow = 2.23 cfs @ 12.08 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min
Primary = 2.23 cfs @ 12.08 hrs, Volume= 0.174 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.41' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.70'	**12.0" Round Culvert** L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.70' / 66.60' S= 0.0007 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.16 cfs @ 12.08 hrs HW=68.35' (Free Discharge)
1=Culvert (Barrel Controls 2.16 cfs @ 2.75 fps)

Summary for Pond POI1: POI#1

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth = 1.20" for 2-Yr event
Inflow = 1.36 cfs @ 12.11 hrs, Volume= 0.105 af
Primary = 1.36 cfs @ 12.11 hrs, Volume= 0.105 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond POI2: POI#2

Inflow Area = 2.528 ac, 75.24% Impervious, Inflow Depth = 2.40" for 2-Yr event
Inflow = 2.31 cfs @ 12.14 hrs, Volume= 0.505 af
Primary = 2.31 cfs @ 12.14 hrs, Volume= 0.505 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Subcatchment S101: S101

Runoff = 2.10 cfs @ 12.07 hrs, Volume= 0.169 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
11,879	98	Roofs, HSG D
8,381	98	Roofs, HSG C
20,260	98	Weighted Average
20,260		100.00% Impervious Area

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

Summary for Subcatchment S102: S102

Runoff = 1.18 cfs @ 12.07 hrs, Volume= 0.089 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
5,739	98	Paved parking, HSG D
3,723	98	Paved parking, HSG C
1,258	80	>75% Grass cover, Good, HSG D
1,230	74	>75% Grass cover, Good, HSG C
11,950	94	Weighted Average
2,488		20.82% Pervious Area
9,462		79.18% Impervious Area

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

Summary for Subcatchment S103: S103

Runoff = 1.22 cfs @ 12.07 hrs, Volume= 0.092 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
6,090	98	Paved parking, HSG C
4,098	98	Paved parking, HSG D
1,212	74	>75% Grass cover, Good, HSG C
897	80	>75% Grass cover, Good, HSG D
12,297	94	Weighted Average
2,109		17.15% Pervious Area
10,188		82.85% Impervious Area

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

Summary for Subcatchment S104: S104

Runoff = 0.78 cfs @ 12.07 hrs, Volume= 0.062 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
464	74	>75% Grass cover, Good, HSG C
7,115	98	Paved parking, HSG C
7,579	97	Weighted Average
464		6.12% Pervious Area
7,115		93.88% Impervious Area

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

Summary for Subcatchment S105: S105

Runoff = 2.70 cfs @ 12.14 hrs, Volume= 0.236 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
2,137	84	50-75% Grass cover, Fair, HSG D
6,297	79	50-75% Grass cover, Fair, HSG C
13,218	98	Paved parking, HSG D
10,736	98	Paved parking, HSG C
32,388	93	Weighted Average
8,434		26.04% Pervious Area
23,954		73.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
2.7	420	0.0167	2.62		**Shallow Concentrated Flow, B to C**
					Paved Kv= 20.3 fps
10.2	470	Total			

Summary for Subcatchment S106: S106

Runoff = 0.78 cfs @ 12.12 hrs, Volume= 0.061 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
1,431	98	Paved parking, HSG D
210	77	Woods, Good, HSG D
10,099	80	>75% Grass cover, Good, HSG D
11,740	82	Weighted Average
10,309		87.81% Pervious Area
1,431		12.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.19		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
3.9	165	0.0100	0.70		**Shallow Concentrated Flow, B to C**
					Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0400	4.06		**Shallow Concentrated Flow, C to D**
					Paved Kv= 20.3 fps
0.3	25	0.0400	1.40		**Shallow Concentrated Flow, D to E**
					Short Grass Pasture Kv= 7.0 fps
8.6	258	Total			

Summary for Subcatchment S107: S107

Runoff = 2.77 cfs @ 12.11 hrs, Volume= 0.207 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
33,773	80	>75% Grass cover, Good, HSG D
7,381	74	>75% Grass cover, Good, HSG C
2,860	70	Woods, Good, HSG C
1,518	77	Woods, Good, HSG D
45,532	78	Weighted Average
45,532		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.10"
1.8	145	0.0370	1.35		**Shallow Concentrated Flow, B to C** Short Grass Pasture Kv= 7.0 fps
0.4	20	0.0300	0.87		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
7.1	215	Total			

Summary for Subcatchment S108: S108

Runoff = 1.35 cfs @ 12.07 hrs, Volume= 0.101 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
10,119	98	Paved parking, HSG D
330	98	Paved parking, HSG C
2,951	80	>75% Grass cover, Good, HSG D
506	74	>75% Grass cover, Good, HSG C
13,906	93	Weighted Average
3,457		24.86% Pervious Area
10,449		75.14% Impervious Area

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

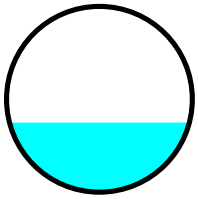
Summary for Reach 1R: Ex. SD

Inflow Area = 0.174 ac, 93.88% Impervious, Inflow Depth = 4.25" for 10-Yr event
Inflow = 0.78 cfs @ 12.07 hrs, Volume= 0.062 af
Outflow = 0.76 cfs @ 12.09 hrs, Volume= 0.062 af, Atten= 3%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.88 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.95 fps, Avg. Travel Time= 1.7 min

Peak Storage= 25 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.61 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 95.0' Slope= 0.0054 '/'
Inlet Invert= 67.11', Outlet Invert= 66.60'



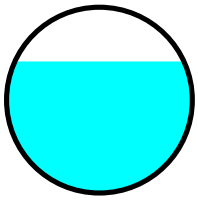
Summary for Reach 2R: Ex. RD

Inflow Area = 0.465 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-Yr event
Inflow = 2.10 cfs @ 12.07 hrs, Volume= 0.169 af
Outflow = 2.06 cfs @ 12.08 hrs, Volume= 0.169 af, Atten= 2%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.50 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.23 fps, Avg. Travel Time= 0.9 min

Peak Storage= 37 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.46 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 63.0' Slope= 0.0048 '/'
Inlet Invert= 67.20', Outlet Invert= 66.90'



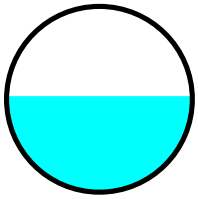
Summary for Reach 3R: Ex. SD

Inflow Area = 1.515 ac, 87.09% Impervious, Inflow Depth = 4.07" for 10-Yr event
Inflow = 1.33 cfs @ 12.50 hrs, Volume= 0.514 af
Outflow = 1.33 cfs @ 12.51 hrs, Volume= 0.514 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.25 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.73 fps, Avg. Travel Time= 0.9 min

Peak Storage= 38 cf @ 12.51 hrs
Average Depth at Peak Storage= 0.52'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.52 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 94.0' Slope= 0.0050 '/'
Inlet Invert= 62.97', Outlet Invert= 62.50'



Summary for Pond 1P: Ex. CB

Inflow Area = 1.784 ac, 75.78% Impervious, Inflow Depth = 3.86" for 10-Yr event
Inflow = 1.59 cfs @ 12.43 hrs, Volume= 0.575 af
Outflow = 1.59 cfs @ 12.43 hrs, Volume= 0.575 af, Atten= 0%, Lag= 0.0 min
Primary = 1.59 cfs @ 12.43 hrs, Volume= 0.575 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 63.19' @ 12.43 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.40'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.40' / 61.70' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.59 cfs @ 12.43 hrs HW=63.19' (Free Discharge)
1=Culvert (Inlet Controls 1.59 cfs @ 2.39 fps)

Summary for Pond 2P: Ex. VUSF

Inflow Area = 1.515 ac, 87.09% Impervious, Inflow Depth = 4.07" for 10-Yr event
Inflow = 6.53 cfs @ 12.08 hrs, Volume= 0.514 af
Outflow = 1.33 cfs @ 12.50 hrs, Volume= 0.514 af, Atten= 80%, Lag= 25.4 min
Primary = 1.33 cfs @ 12.50 hrs, Volume= 0.514 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.47' @ 12.50 hrs Surf.Area= 6,141 sf Storage= 9,611 cf

Plug-Flow detention time= 239.4 min calculated for 0.513 af (100% of inflow)
Center-of-Mass det. time= 239.6 min (1,005.1 - 765.5)

Volume	Invert	Avail.Storage	Storage Description
#1	66.50'	13,049 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.50	3,670	0	0
67.00	4,261	1,983	1,983
68.00	5,510	4,886	6,868
69.00	6,851	6,181	13,049

Device	Routing	Invert	Outlet Devices
#1	Primary	64.01'	**12.0" Round Culvert**
			L= 273.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 64.01' / 63.07' S= 0.0034 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.85'	**9.5" Vert. Orifice/Grate** C= 0.600
#3	Device 2	67.85'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	64.06'	**2.0" Vert. Orifice/Grate** C= 0.600
#5	Device 4	66.50'	**2.410 in/hr Exfiltration over Surface area above 64.06'**
			Excluded Surface area = 0 sf

Primary OutFlow Max=1.33 cfs @ 12.50 hrs HW=68.47' (Free Discharge)
- **1=Culvert** (Passes 1.33 cfs of 4.17 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.11 cfs @ 2.68 fps)
    - **3=Orifice/Grate** (Passes 1.11 cfs of 1.63 cfs potential flow)
  - **4=Orifice/Grate** (Orifice Controls 0.22 cfs @ 10.02 fps)
    - **5=Exfiltration** (Passes 0.22 cfs of 0.34 cfs potential flow)

Summary for Pond 3P: Ex. CB

Inflow Area = 0.448 ac, 84.88% Impervious, Inflow Depth = 4.04" for 10-Yr event
Inflow = 1.92 cfs @ 12.08 hrs, Volume= 0.151 af
Outflow = 1.92 cfs @ 12.08 hrs, Volume= 0.151 af, Atten= 0%, Lag= 0.0 min
Primary = 1.92 cfs @ 12.08 hrs, Volume= 0.151 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.27' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.50'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=67.25' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 1.86 cfs @ 2.95 fps)

Summary for Pond 4P: Ex. Vortechnics Unit

Inflow Area = 1.067 ac, 88.02% Impervious, Inflow Depth = 4.08" for 10-Yr event
Inflow = 4.61 cfs @ 12.08 hrs, Volume= 0.362 af
Outflow = 4.61 cfs @ 12.08 hrs, Volume= 0.362 af, Atten= 0%, Lag= 0.0 min
Primary = 4.61 cfs @ 12.08 hrs, Volume= 0.362 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.46' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 66.60' / 66.50' S= 0.0033 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.46 cfs @ 12.08 hrs HW=69.34' (Free Discharge)
- **1=Culvert** (Inlet Controls 4.46 cfs @ 5.68 fps)

Summary for Pond 5P: Ex. CB

Inflow Area = 0.174 ac, 93.88% Impervious, Inflow Depth = 4.25" for 10-Yr event
Inflow = 0.78 cfs @ 12.07 hrs, Volume= 0.062 af
Outflow = 0.78 cfs @ 12.07 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min
Primary = 0.78 cfs @ 12.07 hrs, Volume= 0.062 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.05' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	68.54'	**12.0" Round Culvert** L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 68.54' / 67.21' S= 0.0171 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.75 cfs @ 12.07 hrs HW=69.04' (Free Discharge)
1=Culvert (Inlet Controls 0.75 cfs @ 1.90 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 0.282 ac, 82.85% Impervious, Inflow Depth = 3.91" for 10-Yr event
Inflow = 1.22 cfs @ 12.07 hrs, Volume= 0.092 af
Outflow = 1.22 cfs @ 12.07 hrs, Volume= 0.092 af, Atten= 0%, Lag= 0.0 min
Primary = 1.22 cfs @ 12.07 hrs, Volume= 0.092 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.58' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.80'	**12.0" Round Culvert** L= 71.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.80' / 66.60' S= 0.0028 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.17 cfs @ 12.07 hrs HW=67.56' (Free Discharge)
1=Culvert (Barrel Controls 1.17 cfs @ 2.54 fps)

Summary for Pond 7P: Ex. CB

Inflow Area = 0.784 ac, 89.88% Impervious, Inflow Depth = 4.14" for 10-Yr event
Inflow = 3.40 cfs @ 12.08 hrs, Volume= 0.270 af
Outflow = 3.40 cfs @ 12.08 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min
Primary = 3.40 cfs @ 12.08 hrs, Volume= 0.270 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.46' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.70'	**12.0" Round Culvert** L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.70' / 66.60' S= 0.0007 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.29 cfs @ 12.08 hrs HW=69.35' (Free Discharge)
1=Culvert (Barrel Controls 3.29 cfs @ 4.20 fps)

Summary for Pond POI1: POI#1

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth = 2.38" for 10-Yr event
Inflow = 2.77 cfs @ 12.11 hrs, Volume= 0.207 af
Primary = 2.77 cfs @ 12.11 hrs, Volume= 0.207 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond POI2: POI#2

Inflow Area = 2.528 ac, 75.24% Impervious, Inflow Depth = 3.85" for 10-Yr event
Inflow = 3.91 cfs @ 12.16 hrs, Volume= 0.811 af
Primary = 3.91 cfs @ 12.16 hrs, Volume= 0.811 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Subcatchment S101: S101

Runoff = 2.66 cfs @ 12.07 hrs, Volume= 0.216 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
11,879	98	Roofs, HSG D
8,381	98	Roofs, HSG C
20,260	98	Weighted Average
20,260		100.00% Impervious Area

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

Summary for Subcatchment S102: S102

Runoff = 1.52 cfs @ 12.07 hrs, Volume= 0.117 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
5,739	98	Paved parking, HSG D
3,723	98	Paved parking, HSG C
1,258	80	>75% Grass cover, Good, HSG D
1,230	74	>75% Grass cover, Good, HSG C
11,950	94	Weighted Average
2,488		20.82% Pervious Area
9,462		79.18% Impervious Area

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

Summary for Subcatchment S103: S103

Runoff = 1.56 cfs @ 12.07 hrs, Volume= 0.120 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
6,090	98	Paved parking, HSG C
4,098	98	Paved parking, HSG D
1,212	74	>75% Grass cover, Good, HSG C
897	80	>75% Grass cover, Good, HSG D
12,297	94	Weighted Average
2,109		17.15% Pervious Area
10,188		82.85% Impervious Area

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

Summary for Subcatchment S104: S104

Runoff = 0.99 cfs @ 12.07 hrs, Volume= 0.079 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
464	74	>75% Grass cover, Good, HSG C
7,115	98	Paved parking, HSG C
7,579	97	Weighted Average
464		6.12% Pervious Area
7,115		93.88% Impervious Area

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

Summary for Subcatchment S105: S105

Runoff = 3.48 cfs @ 12.14 hrs, Volume= 0.309 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
2,137	84	50-75% Grass cover, Fair, HSG D
6,297	79	50-75% Grass cover, Fair, HSG C
13,218	98	Paved parking, HSG D
10,736	98	Paved parking, HSG C
32,388	93	Weighted Average
8,434		26.04% Pervious Area
23,954		73.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
2.7	420	0.0167	2.62		**Shallow Concentrated Flow, B to C**
					Paved Kv= 20.3 fps
10.2	470	Total			

Summary for Subcatchment S106: S106

Runoff = 1.08 cfs @ 12.12 hrs, Volume= 0.085 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
1,431	98	Paved parking, HSG D
210	77	Woods, Good, HSG D
10,099	80	>75% Grass cover, Good, HSG D
11,740	82	Weighted Average
10,309		87.81% Pervious Area
1,431		12.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.19		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
3.9	165	0.0100	0.70		**Shallow Concentrated Flow, B to C**
					Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0400	4.06		**Shallow Concentrated Flow, C to D**
					Paved Kv= 20.3 fps
0.3	25	0.0400	1.40		**Shallow Concentrated Flow, D to E**
					Short Grass Pasture Kv= 7.0 fps
8.6	258	Total			

Summary for Subcatchment S107: S107

Runoff = 3.96 cfs @ 12.10 hrs, Volume= 0.296 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
33,773	80	>75% Grass cover, Good, HSG D
7,381	74	>75% Grass cover, Good, HSG C
2,860	70	Woods, Good, HSG C
1,518	77	Woods, Good, HSG D
45,532	78	Weighted Average
45,532		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
1.8	145	0.0370	1.35		**Shallow Concentrated Flow, B to C**
					Short Grass Pasture Kv= 7.0 fps
0.4	20	0.0300	0.87		**Shallow Concentrated Flow, C to D**
					Woodland Kv= 5.0 fps
7.1	215	Total			

Summary for Subcatchment S108: S108

Runoff = 1.75 cfs @ 12.07 hrs, Volume= 0.133 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
10,119	98	Paved parking, HSG D
330	98	Paved parking, HSG C
2,951	80	>75% Grass cover, Good, HSG D
506	74	>75% Grass cover, Good, HSG C
13,906	93	Weighted Average
3,457		24.86% Pervious Area
10,449		75.14% Impervious Area

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

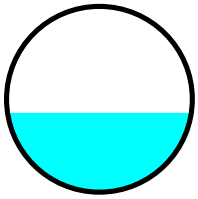
Summary for Reach 1R: Ex. SD

Inflow Area = 0.174 ac, 93.88% Impervious, Inflow Depth = 5.44" for 25-Yr event
Inflow = 0.99 cfs @ 12.07 hrs, Volume= 0.079 af
Outflow = 0.96 cfs @ 12.09 hrs, Volume= 0.079 af, Atten= 3%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.07 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.02 fps, Avg. Travel Time= 1.5 min

Peak Storage= 30 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.43'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.61 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 95.0' Slope= 0.0054 '/'
Inlet Invert= 67.11', Outlet Invert= 66.60'



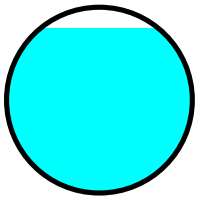
Summary for Reach 2R: Ex. RD

Inflow Area = 0.465 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-Yr event
Inflow = 2.66 cfs @ 12.07 hrs, Volume= 0.216 af
Outflow = 2.61 cfs @ 12.08 hrs, Volume= 0.216 af, Atten= 2%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.56 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.33 fps, Avg. Travel Time= 0.8 min

Peak Storage= 47 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.89'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.46 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 63.0' Slope= 0.0048 '/'
Inlet Invert= 67.20', Outlet Invert= 66.90'



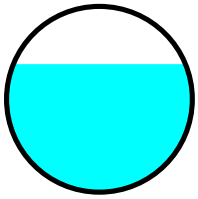
Summary for Reach 3R: Ex. SD

Inflow Area = 1.515 ac, 87.09% Impervious, Inflow Depth = 5.26" for 25-Yr event
Inflow = 2.06 cfs @ 12.45 hrs, Volume= 0.664 af
Outflow = 2.06 cfs @ 12.46 hrs, Volume= 0.664 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.58 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.81 fps, Avg. Travel Time= 0.9 min

Peak Storage= 54 cf @ 12.46 hrs
Average Depth at Peak Storage= 0.69'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.52 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 94.0' Slope= 0.0050 '/'
Inlet Invert= 62.97', Outlet Invert= 62.50'



Summary for Pond 1P: Ex. CB

Inflow Area = 1.784 ac, 75.78% Impervious, Inflow Depth = 5.04" for 25-Yr event
Inflow = 2.62 cfs @ 12.20 hrs, Volume= 0.749 af
Outflow = 2.62 cfs @ 12.20 hrs, Volume= 0.749 af, Atten= 0%, Lag= 0.0 min
Primary = 2.62 cfs @ 12.20 hrs, Volume= 0.749 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 63.67' @ 12.20 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.40'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.40' / 61.70' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.62 cfs @ 12.20 hrs HW=63.67' (Free Discharge)
↑**1=Culvert** (Inlet Controls 2.62 cfs @ 3.33 fps)

Summary for Pond 2P: Ex. VUSF

Inflow Area = 1.515 ac, 87.09% Impervious, Inflow Depth = 5.26" for 25-Yr event
Inflow = 8.34 cfs @ 12.08 hrs, Volume= 0.664 af
Outflow = 2.06 cfs @ 12.45 hrs, Volume= 0.664 af, Atten= 75%, Lag= 22.4 min
Primary = 2.06 cfs @ 12.45 hrs, Volume= 0.664 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.85' @ 12.45 hrs Surf.Area= 6,645 sf Storage= 12,013 cf

Plug-Flow detention time= 213.0 min calculated for 0.663 af (100% of inflow)
Center-of-Mass det. time= 213.3 min (973.4 - 760.2)

Volume	Invert	Avail.Storage	Storage Description
#1	66.50'	13,049 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.50	3,670	0	0
67.00	4,261	1,983	1,983
68.00	5,510	4,886	6,868
69.00	6,851	6,181	13,049

Device	Routing	Invert	Outlet Devices
#1	Primary	64.01'	**12.0" Round Culvert**
			L= 273.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 64.01' / 63.07' S= 0.0034 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.85'	**9.5" Vert. Orifice/Grate** C= 0.600
#3	Device 2	67.85'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	64.06'	**2.0" Vert. Orifice/Grate** C= 0.600
#5	Device 4	66.50'	**2.410 in/hr Exfiltration over Surface area above 64.06'**
			Excluded Surface area = 0 sf

Primary OutFlow Max=2.06 cfs @ 12.45 hrs HW=68.85' (Free Discharge)
└**1=Culvert** (Passes 2.06 cfs of 4.34 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.84 cfs @ 3.73 fps)
    └**3=Orifice/Grate** (Passes 1.84 cfs of 3.56 cfs potential flow)
  └**4=Orifice/Grate** (Orifice Controls 0.23 cfs @ 10.44 fps)
    └**5=Exfiltration** (Passes 0.23 cfs of 0.37 cfs potential flow)

Summary for Pond 3P: Ex. CB

Inflow Area = 0.448 ac, 84.88% Impervious, Inflow Depth = 5.23" for 25-Yr event
Inflow = 2.46 cfs @ 12.08 hrs, Volume= 0.196 af
Outflow = 2.46 cfs @ 12.08 hrs, Volume= 0.196 af, Atten= 0%, Lag= 0.0 min
Primary = 2.46 cfs @ 12.08 hrs, Volume= 0.196 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.41' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.50'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.38 cfs @ 12.08 hrs HW=67.39' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 2.38 cfs @ 3.22 fps)

Summary for Pond 4P: Ex. Vortechnics Unit

Inflow Area = 1.067 ac, 88.02% Impervious, Inflow Depth = 5.27" for 25-Yr event
Inflow = 5.88 cfs @ 12.08 hrs, Volume= 0.468 af
Outflow = 5.88 cfs @ 12.08 hrs, Volume= 0.468 af, Atten= 0%, Lag= 0.0 min
Primary = 5.88 cfs @ 12.08 hrs, Volume= 0.468 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 70.95' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 66.60' / 66.50' S= 0.0033 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=5.70 cfs @ 12.08 hrs HW=70.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.70 cfs @ 7.25 fps)

Summary for Pond 5P: Ex. CB

Inflow Area = 0.174 ac, 93.88% Impervious, Inflow Depth = 5.44" for 25-Yr event
Inflow = 0.99 cfs @ 12.07 hrs, Volume= 0.079 af
Outflow = 0.99 cfs @ 12.07 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min
Primary = 0.99 cfs @ 12.07 hrs, Volume= 0.079 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.13' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	68.54'	**12.0" Round Culvert** L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 68.54' / 67.21' S= 0.0171 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.95 cfs @ 12.07 hrs HW=69.12' (Free Discharge)
1=Culvert (Inlet Controls 0.95 cfs @ 2.04 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 0.282 ac, 82.85% Impervious, Inflow Depth = 5.10" for 25-Yr event
Inflow = 1.56 cfs @ 12.07 hrs, Volume= 0.120 af
Outflow = 1.56 cfs @ 12.07 hrs, Volume= 0.120 af, Atten= 0%, Lag= 0.0 min
Primary = 1.56 cfs @ 12.07 hrs, Volume= 0.120 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.71' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.80'	**12.0" Round Culvert** L= 71.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.80' / 66.60' S= 0.0028 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.51 cfs @ 12.07 hrs HW=67.69' (Free Discharge)
1=Culvert (Barrel Controls 1.51 cfs @ 2.70 fps)

Summary for Pond 7P: Ex. CB

Inflow Area = 0.784 ac, 89.88% Impervious, Inflow Depth = 5.33" for 25-Yr event
Inflow = 4.33 cfs @ 12.08 hrs, Volume= 0.348 af
Outflow = 4.33 cfs @ 12.08 hrs, Volume= 0.348 af, Atten= 0%, Lag= 0.0 min
Primary = 4.33 cfs @ 12.08 hrs, Volume= 0.348 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 70.61' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.70'	**12.0" Round Culvert** L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.70' / 66.60' S= 0.0007 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.20 cfs @ 12.08 hrs HW=70.45' (Free Discharge)
1=Culvert (Barrel Controls 4.20 cfs @ 5.34 fps)

Summary for Pond POI1: POI#1

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth = 3.40" for 25-Yr event
Inflow = 3.96 cfs @ 12.10 hrs, Volume= 0.296 af
Primary = 3.96 cfs @ 12.10 hrs, Volume= 0.296 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

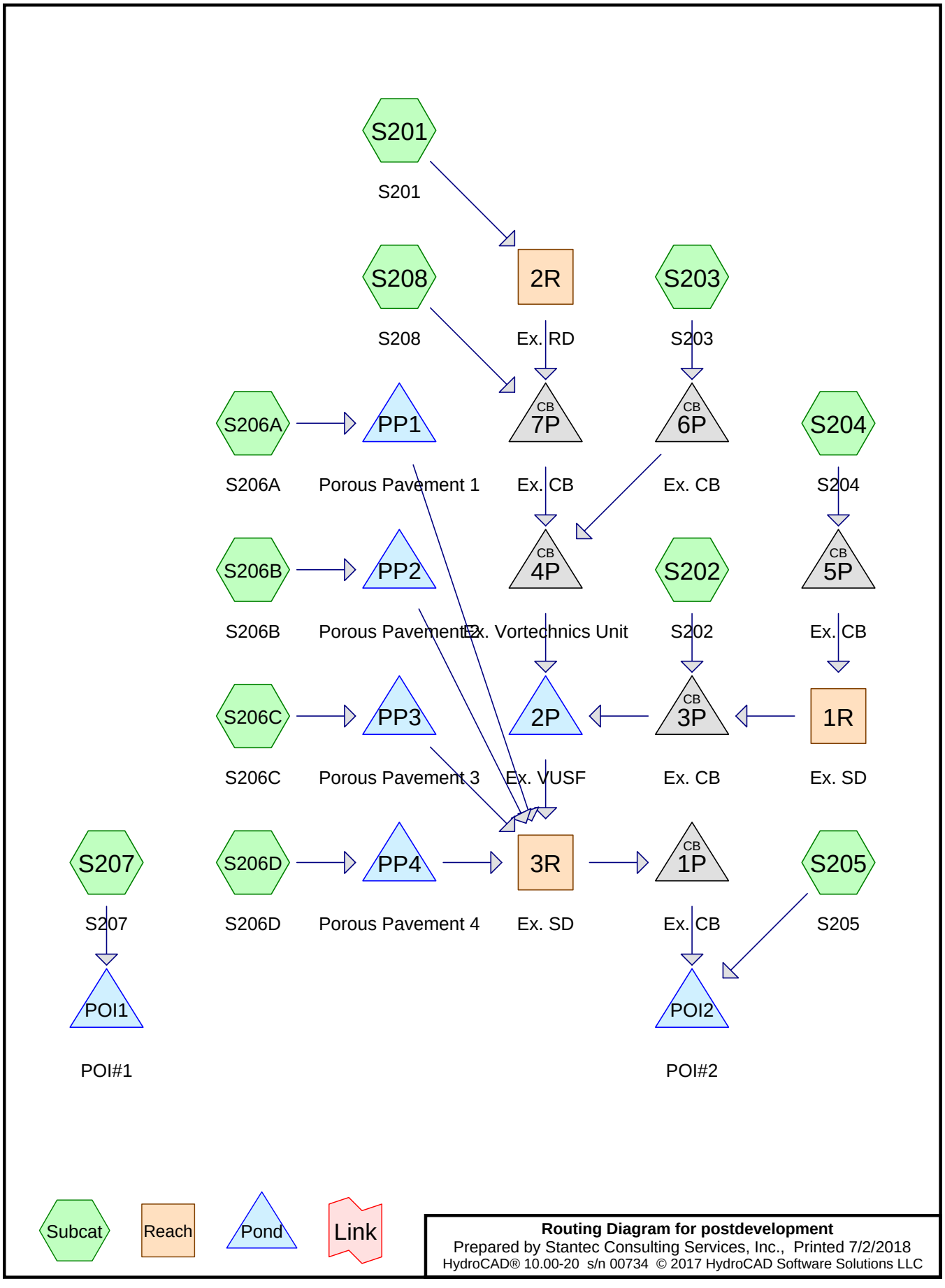
Summary for Pond POI2: POI#2

Inflow Area = 2.528 ac, 75.24% Impervious, Inflow Depth = 5.02" for 25-Yr event
Inflow = 6.04 cfs @ 12.16 hrs, Volume= 1.058 af
Primary = 6.04 cfs @ 12.16 hrs, Volume= 1.058 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

ATTACHMENT D

POST DEVELOPMENT HYDROCAD COMPUTATIONS



Routing Diagram for postdevelopment

Prepared by Stantec Consulting Services, Inc., Printed 7/2/2018

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.254	74	>75% Grass cover, Good, HSG C (S202, S203, S204, S205, S206A, S206D, S207, S208)
0.366	80	>75% Grass cover, Good, HSG D (S202, S203, S205, S206A, S206B, S206C, S206D, S207, S208)
0.802	98	Paved parking, HSG C (S202, S203, S204, S205, S206A, S206D, S208)
1.640	98	Paved parking, HSG D (S202, S203, S205, S206A, S206B, S206C, S206D, S208)
0.210	98	Roofs, HSG C (S201)
0.282	98	Roofs, HSG D (S201)
0.014	70	Woods, Good, HSG C (S207)
0.005	77	Woods, Good, HSG D (S207)
3.573	**94**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.280	HSG C	S201, S202, S203, S204, S205, S206A, S206D, S207, S208
2.294	HSG D	S201, S202, S203, S205, S206A, S206B, S206C, S206D, S207, S208
0.000	Other	
3.573		**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	0.254	0.366	0.000	0.621	>75% Grass cover, Good	S202, S203, S204, S205, S206A, S206B, S206C, S206D, S207, S208
0.000	0.000	0.802	1.640	0.000	2.442	Paved parking	S202, S203, S204, S205, S206A, S206B, S206C, S206D, S208
0.000	0.000	0.210	0.282	0.000	0.491	Roofs	S201
0.000	0.000	0.014	0.005	0.000	0.019	Woods, Good	S207
0.000	**0.000**	**1.280**	**2.294**	**0.000**	**3.573**	**TOTAL AREA**	

Summary for Subcatchment S201: S201

Runoff = 1.49 cfs @ 12.07 hrs, Volume= 0.117 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
12,271	98	Roofs, HSG D
9,127	98	Roofs, HSG C
21,398	98	Weighted Average
21,398		100.00% Impervious Area

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

Summary for Subcatchment S202: S202

Runoff = 0.56 cfs @ 12.07 hrs, Volume= 0.040 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
3,185	98	Paved parking, HSG D
3,505	98	Paved parking, HSG C
1,579	80	>75% Grass cover, Good, HSG D
1,053	74	>75% Grass cover, Good, HSG C
9,322	92	Weighted Average
2,632		28.23% Pervious Area
6,690		71.77% Impervious Area

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

Summary for Subcatchment S203: S203

Runoff = 0.86 cfs @ 12.07 hrs, Volume= 0.067 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
7,931	98	Paved parking, HSG C
4,162	98	Paved parking, HSG D
191	74	>75% Grass cover, Good, HSG C
342	80	>75% Grass cover, Good, HSG D
12,626	97	Weighted Average
533		4.22% Pervious Area
12,093		95.78% Impervious Area

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

Summary for Subcatchment S204: S204

Runoff = 0.40 cfs @ 12.07 hrs, Volume= 0.030 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
1,038	74	>75% Grass cover, Good, HSG C
5,313	98	Paved parking, HSG C
6,351	94	Weighted Average
1,038		16.34% Pervious Area
5,313		83.66% Impervious Area

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

Summary for Subcatchment S205: S205

Runoff = 1.78 cfs @ 12.14 hrs, Volume= 0.150 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
5,415	80	>75% Grass cover, Good, HSG D
4,992	74	>75% Grass cover, Good, HSG C
12,697	98	Paved parking, HSG D
11,718	98	Paved parking, HSG C
34,822	92	Weighted Average
10,407		29.89% Pervious Area
24,415		70.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
2.7	420	0.0167	2.62		**Shallow Concentrated Flow, B to C**
					Paved Kv= 20.3 fps
10.2	470	Total			

Summary for Subcatchment S206A: S206A

Runoff = 1.64 cfs @ 12.07 hrs, Volume= 0.123 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
14,994	98	Paved parking, HSG D
2,860	80	>75% Grass cover, Good, HSG D
5,893	98	Paved parking, HSG C
1,403	74	>75% Grass cover, Good, HSG C
25,150	95	Weighted Average
4,263		16.95% Pervious Area
20,887		83.05% Impervious Area

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

Summary for Subcatchment S206B: S206B

Runoff = 1.69 cfs @ 12.07 hrs, Volume= 0.128 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
3,346	80	>75% Grass cover, Good, HSG D
21,909	98	Paved parking, HSG D
25,255	96	Weighted Average
3,346		13.25% Pervious Area
21,909		86.75% Impervious Area

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

Summary for Subcatchment S206C: S206C

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 0.024 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
517	80	>75% Grass cover, Good, HSG D
4,184	98	Paved parking, HSG D
4,701	96	Weighted Average
517		11.00% Pervious Area
4,184		89.00% Impervious Area

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

Summary for Subcatchment S206D: S206D

Runoff = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
327	80	>75% Grass cover, Good, HSG D
82	74	>75% Grass cover, Good, HSG C
2,180	98	Paved parking, HSG D
239	98	Paved parking, HSG C
2,828	95	Weighted Average
409		14.46% Pervious Area
2,419		85.54% Impervious Area

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

Summary for Subcatchment S207: S207

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
686	80	>75% Grass cover, Good, HSG D
1,738	74	>75% Grass cover, Good, HSG C
596	70	Woods, Good, HSG C
222	77	Woods, Good, HSG D
3,242	75	Weighted Average
3,242		100.00% Pervious Area

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

Summary for Subcatchment S208: S208

Runoff = 0.65 cfs @ 12.07 hrs, Volume= 0.048 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

Area (sf)	CN	Description
8,139	98	Paved parking, HSG D
338	98	Paved parking, HSG C
891	80	>75% Grass cover, Good, HSG D
585	74	>75% Grass cover, Good, HSG C
9,953	95	Weighted Average
1,476		14.83% Pervious Area
8,477		85.17% Impervious Area

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

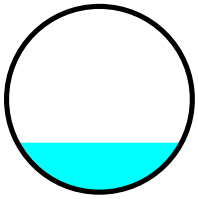
Summary for Reach 1R: Ex. SD

Inflow Area = 0.146 ac, 83.66% Impervious, Inflow Depth = 2.45" for 2-Yr event
Inflow = 0.40 cfs @ 12.07 hrs, Volume= 0.030 af
Outflow = 0.39 cfs @ 12.09 hrs, Volume= 0.030 af, Atten= 3%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.40 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 2.0 min

Peak Storage= 16 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.27'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.61 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 95.0' Slope= 0.0054 '/'
Inlet Invert= 67.11', Outlet Invert= 66.60'



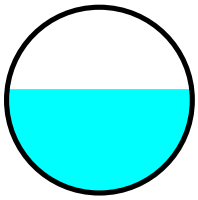
Summary for Reach 2R: Ex. RD

Inflow Area = 0.491 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-Yr event
Inflow = 1.49 cfs @ 12.07 hrs, Volume= 0.117 af
Outflow = 1.46 cfs @ 12.08 hrs, Volume= 0.117 af, Atten= 2%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.25 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.9 min

Peak Storage= 28 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.56'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.46 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 63.0' Slope= 0.0048 '/'
Inlet Invert= 67.20', Outlet Invert= 66.90'



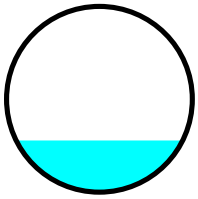
Summary for Reach 3R: Ex. SD

Inflow Area = 2.699 ac, 87.91% Impervious, Inflow Depth > 2.60" for 2-Yr event
Inflow = 0.42 cfs @ 12.80 hrs, Volume= 0.586 af
Outflow = 0.42 cfs @ 12.80 hrs, Volume= 0.585 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.38 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.61 fps, Avg. Travel Time= 1.0 min

Peak Storage= 17 cf @ 12.80 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.52 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 94.0' Slope= 0.0050 '/'
Inlet Invert= 62.97', Outlet Invert= 62.50'



Summary for Pond 1P: Ex. CB

Inflow Area = 2.699 ac, 87.91% Impervious, Inflow Depth > 2.60" for 2-Yr event
Inflow = 0.42 cfs @ 12.80 hrs, Volume= 0.585 af
Outflow = 0.42 cfs @ 12.80 hrs, Volume= 0.585 af, Atten= 0%, Lag= 0.0 min
Primary = 0.42 cfs @ 12.80 hrs, Volume= 0.585 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 62.77' @ 12.80 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.40'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.40' / 61.70' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.42 cfs @ 12.80 hrs HW=62.77' (Free Discharge)
1=Culvert (Inlet Controls 0.42 cfs @ 1.63 fps)

Summary for Pond 2P: Ex. VUSF

Inflow Area = 1.369 ac, 90.48% Impervious, Inflow Depth = 2.65" for 2-Yr event
Inflow = 3.89 cfs @ 12.08 hrs, Volume= 0.302 af
Outflow = 0.21 cfs @ 14.00 hrs, Volume= 0.302 af, Atten= 95%, Lag= 115.4 min
Primary = 0.21 cfs @ 14.00 hrs, Volume= 0.302 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.90' @ 14.00 hrs Surf.Area= 5,381 sf Storage= 6,305 cf

Plug-Flow detention time= 283.6 min calculated for 0.302 af (100% of inflow)
Center-of-Mass det. time= 283.6 min (1,055.1 - 771.5)

Volume	Invert	Avail.Storage	Storage Description
#1	66.50'	13,049 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.50	3,670	0	0
67.00	4,261	1,983	1,983
68.00	5,510	4,886	6,868
69.00	6,851	6,181	13,049

Device	Routing	Invert	Outlet Devices
#1	Primary	64.01'	**12.0" Round Culvert**
			L= 273.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 64.01' / 63.07' S= 0.0034 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.85'	**9.5" Vert. Orifice/Grate** C= 0.600
#3	Device 2	67.85'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	64.06'	**2.0" Vert. Orifice/Grate** C= 0.600
#5	Device 4	66.50'	**2.410 in/hr Exfiltration over Surface area above 64.06'**
			Excluded Surface area = 0 sf

Primary OutFlow Max=0.21 cfs @ 14.00 hrs HW=67.90' (Free Discharge)
└**1=Culvert** (Passes 0.21 cfs of 3.89 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.01 cfs @ 0.74 fps)
    └**3=Orifice/Grate** (Passes 0.01 cfs of 0.01 cfs potential flow)
  └**4=Orifice/Grate** (Orifice Controls 0.20 cfs @ 9.33 fps)
    └**5=Exfiltration** (Passes 0.20 cfs of 0.30 cfs potential flow)

Summary for Pond 3P: Ex. CB

Inflow Area = 0.360 ac, 76.58% Impervious, Inflow Depth = 2.33" for 2-Yr event
Inflow = 0.94 cfs @ 12.08 hrs, Volume= 0.070 af
Outflow = 0.94 cfs @ 12.08 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min
Primary = 0.94 cfs @ 12.08 hrs, Volume= 0.070 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.00' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.50'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.91 cfs @ 12.08 hrs HW=66.99' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.91 cfs @ 2.38 fps)

Summary for Pond 4P: Ex. Vortechnics Unit

Inflow Area = 1.010 ac, 95.43% Impervious, Inflow Depth = 2.76" for 2-Yr event
Inflow = 2.95 cfs @ 12.08 hrs, Volume= 0.233 af
Outflow = 2.95 cfs @ 12.08 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min
Primary = 2.95 cfs @ 12.08 hrs, Volume= 0.233 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.13' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 66.60' / 66.50' S= 0.0033 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.86 cfs @ 12.08 hrs HW=68.08' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.86 cfs @ 3.64 fps)

Summary for Pond 5P: Ex. CB

Inflow Area = 0.146 ac, 83.66% Impervious, Inflow Depth = 2.45" for 2-Yr event
Inflow = 0.40 cfs @ 12.07 hrs, Volume= 0.030 af
Outflow = 0.40 cfs @ 12.07 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.40 cfs @ 12.07 hrs, Volume= 0.030 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.90' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	68.54'	**12.0" Round Culvert** L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 68.54' / 67.21' S= 0.0171 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.39 cfs @ 12.07 hrs HW=68.89' (Free Discharge)
1=Culvert (Inlet Controls 0.39 cfs @ 1.59 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 0.290 ac, 95.78% Impervious, Inflow Depth = 2.76" for 2-Yr event
Inflow = 0.86 cfs @ 12.07 hrs, Volume= 0.067 af
Outflow = 0.86 cfs @ 12.07 hrs, Volume= 0.067 af, Atten= 0%, Lag= 0.0 min
Primary = 0.86 cfs @ 12.07 hrs, Volume= 0.067 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.44' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.80'	**12.0" Round Culvert** L= 71.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.80' / 66.60' S= 0.0028 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.83 cfs @ 12.07 hrs HW=67.42' (Free Discharge)
1=Culvert (Barrel Controls 0.83 cfs @ 2.32 fps)

Summary for Pond 7P: Ex. CB

Inflow Area = 0.720 ac, 95.29% Impervious, Inflow Depth = 2.77" for 2-Yr event
Inflow = 2.10 cfs @ 12.08 hrs, Volume= 0.166 af
Outflow = 2.10 cfs @ 12.08 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.0 min
Primary = 2.10 cfs @ 12.08 hrs, Volume= 0.166 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.32' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.70'	**12.0" Round Culvert** L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.70' / 66.60' S= 0.0007 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.03 cfs @ 12.08 hrs HW=68.27' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.03 cfs @ 2.59 fps)

Summary for Pond POI1: POI#1

Inflow Area = 0.074 ac, 0.00% Impervious, Inflow Depth = 1.03" for 2-Yr event
Inflow = 0.09 cfs @ 12.09 hrs, Volume= 0.006 af
Primary = 0.09 cfs @ 12.09 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond POI2: POI#2

Inflow Area = 3.499 ac, 83.85% Impervious, Inflow Depth > 2.52" for 2-Yr event
Inflow = 2.19 cfs @ 12.14 hrs, Volume= 0.736 af
Primary = 2.19 cfs @ 12.14 hrs, Volume= 0.736 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond PP1: Porous Pavement 1

Inflow Area = 0.577 ac, 83.05% Impervious, Inflow Depth = 2.55" for 2-Yr event
Inflow = 1.64 cfs @ 12.07 hrs, Volume= 0.123 af
Outflow = 0.04 cfs @ 17.10 hrs, Volume= 0.117 af, Atten= 98%, Lag= 301.7 min
Primary = 0.04 cfs @ 17.10 hrs, Volume= 0.117 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.24' @ 17.10 hrs Surf.Area= 20,887 sf Storage= 3,548 cf

Plug-Flow detention time= 891.1 min calculated for 0.117 af (96% of inflow)
Center-of-Mass det. time= 867.6 min (1,648.6 - 781.0)

Volume	Invert	Avail.Storage	Storage Description
#1	67.82'	8,355 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 20,887 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.82	20,887	0	0
68.82	20,887	20,887	20,887

Device	Routing	Invert	Outlet Devices
#1	Primary	66.25'	**1.0" Vert. Orifice/Grate** C= 0.600
#2	Device 4	67.82'	**3.000 in/hr Exfiltration over Surface area above 66.65'** Excluded Surface area = 0 sf
#3	Primary	68.32'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	66.65'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.04 cfs @ 17.10 hrs HW=68.24' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 6.73 fps)
└**4=Orifice/Grate** (Passes 0.04 cfs of 1.10 cfs potential flow)
└**2=Exfiltration** (Passes 0.04 cfs of 1.45 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PP2: Porous Pavement 2

Inflow Area = 0.580 ac, 86.75% Impervious, Inflow Depth = 2.65" for 2-Yr event
Inflow = 1.69 cfs @ 12.07 hrs, Volume= 0.128 af
Outflow = 0.05 cfs @ 15.75 hrs, Volume= 0.128 af, Atten= 97%, Lag= 221.0 min
Primary = 0.05 cfs @ 15.75 hrs, Volume= 0.128 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.75' @ 15.75 hrs Surf.Area= 20,435 sf Storage= 3,291 cf

Plug-Flow detention time= 585.8 min calculated for 0.128 af (100% of inflow)
Center-of-Mass det. time= 586.1 min (1,360.2 - 774.0)

Volume	Invert	Avail.Storage	Storage Description
#1	69.35'	8,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 20,435 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.35	20,435	0	0
70.35	20,435	20,435	20,435

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	69.35'	**3.000 in/hr Exfiltration over Surface area above 68.18'** Excluded Surface area = 0 sf
#3	Primary	69.85'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	68.18'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.05 cfs @ 15.75 hrs HW=69.75' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.05 cfs @ 6.73 fps)
└**4=Orifice/Grate** (Passes 0.05 cfs of 1.09 cfs potential flow)
└**2=Exfiltration** (Passes 0.05 cfs of 1.42 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PP3: Porous Pavement 3

Inflow Area = 0.108 ac, 89.00% Impervious, Inflow Depth = 2.65" for 2-Yr event
Inflow = 0.31 cfs @ 12.07 hrs, Volume= 0.024 af
Outflow = 0.06 cfs @ 12.50 hrs, Volume= 0.024 af, Atten= 80%, Lag= 25.6 min
Primary = 0.06 cfs @ 12.50 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 70.50' @ 12.50 hrs Surf.Area= 5,149 sf Storage= 266 cf

Plug-Flow detention time= 25.8 min calculated for 0.024 af (100% of inflow)
Center-of-Mass det. time= 25.8 min (799.8 - 774.0)

Volume	Invert	Avail.Storage	Storage Description
#1	70.37'	2,060 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 5,149 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.37	5,149	0	0
71.37	5,149	5,149	5,149

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	70.37'	**3.000 in/hr Exfiltration over Surface area above 69.20'** Excluded Surface area = 0 sf
#3	Primary	70.87'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	69.20'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.06 cfs @ 12.50 hrs HW=70.50' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 7.91 fps)
  - **4=Orifice/Grate** (Passes 0.06 cfs of 0.97 cfs potential flow)
    - **2=Exfiltration** (Passes 0.06 cfs of 0.36 cfs potential flow)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PP4: Porous Pavement 4

Inflow Area = 0.065 ac, 85.54% Impervious, Inflow Depth = 2.55" for 2-Yr event
Inflow = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af
Outflow = 0.07 cfs @ 12.29 hrs, Volume= 0.014 af, Atten= 61%, Lag= 13.4 min
Primary = 0.07 cfs @ 12.29 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 71.40' @ 12.29 hrs Surf.Area= 1,473 sf Storage= 73 cf

Plug-Flow detention time= 5.0 min calculated for 0.014 af (100% of inflow)
Center-of-Mass det. time= 5.0 min (786.1 - 781.0)

Volume	Invert	Avail.Storage	Storage Description
#1	71.28'	589 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 1,473 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.28	1,473	0	0
72.28	1,473	1,473	1,473

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	71.28'	**3.000 in/hr Exfiltration over Surface area above 70.11'** Excluded Surface area = 0 sf
#3	Primary	71.78'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	70.11'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.07 cfs @ 12.29 hrs HW=71.40' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 9.14 fps)
  - **4=Orifice/Grate** (Passes 0.07 cfs of 0.97 cfs potential flow)
    - **2=Exfiltration** (Passes 0.07 cfs of 0.10 cfs potential flow)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Subcatchment S201: S201

Runoff = 2.22 cfs @ 12.07 hrs, Volume= 0.179 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
12,271	98	Roofs, HSG D
9,127	98	Roofs, HSG C
21,398	98	Weighted Average
21,398		100.00% Impervious Area

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

Summary for Subcatchment S202: S202

Runoff = 0.89 cfs @ 12.07 hrs, Volume= 0.066 af, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
3,185	98	Paved parking, HSG D
3,505	98	Paved parking, HSG C
1,579	80	>75% Grass cover, Good, HSG D
1,053	74	>75% Grass cover, Good, HSG C
9,322	92	Weighted Average
2,632		28.23% Pervious Area
6,690		71.77% Impervious Area

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

Summary for Subcatchment S203: S203

Runoff = 1.30 cfs @ 12.07 hrs, Volume= 0.103 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
7,931	98	Paved parking, HSG C
4,162	98	Paved parking, HSG D
191	74	>75% Grass cover, Good, HSG C
342	80	>75% Grass cover, Good, HSG D
12,626	97	Weighted Average
533		4.22% Pervious Area
12,093		95.78% Impervious Area

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

Summary for Subcatchment S204: S204

Runoff = 0.63 cfs @ 12.07 hrs, Volume= 0.048 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
1,038	74	>75% Grass cover, Good, HSG C
5,313	98	Paved parking, HSG C
6,351	94	Weighted Average
1,038		16.34% Pervious Area
5,313		83.66% Impervious Area

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

Summary for Subcatchment S205: S205

Runoff = 2.85 cfs @ 12.14 hrs, Volume= 0.246 af, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
5,415	80	>75% Grass cover, Good, HSG D
4,992	74	>75% Grass cover, Good, HSG C
12,697	98	Paved parking, HSG D
11,718	98	Paved parking, HSG C
34,822	92	Weighted Average
10,407		29.89% Pervious Area
24,415		70.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
2.7	420	0.0167	2.62		**Shallow Concentrated Flow, B to C**
					Paved Kv= 20.3 fps
10.2	470	Total			

Summary for Subcatchment S206A: S206A

Runoff = 2.53 cfs @ 12.07 hrs, Volume= 0.194 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
14,994	98	Paved parking, HSG D
2,860	80	>75% Grass cover, Good, HSG D
5,893	98	Paved parking, HSG C
1,403	74	>75% Grass cover, Good, HSG C
25,150	95	Weighted Average
4,263		16.95% Pervious Area
20,887		83.05% Impervious Area

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

Summary for Subcatchment S206B: S206B

Runoff = 2.57 cfs @ 12.07 hrs, Volume= 0.200 af, Depth= 4.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
3,346	80	>75% Grass cover, Good, HSG D
21,909	98	Paved parking, HSG D
25,255	96	Weighted Average
3,346		13.25% Pervious Area
21,909		86.75% Impervious Area

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

Summary for Subcatchment S206C: S206C

Runoff = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af, Depth= 4.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
517	80	>75% Grass cover, Good, HSG D
4,184	98	Paved parking, HSG D
4,701	96	Weighted Average
517		11.00% Pervious Area
4,184		89.00% Impervious Area

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

Summary for Subcatchment S206D: S206D

Runoff = 0.28 cfs @ 12.07 hrs, Volume= 0.022 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
327	80	>75% Grass cover, Good, HSG D
82	74	>75% Grass cover, Good, HSG C
2,180	98	Paved parking, HSG D
239	98	Paved parking, HSG C
2,828	95	Weighted Average
409		14.46% Pervious Area
2,419		85.54% Impervious Area

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

Summary for Subcatchment S207: S207

Runoff = 0.19 cfs @ 12.08 hrs, Volume= 0.013 af, Depth= 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
686	80	>75% Grass cover, Good, HSG D
1,738	74	>75% Grass cover, Good, HSG C
596	70	Woods, Good, HSG C
222	77	Woods, Good, HSG D
3,242	75	Weighted Average
3,242		100.00% Pervious Area

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

Summary for Subcatchment S208: S208

Runoff = 1.00 cfs @ 12.07 hrs, Volume= 0.077 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

Area (sf)	CN	Description
8,139	98	Paved parking, HSG D
338	98	Paved parking, HSG C
891	80	>75% Grass cover, Good, HSG D
585	74	>75% Grass cover, Good, HSG C
9,953	95	Weighted Average
1,476		14.83% Pervious Area
8,477		85.17% Impervious Area

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

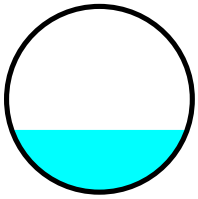
Summary for Reach 1R: Ex. SD

Inflow Area = 0.146 ac, 83.66% Impervious, Inflow Depth = 3.91" for 10-Yr event
Inflow = 0.63 cfs @ 12.07 hrs, Volume= 0.048 af
Outflow = 0.61 cfs @ 12.09 hrs, Volume= 0.048 af, Atten= 3%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.72 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.89 fps, Avg. Travel Time= 1.8 min

Peak Storage= 22 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.61 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 95.0' Slope= 0.0054 '/'
Inlet Invert= 67.11', Outlet Invert= 66.60'



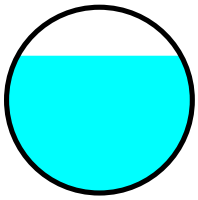
Summary for Reach 2R: Ex. RD

Inflow Area = 0.491 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-Yr event
Inflow = 2.22 cfs @ 12.07 hrs, Volume= 0.179 af
Outflow = 2.18 cfs @ 12.08 hrs, Volume= 0.179 af, Atten= 2%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.53 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.25 fps, Avg. Travel Time= 0.8 min

Peak Storage= 39 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.74'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.46 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 63.0' Slope= 0.0048 '/'
Inlet Invert= 67.20', Outlet Invert= 66.90'



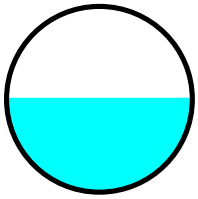
Summary for Reach 3R: Ex. SD

Inflow Area = 2.699 ac, 87.91% Impervious, Inflow Depth > 3.96" for 10-Yr event
Inflow = 1.29 cfs @ 12.55 hrs, Volume= 0.891 af
Outflow = 1.29 cfs @ 12.57 hrs, Volume= 0.891 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.23 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 0.9 min

Peak Storage= 38 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.52 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 94.0' Slope= 0.0050 '/'
Inlet Invert= 62.97', Outlet Invert= 62.50'



Summary for Pond 1P: Ex. CB

Inflow Area = 2.699 ac, 87.91% Impervious, Inflow Depth > 3.96" for 10-Yr event
Inflow = 1.29 cfs @ 12.57 hrs, Volume= 0.891 af
Outflow = 1.29 cfs @ 12.57 hrs, Volume= 0.891 af, Atten= 0%, Lag= 0.0 min
Primary = 1.29 cfs @ 12.57 hrs, Volume= 0.891 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 63.09' @ 12.57 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.40'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.40' / 61.70' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.29 cfs @ 12.57 hrs HW=63.09' (Free Discharge)
1=Culvert (Inlet Controls 1.29 cfs @ 2.23 fps)

Summary for Pond 2P: Ex. VUSF

Inflow Area = 1.369 ac, 90.48% Impervious, Inflow Depth = 4.13" for 10-Yr event
Inflow = 5.94 cfs @ 12.08 hrs, Volume= 0.471 af
Outflow = 1.04 cfs @ 12.53 hrs, Volume= 0.471 af, Atten= 83%, Lag= 27.4 min
Primary = 1.04 cfs @ 12.53 hrs, Volume= 0.471 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.36' @ 12.53 hrs Surf.Area= 5,996 sf Storage= 8,954 cf

Plug-Flow detention time= 248.1 min calculated for 0.471 af (100% of inflow)
Center-of-Mass det. time= 248.2 min (1,010.1 - 761.9)

Volume	Invert	Avail.Storage	Storage Description
#1	66.50'	13,049 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.50	3,670	0	0
67.00	4,261	1,983	1,983
68.00	5,510	4,886	6,868
69.00	6,851	6,181	13,049

Device	Routing	Invert	Outlet Devices
#1	Primary	64.01'	**12.0" Round Culvert**
			L= 273.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 64.01' / 63.07' S= 0.0034 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.85'	**9.5" Vert. Orifice/Grate** C= 0.600
#3	Device 2	67.85'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	64.06'	**2.0" Vert. Orifice/Grate** C= 0.600
#5	Device 4	66.50'	**2.410 in/hr Exfiltration over Surface area above 64.06'**
			Excluded Surface area = 0 sf

Primary OutFlow Max=1.04 cfs @ 12.53 hrs HW=68.36' (Free Discharge)
- **1=Culvert** (Passes 1.04 cfs of 4.11 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.82 cfs @ 2.44 fps)
    - **3=Orifice/Grate** (Passes 0.82 cfs of 1.15 cfs potential flow)
  - **4=Orifice/Grate** (Orifice Controls 0.22 cfs @ 9.89 fps)
    - **5=Exfiltration** (Passes 0.22 cfs of 0.33 cfs potential flow)

Summary for Pond 3P: Ex. CB

Inflow Area = 0.360 ac, 76.58% Impervious, Inflow Depth = 3.79" for 10-Yr event
Inflow = 1.49 cfs @ 12.08 hrs, Volume= 0.114 af
Outflow = 1.49 cfs @ 12.08 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min
Primary = 1.49 cfs @ 12.08 hrs, Volume= 0.114 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.15' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.50'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.44 cfs @ 12.08 hrs HW=67.14' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 1.44 cfs @ 2.72 fps)

Summary for Pond 4P: Ex. Vortechnics Unit

Inflow Area = 1.010 ac, 95.43% Impervious, Inflow Depth = 4.25" for 10-Yr event
Inflow = 4.45 cfs @ 12.08 hrs, Volume= 0.358 af
Outflow = 4.45 cfs @ 12.08 hrs, Volume= 0.358 af, Atten= 0%, Lag= 0.0 min
Primary = 4.45 cfs @ 12.08 hrs, Volume= 0.358 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.31' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 66.60' / 66.50' S= 0.0033 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.31 cfs @ 12.08 hrs HW=69.19' (Free Discharge)
- **1=Culvert** (Inlet Controls 4.31 cfs @ 5.49 fps)

Summary for Pond 5P: Ex. CB

Inflow Area = 0.146 ac, 83.66% Impervious, Inflow Depth = 3.91" for 10-Yr event
Inflow = 0.63 cfs @ 12.07 hrs, Volume= 0.048 af
Outflow = 0.63 cfs @ 12.07 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min
Primary = 0.63 cfs @ 12.07 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.00' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	68.54'	**12.0" Round Culvert** L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 68.54' / 67.21' S= 0.0171 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.61 cfs @ 12.07 hrs HW=68.99' (Free Discharge)
1=Culvert (Inlet Controls 0.61 cfs @ 1.79 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 0.290 ac, 95.78% Impervious, Inflow Depth = 4.25" for 10-Yr event
Inflow = 1.30 cfs @ 12.07 hrs, Volume= 0.103 af
Outflow = 1.30 cfs @ 12.07 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min
Primary = 1.30 cfs @ 12.07 hrs, Volume= 0.103 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.61' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.80'	**12.0" Round Culvert** L= 71.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.80' / 66.60' S= 0.0028 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.25 cfs @ 12.07 hrs HW=67.59' (Free Discharge)
1=Culvert (Barrel Controls 1.25 cfs @ 2.58 fps)

Summary for Pond 7P: Ex. CB

Inflow Area = 0.720 ac, 95.29% Impervious, Inflow Depth = 4.26" for 10-Yr event
Inflow = 3.17 cfs @ 12.08 hrs, Volume= 0.255 af
Outflow = 3.17 cfs @ 12.08 hrs, Volume= 0.255 af, Atten= 0%, Lag= 0.0 min
Primary = 3.17 cfs @ 12.08 hrs, Volume= 0.255 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.21' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.70'	**12.0" Round Culvert** L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.70' / 66.60' S= 0.0007 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.07 cfs @ 12.08 hrs HW=69.12' (Free Discharge)
└**1=Culvert** (Barrel Controls 3.07 cfs @ 3.91 fps)

Summary for Pond POI1: POI#1

Inflow Area = 0.074 ac, 0.00% Impervious, Inflow Depth = 2.13" for 10-Yr event
Inflow = 0.19 cfs @ 12.08 hrs, Volume= 0.013 af
Primary = 0.19 cfs @ 12.08 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond POI2: POI#2

Inflow Area = 3.499 ac, 83.85% Impervious, Inflow Depth > 3.90" for 10-Yr event
Inflow = 3.35 cfs @ 12.15 hrs, Volume= 1.137 af
Primary = 3.35 cfs @ 12.15 hrs, Volume= 1.137 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond PP1: Porous Pavement 1

Inflow Area = 0.577 ac, 83.05% Impervious, Inflow Depth = 4.02" for 10-Yr event
Inflow = 2.53 cfs @ 12.07 hrs, Volume= 0.194 af
Outflow = 0.10 cfs @ 14.97 hrs, Volume= 0.161 af, Atten= 96%, Lag= 174.0 min
Primary = 0.10 cfs @ 14.97 hrs, Volume= 0.161 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.47' @ 14.97 hrs Surf.Area= 20,887 sf Storage= 5,411 cf

Plug-Flow detention time= 780.7 min calculated for 0.160 af (83% of inflow)
Center-of-Mass det. time= 712.8 min (1,482.3 - 769.5)

Volume	Invert	Avail.Storage	Storage Description
#1	67.82'	8,355 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 20,887 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.82	20,887	0	0
68.82	20,887	20,887	20,887

Device	Routing	Invert	Outlet Devices
#1	Primary	66.25'	**1.0" Vert. Orifice/Grate** C= 0.600
#2	Device 4	67.82'	**3.000 in/hr Exfiltration over Surface area above 66.65'** Excluded Surface area = 0 sf
#3	Primary	68.32'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	66.65'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.10 cfs @ 14.97 hrs HW=68.47' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 7.10 fps)
  - **4=Orifice/Grate** (Passes 0.04 cfs of 1.18 cfs potential flow)
    - **2=Exfiltration** (Passes 0.04 cfs of 1.45 cfs potential flow)
- **3=Orifice/Grate** (Orifice Controls 0.06 cfs @ 1.31 fps)

Summary for Pond PP2: Porous Pavement 2

Inflow Area = 0.580 ac, 86.75% Impervious, Inflow Depth = 4.14" for 10-Yr event
Inflow = 2.57 cfs @ 12.07 hrs, Volume= 0.200 af
Outflow = 0.11 cfs @ 14.71 hrs, Volume= 0.200 af, Atten= 96%, Lag= 158.1 min
Primary = 0.11 cfs @ 14.71 hrs, Volume= 0.200 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.99' @ 14.71 hrs Surf.Area= 20,435 sf Storage= 5,209 cf

Plug-Flow detention time= 727.0 min calculated for 0.200 af (100% of inflow)
Center-of-Mass det. time= 726.8 min (1,490.3 - 763.5)

Volume	Invert	Avail.Storage	Storage Description
#1	69.35'	8,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 20,435 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.35	20,435	0	0
70.35	20,435	20,435	20,435

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	69.35'	**3.000 in/hr Exfiltration over Surface area above 68.18'** Excluded Surface area = 0 sf
#3	Primary	69.85'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	68.18'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.11 cfs @ 14.71 hrs HW=69.99' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 7.12 fps)
  - **4=Orifice/Grate** (Passes 0.06 cfs of 1.18 cfs potential flow)
    - **2=Exfiltration** (Passes 0.06 cfs of 1.42 cfs potential flow)
- **3=Orifice/Grate** (Orifice Controls 0.06 cfs @ 1.26 fps)

Summary for Pond PP3: Porous Pavement 3

Inflow Area = 0.108 ac, 89.00% Impervious, Inflow Depth = 4.14" for 10-Yr event
Inflow = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af
Outflow = 0.06 cfs @ 12.59 hrs, Volume= 0.037 af, Atten= 87%, Lag= 31.4 min
Primary = 0.06 cfs @ 12.59 hrs, Volume= 0.037 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 70.61' @ 12.59 hrs Surf.Area= 5,149 sf Storage= 501 cf

Plug-Flow detention time= 51.6 min calculated for 0.037 af (100% of inflow)
Center-of-Mass det. time= 51.6 min (815.1 - 763.5)

Volume	Invert	Avail.Storage	Storage Description
#1	70.37'	2,060 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 5,149 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.37	5,149	0	0
71.37	5,149	5,149	5,149

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	70.37'	**3.000 in/hr Exfiltration over Surface area above 69.20'** Excluded Surface area = 0 sf
#3	Primary	70.87'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	69.20'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.06 cfs @ 12.59 hrs HW=70.61' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 8.08 fps)
  - **4=Orifice/Grate** (Passes 0.06 cfs of 1.02 cfs potential flow)
    - **2=Exfiltration** (Passes 0.06 cfs of 0.36 cfs potential flow)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PP4: Porous Pavement 4

Inflow Area = 0.065 ac, 85.54% Impervious, Inflow Depth = 4.02" for 10-Yr event
Inflow = 0.28 cfs @ 12.07 hrs, Volume= 0.022 af
Outflow = 0.07 cfs @ 12.43 hrs, Volume= 0.022 af, Atten= 74%, Lag= 21.4 min
Primary = 0.07 cfs @ 12.43 hrs, Volume= 0.022 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 71.59' @ 12.43 hrs Surf.Area= 1,473 sf Storage= 184 cf

Plug-Flow detention time= 12.5 min calculated for 0.022 af (100% of inflow)
Center-of-Mass det. time= 12.5 min (782.0 - 769.5)

Volume	Invert	Avail.Storage	Storage Description
#1	71.28'	589 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 1,473 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.28	1,473	0	0
72.28	1,473	1,473	1,473

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	71.28'	**3.000 in/hr Exfiltration over Surface area above 70.11'** Excluded Surface area = 0 sf
#3	Primary	71.78'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	70.11'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.07 cfs @ 12.43 hrs HW=71.59' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.07 cfs @ 9.38 fps)
  - **4=Orifice/Grate** (Passes 0.07 cfs of 1.05 cfs potential flow)
    - **2=Exfiltration** (Passes 0.07 cfs of 0.10 cfs potential flow)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Subcatchment S201: S201

Runoff = 2.81 cfs @ 12.07 hrs, Volume= 0.228 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
12,271	98	Roofs, HSG D
9,127	98	Roofs, HSG C
21,398	98	Weighted Average
21,398		100.00% Impervious Area

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

Summary for Subcatchment S202: S202

Runoff = 1.16 cfs @ 12.07 hrs, Volume= 0.087 af, Depth= 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
3,185	98	Paved parking, HSG D
3,505	98	Paved parking, HSG C
1,579	80	>75% Grass cover, Good, HSG D
1,053	74	>75% Grass cover, Good, HSG C
9,322	92	Weighted Average
2,632		28.23% Pervious Area
6,690		71.77% Impervious Area

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

Summary for Subcatchment S203: S203

Runoff = 1.65 cfs @ 12.07 hrs, Volume= 0.132 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
7,931	98	Paved parking, HSG C
4,162	98	Paved parking, HSG D
191	74	>75% Grass cover, Good, HSG C
342	80	>75% Grass cover, Good, HSG D
12,626	97	Weighted Average
533		4.22% Pervious Area
12,093		95.78% Impervious Area

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

Summary for Subcatchment S204: S204

Runoff = 0.81 cfs @ 12.07 hrs, Volume= 0.062 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
1,038	74	>75% Grass cover, Good, HSG C
5,313	98	Paved parking, HSG C
6,351	94	Weighted Average
1,038		16.34% Pervious Area
5,313		83.66% Impervious Area

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

Summary for Subcatchment S205: S205

Runoff = 3.69 cfs @ 12.14 hrs, Volume= 0.325 af, Depth= 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
5,415	80	>75% Grass cover, Good, HSG D
4,992	74	>75% Grass cover, Good, HSG C
12,697	98	Paved parking, HSG D
11,718	98	Paved parking, HSG C
34,822	92	Weighted Average
10,407		29.89% Pervious Area
24,415		70.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow, A to B**
					Grass: Short n= 0.150 P2= 3.10"
2.7	420	0.0167	2.62		**Shallow Concentrated Flow, B to C**
					Paved Kv= 20.3 fps
10.2	470	Total			

Summary for Subcatchment S206A: S206A

Runoff = 3.23 cfs @ 12.07 hrs, Volume= 0.251 af, Depth= 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
14,994	98	Paved parking, HSG D
2,860	80	>75% Grass cover, Good, HSG D
5,893	98	Paved parking, HSG C
1,403	74	>75% Grass cover, Good, HSG C
25,150	95	Weighted Average
4,263		16.95% Pervious Area
20,887		83.05% Impervious Area

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

Summary for Subcatchment S206B: S206B

Runoff = 3.27 cfs @ 12.07 hrs, Volume= 0.257 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
3,346	80	>75% Grass cover, Good, HSG D
21,909	98	Paved parking, HSG D
25,255	96	Weighted Average
3,346		13.25% Pervious Area
21,909		86.75% Impervious Area

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

Summary for Subcatchment S206C: S206C

Runoff = 0.61 cfs @ 12.07 hrs, Volume= 0.048 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
517	80	>75% Grass cover, Good, HSG D
4,184	98	Paved parking, HSG D
4,701	96	Weighted Average
517		11.00% Pervious Area
4,184		89.00% Impervious Area

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

Summary for Subcatchment S206D: S206D

Runoff = 0.36 cfs @ 12.07 hrs, Volume= 0.028 af, Depth= 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
327	80	>75% Grass cover, Good, HSG D
82	74	>75% Grass cover, Good, HSG C
2,180	98	Paved parking, HSG D
239	98	Paved parking, HSG C
2,828	95	Weighted Average
409		14.46% Pervious Area
2,419		85.54% Impervious Area

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

Summary for Subcatchment S207: S207

Runoff = 0.27 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 3.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
686	80	>75% Grass cover, Good, HSG D
1,738	74	>75% Grass cover, Good, HSG C
596	70	Woods, Good, HSG C
222	77	Woods, Good, HSG D
3,242	75	Weighted Average
3,242		100.00% Pervious Area

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

Summary for Subcatchment S208: S208

Runoff = 1.28 cfs @ 12.07 hrs, Volume= 0.099 af, Depth= 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

Area (sf)	CN	Description
8,139	98	Paved parking, HSG D
338	98	Paved parking, HSG C
891	80	>75% Grass cover, Good, HSG D
585	74	>75% Grass cover, Good, HSG C
9,953	95	Weighted Average
1,476		14.83% Pervious Area
8,477		85.17% Impervious Area

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

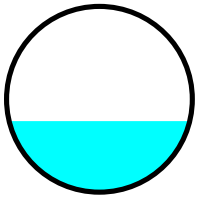
Summary for Reach 1R: Ex. SD

Inflow Area = 0.146 ac, 83.66% Impervious, Inflow Depth = 5.10" for 25-Yr event
Inflow = 0.81 cfs @ 12.07 hrs, Volume= 0.062 af
Outflow = 0.79 cfs @ 12.09 hrs, Volume= 0.062 af, Atten= 3%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.91 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.96 fps, Avg. Travel Time= 1.7 min

Peak Storage= 26 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.61 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 95.0' Slope= 0.0054 '/'
Inlet Invert= 67.11', Outlet Invert= 66.60'



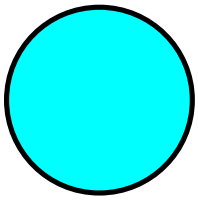
Summary for Reach 2R: Ex. RD

Inflow Area = 0.491 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-Yr event
Inflow = 2.81 cfs @ 12.07 hrs, Volume= 0.228 af
Outflow = 2.46 cfs @ 12.10 hrs, Volume= 0.228 af, Atten= 12%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.57 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.35 fps, Avg. Travel Time= 0.8 min

Peak Storage= 51 cf @ 12.08 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.46 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 63.0' Slope= 0.0048 '/'
Inlet Invert= 67.20', Outlet Invert= 66.90'



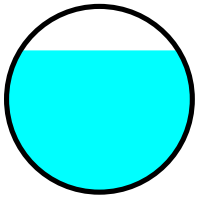
Summary for Reach 3R: Ex. SD

Inflow Area = 2.699 ac, 87.91% Impervious, Inflow Depth > 5.13" for 25-Yr event
Inflow = 2.34 cfs @ 12.52 hrs, Volume= 1.155 af
Outflow = 2.34 cfs @ 12.53 hrs, Volume= 1.155 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.64 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.92 fps, Avg. Travel Time= 0.8 min

Peak Storage= 60 cf @ 12.52 hrs
Average Depth at Peak Storage= 0.76'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.52 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 94.0' Slope= 0.0050 '/'
Inlet Invert= 62.97', Outlet Invert= 62.50'



Summary for Pond 1P: Ex. CB

Inflow Area = 2.699 ac, 87.91% Impervious, Inflow Depth > 5.13" for 25-Yr event
Inflow = 2.34 cfs @ 12.53 hrs, Volume= 1.155 af
Outflow = 2.34 cfs @ 12.53 hrs, Volume= 1.155 af, Atten= 0%, Lag= 0.0 min
Primary = 2.34 cfs @ 12.53 hrs, Volume= 1.155 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 63.51' @ 12.53 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.40'	**12.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.40' / 61.70' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.34 cfs @ 12.53 hrs HW=63.51' (Free Discharge)
1=Culvert (Inlet Controls 2.34 cfs @ 2.97 fps)

Summary for Pond 2P: Ex. VUSF

Inflow Area = 1.369 ac, 90.48% Impervious, Inflow Depth = 5.32" for 25-Yr event
Inflow = 7.26 cfs @ 12.08 hrs, Volume= 0.607 af
Outflow = 1.81 cfs @ 12.46 hrs, Volume= 0.607 af, Atten= 75%, Lag= 22.9 min
Primary = 1.81 cfs @ 12.46 hrs, Volume= 0.607 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.70' @ 12.46 hrs Surf.Area= 6,443 sf Storage= 11,029 cf

Plug-Flow detention time= 220.5 min calculated for 0.607 af (100% of inflow)
Center-of-Mass det. time= 220.7 min (977.6 - 756.9)

Volume	Invert	Avail.Storage	Storage Description
#1	66.50'	13,049 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.50	3,670	0	0
67.00	4,261	1,983	1,983
68.00	5,510	4,886	6,868
69.00	6,851	6,181	13,049

Device	Routing	Invert	Outlet Devices
#1	Primary	64.01'	**12.0" Round Culvert**
			L= 273.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 64.01' / 63.07' S= 0.0034 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.85'	**9.5" Vert. Orifice/Grate** C= 0.600
#3	Device 2	67.85'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	64.06'	**2.0" Vert. Orifice/Grate** C= 0.600
#5	Device 4	66.50'	**2.410 in/hr Exfiltration over Surface area above 64.06'**
			Excluded Surface area = 0 sf

Primary OutFlow Max=1.81 cfs @ 12.46 hrs HW=68.70' (Free Discharge)
└**1=Culvert** (Passes 1.81 cfs of 4.27 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.59 cfs @ 3.23 fps)
    └**3=Orifice/Grate** (Passes 1.59 cfs of 2.77 cfs potential flow)
  └**4=Orifice/Grate** (Orifice Controls 0.22 cfs @ 10.27 fps)
    └**5=Exfiltration** (Passes 0.22 cfs of 0.36 cfs potential flow)

Summary for Pond 3P: Ex. CB

Inflow Area = 0.360 ac, 76.58% Impervious, Inflow Depth = 4.96" for 25-Yr event
Inflow = 1.92 cfs @ 12.08 hrs, Volume= 0.149 af
Outflow = 1.92 cfs @ 12.08 hrs, Volume= 0.149 af, Atten= 0%, Lag= 0.0 min
Primary = 1.92 cfs @ 12.08 hrs, Volume= 0.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.27' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.50'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=67.25' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.86 cfs @ 2.95 fps)

Summary for Pond 4P: Ex. Vortechnics Unit

Inflow Area = 1.010 ac, 95.43% Impervious, Inflow Depth = 5.45" for 25-Yr event
Inflow = 5.42 cfs @ 12.07 hrs, Volume= 0.458 af
Outflow = 5.42 cfs @ 12.07 hrs, Volume= 0.458 af, Atten= 0%, Lag= 0.0 min
Primary = 5.42 cfs @ 12.07 hrs, Volume= 0.458 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 70.37' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.60'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 66.60' / 66.50' S= 0.0033 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=5.24 cfs @ 12.07 hrs HW=70.19' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.24 cfs @ 6.68 fps)

Summary for Pond 5P: Ex. CB

Inflow Area = 0.146 ac, 83.66% Impervious, Inflow Depth = 5.10" for 25-Yr event
Inflow = 0.81 cfs @ 12.07 hrs, Volume= 0.062 af
Outflow = 0.81 cfs @ 12.07 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min
Primary = 0.81 cfs @ 12.07 hrs, Volume= 0.062 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.06' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	68.54'	**12.0" Round Culvert** L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 68.54' / 67.21' S= 0.0171 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.78 cfs @ 12.07 hrs HW=69.05' (Free Discharge)
1=Culvert (Inlet Controls 0.78 cfs @ 1.92 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 0.290 ac, 95.78% Impervious, Inflow Depth = 5.44" for 25-Yr event
Inflow = 1.65 cfs @ 12.07 hrs, Volume= 0.132 af
Outflow = 1.65 cfs @ 12.07 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min
Primary = 1.65 cfs @ 12.07 hrs, Volume= 0.132 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 67.75' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.80'	**12.0" Round Culvert** L= 71.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.80' / 66.60' S= 0.0028 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.59 cfs @ 12.07 hrs HW=67.72' (Free Discharge)
1=Culvert (Barrel Controls 1.59 cfs @ 2.74 fps)

Summary for Pond 7P: Ex. CB

Inflow Area = 0.720 ac, 95.29% Impervious, Inflow Depth = 5.45" for 25-Yr event
Inflow = 3.71 cfs @ 12.08 hrs, Volume= 0.327 af
Outflow = 3.71 cfs @ 12.08 hrs, Volume= 0.327 af, Atten= 0%, Lag= 0.0 min
Primary = 3.71 cfs @ 12.08 hrs, Volume= 0.327 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 69.82' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	66.70'	**12.0" Round Culvert** L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 66.70' / 66.60' S= 0.0007 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.66 cfs @ 12.08 hrs HW=69.77' (Free Discharge)
└**1=Culvert** (Barrel Controls 3.66 cfs @ 4.66 fps)

Summary for Pond POI1: POI#1

Inflow Area = 0.074 ac, 0.00% Impervious, Inflow Depth = 3.11" for 25-Yr event
Inflow = 0.27 cfs @ 12.08 hrs, Volume= 0.019 af
Primary = 0.27 cfs @ 12.08 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond POI2: POI#2

Inflow Area = 3.499 ac, 83.85% Impervious, Inflow Depth > 5.07" for 25-Yr event
Inflow = 5.11 cfs @ 12.17 hrs, Volume= 1.479 af
Primary = 5.11 cfs @ 12.17 hrs, Volume= 1.479 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond PP1: Porous Pavement 1

Inflow Area = 0.577 ac, 83.05% Impervious, Inflow Depth = 5.21" for 25-Yr event
Inflow = 3.23 cfs @ 12.07 hrs, Volume= 0.251 af
Outflow = 0.23 cfs @ 13.27 hrs, Volume= 0.215 af, Atten= 93%, Lag= 71.8 min
Primary = 0.23 cfs @ 13.27 hrs, Volume= 0.215 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.59' @ 13.27 hrs Surf.Area= 20,887 sf Storage= 6,415 cf

Plug-Flow detention time= 635.6 min calculated for 0.215 af (86% of inflow)
Center-of-Mass det. time= 573.1 min (1,336.6 - 763.5)

Volume	Invert	Avail.Storage	Storage Description
#1	67.82'	8,355 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 20,887 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
67.82	20,887	0	0
68.82	20,887	20,887	20,887

Device	Routing	Invert	Outlet Devices
#1	Primary	66.25'	**1.0" Vert. Orifice/Grate** C= 0.600
#2	Device 4	67.82'	**3.000 in/hr Exfiltration over Surface area above 66.65'** Excluded Surface area = 0 sf
#3	Primary	68.32'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	66.65'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.23 cfs @ 13.27 hrs HW=68.59' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 7.30 fps)
  - **4=Orifice/Grate** (Passes 0.04 cfs of 1.23 cfs potential flow)
    - **2=Exfiltration** (Passes 0.04 cfs of 1.45 cfs potential flow)
- **3=Orifice/Grate** (Orifice Controls 0.19 cfs @ 1.76 fps)

Summary for Pond PP2: Porous Pavement 2

Inflow Area = 0.580 ac, 86.75% Impervious, Inflow Depth = 5.33" for 25-Yr event
Inflow = 3.27 cfs @ 12.07 hrs, Volume= 0.257 af
Outflow = 0.24 cfs @ 13.14 hrs, Volume= 0.257 af, Atten= 93%, Lag= 64.4 min
Primary = 0.24 cfs @ 13.14 hrs, Volume= 0.257 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 70.11' @ 13.14 hrs Surf.Area= 20,435 sf Storage= 6,241 cf

Plug-Flow detention time= 629.7 min calculated for 0.257 af (100% of inflow)
Center-of-Mass det. time= 627.8 min (1,385.9 - 758.0)

Volume	Invert	Avail.Storage	Storage Description
#1	69.35'	8,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 20,435 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.35	20,435	0	0
70.35	20,435	20,435	20,435

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	69.35'	**3.000 in/hr Exfiltration over Surface area above 68.18'** Excluded Surface area = 0 sf
#3	Primary	69.85'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	68.18'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.24 cfs @ 13.14 hrs HW=70.11' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 7.32 fps)
  - **4=Orifice/Grate** (Passes 0.06 cfs of 1.23 cfs potential flow)
    - **2=Exfiltration** (Passes 0.06 cfs of 1.42 cfs potential flow)
- **3=Orifice/Grate** (Orifice Controls 0.18 cfs @ 1.75 fps)

Summary for Pond PP3: Porous Pavement 3

Inflow Area = 0.108 ac, 89.00% Impervious, Inflow Depth = 5.33" for 25-Yr event
Inflow = 0.61 cfs @ 12.07 hrs, Volume= 0.048 af
Outflow = 0.06 cfs @ 12.75 hrs, Volume= 0.048 af, Atten= 89%, Lag= 40.8 min
Primary = 0.06 cfs @ 12.75 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 70.71' @ 12.75 hrs Surf.Area= 5,149 sf Storage= 701 cf

Plug-Flow detention time= 75.6 min calculated for 0.048 af (100% of inflow)
Center-of-Mass det. time= 75.6 min (833.6 - 758.0)

Volume	Invert	Avail.Storage	Storage Description
#1	70.37'	2,060 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 5,149 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.37	5,149	0	0
71.37	5,149	5,149	5,149

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	70.37'	**3.000 in/hr Exfiltration over Surface area above 69.20'** Excluded Surface area = 0 sf
#3	Primary	70.87'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	69.20'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.06 cfs @ 12.75 hrs HW=70.71' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 8.21 fps)
  - **4=Orifice/Grate** (Passes 0.06 cfs of 1.06 cfs potential flow)
    - **2=Exfiltration** (Passes 0.06 cfs of 0.36 cfs potential flow)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PP4: Porous Pavement 4

Inflow Area = 0.065 ac, 85.54% Impervious, Inflow Depth = 5.21" for 25-Yr event
Inflow = 0.36 cfs @ 12.07 hrs, Volume= 0.028 af
Outflow = 0.08 cfs @ 12.48 hrs, Volume= 0.028 af, Atten= 79%, Lag= 24.8 min
Primary = 0.08 cfs @ 12.48 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 71.77' @ 12.48 hrs Surf.Area= 1,473 sf Storage= 287 cf

Plug-Flow detention time= 20.1 min calculated for 0.028 af (100% of inflow)
Center-of-Mass det. time= 20.1 min (783.7 - 763.5)

Volume	Invert	Avail.Storage	Storage Description
#1	71.28'	589 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 1,473 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.28	1,473	0	0
72.28	1,473	1,473	1,473

Device	Routing	Invert	Outlet Devices
#1	Primary	67.75'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 4	71.28'	**3.000 in/hr Exfiltration over Surface area above 70.11'** Excluded Surface area = 0 sf
#3	Primary	71.78'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	70.11'	**6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.08 cfs @ 12.48 hrs HW=71.77' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 9.59 fps)
  - **4=Orifice/Grate** (Passes 0.08 cfs of 1.12 cfs potential flow)
    - **2=Exfiltration** (Passes 0.08 cfs of 0.10 cfs potential flow)
- **3=Orifice/Grate** (Controls 0.00 cfs)

ATTACHMENT E

WATER QUALITY TREATMENT SUMMARY

90 Johnson Road Stormwater Management Summary

Subarea ID	New Development			Redevelopment			Treated New Impervious Area (sf)	Treated New Landscaped Area (sf)	Treated Redeveloped Impervious Area (sf)	Treated Redeveloped Landscaped Area (sf)
	Impervious Area (sf)	Landscaped Area (sf)	Total Developed Area (sf)	Impervious Area (sf)	Landscaped Area (sf)	Total Redeveloped Area (sf)				
S201	0	0	0	21,396	0	21,396	0	0	21,396	0
S202	0	0	0	1,320	1,105	2,425	0	0	1,320	1,105
S203	0	0	0	12,093	507	12,600	0	0	12,093	507
S204	0	0	0	1,993	807	2,800	0	0	1,993	807
S208	0	0	0	8,477	1,476	9,953	0	0	8,477	1,476
S205	478	0	478	5,999	4,692	10,691	0	0	0	0
S206A	20,887	4,263	25,150	0	0	0	20,887	4,263	0	0
S206B	16,595	2,382	18,977	5,529	749	6,278	16,595	2,382	5,529	749
S206C	0	0	0	4,184	517	4,701	0	0	4,184	517
S206D	0	0	0	2,419	409	2,828	0	0	2,419	409
S207	0	2,424	2,424	0	0	0	0	0	0	0
Total (sf)	**37,960**	**9,069**	**47,029**	**63,410**	**10,262**	**73,672**	**37,482**	**6,645**	**57,411**	**5,570**
Total (ac)	**0.87**	**0.21**	**1.08**	**1.46**	**0.24**	**1.69**	**0.86**	**0.15**	**1.32**	**0.13**

BMP Summary

Subarea ID	Treatment Method	Water Quality Volume Required (cf)	Water Quality Volume Provided (cf)	BMP Surface Area Required (sf)	BMP Surface Area Provided (sf)
S201 S202 S203 S204 S208	Existing Vegetated Underdrained Filter	3,903	4,801	2,342	3,670
S205	Untreated	N/A	N/A	N/A	N/A
S206A	Porous Pavement 1	1,883	4,177	N/A	20,887
S206B	Porous Pavement 2	1,948	4,087	N/A	20,435
S206C	Porous Pavement 3	366	1,030	N/A	5,149
S206D	Porous Pavement 4	215	295	N/A	1,473

Treatment Summary

	Required	Provided
Treated New Impervious (%)	95%	98.74%
Treated New Developed (%)	80%	93.83%
Treated Redev Impervious (%)	N/A	90.54%
Treated Redev Developed (%)	60%	85.49%

ATTACHMENT F

DRAWDOWN COMPUTATIONS

Drawdown Calculation - Porous Pavement #1

Orifice Diameter =1 in

Elev. (ft)	Depth (ft)	Surface Area (sq.ft)	Ave. End Area (sq.ft)	End Area Depth (ft)	Incremental Volume (cf)	Head, h (ft)	Orifice Flow (cfs)	Drawdown Time (secs)	Drawdown Time (hours)
68.32	0.50	20,887	20887.00	0.25	2088.70	1.67	0.0339	61625.73	17.118
68.07	0.25	20,887	20887.00	0.25	2088.70	1.42	0.0312	66841.31	18.567
67.82	0.00	20,887	0.00	0.00	0.00	1.17	0.0284	0.00	0.000
								TOTAL	***35.685***

Orifice Formula	$CA\ (2gh)^{1/2}$	
Orifice Diameter:	1	inch
A:	0.005454	sq.ft
Filter Thickness:	1.167	feet
g:	32.174	ft/s^2
C:	0.6	Orifice/Grate

Drawdown Calculation - Porous Pavement #2, #3, & #4

Orifice Diameter =1.25 in

Elev. (ft)	Depth (ft)	Surface Area (sq.ft)	Ave. End Area (sq.ft)	End Area Depth (ft)	Incremental Volume (cf)	Head, h (ft)	Orifice Flow (cfs)	Drawdown Time (secs)	Drawdown Time (hours)
69.85	0.50	27,057	27057.00	0.25	2705.70	1.67	0.0530	51091.15	14.192
69.60	0.25	27,057	27057.00	0.25	2705.70	1.42	0.0488	55415.15	15.393
69.35	0.00	27,057	0.00	0.00	0.00	1.17	0.0443	0.00	0.000
								TOTAL	***29.585***

Orifice Formula	$CA\ (2gh)^{1/2}$	
Orifice Diameter:	1.25	inch
A:	0.008522	sq.ft
Filter Thickness:	1.167	feet
g:	32.174	ft/s^2
C:	0.6	Orifice/Grate

ATTACHMENT G

REDEVELOPMENT COMPUTATIONS

Redevelopment Treatment Calculation						
	Existing Condition			Proposed Condition		
Pollutant Ranking	Area (sf)	Area (ac)	Impact Rating	Area (sf)	Area (ac)	Impact Rating
0	0	0	0	0	0	0
1	0	0	0	0	0.00	0.00
2	21,615	0.50	0.99	18,240	0.42	0.84
3	51,943	1.19	3.58	55,318	1.27	3.81
4	0	0.00	0.00	0	0.00	0.00
5	0	0	0	0	0	0
Total	**73,558**	**1.69**	**4.57**	**73,558**	**1.69**	**4.65**

Redevelopment Treatment Summary	
Total Redevelopment Area (ac)	1.69
Existing Impact Rating	4.57
Proposed Impact Rating	4.65
Existing Ranked Impact	2.71
Proposed Ranked Impact	2.75
Resultant Ranked Impact Change	0.05
Redeveloped Area Treatment	**60%**

ATTACHMENT H

STORMWATER OPERATIONS & MAINTENANCE MANUAL

OPERATION AND MAINTENANCE MANUAL FOR STORMWATER MANAGEMENT AND RELATED STORMWATER FACILITIES

90 JOHNSON ROAD PROPERTY
90 JOHNSON ROAD
PORTLAND, MAINE

PREPARED FOR

TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

PREPARED BY

STANTEC CONSULTING SERVICES, INC.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355

JULY 2018

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APPENDICES

Appendix A – Sample Inspection Logs

Appendix B – Permits for Project

Appendix C – Summary Checklist for Inspection and Maintenance

I. INTRODUCTION

Relatively complex stormwater management facilities are commonly installed in development projects including, commercial facilities, and many other developments. The complexity and goals of these systems vary with the nature of the receiving water, as well as the type of development. Runoff from developed areas of the project, including rooftops, paved, or lawn areas typically contain materials that can impact the receiving waters. Source control and the installation of bio-retention facilities and pervious surfaces are often combined with pretreatment measures or vegetated buffer strips. Other best management practices are also among the options that can significantly reduce the non-point pollution discharge from the developed area. These measures are particularly important to projects in the watersheds of sensitive water bodies, or projects with potential impacts to groundwater. With the increased cost of land and development, there is an increased tendency to construct portions of the stormwater management systems underground.

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of years. It is critical that the stormwater management facilities are regularly inspected, and that maintenance is performed on an as-needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that collect and transport the flow to the ponds, infiltration galleries, and other treatment measures. Thus, maintenance should be directed to the total system, not just the collection system or primary stormwater management facility.



The purpose of this document is to define, in detail, the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended when they were designed. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need for the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program for operation and maintenance. Certain facilities, specifically the potential water quality volume storage or treatment measures such as bio-retention cells and pervious surfaces are not intended to be placed in service until the tributary catchment area has the permanent cover in place and any contributing turf areas have achieved a 90% catch of vegetation (i.e. established).

A. GUIDELINES OVERVIEW

A summary of the individual components of stormwater management facilities for this project has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

This report includes the Operation and Maintenance requirements for any potential BMP identified in the Stormwater Management Report for this project.

B. RESPONSIBLE PARTY

The responsible party for operation and maintenance of the stormwater and other site infrastructure will be Transport Leasing Corp., or their agents or assigns.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- MaineDEP Stormwater Permit through the City of Portland Delegated Authority
- City of Portland Level III Site plan and Subdivision Review

A copy of the permits and Stormwater Management Report should be appended to this manual as Appendix B. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Stantec for civil engineering for the development project. Stantec has prepared the design for the stormwater management facilities and may be contacted at:

Stantec
482 Payne Road
Scarborough, ME 04074
(207) 887.3478

It is recommended the preparer of the plan be contacted with any particular questions on the design intent or similar issues.

The applicable plans and design documents which apply to the project are:

1. Civil Site Plans Prepared by Stantec.
2. The Erosion Control/Sedimentation Control Plan for the project.
3. The Stormwater Management Plan for the project.

A copy of these documents should be retained with this manual.

The proposed design includes pervious pavement and stormwater conveyance lines. There are existing inlets, manholes, outlet control structures, conveyance lines, pretreatment devices, and a vegetated filter that will be utilized for stormwater management for the proposed project.

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management system. These O&M procedures will complement scheduled sweeping of the parking lots which is anticipated to occur at least twice per year. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. STORMWATER INLETS

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets may include catch basins, open culverts, culverts with bar screens, roof scuppers, plaza scuppers, trench drains, and field inlets. Inlets exist throughout the proposed systems.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Landscape services
- Building maintenance areas
- Grounds maintenance



The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets

on parking lots or plaza areas. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the buildings.

Frequency: All inlets should be inspected on a quarterly basis, and after/during significant storm events.

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/ inspections of the inlets and tributary drainage system.

Comments: Maintenance of inlets is critical on this project.



B. TRIBUTARY DRAINAGE SYSTEM

Preface: Stormwater from most of the project will be directed through a conveyance system which transports the flow to a public system within Johnson Road. This conveyance system will be principally overland flow and/or infiltration through porous pavement that discharges to piped drain systems. Most of the sediment is carried by the drainage system is intended to be trapped near the inlets or in pretreatment devices such as an existing Vortechnics hydrodynamic separator. Maintenance of this system can play a key role in the long-term maintenance costs and the effectiveness of the onsite systems.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that its carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with debris. The inlet catch basins will be equipped with sumps and hooded outlets which will remove gross floatables and large sediment particles from the flow stream. These must be cleaned on an as-needed basis.

The level of sediment in the sumps or hydrodynamic separator should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sedimentation to any downstream BMP or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. If a temporary filter bag has been designated for the inlet during construction, silt or other deleterious materials, can significantly reduce capacity and the bags should be removed with the sediment and replaced during construction. Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the Development. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline is observed, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed.

Frequency: The piped drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps, hydrodynamic separator, and pipelines will depend on the rate of accumulation.

Maintenance/Inspection Responsibility:

Maintenance Personnel: A hired 3rd party maintenance crew as retained by the applicant, their agents or assigns.

Special Services: The owner may elect to contract with an independent agent for cleaning of catch basins, sumps, and pipelines. Remedial source control measures may be performed by the owner or an outside service depending upon the nature of the particular situation.

Comments: Maintenance of inlets and catch basins is of utmost importance to the project to avoid unintended release of sediments or related materials in the runoff flow stream.

C. POROUS PAVEMENT

Preface: The porous pavement collects stormwater runoff from the surface before passing it through a treatment section and discharging into a closed drainage system.

Inspection: The pavement should be inspected regularly to ensure that the surface is not clogged, and that runoff can pass freely through the porous section. The asphalt surface must be inspected for integrity and to ensure rutting or deformation of the surface is minimized.

Maintenance: Any debris should be removed from the pavement surface. If the porous pavement area is holding water in excess of 48-72 hours corrective action is needed. To correct a standing water problem, the following remedial actions are recommended:

1. Vacuum any sediment or debris from the pavement surface on a semi-annual basis
2. Ensure the underdrain system is not clogged with any silt or other materials.
3. Ensure that the porous pavement can pass water freely and drain quickly while handling large amounts of water.

Frequency: The porous pavement should be inspected and vacuumed semi-annually and maintained as needed.

Maintenance/Inspection Responsibility: The Owner or an outside agent is responsible for inspection and maintenance of the porous pavement areas.

D. WATER QUALITY FILTERS (ABOVE GROUND)

Preface: The soil filter is an underdrain system with multi-media aggregates. This section is applicable to the existing underdrained grass soil filter.

Inspection: The soil filter can be inspected visually. A good time for inspection is within one day of a substantial rain event.

Maintenance: The procedures for maintenance are as follows:

Inlets

Inlets to each soil filter area should be kept open and in good working condition. This is particularly important around curb breaks and pavement edges. These locations should be marked on the roadway at the completion of construction to allow for winter snow dam removal. All eroded areas should be repaired.

Initial Turf Maintenance (when applicable)

Grassed soil filters should be allowed to develop for one full growing season post-construction prior to their first mowing or replacement of vegetation. This allows for natural re-seeding of grass seed mixes and establishment of a healthy stand of grass or plant materials.

Long-Term Turf Maintenance (when applicable)

It is preferable to only mow grassed soil filters two to three times per year. While grassed soil filters can be mown during routine lawn maintenance, excessive mowing reduces the viability of grasses and grass roots and can over-compact the surface layer of the soil filter media.

Large Debris

Large debris, trash etc. within the ponding area should be removed on a routine basis.

Erosion in the Soil Filter Area

Any eroded areas should be repaired as soon as practicable.

Weeds in the Soil Filter Area

Periodic weeding of the soil filter area may be necessary, particularly in the landscaped soil filters. Hand weeding is required as the use of herbicides is not recommended.

Surface Mulch Layer (when applicable)

Areas devoid of mulch should be re-mulched by hand. Every year, in the spring, a fresh layer of mulch should be added to the soil filter area.

Sedimentation (or Clogging) of Soil Filter Area

If the soil filter area is holding water for a period longer than 48-72 hours, the soil mix has, more than likely, become clogged with sediment and/or the underdrains have clogged. To correct a standing water problem, the following remedial actions are recommended:

1. Evaluate the drainage area to the soil filter area to identify any potential sources of sediment, such as an erosive condition, that may be contributing to the clogging of the device. If a source is identified, it is recommended that that source be eliminated to the fullest extent practicable before proceeding with the remaining recommendations provided below.
2. Flush the underdrains. Use cleanouts to flush the underdrains. Sediment in the drains may be preventing the soil mix from draining. Make sure to provide a way to capture any flushed sediment before it enters the stream environment or storm drain system downstream of the device. If, after flushing the underdrains, the device continues to hold water, the soil mix may be contaminated. As such, following the guidelines provided below is recommended.
3. Gage the extent of soil contamination. To do this, it is recommended that one or more test pits be dug with a shovel and that the soil layer be evaluated for contamination. Once the levels of contamination have been determined (for example, the top 4" of soil appears to be contaminated), it is recommended that you proceed with the remaining remedial actions.
4. Harvest the plants (when applicable). Care should be taken in the removal and temporary storage of the plants so that as many as possible can be harvested for replanting in the soil filter area once the functioning of the device has been restored sufficiently.
5. Remove the mulch layer.
6. Remove the top few inches of contaminated soil plus an additional 2-inch of soil and replace the removed soil with a clean soil mix in accordance with the soil mix specification applicable to the particular soil filter area.
7. Monitor the functioning of the soil filter area during the next two to three rain events. If the device appears to be draining as intended (e.g., there is no standing water 48-72 following a rain event), proceed with the remaining remedial actions. If the area continues to hold standing

water, then the entire soil filter area soil mix and the underdrains may need to be removed and replaced. Reuse of any undamaged underdrains may be possible once they have been cleaned thoroughly.

8. Replant the harvested plants and replace any plants that were rendered unusable during or following their removal from the soil filter area.
9. Replace the removed mulch layer with fresh mulch.
10. Water the plants in the soil filter for the next two or more weeks unless there is sufficient rainfall. This will help the plants to re-establish themselves.

Frequency: The water quality filter should be inspected semi-annually and maintained as needed.

Applicability: The development has one existing filter.

Snow storage within the filters should be prohibited by Maintenance Personnel.

E. LITTER

Litter should be removed as a matter of course by workers and as part of the grounds maintenance contract.

F. SUMMARY CHECKLIST

The above described inspection and maintenance items have been summarized on a checklist attached hereto as Appendix C.

IV. PROGRAM ADMINISTRATION

A. GENERAL

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities.

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

6. A qualified post construction inspector shall be retained by the Owner. His duties shall include preparing schedules for the Owner's maintenance, summarizing the results of this maintenance and preparing an annual report on the operation, maintenance, and repair of the stormwater system which must be copied to the City. (The Owner shall be responsible for retaining a separate entity to perform maintenance which cannot be performed by the management of building and property grounds.) This person shall also participate in troubleshooting of the stormwater management system if a problem develops.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. RECORD KEEPING

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix B.

C. CONTRACT SERVICES

In some instances, or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases, the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX A

Sample Inspection Logs

90 JOHNSON ROAD
PORTLAND, MAINE

STORMWATER MANAGEMENT
WATER QUALITY STORAGE OR WET POND
ANNUAL INSPECTION & MAINTENANCE LOG

FACILITY:		**YEAR:**	
LOCATION:		**CONTRACTOR:**	
FUNCTION:		**INSPECTOR:**	
DATE OF INSPECTION:			
ITEM IDENTIFICATION	**DESCRIPTION OF CONDITIONS**	**MAINTENANCE ACCOMPLISHED**	**DATE OF MAINTENANCE**
GENERAL COMMENTS:			

SAMPLE

90 JOHNSON ROAD
PORTLAND, MAINE

STORMWATER MANAGEMENT
SEMI-ANNUAL INSPECTION & MAINTENANCE LOG

SEMI-ANNUAL INSPECT 1.2	FACILITY:
DATE:	LOCATION:
INSPECTOR:	FUNCTION:
SURFACE CONDITION:	
OUTLET CONDITION	

DEVICE/STRUCTURE	EST. DEPTH SED.	REMOVED? Y/N	EST. VOL. CY	WHERE DISPOSED OF	STRUCTURAL CONDITION

CONTROL STRUCTURE:
DESCRIBE CONDITIONS FOUND & MAINTENANCE ACCOMPLISHED:

APPENDIX B

Permits for Project

(To be Added at a Subsequent Time)

APPENDIX C

Summary Checklist
Inspection and Maintenance

Stormwater Management System Maintenance Program Summary Checklist						
		Frequency				
Item	**Commentary**	**Monthly**	**Quarterly**	**Semi-Annual**	**Annual**	**Long Term**
Stormwater Inlets	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.		X		X Clearing	
Tributary Drainage System	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Porous Pavement	Pavement areas should be inspected and vacuumed semi-annually and maintained as needed.			X		
Water Quality Filters	Filters should be inspected semi-annually and maintained as needed. **Snow storage within the filter should be prohibited by Maintenance Personnel.**			X		
Litter	Litter should be removed daily.					

TAB 2 – TRANSPORTATION

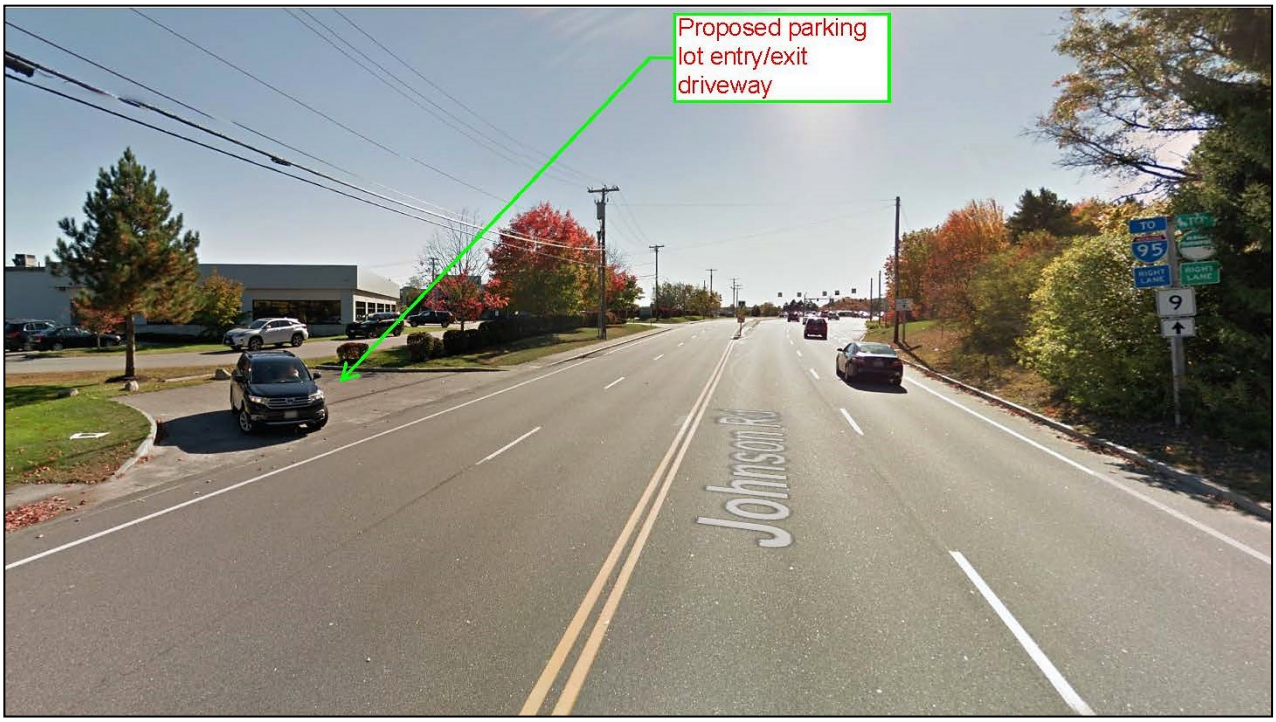
TRAFFIC

The following is a description of existing and proposed access conditions in the site vicinity:

- The intersection of Johnson Road, Skyway Drive and Jetport Boulevard is fully signalized. Site generated traffic from points west (Gorham/Westbrook) likely uses the intersection to access Jetport Boulevard and the private City Line Drive to access the site.

- The intersection of City Line Drive and Jetport Boulevard is Stop Sign controlled on the City Line Drive leg. Exiting traffic may turn left or right. Eastbound traffic on Jetport Boulevard may turn left into City Line Drive from a center lane and there is a by-pass lane for Jetport bound traffic to continue straight thru, thus minimizing delays on the Jetport Boulevard.

- Site generated traffic from South Portland and Scarborough can turn right onto Jetport Boulevard to access City Line Drive or turn right onto City Line Drive off Johnson Road. This traffic may also turn right into the proposed driveway entrance into the parking area to be constructed at the 68 Johnson Road property. This entrance will utilize an existing curb opening on Johnson Road.



Existing Curb Opening on Johnson Road

Traffic to South Portland/Scarborough will be primarily directed to the signalized intersection where there is a stand-alone left turn lane for SB vehicles onto Johnson Road.

As currently configured exiting vehicles from the proposed parking lot may also turn left onto Johnson Road SB as there are two travels lanes in Johnson Road in this area. City line Drive cannot be used to turn left onto Johnson Road as there is an existing median island prohibiting this movement.



Existing Directional Sign on City Line Drive

- Traffic from Congress Street (intown Portland or Westbrook) could turn left into the proposed parking lot entrance off Johnson Road or proceed to the signalized intersection to turn left onto Jetport Boulevard and onto City Line Drive. Traffic from the north (intown Portland) may also simply turn onto International Parkway at the Congress Street intersection and potentially travel to City Line Drive from the Jetport Direction.

- Exiting traffic from the proposed parking lot, intending to go northbound to Congress Street may also use a proposed exit only drive to be located at an existing curb opening at the far north end of the property. This exiting lane will allow right turn only exiting movements.



Existing Curb Opening to Become Right Turn Only Exit

- The METRO Route #5 travels on Jetport Boulevard in the vicinity of the site. There are bus shelters on both sides of the Boulevard (outbound at DHHS and inbound near the Skyway/Johnson/Jetport Boulevard intersection (runway side of the road).

- The proposed building expansion and parking lot will result in an increase of approximately 18,262 SF of space. The following is an estimate of the additional trip generation attributable to the building expansion, assuming that a similar trip generation will apply for that portion of the building that already exists:

Description	Average Rate[1]	Estimated Additional Trips
AM Peak Hour	1.55 /1,000 SFGFA	28 trips
PM Peak Hour	1.49 / 1,000 SFGFA	27 trips



Jetport Boulevard Inbound Bus Shelter (Metro Route 5)

The South Portland Bus service Route 24 goes thru the intersection of Maine Mall Road/Western Ave (near Burlington Coat Factory)



Vicinity Map

[1] Per ITE Trip Generation 7th Edition LUC 710

Section 14-526. Site Plan Standards.

The following statements are provided in accordance with the submission checklist Tab 2 and Section 14-526 of the ordinance.

(a) Transportation Standards

Transportation Analysis – Traffic Impact (14-526 (a) 1)

- *Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts*
- *Traffic Impact Study (Technical Manual, Section 1) if applicable*

1. *Impact on Surrounding Street Systems:*

   The development will fit in with the existing street system as it will continue to use the existing access locations off Johnson Road and City Line Drive. Based on the limited intensity of use, the project is expected to have an insignificant impact on traffic in the neighborhood. Vehicle and loading circulation to the building are accounted for on the plan.

2. *Traffic Impact Study*

   A full traffic impact study has not been completed at this time on the basis that the proposed trip generation and existing robust access conditions do not warrant a study in our opinion. Much of the site is currently developed and in the past has generated traffic into the surrounding street system. The current tenant, Charter Communications, has decreased operations and staffing at the project location, thus in the more recent period, site generated traffic has decreased.

Access and Circulation (14-526 (a) 2 a)

- *Access and internal circulation, addressing ADA access*
- *Access and egress impacts on traffic flows*
- *Description and use of drive-up features, if applicable*

3. *Access and Circulation:*

   a. *Site Access and Circulation.*

      (i) Access to the site is provided by a single two way driveway along Johnson Road and two full driveways along City Line Drive. A single right turn only exit drive will also be provided on Johnson Road. One original site curb cut on Johnson Road will be closed. Based on the primary parking field layout towards the north side of the site, we believe that adequate site access and circulation is provided.

      (ii) Access and egress have been designed to avoid conflict with existing turning movements and traffic flows.

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

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

Loading and Servicing (14-526 (a) 2 b)

- *Loading and servicing needs, route and travel way geometrics for deliveries*
- *Turning templates for delivery vehicles, if applicable*

2. *Access and Circulation:*

   b. *Loading and Servicing:*

      (i) Adequate provisions are made at the site for periodic loading from panel trucks to service two overhead doors at the ground level. The site provides clear area in front of the solid waste enclosures for servicing and loading vehicles.

Sidewalks (14-526 (a) 2 c)

- *Sidewalks and condition along street frontages and internal walkways*
- *Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)*

2. *Access and Circulation:*

   c. *Sidewalks:*

      (i) The site benefits from an existing sidewalk system along Johnson Road and the Jetport Boulevard. Based on the lower traffic volumes on City Line Drive, it is not felt that a sidewalk is necessary along this route. The building improvements include a sidewalk along the perimeter of the building space and at the main building entrances.

Public Transit (14-526 (a) 3), if applicable

- *Existing available transit services*
- *Proposed site plan design details, such as easement, pad base, and shelter*

3. *Public Transit Access.*

   a. The proposed project is not residential

   b. Two transit shelters are located less than ¼ mile from the site each.

   c. The two transit shelters are located on the Jetport Boulevard sidewalk.

   d. A waiver of any further transit related activities is requested given the proximity of existing transit measures to the development.

Off-Street Parking: Vehicle & Motorcycle/Scooter (14-526 (a) 4 a and c)

- *Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements*
- *Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan*

4. *Parking.*

   a. *Location and Required Number of Vehicle Parking Spaces.*

      (i) Off-street parking is provided on the site to accommodate the proposed uses. Parking supply exceeds that which is required by the code for office use.

      (ii) The Applicant has not prepared a TDM strategy, as it is not applicable until a defined tenant is in place.

      (iii) The Applicant proposes the amount of parking which is appropriate for the anticipated uses of this site.

      (iv) Parking spaces and aisles have been designed to meet the dimensional requirements of the Technical Manual.

      (v) All parking lots will be paved.

   c. *Motorcycles and Scooter Parking.*

      (i) Two spaces are provided for motorcycle/scooter parking.

Bicycle Parking (14-526 (a) 4 b)

- *Address bicycle parking requirements and identify locations on-site*
- *Construction details for bike racks (Technical Manual, Section 1)*

4. *Parking.*

   b. *Location and Required Number of Bicycle Parking Spaces.*

      (i) Bicycle parking for up to ten bikes is identified on the plan. Based on a parking count of 188 spaces at least 24 bicycle spaces are required.
      (ii) The applicant is requesting a waiver to provide only 10 bike spaces when 24 are required.

Snow Storage (14-526 (a) 4 d)

- *Management plan for snow removal and locate snow storage areas on plans*

4. *Parking.*

   d. *Snow Storage.*

      (i) Snow storage management will employ two strategies:

         a. Limited snow storage of the parking areas (this will suffice for small storm events and temporary storage only).
         b. Snow removal and off-site disposal. The applicant owns all the land off City Line Drive and they have ample area to store snow as necessary on the property.

Traffic Demand Management (TDM) (14-526 (a) 5), if applicable

- *Develop TDM with Trip Reduction Targets and Strategies*

5. *Transportation Demand Management (TDM).*

   a. The applicant has not completed a TDM plan as they do not currently have a tenant for the proposed office space. Once a tenant is identified they will work with the tenant to identify and implement possible TDM strategies. The site's proximity to transit is an advantage as is the access to the Turnpike and regional transportation corridors.

ATTACHMENT C

ZONING ASSESSMENT

See attached Zoning Analysis Table and additional information provided in cover letter.

ZONING ANALYSIS Relevant Zone(s) B4-Commercial Corridor Zone

All Projects:

	Required	Proposed
Lot Size	10,000 SF	202,554 SF
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	60'	447.82'
Front Yard Minimum	20'	41'
Front Yard Maximum	N/A	N/A
Rear Yard	20'	278'
Yard Right	12'	77'
Yard Left	12'	273'
Side Street Setback	12'	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	N/A	N/A
Minimum Lot Coverage	N/A	N/A
Maximum Height	65'	57'-5"
Open Space	N/A	N/A
Maximum Impervious Area	80%	45.7%
Pavement Setback	N/A	N/A
Floor Area Ratio	0.65	0.34
Off Street Parking Spaces	99	188
Loading Bays	1	0
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

NOT APPLICABLE

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

ATTACHMENT D

WAIVER REQUESTS

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
14-526 Site Plan Standards *(a) Transportation Standards* *3. Public Transit Access:*	*d. Waiver: All or some of this standard may be waived if the Reviewing Authority determines one or more of the following:* *(i) That some or all of the required improvements cannot reasonably be made due to site constraints and/or insufficient right of way width; or* *(ii) That the development is not anticipated to generate public transit usage due to particular characteristics or proposed use of the development.*	A waiver of any further transit related activities is requested given the proximity of existing transit measures to the development.	Two transit shelters are located less than ¼ mile from the site each and the two transit shelters are located on the Jetport Boulevard sidewalk. A waiver of any further transit related activities is requested given the proximity of existing transit measures to the development.
14-526 Site Plan Standards *(a) Transportation Standards* *4. Parking:* *b. Location and Required Number of Bicycle Parking Spaces*	*ii. Waiver: The reviewing authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to characteristics or uses such as elderly or disabled persons housing or industrial uses located in outlying areas.*	The applicant is requesting a waiver to provide only 10 bike spaces when 24 are required.	Bicycle parking for up to ten bikes is identified on the plan. Based on a parking count of 188 spaces at least 24 bicycle spaces are required.

14-526 Site Plan Standards *(b) Environmental Quality Standards* *2. Landscaping and Landscape Preservation:* *a. Landscape Preservation*	(iv) Waiver: Where the applicant can demonstrate that preservation of existing vegetation would compromise development of the site, the Reviewing Authority may permit the substitution of replacement landscaping in other areas of the site, and/or a financial contribution to the City of Portland Tree Fund for an amount proportionate to the cost of trees removed, as described below: (a) For each tree required to be preserved that is removed and is greater than 16" in caliper DBH, two (2) replacement trees of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual). (b) For each tree required to be preserved that is removed and is between ten (10) and sixteen (16) inch DBH, one (1) replacement tree of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual). (c) Where the planting of replacement trees on the site is not feasible, the applicant shall contribute an amount proportionate to the cost of required replacement trees to the City of Portland Tree Fund, as detailed in Section 4 of the Technical Manual.		Landscaping has been provided for on the site plan. This includes perimeter tree plantings to supplement existing landscaping, primarily along the Johnson Road frontage. Where necessary, the owners will provide grass cover to stabilize non-gravel or non-paved surfaces and add a few street trees for landscaping. Protection measures will be made for existing vegetation during construction.

Att. O

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

July 9, 2018

Mr. Pat Cloutier
Water Resource Protection Director
City of South Portland
PO Box 9422-111 Waterman Drive
South Portland, Maine 04106

Subject: Proposed Building Expansion
90 Johnson Road, Portland, Maine
Request for Ability to Serve Letter

Dear Pat:

Transport Leasing Corp. have retained our office to prepare site plans and assist with permitting for a building expansion on their property (Map 214A, Block A, Lots 001 & 003) in the City of Portland. The existing 24,249 SF building has been leased by Charter Communications (aka Time Warner Cable) for a long period of time, however that lease condition is soon running out. The existing building contains a combination of office and warehouse space. The owner is now seeking to complete renovations and additions to the building that would increase the gross leasable area to around 42,500 SF of Class A office space. This will involve second and third level building addition space as well as new parking lot development. We understand that the existing building is presently serviced by a sanitary line that connects to a line in Johnson Road that ultimately ties into the South Portland municipal system.



On behalf of the developer, we are requesting a letter affirming that the proposed project can continue to be served by the municipal sewer system that we understand is part of the City of South Portland collection system.

The project will consist of interior renovations to the existing building that currently has a total size of approximately 22,019 square feet. Additional office space of approximately 20,492 SF will be added to the building. A tenant has not yet been determined however it is predicted that the employee count will be approximately 125 persons to 150 persons. Assuming 20 gpd/employee[1], the estimated flow is 3,000 gpd. We are not aware of the historic water use and wastewater generation for the site but assume the proposed activity will result in an increase to wastewater generation. A copy of the site plan has been attached to this letter for reference. The PWD records indicate a domestic water service line off Johnson Road currently serving this building. We understand at least one 4" or 6" sanitary sewer service line serves the building. The existing building's utility services will remain and continue in their current use and capacity. Based on a limited increase in daily activity and peak use we trust that the existing sewer system has adequate capacity to continue to serve this project. We have submitted our Site Plan Application to the City of Portland Planning Authority and would appreciate your attention to this request in a timely manner.

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

Regards,

STANTEC CONSULTING SERVICES INC.

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

Attachments

c: Portland Planning Authority

V:\2108\active\210801617\civil\admin\permitting\local\level 3 site plan\ltr_Cloutier wastewater 20180709.docx

[1] *See Table 4C Design Flows for other Facilities from Maine Subsurface Disposal Rules*

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: June 26, 2018

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

Site Address: 90 Johnson Road

Chart Block Lot Number: Tax Map 214A/Block A/Lots A001 &A003

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

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

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

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8725
Owner/Developer Name: Transport Leasing Corp. - Mark Sanborn
Owner/Developer Address: PO Box 11054 - Portland, ME 04104
Phone: 207-774-1067 Fax: E-mail: mark@abcorental.com
Engineering Consultant Name: Stephen Bushey, P.E.
Engineering Consultant Address: Stantec, 482 Payne Rd, Scarborough, ME 04074
Phone: 207-887-3478 Fax: 207-883-3376 E-mail: stephen.bushey@stantec.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: _____ GPD
Peaking Factor/ Peak Times: Not Applicable
Specify the source of design guidelines: *(i.e.* __ *"Handbook of Subsurface Wastewater Disposal in Maine,"* __ *"Plumbers and Pipe Fitters Calculation Manual,"* X *Portland Water District Records, Other (specify)* _____

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: Not Applicable

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: Not Applicable 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.

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

September 5, 2018

Ms. Barbara Barhydt/Ms. Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101-3509

Subject: 90 Johnson Road
Applicant – Transport Leasing Corp.
Preliminary Traffic Comments from Tom Errico Dated August 24, 2018 and Engineering comments from Lauren Swett dated August 28, 2018
Letter of Response #1

Dear Barbara:

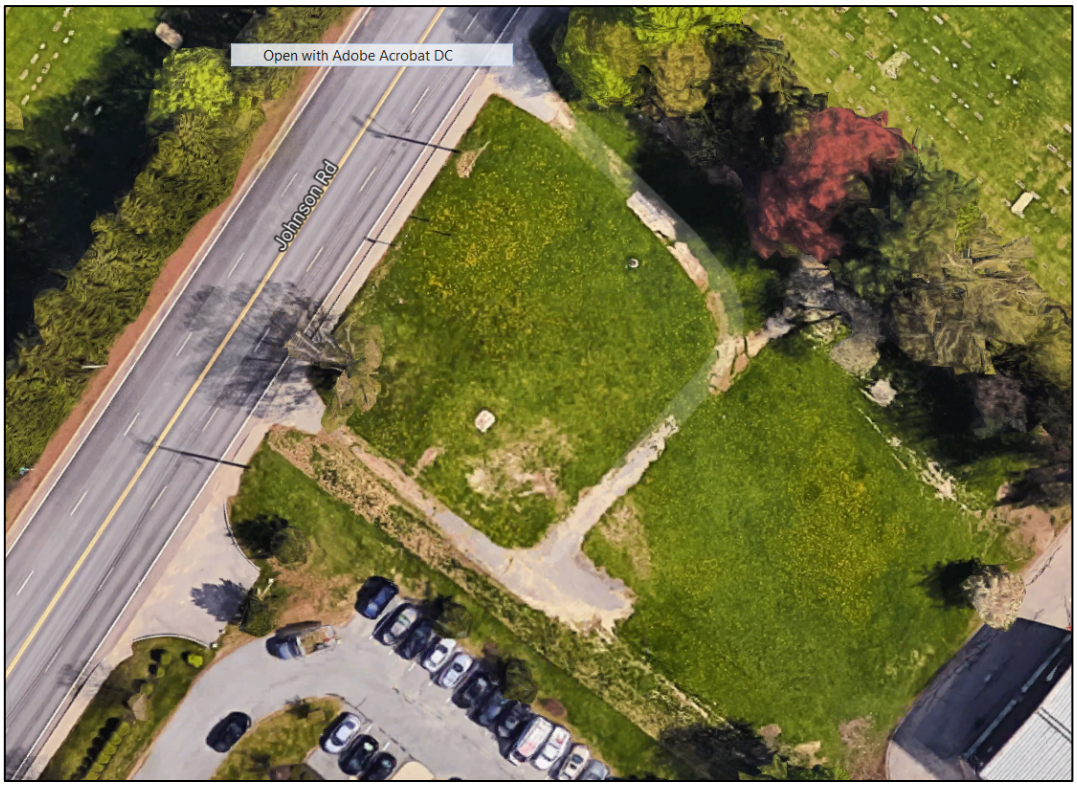
On behalf of Transport Leasing Corp. (Applicant), Stantec has received and reviewed the comments from Tom Errico dated August 24, 2018 and Lauren Swett dated August 28, 2018 associated with the proposed above referenced project. For ease of reference, we have repeated the comments below in *italics* followed by our responses.

PRELIMINARY TRAFFIC COMMENTS FROM TOM ERRICO DATED AUGUST 24, 2018

- *The Applicant will be required to conduct a traffic impact study for the project. The key issue to be evaluated is the creation of a full movement driveway on Johnson Road, which has historically experienced safety problems. I would suggest that we schedule a meeting to identify the specific scope of the study.*

  Response:

  We are amenable to an immediate meeting to discuss the driveways. We note that the proposed driveways are already in existence but are not active, as shown in the image below. We are also interested in understanding the scope of study that is necessary for the proposed development. The owner/applicant is currently seeking approvals for the proposed building expansion, although they do not have a specific user/tenant(s) on board at this time. They will not construct the building expansion until they have sufficient tenant(s) in place to support the development. They will however construct the proposed parking lot as soon as the site plan approval is in place. A short-term use of the parking area is proposed that involves using the lot for supplemental long-term parking at the Jetport. The owner has held discussions with Jetport representatives and there appears to be a need for additional long-term parking capacity. The owner is amenable to discussing the use of the lot and how that might be controlled if necessary until the actual building expansion takes place.



- *The Applicant should provide information in support of the two driveways on Johnson Road. This item would be part of the traffic study.*

  Response:

  The two driveways currently exist, and it is the applicant's goal simply to begin their use. A third existing driveway to the former house at 68 Johnson Road will be eliminated from the site and the curb opening closed and new sidewalk constructed. Given the nature of the proposed parking lot the more easterly opening would function as a full movement driveway allowing both left and right turn entering and exiting movements. We note that the City Line driveway intersection with Johnson Road allows only right turn in and out movements, as there is an existing raised median in City Line Drive, prohibiting left turns in/out at that intersection.

- *I am concerned about the internal intersection near the main Johnson Road driveway. The Study would need to confirm vehicle backups into Johnson Road will not occur.*

  Response:

  If there is a concern about left turns into the proposed easterly driveway from Johnson Road, the applicant is amenable to modifying the driveway to allow only right turns in, thus any approaching traffic on eastbound Johnson Road will be required to proceed to the traffic signal at Jetport Blvd and turn left onto the Blvd and proceed to the City Line drive intersection.

- *The Applicant did provide a trip generation estimate and that projection seems inconsistent with the amount of parking provided. Trip generation methods will be discussed at the suggested scoping meeting.*

  Response:

  The following estimates are derived from the 10th Edition ITE Trip Generation manual and are associated only with the 22,064 SF building addition:

Land Use Category	Trips – Weekday Avg (equation)	Trips – AM Peak Hour Avg (Equation)	Trips – PM Peak Hour Avg (Equation)
710 General Office	215 (245)	26 (47)	25 (27)
715 Single Tenant Office Building	248 (NA)	39 (54)	38 (62)
770 Business Park	274 (950)	9 (NA)	9 (NA)

  We note that the existing building has been occupied for many years and the long-term tenant has been Spectrum (aka Time Warner Cable (TWC)). TWC occupies the building with various uses, including offices, call-center, training and warehouse space. TWC may or may not continue its tenancy in the building. Currently they have a lease period that remains in effect for another 4.5 years.

- *Parking lot aisle widths do not meet City standards and the Applicant shall provide supporting documentation as part of a formal request for a waiver.*

  Response:

  The applicant requests a waiver of the Technical Standards under Section 1.14 Transportation Systems and Street Design requiring drive aisles to be 24' wide. The applicant is requesting the drive aisles be constructed at 22' wide. The parking lots will be low turnover and the frequency of vehicle movements is expected to be low, unlike in a retail or other high turnover location. The placement of longitudinal landscape islands to separate the parking modules also allows for vehicles to extend into the full depth of the parking spaces, thus minimizing the amount of vehicular overhang into the drive aisles and thereby supporting the narrower drive aisle width in our opinion.

- *Although not required by City ordinance, in my professional opinion a sidewalk on City Line Drive to Jetport Boulevard is needed to provide a safe walking connection to the sidewalk on Jetport Boulevard. I have observed pedestrians walking on City Line Drive, particularly during mid-day time periods.*

  Response:

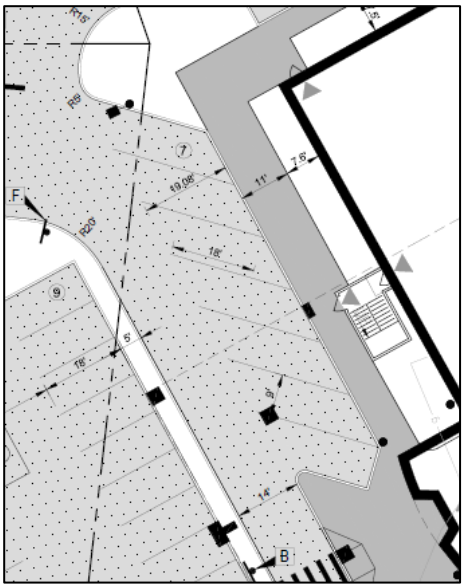
  City Line Drive is an existing private drive that is approximately 40 feet wide or greater for most of its length. There are curbed islands on the south side of the drive and an uncurbed edge of pavement on the north side of the drive. There are existing sidewalk ramps at

the Johnson Road intersection, associated with the Johnson Road sidewalk. The Johnson Road sidewalk extends to the intersection of Jetport Boulevard/Skyway Drive and Johnson Road, where there are pedestrian crossing signals associated with the traffic signal system. These allow sidewalk users to cross to the south side of Jetport Boulevard where a sidewalk runs the length of Jetport Boulevard to the Jetport. There is no sidewalk on the north side of Jetport Boulevard, thus any sidewalk extending to the City Line Drive/Jetport Boulevard intersection would require a midblock cross walk of Jetport Boulevard, which we consider less desirable than the pedestrian signal-controlled crossing at the Johnson Road signalized intersection. In addition, City Line Drive has a large number of curb or driveway openings along its length, thus the opportunity for any traditional raised sidewalk condition is minimized. As noted in the comment, pedestrians do frequently simply walk along the edge of City Line Drive and at a 40' road width, the paved surface seems to have ample area to accommodate the infrequent vehicle movement and pedestrian movements. The traffic volume on City Line Drive is low, thus, like many low volume road systems, pedestrian use along the road edge is considered acceptable and a low safety hazard in our opinion. For these reasons we believe that a sidewalk along this private drive is not necessary.

- *The site plan notes back in angle parking on the north side of the building. Dimensions should be provided for these spaces and confirmation that this is the parking configuration proposed.*

  Response:

  The reverse entry angled parking is dimensioned as shown below. It is the applicant's intent to have vehicles reverse into these parking spaces as this is becoming more common for users to park vehicles in this manner. It is considered a safety measure that helps reduce vehicle conflict for parked vehicles needing to reverse into any oncoming vehicles in the drive aisle, when leaving their parking space.



- *The Applicant should provide information on parking and circulation interaction with the abutting 52 City Line Drive site.*

  Response:

  The abutting site at 52 City Line Drive contains warehouse space and Maine Lobster Now, an online lobster processor and shipping company. The warehouse and Maine Lobster Now are both very low traffic volume producers. Maine Lobster Now has less than 20 employees and their hours of operation are typically 7 a.m. to 8 p.m. Maine Lobster also uses the warehouse area of the building for storage. 52 City Line Drive was previously used by The East Point Christian Church for worship services on Sundays, however that use is no longer active at this location, since they have relocated to Clarks Pond.

STORMWATER COMMENTS FROM LAUREN SWETT, WOODARD & CURRAN DATED AUGUST 28, 2018

- *Portions of the project area are located within the Long Creek Urban Impaired Stream Watershed. The Urban Impaired Stream Standard should be addressed.*

  Response:

  The Owner/Applicant has previously made improvements to the site, the private way (City Line Drive) and the adjacent lot to ensure that stormwater discharge is not tributary to the Long Creek Watershed. The area that previously was within the watershed is now piped to a grassed underdrained soil filter that discharges to the public storm drain system in Johnson Road, which ultimately outfalls into the Stroudwater River and then into the Fore River. All new development will maintain existing drainage patterns and therefore will also be tributary to the Stroudwater River and Fore River and not within the Long Creek watershed.

- *The HydroCAD model for the porous pavement sections includes varied-sized vertical orifices. Provide details of the structures/pipes showing the installation of these orifices. Maintenance of the orifices should be specifically addressed within the Operations and Maintenance Manual.*

  Response:

  Details describing orifice installation have been added to Plan Sheet C-8.2. A section regarding orifice maintenance has been added into the Operations and Maintenance Manual that accompanies this response letter.

- *It is noted that some of the pipes within the porous pavement system have less than 3 feet of cover and may be susceptible to freezing. That said, the entire stormwater system will be impacted by freezing conditions, and snow/ice cover. The Applicant should provide some discussion of where stormwater flow will go in the event that the system is frozen or clogged and ensure that it will not have an impact on adjacent properties and building.*

Response:

The porous section is designed as a granular section and should promote drainage. Therefore, it should not be impacted by freezing conditions. Examples of this type of design functioning properly can be observed throughout the region, with an example as close by as the State of Maine DHS building located off Jetport Boulevard.

- *There is a small amount of snow storage provided adjacent to the porous pavement parking. This space is immediately next to the abutting cemetery property which appears to have trees along it's boundary. The snow storage includes some areas of proposed steep slope. Snow clearing will be important to the functionality of the stormwater system. It is anticipated that snow removal will be required.*

  Response:

  The owner typically maintains the yard areas in the winter, otherwise an outside entity will be hired to maintain the parking lot, including snow removal. The maintenance of the proposed development will likely be included in the maintenance program that has been taking place at the existing property for many years. In severe cases there may be the need to move snow from the property. Snow storage will not occur on any adjoining property not owned by the applicant.

- *The Applicant shall submit letters to request utility capacity and response letters confirming ability to serve the proposed development and adequacy of the existing sewer service should be submitted to the City upon receipt. It is noted that the project is serviced by sewer from the City of South Portland.*

  Response:

  The City of South Portland has provided the accompanying letter indicating their capacity to continue to provide sanitary wastewater treatment.

- *A stormwater maintenance agreement with the City of Portland will be required.*

  Response:

  The accompanying draft Stormwater Maintenance agreement is offered for your review. If acceptable a final document will be executed and recorded.

If you have any questions with the information being submitted, please contact our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3478
Fax: (207) 883-3376
stephen.bushey@stantec.com

c: Mark Sanborn, Transport Leasing Corp.

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

September 20, 2018

Ms. Barbara Barhydt/Ms. Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101-3509

Subject: 90 Johnson Road
Applicant – Transport Leasing Corp.
Supplemental Information
Letter of Response #2

Dear Shukria and Barbara:

On behalf of Transport Leasing Corp. (Applicant), Stantec has prepared the accompanying revised phasing plans reflecting the applicant's objectives. Basically, the proposal is as follows:

- Phase 1 work which the applicant is seeking to commence immediately, involves the construction of 85 parking spaces to be primarily located on the property at 68 Johnson Road. This is a former residential house lot that currently lies vacant. The parking lot will be constructed to provide for overflow parking capacity for the Portland Jetport. We are in the process of obtaining written evidence from Paul Bradbury outlining the Jetport's need for available parking near the Jetport, to accommodate for peak periods and ongoing construction that may temporarily displace long and short-term passenger parking, rental company parking etc. During peak periods it has been necessary in the past to have long-term and PWM employee parking provided at the City-owned property off the end of District Road off outer Congress Street. The accompanying phase 1 plan depicts the construction of 85 parking spaces that will be accessed from Johnson Road from the existing curb opening located just northeast of the City Line Drive/Johnson Road intersection. A right turn exit only driveway will also be provided. This exit only is located within an existing curb opening that served the former residence at the property. The parking lot will not be connected to the existing uses off City Line Drive during this Phase.

  Because the parking lot will be used for only interim Jetport overflow parking we believe that no further traffic analysis is required for this development phase. The lot will be maintained by Transport Leasing and its use will be limited to only use by the Jetport until such time that the Building expansion in Phase 2 occurs. As outlined in the original submission materials, the parking lot will be constructed as a porous pavement surface, like the Dept of Human Services site nearby, and the drainage associated with the lot will ultimately flow into the Johnson Road storm drain system that ultimately discharges to the Stroudwater River, off Congress Street east of the site.

- Phase 2 will consist of the building expansion and renovations to the existing building at 90 Johnson Road. At this time there is no specific tenant associated with this building work, so the timing of this possible expansion is unknown. The applicant is

amenable to preparing a full traffic study and if necessary a Traffic Movement Permit once a tenant user(s) is identified and in advance of the applicant seeking a Building permit. They are aware that this may require reappearing before the Planning Board. We are also aware that the City may revisit access conditions including the drives off Johnson Road as well as site access from City Line Drive at that time. Ultimately it remains the applicant's goal to continue full service use of the existing southerly Johnson Road Drive and allow for right turn exiting movement from the existing northerly drive off Johnson Road. Once a tenant(s) is identified it will be possible to evaluate the overall Johnson Road access conditions then also including the placement of the existing median, the City Line Drive connection/operations, and the Jetport Boulevard signalized intersection.

On behalf of Transport Leasing, we must emphasize the importance of the Phase 1 construction timing. The owner has Shaw Bros. Construction prepared to commence the work immediately, thus it is imperative that at least the Phase 1 approval be granted as expeditiously as possible. We appreciate the City's willingness to assist in that regard.

If you have any questions with the information being submitted, please contact our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
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stephen.bushey@stantec.com

c: Mark Sanborn, Transport Leasing Corp.

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

October 12, 2018

Ms. Barbara Barhydt/Ms. Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101-3509

Subject: 90 Johnson Road
Applicant – Transport Leasing Corp.
Supplemental Information
Letter of Response #3

Dear Shukria and Barbara:

On behalf of Transport Leasing Corp. (Applicant), Stantec is providing the following information related to the comments contained in the Planner's Report and the comments received from the Planning Board at the October 9, 2018 Planning Board Workshop. For ease of reference, we have repeated the comments below in *italics* followed by our responses.

Part VIII Zoning Analysis

Per Code Section 14-229.14, the applicant will have to address how the proposal meets these zoning requirements met as part of the final application:

(a) Landscaping and screening: The site shall be suitably landscaped for parking, surrounding uses and accessory site elements including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).

(b) Curbs and sidewalks: Curbs and sidewalks as specified in article VI of chapter 25.

(c) Off-street parking and loading: Off-street parking and loading are as required by division 20 and division 21 of this article.

(d) Signs: Signs shall be subject to the provisions of division 22 of this article.

(e) Exterior storage:

(f) Storage of vehicles: Storage of vehicles is subject to the provisions of section 14-335.

(g) Shoreland and flood plain management regulations: If the lot is located in a shoreland zone or in a flood plain zone, the requirements of division 26 and/or division 26.5 apply.

Response:

(a) The accompanying Landscape plans indicate landscaping that is consistent with Technical Standards. Namely:

1. **Trees between the parking lot and the Johnson Road frontage are provided at approximately 20' on center. (The technical standards in Section 4.6.3 suggest trees set at 30' to 45' apart while Figure IV-6A indicates 15' to 20' o.c. spacing.)**
2. **Shrub plantings that will be consistent with the existing line of shrubs already located along the 90 Johnson road frontage as shown below.**
3. **Additional trees will be planted at the island ends in the parking area and along the side and rear perimeters.**



(b) The proposed parking lot will contain a sidewalk connection to the building. When the building expansion is constructed there will be a robust sidewalk around the building perimeter and connections to the existing public sidewalk along Johnson Road. The Johnson Road sidewalk connects to the Jetport Boulevard sidewalk and sidewalk system extending north to the cemetery and south to the Mall area.

(c) The accompanying parking analysis outlines the existing and proposed parking demand and supply conditions at the site. Additional explanation and discussion on parking is also provided.

(d) No specific business signs are part of the current project proposal as a new building tenant has not been identified. The applicant will pursue a sign permit as required when necessary.

(e) There is no proposed exterior storage of waste or materials proposed as part of this application. Two small dumpsters currently are positioned at the north end of the site and these are routinely serviced, thus the site is maintained free and clear of debris, garbage etc. that might lead to vermin issues or a fire issue.

(f) There will be no storage of vehicles as contemplated under Section 14-335 of the ordinance.

(g) The lot is not in a Shoreland Zone or Floodplain.

Per Code Section 14-229.15, the applicant will have to address how the proposal meets these zoning requirements met as part of the final application:

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

(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 sixty-five (65) decibels on the A scale between 7:00 a.m. and 9:00 p.m. and sixty (60) decibels on the A scale between 9:00 p.m. and 7:00 a.m., on impulse (less than one (1) second), off premises at source of complaint, excepting air raid sirens and similar warning devices.

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

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

(e) Smoke: Smoke shall not be emitted at a density in excess of thirty (30) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

Response:

(a) The proposed building expansion will involve the construction of new Class A office space that is fully expected to be enclosed.

(b) The proposed uses of office space and parking lots are not expected to generate noise exceeding the City standards. Given the proximity to a major noise generator at the Jetport, the site generator noise is expected to be insignificant. The building design will in fact include measures to address the Jetport noise including the window glazing and other measures.

(c) The proposed office and warehouse use will not generate vibration or heat that is expected to exceed normal levels at the property boundaries. There is no special equipment proposed for the site uses.

(d) The office and warehouse use will not generate glare, radiation or fumes beyond normal levels for similar uses. There is no special equipment proposed that might result in excessive glare, radiation or fumes. Again, the nearby Jetport activity routinely results in higher than normal fumes, simply associated with aircraft operations.

(e) The proposed office and warehouse uses will not generate any smoke as there are no stacks or emissions expected from the normal HVAC equipment to be used.

The applicant will need to submit a signage and wayfinding plan for review by staff prior to a public hearing.

Response:

The accompanying signage and wayfinding plan outlines the proposed ingress and egress conditions for the site. These conditions are highlighted by the following descriptions:

Entering

- **From South Portland – may turn right onto Jetport Boulevard and left on to City Line Drive to access the property at 90 Johnson Road. Signage directing vehicles from City Line Drive to the proposed Phase 1 parking lot will be provided or vehicles may turn right off Johnson Road onto City Line Drive or into the proposed parking lot access driveway.**
- **From Portland/Congress Street – may turn left from Johnson Road onto Jetport Boulevard (at the traffic signal) and proceed to City Line Drive.**
- **From the Jetport – May turn right off Jetport Boulevard onto City Line Drive.**

Exiting

- **To South Portland or Points West on Outer Congress Street – Vehicles from the new parking area will be directed to City Line Drive and to the Jetport Boulevard. Once on the Boulevard, vehicles proceed to the Signal at Johnson Road and turn left towards South Portland and Mall area or straight thru to Skyway Drive.**
- **To Portland – Vehicles may turn right out of the new driveways onto Johnson Road or from City Line Drive**.

Applicant to prepare complete subdivision and site plan submission, including requirements as included in 14-527(e) and (f), for review by the Planning Authority and Planning Board.

Response:

In accordance with Section 14-527 (g) Level III Final Written Materials we offer the following:

1. **Construction Management Plan – see the attached updated CMP contained in Attachment A to this letter. An original CMP was submitted as part of the preliminary submission materials. The attached CMP has been updated to indicate how the Phase 1 parking will be used to supplement parking for the existing building while the**

expansion is to occur, since some existing parking will need to be displaced during the construction.

2. **The applicant requests that the completion of a Traffic Study be deferred until the tenant use for the expanded building has been determined. The applicant is amenable to a condition of approval requiring a Traffic Impact Study and if necessary, a Traffic Movement Permit, be performed for Phase 2. The Traffic Study and TMP will require Planning Board approval in advance of the Phase 2 building expansion.**
3. **The project site at 90 Johnson Road has been developed for greater than 30 years and the site at 68 Johnson Road formerly contained a residential dwelling but is now vacant. There are no significant natural features, wildlife and fisheries habitats or archaeological resources on the properties.**
4. **The description of the project proposals has been provided within the original application materials as well as through the information contained within this letter submission. The proposal includes the use of porous pavement throughout most of the proposed parking area and this system will address the development's stormwater management requirements.**
5. **A Stormwater Report was previously provided in the original application materials.**
6. **The project is located within the B-4 Zoning District near the Portland Jetport and it is not understood to be within any City Designated Master Plan area as indicated within the Comprehensive plan or associated mapping.**
7. **The existing building at 90 Johnson Road is served by public utilities for water, sewer, natural gas and power. The South Portland Water Resources Department has provided the accompanying letter supporting their ability to treat the project wastewater flows since the site is actually connected to the South Portland collection and treatment systems and not Portland. The Portland Water District currently serves the site as does Central Maine Power and Unitil. These services will continue to be available.**
8. **The development currently generates less than 5 cubic yards of waste per week. Several small dumpsters are located on the site and these are emptied on a weekly basis under a yearly renewable contract with a local waste hauler. The waste stream consist of typical materials from an office use, not of which is considered hazardous. A solid waste enclosure area will be located off the northeast corner of the building.**
9. **The Fire Department checklist and NRPA and City Fire safety review was provided in a July 16, 2018 letter to Captain Chris Pirone of the Fire Department and this was made part of the original application materials. We are not aware of any concerns or issues from the Fire Department at this time.**
10. **A review of the development's consistency with the applicable design standards and Design Manual was made part of Tabs 2 through 6 of the original application materials. Further evidence of compliance is provided within this letter.**
11. **The applicant will accept as a condition of approval the requirement to provide the manufacturer's verification that all proposed HVAC equipment will meet applicable**

state and federal emissions requirements. No special or extraordinary HVAC equipment is proposed for the project; thus, it is fully expected that the emissions will be insignificant.

Planning Board Comments

The following general comments were discussed with the Planning Board at the workshop. We offer the following information and we have considered various adjustments to the site plans to address these comments.

Comment – The Phase 1 area should stand on its own and the landscape area along the Johnson Road frontage should be improved.

Response:

We have updated the plans by modifying the proposed parking along the Johnson Road frontage. Specifically, the original plan contained 16 perpendicular parking spaces located immediately adjacent the right of way line. While a row of tree plantings was originally proposed for landscaping, these trees would have been placed on the right of way line or slightly within the right of way. To create a larger green space between the proposed parking and the back of the existing Johnson Road sidewalk, we have eliminated the perpendicular parking spaces and revised the parking to 5 parallel spaces. The result will create a minimum 10' pavement setback from the right of way line and an open space of approximately 23' behind the sidewalk. We have also modified the Phase 1 landscaping plan to provide 5 deciduous shades trees and twenty (20) small shrubs to match the existing landscape treatment now existing along the street frontage of the 90 Johnson Road site as depicted below.



Comment – The parking ratios both existing and proposed should be better defined and explained. Bicycle parking meeting the standards should be provided.

Response:

A brief parking analysis is contained in Attachment A to this letter. The following is a summary of the existing and proposed parking:

Existing conditions – 42 spaces available on 90 Johnson Road property

Use	Existing Size	Parking Requirements by Code	Parking Requirements Desired by Applicant
Office	14,340 SF	36 spaces (2.5/1000)	79 spaces (5.5/1000)
Light Industrial/Warehouse	10,038 SF	10 spaces (1/1000)	10 spaces (1/1000)
Total	**24,378 SF**	**46 spaces**	**89 spaces**

As you can see the existing parking supply on the Johnson Road site is slightly deficient even to satisfy the City Code provisions. This deficit has been overcome by the use of the parking area on the 118 Johnson Road site, on the south side of City Line Drive. However, there are occasions when the parking supply for the two sites is at its maximum use and capacity. According to the owner, the existing tenant, Charter Communications (aka Time Warner) experiences waves of parking demand due to the following:

- **Periods when existing and new fleet vehicles arrive for servicing, new equipment fit ups, and training periods. They may have 80-100 additional vehicles at the site at which time the combined parking demand is at the capacity of the existing supply.**
- **Personnel Training Periods – training may involve additional staff visiting the site for extended periods.**

Proposed Parking

- **Phase 1 (year 1 -year 3) – Proposed Parking will be 110 Spaces – There will be 68 new spaces constructed to meet the existing building tenant demand and to also use for overflow parking from Jetport activities, peak travel periods, and related Jetport activities.**

- **Phase 1 (beyond year 3 with no Building expansion started) – Unless otherwise approved by the Planning Authority the applicant will agree to eliminate 16 parking spaces and 5,870 SF of impervious area from the existing parking surrounding the 90 Johnson Road building. The resultant parking supply will be 94 spaces.**

- **Phase 2 (with Building expansion) – The proposed parking supply will be 185 spaces and the parking demand is summarized as follows:**

Use	Proposed Size	Parking Requirements by Code	Parking Requirements Desired by Applicant
Office	30,633 SF	77 spaces (2.5/1000)	168 spaces (5.5/1000)
Light industrial/warehouse	6,463 SF	6 spaces (1/1000)	6 spaces (1/1000)
Common Area	5,283 SF		
Total	**42,379 SF**	**83 spaces**	**174 spaces**

We note that when evaluating parking demand the designer typically provides a "practical capacity" factor to the demand figures. This is routinely about 15% additional parking that the forecast demand. This "practical capacity" provides enough additional parking spaces so the last few drivers do not have to drive around the entire parking lot looking for the last parking spaces. So, in the case of the proposed full build out parking, the estimated demand is 174 spaces. With a typical 15% practical capacity factor the parking supply would need to be 200 spaces. The actual proposed is 185 spaces which is slightly below this value but still acceptable in our opinion.

The site plans have been updated to indicate the placement of a bike storage area with the capacity of 24 bikes near the proposed Phase 2 expansion area. A waiver of the bicycle storage requirements is no longer requested.

On behalf of Transport Leasing, we must emphasize the importance of the Phase 1 construction timing. The owner has Shaw Bros. Construction prepared to commence the work immediately, thus it is imperative that at least the Phase 1 approval be granted as expeditiously as possible. We appreciate the City's willingness to assist in that regard.

If you have any questions with the information being submitted, please contact our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3478
stephen.bushey@stantec.com

Attachments: A – Parking Analysis
B – Construction Management Plan
C – Ability to Serve So. Portland Water District
Site Plans

c: Mark Sanborn, Transport Leasing Corp.

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ATTACHMENT A

TAB 7
Construction Management Plan- Revised 10.12.2018
90 Johnson Road Office Building
Transport Leasing Corp.

This document and its subsequent attachments comprise The Construction Management Plan being submitted to the City of Portland for the 90 Johnson Road Office Building expansion project at 90 Johnson Road. The Construction Management Plan contains information pertaining to the overall planning and coordination of the project.

The project involves the renovations and construction of a building expansion that will add 18,262 SF of building space onto an existing 24,249 SF building. The expansion includes an increase in building height to add two levels of office space above an existing structure. A portion of the upper level expansion will extend beyond the existing building footprint and be column supported. The existing site contains 42 parking spaces, most of which are located near the building and within the anticipated temporary construction work limits. Site improvements include new porous pavement parking, utilities, and yard work.

A. Construction Management Principles

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

- The construction zone for the building will be fully secured with hard barriers/fencing preventing any access into the site by the public. Barriers are <u>not</u> expected to extend into the Public R.O.W.
- All construction activities will occur within the construction barriers/fencing to ensure the public is never exposed to any risks caused by the activities.
- There will be an onsite staging and unloading area for all deliveries which will prevent any impacts caused by offsite staging of trucks.
- All deliveries will be coordinated and scheduled to ensure that there is no offsite queuing required in Johnson Road or City Line Drive. The Owner plans to schedule as many deliveries as possible in the early morning to limit impact on the surrounding area.
- All construction activities will occur within normal daytime working hours to minimize impacts to the surrounding area.
- The construction of the Phase 1 parking lot, consisting of 69 parking spaces will provide for the temporary displacement of parking around the building when the expansion is underway.

B. Development Review of Construction Management Plan

The Owner will use a site-specific safety program for all team members who work on the construction site. The public will not be put at risk at any point throughout this

project, as all work will be completed within the fenced off jobsite. At no point of the project will the public have access to this job site. Minimizing impacts to areas surrounding the building/construction site will be a primary consideration in the process.

The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood. Such a condition may involve a delay in commencement of construction, if necessary.

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

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

This project will require no anticipated public street openings for utility tie-ins. If found to be necessary, all required permits will be requested and granted by the Department of Public Works prior to any street openings occurring. MUTCD plans will be submitted to and approved by the City of Portland for any traffic disruptions caused by street openings or interruptions to Johnson Road or Jetport Boulevard traffic. City Line Drive is a private way owned and maintained by the applicant.

D. Construction Administration and Communication

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

Mark Sanborn
207.650.9506
mark@abcorental.com

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

E. Construction Schedule

The preliminary construction schedule for the project starts in Fall 2018 and runs through Spring 2019.

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

F. Security & Public Safety

See the Site Plans for fencing and barriers to be used to isolate the construction site from the public. All gates into the project may have Knox locking devices to allow for emergency access.

The fire safety program onsite will consist of the following:

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

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: This project will not require street openings on Johnson Road.

2. Sewer: This building will need to connect to the public sewer system via an existing on site service connection. All required permits will be submitted for and approved by the Sewer Connection Clerk at the Department of Public Works or City of South Portland Water Resource Protection Department.

3. Traffic Control Plans: There will be periods of time throughout the project where construction activity may impact the existing public street system although this is expected to be very limited. Prior to any interruptions, a MUTCD plan will be created and submitted to the City for approval. The MUTCD will ensure that traffic and safe passage for the public is maintained in a satisfactory manner.

H. Site Management and Controls

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

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

I. Erosion Control and Preservation of Trees

Erosion control measures will be installed onsite prior to any work commencing. A complete erosion control plan will be put together and reviewed with the City at the preconstruction meeting. Some of the measures that will be taken are utilization of silt fences to protect to surrounding area from any silt run off from the site. The control measures will be maintained daily and inspected weekly or after any major rain event.

The inspections will be documented for review by the City of Portland, Maine Department of Environmental Protection, or the U.S. Environmental Protection Agency.

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

J. Construction Staging Area

All trucks will be unloaded within the construction site's footprint to avoid impacts on public traffic. An offsite marshalling area will not be required for this project. All materials will be stored onsite and, in a manner, to avoid impacts to site operations and emergency vehicle access to the property.

K. Parking During Construction

Construction parking will be provided onsite. No parking of construction vehicles will be allowed in the Johnson Road R.O.W.

L. Special Measures as Necessary

There will be no special measures necessary for this project.

Please do not hesitate to contact the applicant with any comments, questions, or concerns regarding the Johnson Road project and subsequent Construction Management Plan.

ATTACHMENT B

90 Johnson Road
Parking Analysis
October 12, 2018

90 Johnson Road SF Parking Analysis

Existing Building	**SF**	Desired Parking Spots	Parking by code
Warehouse Area	10038	10	10
Charter Warehse #1	4805		
Charter Warehse #2	3575		
Charter Mezz	1658		
Office Area	14340	79	36
Charter Office	11924		
Charter Mezz Floor	2416		
Common Area	0	0	0
None			
TOTALS	24378	89	46

New Renovated and Expanded	**SF**	Desired Parking Spots	Parking by Code	Notes
Warehouse Area	6463	6	6	
Charter Warehse #1	4805			
*Charter Warehse #2	0			Demoed in Phase 2
Charter Mezz	1658			
Office Area	30633	168	77	
Charter Office Part #1	7575			
Charter Office Part #2	3274			
Charter Mezz Floor	2416			
New 2nd Floor	8684			
New 3rd Floor	8684			
Common Area	5283	0	0	
Floor 1	1575			
Mezz	584			
Floor 2	1562			
Floor 3	1562			
TOTALS	42379	174	83	

Parking Analysis

Use	**Desired Parking supply**	**City Parking ratio per Sec 14-332**
Office	5.5 spaces per 1,000 SF	(j) 1 space per 400 SF
Warehouse	1 space per 1,000 SF	(l) 1 space per 1,000 SF
Common Area	- no impact	

Existing Parking supply on 90 Johnson Road	**42 spaces**
Proposed parking after Phase 1	**110 spaces**
Proposed parking after 3 years and no expansion	**94 Spaces**
Proposed Parking with expansion	**177 Spaces**

ATTACHMENT C

City of South Portland

Water Resource Protection

Patrick Cloutier, Director

July 24, 2018

Stephen Bushey, P.E.
Associate
Stantec Consulting Services Inc.
482 Payne Road, Scarborough Court
Scarborough, Maine 04074

Re: 90 Johnson Road, Portland, Maine 04106

Dear Mr. Bushey,

Please consider this letter confirmation that the City of South Portland has adequate collection and treatment system capacity for the proposed sanitary flow of 3000 GPD (gallons per day) for the project of 90 Johnson Road, Portland, Maine.

If you should need further assistance or have any other questions, please contact me at your convenience.

Sincerely,

Patrick Cloutier, Director

Cc: Steve Puleo, Community Planner, City of South Portland

P.O. Box 9422 • South Portland, Maine 04116-9422 • Telephone (207) 767-7675 • Fax (207) 767-5697
pcloutier@southportland.org • www.southportland.org

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

October 25, 2018

Ms. Barbara Barhydt/Ms. Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101-3509

Subject: 90 Johnson Road
Applicant – Transport Leasing Corp.
Supplemental Information
Letter of Response #5

Dear Shukria and Barbara:

On behalf of Transport Leasing Corp. (Applicant), Stantec is providing the following supplemental information to address comments you provided via email on October 24, 2018. The comments and our responses are as follows:

Comment #1 - The proposed slipform concrete curbing needs to be continued at all the islands in the parking lot, rather than the parking blocks at each stall.

Response:

The accompanying plans reflect the additional curbing along the longitudinal islands in the Phase 1 parking area.

Comment # 2 - The aisle width is shown at 22' and does not meet standard of 24'. Staff recommends that the compact spaces be proposed at 15' (standard is 7' x 15') so the aisle width can be increased to 24'.

Response:

We have modified the dimensions on the plan to provide a 24' wide aisle with parking spaces that are at 17' depth to allow the overall module width to be maintained at 58'. We believe that the proposal for a 10' landscape island between the modules allows for vehicle overhang without impact to a sidewalk, etc. so that the slightly shorter space length at 17' is acceptable in our opinion. The addition of the curbing along the island length also protects from vehicles extending onto the grass within the islands. For these reasons, we are requesting a waiver to provide a typical 18' long parking space and instead the plan includes a 24' wide aisle and 17' perpendicular spaces.

Jeff Tarling comments:

The parking lot landscape should meet the Landscape Standard for the tree and shrub density in regards to parking lot numbers to plantings.

To meet this standard, additional woody plant (tree or shrub) planting could be added to the parking lot island ends where perennial plants are shown, the center island turf area or the space between Johnson Road and the parking lot. We would recommend that landscape islands and planting spaces be slightly crowned. Parking lot islands should be curbed vs using the wheel stops which do not work well with Winter snow clearing and is less protective of the green spaces. Any additional planting in the center island lawn can be grouped together to allow snow storage space. Some of the suggestive plant types would include Sweet Fern, Bayberry in addition to the Viburnums shown. The proposed White Spruce screening could include a mix of heights 5-6' and the larger 8-10' plants shown to give a more natural feel to the planting. Serbian Spruce could be an option for the White Spruce. The proposed 3" caliper trees could be downsized to 2-2.5" caliper for slight cost savings and easier installation, the recommendation intent is that these slightly smaller caliper trees should adapt quicker to the site and provide the desired screening function.

Response:

We have modified the landscaping plan to increase the number of plantings in the parking field. This includes some additional deciduous trees and various shrubs within the end cap islands and several perimeter areas. The White spruce plantings will include a mix of heights to achieve the natural feel highlighted by Mr. Tarling.

We also note that the plans now reflect a short connection between the existing parking lot at 90 Johnson Road and the proposed lot and no use of the existing southerly entrance off Johnson Road. This existing curb opening will remain unchanged for now however it will not be connected internally and several jersey barriers can be placed to prohibit use of that opening at least during the Phase 1 parking lot use. The owner reserves the right to review this curb opening use in the future, depending upon the findings of the traffic study that will need to be performed for the Phase 2 building expansion. This is also subject to the City Traffic engineer's review and acceptance. For Phase 1, there will be only a right turn only exiting movement at the northerly drive onto Johnson Road. All other movements will originate or go thru City Line Drive and the Jetport Boulevard.

If you have any questions with the information being submitted, please contact our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3478
stephen.bushey@stantec.com

c: Mark Sanborn, Transport Leasing Corp.

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

October 29, 2018

Ms. Barbara Barhydt/Ms. Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101-3509

Subject: 90 Johnson Road
Applicant – Transport Leasing Corp.
Supplemental Information
Letter of Response #6

Dear Shukria and Barbara:

We have received your email transmissions from Friday, October 26th and today, October 29th, each with various staff comments. Several of these comments were specifically addressed by our Letter of Response #5 dated October 25th and supporting plans which were uploaded to eplan on Friday, October 26th. The following is a very quick response to the comments you sent back to us on Friday and Monday just to help clarify where we are at with the plan changes and supporting information to address these comments.

Below are Lauren Swett comments:

Comment:

His response references some documents that I do not see in eplan:

- *Plan sheet C-8.2 (they reference some detail edits)*
- *Stormwater maintenance agreement draft*

Response:

I have attached Plan Sheet C-8.2 and the draft Stormwater Maintenance Agreement and these will be uploaded to eplan.

Below are Tom Errico comments:

Comment:

- *The Applicant should provide the right-turn exit only driveway on Johnson Road for Phase 1. No other driveways will be permitted for Phase 1. A traffic study will be required in conjunction with Phase 2 that will assess other driveway provisions on Johnson Road.*
- *An internal connection from the Phase 1 parking lot nearest Johnson Road to City Line Drive is suggested – for Phase 1.*
- *I do not support a waiver for parking lot aisle width.*

Response:

The latest plans uploaded to eplan show a connection to the existing 90 Johnson Road parking area and the existing Johnson Road driveway will be blocked off with Jersey barriers until the completion and approval of a traffic study is performed for the Phase 2 activity. The parking lots are now shown with a 24' wide aisle and 17' deep parking spaces since there are 10' wide landscape islands separating the parking bays, thus allowing for ample opportunity for vehicle overhang.

Below are Bruce Hyman Comments:

Comment:

Site Access:

- *It is my understanding that the applicant will be eliminating the two-way driveway that is shown as Right In/Right Out in the most current site design - there were 14 crashes on the segment/intersection between the Johnson Road/Congress Street intersection and the Johnson Road/Skyway/Jetport Blvd intersection in the period 2015-2017 per the MaineDOT crash database - I support the elimination of the driveway.*
- *More direct, two-way connections are needed from City Line Drive to the Phase I parking lot*
- *The proposed driveway that is to be eliminated is to have curbing and sidewalk installed for the duration of Phase I and pending the review of traffic and transportation analysis to support any new potential Phase II driveway(s).*

Multimodal/Bus Transit Access:

- *The transportation analysis does not note the METRO Route #5 bus stops on each side of Johnson Road in the vicinity of the applicant's property nor any modifications to improve access to/from these bus stops - at a minimum, the bus stop along the Johnson Road frontage near City Line Drive is to be made ADA-compliant by adding the required 5'x8' bus landing area. For Phase II, consideration of enhanced access to the outbound/westbound Route #5 METRO bus stop opposite the applicant's property is to be assessed.*

Response:

We believe the comments pertaining to Site Access have been addressed. The applicant will not install curbing and sidewalk across the existing curb opening however, as they are seeking to reserve the right to have this existing driveway opening be made part of the Phase 2 Traffic Study. They will place jersey barriers across the driveway during Phase 1 to assure it is not used.



We will also need additional information pertaining to the location of the METRO Route #5 bus stop along Johnson Road and supporting information from either the City or METRO as to why an ADA compliant landing area is required. There is currently an existing bus shelter within 600 feet of the site and another within 1500 feet of the site.

If you have any questions with the information being submitted, please contact our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3478
stephen.bushey@stantec.com

Attachments – C-8.2
Stormwater Maintenance Agreement

c: Mark Sanborn, Transport Leasing Corp.

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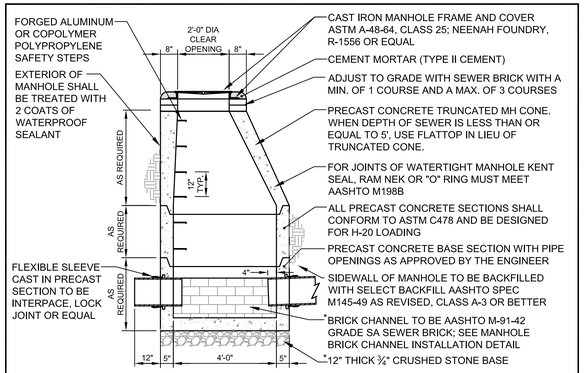
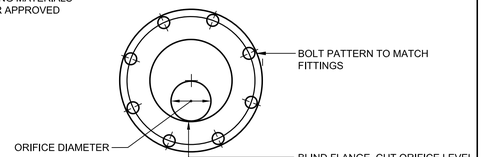


4'-0" DIA. PRECAST SEWER & STORM DRAIN MANHOLE DETAIL

A N.T.S.

*NOTE:
CHANNEL MAY ALSO BE A PREFABRICATED FIBERLINER 2000 CHANNEL AS FABRICATED BY GDT, INC. OF ESSEX, CT OR EQUAL

NOTE:
ALL PIPE FITTING MATERIALS TO BE PVC, OR APPROVED EQUAL



OUTLET ORIFICE DIMENSIONS	
POROUS PAVEMENT AREA ID	ORIFICE DIA. (IN.)
AREA 1	1"
AREA 2	1.25"
AREA 3	1.25"
AREA 4	1.25"

ORIFICE DETAIL

H N.T.S.

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

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No.	Revision	By	Appd.	YY.MM.DD
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.05.22

File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.05.22 DATE

Permit-Seal



Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
DETAILS

Project No. 210801617
Scale

Sheet C-8.2

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STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

Site Development at 90 Johnson Road

IN CONSIDERATION OF the site plan approval granted by the Planning Authority of the City of Portland for the proposed Building Expansion and parking area Project ID PL-232-2018 shown on the Phase 1 and 2 Site Layout & Utility Plans submitted by Stantec Consulting Services Inc., and associated Phase 1 and Phase 2 Grading & Drainage Plans, (Exhibits A and B) prepared by Stantec, of 482 Payne Road, Scarborough, Maine dated last revised _____ and pursuant to a condition thereof, Transport Leasing Corp. with a principal place of business in Portland, Maine, and having a mailing address of 95 Pleasant Hill Road, Scarborough, Maine 04074 (secondary address 58 Lowell Junction Road, Andover MA 01810), the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the porous pavement systems and all ancillary drainage appurtances, piping, and related onsite drainage infrastructure, (hereinafter collectively referred to as the "stormwater system"), as shown on the Grading & Drainage Plan in Exhibit B and in strict compliance with the approved Stormwater Inspection and Maintenance Manual prepared for the Owner by Stantec (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of

this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

Dated at Portland, Maine this _____ day of _____, 2018.

_____
(*name of company*)

_____
(*representative of owner, name and title*)

STATE OF MAINE
CUMBERLAND, ss. Date: _____

Personally appeared the above-named _____(*name and title*), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

_____
Notary Public/Attorney at Law

Print name: _____

Exhibit A: Approved Site Layout Plan
Exhibit B: Approved Grading & Drainage Plan
Exhibit C: Approved Stormwater Inspection and Maintenance Manual

NOTES:

SITE IS IDENTIFIED AS MAP 214A, BLOCK A, LOTS A-2 & A-3 ON THE CITY OF PORTLAND ASSESSOR'S DATABASE.

RECORD OWNER: TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

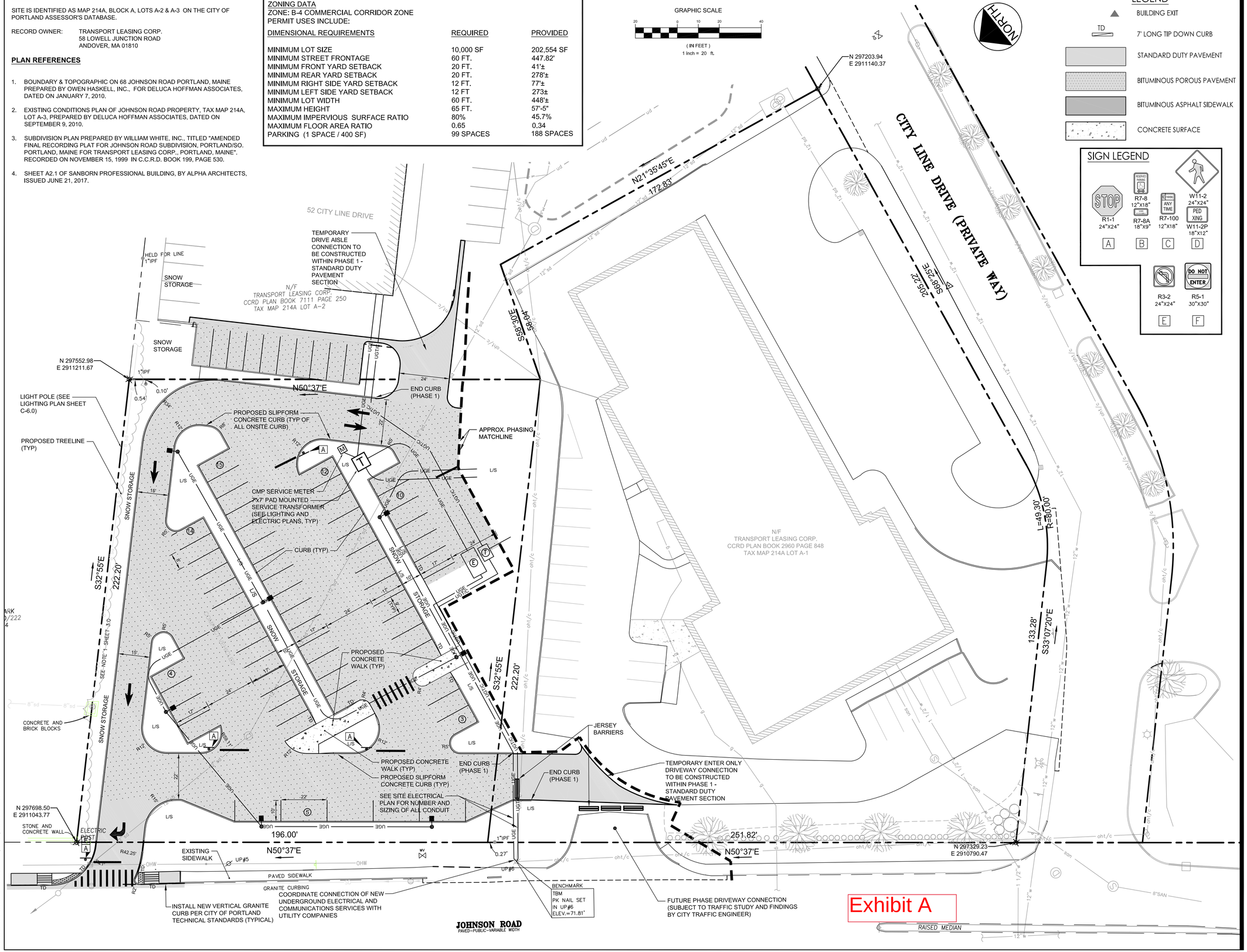
PLAN REFERENCES

1. BOUNDARY & TOPOGRAPHIC ON 68 JOHNSON ROAD PORTLAND, MAINE PREPARED BY OWEN HASKELL, INC., FOR DELUCA HOFFMAN ASSOCIATES, DATED ON JANUARY 7, 2010.
2. EXISTING CONDITIONS PLAN OF JOHNSON ROAD PROPERTY, TAX MAP 214A, LOT A-3, PREPARED BY DELUCA HOFFMAN ASSOCIATES, DATED ON SEPTEMBER 9, 2010.
3. SUBDIVISION PLAN PREPARED BY WILLIAM WHITE, INC., TITLED "AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE", RECORDED ON NOVEMBER 15, 1999 IN C.C.R.D. BOOK 199, PAGE 530.
4. SHEET A2.1 OF SANBORN PROFESSIONAL BUILDING, BY ALPHA ARCHITECTS, ISSUED JUNE 21, 2017.

ZONING DATA
ZONE: B-4 COMMERCIAL CORRIDOR ZONE
PERMIT USES INCLUDE:

DIMENSIONAL REQUIREMENTS	REQUIRED	PROVIDED
MINIMUM LOT SIZE	10,000 SF	202,554 SF
MINIMUM STREET FRONTAGE	60 FT.	447.82'
MINIMUM FRONT YARD SETBACK	20 FT.	41'±
MINIMUM REAR YARD SETBACK	20 FT.	278'±
MINIMUM RIGHT SIDE YARD SETBACK	12 FT.	77'±
MINIMUM LEFT SIDE YARD SETBACK	12 FT	273±
MINIMUM LOT WIDTH	60 FT.	448'±
MAXIMUM HEIGHT	65 FT.	57'-5"
MAXIMUM IMPERVIOUS SURFACE RATIO	80%	45.7%
MAXIMUM FLOOR AREA RATIO	0.65	0.34
PARKING (1 SPACE / 400 SF)	99 SPACES	188 SPACES

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.



LEGEND

- BUILDING EXIT
- TD — 7' LONG TIP DOWN CURB
- STANDARD DUTY PAVEMENT
- BITUMINOUS POROUS PAVEMENT
- BITUMINOUS ASPHALT SIDEWALK
- CONCRETE SURFACE

SIGN LEGEND

R1-1 24"X24"	R7-8 12"X18" / R7-8A 18"X9"	R7-100 12"X18"	W11-2 24"X24" / W11-2P 18"X12"
A	B	C	D
R3-2 24"X24"	R5-1 30"X30"		
E	F		

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

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Revision	By	Appd.	YY.MM.DD
5 REVISED PER CITY COMMENTS - LOA #4	CDD	SRB	18.10.25
4 ISSUED REVISED PLANS TO CITY	PBF	SRB	18.10.12
3 RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	18.09.19
2 SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1 SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.05.22

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSBY
10-25-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
PHASE 1
SITE LAYOUT & UTILITY PLAN

Project No.	Scale
210801617	1" = 20'

Sheet
C-3.0

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NOTES:

SITE IS IDENTIFIED AS MAP 214A, BLOCK A, LOTS A-2 & A-3 ON THE CITY OF PORTLAND ASSESSOR'S DATABASE.

RECORD OWNER: TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

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GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

LEGEND
- BUILDING EXIT
- TD — 7' LONG TIP DOWN CURB
- STANDARD DUTY PAVEMENT
- BITUMINOUS POROUS PAVEMENT
- BITUMINOUS ASPHALT SIDEWALK
- CONCRETE SURFACE

SIGN LEGEND
- R1-1 24"X24" (STOP) — A
- R7-8 12"X18" (RESERVED PARKING) / R7-8A 18"X9" (VAN ACCESSIBLE) — B
- R7-100 12"X18" (ANY TIME) — C
- W11-2 24"X24" / W11-2P 18"X12" (PED XING) — D
- R3-2 24"X24" — E
- R5-1 30"X30" (DO NOT ENTER) — F

NORTH

N 297203.94
E 2911140.37

2' WIDE PAVEMENT OVERLAY MATCH EXISTING PAVEMENT

CITY LINE DRIVE (PRIVATE WAY)

EXISTING STORMWATER BASIN TO REMAIN

52 CITY LINE DRIVE

6" OCS
RIM: 71.0
6" UD IN = 64.06
15" INV IN = 67.85
12" INV OUT = 64.03

N21°35'45"E 172.83'

15 COMPACT VEHICLES

7 COMPACT VEHICLES

S68°25'30"E 204.04'

S68°25'E 205.22'

BENCHMARK: CP 1
PK NAIL
ELEV.: 71.98'

HELD FOR LINE
1"IPF

SNOW STORAGE

N/F
TRANSPORT LEASING CORP.
CCRD PLAN BOOK 7111 PAGE 250
TAX MAP 214A LOT A-2

COMPACT VEHICLES

N 297552.98
E 2911211.67

1"IPF

0.54' 0.10'

N50°37'E

LIGHT POLE (SEE LIGHTING PLAN SHEET C-6.0)

PROPOSED SLIPFORM CONCRETE CURB (TYP OF ALL ONSITE CURB)

PROPOSED TREELINE (TYP)

APPROX. PHASING MATCHLINE

CMP SERVICE METER
7'x7' PAD MOUNTED SERVICE TRANSFORMER (SEE LIGHTING AND ELECTRIC PLANS, TYP)

CURB (TYP)

ELECTRIC MANHOLE & TELCOM MANHOLE (SEE LIGHTING AND ELECTRIC PLANS FOR DETAILS, TYP)

S32°55'E 222.20'

SNOW STORAGE

SEE NOTE 1 SHEET 3.0

SUMP=61.0'
RIM=64.4'
EX. CB

CONCRETE AND BRICK BLOCKS

EX. CB
RIM=59.6'
12" INV. IN=63.07
12" INV. OUT=62.97
SUMP=61.0'

PROPOSED CONCRETE WALK (TYP)

PROPOSED SLIPFORM CONCRETE CURB (TYP)

SEE SITE ELECTRICAL PLAN FOR NUMBER AND SIZING OF ALL CONDUIT

N 297698.50
E 2911043.77

STONE AND CONCRETE WALL

ELECTRIC POST

EX. CB
RIM=66.9'
12" INV. IN=62.5'
12" INV. OUT=62.4'

196.00'

N50°37'E

EXISTING SIDEWALK

UP#5

PAVED SIDEWALK

EX. DMH
RIM=67.6'

EX. CB
RIM=67.5'
INV. IN=61.7' 12" RPP
INV. IN=61.6' 12"
INV. OUT=61.5' 12" RPP W/ HOOD

INSTALL NEW VERTICAL GRANITE CURB PER CITY OF PORTLAND TECHNICAL STANDARDS (TYPICAL)

GRANITE CURBING

COORDINATE CONNECTION OF NEW UNDERGROUND ELECTRICAL AND COMMUNICATIONS SERVICES WITH UTILITY COMPANIES

RIM=69.3'
INV. IN=62.4' 12"RPP
INV. OUT=62.3' 12"RPP W/HOOD

FLUSH GRANITE CURB WITH TACTILE WARNING STRIP, TYP

JOHNSON ROAD
PAVED–PUBLIC–VARIABLE WIDTH

BENCHMARK
TBM
PK NAIL SET
IN UP#6
ELEV.=71.81'

MATCH NEW GRANITE CURB TO NEW SLIPFORM CONCRETE CURB (TYP)

FUTURE PHASE DRIVEWAY CONFIGURATION (SUBJECT TO TRAFFIC STUDY AND FINDINGS BY CITY TRAFFIC ENGINEER)

PROPOSED BITUMINOUS ASPHALT WALK (TYP) (OWNER RESERVES THE RIGHT TO INSTALL CONCRETE)

PROPOSED SLIPFORM CONCRETE CURB (TYP)

10'X10' REINFORCED CONCRETE SOLID WASTE ENCLOSURE

24 BICYCLE PARKING SPACES - HITCH STYLE TO BE COORDINATED WITH CITY

BUILDING OVERHANG

39,548 SF
1 STORY BUILDING CONVERTED TO MULTI-STORY OFFICE BUILDING
FIRST FLOOR - 16,517 SF
MEZZANINE - 2,539 SF
SECOND FLOOR - 10,246 SF
THIRD FLOOR - 10,246 SF

BUILDING COLUMN (TYP)

FD CONNECTION

N/F
TRANSPORT LEASING CORP.
CCRD PLAN BOOK 2960 PAGE 848
TAX MAP 214A LOT A-1

EXISTING DOMESTIC WATER

CONCRETE RAMP (1:12 MAX.), (SEE STRUCTURAL PLANS TYP)

EXISTING SANITARY SERVICE

BITUMINOUS SIDEWALK

12" X 6" TAPPING SLEEVE AND VALVE

PROPOSED 6" FIRE SERVICE

RAMP (1:12 MAX.)

INTEGRAL CIP CONCRETE WALL WITH HANDRAIL (SEE STRUCTURAL PLANS)

SLIPFORM CONCRETE CURB (TYP)

L=49.30'
R=30.00'

S33°07'20"E 133.28'

SNOW STORAGE

2' WIDE PAVEMENT OVERLAY MATCH EXISTING PAVEMENT

END POROUS PAVEMENT

END OF EXISTING GRANITE CURB

PROPOSED SIGN

251.82'

N50°37'E

EXISTING SIDEWALK

N 297329.23
E 2910790.47

MATCH EXISTING PAVEMENT
INSTALL NEW VERTICAL GRANITE CURB PER CITY OF PORTLAND TECHNICAL STANDARDS (TYPICAL)

RAISED MEDIAN

Exhibit A

Revision	By	Appd.	
5 REVISED PER CITY COMMENTS - L.O.R. #4	CDD	SRB	18.10.25
4 ISSUED REVISED PLANS TO CITY	PBF	SRB	18.10.12
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482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

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Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEE
10-25-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
PHASE 2
SITE LAYOUT & UTILITY PLAN

Project No.	Scale
210801617	1" = 20'

Sheet
C-3.1

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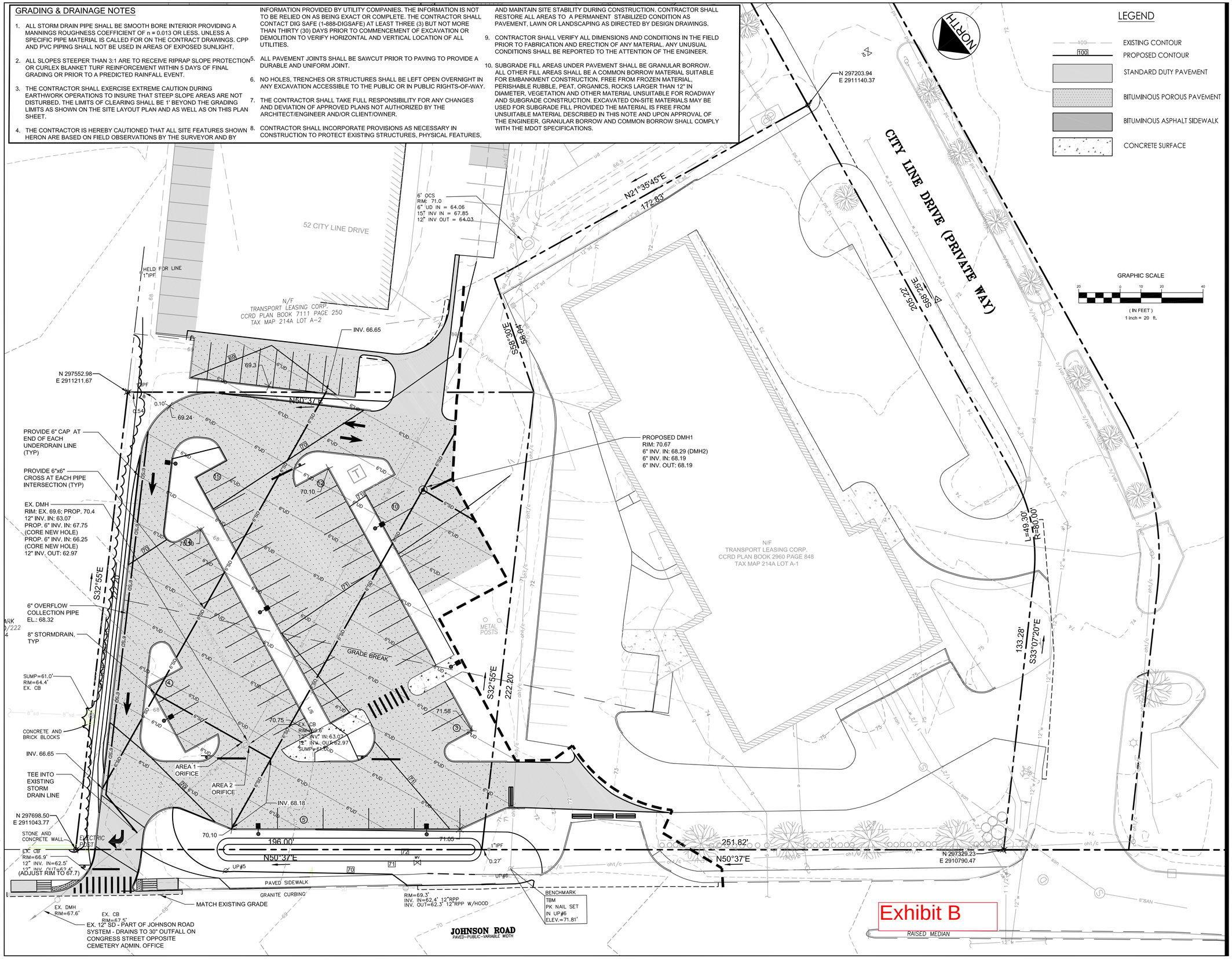
GRADING & DRAINAGE NOTES

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. CPP AND PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
2. ALL SLOPES STEEPER THAN 3:1 ARE TO RECEIVE RIPRAP SLOPE PROTECTION OR CURLEX BLANKET TURF REINFORCEMENT WITHIN 5 DAYS OF FINAL GRADING OR PRIOR TO A PREDICTED RAINFALL EVENT.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT STEEP SLOPE AREAS ARE NOT DISTURBED. THE LIMITS OF CLEARING SHALL BE 1' BEYOND THE GRADING LIMITS AS SHOWN ON THE SITE LAYOUT PLAN AND AS WELL AS ON THIS PLAN SHEET.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HERON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. 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 PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
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, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO A PERMANENT STABILIZED CONDITION AS PAVEMENT, LAWN OR LANDSCAPING 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 ATTENTION OF THE ENGINEER.
10. SUBGRADE FILL AREAS UNDER PAVEMENT SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL 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 SUBGRADE FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH THE MDOT SPECIFICATIONS.



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File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.03.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. PULLEN
10-25-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
PHASE 1
GRADING & DRAINAGE PLAN

Project No. 210801617
Scale N.T.S.

Sheet
C-4.0A

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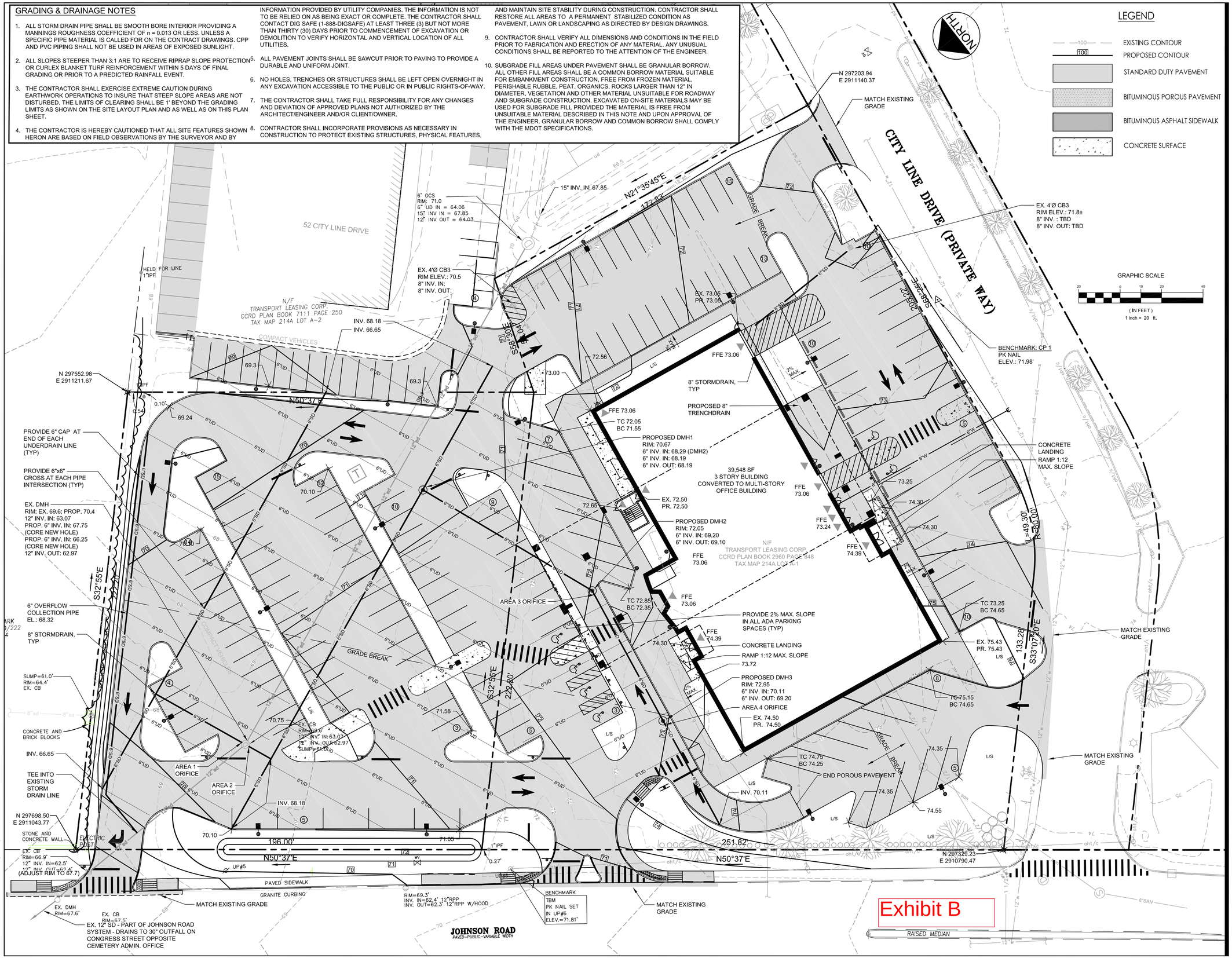

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File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.05.22

Permit-Seal

STATE OF MAINE
STEPHEN R. PUSELEY
10-25-18
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

PHASE 2
GRADING & DRAINAGE PLAN

Project No.	Scale
210801617	N.T.S.

Sheet

C-4.0B

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OPERATION AND MAINTENANCE MANUAL FOR STORMWATER MANAGEMENT AND RELATED STORMWATER FACILITIES

90 JOHNSON ROAD PROPERTY
90 JOHNSON ROAD
PORTLAND, MAINE

PREPARED FOR

TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

PREPARED BY

STANTEC CONSULTING SERVICES, INC.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355

JULY 2018

Exhibit C

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	B. RESPONSIBLE PARTY	2
II.	PROJECT OVERVIEW	2
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APPENDICES

Appendix A – Sample Inspection Logs

Appendix B – Permits for Project

Appendix C – Summary Checklist for Inspection and Maintenance

I. INTRODUCTION

Relatively complex stormwater management facilities are commonly installed in development projects including, commercial facilities, and many other developments. The complexity and goals of these systems vary with the nature of the receiving water, as well as the type of development. Runoff from developed areas of the project, including rooftops, paved, or lawn areas typically contain materials that can impact the receiving waters. Source control and the installation of bio-retention facilities and pervious surfaces are often combined with pretreatment measures or vegetated buffer strips. Other best management practices are also among the options that can significantly reduce the non-point pollution discharge from the developed area. These measures are particularly important to projects in the watersheds of sensitive water bodies, or projects with potential impacts to groundwater. With the increased cost of land and development, there is an increased tendency to construct portions of the stormwater management systems underground.

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of years. It is critical that the stormwater management facilities are regularly inspected, and that maintenance is performed on an as-needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that collect and transport the flow to the ponds, infiltration galleries, and other treatment measures. Thus, maintenance should be directed to the total system, not just the collection system or primary stormwater management facility.



The purpose of this document is to define, in detail, the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended when they were designed. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need for the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program for operation and maintenance. Certain facilities, specifically the potential water quality volume storage or treatment measures such as bio-retention cells and pervious surfaces are not intended to be placed in service until the tributary catchment area has the permanent cover in place and any contributing turf areas have achieved a 90% catch of vegetation (i.e. established).

A. GUIDELINES OVERVIEW

A summary of the individual components of stormwater management facilities for this project has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

This report includes the Operation and Maintenance requirements for any potential BMP identified in the Stormwater Management Report for this project.

B. RESPONSIBLE PARTY

The responsible party for operation and maintenance of the stormwater and other site infrastructure will be Transport Leasing Corp., or their agents or assigns.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- MaineDEP Stormwater Permit through the City of Portland Delegated Authority
- City of Portland Level III Site plan and Subdivision Review

A copy of the permits and Stormwater Management Report should be appended to this manual as Appendix B. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Stantec for civil engineering for the development project. Stantec has prepared the design for the stormwater management facilities and may be contacted at:

Stantec
482 Payne Road
Scarborough, ME 04074
(207) 887.3478

It is recommended the preparer of the plan be contacted with any particular questions on the design intent or similar issues.

The applicable plans and design documents which apply to the project are:

1. Civil Site Plans Prepared by Stantec.
2. The Erosion Control/Sedimentation Control Plan for the project.
3. The Stormwater Management Plan for the project.

A copy of these documents should be retained with this manual.

The proposed design includes pervious pavement and stormwater conveyance lines. There are existing inlets, manholes, outlet control structures, conveyance lines, pretreatment devices, and a vegetated filter that will be utilized for stormwater management for the proposed project.

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management system. These O&M procedures will complement scheduled sweeping of the parking lots which is anticipated to occur at least twice per year. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. STORMWATER INLETS

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets may include catch basins, open culverts, culverts with bar screens, roof scuppers, plaza scuppers, trench drains, and field inlets. Inlets exist throughout the proposed systems.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Landscape services
- Building maintenance areas
- Grounds maintenance



The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets

on parking lots or plaza areas. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the buildings.

Frequency: All inlets should be inspected on a quarterly basis, and after/during significant storm events.

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/ inspections of the inlets and tributary drainage system.

Comments: Maintenance of inlets is critical on this project.



B. TRIBUTARY DRAINAGE SYSTEM

Preface: Stormwater from most of the project will be directed through a conveyance system which transports the flow to a public system within Johnson Road. This conveyance system will be principally overland flow and/or infiltration through porous pavement that discharges to piped drain systems. Most of the sediment is carried by the drainage system is intended to be trapped near the inlets or in pretreatment devices such as an existing Vortechnics hydrodynamic separator. Maintenance of this system can play a key role in the long-term maintenance costs and the effectiveness of the onsite systems.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that its carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with debris. The inlet catch basins will be equipped with sumps and hooded outlets which will remove gross floatables and large sediment particles from the flow stream. These must be cleaned on an as-needed basis.

The level of sediment in the sumps or hydrodynamic separator should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sedimentation to any downstream BMP or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. If a temporary filter bag has been designated for the inlet during construction, silt or other deleterious materials, can significantly reduce capacity and the bags should be removed with the sediment and replaced during construction. Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the Development. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline is observed, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed.

Frequency: The piped drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps, hydrodynamic separator, and pipelines will depend on the rate of accumulation.

Maintenance/Inspection Responsibility:

Maintenance Personnel: A hired 3rd party maintenance crew as retained by the applicant, their agents or assigns.

Special Services: The owner may elect to contract with an independent agent for cleaning of catch basins, sumps, and pipelines. Remedial source control measures may be performed by the owner or an outside service depending upon the nature of the particular situation.

Comments: Maintenance of inlets and catch basins is of utmost importance to the project to avoid unintended release of sediments or related materials in the runoff flow stream.

C. POROUS PAVEMENT

Preface: The porous pavement collects stormwater runoff from the surface before passing it through a treatment section and discharging into a closed drainage system.

Inspection: The pavement should be inspected regularly to ensure that the surface is not clogged, and that runoff can pass freely through the porous section. The asphalt surface must be inspected for integrity and to ensure rutting or deformation of the surface is minimized.

Maintenance: Any debris should be removed from the pavement surface. If the porous pavement area is holding water in excess of 48-72 hours corrective action is needed. To correct a standing water problem, the following remedial actions are recommended:

1. Vacuum any sediment or debris from the pavement surface on a semi-annual basis
2. Ensure the underdrain system is not clogged with any silt or other materials.
3. Ensure that the porous pavement can pass water freely and drain quickly while handling large amounts of water.

Frequency: The porous pavement should be inspected and vacuumed semi-annually and maintained as needed.

Maintenance/Inspection Responsibility: The Owner or an outside agent is responsible for inspection and maintenance of the porous pavement areas.

D. WATER QUALITY FILTERS (ABOVE GROUND)

Preface: The soil filter is an underdrain system with multi-media aggregates. This section is applicable to the existing underdrained grass soil filter.

Inspection: The soil filter can be inspected visually. A good time for inspection is within one day of a substantial rain event.

Maintenance: The procedures for maintenance are as follows:

Inlets

Inlets to each soil filter area should be kept open and in good working condition. This is particularly important around curb breaks and pavement edges. These locations should be marked on the roadway at the completion of construction to allow for winter snow dam removal. All eroded areas should be repaired.

Initial Turf Maintenance (when applicable)

Grassed soil filters should be allowed to develop for one full growing season post-construction prior to their first mowing or replacement of vegetation. This allows for natural re-seeding of grass seed mixes and establishment of a healthy stand of grass or plant materials.

Long-Term Turf Maintenance (when applicable)

It is preferable to only mow grassed soil filters two to three times per year. While grassed soil filters can be mown during routine lawn maintenance, excessive mowing reduces the viability of grasses and grass roots and can over-compact the surface layer of the soil filter media.

Large Debris

Large debris, trash etc. within the ponding area should be removed on a routine basis.

Erosion in the Soil Filter Area

Any eroded areas should be repaired as soon as practicable.

Weeds in the Soil Filter Area

Periodic weeding of the soil filter area may be necessary, particularly in the landscaped soil filters. Hand weeding is required as the use of herbicides is not recommended.

Surface Mulch Layer (when applicable)

Areas devoid of mulch should be re-mulched by hand. Every year, in the spring, a fresh layer of mulch should be added to the soil filter area.

Sedimentation (or Clogging) of Soil Filter Area

If the soil filter area is holding water for a period longer than 48-72 hours, the soil mix has, more than likely, become clogged with sediment and/or the underdrains have clogged. To correct a standing water problem, the following remedial actions are recommended:

1. Evaluate the drainage area to the soil filter area to identify any potential sources of sediment, such as an erosive condition, that may be contributing to the clogging of the device. If a source is identified, it is recommended that that source be eliminated to the fullest extent practicable before proceeding with the remaining recommendations provided below.
2. Flush the underdrains. Use cleanouts to flush the underdrains. Sediment in the drains may be preventing the soil mix from draining. Make sure to provide a way to capture any flushed sediment before it enters the stream environment or storm drain system downstream of the device. If, after flushing the underdrains, the device continues to hold water, the soil mix may be contaminated. As such, following the guidelines provided below is recommended.
3. Gage the extent of soil contamination. To do this, it is recommended that one or more test pits be dug with a shovel and that the soil layer be evaluated for contamination. Once the levels of contamination have been determined (for example, the top 4" of soil appears to be contaminated), it is recommended that you proceed with the remaining remedial actions.
4. Harvest the plants (when applicable). Care should be taken in the removal and temporary storage of the plants so that as many as possible can be harvested for replanting in the soil filter area once the functioning of the device has been restored sufficiently.
5. Remove the mulch layer.
6. Remove the top few inches of contaminated soil plus an additional 2-inch of soil and replace the removed soil with a clean soil mix in accordance with the soil mix specification applicable to the particular soil filter area.
7. Monitor the functioning of the soil filter area during the next two to three rain events. If the device appears to be draining as intended (e.g., there is no standing water 48-72 following a rain event), proceed with the remaining remedial actions. If the area continues to hold standing

water, then the entire soil filter area soil mix and the underdrains may need to be removed and replaced. Reuse of any undamaged underdrains may be possible once they have been cleaned thoroughly.

8. Replant the harvested plants and replace any plants that were rendered unusable during or following their removal from the soil filter area.
9. Replace the removed mulch layer with fresh mulch.
10. Water the plants in the soil filter for the next two or more weeks unless there is sufficient rainfall. This will help the plants to re-establish themselves.

Frequency: The water quality filter should be inspected semi-annually and maintained as needed.

Applicability: The development has one existing filter.

Snow storage within the filters should be prohibited by Maintenance Personnel.

E. LITTER

Litter should be removed as a matter of course by workers and as part of the grounds maintenance contract.

F. SUMMARY CHECKLIST

The above described inspection and maintenance items have been summarized on a checklist attached hereto as Appendix C.

IV. PROGRAM ADMINISTRATION

A. GENERAL

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities.

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

6. A qualified post construction inspector shall be retained by the Owner. His duties shall include preparing schedules for the Owner's maintenance, summarizing the results of this maintenance and preparing an annual report on the operation, maintenance, and repair of the stormwater system which must be copied to the City. (The Owner shall be responsible for retaining a separate entity to perform maintenance which cannot be performed by the management of building and property grounds.) This person shall also participate in troubleshooting of the stormwater management system if a problem develops.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. RECORD KEEPING

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix B.

C. CONTRACT SERVICES

In some instances, or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases, the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX A

Sample Inspection Logs

90 JOHNSON ROAD
PORTLAND, MAINE

STORMWATER MANAGEMENT
WATER QUALITY STORAGE OR WET POND
ANNUAL INSPECTION & MAINTENANCE LOG

FACILITY:		**YEAR:**	
LOCATION:		**CONTRACTOR:**	
FUNCTION:		**INSPECTOR:**	
DATE OF INSPECTION:			
ITEM IDENTIFICATION	**DESCRIPTION OF CONDITIONS**	**MAINTENANCE ACCOMPLISHED**	**DATE OF MAINTENANCE**
GENERAL COMMENTS:			

SAMPLE

90 JOHNSON ROAD
PORTLAND, MAINE

STORMWATER MANAGEMENT
SEMI-ANNUAL INSPECTION & MAINTENANCE LOG

SEMI-ANNUAL INSPECT 1.2	FACILITY:
DATE:	LOCATION:
INSPECTOR:	FUNCTION:
SURFACE CONDITION:	
OUTLET CONDITION	

DEVICE/STRUCTURE	EST. DEPTH SED.	REMOVED? Y/N	EST. VOL. CY	WHERE DISPOSED OF	STRUCTURAL CONDITION

CONTROL STRUCTURE:
DESCRIBE CONDITIONS FOUND & MAINTENANCE ACCOMPLISHED:

APPENDIX B

Permits for Project

(To be Added at a Subsequent Time)

APPENDIX C

Summary Checklist
Inspection and Maintenance

Stormwater Management System Maintenance Program Summary Checklist						
		Frequency				
Item	**Commentary**	**Monthly**	**Quarterly**	**Semi-Annual**	**Annual**	**Long Term**
Stormwater Inlets	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.		X		X Clearing	
Tributary Drainage System	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Porous Pavement	Pavement areas should be inspected and vacuumed semi-annually and maintained as needed.			X		
Water Quality Filters	Filters should be inspected semi-annually and maintained as needed. **Snow storage within the filter should be prohibited by Maintenance Personnel.**			X		
Litter	Litter should be removed daily.					

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

November 13, 2018

Ms. Barbara Barhydt/Ms. Shukria Wiar
Planning and Development Department
City of Portland
389 Congress Street
Portland, ME 04101-3509

Subject: 90 Johnson Road
Applicant – Transport Leasing Corp.
Supplemental Information
Letter of Response #7

Dear Shukria and Barbara:

In response to the discussions we had with City Staff including you and Tuck O'Brien on Thursday, we have completed various updates to the proposed development plans associated with the proposed expansion at 90 Johnson Road. As outlined in a letter from Matt Manahan of Pierce Atwood to your attention, we agree that the applicant is seeking Final Site Plan approval for the full development proposal including building expansion as well as parking area expansion, to be completed as a single project, although project construction will be sequenced with the parking area construction proceeding first. We understand that the performance of a Traffic Study, and if necessary, Traffic Movement Permit, will be a condition of any approval and said Study or TMP, may require at a minimum, Staff review and if necessary, Planning Board Approval. These approvals may be linked to the issuance of a building permit or Certificate of Occupancy, which is to be determined by the Planning authority.

As we have outlined verbally to you the current use of the 90 Johnson Road site includes Charter Communications who now use the site for the following:

- The building has been used for full time sales, technical support and warehouse support for a very long time and will continue. These uses have generally used the available 42 parking spaces to capacity.

- New Technician Training Center: There are now multiple rooms that are used for training of personnel from the entire northeast region. This will involve up to 30-40 technicians and multiple trainers who are at the facility throughout the course of a typical week. Parking to meet this new demand will be provided through the new parking area. Most recently, Charter set up a utility pole training field and have substantial company vehicle parking on the campus.

In recent days, we have counted at least 100 company passenger vehicles on the campus, utilizing the available parking supply to greater than 90% at times.



The accompanying plans reflect the following key updates:

- As directed by Staff, a portion of the existing Johnson Road (south) curb opening will be modified by removing the existing paved apron and radial curbing and this will be replaced with loam, seed and mulch to help reinforce the prohibition of use of this existing curb cut. The applicant is requesting to reserve the right to analyze this location for possible future use as part of the traffic study to be performed.

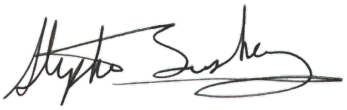
- The following is summary of the parking conditions that exist and will be modified as part of the work:
  - Existing Parking = 42 spaces
  - Initial Construction = 69 spaces
  - Total After Initial Construction = 111 spaces
  - Total After Building Expansion is Completed = 175 spaces

In summary, we believe we have substantially addressed various staff and Planning Board comments related to the development proposal. This includes modifications to the parking field to improve landscaping and street side separation, elimination of curb openings until the completion of a traffic study and supplying evidence of parking need at the site. On this basis we feel the proposal complies with the goals and objectives the of the B-4 Zoning District. We look forward to presenting to the Planning Board at their November 27, 2018 Public Hearing.

If you have any questions with the information being submitted, please contact our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3478
stephen.bushey@stantec.com

Attachments – Updated Plans

c: Mark Sanborn, Transport Leasing Corp.

V:\2108\active\210801617\civil\admin\permitting\local\lor\lor_7_barhydt_20181113_final.docx

Att. V

Portland International Jetport

You're on your way.

Paul H. Bradbury, P.E.
Airport Director

Zachary R. Sundquist, A.A.E.
Assistant Airport Director

September 20, 2018

Mark Sanborn
TLC Property Management
58 Lowell Junction Road
Andover, MA 01810

Dear Mr. Sanborn:

The Portland International Jetport has seen significant passenger growth this year of 13.6% year to date with record passenger volumes from April through August. August alone was up 25.4% over last year, setting an all-time single month record of 255,330 total arriving/departing passengers.

I mention this passenger growth relative to our recent conversation of your plans to develop a private parking lot near the airport campus along Jetport Boulevard this fall. You noted this lot would not be immediately occupied under your development plans. Our passenger growth has caused some on campus parking capacity constraints that we are now working to address. We will be opening our discount parking lot on District Road full time this fall to increase available parking. Your proposed lot could provide welcome additional parking capacity for the Jetport in the short term. The location is ideal since our discount lot shuttle operation already passes this site on the way to District Road.

I look forward to discussing this opportunity further as your project is developed.

Best regards,

Paul Bradbury
Airport Director
Portland International Jetport

cc: Stephen Bushey, Stantec Consulting

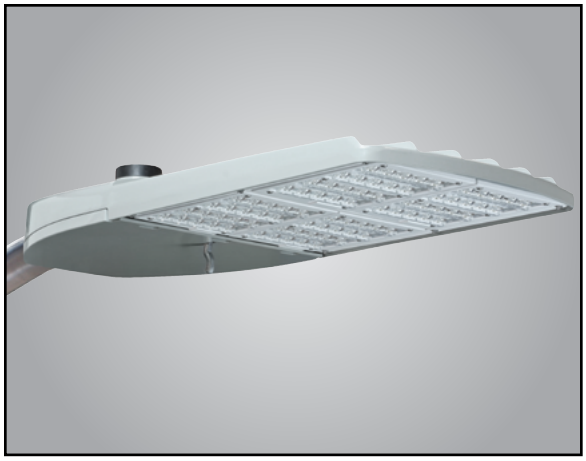
Autobahn Series ATB2

Roadway Lighting

Att. W

Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction

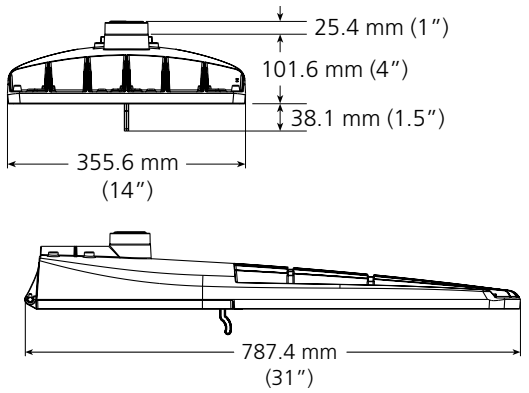
PRODUCT OVERVIEW



Applications:

- Roadways
- Off ramps
- Residential streets
- Parking lots

DIMENSIONS



Effective Projected Area (EPA)
The EPA for the ATB2 is 0.78 sq. ft.,
Approx. Wt. = 21 lbs. (9.53 kg)

STANDARDS

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Color temperatures of ≤ 3000K must be specified for International Dark-Sky Association certification.

Rated for -40°C to 40°C ambient.
CSA Certified to U.S. and Canadian standards
Complies with ANSI: C136.2, C136.10, C136.14, C136.31, C136.15, C136.37

Features:

OPTICAL

Same Light: Performance is comparable to 250-400W HPS roadway luminaires.

White Light: Correlated color temperature - 4000K, 70 CRI minimum, 3000K, 70CRI minimum or optional 5000K, 70 CRI minimum.

Unique IP66 rated LED light engines provided 0% uplight and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing.

Available in Type II, III, IV, & V roadway distributions.

ELECTRICAL

Expected Life: LED light engines are rated >100,000 hours at 25°C, L70. Electronic driver has an expected life of 100,000 hours at a 25°C ambient.

Lower Energy: Saves an average of 40-60% over comparable HPS platforms.

Robust Surge Protection: Three different surge protection options provide a minimum of ANSI C136.2 10kV/5kA protection. 20kV/10kA protection is also available.

MECHANICAL

Easy to Maintain: Includes standard AEL lineman-friendly features such as tool-less entry, 3 station terminal block and quick disconnects. Bubble level located inside the electrical compartment for easy leveling at installation.

Rugged die-cast aluminum housing is polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 7 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).

Four-bolt mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter and provides a 3G vibration rating per ANSI C136.

Wildlife shield is cast into the housing (not a separate piece).

CONTROLS

NEMA 3 Pin photocontrol receptacle is standard, with the Acuity designed ANSI 7 Pin receptacle optionally available.

Premium solid state locking sale photocontrol - PCSS (10 year rated life). Extreme long life sold state locking style photocontrol - PCLL (20 year rated life).

Mulit-level dimming available to provide scheduled dimming as specified by the customer.

Optional onboard Adjustable Output module allows the light output and input wattage to be modified to meet site specific requirements, and can also allow a single fixture to be flexibly applied in many different applications.

Note: Specifications subject to change without notice.

American Electric Lighting

Autobahn Series ATB2
Roadway Lighting

ORDERING INFORMATION

Example: ATB2 40LEDE70 MVOLT R2

Series

ATB2 Autobahn LED Roadway

Performance Packages

40BLEDE70	40B Chips, 700mA Driver
40BLEDE10	40B Chips, 1050mA Driver
40BLEDE13	40B Chips, 1300mA Driver
40BLEDE15	40B Chips, 1500mA Driver
60BLEDE70	60B Chips, 700mA Driver
60BLEDE85	60B Chips, 850mA Driver
60BLEDE10	60B Chips, 1050mA Driver
60BLEDE13	60B Chips, 1300mA Driver
60BLEDE15	60B Chips, 1500mA Driver
80BLEDE70	80B Chips, 700mA Driver
80BLEDE85	80B Chips, 850mA Driver
80BLEDE10	80B Chips, 1050mA Driver
80BLEDE12	80B Chips, 1200mA Driver
80BLEDE15	80B Chips, 1500mA Driver

Voltage

MVOLT	Multi-volt, 120-277V
347	347V
480	480V

Optics

R2	Roadway Type II
R3	Roadway Type III
R4	Roadway Type IV
R5	Roadway Type V

Options

Color Temperature (CCT)

(Blank)	4000K CCT, 70 CRI Min.
3K	3000K CCT, 70 CRI Min.
5K	5000K CCT, 70 CRI Min.

Paint

(Blank)	Gray (Standard)
BK	Black
BZ	Bronze
DDB	Dark Bronze
GI	Graphite
WH	White

Surge Protection

(Blank)	Standard 10kV/5kA SPD
20	20kV/10KA SPD
MP[1]	MOV Pack
IL[1]	SPD with Indicator Light

Terminal Block

(Blank)	Terminal Block (Standard)
T2	Wired to L1 & L2 Positions

Misc.

BL	External Bubble Level
HS	House-Side Shield
NL	Nema Label
XL	Not CSA Certified
HK	Hingekeepers

Misc. (continued)

UMR-XX	8" Horizontal Arm for Round Pole, Painted to match Fixture
UMS-XX	8" Horizontal Arm for Square Pole, Painted to match Fixture
UMR-GALV	8" Horizontal Arm for Round Pole, Galvanized
UMS-GALV	8" Horizontal Arm for Square Pole, Galvanized

Controls

(Blank)	3 Pin NEMA Photocontrol Receptacle (Standard)
P7[2]	7 Pin Photocontrol Receptacle (Dimmable Driver Included)
NR	No Photocontrol Receptacle
AO[2]	Field Adjustable Output
DM	0V-10V Dimmable Driver (Controls by others)
ML[3,4]	Multi-Level Dimming
PCSS[1]	Solid State Lighting Photocontrol (120-277V)
PCLL	Solid State Long Life Photocontrol
SH	Shorting Cap

Packaging

(Blank)	Single Unit (Standard)
JP	Job Pack (24/Pallet)

Notes

1. Not available in 347 or 480V.
2. Not available with DM or ML options.
3. Not available with AO, DM or P7 options.
4. Dimming schedule and light level information required from the customer in order to configure product. Contact Infrastructure Technical Support to proceed.

American Electric Lighting®
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com
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Warranty Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
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.

Please contact your sales representative for the latest product information.

PERFORMANCE PACKAGE

Performance Package	Drive Current (mA)	Input Watts	Optic	4000K CCT		LLD @ 25°C		
				Delivered Lumens	Efficacy (LPW)	50k Hours	75k Hours	100k Hours
40B	700	88	R2	11607	132	0.97	0.97	0.96
	1000	133		16360	123	0.95	0.93	0.92
	1300	171		19544	114	0.93	0.90	0.87
	1500	198		21384	108	0.93	0.90	0.87
	700	88	R3	11552	131	0.97	0.97	0.96
	1000	133		16249	122	0.95	0.93	0.92
	1300	171		19462	114	0.93	0.90	0.87
	1500	198		21331	108	0.93	0.90	0.87
	700	88	R4	11768	134	0.97	0.97	0.96
	1000	133		16593	125	0.95	0.93	0.92
	1300	171		19877	116	0.93	0.90	0.87
	1500	198		21799	110	0.93	0.90	0.87
	700	88	R5	12388	141	0.97	0.97	0.96
	1000	133		17499	132	0.95	0.93	0.92
	1300	171		20795	122	0.93	0.90	0.87
	1500	198		22828	115	0.93	0.90	0.87
60B	700	130	R2	18193	140	0.97	0.97	0.96
	850	165		21436	130	0.95	0.93	0.92
	1000	204		24940	122	0.95	0.93	0.92
	1300	254		29357	116	0.93	0.90	0.87
	1500	291		32052	110	0.93	0.90	0.87
	700	130	R3	17714	136	0.97	0.97	0.96
	850	165		21351	129	0.95	0.93	0.92
	1000	204		25520	125	0.95	0.93	0.92
	1300	254		29991	118	0.93	0.90	0.87
	1500	291		32709	112	0.93	0.90	0.87
	700	130	R4	17984	138	0.97	0.97	0.96
	850	165		21446	130	0.95	0.93	0.92
	1000	204		25423	125	0.95	0.93	0.92
	1300	254		29898	118	0.93	0.90	0.87
	1500	291		32527	112	0.93	0.90	0.87
	700	130	R5	18561	143	0.97	0.97	0.96
	850	165		22402	136	0.95	0.93	0.92
	1000	204		26128	128	0.95	0.93	0.92
	1300	254		30964	122	0.93	0.90	0.87
	1500	291		33922	117	0.93	0.90	0.87
80B	700	177	R2	23037	130	0.97	0.97	0.96
	850	214		27086	127	0.95	0.93	0.92
	1000	268		31920	119	0.95	0.93	0.92
	1200	330		36826	112	0.93	0.90	0.88
	1500	388		40326	104	0.91	0.87	0.83
	700	177	R3	23934	135	0.97	0.97	0.96
	850	214		26879	126	0.95	0.93	0.92
	1000	268		32416	121	0.95	0.93	0.92
	1200	330		37042	112	0.93	0.90	0.88
	1500	388		41858	108	0.91	0.87	0.83
	700	177	R4	23230	131	0.97	0.97	0.96
	850	214		27263	127	0.95	0.93	0.92
	1000	268		32329	121	0.95	0.93	0.92
	1200	330		37293	113	0.93	0.90	0.88
	1500	388		41611	107	0.91	0.87	0.83
	700	177	R5	24776	140	0.97	0.97	0.96
	850	214		28865	135	0.95	0.93	0.92
	1000	268		34319	128	0.95	0.93	0.92
	1200	330		39552	120	0.93	0.9	0.88
	1500	388		44747	115	0.91	0.87	0.83

Note: Information shown above is based on 4000K nominal system data. To calculate 3000K lumen values, multiply the 4000K lumens by .93. Individual fixture performance may vary. Specifications subject to change without notice.

ATB2 LLD Multiplier	15°C	20°C	25°C	30°C	35°C	40°C
	1.02	1.01	1	0.99	0.97	0.96

To calculate the LLD for a temperature other than 25°C, multiply the LLD @ 25°C (shown in the performance package table) by the LLD multiplier for the selected temperature.

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www.americanelectriclighting.com
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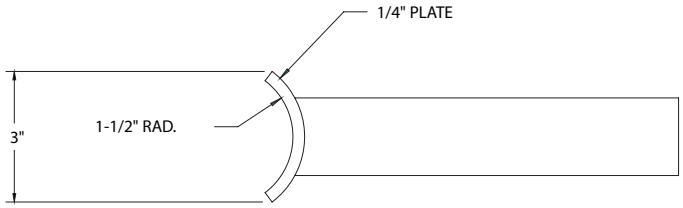
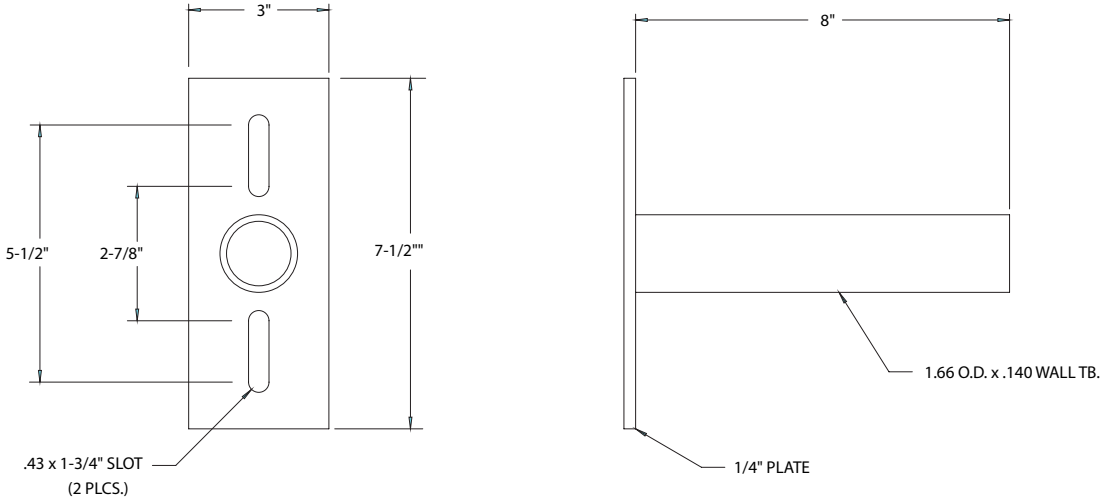
Warranty Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

UMR POLE ADAPTOR

RECOMMENDED FOR USE WITH POLES OF 4" DIAMETER OR SMALLER





UMS POLE ADAPTOR

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Warranty Five-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
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.

Please contact your sales representative for the latest product information.

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS

Catalog Number	
Notes	Type

HLWPC2

Wallpack® Full Cutoff LED





Mechanical

- Heavy grade A360 cast aluminum (aluminum with <1% copper)
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering
- Mounts to a standard junction box
- Swivel kit for pendant mount applications mounts to 4" square electrical box
- Wet location listed
- IP65 rated housing, down light only
- ¾" painted threaded entry(¾" - 14 NPT) on each side and on top, accepts ¾" and ½" conduit
- ¾" threaded plugs are painted on each side
- Vibe rating for surface mount: 3G
- Vibe rating for pendant mount: 3G at 1.5', excludes swivel kit
- Bird shroud for pendant mount

Electrical

- Certified by UL or CSA
- Rated for -40°C (-40°F) minimum ambient
- A programmable electronic driver with 0-10V control leads
- Available in: 120-277V 50/60 Hz and 347-480V 50/60 Hz,
- Standard LEDs shall have a minimum of 70 CRI available in 3000K, 4000K and 5000K CCT
- Optional LEDs shall have a minimum of 80 CRI available in 3000K, 4000K and 5000K CCT
- Amber LED option shall limited wavelength amber and no phosphor corrected amber (8 week lead-time)
- Internally mounted emergency battery backup for operation in an ambient temperature ranging from -20°C (-4°F) to 30°C (86°F), available with P10 thru P40 performance packages, non CEC compliant
- The electrical system for a single circuit shall be designed to meets ANSI/IEEE C62.41.2 and includes a 20kV/10kA (standard) with an optional 10kV/5kA surge protection

Optical

The light engine housing is IP66 rated. The acrylic optical system consist of the following I.E.S. distributions:

- Typ V: E (entry), M (medium), R (rectangle) & W (wide)
- Asymmetric

Controls

- Field adjustable output (AO)
- Button style photocontrol (PE)
- Motion sensor & ambient photocontrol combination for mounting low (8-15') (MASL) and high (15-30') (MASH) mounting heights
- XPoint™ Wireless control
- XPoint™ Wireless UL924, CEC compliant

Certification and Standards

- Luminaire shall be UL or CSA listed per CSA luminaire standard CSA
- Suitable for operation in an ambient temperature up to 40°C/104°F per UL or CSA certification
- Design lights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

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.
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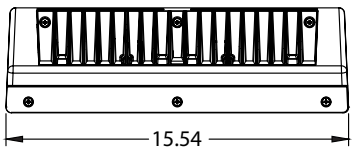

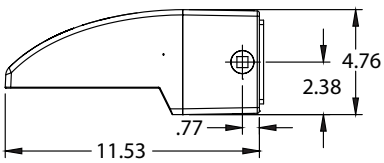

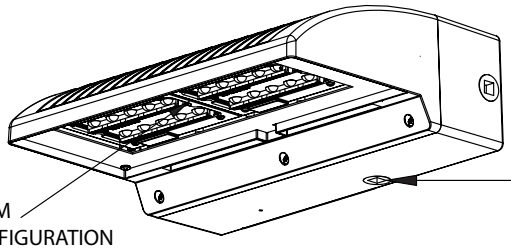

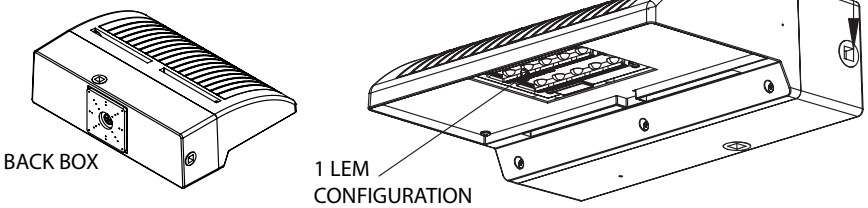

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HLWPC2

Wallpack® Full Cutoff LED

ORDERING INFORMATION

Example: HLWPC2 P20 40K AS T3M BZSDP

Series	Lumen Package	Color Temperature	Voltage	Optics	Color	CRI
HLWPC2 Wallpack Full Cutoff LED	1 LEM Package P10 3,100 lm P20 5,600 lm 2 LEM Package P30 7,800 lm P40 9,900 lm P50 11,700 lm (Nominal Lumens, 4000K)	30K 3,000 K CCT 40K 4,000 K CCT 50K 5,000 K CCT	AS Auto-Sensing Voltage (120V-277V) 50/60HZ AH Auto-Sensing Voltage (347V-480V) 50/60HZ 12 120V 20 208V 24 240V 27 277V 34 347V 48 480V	T2S Type 2 Short T2M Type 2 Medium T3S Type 3 Short T3M Type 3 Medium T4M Type 4 Medium TFTM Forward Throw Medium ASYDF Asymmetric Diffuse SYMDF Symmetric Diffuse	BKSDP Black BZSDP Bronze GYSDP Grey WHSDP White	Blank 70 CRI (STD) 80CRI 80 CRI

Options:

Adjustable/Programmable Options

AO Field Adjustable Output

Circuit Options

2CI 2 Independent Circuits

Control - Motion Sensor Options

MASL Motion / Ambient Sensor, 8-15' Mounting Height Ambient Sensor Enabled at 1 FC

MASH Motion / Ambient Sensor, 15-30' Mounting Height Ambient Sensor Enabled at 1 FC

Control - Photocontrol Options

PE Button Style Photocontrol

P3 N.E.M.A. Twistlock Recepactle Mount -3 PIN

P7 N.E.M.A. Twistlock Recepactle Mount -7 PIN

PCLL DTL Long Life Twistlock Photocontrol for Solid State

PND 0-10V Part-night Dimming, Includes BLC2 & N.E.M.A. Twistlock Photocontrol Receptacle

PSC Shorting Cap

Fuse Option

SF Single Fuse

DF Double Fuse

Safety Option

EM Integral Emergency Battery

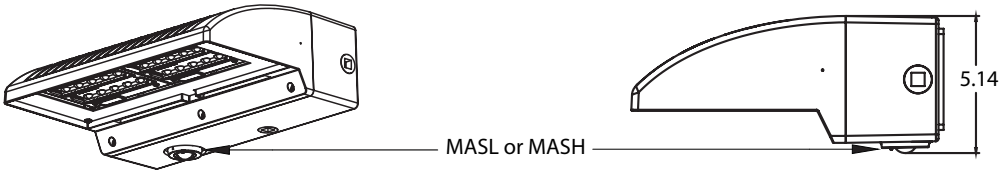
TP Tamper Resistant Hardware

Surge Protection Option - 20kV/10kA is Standard

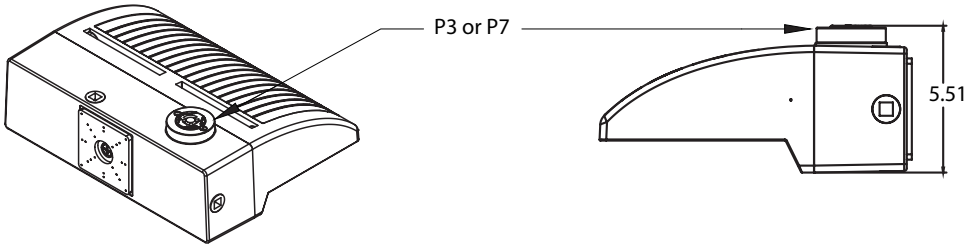
10KV 10kV/5kA Surge Protection, in place of 20kV/10kA

Options Location

Motion/Ambient Sensor mount options for Low (8-15') (MASL) and Height (15-30') (MASH) applications

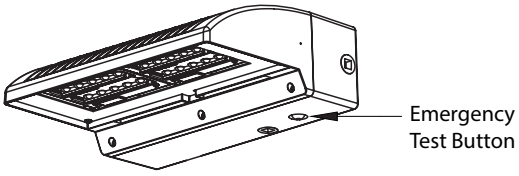


N.E.M.A. Twistlock Receptacle P3 and P7 Options, P7 Shown

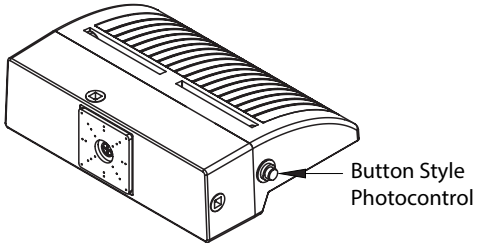


Internal Emergency Battery Test Button - EM Option

Test Button - EM Option



Button Style Photocontrol - PE Option



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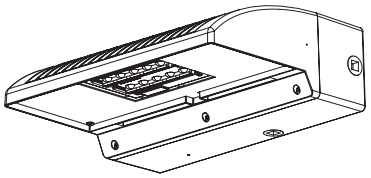
Driver & LEM Configuration Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)		Two Circuit (2CI option)	
		LEMs	Drivers	LEMs	Drivers
Lumen Maintenance Factor	P10	1	1	-	-
	P20	1	1	2	2
	P30	2	1	2	2
	P40	2	1	2	2
	P50	2	1	-	-

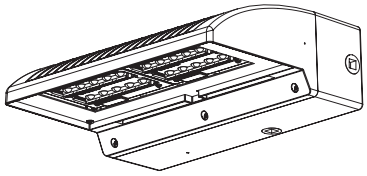
1 LEM Luminaire



SPD Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)				Two Circuit (2CI option)			
		LEMs	Drivers	No. of SPDs	SPD	LEMs	Drivers	No. of SPDs	SPD
Lumen Maintenance Factor	P10	1	1	1	20kV/10kA	-	-	-	-
	P20	1	1	1	20kV/10kA	2	2	2	10kV/5kA
	P30	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P40	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P50	2	1	1	20kV/10kA	-	-	-	-

2 LEM Luminaire



Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform noted in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

The italicized data is extrapolated beyond the TM-21 standard.

E = (LM) x (CU) x (LAT) x (LLD)
LM and CU are obtained from published photometry.

Operating Hours		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P20	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85
	P30	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P40	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85

Operating Hours		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P20	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P30	1	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
	P40	1	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Single Circuit Application

Ambient		P10	P20	P30	P40	P50
0°C	32°F	1.02	1.03	1.03	1.04	1.05
10°C	50°F	1.01	1.02	1.02	1.03	1.03
20°C	68°F	1.01	1.01	1.01	1.01	1.01
25°C	77°F	1.00	1.00	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99	0.99	0.99
40°C	104°F	0.98	0.97	0.98	0.97	0.97

Optional Two Independent Circuit (2CI) Application

Ambient		P20	P30	P40
0°C	32°F	1.02	1.02	1.02
10°C	50°F	1.01	1.01	1.02
20°C	68°F	1.00	1.01	1.01
25°C	77°F	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99
40°C	104°F	0.98	0.98	0.98

Electrical Load

Single Circuit Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	700	28	0.23	0.13	0.12	0.10	0.08	0.06
P20	1400	47	0.41	0.24	0.20	0.18	0.14	0.10
P30	1050	71	0.63	0.37	0.32	0.29	0.22	0.18
P40	1420	95	0.78	0.45	0.40	0.35	0.27	0.20
P50	1720	115	0.95	0.55	0.48	0.42	0.33	0.24

Optional Two Independent Circuit (2CI) Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	-	-	-	-	-	-	-	-
P20	700	22	0.10	0.06	0.05	0.04	-	-
P30	1000	32	0.14	0.08	0.07	0.06	-	-
P40	1250	47	0.18	0.10	0.09	0.08	-	-
P50	-	-	-	-	-	-	-	-

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Operating Characteristics

LED Package	Distribution	System Watts	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P10	T2S	28	2,904	104	1	0	1	3,128	112	1	0	1	3,168	113	1	0	1
	T2M	28	2,887	103	1	0	1	3,110	111	1	0	1	3,149	112	1	0	1
	T3S	28	2,964	106	1	0	1	3,194	114	1	0	1	3,234	116	1	0	1
	T3M	28	2,801	100	1	0	1	3,017	108	1	0	1	3,055	109	1	0	1
	T4M	28	2,858	102	1	0	1	3,079	110	1	0	1	3,118	111	1	0	1
	TFTM	28	2,979	106	1	0	1	3,209	115	1	0	1	3,250	116	1	0	1
	SYMDF	28	2,771	99	1	0	1	2,986	107	1	0	1	3,023	108	1	0	1
	ASYDF	28	2,756	98	1	0	1	2,969	106	1	0	1	3,007	107	1	0	1
P20	T2S	47	5,303	113	1	0	1	5,713	122	1	0	1	5,785	123	1	0	1
	T2M	47	5,272	112	1	0	2	5,680	121	1	0	2	5,751	122	1	0	2
	T3S	47	5,414	115	1	0	2	5,832	124	1	0	2	5,906	126	1	0	2
	T3M	47	5,115	109	1	0	2	5,510	117	1	0	2	5,580	119	1	0	2
	T4M	47	5,220	111	1	0	2	5,623	120	1	0	2	5,694	121	1	0	2
	TFTM	47	5,440	116	1	0	2	5,861	125	1	0	2	5,935	126	1	0	2
	SYMDF	47	5,062	108	2	0	2	5,453	116	2	0	2	5,522	117	2	0	2
	ASYDF	47	5,033	107	1	0	1	5,422	115	2	0	1	5,491	117	2	0	1
P30	T2S	71	7,319	103	2	0	2	7,884	111	2	0	2	7,984	112	2	0	2
	T2M	71	7,276	102	2	0	2	7,838	110	2	0	2	7,937	112	2	0	2
	T3S	71	7,472	105	1	0	2	8,049	113	2	0	2	8,151	115	2	0	2
	T3M	71	7,059	99	2	0	2	7,604	107	2	0	2	7,700	108	2	0	2
	T4M	71	7,203	101	2	0	2	7,760	109	2	0	2	7,858	111	2	0	2
	TFTM	71	7,508	106	1	0	2	8,088	114	2	0	2	8,190	115	2	0	2
	SYMDF	71	6,985	98	2	0	2	7,525	106	3	0	3	7,620	107	3	0	3
	ASYDF	71	6,946	98	2	0	2	7,483	105	2	0	2	7,578	107	2	0	2
P40	T2S	95	9,320	98	2	0	2	10,041	106	2	0	2	10,168	107	2	0	2
	T2M	95	9,266	98	2	0	2	9,982	105	2	0	3	10,108	106	2	0	3
	T3S	95	9,515	100	2	0	2	10,251	108	2	0	2	10,381	109	2	0	2
	T3M	95	8,989	95	2	0	2	9,684	102	2	0	2	9,807	103	2	0	2
	T4M	95	9,174	97	2	0	2	9,883	104	2	0	3	10,008	105	2	0	3
	TFTM	95	9,561	101	2	0	2	10,300	108	2	0	2	10,431	110	2	0	2
	SYMDF	95	8,896	94	3	0	3	9,583	101	3	0	3	9,705	102	3	0	3
	ASYDF	95	8,846	93	2	0	2	9,530	100	2	0	2	9,650	102	2	0	2
P50	T2S	115	10,972	95	2	0	2	11,820	103	2	0	2	11,969	104	2	0	2
	T2M	115	10,908	95	2	0	3	11,751	102	2	0	3	11,900	103	2	0	3
	T3S	115	11,202	97	2	0	2	12,067	105	2	0	2	12,220	106	2	0	2
	T3M	115	10,582	92	2	0	2	11,400	99	2	0	3	11,544	100	2	0	3
	T4M	115	10,799	94	2	0	3	11,634	101	2	0	3	11,781	102	2	0	3
	TFTM	115	11,256	98	2	0	2	12,126	105	2	0	2	12,279	107	2	0	2
	SYMDF	115	10,472	91	3	0	3	11,282	98	3	0	3	11,424	99	3	0	3
	ASYDF	115	10,414	91	2	0	2	11,219	98	3	0	2	11,361	99	3	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

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Operating Characteristics (continued)

LED Package	Distribution	System Watts	30K + 2CI Option (3000K, 70 CRI)					40K + 2CI Option (4000K, 70 CRI)					50K + 2CI Option (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P20	T2S	49	5,015	102	1	0	1	5,402	110	1	0	1	5,471	112	1	0	1
	T2M	49	4,985	102	1	0	2	5,371	110	1	0	2	5,439	111	1	0	2
	T3S	49	5,120	104	1	0	1	5,515	113	1	0	2	5,585	114	1	0	2
	T3M	49	4,837	99	1	0	2	5,210	106	1	0	2	5,276	108	1	0	2
	T4M	49	4,936	101	1	0	2	5,317	109	1	0	2	5,385	110	1	0	2
	TFTM	49	5,144	105	1	0	2	5,542	113	1	0	2	5,612	115	1	0	2
	SYMDF	49	4,786	98	2	0	2	5,156	105	2	0	2	5,222	107	2	0	2
	ASYDF	49	4,760	97	1	0	1	5,127	105	1	0	1	5,192	106	1	0	1
P30	T2S	70	6,769	97	1	0	1	7,293	104	2	0	2	7,385	106	2	0	2
	T2M	70	6,730	96	2	0	2	7,250	104	2	0	2	7,342	105	2	0	2
	T3S	70	6,911	99	1	0	2	7,445	106	1	0	2	7,539	108	1	0	2
	T3M	70	6,529	93	2	0	2	7,033	100	2	0	2	7,123	102	2	0	2
	T4M	70	6,663	95	2	0	2	7,178	103	2	0	2	7,269	104	2	0	2
	TFTM	70	6,945	99	1	0	2	7,481	107	1	0	2	7,576	108	2	0	2
	SYMDF	70	6,461	92	2	0	2	6,960	99	2	0	2	7,049	101	2	0	2
	ASYDF	70	6,425	92	2	0	2	6,922	99	2	0	2	7,009	100	2	0	2
P40	T2S	89	8,370	94	2	0	2	9,017	101	2	0	2	9,131	103	2	0	2
	T2M	89	8,321	93	2	0	2	8,964	101	2	0	2	9,078	102	2	0	2
	T3S	89	8,545	96	2	0	2	9,205	103	2	0	2	9,322	105	2	0	2
	T3M	89	8,073	91	2	0	2	8,696	98	2	0	2	8,807	99	2	0	2
	T4M	89	8,238	93	2	0	2	8,875	100	2	0	2	8,987	101	2	0	2
	TFTM	89	8,586	96	2	0	2	9,250	104	2	0	2	9,367	105	2	0	2
	SYMDF	89	7,989	90	3	0	3	8,606	97	3	0	3	8,715	98	3	0	3
	ASYDF	89	7,944	89	2	0	2	8,558	96	2	0	2	8,666	97	2	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

LED Package	Distribution	System Watts	AMB (Wavelength)					LED Package	Distribution	System Watts	AMB (Wavelength)				
			Lumens	LPW	B	U	G				Lumens	LPW	B	U	G
P10	T2S	28	1,061	38	0	0	1	P30	T2S	28	1,975	71	0	0	1
	T2M	28	1,054	38	0	0	1		T2M	28	1,964	70	0	0	1
	T3S	28	1,083	39	0	0	1		T3S	28	2,016	72	0	0	1
	T3M	28	1,023	37	0	0	1		T3M	28	1,905	68	0	0	1
	T4M	28	1,044	37	0	0	1		T4M	28	1,944	69	0	0	1
	TFTM	28	1,088	39	0	0	1		TFTM	28	2,026	72	0	0	1
	SYMDF	28	1,012	36	1	0	1		SYMDF	28	1,885	67	1	0	1
	ASYDF	28	1,007	36	0	0	1		ASYDF	28	1,875	67	0	0	1

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Options Matrix

Parameters		LED AMB	Options (Start with SF, DF, 2CI or EM if being used)														
			PE	P3	P7	PSC	PCLL	PND	MASH	MASL	SF	DF	TP	10kV	AO	2CI	EM
LED Performance Package	P10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
	P20	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P40	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P50	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Voltage	AS	Y	N	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
	AH	Y	N	Y	Y	Y	N	Y	N	N	N	N	Y	Y	Y	N	N
	12	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	20	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	24	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	34	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	N
	48	Y	N	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N
Options	PE	Y		N	N	N	N	N	N	N	Y	Y	Y	Y	Y	N	Y
	P3	Y	N		N	M	Y	I	N	N	Y	Y	Y	Y	N	N	N
	P7	Y	N	N		M	Y	N	N	N	Y	Y	Y	Y	N	N	N
	PSC	Y	N	M	M		N	N	N	N	Y	Y	Y	Y	N	N	N
	PCLL	Y	N	Y	Y	N		N	N	N	Y	Y	Y	Y	N	N	N
	PND	Y	N	I	N	N	N		N	N	Y	Y	Y	Y	N	N	N
	MASH	Y	N	N	N	N	N	N		N	Y	Y	Y	Y	N	N	N
	MASL	Y	N	N	N	N	N	N	N		Y	Y	Y	Y	N	N	N
	SF	Y	Y	Y	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	Y	Y
	DF	Y	Y	Y	Y	Y	Y	Y	Y	Y	N		Y	Y	Y	Y	Y
	TP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
	10kV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	M	M
	AO	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	Y		N	N
	2CI	P30	N	N	N	N	N	N	N	N	Y	Y	Y	M	N		N
	EM	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	M	N	N	

Notes

I = Included with option

M = Must have: one of these must be installed for the luminaire to operate

N = Combination Not available

P30 = Valid Option Combination, not available with P10 Performance Packabe

Y = Valid Option Combination

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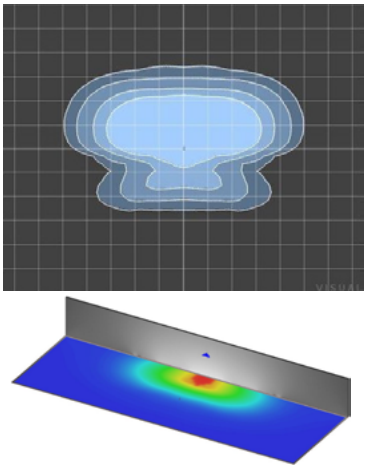
Photometric Diagrams

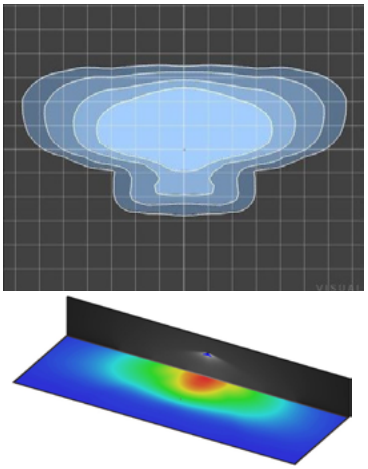
To see complete photometric reports or download .ies files for this product, visit the Holophane's Wallpack FCO LED homepage. Isofootcandle plots for the HLWPC2 P30 40K. Distance are in units of mounting height (12"). Grid is 10'x10'.

0.1 fc	1 fc	0.2 fc	0.5 fc

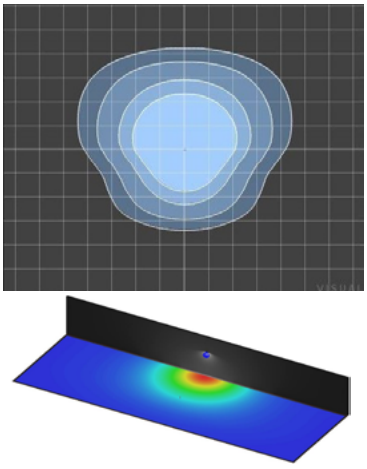
HLWPC2 P30 40K XX T2S



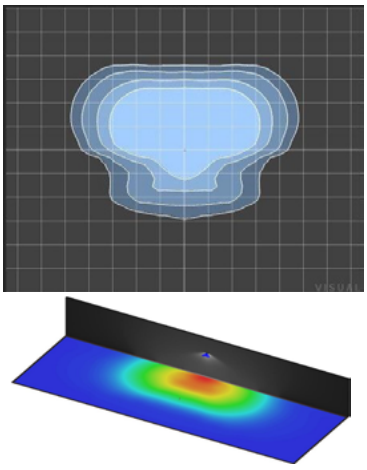
HLWPC2 P30 40K XX T2M



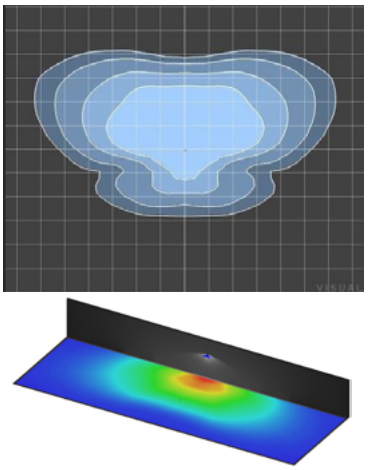
HLWPC2 P30 40K XX ASYDF



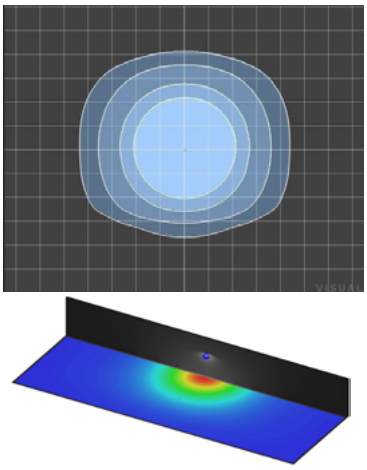
HLWPC2 P30 40K XX T3S



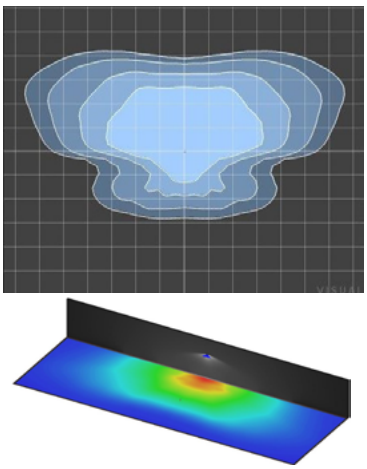
HLWPC2 P30 40K XX T3M



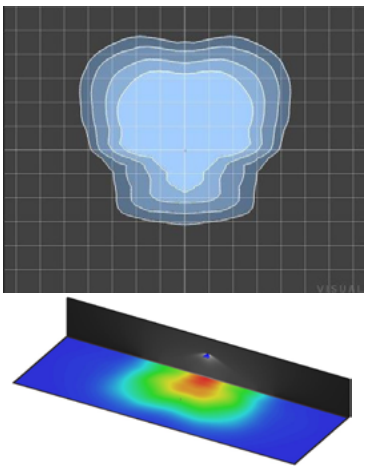
HLWPC2 P30 40K XX SYMDF



HLWPC2 P30 40K XX T4M



HLWPC2 P30 40K XX TFTM



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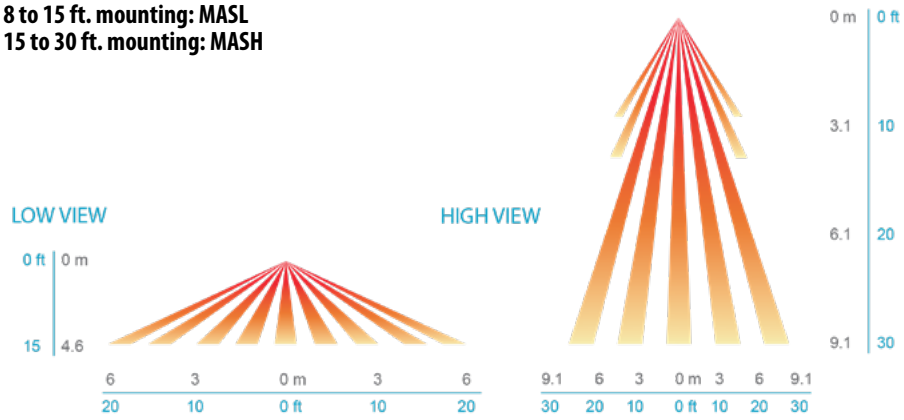
Coverage Pattern

8 to 15 ft. mounting: MASL
15 to 30 ft. mounting: MASH



Control Options

Button Style Photocontrol

PE



N.E.M.A. Receptacle

P3



P7



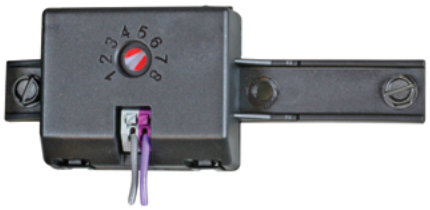
Motion & Ambient Combined Sensor

MASL/MASH



Field Adjustable Output Module

The Field Adjustable Output (AO) module is an onboard device that adjusts the light output and input voltage to meet specific requirements, allowing a single fixture configuration to be flexibly applied in many different applications. The AO option is available on the HLWPC2 series.



P10 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	94%	95%
6	83%	82%
5	71%	69%
4	59%	57%
3	46%	45%
2	34%	33%
1	21%	21%

P20 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P30 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P40 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	95%
6	85%	82%
5	74%	68%
4	62%	55%
3	49%	43%
2	36%	30%
1	21%	17%

P50 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	96%	95%
6	86%	81%
5	75%	68%
4	64%	55%
3	51%	42%
2	37%	29%
1	22%	17%

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HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS

Catalog Number	
Notes	Type

Parkpak® LED





Mechanical
- Heavy grade A380 cast aluminum coupled with a rigorous 5-stage pretreatment, epoxy basecoat and polyester topcoat yield a finish that achieves a scribe creepage rating of 8 after 5,000 hours of salt spray.
- Mounts to a standard junction box
- Provide a swivel kit for pendant mount applications that is secured to a 4 inch square electrical box
- Wet location listed
- IP66 rating
- ¾" threaded plug(¾" - 14 NPT) on each side, accepts ¾" and ½" conduit.
- Vibe rating for surface mount: 3G
- Vibe rating for pendant mount: 3G at 1.5 feet, excludes swivel kit
- Pendant mount: ¾" - 14 NPT in center of housing
- Bird Shroud (Accessory)

Electrical
- Electrical harness for quick and safe disconnect / connect of power and options
- Rated for -40°C / -40°F minimum ambient
- Programmable electronic driver with 0-10V control leads
- Available in: 120-277V 50/60 Hz and 347-480V 50/60 Hz
- Standard LEDs shall have a minimum of 70 CRI available in 3000K, 4000K and 5000K CCT
- Optional LEDs shall have a minimum of 80 CRI available in 3000K, 4000K and 5000K CCT (8 week lead-time)
- Internal mounted emergency battery backup for operation in an ambient temperature ranging from -20°C - 30°C for P10 thru P40 performance packages, non CEC compliant
- The electrical system shall be designed to meet ANSI/IEEE C62.41.2 10kV/10kA and C136.2 10kV/5kA

Optical
- The light engine shall be IP66
- Type V: E (entry), M (medium), R (rectangle) & W(wide)
- Asymmetric

Optical Material Options
- Borosilicate glass lens (GL)
- Polycarbonate lens (PY)
- A zero uplight option (FC)

Controls
- Field adjustable output
- Button style photocontrol
- XPoint™ Wireless control
- Motion Sensor / Ambient Photocontrol with mounting options ranging from (8-15') and (15-30')
- Title 24 compliance options available

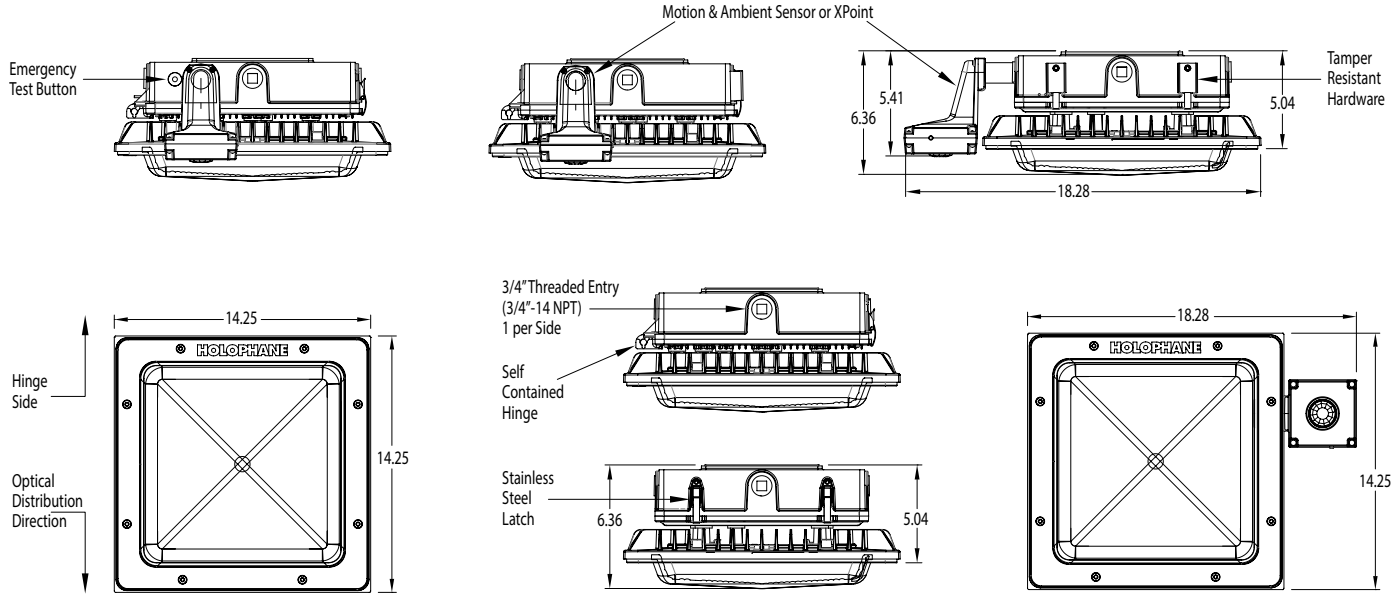
Certification and Standards
- Luminaire shall be CSA listed, US and Canada
- Suitable for operation in an ambient temperature up to 40°C / 104°F for standard product
- Designlights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

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.

DIMENSIONAL DATA

Maximum weight: 24 lbs.



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Parkpak LED

ORDERING INFORMATION

Example: PPSQL2 P40 40K AS GL T5M STM WHSDP 10KV

Series	LED Performance Package	Color Temperature	Voltage	Optics Material	Optics
PPSQL2 Parkpak LED	1 LEM Package P10 LED Package P20 LED Package P30 LED Package P40 LED Package 2 LEM Package P50 LED Package P60 LED Package P70 LED Package P80 LED Package (Refer to page 3 for performance details)	30K 3,000 K CCT 40K 4,000 K CCT 50K 5,000 K CCT	AS Auto-Sensing Voltage (120V-277V) 50/60HZ AH Auto-Sensing Voltage (347V-480V) 50/60HZ 12 120V 20 208V 24 240V 27 277V 34 347V 48 480V	GL Borosilicate Glass Lens (Standard) PY Polycarbonate Lens FC No uplight	T5E Type 5 Entry T5M Type 5 Medium T5R Type 5 Rectangular T5W Type 5 Wide ASY Asymmetric

Mounting	Super Durable Paint	SPD	CRI
STM Surface Mount, Top Feed, 12" Leads SSM Surface Mount, Side Feed, 12" Leads PSM Pendant Swivel Mount, 36" Leads (See page 8 for details)	BKSDP Black BZSDP Bronze GHSDP Graphite GYSDP Grey WHSDP White	10KV 10kV/5kA	Blank 70 CRI (STD) 80CRI 80 CRI

Options:

Adjustable/Programmable Options

AO Field Adjustable Output (for lumen/wattage outputs, refer to page 3 for details)

Control Options for 8-15' Mounting Height
(refer to page 7 for default settings)

MASL Motion / Ambient Sensor

MASL3FC3V924 Motion I Ambient Sensor, Title 24 Compliance, for use on Emergency Lighting Circuit

MASL3FC3V Motion I Ambient Sensor, Title 24 Compliance - Contact Holophane TSG for this option

XPoint Control Options
(refer to page 5 for default settings)

XAD MASL XPoint™ Wireless Enabled, Motion / Ambient Sensor, 8-15' Mounting Height

XAD924 MASL XPoint™ Wireless Enabled, Motion / Ambient Sensor, for use on Emergency Lighting Circuit

Control Options for 15-30' Mounting Height
(refer to page 7 for default settings)

MASH Motion / Ambient Sensor

MASH3FC3V924 Motion I Ambient Sensor, Title 24 Compliance, for use on Emergency Lighting Circuit

MASH3FC3V Motion I Ambient Sensor, Title 24 Compliance - Contact Holophane TSG for this option

XPoint Control Options
(refer to page 5 for default settings)

XAD MASH XPoint™ Wireless Enabled, Motion / Ambient Sensor, 8-15' Mounting Height

XAD924 MASH XPoint™ Wireless Enabled, Motion / Ambient Sensor, for use on Emergency Lighting Circuit

XPoint Control Options

XAD XPoint™ Wireless Enabled, Motion / Ambient Sensor

XAD924 XPoint™ Wireless Enabled, Motion / Ambient Sensor, for use on Emergency Lighting Circuit

Button Style Photocontrol Option

PE Button Style Photocontrol

Fuse Option

SF Single Fuse

DF Dual Fuse

Safety Option

EM Integral Emergency Battery Backup, non CEC compliant

TP Tamper Resistant Hardware

Accessories (*Ordered & Shipped Separately*)

Bird Shroud

BSPPSQL2 Field Installed, (Specify Paint Color)
Ex. BSPPSQL2 WHSDP

Note:
Designlights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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Operating Characteristics

LED Package	Distribution	System Watts	Borosilicate Glass Lens (GL)										Polycarbonate Lens (PY)										Zero Uplight (FC)									
			30K (3000K, 70 CRI)					40K/50K (4000K, 70 CRI)					30K (3000K, 70 CRI)					40K/50K (4000K, 70 CRI)					30K (3000K, 70 CRI)					40K/50K (4000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P10	T5E	25	2,773	111	1	2	1	2,967	119	1	2	1	2,622	105	1	1	1	2,806	112	1	1	1	2,928	117	2	0	0	3,133	125	2	0	0
	T5M	25	2,589	104	1	3	1	2,770	111	1	3	1	2,327	93	1	3	1	2,490	100	1	3	1	2,899	116	2	0	1	3,102	124	2	0	1
	T5W	25	2,504	100	1	3	1	2,679	107	1	3	2	2,280	91	1	3	2	2,440	98	1	3	2	2,843	114	2	0	1	3,042	122	2	0	1
	T5R	25	2,487	99	1	3	2	2,661	106	1	3	2	2,250	90	1	3	2	2,408	96	1	3	2	2,769	111	2	0	2	2,963	119	2	0	2
	ASY	25	2,490	100	1	2	1	2,664	107	1	2	1	2,258	90	1	2	1	2,416	97	1	2	1	2,722	109	1	0	1	2,913	117	1	0	1
P20	T5E	33	3,579	108	2	2	1	3,830	116	2	2	1	3,385	103	2	2	1	3,622	110	2	2	1	3,780	115	2	0	0	4,045	123	2	0	0
	T5M	33	3,342	101	1	3	1	3,576	108	2	3	1	3,004	91	1	3	1	3,214	97	1	3	1	3,742	113	2	0	1	4,004	121	3	0	1
	T5W	33	3,232	98	2	3	2	3,458	105	2	3	2	2,944	89	1	3	2	3,150	95	1	3	2	3,670	111	3	0	1	3,927	119	3	0	2
	T5R	33	3,211	97	2	3	2	3,435	104	2	3	2	2,905	88	1	3	2	3,108	94	1	3	2	3,575	108	3	0	3	3,825	116	3	0	3
	ASY	33	3,214	97	1	3	2	3,439	104	1	3	2	2,915	88	1	3	2	3,119	95	1	3	2	3,514	106	1	0	1	3,760	114	1	0	1
P30	T5E	42	4,323	103	2	2	1	4,625	110	2	2	1	4,089	97	2	2	1	4,375	104	2	2	1	4,566	109	2	0	0	4,885	116	2	0	0
	T5M	42	4,036	96	2	3	2	4,319	103	2	3	2	3,628	86	1	3	2	3,882	92	2	3	2	4,519	108	3	0	1	4,836	115	3	0	1
	T5W	42	3,903	93	2	3	2	4,177	99	2	3	2	3,555	85	2	3	2	3,804	91	2	3	2	4,433	106	3	0	2	4,743	113	3	0	2
	T5R	42	3,877	92	2	3	2	4,149	99	2	3	2	3,508	84	2	3	2	3,754	89	2	3	2	4,317	103	3	0	3	4,620	110	3	0	3
	ASY	42	3,882	92	1	3	2	4,154	99	1	3	2	3,521	84	1	3	2	3,767	90	1	3	2	4,244	101	1	0	1	4,541	108	1	0	1
P40	T5E	51	4,991	98	2	2	1	5,340	105	2	2	1	4,721	93	2	2	1	5,051	99	2	2	1	5,271	103	2	0	0	5,640	111	2	0	0
	T5M	51	4,660	91	2	3	2	4,987	98	2	3	2	4,189	82	2	3	2	4,482	88	2	3	2	5,218	102	3	0	1	5,583	109	3	0	1
	T5W	51	4,507	88	2	3	2	4,822	95	2	3	2	4,105	80	2	3	2	4,392	86	2	3	2	5,118	100	3	0	2	5,476	107	3	0	2
	T5R	51	4,477	88	2	3	3	4,790	94	2	3	3	4,051	79	2	3	3	4,334	85	2	3	3	4,985	98	3	0	3	5,334	105	3	0	3
	ASY	51	4,482	88	1	3	2	4,796	94	1	3	2	4,065	80	1	3	2	4,349	85	1	3	2	4,900	96	1	0	1	5,243	103	1	0	2
P50	T5E	55	6,166	112	2	2	1	6,598	120	2	2	1	5,876	107	2	2	1	6,287	114	2	2	1	6,834	124	3	0	0	7,312	133	3	0	0
	T5M	55	5,989	109	2	3	2	6,408	117	3	3	2	5,405	98	2	3	2	5,783	105	2	3	2	6,865	125	3	0	2	7,346	134	3	0	2
	T5W	55	5,843	106	3	3	3	6,252	114	3	3	3	5,211	95	2	3	3	5,576	101	2	3	3	6,682	121	3	0	3	7,150	130	3	0	3
	T5R	55	5,601	102	3	3	3	5,993	109	3	3	3	5,040	92	2	3	3	5,393	98	2	3	3	6,462	117	3	0	3	6,915	126	3	0	3
	ASY	55	5,564	101	1	3	2	5,953	108	1	3	2	4,961	90	1	3	2	5,308	97	1	3	2	6,393	116	1	0	2	6,840	124	1	0	2
P60	T5E	66	7,094	107	2	2	1	7,591	115	2	2	1	6,761	102	2	2	1	7,234	110	2	2	1	7,862	119	3	0	0	8,413	127	3	0	1
	T5M	66	6,890	104	3	3	2	7,373	112	3	3	2	6,219	94	2	3	2	6,654	101	3	3	2	7,899	120	3	0	2	8,452	128	3	0	2
	T5W	66	6,723	102	3	3	3	7,194	109	3	3	3	5,996	91	2	3	3	6,416	97	3	3	3	7,688	116	3	0	3	8,226	125	3	0	3
	T5R	66	6,445	98	3	3	3	6,896	104	3	3	3	5,799	88	2	3	3	6,205	94	3	3	3	7,435	113	3	0	4	7,956	121	3	0	4
	ASY	66	6,401	97	1	3	2	6,849	104	1	3	2	5,708	86	1	3	3	6,107	93	1	3	3	7,355	111	1	0	2	7,870	119	1	0	2
P70	T5E	80	8,251	103	3	2	1	8,828	110	3	2	1	7,863	98	2	2	1	8,413	105	3	2	1	9,144	114	3	0	1	9,784	122	3	0	1
	T5M	80	8,013	100	3	3	2	8,574	107	3	3	2	7,233	90	3	3	3	7,739	97	3	3	3	9,186	115	3	0	2	9,829	123	4	0	2
	T5W	80	7,819	98	3	3	3	8,366	105	3	3	3	6,973	87	3	3	3	7,461	93	3	3	3	8,941	112	4	0	3	9,567	120	4	0	3
	T5R	80	7,495	94	3	3	3	8,020	100	3	3	3	6,744	84	3	3	3	7,216	90	3	3	3	8,647	108	3	0	4	9,253	116	4	0	4
	ASY	80	7,445	93	2	3	2	7,966	100	2	3	3	6,638	83	1	3	3	7,103	89	1	3	3	8,554	107	1	0	2	9,153	114	2	0	2
P80	T5E	96	9,466	99	3	2	1	10,128	106	3	2	1	9,021	94	3	2	1	9,652	101	3	2	1	10,491	109	3	0	1	11,225	117	3	0	1
	T5M	96	9,193	96	3	3	2	9,837	102	3	3	2	8,298	86	3	3	3	8,878	92	3	3	3	10,539	110	4	0	2	11,277	117	4	0	2
	T5W	96	8,971	93	3	3	3	9,598	100	3	3	3	8,000	83	3	3	3	8,560	89	3	3	3	10,258	107	4	0	3	10,976	114	4	0	3
	T5R	96	8,599	90	3	3	3	9,201	96	3	3	3	7,737	81	3	3	3	8,279	86	3	3	3	9,921	103	4	0	4	10,615	111	4	0	5
	ASY	96	8,541	89	2	3	3	9,139	95	2	3	3	7,616	79	2	3	3	8,149	85	2	3	3	9,814	102	2	0	2	10,501	109	2	0	2

Use the following multipliers to scale 70CRI lumen data to 80CRI. lumens:

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

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Field Adjustable Output Module

The Field Adjustable Output (AO) module is an onboard device that adjusts the light output and input wattage to meet site specific requirements, allowing a single fixture configuration to be flexibly applied in many different applications.



P10 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	94%
6	81%	83%
5	68%	71%
4	57%	59%
3	45%	47%
2	33%	34%
1	21%	21%

P20 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	94%
6	81%	83%
5	68%	71%
4	56%	59%
3	44%	47%
2	32%	34%
1	20%	21%

P30 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	95%
6	80%	84%
5	67%	72%
4	55%	60%
3	43%	48%
2	31%	34%
1	19%	21%

P40 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	92%	95%
6	79%	84%
5	66%	73%
4	53%	61%
3	41%	49%
2	29%	35%
1	18%	21%

P50 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	95%
6	81%	84%
5	62%	66%
4	44%	47%
3	32%	34%
2	20%	21%
1	14%	14%

P60 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	95%
6	81%	83%
5	68%	72%
4	55%	59%
3	43%	46%
2	31%	33%
1	20%	21%

P70 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	95%
6	80%	84%
5	67%	73%
4	54%	60%
3	42%	47%
2	30%	34%
1	19%	21%

P80 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	93%	95%
6	80%	85%
5	67%	74%
4	55%	63%
3	42%	50%
2	29%	35%
1	17%	21%

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OPERATIONAL DATA

Options Matrix

Parameters		SELECTED OPTION (start here with fusing first since there are voltage limitation)																	
		AO	SF	DF	EM	PE	MASH	MASL	MASL3FC3V	MASH3FC3V	MASL3FC3V924	MASH3FC3V924	XAD	XAD924	XAD MASL	XAD MASH	XAD924 MASL	XAD924 MASH	10kV
LED Performance Package	P10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P40	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P50	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P60	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P70	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P80	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Voltage	AS	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	AH	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
	12	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	20	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	24	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	27	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	34	Y	N	N	N	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
	48	Y	N	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
Compatible Options	AO		Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y
	SF	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	DF	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	EM	Y	Y	Y		N	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	Y
	PE	Y	Y	Y	N		N	N	N	N	N	N	Y	Y	N	N	N	N	Y
	MASH	N	Y	Y	Y	N			N	N	N	N	N	N	N	N	N	N	Y
	MASL	N	Y	Y	Y	N			N	N	N	N	N	N	N	N	N	N	Y
	MASL3FC3V	N	Y	Y	Y	N	N	N					N	N	N	N	N	N	Y
	MASH3FC3V	N	Y	Y	Y	N	N	N					N	N	N	N	N	N	Y
	MASL3FC3V924	N	Y	Y	N	N	N	N					N	N	N	N	N	N	Y
	MASH3FC3V924	N	Y	Y	N	N	N	N					N	N	N	N	N	N	Y
	XAD	N	Y	Y	N	Y	N	N	N	N	N	N		N	N	N	N	N	Y
	XAD924	N	Y	Y	N	Y	N	N	N	N	N	N	N		N	N	N	N	Y
	XAD MASL	N	Y	Y	Y	N	N	N	N	N	N	N	N	N		N	N	N	Y
	XAD MASH	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N		N	N	Y
	XAD924 MASL	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N		N	Y
	XAD924 MASH	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N		Y
	10kV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Notes

N = Combination Not available

Y = Valid Option Combination

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	36,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	1	0.959	0.945	0.926	0.914	0.895	0.864

The italicized data is extrapolated beyond the TM-21 standard.

E = (LM) x (CU) x (LAT) x (LLD)

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Temperature
0° C	32° F	1.04
10° C	50° F	1.03
20° C	68° F	1.01
25° C	77° F	1.00
30° C	86° F	0.99
40° C	104° F	0.97

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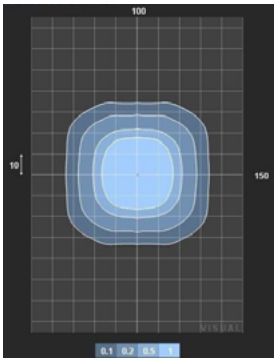
OPERATIONAL DATA

Photometric Diagrams

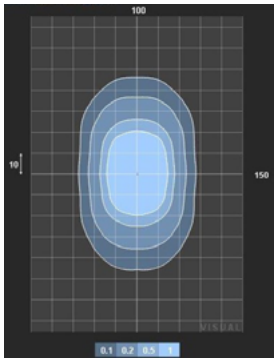
To see complete photometric reports or download .ies files for this product, visit the Holophane's Wallpack FCO LED homepage.
Isofootcandle plots for the PPSQL2 P40 40K/50K. Distance are in units of mounting height (8').

Borosilicate Prismatic Glass Option Distribution

PPSQL2 P40 40K/50K XX GL T5W



PPSQL2 P40 40K/50K XX GL T5R



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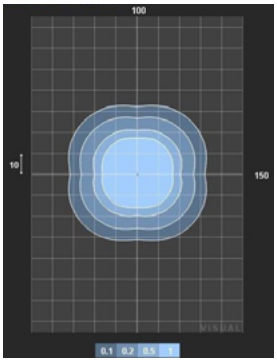

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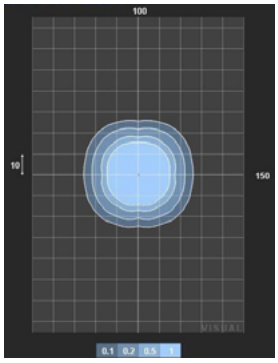
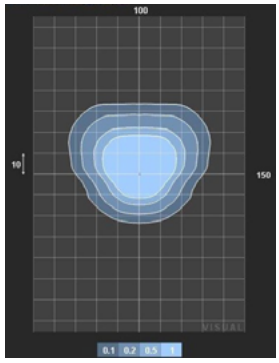


PPSQL2 P40 40K/50K XX GL ASY



Polycarbonate Refractor Option Distribution

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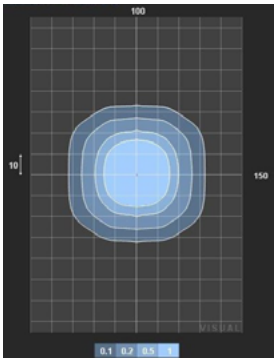

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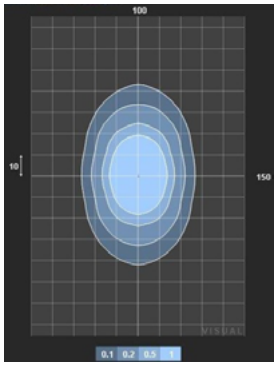

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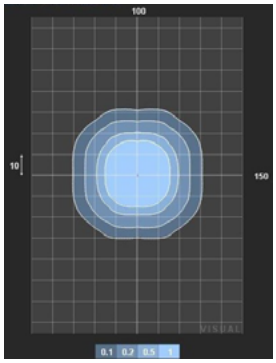

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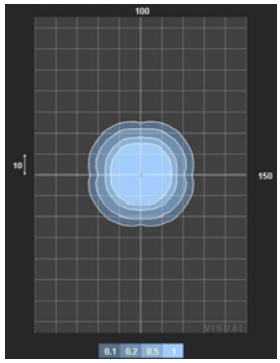
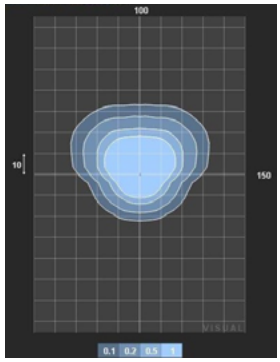
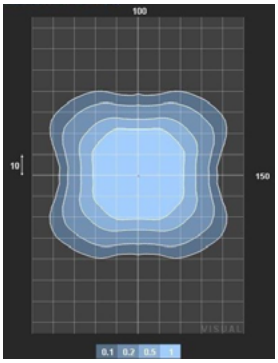


PPSQL2 P40 40K/50K XX PY ASY

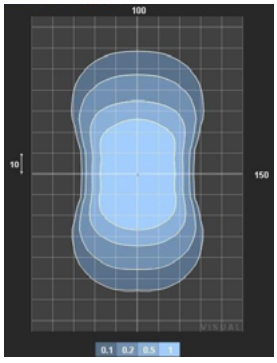


Zero Uplight Option Distribution

PPSQL2 P40 40K/50K XX FC T5W



PPSQL2 P40 40K/50K XX FC T5R



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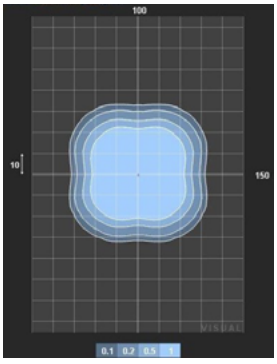

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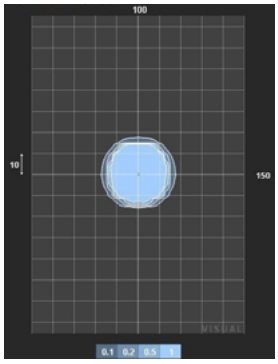

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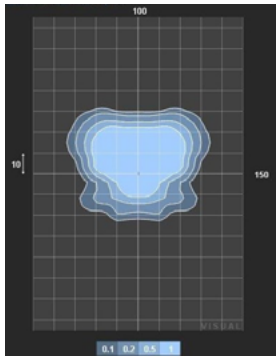

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OPERATIONAL DATA

Motion & Ambient Control Default Settings

Motion Sensor & Photocontrol Default Settings (any other presets require an RFD)						
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Ramp-up Time	Dwell Time	Ramp-down Time
MASL or MASH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	3 sec	5 min	5 min
MASL3FC3V or MASH3FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 3FC	3 sec	5 min	5 min
MASL3FC3V924 or MASH3FC3V924	3V (37%) Output	10V (100%) Output	Enabled @ 3FC	3 sec	5 min	5 min

Xpoint™ Default Settings

Xpoint™ Table						
Option	Dimmed State	"High Level (when triggered)"	Photocell Operation	Ramp-up Time	Dwell Time	Ramp-down Time
XAD or XAD924	-	-	-	-	-	-
XAD MASL or XAD MASH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	3 sec	5 min	5 min
XAD924 MASL or XAD924 MASH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	3 sec	5 min	5 min

Motion Sensor & XPoint Finish Based on Paint Selection

Super Durable Paint		Sensor Color
BKSDP	Black	Black Finish
BZSDP	Bronze	Black Finish
GHSDP	Graphite	White Finish
GYSDP	Grey	White Finish
WHSDP	White	White Finish

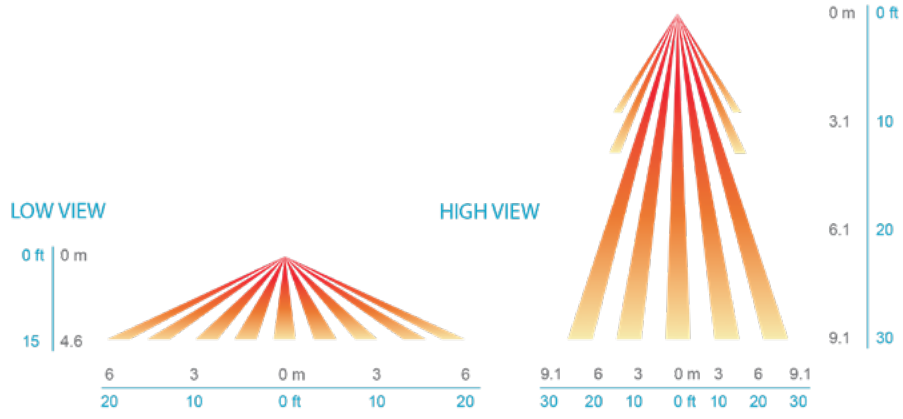
XPoint Wireless UL924

The Xpoint Wireless UL924 listed controllers are intended for use on central emergency power systems. Power interruption during transfer time must be greater than 30 ms in order for the XPoint Wireless controllers to activate the Egress Mode functioality.

The UL924 Xpoint Wireless Light Controllers are designed to provide fully tuned light output for 90 minutes following power loss (also referred to as "Egress Mode"), ignoring both manual and automatic dimming/occupancy/daylight control signals during this time. The device resumes normal diming controls after 90 minutes.

COVERAGE PATTERN

8-15 ft. mounting: MASL, MASL3FCV924, MASL3FC3V, XAD MASL and XAD924 MASL
15-30 ft. mounting: MASH, MASH3FCV924, MASH3FC3V, XAD MASH and XAD924 MASH



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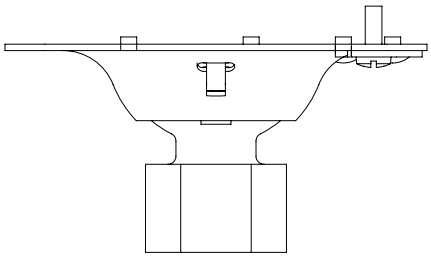
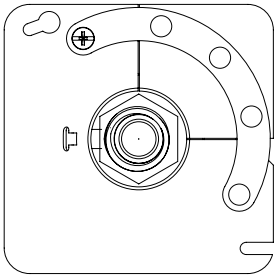
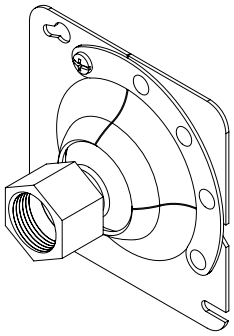
PENDANT MOUNT OPTION WITH SWIVEL KIT

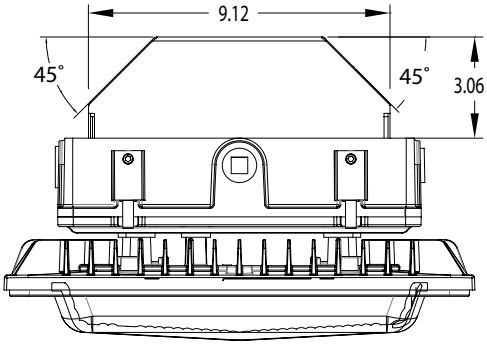
Included with mounting option PSM and mounts to 4" square electrical box.

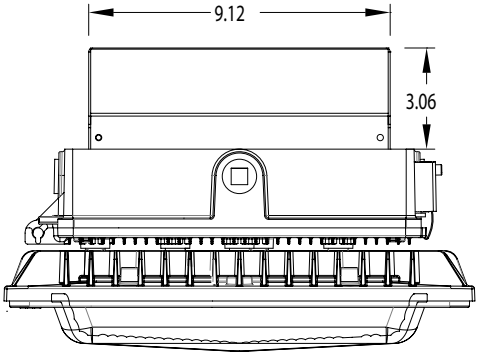


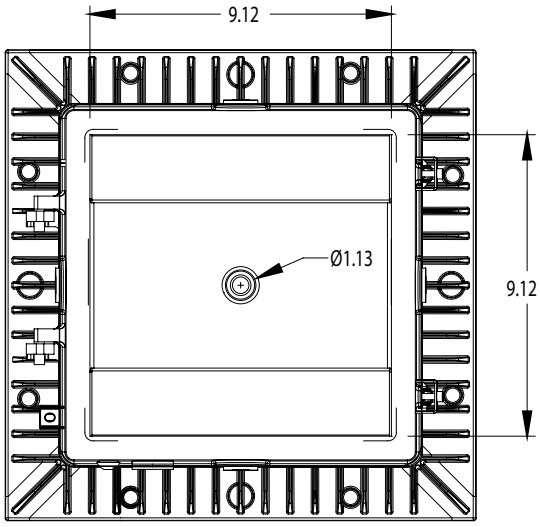




BIRD SHROUD ACCESSORY







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

July 16, 2018

Capt. Chris Pirone
City of Portland Fire Department
380 Congress Street
Portland, Maine 04101

Subject: 90 Johnson Road
Fire Safety Checklist

Dear Capt. Pirone:

In accordance with instructions in the City's Level III Site Plan and Subdivision Review packet, please find enclosed the drawings necessary for your review of the proposed building expansion on 90 Johnson Road this includes building renovations to the existing building to increase building capacity for Class A office space. As part of the building design, the architect will retain a third-party Fire Protection Engineer to review NFPA 101. We have listed each item in your checklist below, followed by our response.

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

   Transport Leasing Corp.
   Attn: Mark Sanborn
   PO Box 11054
   Portland, ME 04104

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

   Alpha Architects
   17 Chestnut Street
   Portland, ME 04101
   207.761.9500
   Attn: Mark Sengelmann

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

Building	NFPA/IBC Classification	Sprinkler
Office Building - Existing	A2- Business	No Existing To be installed as part of renovations
Warehouse	S2- Storage	No Existing To be installed as part of renovations

*Systems designed to meet NFPA

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

Building	Footprint Area (SF)
Existing 1st Floor & Mezzanine	24,249
Proposed 1st Floor & Mezzanine	22,019
Proposed 2nd and 3rd Floor (each)	10,246
Total GLA Proposed	**42,511**

5. *Elevation of all structures.*

   Architectural building elevations accompany this letter and they show the various locations of door openings, etc. around the building perimeter.

6. *Proposed fire protection of all structures.*

   The existing building does not have a sprinkler system. A 6" fire service line and new sprinkler system are proposed as part of the renovations and building addition mechanical system improvements.

7. *Hydrant locations.*

   A hydrant is currently accessible currently in front of the site entrance at the entrance of City Line Drive.

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

   There is currently a single domestic water service to the existing building from the twelve-inch main in Johnson Road. There is also a 12" main in City Line Drive and the new Fire sprinkler service will tap off that main.

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

   The accompanying site plan depicts the site's access conditions that include access to two or more sides of the buildings.

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

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The project access conditions include multiple driveways off City Line Drive and Johnson Road. The driveways will be greater than 24 feet in width which satisfies NFPA 1 18.2.3.4.1.1 that requires a minimum width of 20 ft.

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

City of Portland Technical Manual – Section 3 Public Safety

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

Supporting Evidence: Not applicable.

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

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

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

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

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

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

Supporting Evidence: All buildings in the Jetport Business Park will be provided with an exterior entrance door that will be within 50' of a Fire Department access route.

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

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

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

Supporting Evidence: The proposed elevator will be designed to satisfy this requirement.

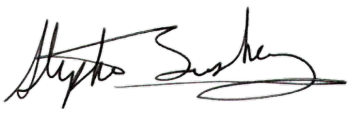
3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Supporting Evidence: Currently, the project location is 90 Johnson Road. The applicant will work with the City's Public Services Division to confirm that this will remain the street address to meet City standards.

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

Regards,

STANTEC CONSULTING SERVICES INC.



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

Attachments

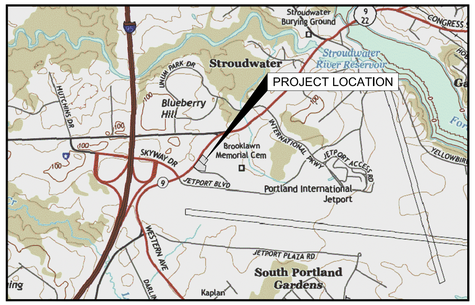
c: Planning Authority

V:\2108\active\210801617\civil\admin\permitting\local\level 3 site plan\ltr_pirone_firedept_20180716.docx

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD
PORTLAND, MAINE
SITE PLAN APPLICATION SUBMISSION FOR PROPOSED BUILDING EXPANSION AND PARKING AREA

PROJECT PARCEL SITE
CITY OF PORTLAND TAX ASSESSOR'S MAP, LOT & BLOCK NUMBERS

MAP	BLOCK	LOTS	CCRD
214A	A	A-1	BOOK 2960, PAGE 848
214A	A	A-2	BOOK 7111, PAGE 250
214A	A	A-3	BOOK 34653, PAGE 201



LOCATION MAP
N.T.S.

OWNER/APPLICANT:
TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

INDEX

C-1.0 COVER SHEET, GENERAL NOTES AND LEGEND
C-2.0 BOUNDARY SURVEY PLAN (THIRD AMENDED SUBDIVISION PLAN BY OWEN HASKELL, INC.)
C-2.1 PHASE 1 EXISTING CONDITIONS PLAN & DEMOLITION PLAN
C-2.2 PHASE 2 EXISTING CONDITIONS PLAN & DEMOLITION PLAN
C-3.0 PHASE 1 SITE LAYOUT & UTILITY PLAN
C-3.1 PHASE 2 SITE LAYOUT & UTILITY PLAN
C-4.0A PHASE 1 GRADING & DRAINAGE PLAN
C-4.0B PHASE 2 GRADING & DRAINAGE PLAN
C-4.1 STORMWATER MANAGEMENT PLAN - SHEET 1 OF 2
C-4.2 STORMWATER MANAGEMENT PLAN - SHEET 2 OF 2
C-5.0 PHASE 1 EROSION CONTROL PLAN
C-5.1 PHASE 2 EROSION CONTROL PLAN
C-6.0 FULL DEPTH BOX CUT ASPHALT PLAN
C-7.0 LANDSCAPE PLAN
C-8.0 DETAILS
C-9.0 DETAILS
C-10.0 EROSION AND SEDIMENT CONTROL NOTES
C-11.0 PRE WATERSHED PLAN
C-12.0 POST WATERSHED PLAN
E-0.1 SITE LIGHTING ILLUMINANCE CALCULATION PLAN
E-0.2 SITE LIGHTING ILLUMINANCE CALCULATION STATISTICS
E-1.1 ELECTRICAL SITE PLAN - 1
E-1.2 ELECTRICAL SITE PLAN - 2
E-1.3 ELECTRICAL DETAILS

PREPARED BY

CIVIL ENGINEER:
STANTEC CONSULTING SERVICES, INC.
482 PAYNE ROAD, SCARBOROUGH COURT
SCARBOROUGH, MAINE 04074
(207) 883-3355
ATTN: STEPHEN BUSHEY
EMAIL: STEPHEN.BUSHEY@STANTEC.COM

SURVEYOR :
OWEN HASKELL
390 U.S. ROUTE 1, UNIT 10
FALMOUTH, MAINE 04105
(207) 772-0424

ARCHITECT :
ALPHA ARCHITECTS
17 CHESTNUT ST.
PORTLAND, ME 04101
(207) 761-9500
MARK@ALPHAARCHITECTS.COM

LIGHTING/ELECTRICAL:
BARTLETT DESIGN INC.
942 WASHINGTON ST.
BATH, ME 04530
(207) 443-5447

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

UTILITIES

WATER
PORTLAND WATER DISTRICT
ATTN: ROBERT BARTELLS
225 DOUGLASS STREET,
P.O. BOX 3553
PORTLAND, MAINE 04104-3553
(207) 774-5961 EXT. 3197
RBARTELLS@PWD.ORG

SEWER
PORTLAND SANITARY DISTRICT
ATTN: BRAD ROLAND
55 PORTLAND STREET
PORTLAND, MAINE 04101
(207) 874-8300

ELECTRIC
CENTRAL MAINE POWER COMPANY
ATTN: JAMIE COUGH
162 CANCO ROAD
PORTLAND, MAINE 04103
(207) 842-2367 (OFFICE)
(207) 626-4082 (CELL)
JAMIECOUGH@CMPCO.COM

GAS
ATTN: RICK BELLEMARE
NORTHERN UTILITIES, INC.
1075 FOREST AVENUE
PORTLAND, MAINE 04103
(207) 797-8002, EXT.6247

TELEPHONE
FAIRPOINT COMMUNICATIONS
ATTN: SCOTT DERRIG
5 DAVIS FARM ROAD
PORTLAND, MAINE 04103
(207) 797-1842 (OFFICE)
SDERRIG@FAIRPOINT.COM

CABLE TV
TIME WARNER CABLE
ATTN: MARK PELLETIER
118 JOHNSON ROAD
PORTLAND, MAINE 04102
(207) 546-0962

FIRE ALARM
PORTLAND FIRE DEPT.
CENTRAL FIRE STATION
CONGRESS STREET
PORTLAND, MAINE 04101
(207) 8874-8300

DIG SAFE
1-800-225-4977

PERMITS

LOCAL
LEVEL III SITE PLAN APPROVAL
DELEGATED REVIEW OF STORMWATER MANAGEMENT

GOVERNING BODY
CITY OF PORTLAND PLANNING AUTHORITY
4TH FLOOR CITY HALL
389 CONGRESS STREET
PORTLAND, MAINE 04101

STATUS
SUBMITTED 7/9/2018

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	ABUTTING PROPERTY LINE / R.O.W. LINE	
N/F JOHN Q. OWNER 1111/222	PROPERTY OWNER NAME & DEED INFO.	
	EASEMENT LINE	
IPF	BOUNDARY MONUMENTATION	
OF 3	SURVEY CONTROL POINT	
	CONSTRUCTION CENTER LINE	
	SETBACK LINE	
	EDGE OF PAVEMENT	
TYPE AS NOTED	CURB	SEE SITE LAYOUT PLAN
	BUILDING	
	STEPS	
	TREELINE / CLEARING LIMIT	
	TREES / LANDSCAPING	SEE LANDSCAPE PLAN
	SIGN - SEE SITE LAYOUT PLAN FOR TYPE	A
	LIGHT POLE / FIXTURE	
UP CMP 14	UTILITY POLE	
	GUY WIRE	GUY
X X	FENCE TYPES (AS NOTED)	X X X
	RIPRAP AREA	
99	GRADING CONTOUR LINE	99
	GRADING SPOT GRADE	99.63
	TEST PIT	
S SMH	SANITARY SEWER MANHOLE	
D DMH	DRAIN MANHOLE	DMH 1
S	SANITARY SEWER LINE	
	SANITARY SERVICE	
CB CB CB	CATCH BASIN	CB 1
15" SD	STORM DRAIN	18"SD
	UNDERDRAIN	
GV	WATER GATE VALVE	
	WATER SHUT OFF	
6"W	WATER MAIN	
HYD.	FIRE HYDRANT	
OE OH	OVERHEAD ELECTRIC LINES	
UE	UNDERGROUND ELECTRIC LINES	UGE
UE/T/C	UNDERGROUND ELECTRIC/TEL./CABLE	
	TRAFFIC CONTROL BOX	
G	GAS LINE	
	CATCH BASIN SEDIMENT BARRIER	
	SILTATION FENCE	SF
	TEMP. STABILIZED CONTRUCTION ENTRANCE	
	BITUMINOUS ASPHALT SIDEWALK	
	BITUMINOUS ASPHALT PAVEMENT	

GENERAL NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE MAINE DEPARTMENT OF TRANSPORTATION, LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (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 ADDITIONAL COST TO THE OWNER UNLESS OTHERWISE AGREED UPON.
3. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
4. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
5. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL STANDARDS. IN THE CASE OF A CONFLICT BETWEEN THE DOT SPECS AND PORTLAND STANDARDS, THE MORE STRINGENT SHALL BE USED AT NO ADDITIONAL COST TO THE OWNER AND THE OWNER NOTIFIED.
6. TOPOGRAPHIC SURVEY INFORMATION WAS TAKEN FROM CITY OF PORTLAND AERIAL SURVEY, ELECTRONIC DATA PROVIDED BY CITY OF PORTLAND GIS DEPARTMENT AND SURVEY DATA PROVIDED BY OWEN HASKELL, INC. SUPPLEMENTAL DATA COLLECTION WAS PERFORMED BY STANTEC IN JUNE 2018.
7. BOUNDARY SURVEY INFORMATION TAKEN FROM A PLAN PREPARED BY OWEN HASKELL, INC. TITLED "BOUNDARY & TOPOGRAPHIC SURVEY" ON 68 JOHNSON ROAD, PORTLAND, MAINE, MADE FOR DELUCA-HOFFMAN ASSOCIATES, INC. DATED NOVEMBER 13, 2009.
8. FEMA MAP COMMUNITY PANEL NUMBER 2300510012C. THE PARCEL DOES NOT LIE WITHIN A FLOOD HAZARD ZONE.
9. 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 AUTHORITY 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.
10. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
11. ALL PARKING STALLS SHALL BE MARKED OFF BY 4" SOLID WHITE LINES EXCEPT AS SHOWN ON THE LAYOUT PLAN.
12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE, SLIPFORM CONCRETE, AND BITUMINOUS CONCRETE CURB SHALL MEET THE REQUIREMENTS OF MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 609.03 AND 609.04 AND CITY OF PORTLAND TECHNICAL STANDARDS.
13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB.
14. A FORMER HOUSE ON LOT 3 WAS SERVICED BY PUBLIC WATER, SEWER AND OVERHEAD UTILITIES ACCORDING TO THE OWNER. THE PORTLAND WATER DISTRICT WAS UNABLE TO PROVIDE A SERVICE LOCATION AND THE PUBLIC SERVICES DEPARTMENT ALSO HAS NO RECORD OF THE SANITARY SERVICE. THE CONTRACTOR SHALL INCLUDE COSTS TO LOCATE AND CLOSE EACH SERVICE IN ACCORDANCE WITH EACH UTILITY PROVIDER'S REQUIREMENTS.
15. THE CONTRACTOR OR DEVELOPER 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. SHOULD THE IMPROVEMENTS BE OF SIGNIFICANT CONCERN OR IN A SENSITIVE AREA, A PRE-CONSTRUCTION MEETING MAY BE REQUIRED AT THE DISCRETION OF 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. THE DEVELOPER, OR AN AUTHORIZED AGENT, MUST BE AVAILABLE AT ALL TIMES DURING CONSTRUCTION.
17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY.
18. CONSTRUCTION AND DEMOLITION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12.
19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE DEVELOPER/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/DEVELOPER'S EXPENSE.
21. THE CLOSURE OF ANY SANITARY SERVICES AND APPURTENANCES SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT AND / OR THE CITY OF SOUTH PORTLAND WASTEWATER DIVISION, WHICHEVER IS MORE STRINGENT, AT NO ADDITIONAL EXPENSE TO THE OWNER.
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.

DIMENSIONAL REQUIREMENTS
ZONE: B4 COMMERCIAL CORRIDOR

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	10,000 SF	202,554 SF
MINIMUM STREET FRONTAGE	60 FT	447.82 FT
MINIMUM YARD		
FRONT	20 FT	41 FT
REAR	20 FT	278 FT
SIDE LEFT	10 FT (1 TO 2 STORY BUILDING)	273 FT
SIDE RIGHT	12 FT (3 OR MORE STORIES)	77 FT
MINIMUM LOT WIDTH	40 FT	448 FT
MAXIMUM HEIGHT	65 FT	57'-5"
MAXIMUM IMPERVIOUS SURFACE RATIO	80%	45.7%
MAXIMUM FLOOR AREA RATIO	0.65	0.34

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

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No.	Revision	By	Appd.	YY.MM.DD
3	RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	18.09.19
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name:	PBF	SRB	SRB	18.05.22
	DWN.	CHKD.	DSGN.	DATE

Permit-Seal
STATE OF MAINE
STEPHEN R. BUSHEY
09-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
COVER SHEET, GENERAL NOTES AND LEGEND

Project No. 210801617
Scale N.T.S.

Sheet
C-1.0

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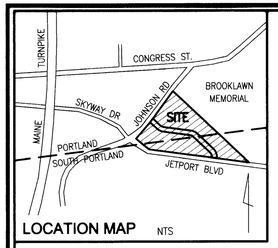

LOCATION MAP NTS

MAGNETIC 1975

BROOKLAWN MEMORIAL PARK

JETPORT STATE BUILDING, LLC
31393/343

TOWN LINE

S32°55'E 222.20'

S32°55'E 384.25'

S32°55'E 377.00'

S32°55'E 391.19'

S32°55'E 119.46'

S32°55'E 244.67'

S04°06'30"E 186.73'

143.51' S57°05'W

S68°25'E 203.83'

S03°27'W 142.16'

AREA "B" TO BE CONVEYED TO LOT 5 8,572 S.F.

AREA "A" TO BE CONVEYED TO LOT 6 14,480 S.F.

PROPOSED 40' WIDE ACCESS & UTILITIES EASEMENT

TM 214-A-3
68 JOHNSON ROAD
0.99 AC.

N50°37'E 196.00'

TM 214-A-2
LOT 4
52-58 CITY LINE DRIVE
1.98 AC.

N50°37'E 196.00'

190.60' N57°05'E

TM 214-A-4
LOT 5
78 CITY LINE DRIVE
1.66 AC.

TM 46-5

GATE

211.33' N57°05'E

TM 46-6
LOT 6
100 CITY LINE DRIVE
1.22 AC.

430.00' S68°25'E

PAVED

222.20' S32°55'E

58.04' S58°30'E

L=83.79' R=141.36'

L=3.81

292.21' S32°55'E

L=85.61'

R=141.00'

L=24.88'

SIGN

N21°38'45"E 172.83'

16' LA 18' S68°25'E

R=80.00' L=49.57'

S32°55'E 308.37'

R=25.00' L=71.34'

66.00' S68°25'E

8" RPP

STREET SIGN

GRANITE CURB

TM 214-A-1
LOT 3
90 JOHNSON ROAD
1.68 AC.

N50°37'E 251.82'

S68°25'E 163.55'

TM 214-A-5

CITY LINE DRIVE PAVED - PRIVATE

205.22' S68°25'E

S68°25'E 262.84'

25' PLANTING BUFFER

255.00' S27°35'W

TM 46-7
LOT 7
71 CITY LINE DRIVE
1.77 AC.

JOHNSON ROAD PAVED - PUBLIC

133.28' S53°07'20"E

L=49.36' R=80.00'

60.36' N50°37'E

S53°07'20"E 128.70'

R=140.00' L=86.24'

SIGN

TM 214-A-6,7,8
LOT 1B & 2C
118 JOHNSON ROAD
3.26 AC.

TOWN LINE PORTLAND SOUTH PORTLAND

TM 46-2C

432.50' S68°25'E

CITY OF PORTLAND

JETPORT BOULEVARD PAVED

405.00' S68°25'E

200.00' S38°15'E

SIGN

RECORD OWNER:

TM 214-A-1	TRANSPORT LEASING CORP. BOOK 2960 PAGE 848
TM 214-A-2	TRANSPORT LEASING CORP. BOOK 7111 PAGE 250
TM 214-A-3	68 JOHNSON ROAD LLC BOOK 27253 PAGE 38
TM 214-A-4 TM 46-5	TRANSPORT LEASING CORP. BOOK 2960 PAGE 848
TM 214-A-6,7,8 TM 46-2C	TRANSPORT LEASING CORP. BOOK 2960 PAGE 848
TM 46-6	TRANSPORT LEASING CORP. BOOK 2960 PAGE 848
TM 46-7	TRANSPORT LEASING CORP. BOOK 2960 PAGE 848

LEGEND

- LIGHT POLE
- WATER VALVE
- CATCH BASIN
- SIGN
- FENCE
- CURB

SCALE: 1" = 50'

0' 25' 50' 100'

STATE OF MAINE, CUMBERLAND, ss
REGISTRY OF DEEDS
RECEIVED June 11, 2014
AT 10 hr. 50 min. A m AND RECORDED
IN PLAN BOOK 214, PAGE 211
ATTEST: Register

PLAN REFERENCES

1. "AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE PREPARED BY WILLIAM E. WHITED, INC. OCTOBER 21, 1999," AS FOUND IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 199 PAGE 530.
1. "ACSM/ALTA LAND TITLE SURVEY AT 100-120 JOHNSON ROAD, PORTLAND/SOUTH PORTLAND, MAINE MADE FOR TRANSPORT LEASING CORP. FEB. 17, 1998" BY OWEN HASKELL, INC.
3. "COMMERCIAL LOAN INSPECTION ON JOHNSON ROAD & CITY LINE DRIVE, PORTLAND/SOUTH PORTLAND, MAINE MADE FOR TRANSPORT LEASING CORP." AUGUST 10, 2012 BY OWEN HASKELL, INC.
4. "ALTA/ACSM LAND TITLE SURVEY 151 JETPORT BOULEVARD SOUTH PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR JETPORT STATE BUILDING, LLC MARKET STREET, PORTLAND, MAINE 04101" DATED APRIL 3, 2014 BY OWEN HASKELL, INC.

CITY OF SOUTH PORTLAND CONDITIONS OF APPROVAL

1. PRIOR TO THE RELEASE OF THE SIGNED SUBDIVISION MYLAR, THE APPLICANT SHALL PAY ALL OUTSTANDING REVIEW ESCROW ACCOUNT FEES AND POST THE NECESSARY PERFORMANCE GUARANTEE(S) IN SUCH AMOUNT(S) AS ESTABLISHED BY THE CITY.
2. PURSUANT TO MAINE LAW REGARDING SUBDIVISIONS THAT STRADDLE MUNICIPAL BOUNDARIES, AS IS TRUE HERE, BOTH THE SOUTH PORTLAND AND PORTLAND PLANNING BOARDS VOTED TO WAIVE THE JOINT MEETING REQUIREMENT AND THE SOUTH PORTLAND PLANNING BOARD VOTED TO APPROVE THE SUBDIVISION AMENDMENT REFLECTED ON THIS PLAN.
3. THE DEVELOPER SHALL INSTALL A SIGN ON LOTS 5 AND 6 PROHIBITING VEHICULAR TRAFFIC LEAVING THE ADJACENT JETPORT STATE BUILDING, LLC SITE FROM TURNING RIGHT TO EXIT THROUGH THE JOHNSON ROAD SUBDIVISION INTERNAL ROAD NETWORK; INSTEAD, ALL VEHICULAR TRAFFIC LEAVING THE JETPORT STATE BUILDING, LLC SITE MUST EXIT ON TO JETPORT BOULEVARD.
4. THE PLANNING BOARD'S APPROVAL IS CONDITIONAL ON THE APPLICANT OBTAINING ALL NECESSARY DEP APPROVALS, ARMY CORPS, IF&W, AND OTHER APPROVALS BEFORE THE APPLICANT COMMENCES ANY LAND USE ACTIVITY. IF THE DEP, ARMY CORPS, IF&W OR ANY OTHER AGENCY IMPOSES ANY MORE STRINGENT CONDITIONS ON THE APPLICANT OR IF THE DEP, ARMY CORPS, OR OTHER AGENCY'S CONDITIONS OF APPROVAL IN ANY WAY IMPACT THE CITY OF SOUTH PORTLAND'S SUBSTANTIVE REVIEW CRITERIA, THE APPLICANT MUST BE REQUIRED TO RETURN TO THE SOUTH PORTLAND PLANNING BOARD FOR REVIEW AND APPROVAL OF AN AMENDED SUBDIVISION PLAN.
5. THE SOUTH PORTLAND PLANNING BOARD APPROVED A WAIVER OF SECTION 24-26(A) FINAL APPROVAL AND FILING FOR ONE (1) ADDITIONAL FILING PERIOD OF 90 DAYS TO EXPIRING NOVEMBER 13. 2014.

NOTES

1. SEE AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE PREPARED BY WILLIAM E. WHITED, INC. OCTOBER 21, 1999 FOR ADDITIONAL NOTES AND CONDITIONS.
2. THE PORTLAND PLANNING BOARD SHALL REVIEW AND APPROVE THE ACCESS AND ASSOCIATED IMPACTS FOR ANY FUTURE DEVELOPMENT WITHIN THE SUBDIVISION.
3. THIS PLAN AMENDS LOTS 5 AND 6 AS SHOWN ON "SECOND AMENDED SUBDIVISION JOHNSON ROAD SUBDIVISION, JOHNSON ROAD & CITY LINE DRIVE PORTLAND/SO. PORTLAND, MAINE FOR RECORD OWNER TRANSPORT LEASING CORP. FEB. 4, 2014 REVISED 3-21-14" RECORDED IN C.C.R.D. PLAN BOOK 214 PAGE 120 TO ADD ADDITIONAL AREA TO EACH LOT.

CERTIFICATE

BOUNDARY INFORMATION TAKEN FROM PLAN REFERENCE 1. IMPROVEMENTS SHOWN WERE FIELD SURVEYED BY OWEN HASKELL, INC.

6-9-14
DATE

JOHN W. SWAN, PLS NO. 1038

STATE OF MAINE · JOHN W. SWAN · NO. 1038 · PROFESSIONAL LAND SURVEYOR

APPROVED BY THE CITY OF SOUTH PORTLAND PLANNING BOARD

Wm. R. Sadilly
Caroline L Hensley
Stephanie Verrecchia
Mark Grondin
K Blazo

6/10/2014
DATE

REV.	DATE	DESCRIPTION
1	06-06-14	UPDATE CONDITIONS OF APPROVAL

THIRD AMENDED SUBDIVISION
JOHNSON ROAD SUBDIVISION
JOHNSON ROAD & CITY LINE DRIVE
PORTLAND / SOUTH PORTLAND, MAINE
MADE FOR RECORD OWNER
TRANSPORT LEASING CORP.
95 PLEASANT HILL ROAD, SCARBOROUGH, ME 04074

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

Drawn By	RRL	Date	Job No.
Trace By	JLW	APRIL 9, 2014	7551P/13-193SP
Check By	JWS	Scale	Dwg. No.
Book No.	FILE	1" = 50'	1C

GENERAL NOTES

OWNER OF RECORD: TRANSPORT LEASING CORP.

PLAN REFERENCES

1. BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD 83 PER CITY CONTROL MONUMENTS.
2. ELEVATIONS ARE BASED ON CITY DATUM.
3. "AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE PREPARED BY WILLIAM E. WHITED, INC. OCTOBER 21, 1999," AS FOUND IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 199 PAGE 530.
4. "ACSM/ALTA LAND TITLE SURVEY AT 100-120 JOHNSON ROAD, PORTLAND/SOUTH PORTLAND, MAINE MADE FOR TRANSPORT LEASING CORP. FEB. 17, 1998" BY OWEN HASKELL, INC.
5. "COMMERCIAL LOAN INSPECTION ON JOHNSON ROAD & CITY LINE DRIVE, PORTLAND/SOUTH PORTLAND, MAINE MADE FOR TRANSPORT LEASING CORP." AUGUST 10, 2012 BY OWEN HASKELL, INC.
6. "ALTA/ACSM LAND TITLE SURVEY 151 JETPORT BOULEVARD SOUTH PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR JETPORT STATE BUILDING, LLC MARKET STREET, PORTLAND, MAINE 04101" DATED APRIL 3, 2014 BY OWEN HASKELL, INC.
7. EXISTING CONDITIONS SUPPLEMENTED WITH FIELD SURVEY PERFORMED BY STANTEC, INC. MAY 18, 2018.
8. THIRD AMENDED SUBDIVISION - JOHNSON ROAD SUBDIVISION, JOHNSON ROAD AND CITY LINE DRIVE, PORTLAND/SOUTH PORTLAND, MAINE. MADE FOR RECORD OWNER TRANSPORT LEASING CORP., 95 PLEASANT HILL ROAD, SCARBOROUGH ME 04074. CCRD PLAN BOOK 214, PAGE 211 - JUNE 11, 2014

NORTH

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

CITY LINE DRIVE (PRIVATE WAY)

52 CITY LINE DRIVE

N/F
TRANSPORT LEASING CORP.
CCRD PLAN BOOK 7111 PAGE 250
TAX MAP 214A LOT A-2

N/F
TRANSPORT LEASING CORP.
CCRD PLAN BOOK 2960 PAGE 848
TAX MAP 214A LOT A-1

N/F
TRANSPORT LEASING CORP.
CCRD BOOK 34653 PAGE 203
214A - LOT A-3

HELD FOR LINE
1"IPF

6' OCS
RIM: 71.0
6" UD IN = 64.06
15" INV IN = 67.85
12" INV OUT = 64.03

N21°35'45"E
172.83'

S68°25'E
205.22'

L=49.30'
R=30.00'

S33°07'20"E
133.28'

S58°30'E
58.64'

196.00'
N50°37'E

1"IPF
0.54'
0.10'

S32°55'E
222.20'

APPROX. PHASING MATCHLINE

APPROXIMATE CLEARING LIMIT (TYP)

TREE LINE TO BE REMOVED (SEE PROPOSED TREELINE ON SITE PLAN

PROTECT EXISTING STORM DRAIN

METAL POSTS

SUMP=61.0'
RIM=64.4'
EX. CB

EXISTING CATCH BASIN TO REMAIN (PROTECT AND ADJUST AS NECESSARY)

CONCRETE AND BRICK BLOCKS

EX. CB
RIM=69.6'
12" INV. IN: 63.07
12" INV. OUT: 62.97
SUMP=61.0'

PROTECT EXISTING DRAINAGE MANHOLE ADJUST TO GRADE CORE HOLES IN STRUCTURE TO ACCEPT NEW CONNECTIONS (TYP)

EXISTING TREES TO BE REMOVED

ADJUST CB RIM TO 67.7

STONE AND CONCRETE WALL

ELECTRIC POST

EX. CB
RIM=66.9'
12" INV. IN=62.5'
12" INV. OUT=62.4'

ADJUST CB TO GRADE

196.00'
N50°37'E

251.82'
N50°37'E

UP#5

OHW

PAVED SIDEWALK

GRANITE CURBING

RIM=69.3'
INV. IN=62.4' 12"RPP
INV. OUT=62.3' 12"RPP W/HOOD

BENCHMARK
TBM
PK NAIL SET
IN UP#6
ELEV.=71.81'

REMOVE ASPHALT, TYP.

REMOVE CURB, TYP.

EX. DMH
RIM=67.6'

EX. CB
RIM=67.5'
INV. IN=61.7' 12" RPP
INV. IN=61.6' 12"
INV. OUT=61.5' 12" RPP W/ HOOD

REMOVE ASPHALT

SAWCUT EXISTING ASPHALT AND 2' GRIND

REMOVE EXISTING CURB (CURB IN R.O.W. TO BE DELIVERED TO CITY STOCKYARD AS NECESSARY)
STREET OPENING PERMIT BY CONTRACTOR (TYP)

RAISED MEDIAN

JOHNSON ROAD
PAVED--PUBLIC--VARIABLE WIDTH

V:\210801active\210801617\civil\cad\dwg\permit\dwg\EXISTING CONDITIONS.dwg ashane 9/19/2018 8:39 AM

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482 Payne Road Scarborough Court
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No.	Revision	By	Appd.	YY.MM.DD
3	RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	18.09.19
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.03.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
09-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
PHASE 1
EXISTING CONDITIONS AND DEMOLITION PLAN

Project No. 210801617
Scale N.T.S.

Sheet
C-2.1

GENERAL NOTES

OWNER OF RECORD: TRANSPORT LEASING CORP.

PLAN REFERENCES

1. BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD 83 PER CITY CONTROL MONUMENTS.
2. ELEVATIONS ARE BASED ON CITY DATUM.
3. "AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE PREPARED BY WILLIAM E. WHITED, INC. OCTOBER 21, 1999," AS FOUND IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 199 PAGE 530.
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NORTH

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

52 CITY LINE DRIVE

HELD FOR LINE 1"IPF

N/F TRANSPORT LEASING CORP. CCRD PLAN BOOK 7111 PAGE 250 TAX MAP 214A LOT A-2

1"IPF

196.00'
N50°37'E

0.54'
0.10'

APPROXIMATE CLEARING LIMIT (TYP)

TREE LINE TO BE REMOVED (SEE PROPOSED TREELINE ON SITE PLAN

REMOVE EXISTING OVERHEAD UTILITY LINES

PROTECT EXISTING DRAINAGE CONTROL STRUCTURE

6" OCS
RIM= 71.0
6" UD IN = 64.06
15" INV IN = 67.85
12" INV OUT = 64.03

ADJUST CB TO GRADE, TYP.

S68°30'E 64.04'

REMOVE EXISTING OVERHEAD UTILITY LINES

APPROX. PHASING MATCHLINE

PROTECT EXISTING STORM DRAIN

EXISTING BIORENTENTION BASIN

N21°35'45"E 172.83'

EXISTING VORTECHNICS HYDRODYNAMIC SEPARATOR

SAWCUT EXISTING ASPHALT AND 2' GRIND

CITY LINE DRIVE (PRIVATE WAY)

PROTECT EXISTING STORMDRAIN

EXISTING BUILDING TO BE REMOVED - REMOVE FOUNDATION AT LEAST 2 FEET BELOW GRADE (TYP)

ADJUST CB TO GRADE, TYP.

REMOVE ASPHALT PARKING LOT AND REGRADE AS NECESSARY

S68°25'E 205.22'

EXISTING FORCE MAIN SEWER IN CITY LINE DRIVE - EXISTING LOCATION UNKNOWN

NATURAL GAS IS BELIEVED TO BE LOCATED IN CITY LINE DRIVE - EXACT LOCATION IS UNKNOWN

EXISTING POLE AND REMOVE POLE MOUNTED METER TO BE REMOVED (SEE ELECTRICAL PLANS FOR DETAILS)

EXISTING CONCRETE WALK TO BE REMOVED

REMOVE EXISTING CONCRETE RAMP

REMOVE EXISTING GENERATOR

EXISTING TREE TO BE REMOVED AND REPLANTED ONSITE

EXISTING 1 STORY BUILDING

N/F TRANSPORT LEASING CORP. CCRD PLAN BOOK 2960 PAGE 848 TAX MAP 214A LOT A-1

(SEE EXISTING ARCHITECTURAL & STRUCTURAL PLANS FOR DEMOLITION AND RENOVATION DETAILS)

EXISTING BUTIMINOUS ASPHALT TO REMOVED

REMOVE EXISTING METAL POSTS

METAL POSTS

N/F TRANSPORT LEASING CORP. CCRD BOOK 34653 PAGE 203 214A - LOT A-3

S32°55'E 222.20'

REMOVE EXISTING OVERHEAD UTILITY LINES

EXISTING CURB TO REMOVED

EXISTING BITUMINOUS WALK TO BE REMOVED

REMOVE EXISTING CONCRETE (TYP)

EXISTING WATER SERVICE

EXISTING SANITARY SERVICE - TO REMAIN

PROTECT EXISTING GAS SERVICE (TYP)

L=49.30'
R=30.00'

133.28'
S33°07'20"E

EXISTING TREE/LANDSCAPING TO BE REMOVED AND REPLANTED ONSITE

EXISTING DIRECTIONAL SIGN TO REMAIN

SAWCUT EXISTING ASPHALT AND 2' GRIND

EXISTING HYDRANT

EXISTING BUTIMINOUS ASPHALT TO REMOVED

SUMP=61.0'
RIM=64.4'
EX. CB

EXISTING CATCH BASIN TO REMAIN (PROTECT AND ADJUST AS NECESSARY)

CONCRETE AND BRICK BLOCKS

EX. CB
RIM=69.6'
12" INV. IN=63.07
12" INV. OUT=62.97
SUMP=61.0'

PROTECT EXISTING DRAINAGE MANHOLE ADJUST TO GRADE CORE HOLES IN STRUCTURE TO ACCEPT NEW CONNECTIONS (TYP)

EXISTING TREES TO BE REMOVED

ADJUST CB RIM TO 67.7

STONE AND CONCRETE WALL

ELECTRIC POST

EX. CB
RIM=66.9'
12" INV. IN=62.5'
12" INV. OUT=62.4'

ADJUST CB TO GRADE

196.00'
N50°37'E

UP#5

OHW

PAVED SIDEWALK

GRANITE CURBING

EX. DMH
RIM=67.6'

EX. CB
RIM=67.5'
INV. IN=61.7" 12" RPP
INV. IN=61.6" 12"
INV. OUT=61.5' 12" RPP W/ HOOD

REMOVE ASPHALT, TYP.

REMOVE CURB, TYP.

RIM=69.3'
INV. IN=62.4' 12"RPP
INV. OUT=62.3' 12"RPP W/HOOD

1"IPF
0.27'

BENCHMARK
TBM
PK NAIL SET
IN UP#6
ELEV.=71.81'

JOHNSON ROAD
PAVED--PUBLIC--VARIABLE WIDTH

251.82'
N50°37'E

REMOVE ASPHALT

SAWCUT EXISTING ASPHALT AND 2' GRIND

REMOVE EXISTING CURB (CURB IN R.O.W. TO BE DELIVERED TO CITY STOCKYARD AS NECESSARY)
STREET OPENING PERMIT BY CONTRACTOR (TYP)

PROTECT EXISTING LANDSCAPING

EXISTING GAS SERVICE TO BUILDING

RAISED MEDIAN

TO SOUTH PORTLAND WWTF

V:\210\active\210801617\civil\cad\permit\dwg\EXISTING CONDITIONS.dwg ashane 9/19/2018 8:42 AM

Stantec

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No.	Revision	By	Appd.	YY.MM.DD
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.09.19
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
3	RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	18.03.22

File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.03.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
09-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
PHASE 2
EXISTING CONDITIONS AND DEMOLITION PLAN

Project No. 210801617
Scale N.T.S.

Sheet
C-2.2

NOTES:

SITE IS IDENTIFIED AS MAP 214A, BLOCK A, LOTS A-2 & A-3 ON THE CITY OF PORTLAND ASSESSOR'S DATABASE.

RECORD OWNER: TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

PLAN REFERENCES

1. BOUNDARY & TOPOGRAPHIC ON 68 JOHNSON ROAD PORTLAND, MAINE PREPARED BY OWEN HASKELL, INC., FOR DELUCA HOFFMAN ASSOCIATES, DATED ON JANUARY 7, 2010.
2. EXISTING CONDITIONS PLAN OF JOHNSON ROAD PROPERTY, TAX MAP 214A, LOT A-3, PREPARED BY DELUCA HOFFMAN ASSOCIATES, DATED ON SEPTEMBER 9, 2010.
3. SUBDIVISION PLAN PREPARED BY WILLIAM WHITE, INC., TITLED "AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE". RECORDED ON NOVEMBER 15, 1999 IN C.C.R.D. BOOK 199, PAGE 530.
4. SHEET A2.1 OF SANBORN PROFESSIONAL BUILDING, BY ALPHA ARCHITECTS, ISSUED JUNE 21, 2017.

ZONING DATA
ZONE: B-4 COMMERCIAL CORRIDOR ZONE
PERMIT USES INCLUDE:

DIMENSIONAL REQUIREMENTS	REQUIRED	PROVIDED
MINIMUM LOT SIZE	10,000 SF	202,554 SF
MINIMUM STREET FRONTAGE	60 FT.	447.82'
MINIMUM FRONT YARD SETBACK	20 FT.	41'±
MINIMUM REAR YARD SETBACK	20 FT.	278'±
MINIMUM RIGHT SIDE YARD SETBACK	12 FT.	77'±
MINIMUM LEFT SIDE YARD SETBACK	12 FT.	273'±
MINIMUM LOT WIDTH	60 FT.	448'±
MAXIMUM HEIGHT	65 FT.	57'-5"
MAXIMUM IMPERVIOUS SURFACE RATIO	80%	45.7%
MAXIMUM FLOOR AREA RATIO	0.65	0.34
PARKING (1 SPACE / 400 SF)	83 SPACES	175 SPACES (SEE NOTE BELOW)

NOTE: TENANT REQUIREMENTS ARE PREDICTED TO RESULT IN A PARKING DEMAND OF 174 SPACES TO SATISFY OFFICE PARKING AT A RATIO OF 5.5 SPACES PER 1,000 SF

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

NORTH

LEGEND
- BUILDING EXIT
- TD — 7' LONG TIP DOWN CURB
- STANDARD DUTY PAVEMENT
- BITUMINOUS POROUS PAVEMENT
- BITUMINOUS ASPHALT SIDEWALK
- CONCRETE SURFACE

SIGN LEGEND
- R1-1 STOP 24"X24" — A
- R7-8 RESERVED PARKING 12"X18" / R7-8A 18"X9" — B
- R7-100 ANY TIME 12"X18" — C
- W11-2 24"X24" / W11-2P PED XING 18"X12" — D
- R3-2 24"X24" — E
- R5-1 DO NOT ENTER 30"X30" — F

N 297203.94
E 2911140.37

2' WIDE PAVEMENT OVERLAY MATCH EXISTING PAVEMENT

CITY LINE DRIVE (PRIVATE WAY)

BENCHMARK: CP 1
PK NAIL
ELEV.: 71.98'

12" X 6" TAPPING SLEEVE AND VALVE

PROPOSED 6" FIRE SERVICE

RAMP (1:12 MAX.)

INTEGRAL CIP CONCRETE WALL WITH HANDRAIL (SEE STRUCTURAL PLANS)

SLIPFORM CONCRETE CURB (TYP)

2' WIDE PAVEMENT OVERLAY MATCH EXISTING PAVEMENT

END OF EXISTING GRANITE CURB

END POROUS PAVEMENT

SNOW STORAGE

BITUMINOUS SIDEWALK

52 CITY LINE DRIVE

6" DCS
RIM: 71.0
6" UD IN = 64.06
15" INV IN = 67.85
12" INV OUT = 64.03

N21°35'45"E 172.83'

15 COMPACT VEHICLES

7 COMPACT VEHICLES

S68°25'E 205.22'

SIDEWALK

OHD

PROPOSED BITUMINOUS ASPHALT WALK (TYP) (OWNER RESERVES THE RIGHT TO INSTALL CONCRETE)

PROPOSED SLIPFORM CONCRETE CURB (TYP)

10'X10' REINFORCED CONCRETE SOLID WASTE ENCLOSURE

24 BICYCLE PARKING SPACES - HITCH STYLE TO BE COORDINATED WITH CITY

BUILDING OVERHANG

39,548 SF
1 STORY BUILDING CONVERTED TO MULTI-STORY OFFICE BUILDING
FIRST FLOOR - 16,517 SF
MEZZANINE - 2,539 SF
SECOND FLOOR - 10,246 SF
THIRD FLOOR - 10,246 SF

BUILDING COLUMN (TYP)

FD CONNECTION

N/F
TRANSPORT LEASING CORP.
CCRD PLAN BOOK 2960 PAGE 848
TAX MAP 214A LOT A-1

LIGHT (SEE LIGHTING PLAN SHEET E0.1)

EXISTING DOMESTIC WATER

CONCRETE RAMP (1:12 MAX.), (SEE STRUCTURAL PLANS TYP)

EXISTING SANITARY SERVICE

L=49.30'
R=30.00'
S33°07'20"E 133.28'

N/F
TRANSPORT LEASING CORP.
CCRD PLAN BOOK 111 PAGE 250
TAX MAP 214A LOT A-2

HELD FOR LINE
1"IPF

SNOW STORAGE

COMPACT VEHICLES

N 297552.98
E 2911211.67

1"IPF

LIGHT POLE (SEE LIGHTING PLAN SHEET C-6.0)

PROPOSED TREELINE (TYP)

N50°37'E 196.00'

PROPOSED SLIPFORM CONCRETE CURB (TYP OF ALL ONSITE CURB)

APPROX. PHASING MATCHLINE

CMP SERVICE METER
7'x7' PAD MOUNTED SERVICE TRANSFORMER (SEE LIGHTING AND ELECTRIC PLANS, TYP)

CURB (TYP)

ELECTRIC MANHOLE & TELCOM MANHOLE (SEE LIGHTING AND ELECTRIC PLANS FOR DETAILS, TYP)

S32°55'E 222.20'

175 SPACES

PROPOSED CONCRETE WALK (TYP)

(COMPACT SPACES)

SUMP=61.0'
RIM=64.4'
EX. CB

CONCRETE AND BRICK BLOCKS

PROPOSED CONCRETE WALK (TYP)

PROPOSED SLIPFORM CONCRETE CURB (TYP)

SEE SITE ELECTRICAL PLAN FOR NUMBER AND SIZING OF ALL CONDUIT

PROPOSED SIGN

N 297698.50
E 2911043.77

STONE AND CONCRETE WALL

ELECTRIC POST

EX. CB
RIM=66.9'
12" INV. IN=62.5'
12" INV. OUT=62.4'

EXISTING SIDEWALK

INSTALL NEW VERTICAL GRANITE CURB PER CITY OF PORTLAND TECHNICAL STANDARDS (TYPICAL)

COORDINATE CONNECTION OF NEW UNDERGROUND ELECTRICAL AND COMMUNICATIONS SERVICES WITH UTILITY COMPANIES

EX. DMH
RIM=67.6'

EX. CB
RIM=67.5'
INV. IN=61.7' 12" RPP
INV. IN=61.6' 12"
INV. OUT=61.5' 12" RPP W/ HOOD

GRANITE CURBING

PAVED SIDEWALK

JOHNSON ROAD
PAVED—PUBLIC—VARIABLE WIDTH

BENCHMARK
TBM
PK NAIL SET
IN UP#6
ELEV.=71.81'

PROPOSED BITUMINOUS SIDEWALK CONNECTION TO JOHNSON ROAD SIDEWALK

N50°37'E 251.82'

EXISTING SIDEWALK

N 297329.23
E 2910790.47

RAISED MEDIAN

8"SAN

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8	REVISED PER CITY COMMENTS	CDD	SRB	18.11.19
7	REVISED PER CITY COMMENTS	CDD	SRB	18.11.14
6	REVISED PER CITY COMMENTS - I.O.R. #7	CDD	SRB	18.11.13
5	REVISED PER CITY COMMENTS - I.O.R. #4	CDD	SRB	18.10.25
4	ISSUED REVISED PLANS TO CITY	PBF	SRB	18.10.12
3	RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	18.09.19
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.05.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
11-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
BUILDING PHASE
SITE LAYOUT & UTILITY PLAN

Project No. 210801617 | Scale 1" = 20'

Sheet
C-3.1

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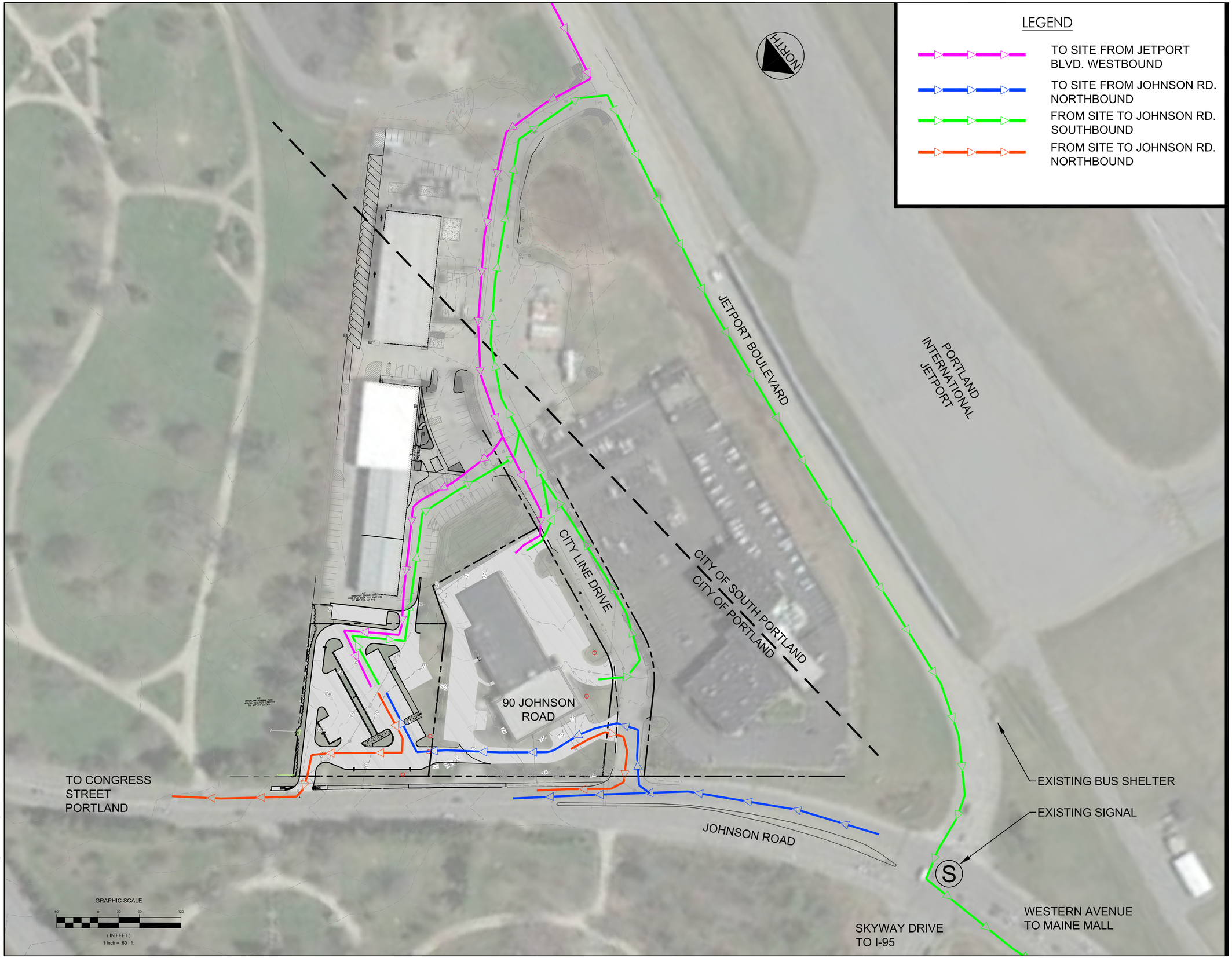

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File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.05.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSBY
11-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
SIGNAGE & WAYFINDING PLAN

Project No. 210801617
Scale 1" = 60'

Sheet
C-3.2

V:\2108\active\210801617\civil\addl\permit\dwg\WAYFINDING.dwg cddube 11/19/2018 1:51 PM

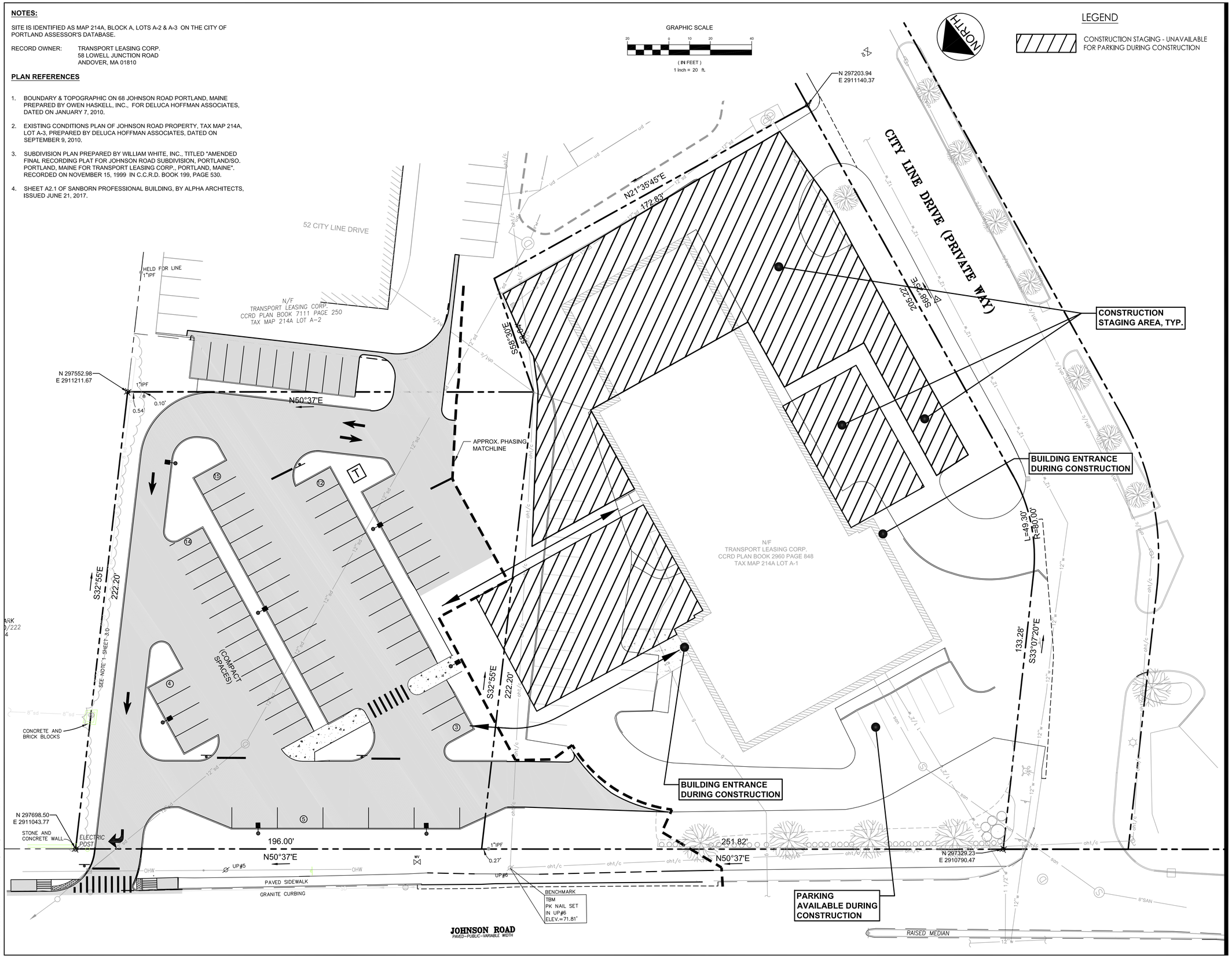
NOTES:

SITE IS IDENTIFIED AS MAP 214A, BLOCK A, LOTS A-2 & A-3 ON THE CITY OF PORTLAND ASSESSOR'S DATABASE.

RECORD OWNER: TRANSPORT LEASING CORP.
58 LOWELL JUNCTION ROAD
ANDOVER, MA 01810

PLAN REFERENCES

1. BOUNDARY & TOPOGRAPHIC ON 68 JOHNSON ROAD PORTLAND, MAINE PREPARED BY OWEN HASKELL, INC., FOR DELUCA HOFFMAN ASSOCIATES, DATED ON JANUARY 7, 2010.
2. EXISTING CONDITIONS PLAN OF JOHNSON ROAD PROPERTY, TAX MAP 214A, LOT A-3, PREPARED BY DELUCA HOFFMAN ASSOCIATES, DATED ON SEPTEMBER 9, 2010.
3. SUBDIVISION PLAN PREPARED BY WILLIAM WHITE, INC., TITLED "AMENDED FINAL RECORDING PLAT FOR JOHNSON ROAD SUBDIVISION, PORTLAND/SO. PORTLAND, MAINE FOR TRANSPORT LEASING CORP., PORTLAND, MAINE". RECORDED ON NOVEMBER 15, 1999 IN C.C.R.D. BOOK 199, PAGE 530.
4. SHEET A2.1 OF SANBORN PROFESSIONAL BUILDING, BY ALPHA ARCHITECTS, ISSUED JUNE 21, 2017.



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1 SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.05.22

File Name:	PBF	SRB	SRB	18.05.22
	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7890
11-19-18
LICENSED
PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

CONSTRUCTION MANAGEMENT PLAN

Project No. 210801617

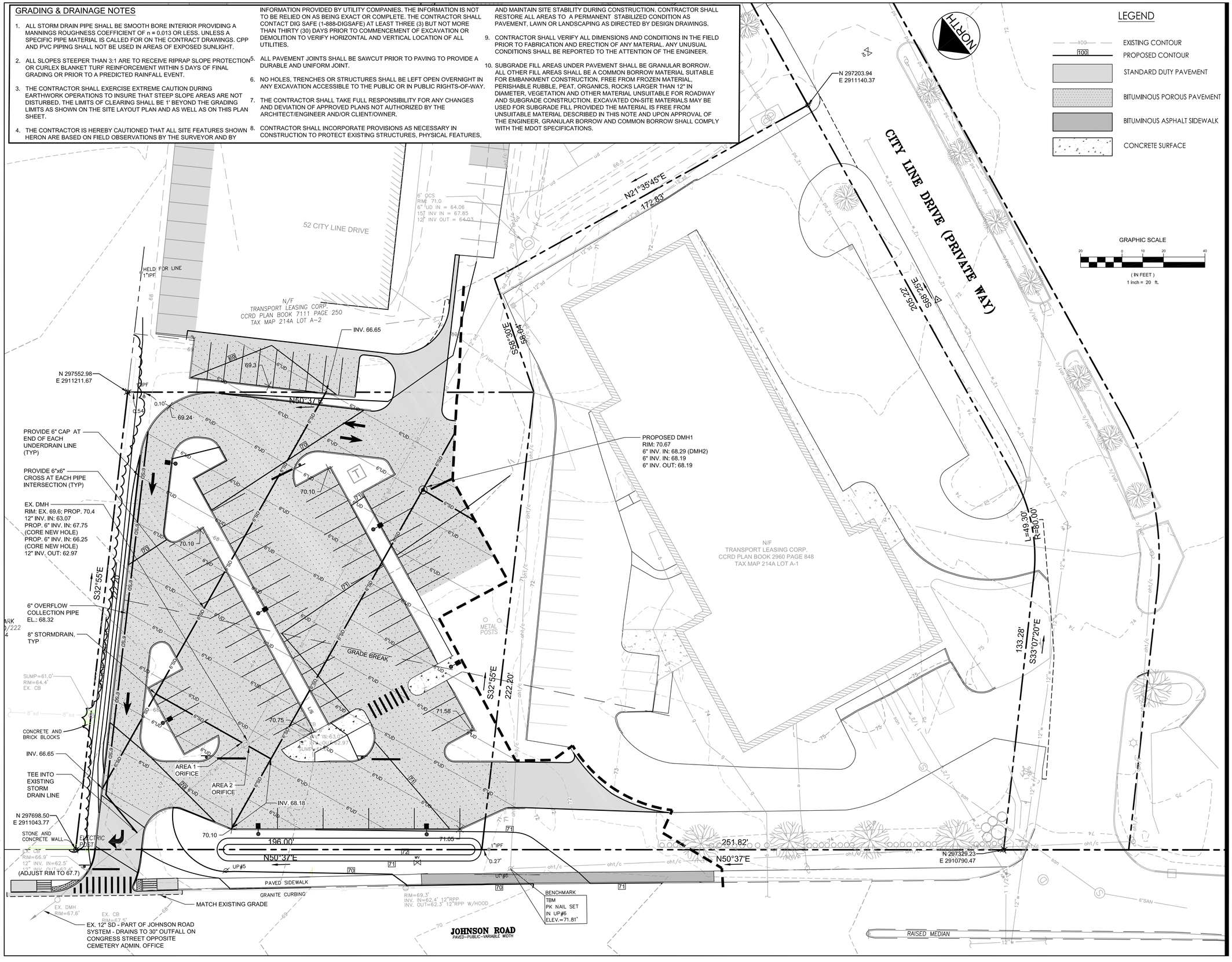
Scale 1" = 20'

Sheet

C-3.3

GRADING & 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. CPP AND PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
2. ALL SLOPES STEEPER THAN 3:1 ARE TO RECEIVE RIPRAP SLOPE PROTECTION OR CURLEX BLANKET TURF REINFORCEMENT WITHIN 5 DAYS OF FINAL GRADING OR PRIOR TO A PREDICTED RAINFALL EVENT.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT STEEP SLOPE AREAS ARE NOT DISTURBED. THE LIMITS OF CLEARING SHALL BE 1' BEYOND THE GRADING LIMITS AS SHOWN ON THE SITE LAYOUT PLAN AND AS WELL AS ON THIS PLAN SHEET.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HERON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. 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 PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
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, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO A PERMANENT STABILIZED CONDITION AS PAVEMENT, LAWN OR LANDSCAPING 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 ATTENTION OF THE ENGINEER.
10. SUBGRADE FILL AREAS UNDER PAVEMENT SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL 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 SUBGRADE FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH THE MDOT SPECIFICATIONS.



By	Appd.	YY.MM.DD	Revision
CDD	SRB	18.11.19	8 REVISED PER CITY COMMENTS
CDD	SRB	18.11.14	7 REVISED PER CITY COMMENTS
CDD	SRB	18.11.13	6 REVISED PER CITY COMMENTS - LOS. #7
CDD	SRB	18.10.25	5 REVISED PER CITY COMMENTS - LOS. #4
PBF	SRB	18.10.12	4 ISSUED REVISED PLANS TO CITY
PBF	SRB	18.09.19	3 RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY
PBF	SRB	18.07.09	2 SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW
PBF	SRB	18.03.22	1 SUBMITTED FOR OWNER REVIEW

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File Name:	PBF	SRB	SRB	18.03.22
	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSBY
11-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
INITIAL CONSTRUCTION GRADING & DRAINAGE PLAN

Project No.	Scale
210801617	1" = 20'

Sheet
C-4.0A

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GRADING & DRAINAGE NOTES

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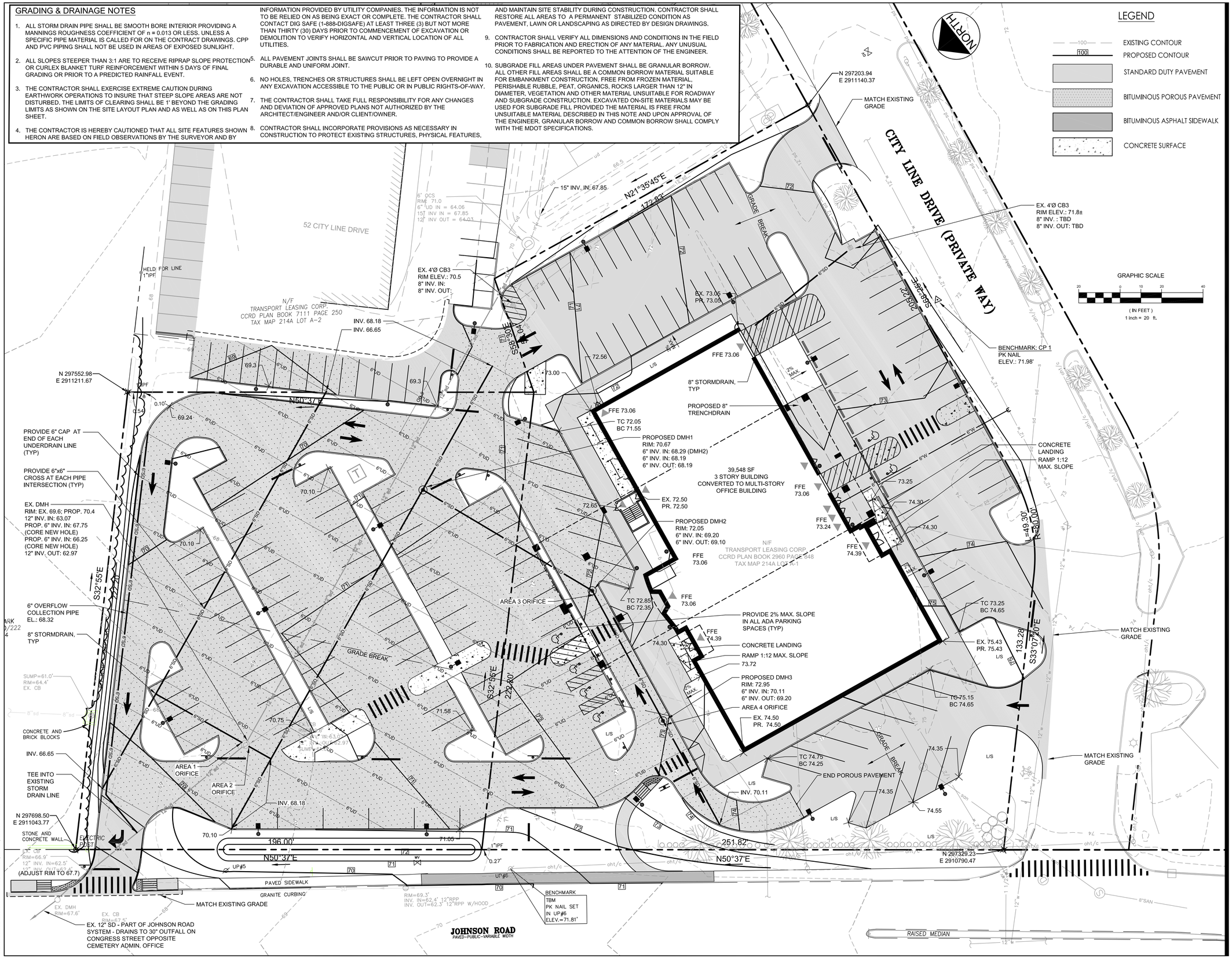

Revision	By	Appd.	YY.MM.DD
1 SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22
2 SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
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8 REVISED PER CITY COMMENTS	CDD	SRB	18.11.19

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Permit-Seal

STATE OF MAINE STEPHEN R. BUSBY 11-19-18 LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

BUILDING PHASE
GRADING & DRAINAGE PLAN

Project No.	Scale
210801617	1" = 20'

Sheet

C-4.0B

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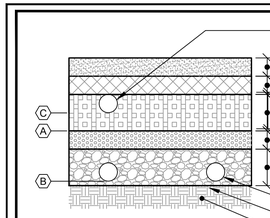

NOTES:

ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT. POROUS ASPHALT MIX DESIGN TO BE PROVIDED TO CONTRACTOR AT TIME OF BIDDING.

POROUS PAVEMENT SECTION	AREA 1	AREA 2	AREA 3	AREA 4
A-TOP OF FILTER COURSE ELEV.	67.82	69.35	70.37	71.28
B - UD INV. ELEV.	66.65	68.18	69.20	70.11
C - OVERFLOW PIPE INV. ELEV.	68.32	69.85	70.87	71.78

Ⓒ POROUS PAVEMENT SECTION
N.T.S.

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File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.05.22

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSBY
07-09-18
LICENSED
PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
STORMWATER MANAGEMENT PLAN
SHEET 1 OF 2

Project No.	Scale
210801617	N.T.S.

Sheet
C-4.1

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90 Johnson Road Stormwater Management Summary

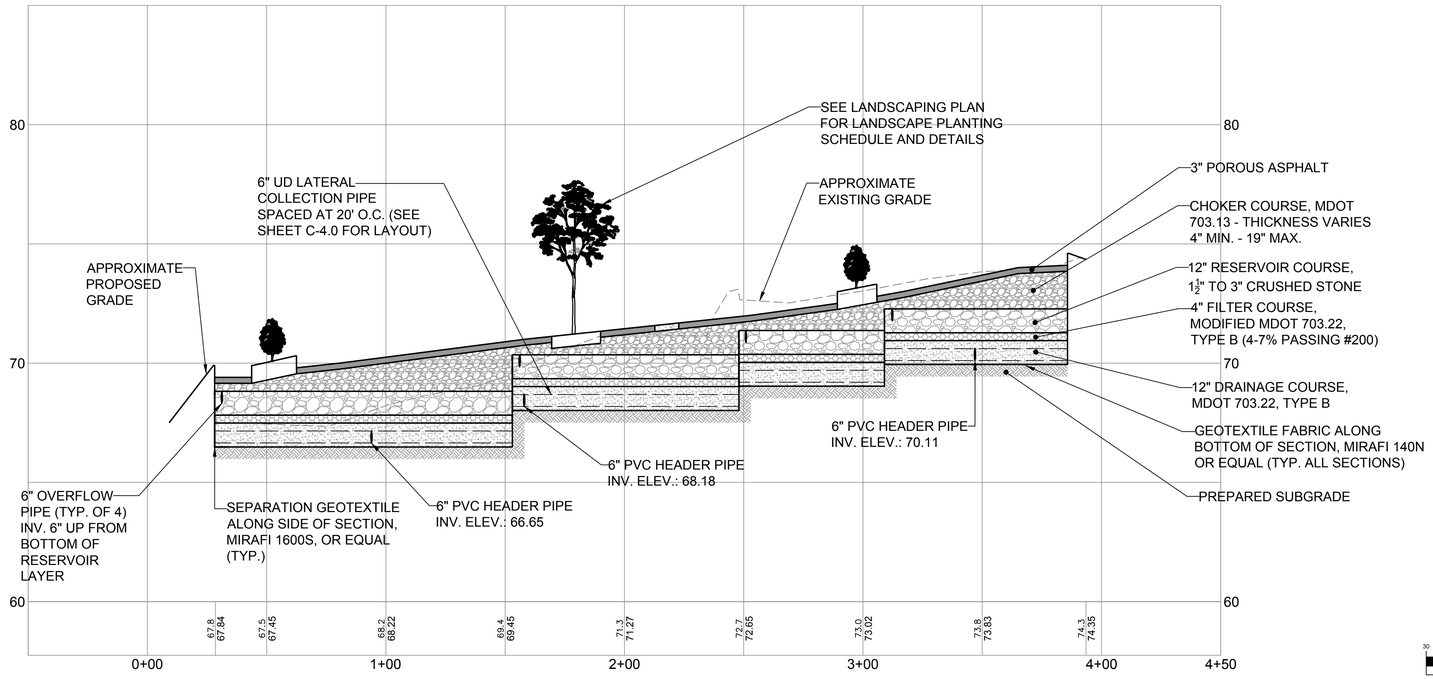
Subarea ID	New Development			Redevelopment			Treated New Impervious Area (sf)	Treated New Landscaped Area (sf)	Treated Redeveloped Impervious Area (sf)	Treated Redeveloped Landscaped Area (sf)
	Impervious Area (sf)	Landscaped Area (sf)	Total Developed Area (sf)	Impervious Area (sf)	Landscaped Area (sf)	Total Redeveloped Area (sf)				
S201	0	0	0	21,396	0	21,396	0	0	21,396	0
S202	0	0	0	1,320	1,105	2,425	0	0	1,320	1,105
S203	0	0	0	12,093	507	12,600	0	0	12,093	507
S204	0	0	0	1,993	807	2,800	0	0	1,993	807
S208	0	0	0	8,477	1,476	9,953	0	0	8,477	1,476
S205	478	0	478	5,999	4,692	10,691	0	0	0	0
S206A	20,887	4,263	25,150	0	0	0	20,887	4,263	0	0
S206B	16,595	2,382	18,977	5,529	749	6,278	16,595	2,382	5,529	749
S206C	0	0	0	4,184	517	4,701	0	0	4,184	517
S206D	0	0	0	2,419	409	2,828	0	0	2,419	409
S207	0	2,424	2,424	0	0	0	0	0	0	0
Total (sf)	**37,960**	**9,069**	**47,029**	**63,410**	**10,262**	**73,672**	**37,482**	**6,645**	**57,411**	**5,570**
Total (ac)	**0.87**	**0.21**	**1.08**	**1.46**	**0.24**	**1.69**	**0.86**	**0.15**	**1.32**	**0.13**

BMP Summary

Subarea ID	Treatment Method	Water Quality Volume Required (cf)	Water Quality Volume Provided (cf)	BMP Surface Area Required (sf)	BMP Surface Area Provided (sf)
S201	Existing Vegetated Underdrained Filter	3,903	4,801	2,342	3,670
S202					
S203					
S204					
S208					
S205	Untreated	N/A	N/A	N/A	N/A
S206A	Porous Pavement 1	1,883	4,177	N/A	20,887
S206B	Porous Pavement 2	1,948	4,087	N/A	20,435
S206C	Porous Pavement 3	366	1,030	N/A	5,149
S206D	Porous Pavement 4	215	295	N/A	1,473

Treatment Summary

	Required	Provided
Treated New Impervious (%)	95%	98.74%
Treated New Developed (%)	80%	93.83%
Treated Redev Impervious (%)	N/A	90.54%
Treated Redev Developed (%)	60%	85.49%



CROSS SECTION A-A (SEE C-4.1 FOR LOCATION)

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

Stantec

482 Payne Road Scarborough Court
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Permit-Seal

STATE OF MAINE
STEPHEN R. BUSBEY
07-09-18
LICENSED
PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

STORMWATER MANAGEMENT PLAN
SHEET 2 OF 2

Project No.	Scale
210801617	N.T.S.

Sheet

C-4.2

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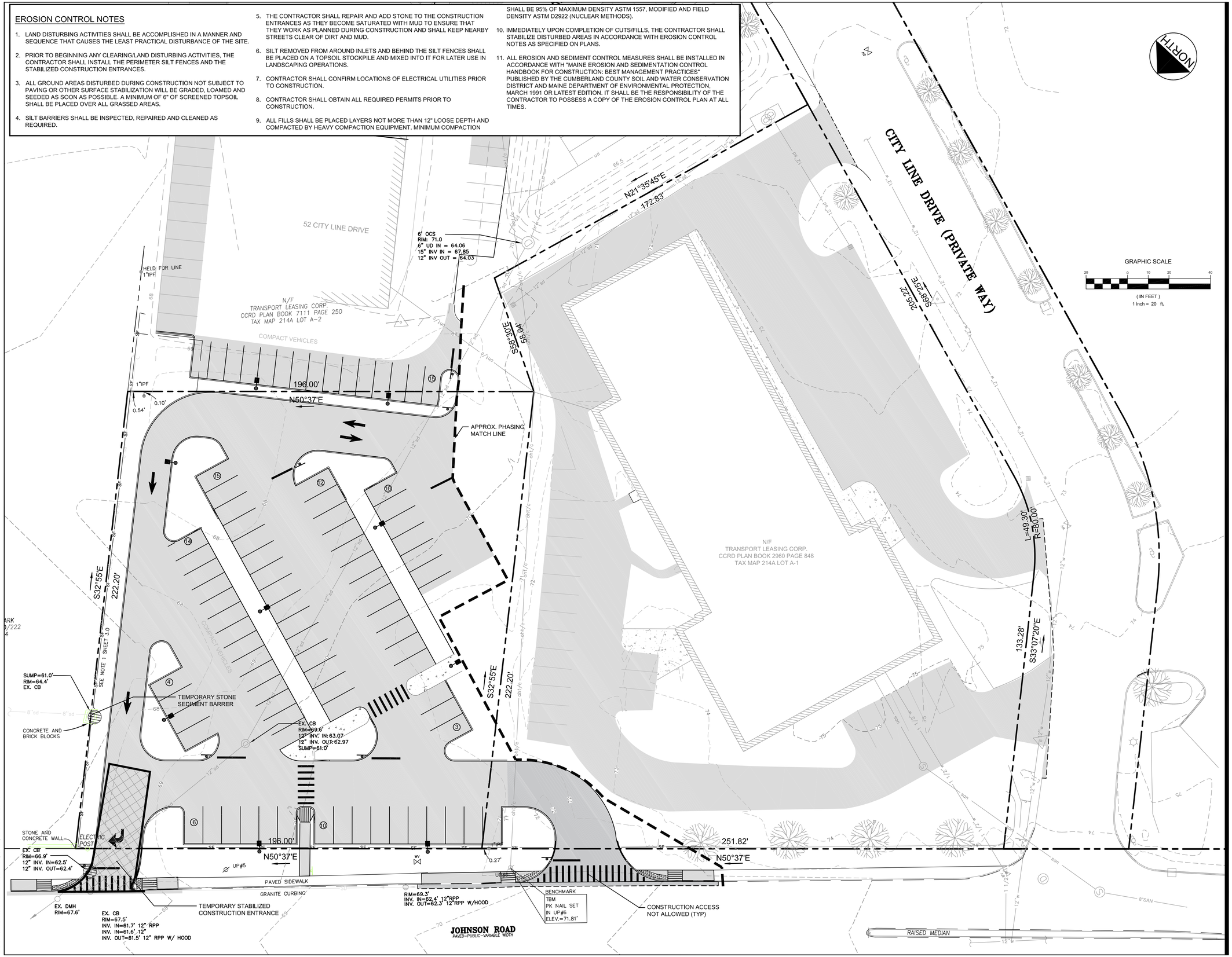
EROSION CONTROL NOTES

1. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
2. PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE STABILIZED CONSTRUCTION ENTRANCES.
3. ALL GROUND AREAS DISTURBED DURING CONSTRUCTION NOT SUBJECT TO PAVING OR OTHER SURFACE STABILIZATION WILL BE GRADED, LOAMED AND SEEDED AS SOON AS POSSIBLE. A MINIMUM OF 6" OF SCREENED TOPSOIL SHALL BE PLACED OVER ALL GRASSED AREAS.
4. SILT BARRIERS SHALL BE INSPECTED, REPAIRED AND CLEANED AS REQUIRED.
5. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCES AS THEY BECOME SATURATED WITH MUD TO ENSURE THAT THEY WORK AS PLANNED DURING CONSTRUCTION AND SHALL KEEP NEARBY STREETS CLEAR OF DIRT AND MUD.
6. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO IT FOR LATER USE IN LANDSCAPING OPERATIONS.
7. CONTRACTOR SHALL CONFIRM LOCATIONS OF ELECTRICAL UTILITIES PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
9. ALL FILLS SHALL BE PLACED 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).
10. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AS SPECIFIED ON PLANS.
11. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 1991 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.



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By	Appd.	YY.MM.DD	Revision
PBF	SRB	18.09.19	3 RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY
PBF	SRB	18.07.09	2 SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW
PBF	SRB	18.03.22	1 SUBMITTED FOR OWNER REVIEW

File Name:	PBF DWN.	SRB CHKD.	SRB DSGN.	18.05.22 DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
09-19-18
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

PHASE 1
EROSION CONTROL PLAN

Project No.	Scale
210801617	N.T.S.

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EROSION CONTROL NOTES

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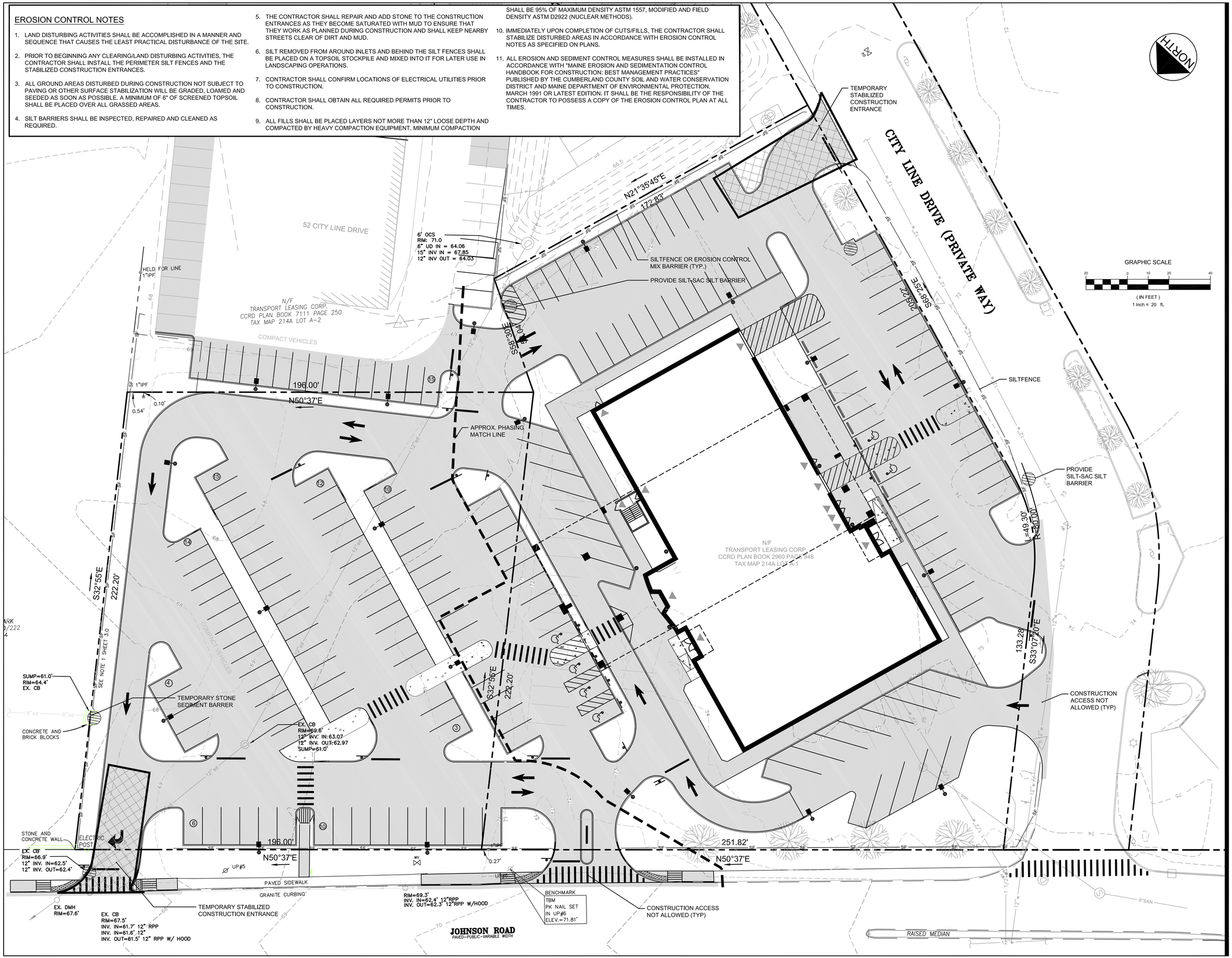

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No.	Revision	By	Appd.	YY.MM.DD
3	RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	19.09.19
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	19.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	19.03.22

File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.05.22 DATE

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STATE OF MAINE
STEPHEN R. BUSBY
08-19-19
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

PHASE 2
EROSION CONTROL PLAN

Project No. 210801617

Scale N.T.S.

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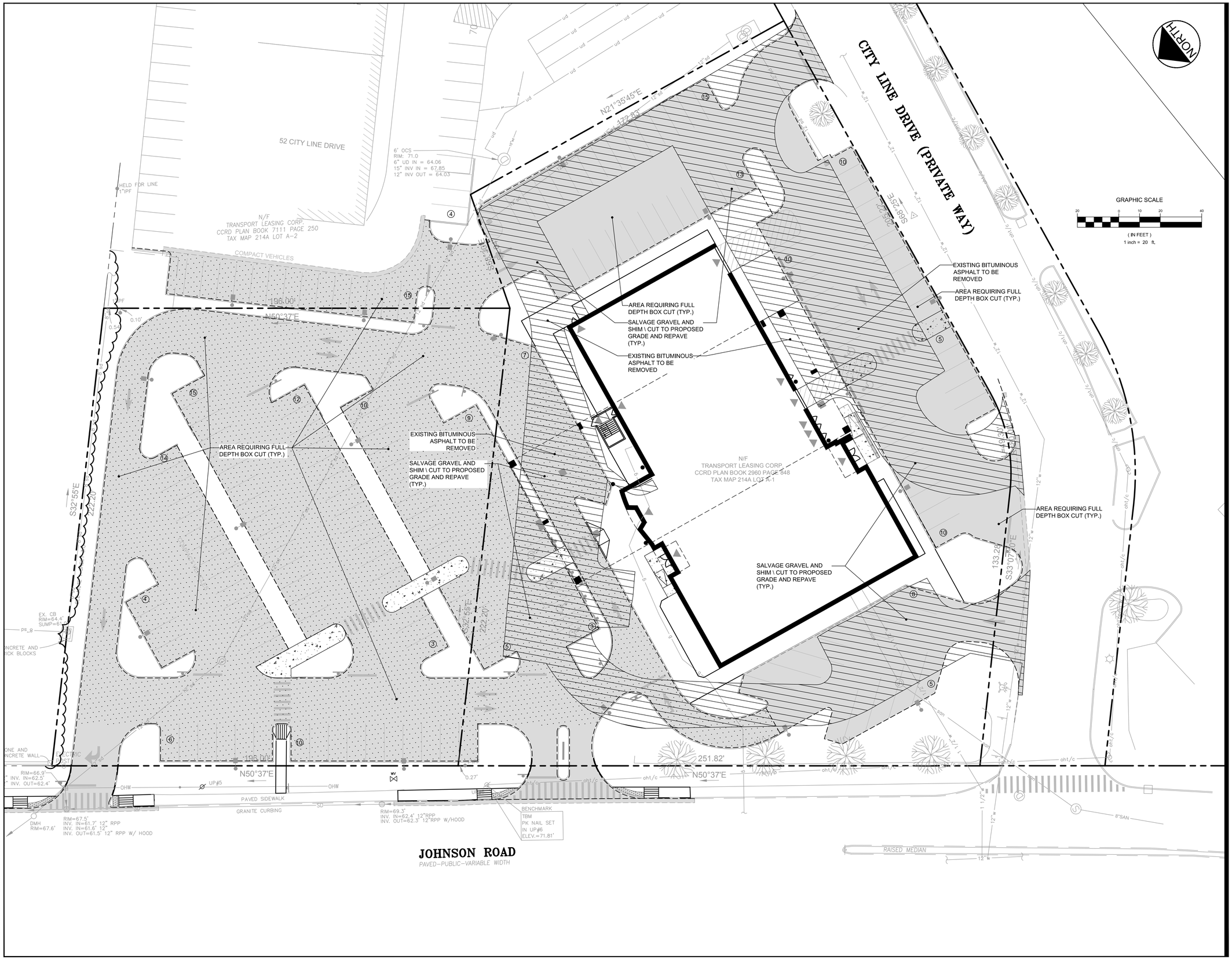

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No.	Revision	By	Appd.	YY.MM.DD
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.05.22

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STATE OF MAINE
STEPHEN R. BUSHEY
07-09-18
LICENSED
PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
FULL DEPTH BOX CUT ASPHALT PLAN

Project No.
210801617

Scale
1" = 20'

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1. PLANTING OF TREES AND SHRUBS SHALL NOT OCCUR UNTIL ALL GRADING AND PAVING IS COMPLETED IN THE AREA.

2. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH FOR THE SPECIES AND SHALL BE SOUND, HEALTHY AND FREE OF DISEASE AND INSECTS. THEY SHALL CONFORM TO THE SIZE SPECIFICATION INDICATED ON THE PLANT LIST AND SHALL CONFORM TO ANSI Z60.1 - NURSERY STOCK, LATEST REVISION.

3. ALL PLANTS SHALL HAVE ALL ROOTBALL WRAPPING MATERIALS (BURLAP, WIRE, STRING, ROPE, POTS, ETC.) REMOVED AT THE TIME OF PLANTING. REMOVE SOIL PLACED ABOVE ROOTS TO EXPOSE TRUNK FLARE AS NECESSARY TO DETERMINE SETTING LEVEL AND PIT DEPTH. CIRCLING ROOTS OR ROOTS THAT WOULD LATER GIRDLE THE PLANT SHALL BE STRAIGHTENED OR CUT OR THE ROOT BALL SHALL BE CUT UTILIZING THE "BUTTERFLY METHOD".

4. BACKFILL MIX FOR ALL PLANT MATERIAL, EXCEPT TREES, SHALL BE COMPOSED OF TWO PARTS EXISTING SOIL AMENDED WITH ONE PART COMPOST OR TOPSOIL, OR WITH ONE PART SANDY FILL IF HEAVY SOILS. TREE PITS SHALL BE BACKFILLED WITH EXISTING SOIL. PLANTING PITS SHALL BE EXCAVATED TO TWICE THE DIAMETER AND TO THE SAME DEPTH OF THE PLANT ROOT BALL. BACKFILL 1/2 OF DEPTH OF PIT AT A TIME AND COMPACT. REFER TO FERTILIZER RATES AND INSTALL SLOW RELEASE FERTILIZER AFTER FIRST BACKFILL LIFT.

5. ALL PLANTINGS SHALL HAVE SLOW RELEASE FERTILIZER TABLETS INSTALLED. TABLETS SHALL BE AGRIFORM 21-GRAM 20-10-5 PLANTING TABLETS OR AN APPROVED EQUAL. APPLICATION RATE: PERENNIALS - 1 TABLET/PLANT, WOODY SHRUBS TO 3'-0" - 2 TABLETS/PLANT, SHRUBS AND TREES 3'-0" TO 6'-0"-3 TABLETS/PLANT AND TREES 6'-0" AND ABOVE - 4 TABLETS/PLANT. AFTER PLANTS ARE INSTALLED, LIQUID FEED ALL PLANTS WITH ROOTS OR AN APPROVED EQUAL. MIX ACCORDING TO MANUFACTURERS INSTRUCTIONS. APPLICATION RATE: PERENNIALS - 2 QT/PLANT, WOODY SHRUBS TO 4'-0" - 1.5 GAL/PLANT, TREES AND SHRUBS 4'-0" TO 10'-0" 3.0 GAL/PLANT AND TREES 10' AND ABOVE - 4.0 GAL/PLANT.

6. ALL TREES REQUIRE A MINIMUM OF 2 STAKES EACH AND ALL SHALL BE GUYED OR STAKED. TREE STAKING MATERIAL SHALL BE REMOVED BY THE LANDSCAPE CONTRACTOR AFTER ONE GROWING SEASON.

7. ALL SHRUB PLANTINGS ARE IN MULCHED BEDS. ALL PLANTING BEDS SHALL BE FREE OF WEEDS OR GRASS PRIOR TO INSTALLATION OF MULCH. IF VEGETATION EXISTS, TREAT WITH HERBICIDE. MULCH SHALL BE MEDIUM SHREDDED BARK, 3" DEPTH. ALL PLANTINGS NOT IN BEDS OR ISLANDS SHALL HAVE MULCHED WATER RINGS ACCORDING TO THE DETAILS.

8. ALL PLANTS SHALL HAVE THEIR LOCATIONS STAKED AND THEN APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER PRIOR TO PLANT INSTALLATION. ALL PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE. TREE LOCATIONS SHALL BE ADJUSTED TO AVOID FUTURE CONFLICT WITH OVERHEAD UTILITY LINES OR OTHER OBSTRUCTIONS.

9. PLANT SPECIES SUBSTITUTIONS WILL NOT BE ALLOWED UNLESS FIRST APPROVED BY THE LANDSCAPE ARCHITECT, OWNER, AND CITY OF PORTLAND. ANY CHANGE TO PLANT SPECIES, DUE TO LACK OF AVAILABILITY DURING CONSTRUCTION, SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.

10. ALL DISTURBED AREAS NOT IDENTIFIED WITH OTHER SURFACE TREATMENTS SHALL BE GRASSED. THE GRASSED AREAS SHALL BE LOAMED, SEEDED AND MULCHED WITH SEED MIXES AS NOTED:

a. PRIOR TO SEEDING, APPLY FERTILIZER AND LIME IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS.
b. LAWN AREAS: 35% TALL FESCUE, 30% CREEPING RED FESCUE, 20% PERENNIAL RYEGRASS, 15% ANNUAL RYEGRASS
c. RATE: 5 LBS/1000 SF.
d. VEGETATED UNDERDRAINED SOIL FILTER :20 LBS / ACRE CREEPING RED FESCUE, 20 LBS / ACRE TALL FESCUE, 8 LBS / ACRE BIRDS FOOT TREFOIL.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAWN MAINTENANCE. MAINTENANCE SHALL COMMENCE AT THE TIME OF PLANTING AND CONTINUE UNTIL GRASS IS FULL AND ESTABLISHED AND ACCEPTED BY THE OWNER.

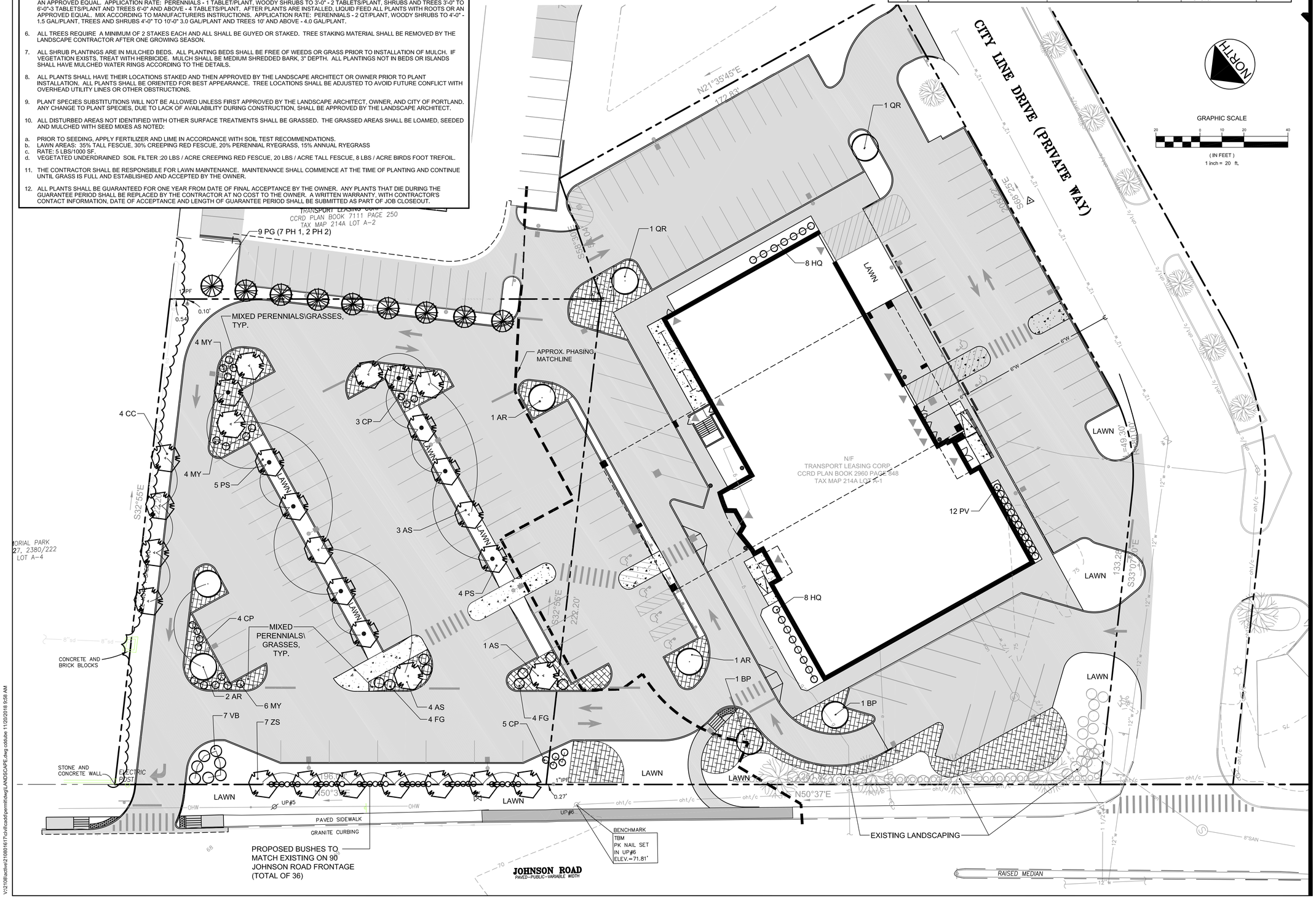
12. ALL PLANTS SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY THE OWNER. ANY PLANTS THAT DIE DURING THE GUARANTEE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. A WRITTEN WARRANTY, WITH CONTRACTOR'S CONTACT INFORMATION, DATE OF ACCEPTANCE AND LENGTH OF GUARANTEE PERIOD SHALL BE SUBMITTED AS PART OF JOB CLOSEOUT.

PLANT LIST - TREES

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
4	AR	*Acer rubrum x freemanii*	Freeman's Red Maple	2" CAL.	B&B	Y
8	AS	*Acer saccharum*	Sugar Maple	2" CAL.	B&B	Y
0	AC	*Amelanchier canadensis*	Serviceberry	8' - 10'	B&B, Multistem	Y
2	BP	*Betula papyrifera*	White Paper Birch	2" CAL.	B&B, Multistem	Y
4	CC	*Carpinus Caroliniana*	American Hornbeam	2" - 2 ½" CAL.	B&B	
9	PG	*Picea glauca*	White Spruce	4 @ 5' - 6' 5 @ 8' - 10'	B&B	Y
9	PS	*Prunus Sargentii*	Sargent Cherry	2" CAL.	B&B	Y
2	QR	*Quercus rubra*	Red Oak	2" CAL.	B&B	Y
7	ZS	*Zelkova Serrata 'Green Vase'*	Japanese Zelkova	2" - 2 ½" CAL.	B&B	

PLANT LIST - SHRUBS + PERENNIALS + GROUND COVERS

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
500		*Mixed perennials & grasses - TBD*		# 1	2' O.C.	Y
12	CP	*Comptonia peregrina*	Sweet Fern	#1	3' O.C.	Y
8	FG	*Fothergilla gardenii*	Dwarf Fothergilla	#7	CONT.	Y
16	HQ	*Hydrangea quercifolia*	"Ruby Slipper" Oakleaf hydrangea	#5	3' O.C.	
14	MY	*Myrica Pennsylvanica*	Bayberry	#3	3' O.C.	Y
12	PV	*Panicum virgatum*	"Cheyenne Sky" Switchgrass	#2	3' O.C.	Y
7	VB	*Viburnum × burkwoodii*	Burkwood viburnum	#3	3' O.C.	Y



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No.	Revision	By	Appd.	YY.MM.DD
8	REVISED PER CITY COMMENTS	CDD	SRB	18.11.19
7	REVISED PER CITY COMMENTS	CDD	SRB	18.11.14
6	REVISED PER CITY COMMENTS - LO.R. #7	CDD	SRB	18.11.13
5	REVISED PER CITY COMMENTS - LO.R. #4	CDD	SRB	18.10.25
4	ISSUED REVISED PLANS TO CITY	PBF	SRB	18.10.12
3	RELEASED TO SITE CONTRACTOR AND SUBMITTED TO CITY	PBF	SRB	18.09.19
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.05.22

File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.05.22 DATE

Permit-Seal

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
BUILDING PHASE
LANDSCAPE PLAN

Project No. 210801617

Scale 1" = 20'

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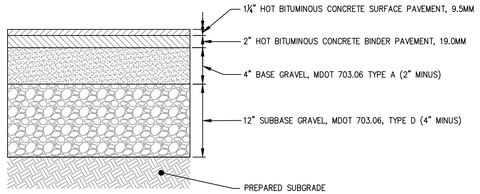


NOTES

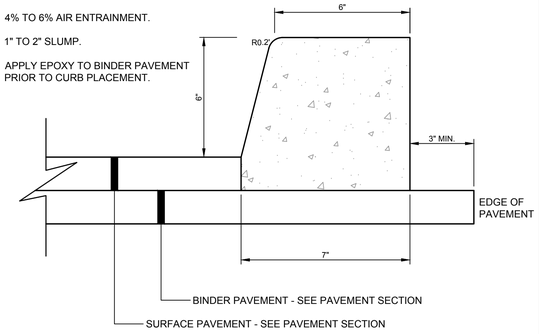
1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE MDOT SPECIFICATIONS.
3. USE SMOOTH BLADE BUCKET TO MINIMIZE DISTURBANCE AS SUBGRADE IS PREPARED.
4. GEOTEXTILE FABRIC MAY BE NECESSARY OVER SILTY CLAY OR YIELDING SUBGRADE. CONTRACTOR SHALL NOTIFY OWNER IF YIELDING SUBGRADE CONDITIONS ARE ENCOUNTERED IN ORDER TO DISCUSS AND DETERMINE A COURSE OF ACTION.

(A) STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT SECTION

N.T.S.

NOTES:

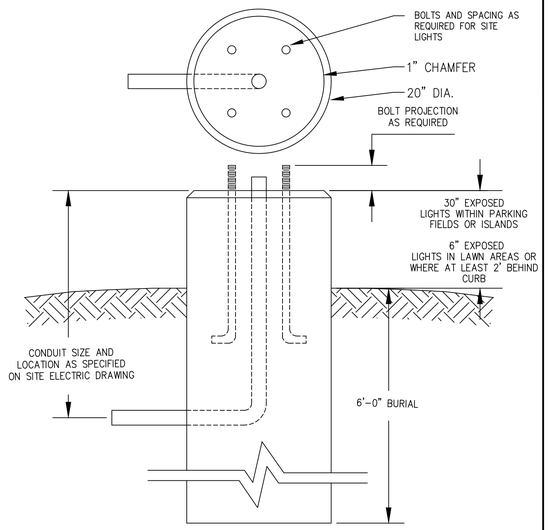
1. 4,000 PSI CONCRETE WITH FIBER REINFORCEMENT.
2. 4% TO 6% AIR ENTRAINMENT.
3. 1" TO 2" SLUMP.
4. APPLY EPOXY TO BINDER PAVEMENT PRIOR TO CURB PLACEMENT.



(B) EXTRUDED SLIPFORM VERTICAL CONCRETE CURB

N.T.S.

NOTE: ANCHOR BOLTS TO BE PROVIDED TO CONTRACTOR BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ALL LIGHT POLE FOUNDATIONS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR TRENCHING AND BACKFILLING ALL CONDUITS. THE OWNER WILL BE RESPONSIBLE FOR SETTING OF LIGHT POLES AND ALL WIRING AND LIGHTING ASSEMBLIES.



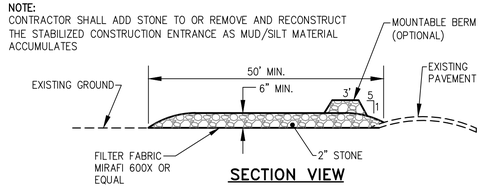
DESIGN NOTES:

1. CONCRETE 4,000 PSI AT 28 DAYS
2. REINFORCING IS AS SPECIFIED. (TYP. 4 – #4 VERTICALLY AND #3 STIRRUPS 12" O.C. HORIZONTALLY)
3. ANCHOR BOLTS AND GROUNDING AS SPECIFIED AND REQUIRED BY SUPPLIER.
4. EXPOSED PORTION OF CONCRETE FOUNDATION TO BE PAINTED WITH 2 COATS OF ACRYLIC PAINT. COLOR TO MATCH POLE COLOR.
5. FOR POLE HEIGHTS EQUAL TO OR LESS THAN 25' TALL.

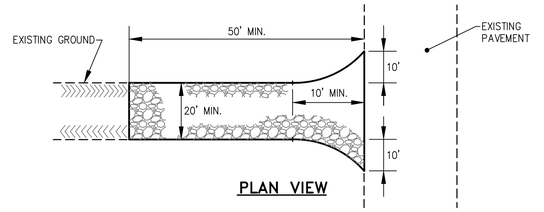
(D) 20" ROUND LIGHT POLE FOUNDATION

N.T.S.

NOTE:
CONTRACTOR SHALL ADD STONE TO OR REMOVE AND RECONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES



SECTION VIEW



PLAN VIEW

(J) STABILIZED CONSTRUCTION ENTRANCE DETAIL

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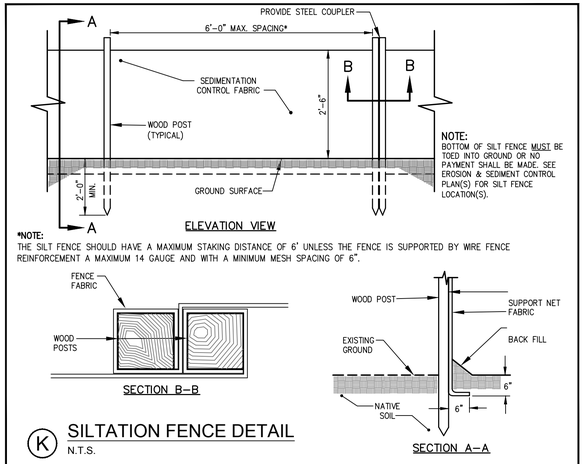


NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE. SEE EROSION & SEDIMENT CONTROL PLAN(S) FOR SILT FENCE LOCATION(S).

ELEVATION VIEW

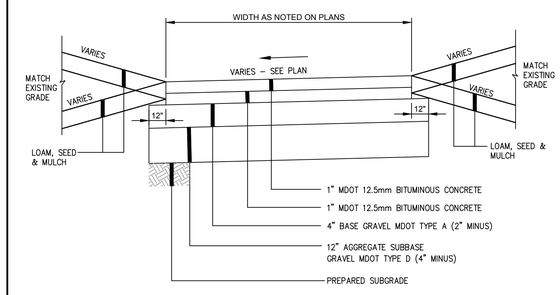
SECTION B–B

SECTION A–A

***NOTE:**
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6' UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".

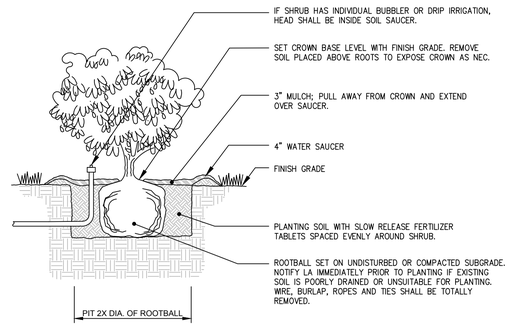
(K) SILTATION FENCE DETAIL

N.T.S.



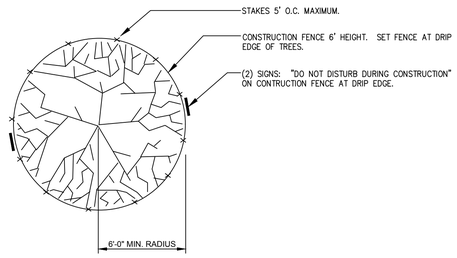
(C) BITUMINOUS SIDEWALK DETAIL-NO CURB

N.T.S.



(E) SHRUB INSTALLATION DETAIL

N.T.S.



(H) TREE PROTECTION DETAIL

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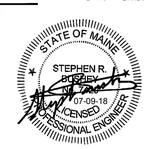
Revision	By	Appd.	YY.MM.DD
2 SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1 SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.05.22

Permit-Seal



Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

DETAILS

Project No. 210801617

Scale

Sheet C-8.0

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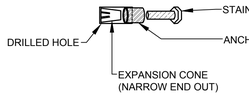
NOTES:

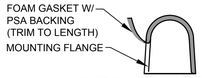
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY BEST MANAGEMENT PRODUCTS, INC. TOLL FREE: (800) 504-8008 OR (888) 354-7585 WEB SITE: www.bmpinc.com OR PRE-APPROVED EQUAL.
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, & AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE IN ACCORDANCE WITH THE FOLLOWING TABLE:

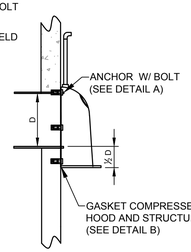
STRUCTURE OUTLET HOLE SIZE	SNOUT SIZE
11.9" O.D. OR LESS	12 F or R
12.0"-17.9" O.D.	18 F or R
18.0"-23.9" O.D.	24 F or R
24.0"-29.9" O.D.	30 F or R
30.0"-47.9" O.D.	48 F
48.0"-95.9" O.D.	96 F

5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT, WHICH INCLUDES:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS



DETAIL A

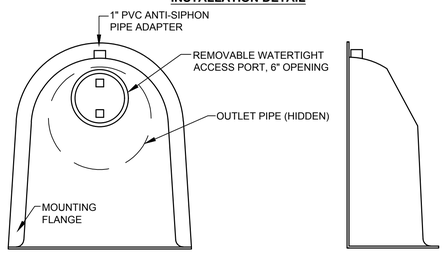




INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINUMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

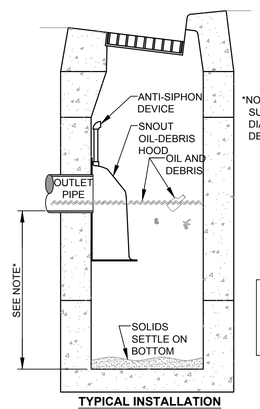
DETAIL B

INSTALLATION DETAIL



FRONT VIEW **SIDE VIEW**

CONFIGURATION DETAIL

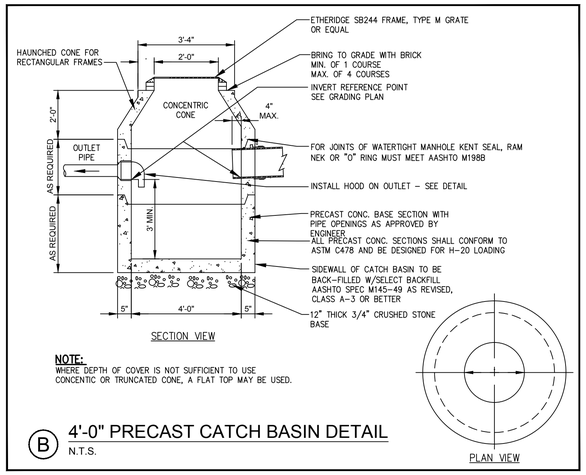


*NOTE:
SUMP DEPTH OF 36" MIN. FOR < OR = 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

SNOUTS INSTALLED ON STORM DRAIN PIPES GREATER THAN 18" DIAMETER ARE REQUIRED TO BE INSTALLED PRIOR TO INSTALLATION OF CATCH BASIN FLAT TOP.

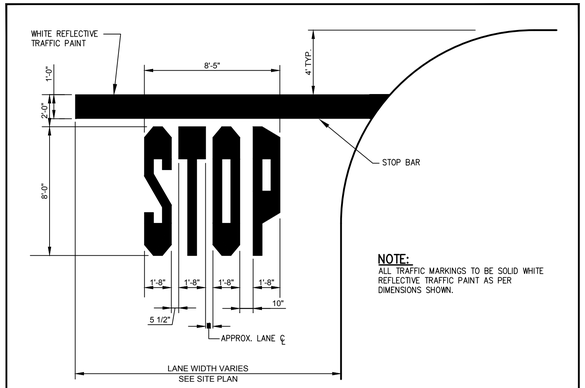
TYPICAL INSTALLATION

(A) SNOUT OIL-WATER-DEBRIS SEPARATOR DETAIL
N.T.S.



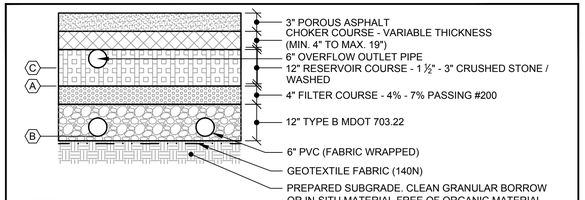
NOTE:
WHERE DEPTH OF COVER IS NOT SUFFICIENT TO USE CONCENTIC OR TRUNCATED CONE, A FLAT TOP MAY BE USED.

(B) 4'-0" PRECAST CATCH BASIN DETAIL
N.T.S.



NOTE:
ALL TRAFFIC MARKINGS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS SHOWN.

(E) TYPICAL PAVEMENT MARKINGS
N.T.S.

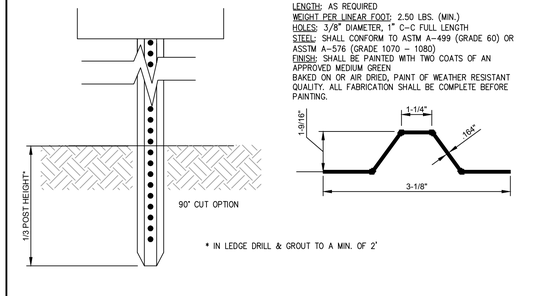


NOTES:

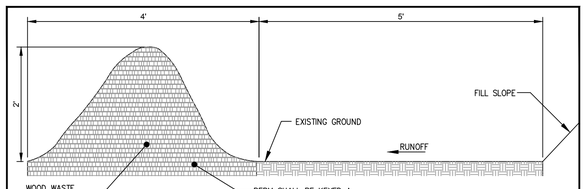
ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT.

POROUS PAVEMENT SECTION	AREA 1	AREA 2	AREA 3	AREA 4
A-TOP OF FILTER COURSE ELEV.	67.82	69.35	70.37	71.28
B - UD INV. ELEV.	66.65	68.18	69.20	70.11
C - OVERFLOW PIPE INV. ELEV.	68.32	69.85	70.87	71.78

(C) POROUS PAVEMENT SECTION
N.T.S.



(F) SIGN POST DETAIL
N.T.S.



NOTES:
1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:

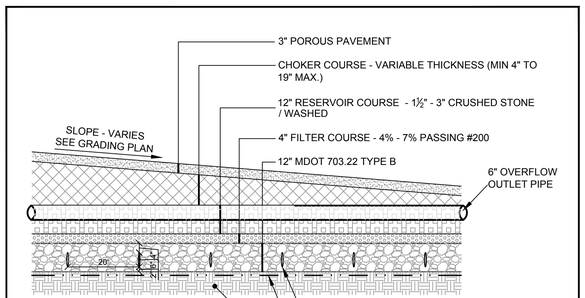
A. MOISTURE CONTENT – 30–60%
B. pH – 5.0–8.0
C. SCREEN SIZE – 100% LESS THAN 3", MAX. 70% LESS THAN 1"
D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION
F. NO STONES LARGER THAN 2" IN DIAMETER

2. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.

3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.

4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT THE NATIVE EARTH CAN BE SEEN BELOW.

(D) WOOD WASTE COMPOST / BARK FILTER BERM
N.T.S.



(G) POROUS PAVEMENT TYPICAL SECTION
N.T.S.

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

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1 SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.03.22

File Name:	PBF	SRB	SRB	18.05.22
	DWN.	CHKD.	DSGN.	DATE

Permit-Seal



Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY

90 JOHNSON ROAD, PORTLAND, MAINE

Title

DETAILS

Project No. 210801617

Scale

Sheet C-9.0

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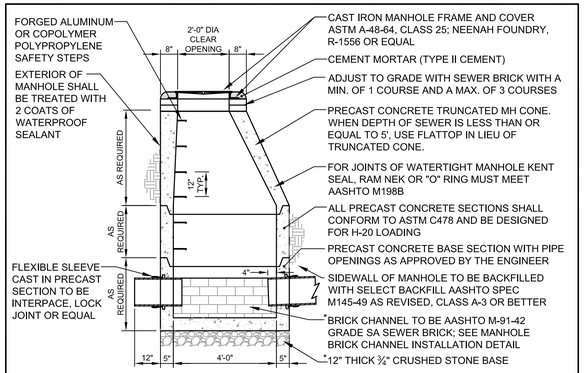
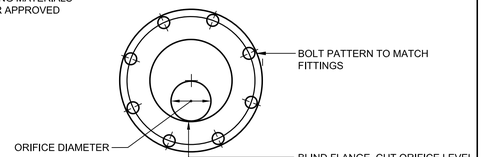


4'-0" DIA. PRECAST SEWER & STORM DRAIN MANHOLE DETAIL

A N.T.S.

*NOTE:
CHANNEL MAY ALSO BE A PREFABRICATED FIBERLINER 2000 CHANNEL AS FABRICATED BY GDT, INC. OF ESSEX, CT OR EQUAL

NOTE:
ALL PIPE FITTING MATERIALS TO BE PVC, OR APPROVED EQUAL



OUTLET ORIFICE DIMENSIONS	
POROUS PAVEMENT AREA ID	ORIFICE DIA. (IN.)
AREA 1	1"
AREA 2	1.25"
AREA 3	1.25"
AREA 4	1.25"

ORIFICE DETAIL

H N.T.S.

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File Name: | PBF DWN. | SRB CHKD. | SRB DSGN. | 18.05.22 DATE

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Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title
DETAILS

Project No. 210801617
Scale

Sheet C-8.2

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EROSION AND SEDIMENTATION CONTROL NOTES

THE PRIMARY EMPHASIS OF THE EROSION/SEDIMENTATION CONTROL PLAN TO BE IMPLEMENTED FOR THIS PROJECT ARE AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
- RAPID REVEGETATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
- RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- THE USE OF ONSITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/SILT FENCE, ETC.)

DESCRIPTION AND LOCATION OF LIMITS OF ALL PROPOSED EARTH MOVEMENTS
THE CONSTRUCTION OF THE DEVELOPMENT WILL REQUIRE THE FOLLOWING ON-SITE IMPROVEMENTS.

EARTHWORK ACTIVITY INCLUDING CUTS AND FILLS TO BRING THE PARKING, DRIVE AISLE AND WALKWAY AREAS TO SUBGRADE.

CONSTRUCTION OF PARKING LOTS, DRIVE AISLES, WALKWAYS AND INSTALLATION OF THE DRAINAGE SYSTEMS.

EROSION/SEDIMENTATION CONTROL DEVICES

THE FOLLOWING EROSION/SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. ALL EROSION/SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PRIOR TO ANY WORK BEING DONE SO THAT NO SEDIMENT ENTERS THE PROPOSED DRAINAGE SYSTEM. FOR FURTHER REFERENCE, SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES.

SILTATION FENCE OR A SEDIMENT BARRIER SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS REVEGETATED. THE SEDIMENT BARRIER SHALL BE INSTALLED PER THE DETAIL PROVIDED IN THE PLAN SET AND INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IMMEDIATELY BY THE CONTRACTOR IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE SEDIMENT BARRIER LINE. PROPER PLACEMENT OF STAKES AND FABRIC INTO THE GROUND IS CRITICAL TO SILT FENCE EFFECTIVENESS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE BARRIER, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. STRAW OR HAY MULCH INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED ON SLOPES OF LESS THAN 15 PERCENT OR 8 PERCENT DEPENDING ON THE TIME OF YEAR SHALL BE ANCHORED BY APPLYING WATER; MULCH PLACED ON SLOPES STEEPER THAN 15 PERCENT OR 8 PERCENT DEPENDING ON THE TIME OF YEAR SHALL BE COVERED WITH A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SLOPES STEEPER THAN 3:1 WHICH ARE TO BE REVEGETATED SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSIOR OR EQUAL WITHIN 5 DAYS OF FINAL GRADING OR PRIOR TO A PREDICTED RAINFALL EVENT. HAY MULCH SHALL BE AVAILABLE ON SITE AT ALL TIMES IN ORDER TO PROVIDE IMMEDIATE TEMPORARY STABILIZATION WHEN NECESSARY. A CONSTRUCTION ENTRANCE WILL BE CONSTRUCTED AT ALL ACCESS POINTS ONTO THE SITE TO PREVENT TRACKING OF SOIL ONTO ADJACENT PAVED AREAS. STONE SEDIMENT TRAPS OR A PREMANUFACTURED SILTSACK WILL BE INSTALLED AT CATCH BASIN INLETS TO PREVENT SILT FROM ENTERING ONSITE OR OFFSITE THE STORM DRAIN SYSTEM. LOAM AND SEED IS INTENDED TO SERVE AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DENUDED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP. APPLICATION RATES ARE PROVIDED AT THE END OF THIS SECTION FOR TEMPORARY AND PERMANENT SEEDING.

TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

THE FOLLOWING ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

A CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE PLACED AT THE SITE ACCESS ONTO ADJACENT PAVED AREAS.

SILTATION FENCE OR A MULCH FILTER BARRER SHALL BE INSTALLED ALONG THE DOWNGRADIENT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SILTATION FENCE WILL REMAIN IN PLACE AND PROPERLY MAINTAINED UNTIL THE SITE IS ACCEPTABLY REVEGETATED.

TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:

TEMPORARY STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE SWALES.

STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.

ALL DENUDED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE PARKING AND DRIVEWAY SUBBASE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOIL.

FOR WORK WHICH IS CONDUCTED BETWEEN OCTOBER 1 AND APRIL 15 OF ANY CALENDAR YEAR, ALL DENUDED AREAS WILL BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 5 DAYS FOR ALL AREAS OR IMMEDIATELY IN ADVANCE OF A PREDICTED RAINFALL EVENT.

ADJACENT PAVED AREAS SHALL BE SWEPT TO CONTROL MUD AND DUST AS NECESSARY. A STREET SWEEPER SHALL BE AVAILABLE ON IMMEDIATE NOTICE.

DURING GRUBBING OPERATIONS STONE CHECK DAMS OR HAY BALE BARRIERS WILL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.

SILT FENCING WITH A MAXIMUM STAKE SPACING OF 6 FEET SHOULD BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHOULD BE PROPERLY ANCHORED A MINIMUM OF 6" PER THE PLAN DETAIL AND BACKFILLED. ANY SILT FENCE IDENTIFIED BY THE OWNER OR REVIEWING AGENCIES AS NOT BEING PROPERLY INSTALLED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED IN ACCORDANCE WITH THE INSTALLATION DETAILS.

PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS WHERE THE FINISH GRADE SLOPE IS GREATER THAN 10 PERCENT. NATIVE TOPSOIL SHALL BE STOCKPILED TEMPORARILY STABILIZED WITH SEED AND MULCH AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

CATCH BASINS WILL BE PROVIDED WITH A 3'-0" DEEP SEDIMENT SUMP.

TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO INSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPTIMIZED. THE SEQUENCE APPLIES TO ALL PHASES OF CONSTRUCTION.

NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE BY LIMITING THE DISTURBED AREA.
INSTALL CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCE.
INSTALL PERIMETER SILTATION FENCE OR SEDIMENT BARRIER AS INDICATED ON THE PLANS.
COMPLETE DEMOLITION ACTIVITY
PERFORM EARTHWORK TO BRING PARKING AREAS TO SUBGRADE.
BEGIN INSTALLATION OF DRAINAGE APPURTENANCES AND PIPING.
COMMENCE ADDITIONAL EARTHWORK IN FILL AREAS AND FOR WATER QUALITY TREATMENT AREAS.
COMPLETE EARTHWORK, GRADING AND PIPE INSTALLATION FOR WATER QUALITY TREATMENT FILTERS UP TO BOTTOM OF SOIL FILTER MEDIA - SOIL FILTER MEDIA SHALL NOT BE INSTALLED UNTIL PARKING LOT PAVEING (BINDER) IS COMPLETED.
COMPLETE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR PARKING AREAS.
COMPLETE INSTALLATION OF STORM DRAINAGE APPURTENANCES.
COMMENCE INSTALLATION OF UTILITIES FROM THE STREET OR ON SITE AS NECESSARY.

INSTALL LIGHT POLE FOUNDATIONS.
COMPLETE ALL REMAINING EARTHWORK OPERATIONS INCLUDING FINE GRADING OF SLOPES.
INSTALL SUBBASE AND BASE GRAVELS.
INSTALL BASE COURSE PAVING.
INSTALL CURBING.
LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS, AND COMPLETE ALL LANDSCAPING.
INSTALL SOIL FILTER MEDIA IN WATER QUALITY TREATMENT AREAS.
INSTALL SURFACE COURSE PAVING. STRIPE PER PLANS.
REMOVE ACCUMULATED SEDIMENT FROM AHEAD OF ANY SEDIMENT BARRIERS AS NECESSARY.
ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
TOUCH UP LOAM AND SEED.

NOTE: ALL DENUDED AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP OR GRAVEL, SHALL BE REVEGETATED. DUE TO THE TIMING AND SIZE OF THE PROJECT, COMPLETION OF THE FACILITY WITHIN A SUMMER CONSTRUCTION SEASON IS EXPECTED. HOWEVER, IF CIRCUMSTANCES DICTATE FOR ALL WORK WHICH WILL BE CONDUCTED BETWEEN OCTOBER 1 AND APRIL 15 OF THE CALENDAR YEAR, THE CONTRACTOR SHALL SUBMIT A SCHEDULE WHICH WILL SATISFY THE FOLLOWING CRITERIA:

LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 7 DAYS. DURING THE CONSTRUCTION PROCESS, ALL DISTURBED AREAS SHALL BE COVERED WITH MULCH WITHIN 5 DAYS OF FINAL GRADING. ONCE FINAL GRADE HAS BEEN ESTABLISHED, THE CONTRACTOR MAY CHOOSE TO DORMANT SEED THE DISTURBED AREAS PRIOR TO PLACEMENT OF MULCH AND PLACEMENT OF 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#/1000 S.F.

ALL AREAS SEEDED DURING THE WINTER MONTHS 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.

THE AREA OF DENUDED NON-STABILIZED CONSTRUCTION SHALL BE LIMITED TO THE MINIMUM AREA PRACTICABLE. AN AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN PARKING AREAS, OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED, AND MULCHED. THE MULCH RATE SHALL BE TWICE THE RATE
SPECIFIED IN THE SEEDING PLAN. [FOR EXAMPLE, 115#/1,000 S.F. X 2 = 230#/S.F.]
THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS.

PERMANENT SEEDING PLAN
PROJECT - 90 JOHNSON ROAD - PARKING AREA
SITE LOCATION -
X PERMANENT SEEDING TEMPORARY SEEDING
1.AREA TO BE SEEDED: LESS THAN 1/2 ACRE
2.INSTRUCTIONS ON PREPARATION OF SOIL: PREPARE A GOOD SEED BED FOR PLANTING METHOD USED.
3.APPLY LIME AS FOLLOWS: 138#/M SQ. FT.
4.FERTILIZE WITH 18.4 POUNDS OF 10 - 20 - 20 N-P-K/M SQ. FT.
5.METHOD OF APPLYING LIME AND FERTILIZER: SPREAD AND WORK INTO THE SOIL BEFORE SEEDING.
6.SEED WITH THE FOLLOWING MIXTURE:
15% ANNUAL RYEGRASS
35% TALL FESCUE
30% CREEPING RED FESCUE
20% PERENNIAL RYEGRASS
WHEN USING SMALL GRAIN AS NURSE CROP SEED IT AT ONE-HALF THE NORMAL SEEDING RATE.
7.MULCHING INSTRUCTIONS: APPLY AT THE RATE OF 115 POUNDS PER M. SQ. FT.
AMOUNT UNIT #, TONS, ETC.
8.TOTAL LIME 138 #/1000 SQ. FT.
9.TOTAL FERTILIZER 18.4 #/1000 SQ. FT.
10.TOTAL SEED 5 LBS/1000 SQ. FT.
11.TOTAL MULCH 115 #/1000 SQ. FT.
12.TOTAL OTHER MATERIALS, SEEDS, ETC. N/A
13.REMARKS
SPRING SEEDING IS RECOMMENDED, HOWEVER, LATE SUMMER (PRIOR TO SEPTEMBER 1) SEEDING CAN BE MADE. PERMANENT SEEDING SHOULD BE MADE PRIOR TO AUGUST 5 OR AS A DORMANT SEEDING AFTER THE FIRST KILLING FROST AND BEFORE THE FIRST SNOWFALL. IF SEEDING CANNOT BE DONE WITHIN THESE SEEDING DATES, TEMPORARY SEEDING AND MULCHING SHALL BE USED TO PROTECT THE SITE. PERMANENT SEEDING SHALL BE DELAYED UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

FERTILIZER REQUIREMENTS SHALL BE SUBJECT TO ACTUAL TEST RESULTS OF THE TOPSOIL USED FOR THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TOPSOIL TEST RESULTS FOR PH AND RECOMMENDED FERTILIZER APPLICATION RATES TO THE OWNER.

TEMPORARY SEEDING PLAN
PROJECT - 90 JOHNSON ROAD - PARKING AREA
SITE LOCATION -
PERMANENT SEEDING X TEMPORARY SEEDING
1.AREA TO BE SEEDED: LESS THAN 1/2 ACRE
2.INSTRUCTIONS ON PREPARATION OF SOIL: PREPARE A GOOD SEED BED FOR PLANTING METHOD USED.
3.APPLY LIME AS FOLLOWS: 138#/M SQ. FT.
4.FERTILIZE WITH POUNDS OF N-P-K/AC. OR 18.4 POUNDS OF 10 - 20 - 20 N-P-K/M SQ. FT.
5.METHOD OF APPLYING LIME AND FERTILIZER: SPREAD AND WORK INTO THE SOIL BEFORE SEEDING.
6.SEED WITH THE FOLLOWING MIXTURE:
50% PERENNIAL RYEGRASS
50% WINTER RYE
WHEN USING SMALL GRAIN AS NURSE CROP SEED IT AT ONE-HALF THE NORMAL SEEDING RATE.
7.MULCHING INSTRUCTIONS: APPLY AT THE RATE OF 230 POUNDS PER M. SQ. FT.
AMOUNTUNIT #, TONS, ETC.
8.TOTAL LIME 138#/1000 SQ. FT.
9.TOTAL FERTILIZER 13.8#/1000 SQ. FT.
10.TOTAL SEED 3.5#/1000 SQ. FT.
11.TOTAL MULCH 230#/1000 SQ. FT.
12.TOTAL OTHER MATERIALS, SEEDS, ETC. N/A
13.REMARKS
RECOMMENDED SEEDING DATES AFTER AUGUST 15.
FOR AREAS WITH SLOPES >10%, FALL AND WINTER EROSION CONTROL AREAS, MULCH NETTING SHALL BE USED PER MANUFACTURER'S SPECIFICATIONS.

STANDARDS FOR STABILIZING SITES FOR THE WINTER

IN THE EVENT THAT WINTERTIME WORK IS WARRANTED OR NECESSARY, THE FOLLOWING STANDARDS SHALL APPLY:

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS: THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE CONTRACTOR FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

   I. INSTALL A SOD LINING IN THE DITCH. THE CONTRACTOR SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT 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.

   II. INSTALL A STONE LINING IN THE DITCH. THE CONTRACTOR SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE CONTRACTOR SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO AS TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES: THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 10% (10H: 1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

   I. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MESH. BY OCTOBER 1 THE CONTRACTOR SHALL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 45 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 15, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS STANDARD OR WITH STONE RIP RAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.

   II. STABILIZE THE SLOPE WITH SOD. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H: 1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

   III. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST. THE CONTRACTOR SHALL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE CONTRACTOR SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE CONTRACTOR SHALL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H: 1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

   IV. STABILIZE THE SLOPE WITH STONE RIP RAP. THE CONTRACTOR SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE CONTRACTOR SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOIL: BY SEPTEMBER 15, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

   I. STABILIZE THE SOIL WITH TEMPORARY VEGETATION. BY OCTOBER 1, THE CONTRACTOR SHALL 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 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE CONTRACTOR SHALL MONITOR THE GROWTH OF THE RYE OVER THE NEXT 45 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE CONTRACTOR SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.

   II. STABILIZE THE SOIL WITH SOD. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

   III. STABILIZE THE SOIL WITH MULCH. BY NOVEMBER 15, THE CONTRACTOR SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE CONTRACTOR SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR SHALL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

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	Revision	By	Appd.	YY.MM.DD
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.07.09
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.05.22

File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.05.22

Permit-Seal
STATE OF MAINE
STEPHEN R. BUSHEY
No. 7[illegible]
07-09-18
LICENSED PROFESSIONAL ENGINEER

Client/Project
TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY

90 JOHNSON ROAD, PORTLAND, MAINE

Title
EROSION AND SEDIMENT CONTROL NOTES

Project No. 210801617
Scale

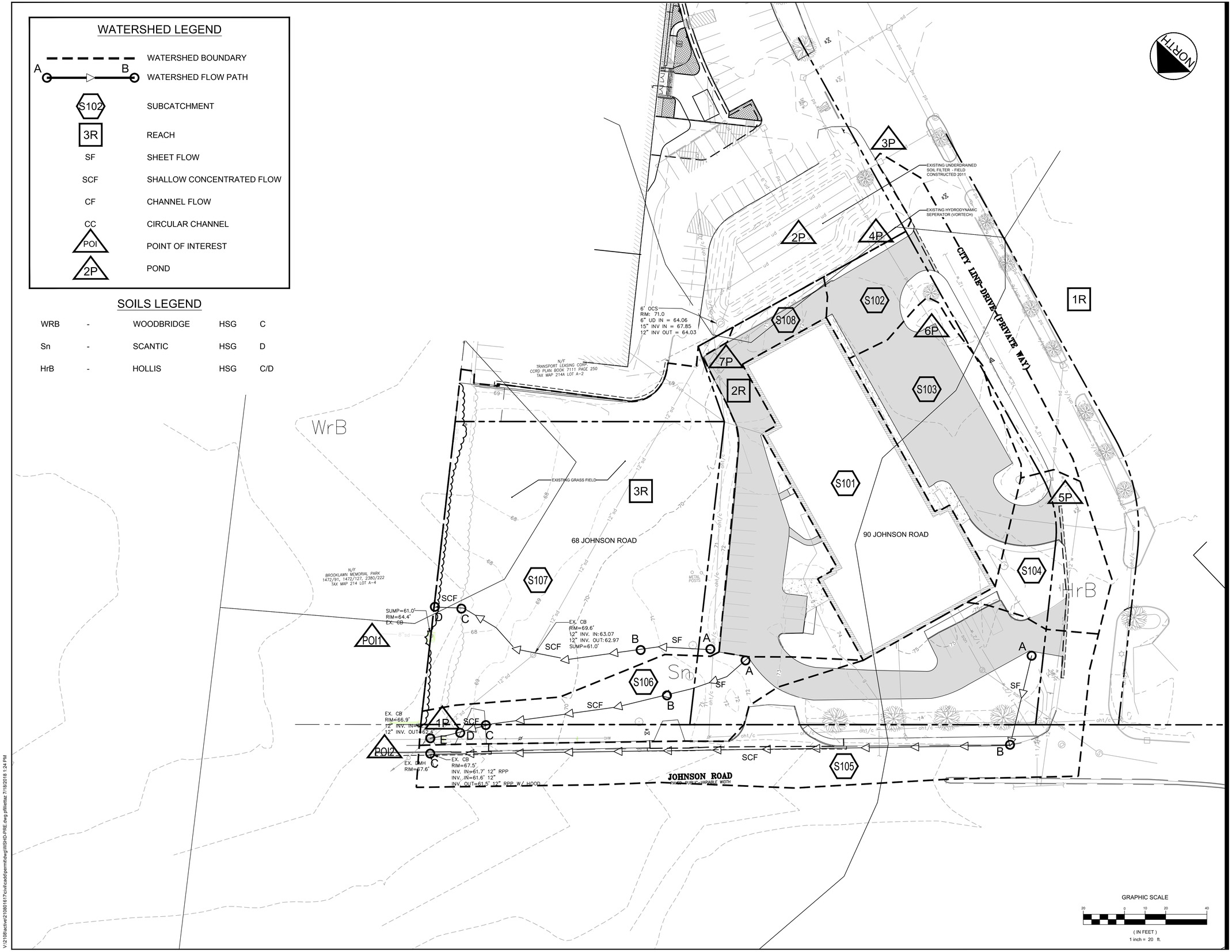
Sheet C-10.0

WATERSHED LEGEND

	WATERSHED BOUNDARY
A — B	WATERSHED FLOW PATH
S102	SUBCATCHMENT
3R	REACH
SF	SHEET FLOW
SCF	SHALLOW CONCENTRATED FLOW
CF	CHANNEL FLOW
CC	CIRCULAR CHANNEL
POI	POINT OF INTEREST
2P	POND

SOILS LEGEND

WRB	-	WOODBRIDGE	HSG	C
Sn	-	SCANTIC	HSG	D
HrB	-	HOLLIS	HSG	C/D



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No.	Revision	By	Appd.	YY.MM.DD
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.07.09
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.03.22

File Name:	DWN.	CHKD.	DSGN.	DATE
	PBF	SRB	SRB	18.03.22

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STATE OF MAINE
STEPHEN R. BUSHEY
07-09-18
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD, PORTLAND, MAINE

Title

PREDEVELOPMENT WATERSHED PLAN

Project No.	Scale
210801617	N.T.S.

Sheet

C-11.0

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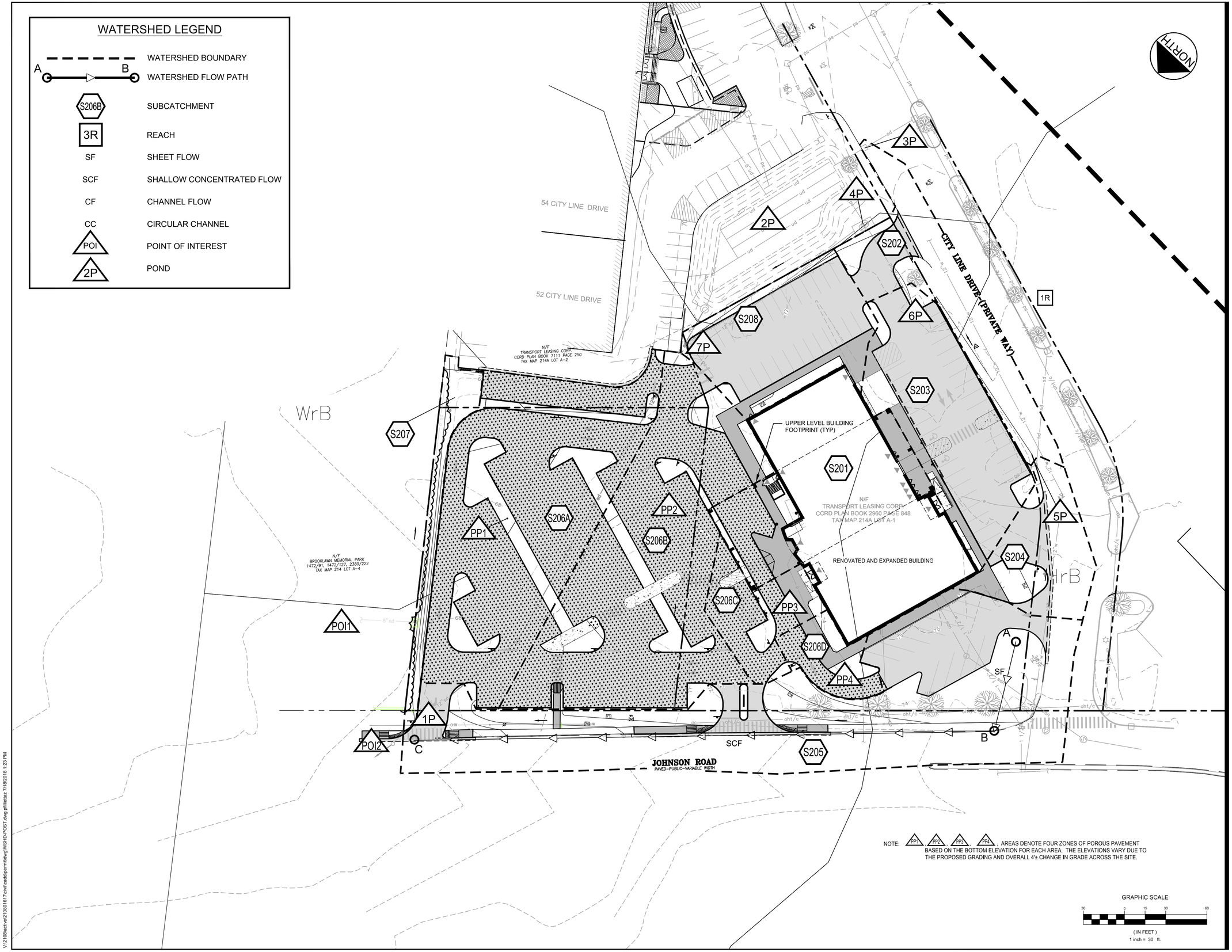
WATERSHED LEGEND

- WATERSHED BOUNDARY
- A — B: WATERSHED FLOW PATH
- S206B: SUBCATCHMENT
- 3R: REACH
- SF: SHEET FLOW
- SCF: SHALLOW CONCENTRATED FLOW
- CF: CHANNEL FLOW
- CC: CIRCULAR CHANNEL
- POI: POINT OF INTEREST
- 2P: POND



NOTE: PP1 PP2 PP3 PP4 AREAS DENOTE FOUR ZONES OF POROUS PAVEMENT BASED ON THE BOTTOM ELEVATION FOR EACH AREA. THE ELEVATIONS VARY DUE TO THE PROPOSED GRADING AND OVERALL 4'± CHANGE IN GRADE ACROSS THE SITE.

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

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No.	Revision	By	Appd.	YY.MM.DD
1	SUBMITTED FOR OWNER REVIEW	PBF	SRB	18.07.09
2	SUBMITTED TO CITY FOR LEVEL III SITE PLAN REVIEW	PBF	SRB	18.53.22

File Name:	PBF DWN.	SRB CHKD.	SRB DSGN.	18.05.22 DATE

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STATE OF MAINE
STEPHEN R. BUSBY
07-09-18
LICENSED PROFESSIONAL ENGINEER

Client/Project

TRANSPORT LEASING CORP.
ANDOVER, MA

JOHNSON ROAD
PROPERTY

90 JOHNSON ROAD, PORTLAND, MAINE

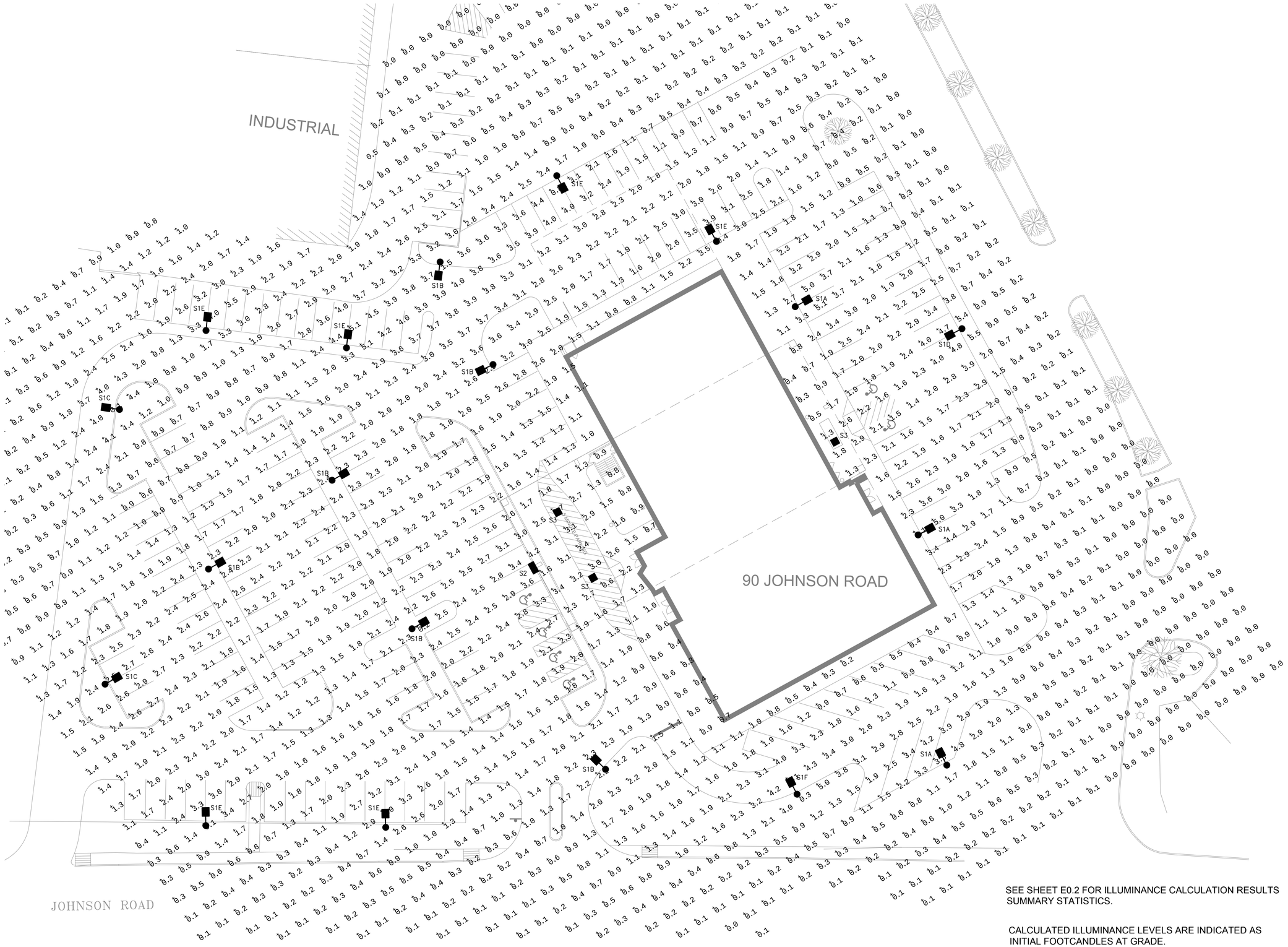
Title

POST DEVELOPMENT WATERSHED PLAN

Project No.	Scale
210801617	1" = 30'

Sheet

C-12.0



SEE SHEET E0.2 FOR ILLUMINANCE CALCULATION RESULTS SUMMARY STATISTICS.

CALCULATED ILLUMINANCE LEVELS ARE INDICATED AS INITIAL FOOTCANDLES AT GRADE.

SCALE: 1" = 20'-0"

SITE LIGHTING ILLUMINANCE CALCULATION PLAN | 1

STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
LICENSED PROFESSIONAL ENGINEER
Lawrence E. Bartlett
7/2/18

project no. 18-0018
revisions:

project
JOHNSON ROAD PROPERTY
90 JOHNSON ROAD PORTLAND, MAINE

drawing title
SITE LIGHTING PLAN

date drawn:	06/22/18
date issued:	07/02/18
drawn by:	LEB
scale:	AS NOTED

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
5 PALMER STREET, BATH, ME 04530
TEL (207) 443-5447

E-0.1
sheet number

RECOMMENDED ILLUMINANCE ACCORDING TO THE IESNA□

MINIMUM: 0.5 FC (or greater)

UNIFORMITY RATIO: 4.0-TO-1 (or lesser)

UNIFORMITY RATIO: 15.0-TO-1 (or lesser)

□ RECOMMENDED ILLUMINANCE LEVELS ARE PUBLISHED BY THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA IN RP-20-14 LIGHTING FOR PARKING FACILITIES.

PARKING LOT 1 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	2.2 FC
MAXIMUM:	5.1 FC
MINIMUM:	0.6 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	3.7-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	8.5-TO-1

PARKING LOT 2 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	2.1 FC
MAXIMUM:	4.8 FC
MINIMUM:	0.5 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	4.2-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	9.6-TO-1

PARKING LOT 7 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	1.8 FC
MAXIMUM:	2.5 FC
MINIMUM:	0.7 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	2.5-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	3.6-TO-1

PARKING LOT 3 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	2.2 FC
MAXIMUM:	3.6 FC
MINIMUM:	1.5 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	1.5-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	2.4-TO-1

PARKING LOT 8 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	2.2 FC
MAXIMUM:	4.0 FC
MINIMUM:	1.3 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	1.7-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	3.1-TO-1

PARKING LOT 4 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	1.8 FC
MAXIMUM:	2.6 FC
MINIMUM:	1.2 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	1.4-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	2.2-TO-1

PARKING LOT 9 LIGHTING STATISTICS:

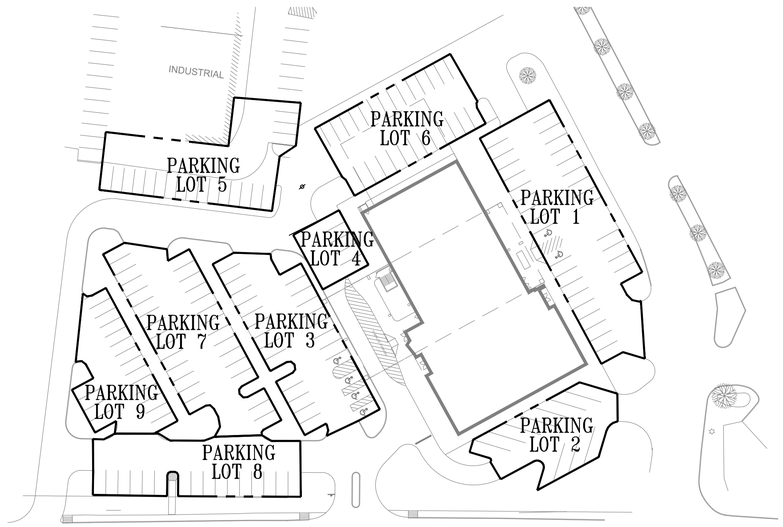
	AS DESIGNED
AVERAGE:	2.0 FC
MAXIMUM:	2.9 FC
MINIMUM:	0.6 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	3.4-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	4.8-TO-1

PARKING LOT 5 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	2.4 FC
MAXIMUM:	5.1 FC
MINIMUM:	0.7 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	3.4-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	7.3-TO-1

PARKING LOT 6 LIGHTING STATISTICS:

	AS DESIGNED
AVERAGE:	2.3 FC
MAXIMUM:	4.4 FC
MINIMUM:	0.6 FC
AVERAGE-TO-MINIMUM UNIFORMITY RATIO:	3.8-TO-1
MAXIMUM-TO-MINIMUM UNIFORMITY RATIO:	7.3-TO-1



TYPE S1A
MANUFACTURER: AMERICAN ELECTRIC LIGHTING
ATB2-40BLED70-MVOLT-R3-BK (LUMINAIRE)
MANUFACTURER: VALMONT # R-170830504T5-P2-DBL (LIGHTING POLE)
MANUFACTURER: VALMONT # 1HT90 (POLE BRACKET ARM)
MANUFACTURER: VALMONT # CL14AC-DBL (POLE BASE COVER)
DESCRIPTION: 18-FOOT TALL TAPERED ALUMINUM POLE WITH CONCRETE FOUNDATION BASE WITH 30-INCHES EXPOSED ABOVE GRADE. LUMINAIRE TO UTILI□E 4000K LED LAMPS WITH IES TYPE III OPTICAL DISTRIBUTION.

TYPE S1B
DESCRIPTION: SIMILAR TO TYPE S1A EXCEPT WITH 20-FOOT TALL POLE WITH CONCRETE FOUNDATION WITH 6-INCHES EXPOSED ABOVE GRADE. LUMINAIRE TO HAVE IES TYPE V OPTICAL DISTRIBUTION.

TYPE S1C
DESCRIPTION: SIMILAR TO TYPE S1A EXCEPT LUMINAIRE TO HAVE IES TYPE V OPTICAL DISTRIBUTION.

TYPE S1D
DESCRIPTION: SIMILAR TO TYPE S1A EXCEPT LUMINAIRE TO HAVE IES TYPE II OPTICAL DISTRIBUTION.

TYPE S1E
DESCRIPTION: SIMILAR TO TYPE S1A EXCEPT LUMINAIRE TO HAVE IES TYPE IV OPTICAL DISTRIBUTION.

TYPE S1F
DESCRIPTION: SIMILAR TO TYPE S1A EXCEPT WITH 20-FOOT TALL POLE WITH CONCRETE FOUNDATION WITH 6-INCHES EXPOSED ABOVE GRADE. LUMINAIRE TO HAVE IES TYPE II OPTICAL DISTRIBUTION.

TYPE S2
MANUFACTURER: HOLOPHANE LIGHTING
HLWPC2-P40-40K-12-T3M-BKSDP-PE (LUMINAIRE)
DESCRIPTION: WALL MOUNTED LUMINAIRE INSTALLED 20-FEET ABOVE GRADE. LUMINAIRE TO UTILI□E 4000K LED LAMPS WITH IES TYPE III OPTICAL DISTRIBUTION.

TYPE S3
MANUFACTURER: HOLOPHANE LIGHTING
PPSQL2-P10-40K-12-FC-T5M-BKSPD-SPD (LUMINAIRE)
DESCRIPTION: SURFACE CEILING MOUNTED LUMINAIRE INSTALLED UNDER ENTRANCE CANOPY. LUMINAIRE TO UTILI□E WITH 4000K LED LAMPS WITH IES TYPE V OPTICAL DISTRIBUTION.

STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
LICENSED PROFESSIONAL ENGINEER
Lawrence E. Bartlett
7/2/18

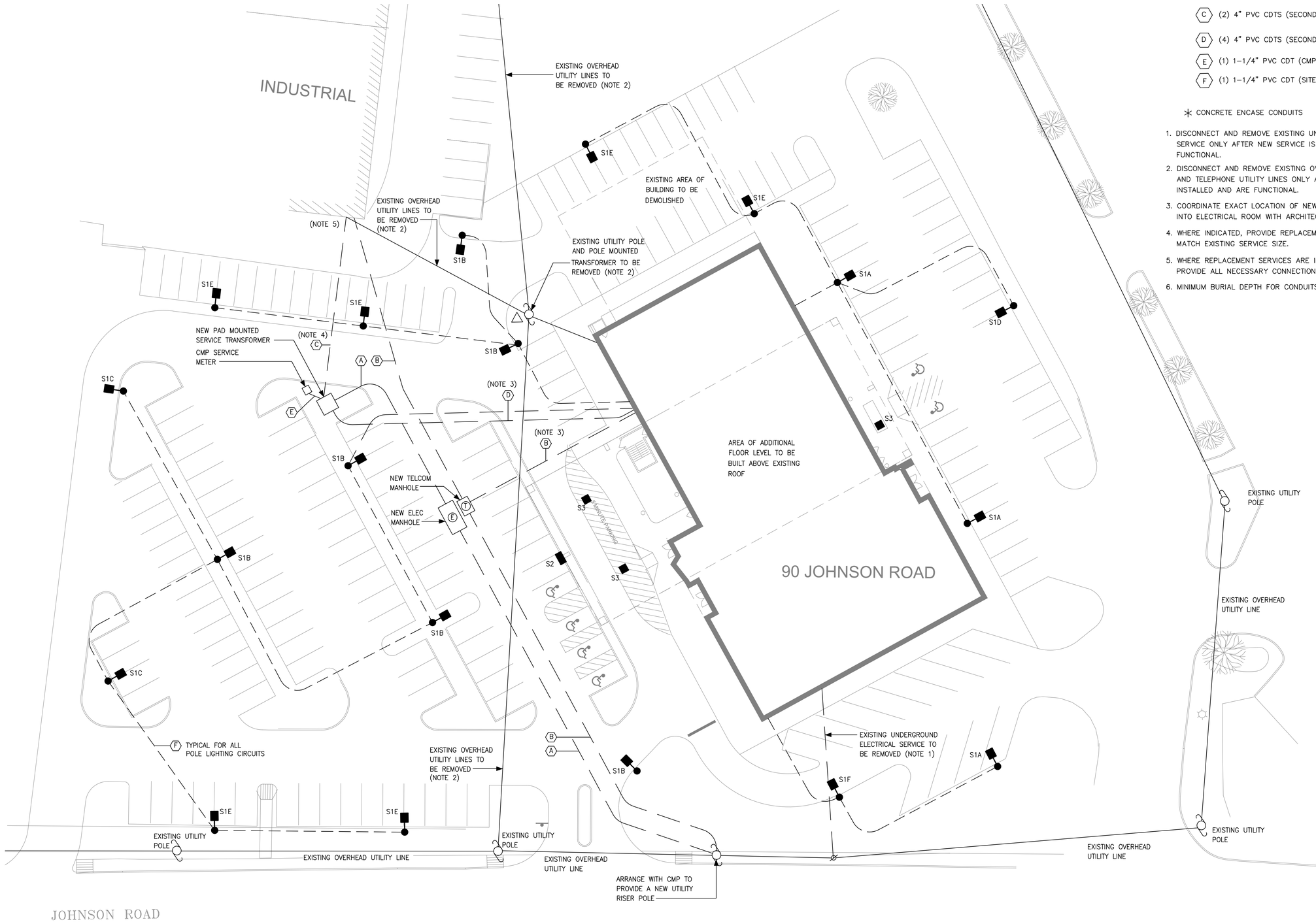
project no. 18-0018
revisions:

JOHNSON ROAD PROPERTY
90 JOHNSON ROAD PORTLAND, MAINE
project
SITE LIGHTING CALCULATION RESULTS
drawing title

date drawn: 06/22/18
date issued: 07/02/18
drawn by: LEB
scale: AS NOTED

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
5 PALMER STREET, BATH, ME 04530
TEL (207) 443-5447

SEE SHEET E1.2 FOR CONTINUATION



UNDERGROUND CONDUIT SCHEDULE

- ✳ (A) (2) 5" PVC CDTS (CMP PRMARY)
- (B) (2) 4" PVC CDTS (TELEPHONE)
- (C) (2) 4" PVC CDTS (SECONDARY SERVICE)
- (D) (4) 4" PVC CDTS (SECONDARY SERVICE)
- (E) (1) 1–1/4" PVC CDT (CMP METER)
- (F) (1) 1–1/4" PVC CDT (SITE LIGHTING)

✳ CONCRETE ENCASE CONDUITS

1. DISCONNECT AND REMOVE EXISTING UNDERGROUND ELECTRICAL SERVICE ONLY AFTER NEW SERVICE IS INSTALLED AND IS FUNCTIONAL.
2. DISCONNECT AND REMOVE EXISTING OVERHEAD ELECTRICAL AND TELEPHONE UTILITY LINES ONLY AFTER NEW SERVICES ARE INSTALLED AND ARE FUNCTIONAL.
3. COORDINATE EXACT LOCATION OF NEW SERVICE ENTRANCE CONDUITS INTO ELECTRICAL ROOM WITH ARCHITECTURAL FLOOR PLANS.
4. WHERE INDICATED, PROVIDE REPLACEMENT ELECTRICAL SERVICE TO MATCH EXISTING SERVICE SIZE.
5. WHERE REPLACEMENT SERVICES ARE INDICATED AT EXISTING BUILDINGS, PROVIDE ALL NECESSARY CONNECTIONS TO EXISTING FACILITIES.
6. MINIMUM BURIAL DEPTH FOR CONDUITS SHALL BE 36–INCHES.

STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
LICENSED PROFESSIONAL ENGINEER
Lawrence E. Bartlett
7/2/18

project no. 18-0018
revisions:

project
JOHNSON ROAD PROPERTY
90 JOHNSON ROAD PORTLAND, MAINE
drawing title
SITE LIGHTING CALCULATION RESULTS

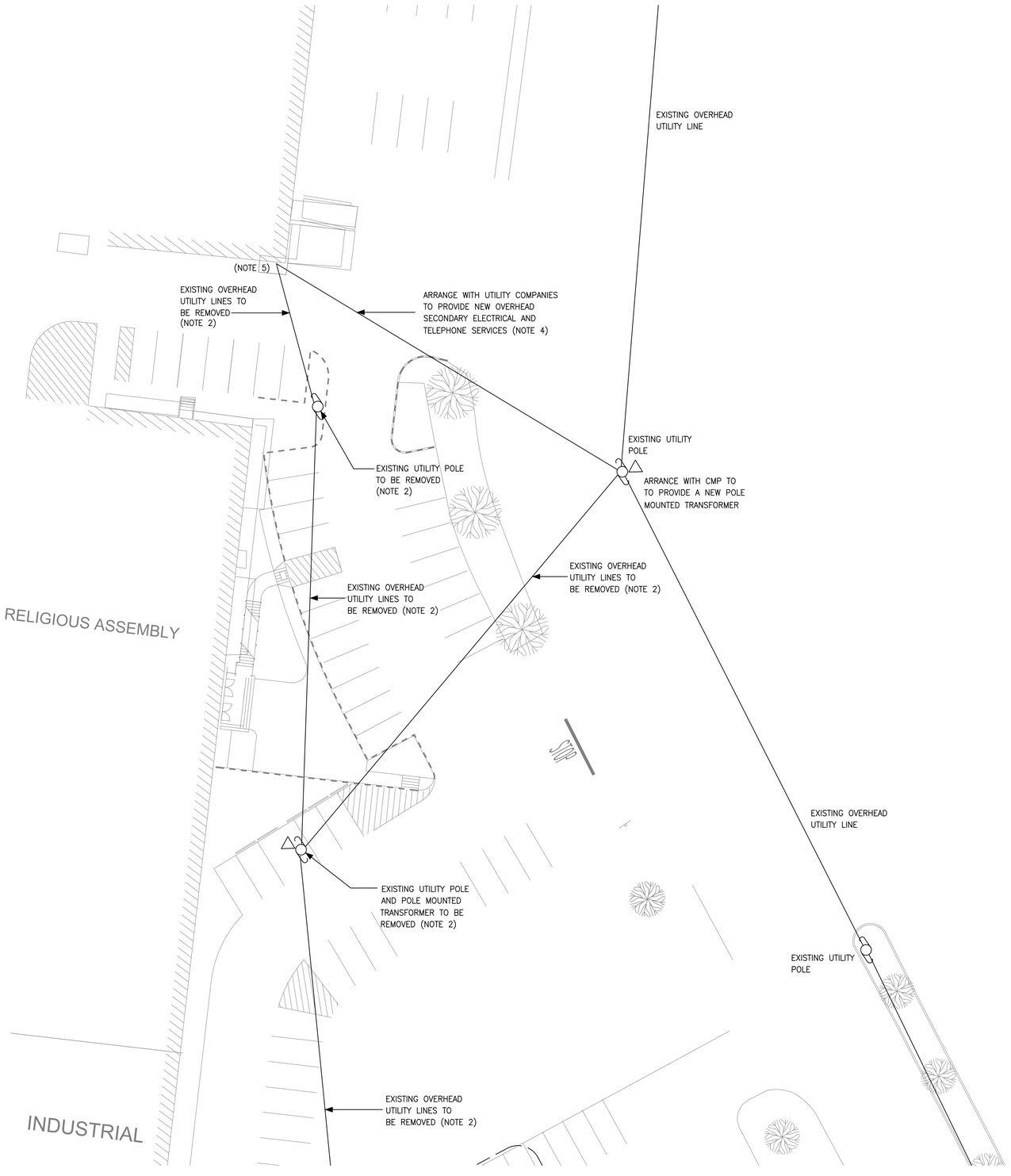
date drawn: 06/22/18
date issued: 07/02/18
drawn by: LEB
scale: AS NOTED

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
5 PALMER STREET, BATH, ME 04530
TEL (207) 443-5447

SCALE: 1" = 20'–0"

ELECTRICAL SITE PLAN | 1

E-1.1
sheet number



SEE SHEET E1.1 FOR CONTINUATION

SCALE: 1" = 20'-0"

ELECTRICAL SITE PLAN | 1

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7/2/18

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SITE LIGHTING CALCULATION RESULTS

date drawn: 06/22/18
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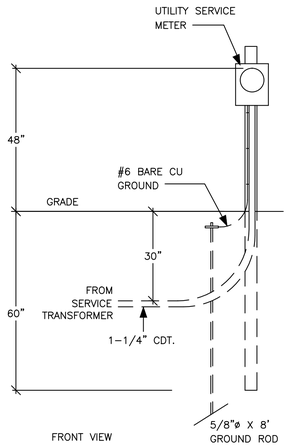
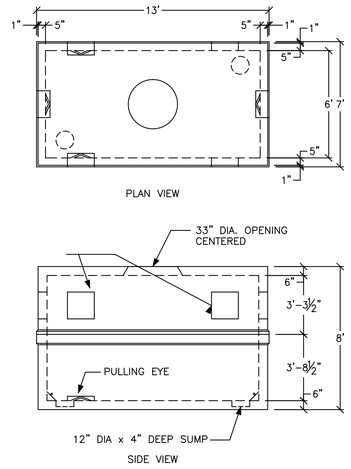
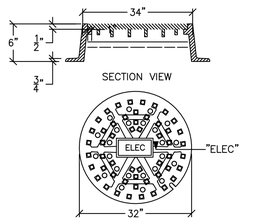


FRONT VIEW

NOT TO SCALE

ELECTRICAL SERVICE METER DETAIL | 4





ELECTRICAL MANHOLE DETAIL NOTES:
1. VAULT SHALL BE DESIGNED TO WITHSTAND LOADING WITH 6' OF OVERBURDEN. THE DESIGN SHALL ALSO COMPLY WITH THE STRENGTH REQUIREMENTS OF NATIONAL ELECTRICAL SAFETY CODE SECTION 323A. PROVIDE SHOP DRAWINGS STAMPED BY A STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER UPON REQUEST.
2. JOINTS SEALED WITH ASPHALT.
3. MOUNTINGS FOR CABLE RACKS, ETC. CAST IN WALL BY FURTHER PLANS OR FIELD LOCATED.
4. MANHOLE SHALL BE SET ON A SUITABLE GRAVEL BASE.
5. CABLES ARE TO BE RACKED ALONG ONE WALL ONLY.

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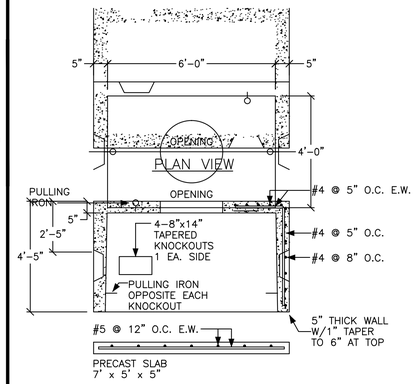
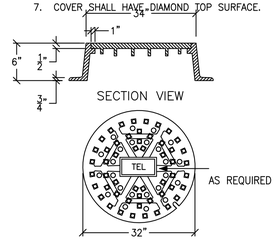
ELECTRICAL MANHOLE DETAIL | 3



SECTION VIEW

TELCOM MANHOLE DETAIL NOTES:
1. CONCRETE: 4,000 PSI @ 28DAYS.
2. USE 32IN COVER AND FRAME MARKED TEL AS REQUIRED. MINIMUM ONE COURSE BRICK TO GRADE.
3. MOUNTINGS FOR CABLE RACKS ECT, CAST IN WALL BY FUTURE PLANS OR FIELD LOCATED.
4. SPLICE BOX SHALL BE SET ON A SUITABLE GRAVEL BASE.
5. REINFORCING: GRADE 60 REBAR:
   –REINFORCING PLACED IN CENTER IF CONCRETE SLAB, WALLS, & ROOF.
   –#4 @ 5IN O.C. VERTICAL IN WALLS, CANTILEVERED OVER TOP OF OPENING
   –#4 @ 8IN O.C. HORIZONTALLY IN WALLS
   –4 PIECES #4 SURROUNDING OPENING
   –#4 @ 5IN O.C. EACH WAY ON TOP
6. MANHOLE FRAMES AND COVERS ARE TO BE MACHINED TO A SMOOTH FIT AND SHALL BE OF GRAY CAST IRON.
7. COVER SHALL HAVE DIAMOND TOP SURFACE.



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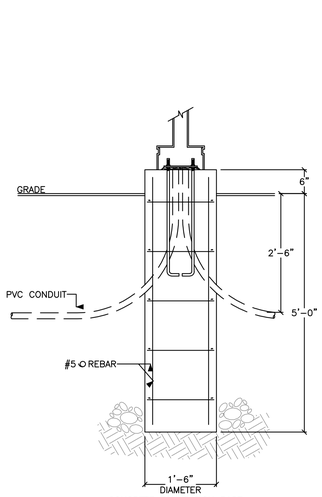
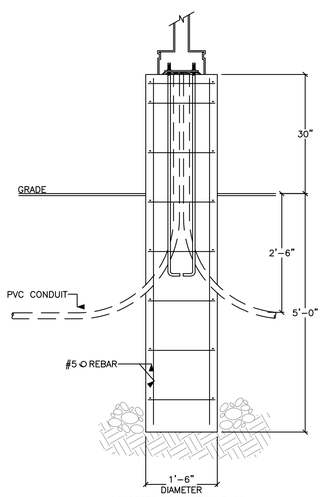
TELCOM MANHOLE DETAIL | 2



TYPICAL FOR POLE TYPES S1B AND S1F



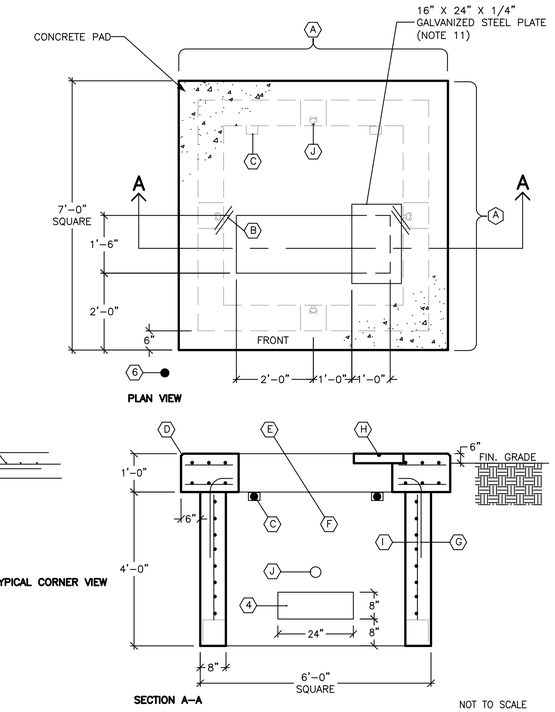
TYPICAL FOR POLE TYPES S1A, S1C AND S1E

NOT TO SCALE

LIGHT POLE BASE DETAILS | 5

TRANSFORMER PAD DETAIL NOTES:
1. "FRONT" DENOTES THE SIDE ON WHICH THE ACCESS DOORS ARE LOCATED. THE CONCRETE BASE SHALL BE SET ON A SUITABLE GRAVEL BASE AND LOCATED SO THE FRONT IS ACCESSIBLE BY TRUCK AND SUITABLY PROTECTED FROM PLOW AND TRAFFIC DAMAGE.
2. BEFORE INSTALLING OR REQUIRING ANY ACTIVE DRAINAGE STRUCTURE (EG. DRAIN PIPE) INTO THE FOUNDATION OR PAD, THE CONTRACTOR, CMP LINE SUPERVISOR, OR CMP DISTRIBUTION ENGINEER MUST CONTACT CENTRAL MAINE POWER COMPANY'S ENVIRONMENTAL SERVICES DEPARTMENT AT 623–3521 EXT 3479 TO REQUEST A SITE INSPECTION.
3. FINISH GRADE SHALL BE GRADED IN SUCH A MANNER TO ALLOW SURFACE WATER TO FLOW AWAY FROM THE PAD.
4. PROVIDE 8" X 24" CABLE HOLES (BOND OUTS) 8" UP THE WALL FROM THE BASE. LOCATE ONE CABLE HOLE PER WALL, MORE IF NECESSARY. LINE UP CABLE HOLES WITH TRENCH.
5. CONDUITS ENTERING CONCRETE STRUCTURES SHALL BE SET BACK FROM THE INSIDE WALL 1 TO 2 INCHES AND THE SPACE WITHIN THE KNOCKOUT SURROUNDING THE CONDUITS COMPLETELY FILLED WITH MORTAR TO PREVENT SOIL FROM ENTERING STRUCTURE. INSIDE THE STRUCTURE THE MORTAR SHALL BE FINISHED AND BEVELED FROM THE CONDUIT ENDS TO THE INSIDE WALL FACE TO COVER AND SMOOTH THE EDGES OF THE KNOCKOUTS.
6. A 3/4" X 8'–0" GALVANIZED GROUND ROD IS TO BE INSTALLED SIX INCHES IN FRONT OF THE FRONT CORNER OF THE FOUNDATION. THE TOP OF THE GROUND IS TO BE 6" BELOW FINAL GRADE.
7. A GROUND WIRE SHALL BE INSTALLED FROM THE GROUND ROD THROUGH THE CABLE HOLE AT THE BOTTOM OF THE PAD. 10 FEET OF GROUND WIRE SHALL BE PROVIDED SO THAT IT CAN BE INSTALLED THROUGH THE TWO GROUNDING LUGS AND CONNECTED TO THE NEUTRAL SPADE.
8. CONCRETE COMPRESSION STRENGTH SHALL BE 4000 PSI @ 28 DAYS. FOR CAST IN PLACE EARLY HIGH STRENGTH MAY BE USED WITH A MINIMUM OF SEVEN DAY CURE TIME.
9. REINFORCING STEEL TO HAVE: FY = 60 KSI.
10. FOR PRECAST UNITS: THE PRECAST SUPPLIER SHALL PROVIDE LIFTING LUGS IN THE SLAB (FOUNDATION) AND BASE; THE PRECAST SUPPLIER SHALL ASSEMBLE THE SLAB TO THE BASE PRIOR TO SHIPPING TO THE SITE TO ENSURE THAT THE SLAB AND THE BASE FIT PROPERLY (WITH NO ROCKING OF THE SLAB EVIDENT).
11. 1 16" X 24" X 1/4" GALVANIZED STEEL PLATE TO COVER A PORTION OF THE CABLE HOLE WHEN THE TRANSFORMER DOES NOT COMPLETELY COVER IT. CUT THE STEEL PLATE TO FIT IF NECESSARY.

A. 7–#5 REBAR EVENLY SPACED EACH WAY TOP TO BOTTOM
B. 2–#4 CORNER DIAGONAL REBAR 2'–0" LONG TOP AND BOTTOM
C. 4" X 4" X 1/2" ANGLE 6" LONG WITH 2–3/4" DIAMETER EXPANSION ANCHORS TYPICAL – 4 PLACES (TWO PIECE PRECAST ONLY)
D. CHAMFER TYPICAL
E. 2" CONCRETE COVER OVER TOP REBAR
F. 3" CONCRETE COVER OVER BOTTOM REBAR
G. #5 L–BAR @ 12" (CAST IN PLACE ONLY)
H. 16" X 24" X 1/4" GALVANIZED STEEL PLATE. MID #6000621790
I. #5 REBAR ON 12" CENTERS
J. PULLING EYE INSERT, FOR USE WITH 3/4" NATIONAL COURSE THREAD EYE–BOLT, (RICHMOND LCB–1 OR EQUIVALENT). LOCATED OPPOSITE EACH CABLE HOLE AND 2 FEET FROM THE BOTTOM.
K. ALL REBAR ENDS TO BE COVERED BY 1" OF CONCRETE MINIMUM.



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SERVICE TRANSFORMER PAD DETAIL | 1

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Lawrence E. Bartlett
7/2/18

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JOHNSON ROAD PROPERTY
90 JOHNSON ROAD PORTLAND, MAINE

drawing title
SITE LIGHTING CALCULATION RESULTS

date drawn:	06/22/18
date issued:	07/02/18
drawn by:	LEB
scale:	AS NOTED

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E-1.3
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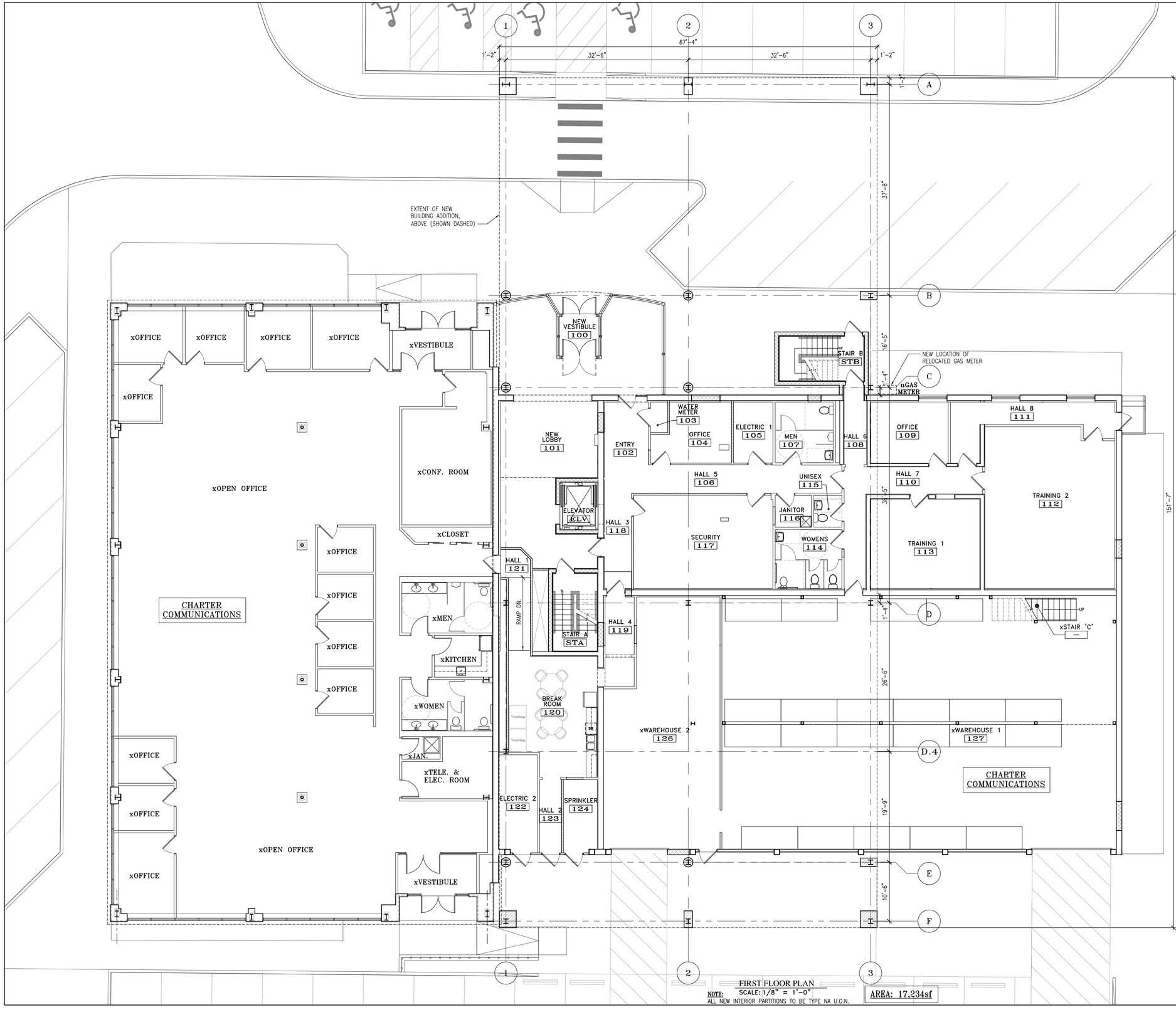

FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

NOTE: ALL NEW INTERIOR PARTITIONS TO BE TYPE NA U.O.N.

AREA: 17,234sf

07-02-18

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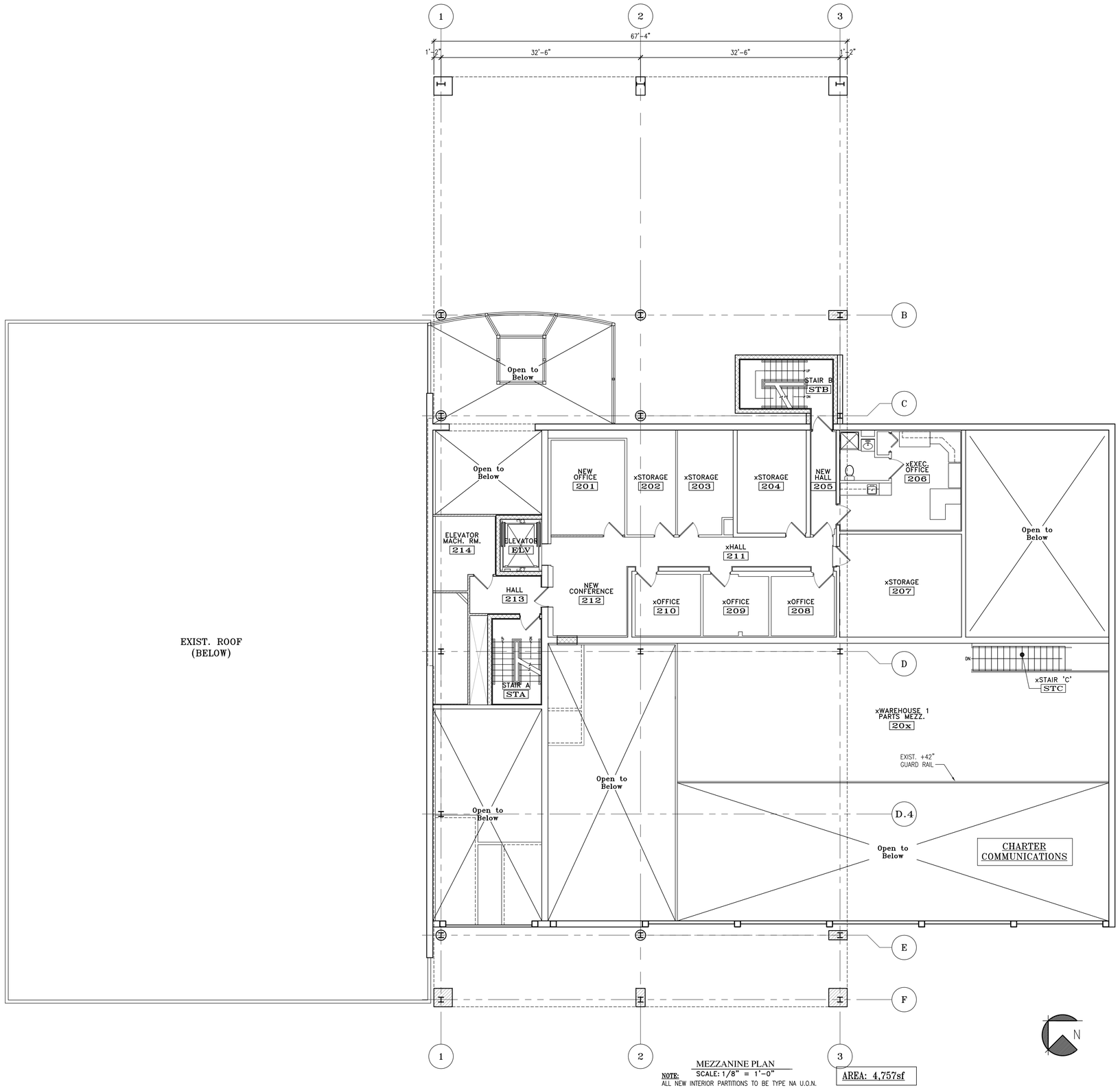
FIRST & SECOND FLOOR PLANS

A1.1



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

NOTE: ALL NEW INTERIOR PARTITIONS TO BE TYPE NA U.O.N.

AREA: 4,757sf

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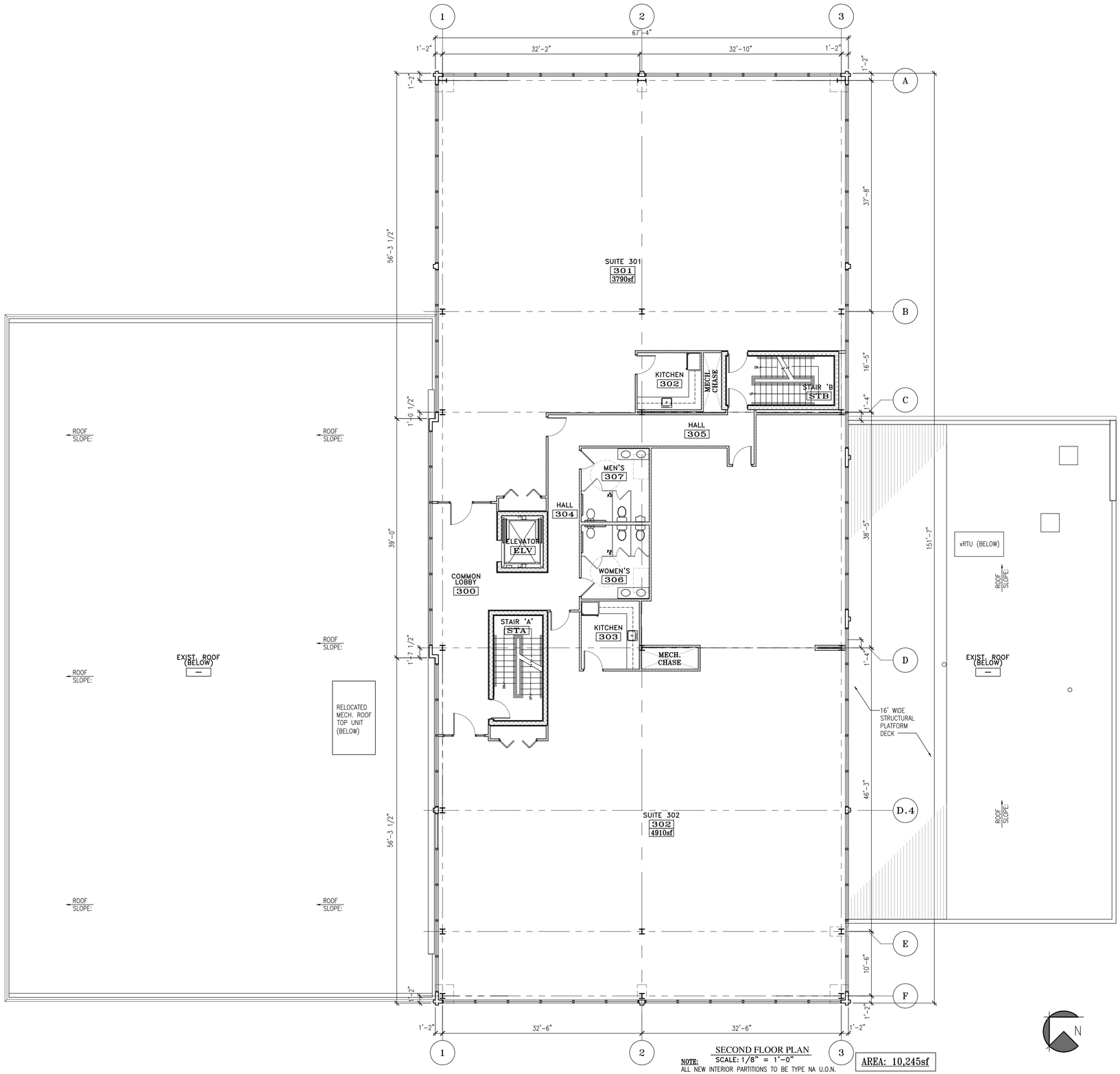
MEZZANINE PLAN

A1.2



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

NOTE:
ALL NEW INTERIOR PARTITIONS TO BE TYPE NA U.O.N.

AREA: 10,245sf

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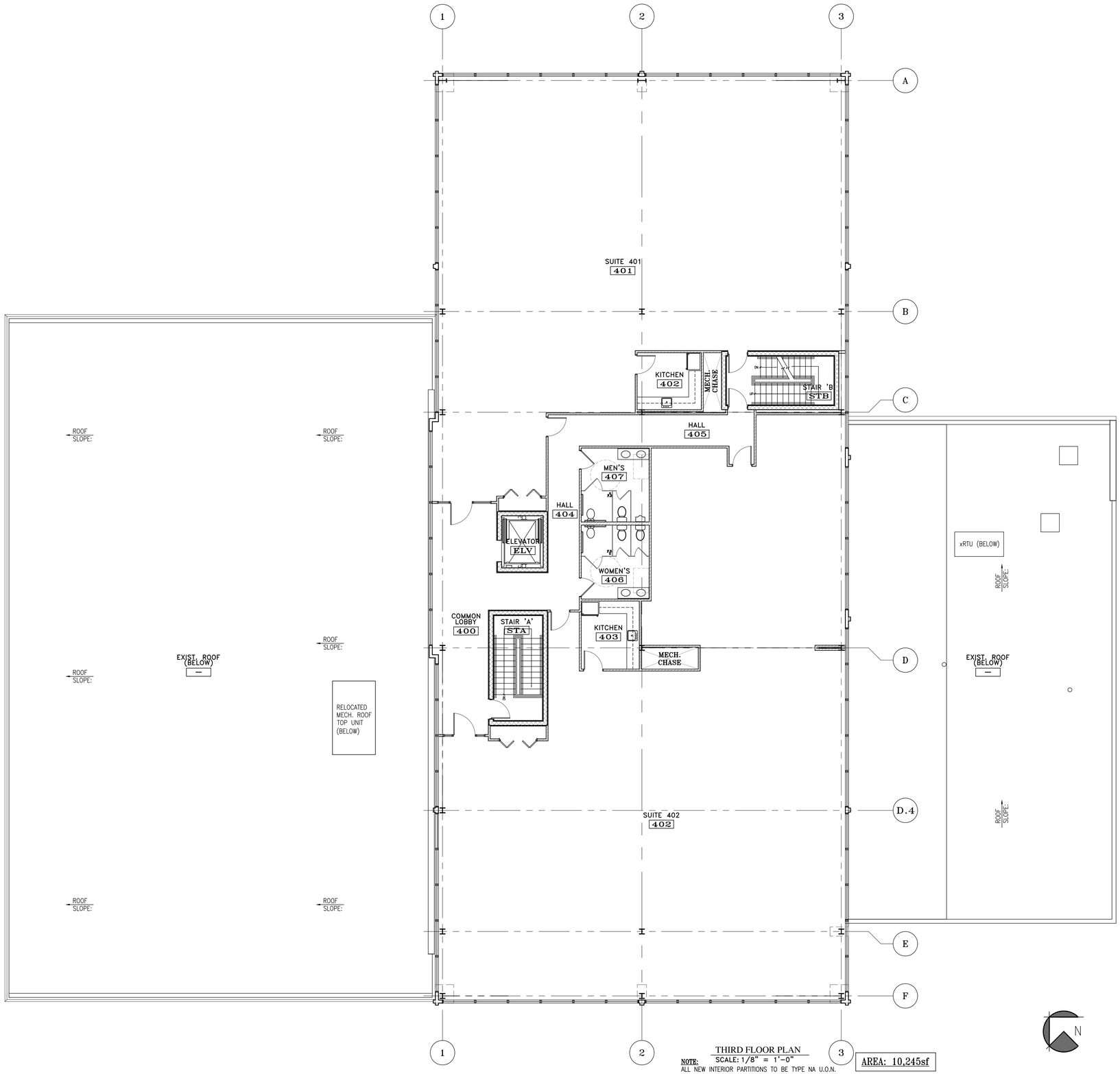
SECOND FLOOR PLAN

A1.3

90 Johnson Road



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

NOTE:
ALL NEW INTERIOR PARTITIONS TO BE TYPE NA U.O.N.

AREA: 10,245sf

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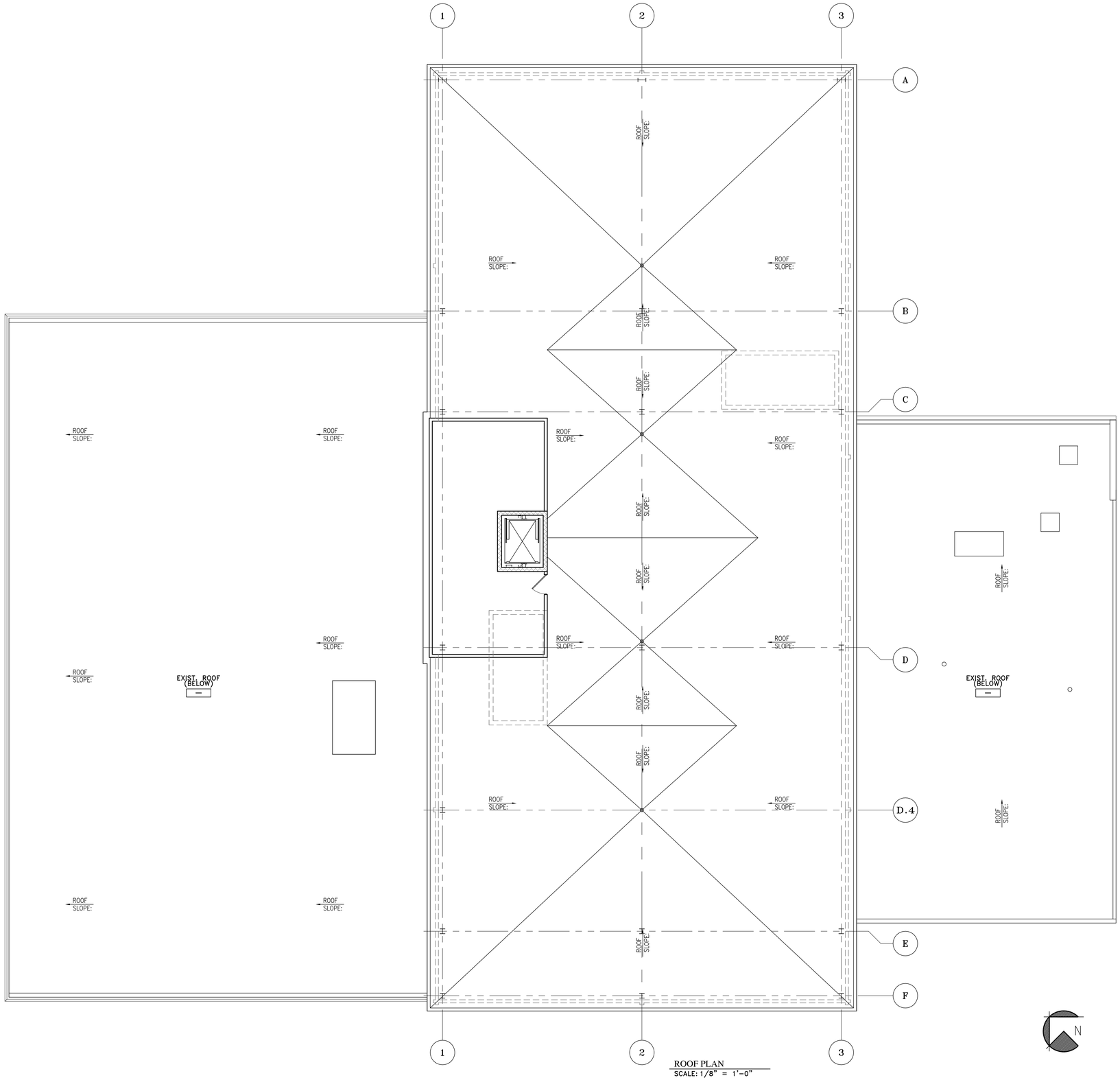
THIRD FLOOR PLAN

A1.4



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

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ROOF PLAN

A1.5

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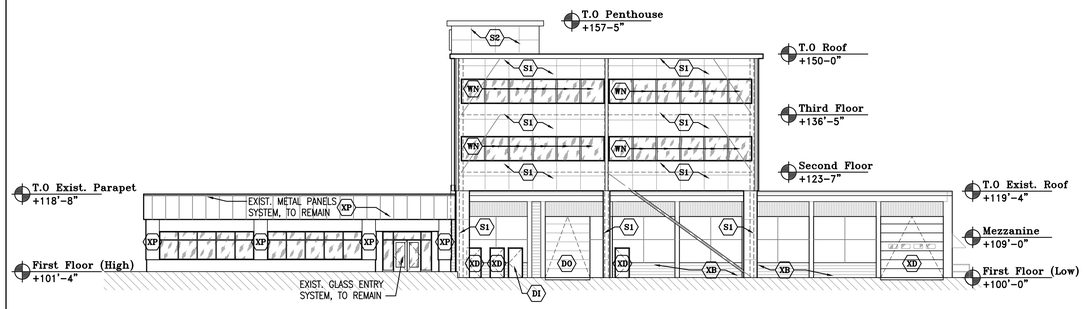
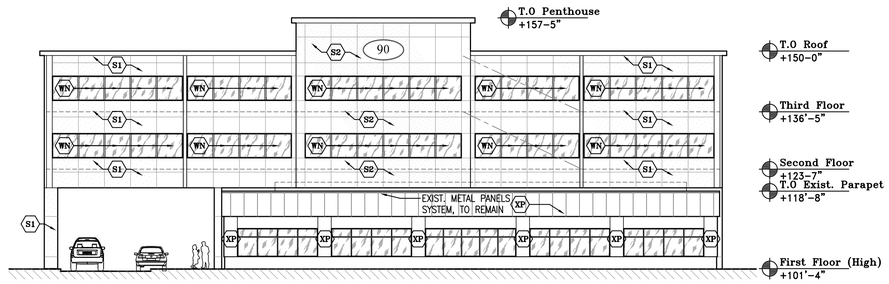


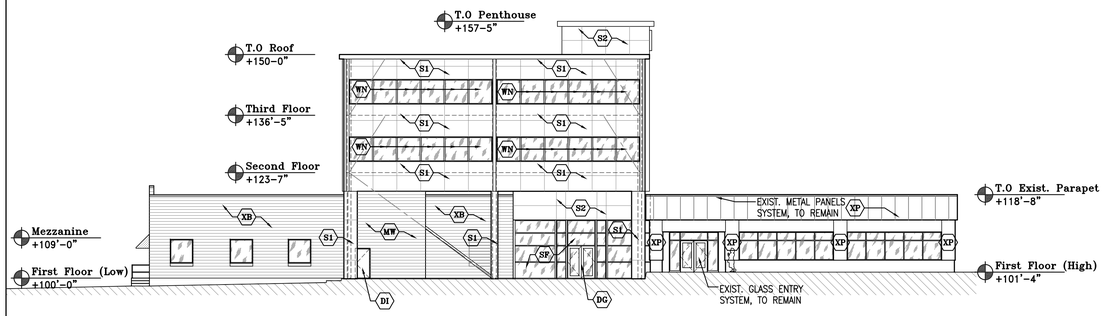
CITY LINE DRIVE (SOUTH) ELEVATION
SCALE: 1/16" = 1'-0"



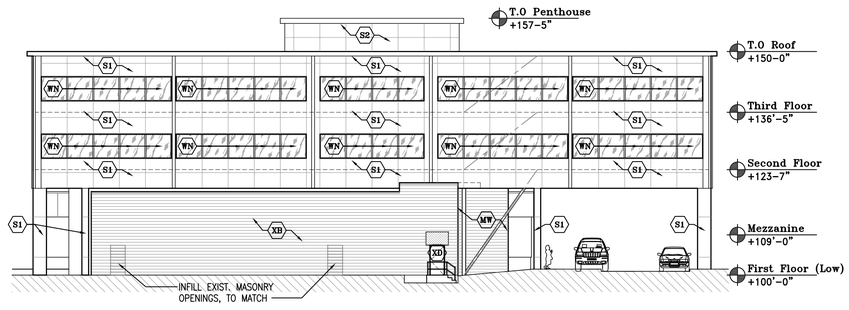
JOHNSON ROAD (WEST) ELEVATION
SCALE: 1/16" = 1'-0"

MATERIAL LEGEND:

- DG — INSULATED FULL GLASS DOOR(S)
- DI — INSULATED EXTERIOR DOOR(S) – PAINT COLOR BY OWNER
- DO — OVERHEAD DOOR SYSTEM – PAINT COLOR BY OWNER
- MW — NEW CMU BLOCK PAINTED – PAINT COLOR BY OWNER
- S1 — SMOOTH METAL PANEL SIDING –'OMEGA' 1/4" DOUBLE FACED ALUMINUM PANELS – MAT SILVER
- S2 — SMOOTH METAL PANEL SIDING –'OMEGA' 1/4" DOUBLE FACED ALUMINUM PANELS – ROYAL BLUE
- SF — STOREFRONT SYSTEM – 'KAWNEER' INSULATED SOLARBAN 60, CLEAR ANODIZED ALUMINUM FRAME
- WN — FIXED INSULATED WINDOWS – 'KAWNEER' SOLARBAN, 60 WINDOWS, CLEAR ANODIZED ALUMINUM FRAME
- XB — EXISTING BRICK/BLOCK – PAINT COLOR BY OWNER
- XD — EXISTING DOOR/S – PAINT COLOR BY OWNER



PARKING LOT (NORTH) ELEVATION
SCALE: 1/16" = 1'-0"



EAST ELEVATION
SCALE: 1/16" = 1'-0"

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EXTERIOR ELEVATIONS

A2.0

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A2.16

PLANNING BOARD REPORT
PORTLAND, MAINE

Dirigo Plaza, (now known as Rock Row)
1190 Brighton Avenue
Request for Waiver of Joint Meeting with Westbrook
Dirigo Center Developers LLC, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: 11/27/2018	Prepared by: Barbara Barhydt, Development Review Service Mgr Date: 11/19/2018

I. INTRODUCTION

James Katsiaficas, Attorney representing Dirigo Center Developers LLC, is requesting the Planning Board to waive the requirement for a joint meeting for an amended subdivision plan for Dirigo Plaza (Attachment 1).

The subdivision plan for Dirigo Plaza, now referred to as Rock Row, crosses the municipal boundaries of Portland and Westbrook. The shopping center development is primarily within Westbrook. The Portland Planning Board approved the subdivision plat with three conditions of approval on October 18, 2018 (approval letter, Attachment 2). The applicant has met conditions 1 and 2 and many of the off-site TMP improvements referred to in condition 3 have been completed. The Westbrook Planning Board approved the subdivision with 12 conditions of approval (Attachment 3.)

II. WAIVER REQUEST

A lot line adjustment to Lot 2 was proposed to recognize PanAm's ownership of the railroad strip in fee, which divides the overall property into two tracts or parcels. Under Portland's Subdivision Ordinance, Section 14-496, alterations of an approved plat can be approved by the Planning Authority if the following conditions are met:

(c) *Alterations to an approved plat.* The planning authority may approve alterations to an approved recording plat when all of the following conditions are met; otherwise, a new subdivision plat must be submitted to the Planning Board:

1. The rearrangement of lot lines does not increase the number of lots within a block or other subdivision unit or area;
2. The alteration will not affect any street, alley, utility easement or drainage easement;
3. The alteration meets all of the minimum requirements of this article, article III of this chapter on zoning and other applicable state and local codes:
4. The alteration is approved by the public works authority and the fire department.

The lot line adjustment for the rail corridor line (within Westbrook) was determined to meet the above

criteria and Jeff Levine, Director of the Planning and Urban Development Department, signed the amended plat. The Westbrook Planning Board approved the amended plat on September 18, 2018 with the decision dated September 25, 2018 (Attachment 4).

Mr. Katsiaficas is seeking the Board's confirmation that it waives the joint meetings and hearings with Westbrook for the review of the amended plan.

The Planning and Corporation Counsel staff concur that Portland's Ordinance allows the amendment to be handled administratively and signed by the Planning Authority, thus the request to waive a joint meeting is unnecessary. However, the applicant is seeking this decision for clarity under the State subdivision law (30-A MRSA section 4403 (1-A) and the staff recommend approving the proposed motion.

III. PROPOSED MOTION

On the basis of the written request from James N. Katsiaficas, plans, reports and other information submitted by Dirigo Center Developers LLC, the applicant; findings and recommendations contained in the planning board report for the public hearing on November 27, 2018 for application #2016-073 relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the Planning Board [waives/does not waive] holding joint meetings and hearings, as provided for in Title 30-A MRSA section 44-3 (1-A), to review the Dirigo Center Developer's LLC application of Amended Subdivision Plan, "Rock Row," Plan A-4, dated October 17, 2018.

Attachments:

1. James N. Katsiaficas, dated October 22, 2018
2. Portland Approval Letter, dated October 18, 2018
3. Westbrook Notice of Decision, dated October 19, 2018
4. Westbrook Notice of Decision, dated September 25, 2018
5. Amended Subdivision Plat – 2 sheets

Att. 1

PERKINS THOMPSON
ATTORNEYS & COUNSELORS AT LAW

ESTABLISHED 1871

ONE CANAL PLAZA
PO BOX 426
PORTLAND ME 04112
TEL 207.774.2635
FAX 207.871.8026

Hand Delivered
October 22, 2018

Jeffrey Levine, AICP, Director
Planning & Urban Development
Portland City Hall
389 Congress Street, 4th Floor
Portland, ME 04101

Re: Dirigo Center Developers LLC- Dirigo Plaza (now "Rock Row") Amended Subdivision Plan

Dear Jeff:

Dirigo Center Developers, LLC has applied for and received approval of its Amended Subdivision Plan from the Westbrook Planning Board. As we had discussed in our meetings and email discussions last July, the changes made by the amendment to the plan are minor – to alter the lot lines of the previously approved Lot 2, and to recognize that PanAm's ownership of the railroad strip in fee divides the overall property into two tracts or parcels. We had agreed that approval of these minor changes are within the scope of your authority under Section 14-496 (c) of the Portland City Code of Ordinances, which permits the Planning Authority (the Director of Planning and Urban Development) to approve a subdivision amendment that: only affects lot lines and does not increase the number of lots; does not affect any street, alley, utility easement or drainage easement; meets codes; and is approved by the public works authority and the fire department. We agreed to submit these amendments first to the Westbrook Planning Board, which approved them on September 18, 2018, and then to you.

Therefore, we now are submitting the enclosed two Plan A4 mylars to you for your signature before the Westbrook Planning Board signs them on November 6, 2018. We also ask that you sign and return a copy of this letter to Westbrook Planning Director Jennie Franceschi to acknowledge your agreement with the Westbrook Planning Board to waive joint meetings of the City of Westbrook and City of Portland Planning Boards to review this amendment. As seen in the Westbrook Planning Board Notice of Decision dated September 25, 2018 (copy enclosed), the Westbrook Planning Board explicitly waived joint meetings with the City of Portland Planning Board for review of this amendment.

Please note that we have received a copy of a Rule 80B appeal from the Westbrook Planning Board's approval, a copy of which also is enclosed. I do not believe it prevents the City of Westbrook and City of Portland Planning authorities from taking the step of signing the mylars

or prevents us from recording the same, but we wanted you to know that an appeal has been filed.

Sincerely,

James N. Katsiaficas

cc: Danielle West-Chuhta, Corporation Counsel, City of Portland
Jennifer Thompson, Assoc. Corporation Counsel, City of Portland
Jennie Franceschi, Planning Director, City of Westbrook
Natalie Burns, Esq., Jensen Baird
Josh Levy, Waterstone Retail
Wayne Morrill P.E., Jones & Beach

By my signature below, I, Jeffrey Levine, as the duly appointed Director of Planning & Urban Development for the City of Portland, do agree with the Westbrook Planning Board, on behalf of the City of Portland and its Planning Board, to waive joint meetings and hearings to review the Dirigo Center Developers LLC application for Amended Subdivision Plan, "Rock Row," Plan A-4, dated October 17, 2018.

Dated: _____, 2018

By: _____
Jeffrey Levine, Director
Planning & Urban Development
City of Portland

CITY OF PORTLAND, MAINE
PLANNING BOARD

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

October 25, 2016

Dirigo Center Developers, LLC.
Jeffrey Gove
7 Swain Drive
Hampton Falls, NH 03844

Jones & Beach Engineers, Inc.
Wayne Morrill
85 Portsmouth Avenue
Strathan, NH 03885

Project Name: Dirigo Plaza Project ID: #2016-073 Address: 1190 Brighton Avenue, Westbrook, Maine CBL: 264-A-002 Applicant: Dirigo Center Developers, LLC. (previously J & J Gove Development Group Planner: Barbara Barhydt, Development Review Services Manager

Dear Mr. Gove:

On October 18, 2016, the Planning Board considered a subdivision plan for the development of a retail center (Dirigo Plaza) in Westbrook, which crosses the municipal boundaries of Portland and Westbrook in the vicinity of 1190 Brighton Avenue. The proposed buildings and site improvements for the shopping center development do not extend into Portland, so the primary focus of the subdivision review has been on the traffic and stormwater impacts of this proposal in Portland. The Planning Board reviewed the proposal for conformance with the standards of the Subdivision Ordinance. The Planning Board voted unanimously (5-0, Dundon and Nichols absent) to approve the application with three conditions of approval (see below).

SUBDIVISION REVIEW

On the basis of the application, plans, reports and other information submitted by Dirigo Center Developers, LLC, the applicant; findings and recommendations contained in the planning board report for the public hearing on October 18, 2016 for application #2016-073 relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the planning board finds that the plan is in conformance with the subdivision standards of the land use code, subject to the following conditions of approval:

1. The applicant shall provide evidence of all required State and local approvals, including but not limited to Maine DOT Traffic Movement Permit, DEP Site Location of Development Act, Stormwater Permit, Natural Resources Protection Act Permit and Westbrook Subdivision review, prior to the issuance of a street opening permit from Portland's Department of Public Works.

2. The applicant shall provide the monetary compensation of $220,000 for mitigation of traffic impacts along Brighton Avenue for the installation of pedestrian and ADA improvements, prior to the issuance of a street opening permit from Portland Department of Public Works.

3. If any revisions are proposed to the traffic movement permit or off-site traffic mitigation measures planned in Portland, which differ from those presented in the application reviewed on October 18,

2016, then the applicant shall submit an amended subdivision plan for review pursuant to Portland's Subdivision Ordinance.

STANDARD CONDITIOINS OF APPROVAL
Please note the following standard conditions of approval and requirements for all approved site plans:

1. **Develop Site According to Plan** The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

2. **Subdivision Expiration** The subdivision approval is valid for up to three years from the date of Planning Board approval.

3. **Department of Public Services Permits** If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

The subdivision conditions must be completed and approved by the Planning Authority and the Public Works Authority prior to the issuance of a street opening permit. Please coordinate with the Portland staff in order to meet these requirements.



If there are any questions, please contact Barbara Barhydt at (207) 874-

8699. Sincerely,

Elizabeth Boepple, Chair
Portland Planning Board

Attachments:
1. Planning Board Report with attached staff review memos

Electronic Distribution:

cc: Jeff Levine, AICP, Director of Planning and Urban Development
Barbara Barhydt, Development Review Services Manager
Philip DiPierro, Development Review Coordinator,
Planning Mike Russell, Director of Permitting and Inspections
Ann Machado, Zoning Administrator, Inspections Division Jonathan Rioux, Inspections Division Deputy Director Jeanie Bourke, Plan Reviewer/CEO, Inspections Division Chris Branch, Director of Public Works

Katherine Earley, Engineering Services Manager, Public Works Bill Clark, Project Engineer, Public Works
Doug Roncarati, Stormwater Coordinator, Public Works Greg Vining, Associate Engineer, Public Works
Michelle Sweeney, Associate Engineer, Public Works
John Low, Associate Engineer, Public Works
Rhonda Zazzara, Field Inspection Coordinator, Public Works Jeff Tarling, City Arborist, Public Works

Jeremiah Bartlett, Public Works
Keith Gautreau, Fire
Department
Danielle West-Chuhta, Corporation
Counsel Thomas Errico, P.E., TY Lin
Associates Lauren Swett, P.E., Woodard
and Curran Rick Blackburn, Assessor's
Department Approval Letter File

City of Westbrook

DEPARTMENT OF PLANNING & CODE ENFORCEMENT

2 York Street Westbrook, Maine 04092 (207) 854-0638 Fax: 1-866-559-0642

NOTICE OF DECISION

October 19, 2016

Dirigo Center Developers, LLC
Attn: Jeffery Gove
7 Thornton Street
Seabrook, NH 03874

Re: 2016.12 – Site Plan, Subdivision & Special Exception – Dirigo Plaza
80 Main Street & 11 Larrabee Road – Dirigo Center Developers, LLC
Tax Map: 42B Lots: 9, 10, 11, & 14.
Zone: Gateway Commercial.

Dear Jeffery,

At their meeting of October 18, 2016, the Westbrook Planning Board reviewed your application for Final Site Plan, Subdivision & Special Exception for J & J Gove Development to construct a 495,915 sq. ft. regional shopping center, with uses as stated in the Project Description section of the October 14, 2016 Staff Memo. The location of the project is 80 Main Street & 11 Larrabee Road, Tax Map: 42B Lots: 9, 10, 11, & 14 Zone: Gateway Commercial.

Based upon the presentation and materials submitted, the Planning Board granted Final Site Plan, Subdivision & Special Exception approval and approved the Findings of Fact and Conclusions of Law, conditioned on the following:

Conditions:

1. Approval is dependent upon, and limited to, the proposals and plans contained in the application dated September 13, 2016 and all supporting documents and oral representations submitted and affirmed by the applicant, and conditions, if any, imposed by the Planning Board, and any variation from such plans, proposals and supporting documents and representations are subject to review and approval by the City Planner or the Planning Board.

2. Consistent with Section 504.3, the Code Enforcement Officer shall not issue any permits until a site plan has been approved by the Planning Board and a Mylar signed by the Planning Board. *Mylars must be submitted to the City within 90 days of Planning Board approval or the approval shall be null and void.*

3. Prior to any ground disturbance or permits (Phase 1 only) being issued for the project:
   a. All outstanding Staff comments must be addressed.
   b. Copy of Maine Department of Transportation Traffic Movement permit
   c. Updated site plan set based upon all State permits if necessary (Mylar & Paper form)
   d. Copy of the recorded subdivision plan.

e. Copy of SWPPP shall be provided to Planning Office
f. Copy of Maine Construction General Permit to Planning Office
g. The applicant shall provide the digital data as required by Section 504.5.B.12 and 13. – verification with GIS coordinator
h. Copy of all recorded easements between the leased portions of the site and the main parcel for access, drainage and snow storage.
i. A pre-construction meeting must be held with City Staff and the site work contractor. Contact the Planning Office to coordinate.
j. Sewer Plans reviewed and approved of by City Sewer Department
k. An inspection fee shall be made payable to the City of Westbrook for inspection of site improvements made by the Code Enforcement Officer and/or other appropriate City staff. This fee is required per Section 500.8 of the Land Use Ordinances in order to cover the costs of inspection of site improvements.
l. The applicant shall file a performance guarantee with the City of Westbrook. The amount of the guarantee shall be agreed upon in advance with the City of Westbrook and shall be of an amount to ensure completion of all on- and off-site improvements necessary to support the proposed project.
m. Stormwater components:
    i. All Grassed Underdrained Soil filters will have cleanouts.
    ii. All sediment forebays will have concrete pad in base of forebay
    iii. Best management practices shall be adhered to during all ground disturbance operations. All Street Catch basins in the vicinity of earthwork operations shall have silt sacks installed & maintained for the duration of the work.
n. Site Components:
    i. Verification that all Truncated domes in City ROW will be cast iron type.
    ii. All dumpsters, compactors and storage of recycling or waste materials must be fully screened. Screening method shall be approved of by Planning Department.

4. Prior to any building permit issuance on Phase 2 (South side of project):
    a. Applicant will reapply to the Planning Board for approval of all site improvements and building elevations. (Parking layouts revised, pedestrian systems addressed, etc.)
    b. Provide an easement along the Arterial side of the site for potential future sidewalks/pedestrian amenities.

5. Prior to commencing any work in the City Right-of-Way, the applicant must obtain a road-opening permit from the Public Works Department.

6. Prior to the first Occupancy Permit issuance,
    a. An internal signage plan shall be approved by the City and installed per plan. (Directing traffic to Exit 47).
    b. Provide documentation of maintenance contractor for the project to keep site clean.

7. Prior to release of the performance guarantee, the site will be in compliance with the approved plan and as-built plan provided.

8. The applicant shall comply with Chapter 37, the local Post Construction Stormwater Management Ordinance. On January 15th every year, a copy of the maintenance log for the previous year for the stormwater treatment features associated with this project needs to be provided to the Planning Office.

9. The applicant shall comply with the requirements of local and state authorities for life and safety requirements.

10. Traffic Conditions:
    a. No permits will be issued until a copy of the MDOT permit is provided to the Planning Office.
    b. Bus Stop for Kohl's vs a bus pullout – will be determined based upon ROW.
    c. On all turning movements where skip lines are shown on the road to delineate lanes, those skip lines should be recessed into the pavement.
    d. Construction sequencing of the traffic improvements will be a coordination effort with the City of Westbrook, Portland, MDOT and MTA.
    e. ROW drawings will need to be completed to verify work limits.
    f. Provide an easement along the Arterial side of the site for potential future sidewalks/pedestrian amenities.
    g. Piano Key sidewalk striping will be acceptable to Westbrook.
    h. In public ROW islands or along roads, any vegetation needs to be salt tolerant plantings. NO grassed areas will be allowed.
    i. A monitoring program for traffic system will be required if not part of the MDOT TMP.
    j. Left turn pockets on Larrabee Road will need to be evaluated once final plans are provided.

11. Project letters with conditions to be part of the approval:
    a. Westbrook Fire Department – letter from Andrew Turcotte, Fire Chief dated September 7, 2016
    b. Westbrook Sewer Department – letter from Eric Dudley, P.E. dated September 22, 2016
    c. Portland Water District ability to serve letter – dated January 19, 2016
    d. Westbrook Police Department – letter from Chief Janine Roberts dated September 13, 2016

12. Conditioned on the Responses provided by the applicant:
    a. Letter from Wayne Morrill of September 27, 2016 to Jennie Franceschi
    b. Letter from Wayne Morrill of October 10, 2016 to Jennie Franceschi

Appeals of the Planning Board's decision may be made per the Westbrook Code of Ordinances.

Site Plan approval expires unless the work necessary to accomplish the purpose for which it was requested is commenced within one year and completed within two years after October 18, 2016. An extension request must occur within one year after approval was granted.

If you have any questions, please call the Planning Department at 207-854-9105.

FOR THE WESTBROOK PLANNING BOARD

Jennie P. Franceschi

Jennie Poulin Franceschi, P.E.
Director of Planning and Code Enforcement

CC: File, Wayne Morrill - Jones & Beach, Jim Katsiaficas – Perkins Thompson

City of Westbrook

DEPARTMENT OF PLANNING & CODE ENFORCEMENT

2 York Street Westbrook, Maine 04092 (207) 854-0638 Fax: 1-866-559-0642

NOTICE OF DECISION AND CERTIFICATE

September 25, 2018

Dirigo Center Developers, LLC
Attn: Josh Levy
332 Reservoir St
Needham, MA 02494

Re: 2018.34 – Amended Site Plan, Subdivision & Special Exception – 58 & 80 Main Street
Rock Row (previously called "Dirigo Plaza")
Tax Map: 042B Lots: 009, 010, 011, 014 Zone: Gateway Commercial District

Dear Mr. Levy:

At its meeting of September 18, 2018, the Westbrook Planning Board reviewed Dirigo Center Developers, LLC's application for Amended Final Site Plan, Subdivision, and Special Exception Approval to reconfigure building layouts and internal traffic circulation located to the northerly parcel of the campus. Project is located at 58 & 80 Main Street Tax Map: 42B Lots: 009, 010, 011 & 014. Zone: Gateway Commercial ("The Application").

Based upon the presentation and materials submitted, the Planning Board granted final site plan approval including, without limitation, approval of the amended phased commencement and completion schedule attached to the application; reapproval of the Special Exception approval as a Conditional Use approval and the Subdivision waivers for Rock Row; waiver of joint meetings and hearings with the City of Portland reviewing authority to review the application; and adoption of the findings of fact and conclusions of law set forth in the Staff Memorandum dated September 14, 2018, along with adoption of the following conditions:

Conditions:

1. Approval is dependent upon, and limited to, the proposals and plans contained in the application dated September 13, 2016 and amended July 12, 2018 and all supporting/subsequent documents and oral representations submitted and affirmed by the applicant, and conditions, if any, imposed by the Planning Board, and any variation from such plans, proposals and supporting documents and representations are subject to review and approval by the City Planner or the Planning Board.

2. Consistent with Section 504.3, the Code Enforcement Officer shall not issue any permits until a site plan has been approved by the Planning Board and a Mylar signed by the Planning Board. *Mylars must be submitted to the City within 90 days of Planning Board approval or the approval shall be null and void.*

3. Prior to any permits being issued for Phase I only (as delineated on approved Site Plan):
   a. All outstanding Staff comments must be addressed.
   b. Copy of updated Maine Department of Transportation Traffic Movement permit
   c. Copy of updated MDEP Permits
   d. Updated site plan set based upon all State permits if necessary (Mylar & Paper form)
   e. Copy of the recorded amended subdivision plan.
   f. Copy of SWPPP shall be provided to Planning Office

g. Copy of Maine Construction General Permit to Planning Office
h. The applicant shall provide the digital data as required by Section 504.5.B.12 and 13. – verification with GIS coordinator
i. Copy of all recorded easements between the leased portions of the site and the main parcel for access, drainage and snow storage.
j. A pre-construction meeting must be held with City Staff and the site work contractor. Contact the Planning Office to coordinate.
k. Final Sewer Plans (including the upgrades to the main lines servicing Phase I along Terminal Street all the way to the pump station) reviewed and approved of by City of Westbrook Sewer Department. Additionally, connection of Building 1-C to the Main Street sewer is only permitted as the use is a bank with low flows and there is an existing lateral into the site, however the applicant will replace the existing lateral all the way to the main line in Main Street to the satisfaction of the sewer department.
l. An inspection fee shall be made payable to the City of Westbrook for inspection of site improvements made by the Code Enforcement Officer and/or other appropriate City staff. This fee is required per Section 500.8 of the Land Use Ordinances in order to cover the costs of inspection of site improvements. Previously paid - $168,744.00 This inspection fee will be recalculated, and payment adjusted, as appropriate.
m. The applicant shall file a performance guarantee with the City of Westbrook. The amount of the guarantee shall be agreed upon in advance with the City of Westbrook and shall be of an amount to ensure completion of all on- and off-site improvements necessary to support the proposed project. (Current guarantee amount: $8,437,220.00) The performance guarantee will be recalculated, and the amount of the current performance guarantee will be adjusted, as appropriate.
n. Stormwater components:
    i. All Grassed Underdrained Soil filters will have cleanouts.
    ii. All sediment forebays will have concrete pad in base of forebay
    iii. Best management practices shall be adhered to during all ground disturbance operations. All Street Catch basins in the vicinity of earthwork operations shall have silt sacks installed & maintained for the duration of the work.
o. Site Components:
    i. Verification that all Truncated domes in City ROW will be cast iron type.
    ii. All dumpsters, compactors and storage of recycling or waste materials must be fully screened. Screening method shall be approved of by Planning Department.

4. Prior to any sign permits, a site signage package meeting the district requirements must be reviewed and approved of by the City.

5. Prior to any building permit issuance beyond the "Phase 1 Limit of Work Line" as shown on the approved site plans:
    a. Applicant will reapply to the Planning Board for approval of all site improvements and building elevations. (Parking layouts revised, pedestrian systems addressed, internal signage directing traffic to Exit 47, etc.)
    b. Provide an easement along the Arterial side of the site for potential future sidewalks/pedestrian amenities.

6. Prior to commencing any work in the City Right-of-Way, the applicant must obtain a road-opening permit from the Public Works Department.

7. Prior to the first Occupancy Permit issuance,
    a. An internal signage plan shall be approved by the City and installed per plan.
    b. Businesses addressed to the satisfaction of the E911 coordinator

c. Provide documentation of maintenance contractor for the project to keep site maintained.
d. Lake must be contained from public access.
e. Barrier along Limit of Phase I work line to separate the active site from the construction site.

8. Prior to release of the performance guarantee, the site will be in compliance with the approved plan and as-built plan provided.

9. The applicant shall comply with Chapter 37, the local Post Construction Stormwater Management Ordinance. On January 15th every year, a copy of the maintenance log for the previous year for the stormwater treatment features associated with this project needs to be provided to the Planning Office.

10. The applicant shall comply with the requirements of local and state authorities for life and safety requirements.

11. Traffic Conditions:
a. On all turning movements where skip lines are shown on the road to delineate lanes, those skip lines should be recessed into the pavement.
b. Construction of the traffic improvements will be phased based on the amended MDOT Traffic movement permit and will be a coordination effort with the City of Westbrook, Portland, MDOT and MTA.
c. ROW drawings will need to be completed to verify work limits.
d. In future phases, provide an easement along the Arterial side of the site for potential future sidewalks/pedestrian amenities.
e. Piano Key sidewalk striping will be acceptable to Westbrook.
f. In public ROW islands or along roads, any vegetation needs to be salt tolerant plantings. NO grassed areas will be allowed.
g. A monitoring program for traffic system will be required if not part of the MDOT TMP.
h. Left turn pockets on Larrabee Road will need to be evaluated once final plans are provided.

12. Project letters with conditions to be part of the approval (as modified by this approval):
a. Westbrook Fire Department – letter from Andrew Turcotte, Fire Chief dated September 7, 2016
b. Westbrook Sewer Department – letter from Eric Dudley, P.E. dated September 22, 2016
c. Portland Water District ability to serve letter – dated January 19, 2016
d. Westbrook Police Department – letter from Chief Janine Roberts dated September 13, 2016

13. Conditioned on the Responses provided by the applicant (as modified by this approval):
a. Letter from Wayne Morrill of September 27, 2016 to Jennie Franceschi
b. Letter from Wayne Morrill of October 10, 2016 to Jennie Franceschi

Appeals of the Planning Board's decision may be made per the Westbrook Code of Ordinances.

If you have any questions, please call the Planning Department at 854-9105.

FOR THE WESTBROOK PLANNING BOARD

Jennie P. Franceschi, P.E.
Director of Planning and Code Enforcement

Notice: The Applicant must record this Certificate in the Cumberland County Registry of Deeds within ninety (90) days from September 18, 2018 or the special exception and subdivision waivers are void.
Attachments: Conditions of Approval, Certification for Registry, Phasing Plan for Dirigo Plaza

Certification

State of Maine
Cumberland, ss

September 25, 2018

I, Jennie P. Franceschi, P.E., the duly appointed Director of Planning and Code Enforcement for the City of Westbrook, Maine, do swear that this Notice of Decision and Certification is a true and exact copy of the Notice of the Planning Board's September 18, 2018 decision approving the Application of Dirigo Center Developers, LLC's for Amendment to Final Site Plan, Subdivision, and Special Exception Approvals granted by the Planning Board on October 18, 2016 and reapproved on September 18, 2018 for Rock Row (formerly "Dirigo Plaza"), and that the original Notice of Decision and Certification remains in my possession.

Before me,

Notary Public/Attorney at Law

Ashley M Rand
(Print name)

ASHLEY M. RAND
NOTARY PUBLIC
State of Maine
My Commission Exp
June 1, 2023

Attachment A

Subdivision, Site Plan and Special Exception Phasing Plan City of Westbrook, ME

December 6, 2016; revised December 22, 2016, March 21, 2017, June 6, 2017, September 5, 2017 and September 4, 2018

Project:
Rock Row
58 & 80 Main Street
Westbrook, ME 04092

Applicant:
Dirigo Center Developers, LLC
C/o Waterstone Properties Group, Inc.
322 Reservoir Street
Needham, MA 02494

Rock Row Phasing Plan

Dirigo Center Developers, LLC proposes the following phasing of development of Rock Row:

Phase I. Phase I consists of a portion of the North Campus buildings and improvements (including Market Basket, a pharmacy, a bank, and retail) – construction of this phase will commence within one year from September 4, 2018 amended Subdivision and Site Plan approval. Phase I also shall include construction of accesses from Main Street and Larrabee Road to thereby improve traffic flow onto and from abutting public ways.

Phase II. Phase II consists of the remainder of the North Campus – construction of this phase will commence within a period of three years from the September 4, 2018 amended Subdivision and Site Plan approval.

Phase III. Phase III consists of the South Campus buildings and improvements – construction of this phase will commence within a period of five years from the September 4, 2018 amended Subdivision and Site Plan.

Time for Completion, Incorporation into Final Approvals. Consistent with Sections 204.3[1] and 510[2] of the Westbrook Code of Ordinances, work on the improvements and buildings in each phase shall be completed within two (2) years after the end of the period for each phase stated above. Upon approval of this Phasing Plan by the Planning Board, this Phasing Plan shall be deemed incorporated into the final Special Exception, Subdivision and Site Plan approvals for Dirigo Plaza.

Prepared December 6, 2016, revised December 22, 2016, March 21, 2017, June 6, 2017, September 5, 2017 and September 4, 2018.

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[1] **204.3 Time Limitations of Rights Granted by the Planning Board.**
A special exception granted by the Planning Board expires unless the work necessary to accomplish the purpose for which it was requested is commenced within one (1) year and completed within two (2) years after it was granted, or is completed in accordance with a phased completion schedule proposed by the applicant and approved, or modified and approved, by the Board and incorporated in its decision granting the exception. In determining whether work has been completed in accordance with an approved schedule, allowances may be made for delays in scheduled completions caused by inclement weather, strike, or acts of a natural nature.

[2] **510 Approval Expiration.**
Site Plan approval expires unless the work necessary to accomplish the purpose for which it was requested is commenced within one (1) year and completed within two (2) years after the date of Planning Board approval or is completed in accordance with a phased completion schedule proposed by the applicant and approved by the Planning Board, as incorporated in the final approval. Failure to complete a subsequent phase within the required period shall also have the effect of causing the permit to expire. Any applicant may come back before the Board and request a permit extension. An extension request must occur within one (1) year after approval was granted. An extension of the completion date established for the project must be requested within two (2) years after the project was approved by the City. Deadline dates for phased developments shall be established at the time of approval. The Planning Board may choose not to grant more than two (2) permit extensions for the same project.

PLAN NOTES:

THE INTENT OF THIS PLAN IS TO REVISE LOT #2, LEASE AREA "B"

PLAN REFERENCE:

"SUBDIVISION – LOT CONSOLIDATION PLAT, DIRIGO PLAZA, 80 MAIN ST. & 11 LARRABEE RD., WESTBROOK, ME." DATED FEBRUARY 23, 2015. SCALE 1" = 100'. PREPARED BY JONES & BEACH ENGINEERS, INC.. C.C.R.D. PLAN BOOK 217 PAGES 384–385.

DEED REFERENCE

C.C.R.D.BOOK 34380 PAGE 164.

LEASE LINE TABLE		
LINE	LENGTH	BEARING
L6	50.00'	N81°05'28"W
L7	101.53'	N76°42'03"W
L8	210.15'	N13°17'57"E
L9	95.01'	S77°36'10"E
L10	80.01'	S75°41'37"E
L11	141.34'	S13°17'57"W
L12	20.50'	S77°36'10"E
L13	34.57'	S77°36'10"E
L14	20.76'	S75°41'37"E
L15	91.72'	S75°41'37"E

LEASE CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
C1	85°36'35"	45.00'	67.24'	N56°06'15"E	61.16
C2	4°23'25"	100.00'	7.66'	S78°53'45"E	7.66
C3	90°00'00"	15.00'	23.56'	S31°42'03"E	21.21
C4	59°44'35"	40.00'	41.71'	N16°34'20"W	39.84

PARCEL 1
TAX MAP 42B, LOT 14
AREA = 1,106,776 S.F. OR 25.41 ACRES

PARCEL 2, LOT #1
LEASE AREA "E"
AREA = 531,222 SF OR 12.19 ACRES

PARCEL 2, LOT #3
TAX MAP 42B, LOT 11
AREA PRIOR TO ADJUSTMENT 1,158,460 SF OR 26.59 ACRES
AREA AFTER ADJUSTMENT 1,142,010 SF OR 26.22 ACRES

PARCEL 2, LOT #2
LEASE AREA "B"
AREA PRIOR TO ADJUSTMENT 47,710 SF OR 1.09 ACRES
AREA AFTER ADJUSTMENT 64,160 SF OR 1.47 ACRES

LINE TABLE		
LINE	LENGTH	BEARING
L1	3.12'	S78°34'17"E
L2	25.35'	N68°25'34"W
L3	15.00'	N77°29'27"W
L4	4.90'	N13°44'59"E
L5	50.23'	S76°01'52"E

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

LOT TABLE - PARCEL 2			
LOT(S)	AREA S.F.	AREA ACRES	AREA TOTAL (AC)
LOT #1 LEASE AREA "E"	531,222	12.19	12.19
LOT #2 LEASE AREA "B"	64,160	1.47	1.47
LOT #3			
TAX MAP 42B, LOT 11 (WESTBROOK) (EXCLUDING LEASE AREAS "B" AND "E")	1,142,010	26.22	42.70
MAP 264, LOT A002/ MAP 265, LOT A003 (PORTLAND)	652,513	14.98	
MAP 264, LOT A004/ MAP 265, LOT A005 (PORTLAND)	65,496	1.50	
TOTAL OF ALL 3 LOTS	2,455,401	56.37 AC	

PARCEL 2, LOT #3
TAX MAP 264 LOT A002 / TAX MAP 265 LOT A003
AREA= 652,513 SF OR 14.98 ACRES

PARCEL 2, LOT #3
TAX MAP 264 LOT A004/ TAX MAP 265 LOT A005
AREA= 65,496 SF OR 1.50 ACRES

APPROVED - CITY OF PORTLAND
PLANNING & URBAN DEVELOPMENT DIRECTOR

DATE:

APPROVED - WESTBROOK, ME
PLANNING BOARD

DATE:

STATE OF MAINE
GORDON D. HISLOP JR. 2293
REGISTERED LAND SURVEYOR

CERTIFICATION:

THIS SURVEY MAP IS IN ACCORDANCE WITH CHAPTER 90, PARTS 1 & 2 OF THE STATE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS EXCEPTING A WRITTEN REPORT AND LEASE LINE MONUMENTS TO BE SET PRIOR TO BUILDING PAD TURNOVER.

Gordon D. Hislop Jr. 11-16-2018

GORDON D. HISLOP, JR. PLS #2293 DATE:
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

NOTES:
1. ON JULY 19, 2016, THE WESTBROOK PLANNING BOARD GRANTED DIRIGO CENTER DEVELOPERS, LLC A WAIVER FROM THE SUBMISSION REQUIREMENTS OF SECTION 502.4 OF THE LAND ORDINANCES OF THE CITY OF WESTBROOK THAT THE SUBDIVISION FINAL PLAN FOR DIRIGO PLAZA MUST CONTAIN ALL OF THE INFORMATION REQUIRED BY SECTION 502.4, SO THAT THE APPLICANT IS NOT REQUIRED TO SHOW ALL OF THE INFORMATION ON THE FINAL PLAN, BUT INSTEAD MAY PROVIDE ALL OF THAT REQUIRED INFORMATION IN THE DIRIGO PLAZA PLAN SETS AS SUBMITTED.
2. ACCESS TO LEASE LOTS "E" AND "B" WILL BE IN ACCORDANCE WITH INTERIOR ACCESS ROADS SHOWN ON SITE PLAN, PART OF A SITE PLAN APPLICATION ON FILE WITH THE CITY OF WESTBROOK DATED SEPTEMBER 6, 2016, WHICH ABUT LEASE LINES AS INDICATED HEREON.
3. REFER TO SHEET A2 FOR ALL ASSOCIATED EASEMENTS AND CONDITIONS OF APPROVAL FROM THE CITIES OF WESTBROOK AND PORTLAND. (PREVIOUSLY RECORDED C.C.R.D. 217/384)

PROJECT PARCEL
CITY OF WESTBROOK
TAX MAP 42B, LOTS 11 & 14
CITY OF PORTLAND
TAX MAP 264, LOTS A002 & A004
TAX MAP 265, LOT A003 & A005

APPLICANT
DIRIGO CENTER DEVELOPERS, LLC
C/O WATERSTONE PROPERTIES GROUP, INC.
322 RESERVOIR STREET
NEEDHAM, MA 02494

TOTAL AREA OF PARCELS
3,562,177 SQ. FT.
81.78 ACRES

Design: WGM	Draft: MJS	Date: 7/10/18	
Checked: WGM	Scale: 1" = 100'	Project No.: 14110	
Drawing Name: 14110-LLA-LEASE-AREA-B.DWG			

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

REV.	DATE	REVISION	BY
6	10/10/18	REVISED LEASE AREA "B" & AREA TABLE	DMC
5	7/27/18	ADDED DEED REFERENCE	MJS
4	7/26/18	REVISED PER REVIEW COMMENTS	DMC
3	7/18/18	REVISED PER REVIEW COMMENTS	MJS
2	7/16/18	REVISED PER REVIEW COMMENTS	MJS

Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: AMENDED SUBDIVISION PLAT
Project: "ROCK ROW" 80 MAIN STREET & 11 LARRABEE ROAD, WESTBROOK, ME
Owner of Record: DIRIGO CENTER DEVELOPERS, LLC. C/O WATERSTONE PROPERTIES GROUP, INC. 322 RESERVOIR STREET NEEDHAM, MA 02494

DRAWING No. A4
SHEET 1 OF 1
JBE PROJECT NO. 14110

PLANNING BOARD REPORT
PORTLAND, MAINE

Medical and Adult Use Zoning Text Amendments

Submitted to: Chair Dundon and Members of the Planning Board Public Hearing Date: November 27, 2018	Prepared by: Christine Grimando, Senior Planner Date: November 21, 2018

I. Introduction

The State of Maine recently legalized adult use (recreational) marijuana and made significant changes to the Medical Use of Marijuana Act, both of which have land use implications. In response to these changes are enclosed zoning amendments for both medical and adult use marijuana. The draft amendment (Attachment 1) includes proposed new uses, locations, dimensional standards as well as supplemental use standards. Zoning districts impacted by the text amendment include the B-2, B-2b, B-2c, B-3, B-3c, B-7, B-4, I-H, I-L, I-Lb, I-M and I-Mb. Provisions for small-scale marijuana caregivers as home occupations would also regulate activities within residences.

In addition to being responsive to changes in state law, the proposed amendments strive to balance both the needs and wishes of a burgeoning new sector of the local economy with reasonable limits on location, size, and performance standards. The zoning amendments serve to significantly update the City's medical marijuana standards and provide a unified zoning framework for both medical and adult use marijuana.

An overview of existing regulations, the proposed amendments, as well as revisions since the November 13th workshop, follows.

II. BACKGROUND

Portland has had regulations in place for medical marijuana since 2010. It's a simple framework, consisting of defined uses and zones where those uses are permitted or conditionally permitted. The two definitions are *Registered medical marijuana dispensary* and *Registered medical marijuana cultivation facility*:

***Registered medical marijuana dispensary**: "Registered medical marijuana dispensary" or "dispensary" means a not-for-profit entity registered under 22 M.R.S.A. section 2428 that acquires, possesses, cultivates, manufactures, delivers, transfers, transports, sells, supplies or dispenses marijuana or related supplies and educational materials to registered patients who have designated the dispensary to cultivate marijuana for their medical use, and the registered primary caregivers of those patients.*

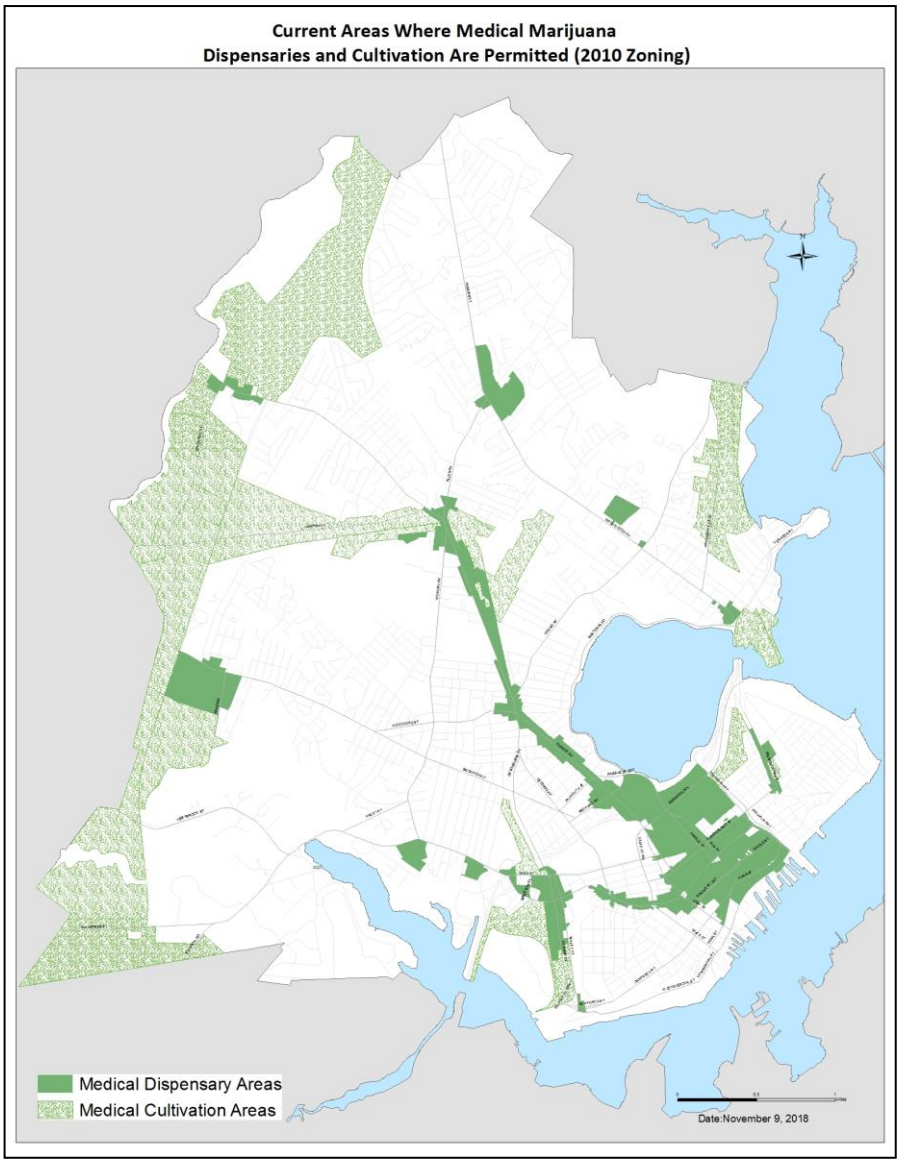
***Registered medical marijuana cultivation facility**: "Registered medical marijuana cultivation facility" means a facility registered under 22 M.R.S.A. section 2428 that cultivates and manufactures marijuana or related supplies for a "registered medical marijuana dispensary" under common management and operating under the same state and local license(s).*

These two existing uses are currently permitted in the following zones (in Table I and associated map):

Table 1, Existing medical marijuana uses/zones

Use	Zones Permitted
Registered medical marijuana dispensaries	B2, B2b (conditional use), B2c (conditional use), B3, B3c, B7
Registered medical marijuana cultivation facilities	B4, IH, IL, ILb, IM, IMb

There have been changes to State law since 2010 that necessitate changes both to Maine medical marijuana law and to address the legalization of adult use (recreational) marijuana. In October 2018, the Council adopt a moratorium on new caregiver medical marijuana retail stores, manufacturing facilities, testing facilities, and grow facilities (see Attachment 4 for a summary of state marijuana law and considerations that informed the moratorium and Attachment 5 for the adopted moratorium) to provide time for the City to develop appropriate standards. The goal is to have a zoning framework in place by expiration by the time of the moratorium's expiration on December 13th.



Map of areas permitting existing medical marijuana uses (2010 zoning)

III. PROCESS

Planning staff has participated in an internal working group to consider the multi-disciplinary implications of local regulation of both adult use and medical marijuana, including, life safety, code enforcement, permitting, licensing, and zoning. There has also been a council workshop and a public hearing on the moratorium, which included a discussion on the overall approach to zoning amendments. Staff has also met with various individuals within the medical and adult use

marijuana industry, including representatives of dispensaries, caregivers, testing facilities, cultivation and manufacturing.

In addition to developing a zoning framework, the City is developing a licensing framework, the ultimate timing and final substance of which is contingent on state rulemaking. Recreational marijuana will not become effective until the State and City pass a comprehensive licensing scheme. Implementing adult use marijuana zoning prior to licensing allows the City create a land use framework for adult use marijuana that will be effective as soon as licensing is implemented and that will provide clarity and guidance for those planning to pursue adult use marijuana-related businesses.

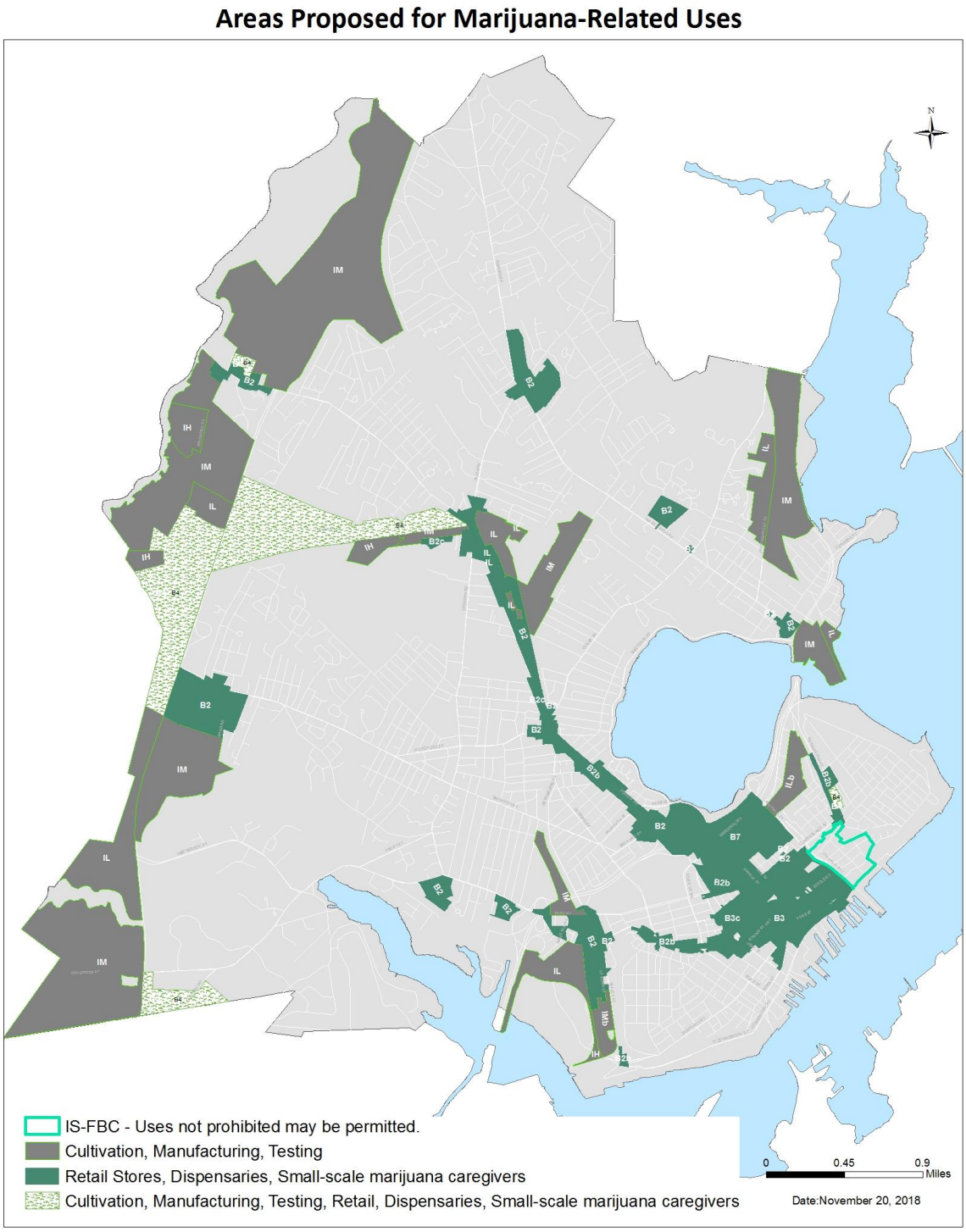
The Planning Board held a workshop on this item on November 13th. Feedback was received during public comment at the workshop that included concerns about prohibition of accessory uses to retail, visibility of business activities, and regulation of deliveries.

IV. PROPOSED AMENDMENTS

Our recommended approach for implementation of adult use and expanded medical marijuana zoning is to build off of the existing geographic framework for dispensaries and cultivation, adding new definitions and use categories to supplement the existing two marijuana-related definitions in the Land Use Code. These include *Marijuana, Marijuana Cultivation, Testing Facility, Marijuana Manufacturing Facility, Marijuana Retail Store, Registered Patient and Small-scale marijuana caregiver*. Added since November 13th is a definition of *Plant Canopy*. Retail stores are proposed where dispensaries are currently permitted, and testing, cultivation and manufacturing are proposed for the same zones as the current use of *Registered medical marijuana cultivation facility,* which currently encompasses manufacturing as well as cultivation. One change of permitted uses by zone, following discussion at the November workshop, is to allow marijuana retail stores and registered dispensaries in the B-4 zone. Another is to allow small-scale marijuana caregivers in commercial spaces in multiple B zones, in addition to allowing them as home occupations. Though not a change to the zoning text, the IS-FBC permits uses not prohibited, and so could potentially accommodate marijuana-related uses if they are able to meet the form and related requirements of the zone. The uses proposed as part of the current text amendment are proposed for the following zones:

Table 2, Proposed marijuana uses by zone:

Use	Zones Permitted
Marijuana cultivation facility	B4, IH, IL, ILb, IM, IMb
Marijuana manufacturing facility	B4, IH, IL, ILb, IM, IMb
Marijuana retail store	B2, B2b (conditional use), B2c (conditional use), B3, B3c, B4, B7
Marijuana testing facility	B4, IH, IL, ILb, IM, IMb
Registered dispensary	B2, B2b (conditional use), B2c (conditional use), B3, B3c, B4, B7
Small-scale marijuana caregiver	B2, B2b, B2c, B3, B3c, B4, B7, and as Home Occupation



Map of proposed marijuana uses by zone

Though the existing medical marijuana zoning forms the geographic framework for where new uses would be permitted, recommendations for new zoning regulations include new size caps for certain uses, such as a maximum retail store size and maximum plant canopy areas for cultivation facilities to reflect the intended intensities of the

respective industrial zones. Recommendations are included for regulating small scale caregivers as home occupations and as low impact commercial uses, a use previously regulated under State law but only recently something municipalities have the ability to regulate.

The draft zoning amendment does not distinguish between adult use and medical marijuana where the uses converge, creating unified performance standards and scale limits as much as possible – medical retail and adult use retail, for instance, though they may have different licensing requirements, are anticipated to have similar needs from a land use policy perspective, and warrant similar consideration of size limits and performance standards. Similarly, medical and adult use cultivation, manufacturing, and testing warrant similar treatment.

V. AMENDMENT UPDATES

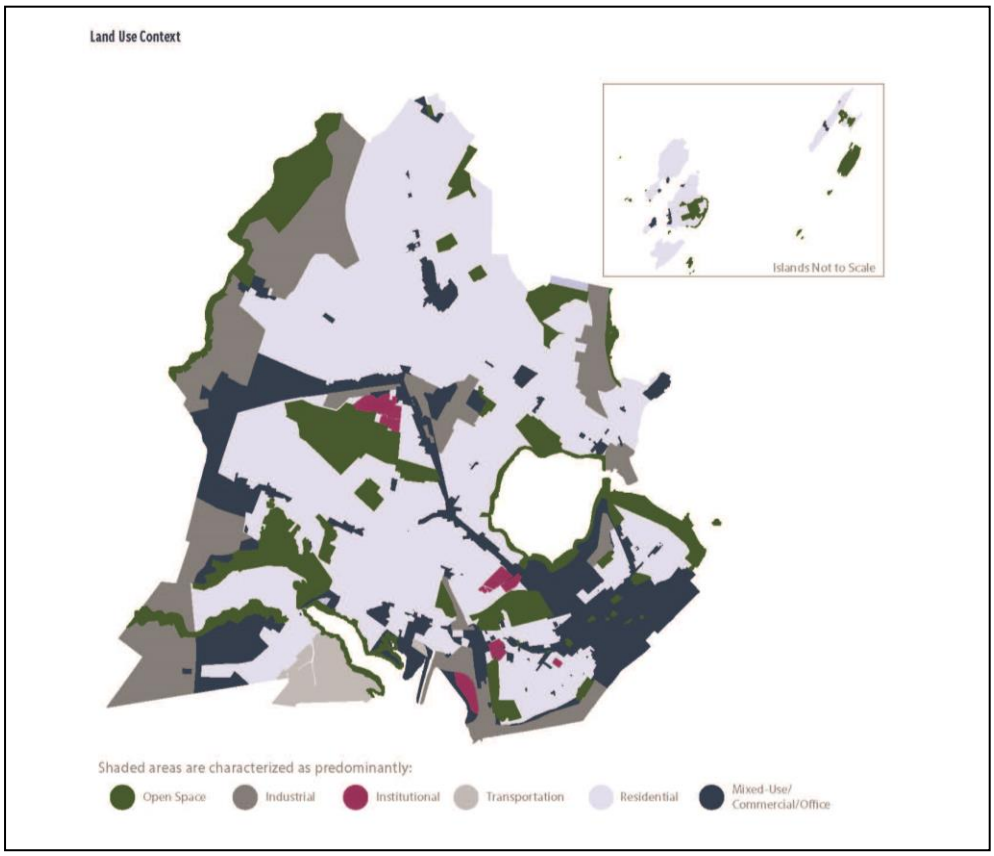
A number of revisions have been made to the ordinance amendment since the November 13th workshop, based on Planning Board feedback, public comment, and continued staff discussion. The Planning Board workshop discussion focused on location criteria, accessory uses in retail stores and performance standards such as odor, hours, and deliveries.

- Retail store and dispensary has been added to the B-4 zone. As a business zone that also allows for a number of industrial uses, it is the sole zone that is proposed to allow manufacturing, cultivation, testing, as well as retail and accessory uses.
- Small-scale marijuana caregivers have been added as permitted uses to the B2, B2b, B2c, B3, B3c, B4, B7 zones. Clarifying language about the time period for the five patient maximum and the sharing of common facilities have been added, as well.
- Size limits:
    1. A size cap of 2,000 square feet has been added to the definition of retail store.
    2. A maximum 2,000 square feet of plant canopy for cultivation has been added to the I-L/I-Lb zone.
    3. A maximum 7,000 square feet of plant canopy for cultivation has been added to the B4, IH, IM, IMb I-M, I-H, and B-4 zones. Canopy caps limit mature plant growing area, but do not limit related activities within a cultivation facility, such as office and storage areas ancillary to the cultivation.
    4. Small-scale marijuana caregiver maximum cultivation areas have been changed from a total maximum plant limit to maximum plant canopy areas of 250 square feet for single family homes or a commercial space, and 125 square feet for dwelling units in two-family or multi-family buildings. The intent of this change is to allow small-scale caregivers many possible areas to operate, while insuring the scale is limited in its impact.
- Accessory Uses in retail stores. The pervious iteration of the definition of retail store prohibited all sales accessory to marijuana sales, but following the November 13th workshop this was amended to allow sales of incidental accessories but not food or beverages.
- Supplemental Use regulations:
    1. Small-scale marijuana caregiver has been added to the marijuana-related uses with a distance requirement from schools.
    2. Retail stores and dispensaries have been are not subject to the distance requirement from residential zones.
    3. Prohibition on visibility of marijuana-related activities is not included.
    4. Prohibition on deliveries is not included.
    5. Additional odor control language has been added.

6. Hours of operation limits are not included.
7. The requirement for a security plan is not included.

In regard to hours of operation, delivery restrictions, and security requirements, these are items that can be considered as the City develops local licensing requirements, but that aren't best addressed in the Land Use Code. In considering which of these items to not include in the zoning text amendment, but instead pass along for potential inclusion in licensing requirements, staff has evaluated what activities, standards, and land use impacts are best addressed by zoning and other, related tools of the Land Use Code (such as site plan review, where applicable), and these have to do with physical form, scale, intensity of uses, and location.

- Home occupations. The previous memo indicated that small-scale marijuana caregivers, proposed as a home occupation, would be permitted in the R-zones. The City's Land Use Code specifies home occupations as permitted uses in the residential zones (and is mentioned as an accessory use in the I-B). Section 14-404 of the code indicates that home occupations are considered accessory uses, which would make them permitted accessory uses in residences city-wide, regardless of zone. No change has been made to the home occupations section included in the draft to indicate this, but this serves to clarify the geographic implications of where home occupations may occur.



Land Use Context from Portland's Plan 2030

VI. COMPREHENSIVE PLAN POLICIES

Marijuana isn't addressed specifically in *Portland's Plan 2030*, but the plan is encouraging to new areas of economic growth. The plan's vision supports *creating a resilient economy through innovation, investment, and commitment to diversity* (p.6). The Economy Policy Guide *supports creating economic prosperity by growing Portland's tax and employment base* and promoting *an economic climate that increases job opportunities and overall economic well-being* (p.43). Future Land Use reinforces the continued importance of City's industrial and mixed-use areas (p.81, see

inset).

VII. NEXT STEPS

Following Planning Board recommendations on the enclosed text amendments, the recommendations will be forwarded to the City Council for consideration.

VIII. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of the information contained in the Planning Report and testimony presented at the Public Hearing, the Board finds:

The proposed Zoning text amendments to Division 1, Sec. 14-47, Definitions; Division 10, B-2, B-2b and B-2c Community Business Zones; Division 12, B-3, B-3b, B-3c Downtown Business Zones; Division 12.5, B-4 Commercial Corridor Zone; Division 13, I-L and I-Lb Industrial Zones; Division 14, I-M, I-ma and I-Mb Zones; Division 17, B-7 Mixed Development District Zone; Division 15, I-H and I-Hb Industrial Zones; Division 24, Use Regulations and Exceptions [**is or is not**] in conformance with the City of Portland's Comprehensive Plan and therefore [**recommends or does not recommend**] approval of the amendments to the City Council.

IX. ATTACHMENTS

1. Zoning Text Amendments 11-21-2018
2. Map of areas currently permitting medical marijuana uses (2010 Zoning)
3. Map of areas proposed for marijuana-related uses
4. Background Memo form Corporation Counsel
5. Adopted Moratorium

Division 1. Generally

…

Sec. 14-47, Definitions

Marijuana cultivation facility. A cultivation facility required to be licensed pursuant to 22 M.R.S. § 201 or any other facility engaged primarily in the business of planting, propagation, growing, harvesting, drying, curing, grading, trimming or other processing of marijuana, including mature marijuana plants, immature marijuana plants, seedlings and marijuana seeds, for use or sale.

Marijuana manufacturing facility. A manufacturing facility required to be licensed pursuant to 22 M.R.S. § 2423-F or 28-B M.R.S. § 201.

Marijuana product. As defined by 22 M.R.S. §2422 or 28-B M.R.S., §102.

Marijuana retail store. A retail establishment licensed to sell marijuana, marijuana products, immature marijuana plants and seedlings to adult use or medical marijuana customers. A marijuana retail store is only authorized as a principal use, and is not permitted as an accessory use. Accessory sales of incidental accessories are permitted, but no food or beverage shall be sold on the premises. A marijuana retail store may not exceed a maximum gross floor area of 2,000 square feet.

Marijuana testing facility. A facility licensed to develop, research and test marijuana, marijuana products and other substances as defined by 22 M.R.S. §2422 or 28-B M.R.S., §102.

~~**Registered medical marijuana cultivation facility**: "Registered medical marijuana cultivation facility" means a facility registered under 22 M.R.S.A. §2428 that cultivates and manufactures marijuana or related supplies for a "registered medical marijuana dispensary" under common management and operating under the same state and local license(s).~~

~~Registered medical marijuana dispensary: "Registered medical marijuana dispensary" or "dispensary" means a not-for-profit entity registered under 22 M.R.S.A. section 2428 that acqueris, possesses, cultivates, manufactures, delivers, transfers, transports, sells, supplies or dispenses marijuana or related supplies and educational materials to registered patients who have designated the dispensary to cultivate marijuana for their medical use, and the registered primary caregivers of those patients.~~

Plant Canopy. As defined by 28-B M.R.S., §102.

Small-scale marijuana caregiver. A registered caregiver who sells or dispenses marijuana to no more than five individual registered patients in any one calendar month; does not process or manufacture marijuana using chemicals or solvents; cultivates no more than 1) 250 square feet of plant canopy where located in a single-family dwelling or commercial space, or 2) 125 square feet of plant canopy where located in a dwelling unit within a two-family or multi-family building; and who does not share any common areas used in the caregiver operation with any other caregiver.

Registered dispensary. A registered medical marijuana dispensary as defined by 22 M.R.S. §2422.

Registered patient. As defined by 22 M.R.S. §2422.

…

Division 10. B-2, B-2b and B-2c Community Business Zones

…

Sec. 14-182. Use Table

….

Group[1]	Use	B-2[2]	B-2b	B-2c
B	Marijuana retail store	Y	C	C
B	Registered dispensary ~~medical marijuana dispensaries~~	Y	C	C
B	Small-scale marijuana caregiver	Y	Y	Y

…

Division 12. B-3, B-3b and B-3c Downtown Business Zones

Sec. 14-217. Permitted uses

(a) The following uses are permitted in the B-3, B-3b and B-3c zones:

…

2. Business:

…

r. Registered dispensary ~~medical marijuana dispensaries.~~

s. Marijuana retail store

t. Small-scale marijuana caregiver

…

Division 12.5. B-4 Commercial Corridor Zones

…

Sec. 14-229.11. Permitted uses.

The following uses are permitted in the B-4 zone:
(a) Business:

27. ~~Registered medical~~ Marijuana cultivation facility~~ies~~ (maximum 7,000 square feet of plant canopy)

24. Marijuana manufacturing facility

25. Marijuana testing facility

26. Marijuana retail store

27. Registered dispensary

28. Small-scale marijuana caregiver

…

Division 13. I-L and I-Lb Industrial Zones

…

Sec. 14-232. Permitted uses

The following uses are permitted whether provided by private or public entities in the I-L ~~low impact industrial~~ zone and the I-Lb zone:

…

(r) ~~Registered medical~~ Marijuana cultivation facility~~ies~~ (maximum 2,000 square feet of plant canopy).

…

(x) Marijuana manufacturing facility

(y) Marijuana testing facility

…

Division 14. I-M, I-Ma and I-Mb Industrial Zones

…

Sec. 14-247. Permitted uses

The following uses are permitted whether provided by private or public entities in the I-M moderate impact industrial zone, the I-Ma and the I-Mb zone:

…

(v) ~~Registered medical~~ Marijuana cultivation facility~~ies~~ (maximum 7,000 square feet of plant canopy).

…

(z) Marijuana manufacturing facility

(aa) Marijuana testing facility

…

Division 17. B-7 Mixed Development District Zone

…

Sec. 14-295. Permitted uses

The following uses are permitted in the B-7 zone:

(a) Commercial:

…

22. Registered dispensary ~~medical marijuana dispensaries~~

…

27. Marijuana retail store

28. Small-scale marijuana caregiver

…

Division 15. I-H and I-Hb Industrial Zones

Sec. 14-262. Permitted uses

The following uses are permitted whether provided by private or public entities in the ~~high impact industrial~~ I-H zone and the I-Hb zone:

(t) ~~Registered medical~~ Marijuana cultivation facility~~ies~~ (maximum 7,000 square feet of plant canopy)

…

(x) Marijuana manufacturing facility

(y) Marijuana testing facility

…

Division 24. Use Regulations and Exceptions

Sec. 14-401. Generally

The requirements of this article shall be subject to the use regulations and exceptions of this division.

…

Sec. 14-410. Home occupation.

Purpose. The purpose of home occupations is to allow the secondary and incidental use of a residence for the conduct of appropriate occupations whose external activity levels and impacts are so limited as to be compatible with the residential character of the neighborhood.

(a) In connection with the operation of a home occupation, within a dwelling unit, the following requirements shall be met:

1. A home occupation shall not occupy more than five hundred (500) square feet of floor area or more than twenty-five (25) percent of the total floor area of such a dwelling unit, whichever is less, or in the case of licensed family day care homes, or home babysitting services, to accommodate not more than six (6) children plus two (2) children after school and having no nonresidential employees;
2. There shall be no outside storage of goods and materials nor shall there be exterior displays, or display of goods visible from the outside;
3. Storage of materials related to the home occupation shall count as a part of the occupancy limitations in subsection (a)1 above, but shall not constitute a dominant part of such occupancy provided, however, storage of such materials or products in garages or other accessory structures is prohibited;
4. Exterior signs shall be limited to one (1) nonilluminated sign not exceeding a total area of two (2) square feet, affixed to the building and not projecting more than one (1) foot beyond the building;
5. Any exterior alterations to the residence shall be compatible with the architecture of the building and maintain the residential appearance by virtue of exterior materials, lighting, and signs;
6. *Off-street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article;
7. The home occupation shall not produce offensive noise, vibration, smoke, dust or other particulate matter, odorous matter, heat, humidity, glare or other objectionable effects;

8. There shall be no more than one (1) nonresident employed in the home occupation, provided, however, family day care or home babysitting services shall have no nonresident employees;
9. No traffic shall be generated by the home occupation in greater volumes than would normally be expected in a residential neighborhood;
10. No motor vehicle exceeding a gross vehicle weight of six thousand (6,000) pounds shall be stored on the property in connection with the home occupation.

(b) No residence shall be occupied, altered or used for any home occupation except the following:

1. Accountants and auditors;
2. Answering services (telephone);
3. Architects;
4. Artists and sculptors;
5. Authors and composers;
6. Computer programming;
7. Custodial services;
8. Custom furniture repair and upholstering;
9. Dentists, doctors, therapists, and health care practitioners;
10. Direct mail services;
11. Dressmakers, seamstresses and tailors;
12. Engineers;
13. Family planning services;
14. Hairdressers (limited to no more than two (2) hair dryers);
15. Home crafts, such as model making, rug weaving, lapidary work, cabinet making, weaving, ceramics;
16. Interior decorators;
17. Lawyers, justices of the peace and notary publics;
18. Licensed family day care home or babysitting services;
19. Musicians or music teachers, including group instruction not to exceed six (6) students at any time but not including performances or band rehearsals, which shall meet the following requirements in addition to those set forth in subsection (a) of this section:

    a. Electronic amplification is prohibited;
    b. The applicant shall demonstrate that noise attenuation is provided which minimizes perception of sound at property lines at all times during the use. Noise attenuation measures may include, but are not limited to, insulation, double-pane windows, air conditioners or any combination of these or similar noise attenuation measures;
    c. Hours of operation shall be limited to 8:30 a.m. to 9:30 p.m.

20. Office facility of a minister, rabbi, or priest;
21. Photographic studios;
22. Professional counseling and consulting services;
23. Professional research services;
24. Sales persons provided that no retail or wholesale transactions are made on the premises;
25. Small appliance repair;
26. Snow plowing provided that only one (1) snow plow vehicle is stored on or generated from the site;
27. Special tutoring or instruction (not to exceed three (3) pupils at any given time);
28. Stenographic and other clerical services.

29. Small-scale marijuana caregiver, except that no more than one small-scale caregiver may operate out of any one dwelling unit.

(c) A home occupation that is not listed in paragraph (b) of this section but is similar to and no more objectionable than those home occupations listed in that paragraph, shall be permitted as a conditional use subject to the requirements of paragraph (a) of this section and section 14-474 (conditional use) of this article. This provision shall not include veterinarians, kennels, animal raising, funeral homes, retail uses including antique shops, restaurants, dancing studios, towing services, repair and painting of automobiles as home occupations.

Sec. 14-411. Marijuana Use Regulations

The following standards apply to the following marijuana-related uses: Marijuana cultivation facilities, Marijuana manufacturing facilities, Marijuana retail stores, Marijuana testing facilities, Small-scale marijuana caregivers and Registered dispensaries. Marijuana-related uses shall comply with all other applicable local and state requirements in addition to the standards below.

(a) Location Criteria

1. Neither a marijuana cultivation facility, a marijuana manufacturing facility, a marijuana testing facility, a small-scale marijuana caregiver, a marijuana store or a registered dispensary may be located within 500 feet of a preexisting public school, private school, or a public preschool program, as defined by 20-A M.R.S.A. §1. Distance shall be measured from nearest property line of the rmarijuana-related use to the property line of the lot containing the public school, private school, or public preschool program.

2. Neither a marijuana cultivation facility, a marijuana manufacturing facility, or a marijuana testing facility may be located within 200 feet of the following residential zones: R-1, R-2, R-3, R-4, R-5, R-5A, R-6, R-6A, or R-7. Distance shall be measured from nearest property line of the marijuana cultivation facility, manufacturing facility, or testing facility and the nearest applicable residential zone boundary.

(b) Supplemental Standards

1. Marijuana-related uses are only permitted within a fully enclosed building.

2. No outside storage of marijuana, marijuana products, or related supplies is permitted.

3. No drive-through service is permitted for marijuana-related uses.

4. No marijuana or marijuana product shall be smoked, eaten or otherwise consumed or ingested on the premises where sold.

5. An operating plan for small-scale marijuana caregivers, marijuana cultivation facilities, marijuana testing facilities, and marijuana manufacturing facilities shall be provided that at a minimum addresses the following:
   a. wastewater; and
   b. disposal of waste

6. A ventilation plan shall be provided for marijuana cultivation facilities, marijuana manufacturing facilities, and small-scale marijuana caregivers that provides for adequate ventilation so as to prevent pesticides, insecticides or other chemicals used in the cultivation

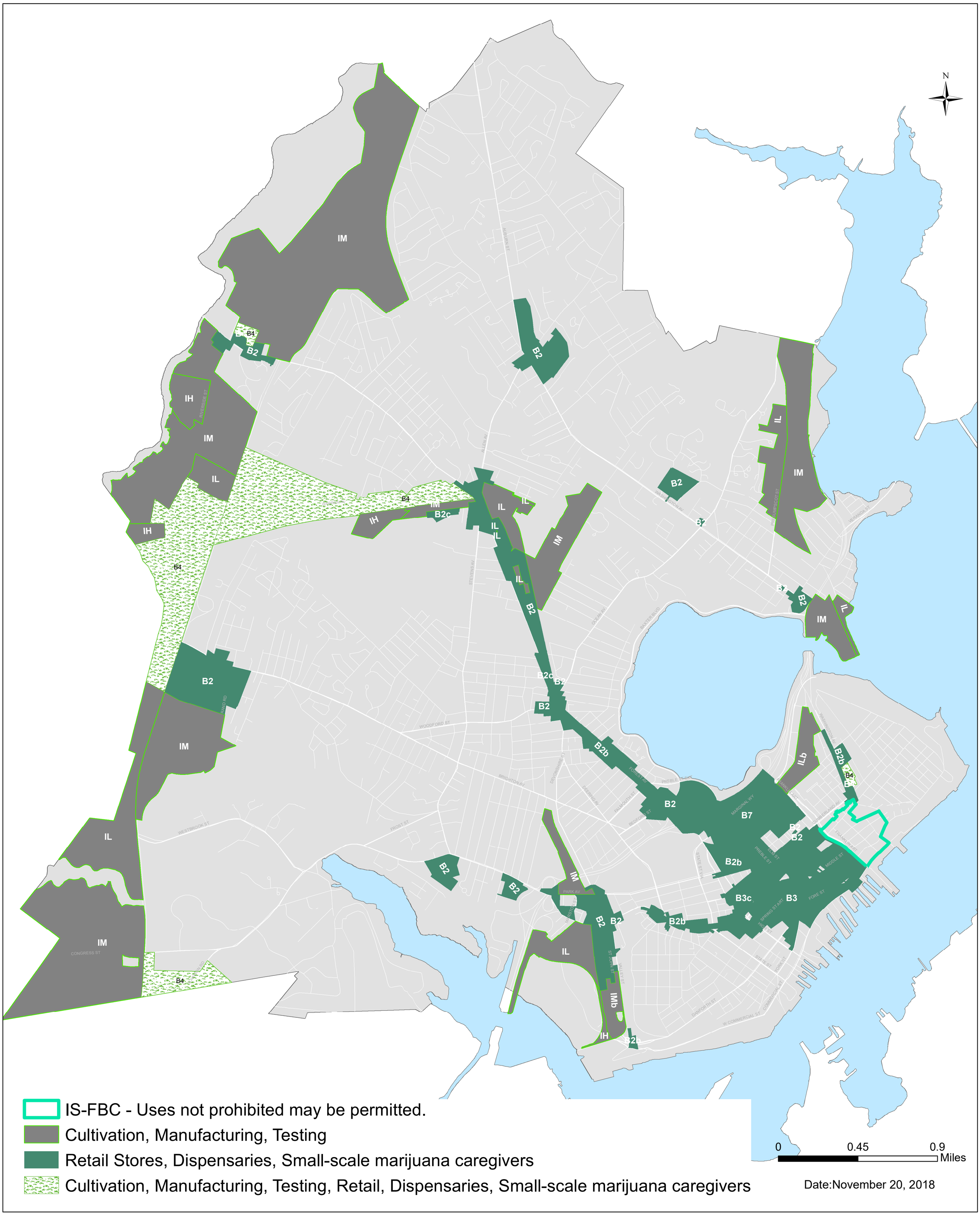
or processing of marijuana or marijuana related products from being dispersed or released outside the premises. The plan shall further provide for resulting smoke, vapor, fumes, gases and particulate matter from marijuana or its processing or cultivation to be effectively confined to the premises.

7. Marijuana-related uses shall provide odor control measures so that odor generated on site is mitigated at the property line of the lot containing the marijuana-related use. Applications must demonstrate appropriate measures, such as carbon filtration, ventilation and exhaust systems, facility plans or other additional practices adequate to mitigate odors for the scale of operations for the uses proposed.

Sec. ~~14-411~~14-412. – Sec. 14-420. Reserved.

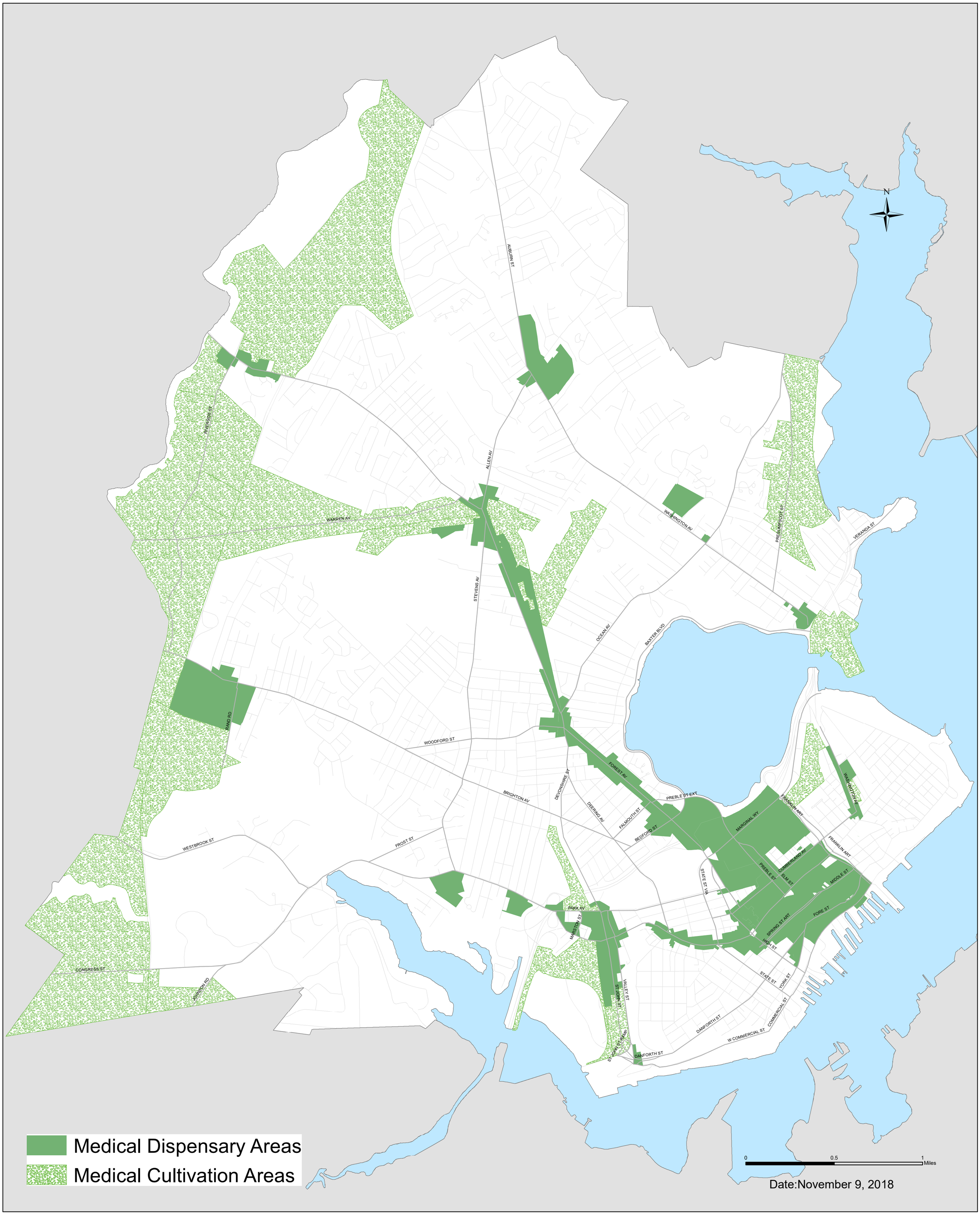
Att. 2

Areas Proposed for Marijuana-Related Uses



Current Areas Where Medical Marijuana Dispensaries and Cultivation Are Permitted (2010 Zoning)

Att. 3



MEMORANDUM

TO: City Council; Mayor Strimling
FROM: Anne Torregrossa, Associate Corporation Counsel
DATE: September 20, 2018
RE: Summary of Status of Medical Marijuana Laws as they Relate to the Proposed Medical Marijuana Moratorium

Staff is recommending that the Council adopt a moratorium on new caregiver medical marijuana retail stores, manufacturing facilities, testing facilities, and grow facilities of a certain size. The moratorium would apply retroactively to all pending applications for these uses, so long as those applications were filed after July 9, 2018. If the Council adopts the proposed moratorium with the retroactivity provision intact, the effect would be to put the pending applications on hold. Those pending applications would then be taken up once the City has had a chance to adopt a comprehensive set of ordinances for this industry. The resulting ordinances would govern which of the new provisions would apply to the currently pending applications.

The need for, and timing of, this moratorium arises out of the passage of two bills in the legislature relating to new caregiver uses – LD 238 and LD 1539 – which were passed over the governor's veto on July 9, 2018. For years, the scope and authority of a municipality to regulate registered medical marijuana caregivers has been unclear under state statute. However, with the emergency passage of LD 238, municipalities explicitly received authorization to regulate registered caregivers for the first time. LD 238 provides that, "Pursuant to the home rule authority . . . a municipality may regulate registered primary caregivers, registered dispensaries, marijuana testing facilities and manufacturing facilities . . ." 22 M.R.S. § 2423-A(14). In addition to the provisions for local control, LD 238 also made some changes to the law surrounding marijuana testing facilities and caregiver manufacturing facilities. Importantly, although the law contemplates that the state will enact a full licensing and regulatory scheme for testing and manufacturing facilities, it allows those facilities to begin operating without the safeguards.

LD 1539, on the other hand, was not passed as an emergency, and will not take effect until December 13, 2018. LD 1539 is a much more robust and detailed bill. LD 1539 adds in significant detail about the process for registration of caregivers (similar to licensing) at the state level, allows the state to share certain information with local code officers, has annual reporting requirements, and changes some requirements for dispensaries. It also authorizes caregiver retail stores for the first time.[1] Unlike LD 238, which allows manufacturing and testing facilities to open before the state can get its licensing in place, LD 1539 requires municipal approval before manufacturing, testing, or retail stores can open (an "opt-in" clause). LD 1539 also provides that all retail stores, registered dispensaries, marijuana testing facilities, and manufacturing facilities are grandfathered if they are open and "operating with municipal approval in the municipality" prior to December 13. Once LD 1539 goes into effect, no more caregiver facilities may open until the City enacts its

[1] While caregiver retail stores are not currently permitted, some caregivers have been "cycling" their fifth patient so that they are essentially selling to anyone who walks through their door. In May of this year, new regulations by DHHS went into effect that made this practice more difficult for anyone operating a separate storefront, but it has not stopped the practice. The distinction between caregivers who are cycling their fifth patient and those who are operating a retail store is not clarified in state law.

licensing program (a so-called "opt-in" provision). However, any facilities that have opened up with municipal approval are allowed to continue and are "grandfathered." This means that manufacturing and testing facilities have a short window within which to open –between July 9, 2018 and December 13, 2018 – or they have to wait until the City implements a fully developed licensing scheme.

This memo summarizes the current gaps in state and local legislation that indicate the need for a moratorium. It also summarizes the standards to enact a moratorium, state law governing retroactivity, and the City provisions for emergency passage. Finally, more detailed summaries of LD 238 and LD 1539 are attached.

I. GAPS IN STATE LAW AND PURELY LOCAL REQUIREMENTS

LD 238 and LD 1539 have created a strange situation where manufacturing and testing facilities have an incentive to rush to establish a permitted presence in the gap between July 9, 2018 and December 13, 2018. If they do so, they will gain grandfathered status and will also not need to wait for local licensing to be up and running. However, those establishments will be coming in at a time where there is relatively little state regulation, and minimal local regulation.

A. Gaps in State Law

At the state level, the more detailed restrictions and requirements are found in LD 1539, which will not go into effect for another three months. This includes important requirements about labeling, packaging, tracking, record keeping and reporting, education, and signage. None of the caregiver facilities that open between now and December will be subject to those requirements.

Further, none of the rules for either bill have been developed. LD 238, for example, contemplates specific rules for testing facility director qualification requirements and security requirements. It also requires rules for manufacturing facilities including registration of the facility and key players, extraction using inherently hazardous substances, director qualifications, security, a disposal plan, record keeping, and educational materials. Looking at the existing rules currently in place for dispensaries, there are many gaps in regulation that we can expect the state to fill with rulemaking.

Finally, while LD 238 requires ISO[2] certification for labs and NFPA 2018 standards for manufacturing facilities using inherently hazardous substances, there is no one at the state level checking those certifications, and no one yet trained at the City level to do so. Similarly, although there are background check requirements and criminal history disqualifications, because there is no licensing scheme, no one is doing those checks to ensure that new businesses cropping up are being run by appropriate personnel. The Department of Administration and Financial Services, the state agency that will be running this program, still needs to get its regulatory and enforcement arms up and running.

[2] ISO is the International Organization for Standardization and is a third party who puts out international standards on various topics.

B. Local Requirements

In addition to the anticipated state law, rules, and licensing, there are purely local requirements that will need to be put into place. Some anticipated proposals will include:

- Zoning requirements to ensure that facilities open in appropriate locations and that there is no disproportionate impact on certain areas;
- Separation requirements from schools and other sensitive uses for all types of facilities;
- Separation requirements for retail stores from each other, from dispensaries, and from adult use stores;
- Separation requirements for manufacturing and cultivation facilities from residential properties to mitigate odor concerns;
- Odor mitigation requirements;
- Safety requirements;
- Provisions anticipating the switch from medical to adult use facilities in the future;
- Capping the size of facilities to avoid pushing out other industries;
- Licensing scheme to consider qualifications, likely including criminal history as well as financial and technical capacity; and
- Fire and life safety requirements in addition those that currently apply to manufacturing facilities using inherently hazardous substances.

Other places that have implemented more robust marijuana programs than Maine have already felt the growing pains of inadequate planning. One refrain that staff and I consistently heard from Colorado and other jurisdictions was to get out ahead of the industry with regulations in order to avoid negative impacts on residents and businesses. Frequently cited consequences were the clustering of facilities, the concentration of facilities in low income areas, significant changes to neighborhoods, inadequate building and fire regulations, the improper citing of facilities without thought to traffic, crime, and other impacts, and the need to be able to address an ever-evolving industry. The State of Colorado and a marijuana cultivation facility have been embroiled in litigation that has already gone up on appeal to the Tenth Circuit Court of Appeals over a complaint by neighbors of the facility who claim that the smell interferes with the enjoyment of their property. Maine also has a pending case where a condo owner has sued her neighbors for the nuisance created from the smell of marijuana.

In addition to clear regulations, staff needs training. They need resources to be able to evaluate applications in this relatively new industry. They also need education to be able to enforce even existing state laws, let alone anticipated new laws, rules, and ordinances. Most importantly, staff needs training on how to do all of this with an eye towards safety for themselves and the public. Examples of issues that have already arisen include improper storage and disposal of plants; manufacturing and testing facilities with inadequate fire and life safety protections and questionable operations; mobile testing facilities; electrical system overloads; and neighborhood impacts.

II. STANDARDS FOR MORATORIA, RETROACTIVITY IN MORATORIA AND ORDINANCES, AND EMERGENCY PASSAGE

The standards for moratoria, retroactivity, and emergency passage are all very deferential to the municipal officers.

A. Moratorium Standards

A municipal moratorium may be enacted for up to 180 days if it is needed, "Because the application of existing comprehensive plans, land use ordinances or regulations or other applicable laws, if any, is inadequate to prevent serious public harm from residential, commercial or industrial development in the affected geographic area." 30-A M.R.S. § 4356(1)(B). "Absent evidence to the contrary, a moratorium, like any other municipal ordinance, is presumptively valid." *Minster v. Gray*, 584 A.2d 646, 649 (Me. 1990). Any party who challenges a moratorium must establish "the complete absence of any state of facts that would support the need for the enactment." *Id.*, *quoting Tisei v. Town of Ogunquit*, 491 A.2d 564, 569 (Me. 1985). The absence of adequate zoning or other regulatory requirements has been upheld as an adequate justification for a moratorium. *See id* (moratorium on mobile home parks acceptable).

Without the proposed moratorium, caregiver testing and manufacturing facilities will have an incentive to rush into the market before LD 1539 goes into effect so that they will be "grandfathered" and allowed to continue operating. Until the state and the City establish their regulatory and licensing scheme, these businesses will operate with very little oversight or guidance.

B. Retroactivity Standards

State law provides that generally, "actions and proceedings pending at the time of the passage, amendment or repeal of an Act or ordinance are not affected thereby." 1 M.R.S. § 302. However, the Law Court has explained that § 302 "does not expressly or impliedly prohibit municipalities from applying ordinances retroactively." *Portland v. Fisherman's Wharf Assocs. II*, 541 A.2d 160, 164 (Me. 1988). Instead, it is simply a rule of statutory construction that does not apply where the legislative body (here, the City Council) is clear on its desire to make the legislation apply retroactively. *Kittery Retail Ventures, LLC v. Town of Kittery*, 2004 ME 65, ¶ 17.

The law in Maine is quite permissive in allowing municipalities to enact legislation that has retroactive application. In fact, in "neither the submission of a development application, nor the issuance of a development permit, establishes vested rights" that would prevent retroactivity. *Kittery Retail Ventures, LLC*, 2004 ME 65, ¶ 24. Additionally, a party's "mere reliance on the language of an existing ordinance, or the incurrence of preliminary expenses to satisfy application requirements, is not sufficient" to change the municipality's rights in this respect. *Id.*

If the moratorium is not made retroactive, the applications for three additional extraction facilities and one testing lab will continue to move forward and be processed.[3] If these facilities open before December 13, 2018, they will be grandfathered and will be operating in an environment with minimal standards and oversight.

C. Emergency Passage

Ordinarily, City ordinances take effect 30 days after passage. However, the Council has the authority to pass emergency ordinances. The charter provides:

> The city council may, by vote of at least seven (7) of its members, pass emergency ordinances, orders, or resolves to take effect at the time indicated therein, but such emergency ordinances, orders, or resolves shall contain a section in which the emergency is set forth and defined, provided, however, that the declaration of such emergency by the city council shall be conclusive.

City of Portland Charter Art. III, § 11. This standard does not require an imminent threat of significant harm, or some other heightened standard. The Council's determination of the need for emergency passage is final.

If the moratorium is not passed as an emergency, then additional manufacturing and testing facilities will have an incentive to rush in to get permitted in the additional 30-day period before the moratorium takes place. Additionally, larger cultivation facilities, where multiple caregivers are sited at the same location, will have the same incentive. As discussed above, both state and local requirements have significant gaps that are needed to protect residents, existing business, neighborhoods, and customers of the new facilities themselves. Also, the short time frame may encourage businesses who do not have fully developed resources, business plans, or knowledge to rush into the market to hold their place.

[3] It is unlikely that the retail store application will be granted, given that retail stores are not yet allowed under state law.

ATTACHMENT A
LD 238 – CAREGIVER TESTING AND MANUFACTURING

LD 238 paves the way for manufacturing facilities, and also provides additional requirements for testing facilities. While the bill specifically contemplates a state licensing scheme, it allows these facilities to move forward without state licensing.

A. Testing Facilities.

Testing facilities have been allowed for several years under state law, although it was previously unclear whether they could open in the absence of state rules and licensing. LD 238 clarified that testing facilities could open without state approval, and also added the requirement that labs be accredited to ISO/IEC 17025 standards. As discussed above, it also made it clear that the City could regulate these facilities. Under current state law, testing facilities must:

(1) Dispose of marijuana residue in a manner that prevents diversion of marijuana to persons not authorized to possess marijuana tested by the facility;
(2) House and store marijuana in the facility's possession or control during the process of testing, transport or analysis in a manner to prevent diversion, theft or loss;
(3) Label marijuana being transported to and from the facility with the following statement: "For Testing Purposes Only"; [and]
(4) Maintain testing results as part of the facility's business books and records.

22 M.R.S. § 2423-A(10)(C). Testing facilities must also "obtain and must be able to produce, upon demand of the department or a municipal code enforcement officer, documentation of the facility's accreditation pursuant to standard ISO/IEC 17025 of the International Organization for Standardization by a 3rd-party accrediting body." 22 M.R.S. § 2423-A(10)(E). This ISO standard largely governs documentation of processes and procedures.

State statute specifically contemplates that the State will further develop rules regarding "(1) Marijuana testing facility director qualification requirements; (2) Required security for marijuana testing facilities; and (3) Requirements for the licensing, certifying or other approval of marijuana testing facilities." 22 M.R.S. § 2423-A(10)(D). The state has not promulgated any of these rules, and there are no specific requirements in these areas.

B. Caregiver Manufacturing Facilities.

Although caregivers have been allowed to extract and manufacture marijuana products, LD 238 fleshes out the requirements for stand-alone manufacturing for caregivers. State law distinguishes between caregiver manufacturing facilities that engage in extraction using "inherently hazardous substances," and those that do not. Inherently hazardous substance is defined as "a liquid chemical; a compressed gas; carbon dioxide; or a commercial product that has a flash point at or lower than 38 degrees Celsius or 100 degrees Fahrenheit, including, but not limited to, butane, propane and diethyl ether. 'Inherently hazardous substance' does not include any form of alcohol or ethanol." 22 M.R.S. § 4-D.

Caregivers who do not extract using inherently hazardous substances are not subject to NFPA 2018 standards and are subject to only a few requirements. State statute requires that they "Shall dispose of marijuana used in the manufacturing process in a manner that prevents diversion of marijuana to persons not authorized to possess marijuana or marijuana products possessed by the facility and in accordance with rules adopted by the department," and must also label their product with certain information. 22 M.R.S. § 2423-F(4)(D), (9).

Caregivers who do use inherently hazardous substances are subject to additional requirements, including:

(1) Certification from a professional engineer licensed in this State of the safety of the equipment used for marijuana extraction and the location of the equipment and the professional engineer's approval of the standard operating procedures for the marijuana extraction;
(2) Documentation from a professional engineer licensed in this State or a state or local official authorized to certify compliance that the equipment used for marijuana extraction and the location of the equipment comply with state law and all applicable local and state building codes, electrical codes and fire codes, including the chapters of the most recent National Fire Protection Association Fire Code relating to marijuana extraction facilities; [and]
(3) Documentation from the manufacturer of the marijuana extraction system or a professional engineer licensed in this State showing that a professional grade, closed-loop extraction system that is capable of recovering the solvents used to produce marijuana concentrate is used by the person or entity.

22 M.R.S. § 2423-F(3)(A). Officers and employees of manufacturing facilities using inherently hazardous substances must also pass a criminal background check. 22 M.R.S. § 2423-F(8)(B). The facilities must also "maintain records of all transactions for a minimum of one year after the date of the transaction." 22 M.R.S. § 2423-F(12).

The State is required to adopt rules specifically addressing the following:

A. Requirements for the registration of a manufacturing facility and the principal officers, board members and employees of a registered manufacturing facility;
B. Requirements for engaging in marijuana extraction using inherently hazardous substances;
C. Manufacturing facility director or principal officer qualification requirements;
D. Required security for manufacturing facilities;
E. Requirements of a disposal plan for marijuana used in the manufacturing process;
F. Minimum record-keeping requirements, including an annual audit requirement; and
G. Minimum content of educational materials provided to the recipient of the marijuana products or marijuana concentrate.

22 M.R.S. § 2423-F(10). Again, the State has not promulgated any of these rules, and there are no specific requirements with respect to manufacturing facilities in these areas.

ATTACHMENT B
LD 1539 – CAREGIVER RETAIL STORES
AND ADDITIONAL REGULATION

A. Caregiver Retail Stores.

One of the more significant changes in LD 1539, is that it explicitly authorizes registered caregivers to operate a retail store. Currently, retail stores are not permitted, although the distinction between a caregiver who is cycling his or her fifth patient and one who is operating a retail store is unclear. This issue may be dealt with at the state level through rule making, or the City could address it through ordinances.

B. Manufacturing of Edibles

LD 1539 also implements several specific protections around the production of edible marijuana products. Among other requirements, edibles must be manufactured so that cannabinoid content and marijuana concentrate is consistent throughout the product; may not be manufactured in the shape of a human, animal, or fruit; may not contain additives that are toxic or harmful to humans or that are designed to make the product appeal to persons under 21; and may not be added to a trademarked food or drink product except under limited circumstances.

C. Additional Restrictions

LD 1539 has very specific packaging requirements for marijuana sold in a retail transaction, including that it be:

A. Prepackaged in child-resistant and tamper-evident packaging or placed in child-resistant and tamper-evident packaging with a signifier that the package contains harvested marijuana at the final point of sale to a qualifying patient;
B. Prepackaged in opaque packaging or an opaque container or placed in opaque packaging or an opaque container with a signifier that the package contains harvested marijuana at the final point of sale to a qualifying patient;
C. Packaged in a container with an integral measurement component and child-resistant cap if the marijuana product is a multiserving liquid; and

. . .

Any package required under this subsection that contains edible marijuana products must include a signifier that the package contains harvested marijuana.

It also includes specific packaging restrictions, including that marijuana sold may not be:

A. Labeled or packaged in violation of a federal trademark law or regulation or in a manner that would cause a reasonable consumer confusion as to whether the harvested marijuana was a trademarked product;
B. Labeled or packaged in a manner that is specifically designed to appeal particularly to a person under 21 years of age;

C. Labeled or packaged in a manner that obscures identifying information on the label or uses a false or deceptive label;
D. Sold or offered for sale using a label or packaging that depicts a human, animal or fruit.

The new law will also require testing in certain situations, the distribution of educational materials, plant tracking and labeling, and significant record keeping requirements. It also limits signs, advertising, and marketing.

Order 69-18/19
Motion to postpone to October 1, 2018: 7-0 (Costa absent, Thibodeau recused and absent)
Amended by adding at the end of the title of the order "and medical marijuana grow facilities", at the end of the fourth whereas, "and 4) grow up to 30 plants per caregiver for medical use"; in the fifth and sixth whereas adding " grow facilities", in the seventh whereas adding "testing facilities, manufacturing facilities, and grow facilities", in the tenth whereas adding "grow facilities", "in the title of Article X adding " and Grow Facilities"; in section 17-124 last paragraph adding "and medical marijuana grow facilities"; in section 17-125 adding "Medical marijuana grow facility means a lot or parcel where more than one registered caregiver is growing medical marijuana for medical use", in 17-127 adding "or medical marijuana grow facility", in Sec. 17-128 "Pursuant to Article II, section 11 of the Portland City Charter, in order to protect the public safety and welfare of the City of Portland," and "be enacted as an Emergency, and begin on October 1, 2018" also adding "until December 13, 2018 for medical marijuana manufacturing facilities, medical marijuana retail stores and medical marijuana testing facilities. This moratorium shall begin on October 1, 2018 and continue until February 1, 2019 for medical marijuana grow facilities." Lastly by deleting section 17-129 and the two following Be It Further Ordered paragraphs: 8-0 on 10/1/2018 (Councilor Thibodeau recused)

Passage as amended: 8-0 on 10/1/2018 (Councilor Thibodeau recused)

Effective 10/1/2018

ETHAN K. STRIMLING (MAYOR)
BELINDA S. RAY (1)
SPENCER R. THIBODEAU (2)
BRIAN E. BATSON (3)
JUSTIN COSTA (4)

CITY OF PORTLAND
IN THE CITY COUNCIL

KIMBERLY COOK (5)
JILL C. DUSON (A/L)
PIOUS ALI (A/L)
NICHOLAS M. MAVODONES, JR (A/L)

AMENDMENT TO THE PORTLAND CITY CODE CHAPTER 17 RE: MORATORIUM ON MEDICAL MARIJUANA RETAIL STORES, MEDICAL MARIJUANA TESTING FACILITIES, AND MEDICAL MARIJUANA MANUFACTURING FACILITIES, AND MEDICAL MARIJUANA GROW FACILITIES

WHEREAS, the Maine Medical Use of Marijuana Act (the "Act"), codified in the Maine Revised Statutes in Title 22, Chapter 558-C, authorizes registered caregivers to possess, cultivate, and transfer medical marijuana to qualifying patients, as those terms are defined by 22 M.R.S. § 2422; and

WHEREAS, on July 9, 2018 the Maine Legislature enacted as emergency legislation PL 2017, c. 447 (LD 239), An Act to Amend the Maine Medical Marijuana Law, which expressly recognizes municipal home rule authority to regulate registered caregiver operations; and

WHEREAS, on July 9, 2018, the Maine Legislature also enacted PL 2017, c. 452 (LD 1539), An Act to Amend Maine's Medical Marijuana Law ("LD 1539"); and

WHEREAS, LD 1539 includes express authorization for registered caregivers to 1) operate retail stores for the sale of harvested medical marijuana to qualifying patients, 2) conduct marijuana testing for research and development purposes, 3) manufacture marijuana products and marijuana concentrates for distribution to patients, and 4) grow up to 30 plants per caregiver for medical use; and

WHEREAS, the unregulated location and operation of medical marijuana retail stores, testing facilities, manufacturing facilities and grow facilities within the City of Portland (the "City") raises legitimate and substantial questions about the impact of such activity on the City, including questions as to compatibility with existing land uses and developments in the City; the sufficiency of municipal infrastructure to accommodate such activity; and the possibility of unlawful sale of medical marijuana and medical marijuana products; and

WHEREAS, as a result of the foregoing issues, the location and operation of medical marijuana retail stores, testing facilities, and manufacturing facilities, and grow facilities within the City have potentially serious implications for the health, safety and welfare of the City and its residents; and

WHEREAS, existing ordinances are insufficient to prevent serious public harm that could result from the unregulated development of medical marijuana retail stores, testing facilities, manufacturing facilities, and grow facilities; and

WHEREAS, the City needs time to understand the impact of the amendments to the Act on the City's existing rules and ordinances regarding, among other things, zoning, land use, and fire and life safety requirements; and

WHEREAS, in the judgment of the City Council, the foregoing findings and conclusions constitute an emergency within the meaning of 30-A M.R.S. § 4356 requiring immediate legislative action; and

WHEREAS, a temporary prohibition on medical marijuana retail stores, testing facilities, and manufacturing facilities, and grow facilities is therefore appropriate in order to determine what regulations, if any, are necessary within the City as a result of the amendments to the Act:

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORTLAND, that the Portland City Code is hereby amended by adding an Article, to be numbered X, which said Article reads as follows:

ARTICLE X. MORATORIUM ON MARIJUANA CAREGIVER RETAIL STORES, TESTING FACILITIES, AND MANUFACTURING FACILITIES, AND GROW FACILITIES

Sec. 17-124. Necessity.

Municipalities are authorized by 30-A M.R.S. § 4356(1)(a) and (b) to enact moratoria for the following reasons:

a. To prevent a shortage or an overburden of public facilities that would otherwise occur during the effective period of the moratorium or that is reasonably foreseeable as a result of any proposed or anticipated development; or

b. Because the application of existing comprehensive plans, land use ordinances or regulations or other applicable laws, if any, is inadequate to prevent public harm from residential, commercial or industrial development in the affected geographic area.

In accordance with 30-A M.R.S. § 4356(1)(a) and (b) and for the reasons stated above, the Portland City Council hereby finds that a moratorium on medical marijuana retail stores, medical marijuana testing facilities, medical marijuana manufacturing facilities, and medical marijuana grow facilities is necessary and warranted in the City of Portland.

Sec. 17-125. Definitions.

Except as otherwise provided, the following definitions shall apply to this Article:

Marijuana extraction means the process of extracting marijuana concentrate from harvested marijuana using water,

lipids, gases, solvents or other chemicals or chemical processes.

Manufacturing or manufacture means the production, drying, blending, infusing, compounding or other preparation of marijuana and marijuana products, including the preparation of food, drink, or similar products from marijuana or marijuana products. Manufacturing includes, but is not limited to, marijuana extraction or preparation by means of chemical synthesis.

Medical marijuana grow facility means a lot or parcel where more than one registered caregiver is growing medical marijuana for medical use.

Medical marijuana manufacturing facility means an establishment that manufactures marijuana and marijuana products produced by a registered caregiver. Medical marijuana manufacturing facility does not include a single registered caregiver who solely manufactures marijuana and marijuana products out of marijuana legally grown by that caregiver for distribution to that caregiver's own patients.

Medical marijuana retail store means an establishment having the attributes of a typical retail establishment, such as, but not limited to, signage, regular business hours, accessibility to the public, regular sales to more than five individual qualifying patients in any one week, and sales directly to the consumer of the product. This includes, but is not limited to, an establishment meeting the definition of a retail establishment in Sec. 14-47 of this Code that is used by a registered caregiver to offer harvested medical marijuana or marijuana products for sale to qualifying patients.

Medical marijuana testing facility means an establishment that tests marijuana produced by a registered caregiver. Medical marijuana testing facility does not include a single registered caregiver who solely tests the marijuana legally grown by that caregiver for distribution to that caregiver's own patients.

Sec. 17-126. Conflicts/Savings Clause.

Any provisions of this Code that are inconsistent or conflicting with the provisions of this Article are hereby repealed to the extent applicable for the duration of this

moratorium. If any section or provision of this Code is declared by any court of competent jurisdiction to be invalid, such a declaration shall not invalidate any other section or provision.

Section 17-127. Violations.

If any medical marijuana retail store, medical marijuana testing facility, medical marijuana manufacturing facility, or medical marijuana grow facility is established in violation of this Article, it shall be subject to the penalties provided for in Sec. 1-15 of this Code.

Sec. 17-128. Term.

Pursuant to Article II, section 11 of the Portland City Charter, in order to protect the public safety and welfare of the City of Portland, this moratorium shall be enacted as an Emergency, and begin on October 1, 2018 and continue until December 13, 2018 for medical marijuana manufacturing facilities, medical marijuana retail stores and medical marijuana testing facilities. This moratorium shall begin on October 1, 2018 and continue until February 1, 2019 for medical marijuana grow facilities. It may be extended for additional 180 day periods by the City of Portland in accordance with 30-A M.R.S. § 4356(2).

PLANNING BOARD REPORT
PORTLAND, MAINE

Level III Site Plan, Conditional Use, Shoreland Zone and Site Location Amendment
400 W. Commercial Street, Canal Landing Ph. IV
PL-000216-2018
Canal Landing, LLC, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: November 27, 2018	Prepared by: Matthew Grooms, Planner Date: November 16, 2018

I. INTRODUCTION

Canal Landing, LLC has submitted a Level III site plan, conditional use and site location amendment application for a new 12,000 square foot maintenance building to be constructed at 400 West Commercial Street in the WPDZ Waterfront Port Development zone. The proposed use is a permitted use within the zone, however, given that the height of the proposed building will extend to 72' feet above average grade, the project triggers a conditional use review in accordance with Section 14-320(a). The proposed development is described as phase IV, as three prior approvals were granted by the Planning Board for developments at this site relating to boat maintenance, storage and repair, as well as office and retail. This development is subject to site plan, conditional use, site location and shoreland review. A Planning Board workshop was held on September 25, 2018 regarding this item.



Figure 1: Development site and proposed building location

The Public Hearing was noticed to 52 neighbors and interested parties, and the public notice appeared in the Portland Press-Herald on November 19th and 20th, 2018. The Planning Division has not received any public comments as of the completion of this Report.

Applicant: Canal Landing, LLC, Phin Sprague
Consultants: Stephen Bushey, P.E., Stantec Consulting Services INC.

Required reviews and requested waivers

Applicant's Proposal	Applicable Standards
Construction of new 12,000 square foot marine maintenance building with height of 72'	14-523 Site plan Required Approval and Applicability Level III Site Plan and 14-526 Site Plan Standards
Waivers	**Applicable Standards**
The applicant has requested a waiver of Maine DEP Ch. 500 Flooding Standard, siting capacity of the receiving body, the Fore River. Staff Recommendation: Staff recommends approval of this waiver request based upon the findings of the peer review engineer.	Technical Manual Section 5(IV), Submission Requirements, which requires that Level III site plans comply with the Maine DEP Chapter 500 Flooding Standard.

The applicant has requested a waiver of the Site Plan standard requiring two (2) bicycle parking spaces for every ten (10) vehicle parking spaces. Based upon a total parking requirement of twelve (12) spaces, a total of two bicycle parking spaces is required. Staff Recommendation: Based upon the proposed use, which is not anticipated to increase the number of employees, and available bicycle parking at Building D, staff support a waiver of this standard.	Section 14-526(a)(4)(b)(i)(b). Non-residential structures. Two (2) bicycle parking spaces for every ten (10) vehicle parking spaces for the first one hundred (100) required vehicle parking spaces.

II. PROJECT DATA

SUBJECT	DATA
Existing Zoning	Waterfront Port Development Zone (WPDZ)
Existing Use	Undeveloped/Boat Storage
Proposed Use	Marine Repair/Maintenance
Parcel Size	17.77 acres
Existing building footprint	0 SF
Proposed building footprint	12,000 SF
Existing floor area	0 SF
Proposed floor area	12,000 SF
Impervious Surface Area --Existing --Proposed --Net Change	 50,000 sq ft 65,000 SF 15,000 SF
Total Disturbed Area	12.7 acres
Parking Spaces -Existing -Proposed -Net change	 0 0 (Significant on-site parking capacity) 0

III. BACKGROUND AND EXISTING CONDITIONS

The development site is located north of the Fore River, south of West Commercial Street, west of the International Marine Terminal and east of Cassidy Point. Directly across West Commercial Street is primarily vacant land, with the Star Match commercial building being located further east. Further to the north lies the West End Neighborhood, with Danforth Street and Salem Street overlooking this site.

This site has 2,160 linear feet of frontage along West Commercial Street. Historically, this area was utilized as a rail yard, though the majority of these rail lines have since been removed. MDOT installed the existing line, which bisects the site running east-west in 2014 to serve the recently developed International Marine Terminal. The development area is relatively flat with the highest points along the property's West Commercial Street frontage at approximately 16' feet to 18' feet in elevation, sloping down to the Fore River. The site's lowest area, located along the bank of the Fore River, is between 9' and 10' feet in elevation. The flood hazard elevation in this area is 10' feet. The high annual tide line for the Fore River is 7.4' feet and the mean low water line is approximately -4' feet.

This property is located within the Waterfront Port Development Zone (WPDZ). This area of Portland's waterfront is intended for marine industrial uses and is an integral component of the city's working waterfront. At present, the site is undeveloped and sporadically used for boat and material storage. 'New Yard', which represents the portion of the western waterfront being utilized for boat storage and repair, has been under development since 2012, as identified in the timeline below.

TIMELINE

December 8, 2012 – Planning Board approves a boat yard and service yard on a 22-acre site just west of the Casco Bridge (currently occupied by the IMT). The approved site plan included a 42,000 SF boat repair building and regrading of approximately 7 acres of the site for boat storage and circulation. Additional site improvements included two boat ramps, a travel lift basin, floating docks, stormwater improvements, utility work, lighting and site landscaping.

August 27, 2013 – The applicant requested and received Planning Board approval for an amendment to the previous site plan allowing a phased development.

October 22, 2013 – The Planning Board approved a revised site plan, which shifted the two buildings shown in Phase I to the far westerly end of the site. This change avoided buildings being located on land that would later be acquired for IMT expansion. The first building was labeled as Phase 1b "proposed tension fabric building" with a footprint of 19,200 SF.

July 8, 2014 – The Planning Board approved an expansion of the IMT facility. The IMT site plan included approximately 17 acres previously controlled by New Yard. New Yard's remaining land, totaling 5 acre, contained their newly constructed 19,200 SF tension fabric building.

August 12, 2014 – The Planning Board approved a 27,600 SF addition to the existing building, intended for boat maintenance and repair.

January 12, 2016 – The Planning Board approved a new proposal by New Yard for construction of two new buildings intended for use as marine retail space and administrative offices. Additional site improvements included site regrading, installation of a pervious gravel surface across approximately 12 acres of newly acquired property for boat display and storage, and construction of a 2,400 SF shell building at the southwestern corner of the site, to be used by Waynflete Academy for storage of small personal watercraft. Conditions of approval included the installation of street trees, contributions of $65,000 and $25,000 for construction of a dedicated left turn lane and improvements to West Commercial Street as identified in the West Commercial Street Master Plan respectively.

September 6, 2017 – The City Council approved a text amendment to the WPDZ which permits taller structures across the zone while delineating more stringent dimensional standards for building lengh and lot coverage. The amendment also established basic design standards, a view corridor provision, and strengthened conditional use standards to promote marine activity.

January 23, 2018 – The Planning Board re-approved Canal Landing Phase III, which is described in greater detail under the timeline date, January 12, 2016. Approval of this site plan application lapsed, and the applicant was required to go back before the Board for approval.

February 27, 2018 – The Planning Authority approved a Level II site plan for construction of a concrete travel lift basin, to be located towards the easterly portion of the applicant's site. The travel lift transports vessels from the water to land, and is used to maneuver vessels around the site.



Figure 2: Image showing phases of development. Red indicates Ph. I & II, Blue indicates Ph. III, Purple indicates travel lift location, and green indicates Ph. IV.

IV. PROPOSED DEVELOPMENT

The applicant's proposal is to construct a new marine maintenance and repair building, totaling 12,000 square feet in gross floor area, that would be located towards the Fore River on the southerly side of the Maine DOT Rail corridor, approximately 187' feet from the West Commercial Street right-of-way (at its closest point) and approximately 160' feet from the highest annual tide line (HAT). The site is accessible via two separate railroad crossings, with the primary access point being located approximately 732' feet to the west of the proposed building, and the secondary access point being located approximately 35' feet to the northeast. No driveways are proposed, and vehicles accessing the site would be required to traverse the 'pervious manmade surface' material approved as part of Canal Landing Phase III and graded with the understanding the vehicles would be driving across this surface. This material according to the applicant is suitable for vehicle use.

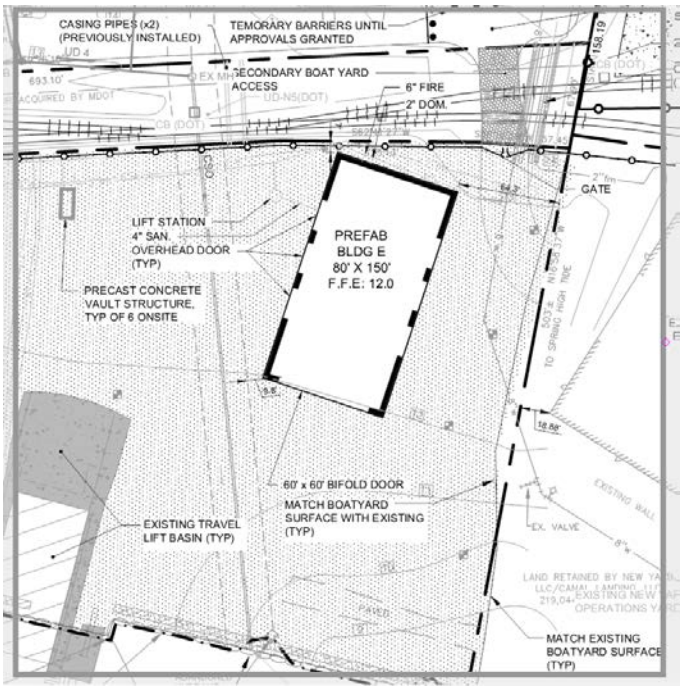


Figure 3: Proposed development plan for Ph. IV

Around the exterior of the building, no significant site improvements are proposed, which would include off-street parking, landscaping or lighting. The staff had asked at the workshop that the applicant provide details regarding building lighting, and provide some vegetation, particularly to the north of the building between the building and Maine DOT right-of-way, as this space is not easily traversable. As part of the applicant's resubmission of plans, these comments were addressed, save for a photometric plan, which is being included as a condition of approval. The building will feature some new utility connections in the form of sanitary sewer, water and electric.

V. NEIGHBORHOOD MEETING AND PUBLIC COMMENT

As of the writing of this memo, the Planning Division has not received written public comment regarding this proposal. The required neighborhood meeting was held on Tuesday, August 28, 2018 at Portland Yacht Services, located at 100 West Commercial Street, and was attended by four (4) members of the public. At this meeting, those in attendance requested information on public access to the boatyard, and voiced concerns regarding traffic along West Commercial Street, particularly at the Bridge Street intersection.

In response, Mr. Sprague of Portland Yacht Services stated that while the boatyard contains no public waterfront access, that he was open to having members of the public visit the site and request permission for limited access. In regards to traffic, the city's traffic engineer has noted that the development is subject to a traffic movement permit, with conditions needing to be met within a five (5) year period, set to expire in January 2021, and that the proposed development will result in very limited additional trip generation.

Planning Board Workshop

A Planning Board workshop was held on September 25, 2018 to discuss the applicant's proposal. At that workshop, no members of the public spoke, and the Board requested that the applicant continue to work with staff to resolve concerns related to the design of the building and address other outstanding comments regarding stormwater management, utility connections and site lighting.

VI. STAFF REVIEW

A. ZONING

The zoning review contains the following sections; Waterfront Port Development Zone Review, Shoreland Zone Review and the Conditional Use Review.

i. Waterfront Port Development Zone Review

The project is located in the Waterfront Port Development Zone. The proposed uses, marine repair and maintenance are permitted uses within this zone. Under Section 14-319, Permitted Uses, it states that the proposed use, marine repair services, may exceed the maximum by-right height of 55 feet, though by doing so, it triggers a conditional use review. Height-based conditional uses within this area of the WPDZ, defined as, "east of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive and west of Casco Bay Bridge, on lots 5 contiguous acres or larger" are limited to a maximum height of 75 feet, as listed under Section 14-320.2. The highest point of the proposed building according to the applicant is 72 feet.

As a conditional use, this project is required to demonstrate compliance with both the zone-specific conditional use standards, Section 14-320(a), which are intended to ensure water access for water-dependent and marine-related uses, as well as the general conditional use standards as listed under Section 14-474(c)(2). The WPDZ also includes a provision for protecting access to the water for water dependent uses under Section 14-318.5, "No Adverse Impact on Marine Uses". The standards for that section are listed below.

Sec. 14-318.5

(a) The proposed non-water dependent use will displace an existing water-dependent use;

(b) The proposed use will reduce existing commercial vessel berthing space;

(c) The proposed nonwatery-dependent use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will

unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other uses to the water by water-dependent uses; or

(d) The siting of a proposed nonwatery-dependent use will substantially reduce or inhibit existing public access to marine or tidal waters.

The proposed use, which is considered both a water-dependent and marine-related use, does not impede access to the water by other such users and is further not subject to these particular standards based upon its classification.

Dimensional Standards Review

Lots located between Cassidy Point and the Casco Bay Bridge are permitted a lot coverage of up to 50%, a building height of 75 feet or less with building run of 300 feet or less (as measured parallel with West Commercial Street) for conditional uses. The proposed development falls within these limitations, with a lot coverage of 11.2%, proposed building height of 72 feet and building length of 80 feet. The staff are requesting that an updated building elevation be provided that includes the grade at all four corners of the building, to establish an average grade. The height of the building can then be confirmed.

Performance Standards Review

In compliance with Section 14-320.3. Performance Standards, the applicant has submitted an impact mitigation narrative summarizing how the project intends to meet the applicable performance standards.

(a) Outdoor Storage of Materials: Proposed storage of vessels will be entirely contained within designated areas requiring security access. The surface material, which is a porous manmade surface permitted by Maine DEP for stormwater quality control, serves to treat runoff contaminants.
Staff Finding: This applicant's proposal complies with this standard. The applicant has further indicated that they will be fully compliant with the Maine DEP Brightwork Manual, which sets state-wide standards related to storage of marine equipment.

(b) Noise: It is not anticipated that noise levels will exceed 55 decibels between 7:00 p.m. and 7:00 a.m.
Staff Finding: This applicant's proposal complies with this standard and there shall be minimal work occurring during evening and nighttime hours.

(c) Vibration: It is not anticipated that this phase of the development will result in significant vibration impacts.
Staff Finding: This applicant's proposal complies with this standard

(d) Federal and State Environmental Regulations: Proposed boat repair and maintenance activities will be performed in accordance with State and Federal regulations, so actions such as sand blasting and related boat work are managed and controlled to minimize emissions.
Staff Finding: This applicant's proposal complies with this standard.

(e) Discharges into Harbor Areas: Proposed discharge into the Fore River will occur either through the existing City drainage system (CSO), or through new drainage outfalls falling under Permit By Rule authorization from Maine DEP. The applicant has coordinated with the Portland Water District to execute an easement for this CSO, which was made a condition of approval for the Level II project for the travel lift.
Staff Finding: This applicant's proposal complies with this standard.

(f) Storage of Vehicles: This development does not involve the storage of vehicles, and boats are exempt from this requirement, as boat storage is a permitted use.

Staff Finding: This applicant's proposal complies with this standard.

(g) Landfill of Docking and Berthing Areas: Proposed development does not involve landfill of docking or berthing areas.
Staff Finding: This applicant's proposal complies with this standard

(h) Off-Street Parking: The proposed use requires a minimum of twelve (12) off-street parking spaces. While not striped the applicant has indicated that there is extensive space on-site for parking, and that the proposed development should be considered as an expansion of services and not capacity, and as a result, no additional employees are anticipated.
Staff Finding: The site itself possesses adequate parking for employees of the facility (which are not intended to increase as a result of this project), and is not accessible to members of the public, the staff find that there is sufficient off-street parking and that no new parking is required.

(i) Off-Street Loading: The proposed building will feature multiple overhead doors and ample maneuvering space for loading and unloading activities via the travel-lift.
Staff Finding: This applicant's proposal complies with this standard

(j) Shoreland and Flood Plain Management Regulations: Proposed activities are located outside of the shore land zone, and the city's zoning administrator has reviewed the project for compliance with the Shoreland Zone.
Staff Finding: This applicant's proposal complies with this standard.

(k) Lighting: Based upon the application material, it is not clear whether or not new lighting is being proposed. The applicant indicates that existing lighting, on-site and on adjacent sites, provides adequate levels of illumination.
Staff Finding: The staff have included a condition of approval that a photometric plan in compliance with Section 12 of the Technical Manual be provided prior to issuance of a building permit.

(l) Signs: No signs are proposed as part of this application.
Staff Finding: The applicant's proposal complies with this standard.

(m) Storage of Pollutants and Oily Wastes: According to the applicant, the proposal will be fully compliant with Maine DEP's Brightwork Manual, which establishes benchmarks and best practices for managing waste and pollution at boatyards and Marinas.
Staff Finding: The applicant's proposal complies with this standard

(n) Compatibility of non-marine uses with marine uses: The proposed use is considered a water-dependent use and does not trigger this standard.
Staff Finding: The applicant's proposal complies with this standard

(o) Design and Visual Character: The Board shall consider compliance of the proposed structure with the following criteria:
   a. In building design, including placement and screening of mechanical equipment, take into consideration long views to minimize negative visual impact and provide visual interest, and architecturally integrate exposed industrial systems and equipment where practical.
   b. Organize massing to emphasize certain parts of the building such as entries, corners, or different uses.
   c. Treat all facades, including the roof, with equal level of detail, and articulation.

d. Vary and articulate building facades to add scale and avoid large monotonous walls. Treatments such as texture, color, material changes, or shadow lines or murals must be used to add visual interest and avoid dull, flat, repetitive facades.
e. Use a scaling or articulation element such as stepback, canopy, or fenestration, as required for any street-facing façade within fifty (50) feet of West Commercial Street.

Staff Finding: Based upon these criteria, the staff are asking that a revised set of building elevations showing the location of building systems be provided. Building systems must be integrated into the roof form and are not to increase the absolute height of the building above 75' feet. The staff also suggest that the slope of the roof could be increased to create a more varied form. Aside from these two points, the overall façade treatment and disposition of the building are appreciated, as the narrowest portion of the building is oriented towards the street and the façade composition is intended to complement other existing buildings on-site (Attachment 4).



Figure 5: In terms of design, the proposed building will be very similar to the building above, albeit taller and less wide (as the broad gable roof was used to bring the overall height of the building into compliance under the previous ordinance)

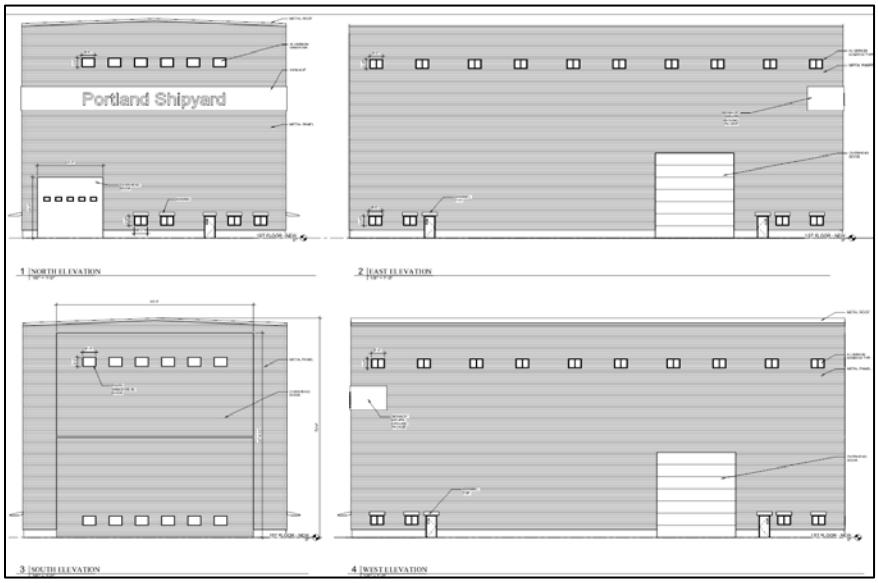


Figure 4: Proposed elevations for Paint Building

ii. Shoreland Zone Review

The Zoning Administrator, Ann Machado, has reviewed the application for Canal Landing Ph. IV and has provided the following comments (Attachment 3), largely requesting additional information on key topic areas and a narrative response outlining compliance:

> Flood Plain:
>
> The only real reference to the flood plain is in the Project Description as shown on Figure 7. This is from the Maine office of GIS. This is not the correct map to use for identifying the flood zone under our floodplain ordinance (Divison26.5). Portland is part of the National Flood Insurance Program and therefore the flood zone is based on the Flood Insurance Rate Maps (FIRMS) put out by FEMA. The area of development is located on Community Panel 230051 0016 B. Part of the property is located in the Flood Zone A2 (EL 10) and part is located in Zone C. The A2 Flood Zone line needs to be clearly located on the site plan. If any part of the proposed structure is located in the A2 Flood Zone, the applicant will need to submit the permits for Development in the Flood zone and either a flood elevation certificate or a Flood Proofing Certificate.
>
> Shoreland Zone: Division 26
>
> The extent of the Shoreland Zone needs to be clearly identified on the site plan.
>
> The property is located in the Waterfront Port Development Zone (WPDZ).
>
> Section 14-449(a)(1)(b) exempts any structure in the WPDZ zone from having to be set back 75′ from the highest annual tide.
>
> Section 14-449(c)(2) exempts the development in the WPDZ zone from the clearing or removal of vegetation standards in this section
>
> Section 14-449(d) addresses erosion and sedimentation control.
>
> Section 14-449(m) addresses Stormwater Runoff.
>
> Section 14-449(o) addresses General Site Plan Features in the Shoreland Zone.

Lauren Swett, P.E. with Woodard and Curran, has reviewed the proposal for compliance with city site plan standards related to Sec. 14-499(d) and Sec. 14-499(m), and has found the information provided to be insufficient, providing the following comments (Attachment 1) from the workshop:

- A stormwater management report has previously been submitted for the overall site. This should be provided and updated based on the current project.
- No site details are provided. At a minimum, plans should include details associated with utility work, surface restoration, and erosion and sedimentation control.

Lauren Swett's final review comments of recently submitted material and any potential conditions of approval will be available before the public hearing.

In regards to Sec. 14-499(o), the Planning Board shall approve a site plan located within the shoreland zone if it finds that the following standards, in addition to the standards set forth in 14-526, are met.

(a) The proposal will maintain safe and healthy conditions;

(b) The proposal will not result in water pollution, erosion, or sedimentation to surface waters

(c) This proposal will adequately provide for disposal of all wastewater

(d) The proposal will not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;

(e) The proposal will conserve shore cover and visual, as well as actual, points of access to inland and coastal waters;

(f) The proposal will protect archaeological and historic resources

(g) The proposal will not adversely affect existing commercial fishing or maritime activities;

(h) The proposal will avoid problems associated with floodplain development and use;

(i) The proposal is in conformance with the standards set forth this section.

iii. Height-Based Conditional Use Review in the WPDZ

"Marine Repair" uses are identified as a permitted use eligible for a height bonus under the conditional use standards, Section 14-320.2. An analysis of dimensional requirement compliance can be found above.

The conditional use standards for the WPDZ are listed below:

Section 14-320. Conditional Uses

(a) Conditional uses shall be permitted in the Waterfront Port Development Zone, provided that, notwithstanding section 14-471 (c), section 14-474(a), or any other provision of this Code, the Planning Board shall be substituted for the Board of Appeals as the Reviewing Authority.

In addition to the provisions of section 14-474(c)(2) such uses will:

- Not impede or preclude existing or potential water-dependent development on other lots;
- Allow for adequate access to the water;
- Be compatible with water dependent and marine uses;
- Operationally support one or more water dependent use(s), or be located in a building or structure that is physically adaptable or relocatable to make way for future development of water-dependent uses; and
- Meet any additional performance and dimensional standards set forth below.

The development as proposed is only considered a conditional use due to the height of the proposed building and not because of the use itself, which in fact is a water-dependent use. These zone-specific conditions are largely relevant to marine-related or non-marine uses permitted within the WPDZ only on a conditional basis.

With this said, the development does fully meet aforementioned standards. The proposed building is designed to be a short-term 20-year building that serves the marine repair and maintenance component of this operation. All portions of this site, including the proposed buildings are easily adaptable and or relocatable given their relatively temporary nature, and do not occupy space directly adjacent to the water. The development proposal as presented does not preclude future water-dependent uses in this location and further supports existing and proposed water-dependent uses at this location.

The staff finds that this application meets the WPDZ conditional use standards.

Section 14-474. Conditional Use

The Board shall, after review of required materials, authorize issuance of a conditional use permit, upon a showing that the proposed use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zoning district. The Board shall find that this standard is satisfied if it finds that:

(a) The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

Staff Review: This project is not anticipated to result in additional activity or traffic generation, given that facility would serve existing vessels currently being serviced elsewhere at this site. As such, staff finds that the proposal is in conformance with this standard.

(b) The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewerage disposal, emissions to the air, odor, lighting or litter; and

Staff Review: The proposed uses are not expected to produce any such impacts as stated above, thus, staff finds that the proposal conforms with this standard.

(c) The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash, or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

Staff Review: The proposed development will not differ from any other uses in this zone in regards to site design, given that the use is only a conditional use due to the building's proposed height, and not use. Staff are requesting that additional landscaping be provided.

B. SITE PLAN STANDARDS

(a) Transportation Standards

1. Impact on the Surrounding Street Network and Circulation

In reviewing the applicant's proposal against site plan standards regarding impacts to the surrounding street network and site circulation, the city's consulting traffic engineer, Tom Errico, found that the proposed development will not result in additional traffic impacts (Attachment 2).

2. Loading and Servicing

The site will be serviced via two separate driveways along West Commercial Street, which both provide access to one of two railroad crossings, located on either side of the proposed maintenance building. The driveway itself does not continue to the proposed building, though the applicant has indicated that the 'manmade pervious surface' is suitable for vehicle use.

As a marine maintenance and repair facility, much of the loading and servicing will actually arrive from the Fore River, and will be accessed using a marine travel lift, intended to transport marine vessels between the water and building. Tom Errico, in reviewing this proposal, has no concerns with the current configuration (Attachment 2).

3. Sidewalks

The project site has 2,160 linear feet of frontage along West Commercial Street, and given the fact that no sidewalk exists along the south side of West Commercial Street between the intersection of West Commercial and High Street (near Becky's Diner) and Cassidy Point, the applicant is requesting a waiver from the sidewalk requirement along their entire frontage. As this waiver was granted for phase 3 of this development, the staff does not believe a new waiver is required.

4. Public Transit Access

Not Applicable

5. Parking

The applicant has indicated that the proposed building is an expansion of services, not so much an expansion of capacity, and because of this, no additional employees are anticipated. Furthermore, given that the 'manmade pervious surface' is considered suitable for employee vehicles, the staff finds that there is sufficient on-site parking capacity.

6. Bicycle Parking

Given that no additional staff are anticipated, and as a result, no new additional parking, the proposal does not include new bicycle parking, though the applicant has requested a waiver of this criteria, which the staff support.

7. Snow Storage

The applicant has identified locations on their site plan for snow storage.

8. Transportation Demand Management (TDM)

Not Applicable

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features

The site is located on fill land which was developed for and used as a rail yard. Its natural features were disturbed many years ago and today the existing site has sparse vegetation.

2. Landscape and Landscape Preservation

The development site is undeveloped with no vegetation, and as such, no landscape preservation is required.

3. Site Landscaping

No site landscaping is proposed. Given that there is limited space for maneuvering between the proposed building and rail corridor, the staff are asking that landscaping be provided in this location.

4. Water Quality, Stormwater Management and Erosion Control

A description of the proposed stormwater scheme is provided below:

- The site's runoff conditions are primarily self-contained and runoff infiltrates or sheets to the Fore River; therefore, issues related to offsite or downstream flooding are not applicable. The Boatyard surface, consisting of a thick section of granular and crushed stone soils, provides for nearly 100% absorption, other than for very heavy rainfall events, thus water quality treatment is also achieved.

  All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

Reviewing Engineer, Lauren Swett, P.E., Woodard and Curran, has reviewed the final plan and her comments are listed below (Attachment 1) from the workshop. Her final review comments on recently submitted material and potential conditions of approval will be available prior to the public hearing.

- The Applicant has noted that they are requesting a waiver of the flooding standard. This should be documented on the waiver request sheet.
- A stormwater management report has previously been submitted for the overall site. This should be provided and updated based on the current project.
- No site details are provided. At a minimum, plans should include details associated with utility work, surface restoration, and erosion and sedimentation control.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans

The proposed development is highly supportive of the City's recently approved Comprehensive Plan, which provides a number goals and strategies to create a vibrant and diversified working waterfront. Two goals in particular identified in the Comprehensive Plan stand out as being highly compatible with this proposed development.

- Prioritize and promote Portland's unique mix of water-dependent, marine-related and compatible non-marine uses.
- Ensure the future of the marine economy through support for emerging marine industries and mitigation of market trends that could compromise the balance between marine industries and competing development.

The proposed marine maintenance and repair facility will further diversify the operations occurring at Canal Landing, which is poised to become the first true shipyard in the City of Portland. This facility will expand available services, enabling this operation to work on larger marine vessels such as those of the Casco Bay Line fleet.

2. Public Safety and Fire Prevention

The proposed development has been reviewed by Fire Chief, Robert Thompson, who offers the following comments in regards to Public and Fire Safety (Attachment 1).

- The street side of the building(s) must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.

3. Availability and Adequacy of Public Utilities

The applicant has supplied an ability to serve letter from the Portland Water District, though not letter has yet been submitted for Central Maine Power or Municipal wastewater. Submission of these letters shall be a condition of approval.

(d) Site Design Standards

1. Massing Ventilation and Wind Impact

It is not anticipated that the proposed development will result in adverse impacts related to ventilation or wind as a result of proposed massing.

2. Shadows

Not Applicable

3. Snow and Ice Loading

Not Applicable

4. View Corridors

Recent text amendments to the WPDZ require view corridors measuring a minimum of 90 feet in width to remain unbuilt to preserve a clear line of sight between West Commercial Street and the water. No formalized view corridor has been provided, although the intent of the view corridor provision is met given the substantial area left undeveloped.

5. Historic Resources

The site contains historic and archaeological resources. The 19th century seawall is currently being restored in conjunction with the proposed marine improvements as approved during phase 3 of this project.

6. Site Lighting

The applicant has submitted lighting plans and details that demonstrate compliance with the standards of Technical Manual Section 12, related to site lighting.

7. Noise and Vibration

The proposed develop is not anticipated to result in adverse conditions related to noise and or vibration.

8. Signage and Wayfinding

Not Applicable.

9. Zoning Related Design Standards

Please see discussion above

VII. FINANCIAL AND TECHNICAL CAPACITY

The applicant has provided a description of their technical capacity to complete the proposed project. Similarly, a letter from Norway Savings Bank was supplied demonstrating the applicant's financial capacity to complete the project, which is estimated to cost approximately $100,000 for site work, and $1.5 million to $2 million for construction of the building.

VIII. RIGHT, TITLE & INTEREST

The applicant supplied a Release Deed and Settlement Agreement demonstrating ownership of the property and property encumbrances.

IX. STAFF RECOMMENDATION

The Planning Division recommends approval of the Level III site plan, conditional use and site location amendment applications with the recommended conditions of approval under the Planning Board motion.

X. PLANNING BOARD MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on November 27, 2018 for application PL-000216-2018 relevant to Portland's site plan ordinance and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board **[finds/does not find],** based upon the consulting peer engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Standard Section 5 (IV) which requires that Level III site plans comply with the Maine DEP Ch. 500 Flooding Standard. The Planning Board **[waives/does not waive]** the Technical Manual Standard (Section 5(IV)) based upon the capacity of the receiving body, the Fore River.

2. The Planning Board **[finds/does not find],** based upon the consulting traffic engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the site plan standard (Section 14-526(a)(4)(b)), which requires that two (2) bicycle parking spaces be provided for every ten (10) vehicle parking spaces. The Planning Board **[waives/does not waive]** the Site Plan Standard (Section 14-526(a)(4)(b)) based upon the location of nearby bicycle parking at Building D along West Commercial Street.

B. CONDITIONAL USE

Height Based Conditional Use

On the basis of the applications, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on November 27, 2018 for application PL-000216-2018 relevant to the conditional use 'marine repair' where building height exceeds 55' feet as authorized by Division 18.5, Section 14-319; and the testimony presented at the Planning Board Hearing, the Planning Board [finds/does not find] that the proposed conditional use meets the standards of Section 14-320 and Section 14-474.

C. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on November 27, 2018 for application PL-000216-2018 relevant to the site plan, shoreland zone and site location of development regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the relevant standards, subject to the following conditions of approval that must be met in accordance with the following timeline:

Prior to applying for a Building Permit

1. The applicant shall provide updated building elevations that show the location of building mounted lighting and building systems. Roof-mounted mechanical equipment shall be integrated into the roof design with consideration of long views of the building, and shall not increase the absolute height of the building above 75' feet above average grade.

2. An updated site plan shall be provided showing the location of relevant flood zone lines, to determine the level of shoreland zone review necessary. If located in the A2 zone, the applicant shall submit permit applications for 'Development in a Flood Zone' and for either a 'Flood Elevation Certificate' or 'Flood Proofing Certificate'.

3. The applicant shall provide required 'ability to serve' letters for electrical and wastewater service.

4. The applicant shall address all outstanding comments contained in the Woodard and Curran Memo dated November 21st, related to stormwater management and utility connections.

Prior to issuance of a building permit

5. In accordance with a prior approval, the applicant shall TV the existing pipe located within the CSO easement to document any existing damage to the pipe. Following construction, the pipe shall again be inspected to determine if in the course of construction, any damage was caused. Given that the applicant will be transporting heavy equipment across this easement, if at any point in the future this pipe is damaged, it shall be the responsibility of the applicant to make repairs as necessary.

6. The applicant shall coordinate with the Department of Public Works on the development of an acceptable construction management plan.

7. The applicant shall update their stormwater maintenance agreement and have it reviewed and approved by the Department of Public Works and Corporation Counsel.

8. The applicant shall coordinate with City staff to assign an address for the proposed building that is consistent with 911, tax assessor, Inspections Division and future mailing address.

XI. ATTACHMENTS:

Attachments to Memorandum

1. Preliminary Planning and Peer Review Comments
2. Traffic Engineering Review comments
3. Shoreland Zone Review Comments
4. Design Review Comments

Applicant's Submittal

A. Project Description
B. Site Plan Checklist
C. Financial Capability
D. Right, Title & Interest
E. Technical Capacity
F. Waiver Requests
G. Zoning Assessment
H. Environmental and Stormwater Document
I. Environmental Landscape Features
J. Public Infrastructure & Safety
K. Site Design Memo
L. Transportation
M. Construction Management Plan
N. Ability to Serve Letter (PWD)

O. Erosion/Sedimentation Control and Stormwater Material
P. Stormwater Maintenance Agreement
Q. Response Letter (10.26.18)
R. Response Letter (11.14.18)
S. Response Letter (11.14.18)
T. Street View Renderings

Plans

P1. Cover Sheet
P2. Existing Conditions
P3. Site Layout Plan
P4. General Construction Notes
P5. Detail Sheet
P6. Building Elevations
P7. Site Lighting

PLAN CORRECTIONS REPORT PL-000216-2018
FOR CITY OF PORTLAND

PLAN ADDRESS: 400 West Commercial Street
Portland, ME 04101

PARCEL: 059 A003001

APPLICATION DATE: 06/26/2018

SQUARE FEET: 0.00

DESCRIPTION: Canal Landing New Yard - Phase IV (Building E)

EXPIRATION DATE:

VALUATION: $0.00

CONTACTS	Name	Company	Address
Agent/Representative	Stephen Bushey	Stantec	778 Main Street, Suite 8 So. Portland, ME 04106

Corrections Required

City Arborist — Jeff Tarling

Civil Engineering - Third Party Reviewer — Lauren Swett

v.1.00 - Not Resolved

Correction: General
All building utility services are shown on the existing conditions plan, but they are called out on the proposed site plan. Please clarify that these site items (lift station, sanitary, fire, and domestic services) are already installed.
Corrective Action: Provide written response and or updated plans

Correction: General
The Applicant has noted that they are requesting a waiver of the flooding standard. This should be documented on the waiver request sheet.
Corrective Action: Provide waiver request

Correction: General
No site details are provided. At a minimum, plans should include details associated with utility work, surface restoration, and erosion and sedimentation control.
Corrective Action: Provide updated plans

Correction: General
Utility ability to serve requests have been submitted for water and sewer. Final confirmation of ability to serve should be provided when received.
Corrective Action: Provide written confirmation from utility providers

Correction: General
Please provide additional clarity on the CSO easement that exists adjacent to the site, and what restrictions exist. We understand that this CSO and easement are under the authority of the Portland Water District, and not the City of Portland as was previously understood. Specifically, are there restrictions on filling and grading over the easement, and are there any long-term maintenance or access requirements.
Corrective Action: Provide update on status of CSO easement

Correction: General
A stormwater management report has previously been submitted for the overall site. This should be provided and updated based on the current project.
Corrective Action: Revise stormwater management report to reflect updated conditions.

Fire — Pool Fire

Parking — John Peverada

Planning — Matt Grooms

v.1.00 - Not Resolved

Correction: Screening of Site Features
In accordance with site landscaping standards, the proposed development should provide some vegetation between the building and Maine DOT ROW to provide visual interest and buffering between the building and rail corridor.
Corrective Action: Coordinate with City Arborist in developing a landscape plan.

Correction: Utility Capacity
Prior to the issuance of any building permits, a copy of all 'ability to serve' letters shall be provided to the Planning Authority, which demonstrate adequate utility capacity for the project.

Corrective Action: Provide written confirmation from utility providers.

Correction: General
Renderings of the proposed building shall be provided to confer impact of the proposed building upon the surrounding context. These renderings should include multiple perspectives taken from West Commercial Street and from the West End neighborhood.
Corrective Action: Provide renderings of proposed building

Correction: Bicycle Parking
Bicycle parking shall be provided at a rate of two spaces per ten vehicle spaces. If the applicant does not wish to provide bicycle spaces, then a waiver request shall be submitted.
Corrective Action: Update plans or provide written waiver request.

Correction: Emergency Vehicle Access
The project site shall be designed to ensure adequate emergency access, notably access for fire apparatus and proximity to required fire hydrants. The name and address of the property should be standardized across assessor and 911 records to ensure efficient response times in case of an emergency.
Corrective Action: Provide written response outlining emergency vehicle access.

Correction: Site Lighting
It is not clear from the applicant's submittal whether or not site lighting is proposed? The applicant shall indicate the location and type of all site lighting on applicable plan sheets, and shall include lighting details and photometric plans demonstrating acceptable illumination levels and light trespass. All proposed lighting shall be full cutoff and shall be in compliance with Section 12 of the City's Technical Manual.
Corrective Action: Provide written response and if necessary, update and or provide plan showing location of lighting along with relevant details and photometrics.

Correction: General
The building elevations submitted are not sufficient. An updated building elevation shall be submitted which includes the following information regarding facade materials, average building grade and height based upon that grade.
Corrective Action: Provide updated building elevation

Correction: Exterior/Roof-Mounted Mechanical Equipment
The location of all exterior and or rooftop mechanical equipment shall be shown on applicable plan sheets, including but not limited to HVAC systems, transformers, air handling units, emergency generators and meter boxes. In the case of this building, long views shall be taken into consideration from the surrounding neighborhoods.
Corrective Action: Update plan sheets as necessary

Correction: General
The applicant states that an impact mitigation narrative was included in the submitted material, however this does not appear to be the case. The staff are requesting that this document be resubmitted.
Corrective Action: Resubmit document

Public Works Engineering	Mike Farmer
Public Works Street Openings	Rhonda Zazzara
Public Works Water Resources	Nathaniel Smith
Public Works Water Resources Engineering	Doug Roncarati
Traffic - Third Party Reviewer	Tom Errico
Transportation/Planning	Bruce Hyman
Zoning	Pool Zoning

Conditions Required

Att. 2

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

400 W Commercial Street - Canal Landing Phase IV

Tom Errico <thomas.errico@tylin.com> Fri, Aug 31, 2018 at 7:37 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt – I do not have any comments from a traffic perspective. Thanks

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
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+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

From: Matthew Grooms <mgrooms@portlandmaine.gov>
Sent: Thursday, August 30, 2018 3:50 PM
To: Jeff Tarling <jst@portlandmaine.gov>; Swett, Lauren <lswett@woodardcurran.com>; Robert Thompson <rmt@portlandmaine.gov>; Tom Errico <thomas.errico@tylin.com>; Keith Gray <kgray@portlandmaine.gov>
Subject: 400 W Commercial Street - Canal Landing Phase IV

[Quoted text hidden]

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

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Canal Landing Ph. IV - Shoreland Zone Review

Ann Machado <amachado@portlandmaine.gov> Thu, Aug 30, 2018 at 10:05 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Matt -

Flood Plain:

The only real reference to the flood plain is in the Project Description as shown on Figure 7. This is from the Maine office of GIS. This is not the correct map to use for identifying the flood zone under our floodplain ordinance (Divison26.5). Portland is part of the National Flood Insurance Program and therefore the flood zone is based on the Flood Insurance Rate Maps (FIRMS) put out by FEMA. The area of development is located on Community Panel 230051 0016 B. Part of the property is located in the Flood Zone A2 (EL 10) and part is located in Zone C. The A2 Flood Zone line needs to be clearly located on the site plan. If any part of the proposed structure is located in the A2 Flood Zone, the applicant will need to submit the permits for Development in the Fllod zone and either a flood elevation certificate or a Flood Proofing Certificate.

Shoreland Zone: Division 26

The extent of the Shoreland Zone needs to be clearly identified on the site plan.

The property is located in the Waterfront Port Development Zone (WPDZ).

Section 14-449(a)(1)(b) exempts any structure in the WPDZ zone from having to be set back 75' from the highest annual tide.

Section 14-449(c)(2) exempts the development in the WPDZ zone from the clearing or removal of vegetation standards in this section

Section 14-449(d) addresses erosion and sedimentation control. Make sure that the criteria has been addressed.

Section 14-449(m) addresses Stormwater Runoff. Make sure that the criteria has been addressed.

Section 14-449(o) addresses General Site Plan Features in the Shoreland Zone. Make sure that this criteria has been addressed.

Does the location of the building require any approval from DEP under NRPA?

Let me know if you have any questions.

Ann

Ann Machado
Zoning Administrator
Permitting and Inspections Department
City of Portland, Maine
(207) 874-8709
[Quoted text hidden]

Planning and Urban Development Department
Planning Division

Subject: WPDZ Design Review – 400 W Commercial Paint Shed

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, November 14 2018

The project at 400 West Commercial Street – Canal Landing Paint Shed - was reviewed according to the adopted WPD Zone performance standards by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Shukria Wiar, Planner.

Questions & Outstanding items:

- What building systems are proposed and where will they be located?

Design Review Comments: *(questions and unmet standards in red)*
Sec. 14-320.3 Performance Standards

(k) Lighting – A photometric plan shows that site lighting will not have "an unreasonable adverse impact on adjacent residential zones" but also provides adequate lighting. Staff require location of lights on elevations and evidence that site lighting is cutoff.

(l) Signs – Signs will come under separate permit application according to Sign Ordinance in Division 22. The sign as shown in this submittal is not approved as part of this Site Plan review and approval.

(o) Design and Visual Character:

1) Long Views/Building Design: Change in roof form provides some visual interest to meet the standard however, staff suggest the slope could be increased to create a more varied form. The building orientation puts the narrow side to the street minimizing the visual impact of the building to the water from street level and the long views. Building systems - the project narrative suggests there will be systems on the roof – these must be shown on the elevations, be integrated into the roof forms, and not exceed the 75' height limit.

2) Massing: Massing and roof form are simple according to functional relationship of use and relationship to water and other buildings on-site.

3) Façades – equal treatment: More information is needed to evaluate this standard for rooftop systems showing they are integrated into the form. In terms of materials, this standard with all facades and roof using a material with texture.

4) Facades – variation and articulation: Project provides some visual interest with sloped roof line (though this could be steeper to vary the form), material texture, roof overhangs, windows. Canopies were added for articulation, function, and legibility to these side entries.

5) Scale and Articulation: Not applicable – building is further than 50' from street.

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

June 26, 2018

Mr. Matthew Grooms
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Canal Landing New Yard – Phase IV (Building E)
400 West Commercial Street
Level III Site Plan and Conditional Use Application
Applicant: Canal Landing, LLC

Dear Matthew:

On behalf of Canal Landing, LLC, we are pleased to provide the accompanying package of submission materials related to the proposed **Phase IV** Canal Landing New Yard development off West Commercial Street. This submission package is intended to meet the City's Submission Requirements as outlined in the Level III Application procedures.

As you are aware, the applicant has completed the initial phases of development consisting of two buildings constructed since late 2013 on their 5.03-acre remainder property positioned just to the southeast corner of the IMT Expansion project. The Portland Planning Authority previously approved these activities beginning in the fall of 2013. More recently in January 2018, the Planning Board approved the Phase III Site Plan for Buildings C & D and in February 2018 the Planning Authority approved a Level II Site Plan for the Travel Lift Basin construction and various and improvements. This current application is for the next phase **(Phase IV)** of development activity which will include the development of an 80' x 150' Maintenance Building (E), to be located on the waterfront parcel near the new Travel Lift Basin. As outlined in previously submitted Master Plans, the Canal Landing development will include multiple new buildings to be constructed along the Commercial Street frontage as well as shorefront areas. It is expected that all uses will be marine related and thus compliant with the WPDZ zoning either as permitted or conditional uses. An impact mitigation narrative is contained in Section 3 of this submission package.

The **Phase IV** development activity for which this application is made includes the construction of approximately 12,000 SF of new maintenance building space. The Canal Landing **Phase IV** activity includes a use that is identified as Permitted under the WPDZ Zone (Marine Repair Services) and therefore the appropriate supporting information is contained within this submission. The proposed building will also extend to a height of 72'-0" the it qualifies as a conditional use under Section 14-320.2(a).

PROJECT OVERVIEW

Canal Landing, LLC proposes to construct an expansion to their boat maintenance and repair yard within approximately 17.77 acres of land located prominently along the West Commercial Street waterfront. This land area includes 5.03 acres of remainder land that the Applicant retained after the MaineDOT acquired nearly 18 acres of land from New Yard, LLC for the IMT Expansion project. The Applicant acquired an additional 12.74 acres from Maine Central Railroad to fulfill their goals for a full-scale boat maintenance and marine related activities facility. The project represents an ideal reuse of a former highly industrialized property. The Canal Landing Boat Maintenance facility and IMT expansion have now initiated a new resurgence in marine waterfront related activity along the Fore River.

The proposed project includes previously approval buildings constructed over multiple phases along with constructed shorefront uses including a marine travel lift basin, two boat ramps, floats/docks, new or reconstructed piers and ancillary support features. The current Level III Site Plan approval request is only for **Phase IV** activities which are listed below in the Proposed Development section.

The **Phase IV** project includes limited site development activities involving earthwork, grading, building construction, and utilities associated with the proposed Maintenance Building (E). Among other things, utilities have been previously stubbed to the proposed Building E location.

The following sections provide greater detail regarding the site's existing conditions and the proposed development program.

Site Ownership

According to the ALTA/ACSM Survey completed by Owen Haskell, Inc. in April 2015, the development site contains multiple parcels as identified in the City of Portland Tax Assessor's maps. These parcels are more fully described as follows:

TABLE 1 – Land Ownership

Chart-Block-Lot	Owner	Description
59-A-3 & 4	New Yard, LLC CCRD Book 30887; Page 2	Consists of 5.03 acres. Land retained following the MaineDOT land taking.
60-F-1, 3 &4 71-F-2	Canal Landing, LLC CCRD Book 32239; Page 148	Consists of a 6.75-acre area between the IMT rail track and the street; also consists of 5.99 acres of area along the waterfront, out to mean low water.

Figures 1-12 provided with this letter depict the project location on various available resource maps. As shown, the site location is on West Commercial Street just west of the Casco Bay Bridge and between Commercial Street and the waterfront. The combined parcels have approximately 2,159.55 LF of frontage along Commercial Street. The development site is identified on the U.S.G.S. Portland West 7.5 Minute Quadrangle Map.

PROJECT PURPOSE AND NEED

The Canal Landing project has transformed an underutilized, yet prominent property, into water dependent maritime use as was contemplated within the City's zoning and comprehensive plans. The project's community benefits continue to include:

- Enhanced commercial/marine related opportunity and rehabilitation of a deteriorated, older industrial property.
- Rehabilitated waterfront including new/renovated pier(s), boat ramp(s) and shoreline stabilization.
- Various remedial activities related to recognized environmental conditions on the properties will be performed, thus addressing several long-standing environmental issues.
- Revitalization of an important waterfront property that has excellent access to deep water, various utilities, City services, and related shorefront amenities.
- Furtherance of the purposes of the Waterfront Port Development zone as articulated in the Land Use Ordinance to "*ensure the continued viability of the Port of Portland*" by limiting use to "*those uses which are dependent upon deep water and which contribute to port activity*".
- Creation of new buildings and site use consistent with waterfront activities in a gateway location along the busy West Commercial Street corridor. The proposed **Phase IV** building includes marine repair service facilities that are essential to the operations of the Portland Yacht Services business.

EXISTING CONDITIONS

The site consists of approximately 17.77 acres of land that is composed of three primary areas described as follows:

1. **Retained Parcel (Map 59A, Lots 3 & 4)**: Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Building A and Building B amounting to approximately 48,000 SF of

building space. This parcel contains a boat ramp and boat yard area currently in use by Portland Yacht Services.

2. **Shorefront Parcel (Map 60F, Lots 3 & 4)**: This area is irregularly shaped and contains approximately 1,581 LF of waterfront. The site area is approximately 5.99 acres. This area is now home to the new travel lift and travel lift basin which has been under construction since early spring.

3. **Street Front Parcel (Map 60F, Lot 1)**: This 6.75-acre area contains approximately 2,160 LF of street front. Previously approved Buildings C & D are scheduled for construction this summer in this area.

Existing development in the area includes the following:

- The City of Portland Marine Terminal and expansion area is located to the east of the site.
- Commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of Commercial Street.
- The Portland Star Match Co. building lines up opposite the site.
- The State of Maine now operates rail tracks into the IMT expansion area. These tracks were completed in 2014/2015.

ACCESS CONDITIONS

The applicant has installed two new driveways (east & central as shown on plans) to allow access to Canal Landing's business operations. The central driveway will continue to be the primary site entrance as it aligns with a 50' wide rail track crossing. The easterly driveway will provide access to the east end of the site including the existing buildings and easterly boat ramp. A third driveway, previously approved as part of the Phase III activity for Buildings C & D, is currently under construction at the far west end of the property.

SITE UTILITIES

The site contains numerous utility lines. The primary utilities are identified as follows:

- The Portland Water District maintains a 48" sanitary sewer interceptor sewer along the site's entire Commercial Street frontage. A portion of this sewer is located within the site within a utility easement. The District/City also maintain two CSO lines that discharge out to the Fore River. The previously completed Buildings A and B discharge

to an onsite private pump station that ultimately discharges to the 48" interceptor sewer. The proposed **Phase IV** building's sanitary sewer will also connect to the existing force main on the waterfront side of the tracks and these flows will continue to discharge to the 48" interceptor sewer.

- The Portland Water District maintains a water main in Commercial Street that varies from 12" to 16". The Applicant has previously installed a fire line and fire line meter to supply water to allow for both fire and domestic water supply service into the waterfront site. This system will be used for the **Phase IV** Maintenance Building.

- Unitil maintains high-pressure and low-pressure natural gas line along Commercial Street. The Applicant continues to investigate service connections for natural gas supply to the property. Currently, Buildings A and B are served by onsite LP fuel storage tanks. Building E is also expected to be served by onsite LP tank supply.

- Power to the site is supplied by Central Maine Power. Currently, there is an overhead service crossing Commercial Street to a pole from which underground facilities extend to Buildings A and B. This service will also be used to supply power to Building E. We have requested CMP provide a statement regarding their ability to continue supplying power to the development site.

Letters were sent to the following utility providers requesting ability to serve for the project (copies provided with this letter in Tab 5):

- Portland Water District (water supply)

- City of Portland Public Services (sanitary sewer)

Plan C-2.1 shows the proposed utilities for **Phase IV**.

TOPOGRAPHY AND DRAINAGE

Owen Haskell, Inc. has completed a topographic survey of the property. The site is relatively flat with the highest points along the Commercial Street frontage, sloping to the waterfront. Site elevations along Commercial Street trend down from east to west from Elevation 18' (NGVD 1929) to Elevation 16'. Recent site improvements include the placement of a boatyard surface material over most of the shorefront parcel, as was previously approved. This has raised site grades up several feet. The High Annual Tide Line (HAT) for the Fore River is elevation 7.4' and mean low water is approximately Elevation -4.0'. The Federal Channel is also represented on the project drawings and it is generally located 60' to 120' off the shorefront.

The site's runoff drains directly to the Fore River via overland flow. There are very few drainage measures on site except for several old catch basins, although there is a closed storm drainage system within Commercial Street.

Ongoing ground activities include improved surfaces to support boatyard activities. This includes the placement of the "Boatyard Surface" consisting of new gravel and crushed stone surfacing thereby aiding stormwater control and treatment. This "Boatyard Surface" treatment has been widely placed throughout the shorefront land and it has been found effective in handling the site's runoff conditions. This surface is compliant with the MeDEP Brightwork Manual. The majority of the shorefront parcel area is now covered with the "Boatyard Surface" and generally speaking produces minimal runoff as nearly all rainfall is absorbed into the surface area.

SOILS CONDITIONS

- 10 to 15 feet of sand and gravel fill – there is little to no organic surface layer throughout the site which is reflective of the site's rail yard history.
- 5 to 10 feet of silt and sand.
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands.
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

According to various investigation data, depth to groundwater varies from 3 to 7 feet and this likely varies with tidal conditions in the Fore River. Generally, the groundwater flows from the northwest to the southeast across the site. The **Phase IV** project will not impact the underlying soils or groundwater conditions.

PROPOSED DEVELOPMENT

The Applicant proposes to continue development of the property in a manner consistent with the WPDZ Standards. The **Phase IV** development program includes construction of a 12,000 SF Maintenance Building.

Offsite

Site access is proposed via Commercial Street as well as from the Fore River. The **Phase IV** primary site entrance is proposed from both of the existing rail crossing and West Commercial Street entrances.

LAND ORDINANCE REVIEW

The property currently lies within the City of Portland Waterfront Port Development Zone (WPDZ). Within the WPDZ district the following uses are permitted or conditioned:

Permitted Uses

- Marine repair services and machine shops
- Tug boat, fire boat, pilot boat and similar services
- Boat repair yard
- Marine cargo handling facilities, including docking, loading, and related storage
- Warehousing and storage of goods which are awaiting shipment via cargo carriers

Conditional Uses

- Marine ship building and facilities for construction, maintenance, and repair of vessels
- Boat storage facilities excluding rack storage
- Seafood processing
- Seafood packing and packaging
- Off-street parking lots, excluding parking structures

The following dimensional requirements apply in the WPDZ District:

Dimensional Standard	Requirement
Minimum Lot Size	None
Minimum Frontage	None
Front Yard Setback	None
Side Yard Setback	None
Rear Yard Setback	None
Setback from Pier Line	5 feet for structures
Maximum Lot Coverage	50%
Maximum Building Height	55 feet or 75 feet (conditional use)[1]

With regard to building height compliance, the proposed finished floor elevation of the **Phase IV** building is 12.0 feet and the building height will be 70'-0".

In accordance with Section 14-318.5 (no adverse impact on marine uses) the following statements support the project intentions:

[1] The proposed Building E will have a maximum height of 72'-0". This is considered a conditional use in the WPDZ per Section 14-320.2(a) Dimensional Table.

- *Criteria 1 – The proposed non-water dependent use will not displace an existing water-dependent use.*

  Supporting Evidence: In fact, the proposed project is a water dependent use and it is not displacing any existing water related use.

- *Criteria 2 – The proposed use will not reduce existing commercial vessel berthing spaces.*

  Supporting Evidence: In fact, the project includes measures to improve and increase commercial vessel berthing space as the project activities contemplate pier rehabilitation and the installation of berthing spaces for maintenance of vessels including tug boats or similar sized vessels and travel lift capacity to remove vessels from the water for placement into the proposed Maintenance Building.

- *Criteria 3 – The proposed non-water dependent use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses.*

  Supporting Evidence: The proposed uses are water-dependent and do not interfere with any existing water dependent uses or activities on the site.

- *Criteria 4 – The siting of a proposed non-water dependent use will substantially reduce or inhibit existing public access to marine or tidal waters.*

  Supporting Evidence: The project is not non-water dependent and it will not reduce or inhibit existing public access to marine or tidal waters. It is expected that waterfront access will be improved as a result of the installation of the previously approved boat ramp(s) and floating dock facilities.

In accordance with Section 14-320 – Conditional Use Standards, the following evidence is provided:

Provisions to satisfy:

- *Not impede or preclude existing or potential water dependent development on other lots.*

Supporting Evidence:

The proposed Maintenance Building will be an integral part of the marine services provided on the property. Its placement will not impede uses or future activities at the IMT or Cassidy Point.

- *Allow for adequate access to the water.*

Supporting Evidence:

The Maintenance Building has been positioned to allow for use by the travel lift basin and it will not impede access to the two boat ramps on the site.

- *Be compatible with water dependent and marine uses.*

Supporting Evidence:

The proposed Maintenance Building is an integral part of the boat repair and maintenance operations to be provided at this site. It is considered absolutely compatible with water dependent and marine uses.

- *Operationally support one or more water dependent use(s) or be located in a building or structure that is physically adaptable or relocatable to make way for future development of water dependent uses.*

Supporting Evidence:

The proposed Maintenance Building will be used for vessel repairs and maintenance and is therefore supportive of water depended uses.

- *Meet any additional performance and dimensional standards set forth below (per Section 14-320.3)*

Supporting Evidence:

The proposed Maintenance Building will have a maximum height of 72'-0" and is therefore compliant with the conditional use dimensional standards.

Performance Standard Compliance

The Applicant will comply with all items listed and described in the performance standards for the WPDZ in the development of the proposed **Phase IV** project as well as through the day to day operational activity at the site once construction of **Phase IV** is

complete. Compliance with these standards is discussed in the Impact Mitigation narrative contained in Section 3 of this submission.

The off-street parking and loading requirements will not be applicable to Canal Landing's business operations. The construction of the Maintenance Building will not involve the increase of staffing beyond current levels. Generally, the project involves employee parking which will vary within the yard area to allow flexibility for boat storage.

Brightwork manual overview

In 2005, the Maine Department of Environmental Protection released "*Brightwork -- A Best Management Practices Manual for Maine's Boatyards and Marinas* ". The goal of the manual is to help site owners and operators of marinas and boatyards to reduce pollution from their facilities by providing environmental compliance benchmarks, common sense practices that enable the benchmarks to be met, a list of regulatory references that form the basis of the benchmarks, and a series of tools to enable easier benchmark progress measuring.

The manual describes in detail, the types of toxic pollutants generated by boatyard and marina sites and the resulting environmental and economic impacts.

The manual provides guidance on how to carry out typical jobs and practices associated with boatyards and marinas and the associated benchmarks, best management practices, clean up and waste disposal, customer relations, legal requirements, etc.

The practices described include:

- Hull Preparation
- Sandblasting
- Painting
- Boat Washing
- Engine Repair and Maintenance
- Stormwater Planning
- Fueling and Fuel Storage
- Waste Management

The manual provides best management practices for each practice including containment, indoor vs. outdoor recommendations, dust emissions, managing spills, storage, labeling and disposal of various waste products.

The Applicant currently complies with the Brightwork practices within their new facilities at the Canal Landing Yard. They will continue to utilize the Brightwork Manual as a reference and adhere to the requirements set forth for all activities at the proposed site.

TRAFFIC

The proposed project will not result in significant impacts to the surrounding street system. The previous approval review in January 2016 included a Traffic Movement Permit which we understand remains in force. No further traffic analysis for the **Phase IV** application has been performed at this time as the proposed building is a maintenance building that will be part of the ongoing business operations and no impact to site traffic generation is anticipated.

The existing boatyard consists of two buildings totaling 48,000 SF of boat storage/maintenance space. There are approximately 50 employees at the site at various times. The proposed **Phase IV** activities include the construction of Building E that will include the following use:

- Approximately 12,000 SF of marine repair and support space (Building E)

NATURAL FEATURES

The development site does not contain any significant natural features including wetlands, vernal pools or other protected resources except for the shorefront edge adjacent the Fore River. The site has been developed for a period greater than 150 years and there is generally no land area that has not been disturbed or otherwise developed. Stantec previously has contacted various resource agencies regarding the site's potential to contain significant wildlife habitat, historic or archaeological resources. Findings from each of the agencies has been previously provided to the City. The MeDEP has previously approved the ongoing construction of the travel lift basin and revetment repairs.

NOISE/VIBRATION

The WPDZ has the following standards for noise and vibration:

"Noise:

1. *The level of sound, measured by a sound level meter with frequency weighting network, inherently and recurrently generated within the WPDZ between the hours of 7.00 p.m. and 7.00 a.m. from industrial facilities or operation commenced on or after July 1, 1988, shall not exceed 55 dB on the A scale at or within the boundaries of any residential zone, 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 devices.*

2. *In measuring sound levels under this section, sounds with a continuous duration of less than 60 seconds shall be measured by the maximum reading on a sound level meter set to the weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of 60 seconds or more shall be measured on the basis of the energy average sound level over a period of 60 seconds (LEQ_1).*
3. *In addition to the sound level standards otherwise established, facilities or operations established or built in the waterfront port development zone on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one second."*

"Vibration:

Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile supported pier."

It is the Applicant's intention to comply with the noise and vibration standards above. Night time activity will be minimal. Typical sources of noise from routine boat yard jobs and practices include hull preparation, sandblasting, painting, boat washing, engine repairs and maintenance and transportation of vessels throughout the site. All these practices will be performed in accordance with the MeDEP Brightwork Manual.

The site is well separated from noise sensitive sites with no direct abutting impacts to abutting residential neighborhoods. The nearest residential building is approximately 800' away from the edge of the proposed buildings and is located along the Beach Street ramp connection to the Casco Bay Bridge.

The site is surrounded by commercial/industrial uses including the International Marine Terminal to the east, Commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of Commercial Street. Other adjacent noise generating sources including the Casco Bay Bridge and the flight path of the Portland International Jetport. To the best of our understanding, the operations of the site over the past few years has not resulted in neighborhood complaints or issues.

LIGHTING

The primary purpose for site lighting for Canal Landing is for security in the vicinity of the buildings and to provide lighting at key operational access points to the Fore River.

Nighttime operations for the boatyard are atypical. Security at the site will be supplemented by infrared cameras mounted on the buildings.

It is important to note that light sources from abutting properties cast direct and indirect illumination onto the property. The adjacent light sources include cobra head sodium lights on utility poles along Commercial Street.

Based upon the existing ambient light levels and the proposed lighting, the Applicant is comfortable that adequate lighting will be present at the property for the proposed uses. Comments from the residential neighbors during the previous review periods indicate that additional lighting to raise the overall level of light at the property is not desired.

The Applicant is requesting that the Planning Staff support a waiver by the Planning Board of the lighting standards of Section XV 4.A. Uniformity and 4.B. Illumination Levels, based upon the following:

1. Existing ambient light levels at the property are between 0 and 0.3 foot-candles at the interior and 0.8 to 1.5 fc at the edges of the lot;
2. Proposed lighting will raise the light levels needed for safe access and egress in and out of the property onto Commercial Street to reasonable average levels of 1.25; and
3. Proposed lighting will provide for security, safety, and nighttime use of the new buildings and work yards;
4. Illumination of the property to the levels required by the City Ordinance will impact the residences located uphill from the proposed project.

SOLID WASTE

The proposed boatyard use will generate two types of solid waste: regular waste and hazardous waste.

Regular non-hazardous waste will be stored on site in a dumpster(s) and collected by a local solid waste company who the Applicant will form an annual contract.

Hazardous waste will be stored in accordance with the requirements of the Brightwork Boatyard Manual and collected, transported and disposed of by ENPRO Services, Inc. or another similar company. We have previously provided a letter from ENPRO identifying the most common drummed wastes generated by the Applicant's former facility on Fore Street in Portland, how they are tracked, where they are transported to and how they are disposed of. No further information related to solid waste will be provided unless requested by City Staff.

STORMWATER MANAGEMENT

The development will rely on the placement of boatyard surface materials consisting of crushed stone aggregate and subbase gravels similar to what has been placed on the majority of the shorefront parcel. The Applicant will be requesting a waiver from the City's Flooding Standards due to the site's proximity to Tidal Conditions in the Fore River. We propose the placement of the "Boatyard Surface" as the primary means of water quality treatment for the site.

EROSION AND SEDIMENT CONTROL

A temporary Erosion and Sediment Control Plan is included as part of the plan documents. Because of the placement of the crushed stone surface over most of the property, there is little to no exposure for erosion or sediment transport off the site.

FLOODING

The project site has been depicted graphically on a portion of the FEMA Flood Insurance Rate Map and is attached as Figure 7 and provided at the end of this section. The **Phase IV** building will be constructed with a finish floor elevation of at least 12.0 feet, which is 2 feet higher than the 100-year flood elevation of 10.0 feet.

BLASTING

Based on previous soil investigation at the site, blasting is not anticipated for construction of Building E.

AIR EMISSIONS/ODORS/VAPORS

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

- Temporary emissions associated with construction vehicles and construction of project.
- Temporary emissions associated with vehicular travel of employees, delivery vehicles, travel lift, etc.
- Emissions associated with the heating systems for the building.
- Emissions related to boat repair activity.
- Insignificant odors will be generated during the construction phase of the development and during day to day operation of the proposed boatyard facility.

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

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

Long term odors or odors generated during day to day operation of the facility such as that proposed include:

- Petroleum odors from vehicles/travel lift.
- Solid Waste odors.
- Odors from boatyard activities such as painting, etc.

These odors are not likely to be offensive, as they are of low intensity and the site is not in a densely developed area. Therefore, no provisions for odor control are planned. However appropriate ventilation procedures will be utilized on site for health and safety of staff during certain boat repair activities.

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

SUNLIGHT

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

APPROVAL REQUIREMENTS

The following **Phase IV** permits are required:

- City of Portland Planning Board Level III Amended Site Plan Approval, Conditional Use Approval and Shoreland Zoning Approval
- City of Portland Building Permit(s)

CLOSURE

Accompanying this cover letter are the following materials to complete Tab 1 – General Application Documents:

- Attachment A: Level III Site Plan Application Completed Checklist
- Attachment B: Right, Title and Interest
- Attachment C: Zoning Assessment
- Attachment D: Waiver Requests
- Attachment E: Financial Capability
- Attachment F: Technical Capability

In addition to the information listed above, we are also providing the following materials with our submission:

- Tab 2 – Transportation
- Tab 3 – Environmental and Landscape Features
- Tab 4 – Environmental and Stormwater
- Tab 5 – Public Infrastructure and Safety
- Tab 6 – Site Design
- Tab 7 – Construction Management Plan
- Plan Sheets

On behalf of the Canal Landing Team, we look forward to your continued assistance on the project and we look forward to the next available Public Hearing meeting with the Planning Board. We are of the opinion that a workshop with the Planning Board is not necessary given the previous appearances we have made before the Planning Board. In advance of the Public Hearing, the applicant will be conducting a Public Informational Meeting. We anticipate this meeting will be conducted prior to the Public Hearing.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3406
Fax: (207) 883-3376
stephen.bushey@stantec.com

Attachments – As listed above

c: Phineas Sprague, Jr. – Canal Landing, LLC
Clint Marshall

V:\1953\active\195350129\Admin\Permitting\Level III - Ph 4 - Site Plan Application\ltr_grooms_level3_2018.06.26.docx

FIGURES 1-12



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LOCATION MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

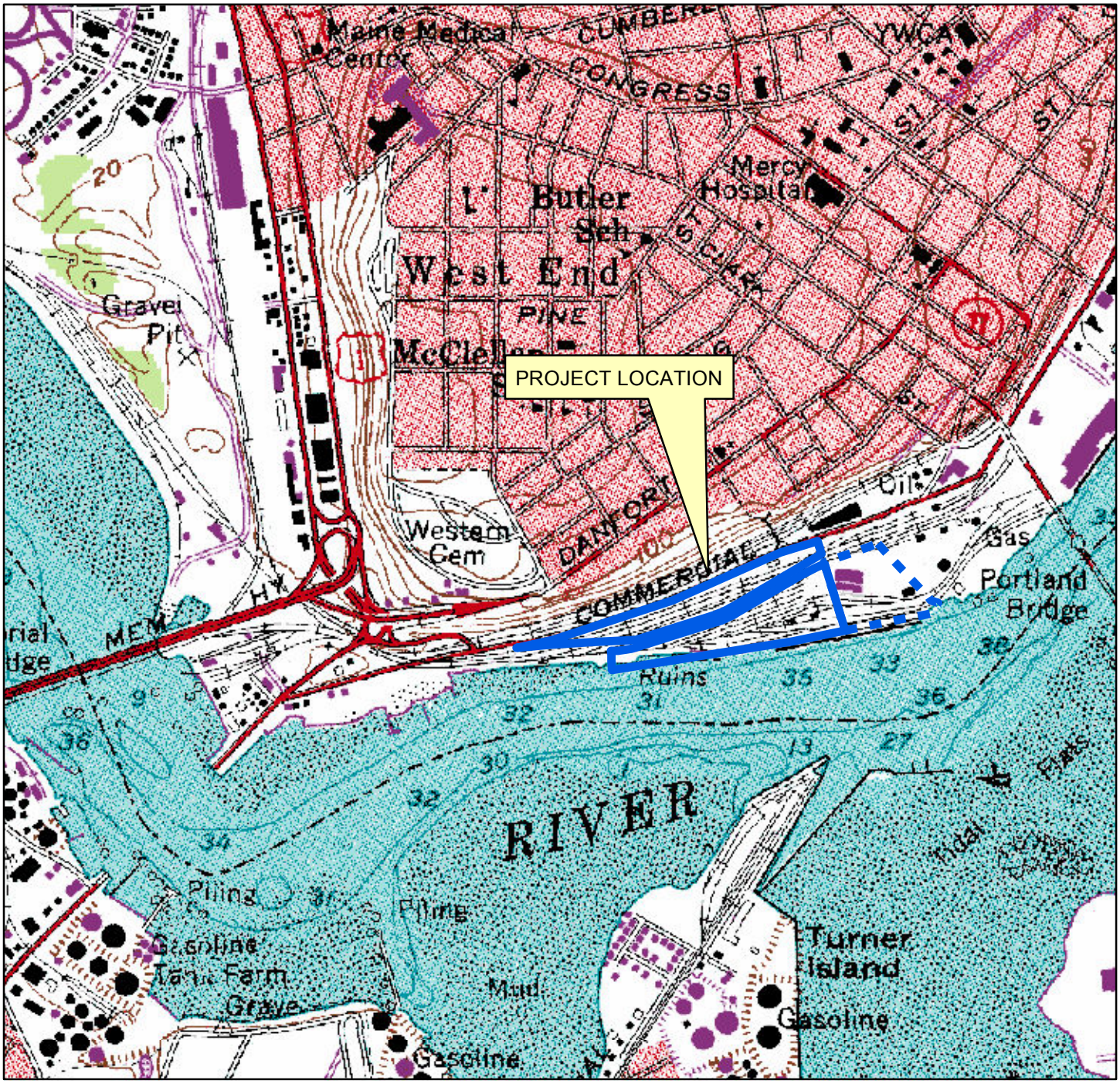
SOURCE: DELORME STREET ATLAS USA 5.0

FST 100 YEARS

FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	DED
CHECKED:	SRB
DATE:	FEB 2015
FILENAME:	3091.04 LOCMAP
SCALE:	1" = 1000'

FIGURE
1



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USGS LOCATION MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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ENGINEERS • PLANNERS • SCIENTISTS
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DRAWN:	DED
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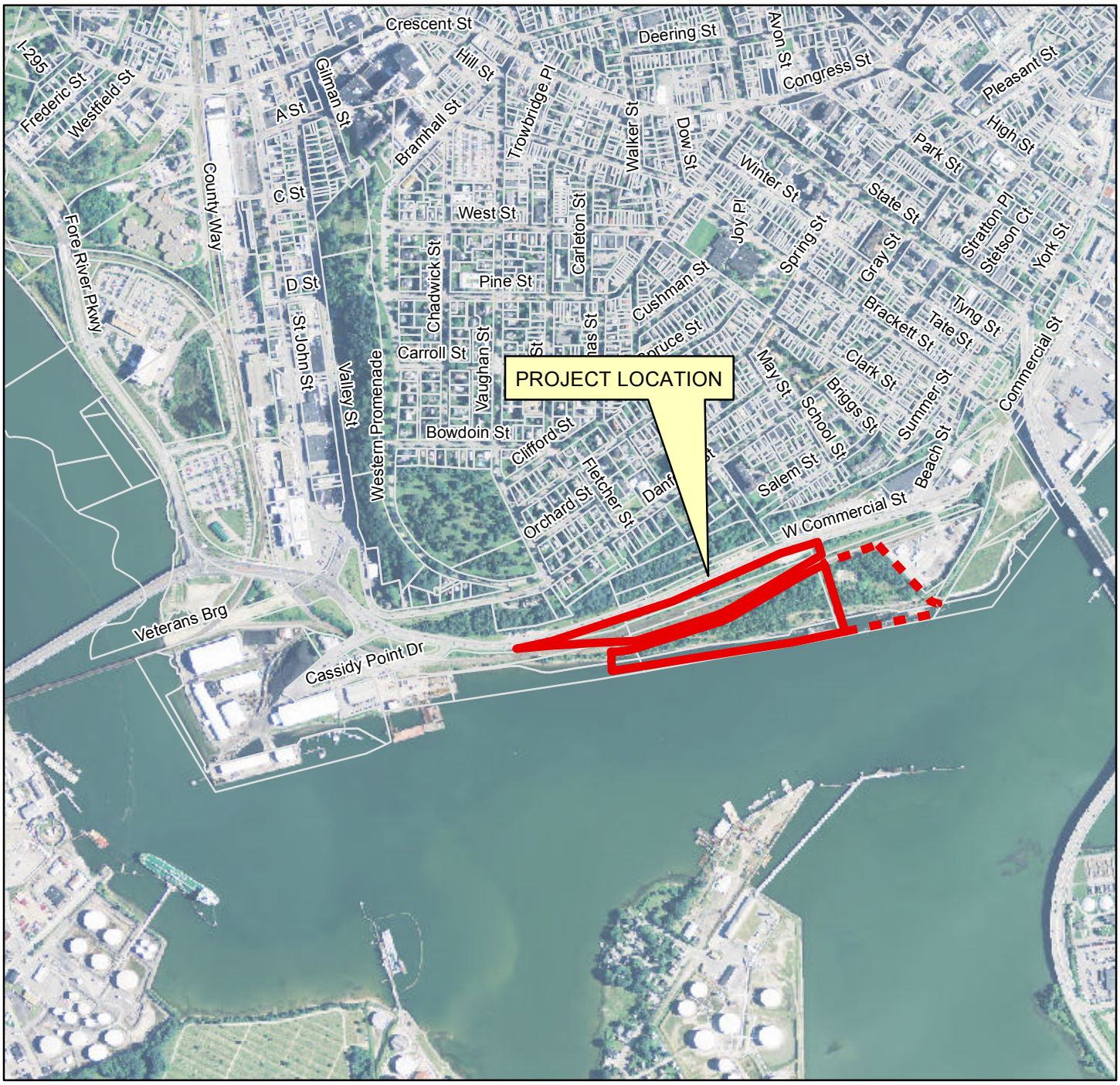
FIGURE

2



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TAX MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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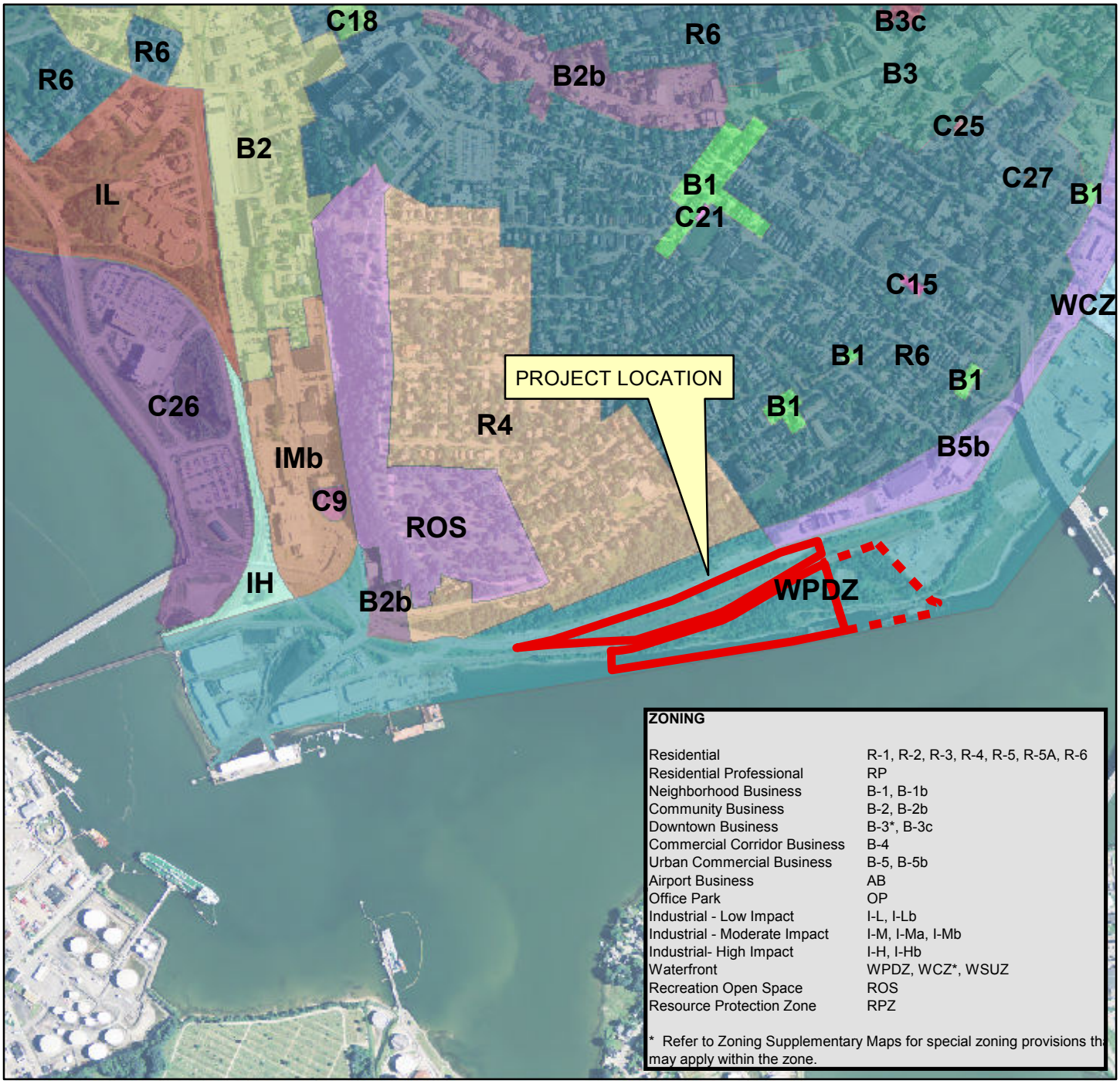
FIGURE

3



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ZONING MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS
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FIGURE
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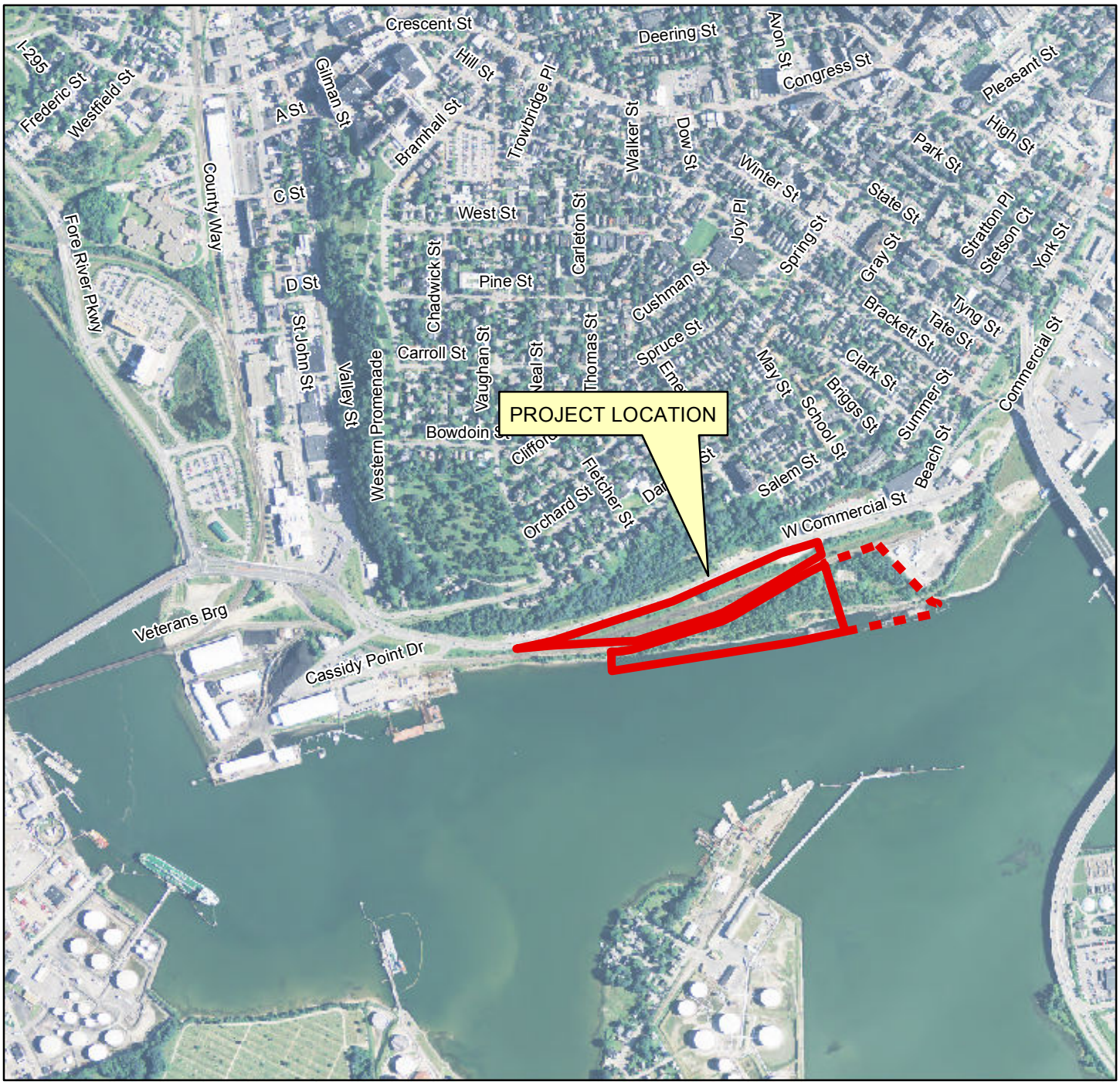

AERIAL PHOTOGRAPH
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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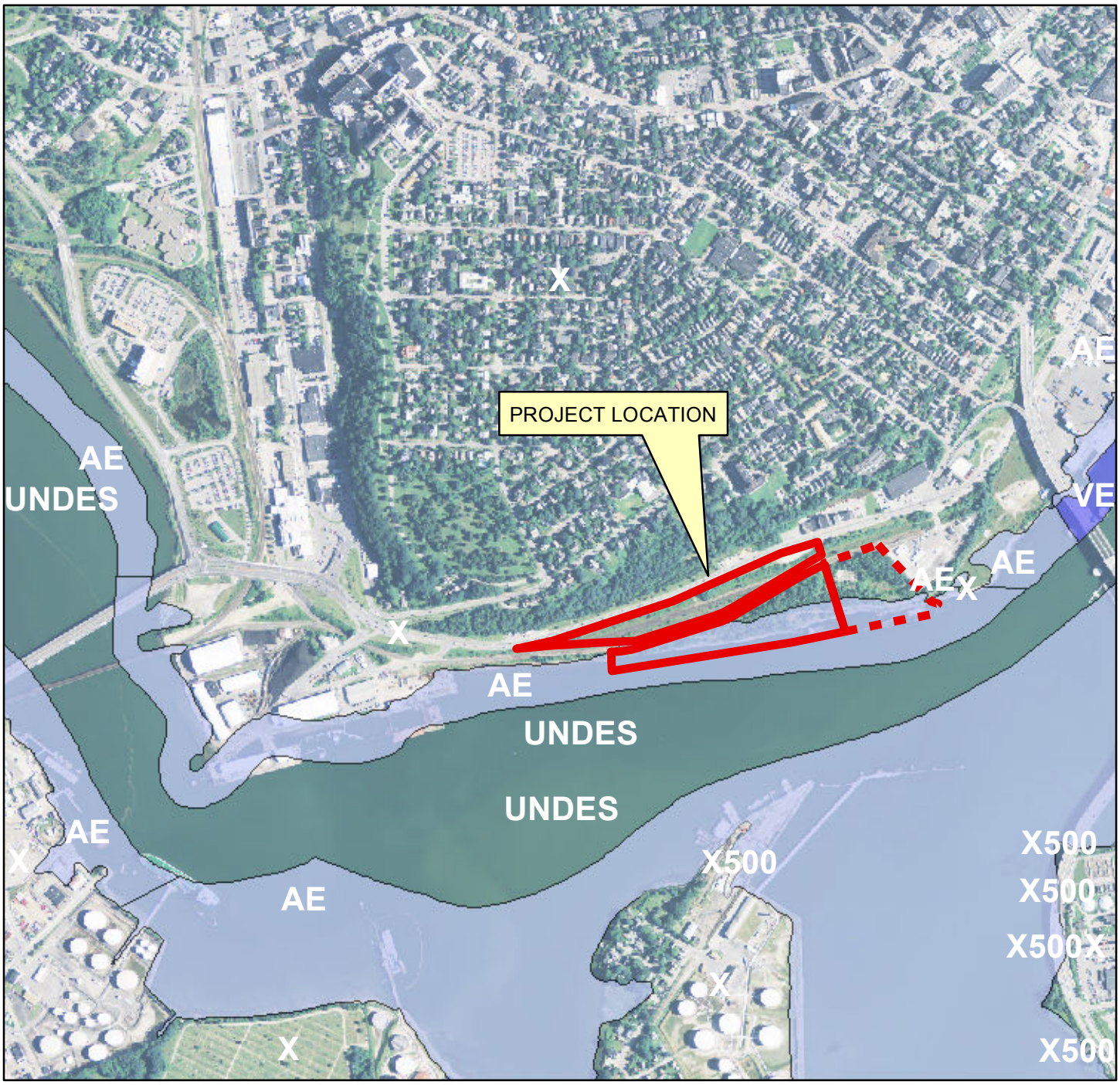
FIGURE

5



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FLOOD MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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FIGURE

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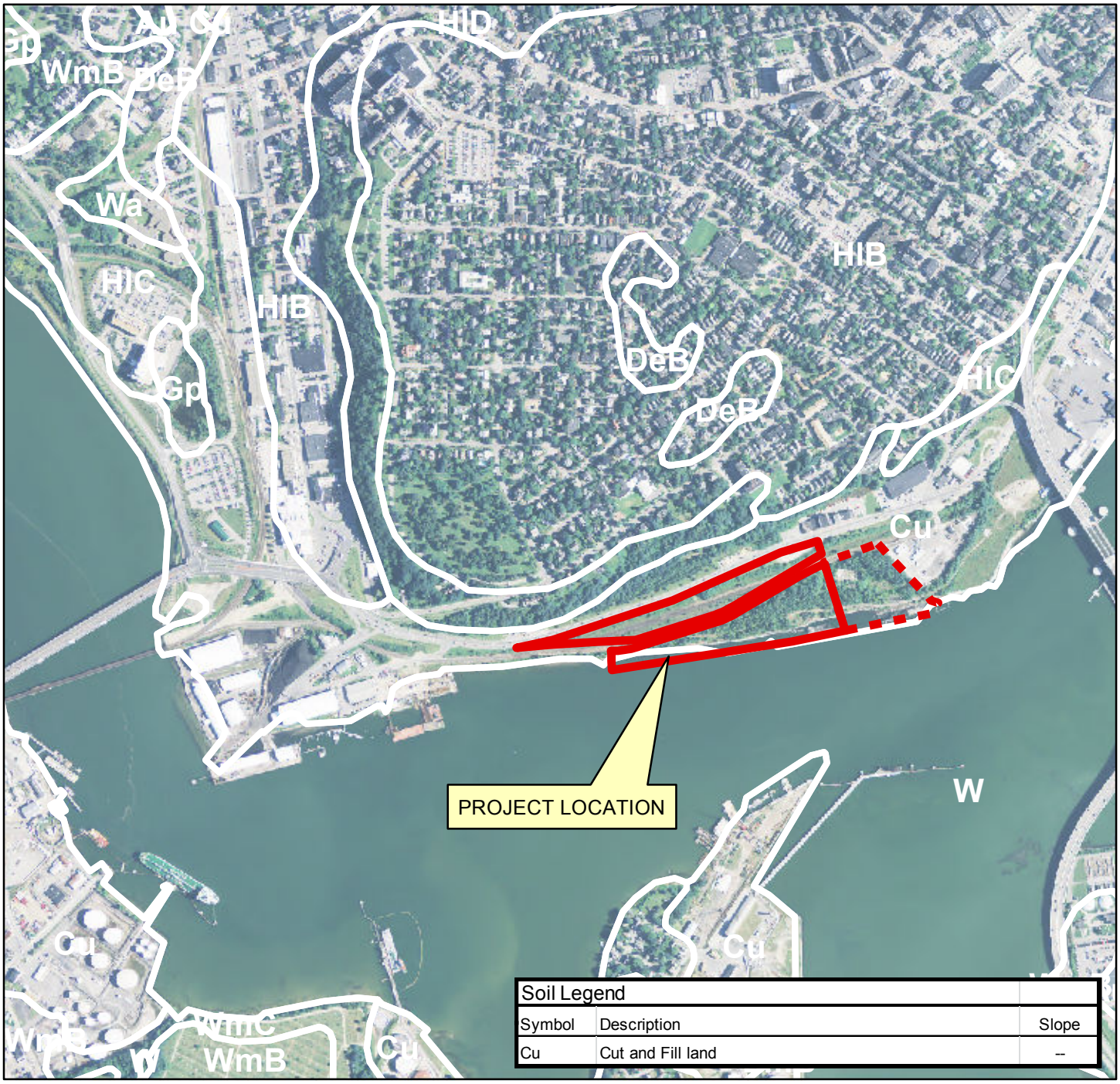

Soil Legend		
Symbol	Description	Slope
Cu	Cut and Fill land	--

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SOILS MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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FIGURE

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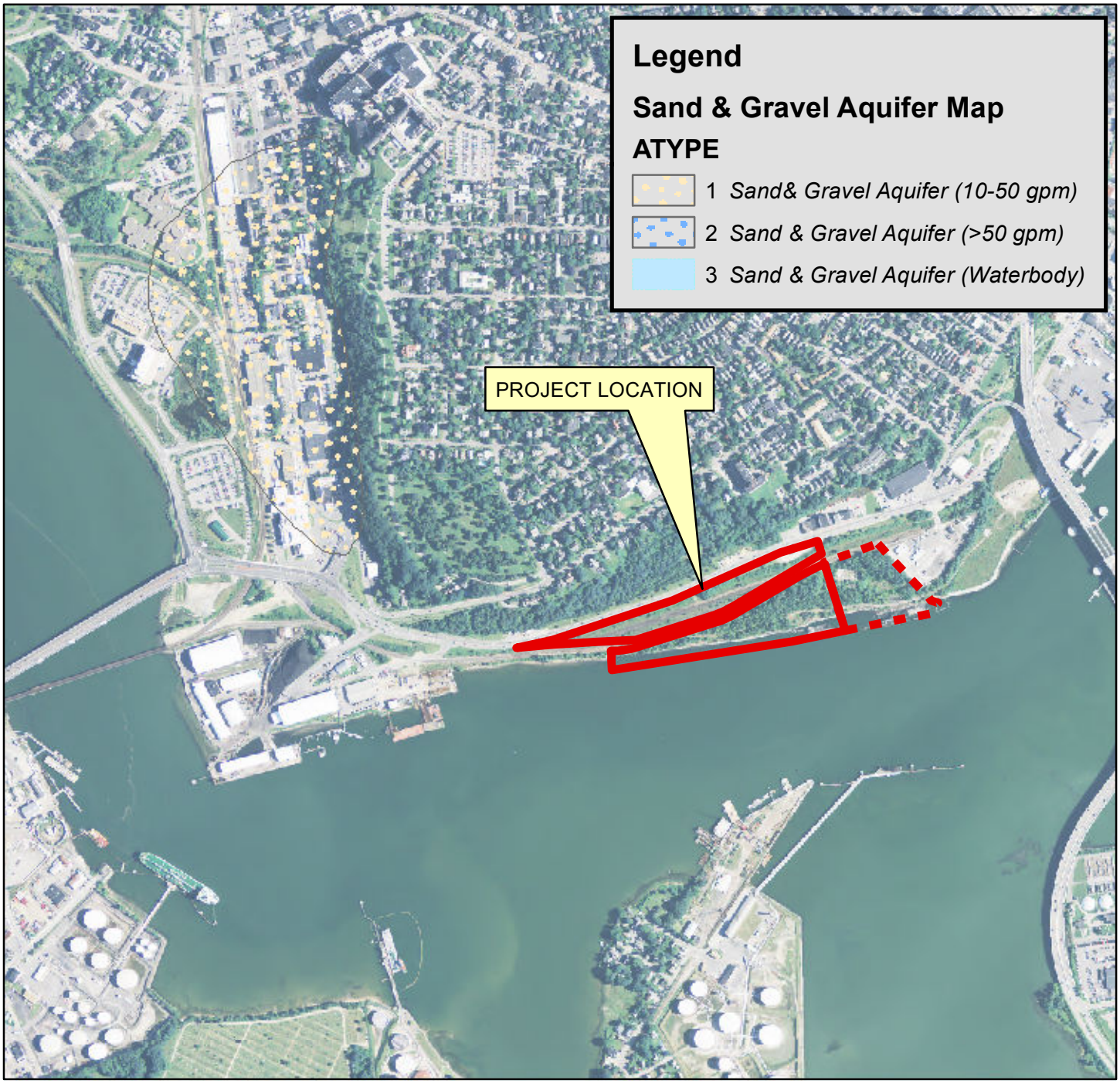

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SAND GRAVEL AQUIFER MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
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SCALE:	1 inch = 1,000 feet

FIGURE
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SURFICIAL GEOLOGY MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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FIGURE
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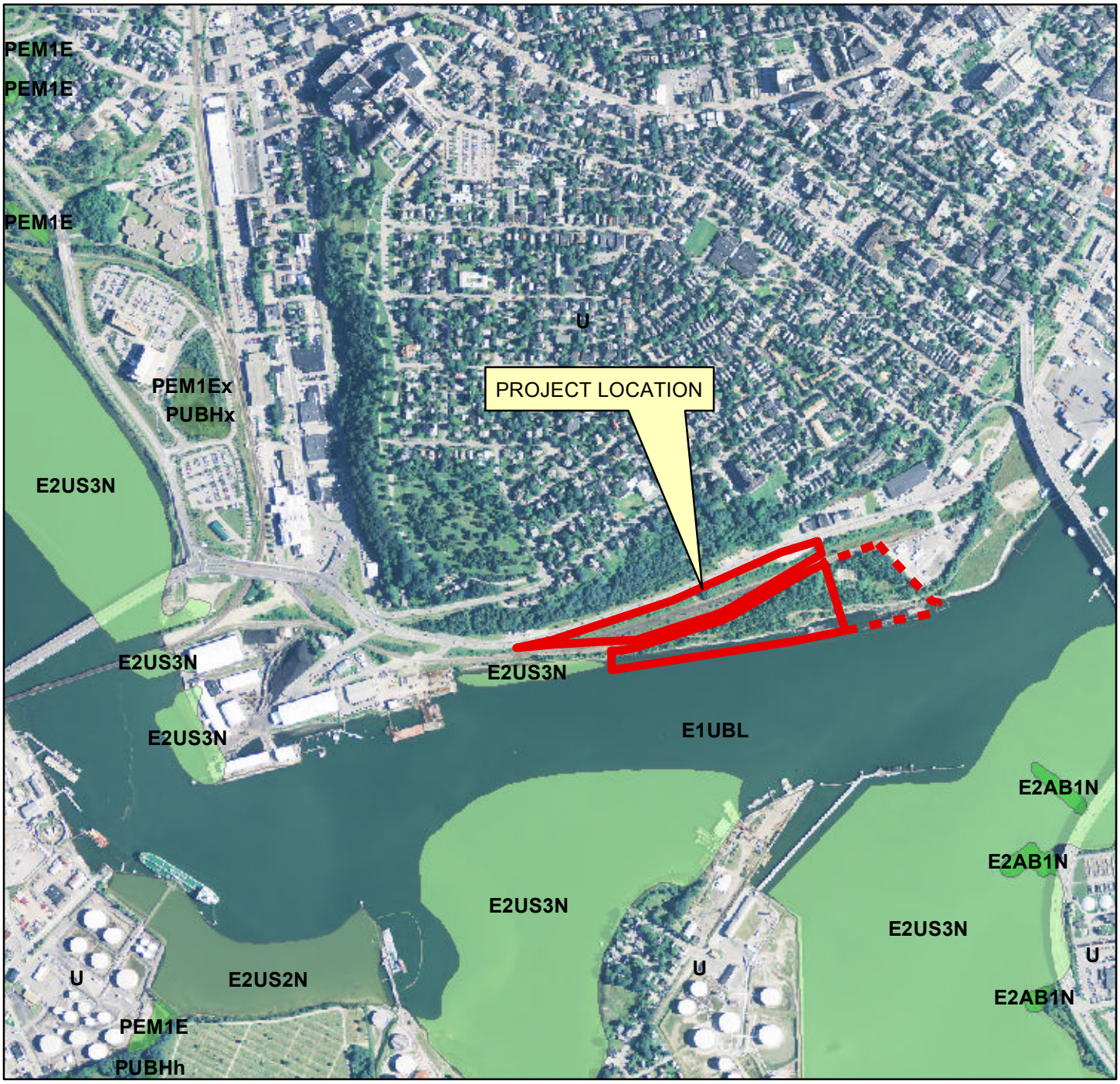

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NWI MAP
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS

FST 100 YEARS

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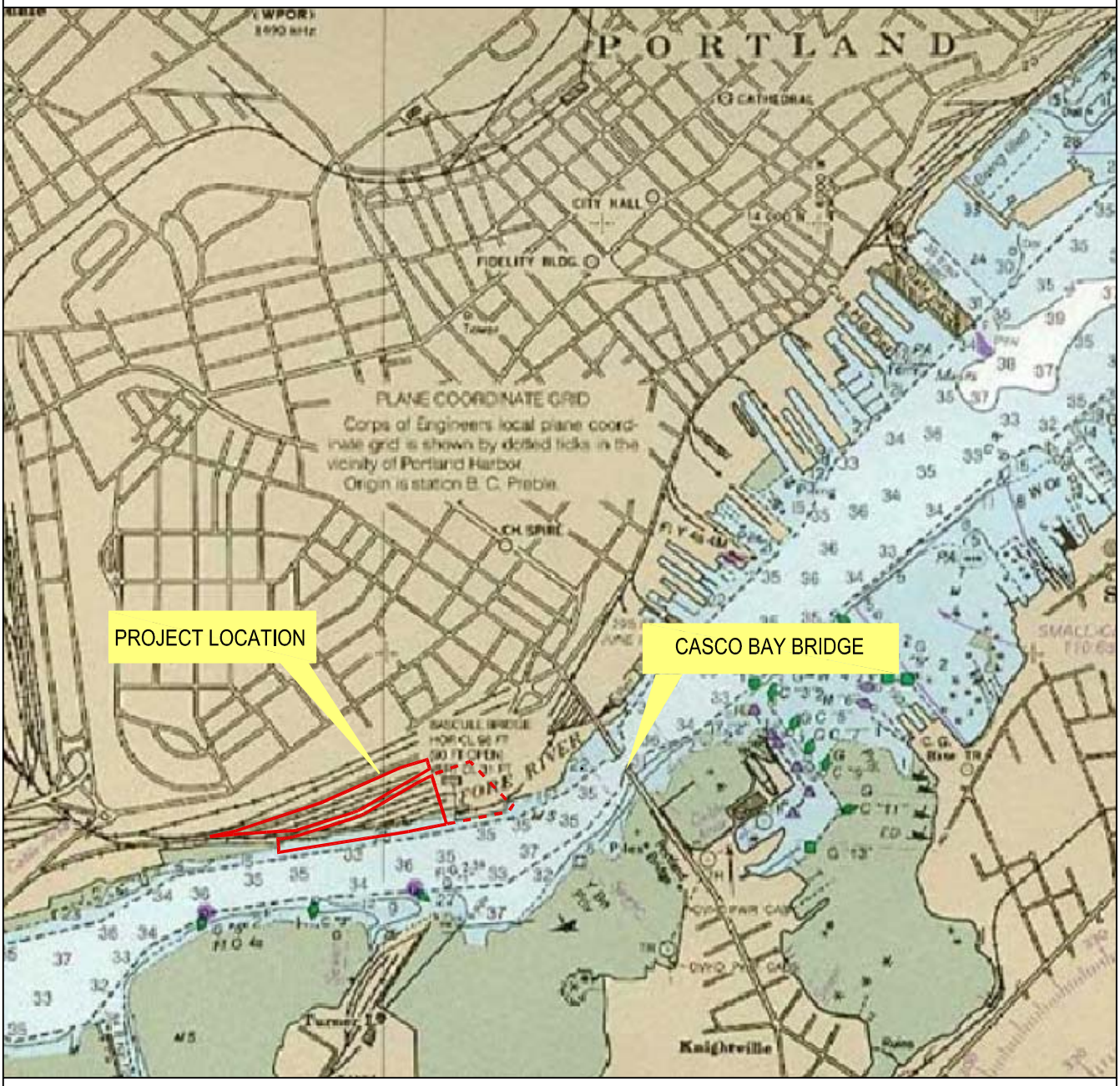
FIGURE
11



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PORT OF PORTLAND - HARBOR CHART
CANAL LANDING - NEW YARD EXPANSION
PORTLAND, MAINE

SOURCE: PORT OF PORTLAND HARBOR CHART

FST 100 YEARS

FAY, SPOFFORD & THORNDIKE
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CHECKED:	WGH
DATE:	FEB 2015
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SCALE:	1" = 1000'

FIGURE
12

ATTACHMENT A

LEVEL III APPLICATION SUBMISSION CHECKLIST

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below

Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

Checklist	Items to be Provided
Yes NA Plan ✔ ☐ ☐	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes NA Plan ✔ ☐ ☐	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes NA Plan ☐ ✔ ☐	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes NA Plan ☐ ✔ ☐	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes NA Plan ✔ ☐ ☐	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes NA Plan ☐ ✔ ☐	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS, if applicable • Evidence of existing easements and any proposed easements
Yes NA Plan ✔ ☐ ☐	WAIVER REQUESTS • Written request for waiver describing request and reason. Waiver Table
Yes NA Plan ☐ ✔ ☐	FINANCIAL CAPABILITY • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA Plan ☐ ✔ ☐	TECHNICAL CAPABILITY • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Submit each Tab as one PDF file and bookmark the items as noted below

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ✔ ☐ ☐	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
Yes NA Plan ✔ ☐ ☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
Yes NA Plan ☐ ✔ ☐	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☐ ✔ ☐	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☐ ✔ ☐	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☐ ✔ ☐	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☐ ✔ ☐	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ✔ ☐	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ☐ ✔ ☐	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ☐ ✔ ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

Tab 4 - ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

Tab 6 - SITE DESIGN

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appendix 1)

Yes NA Plan ☐ ✔ ☐	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes NA Plan ✔ ☐ ☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ✔ ☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ✔ ☐	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes NA Plan ☐ ✔ ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Check list	
Yes NA Plan ✔ ☐ ☐	**Construction Management Plan** • Construction Management Document and Plan

Level II and Level III Site Plan Checklist

Please upload the following drawings with the listed details into e-Plan

☑ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☑ Existing Conditions

- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☑ Proposed Site Plan

- Ground floor area, and grade elevations for all buildings

☑ Access, Circulation, and Parking

- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☑ Site Considerations

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☑ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

☑ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☑ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☐ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☐ RECORDING PLAT, if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☑ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

ATTACHMENT E

FINANCIAL CAPABILITY

The Applicant has the means at its disposal for financing the proposed Canal Landing project. A letter from Norway Savings Bank was supplied previously indicating their support of the project. They remain actively involved and supportive of the Phase IV and future phase activities. An updated letter from Norway Savings can be supplied upon request.

A breakdown of the preliminary project cost for Phase IV includes the following:

- Phase IV Site Work <$100,000
- Structures $1.5 million to $2 million

These values are considered preliminary and approximate and are subject to change as building design and project layout is refined.

ATTACHMENT B

RIGHT, TITLE & INTEREST

The Applicant has completed the acquisition of the property with Portland Terminal Company as evidenced by the Release Deed previously submitted to the City as part of the Buildings C & D application; approved by the City of Portland in January 2018. A copy of this deed is provided following this page.

RELEASE DEED

MAINE CENTRAL RAILROAD COMPANY, a corporation duly organized and existing under the laws of the State of Maine, with offices at 1700 Iron Horse Park, North Billerica, Middlesex County, Massachusetts 01862 (the "Grantor") in consideration of [redacted] Dollars paid to it by **CANAL LANDING, LLC,** with a mailing address of 400 West Commercial Street, Portland, Maine 04101 (the "Grantee") hereby grants to the Grantee all the Grantor's right, title and interest, without any warranties or covenants of title whatsoever, in a certain parcel of land, and the buildings, bridges, structures, crossings, fixtures and improvements thereon, if any, situated in Portland, County of Cumberland, State of Maine (the "Premises") described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND
MADE A PART HEREOF BY THIS REFERENCE.

This conveyance is subject to the following reservations, conditions, covenants and agreements:

1. This conveyance is made without granting any right of way, either by necessity or otherwise, over any remaining land or location of the Grantor.

2. ~~The Grantor hereby reserves a permanent, exclusive right of way and easement in, on, over, under, across and through the Premises for the purpose of accessing, constructing, installing, operating, maintaining, modifying, repairing, replacing, relocating and removing a telecommunications system or other system for transmission of intelligence or information by any means, whether now existing or hereafter devised, including such poles, pipes, wires, fibers, fiber optic cables, repeater stations, attachments, appurtenances, structures or other equipment and property of any description necessary or useful for the same (the "Telecommunications Easement"). The Grantor further reserves the right to freely lease, license, mortgage, assign, pledge and otherwise alienate the Telecommunications Easement. The Grantee hereby covenants with the Grantor to recognize the Telecommunications Easement and, without the payment of any further consideration, to execute, acknowledge and deliver such instruments suitable for recording with the registry of deeds as the Grantor may reasonably require to acknowledge title to the Telecommunications Easement in the Grantor. The Grantor covenants to reasonably repair and restore the surface of the easement area after any work.~~

MAINE REAL ESTATE TAX PAID

3. The Grantor excepts from this conveyance any and all railroad tracks, railroad track materials (including, but not limited to, ties, connections, switches and ballast) and/or related equipment of any description located in whole or in part within the Premises.

4. ~~The Grantor excepts from this conveyance any and all advertising signs and/or billboards located upon the Premises which are not owned by the Grantor. Furthermore, this conveyance is subject to the right of the owners of said signs and/or billboards to go upon the Premises and remove them within ninety (90) days from the date of delivery of this deed.~~

5. By the acceptance of this deed and as part consideration therefor, the Grantee hereby assumes any and all agreements, covenants, obligations and liabilities of the Grantor in respect to any underground facilities, drainage culverts, walls, crossings and/or other structures of any nature and description located in whole or in part within the Premises.

6. By the acceptance of this deed and as part consideration therefore, the Grantee agrees to indemnify, defend and hold harmless the Grantor (including its officers, employees, agents, directors, shareholders and affiliates) from and against any and all loss, liability, damage, cost and expense (including reasonable attorneys' fees) occasioned by or associated with any claims, suits and/or enforcement actions (including any administrative or judicial proceedings and any remedial, removal or response actions) ever asserted, threatened, instituted or requested by any person and/or governmental agency on account of: (a) any release of oil or hazardous materials or substances of any description on, upon or into the Premises in contravention of any ordinance, law or statute (including, but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. Section 9601, et seq., as amended); and (b) any and all damage to real or personal property, natural resources and/or harm or injury to persons alleged to have resulted from such release of oil or hazardous materials or substances.

7. ~~By the acceptance of this deed and as part consideration therefor, the Grantee hereby agrees to build and forever maintain fences (together with any necessary gates), suitable to the Principal Engineering Officer of the Grantor, along the boundaries of the Premises which are common to remaining land or location of the Grantor (the "Fences"), if Fences are ever required in the sole and reasonable opinion of said Principal Engineering Officer.~~

8. This conveyance is subject to the following restriction for the benefit of other land or location of the Grantor, to wit: that from the date of delivery of this deed, the Grantor shall not be liable to the Grantee or any lessee or user of the Premises (or any part thereof) for any damage to any buildings or property upon them caused by fire, whether communicated directly or indirectly by or from locomotive engines of any description upon the railroad operated by the Grantor, or otherwise.

9. ~~By the acceptance of this deed and as part consideration therefor, the Grantee hereby agrees to make no use of the Premises which, in the sole and reasonable opinion of the Principal Engineering Officer of the Grantor, adversely affects, increases or decreases drainage to, from, upon or in any remaining land or location of the Grantor. The Grantee agrees to indemnify and save the Grantor harmless from and against any and all loss, cost, damage or expense including, but not limited to, the cost of defending all claims and/or suits for property damage, personal injury or death arising out of or in any way attributable to any breach of the foregoing covenant.~~

10. ~~The Grantor excepts from this conveyance any and all overhead, surface or underground signal and communication line facilities of the Grantor located within the limits of the Premises and this conveyance is subject to the Grantor's use of any such facilities in their present locations and entry upon the Premises from time to time to maintain, repair, replace, renew, relay or remove such facilities.~~

11. Whenever used in this deed, the term "Grantor" shall not only refer to the **MAINE CENTRAL RAILROAD COMPANY**, but also its successors, assigns and affiliates and the term "Grantee" shall not only refer to the above-named Grantee, but also the Grantee's successors, assigns and grantees, as the case may be.

12. The several exceptions, reservations, conditions, covenants and agreements contained this deed shall be deemed to run with the land and be binding upon the Grantee forever. In addition to the acceptance and recording of this deed, the Grantee hereby signifies assent to the said several exceptions, reservations, conditions, covenants and agreements, by joining in its execution.

WITNESS WHEREOF, the said **MAINE CENTRAL RAILROAD COMPANY** has caused this release deed to be executed in its name and its corporate seal to be hereto affixed by David A. Fink, its President, thereunto duly authorized this 27th day of April, 2015.

GRANTOR:
MAINE CENTRAL RAILROAD COMPANY

Witness

By: David G. Fink
David A. Fink, President

Witness

GRANTEE:
CANAL LANDING, LLC

SEAL

By: Phineas Sprague Jr
Phineas Sprague, Jr., Manager

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss. April 27, 2015

On this 27th day of April, 2015, before me, the undersigned notary public, personally appeared the above-named David A. Fink, the President of the **MAINE CENTRAL RAILROAD COMPANY** as aforesaid, proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public: [signature]
My Commission Expires: FEB 24 2017

PAMELA J. HITCHCOCK
MY COMMISSION EXPIRES
FEB 24 2017
COMMONWEALTH OF MASSACHUSETTS
NOTARY PUBLIC

STATE OF MAINE

Cumberland, ss. May 1, 2015

On this 1st day of May, 2015, before me, the undersigned ~~notary public,~~ attorney at law personally appeared the above-named Phineas Sprague, Jr., Manager of Canal Landing, LLC, as aforesaid, proved to me through satisfactory evidence of identification, which was personal recognition, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

[signature]
Attorney-at-law
~~Notary Public~~: Drew H. Anderson
My Commission Expires: N/A

EXHIBIT "A"

MAINE CENTRAL RAILROAD COMPANY
TO
CANAL LANDING, LLC
RAILROAD LAND
IN
PORTLAND, MAINE

A certain lot or parcel of land situated on the southerly side of West Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on a plan entitled "Land on West Commercial Street, Portland, Maine, Maine Central Railroad Company to Canal Landing, LLC, dated April 30, 2015 to be recorded in the Cumberland County Registry of Deeds in Plan Book 215, Page 157 (the "Plan"), bounded and described as follows:

Beginning at a point on the southerly sideline of West Commercial Street at the northwesterly corner of land now or formerly of New Yard, LLC recorded in the Cumberland County Registry of Deeds in Book 30887, Page 247;

Thence, S 16°58'37" E along the westerly line of land of said New Yard, LLC 90.30 feet to the northerly line of land now or formerly of the State of Maine Department of Transportation recorded in said Registry of Deeds in Book 31408, Page 301;

Thence, the following courses and distances along the northerly line of land of said State of Maine:

S 59°26'10" W 693.10 feet;

Thence, along a curve to the right with a radius of 673.74' feet, having an arc length of 153.57 feet, having a chord bearing of S 65°57'58" W and chord length of 153.24 feet;

S 72°29'45" W 542.24 feet;

S 87°07'38" W 273.21 feet;

S 86°01'33" W 312.82 feet;

S 84°41'57" W 219.48 feet to the southerly sideline of said West Commercial Street;

Thence the following courses and distances along the southerly sideline of West Commercial Street:

N 77°41'31" E 248.67 feet;

N 71°39'48" E 854.33 feet;

N 66°06'18" E 793.06 feet;

N 73°01'23" E 263.49 feet to the point of beginning. Containing 294,083 S.F. or 6.75 acres, more or less.

Also another certain lot or parcel of land situated on the southerly side but not adjacent to West Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on the Plan, bounded and described as follows:

Commencing at a point on the southerly sideline of West Commercial Street at the northwesterly corner of land now or formerly of New Yard, LLC recorded in said Registry of Deeds in Book 30887, Page 247;

Thence, S 16°58'37" E along the westerly line of land of said New Yard, LLC 158.20 feet to the point of beginning at the southerly line of land now or formerly of the State of Maine Department of Transportation recorded in said Registry of Deeds in Book 31408, Page 301;

Thence, S 16°58'37" E continuing along the westerly line of New Yard, LLC 503 feet, more or less, to the spring high tide line of the Fore River;

Thence, westerly along the spring high tide line of the Fore River 1659 feet, more or less, to land of the State of Maine;

Thence, the following courses and distances along the southerly line of land of said State of Maine:

N 02°52'22" W 26 feet, more or less;

N 87°07'38" E 21.45 feet;

Thence, along a curve to the left with a radius of 725.78 feet, having an arc length of 185.34 feet, having a chord bearing of N 79°48'41" E and chord length of 184.84 feet;

N 72°29'45" E 519.07 feet;

Thence, along a curve to the left with a radius of 725.74 feet, having an arc length of 165.42 feet, having a chord bearing of N 65°57'58" E and chord length of 165.07 feet;

N 59°26'10" E 495.19 feet;

N 62°41'27" E 125.13 feet;

N 66°19'39" E 57.45 feet to the point of beginning. Containing 260,844 S.F. or 5.99 acres, more or less.

Together with all right, title and interest that this grantor may have in the intertidal and submerged lands abutting the above described parcel.

The property is subject to a Deed of Easement from Maine Central Railroad Company to Canal Landing, LLC, dated August 7, 2014 and recorded in said Registry of Deeds in Book 31723, Page 95.

MAINE CENTRAL RAILROAD COMPANY was f/k/a Maine Central Road Company, Portland and Ogdensburg Railroad Company and Boston and Maine Railroad.

Meaning and intending to convey and hereby conveying a portion of the premises conveyed to Maine Central Railroad Company, a/k/a Maine Central Road Company by deed of Portland Terminal Company, dated December 30, 1985 and recorded in said Registry of Deeds in Book 7026, Page 187.

Received
Recorded Register of Deeds
May 01,2015 11:27:57A
Cumberland County
Nancy A. Lane

ATTACHMENT F

TECHNICAL CAPABILITY

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 Mr. Phineas Sprague, Jr. as Project Developer.

The Team services will be provided by the following companies and their respective team leaders:

Civil Engineer	Stephen R. Bushey, P.E. Stantec Consulting Services Inc. 482 Payne Road Scarborough, Maine 04074 (207) 887-3478 – Work (207) 756-9359 – Cell Stephen.Bushey@Stantec.com
Surveyor	John Swan, P.L.S. Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, ME 04105 (207) 774-0424 – Work (207) 774-0511 – Fax jswan@owenhaskell.com
Attorney	Peter Plumb, Esq. Murray Plumb & Murray 75 Pearl Street Portland, ME 04104 (207) 773-5651 – Work (207) 773-8023 – Fax pplumb@mpmlaw.com
Geotechnical	Tim Boyce, P.E. S. W. Cole Engineering 286 Portland Road Gray, ME 04039 (207) 657-2866 – Work (207) 657-2840 – Fax TBoyce@SWCole.com
Environmental	Rip Patten, P.E. Credere Associates, LLC 776 Main Street Westbrook, ME 04092 (207) 828-1272 – Work (207) 887-1051 – Fax rpatten@crederellc.com
Structural Engineering	Roger Gagnon Gagnon Engineering 10 Solomon Drive Gorham, ME 04038 (207) 839-8085 – Work roger@gagnonengineering.com

Construction Manager	Jim Keeley Keeley Crane Service P.O. Box 1074 Portland, ME 04104 (207) 885-0035 jim@keeleycrane.com

The team of consultants retained by developer has expertise and experience in the design of similar commercial projects. Resumes of key personnel for development team can be provided upon request.

The Applicant also has significant experience in the development and management of large commercial projects having managed Portland Yacht Services for many years.

ATTACHMENT D

WAIVER REQUESTS

See Waiver Table and additional information provided in cover letter.

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Section 14-498(b)(8)(a) Sidewalks and Curbs	a. Sidewalks shall be constructed on each side of each street in accordance with Article III of Chapter 25. Sidewalks to be used by pedestrians are to be so located as to minimize contacts with normal automotive traffic, with preference given to interior	We are requesting a waiver to provide a sidewalk along the full property frontage	There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.
Section 14-498(b)(8)(b) Sidewalks and Curbs	b. Curb shall be constructed on each side of each street. The curbing shall be constructed as provided in Article VI of Chapter 25.	We are requesting a waiver to provide curb along the full property frontage.	The street has been rehabilitated without curbing in the last 60 months. Runoff from the development site or within the street does not require curbing for stormwater management.
Section 14-526 (a) 3 a Public Transit Access	a. For any residential development consisting of twenty (20) or more dwelling units or commercial or institutional development of at least 20,000 square feet gross floor area, a transit facility shall be constructed where the	The Applicant requests a waiver of the transit facility requirement.	The proposed project will only be 12,000 SF and will not generate public transit usage

ATTACHMENT C

ZONING ASSESSMENT

See Zoning Analysis table and additional information provided in cover letter.

ZONING ANALYSIS Relevant Zone(s) Waterfront Port Development Zone (WPDZ)

All Projects:

	Required	Proposed
Lot Size	N/A	
Area Per Dwelling Unit		
Minimum Street Frontage		
Front Yard Minimum	N/A	
Front Yard Maximum		
Rear Yard		
Yard Right		
Yard Left		
Side Street Setback		
Step Back		
Maximum Lot Coverage	50%	
Minimum Lot Coverage	N/A / 5 acres cond use	
Maximum Height	55 ft / 75 ft. cond use	72 ft.
Open Space		
Maximum Impervious Area		
Pavement Setback		
Floor Area Ratio		
Off Street Parking Spaces		
Loading Bays		
Other 1 Setback from Pier Line	5 ft.	
Other 2 Max. Building Length	450 ft.	150 ft.
Other 3		

Planned Residential Unit Developments (PRUD) Requirements - N/A

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable) - N/A

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

TAB 4 – ENVIRONMENTAL AND STORMWATER

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 4 and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)

- *Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable*
- *Erosion control plan and measures*
- *Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable*
- *Subsurface sanitary sewage disposal and groundwater protection*

3. *Water Quality, Stormwater Management and Erosion Control:*

   a. *Stormwater:*

      (i) The site's runoff conditions are primarily self-contained and runoff infiltrates or sheets to the Fore River; therefore, issues related to offsite or downstream flooding are not applicable. The Boatyard Surface, consisting of a thick section of granular and crushed stone soils, provides for nearly 100% absorption, other than for very heavy rainfall events, thus water quality treatment is also achieved.

      (ii) All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

      (iii) All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

      (iv) All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

TAB 3 – ENVIRONMENTAL AND LANDSCAPE FEATURES

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 3 and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Preservation of Significant Natural Features (14-526 (b) 1), if applicable

- *Trees, plants, habitats listed on State or Federal list of endangered or threatened*
- *High and moderate value waterfowl and wading habitat*
- *Aquifers on Casco Bay Islands*
- *Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)*
- *Proposed preservation areas and protection measures*
- *Documentation from environmental consultants, determinations from applicable state agencies*

1. *Preservation of Significant Natural Features:*

   a. The existing site retains no prominent significant natural features therefore no issue related to the preservation of these features applies.

   b. The Applicant is not requesting a waiver from this standard.

Landscaping and Landscape Preservation (14-526 (b) 2 a)

- *Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)*
- *Protection measures of existing vegetation during construction*
- *Protection measures within Shoreland Zone, if applicable*

2. *Landscaping and Landscape Prevention:*

   a. Landscape Preservation.

      (i) The site's existing tree population is limited and the City's Shoreland Zoning vegetation management provisions do not require tree protection in the Waterfront Development Zone.

      (ii) Not applicable.

      (iii) Not applicable.

      (iv) The Applicant will request a waiver from this standard.

Site Landscaping (14-526 (b) 2 b i)

- *Screening and buffering of service areas and between non-residential and residential uses*
- *Planting plans with plant schedule and sizes (Technical Manual, Section 4)*

2. *Landscaping and Landscape Prevention:*

   b. Site Landscaping:

      (i) Landscaped Buffers:

         (a) There are no service or loading areas observable from nearby sidewalks or residential properties.

         (b) The development is not subject to zoning setbacks or buffering requirements.

         (c) Not applicable.

         (d) Not applicable.

Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable

- *Landscaped islands within parking areas (Technical Manual, Section 4)*

2. *Landscaping and Landscape Preservation:*

   b. Site Landscaping.

      (ii) Parking Lot Landscaping:

         a) thru d) The applicant is requesting a waiver of the landscape requirements based on the proposed boatyard use and the need for flexibility with respect to boat parking and heavy vehicle maneuvering.

Street Trees (14-526 (b) 2 b iii)

- Existing Heritage or Feature Trees on site and measures to preserve
- Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

2. *Landscaping and Landscape Preservation:*

   b. Site Landscaping.

      (iii) Street Trees:

(a) In accordance with the previously approved plan for the Phase III Buildings C & D, various street trees will be provided along the West Commercial Street frontage. No further street tree measures are proposed as part of the Phase IV Building E proposal.

TAB 5 – PUBLIC INFRASTRUCTURE AND SAFETY

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 5 and Section 14-526 of the ordinance.

(c) Public Infrastructure and Community Safety Standards.

Consistency with City Master Plans (14-526 (c) 1)

- *Identify consistency with master plans*
- *Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable*

1. *Consistency with City Master Plans:*

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

   b. The Applicant will coordinate with utility representatives for the continuation of easements related to utility infrastructure crossing the site.

Public Safety and Fire Prevention (14-526 (c) 2)

- *Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)*
- *Emergency vehicle access*
- *Address consistency with public safety standards (Technical Manual, Section 3)*
- *Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist*

2. *Public Safety and Fire Prevention:*

   a. The site has been designed to promote a safe and inviting customer access. The MaineDOT has previously constructed the two rail crossings as shown on the plans.

   b. No changes to emergency access conditions within the surrounding streets is proposed.

   c. Fire hydrants are located within the adjacent street system. Additional fire hydrants have been installed within the site.

Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)

- Electrical services, including providing underground services

- Identify existing and proposed connections for public utilities and required public utility upgrades
- Sewer line connections are required, if there is a main within 200 feet
- Proposed solid waste management facilities on-site and management for the site
- Written evidence of the ability to serve from utility companies, as applicable

3. *Availability and Adequate Capacity of Public Utilities:*

   a. The Applicant has previously secured letters from all applicable utilities stating their ability to serve the site and systems have been previously installed that are available to serve Building E.

   b. All on site electrical lines will be underground.

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

   d. The project will use an existing force main sewer and gravity connection to the interceptor sewer located along the property frontage.

   e. The sanitary sewer collection system will be designed to meet all applicable sections of the Technical Manual.

   f. Not applicable.

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

June 26, 2018

Captain Chris Pirone
City of Portland Fire Department
380 Congress Street
Portland, ME 04101

Subject: Canal Landing New Yard – Phase IV – Building E
400 West Commercial Street
Applicant: Canal Landing, LLC
NFPA 1 Review to Access and Other Fire Department Issues

Dear Captain Pirone:

In accordance with instructions in the City's Site Plan Review packet, please find enclosed the drawing necessary for your review of the Canal Landing site at 400 West Commercial Street project. We are submitting a Level III Site Plan Application associated with a proposed 12,000 SF metal Maintenance Building to be located on the shorefront side of the development. We have listed each item in your checklist below, followed by our response:

- **Fire Department Checklist:**

1. Name, address, telephone number of applicant:

   Canal Landing, LLC
   400 West Commercial Street
   Portland, Maine 04101
   Cell: 207-653-1414
   phin@portlandyacht.com

2. Name address, telephone number of architect:

   David Lloyd
   Archetype PA
   48 Union Wharf
   Portland, ME 04101
   Phone: 207-772-6022
   Lloyd@archetypepa.com

3. Proposed uses of any structures [NFPA and IBC classification]:

   The following IBC and NFPA classifications will apply to the Phase IV development:

IBC	NFPA Classification
2B	II (000)
5B	V (000)

4. Square footage of all structures [total and per story]:

BUILDING PROGRAM		
Structure	**Total (SF)**	**Per Story ±**
Marine Maintenance (Building E)	12,000	same

5. Elevation of all structures:

   Building elevations accompany this letter.

6. Proposed fire protection of all structures:

   All of the structures are proposed to have a sprinkler system. Fire protection is currently provided by several onsite hydrants and hydrants within Commercial Street in the vicinity of the site.

7. Hydrant locations:

   Multiple new hydrants have been installed onsite. The Fire Department should review and provide any additional information necessary regarding placement and locations of future fire hydrants on the site. All hydrants installed comply with the Portland Water District and Portland Fire Department standards pertaining to manufacturer, style, and installation specifications.

8. Water main[s] size and location:

   The site will be served by an 8" water main that will extend off the 12" main in Commercial along the east end of the site. There is an existing fire line supply meter serving the property. Below the meter pit, the project water main size will be a minimum of 6" to serve the development site.

9. Access to all structures [min. 2 sides]:

   The accompanying site plan depicts the site's access conditions that include access to two or more sides of the buildings.

10. A Code Summary shall be included referencing NFPA 1 and all Fire Department Technical Standards.

- **NFPA 1 – Chapter 18 Fire Department Access and Water Supply**

18.2 Fire Department Access

The project access conditions for east to west include an entrance at the eastern side of the site generally in the location of an existing graveled lot opposite the Star Match Building. A primary access will be available from the existing driveway in the middle of the property. A third, secondary driveway is proposed at the west end of the site off Commercial Street. The separation between all driveways will be at least 700 feet. The driveways will be greater than 24 feet in width which satisfies NFPA 1 18.2.3.4.1.1 that requires a minimum width of 20 ft.

Per NFPA 1 Chapter 18.2.3.2.1 the interior site access conditions will extend to within 50 ft. of at least one exterior door of all structures. This is satisfied on the site plan.

Per NFPA 1 Chapter 18.2.3.2.2 all first story floors shall be located not more than 150 ft. from the Fire Department access road. This is satisfied on the site plan.

NFPA 1 18.2.3.3 pertains to the number of access roads required and states that this determination is subject to the Authority Having Jurisdiction (AHJ).

69. 3.3.4 Minimum Separation Distances

Stantec reviewed NFPA 1 pertaining to separation distances between LP gas storage containers and buildings. NGL has removed all of their tank storage in the nearby parcel, therefore separation to LP tank storage no longer applies.

- **City of Portland Technical Manual Section 3 – Public Safety**

Part 3.4 Site Access Standards

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

Supporting evidence: The development site is located along Commercial Street which is accessible from either direction. A minimum of two points of access will be provided into the Building E site.

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

Supporting evidence: As depicted on the site plans, the proposed building layout provides for a minimum two-sided access to all structures.

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

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

Supporting Evidence: The proposed development layout has contemplated emergency access conditions and provided for safe and efficient access for emergency vehicles.

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

Supporting Evidence: All buildings will be provided with an exterior entrance door that will be within 50' of a Fire Department access route.

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

Supporting Evidence: A minimum 9 ft. vertical clearance will be provided below any overhead signage or utilities entering the site. Generally speaking, all utilities will be underground.

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

Supporting evidence: There are no elevators proposed for the project.

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

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

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3406
Fax: (207) 883-3376
stephen.bushey@stantec.com

Attachments – Amended Fire Protection Plan

c: Phineas Sprague, Jr. – New Yard LLC
Clint Marshall

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UTILITY ABILITY TO SERVE REQUESTS

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

June 20, 2018

MEANS GROUP
Portland Water District
225 Douglass Street
P.O. Box 3553
Portland, ME 04104-3553

Subject: Canal Landing New Yard – Phase IV
400 West Commercial Street, Portland, Maine
Ability to Serve Project with Water Supply & Wastewater Collection/Treatment

Dear Coordinator:

On behalf of Canal Landing, LLC, we would like to verify the Portland Water District's ability to provide domestic and fire supply water and wastewater capacity for their project at 400 West Commercial Street in Portland. This Phase IV project consists of a proposed 12,000 SF metal maintenance building that will include sprinkler service and domestic water supply. The building will be served from the existing supply main that crosses the rail tracks and serves the two existing buildings. The existing fire line supply meter is part of this service system. The project site is located on all or a portion of Map 59, Block A Lots 3 & 4; Map 60, Block F, Lots 1, 2, 3 & 4; Map 71, Block F, Lots 2, 4, 5 & 6.

Water demand for domestic consumption is expected to be similar to wastewater demands or as observed at the PYS center on Fore Street, water consumption will be slightly more than wastewater flow. We do not anticipate the use of irrigation at this time.

We are in the process of completing the Level III Site Plan Application for a submission to the City of Portland Planning Staff and would appreciate your response to the Planning Department.

Specifically, our office is interested in a letter from you indicating the following:

- The continued ability of the Portland Water District's facilities to serve the project.
- Any other factors which may affect the water and sewer service to this site.
- The ability of the collection system to accept this flow.
- Any connection service or impact fees.
- The ability of the Portland Water District to provide domestic and fire water supply to the new Phase IV 12,000 SF Maintenance Building.

If you have any questions with regards to the information submitted, please contact our office.

Regards,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3478
Fax: (207) 883-3376
Stephen.bushey@stantec.com

Attachment

c: Phin Sprague, Portland Yacht Services

V:\1953\active\195350129\Admin\Permitting\Level III - Ph 4 - Site Plan Application\attachments\ltr_abs_pwd_2018.06.20.docx

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

June 20, 2018

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

Subject: Canal Landing New Yard – Phase IV
400 West Commercial Street
Applicant: Canal Landing, LLC
Wastewater Capacity Application

Dear Mr. Roland:

Our office is working as a consultant to Canal Landing, LLC on the site planning and permitting associated with the proposed Phase IV of the Canal Landing New Yard Development. This Phase IV project consists of a proposed 12,000 SF metal maintenance building. The project site is located on all or a portion of Map 59, Block A Lots 3 & 4; Map 60, Block F, Lots 1, 2, 3 & 4; Map 71, Block F, Lots 2, 4, 5 & 6.

Water demand for domestic consumption is expected to be similar to wastewater demands or as observed at the former PYS center on Fore Street, water consumption will be slightly more than wastewater flow. We do not anticipate the use of irrigation at this time. Based on this modest amount of domestic flow, we trust that the City's wastewater collection and treatment system has adequate capacity to serve this project.

We are in the process of completing the Level III Site Plan Application for for a submission to the City Planning Staff and would appreciate your response to the Planning Department. If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3406
Fax: (207) 883-3376
stephen.bushey@stantec.com

Enclosure

c: Phineas Sprague, Jr. – Canal Landing, LLC
Clint Marshall

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CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: June 20, 2018

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

Site Address: 400 West Commercial Street (Building E) — Chart Block Lot Number: 59-A-3, 4; 60-F-1, 2, 3, 4; 71-F-2, 4, 5, 6

Proposed Use: 12,000 SF Boat Maintenance/Marine

Previous Use: Rail Yard

Existing Sanitary Flows: 0 GPD

Existing Process Flows: 0 GPD

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

Site Category:

Commercial *(see part 4 below)*	X
Industrial *(complete part 5 below)*	
Governmental	
Residential	
Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: Matthew Grooms Phone: 207-874-8725

Owner/Developer Name: Canal Landing LLC

Owner/Developer Address: 400 West Commercial Street

Phone: 207-774-1067 Fax: E-mail: phin@portlandyacht.com

Engineering Consultant Name: Stephen Bushey, P.E.

Engineering Consultant Address: Stantec, 482 Payne Rd, Scarborough, ME 04074

Phone: 207-887-3478 Fax: 207-883-3376 E-mail: stephen.bushey@stantec.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: 20 employees at 15 gpd = 300 GPD

Peaking Factor/ Peak Times: Not Applicable

Specify the source of design guidelines: *(i.e.* __ *"Handbook of Subsurface Wastewater Disposal in Maine,"* __ *"Plumbers and Pipe Fitters Calculation Manual,"* X *Portland Water District Records, Other (specify)* _____

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: Not Applicable

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: Not Applicable 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.

TAB 6 – SITE DESIGN

Section 14-526. Site Plan Standards

The following statements are provided in accordance with the submission checklist Tab 6 and Section 14-526 of the ordinance.

(d) Site Design Standards.

Massing, Ventilations and Wind Impact (14-526 (d) 1)

- *Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable.*
- *Bulk, location or height impacts on adjoining structures*
- *Identify and locate HVAC equipment and venting away from public spaces and residential properties*
- *Identify screening and manufacturing specifications for noise, if applicable*

1. *Massing, Ventilation and Wind Impact:*

   a. The bulk, location and height of the proposed Building E has been designed to not result in adverse impacts to abutting properties.

   b. The bulk location and height of the proposed building is consistent with the WPDZ requirements and there are no nearby developed lots that may be negatively impacted. The IMT expansion area is an industrial waterfront use. There is currently no development on the opposite side of Commercial Street. Land to the west includes more waterfront industrial land uses and buildings.

   c. HVAC venting, if necessary, will be directed through rooftop units and will not impact any adjacent public spaces.

Shadows (14-526 (d) 2), if applicable

- Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

2. *Shadows:*

   a. The development is located in the WPDZ Zone and this standard is not applicable.

Snow and Ice Loading (14-526 (d) 3)

- *Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways.*

3. *Snow and Ice Loading:*

a. The proposed building has been designed and located such that accumulated snow and ice will not fall onto adjacent properties or public ways.

View Corridors (14-526 (d) 4), if applicable

- *Protection of designated view corridors (Portland Design Manual, Appendix 1)*

4. *View Corridors:*

   a. The project site it located outside the Downtown Vision Corridor Protection Plan.

Historic Resources (14-526 (d) 5), if applicable

- *Identify developments within Historic Districts or affecting Designated Landmarks*
- *Certificate of Appropriateness or other evidence*
- *Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required*
- *Address preservation and documentation of Archaeological Resources*

5. *Historic Resources:*

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

   b. The development is not located adjacent to or within 100 ft. of a designated landmark, historic district, or historic landscape district.

   c. There are no known archaeological resources on the site except for the location of the former Cumberland and Oxford Canal and the former Portland Glassworks. There are no known aspects of the Canal visible at the site. The Applicant has been cooperating with officials from MHPO as they conducted an archaeological investigation of the Glass Works site. Their findings can be provided under separate cover, if necessary.

Exterior Lighting (14-526 (d) 6)

- *Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)*
- *Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)*

6. *Exterior Lighting:*

   a. Site Lighting

      (i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual.

   b. Architectural and Specialty Lighting

(i) Not applicable to the project.

(ii) Not applicable to the project.

c. Street Lighting

(i) There are existing street lights along Commercial Street. No changes are currently contemplated to the existing street light conditions.

Noise and Vibration (14-526 (d) 7)

- *Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements*

7. Noise and Vibration:

The project noise levels will be designed to meet the permitted levels as outlined in the WPDZ Zone. All HVAC and mechanical equipment is proposed to be mounted on the roof, or otherwise ground mounted and concealed from nearby properties.

Signage and Wayfinding (14-526 (d) 8), if applicable

- *Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff*
- *Proposed commercial and directional signage on site*

8. Signage and Wayfinding:

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

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

(ii) Proposed commercial signage is still being designed and subject to a condition of approval.

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

Zone Related Design Standards (14-526 (d) 9)

- Address Historic Preservation Design Review, if applicable
- Address any applicable design review standards by zone
- Address submission requirements from Design Manual, page 1, addressing neighborhood context
- Description of exterior materials, color, finish, and samples

9. *Zoning Related Design Standards:*

    a. The project is within the WPDZ and zoning related design standards are not applicable.

TAB 2 – TRANSPORTATION

Section 14-526. Site Plan Standards.

The following statements are provided in accordance with the submission checklist Tab 2 and Section 14-526 of the ordinance.

(a) Transportation Standards

Transportation Analysis – Traffic Impact (14-526 (a) 1)

- *Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts*
- *Traffic Impact Study (Technical Manual, Section 1) if applicable*

1. *Impact on Surrounding Street Systems:*

   The development will fit in with the existing street system, as it will continue to use improved access locations off Commercial Street. Based on the limited intensity of use, the project is expected to have an insignificant impact on traffic in the neighborhood. Due to its land use as a Boat Maintenance Facility, Building E does not involve specific pedestrian or bicycle facilities. Vehicle and loading circulation to the building are accounted for on the plan.

Access and Circulation (14-526 (a) 2 a)

- *Access and internal circulation, addressing ADA access*
- *Access and egress impacts on traffic flows*
- *Description and use of drive-up features, if applicable*

2. *Access and Circulation:*

   a. *Site Access and Circulation.*

      (i) The development provides access via Commercial Street. Ample turning movement is provided at each street entrance. Internal circulation has been reviewed and designed to accommodate the typical use of semi-trailers, boat trailers, and the travel lift. The driveways have been operating satisfactorily over the course of the past years and are expected to continue into the future.

      (ii) Access and egress have been designed to avoid conflict with existing turning movements and traffic flows.

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

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

Loading and Servicing (14-526 (a) 2 b)

- *Loading and servicing needs, route and travel way geometrics for deliveries*
- *Turning templates for delivery vehicles, if applicable*

2. *Access and Circulation:*

   b. *Loading and Servicing:*

      (i) The site layout has been configured to accommodate the typical movements of large boat delivery vehicles and access to the boat ramps. Moreover, the operations of the travel lift basin have factored into the positioning of the building.

Sidewalks (14-526 (a) 2 c)

- *Sidewalks and condition along street frontages and internal walkways*
- *Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)*

2. *Access and Circulation:*

   c. *Sidewalks:*

      (i) The Applicant is requesting a waiver to provide a sidewalk along the full property frontage as previously contained in the Findings for the Buildings C & D project and approved by the Planning Board on January 23, 2018. We believe no further evidence is required for the Building E project.

Public Transit (14-526 (a) 3), if applicable

- *Existing available transit services*
- *Proposed site plan design details, such as easement, pad base, and shelter*

3. *Public Transit Access.*

   a. The development contains no residential uses therefore Public Transit Access is not applicable.

   b. A new Transit stop is not proposed.

   c. A new Transit stop is not proposed.

   d. Waiver: The Applicant requests a waiver of the transit facility requirement.

Off-Street Parking: Vehicle & Motorcycle/Scooter (14-526 (a) 4 a and c)

- *Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements*
- *Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan*

4. *Parking.*

   a. *Location and Required Number of Vehicle Parking Spaces.*

      (i) The Applicant is providing parking for their employees within the boat parking area around the site. The Applicant is seeking flexibility to move vehicular parking around the site to meet variable vessel parking demand therefore no specific vehicular spaces are identified on the site plans. Building E will not involve any increase to employee or patron parking demand.

      (ii) The Applicant has not prepared a TDM strategy, as it is not applicable to the intended uses.

      (iii) The Applicant proposes the amount of parking which is appropriate for the anticipated uses of this site.

      (iv) Parking spaces and aisles have been designed to meet the dimensional requirements of the Technical Manual.

      (v) Vehicle and vessel parking areas have been designed to withstand site conditions.

   c. *Motorcycles and Scooter Parking.*

      (i) The Applicant is requesting a waiver of the motorcycle/scooter parking requirements based on the site use.

Bicycle Parking (14-526 (a) 4 b)

- *Address bicycle parking requirements and identify locations on-site*
- *Construction details for bike racks (Technical Manual, Section 1)*

4. *Parking.*

   b. *Location and Required Number of Bicycle Parking Spaces.*

      (ii) The Applicant is requesting a waiver of the bicycle parking requirements based on the site use for Building E.

Snow Storage (14-526 (a) 4 d)

- *Management plan for snow removal and locate snow storage areas on plans*

4. Parking.

d. Snow Storage.

(i) Snow storage management will employ two strategies:

1. On-site snow storage around the perimeter of the site.

2. Snow removal and off-site storage. Generally speaking, the nature of the proposed site use precludes the need for significant snow removal.

Traffic Demand Management (TDM) (14-526 (a) 5), if applicable

- *Develop TDM with Trip Reduction Targets and Strategies*

5. Transportation Demand Management (TDM).

a. A TDM plan is not required for the project.

Construction Management Plan

Canal Landing New Yard – Phase IV – Building E
Canal Landing, LLC

This document and its subsequent attachments comprise The Construction Management Plan being submitted to the City of Portland for the Canal Landing development at 400 West Commercial Street. The Construction Management Plan contains information pertaining to the overall planning and coordination of Phase IV of the project.

Phase IV involves the construction of a new 12,000 SF maintenance building to be located within the shorefront parcel. The building will be used for marine repairs and vessel maintenance. Site improvements include parking, utilities, and yard work.

A. Construction Management Principles

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

- The construction zone for the building will be fully secured with hard barriers/fencing preventing any access into the site by the public. Barriers are not expected to extend into the Public R.O.W.
- All construction activities will occur within the construction barriers/fencing to ensure the public is never exposed to any risks caused by the activities.
- There will be an onsite staging and unloading area for all deliveries which will prevent any impacts caused by offsite staging of trucks.
- All deliveries will be coordinated and scheduled to ensure that there is no offsite queuing required in West Commercial Street. The Owner plans to schedule as many deliveries as possible in the early morning to limit impact on the surrounding area.
- All construction activities will occur within normal daytime working hours to minimize sound impacts to the surrounding area.

B. Development Review of Construction Management Plan

The Owner will use a site-specific safety program for all team members who work on the construction site. The public will not be put at risk at any point throughout this project, as all work will be completed within the fenced off jobsite. At no point of the project will the public have access to this job site. Minimizing impacts to areas surrounding the building/construction site will be a primary consideration in the process.

The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood. Such a condition may involve a delay in commencement of construction, if necessary.

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

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

This project will require no anticipated public street openings for utility tie-ins. If found to be necessary, all required permits will be requested and granted by the Department of Public Works prior to any street openings occurring. MUTCD plans will be submitted to and approved by the City of Portland for any traffic disruptions caused by street openings or interruptions to West Commercial Street traffic.

D. Construction Administration and Communication

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

Phineas Sprague
207-653-1414
phin@portlandyacht.com

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

E. Construction Schedule

The preliminary construction schedule for the project starts in Fall 2018 and runs through Spring 2019.

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

F. Security & Public Safety

See the Site Plans for fencing and barriers to be used to isolate the construction site from the public. All gates into the project may have Knox locking devices to allow for emergency access.

The fire safety program onsite will consist of the following:

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

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: This project will not require street openings on West Commercial Street.

2. Sewer: This building will need to connect to the public sewer system via an existing on site service connection. All required permits will be submitted for and approved by the Sewer Connection Clerk at the Department of Public Works.

3. Traffic Control Plans: There will be periods of time throughout the project where construction activity may impact the existing public street system although this is expected to be very limited. Prior to any interruptions, a MUTCD plan will be created and submitted to the City for approval. The MUTCD will ensure that traffic and safe passage for the public is maintained in a satisfactory manner.

H. Site Management and Controls

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

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

I. Erosion Control and Preservation of Trees

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

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

J. Construction Staging Area

All trucks will be unloaded within the construction site's footprint to avoid impacts on public traffic. An offsite marshalling area will not be required for this project. All materials will be stored onsite and in a manner to avoid impacts to ongoing Boat Yard operations and emergency vehicle access to the property.

K. Parking During Construction

Construction parking will be provided onsite. No parking of construction vehicles will be allowed in the West Commercial Street R.O.W.

L. Special Measures as Necessary

There will be no special measures necessary for this project.

Please do not hesitate to contact me with any comments, questions, or concerns regarding the Canal Landing Phase IV project and subsequent Construction Management Plan.

UTILITY CAPACITY LETTERS

CENTRAL MAINE POWER

June 26, 2018

Stantec
C/O Mr. Steve Bushey
482 Payne Road
Scarborough, Maine 04074-8929

RE: Canal Landing, West Commercial Street, Building E

Dear Mr. Bushey,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a SAP Work Request Order so we may provide an actual cost.

If you have any questions please feel free to call me at 828-2882.

Sincerely,

Paul DuPerre

Paul DuPerre
Energy Service Specialist

162 Canco Road, Portland, ME 04103
Telephone 800.750.4000, Fax 207.791.1026
cmpco.com

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Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

October 30, 2018

Stephen Bushey, P.E.
Stantec
482 Payne Road Scarborough Court
Scarborough ME 04074-8929 US

Re: 40 West Commercial Street, PO (Bldg E)
Ability to Serve with PWD Water

Dear Mr. Bushey:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on October 1, 2018. Based on the information provided per plans dated June 26, 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 service line at this site may be used to provide fire and domestic water to the building. Our records show that the property is currently served with an 8-inch fire and domestic water service. An approved backflow prevention device (RPZ on domestic service, Testable DCVA on fire service) must be installed on the service line at the service entrance prior to service activation. Please refer to the PWD website for more information on cross-connection control policies. If any use other than that stated is expected, please contact the District so we can review the ability of the existing service to meet your water needs.
- Please note that PWD's Terms and Conditions require that a service to one parcel cannot serve another parcel. If in the future this parcel is subdivided, a separate service will be required.

Existing Site Service

According to District records, the project site does currently have existing water service. An 8-inch diameter ductile iron fire and 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 16-inch diameter cast iron water main in West Commercial Street and a public fire hydrant located approximately 50 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 103 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

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

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

Att. O

EROSION AND SEDIMENTATION CONTROL REPORT

CANAL LANDING NEW YARD
100 WEST COMMERCIAL STREET
PORTLAND, ME

PREPARED FOR

NEW YARD, LLC
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
(207) 774-1067

PREPARED BY

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355



OCTOBER 2018

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Figures and Photographs (previously submitted for Phase III – Available upon request)

Figure 2 – USGS Location Map
Figure 3 – Tax Map
Figure 4 – Zoning Map
Figure 5 – Aerial Photograph
Figure 7 – FEMA Flood Map
Figure 8 – USDA SCS Soils Map
Figure 9 – GIS Sand and Gravel Aquifer Map
Figure 10 – Surficial Geology Map
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Appendices

Appendix A – Seeding Plan
Appendix B – Sample Erosion Control Compliance Certification and Inspection Forms

A. INTRODUCTION

New Yard, LLC owns and operates a new boat maintenance and repair yard within approximately 17 acres of land located prominently along the West Commercial Street waterfront. The project represents an ideal marine related use within the Waterfront Port Development Zone.

The project includes multiple buildings to be constructed over multiple phases along with new shorefront uses including one or more boat ramps, docks, new or reconstructed piers and a travel lift basin. The applicant's Phase IV plan includes Building E and some surrounding site area, all within a less than 1 acre site area.

This section of the permit application presents the Erosion Sediment Control Plan designed for the Phase IV building site. The site development activities are limited in scope and earthmoving will be closely managed to prevent any sediment transport within the site and towards the Fore River shorefront. The fugitive dust emissions will be controlled, and the requirements of this erosion control plan and all permit requirements will be fulfilled. Winter construction will be required. Specific erosion controls stipulated by the plan and this report are minimum requirements.

B. EXISTING CONDITIONS

The overall project site consists of approximately 17.77 acres of land that is composed of three primary areas described as follows, although the Building E area is less than 1 acre:

1. **Retained Parcel (Map 59A, Lots 3 & 4)**: Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Building A and Building B amounting to approximately 48,000 SF of building space. This parcel contains a new boat ramp and boat yard area currently in use by Portland Yacht Services.
2. **Shorefront Parcel (Map 60F, Lots 3 & 4)**: This area is irregularly shaped and contains approximately 1,581 LF of waterfront. The site area is approximately 5.99 acres. This area is currently developed with the recently constructed travel lift basin and the now completed shorefront revetment improvements, float system and various support features for boatyard operations.
3. **Street Front Parcel (Map 60F, Lot 1)**: This 6.75-acre area contains approximately 2,160 LF of street front. The property is generally undeveloped, although proposed Buildings C and D have been previously approved for construction and are expected to be underway within the next few months.

   Existing development in the area includes the following:

   - The City of Portland Marine Terminal and expansion area is located to the east of the site.
   - Commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of Commercial Street.
   - The Portland Star Match Co. building lines up opposite the site.
   - The State of Maine now operates rail tracks into the IMT expansion area. These tracks were completed in 2016.

Owen Haskell, Inc. has completed a topographic survey of the property. The site is relatively flat with the highest points along the Commercial Street frontage, sloping to the shorefront. Site elevations along Commercial Street trend down from west to east from elevation 23' (NGVD 1929) to elevation 16' at the westerly end of the Commercial Street frontage. The site's low areas

were previously near elevation 9'-10' while most of the waterfront top of bank was between elevation 9'-11'. During the Travel Lift construction phase (earlier this year), the site grades were raised to elevation 12' or higher. The High Annual Tide Line (HAT) for the Fore River is elevation 7.4' and mean low water is approximately elevation -4.0'. Owen Haskell, Inc. has also completed bathymetric survey data collection and found water depths within 50' of the low water line to be 10' to 30'. The Federal Channel is also represented on the project's drawings and it is generally located 60' to 120' off the shorefront. No activities are proposed beyond the Federal Channel line. The manmade pervious surface approach is considered the most practical choice for meeting the projects stormwater management needs. The experience thus far on the completed site areas has been positive with respect to how the Boatyard surface functions for handling rainfall and stormwater.

The site's runoff either infiltrates into the ground or drains directly to the Fore River via overland flow. There are no drainage systems on site, although there is a closed storm drainage system within Commercial Street. The Commercial Street drainage system ultimately ties into a CSO line located on the west end of the site as well as a second CSO line on the east side of the site. The applicant has provided easements to the Portland Water District for the operations of these CSO pipes crossing the site.

Due to the site's historic industrial condition much of the surface consists of sand and gravel fill, asphalt or otherwise sparsely vegetated ground surface.

The site's soil layers are generally characterized as follows:

- 10 to 15 feet of sand and gravel fill – there is little to no organic surface layer throughout the site.
- 5 to 10 feet of silt and sand.
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands.
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

Observed soils conditions at the ground surface include fill material containing coal, coal ash, and comingled with scarified sand and gravel. Minor eroded soils conditions have been observed along the shoreline in and behind the existing granite revetment wall and remnant pier areas. The project's site development activities include restoration, rehabilitation, and stabilization of these areas.

According to various investigation data, depth to groundwater varies from 3 to 7 feet and this likely varies with tidal conditions in the Fore River. The groundwater flows from the northwest to the southeast across the site.

C. PROPOSED PROJECT

The applicant proposes to redevelop the property in a manner consistent with the WPDZ Standards. The development program includes the following components:

ONSITE

The development program includes continued phased development of boat maintenance facilities and ancillary marine related uses. Phase IV development activities are summarized as follows:

Phase III – Will Include (For Which Approval Renewal Is Requested):

- Building E area preparation for foundation construction.
- Construction of a 12,000 SF building for marine vessel repairs and maintenance.
- Establishment of the remaining yard areas and surfaces for heavy equipment around the Building E site.
- Installation of utilities for building E.
- Minor landscape and tree planting

D. OVERVIEW OF SOIL EROSION AND SEDIMENTATION CONCERNS

The primary emphasis of the Erosion and Sedimentation Control Plan to be implemented for this project is as follows:

- **Temporary Measures:** Planning the project to have erosion resistant measures in place by implementing measures intended to prevent erosion from occurring.
- **Phasing Sequencing:** The plan includes measures to intercept and convey runoff to temporary sediment sumps as the construction of the project occurs. The use of small temporary collection sumps with a clean sand or crushed stone filter above an underdrained discharge is recommended to supplement the principal sumps to help reduce turbidity.
- **Crushed stone surfacing:** The applicant has placed heavy emphasis on the placement of crushed stone over the majority of the site to create a stable surface that aids with water absorption and minimizes erosion potential.
- **Long Term Site Protection:** The implementation of long-term measures for erosion/sediment and pollutant treatment through the construction of permanent water quality measures including the principal measures of aggregate and crushed stone surfacing over the majority of the site

E. DESCRIPTION AND LOCATION OF LIMITS OF ALL PROPOSED EARTH MOVEMENTS

The construction of the Building E project will disturb less than 1 acre of land. The limit of disturbance is generally coincident with the limit of grading. Most of the disturbance however involves fill placement rather than earthmoving, this reducing the potential for erosion.

The earth moving will include trenching for underground utilities, earthwork to reshape the Building E site, earthwork to prepare and shape the prepared boatyard surface around the building, and excavation attendant with the building foundation.

F. CRITICAL AREAS

Critical resource areas include the Fore River. No special species habitats have been identified.

G. EROSION/SEDIMENTATION CONTROL DEVICES

As part of the site development, the Contractor will be obligated to implement the following erosion and sediment control devices. These devices shall be installed as indicated on the plans or as described within this report. For further reference on these devices, see the *Maine Department of Environmental Protection Erosion and Sediment Control BMPS Manual (March, 2003)*.

1. A construction entrance will be constructed at all access points onto the site to prevent tracking of soil onto adjacent local roads and streets. Routine pavement sweeping may be necessary during construction and as part of regular operations although it is noted that the site contains substantial stone coverage currently and thus vehicle tracking of any mud is substantially minimized.
2. Dirtbags™ will be available for construction dewatering related to trenching or foundation construction if necessary. Dirtbags™ will need to be installed above filter sand and crushed stone in accordance with the details shown on the plan set will need to be installed.
3. Loam and seed is intended to serve as the secondary permanent revegetative measure for all denuded areas not provided with other erosion control measures, such as riprap or manmade pervious surface. This area is limited to just around the tree plantings proposed between the building and the rail tracks. Application rates are provided in Appendix A of this section for temporary and permanent seeding. It is anticipated there will be a limited area of grass establishment beyond what currently exists based on the project's needs for boat storage and the placement of the boatyard surface over the majority of the site.
4. Stone check dams will be installed in areas noted on the plan or as warranted, based upon observations during construction of the site.
5. Silt logs are an option for stone check dams and may be substituted provided the devices are well anchored.

H. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

The following are planned as temporary erosion/sedimentation control measures during construction:

1. Crushed stone-stabilized construction entrances shall be placed at any construction access points from adjacent streets or the existing parking lot. The locations of the construction entrances shown on the drawings should be considered illustrative and will need to be adjusted as appropriate and located at any area where there is the potential for tracking of mud and debris onto existing roads or streets. Stone stabilized construction entrances will require the stone to be removed and replaced, as it becomes covered or filled with mud and material tracked by vehicles exiting the site. The applicant has maintained crushed stone surfaces over much of the site over the past few years and found it to be a successful approach to surface management, erosion and runoff control.
2. Dirtbags™ may be used in accordance with the details in the plan set. The purpose of the Dirtbags™ is to receive any water pumped from excavations if encountered during construction. It is not anticipated that groundwater will be an issue during construction. A Dirtbag™ shall be installed and prepared if groundwater is encountered. When Dirtbags™ are observed to be at 50% capacity, they shall be cleaned or replaced. Stone and filter sand under the Dirtbag™ shall be removed and replaced concurrently with the replacement of the Dirtbag™.

3. Temporary stockpiles of common excavation will be protected as follows:

   a) Temporary stockpiles shall not be located at least 50 feet upgradient of the water's edge.

   b) Inactive stockpiles shall be stabilized within 5 days by either temporarily seeding the stockpile with a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch. If necessary, mesh shall be installed to prevent wind from removing the mulch.

4. All soils disturbed between September 15 and April 15 will be covered with mulch or crushed stone within 5 days of disturbance, prior to any predicted storm event of the equivalent of ½" of rainfall in a 24-hour period, or prior to any work shutdown lasting more than 35 hours (including weekends and holidays). The mulch rate shall be double the normal rate.

5. Stone check dams, silt logs, or hay bale barriers will be installed at any evident concentrated flow discharge points during construction and earthwork operations.

6. Areas of visible erosion and the temporary sediment sumps shall be stabilized with crushed stone. The size of the stone shall be determined by the contractor's designated representative in consultation with the Owner.

7. Maintenance of the erosion control, sedimentation facilities, and control of fugitive dust must occur until the site is stabilized with permanent erosion control measures.

I. STANDARDS FOR STABILIZING SITES FOR THE WINTER

The construction of the project may require winter construction. The project is anticipated to require about 6 months to construct. For permitted winter construction, the erosion control measures are substantially more stringent due to the cold temperatures and lack of weather conditions which aid in drying the subgrade soils through evaporation.

If construction activities involving earth disturbance continue past September 15 or begin before April 15, the following must be incorporated with the erosion control plan and implementation:

1. Enlarged access points must be stabilized to provide for snow stockpiling.

2. Limits of disturbance shall be reduced to the extent practicable.

3. A snow management plan including adequate storage and control of snowmelt, requiring cleared snow to be stored downgradient of all areas of disturbance shall be prepared by the contractor and submitted to the Owner for review and approval.

4. To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day, with the following exceptions:

   - If no precipitation within 24 hours is forecast and work will resume in the same disturbed area within 24 hours, daily stabilization is not necessary.

   - Disturbed areas that collect and retain runoff, such as foundations or open utility trenches.

5. Standard for the timely stabilization of ditches and channels: The Contractor shall construct and stabilize all stone-lined ditches and channels on the site by September 15. If the Contractor fails to stabilize a ditch or channel by September 1, then the Contractor shall take one of the following actions to stabilize the ditch for late fall and winter.

   i. Install a stone lining in the ditch. The contractor shall line the ditch with stone riprap by September 15. If necessary, the Contractor shall regrade the ditch prior to placing the stone lining so as to prevent the stone lining from reducing the ditch's cross-sectional area.

6. Standard for the timely stabilization of disturbed slopes: The Contractor shall construct and stabilize stone-covered slopes by September 15. If the Contractor fails to stabilize any slope to be vegetated by September 1, then the Contractor shall take one of the following actions to stabilize the slope for late fall and winter.

    i. Stabilize the slope with wood waste compost. The Contractor shall place a six-inch layer of wood waste compost on the slope by September 15. Prior to placing the wood waste compost, the Contractor shall remove any snow accumulation on the disturbed slope. The contractor shall not use wood waste compost to stabilize slopes having grades greater than 50% (2H:1V) or having groundwater seeps on the slope face.

    ii. Stabilize the slope with stone rip rap. The Contractor shall place a layer of stone riprap on the slope by September 15.

J. SPECIAL MEASURES FOR SUMMER CONSTRUCTION

The summer period is generally optimum for construction in Maine, but it is also the period when intense short duration storms are most common, making denuded areas very susceptible to erosion, when dust control needs to be the most stringent, and when the potential to establish vegetation is often restricted by moisture deficit. During these periods, the Contractor must:

1. Implement a program to apply dust control measures on a daily basis except those days where the precipitation exceeds 0.25 inch. This program shall extend to and include adjacent streets used by construction vehicles.

2. Take additional steps needed to control fugitive dust emissions to minimize reductions in visibility and the airborne disbursement of fine-grained soils. This is particularly important along the waterfront.

These measures may also be required in the spring and fall during the drier periods of these seasons.

K. PERMANENT EROSION CONTROL MEASURES

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. All areas disturbed during construction, but not subject to other restoration (crushed stone surface, etc.), will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. Native topsoil shall be stockpiled and temporarily stabilized with seed and mulch and reused for final restoration when it is of sufficient quality. The area of permanent grass coverage for the site is very limited.

2. Permanent seeding shall be conducted only in April through May and in late summer until September 15.

3. Boatyard gravel/stone surface will be applied to most of the site.

L. TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

The site is quite stable and is principally a gravel surface. These conditions will reduce the extent of erosion controls needed compared to projects with fine-grained soils. However, the project must

control fugitive dust emissions, respect and not impede the neighboring land uses, and control sediment laden runoff. For all grading activities, the Contractor shall exercise extreme caution not to overexpose the site by limiting the disturbed area and shall stabilize disturbed within 24 hours if final slope grading and stabilization will not be completed within 7 days. Any final slopes shall have the specified erosion control measures installed within 7 days of final stabilization.

The following construction sequence shall be required, (unless otherwise authorized in writing by the Owner's project manager or authorized permit agent).

The description of the work is:

Phase IV: The Contractor will need to perform the following work:

- Mark the Phase IV work limits.
- Install safety fence and security signs around the perimeter of the site.
- Establish and install construction entrance with gates.
- Establish Dirtbag™ area and pump system for dewatering activities as necessary.
- Construct the Phase IV Building and connect associated utilities.
- Install landscaping around the perimeter site.
- Place boatyard prepared stone surfaces around the Building E area.

M. CONTRACTING PROCEDURE

The onsite components of the project will be constructed by a General Contractor under contract to the applicant. The Contractor shall submit a schedule for the completion of the work, which will satisfy the following criteria:

1. The construction sequence of Section L should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to prevent the duration of areas exposed or susceptible to erosion as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt barriers and construction entrances in place before large areas of land are denuded.

2. The work shall be conducted in sections which will:
   a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the preceding 30 days.
   b) Stabilize with stone disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading and temporarily stabilized within 7 days of initial disturbance or before a predicted storm event of over ½" of rain.

3. The area of denuded, non-stabilized construction shall be limited to the minimum area practicable. An area shall be considered to be denuded until the subbase gravel is installed in parking areas, or the areas of future loam and seed have been loamed, seeded, and mulched. The mulch rate shall be twice the rate specified in the seeding plan. [For example, 115#/1,000 s.f. x 2 = 230#/s.f.]

4. The schedule shall be subject to the approval of the Owner.

5. The Contractor must maintain an accurate set of record drawings indicating the date when an area is first denuded, the date of temporary stabilization, and the date of final stabilization.

6. The Contractor must install any added measures which may be necessary to control erosion/sedimentation and fugitive dust emissions from the site, with adjustments made dependent upon forecasted and actual site and weather conditions.

7. The Contractor shall note that no area within 50 feet of a slope with a vertical drop of more than 3' in 50 feet shall remain denuded for a period of over 5 days before it is temporarily stabilized. Temporary stabilization shall be the installation of crushed stone. All other areas shall be stabilized within 7 days or before a predicted rain event. For construction between September 15 and April 15 of any calendar year, all areas shall be temporarily stabilized at the earlier time frames specified above.

   A notice and point of contact with cell phone number shall be posted at the trailer to permit access to the records during normal work hours and in case of emergency at other times. All additions and construction records shall be copied via e-mail to the following addresses:

   phin@portlandyacht.com

   The Owner reserves the right to add additional personnel to this list at the pre-construction conference or at reasonable intervals during the project.

8. The Owner will provide a copy of the Notice of Intent acceptance letter to the Contractor. This letter shall be maintained at the site.

9. The Contractor shall engage a qualified representative to monitor the work. This representative shall be approved by the Owner prior to the individual being engaged on the project. This inspection shall be a part of the Contractor's Quality Control Plan for the project by the Contractor. The representative's qualifications and duties that he shall perform are as follows:

   a. Covered by Workman's Compensation Insurance

   b. Experienced in this type of work, the specific erosion controls applicable to this project with a resume approved by the engineer

   c. Compensated on a unit rate basis with no incentives for reduced costs or subject to any type of compensation for passing inspections

   d. Approved by the Owner and the preparer of this plan

   The *qualified representatives* shall conduct site inspections in accordance with the following timetable:

   a. Where soil disturbance activities are on-going, the *qualified representative* shall conduct a site inspection at least once every seven (7) calendar days.

   b. Where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas,

the *qualified representative* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the City's stormwater contact person or, in areas under the jurisdiction of a *regulated traditional land use control MS4*, the MS4 (provided the MS4 is not the *owner or operator* of the construction activity) in writing prior to reducing the frequency of inspections.

c. Where soil disturbance activities have been shut down with partial project completion, the *qualified representative* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed and are operational. The *owner or operator* shall notify the City's stormwater contact person in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the Contractor shall have the *qualified representative* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed, and that all post-construction stormwater management practices have been constructed in conformance this plan by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the Notice of Termination. The *owner or operator* shall then submit the completed Notice of Termination form to the City of Portland.

At a minimum, the *qualified representative* shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all areas of disturbance that have not achieved *final stabilization*, all points of discharge to natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.

The *qualified representative* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather which shall be consistent with the National Weather Service Forecast Office, Portland-Gray, ME and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which received runoff from disturbed areas. This shall include identification of any *discharge* of sediment to the surface water body;

f. Identification of all erosion and sediment control practices that need repair or maintenance;

g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

k. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified representative* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified representative* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified representative* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

Within one business day of the completion of an inspection, the *qualified representative* shall notify the owner the appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame, at its sole cost.

All inspection reports shall be signed by the *qualified representative*. The inspection reports shall be maintained on site.

10. The Owner reserves the right to have quality assurance monitoring of the work. The Contractor shall, at its sole cost, cooperate with the Owner and their quality assurance monitoring of the work including maintaining an accurate schedule for performing the work. The Owner will notify the contractor if any particular elements of the work should be uncovered or available for observation by the Quality Assurance Monitor selected by the Owner. The Owner reserves the right to conduct the quality assurance monitoring during working hours at any time during the project.

N. PROVISIONS FOR MAINTENANCE OF THE EROSION/SEDIMENTATION CONTROL FEATURES

The project will be contracted to a General Contractor. The project is subject to the requirements of the local permits, and a state regulated Construction General Permit and Site Location of Development Permit (administered by the City of Portland).

This project requires the Contractor to prepare a list and designate by name, address and telephone number all individuals who will be responsible for implementation, inspection, and maintenance of all erosion control measures identified within this section and as contained in the Erosion and

Sedimentation Control Plan of the contract drawings. Specific responsibilities of the qualified representative(s) will include:

1. Execution of the Contractor/Subcontractor Certification contained in Appendix B by any and all parties responsible for erosion control measures on the site as required by the permit authorities.
2. Assuring and certifying the Owner's construction sequence is in conformance with the specified schedule of this section. A weekly certification stating compliance, any deviations, and corrective measures necessary to comply with the erosion control requirements of this section shall be prepared and signed by the qualified representative(s).
3. In addition to the weekly certifications, the representative(s) shall maintain written reports recording construction activities on site which include:
    - Dates when major grading activities occur in a particular areas.
    - Dates when major construction activities cease in a particular area, either temporarily or permanently.
    - Dates when an area is stabilized.
4. Inspection of this project work site on a weekly basis and after each significant rainfall event (0.5 inch or more within any consecutive 24-hour period) during construction until permanent erosion control measures have been properly installed and the site has been stabilized. Inspection of the project work site shall include:
    - Identification of proper erosion control measure installation in accordance with standard erosion control details or as specified in this section.
    - Determine whether each erosion control measure is properly operating. If not, identify damage to the control device and determine remedial measures.
    - Identify areas which appear vulnerable to erosion and determine additional erosion control measures which should be used to improve conditions.
    - All erosion controls shall be removed within 30 days of permanent stabilization.
    - Accumulated silt/sediment should be removed when the depth of sediment reaches 50 percent of the barrier height. Accumulated silt/sediment should be removed from behind silt fencing when the depth of the sediment reaches 6 inches.
5. If inspection of the site indicates a change should be made to the erosion control plan, to either improve effectiveness or correct a site-specific deficiency, the representative shall immediately implement the corrective measure and notify the Owner of the change.
6. Arranging for an on-site meeting prior to commencing winter construction to assure that all special winter construction measures will be implemented and to review the specific requirements of this plan for winter construction.

All certifications, inspection forms, and written reports prepared by the qualified representative(s) shall be filed with the Owner, and the Permit File contained on the project site. All written certifications, inspection forms, and written reports must be filed within one (1) week of the inspection date.

The Contractor has sole responsibility for complying with the erosion/sediment control report, including control of fugitive dust, and shall be responsible for any monetary penalties resulting from failure to comply with these standards.

Once construction has been completed, long-term maintenance of the stormwater management system will be the responsibility of the applicant. Inspection and Maintenance items with a list of maintenance requirements and frequency are described in a separate document. In the event of defective workmanship or any failure by the contractor and its subcontractors to adhere to the Standards set forth in these documents, the Contractor shall be responsible to correct, at its sole cost, any latent defects together with reimbursement of Owner for any expenses borne by the Owner up to the time of said correction. This provision shall remain in effect beyond any stated or implied warranty period.

O. PRECONSTRUCTION CONFERENCE

Prior to any construction at the site, representatives of the Contractor, the Owner, the City of Portland, and the site design engineer and any personnel identified in the permit conditions shall meet to discuss the scheduling of the site construction and the designation of the responsible parties for implementing the plan. The Contractor shall be responsible for scheduling the meeting. Prior to the meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. The Contractor shall conduct a meeting with employees and sub-contractors to review the erosion control plan, the construction techniques which will be employed to implement the plan, and provide a list of attendees and items discussed at the meeting to the Owner. Three copies of the schedule, the Contractor's meeting minutes, and marked-up site plan shall be provided to the Owner.

P. APPENDICES

Appendix A – Sample Erosion Control Compliance Certification and Inspection Forms

APPENDIX A

Sample Erosion Control Compliance Certification and Inspection Forms

MAINE CONSTRUCTION GENERAL PERMIT
CONTRACTOR/SUBCONTRACTOR CERTIFICATION

PROJECT INFORMATION

Project Name: Canal Landing New Yard

Address: Portland, Maine

CONTRACTOR/SUBCONTRACTOR INFORMATION

Firm Name:

Address:

Telephone:

Type of Firm:

CERTIFICATION STATEMENT

"I certify under penalty of law that I understand the terms and conditions of the Maine Construction General Permit (MCGP) permit that authorizes the stormwater discharges associated with construction activity from the project site identified as part of this certification."

_____
Signature

_____
Typed Name

_____
Title

_____
Date

MAINE CONSTRUCTION GENERAL PERMIT

INSPECTION REPORT

PROJECT INFORMATION

Project Name: Canal Landing New Yard

Address: Portland, Maine

INSPECTOR INFORMATION

Representative Name: _____

Firm: _____

Title: _____

Qualifications: _____

Weather and Soil Conditions: _____

INSPECTION SUMMARY

Date of Inspection: _____

Major Observations: _____

_____

_____

_____

1. Attach the following to the Report:

   a. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

   b. A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which received runoff from disturbed areas. This shall include identification of any discharge of sediment to the surface water body;

   c. Identification of all erosion and sediment control practices that need repair or maintenance.

   d. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

   e. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

f. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPP and technical standards;

g. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

h. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified representative shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified representative shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified representative shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

2. Within one business day of the completion of an inspection, the *qualified representative* shall notify the owner the appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

3. All inspection reports shall be signed by the *qualified representative*. The inspection reports shall be maintained on site.

THE FACILITY IS IN COMPLIANCE WITH THE PLAN WITH THE FOLLOWING EXCEPTIONS:

_____

_____

_____

_____

ACTIONS NECESSARY TO BRING FACILITY INTO COMPLIANCE:

_____

_____

REQUIRED MODIFICATIONS TO (MUST BE SUBMITTED WITHIN 2 DAYS OF INSPECTION TO OWNER FOR APPROVAL):

_____

_____

_____

_____

CERTIFICATION STATEMENT:

"I certify under penalty of law that this document and all Appendices were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the systems, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of find and imprisonment for knowing violations."

_____
Signature

_____
Typed Name

_____
Title

_____
Date

STORMWATER MANAGEMENT REPORT
(GENERAL STANDARDS)

CANAL LANDING NEW YARD
100 WEST COMMERCIAL STREET
PORTLAND, ME

PREPARED FOR

New Yard, LLC
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
(207) 774-1067

PREPARED BY

STANTEC CONSULTING LTD.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355



October 2018

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Figures and Photographs (Previously provided in Phase III application – Available upon request)

Figure 2 – USGS Location Map
Figure 3 – Tax Map
Figure 4 – Zoning Map
Figure 5 – Aerial Photograph
Figure 7 – FEMA Flood Map
Figure 8 – USDA SCS Soils Map
Figure 9 – GIS Sand and Gravel Aquifer Map
Figure 10 – Surficial Geology Map
Figure 11 – NWI Map

STORMWATER MANAGEMENT REPORT

1.0 INTRODUCTION

New Yard, LLC owns and operates the existing boat maintenance and repair yard within approximately 17 acres of land located prominently along the West Commercial Street waterfront. The project represents an ideal marine related use within the Waterfront Port Development Zone.

The proposed project includes multiple buildings to be constructed over multiple phases along with new shorefront uses including one or more boat ramps, docks, new or reconstructed piers and a travel lift basin. The applicant's current plan includes a new Building E constructed to support the boat maintenance and repair operations. The building will be located within the shorefront parcel in the area slightly west of the existing Building B location.

The Phase IV project includes site development activities involving Buildings E, limited earthwork and grading, building construction, utilities services into the building and a limited amount of ground work around the immediate building area. The shorefront parcel has been largely completed as part of the Travel Lift Basin construction, completed in the summer 2018, thus there remains very limited work to be done for the Building E site.

This section of the Level III permit application presents the Stormwater Management Plan designed for the building E project activities. The stormwater management design presented herein will show that it meets the criterion of the City of Portland stormwater requirements and the adopted MeDEP Chapter 500 Regulations.

The site discharges to the mouth of the Fore River where it meets the ocean. Due to these tidal conditions, **the applicant is requesting a waiver of the flooding standards**. As discussed below the site's current conditions are characterized by the substantial use of a pervious Boatyard Surface material over much of the shorefront parcel. The surface consists of clean crushed stone overlying a thick (>24" layer) of heavy granular fill and geotextile fabric material. The surface is ideal for the support of heavy travel lift equipment and the placement of vessels.

The proposed stormwater quality treatment plan utilizes the 'Manmade Pervious Surface' approach listed in the Maine Best Management Practices (BMPs) to meet the stormwater quality standards required under the general standards as outlined in the adopted MeDEP Chapter 500 Stormwater Management Technical Manual. The manmade pervious surface (throughout much of the boatyard site) is intended to provide water quality treatment for close to 100 percent of the proposed development area. The applicant has also studied the guidelines set forth in the Brightwork BMP Manual for Maine's Boatyards and Marinas regarding typical boatyard processes and potential sources of contamination and will conduct boatyard activities in accordance with these guidelines as they have in the past.

USGS, aerial photographs, and related maps have been previously supplied to the City in previous applications and are available upon request.

The applicant has prepared this report to show the proposed Phase IV Building E Stormwater Management Plan meets the City's General Stormwater Standards.

2.0 EXISTING SITE CONDITIONS

The overall site consists of approximately 17.77 acres of land that is composed of three primary areas described as follows:

1. **Retained Parcel (Map 59A, Lots 3 & 4)**: Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Building A and Building B amounting to approximately 48,000 SF of building space. This parcel contains a new boat ramp and boat yard area currently in use by Portland Yacht Services.
2. **Shorefront Parcel (Map 60F, Lots 3 & 4)**: This area is irregularly shaped and contains approximately 1,581 LF of waterfront. The site area is approximately 5.99 acres. This area is currently developed with the recently constructed travel lift basin and the now completed shorefront revetment improvements, float system and various support features for boatyard operations.
3. **Street Front Parcel (Map 60F, Lot 1)**: This 6.75-acre area contains approximately 2,160 LF of street front. The property is generally undeveloped, although proposed Buildings C and D have been previously approved for construction and are expected to be underway within the next few months.

Existing development in the area includes the following:

- The City of Portland Marine Terminal and expansion area is located to the east of the site.
- Commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of Commercial Street.
- The Portland Star Match Co. building lines up opposite the site.
- The State of Maine now operates rail tracks into the IMT expansion area. These tracks were completed in 2016.

Owen Haskell, Inc. has completed a topographic survey of the property. The site is relatively flat with the highest points along the Commercial Street frontage, sloping to the shorefront. Site elevations along Commercial Street trend down from west to east from elevation 23' (NGVD 1929) to elevation 16' at the westerly end of the Commercial Street frontage. The site's low areas were previously near elevation 9'-10' while most of the waterfront top of bank was between elevation 9'-11'. During the Travel Lift construction phase (earlier this year), the site grades were raised to elevation 12' or higher. The High Annual Tide Line (HAT) for the Fore River is elevation 7.4' and mean low water is approximately elevation -4.0'. Owen Haskell, Inc. has also completed bathymetric survey data collection and found water depths within 50' of the low water line to be 10' to 30'. The Federal Channel is also represented on the project's drawings and it is

generally located 60' to 120' off the shorefront. No activities are proposed beyond the Federal Channel line. The manmade pervious surface approach is considered the most practical choice for meeting the projects stormwater management needs. The experience thus far on the completed site areas has been positive with respect to how the Boatyard surface functions for handling rainfall and stormwater.

The site's runoff either infiltrates into the ground or drains directly to the Fore River via overland flow. There are no drainage systems on site, although there is a closed storm drainage system within Commercial Street. The Commercial Street drainage system ultimately ties into a CSO line located on the west end of the site as well as a second CSO line on the east side of the site. The applicant has provided easements to the Portland Water District for the operations of these CSO pipes crossing the site.

Due to the site's historic industrial condition nearly all the surface consists of sand and gravel fill, rail ballast or otherwise sparsely vegetated ground surface. The following Figure 1 shows the extent of previous rail use across the property.

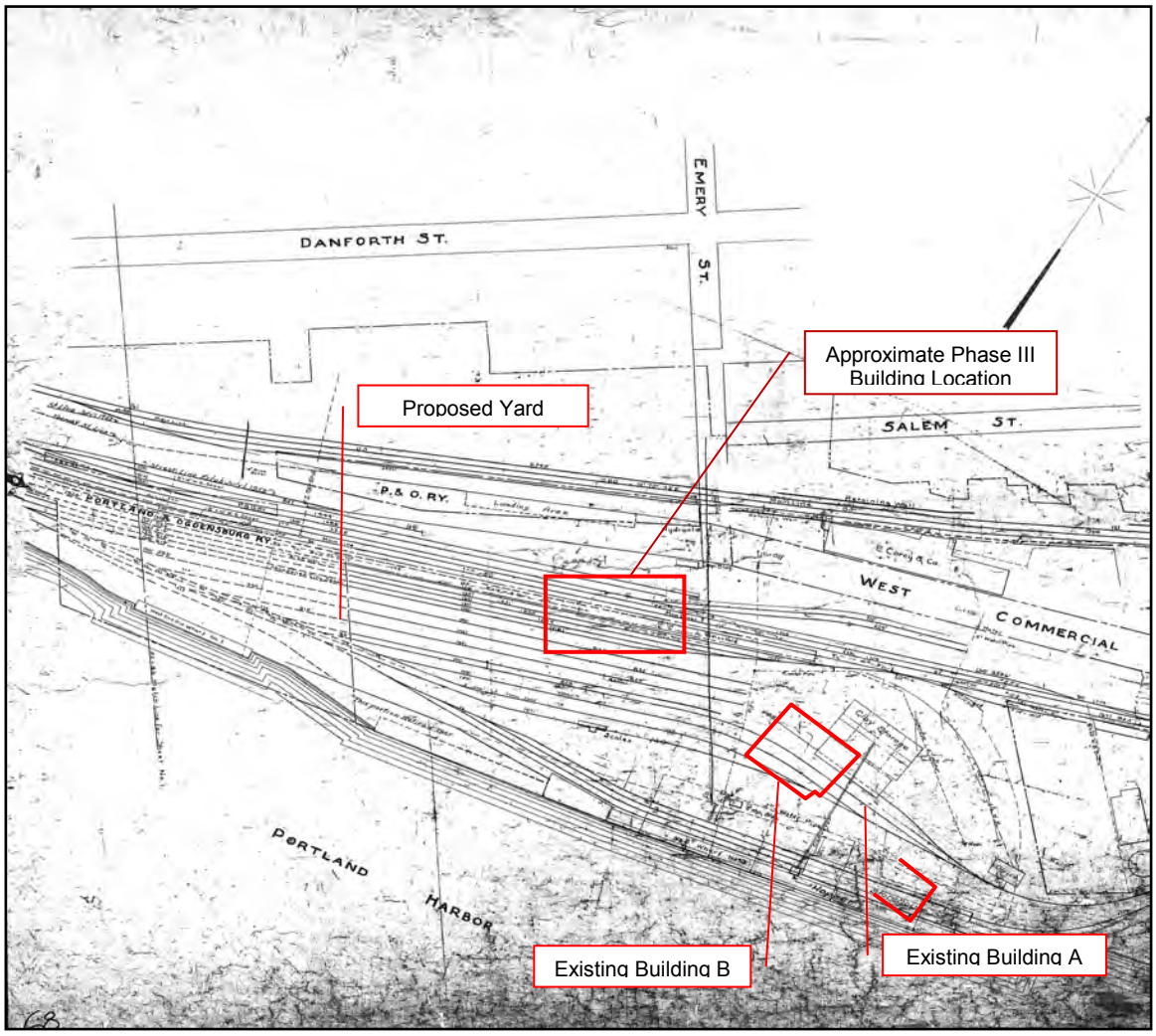


Figure 1 – Historical Rail Yard

The site's soil layers are generally characterized as follows:

- 10 to 15 feet of sand and gravel fill, there is little to no organic surface layer throughout the site.
- 5 to 10 feet of silt and sand.
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands.
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

Observed soils conditions at the original ground surface included fill material containing coal, and coal ash comingled with scarified sand and gravel. Eroded soils conditions were previously observed along the shoreline in and behind the existing granite revetment wall and remnant pier areas. Work has now been completed to repair these areas.

According to various investigation data, depth to groundwater varies from 3 to 7 feet and this likely varies with tidal conditions in the Fore River. The groundwater flows from the northwest to the southeast across the site.

3.0 PROPOSED PROJECT

The applicant proposes to redevelop the property in a manner consistent with the WPDZ Standards. The development program includes the following components:

ONSITE

The development program includes phased development of boat maintenance facilities and future ancillary marine related uses. Phase IV activities are summarized as follows:

Phase IV – Will Include:

- Building E area preparation for foundation construction.
- Construction of a 12,000 SF building for marine vessel repairs and maintenance.
- Establishment of the remaining yard areas and surfaces for heavy equipment around the Building E site.
- Installation of utilities for building E.
- Minor landscape and tree planting.

4.0 REFERENCES

- Brightwork – A Best Management Practice Manual for Maine's Boatyards and Marinas, December 2005

- Erosion and Sediment – *Maine Erosion and Sediment Control BMPs", published by the MeDEP in 2003* *http://www.maine.gov/dep/blwg/docstand/escbmps/index.htm*
- City of Portland –Code of ordinances, Section 32 Rev. 9-17-09
- Portland Stormwater Management –Section 5 Adopted 7-19-10.
- Stormwater Management for Maine Volume III – BMP Technical Design Manual
- Chapter 500 DEP Rules, revision October 2010.

5.0 MODELING SOFTWARE

Microsoft Excel 2007, Microsoft Corporation – used for spreadsheet computations.

6.0 PRESENTATION OF ANALYSIS

The stormwater analysis has been performed for the project to determine the requirements of the City of Portland, Section 5 and adopted MeDEP Chapter 500 Stormwater Rules and to show a plan which will generally meet the requirements with the exceptions noted herein.

7.0 ASSUMPTIONS

- That detention will not be required to reduce the peak flow rate or meet the flooding standards. **A waiver of the flooding standards is requested**.
- That the native soils/gravels will have infiltrative properties that meet the requirements of the Maine DEP BMP proposed. Note: **A waiver is being sought for infiltration testing**. Evidence from the previously developed area of 5.03 acres for Phase I/II and the shorefront area for the Travel lift operations supports the proposition that the soils are highly infiltrative. The same approach will be continued around the perimeter of the Building E site location. Roof runoff will sheet onto the porous boatyard surfaces and be absorbed and infiltrated into the ground.

8.0 STORMWATER MANAGEMENT OBJECTIVES

The goal of the Stormwater Management Plan is to design, operate, and maintain the development to avoid downstream erosion or significant water quality impairment.

This goal will be achieved by:

- Designing the project to meet the Portland Stormwater Management Standards adopted 7/19/10 and General Stormwater Standards of MeDEP (revised October 2010).
- Designing water quality measures to provide long-term removal of non-point contaminants.

- Implementing a plan to control erosion, sedimentation, or fugitive dust emissions during construction.
- Implementing operational processes to avoid toxic pollutants from boat yard activities, both organic chemicals and heavy metals, from entering ground and adjacent water bodies.
- Maintenance of the Stormwater Management System in accordance with the Stormwater O&M Manual (provided as a separate document) and MeDEP Brightwork Manual.

The plan has been therefore been designed in accordance with the City of Portland Stormwater Rules.

9.0 STORMWATER MANAGEMENT QUALITY SUMMARY

Approach

To meet the General Standards, our office reviewed the list of options of MeDEP's accepted Best Management Practice (BMP) options to provide water quality treatment including grassed underdrained filter, bio-filter, proprietary devices and infiltration trenches for the expanded New Yard site. Following this review and incorporating knowledge of the site and the goals of the client, it was realized that developing a method for providing stormwater quality treatment that utilizes the proposed crushed stone surface (desirable to applicant for boatyard use and related activities) and infiltrating the runoff into the underlying soils would be preferable both functionally and economically. According to the MaineDEP BMPs this is known as a "Manmade Pervious Surface" approach to stormwater quality treatment.

A pervious pavement consists of a permeable surface material and subbase materials that allow penetration of runoff in to the underlying soils. The system must be designed to store and infiltrate the water quality volume (1.0" of impervious area and 0.4" pervious area) with the remainder (larger storm events) discharged through an 'over-flow' device. The effectiveness of the system depends heavily on long term inspection and maintenance.

Following a review of the design criteria for a "Manmade Pervious Surface", it was determined that the selection of at least a 3" to 6" thick crushed stone surface across the entire 'prepared surface' area designated on the site plan is appropriate. This layer of stone will act as a reservoir for the 1" storm event. The material may be placed over a thicker (>24" thick layer) of heavier granular soils and geotextile fabric and infiltration into the existing underlying gravel will meet the requirements of this BMP. Runoff from the site is nearly non-existent as even during higher rainfalls exceeding 3", the installed surfaces have functioned to absorb and store rainfall. Proper management of parked vessels and adherence to the Brightwork manual will minimize the potential for petroleum and other contaminants from site activities, etc. to enter the stone areas.

Our office has laid out a plan which utilizes the "Manmade Pervious Surface" BMP to provide water quality treatment as described in Chapter 7.7 of the MeDEP Volume III BMPs Technical Design Manual meeting the minimum

treatment standards as required by the General Standards. The project drawings provide limits and details of the manmade pervious surface proposed. This pervious surface is represented by the 'prepared surface for boatyard' on the site.

The basis of design of treatment method is as follows:

Compliance with BMP Design Criteria:

Traffic Volumes:

Traffic volumes will be low around the Building E area. Some heavy vehicles including tractor trailer trucks and the Marine Travel Lift will maneuver across the crushed stone surface. However, much of the surface will be utilized for boat storage. The applicant proposes to manage the crushed stone surface by routinely raking and grading to minimize the buildup of fine particles that might impact the materials absorptive capacity. Removal and replacement of this gravel layer may be required over time.

Grading:

Grades across the crushed stone area will range from 1 - 2%, thus meeting the <5% slope recommendation.

Sediment Loading:
The crushed stone area is not expected to receive high volumes of sediments. Over time any buildup of fines that impact the stone surface absorption capacity will be removed and replaced. In the winter, calcium chloride may be placed to minimize icing.

Reservoir Course:

The reservoir course will consist of clean double washed 3/4" stone free of debris. The stone depth will be 3" to 6" typically.

Pretreatment Layer

A pretreatment layer will be achieved by providing a 12" -24" subbase gravel layer (like MDOT Type D) beneath the crushed stone.

Separation to Groundwater:

Based on the test pit data included in previous subsurface explorations, the groundwater table throughout the site is six to nine feet below existing grade thus there is ample separation from any underlying groundwater resources

Infiltration Testing:

The applicant is seeking a waiver from the infiltration testing requirement. The applicant has observed the existing site after heavy rain events and observed ponding for only a couple of hours. The existing site has a surface gravel/sand

layer and it is expected that the proposed stone surface will not negatively impact the infiltration properties below.

Flooding Standard:

Due to the direct discharge to the Fore River, **a waiver from the flooding standard is being requested**.

Storm events larger than the 1-inch storm will be directed via sheet flow to one of the following:

- The shorefront parcel will generally generate overland flow to the waterfront and the river.

10.0 CHAPTER 500 TREATMENT PERCENT COMPLIANCE

The proposed redevelopment project creates 0.275 acres of improved surface area (roof) and 0.5 acres of pervious boat yard surface area for a total disturbed area of about 0.77 acres.

Within the Building E area, the proposed stormwater management plan provides treatment for the entire area as the Boatyard surface will provide for storage or runoff from the roof and for any direct rainfall amounts yielding 100% treatment. Hence, the strategies proposed herein meets the minimum requirements stated in the General Standards.

11.0 BOATYARD ACTIVITY PLANNING

A major issue associated with boatyard and marine related use is the proximity to the shorefront. Any pollutants that are generated on the site may eventually reach the water. As such, the applicant will implement thoughtful planning and processes to avoid toxic pollutants including organic chemicals and heavy metals from spills.

Activities such as hull prep, sandblasting, painting, washing, engine repairs and maintenance will be performed in accordance with the guidelines set forth in the Brightworks manual. Storage, handling and disposal of waste material from these activities will also be carried out in accordance with the manual and utilize local waste companies who specialize in this environment. A plan will also be in place to manage spills if they occur. This plan will identify potential spill sources, hazardous materials stored, prevention measures (including training, security, etc.), spill emergency procedures (including health and safety measures, notification information, spill containment, etc.), emergency phone numbers, location of spill containment and control materials and a drainage plan. The applicant is a current boatyard operator and is very familiar with the guidelines and requirements set forth in the Brightwork Manual. They have successfully complied with these requirements for many years and they are confident that similar operations will be maintained at the current site.

12.0 EROSION CONTROL

An Erosion Control Narrative, Plan, and Details have been previously prepared for the project and are part of the project record. These materials continue to apply as they relate to the Phase IV construction activities.

13.0 OPERATIONS AND MAINTENANCE

An Operations & Maintenance Manual has been previously prepared and is part of the project record. The requirements of this O&M Manual continue to apply to this Phase IV project.

14.0 PERMIT REQUIREMENTS

City of Portland review and permitting of the Stormwater Management Plan is required and will be completed with the review of the Site Plan Application submitted to the City of Portland Planning Authority.

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

Canal Landing Phase III and IV – 400 West Commercial Street

IN CONSIDERATION OF the site plan approval granted by the Planning Board of the City of Portland to the proposed Canal Landing project at 400 West Commercial Street Project ID 2017-293 shown on the Site Layout Plan submitted by Stantec Consulting Services Inc., and associated Site Layout and Grading & Drainage Plans, (Exhibits A and B) prepared by Stantec, of 482 Payne Road, Scarborough, Maine dated last revised 11.09.18 and 11.13.18, respectively and pursuant to a condition thereof, New Yard LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 400 West Commercial Street, Portland, Maine 04101, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the Roof Filter Cartridge systems, Boatyard Surfaces, Pervious pavement systems and related onsite drainage infrastructure, (hereinafter collectively referred to as the "stormwater system"), as shown on the Phase III and IV Plans in Exhibit B and in strict compliance with the approved Stormwater Inspection and Maintenance Manual prepared for the Owner by Stantec (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or

assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

Dated at Portland, Maine this _____ day of _____, 2018.

_____
(*name of company*)

_____
(*representative of owner, name and title*)

STATE OF MAINE
CUMBERLAND, ss. Date: _____

Personally appeared the above-named _____(*name and title*), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

_____
Notary Public/Attorney at Law

Print name: _____

Exhibit A: Approved Phase III and IV Site Layout Plan
Exhibit B: Approved Phase III Grading & Drainage Plan
Exhibit C: Approved Stormwater Inspection and Maintenance Manual

30' WIDE CSO EASEMENT TO CITY OF PORTLAND WATER DISTRICT

PHASE III HEAVY DUTY ASPHALT SURFACE - WESTERN ENTRANCE

THE INSTALLATION OF STREET TREES WEST OF THE MAIN ENTRANCE WILL BE PART OF PHASE IV, FOR WHICH AN APPLICATION WILL BE SUBMITTED TO THE CITY IN THE SPRING OF 2018.

OPTIONAL 6' TALL VINYL COATED CHAIN LINK FENCE AROUND PERIMETER OF SECURED STORAGE AREA. THE APPLICANT RESERVES THE RIGHT TO INSTALL ACCESS GATES AT MULTIPLE LOCATIONS TO BE DETERMINED.

APPLICANT RESERVES THE RIGHT TO INSTALL A 6' HIGH CHAIN LINK FENCE AROUND THE PERIMETER FOR SECURITY PURPOSES.

GROUND SURFACE BETWEEN EXISTING EDGE OF PAVEMENT AND THE R.O.W. WILL REMAIN GENERALLY UNCHANGED UNTIL COORDINATION WITH THE WEST COMMERCIAL STREET CORRIDOR STUDY IS COMPLETED

BETULA NIGRA - RIVER BIRCH 8'-10' FT CLUMPS - (TYP OF 4 CLUMPS IN FRONT OF BUILDING) FORSYTHIA 'NORTHERN GOLD' - 2-3' POTTED (TYP OF 14 IN FRONT OF BUILDING)

EXISTING GRAVEL SHOULDER TO REMAIN

EXISTING EDGE OF PAVEMENT TO REMAIN, (TYP.)

MIX OF RED MAPLE (ACER RUBRUM 'KARPICK') & 'PATRIOT' ELM (ULMUS) @ 40' O.C., 2" CAL. (TYP)

LANE MARKINGS TO TRANSITION TO MARKINGS ESTABLISHED AS PART OF IMT EXPANSION PROJECT BY MaineDOT.

STREET SECTION CONDITIONS ON THIS PLAN DO NOT REFLECT IMPROVEMENTS COMPLETED IN SUMMER/FALL OF 2015 AS PART OF THE IMT EXPANSION

TREES TO REMAIN

STOP BAR

STOP SIGN

PROJECT SIGN

PHASE III HEAVY DUTY ASPHALT SURFACE - CENTRAL ENTRANCE

STOP BAR

PROJECT SIGN

STOP SIGN

AUTOMATED GATE SYSTEM

SNOW DUMP

PROPOSED HYDRANT

MULTI USE MARINE STORAGE AREA

THE APPLICANT IS SEEKING APPROVAL TO CONDUCT MARINE RELATED ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PARKING OF SEMI-TRAILERS RELATED TO IMT ACTIVITIES, THE TEMPORARY STORAGE OF MARINE RELATED PRODUCTS, CARGO OR EQUIPMENT, THE PARKING OF VEHICLES ASSOCIATED WITH MARINE ACTIVITIES, PROJECTS OR SIMILAR USES WITHIN THE OUTLINED AREA AS PART OF PHASE III. EXISTING GROUND WILL BE STRIPPED OF VEGETATION, PROOF ROLLED AND 2"-4" OF STONE/GRAVEL PLACED AS A SURFACE TREATMENT.

CB (BY MDOT)

20' x 120' SHELL STORAGE BLDG. (RUBB STYLE)

10' MIN. BOATYARD SURFACE

CB (BY MDOT)

PHASE III

AUTOMATED OR MANUAL SLIDING OR SWING GATE SYSTEM TO BE INSTALLED

PROPOSED FLOATS AND GANGWAY (PERMITTING AND CONSTRUCTION BY OTHERS)

GANGWAY SYSTEM TO BE INSTALLED FOR ACCESS TO FLOAT SYSTEM (TYP.)

PROPOSED PIER EXTENSION BY OTHERS

CANAL LANDING HAS ACQUIRED LAND EXTENDING OUT TO MEAN LOW WATER ELEV. -4.0, (TYP.)

CIP CONCRETE WALL

EX. BUILDING

BLDG. C
180'x110'
19,800 S.F.
F.F.E: 16.0
MARINE RETAIL/NEW YARD ADMINISTRATION

BLDG. D
80'x60'
4,800 S.F.

ENTRY F.F.E.: 28.67

BUILDING ROOF OVERHANG

2 BIKE RACKS

CIP CONCRETE RAMP

ADA SIGN

RAMP

UPPER PARKING

2' GRIND

EASTERN ENTRANCE

STOP BAR

STOP SIGN

PREPARED BOATYARD SURFACE FOR VESSEL DISPLAY AND MAINTENANCE, TYP.

OVERHEAD DOOR, TYP.

ENTRY

ENTRY

ENTRY

ADA SIGN MOUNTED TO BUILDING

LOADING ZONE

OH DOOR

9' x 9' CONCRETE TRANS. PAD

CIP CONCRETE OR LARGE BLOCK MODULAR WALL

PREFAB OR CIP STAIRS (SEE NOTE 1)

AUTOMATED GATE SYSTEM

PROPOSED HAUL ROAD CORRIDOR (14 FT) (BY MEDOT)

SNOW STORAGE

PHASE III

OVERHEAD DOOR

SEE SHEET C-3.2 FOR ENLARGEMENT

IMT LOADING PAD (BY OTHERS)

OPTIONAL SWING GATE ASSEMBLY

24' DOUBLE SWING GATE (BY MEDOT)

CASING PIPES (x4)(INSTALLED 2014)

SECONDARY BOAT YARD ACCESS - FOR USE BY PYS STAFF PRIMARILY

RAILROAD BASE AND WOOD CROSSING INCLUDING SIGNAGE BY MDOT (AUGUST 2015)

AUTOMATED OR MANUAL SLIDING OR SWING GATE SYSTEM TO BE INSTALLED

CASING PIPES (x2)

EXISTING FIRE HYDRANT

RAILROAD BASE AND WOOD CROSSING INCLUDING SIGNAGE MEDOT (AUGUST 2015)

PRIMARY BOAT YARD ACCESS 50' WIDE GRADE CROSSING BENEFITTING NEW YARD, LLC -SLIDING OR SWING GATE SYSTEM TO BE INSTALLED

6' HIGH CHAIN LINK FENCE

PROPOSED RAILROAD R.O.W. (38 FT) (BY MEDOT)

PRIMARY ACTIVITIES WITHIN THE SHOREFRONT AREA WILL BE BOAT AND BOAT TRAILER PARKING AND MAINTENANCE ACTIVITIES

EXISTING FIRE HYDRANT

SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929

1 OR 2 COURSES OF 2'x2'x8' CONCRETE BLOCKS TO BE ADDED TO THE TOP OF THE EXISTING GRANITE REVETMENT AND GEOTEXTILE FABRIC WITH STONE SHALL BE PLACED BEHIND THE WALL

REMAINING AREA OF SOUTH PORTION = ±260,814 S.F. ±5.99 ACRES± TO SPRING HIGH TIDE CANAL LANDING LLC CCRD BOOK 32239 PAGE 148

EXISTING FIRE HYDRANT

EXISTING TRAVEL BASIN

MATCH BOATYARD SURFACE WITH EXISTING (TYP)

30' WIDE CSO EASEMENT TO CITY OF PORTLAND WATER DISTRICT (CCRD BOOK 35184, PAGE 228)

REMOVE ANY MATERIAL WITHIN EASEMENT WHEN NECESSARY FOR MAINTENANCE OR REPAIRS BY CITY)

VESSEL PARKING SHOWN FOR ILLUSTRATION PURPOSES ONLY

DILAPIDATED PIER

ABANDONED HYDRANT

APPROXIMATE MEAN LOW WATER ELEVATION = -4.0 NGVD 1929

SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929

105' USACOE SETBACK LINE)

50' HARBOR COMMISSION SETBACK

APPROXIMATE MEAN LOW WATER ELEVATION -4.0

EXISTING CSO OUTFALL

SPRING HIGH TIDE ELEVATION 7.4 (NGVD 1929)

EXISTING FLOATS

BOAT RAMP #1 (CONSTRUCTED FALL 2013)

EXISTING BLDG. B 28,800 SF

EXISTING BLDG. A 19,200 SF

LAND RETAINED BY NEW YARD LLC/CANAL LANDING, LLC 219,044±/5.03± ACRES

ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	NONE
MINIMUM YARD DIMENSIONS		
FRONT	NONE	0 FT
SIDE	NONE	18.1 FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	>100 FT
MAXIMUM LOT COVERAGE	100%	9.6%
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	<45 FT

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING (PHASE III)
- PREPARED PERVIOUS SURFACE FOR VESSEL DISPLAY, STORAGE AND MAINTENANCE
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- TRUEGRID PERMEABLE PAVING SURFACE

NOTES

1. THE OWNER SHALL BE RESPONSIBLE TO REMOVE PROPOSED STRUCTURES I.E. STAIRS, RAMPS, ETC. WITHIN THE PROPOSED 30' WIDE EASEMENT OVER THE CSO LINE IN THE EVENT THAT THEPORTLAND WATER DISTRICT MUST HAVE ACCESS FOR MAINTENANCE AND REPAIRS TO THE PIPE.

Exhibit A

(IN FEET)
1 inch = 50 ft.

REV	DATE	DESCRIPTION
10	11.09.18	REVISED FINAL PHASE III PLAN SUBMISSION
9	10.05.18	FINAL PHASE III PLAN SUBMISSION
8	06.11.18	FINAL PLAN SUBMISSION TO CITY
7	03.23.18	REVISED PLANS SUBMITTED FOR OWNER REVIEW
6	03.16.18	REVISED PER CITY COMMENT/FINAL PLAN SUBMISSION TO CITY
5	01.19.18	REVISED PER CITY COMMENT
4	12.14.17	PERMIT RENEWAL SUBMISSION - LEVEL III
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/09/18 — REGISTERED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

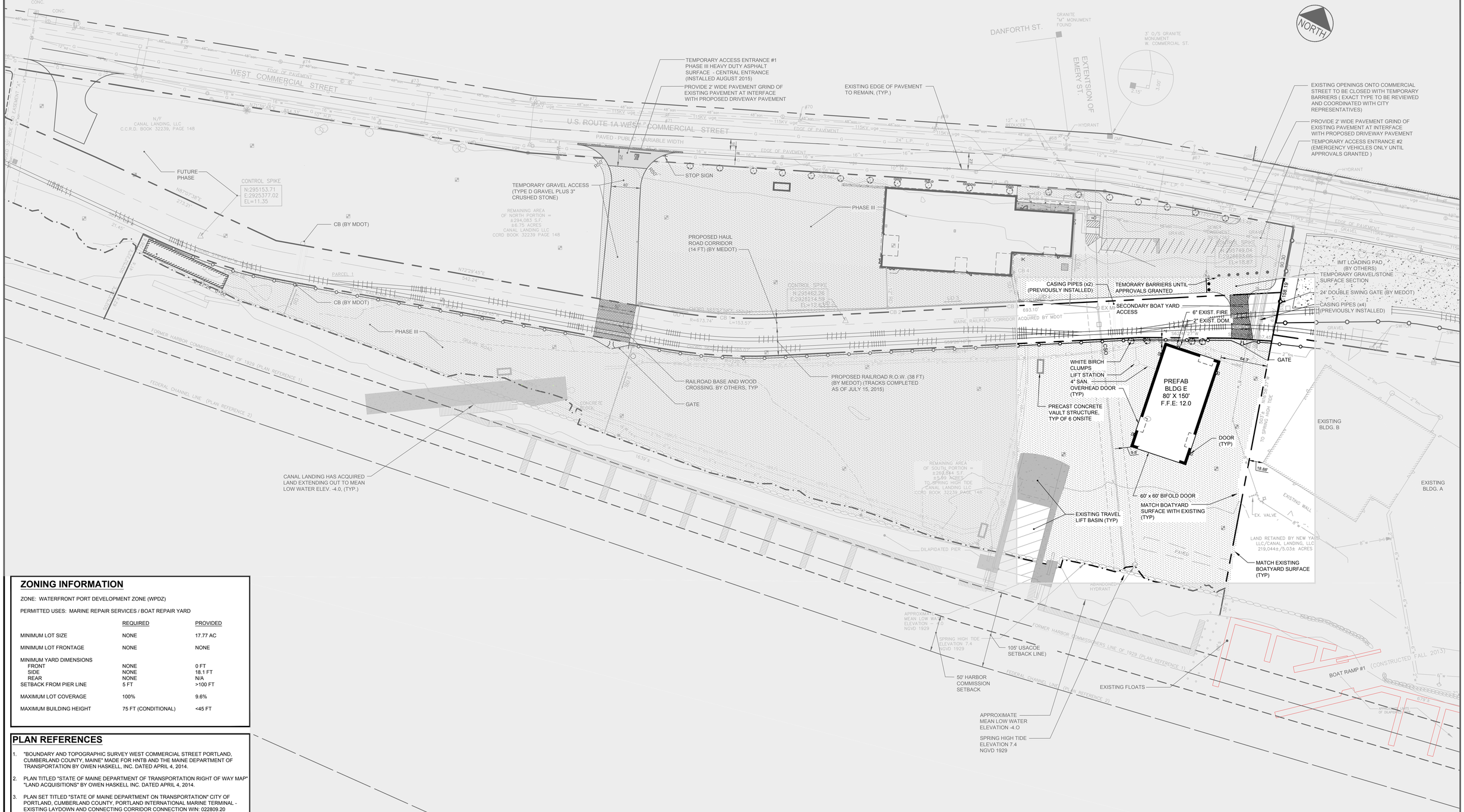
SHEET TITLE
PHASE III
SITE LAYOUT PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM

DRAWN: PBF	DATE: DECEMBER 2017
DESIGNED: SRB	SCALE: 1" = 50'
CHECKED: SRB	JOB NO. 195350129
FILE NAME: 3091.04-SITE LAYOUT	
SHEET	C-2.1

V:\1953\active\195350129\Cadd\Permit Set\dwg\PHASE III PERMIT\3091.04-SITE LAYOUT.dwg pfillettaz 11/9/2018 2:08 PM



ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	NONE
MINIMUM YARD DIMENSIONS		
FRONT	NONE	0 FT
SIDE	NONE	18.1 FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	>100 FT
MAXIMUM LOT COVERAGE	100%	9.6%
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	<45 FT

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING (PHASE III)
- PREPARED PERVIOUS SURFACE FOR VESSEL DISPLAY, STORAGE AND MAINTENANCE
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- OPTIONAL CONCRETE PAD (TO BE DETERMINED BY APPLICANT)

GENERAL NOTE:

1. THE PLACEMENT OF A FLOWABLE FILL CAP OVER THE CSO LINE WOULD BE PROVIDED AS A PROTECTIVE MEASURE TO HELP DISTRIBUTE EQUIPMENT LOADS OVER THE UNDERLYING PIPE BELOW ONLY IN THE EVENT THAT THE CITY REQUESTS IT OR OTHER EVIDENCE OF DEFICIENT PIPE LOADING CAPACITY IS DISCOVERED.
2. PREFAB BUILDINGS ARE CURRENTLY ONSITE. EACH WILL BE RETROFITTED TO INCLUDE POWER CONTROLS AND RELATED EQUIPMENT, WATER SUPPLY (YEAR ROUND AND/OR SEASONAL) AND OTHER SERVICES AS DETERMINED BY OWNER. WORK SHALL INCLUDE POSITIONING OF THESE BUILDINGS ON CRUSHED STONE BASE AND ALL UTILITY INSTALLATIONS.

NOTES

1. THE OWNER SHALL BE RESPONSIBLE TO REMOVE PROPOSED STRUCTURES I.E. STAIRS, RAMPS, ETC. WITHIN THE PROPOSED 30' WIDE EASEMENT OVER THE CSO LINE IN THE EVENT THAT THE CITY MUST HAVE ACCESS FOR MAINTENANCE AND REPAIRS TO THE PIPE.

Exhibit A

(IN FEET)
1 inch = 50 ft.

REV	DATE	DESCRIPTION
8	11.13.18	RESUBMITTED TO CITY - FINAL PLAN
7	06.26.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
6	03.09.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
5	12.07.17	REVISED FOR RESUBMISSION TO HARBOR COMMISSION
4	10.26.17	REVISED FOR DEP NRPAA AMENDMENT SUBMISSION
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/13/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
BUILDING E
SITE LAYOUT PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-SITE LAYOUT		
SHEET	C-2.1		

NORTH

WATER QUALITY TREATMENT SUMMARY TABLE - PHASE III CANAL LANDING			
Description	**Treated Area (ac.)**	**Untreated Area (ac.)**	**Treatment %**
Improved Impervious Area (Roof/buildings/walls)	0.8	0.80	86%
Boat Yard Surface Area	9.81	0.00	100%
Landscaped Area	0.32	0.00	0%
Total	**10.93**	**0.80**	**Total Area = 12.74**
Overall Impervious Area Treated	10.93		99% (exceeds 95% required)
Overall Developed Area Treated	10.93		86% (exceeds 80% required)

MATCH EXISTING GRADE
INSTALL STABILIZED CONSTRUCTION ENTRANCE (TYP)
PROSPECTIVE DRIVEWAY
EX. SAN MH INV. 5.3'±
CMP MH'S
WEST COMMERCIAL STREET
EDGE OF PAVEMENT
APPROX. GAS
APPROX. WATER
DROP INLET
STORM MH
CMP MH
EX. SAN MH INV. 5.10'±
PROVIDE SLOPE STABILIZATION TO PROTECT EROSION DUE TO RUNOFF FROM STREET SHEETING ONTO PROPERTY, (TYP.)
RESHAPE GRAVEL SHOULDER AS NECESSARY
U.S. ROUTE 1A WEST COMMERCIAL STREET
PAVED - PUBLIC - VARIABLE WIDTH
EDGE OF PAVEMENT
EX. SAN MH INV. 4.71'±
WALL
STORM BASIN CARTRIDGE FILTER UNIT (TYP. OF 2)
EDGE OF TRAVELWAY PAVED SHOULDER
LAWN, TYP.
EX. BUILDING
BLDG. C 180'x110' 19,800 S.F. F.F.E: 16.0
ENTRY 28.67
SECOND LEVEL F.F.E.: 28.83
BLDG. D 80'x60' 4,800 S.F.
BUILDING C TO HAVE INTERIOR ROOF DRAINS
OHD
ENTRY
16.0
15.5
DANFORTH ST.
"M" MONUMENT FOUND
EXTENTSION OF EMERY ST.
3' O/S GRANITE MONUMENT W. COMMERCIAL ST.
2.15'
3.00'
EX. SAN MH INV. 4.3'± 12" x 16" REDUCER
INSTALL STABILIZED CONSTRUCTION ENTRANCE (TYP)
MATCH EXISTING GRADE
CONCRETE OR GRANITE ROCKS AT BASE OF RAMP SYSTEM (TYP)
STAIRS W/PIPE RAILING
GAS METERS
HYDRANT
CURB
GRANITE CURB
EDGE OF PAVEMENT
GRAVEL
SALVAGED GRANITE BLOCK OR PRECAST CONCRETE WALL FIELD VERIFY TOP OF WALL - PROPOSED GRADES
IMT LOADING DOCK
CB (PREVIOUSLY INSTALLED BY DOT, TYP.)
EX MH
UD-N5(DOT)
CB (DOT)
EXISTING 24" CSO OUTFALL WILL REMAIN IN PLACE AS THE PRIMARY DISCHARGE FOR IMT AND CANAL LANDING DRAINAGE SYSTEMS
24" BRICK STORM WATER OVERFLOW INV. = -1.4
20' x 120' SHELL STORAGE BLDG. (RUBB STYLE)
PREVIOUSLY INSTALLED 24" RCP CLASS V UTILITY SLEEVES (TYP.)
CB (PREVIOUSLY INSTALLED BY DOT, TYP.)
EDGE OF BOATYARD SURFACE
12" UD-N3(DOT)
UD-N4 (PREVIOUSLY INSTALLED BY DOT, TYP.)
CB (PREV. INSTALLED BY DOT)
EXISTING JERSEY BARRIER WALL (BY-MDOT 2015)
SEE NOTE 1
CB (PREVIOUSLY INSTALLED BY DOT, TYP.)
UD-N5 (PREVIOUSLY INSTALLED BY DOT)
GRADING DEPICTED WITHIN THE RAIL CORRIDOR IS BASED ON DESIGN PLANS BY HNTB AND IS CONSIDERED APPROXIMATE AND INTENDED FOR INFORMATIONAL PURPOSES ONLY.
30' WIDE CSO EASEMENT
EXISTING BLDG.B
EXISTING NEW YARD LLC OPERATIONS YARD
EX. VALVE
PAVED
ABANDONED HYDRANT
EXISTING CSO OUTFALL WILL REMAIN IN PLACE AS THE PRIMARY DISCHARGE FOR IMT AND CANAL LANDING DRAINAGE SYSTEMS
BOAT RAMP #1 (CONSTRUCTION)
PROPOSED OUTFALL THROUGH EXISTING REVETMENT WALL INV. OUT TBD (REQUIRES PBR AUTHORIZATION BY MEDEP, TYP.)
PROPOSED OUTFALL THROUGH EXISTING REVETMENT WALL INV. OUT TBD (REQUIRES PBR AUTHORIZATION BY MEDEP, TYP.)
CONCRETE BLOCK
TOP OF WALL 11' - 12' BASED ON ADDITION OF ONE COURSE OF CONCRETE BLOCKS
TOP OF WALL 11' - 12'
EX. BUILDING, TYP
DILAPIDATED PIER
INSTALL SILT BARRIER GENERALLY BEHIND REVETMENT WALL - SHALL CONSIST OF EROSION CONTROL MIX BERM
EXISTING WATER DEPTHS BASED ON PLAN REFERENCE #4 IDENTIFIED ON SHEET C-2.1 (TYP)
APPROXIMATE MEAN LOW WATER ELEVATION -4.0 NGVD 1929
SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929
APPROXIMATE MEAN LOW WATER ELEVATION -4.0
SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929
FORMER HARBOR COMMISSIONERS LINE OF 1929 (PLAN REFERENCE 1)
FEDERAL CHANNEL LINE (PLAN REFERENCE 2)
GRAVEL ROAD
FEDERAL CHANNEL LINE

GRAPHIC SCALE
50 0 20 50 100
(IN FEET)
1 inch = 50 ft.

Exhibit B

NOTES:

1. THE OWNER HAS RIGHTS FOR CONNECTING TO THE EXISTING DRAINAGE SYSTEMS THRU THE STATE OF MAINE RAIL R.O.W., UNDER A SUPPLEMENTAL AGREEMENT DATED JULY 8, 2014.
2. ALL FUTURE SITE ACTIVITIES INCLUDING BUILDING AND YARD AREA IMPROVEMENTS SHALL COMPLY WITH THE CHAPTER 500/CITY OF PORTLAND GENERAL STANDARDS FOR STORMWATER MANAGEMENT.

REV	DATE	DESCRIPTION
10	11.09.18	REVISED FINAL PHASE III PLAN SUBMISSION
9	10.05.18	FINAL PHASE III PLAN SUBMISSION
8	06.11.18	FINAL PLAN SUBMISSION TO CITY
7	03.23.18	REVISED PLANS SUBMITTED FOR OWNER REVIEW
6	03.16.18	REVISED PER CITY COMMENT/FINAL PLAN SUBMISSION TO CITY
5	01.19.18	REVISED PER CITY COMMENT
4	12.14.17	PERMIT RENEWAL SUBMISSION - LEVEL III
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/09/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING AMENDED SITE PLAN

SHEET TITLE
PHASE III GRADING AND DRAINAGE PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN: PBF	DATE: DECEMBER 2017
DESIGNED: SRB	SCALE: AS NOTED
CHECKED: SRB	JOB NO. 195350129
FILE NAME: 3091.04-CONCEPT GRADING	
SHEET	C-3.1

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INSPECTION AND MAINTENANCE MANUAL FOR STORMWATER MANAGEMENT AND RELATED STORMWATER FACILITIES

CANAL LANDING/NEW YARD
100 WEST COMMERCIAL STREET
PORTLAND, MAINE

PREPARED FOR

CANAL LANDING, LLC
100 WEST COMMERCIAL
PORTLAND, MAINE 04101

PREPARED BY

STANTEC CONSULTING LTD.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
207-883-3355

JANUARY 2018

Exhibit C

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
I.	INTRODUCTION	1
	A. Guidelines Overview	1
II.	PROJECT OVERVIEW	2
III.	STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS	4
	A. Control Structures	4
	B. Stormwater Inlets	4
	C. Tributary Drainage System	6
	D. Vegetated Swales	8
	E. Infiltration Systems	**Error! Bookmark not defined.**
	F. Boat Yard Surface	10
	G. Litter	11
	H. Summary Checklist	11
IV.	PROGRAM ADMINISTRATION	11
	A. General	11
	B. Record Keeping	11
	C. Contract Services	12

APPENDICES

Attachment A – Sample Inspection Logs

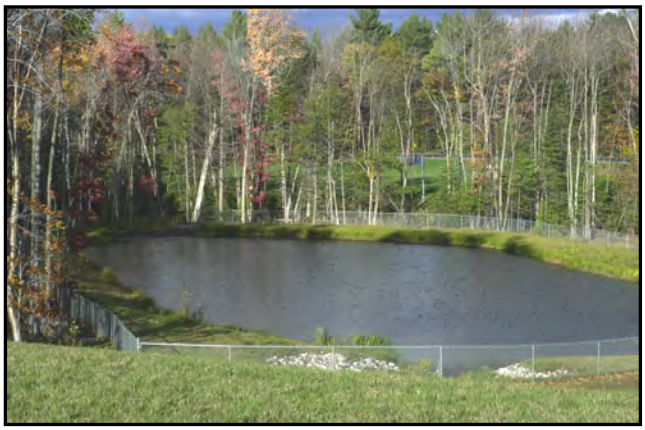
Attachment B – Permits for Project

Attachment C – Summary Checklist for Inspection and Maintenance

I. INTRODUCTION

Relatively complex stormwater management facilities are commonly installed in development projects including, commercial facilities, and many other developments. The complexity and goals of these systems vary with the nature of the receiving water, as well as the type of development. Runoff from developed areas of the project, including rooftops, paved or lawn areas, typically contain materials that can impact the receiving waters. Source control and the installation of swales and infiltrative surfaces often combined with pretreatment measures or followed by other best management practices, can significantly reduce the non-point pollution discharge from the developed area. These measures are particularly important to projects in the watersheds of sensitive water bodies, or projects with potential impacts to groundwater.

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of years. It is critical that the stormwater management facilities are regularly inspected, and that maintenance is performed on an as-needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that collect and transport the flow to the swales and pervious/infiltrative surfaces. Thus, maintenance should be directed to the total system, not just the primary stormwater management facility.



The purpose of this document is to define, in detail, the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended when they were designed. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need for the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program for operation and maintenance. A supplemental section provides guidance for construction monitoring of the facilities during their installation and more detailed checklists (Attachment D). Certain facilities, specifically the groundwater recharge and infiltration beds are not intended to be placed in service until the tributary catchment area has the permanent cover in place and any contributing turf areas have achieved a 90% catch of vegetation (i.e. established).

A. GUIDELINES OVERVIEW

A summary of the individual components of stormwater management facilities has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- City of Portland Planning Board Level III Site Plan Approval and Shoreland Zoning Approval
- City of Portland Building Permit(s)
- MeDEP Natural Resource Protection Act (NRPA) #L-25823-4E-A-N
- City of Portland Delegated Review of the Site Location of Development Act (SLDA)
- U.S. ACOE Water Quality Certification/Federal Channel Review – File No. NAE-2012-02469
- State of Maine Submerged Lands Lease
- Harbor Commissioner's Review – latest approval December 2017

The permit applications pending for the project include the design information for the stormwater system.

A copy of the permits and Stormwater Management Report should be appended to this manual as Attachment B. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Stantec for civil engineering for the Canal Landing New Yard Project in Portland, Maine. Stantec has prepared the design for the stormwater management facilities and may be contacted at:

Stantec Consulting Ltd.
482 Payne Road
Scarborough, Maine 04074
207-883-3355

It is recommended the preparer of the plan be contacted with any particular questions on the design intent or similar issues.

The applicable plans/design documents which apply to the project are:

1. Civil Site Plans/Permit Applications Prepared by Stantec Consulting Ltd.
2. The Erosion Control/Sedimentation Control Plan for the project.
3. The Stormwater Management Plan for the project.

A copy of these documents should be retained with the manual.

The proposed design will include deep sump catch basins, manmade pervious/infiltrative surfaces, grassed swales, overflow, collection, conveyance, and discharge systems.

The project is subject to the requirements of the City of Portland Code of Ordinances, Chapter 32, specifically the post construction stormwater management plan. The City requirements have been reiterated for ease of reference; however, the owner shall be responsible to meet the current City code.

"Any person owning, operating or otherwise having control over a BMP required by a post construction stormwater management plan shall maintain the BMP's in accordance with the approved plan and shall demonstrate compliance with that plan as follows:

(a) Inspections. The owner of operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMP's, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

(b) Maintenance and repair. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action (s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action (s) to the department of public services ("DPS") in the annual report.

(c) Annual report. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP (s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action (s) taken.

(d) Filing fee. Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.

(e) Right of entry. In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMP's."

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management area. These O&M procedures will complement scheduled sweeping of the pavement areas anticipated to occur at least twice per year. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. DRAINAGE STRUCTURES

Preface: Proposed grassed swales that wraps around the site edges will collect overflow runoff from the infiltrative Boatyard surface during major storm events, and will discharge to the existing 24" CSO line thru an existing appurtenant structure.

All structures are to be inspected by removing the covers and inspection channels. Debris should be removed whenever observed and reported to key maintenance personnel since any debris would indicate lack of proper system O&M in the collection and conveyance system. Entry may require CONFINED SPACE ENTRY procedures and appropriately trained personnel.

Inspection: The drainage structures must be inspected to assure they maintain intended hydraulic characteristics. The inspection would note any debris or sediment which may accumulate in the structure and in the outlet pipes. It is noted that it does not take much debris or silt to alter the hydraulic characteristics of the discharge. The inlet should be inspected to assure it is not blocked or restricted or there is sediment to the extent that its flow characteristics may be altered.

Maintenance: Maintenance of the drainage structure will consist primarily of removing debris which may accumulate.

Frequency: The drainage structures should be inspected semi-annually, and after a high intensity rainfall event (in excess of 3 inches in a 24-hour period).

Maintenance/Inspection Responsibility:

Inspection Personnel: The Maintenance Personnel of Canal Landing, LLC will perform the scheduled maintenance/inspection.

Dates of inspections, maintenance performed, and any observed problems should be noted in the logs/records maintained by Canal Landing, LLC.

B. STORMWATER INLETS

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets include the few overflow catch basins proposed toward the north of the site and the basins within the concrete

washdown areas along the shorefront. This section is directed at maintenance of the actual inlet point. A later section addresses more substantive maintenance of the structures and conveyance facilities.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Roadway/parking lot/boat yard maintenance areas
- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets in parking lots/roadway areas. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the building.

Frequency: All inlets should be inspected on a monthly basis, and after/during significant storm events. A windshield survey is suitable for most inlets but off road inlets and pond structures require more rigorous inspection by walking the parcel.

Maintenance/Inspection Responsibility:

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/inspections of the inlets and culvert crossings.

Comments: Maintenance of inlets is critical on this project.



POORLY STABILIZED INLET ALLOWS ENTRANCE OF DEBRIS AND REDUCED CAPACITY



STABILIZED INLETS REDUCE DEBRIS ACCUMULATION AND MAINTAIN DESIGN CAPACITY

C. TRIBUTARY DRAINAGE SYSTEM

Preface: Overflow stormwater from portions of the project will be directed through a conveyance system which transports the flow to an existing 24" CSO line that crosses the site. This conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment (minimal amounts anticipated) is carried by the drainage system is intended to be trapped in the boatyard surface, within catch basin sumps or grassed swales. Maintenance of this system can play a major role in the long-term maintenance costs and the effectiveness of the site.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that its carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped

systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with leaves or other debris. The inlet basins are normally equipped with sumps which will remove large sediment particles from the flow stream with hooded outlets.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

In some projects most of the stormwater is carried in open swales, channels, or ditches. These conveyance channels may be rip rapped or vegetated, depending on the gradient and expected flow velocities. These facilities must be inspected to insure debris or sedimentation does not reduce their carrying capacity. Excess vegetative growth must also be noted. The surface protection for the channels, either stone or vegetation, must be inspected to insure its integrity. Any areas subject to erosion should be noted.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sedimentation to any downstream detention pond, or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. When the filter bag in an inlet restricts capacity and is coated with silt or other deleterious materials, the bag should be removed and Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the retail center. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline exceeds 20% of the diameter of the pipe, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed. In general a sump or sediment trap should be used where it can be flushed into the detention pond, since it will reduce pond volume and hasten the time when it must be cleaned.

Frequency: The piped drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

Maintenance/Inspection Responsibility:

Maintenance Personnel: Canal Landing, LLC Maintenance Personnel.

Special Services: The owner may elect to contract with an independent agent for cleaning of replacement of sorbent booms, catch basins, sumps, and pipelines. Remedial source control measures may be performed by the owner or an outside service depending upon the nature of the particular situation.

Comments: Maintenance of inlets is critical on this project.



A WELL STABILIZED VEGETATED SWALE SHOWS LITTLE SIGNS OF EROSIVE VELOCITIES OR FLOWS. THIS SWALE ALSO FUNCTIONS AS A POND SPILLWAY

D. VEGETATED SWALES

Preface*:* Vegetated swales are often used to convey stormwater. Swales can be intended to be:

1. Mowed and maintained
2. Reverted to wetlands
3. Naturalized

Inspection*:* Swales should be inspected for erosion and sedimentation.

Maintenance*:* Eroded or silted channels need to be repaired when discovered. If erosion is a problem, the swale design should be examined. Likewise, if situation is a continuing problem, the upgradient conditions should be assumed.

Frequency*:* It is recommended vegetated swales be inspected quarterly until vegetation is established and a year after installation. Thereafter, if no problems have been noticed, the frequency can be reduced to once per year.

Design Guidelines*:* The vegetated swale should consider channel cover at the time of concentration as well as several years after construction.

Design computations should state the assumed channel of vegetation and provide the basis for the Manning's or other roughness coefficient and for design.

Applicability*:* Canal Landing New Yard may have shallow swales along the yard perimeters as necessary to collect overflow from the Boatyard surface areas.



VEGETATED SWALE WITH HAY BALE CHECK DAM TO REDUCE VELOCITIES UNDER CONSTRUCTION



A WELL STABILIZED VEGETATED SWALE SHOWS LITTLE SIGNS OF EROSIVE VELOCITIES OR FLOWS. THIS SWALE ALSO FUNCTIONS AS A POND SPILLWAY

E. ROOF DRIPLINE FILTER

Preface: Similar to the vegetated soil filter, roof dripline filters control stormwater quality by capturing and retaining runoff within a stone reservoir and passing it through a filter bed comprised of a specific filter media. Once through the soil media, the runoff is collected in a perforated underdrain pipe and discharged downstream. The filter structure provides for the slow release of smaller storm events, minimizing stream channel erosion and cooling the discharge.

Inspection: A roof dripline filter must be inspected to ensure it is draining within 48 hours following a one inch storm or greater.

Maintenance: Debris must be removed from the reservoir stone. If the filter is not draining within 72 hours, the filter media shall be replaced.

Frequency: During the first year, the filter should be inspected semi-annually and following all major storm events. Thereafter, the filter should be inspected at least every 6 months. Debris and sediment buildup should be removed as needed.

F. FABCO MODEL 10080-2 STORMBASIN CARTRIDGE FILTER UNIT

Preface: The roof drain filter unit is intended to provide water quality treatment for runoff from the proposed roof surface prior to discharge into the municipal drainage system in Hancock Street Extension. Primary contaminants from the roof include bird waste, metals, dust, and related pollutants.

Inspection: The roof filter unit must be inspected to ensure proper function during rain events. Primary inspection goals include removal of debris, leaves, or related solids preventing filtering and water pass thru or blocking the internal overflow.

Maintenance: If the filter is not draining within 24 hours, the filter media shall be replaced in accordance with the manufacturer's instructions. Debris must be removed from the filter unit. With all debris removed from the StormBasin the filter cartridge(s) will be exposed at the bottom. To remove the cartridge(s) reach down into the basin and firmly grasp the plastic outer rim of the cartridge body just below the foam, twist the cartridge body counter-clock-wise about ¼ turn until it stops, and lift the cartridge straight up to remove. Insert the new StormBasin cartridge down through the hole in the base of the unit. The colored ring on the cartridge should be facing upwards. Push the cartridge all the way through the hole until it rests on the bottom. Slowly turn the cartridge in a clock-wise direction until the tabs align with the slots and the cartridge body drops about ¼' further down. Once the tabs fall through the slots, continue turning firmly in a clock-wise direction until the tabs contact the STOPS. The cartridge is now installed.

Frequency: During the first year, the unit should be inspected quarterly and following all major storm events. Thereafter, the unit should be inspected at least every 6 months. Debris and sediment buildup should be removed as needed in accordance with manufacturer's recommendations. The filter cartridges shall be replaced on an annual basis. Cartridges can be sourced from Fabco Industries, Inc., phone 631-393-6024, 66 Central Avenue Farmingdale, NH 11735.

G. BOAT YARD SURFACE

To protect the infiltrative/pervious surface, it is recommended the prepared boatyard surface be re-graded at mid winter and spring (or as needed).

Maintenance: The maintenance crew may from time to time need to remove the stone surface and remove accumulated sediment in specific areas.

H. LITTER

Litter should be removed as a matter of course by workers and a part of the grounds maintenance contract.

I. SUMMARY CHECKLIST

The above described inspection and maintenance items have been summarized on a checklist attached hereto as Attachment C.

IV. PROGRAM ADMINISTRATION

A. GENERAL

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities.

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs, or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. RECORD KEEPING

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of

such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Attachment B.

C. CONTRACT SERVICES

In some instances or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

ATTACHMENT A

Sample Inspection Logs

CANAL LANDING NEW YARD
PORTLAND, ME

INFILTRATIVE/PERVIOUS
BOATYARD SURFACE
ANNUAL INSPECTION & MAINTENANCE LOG

FACILITY:		**YEAR:**	
LOCATION:		**CONTRACTOR:**	
FUNCTION:		**INSPECTOR:**	
DATE OF INSPECTION:			
ITEM IDENTIFICATION	**DESCRIPTION OF CONDITIONS**	**MAINTENANCE ACCOMPLISHED**	**DATE OF MAINTENANCE**
GENERAL COMMENTS:			

ATTACHMENT B

Permits for Project

(To be Added at a Subsequent Time)

ATTACHMENT C

Summary Checklist
Inspection and Maintenance

Stormwater Management System
Maintenance Program
Summary Checklist

Item	Commentary	Frequency				
		Monthly	Quarterly	Semi-Annual	Annual	Long Term
Drainage Structures	Inspect outlet control to assure it maintains its hydraulic characteristics. Inspect inlets for blockage.		X			
Stormwater Inlets in Series	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.	X			X Clearing	
Tributary Drainage	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Vegetated Swales	Swales should be inspected for erosion and sedimentation		X (until vegetation established)		X	
Infiltration Systems/Roof drip edges	Observation of the infiltration area and a determination of its performance				X	
Boat Yard Surface	Observe area for clogging and repair surface as needed including regrading/shaping of surface.	X				
Roof Drain Filters	Inspect systems to verify adequate functioning and capacity. Dispose of filters that have reached useful life in accordance with the manufacturer's recommendations. Replace filters as required.	X				
Litter	Litter should be removed daily.					

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

October 26, 2018

Mr. Matthew Grooms
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Canal Landing New Yard – Phase IV (Building E)
400 West Commercial Street
Level III Site Plan and Conditional Use Application
Applicant: Canal Landing, LLC

Dear Matthew:

On behalf of Canal Landing, LLC, our office has received staff review comments dated September 20, 2018 for the above referenced project, generally contained in the Staff Review memo for the September 25, 2018 Planning Board Workshop meeting. We offer our responses and supplemental information below as part of the final submission of materials in advance of a public hearing for the project. For ease of reference, we have repeated the comments below in *italics followed by our responses.*

Comments from Civil Engineering Third Party Reviewer – Lauren Swett

Comment 1:

All building utility services are shown on the existing conditions plan, but they are called out on the proposed site plan. Please clarify that these items (lift station, sanitary, fire, and domestic services) are already installed.

Response:

All the utilities have been installed on the site except for the immediate service connections for Building E. This work has been completed as part of the Travel Lift construction efforts. Generally, the waterfront parcel is now fully constructed except for the within the immediate area of the Building E footprint.

Comment 2:

The Applicant has noted that they are requesting a waiver of the flooding standard. This should be documented on the waiver request sheet.

Response:

The accompanying waiver request sheets has been updated to include the waiver request from the flooding standards. This waiver has been previously granted for earlier approvals and remains applicable due to the site's proximity to the Fore River.

Comment 3:

No site details are provided. At a minimum, plans should include details associated with utility work, surface restoration, and erosion and sedimentation control.

Response:

Several sheets of applicable details are contained in the most recent upload to E-plan. The owner has been using the previously reviewed plans and details from the earlier phases. To provide for a complete drawing set for the Building E proposal, we have added several sheets to the drawings.

Comment 4:

Utility ability to serve requests have been submitted for water and sewer. Final confirmation of ability to serve should be provided when received.

Response:

The Portland Water District will be providing their capacity availability letter very soon and this will be provided to the planning department immediately upon receipt.

Comment 5:

Please provide additional clarity on the CSO easement that exists adjacent to the site, and what restrictions exist. We understand that this CSO and easement are under the authority of the Portland Water District, and not the City of Portland as was previously understood. Specifically, are there restrictions on filling and grading over the easement, and are there any long-term maintenance or access requirements.

Response:

An easement has been executed between the owner and PWD, a copy of which accompanies this letter. The easement was recorded in CCRD Book 35184, page 228.

Comment 6:

A stormwater management report has previously been submitted for the overall site. This should be provided and updated based on the current project.

Response:

A stormwater management plan and standard City management agreement accompanies this letter. The site relies exclusively on the boatyard surface material for the handling of rainfall, as it allows for absorption and storage of rainfall, with little to no runoff conditions. The owner maintains these features in accordance with the MaineDEP ***Brightwork Manual – A Best Management Practices Manual for Maines' Boatyards and Marinas***.

Comments from Planning Department – Matthew Grooms

Comment 1:

In accordance with site landscaping standards, the proposed development should provide some vegetation between the building and Maine DOT ROW to provide visual interest and buffering between the building and rail corridor.

Response:

See the accompanying Site Plan and renderings indicating the placement of birch tree plantings between the building and the rail tracks.

Comment 2:

Prior to the issuance of any building permits, a copy of all 'ability to serve' letters shall be provided to the Planning Authority, which demonstrate adequate utility capacity for the project.

Response:

The PWD is expected to issue their ability to serve confirmation very soon.

Comment 3:

Renderings of the proposed building shall be provided to confer impact of the proposed building upon the surrounding context. These renderings should include multiple perspectives taken from West Commercial Street and from the West End neighborhood.

Response:

The accompanying renderings address this request and provide views from several perspectives.

Comment 4:

Bicycle parking shall be provided at a rate of two spaces per ten vehicle spaces. If the applicant does not wish to provide spaces, then a waiver request shall be submitted.

Response:

The applicant requests a waiver of this requirement and the waiver request form has been updated and is attached to this letter.

Comment 5:

The project site shall be designed to ensure adequate emergency access, notably access for fire apparatus and proximity to required fire hydrants. The name and address of the property should be standardized across assessor and 911 records to ensure efficient response times in case of an emergency.

Response:

The site contains multiple fire hydrants as shown on the site plan. We continue to work with the Fire Department for the address assignment that will go to Building E. We await their input as to what is required. It may be that the site will be 100 West Commercial Street with large lettering "E" on the side of the building.

Comment 6:

It is not clear from the applicant's submittal whether or not site lighting is proposed? The applicant shall indicate the location and type of all site lighting on applicable plan sheets, and shall include lighting details and photometric plans demonstrating acceptable illumination levels and light trespass. All proposed lighting shall be full cutoff and shall be in compliance with Section 12 of the City's Technical Manual.

Response:

The lighting will consist only of building mounted fixtures. We have a lighting consultant preparing a photometric plan and we will submit to the planning department within the next week. The fixtures will be the same as uses on buildings A and B, the Laredo series

from Spaulding Lighting. A catalog cut accompanies this letter. Swaney Lighting is preparing a photometric plan.

Comment 7:

The building elevations submitted are not sufficient. An updated building elevation shall be submitted which includes the following information regarding façade materials, average building grade and height based upon that grade.

Response:

An updated building elevation plan is being prepared and will be submitted under separate cover.

Comment 8:

The location of all exterior and or rooftop mechanical equipment shall be shown on applicable plan sheets, including but not limited to HVAC systems, transformers, air handling units, emergency generators and meter boxes. In the case of this building, long views shall be taken into consideration from the surrounding neighborhoods.

Response:

The builder and designers are currently working through the locations for the building equipment and an updated plan identifying these locations will be provided prior to the public hearing.

Comment 9:

The applicant states that an impact mitigation narrative as included in the submitted material, however this does not appear to be the case. The staff are requesting that this document be resubmitted.

Response:

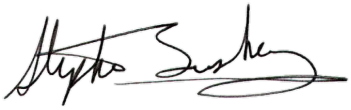
The accompanying impact mitigation narrative provides supplemental information pertaining to the city standards.

We look forward to presenting the project again during a public hearing with the Planning Board, which we understand has been tentative scheduled for November 27, 2018. We appreciate the staff's efforts to schedule this hearing.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3406
Fax: (207) 883-3376
stephen.bushey@stantec.com

Attachments

c: Phineas Sprague, Jr. – Canal Landing, LLC

V:\1953\active\195350129\Admin\Permitting\Level III - Ph 4 - Site Plan Application\lor\lor_1_grooms_20181026.docx

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Section 14-498(b)(8)(a) *Sidewalks and Curbs*	*a. Sidewalks shall be constructed on each side of each street in accordance with Article III of Chapter 25. Sidewalks to be used by pedestrians are to be so located as to minimize contacts with normal automotive traffic, with preference given to interior walks away from streets in common open space in block interiors.*	We are requesting a waiver to provide a sidewalk along the full property frontage	There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.
Section 14-498(b)(8)(b) *Sidewalks and Curbs*	*b. Curb shall be constructed on each side of each street. The curbing shall be constructed as provided in Article VI of Chapter 25.*	We are requesting a waiver to provide curb along the full property frontage.	The street has been rehabilitated without curbing in the last 60 months. Runoff from the development site or within the street does not require curbing for stormwater management.
14-526 Site Plan Standards *(a) Transportation Standards* *3. Public Transit Access:*	*a. For any residential development consisting of twenty (20) or more dwelling units or commercial or institutional development of at least 20,000 square feet gross floor area, a transit facility shall be constructed where the following criteria are met:* *(i) The development is proposed along an existing public transit route on a local principal or minor arterial roadway, as shown in the Federal Street Classification Map provided in Section 1 of the Technical Manual.* *(ii) The nearest existing transit shelter and/or bus pullout on the route is ¼ mile (1,320 feet) or more away from the closest primary building on the site, measured along rights-of-way.*	The Applicant requests a waiver of the transit facility requirement.	The proposed project will only be 12,000 SF and will not generate public transit usage

14-526 Site Plan Standards *(b) 3. Water Quality, Stormwater Management and Erosion Control*	*All development must demonstrate that the proposed site improvements are designed to minimize the amount of stormwater leaving the site. This must include consideration of the design and location of improvements to minimize the total area of impervious surface on the site and stormwater management techniques to minimize both the volume and rate of runoff from the lot. The stormwater management plan must demonstrate:*	The applicant is requesting a waiver of the flooding standard.	Proximity to the Fore River.
14-526 Site Plan Standards *(a) (4) (b) i. (b) Location and Required Number of Bicycle Parking Spaces*	*(b) Non-residential structures. Two (2) bicycle parking spaces for every ten (10) vehicle parking space for the first one hundred (100) required vehicle parking spaces, plus one (1) bicycle parking space for every twenty (20) required motor vehicle parking space over one hundred (100) required vehicle parking spaces.*	The applicant is requesting a waiver due to the use is a boat maintenance facility.	Site visitors do not routinely bike to the site.
14-320.3 Performance Standards *(b) 1. Noise*	*1. 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 generated within the waterfront port development zone between the hours of 7:00 p.m. and 7:00 a.m. from industrial facilities or operation commenced on or after July 1, 1988, shall not exceed fifty-five (55) decibels on the A scale at or within the boundaries of any residential zone, 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.*	The applicant is requesting a waiver to conduct noise measurements.	Hours of operation do not occur between 7:00 PM to 7:00 AM

Section 14-332 *Uses requiring offstreet parking*	*(l) For that part of every business, manufacturing, and industrial building not catering to retail trade and with floor area over three thousand (3,000) square feet: One (1) parking space for each one thousand (1,000) square feet of floor area, or major fraction thereof.*	The applicant is requesting a waiver for parking.	Building does not involve additional employees at the site.

B. 35184
P. 228
1. 10/2/18
@ 8:59am

EASEMENT DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **NEW YARD, LLC**, a Maine limited liability company, with a mailing address of 400 West Commercial Street, Portland, Maine 04101 ("Grantor") in consideration of One Dollar ($1.00) and other valuable consideration paid by the **PORTLAND WATER DISTRICT**, a quasi-municipal corporation organized under the laws of the State of Maine, with a mailing address of 225 Douglas Street, Portland, Maine 04102, does hereby remise and release and forever quitclaim to the said Portland Water District the certain easements and rights of way described below, and on, under and over the real property described in Exhibit A attached hereto, and shown on the sketch attached hereto as Exhibit B, both incorporated herein by reference.

Said easements and rights of way for the purpose of and conveying the right to perpetually maintain through, under and across said property access ways with all necessary fixtures and appurtenances for installing and maintaining through, under, and across said property conduits or pipelines with all necessary fixtures and appurtenances for conveying storm water and sewer water and to lay, relay, replace, repair, maintain, clean and remove said storm water and sewer water pipe or pipes upon or under said strips, with all necessary fixtures and appurtenances including an outfall and related riprap, walls or other improvements, reasonably deemed necessary by the Grantee for the exercise of the rights conveyed hereunder, together with the right at all times to make connections with said conduits or pipelines to land adjoining said sewer and drainage easement by means of pipes or other services; to trim, cut down and remove trees, bushes, and other vegetation of all kinds, to remove debris and deposits of any kind, and to enter upon said easement at any and all times for any of the foregoing purposes, all of the foregoing subject to the obligation of Grantee to return and re-grade the contours of said easements, and to rebuild all seawalls, other walls and/or other structures or facilities located within said easement strips, to their original condition existing prior to any work or disturbance by Grantee.

Reserving to the Grantor, and its successors and assigns, the use and enjoyment of said easement strips and for such purposes only as will in no way interfere temporarily or otherwise with the perpetual use thereof by the Grantee, its successors and assigns, for the purpose above mentioned; provided, however, that Grantor, its successors and assigns, shall maintain the perpetual right to use and enjoy said easement strips for all purposes reasonably necessary or incident to

the operation of a boat yard and/or other multi-use development as described in the Canal Landing Amended Site Plan, Phase III Grading and Drainage Plan prepared by Stantec Consulting Services Inc., dated December 2017, last revised June 11, 2018, and the Canal Landing Amended Site Plan, Building E Site Layout Plan prepared by Stantec Consulting Services Inc, dated October 2017, last revised June 26, 2018, which plans are on file at the offices of the Grantor and Grantee, including without limitation, the right to place earth fill within and throughout said easement strips up to a height of four (4) feet ; provided that the Grantor, its successors and assigns, shall not remove earth from said easement strips without notification and the written permission of the Grantee, its successors and assigns, except as to placing, installing, constructing, locating, laying, relaying, replacing, repairing, maintaining, cleaning, improving, and removing boat yard and other facilities, including without limitation, utilities, security fences, and other fences; provided that such activity does not in any way interfere or impede the activities and operations of the Grantee allowed by this Easement. In the event Grantor, its successors and assigns, determines in its reasonable discretion to locate boat yard and/or other facilities within said easement strips where Grantee's sewer and storm drainage pipelines are located, Grantee agrees to relocate its pipelines to a mutually agreeable location at Grantor's sole cost.

[signature appears on following page]

IN WITNESS WHEREOF, the said NEW YARD, LLC has hereunto caused this instrument to be signed by Phineas Sprague, Jr., its Sole Manager, duly authorized, this 1st day of October, 2018.

WITNESS:

NEW YARD, LLC

By _____
Phineas Sprague, Jr.
Sole Manager

STATE OF MAINE
CUMBERLAND, ss.

October 1, 2018

Personally appeared the above-named, Phineas Sprague, Jr., in his capacity as Sole Manager, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of New Yard, LLC.

Before me,

_____
~~Notary Public~~/Attorney-at-Law

_____
Print Name

Exhibit A

CSO EASEMENT AREA A:

A 30 (thirty) feet wide strip of land across lands situated on the southerly side of Commercial Street in the City of Portland, Cumberland County, State of Maine as shown on a plan entitled "State of Maine Department of Transportation Right of Way Land Acquisitions D.O.T. File No. 3-595" by Owen Haskell, Inc., dated March 2014, the centerline of which is described as follows:

Beginning at a point on the southerly sideline of said Commercial Street, said point being 170.74 feet easterly of an angle point in said southerly sideline on a course of N 71° 39' 48" E, thence the following course and distance across land of the Grantor:

S 14° 09' 30" E 219 feet, more or less.

Said Grantor's property interest was acquired in a deed from Maine Central Railroad Company to Canal Landing, LLC, dated April 27, 2015 and recorded in said Registry of Deeds in Book 32239, Page 148.

CSO EASEMENT AREA B:

Also, a 30 foot wide strip of land situated on the southerly side of Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on a plan entitled "State of Maine Department of Transportation Right of Way Land Acquisition D.O.T. File No. 3-595" by Owen Haskell, Inc., dated March 2014, the centerline of which is described as follows:

Beginning at a point on the southerly sideline of said Commercial Street, said point being 12.61 feet westerly of an angle point in south southerly sideline on a course of S 66° 06' 18" W; thence the following courses and distances across land of the Grantor:

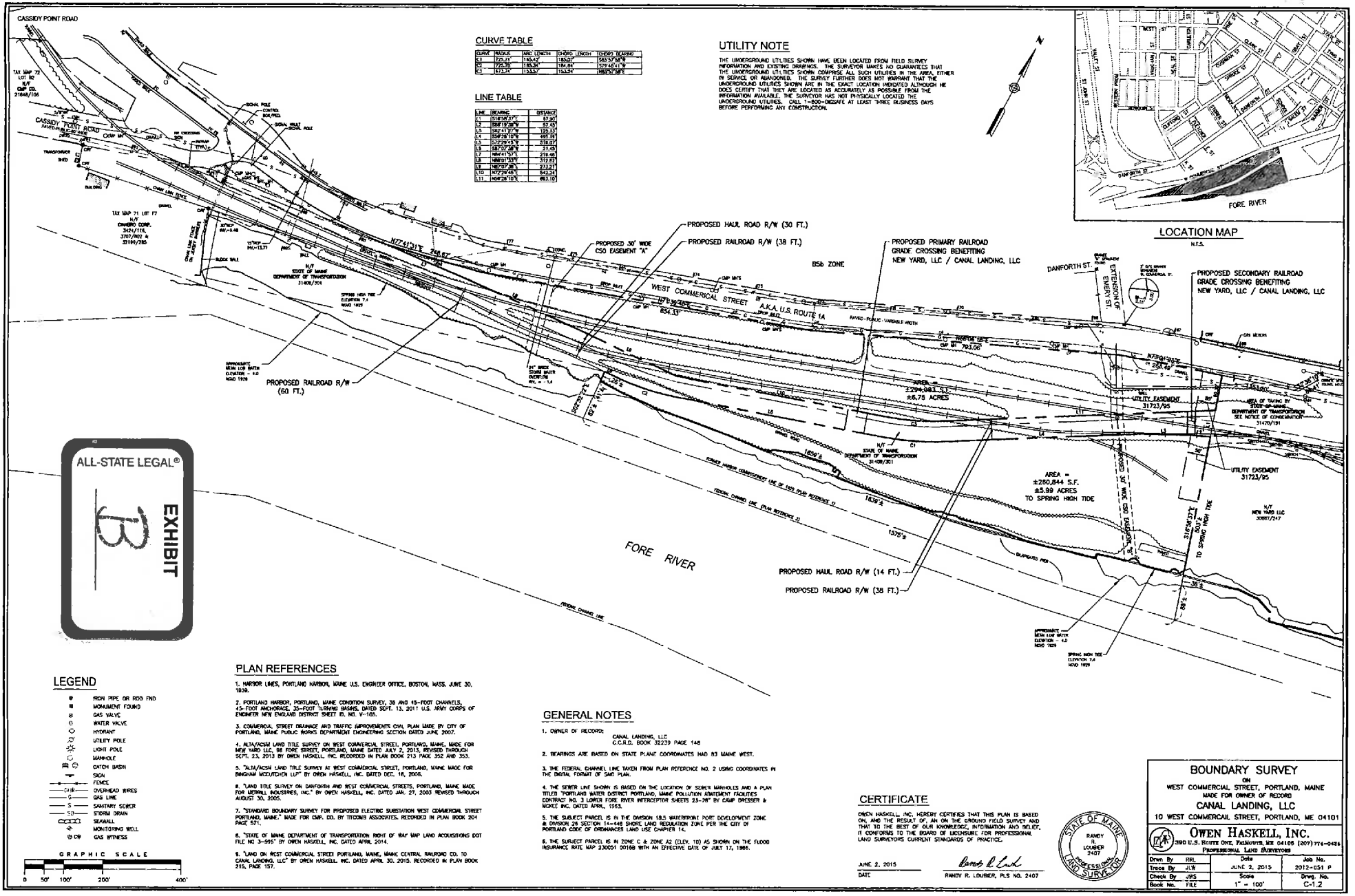
S 28° 00' 00" E 31.95 feet;
S 29° 08' 26" E 127.88 feet;
S 33° 38' 26" E 370 feet, more or less.

Said Grantor's property interest was acquired in a deed from Canal Landing, LLC, dated August 29, 2018 and recorded in said Registry of Deeds in Book 35107, Page 310. Reference is made to that certain deed from Maine Central Railroad Company to Canal Landing, LLC, dated April 27, 2015 and recorded in said Registry of Deeds in Book 32239, Page 148.

POCO14/1174642

Exhibit B

Boundary Survey showing CSO A & B
(see attached)



CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	725.70'	183.49'	183.00'	S60°57'08"W
C2	725.70'	185.34'	184.84'	S79°48'41"W
C3	673.74'	153.57'	153.24'	N83°57'58"E

LINE TABLE

LINE	BEARING	DISTANCE
L1	S18°58'37"E	57.90'
L2	S56°19'38"W	57.45'
L3	S82°41'31"W	135.13'
L4	S58°28'10"W	495.19'
L5	S22°29'45"W	318.07'
L6	S87°27'38"W	27.45'
L7	N84°41'57"E	218.46'
L8	N88°01'43"E	312.83'
L9	N85°07'38"E	273.27'
L10	N72°29'45"E	542.34'
L11	N58°28'10"E	693.10'

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 SURVEY FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

LOCATION MAP

N.T.S.

ALL-STATE LEGAL®

EXHIBIT 3

LEGEND

- IRON PIPE OR ROD FND
- MONUMENT FOUND
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- MANHOLE
- CATCH BASIN
- SIGN
- FENCE
- OHW — OVERHEAD WIRES
- G — GAS LINE
- S — SANITARY SEWER
- SD — STORM DRAIN
- SEAWALL
- MONITORING WELL
- GW — GAS WITNESS

GRAPHIC SCALE

0 50' 100' 200' 400'

PLAN REFERENCES

1. HARBOR LINES, PORTLAND HARBOR, MAINE U.S. ENGINEER OFFICE, BOSTON, MASS. JUNE 30, 1939.
2. PORTLAND HARBOR, PORTLAND, MAINE CONDITION SURVEY, 35 AND 45-FOOT CHANNELS, 45-FOOT ANCHORAGE, 35-FOOT TURNING BASINS, DATED SEPT. 13, 2011 U.S. ARMY CORPS OF ENGINEER NEW ENGLAND DISTRICT SHEET ID. NO. V-165.
3. COMMERCIAL STREET DRAINAGE AND TRAFFIC IMPROVEMENTS CIVIL PLAN MADE BY CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT ENGINEERING SECTION DATED JUNE 2007.
4. ALTA/ACSM LAND TITLE SURVEY ON WEST COMMERCIAL STREET, PORTLAND, MAINE, MADE FOR NEW YARD LLC, 98 FORE STREET, PORTLAND, MAINE DATED JULY 2, 2013, REVISED THROUGH SEPT. 23, 2013 BY OWEN HASKELL, INC. RECORDED IN PLAN BOOK 213 PAGE 352 AND 353.
5. "ALTA/ACSM LAND TITLE SURVEY AT WEST COMMERCIAL STREET, PORTLAND, MAINE MADE FOR BINGHAM MCCUTCHEN LLP" BY OWEN HASKELL, INC. DATED DEC. 18, 2006.
6. "LAND TITLE SURVEY ON DANFORTH AND WEST COMMERCIAL STREETS, PORTLAND, MAINE MADE FOR MERRILL INDUSTRIES, INC." BY OWEN HASKELL, INC. DATED JAN. 27, 2003 REVISED THROUGH AUGUST 30, 2005.
7. "STANDARD BOUNDARY SURVEY FOR PROPOSED ELECTRIC SUBSTATION WEST COMMERCIAL STREET PORTLAND, MAINE." MADE FOR CMP. CO. BY TITCOMB ASSOCIATES. RECORDED IN PLAN BOOK 204 PAGE 571.
8. "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP LAND ACQUISITIONS DOT FILE NO 3-595" BY OWEN HASKELL, INC. DATED APRIL 2014.
9. "LAND ON WEST COMMERCIAL STREET PORTLAND, MAINE, MAINE CENTRAL RAILROAD CO. TO CANAL LANDING, LLC" BY OWEN HASKELL, INC. DATED APRIL 30, 2015. RECORDED IN PLAN BOOK 215, PAGE 157.

GENERAL NOTES

1. OWNER OF RECORD: CANAL LANDING, LLC C.C.R.D. BOOK 32239 PAGE 148
2. BEARINGS ARE BASED ON STATE PLANE COORDINATES NAD 83 MAINE WEST.
3. THE FEDERAL CHANNEL LINE TAKEN FROM PLAN REFERENCE NO. 2 USING COORDINATES IN THE DIGITAL FORMAT OF SAID PLAN.
4. THE SEWER LINE SHOWN IS BASED ON THE LOCATION OF SEWER MANHOLES AND A PLAN TITLED "PORTLAND WATER DISTRICT PORTLAND, MAINE POLLUTION ABATEMENT FACILITIES CONTRACT NO. 3 LOWER FORE RIVER INTERCEPTOR SHEETS 23-28" BY CAMP DRESSER & MCKEE INC. DATED APRIL, 1963.
5. THE SUBJECT PARCEL IS IN THE DIVISION 18.5 WATERFRONT PORT DEVELOPMENT ZONE & DIVISION 28 SECTION 14-448 SHORE LAND REGULATION ZONE PER THE CITY OF PORTLAND CODE OF ORDINANCES LAND USE CHAPTER 14.
6. THE SUBJECT PARCEL IS IN ZONE C & ZONE A2 (ELEV. 10) AS SHOWN ON THE FLOOD INSURANCE RATE MAP 230051 0016B WITH AN EFFECTIVE DATE OF JULY 17, 1986.

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.

JUNE 2, 2015
DATE

RANDY R. LOUBIER, PLS NO. 2407

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

BOUNDARY SURVEY

ON
WEST COMMERCIAL STREET, PORTLAND, MAINE
MADE FOR OWNER OF RECORD
CANAL LANDING, LLC
10 WEST COMMERCIAL STREET, PORTLAND, ME 04101

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

Drawn By: RRL	Date: JUNE 2, 2015	Job No.: 2012-051 P
Trace By: JLW	Scale: 1" = 100'	Dwg. No.: C-1.2
Check By: JWS		
Book No.: FILE		

LAREDO SERIES
LMC - 30LEDs

Cat.#

Job

Type

SPAULDING LIGHTING

Approvals

SPECIFICATIONS

Intended Use:
Full cut-off IDA compliant perimeter or entry lighting for 10-18ft mounting heights that require high light output and maximum energy efficiency. Laredo LMC-30 LED wallpack provides low installation costs with little or no maintenance and up to 80% energy savings. Ideal for schools, factories, hospitals, warehouses and retail applications.

Construction:
Decorative die-cast aluminum housing and door. Rugged design protects internal components and provides excellent thermal management for over 70% lumen maintenance at 50,000 hours minimum LED life. Lektrocote® series powder paint finishes provide lasting appearance in outdoor environments. Five standard finishes include: Bronze, Black, Gray, White and Platinum.

Optics/Electrical
LED:
30 High power LEDs delivers up to 7300 lumens at 700mA and up to 3489 lumens at 350mA. Variety of distributions – Types II, III and IV (Forward throw). High CRI LEDs provide excellent color rendition with up to 100 lumens per watt efficiency.

- CCT- 5000K/ 70 CRI, 4000K/ 70 CRI, 3000K/70 CRI
- Electronic driver 71w system (2 drivers, 2 circuits), 0.4 AMPS max, or 35w (1 driver, 2 circuits), 0.3 amps max, 120-277V and 347V and 480V, 50/60Hz
- Surge protection – 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 2)

Lenses:
Full cut-off distribution - individual acrylic LED optics provide IES Type II, III and IV distributions.
Installation:
Quick mount system provides rigid mounting over recessed junction boxes – fixture does not require opening for mounting. Foam gasket for sealing to smooth surfaces provided. Superior performance with 5 to 1 spacing to mounting height ratio. Minimum operating temperature is -40˚C/ -40˚F.

Controls:
Drivers are 0-10V dimming standard.
Photocell and occupancy sensor options available for complete on/off and dimming control.

Listings:
- Listed to UL1598 for wet locations
- 40˚ C ambient environments
- U.S. Patent No. D563,587
- DesignLights Consortium (DLC) qualified, Consult DLC website for more details: http://www.designlights.org/QPL

LMC-30LU Egress Wallpack:
Designed to meet strict 1fc minimum requirements. At 12ft mounting height 1fc covers 16x16ft area, well beyond the 10x10ft standard; No uplight, external test button; 120V or 277V only; Rated -20˚ C to 35˚ C

Warranty:
Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

C SP US

DLC QPL LISTED

LED lighting facts LED Product Partner

ida DARK SKY APPROVED 2016

*3000K and warmer CCTs only

PRODUCT IMAGE(S)



LMC-30LU

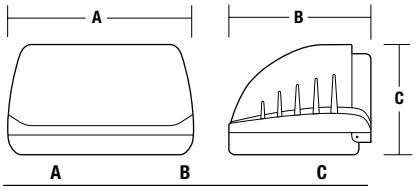


LMC-30LU Motion Sensor



LMC-30LU BBU

DIMENSIONS



ORDERING INFORMATION

ORDERING EXAMPLE: LMC-30LU-5K-3-1-PC(4)

LMC - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES	NUMBER OF LEDS/SOURCE/VOLTAGE	CCT	IES DISTRIBUTION	DRIVE CURRENT	FINISH	OPTIONS
LMC Laredo Medium Cut-off	**30LU** 30 LEDs, Universal voltage 120-277V	**3K** 3000K nominal	**2** Type II	**BLANK** STD 700MA	**1** Bronze	**BBU**[1] Integral battery for 120 or 277V rated for -20˚ C ambient; Available in 350mA (035) drive current only
	30L1 30 LEDs, 120V	**4K** 4000K nominal	**3** Type III	**035** 350MA	**2** Black	**PC**[1] Button photocontrol (must specify voltage per footnote 1, not available in 480V)
	30L2 30 LEDs, 208V	**5K** 5000K nominal	**4** Type IV (Forward throw)		**3** Gray	**F**[1] Fusing (specify voltage per footnote)
	30L3 30 LEDs, 240V				**4** White	**SCP**[2,3] Programmable motion control, factory default is 10% light output
	30L4 30 LEDs, 277V				**5** Platinum	
	30LF 30 LEDs, 347V					
	30L5 30 LEDs, 480V					

SPECIFY SCP HEIGHT
8F Up to 8ft mount height
20F Up to 20ft mount height

1 Specify voltage, for PC(X) and F(X), replace X with 1-120V, 2-208V, 3-240V, 4-277V, 6-347V, 5-480V
2 Must order minimum of one SCP-REMOTE to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V-277V only
3 PC option not applicable, included in sensor

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HUBBELL Lighting

ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
LMC-SPC	Polycarbonate shield
PBT-1	120V button photocontrol
PBT-234	208/240/277V button photocontrol
93044764	40w, 700mA, 120-277V, 0-10V dimming driver
93052458	20KA surge protection with an end of life LED indicator
SCP-REMOTE	Remote control for SCP option; order at least one per project to program and control

PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
# OF LEDS	**DRIVE CURRENT**	**SYSTEM WATTS**	**DIST. TYPE**	**LUMENS**	**LPW[1]**	**B**	**U**	**G**	**LUMENS**	**LPW[1]**	**B**	**U**	**G**	**LUMENS**	**LPW[1]**	**B**	**U**	**G**
30	BBU*	–	3	1546*	–	–	–	–	1405*	–	–	–	–	1101*	–	–	–	–
	350mA	35w	2	3870	111	1	0	1	3813	109	1	0	1	3622	103	1	0	1
			3	3972	113	1	0	1	3913	112	1	0	1	3717	106	1	0	1
			4	3903	112	1	0	2	3845	110	1	0	2	3653	104	1	0	2
	700mA	70w	2	7064	101	2	0	2	6960	99	2	0	2	6612	94	2	0	2
			3	7315	105	1	0	2	7207	103	1	0	2	6847	98	1	0	2
			4	7141	102	1	0	3	7035	101	1	0	3	6683	95	1	0	2

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application. Please consult IES files for BUG ratings.
*BBU emergency mode lumen output.

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
30	-035 (350mA)	120	0.33	35.00
		277	0.14	35.00
	STD. (700mA)	120	0.60	70.00
		208	0.35	70.00
		277	0.26	70.00
		347	0.22	70.00
		480	0.16	70.00

PROJECTED LUMEN MAINTENANCE

	OPERATING HOURS					
Ambient Temp.	**0**	**25,000**	**50,000**	**TM-21-11[1] L96 60,000**	**100,000**	**L70 (hours)**
25°C / 77°F	1.00	0.97	0.95	0.95	0.92	>539,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs)
Data references the extrapolated performance projections for the LMC-30LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0˚ C	32˚ F	1.02
10˚ C	50˚ F	1.01
20˚ C	68˚ F	1.00
25˚ C	77˚ F	1.00
30˚ C	86˚ F	1.00
40˚ C	104˚ F	0.99
50°C	122˚ F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20µs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator – Green LED is unlit at end of life

Pulse Rating (8 x 20 µSec)	
Strikes	**Surge**
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I_n	10KA	5KA

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IMPACT MITIGATION

Sec. 14-320.3. Performance Standards

In accordance with Section 14-320.3, the following impact mitigation narrative is offered to address compliance with the following standards:

(a) Outdoor Storage of Materials: The proposed Phase IV (Building E) activity includes the construction of a boat repair and maintenance building associated with the Boat Repair and Maintenance operations. The facility does not involve large scale outdoor storage of materials although vessels, trailers and related equipment associated with the boat repair and maintenance operations may be placed outside. In no case will these materials exceed a height of 45 feet, except for boat Mast which may be taller than 45 feet and the marine travel lift equipment. The yard area has been stabilized with the boat yard surface material which helps contain and manage stormwater runoff. The yard use complies with the practices outlined in the MaineDEP Brightwork Manual for boat yards and marine facilities.

(b) Noise:

1. The proposed Phase IV facilities at Canal Landing involve a new maintenance building. Typical working hours will be 7:00 am to 5:00 pm. The noise generated by the development are considered minor in nature and will not exceed the fifty-five (55) decibels level during the hours from 7:00 pm to 7:00 am. There is existing background noise attributable to the nearby streets, Jetport flight path and related commercial activities that are considered greater than those activities at the boat yard.

2. The applicant requests a waiver of any further noise measurements for the site, based on their operating history and absence of any complaints about noise generated from the Canal Landing site. Based on the prevalence of nearby land uses, including the IMT, Sprague Energy, Portland Jetport, rail operations and general commercial development, it is believed that the Canal Landing operations are an insignificant generator of noise in the region.

3. The proposed Phase IV activity will employ HVAC equipment that will not exceed the City's noise standards at the property line.

(c) Vibration: The proposed Phase IV activities will not result in significant vibration as the activity is primarily associated with the development of a maintenance building within which vessel repairs will typically be performed.

(d) Federal and State Environmental Regulations: The boat repair and maintenance activities are performed in accordance with State and Federal regulations so actions such as sand blasting and related boat work are managed and controlled to minimize emissions.

(e) **Discharges into Harbor Areas:** The Canal Landing site is served by public wastewater collection so there are no onsite wastewater disposal systems. The yard will ultimately contain one or more sources of collection for domestic wastewater from vessels and this wastewater will ultimately be discharged to the municipal collection system. Other bilge related waste sources are handling in accordance with the State regulations and no discharges of hydrocarbons or related waste are allowed to enter the sewer flows going to the WWTP. The applicant does not foresee activities requiring a Waste Discharge License from the MaineDEP.

(f) **Storage of Vehicles:** The Canal Landing development does not involve the storage of automobiles. Any storage is typically related to vessels due for repairs and maintenance. Some Vessels do remain on the site for greater than 60 days simply due to the amount of work required on them.

(g) **Landfill of Docking and Berthing Areas:** The proposed development does not involve landfill of docking or berthing areas. The Phase IV development involves only activity along the shore frontage. Shorefront activities involve the travel lift basin operations, floats and new boat ramp.

(h) **Off-street Parking:** The approximately 17 acre site area contains ample parking for the boat yard as well as Phase IV development activity. The applicant is requesting a waiver of Section 14-332 (h) which indicates a parking requirement of 1 parking space for each one thousand (1000) SF of space not used for bulk storage.

(i) **Off-street Loading:** The proposed Phase IV building will contain multiple overhead doors for loading/unloading.

(j) **Shoreland and Flood Plain Management Regulations:** The proposed Phase IV activities are located beyond the shore land zone. There are no clearing restrictions on the site and activity will be compliant with any Shoreland and Flood Plain regulations. The Phase IV building floor elevation will be at elevation 13.0' which is 3 feet above the Fore River Flood elevation.

(k) **Lighting:** All onsite lighting will be shielded and of low intensity. Building mounted lights on the Phase IV building will be cutoff style and be installed for safety and security and will be placed around the perimeter of the building.

(l) **Signs:** No new signs are proposed.

(m) **Storage of Pollutants and Oily Wastes:** The Phase IV activity does not involve the bulk storage of pollutants or oily waste. Canal Landing does collect oily waste and either recycles or disposes of this material. They generally burn collected oil waste in their two waste oil heaters. All other waste items are collected and disposed of by a qualified third party following DEP regulations and protocols. Manifests of shipped waste products can be provided upon request.

(n) Compatibility of non-marine uses with marine uses: The proposed Phase IV activity is a use that is considered marine related therefore, this design standard is not applicable.

(o) Design and Visual Character shall:

1. The proposed Phase IV building has been designed to be consistent with the previously constructed structures within the Canal Landing site and to also work with nearby buildings and uses. The building has been positioned to align perpendicular to the waterfront front, thus anchoring its presence to the street, as well as affording a view corridor from the street to the waterfront. The roof line includes a pitched roof to provide some break up and provide visual interest.

2. The building E is a large structure intended to serve the travel lift equipment and large vessel repairs. Its orientation has been based primarily on the availability of space for the travel lift and its ability to maneuver from the basin to the building while carrying vessels up to 100 feet in length or greater.

3. The building elevations renderings prepared by Archetype PA attempt to show consistency between the proposed building space and the existing building B. .

4. The accompanying building elevations again attempt to address this standard by the use of windows, colors and accents.

5. Building E is not located within 50 feet of West Commercial Street.


Portland Shipyard


Portland Shipyard



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

November 13, 2018

Mr. Matthew Grooms
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Canal Landing New Yard – Phase IV (Building E)
400 West Commercial Street
Level III Site Plan and Conditional Use Application
Applicant: Canal Landing, LLC

Dear Matthew:

On behalf of Canal Landing, LLC, our office is providing the accompanying supplemental information to address some outstanding staff comments and informational needs. The following information accompanies this letter and will be uploaded for staff review:

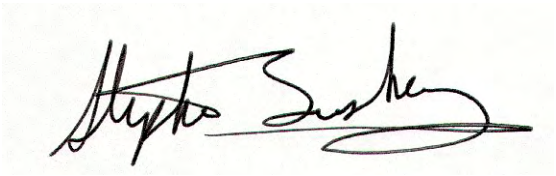
1. Updated Stormwater Management Plan and Maintenance Agreement – See the accompanying Erosion Control Narrative, Stormwater Management Plan and a Draft of the Stormwater Maintenance Agreement for review.
2. Utility Capacity Letters – The Portland Water District and Central Maine Power have provided the accompanying Ability to Serve confirmation letters.
3. Updated Site Plan (Sheet C-2.1) – See the accompanying Site Plan depicting the location of Building E as well as the landscape pieces including several Birch Tree clumps to be planted between the building and the railroad tracks.
4. Updated Detail Sheets (per comment #3 from Lauren) – The accompanying Detail Sheets have been added to the Phase IV set and uploaded for your file record. The site work is very basic as the bulk of the site area around Building E has been constructed. The remaining work for Building E involves foundation construction, utility connections and final surface restoration around the building perimeter.
5. Building Elevations – Archetype PA has completed the accompanying building elevations and renderings.
6. Lighting/Photometric Plan – Swaney Lighting has completed the attached lighting plan for Building E. They propose 11 building mounted lights to match the existing buildings.

We look forward to presenting the project again during a public hearing with the Planning Board, which we understand has been scheduled for November 27, 2018. We appreciate the staff's efforts to schedule this hearing.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: (207) 887-3406
Fax: (207) 883-3376
stephen.bushey@stantec.com

Attachments

c: Phineas Sprague, Jr. – Canal Landing, LLC
Jim Keeley, Keeley Crane

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

November 13, 2018

Mr. Matthew Grooms
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Canal Landing New Yard – Phase IV (Building E)
400 West Commercial Street
Level III Site Plan and Conditional Use Application
Applicant: Canal Landing, LLC

Dear Matthew:

On behalf of Canal Landing, LLC, our office is providing the accompanying supplemental information to address some outstanding staff comments and informational needs. The following information accompanies this letter and will be uploaded for staff review:

1. Updated Stormwater Management Plan and Maintenance Agreement – See the accompanying Erosion Control Narrative, Stormwater Management Plan and a Draft of the Stormwater Maintenance Agreement for review.
2. Utility Capacity Letters – The Portland Water District and Central Maine Power have provided the accompanying Ability to Serve confirmation letters.
3. Updated Site Plan (Sheet C-2.1) – See the accompanying Site Plan depicting the location of Building E as well as the landscape pieces including several Birch Tree clumps to be planted between the building and the railroad tracks.
4. Updated Detail Sheets (per comment #3 from Lauren) – The accompanying Detail Sheets have been added to the Phase IV set and uploaded for your file record. The site work is very basic as the bulk of the site area around Building E has been constructed. The remaining work for Building E involves foundation construction, utility connections and final surface restoration around the building perimeter.
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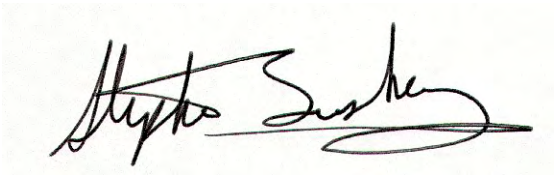

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UPDATED STORMWATER MANAGEMENT PLAN AND MAINTENANCE AGREEMENT

EROSION AND SEDIMENTATION CONTROL REPORT

CANAL LANDING NEW YARD
100 WEST COMMERCIAL STREET
PORTLAND, ME

PREPARED FOR

NEW YARD, LLC
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
(207) 774-1067

PREPARED BY

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355



OCTOBER 2018

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Figures and Photographs (previously submitted for Phase III – Available upon request)

Figure 2 – USGS Location Map
Figure 3 – Tax Map
Figure 4 – Zoning Map
Figure 5 – Aerial Photograph
Figure 7 – FEMA Flood Map
Figure 8 – USDA SCS Soils Map
Figure 9 – GIS Sand and Gravel Aquifer Map
Figure 10 – Surficial Geology Map
Figure 11 – NWI Map

Appendices

Appendix A – Seeding Plan
Appendix B – Sample Erosion Control Compliance Certification and Inspection Forms

A. INTRODUCTION

New Yard, LLC owns and operates a new boat maintenance and repair yard within approximately 17 acres of land located prominently along the West Commercial Street waterfront. The project represents an ideal marine related use within the Waterfront Port Development Zone.

The project includes multiple buildings to be constructed over multiple phases along with new shorefront uses including one or more boat ramps, docks, new or reconstructed piers and a travel lift basin. The applicant's Phase IV plan includes Building E and some surrounding site area, all within a less than 1 acre site area.

This section of the permit application presents the Erosion Sediment Control Plan designed for the Phase IV building site. The site development activities are limited in scope and earthmoving will be closely managed to prevent any sediment transport within the site and towards the Fore River shorefront. The fugitive dust emissions will be controlled, and the requirements of this erosion control plan and all permit requirements will be fulfilled. Winter construction will be required. Specific erosion controls stipulated by the plan and this report are minimum requirements.

B. EXISTING CONDITIONS

The overall project site consists of approximately 17.77 acres of land that is composed of three primary areas described as follows, although the Building E area is less than 1 acre:

1. **Retained Parcel (Map 59A, Lots 3 & 4)**: Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Building A and Building B amounting to approximately 48,000 SF of building space. This parcel contains a new boat ramp and boat yard area currently in use by Portland Yacht Services.
2. **Shorefront Parcel (Map 60F, Lots 3 & 4)**: This area is irregularly shaped and contains approximately 1,581 LF of waterfront. The site area is approximately 5.99 acres. This area is currently developed with the recently constructed travel lift basin and the now completed shorefront revetment improvements, float system and various support features for boatyard operations.
3. **Street Front Parcel (Map 60F, Lot 1)**: This 6.75-acre area contains approximately 2,160 LF of street front. The property is generally undeveloped, although proposed Buildings C and D have been previously approved for construction and are expected to be underway within the next few months.

   Existing development in the area includes the following:

   - The City of Portland Marine Terminal and expansion area is located to the east of the site.
   - Commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of Commercial Street.
   - The Portland Star Match Co. building lines up opposite the site.
   - The State of Maine now operates rail tracks into the IMT expansion area. These tracks were completed in 2016.

Owen Haskell, Inc. has completed a topographic survey of the property. The site is relatively flat with the highest points along the Commercial Street frontage, sloping to the shorefront. Site elevations along Commercial Street trend down from west to east from elevation 23' (NGVD 1929) to elevation 16' at the westerly end of the Commercial Street frontage. The site's low areas

were previously near elevation 9'-10' while most of the waterfront top of bank was between elevation 9'-11'. During the Travel Lift construction phase (earlier this year), the site grades were raised to elevation 12' or higher. The High Annual Tide Line (HAT) for the Fore River is elevation 7.4' and mean low water is approximately elevation -4.0'. Owen Haskell, Inc. has also completed bathymetric survey data collection and found water depths within 50' of the low water line to be 10' to 30'. The Federal Channel is also represented on the project's drawings and it is generally located 60' to 120' off the shorefront. No activities are proposed beyond the Federal Channel line. The manmade pervious surface approach is considered the most practical choice for meeting the projects stormwater management needs. The experience thus far on the completed site areas has been positive with respect to how the Boatyard surface functions for handling rainfall and stormwater.

The site's runoff either infiltrates into the ground or drains directly to the Fore River via overland flow. There are no drainage systems on site, although there is a closed storm drainage system within Commercial Street. The Commercial Street drainage system ultimately ties into a CSO line located on the west end of the site as well as a second CSO line on the east side of the site. The applicant has provided easements to the Portland Water District for the operations of these CSO pipes crossing the site.

Due to the site's historic industrial condition much of the surface consists of sand and gravel fill, asphalt or otherwise sparsely vegetated ground surface.

The site's soil layers are generally characterized as follows:

- 10 to 15 feet of sand and gravel fill – there is little to no organic surface layer throughout the site.
- 5 to 10 feet of silt and sand.
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands.
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

Observed soils conditions at the ground surface include fill material containing coal, coal ash, and comingled with scarified sand and gravel. Minor eroded soils conditions have been observed along the shoreline in and behind the existing granite revetment wall and remnant pier areas. The project's site development activities include restoration, rehabilitation, and stabilization of these areas.

According to various investigation data, depth to groundwater varies from 3 to 7 feet and this likely varies with tidal conditions in the Fore River. The groundwater flows from the northwest to the southeast across the site.

C. PROPOSED PROJECT

The applicant proposes to redevelop the property in a manner consistent with the WPDZ Standards. The development program includes the following components:

ONSITE

The development program includes continued phased development of boat maintenance facilities and ancillary marine related uses. Phase IV development activities are summarized as follows:

Phase III – Will Include (For Which Approval Renewal Is Requested):

- Building E area preparation for foundation construction.
- Construction of a 12,000 SF building for marine vessel repairs and maintenance.
- Establishment of the remaining yard areas and surfaces for heavy equipment around the Building E site.
- Installation of utilities for building E.
- Minor landscape and tree planting

D. OVERVIEW OF SOIL EROSION AND SEDIMENTATION CONCERNS

The primary emphasis of the Erosion and Sedimentation Control Plan to be implemented for this project is as follows:

- **Temporary Measures:** Planning the project to have erosion resistant measures in place by implementing measures intended to prevent erosion from occurring.
- **Phasing Sequencing:** The plan includes measures to intercept and convey runoff to temporary sediment sumps as the construction of the project occurs. The use of small temporary collection sumps with a clean sand or crushed stone filter above an underdrained discharge is recommended to supplement the principal sumps to help reduce turbidity.
- **Crushed stone surfacing:** The applicant has placed heavy emphasis on the placement of crushed stone over the majority of the site to create a stable surface that aids with water absorption and minimizes erosion potential.
- **Long Term Site Protection:** The implementation of long-term measures for erosion/sediment and pollutant treatment through the construction of permanent water quality measures including the principal measures of aggregate and crushed stone surfacing over the majority of the site

E. DESCRIPTION AND LOCATION OF LIMITS OF ALL PROPOSED EARTH MOVEMENTS

The construction of the Building E project will disturb less than 1 acre of land. The limit of disturbance is generally coincident with the limit of grading. Most of the disturbance however involves fill placement rather than earthmoving, this reducing the potential for erosion.

The earth moving will include trenching for underground utilities, earthwork to reshape the Building E site, earthwork to prepare and shape the prepared boatyard surface around the building, and excavation attendant with the building foundation.

F. CRITICAL AREAS

Critical resource areas include the Fore River. No special species habitats have been identified.

G. EROSION/SEDIMENTATION CONTROL DEVICES

As part of the site development, the Contractor will be obligated to implement the following erosion and sediment control devices. These devices shall be installed as indicated on the plans or as described within this report. For further reference on these devices, see the *Maine Department of Environmental Protection Erosion and Sediment Control BMPS Manual (March, 2003)*.

1. A construction entrance will be constructed at all access points onto the site to prevent tracking of soil onto adjacent local roads and streets. Routine pavement sweeping may be necessary during construction and as part of regular operations although it is noted that the site contains substantial stone coverage currently and thus vehicle tracking of any mud is substantially minimized.
2. Dirtbags™ will be available for construction dewatering related to trenching or foundation construction if necessary. Dirtbags™ will need to be installed above filter sand and crushed stone in accordance with the details shown on the plan set will need to be installed.
3. Loam and seed is intended to serve as the secondary permanent revegetative measure for all denuded areas not provided with other erosion control measures, such as riprap or manmade pervious surface. This area is limited to just around the tree plantings proposed between the building and the rail tracks. Application rates are provided in Appendix A of this section for temporary and permanent seeding. It is anticipated there will be a limited area of grass establishment beyond what currently exists based on the project's needs for boat storage and the placement of the boatyard surface over the majority of the site.
4. Stone check dams will be installed in areas noted on the plan or as warranted, based upon observations during construction of the site.
5. Silt logs are an option for stone check dams and may be substituted provided the devices are well anchored.

H. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

The following are planned as temporary erosion/sedimentation control measures during construction:

1. Crushed stone-stabilized construction entrances shall be placed at any construction access points from adjacent streets or the existing parking lot. The locations of the construction entrances shown on the drawings should be considered illustrative and will need to be adjusted as appropriate and located at any area where there is the potential for tracking of mud and debris onto existing roads or streets. Stone stabilized construction entrances will require the stone to be removed and replaced, as it becomes covered or filled with mud and material tracked by vehicles exiting the site. The applicant has maintained crushed stone surfaces over much of the site over the past few years and found it to be a successful approach to surface management, erosion and runoff control.
2. Dirtbags™ may be used in accordance with the details in the plan set. The purpose of the Dirtbags™ is to receive any water pumped from excavations if encountered during construction. It is not anticipated that groundwater will be an issue during construction. A Dirtbag™ shall be installed and prepared if groundwater is encountered. When Dirtbags™ are observed to be at 50% capacity, they shall be cleaned or replaced. Stone and filter sand under the Dirtbag™ shall be removed and replaced concurrently with the replacement of the Dirtbag™.

3. Temporary stockpiles of common excavation will be protected as follows:

   a) Temporary stockpiles shall not be located at least 50 feet upgradient of the water's edge.

   b) Inactive stockpiles shall be stabilized within 5 days by either temporarily seeding the stockpile with a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch. If necessary, mesh shall be installed to prevent wind from removing the mulch.

4. All soils disturbed between September 15 and April 15 will be covered with mulch or crushed stone within 5 days of disturbance, prior to any predicted storm event of the equivalent of ½" of rainfall in a 24-hour period, or prior to any work shutdown lasting more than 35 hours (including weekends and holidays). The mulch rate shall be double the normal rate.

5. Stone check dams, silt logs, or hay bale barriers will be installed at any evident concentrated flow discharge points during construction and earthwork operations.

6. Areas of visible erosion and the temporary sediment sumps shall be stabilized with crushed stone. The size of the stone shall be determined by the contractor's designated representative in consultation with the Owner.

7. Maintenance of the erosion control, sedimentation facilities, and control of fugitive dust must occur until the site is stabilized with permanent erosion control measures.

I. STANDARDS FOR STABILIZING SITES FOR THE WINTER

The construction of the project may require winter construction. The project is anticipated to require about 6 months to construct. For permitted winter construction, the erosion control measures are substantially more stringent due to the cold temperatures and lack of weather conditions which aid in drying the subgrade soils through evaporation.

If construction activities involving earth disturbance continue past September 15 or begin before April 15, the following must be incorporated with the erosion control plan and implementation:

1. Enlarged access points must be stabilized to provide for snow stockpiling.

2. Limits of disturbance shall be reduced to the extent practicable.

3. A snow management plan including adequate storage and control of snowmelt, requiring cleared snow to be stored downgradient of all areas of disturbance shall be prepared by the contractor and submitted to the Owner for review and approval.

4. To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day, with the following exceptions:

   - If no precipitation within 24 hours is forecast and work will resume in the same disturbed area within 24 hours, daily stabilization is not necessary.

   - Disturbed areas that collect and retain runoff, such as foundations or open utility trenches.

5. Standard for the timely stabilization of ditches and channels: The Contractor shall construct and stabilize all stone-lined ditches and channels on the site by September 15. If the Contractor fails to stabilize a ditch or channel by September 1, then the Contractor shall take one of the following actions to stabilize the ditch for late fall and winter.

   i. Install a stone lining in the ditch. The contractor shall line the ditch with stone riprap by September 15. If necessary, the Contractor shall regrade the ditch prior to placing the stone lining so as to prevent the stone lining from reducing the ditch's cross-sectional area.

6. Standard for the timely stabilization of disturbed slopes: The Contractor shall construct and stabilize stone-covered slopes by September 15. If the Contractor fails to stabilize any slope to be vegetated by September 1, then the Contractor shall take one of the following actions to stabilize the slope for late fall and winter.

    i. Stabilize the slope with wood waste compost. The Contractor shall place a six-inch layer of wood waste compost on the slope by September 15. Prior to placing the wood waste compost, the Contractor shall remove any snow accumulation on the disturbed slope. The contractor shall not use wood waste compost to stabilize slopes having grades greater than 50% (2H:1V) or having groundwater seeps on the slope face.

    ii. Stabilize the slope with stone rip rap. The Contractor shall place a layer of stone riprap on the slope by September 15.

J. SPECIAL MEASURES FOR SUMMER CONSTRUCTION

The summer period is generally optimum for construction in Maine, but it is also the period when intense short duration storms are most common, making denuded areas very susceptible to erosion, when dust control needs to be the most stringent, and when the potential to establish vegetation is often restricted by moisture deficit. During these periods, the Contractor must:

1. Implement a program to apply dust control measures on a daily basis except those days where the precipitation exceeds 0.25 inch. This program shall extend to and include adjacent streets used by construction vehicles.

2. Take additional steps needed to control fugitive dust emissions to minimize reductions in visibility and the airborne disbursement of fine-grained soils. This is particularly important along the waterfront.

These measures may also be required in the spring and fall during the drier periods of these seasons.

K. PERMANENT EROSION CONTROL MEASURES

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. All areas disturbed during construction, but not subject to other restoration (crushed stone surface, etc.), will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. Native topsoil shall be stockpiled and temporarily stabilized with seed and mulch and reused for final restoration when it is of sufficient quality. The area of permanent grass coverage for the site is very limited.

2. Permanent seeding shall be conducted only in April through May and in late summer until September 15.

3. Boatyard gravel/stone surface will be applied to most of the site.

L. TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

The site is quite stable and is principally a gravel surface. These conditions will reduce the extent of erosion controls needed compared to projects with fine-grained soils. However, the project must

control fugitive dust emissions, respect and not impede the neighboring land uses, and control sediment laden runoff. For all grading activities, the Contractor shall exercise extreme caution not to overexpose the site by limiting the disturbed area and shall stabilize disturbed within 24 hours if final slope grading and stabilization will not be completed within 7 days. Any final slopes shall have the specified erosion control measures installed within 7 days of final stabilization.

The following construction sequence shall be required, (unless otherwise authorized in writing by the Owner's project manager or authorized permit agent).

The description of the work is:

Phase IV: The Contractor will need to perform the following work:

- Mark the Phase IV work limits.
- Install safety fence and security signs around the perimeter of the site.
- Establish and install construction entrance with gates.
- Establish Dirtbag™ area and pump system for dewatering activities as necessary.
- Construct the Phase IV Building and connect associated utilities.
- Install landscaping around the perimeter site.
- Place boatyard prepared stone surfaces around the Building E area.

M. CONTRACTING PROCEDURE

The onsite components of the project will be constructed by a General Contractor under contract to the applicant. The Contractor shall submit a schedule for the completion of the work, which will satisfy the following criteria:

1. The construction sequence of Section L should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to prevent the duration of areas exposed or susceptible to erosion as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt barriers and construction entrances in place before large areas of land are denuded.

2. The work shall be conducted in sections which will:
   a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the preceding 30 days.
   b) Stabilize with stone disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading and temporarily stabilized within 7 days of initial disturbance or before a predicted storm event of over ½" of rain.

3. The area of denuded, non-stabilized construction shall be limited to the minimum area practicable. An area shall be considered to be denuded until the subbase gravel is installed in parking areas, or the areas of future loam and seed have been loamed, seeded, and mulched. The mulch rate shall be twice the rate specified in the seeding plan. [For example, 115#/1,000 s.f. x 2 = 230#/s.f.]

4. The schedule shall be subject to the approval of the Owner.

5. The Contractor must maintain an accurate set of record drawings indicating the date when an area is first denuded, the date of temporary stabilization, and the date of final stabilization.

6. The Contractor must install any added measures which may be necessary to control erosion/sedimentation and fugitive dust emissions from the site, with adjustments made dependent upon forecasted and actual site and weather conditions.

7. The Contractor shall note that no area within 50 feet of a slope with a vertical drop of more than 3' in 50 feet shall remain denuded for a period of over 5 days before it is temporarily stabilized. Temporary stabilization shall be the installation of crushed stone. All other areas shall be stabilized within 7 days or before a predicted rain event. For construction between September 15 and April 15 of any calendar year, all areas shall be temporarily stabilized at the earlier time frames specified above.

   A notice and point of contact with cell phone number shall be posted at the trailer to permit access to the records during normal work hours and in case of emergency at other times. All additions and construction records shall be copied via e-mail to the following addresses:

   phin@portlandyacht.com

   The Owner reserves the right to add additional personnel to this list at the pre-construction conference or at reasonable intervals during the project.

8. The Owner will provide a copy of the Notice of Intent acceptance letter to the Contractor. This letter shall be maintained at the site.

9. The Contractor shall engage a qualified representative to monitor the work. This representative shall be approved by the Owner prior to the individual being engaged on the project. This inspection shall be a part of the Contractor's Quality Control Plan for the project by the Contractor. The representative's qualifications and duties that he shall perform are as follows:

   a. Covered by Workman's Compensation Insurance

   b. Experienced in this type of work, the specific erosion controls applicable to this project with a resume approved by the engineer

   c. Compensated on a unit rate basis with no incentives for reduced costs or subject to any type of compensation for passing inspections

   d. Approved by the Owner and the preparer of this plan

   The *qualified representatives* shall conduct site inspections in accordance with the following timetable:

   a. Where soil disturbance activities are on-going, the *qualified representative* shall conduct a site inspection at least once every seven (7) calendar days.

   b. Where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas,

the *qualified representative* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the City's stormwater contact person or, in areas under the jurisdiction of a *regulated traditional land use control MS4*, the MS4 (provided the MS4 is not the *owner or operator* of the construction activity) in writing prior to reducing the frequency of inspections.

c. Where soil disturbance activities have been shut down with partial project completion, the *qualified representative* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed and are operational. The *owner or operator* shall notify the City's stormwater contact person in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the Contractor shall have the *qualified representative* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed, and that all post-construction stormwater management practices have been constructed in conformance this plan by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the Notice of Termination. The *owner or operator* shall then submit the completed Notice of Termination form to the City of Portland.

At a minimum, the *qualified representative* shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all areas of disturbance that have not achieved *final stabilization*, all points of discharge to natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.

The *qualified representative* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather which shall be consistent with the National Weather Service Forecast Office, Portland-Gray, ME and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which received runoff from disturbed areas. This shall include identification of any *discharge* of sediment to the surface water body;

f. Identification of all erosion and sediment control practices that need repair or maintenance;

g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

k. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified representative* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified representative* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified representative* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

Within one business day of the completion of an inspection, the *qualified representative* shall notify the owner the appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame, at its sole cost.

All inspection reports shall be signed by the *qualified representative*. The inspection reports shall be maintained on site.

10. The Owner reserves the right to have quality assurance monitoring of the work. The Contractor shall, at its sole cost, cooperate with the Owner and their quality assurance monitoring of the work including maintaining an accurate schedule for performing the work. The Owner will notify the contractor if any particular elements of the work should be uncovered or available for observation by the Quality Assurance Monitor selected by the Owner. The Owner reserves the right to conduct the quality assurance monitoring during working hours at any time during the project.

N. PROVISIONS FOR MAINTENANCE OF THE EROSION/SEDIMENTATION CONTROL FEATURES

The project will be contracted to a General Contractor. The project is subject to the requirements of the local permits, and a state regulated Construction General Permit and Site Location of Development Permit (administered by the City of Portland).

This project requires the Contractor to prepare a list and designate by name, address and telephone number all individuals who will be responsible for implementation, inspection, and maintenance of all erosion control measures identified within this section and as contained in the Erosion and

Sedimentation Control Plan of the contract drawings. Specific responsibilities of the qualified representative(s) will include:

1. Execution of the Contractor/Subcontractor Certification contained in Appendix B by any and all parties responsible for erosion control measures on the site as required by the permit authorities.
2. Assuring and certifying the Owner's construction sequence is in conformance with the specified schedule of this section. A weekly certification stating compliance, any deviations, and corrective measures necessary to comply with the erosion control requirements of this section shall be prepared and signed by the qualified representative(s).
3. In addition to the weekly certifications, the representative(s) shall maintain written reports recording construction activities on site which include:
    - Dates when major grading activities occur in a particular areas.
    - Dates when major construction activities cease in a particular area, either temporarily or permanently.
    - Dates when an area is stabilized.
4. Inspection of this project work site on a weekly basis and after each significant rainfall event (0.5 inch or more within any consecutive 24-hour period) during construction until permanent erosion control measures have been properly installed and the site has been stabilized. Inspection of the project work site shall include:
    - Identification of proper erosion control measure installation in accordance with standard erosion control details or as specified in this section.
    - Determine whether each erosion control measure is properly operating. If not, identify damage to the control device and determine remedial measures.
    - Identify areas which appear vulnerable to erosion and determine additional erosion control measures which should be used to improve conditions.
    - All erosion controls shall be removed within 30 days of permanent stabilization.
    - Accumulated silt/sediment should be removed when the depth of sediment reaches 50 percent of the barrier height. Accumulated silt/sediment should be removed from behind silt fencing when the depth of the sediment reaches 6 inches.
5. If inspection of the site indicates a change should be made to the erosion control plan, to either improve effectiveness or correct a site-specific deficiency, the representative shall immediately implement the corrective measure and notify the Owner of the change.
6. Arranging for an on-site meeting prior to commencing winter construction to assure that all special winter construction measures will be implemented and to review the specific requirements of this plan for winter construction.

All certifications, inspection forms, and written reports prepared by the qualified representative(s) shall be filed with the Owner, and the Permit File contained on the project site. All written certifications, inspection forms, and written reports must be filed within one (1) week of the inspection date.

The Contractor has sole responsibility for complying with the erosion/sediment control report, including control of fugitive dust, and shall be responsible for any monetary penalties resulting from failure to comply with these standards.

Once construction has been completed, long-term maintenance of the stormwater management system will be the responsibility of the applicant. Inspection and Maintenance items with a list of maintenance requirements and frequency are described in a separate document. In the event of defective workmanship or any failure by the contractor and its subcontractors to adhere to the Standards set forth in these documents, the Contractor shall be responsible to correct, at its sole cost, any latent defects together with reimbursement of Owner for any expenses borne by the Owner up to the time of said correction. This provision shall remain in effect beyond any stated or implied warranty period.

O. PRECONSTRUCTION CONFERENCE

Prior to any construction at the site, representatives of the Contractor, the Owner, the City of Portland, and the site design engineer and any personnel identified in the permit conditions shall meet to discuss the scheduling of the site construction and the designation of the responsible parties for implementing the plan. The Contractor shall be responsible for scheduling the meeting. Prior to the meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. The Contractor shall conduct a meeting with employees and sub-contractors to review the erosion control plan, the construction techniques which will be employed to implement the plan, and provide a list of attendees and items discussed at the meeting to the Owner. Three copies of the schedule, the Contractor's meeting minutes, and marked-up site plan shall be provided to the Owner.

P. APPENDICES

Appendix A – Sample Erosion Control Compliance Certification and Inspection Forms

APPENDIX A

Sample Erosion Control Compliance Certification and Inspection Forms

MAINE CONSTRUCTION GENERAL PERMIT
CONTRACTOR/SUBCONTRACTOR CERTIFICATION

PROJECT INFORMATION

Project Name: Canal Landing New Yard

Address: Portland, Maine

CONTRACTOR/SUBCONTRACTOR INFORMATION

Firm Name:

Address:

Telephone:

Type of Firm:

CERTIFICATION STATEMENT

"I certify under penalty of law that I understand the terms and conditions of the Maine Construction General Permit (MCGP) permit that authorizes the stormwater discharges associated with construction activity from the project site identified as part of this certification."

_____
Signature

_____
Typed Name

_____
Title

_____
Date

MAINE CONSTRUCTION GENERAL PERMIT

INSPECTION REPORT

PROJECT INFORMATION

Project Name: Canal Landing New Yard

Address: Portland, Maine

INSPECTOR INFORMATION

Representative Name: _____

Firm: _____

Title: _____

Qualifications: _____

Weather and Soil Conditions: _____

INSPECTION SUMMARY

Date of Inspection: _____

Major Observations: _____

_____

_____

_____

1. Attach the following to the Report:

   a. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

   b. A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which received runoff from disturbed areas. This shall include identification of any discharge of sediment to the surface water body;

   c. Identification of all erosion and sediment control practices that need repair or maintenance.

   d. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

   e. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

f. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPP and technical standards;

g. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

h. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified representative shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified representative shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified representative shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

2. Within one business day of the completion of an inspection, the *qualified representative* shall notify the owner the appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

3. All inspection reports shall be signed by the *qualified representative*. The inspection reports shall be maintained on site.

THE FACILITY IS IN COMPLIANCE WITH THE PLAN WITH THE FOLLOWING EXCEPTIONS:

_____

_____

_____

_____

ACTIONS NECESSARY TO BRING FACILITY INTO COMPLIANCE:

_____

_____

REQUIRED MODIFICATIONS TO (MUST BE SUBMITTED WITHIN 2 DAYS OF INSPECTION TO OWNER FOR APPROVAL):

_____

_____

_____

_____

CERTIFICATION STATEMENT:

"I certify under penalty of law that this document and all Appendices were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the systems, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of find and imprisonment for knowing violations."

_____
Signature

_____
Typed Name

_____
Title

_____
Date

STORMWATER MANAGEMENT REPORT
(GENERAL STANDARDS)

CANAL LANDING NEW YARD
100 WEST COMMERCIAL STREET
PORTLAND, ME

PREPARED FOR

New Yard, LLC
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
(207) 774-1067

PREPARED BY

STANTEC CONSULTING LTD.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355



October 2018

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Figures and Photographs (Previously provided in Phase III application – Available upon request)

Figure 2 – USGS Location Map
Figure 3 – Tax Map
Figure 4 – Zoning Map
Figure 5 – Aerial Photograph
Figure 7 – FEMA Flood Map
Figure 8 – USDA SCS Soils Map
Figure 9 – GIS Sand and Gravel Aquifer Map
Figure 10 – Surficial Geology Map
Figure 11 – NWI Map

STORMWATER MANAGEMENT REPORT

1.0 INTRODUCTION

New Yard, LLC owns and operates the existing boat maintenance and repair yard within approximately 17 acres of land located prominently along the West Commercial Street waterfront. The project represents an ideal marine related use within the Waterfront Port Development Zone.

The proposed project includes multiple buildings to be constructed over multiple phases along with new shorefront uses including one or more boat ramps, docks, new or reconstructed piers and a travel lift basin. The applicant's current plan includes a new Building E constructed to support the boat maintenance and repair operations. The building will be located within the shorefront parcel in the area slightly west of the existing Building B location.

The Phase IV project includes site development activities involving Buildings E, limited earthwork and grading, building construction, utilities services into the building and a limited amount of ground work around the immediate building area. The shorefront parcel has been largely completed as part of the Travel Lift Basin construction, completed in the summer 2018, thus there remains very limited work to be done for the Building E site.

This section of the Level III permit application presents the Stormwater Management Plan designed for the building E project activities. The stormwater management design presented herein will show that it meets the criterion of the City of Portland stormwater requirements and the adopted MeDEP Chapter 500 Regulations.

The site discharges to the mouth of the Fore River where it meets the ocean. Due to these tidal conditions, **the applicant is requesting a waiver of the flooding standards**. As discussed below the site's current conditions are characterized by the substantial use of a pervious Boatyard Surface material over much of the shorefront parcel. The surface consists of clean crushed stone overlying a thick (>24" layer) of heavy granular fill and geotextile fabric material. The surface is ideal for the support of heavy travel lift equipment and the placement of vessels.

The proposed stormwater quality treatment plan utilizes the 'Manmade Pervious Surface' approach listed in the Maine Best Management Practices (BMPs) to meet the stormwater quality standards required under the general standards as outlined in the adopted MeDEP Chapter 500 Stormwater Management Technical Manual. The manmade pervious surface (throughout much of the boatyard site) is intended to provide water quality treatment for close to 100 percent of the proposed development area. The applicant has also studied the guidelines set forth in the Brightwork BMP Manual for Maine's Boatyards and Marinas regarding typical boatyard processes and potential sources of contamination and will conduct boatyard activities in accordance with these guidelines as they have in the past.

USGS, aerial photographs, and related maps have been previously supplied to the City in previous applications and are available upon request.

The applicant has prepared this report to show the proposed Phase IV Building E Stormwater Management Plan meets the City's General Stormwater Standards.

2.0 EXISTING SITE CONDITIONS

The overall site consists of approximately 17.77 acres of land that is composed of three primary areas described as follows:

1. **Retained Parcel (Map 59A, Lots 3 & 4)**: Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Building A and Building B amounting to approximately 48,000 SF of building space. This parcel contains a new boat ramp and boat yard area currently in use by Portland Yacht Services.
2. **Shorefront Parcel (Map 60F, Lots 3 & 4)**: This area is irregularly shaped and contains approximately 1,581 LF of waterfront. The site area is approximately 5.99 acres. This area is currently developed with the recently constructed travel lift basin and the now completed shorefront revetment improvements, float system and various support features for boatyard operations.
3. **Street Front Parcel (Map 60F, Lot 1)**: This 6.75-acre area contains approximately 2,160 LF of street front. The property is generally undeveloped, although proposed Buildings C and D have been previously approved for construction and are expected to be underway within the next few months.

Existing development in the area includes the following:

- The City of Portland Marine Terminal and expansion area is located to the east of the site.
- Commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of Commercial Street.
- The Portland Star Match Co. building lines up opposite the site.
- The State of Maine now operates rail tracks into the IMT expansion area. These tracks were completed in 2016.

Owen Haskell, Inc. has completed a topographic survey of the property. The site is relatively flat with the highest points along the Commercial Street frontage, sloping to the shorefront. Site elevations along Commercial Street trend down from west to east from elevation 23' (NGVD 1929) to elevation 16' at the westerly end of the Commercial Street frontage. The site's low areas were previously near elevation 9'-10' while most of the waterfront top of bank was between elevation 9'-11'. During the Travel Lift construction phase (earlier this year), the site grades were raised to elevation 12' or higher. The High Annual Tide Line (HAT) for the Fore River is elevation 7.4' and mean low water is approximately elevation -4.0'. Owen Haskell, Inc. has also completed bathymetric survey data collection and found water depths within 50' of the low water line to be 10' to 30'. The Federal Channel is also represented on the project's drawings and it is

generally located 60' to 120' off the shorefront. No activities are proposed beyond the Federal Channel line. The manmade pervious surface approach is considered the most practical choice for meeting the projects stormwater management needs. The experience thus far on the completed site areas has been positive with respect to how the Boatyard surface functions for handling rainfall and stormwater.

The site's runoff either infiltrates into the ground or drains directly to the Fore River via overland flow. There are no drainage systems on site, although there is a closed storm drainage system within Commercial Street. The Commercial Street drainage system ultimately ties into a CSO line located on the west end of the site as well as a second CSO line on the east side of the site. The applicant has provided easements to the Portland Water District for the operations of these CSO pipes crossing the site.

Due to the site's historic industrial condition nearly all the surface consists of sand and gravel fill, rail ballast or otherwise sparsely vegetated ground surface. The following Figure 1 shows the extent of previous rail use across the property.

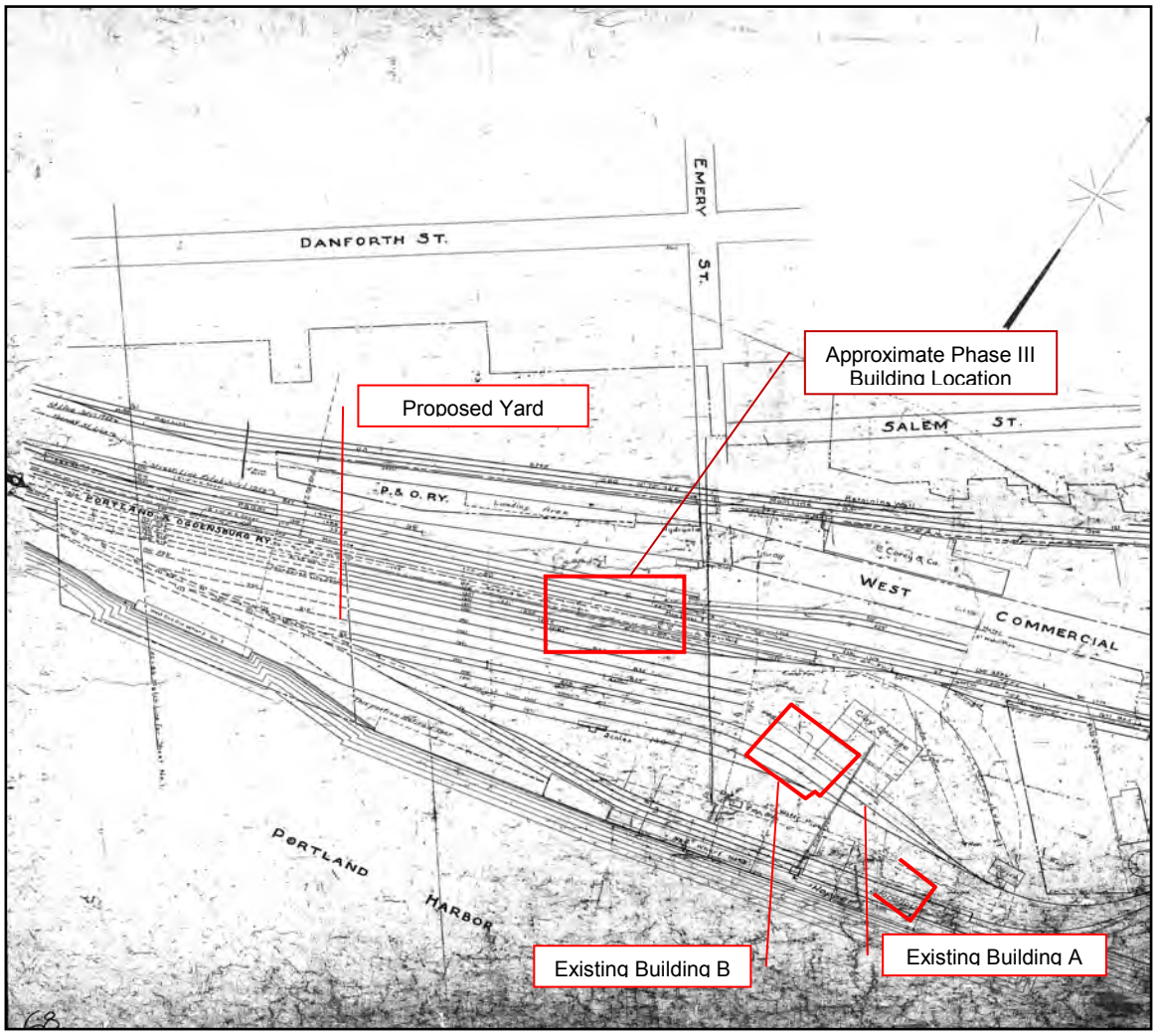

Figure 1 – Historical Rail Yard

The site's soil layers are generally characterized as follows:

- 10 to 15 feet of sand and gravel fill, there is little to no organic surface layer throughout the site.
- 5 to 10 feet of silt and sand.
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands.
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

Observed soils conditions at the original ground surface included fill material containing coal, and coal ash comingled with scarified sand and gravel. Eroded soils conditions were previously observed along the shoreline in and behind the existing granite revetment wall and remnant pier areas. Work has now been completed to repair these areas.

According to various investigation data, depth to groundwater varies from 3 to 7 feet and this likely varies with tidal conditions in the Fore River. The groundwater flows from the northwest to the southeast across the site.

3.0 PROPOSED PROJECT

The applicant proposes to redevelop the property in a manner consistent with the WPDZ Standards. The development program includes the following components:

ONSITE

The development program includes phased development of boat maintenance facilities and future ancillary marine related uses. Phase IV activities are summarized as follows:

Phase IV – Will Include:

- Building E area preparation for foundation construction.
- Construction of a 12,000 SF building for marine vessel repairs and maintenance.
- Establishment of the remaining yard areas and surfaces for heavy equipment around the Building E site.
- Installation of utilities for building E.
- Minor landscape and tree planting.

4.0 REFERENCES

- Brightwork – A Best Management Practice Manual for Maine's Boatyards and Marinas, December 2005

- Erosion and Sediment – *Maine Erosion and Sediment Control BMPs", published by the MeDEP in 2003* *http://www.maine.gov/dep/blwg/docstand/escbmps/index.htm*
- City of Portland –Code of ordinances, Section 32 Rev. 9-17-09
- Portland Stormwater Management –Section 5 Adopted 7-19-10.
- Stormwater Management for Maine Volume III – BMP Technical Design Manual
- Chapter 500 DEP Rules, revision October 2010.

5.0 MODELING SOFTWARE

Microsoft Excel 2007, Microsoft Corporation – used for spreadsheet computations.

6.0 PRESENTATION OF ANALYSIS

The stormwater analysis has been performed for the project to determine the requirements of the City of Portland, Section 5 and adopted MeDEP Chapter 500 Stormwater Rules and to show a plan which will generally meet the requirements with the exceptions noted herein.

7.0 ASSUMPTIONS

- That detention will not be required to reduce the peak flow rate or meet the flooding standards. **A waiver of the flooding standards is requested**.
- That the native soils/gravels will have infiltrative properties that meet the requirements of the Maine DEP BMP proposed. Note: **A waiver is being sought for infiltration testing**. Evidence from the previously developed area of 5.03 acres for Phase I/II and the shorefront area for the Travel lift operations supports the proposition that the soils are highly infiltrative. The same approach will be continued around the perimeter of the Building E site location. Roof runoff will sheet onto the porous boatyard surfaces and be absorbed and infiltrated into the ground.

8.0 STORMWATER MANAGEMENT OBJECTIVES

The goal of the Stormwater Management Plan is to design, operate, and maintain the development to avoid downstream erosion or significant water quality impairment.

This goal will be achieved by:

- Designing the project to meet the Portland Stormwater Management Standards adopted 7/19/10 and General Stormwater Standards of MeDEP (revised October 2010).
- Designing water quality measures to provide long-term removal of non-point contaminants.

- Implementing a plan to control erosion, sedimentation, or fugitive dust emissions during construction.
- Implementing operational processes to avoid toxic pollutants from boat yard activities, both organic chemicals and heavy metals, from entering ground and adjacent water bodies.
- Maintenance of the Stormwater Management System in accordance with the Stormwater O&M Manual (provided as a separate document) and MeDEP Brightwork Manual.

The plan has been therefore been designed in accordance with the City of Portland Stormwater Rules.

9.0 STORMWATER MANAGEMENT QUALITY SUMMARY

Approach

To meet the General Standards, our office reviewed the list of options of MeDEP's accepted Best Management Practice (BMP) options to provide water quality treatment including grassed underdrained filter, bio-filter, proprietary devices and infiltration trenches for the expanded New Yard site. Following this review and incorporating knowledge of the site and the goals of the client, it was realized that developing a method for providing stormwater quality treatment that utilizes the proposed crushed stone surface (desirable to applicant for boatyard use and related activities) and infiltrating the runoff into the underlying soils would be preferable both functionally and economically. According to the MaineDEP BMPs this is known as a "Manmade Pervious Surface" approach to stormwater quality treatment.

A pervious pavement consists of a permeable surface material and subbase materials that allow penetration of runoff in to the underlying soils. The system must be designed to store and infiltrate the water quality volume (1.0" of impervious area and 0.4" pervious area) with the remainder (larger storm events) discharged through an 'over-flow' device. The effectiveness of the system depends heavily on long term inspection and maintenance.

Following a review of the design criteria for a "Manmade Pervious Surface", it was determined that the selection of at least a 3" to 6" thick crushed stone surface across the entire 'prepared surface' area designated on the site plan is appropriate. This layer of stone will act as a reservoir for the 1" storm event. The material may be placed over a thicker (>24" thick layer) of heavier granular soils and geotextile fabric and infiltration into the existing underlying gravel will meet the requirements of this BMP. Runoff from the site is nearly non-existent as even during higher rainfalls exceeding 3", the installed surfaces have functioned to absorb and store rainfall. Proper management of parked vessels and adherence to the Brightwork manual will minimize the potential for petroleum and other contaminants from site activities, etc. to enter the stone areas.

Our office has laid out a plan which utilizes the "Manmade Pervious Surface" BMP to provide water quality treatment as described in Chapter 7.7 of the MeDEP Volume III BMPs Technical Design Manual meeting the minimum

treatment standards as required by the General Standards. The project drawings provide limits and details of the manmade pervious surface proposed. This pervious surface is represented by the 'prepared surface for boatyard' on the site.

The basis of design of treatment method is as follows:

Compliance with BMP Design Criteria:

Traffic Volumes:

Traffic volumes will be low around the Building E area. Some heavy vehicles including tractor trailer trucks and the Marine Travel Lift will maneuver across the crushed stone surface. However, much of the surface will be utilized for boat storage. The applicant proposes to manage the crushed stone surface by routinely raking and grading to minimize the buildup of fine particles that might impact the materials absorptive capacity. Removal and replacement of this gravel layer may be required over time.

Grading:

Grades across the crushed stone area will range from 1 - 2%, thus meeting the <5% slope recommendation.

Sediment Loading:
The crushed stone area is not expected to receive high volumes of sediments. Over time any buildup of fines that impact the stone surface absorption capacity will be removed and replaced. In the winter, calcium chloride may be placed to minimize icing.

Reservoir Course:

The reservoir course will consist of clean double washed 3/4" stone free of debris. The stone depth will be 3" to 6" typically.

Pretreatment Layer

A pretreatment layer will be achieved by providing a 12" -24" subbase gravel layer (like MDOT Type D) beneath the crushed stone.

Separation to Groundwater:

Based on the test pit data included in previous subsurface explorations, the groundwater table throughout the site is six to nine feet below existing grade thus there is ample separation from any underlying groundwater resources

Infiltration Testing:

The applicant is seeking a waiver from the infiltration testing requirement. The applicant has observed the existing site after heavy rain events and observed ponding for only a couple of hours. The existing site has a surface gravel/sand

layer and it is expected that the proposed stone surface will not negatively impact the infiltration properties below.

Flooding Standard:

Due to the direct discharge to the Fore River, **a waiver from the flooding standard is being requested**.

Storm events larger than the 1-inch storm will be directed via sheet flow to one of the following:

- The shorefront parcel will generally generate overland flow to the waterfront and the river.

10.0 CHAPTER 500 TREATMENT PERCENT COMPLIANCE

The proposed redevelopment project creates 0.275 acres of improved surface area (roof) and 0.5 acres of pervious boat yard surface area for a total disturbed area of about 0.77 acres.

Within the Building E area, the proposed stormwater management plan provides treatment for the entire area as the Boatyard surface will provide for storage or runoff from the roof and for any direct rainfall amounts yielding 100% treatment. Hence, the strategies proposed herein meets the minimum requirements stated in the General Standards.

11.0 BOATYARD ACTIVITY PLANNING

A major issue associated with boatyard and marine related use is the proximity to the shorefront. Any pollutants that are generated on the site may eventually reach the water. As such, the applicant will implement thoughtful planning and processes to avoid toxic pollutants including organic chemicals and heavy metals from spills.

Activities such as hull prep, sandblasting, painting, washing, engine repairs and maintenance will be performed in accordance with the guidelines set forth in the Brightworks manual. Storage, handling and disposal of waste material from these activities will also be carried out in accordance with the manual and utilize local waste companies who specialize in this environment. A plan will also be in place to manage spills if they occur. This plan will identify potential spill sources, hazardous materials stored, prevention measures (including training, security, etc.), spill emergency procedures (including health and safety measures, notification information, spill containment, etc.), emergency phone numbers, location of spill containment and control materials and a drainage plan. The applicant is a current boatyard operator and is very familiar with the guidelines and requirements set forth in the Brightwork Manual. They have successfully complied with these requirements for many years and they are confident that similar operations will be maintained at the current site.

12.0 EROSION CONTROL

An Erosion Control Narrative, Plan, and Details have been previously prepared for the project and are part of the project record. These materials continue to apply as they relate to the Phase IV construction activities.

13.0 OPERATIONS AND MAINTENANCE

An Operations & Maintenance Manual has been previously prepared and is part of the project record. The requirements of this O&M Manual continue to apply to this Phase IV project.

14.0 PERMIT REQUIREMENTS

City of Portland review and permitting of the Stormwater Management Plan is required and will be completed with the review of the Site Plan Application submitted to the City of Portland Planning Authority.

STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

Canal Landing Phase III and IV – 400 West Commercial Street

IN CONSIDERATION OF the site plan approval granted by the Planning Board of the City of Portland to the proposed Canal Landing project at 400 West Commercial Street Project ID 2017-293 shown on the Site Layout Plan submitted by Stantec Consulting Services Inc., and associated Site Layout and Grading & Drainage Plans, (Exhibits A and B) prepared by Stantec, of 482 Payne Road, Scarborough, Maine dated last revised 11.09.18 and 11.13.18, respectively and pursuant to a condition thereof, New Yard LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 400 West Commercial Street, Portland, Maine 04101, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the Roof Filter Cartridge systems, Boatyard Surfaces, Pervious pavement systems and related onsite drainage infrastructure, (hereinafter collectively referred to as the "stormwater system"), as shown on the Phase III and IV Plans in Exhibit B and in strict compliance with the approved Stormwater Inspection and Maintenance Manual prepared for the Owner by Stantec (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or

assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

Dated at Portland, Maine this _____ day of _____, 2018.

_____
(*name of company*)

_____
(*representative of owner, name and title*)

STATE OF MAINE
CUMBERLAND, ss. Date: _____

Personally appeared the above-named _____(*name and title*), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

_____
Notary Public/Attorney at Law

Print name: _____

Exhibit A: Approved Phase III and IV Site Layout Plan
Exhibit B: Approved Phase III Grading & Drainage Plan
Exhibit C: Approved Stormwater Inspection and Maintenance Manual

30' WIDE CSO EASEMENT TO CITY OF PORTLAND WATER DISTRICT

PHASE III HEAVY DUTY ASPHALT SURFACE - WESTERN ENTRANCE

THE INSTALLATION OF STREET TREES WEST OF THE MAIN ENTRANCE WILL BE PART OF PHASE IV, FOR WHICH AN APPLICATION WILL BE SUBMITTED TO THE CITY IN THE SPRING OF 2018.

OPTIONAL 6' TALL VINYL COATED CHAIN LINK FENCE AROUND PERIMETER OF SECURED STORAGE AREA. THE APPLICANT RESERVES THE RIGHT TO INSTALL ACCESS GATES AT MULTIPLE LOCATIONS TO BE DETERMINED.

APPLICANT RESERVES THE RIGHT TO INSTALL A 6' HIGH CHAIN LINK FENCE AROUND THE PERIMETER FOR SECURITY PURPOSES.

GROUND SURFACE BETWEEN EXISTING EDGE OF PAVEMENT AND THE R.O.W. WILL REMAIN GENERALLY UNCHANGED UNTIL COORDINATION WITH THE WEST COMMERCIAL STREET CORRIDOR STUDY IS COMPLETED

BETULA NIGRA - RIVER BIRCH 8'-10' FT CLUMPS - (TYP OF 4 CLUMPS IN FRONT OF BUILDING) FORSYTHIA 'NORTHERN GOLD' - 2-3' POTTED (TYP OF 14 IN FRONT OF BUILDING)

EXISTING GRAVEL SHOULDER TO REMAIN

EXISTING EDGE OF PAVEMENT TO REMAIN, (TYP.)

MIX OF RED MAPLE (ACER RUBRUM 'KARPICK') & 'PATRIOT' ELM (ULMUS) @ 40' O.C., 2" CAL. (TYP)

LANE MARKINGS TO TRANSITION TO MARKINGS ESTABLISHED AS PART OF IMT EXPANSION PROJECT BY MaineDOT.

STREET SECTION CONDITIONS ON THIS PLAN DO NOT REFLECT IMPROVEMENTS COMPLETED IN SUMMER/FALL OF 2015 AS PART OF THE IMT EXPANSION

TREES TO REMAIN

STOP BAR

STOP SIGN

PROJECT SIGN

PHASE III HEAVY DUTY ASPHALT SURFACE - CENTRAL ENTRANCE

STOP BAR

PROJECT SIGN

STOP SIGN

AUTOMATED GATE SYSTEM

SNOW DUMP

PROPOSED HYDRANT

MULTI USE MARINE STORAGE AREA

THE APPLICANT IS SEEKING APPROVAL TO CONDUCT MARINE RELATED ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PARKING OF SEMI-TRAILERS RELATED TO IMT ACTIVITIES, THE TEMPORARY STORAGE OF MARINE RELATED PRODUCTS, CARGO OR EQUIPMENT, THE PARKING OF VEHICLES ASSOCIATED WITH MARINE ACTIVITIES, PROJECTS OR SIMILAR USES WITHIN THE OUTLINED AREA AS PART OF PHASE III. EXISTING GROUND WILL BE STRIPPED OF VEGETATION, PROOF ROLLED AND 2"-4" OF STONE/GRAVEL PLACED AS A SURFACE TREATMENT.

CB (BY MDOT)

20' x 120' SHELL STORAGE BLDG. (RUBB STYLE)

10' MIN. BOATYARD SURFACE

CB (BY MDOT)

PHASE III

AUTOMATED OR MANUAL SLIDING OR SWING GATE SYSTEM TO BE INSTALLED

PROPOSED FLOATS AND GANGWAY (PERMITTING AND CONSTRUCTION BY OTHERS)

GANGWAY SYSTEM TO BE INSTALLED FOR ACCESS TO FLOAT SYSTEM (TYP.)

PROPOSED PIER EXTENSION BY OTHERS

CANAL LANDING HAS ACQUIRED LAND EXTENDING OUT TO MEAN LOW WATER ELEV. -4.0, (TYP.)

CIP CONCRETE WALL

EX. BUILDING

BLDG. C
180'x110'
19,800 S.F.
F.F.E: 16.0
MARINE RETAIL/NEW YARD ADMINISTRATION

BLDG. D
80'x60'
4,800 S.F.

ENTRY F.F.E.: 28.67

BUILDING ROOF OVERHANG

2 BIKE RACKS

CIP CONCRETE RAMP

ADA SIGN

RAMP

UPPER PARKING

2' GRIND

EASTERN ENTRANCE

STOP BAR

STOP SIGN

PREPARED BOATYARD SURFACE FOR VESSEL DISPLAY AND MAINTENANCE, TYP.

OVERHEAD DOOR, TYP.

ENTRY

ENTRY

ENTRY

ADA SIGN MOUNTED TO BUILDING

LOADING ZONE

OH DOOR

9' x 9' CONCRETE TRANS. PAD

CIP CONCRETE OR LARGE BLOCK MODULAR WALL

PREFAB OR CIP STAIRS (SEE NOTE 1)

AUTOMATED GATE SYSTEM

PROPOSED HAUL ROAD CORRIDOR (14 FT) (BY MEDOT)

SNOW STORAGE

PHASE III

OVERHEAD DOOR

SEE SHEET C-3.2 FOR ENLARGEMENT

IMT LOADING PAD (BY OTHERS)

OPTIONAL SWING GATE ASSEMBLY

24' DOUBLE SWING GATE (BY MEDOT)

CASING PIPES (x4)(INSTALLED 2014)

SECONDARY BOAT YARD ACCESS - FOR USE BY PYS STAFF PRIMARILY

RAILROAD BASE AND WOOD CROSSING INCLUDING SIGNAGE BY MDOT (AUGUST 2015)

AUTOMATED OR MANUAL SLIDING OR SWING GATE SYSTEM TO BE INSTALLED

CASING PIPES (x2)

EXISTING FIRE HYDRANT

RAILROAD BASE AND WOOD CROSSING INCLUDING SIGNAGE MEDOT (AUGUST 2015)

PRIMARY BOAT YARD ACCESS 50' WIDE GRADE CROSSING BENEFITTING NEW YARD, LLC -SLIDING OR SWING GATE SYSTEM TO BE INSTALLED

6' HIGH CHAIN LINK FENCE

PROPOSED RAILROAD R.O.W. (38 FT) (BY MEDOT)

PRIMARY ACTIVITIES WITHIN THE SHOREFRONT AREA WILL BE BOAT AND BOAT TRAILER PARKING AND MAINTENANCE ACTIVITIES

EXISTING FIRE HYDRANT

SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929

1 OR 2 COURSES OF 2'x2'x8' CONCRETE BLOCKS TO BE ADDED TO THE TOP OF THE EXISTING GRANITE REVETMENT AND GEOTEXTILE FABRIC WITH STONE SHALL BE PLACED BEHIND THE WALL

REMAINING AREA OF SOUTH PORTION = ±260,814 S.F. ±5.99 ACRES± TO SPRING HIGH TIDE CANAL LANDING LLC CCRD BOOK 32239 PAGE 148

EXISTING FIRE HYDRANT

EXISTING TRAVEL BASIN

MATCH BOATYARD SURFACE WITH EXISTING (TYP)

30' WIDE CSO EASEMENT TO CITY OF PORTLAND WATER DISTRICT (CCRD BOOK 35184, PAGE 228)

REMOVE ANY MATERIAL WITHIN EASEMENT WHEN NECESSARY FOR MAINTENANCE OR REPAIRS BY CITY)

VESSEL PARKING SHOWN FOR ILLUSTRATION PURPOSES ONLY

DILAPIDATED PIER

ABANDONED HYDRANT

APPROXIMATE MEAN LOW WATER ELEVATION = -4.0 NGVD 1929

SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929

105' USACOE SETBACK LINE)

50' HARBOR COMMISSION SETBACK

APPROXIMATE MEAN LOW WATER ELEVATION -4.0

EXISTING CSO OUTFALL

SPRING HIGH TIDE ELEVATION 7.4 (NGVD 1929)

EXISTING FLOATS

BOAT RAMP #1 (CONSTRUCTED FALL 2013)

EXISTING BLDG. B 28,800 SF

EXISTING BLDG. A 19,200 SF

LAND RETAINED BY NEW YARD LLC/CANAL LANDING, LLC 219,044±/5.03± ACRES

ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	NONE
MINIMUM YARD DIMENSIONS		
FRONT	NONE	0 FT
SIDE	NONE	18.1 FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	>100 FT
MAXIMUM LOT COVERAGE	100%	9.6%
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	<45 FT

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING (PHASE III)
- PREPARED PERVIOUS SURFACE FOR VESSEL DISPLAY, STORAGE AND MAINTENANCE
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- TRUEGRID PERMEABLE PAVING SURFACE

NOTES

1. THE OWNER SHALL BE RESPONSIBLE TO REMOVE PROPOSED STRUCTURES I.E. STAIRS, RAMPS, ETC. WITHIN THE PROPOSED 30' WIDE EASEMENT OVER THE CSO LINE IN THE EVENT THAT THEPORTLAND WATER DISTRICT MUST HAVE ACCESS FOR MAINTENANCE AND REPAIRS TO THE PIPE.

Exhibit A

(IN FEET)
1 inch = 50 ft.

REV	DATE	DESCRIPTION
10	11.09.18	REVISED FINAL PHASE III PLAN SUBMISSION
9	10.05.18	FINAL PHASE III PLAN SUBMISSION
8	06.11.18	FINAL PLAN SUBMISSION TO CITY
7	03.23.18	REVISED PLANS SUBMITTED FOR OWNER REVIEW
6	03.16.18	REVISED PER CITY COMMENT/FINAL PLAN SUBMISSION TO CITY
5	01.19.18	REVISED PER CITY COMMENT
4	12.14.17	PERMIT RENEWAL SUBMISSION - LEVEL III
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/09/18 — REGISTERED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
PHASE III
SITE LAYOUT PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM

DRAWN: PBF	DATE: DECEMBER 2017
DESIGNED: SRB	SCALE: 1" = 50'
CHECKED: SRB	JOB NO. 195350129
FILE NAME: 3091.04-SITE LAYOUT	
SHEET	C-2.1

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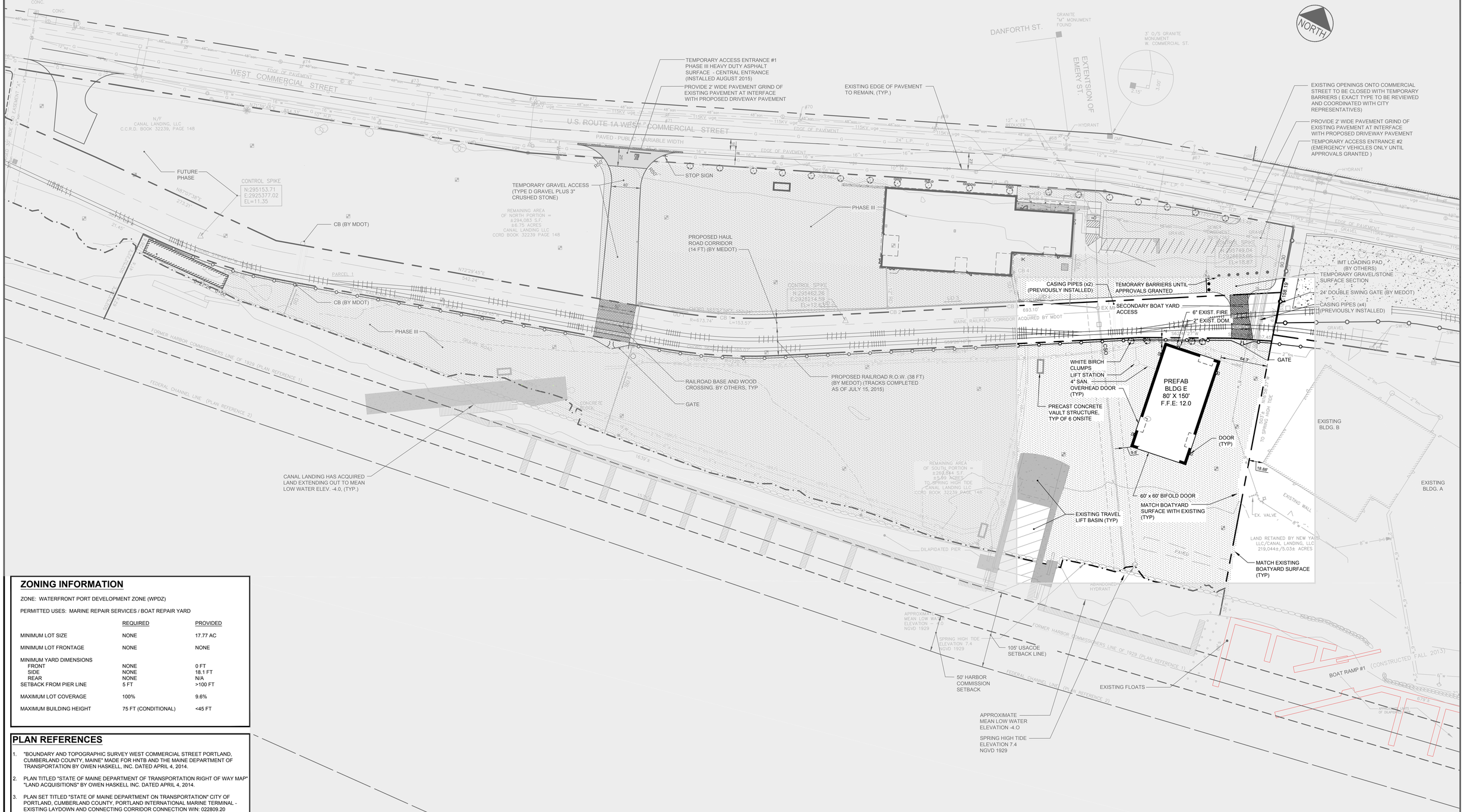

ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	NONE
MINIMUM YARD DIMENSIONS		
FRONT	NONE	0 FT
SIDE	NONE	18.1 FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	>100 FT
MAXIMUM LOT COVERAGE	100%	9.6%
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	<45 FT

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
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4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING (PHASE III)
- PREPARED PERVIOUS SURFACE FOR VESSEL DISPLAY, STORAGE AND MAINTENANCE
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- OPTIONAL CONCRETE PAD (TO BE DETERMINED BY APPLICANT)

GENERAL NOTE:

1. THE PLACEMENT OF A FLOWABLE FILL CAP OVER THE CSO LINE WOULD BE PROVIDED AS A PROTECTIVE MEASURE TO HELP DISTRIBUTE EQUIPMENT LOADS OVER THE UNDERLYING PIPE BELOW ONLY IN THE EVENT THAT THE CITY REQUESTS IT OR OTHER EVIDENCE OF DEFICIENT PIPE LOADING CAPACITY IS DISCOVERED.
2. PREFAB BUILDINGS ARE CURRENTLY ONSITE. EACH WILL BE RETROFITTED TO INCLUDE POWER CONTROLS AND RELATED EQUIPMENT, WATER SUPPLY (YEAR ROUND AND/OR SEASONAL) AND OTHER SERVICES AS DETERMINED BY OWNER. WORK SHALL INCLUDE POSITIONING OF THESE BUILDINGS ON CRUSHED STONE BASE AND ALL UTILITY INSTALLATIONS.

NOTES

1. THE OWNER SHALL BE RESPONSIBLE TO REMOVE PROPOSED STRUCTURES I.E. STAIRS, RAMPS, ETC. WITHIN THE PROPOSED 30' WIDE EASEMENT OVER THE CSO LINE IN THE EVENT THAT THE CITY MUST HAVE ACCESS FOR MAINTENANCE AND REPAIRS TO THE PIPE.

Exhibit A

(IN FEET)
1 inch = 50 ft.

REV	DATE	DESCRIPTION
8	11.13.18	RESUBMITTED TO CITY - FINAL PLAN
7	06.26.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
6	03.09.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
5	12.07.17	REVISED FOR RESUBMISSION TO HARBOR COMMISSION
4	10.26.17	REVISED FOR DEP NRPAA AMENDMENT SUBMISSION
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/13/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
BUILDING E
SITE LAYOUT PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-SITE LAYOUT		
SHEET	C-2.1		

NORTH

WATER QUALITY TREATMENT SUMMARY TABLE - PHASE III CANAL LANDING			
Description	**Treated Area (ac.)**	**Untreated Area (ac.)**	**Treatment %**
Improved Impervious Area (Roof/buildings/walls)	0.8	0.80	86%
Boat Yard Surface Area	9.81	0.00	100%
Landscaped Area	0.32	0.00	0%
Total	**10.93**	**0.80**	**Total Area = 12.74**
Overall Impervious Area Treated	10.93		99% (exceeds 95% required)
Overall Developed Area Treated	10.93		86% (exceeds 80% required)

MATCH EXISTING GRADE
INSTALL STABILIZED CONSTRUCTION ENTRANCE (TYP)
PROSPECTIVE DRIVEWAY
EX. SAN MH INV. 5.3'±
CMP MH'S
WEST COMMERCIAL STREET
EDGE OF PAVEMENT
APPROX. GAS
APPROX. WATER
DROP INLET
STORM MH
CMP MH
EX. SAN MH INV. 5.10'±
PROVIDE SLOPE STABILIZATION TO PROTECT EROSION DUE TO RUNOFF FROM STREET SHEETING ONTO PROPERTY, (TYP.)
RESHAPE GRAVEL SHOULDER AS NECESSARY
U.S. ROUTE 1A WEST COMMERCIAL STREET
PAVED - PUBLIC - VARIABLE WIDTH
EDGE OF PAVEMENT
EX. SAN MH INV. 4.71'±
WALL
STORM BASIN CARTRIDGE FILTER UNIT (TYP. OF 2)
EDGE OF TRAVELWAY PAVED SHOULDER
LAWN, TYP.
EX. BUILDING
BLDG. C 180'x110' 19,800 S.F. F.F.E: 16.0
ENTRY 28.67
SECOND LEVEL F.F.E.: 28.83
BLDG. D 80'x60' 4,800 S.F.
BUILDING C TO HAVE INTERIOR ROOF DRAINS
OHD
ENTRY
16.0
15.5
DANFORTH ST.
"M" MONUMENT FOUND
EXTENTSION OF EMERY ST.
3' O/S GRANITE MONUMENT W. COMMERCIAL ST.
2.15'
3.00'
EX. SAN MH INV. 4.3'± 12" x 16" REDUCER
INSTALL STABILIZED CONSTRUCTION ENTRANCE (TYP)
MATCH EXISTING GRADE
CONCRETE OR GRANITE ROCKS AT BASE OF RAMP SYSTEM (TYP)
STAIRS W/PIPE RAILING
GAS METERS
HYDRANT
CURB
GRANITE CURB
EDGE OF PAVEMENT
GRAVEL
SALVAGED GRANITE BLOCK OR PRECAST CONCRETE WALL FIELD VERIFY TOP OF WALL - PROPOSED GRADES
IMT LOADING DOCK
CB (PREVIOUSLY INSTALLED BY DOT, TYP.)
EX MH
UD-N5(DOT)
CB (DOT)
EXISTING 24" CSO OUTFALL WILL REMAIN IN PLACE AS THE PRIMARY DISCHARGE FOR IMT AND CANAL LANDING DRAINAGE SYSTEMS
24" BRICK STORM WATER OVERFLOW INV. = -1.4
20' x 120' SHELL STORAGE BLDG. (RUBB STYLE)
PREVIOUSLY INSTALLED 24" RCP CLASS V UTILITY SLEEVES (TYP.)
CB (PREVIOUSLY INSTALLED BY DOT, TYP.)
EDGE OF BOATYARD SURFACE
12" UD-N3(DOT)
UD-N4 (PREVIOUSLY INSTALLED BY DOT, TYP.)
CB (PREV. INSTALLED BY DOT)
EXISTING JERSEY BARRIER WALL (BY-MDOT 2015)
SEE NOTE 1
CB (PREVIOUSLY INSTALLED BY DOT, TYP.)
UD-N5 (PREVIOUSLY INSTALLED BY DOT)
GRADING DEPICTED WITHIN THE RAIL CORRIDOR IS BASED ON DESIGN PLANS BY HNTB AND IS CONSIDERED APPROXIMATE AND INTENDED FOR INFORMATIONAL PURPOSES ONLY.
30' WIDE CSO EASEMENT
EXISTING BLDG.B
EXISTING NEW YARD LLC OPERATIONS YARD
EX. VALVE
PAVED
ABANDONED HYDRANT
EXISTING CSO OUTFALL WILL REMAIN IN PLACE AS THE PRIMARY DISCHARGE FOR IMT AND CANAL LANDING DRAINAGE SYSTEMS
BOAT RAMP #1 (CONSTRUCTION)
PROPOSED OUTFALL THROUGH EXISTING REVETMENT WALL INV. OUT TBD (REQUIRES PBR AUTHORIZATION BY MEDEP, TYP.)
PROPOSED OUTFALL THROUGH EXISTING REVETMENT WALL INV. OUT TBD (REQUIRES PBR AUTHORIZATION BY MEDEP, TYP.)
CONCRETE BLOCK
TOP OF WALL 11' - 12' BASED ON ADDITION OF ONE COURSE OF CONCRETE BLOCKS
TOP OF WALL 11' - 12'
EX. BUILDING, TYP
DILAPIDATED PIER
INSTALL SILT BARRIER GENERALLY BEHIND REVETMENT WALL - SHALL CONSIST OF EROSION CONTROL MIX BERM
EXISTING WATER DEPTHS BASED ON PLAN REFERENCE #4 IDENTIFIED ON SHEET C-2.1 (TYP)
APPROXIMATE MEAN LOW WATER ELEVATION -4.0 NGVD 1929
SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929
APPROXIMATE MEAN LOW WATER ELEVATION -4.0
SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929
FORMER HARBOR COMMISSIONERS LINE OF 1929 (PLAN REFERENCE 1)
FEDERAL CHANNEL LINE (PLAN REFERENCE 2)
GRAVEL ROAD
FEDERAL CHANNEL LINE

GRAPHIC SCALE
50 0 20 50 100
(IN FEET)
1 inch = 50 ft.

Exhibit B

NOTES:

1. THE OWNER HAS RIGHTS FOR CONNECTING TO THE EXISTING DRAINAGE SYSTEMS THRU THE STATE OF MAINE RAIL R.O.W., UNDER A SUPPLEMENTAL AGREEMENT DATED JULY 8, 2014.
2. ALL FUTURE SITE ACTIVITIES INCLUDING BUILDING AND YARD AREA IMPROVEMENTS SHALL COMPLY WITH THE CHAPTER 500/CITY OF PORTLAND GENERAL STANDARDS FOR STORMWATER MANAGEMENT.

REV	DATE	DESCRIPTION
10	11.09.18	REVISED FINAL PHASE III PLAN SUBMISSION
9	10.05.18	FINAL PHASE III PLAN SUBMISSION
8	06.11.18	FINAL PLAN SUBMISSION TO CITY
7	03.23.18	REVISED PLANS SUBMITTED FOR OWNER REVIEW
6	03.16.18	REVISED PER CITY COMMENT/FINAL PLAN SUBMISSION TO CITY
5	01.19.18	REVISED PER CITY COMMENT
4	12.14.17	PERMIT RENEWAL SUBMISSION - LEVEL III
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/09/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING AMENDED SITE PLAN

SHEET TITLE
PHASE III GRADING AND DRAINAGE PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN: PBF	DATE: DECEMBER 2017
DESIGNED: SRB	SCALE: AS NOTED
CHECKED: SRB	JOB NO. 195350129
FILE NAME: 3091.04-CONCEPT GRADING	
SHEET	C-3.1

V:\1953\active\195350129\Cadd\Permit Set\dwg\PHASE III PERMIT\3091.04_CONCEPT B_GRADING.dwg pfillette 11/9/2018 2:25 PM

INSPECTION AND MAINTENANCE MANUAL FOR STORMWATER MANAGEMENT AND RELATED STORMWATER FACILITIES

CANAL LANDING/NEW YARD
100 WEST COMMERCIAL STREET
PORTLAND, MAINE

PREPARED FOR

CANAL LANDING, LLC
100 WEST COMMERCIAL
PORTLAND, MAINE 04101

PREPARED BY

STANTEC CONSULTING LTD.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
207-883-3355

JANUARY 2018

Exhibit C

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
I.	INTRODUCTION	1
	A. Guidelines Overview	1
II.	PROJECT OVERVIEW	2
III.	STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS	4
	A. Control Structures	4
	B. Stormwater Inlets	4
	C. Tributary Drainage System	6
	D. Vegetated Swales	8
	E. Infiltration Systems	**Error! Bookmark not defined.**
	F. Boat Yard Surface	10
	G. Litter	11
	H. Summary Checklist	11
IV.	PROGRAM ADMINISTRATION	11
	A. General	11
	B. Record Keeping	11
	C. Contract Services	12

APPENDICES

Attachment A – Sample Inspection Logs

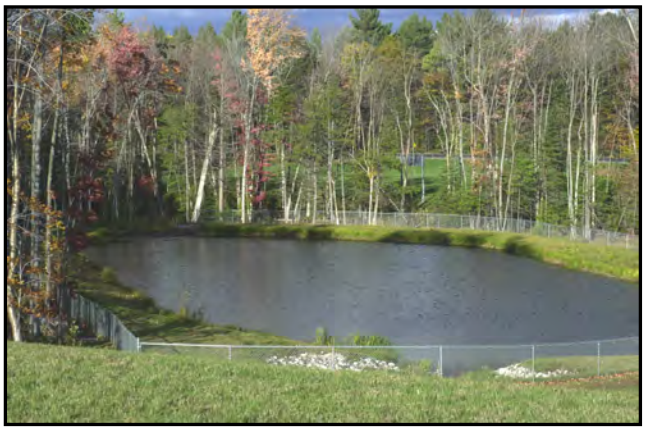
Attachment B – Permits for Project

Attachment C – Summary Checklist for Inspection and Maintenance

I. INTRODUCTION

Relatively complex stormwater management facilities are commonly installed in development projects including, commercial facilities, and many other developments. The complexity and goals of these systems vary with the nature of the receiving water, as well as the type of development. Runoff from developed areas of the project, including rooftops, paved or lawn areas, typically contain materials that can impact the receiving waters. Source control and the installation of swales and infiltrative surfaces often combined with pretreatment measures or followed by other best management practices, can significantly reduce the non-point pollution discharge from the developed area. These measures are particularly important to projects in the watersheds of sensitive water bodies, or projects with potential impacts to groundwater.

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of years. It is critical that the stormwater management facilities are regularly inspected, and that maintenance is performed on an as-needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that collect and transport the flow to the swales and pervious/infiltrative surfaces. Thus, maintenance should be directed to the total system, not just the primary stormwater management facility.



The purpose of this document is to define, in detail, the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended when they were designed. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need for the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program for operation and maintenance. A supplemental section provides guidance for construction monitoring of the facilities during their installation and more detailed checklists (Attachment D). Certain facilities, specifically the groundwater recharge and infiltration beds are not intended to be placed in service until the tributary catchment area has the permanent cover in place and any contributing turf areas have achieved a 90% catch of vegetation (i.e. established).

A. GUIDELINES OVERVIEW

A summary of the individual components of stormwater management facilities has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- City of Portland Planning Board Level III Site Plan Approval and Shoreland Zoning Approval
- City of Portland Building Permit(s)
- MeDEP Natural Resource Protection Act (NRPA) #L-25823-4E-A-N
- City of Portland Delegated Review of the Site Location of Development Act (SLDA)
- U.S. ACOE Water Quality Certification/Federal Channel Review – File No. NAE-2012-02469
- State of Maine Submerged Lands Lease
- Harbor Commissioner's Review – latest approval December 2017

The permit applications pending for the project include the design information for the stormwater system.

A copy of the permits and Stormwater Management Report should be appended to this manual as Attachment B. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Stantec for civil engineering for the Canal Landing New Yard Project in Portland, Maine. Stantec has prepared the design for the stormwater management facilities and may be contacted at:

Stantec Consulting Ltd.
482 Payne Road
Scarborough, Maine 04074
207-883-3355

It is recommended the preparer of the plan be contacted with any particular questions on the design intent or similar issues.

The applicable plans/design documents which apply to the project are:

1. Civil Site Plans/Permit Applications Prepared by Stantec Consulting Ltd.
2. The Erosion Control/Sedimentation Control Plan for the project.
3. The Stormwater Management Plan for the project.

A copy of these documents should be retained with the manual.

The proposed design will include deep sump catch basins, manmade pervious/infiltrative surfaces, grassed swales, overflow, collection, conveyance, and discharge systems.

The project is subject to the requirements of the City of Portland Code of Ordinances, Chapter 32, specifically the post construction stormwater management plan. The City requirements have been reiterated for ease of reference; however, the owner shall be responsible to meet the current City code.

"Any person owning, operating or otherwise having control over a BMP required by a post construction stormwater management plan shall maintain the BMP's in accordance with the approved plan and shall demonstrate compliance with that plan as follows:

(a) Inspections. The owner of operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMP's, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

(b) Maintenance and repair. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action (s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action (s) to the department of public services ("DPS") in the annual report.

(c) Annual report. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP (s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action (s) taken.

(d) Filing fee. Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.

(e) Right of entry. In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMP's."

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management area. These O&M procedures will complement scheduled sweeping of the pavement areas anticipated to occur at least twice per year. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. DRAINAGE STRUCTURES

Preface: Proposed grassed swales that wraps around the site edges will collect overflow runoff from the infiltrative Boatyard surface during major storm events, and will discharge to the existing 24" CSO line thru an existing appurtenant structure.

All structures are to be inspected by removing the covers and inspection channels. Debris should be removed whenever observed and reported to key maintenance personnel since any debris would indicate lack of proper system O&M in the collection and conveyance system. Entry may require CONFINED SPACE ENTRY procedures and appropriately trained personnel.

Inspection: The drainage structures must be inspected to assure they maintain intended hydraulic characteristics. The inspection would note any debris or sediment which may accumulate in the structure and in the outlet pipes. It is noted that it does not take much debris or silt to alter the hydraulic characteristics of the discharge. The inlet should be inspected to assure it is not blocked or restricted or there is sediment to the extent that its flow characteristics may be altered.

Maintenance: Maintenance of the drainage structure will consist primarily of removing debris which may accumulate.

Frequency: The drainage structures should be inspected semi-annually, and after a high intensity rainfall event (in excess of 3 inches in a 24-hour period).

Maintenance/Inspection Responsibility:

Inspection Personnel: The Maintenance Personnel of Canal Landing, LLC will perform the scheduled maintenance/inspection.

Dates of inspections, maintenance performed, and any observed problems should be noted in the logs/records maintained by Canal Landing, LLC.

B. STORMWATER INLETS

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets include the few overflow catch basins proposed toward the north of the site and the basins within the concrete

washdown areas along the shorefront. This section is directed at maintenance of the actual inlet point. A later section addresses more substantive maintenance of the structures and conveyance facilities.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Roadway/parking lot/boat yard maintenance areas
- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets in parking lots/roadway areas. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the building.

Frequency: All inlets should be inspected on a monthly basis, and after/during significant storm events. A windshield survey is suitable for most inlets but off road inlets and pond structures require more rigorous inspection by walking the parcel.

Maintenance/Inspection Responsibility:

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/inspections of the inlets and culvert crossings.

Comments: Maintenance of inlets is critical on this project.



POORLY STABILIZED INLET ALLOWS ENTRANCE OF DEBRIS AND REDUCED CAPACITY



STABILIZED INLETS REDUCE DEBRIS ACCUMULATION AND MAINTAIN DESIGN CAPACITY

C. TRIBUTARY DRAINAGE SYSTEM

Preface: Overflow stormwater from portions of the project will be directed through a conveyance system which transports the flow to an existing 24" CSO line that crosses the site. This conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment (minimal amounts anticipated) is carried by the drainage system is intended to be trapped in the boatyard surface, within catch basin sumps or grassed swales. Maintenance of this system can play a major role in the long-term maintenance costs and the effectiveness of the site.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that its carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped

systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with leaves or other debris. The inlet basins are normally equipped with sumps which will remove large sediment particles from the flow stream with hooded outlets.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

In some projects most of the stormwater is carried in open swales, channels, or ditches. These conveyance channels may be rip rapped or vegetated, depending on the gradient and expected flow velocities. These facilities must be inspected to insure debris or sedimentation does not reduce their carrying capacity. Excess vegetative growth must also be noted. The surface protection for the channels, either stone or vegetation, must be inspected to insure its integrity. Any areas subject to erosion should be noted.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sedimentation to any downstream detention pond, or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. When the filter bag in an inlet restricts capacity and is coated with silt or other deleterious materials, the bag should be removed and Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the retail center. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline exceeds 20% of the diameter of the pipe, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed. In general a sump or sediment trap should be used where it can be flushed into the detention pond, since it will reduce pond volume and hasten the time when it must be cleaned.

Frequency: The piped drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

Maintenance/Inspection Responsibility:

Maintenance Personnel: Canal Landing, LLC Maintenance Personnel.

Special Services: The owner may elect to contract with an independent agent for cleaning of replacement of sorbent booms, catch basins, sumps, and pipelines. Remedial source control measures may be performed by the owner or an outside service depending upon the nature of the particular situation.

Comments: Maintenance of inlets is critical on this project.



A WELL STABILIZED VEGETATED SWALE SHOWS LITTLE SIGNS OF EROSIVE VELOCITIES OR FLOWS. THIS SWALE ALSO FUNCTIONS AS A POND SPILLWAY

D. VEGETATED SWALES

Preface*:* Vegetated swales are often used to convey stormwater. Swales can be intended to be:

1. Mowed and maintained
2. Reverted to wetlands
3. Naturalized

Inspection*:* Swales should be inspected for erosion and sedimentation.

Maintenance*:* Eroded or silted channels need to be repaired when discovered. If erosion is a problem, the swale design should be examined. Likewise, if situation is a continuing problem, the upgradient conditions should be assumed.

Frequency*:* It is recommended vegetated swales be inspected quarterly until vegetation is established and a year after installation. Thereafter, if no problems have been noticed, the frequency can be reduced to once per year.

Design Guidelines*:* The vegetated swale should consider channel cover at the time of concentration as well as several years after construction.

Design computations should state the assumed channel of vegetation and provide the basis for the Manning's or other roughness coefficient and for design.

Applicability*:* Canal Landing New Yard may have shallow swales along the yard perimeters as necessary to collect overflow from the Boatyard surface areas.



VEGETATED SWALE WITH HAY BALE CHECK DAM TO REDUCE VELOCITIES UNDER CONSTRUCTION



A WELL STABILIZED VEGETATED SWALE SHOWS LITTLE SIGNS OF EROSIVE VELOCITIES OR FLOWS. THIS SWALE ALSO FUNCTIONS AS A POND SPILLWAY

E. ROOF DRIPLINE FILTER

Preface: Similar to the vegetated soil filter, roof dripline filters control stormwater quality by capturing and retaining runoff within a stone reservoir and passing it through a filter bed comprised of a specific filter media. Once through the soil media, the runoff is collected in a perforated underdrain pipe and discharged downstream. The filter structure provides for the slow release of smaller storm events, minimizing stream channel erosion and cooling the discharge.

Inspection: A roof dripline filter must be inspected to ensure it is draining within 48 hours following a one inch storm or greater.

Maintenance: Debris must be removed from the reservoir stone. If the filter is not draining within 72 hours, the filter media shall be replaced.

Frequency: During the first year, the filter should be inspected semi-annually and following all major storm events. Thereafter, the filter should be inspected at least every 6 months. Debris and sediment buildup should be removed as needed.

F. FABCO MODEL 10080-2 STORMBASIN CARTRIDGE FILTER UNIT

Preface: The roof drain filter unit is intended to provide water quality treatment for runoff from the proposed roof surface prior to discharge into the municipal drainage system in Hancock Street Extension. Primary contaminants from the roof include bird waste, metals, dust, and related pollutants.

Inspection: The roof filter unit must be inspected to ensure proper function during rain events. Primary inspection goals include removal of debris, leaves, or related solids preventing filtering and water pass thru or blocking the internal overflow.

Maintenance: If the filter is not draining within 24 hours, the filter media shall be replaced in accordance with the manufacturer's instructions. Debris must be removed from the filter unit. With all debris removed from the StormBasin the filter cartridge(s) will be exposed at the bottom. To remove the cartridge(s) reach down into the basin and firmly grasp the plastic outer rim of the cartridge body just below the foam, twist the cartridge body counter-clock-wise about ¼ turn until it stops, and lift the cartridge straight up to remove. Insert the new StormBasin cartridge down through the hole in the base of the unit. The colored ring on the cartridge should be facing upwards. Push the cartridge all the way through the hole until it rests on the bottom. Slowly turn the cartridge in a clock-wise direction until the tabs align with the slots and the cartridge body drops about ¼' further down. Once the tabs fall through the slots, continue turning firmly in a clock-wise direction until the tabs contact the STOPS. The cartridge is now installed.

Frequency: During the first year, the unit should be inspected quarterly and following all major storm events. Thereafter, the unit should be inspected at least every 6 months. Debris and sediment buildup should be removed as needed in accordance with manufacturer's recommendations. The filter cartridges shall be replaced on an annual basis. Cartridges can be sourced from Fabco Industries, Inc., phone 631-393-6024, 66 Central Avenue Farmingdale, NH 11735.

G. BOAT YARD SURFACE

To protect the infiltrative/pervious surface, it is recommended the prepared boatyard surface be re-graded at mid winter and spring (or as needed).

Maintenance: The maintenance crew may from time to time need to remove the stone surface and remove accumulated sediment in specific areas.

H. LITTER

Litter should be removed as a matter of course by workers and a part of the grounds maintenance contract.

I. SUMMARY CHECKLIST

The above described inspection and maintenance items have been summarized on a checklist attached hereto as Attachment C.

IV. PROGRAM ADMINISTRATION

A. GENERAL

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities.

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs, or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. RECORD KEEPING

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of

such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Attachment B.

C. CONTRACT SERVICES

In some instances or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

ATTACHMENT A

Sample Inspection Logs

CANAL LANDING NEW YARD
PORTLAND, ME

INFILTRATIVE/PERVIOUS
BOATYARD SURFACE
ANNUAL INSPECTION & MAINTENANCE LOG

FACILITY:		**YEAR:**	
LOCATION:		**CONTRACTOR:**	
FUNCTION:		**INSPECTOR:**	
DATE OF INSPECTION:			
ITEM IDENTIFICATION	**DESCRIPTION OF CONDITIONS**	**MAINTENANCE ACCOMPLISHED**	**DATE OF MAINTENANCE**
GENERAL COMMENTS:			

ATTACHMENT B

Permits for Project

(To be Added at a Subsequent Time)

ATTACHMENT C

Summary Checklist
Inspection and Maintenance

Stormwater Management System
Maintenance Program
Summary Checklist

Item	Commentary	Frequency				
		Monthly	Quarterly	Semi-Annual	Annual	Long Term
Drainage Structures	Inspect outlet control to assure it maintains its hydraulic characteristics. Inspect inlets for blockage.		X			
Stormwater Inlets in Series	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.	X			X Clearing	
Tributary Drainage	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Vegetated Swales	Swales should be inspected for erosion and sedimentation		X (until vegetation established)		X	
Infiltration Systems/Roof drip edges	Observation of the infiltration area and a determination of its performance				X	
Boat Yard Surface	Observe area for clogging and repair surface as needed including regrading/shaping of surface.	X				
Roof Drain Filters	Inspect systems to verify adequate functioning and capacity. Dispose of filters that have reached useful life in accordance with the manufacturer's recommendations. Replace filters as required.	X				
Litter	Litter should be removed daily.					

UTILITY CAPACITY LETTERS

CENTRAL MAINE POWER

June 26, 2018

Stantec
C/O Mr. Steve Bushey
482 Payne Road
Scarborough, Maine 04074-8929

RE: Canal Landing, West Commercial Street, Building E

Dear Mr. Bushey,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a SAP Work Request Order so we may provide an actual cost.

If you have any questions please feel free to call me at 828-2882.

Sincerely,

Paul DuPerre

Paul DuPerre
Energy Service Specialist

162 Canco Road, Portland, ME 04103
Telephone 800.750.4000, Fax 207.791.1026
cmpco.com

IBERDROLA USA

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Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

October 30, 2018

Stephen Bushey, P.E.
Stantec
482 Payne Road Scarborough Court
Scarborough ME 04074-8929 US

Re: 40 West Commercial Street, PO (Bldg E)
Ability to Serve with PWD Water

Dear Mr. Bushey:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on October 1, 2018. Based on the information provided per plans dated June 26, 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 service line at this site may be used to provide fire and domestic water to the building. Our records show that the property is currently served with an 8-inch fire and domestic water service. An approved backflow prevention device (RPZ on domestic service, Testable DCVA on fire service) must be installed on the service line at the service entrance prior to service activation. Please refer to the PWD website for more information on cross-connection control policies. If any use other than that stated is expected, please contact the District so we can review the ability of the existing service to meet your water needs.
- Please note that PWD's Terms and Conditions require that a service to one parcel cannot serve another parcel. If in the future this parcel is subdivided, a separate service will be required.

Existing Site Service

According to District records, the project site does currently have existing water service. An 8-inch diameter ductile iron fire and 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 16-inch diameter cast iron water main in West Commercial Street and a public fire hydrant located approximately 50 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 103 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

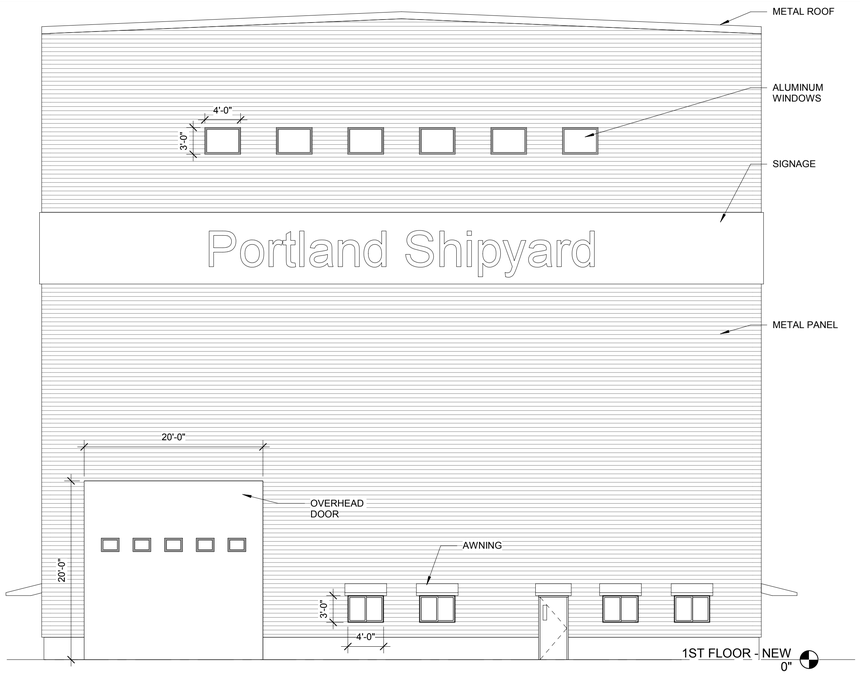
If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

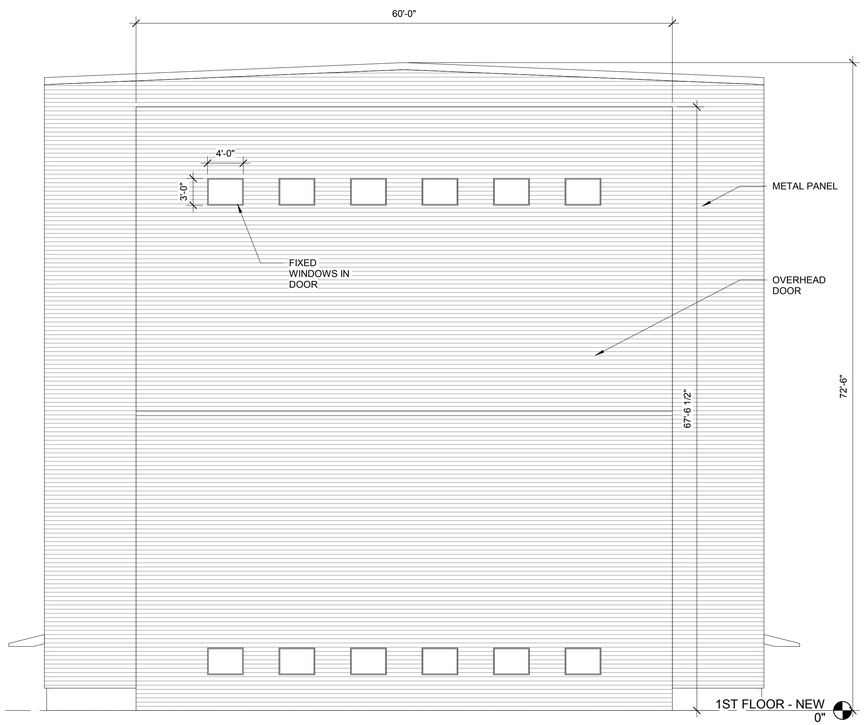
ARCHITECTURAL RENDERINGS



1 NORTH ELEVATION
1/8" = 1'-0"



2 EAST ELEVATION
1/8" = 1'-0"



3 SOUTH ELEVATION
1/8" = 1'-0"



4 WEST ELEVATION
1/8" = 1'-0"

Prepared For:
NEW YARD LLC

Consultant:

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

Project:
CANAL LANDING
BUILDING E

Revisions:

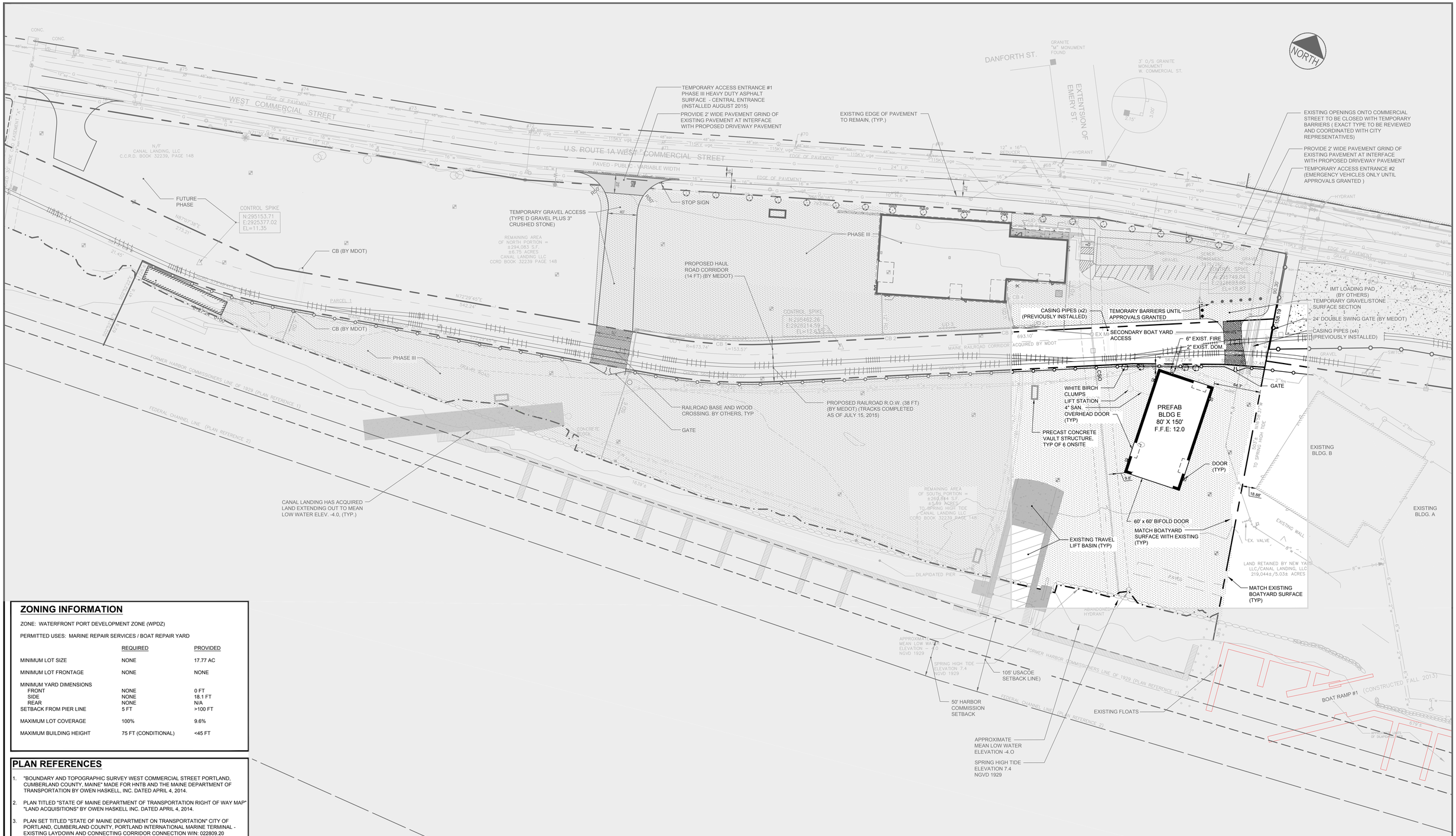
Scale:
1/8" = 1'-0"

Date:
NOV. 13, 2018

BUILDING ELEVATIONS

A2.01


Portland Shipyard



ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	NONE
MINIMUM YARD DIMENSIONS		
FRONT	NONE	0 FT
SIDE	NONE	18.1 FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	>100 FT
MAXIMUM LOT COVERAGE	100%	9.6%
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	<45 FT

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING (PHASE III)
- PREPARED PERVIOUS SURFACE FOR VESSEL DISPLAY, STORAGE AND MAINTENANCE
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- OPTIONAL CONCRETE PAD (TO BE DETERMINED BY APPLICANT)

GENERAL NOTE:

1. THE PLACEMENT OF A FLOWABLE FILL CAP OVER THE CSO LINE WOULD BE PROVIDED AS A PROTECTIVE MEASURE TO HELP DISTRIBUTE EQUIPMENT LOADS OVER THE UNDERLYING PIPE BELOW ONLY IN THE EVENT THAT THE CITY REQUESTS IT OR OTHER EVIDENCE OF DEFICIENT PIPE LOADING CAPACITY IS DISCOVERED.
2. PREFAB BUILDINGS ARE CURRENTLY ONSITE. EACH WILL BE RETROFITTED TO INCLUDE POWER CONTROLS AND RELATED EQUIPMENT, WATER SUPPLY (YEAR ROUND AND/OR SEASONAL) AND OTHER SERVICES AS DETERMINED BY OWNER. WORK SHALL INCLUDE POSITIONING OF THESE BUILDINGS ON CRUSHED STONE BASE AND ALL UTILITY INSTALLATIONS.

NOTES

1. THE OWNER SHALL BE RESPONSIBLE TO REMOVE PROPOSED STRUCTURES I.E. STAIRS, RAMPS, ETC. WITHIN THE PROPOSED 30' WIDE EASEMENT OVER THE CSO LINE IN THE EVENT THAT THE CITY MUST HAVE ACCESS FOR MAINTENANCE AND REPAIRS TO THE PIPE.

REV	DATE	DESCRIPTION
8	11.13.18	RESUBMITTED TO CITY - FINAL PLAN
7	06.26.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
6	03.09.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
5	12.07.17	REVISED FOR RESUBMISSION TO HARBOR COMMISSION
4	10.26.17	REVISED FOR DEP NRPAA AMENDMENT SUBMISSION
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/13/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

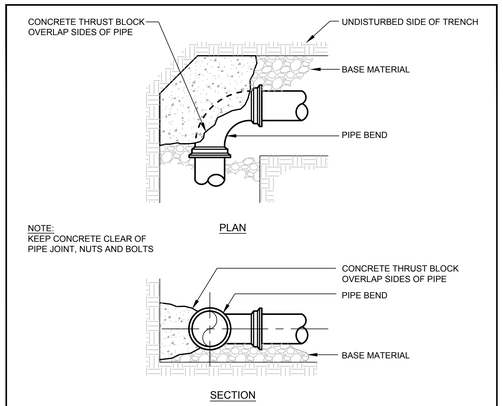
PROJECT
CANAL LANDING AMENDED SITE PLAN

SHEET TITLE
BUILDING E SITE LAYOUT PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-SITE LAYOUT		
SHEET	C-2.1		



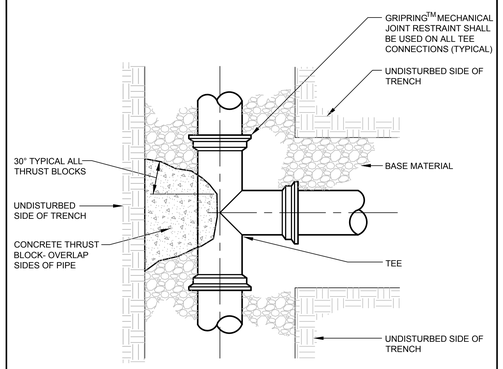
THRUST/RETAINER GLAND SCHEDULE		
¼ BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING™ MECHANICAL JOINT RESTRAINT
⅛ BEND	(45°)	THRUST BLOCK W/ GRIPRING™
1/16 BEND	(22 ½°)	THRUST BLOCK W/ GRIPRING™
1/32 BEND	(11 ¼°)	THRUST BLOCK W/ GRIPRING™

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

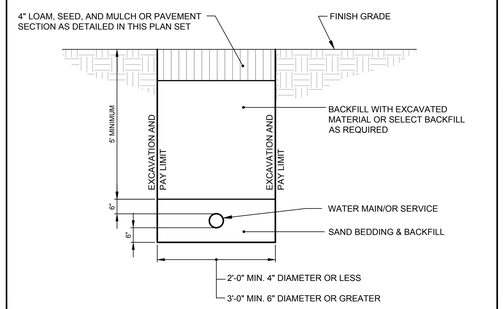
NOTES:

1. THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
2. REFER TO SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
3. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS & BOLTS TO BE STAINLESS STEEL.
4. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.

A TYPICAL THRUST BLOCK PLACEMENT ON BENDS DETAIL
N.T.S.

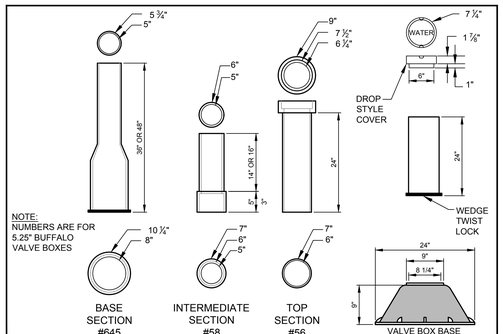


C TYPICAL THRUST BLOCK PLACEMENT ON TEES DETAIL
N.T.S.



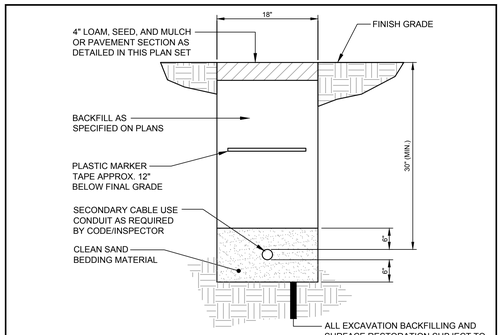
SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

F WATER SERVICE TRENCH SECTION
N.T.S.

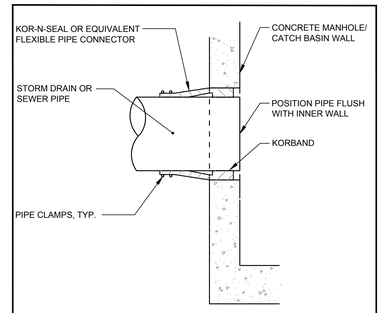


SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

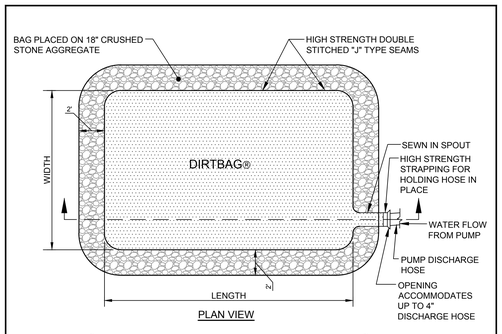
G TYPICAL VALVE BOXES DETAIL
N.T.S.



I SECONDARY ELECTRICAL TRENCH DETAIL
N.T.S.



K PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURES
N.T.S.



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

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF FROM THE SITE TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE **DIRTBAGS** REFERRED TO IN THIS NARRATIVE:

OVERVIEW:

THE PROJECT WILL USE SHALLOW SWALES AS SEDIMENTATION BASINS DURING CONSTRUCTION. HOWEVER, IT IS RECOGNIZED THAT WEATHER CONDITIONS ARE NOT ALWAYS PREDICTABLE; THERE MAY BE EXCEPTIONAL PERIODS WHEN CONSTRUCTION ACTIVITY RESULTS IN HIGHLY TURBID WATER WHICH IS NOT CONSIDERED DESIRABLE TO DISCHARGE TO THE SWALES, OR LIMITED ACTIVITY IS REQUIRED THAT MAY NOT BE EASILY ACCOMMODATED BY THE SWALES. TRADITIONALLY, MEDEP PERMITS HAVE HAD A STANDARD CONDITION WHICH STATES:

"THE APPLICANT SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE THAT ITS ACTIVITIES OR THOSE OF ITS AGENTS DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS ON THE SITE DURING THE CONSTRUCTION AND OPERATION OF THE PROJECT COVERED BY THIS APPROVAL."

THESE SPECIFICATIONS HAVE BEEN DEVELOPED FOR THE PURPOSE OF ADDRESSING CONSTRUCTION-DEWATERING ACTIVITIES WITH THE CONTINGENCY THAT UNPREDICTABLE WEATHER CAN CREATE. THE SPECIFICATION IS INTENDED TO "SHARE THE RISK" BETWEEN THE CONTRACTOR AND OWNER. IT IS ANTICIPATED THAT THIS METHOD WILL ALLOW THE BASE BID FOR THE PROJECT TO HAVE A REDUCED BUILT-IN CONTINGENCY COST FOR CERTAIN WEATHER-RELATED FACTORS.

THIS SPECIFICATION IS NOT INTENDED TO DIMINISH THE RECOGNIZED AND POTENTIAL AID OF THE PROPOSED SEDIMENT SWALES TO ACT AS THE PRIMARY DEVICE TO CAPTURE AND RETAIN SUSPENDED SEDIMENT. THIS BENEFIT IS A PRINCIPAL REASON WHY THE CONSTRUCTION OF THE SWALES EARLY IN THE PROJECT IS SO IMPORTANT.

ACCEPTABLE METHODS OF DISCHARGING CONSTRUCTION SITE RUNOFF:

DEWATERING OF THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED USING ONE OF THE FOLLOWING MEASURES:

· THE DIRECTION OF THE RUNOFF TO SEDIMENTATION SWALES BY SHEET FLOW.

· THE PUMPING OF DIRTBAGS WITH A DISCHARGE TO THE SWALES OR MUNICIPAL DRAINAGE SYSTEM.

· THE PUMPING OF CONSTRUCTION SITE WATER AND COLLECTED RUNOFF TO A **DIRTBAG** (PATENTED PRODUCT BY ACF ENVIRONMENTAL PRODUCTS) WITH RELEASE THROUGH A VEGETATED BUFFER AT LEAST 50 FEET UPGRADIENT OF SHOREFRONT.

REQUIREMENTS FOR DIRTBAGS:

THE SITE CONTRACTOR SHALL INCLUDE THE PRICE OF INSTALLING, OPERATING, AND REMOVAL AND DISPOSAL OF FOUR **DIRTBAG 55'S** AS PART OF THE BASE BID. A UNIT PRICE SHALL BE PROVIDED FOR ADDITIONAL **DIRTBAGS.**

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE **DIRTBAG** ACTIVE OR READY FOR USE. THE **DIRTBAGS** SHALL BE FIELD LOCATED BY THE CONTRACTOR BUT ARE NOT TO BE INSTALLED IN ANY **"CRITICAL"** AREA. (THE SITE CRITICAL AREAS ARE SHOWN ON THE EROSION-SEDIMENT CONTROL PLAN.) THE **DIRTBAG** SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 600X, AND 18 INCHES OF ¾ INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE **DIRTBAG** BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE **DIRTBAG** SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

CONSTRUCTION DEWATERING OPERATIONS:

ALL CONSTRUCTION-DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE **DIRTBAG**, THE SELECTION OF THE USE OF THE **DIRTBAG** OR THE SEDIMENTATION BASIN FOR DIRECTING DEWATERING, EXCEPT THAT THE OWNER MAY DIRECT THE SITE CONTRACTOR TO ALTER THE SELECTED OPERATION IF TURBID DISCHARGE TO THE WATER FRONT IS OBSERVED.

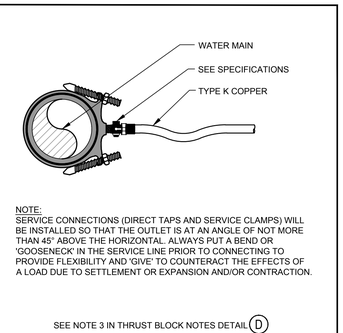
WINTER OPERATIONS:

IN THE EVENT THAT WINTER OPERATIONS ARE REQUIRED, THE CONTRACTOR SHALL "POLY", ENCLOSE, AND PROVIDE TEMPORARY HEAT TO PREVENT THE **DIRTBAG** FROM SUBSTANTIAL FREEZING.

RECORD KEEPING

THE WEEKLY EROSION-SEDIMENT CONTROL REPORTS PREPARED IN ACCORDANCE WITH THE MAINE CONSTRUCTION GENERAL PERMIT SHALL MAINTAIN A LOG OF THE LOCATION, USE, AND REMOVAL OF **DIRTBAGS.** IN THE EVENT THAT THE STONE UNDER THE **DIRTBAG** BECOMES HIGHLY CONTAMINATED WITH FINES, THE NEXT **DIRTBAG** SHALL BE INSTALLED IN A DIFFERENT LOCATION.

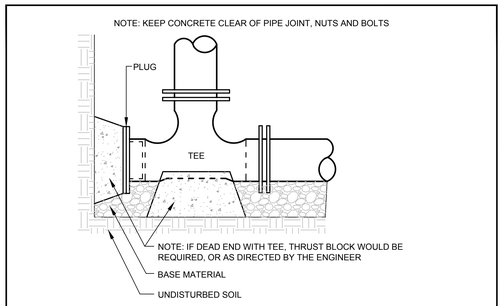
J DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.



NOTE:
SERVICE CONNECTIONS (DIRECT TAPS AND SERVICE CLAMPS) WILL BE INSTALLED SO THAT THE OUTLET IS AT AN ANGLE OF NOT MORE THAN 45° ABOVE THE HORIZONTAL. ALWAYS PUT A BEND OR 'GOOSENECK' IN THE SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND 'GIVE' TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

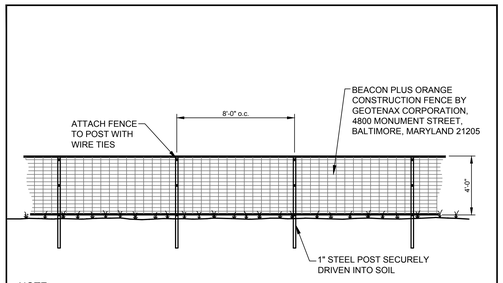
L WATER SERVICE DETAIL
N.T.S.



USE GRIPRINGS™ AT ALL RESTRAINED JOINTS

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

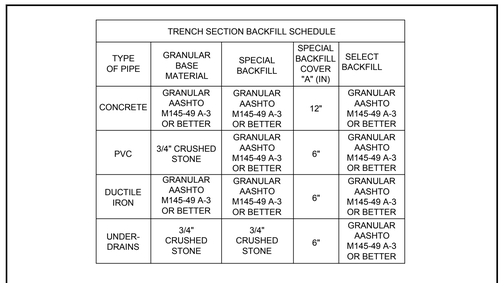
B STANDARD TEE BLOCKING DETAIL
N.T.S.



NOTE:
THE CONTRACTOR IS CAUTIONED THAT THE SITE CONTAINS UNDERGROUND POWER AND GAS FACILITIES AND THAT ALL POST LOCATIONS SHALL BE REVIEWED AND APPROVED BY THE SERVING UTILITY COMPANIES PRIOR TO INSTALLATION. ALL COORDINATION EFFORTS SHALL BE AT NO EXTRA EXPENSE TO THE OWNER.

D ORANGE CONSTRUCTION FENCE
N.T.S.

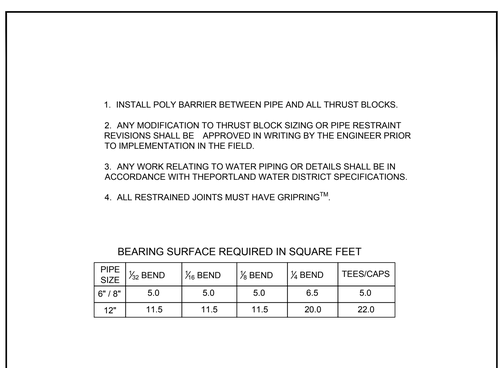
TRENCH SECTION BACKFILL SCHEDULE				
TYPE OF PIPE	GRANULAR BASE MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER "A" (IN)	SELECT BACKFILL
CONCRETE	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	12"	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
UNDER-DRAINS	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER



NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. WHERE APPLICABLE, SERVICES TO BE SIMILAR EXCEPT MINIMUM PAY WIDTH IS 2 1/2 FT.

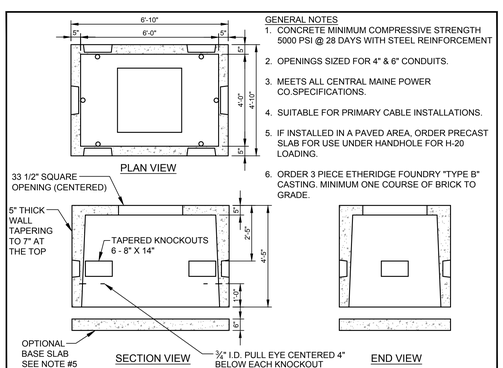
H TYPICAL UTILITY PIPE TRENCH SECTION DETAIL
N.T.S.



BEARING SURFACE REQUIRED IN SQUARE FEET

PIPE SIZE	½ BEND	⅛ BEND	⅛ BEND	¼ BEND	TEES/CAPS
6" / 8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

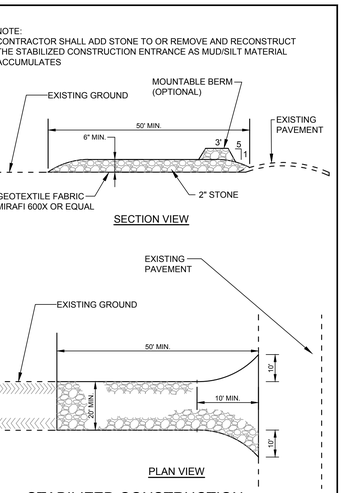
C THRUST BLOCK NOTES
N.T.S.



GENERAL NOTES

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 5000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT
2. OPENINGS SIZED FOR 4" & 6" CONDUITS.
3. MEETS ALL CENTRAL MAINE POWER CO.SPECIFICATIONS.
4. SUITABLE FOR PRIMARY CABLE INSTALLATIONS.
5. IF INSTALLED IN A PAVED AREA, ORDER PRECAST SLAB FOR USE UNDER HANDHOLE FOR H-20 LOADING.
6. ORDER 3 PIECE ETHERIDGE FOUNDRY "TYPE 8" CASTING. MINIMUM ONE COURSE OF BRICK TO GRADE.

E SPLICE BOX DETAIL
N.T.S.



M STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.

REV	DATE	DESCRIPTION
1	11.13.18	RESUBMITTED TO CITY - FINAL PLAN

REVISIONS

STATE OF MAINE — STEPHEN B. BUSHEY — 11/13/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
PHASE IV DETAILS

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	AS SHOWN
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-DET		
SHEET	C-3.0		


Portland Shipyard


Portland Shipyard




Portland Shipyard

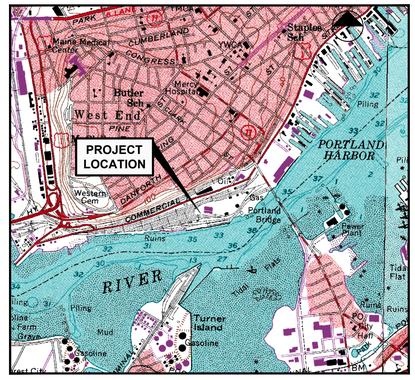
SITE DEVELOPMENT PLANS
FOR
CANAL LANDING
NEW YARD EXPANSION - PHASE IV
(FOR CONSTRUCTION OF BUILDING E)
PORTLAND, MAINE
PERMIT DOCUMENTS
JUNE 2018

PROJECT PARCEL SITE			
ZONING: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)			
PORTLAND TAX ASSESSOR'S MAP AND LOT NUMBERS			
MAP	BLOCK	LOTS	OWNER
59	A	1, 2, 5, 6, 7,8, 9, 10, 11	MAINE DEPARTMENT OF TRANSPORTATION
59	A	3, 4	NEW YARD LLC
60	F	1,2,3, 4	CANAL LANDING, LLC
71	F	2,4,5,6	CANAL LANDING, LLC

OWNER / APPLICANT:
CANAL LANDING, LLC
101 WEST COMMERCIAL STREET
PORTLAND, ME 04101
ATTN: PHINEAS SPRAGUE, JR
CCRD BOOK 32239, PAGE 148

REFERENCE PLANS:
1. STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP "LAND ACQUISITIONS" BY OWEN HASKELL, INC. DATED APRIL 2014. D.O.T. FILE No. 3-595.
2. "BOUNDARY AND TOPOGRAPHIC SURVEY - WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB & THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014. D.O.T. FILE NO. 3-595.
3. "LAND ON WEST COMMERCIAL STREET, PORTLAND, MAINE MAINE CENTRAL RAILROAD, CO. TO CANAL LANDING LLC" BY OWEN HASKELL, INC. DATED APRIL 29,2015.

NOTES
1. IN ACCORDANCE WITH A SETTLEMENT AGREEMENT THE MAINE DEPARTMENT OF TRANSPORTATION ACQUIRED BY EMINENT DOMAIN TAKING APPROXIMATELY 17.9 ACRES OF LAND FORMERLY CONTROLLED BY NEW YARD, LLC AND AS DEPICTED ON SITE DEVELOPMENT PLANS ORIGINALLY APPROVED AND SUBSEQUENTLY AMENDED AND LAST APPROVED ON OCTOBER 22, 2013.
2. SEE DEVELOPMENT PLANS FOR PORTLAND INTERNATIONAL MARINE TERMINAL BY HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION FOR INFORMATION RELATED TO IMT EXPANSION AND SITE DEVELOPMENT ACTIVITY.
3. THE AMENDED DRAWINGS AS INDICATED IN THE INDEX BELOW ARE INTENDED TO SUPERCEDE THE APPROVED PLANS DATED 09.20.2013. PREVIOUSLY APPROVED SHEETS, NOT OTHERWISE CONTAINED IN THIS SUBMISSION WILL CONTINUE TO APPLY.



LOCATION MAP
N.T.S.

INDEX

C-1.0 COVER SHEET
C-1.1 GENERAL NOTES AND LEGEND
C-1.2 EXISTING CONDITIONS PLAN
C-2.1 BUILDING E SITE LAYOUT PLAN

UTILITIES
WATER
ATTN: ROBERT BARTELLS
PORTLAND WATER DISTRICT
225 DOUGLAS STREET
P.O. BOX 3533
PORTLAND, MAINE 04104
207.761.8310

SEWER
ATTN:BRAD ROLAND, P.E.
CITY OF PORTLAND
PUBLIC SERVICES ENGINEERING DEPT.
55 PORTLAND STREET
PORTLAND, MAINE 04102
207.874.8840

POWER
ATTN: JAMIE COUGH
CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
207.828.2882

TELEPHONE
ATTN: SCOTT DERRIG
FAIRPOINT COMMUNICATIONS
ONE DAVIS FARM ROAD
PORTLAND, MAINE 04103
207.797.1842

CABLE
ATTN: MARK PELLETIER
TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE 04102
877.546.0962

NATURAL GAS
ATTN:SCOTT CARPENTER
UNITIL / FORMERLY NORTHERN UTILITIES
1075 FOREST AVENEUE
PORTLAND, ME 04103
207.541.2505

CALL BEFORE YOU DIG:
1.888.DIGSAFE (1.888.344.7233)
DIG SAFE MAINE

PERMITS / APPROVALS
LOCAL	GOVERNING BODY	STATUS
SITE PLAN, SHORELAND ZONING AND SUBDIVISION REVIEW CONDITIONAL USE PERMIT	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8699 CONTACT: BARBARA BARHYDT	PRELIMINARY PLAN SUBMISSION 08.21.12 FINAL PLAN APPROVED 12.18.12 AMENDED SITE PLAN SUBMISSION 08.27.13 AMENDED SITE PLAN APPLICATION FOR PHASE 1B 10.22.13 AMENDED SITE PLAN APPLICATION FILED 06.27.14 (APPROVED 08.12.14) PRELIMINARY PHASE III AMENDED SITE PLAN APPLICATION FILED 06.15.15 FINAL PHASE III AMENDED SITE PLAN APPLICATION FILED 09.04.15 LEVEL III / PHASE III APPROVED 01.2018 LEVEL II / PHASE II APPROVED 02.27.2017
BUILDING AND DEMOLITION PERMITS	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8703	TO BE FILED PRIOR TO CONSTRUCTION BY CONTRACTOR
STREET OPENING PERMIT	CITY OF PORTLAND PUBLIC SERVICES DIVISION 55 PORTLAND STREET PORTLAND, MAINE 04101 207.874.8801	TO BE FILED PRIOR TO CONSTRUCTION BY CONTRACTOR
PORTLAND HARBOR COMMISSIONER REVIEW	BOARD OF HARBOR COMMISSIONER 2 PORTLAND FISH PIER (SUITE 105) MARINE TRADE CENTER PORTLAND, MAINE 04101 207.772.8121 CONTACT: KEVIN BATTLE	APPROVED 01.10.13 AMENDED APPLICATION AND HCR PENDING AS OF 08.24.15 APPROVED 12.14.17
STATE	**GOVERNING BODY**	**STATUS**
SITE LOCATION OF DEVELOPMENT	CITY OF PORTLAND PLANNING AUTHORITY DELEGATED REVIEW AUTHORITY CITY HALL, 389 CONGRESS STREET 207.874.8699 CONTACT: BARBARA BARHYDT	FILED UNDER CITY OF PORTLAND DELEGATED REVIEW
NATURAL RESOURCES PROTECTION ACT (NRPA) / MAINE CONSTRUCTION GENERAL PERMIT	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 312 CANCO ROAD PORTLAND, MAINE 04103 207.822.6300 CONTACT: ALISON SIROIS	FILED NOVEMBER 2012 APPROVED PERMIT ORDER #L-25823-4E-A-N AMENDED APPLICATION MeDEP SUBMITTED 10.20.17 LAST APPROVED PERMIT ORDER #L-25823-4E-D-N 02.16.2018 #L-25823-TW-E-N #L-25823-2F-F-N
SUBMERGED LANDS LEASE	DEPARTMENT OF CONSERVATION BUREAU OF PARKS AND LANDS 22 STATE HOUSE STATION AUGUSTA, MAINE 04333 CONTACT: CAROL DIBELLO	FILED NOVEMBER 2012 APPROVED 03.01.13 FOR ORIGINAL PHASEI/II SHOREFRONT ACTIVITIES PHASE III APPLICATION SUBMISSION 10.20.17/APPROVED MARCH 1, 2018
TRAFFIC MOVEMENT PERMIT	CITY OF PORTLAND (DELEGATED AUTHORITY) CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8703	ISSUED JANUARY 27, 2016
FEDERAL	**GOVERNING BODY**	**STATUS**
U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT	U.S. ARMY CORPS OF ENGINEERS RR2 BOX 1855 MANCHESTER, MAINE 04351 207.623.8367 CONTACT: JAY CLEMENT	FILED NOVEMBER 2012 APPROVED PERMIT ORDER #NAE-2012-02469 FOR ORIGINAL PHASEI/II SHOREFRONT ACTIVITIES TRAVEL LIFT & BASIN APPROVED DECEMBER 20, 2017 (NAE-2012-02469-MOD)

CONSULTANT LIST

CIVIL ENGINEER:
Stantec
482 PAYNE ROAD SCARBOROUGH COURT
SCARBOROUGH, MAINE 04074
207.883.3355
ATTN: STEVE BUSHEY
STEPHEN.BUSHEY@STANTEC.COM

SURVEYOR:
Owen Haskell, Inc
390 U.S. ROUTE 1, UNIT 10
FALMOUTH, ME 04105
207.774.0424
ATTN: JOHN SWAN, P.L.S.
www.owenhaskell.com

GEOTECHNICAL:
S.W. Cole Engineering, Inc
286 PORTLAND ROAD
GRAY, ME 04039
207.657.2866
ATTN: TIM BOYCE, P.E.
www.swcole.com

ENVIRONMENTAL:
Credere Associates, LLC
776 MAIN STREET
WESTBROOK, ME 04092
207.828.1272
ATTN: RIP PATTEN
www.crederellc.com

STRUCTURAL:
Gagnon Engineering, Inc.
10 SOLOMON DRIVE
GORHAM, ME 04038
207.839.8085
ATTN: ROGER GAGNON, P.E.

ATTORNEY:
Murray, Plumb & Murray
P.O. BOX 9785
PORTLAND, ME 04104
207.773.5651
ATTN: MICHAEL TRAISTER
www.mpmlaw.com

ELECTRICAL DESIGN:
Bartlett Design
942 WASHINGTON STREET
BATH, ME 04530
207.443.5447
ATTN: LARRY BARTLETT

CONSTRUCTION MANAGER:
KEELEY CONSTRUCTION Co., Inc.
P.O. BOX 1074
PORTLAND, ME 04104
207.885.0035
ATTN: JAMES KEELEY
www.keeleycrane.com

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

ALL PERMITS ARE ANTICIPATED TO HAVE CONDITIONS ATTENDANT WITH THEIR APPROVAL. THE CONTRACTOR SHALL REVIEW ALL PERMITS AND THE CONDITIONS ATTENDANT WITH APPROVALS PRIOR TO THE START OF THE WORK. UNLESS OTHERWISE STIPULATED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR IS REQUIRED TO COMPLY AND FULFILL ALL CONDITIONS OF APPROVAL.

REV	DATE	DESCRIPTION
7	06.26.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
6	03.09.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
5	12.07.17	REVISED FOR RESUBMISSION TO HARBOR COMMISSION
4	10.26.17	REVISED FOR DEP NRPAA AMENDMENT SUBMISSION
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 06/26/18 — LICENSED PROFESSIONAL ENGINEER
P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT: CANAL LANDING AMENDED SITE PLAN
SHEET TITLE: PHASE IV COVER SHEET
CLIENT: CANAL LANDING LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	AS NOTED
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-COV		
SHEET	C-1.0		

NORTH

DRIVEWAY #3
(UNDER CONSTRUCTION
JUNE 2018)

WEST COMMERCIAL STREET

U.S. ROUTE 1A WEST COMMERCIAL STREET

PAVED - PUBLIC - VARIABLE WIDTH

DANFORTH ST.

GRANITE "M" MONUMENT FOUND

EXTENTSION OF EMERY ST.

3' O/S GRANITE MONUMENT W. COMMERCIAL ST.

B2b ZONE

WPDZ ZONE

EXISTING PINE TREES TO REMAIN
EXISTING BIRCH TREES TO REMAIN

EXISTING BIRCH CLUMP TO REMAIN

EXISTING PAVED APRON

GRAVEL DRIVEWAY

EXISTING RELOCATED TRACK LOCATION (COMPLETED JULY 2015)

REMAINING AREA OF NORTH PORTION = ±294,083 S.F. ±6.75 ACRES CANAL LANDING LLC CCRD BOOK 32239 PAGE 148

FUTURE PAVING - PART OF BUILDING C/D PROJECT

BLDG. C
180'x110'
19,800 S.F.
F.F.E. 16.0
(TO BE CONSTRUCTED)

BLDG. D
80'x60'
4,800 S.F.
(TO BE CONSTRUCTED)

24" BRICK STORM WATER OVERFLOW INV. = ~1.4

20' x 120' SHELL STORAGE BLDG. (RUBB STYLE) (NOT YET INSTALLED JUNE 2018)

EXISTING PIER/FLOATS

BOAT RAMP #2 (UNDER CONSTRUCTION JUNE 2018)

CONCRETE DOCK

GRAVEL ROAD

REMAINING AREA OF SOUTH PORTION = ±260,844 S.F. ±5.99 ACRES TO SPRING HIGH TIDE CANAL LANDING LLC CCRD BOOK 32239 PAGE 148

2" FORCEMAIN

EXISTING TRAVEL LIFT BASIN (UNDER CONSTRUCTION JUNE 2018)

SPRING HIGH TIDE OR HIGH ANNUAL TIDE - ELEV. 7.4' (NGVD 1929)

105' USACOE SETBACK LINE

50' HARBOR COMMISSION LINE

PROPOSED FLOATS (NOT YET INSTALLED AS OF JUNE 2018)

EXISTING GRANITE REVETMENT WALL

EXISTING DILAPIDATED PIERS TO BE REMOVED

APPROXIMATE MEAN LOW WATER ELEVATION -4.0

SPRING HIGH TIDE ELEVATION 7.4 NGVD 1929

EXISTING CSO OUTFALL

EXISTING FLOATS (INSTALLED SUMMER 2014)

BOAT RAMP #1

IMT LOADING SLAB (UNDER CONSTRUCTION AUGUST 2018)

BUILDING B (COMPLETED WINTER 2014/2015)

GAS METERS

UTILITY EASEMENT FROM PORTLAND TERMINAL COMPANY TO CANAL LANDING, LLC

TO SPRING HIGH TIDE

FEDERAL CHANNEL LINE

FORMER HARBOR COMMISSIONERS LINE OF 1929 (PLAN REFERENCE 1)

FEDERAL CHANNEL LINE (PLAN REFERENCE 2)

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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REVISIONS

STATE OF MAINE
STEPHEN R. BUSHEY
06/26/18
LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

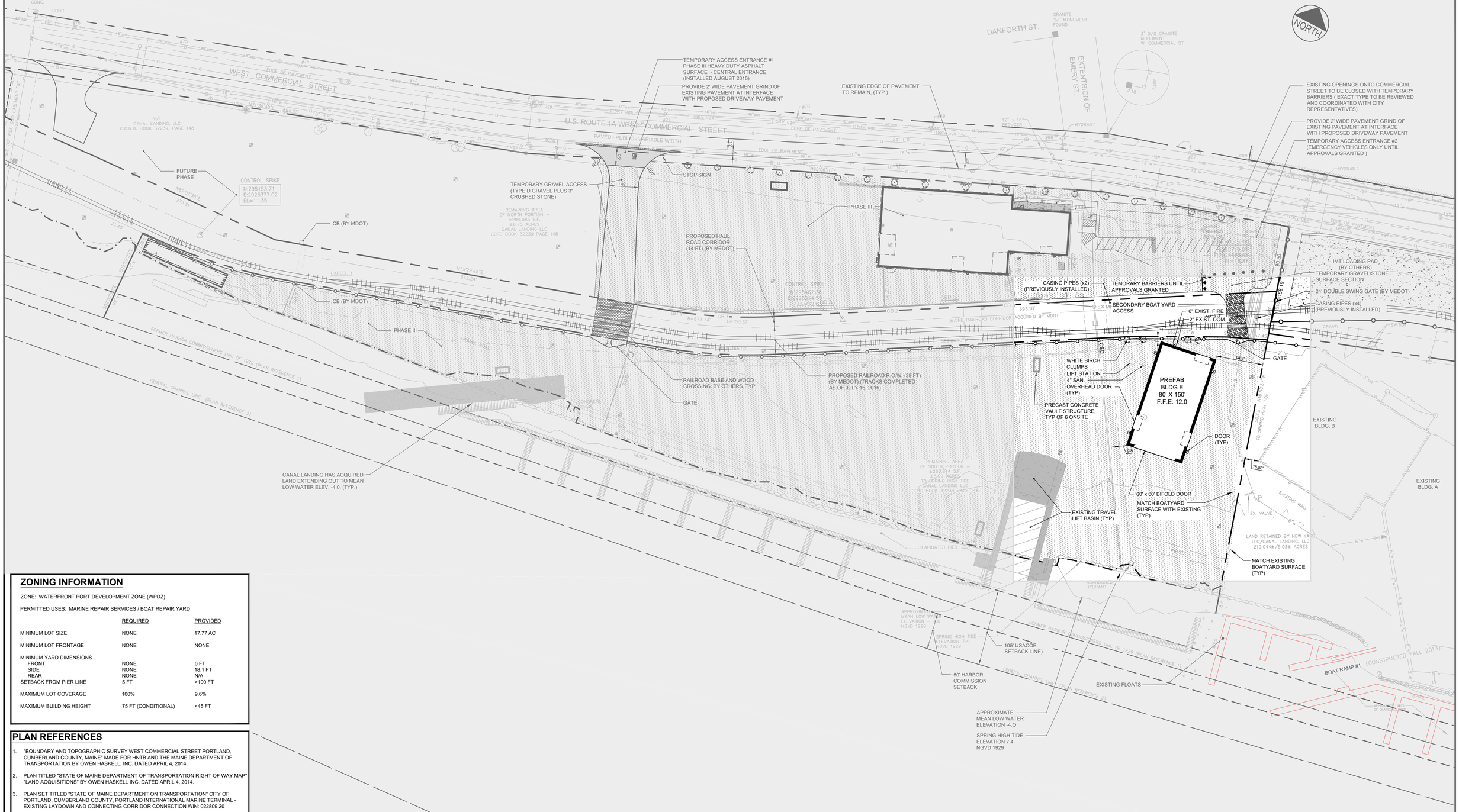
SHEET TITLE
PHASE IV EXISTING CONDITIONS PLAN

CLIENT
CANAL LANDING LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04 - EXISTING CONDITIONS		
SHEET	C-1.2		

V:\1953\active\195350129\Cadd\Permit Set\dwg\PHASE IV\3091.04-EXISTING CONDITIONS.dwg cddube 7/5/2018 3:01 PM



ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	NONE
MINIMUM YARD DIMENSIONS		
FRONT	NONE	0 FT
SIDE	NONE	18.1 FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	>100 FT
MAXIMUM LOT COVERAGE	100%	9.6%
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	<45 FT

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
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4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING (PHASE III)
- PREPARED PERVIOUS SURFACE FOR VESSEL DISPLAY, STORAGE AND MAINTENANCE
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- OPTIONAL CONCRETE PAD (TO BE DETERMINED BY APPLICANT)

GENERAL NOTE:

1. THE PLACEMENT OF A FLOWABLE FILL CAP OVER THE CSO LINE WOULD BE PROVIDED AS A PROTECTIVE MEASURE TO HELP DISTRIBUTE EQUIPMENT LOADS OVER THE UNDERLYING PIPE BELOW ONLY IN THE EVENT THAT THE CITY REQUESTS IT OR OTHER EVIDENCE OF DEFICIENT PIPE LOADING CAPACITY IS DISCOVERED.
2. PREFAB BUILDINGS ARE CURRENTLY ONSITE. EACH WILL BE RETROFITTED TO INCLUDE POWER CONTROLS AND RELATED EQUIPMENT, WATER SUPPLY (YEAR ROUND AND/OR SEASONAL) AND OTHER SERVICES AS DETERMINED BY OWNER. WORK SHALL INCLUDE POSITIONING OF THESE BUILDINGS ON CRUSHED STONE BASE AND ALL UTILITY INSTALLATIONS.

NOTES

1. THE OWNER SHALL BE RESPONSIBLE TO REMOVE PROPOSED STRUCTURES I.E. STAIRS, RAMPS, ETC. WITHIN THE PROPOSED 30' WIDE EASEMENT OVER THE CSO LINE IN THE EVENT THAT THE CITY MUST HAVE ACCESS FOR MAINTENANCE AND REPAIRS TO THE PIPE.

REV	DATE	DESCRIPTION
8	11.13.18	RESUBMITTED TO CITY - FINAL PLAN
7	06.26.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
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REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/13/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
BUILDING E
SITE LAYOUT PLAN

CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-SITE LAYOUT		
SHEET	C-2.1		

GENERAL NOTES

1. IN ADDITION TO THESE PLANS AND NOTES, THE CONTRACTOR SHALL REFER TO THE PROJECT MANUAL OR MOST CURRENT MDOT SPECIFICATIONS FOR CONSTRUCTION SPECIFICATIONS AND BIDDING PROCEDURES.

2. THIS PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE U.S DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.

3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCE, PAVING, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS. ENTRANCES IN MOST LOCATIONS REQUIRE STRUCTURAL SLABS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR INFORMATION ON THE STRUCTURAL SLAB ENTRANCES.

4. ALL REQUIRED AND NECESSARY INSPECTIONS AND OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSIONS AND THE FINAL SERVICE CONNECTIONS.

5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT ITS SOLE COST.

6. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE APPLICANT 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, THEIR REPRESENTATIVES, OR THE CITY, AT NO ADDITIONAL COST TO THE OWNER.

7. 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.

8. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SHALL APPLY AT NO EXTRA COST TO THE OWNER.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS THROUGHOUT THE PROJECT AND PROVIDING THE OWNER WITH A SET OF ELECTRONIC FINAL RECORD DRAWINGS WHEN THE PROJECT IS COMPLETE.

10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES INCLUDING NGL-NE SITE AND MDOT MAINTENANCE BUILDING AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN SAFE VEHICLE AND PEDESTRIAN ACCESS THROUGH OUT THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACT OR CHANGES TO SITE ACCESS CONDITIONS.

11. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMANCE OF WORK IN ACCORDANCE WITH ALL AREMA SAFETY STANDARDS AND SHALL COOPERATE FULLY WITH REPRESENTATIVES OF PAN AM RAILWAYS, MDOT, AND UNITIL AS MAY BE REQUIRED.

PERMITTING NOTES

1. THIS PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF A MAINE DEP NATURAL RESOURCES PROTECTION ACT PERMIT AS AMENDED FOR ACTIVITIES WITHIN 75' OF THE RIVER, WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS.

2. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE AMENDED 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.

3. THE PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE PORTLAND HARBOR COMMISSION APPROVAL AS AMENDED WHICH WILL BE MADE PART OF THE CONTRACT BID DOCUMENTS.

4. THE CONTRACTOR SHALL REVIEW THE ABOVE-REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

5. THE PROJECT CONSTRUCTION IS SUBJECT TO ALL REQUIREMENTS OF THE VOLUNTARY RESPONSE ACTION PLAN AS PREPARED BY AMEC ON BEHALF OF UNITIL FOR THE NORTHERN UTILITIES PROPERTIES. CREDERE ASSOCIATES IS RESPONSIBLE FOR ENVIRONMENTAL CONSULTATION FOR NEW YARD, LLC AND WILL BE PREPARING ENVIRONMENTAL REPORTS RELATED TO THE PAN AM PROPERTIES FOLLOWING THE PROPERTY TRANSFER AND APPROVED BY THE MAINE DEP. SEE SEPARATE DOCUMENTS PREPARED BY CREDERE ASSOCIATES WHICH ARE TO BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.

SITE LAYOUT NOTES

1. BITUMINOUS CONCRETE CURB, SLIPFORM CONCRETE CURB AND GRANITE CURB SHALL MEET THE REQUIREMENTS OF MDOT 702.001, 703.07 AND 609.04.

2. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR THE FACE OF THE BUILDING.

3. EXCEPT WHERE INDICATED OTHERWISE, THE PAVEMENT IS TO BE HEAVY DUTY PAVEMENT.

4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & STANDARDS OF THE MAINE DEPARTMENT OF TRANSPORTATION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITIONS AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

GRADING & DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N = 0.012 OR LESS.

2. AN "AS-BUILT" CERTIFICATION AND PLANS OF THE STORMWATER DRAINAGE SYSTEM IS REQUIRED PRIOR TO THE OWNER ACCEPTING ANY BUILDINGS AND PROPERTY. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ANY DEVIATION FROM THE PLANS MAY DELAY THE ACCEPTANCE OF THE PROJECT, WITH CONTRACTOR RESPONSIBLE FOR ANY ASSOCIATED COSTS.

3. A DETAILED O&M MANUAL FOR STORMWATER MANAGEMENT SYSTEMS IS (WILL BE) FILED WITH THE CITY OF PORTLAND DURING THE PERMIT REVIEW PROCESS. A SPECIFIC MANUAL HAS BEEN PREPARED FOR O&M OF THE DRAINAGE SYSTEM.

4. SEE EXISTING CONDITIONS FOR BENCHMARK INFORMATION.

5. SEE GRADING, DRAINAGE AND EROSION/SEDIMENT CONTROL FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.

6. ALL DISTURBED AREAS NOT TO BE PAVED, GRAVELED, SODDED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.

7. COMPACTION REQUIREMENTS:

LOCATION	MINIMUM COMPACTION*
SUBBASE AND BASE GRAVEL BELOW PAVED OR CONCRETE AREAS	95%
SUBGRADE FILL BELOW PAVED AREAS	90%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%
STRUCTURAL FILL WITHIN PROPOSED BUILDING AREA	95%
SELECT FILL ADJACENT BUILDING FOUNDATIONS, EXTERIOR FOUNDATIONS AND WITHIN 8 INCHES OF THE SLAB-ON-GRADE	95%

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM-D-1557.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

9. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXIT RAMPS ADJACENT TO THE BUILDING AND ALONG NEW CURBED AREAS.

10. PROVIDE STABILIZATION OR SEPARATION GEOTEXTILE FABRIC OVER UNSTABLE SOILS AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND IN ACCORDANCE WITH THE FINAL GEOTECHNICAL RECOMMENDATIONS.

11. NATIVE SOILS RANGE FROM GRANULAR TO CLAYEY AND SILTY. CARE MUST BE EXERCISED TO LIMIT DISTURBANCE OF THE BEARING SOILS. THE NATIVE CLAYEY OR SILTY SOILS SHOULD NOT BE PROOF-ROLLED. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

LOCAL APPROVALS, WAIVERS AND VARIANCES

THE CONSTRUCTION PLANS ARE TO BE SUBMITTED TO THE CITY OF PORTLAND FOR THEIR REVIEW, APPROVAL AND RECORDS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

PENDING SITE PLAN CONDITIONS OF APPROVAL

STANDARD CONDITIONS OF APPROVAL

1. DEVELOP SITE ACCORDING TO PLAN: THE SITE SHALL BE DEVELOPED AND MAINTAINED AS DEPICTED ON THE SITE PLAN AND IN THE WRITTEN SUBMISSION OF THE APPLICANT. MODIFICATION OF ANY APPROVED SITE PLAN OR ALTERATION OF A PARCEL WHICH WAS THE SUBJECT OF SITE PLAN APPROVAL AFTER MAY 20, 1974, SHALL REQUIRE THE PRIOR APPROVAL OF A REVISED SITE PLAN BY THE PLANNING BOARD OR PLANNING AUTHORITY PURSUANT TO THE TERMS OF CHAPTER 14, LAND USE, OF THE PORTLAND CITY CODE.

2. SEPARATE BUILDING PERMITS ARE REQUIRED: THIS APPROVAL DOES NOT CONSTITUTE APPROVAL OF BUILDING PLANS, WHICH MUST BE REVIEWED AND APPROVED BY THE CITY OF PORTLAND'S INSPECTION DIVISION.

3. SITE PLAN EXPIRATION: THE SITE PLAN APPROVAL WILL BE DEEMED TO HAVE EXPIRED UNLESS WORK HAS COMMENCED WITHIN ONE (1) YEAR OF THE APPROVAL OR WITHIN A TIME PERIOD UP TO THREE (3) YEARS FROM THE APPROVAL DATE AS AGREED UPON IN WRITING BY THE CITY AND THE APPLICANT. REQUESTS TO EXTEND APPROVALS MUST BE RECEIVED BEFORE THE ONE (1) YEAR EXPIRATION DATE.

4. PERFORMANCE GUARANTEE AND INSPECTION FEES: A PERFORMANCE GUARANTEE COVERING THE SITE IMPROVEMENTS, INSPECTION FEE PAYMENT OF 2.0% OF THE GUARANTEE AMOUNT AND SEVEN (7) FINAL SETS OF PLANS MUST BE SUBMITTED TO AND APPROVED BY THE PLANNING DIVISION AND PUBLIC SERVICES DEPARTMENT PRIOR TO THE RELEASE OF A BUILDING PERMIT, STREET OPENING PERMIT OR CERTIFICATE OF OCCUPANCY FOR SITE PLANS. IF YOU NEED TO MAKE ANY MODIFICATIONS TO THE APPROVED PLANS, YOU MUST SUBMIT A REVISED SITE PLAN APPLICATION FOR STAFF REVIEW AND APPROVAL.

5. DEFECT GUARANTEE: A DEFECT GUARANTEE, CONSISTING OF 10% OF THE PERFORMANCE GUARANTEE, MUST BE POSTED BEFORE THE PERFORMANCE GUARANTEE WILL BE RELEASED.

6. PRECONSTRUCTION MEETING: PRIOR TO THE RELEASE OF A BUILDING PERMIT OR SITE CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE. THIS MEETING WILL BE HELD WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC SERVICE'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE DEVELOPMENT REVIEW COORDINATOR WILL CONFIRM THAT THE CONTRACTOR IS WORKING FROM THE APPROVED SITE PLAN. THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRE-CONSTRUCTION MEETING (IF APPLICABLE).

7. DEPARTMENT OF PUBLIC SERVICES PERMITS: IF WORK WILL OCCUR WITHIN THE PUBLIC RIGHT-OF-WAY SUCH AS UTILITIES, CURB, SIDEWALK AND DRIVEWAY CONSTRUCTION, A STREET OPENING PERMIT(S) IS REQUIRED FOR YOUR SITE. PLEASE CONTACT CAROL MERRITT AT 874-8300, EXT. 8828. (ONLY EXCAVATORS LICENSED BY THE CITY OF PORTLAND ARE ELIGIBLE.)

8. AS-BUILT FINAL PLANS: FINAL SETS OF AS-BUILT PLANS SHALL BE SUBMITTED DIGITALLY TO THE PLANNING DIVISION, ON A CD OR DVD, IN AUTOCAD FORMAT (*.DWG), RELEASE AUTOCAD 2005 OR GREATER.

9. STORMWATER MANAGEMENT: THAT THE DEVELOPER/ CONTRACTOR/ SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT & EROSION CONTROL PLAN BASED ON CITY STANDARDS AND STATE GUIDELINES; THAT THE OWNER/OPERATOR OF THE APPROVED STORMWATER MANAGEMENT SYSTEM AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS; AND THAT A MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM, AS ATTACHED, OR IN SUBSTANTIALLY THE SAME FORM WITH ANY CHANGES TO BE APPROVED BY CORPORATION COUNSEL, SHALL BE SUBMITTED AND SIGNED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY WITH A COPY TO THE DEPARTMENT OF PUBLIC SERVICES.

PENDING WAIVERS (SUBJECT TO AMENDED SITE PLAN REVIEW)

UTILITY NOTES

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED AND CONSTRUCTED BY THE SITE CONTRACTOR TO WITHIN 5 FEET OF THE BUILDINGS, AT A LOCATION COORDINATED WITH THE MEP CONTRACTOR(S) AND THE BUILDING PLANS. SITE WORK WITHIN 5 FEET OF UNDERSLAB UTILITIES SHALL CONSIST OF TRENCHING AND BACKFILLING. ACTUAL UTILITY INSTALLATION SHALL BE BY THE MEP CONTRACTOR. ALL REQUIRED CONNECTION FEES SHALL BE PAID BY THE GENERAL CONTRACTOR.

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. ALL SANITARY SEWER WORK SHALL MEET THE STANDARDS OF THE MAINE STATE PLUMBING CODE AND CITY OF PORTLAND PUBLIC SERVICES DIVISION. CONNECTIONS TO THE 42" SAN. SEWER AND 24" CSO LINE SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF PORTLAND PUBLIC SERVICES DIVISION RECOMMENDATIONS AND REGULATIONS.

4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, CONDUIT AND BACKFILLING ASSOCIATED WITH UNDERGROUND POWER, COMMUNICATIONS AND CABLE.

5. COORDINATE ALL OTHER UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY WORK SHALL CONFORM TO THE STANDARDS OF THE UTILITY COMPANY AND PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT, AT NO EXTRA EXPENSE TO THE OWNER.

6. THE LOCATIONS OF THE NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE SERVING UTILITY COMPANY, PROJECT ARCHITECTS AND MEP DESIGNERS.

7. UNDERGROUND ELECTRICAL, CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO CENTRAL MAINE POWER STANDARDS AND PROJECT SPECIFICATIONS, WHICH EVER IS MORE STRINGENT. THE EXISTING 115KV TRANSMISSION LINE SHALL BE MARKED/FLAGGED AND PROTECTED DURING CONSTRUCTION. WORK ADJACENT TO THE UNE SHALL BE MONITORED BY CENTRAL MAINE POWER.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OR WORK TO FINISH GRADE.

9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

10. 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.

11. 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.

12. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.

13. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION AND PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOB SITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER AND AFFECTED BUSINESSES.

14. REMOVAL AND RELOCATION OF THE EXISTING GAS RELATED FACILITIES SHALL BE COORDINATED WITH UNITIL AND THEIR ASSIGNS. CONTRACTOR TO COORDINATE WITH UNITIL'S CONTRACTOR FOR RELOCATION OF THE 8" GAS LINE AND INSTALLATION OF VAULT (SEE UTILITY PLAN FOR LOCATION).

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES, CLEARING AND GRADING LIMITS SHALL BE STAKED BY THE CONTRACTOR BASED ON THE LIMITS OF GRADING SHOWN ON THE DRAWINGS AND ACCEPTED BY THE OWNER'S REPRESENTATIVE IN THE FIELD. AFTER THE CLEARING AND GRADING LIMITS HAVE BEEN ACCEPTED, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES, SEDIMENT BARRIERS AND THE CONSTRUCTION ENTRANCES ASSOCIATED WITH THE PROJECT.

2. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCHED AS SOON AS POSSIBLE. TEMPORARY/PERMANENT SEED MIXTURES SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL PROJECT PREPARED FOR THIS PROJECT.

3. PRIOR TO PAVING OR GRAVEL PLACEMENT, THE CONTRACTOR SHALL REMOVE SILT FROM ALL STORM LINES AND APPURTANCES.

4. ALL STORM DRAIN INLETS AND OUTLETS NOT IN PAVED AREAS ARE TO RECEIVE RIPRAP PROTECTION APRONS DURING CONSTRUCTION.

5. SILT BARIRIERS SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES SHOWN ON THE EROSION CONTROL DETAIL SHEET.

6. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCES AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT FUNCTIONS TO CAPTURE MUD FROM THE TIRES OF CONSTRUCTION VEHICLES DURING CONSTRUCTION. THE PURPOSE OF THE CONSTRUCTION ENTRANCE IS TO KEEP ADJACENT STREETS CLEAR OF DIRT AND MUD. SWEEPING OF THE ROADWAYS SHALL BE PERFORMED BY THE CONTRACTOR ON AN AS NEEDED BASIS, BUT AT A MINIMUM ONCE A WEEK.

7. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO TOPSOIL FOR USE IN LANDSCAPING OPERATIONS.

8. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE WHICH CAUSE THE LEAST PRACTICAL UNPROTECTED DENUDED AREAS ON THE SITE DURING CONSTRUCTION.

9. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS MAY RESULT IN MONETARY PENALTIES AS ENFORCED BY THE MEDEP OR LOCAL AGENCIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.

10. A FULL EROSION/SEDIMENTATION CONTROL PLAN ACCOMPANIES THIS DRAWING SET AND IS ALSO CONTAINED IN THE DIV 312513 SPECIFICATIONS.

11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AS SHOWN AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.

12. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAIN STORM OF 0.25 INCHES OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE FILTER EFFICIENCY. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 OF THE STRUCTURE HEIGHT.

13. INSTALL CURLEX EROSION CONTROL MAT OR EQUAL ON ALL SLOPES STEEPER THAN 4:1. TURF REINFORCEMENT (NORTH AMERICAN GREEN OR EQUAL) SHALL BE USED ON SLOPES STEPPER THAN 3:1 IF NOT CALLED OUT FOR RIPRAP STABILIZATION.

14. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES, CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003".

ZONING INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD

CONDITIONAL USE PERMIT: MARINE RETAIL

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	17.77 AC
MINIMUM LOT FRONTAGE	NONE	<1,910 FT
MINIMUM YARD DIMENSIONS		
FRONT	NONE	FT
SIDE	NONE	FT
REAR	NONE	N/A
SETBACK FROM PIER LINE	5 FT	FT
MAXIMUM LOT COVERAGE	100%	<20 %
MAXIMUM BUILDING HEIGHT	75 FT (CONDITIONAL)	72'-0" (BUILDING E)

EXISTING	PROPOSED
IRON PIPE OR ROD FND	BARRIER FREE SYMBOL
MONUMENT FOUND	SIGN
GAS VALVE	SIGN LABEL
WATER VALVE	GUIDERAIL - METAL
HYDRANT	GUIDERAIL - TIMBER
UTILITY POLE	FENCE - CHAINLINK
LIGHT POLE	FENCE - WOOD
COMMUNICATION MANHOLE	BUILDING / BUILDING ACCESS
DRAINAGE MANHOLE	RETAINING WALL
ELECTRIC MANHOLE	PEDESTRIAN CROSSWALK
SEWER MANHOLE	BOLLARD
CATCH BASIN	VERTICAL GRANITE CURB
SIGN	SLOPED GRANITE CURB
FENCE	CATCH BASIN
EDGE OF PAVEMENT	CONTOUR LABEL
CURB	DRAIN MANHOLE
OVERHEAD WIRES	RIPRAP INLET APRON
UNDERGROUND ELECTRIC	RIPRAP OUTLET APRON
TELEPHONE	SLOPE DESIGNATION
WATER LINE	SPOT GRADE
GAS LINE	SPOT GRADE AT CURB (TC = TOP / BC = BOTTOM)
SANITARY SEWER	WATER MARK
STORM DRAIN	UNDERDRAIN
1' CONTOUR	STORM DRAIN
MONITORING WELL	TREE LINE OR LIMIT OF CLEARING
ELEVATIONS DERIVED FROM SOUNDING ON PLAN REF. 7	CURB STOP
ELEVATIONS DERIVED FROM	HYDRANT
TREE	LIGHT POLE WITH FIXTURE(S)
BUILDING	JERSEY BARRIER
RAIL TRACKS	SANITARY SEWER MANHOLE
RIPRAP	TEST PIT
	TRANSFORMER PAD
	UTILITY POLE
	VALVE
	SANITARY SEWER
	WATER MAIN
	GAS MAIN
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	RAIL TRACKS
	STONE BASE AT RAILROAD CROSSING
	TIMBERS AT RAILROAD CROSSING
	CONCRETE
	BOATYARD SURFACE

REV	DATE	DESCRIPTION
7	06.26.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
6	03.09.18	SUBMITTED PHASE IV - LEVEL III SITE PLAN APPLICATION
5	12.07.17	REVISED FOR RESUBMISSION TO HARBOR COMMISSION
4	10.26.17	REVISED FOR DEP NRPAA AMENDMENT SUBMISSION
3	11.10.15	REVISED FINAL PLAN SUBMISSION
2	09.04.15	FINAL PLAN SUBMISSION TO CITY OF PORTLAND
1	06.15.15	PRELIMINARY PHASE III AMENDED SITE PLAN TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE · STEPHEN R. BUSHEY · 06/26/18 · LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

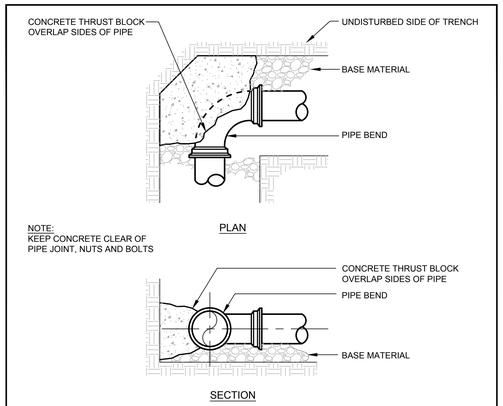
PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
PHASE IV GENERAL NOTES AND LEGEND

CLIENT
CANAL LANDING LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

DRAWN:	PBF	DATE:	OCTOBER 2017
DESIGNED:	SRB	SCALE:	N.T.S.
CHECKED:	SRB	JOB NO.	195350129
FILE NAME:	3091.04-GENERAL NOTES		
SHEET	C-1.1		



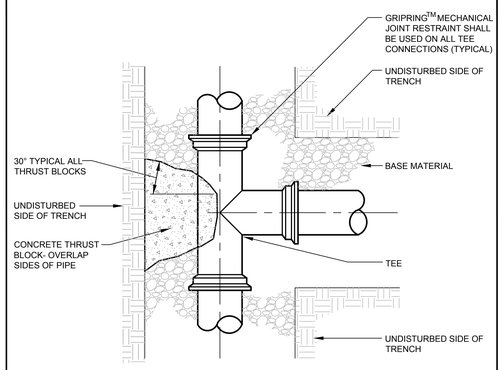
THRUST/RETAINER GLAND SCHEDULE		
¼ BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING™ MECHANICAL JOINT RESTRAINT
⅛ BEND	(45°)	THRUST BLOCK W/ GRIPRING™
1/16 BEND	(22 ½°)	THRUST BLOCK W/ GRIPRING™
1/32 BEND	(11 ¼°)	THRUST BLOCK W/ GRIPRING™

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

NOTES:

1. THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
2. REFER TO SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
3. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS & BOLTS TO BE STAINLESS STEEL.
4. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.

A TYPICAL THRUST BLOCK PLACEMENT ON BENDS DETAIL
N.T.S.



C TYPICAL THRUST BLOCK PLACEMENT ON TEES DETAIL
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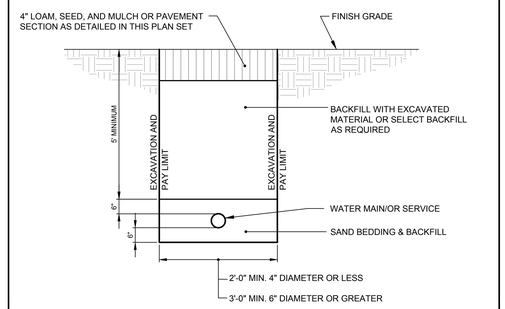

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

F WATER SERVICE TRENCH SECTION
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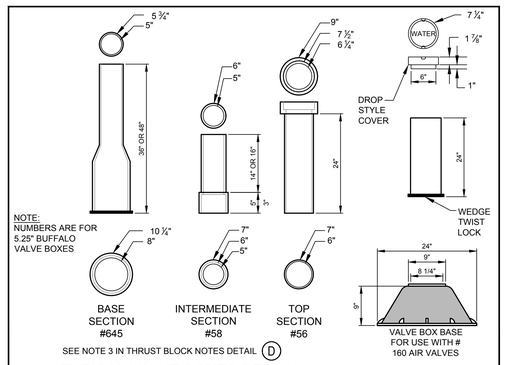
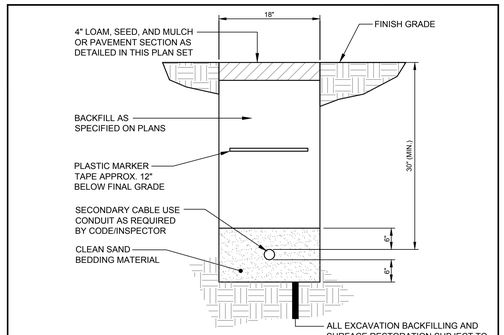


SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

G TYPICAL VALVE BOXES DETAIL
N.T.S.



I SECONDARY ELECTRICAL TRENCH DETAIL
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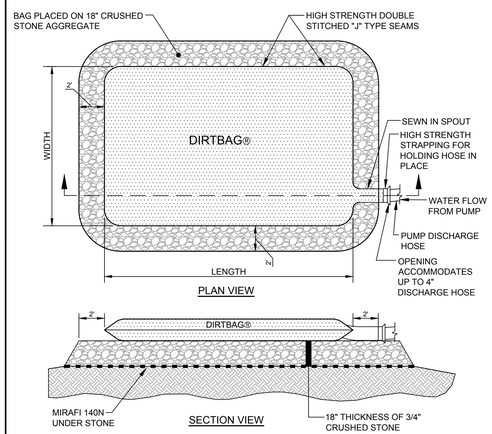


NOTE:
LOCATION OF DIRTBAGS TO BE SELECTED BY THE CONTRACTOR BUT SHALL NOT BE SITED IN THE CRITICAL AREAS.

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF FROM THE SITE TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE **DIRTBAGS** REFERRED TO IN THIS NARRATIVE.

OVERVIEW:

THE PROJECT WILL USE SHALLOW SWALES AS SEDIMENTATION BASINS DURING CONSTRUCTION. HOWEVER, IT IS RECOGNIZED THAT WEATHER CONDITIONS ARE NOT ALWAYS PREDICTABLE; THERE MAY BE EXCEPTIONAL PERIODS WHEN CONSTRUCTION ACTIVITY RESULTS IN HIGHLY TURBID WATER WHICH IS NOT CONSIDERED DESIRABLE TO DISCHARGE TO THE SWALES, OR LIMITED ACTIVITY IS REQUIRED THAT MAY NOT BE EASILY ACCOMMODATED BY THE SWALES. TRADITIONALLY, MEDEP PERMITS HAVE HAD A STANDARD CONDITION WHICH STATES:

"THE APPLICANT SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE THAT ITS ACTIVITIES OR THOSE OF ITS AGENTS DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS ON THE SITE DURING THE CONSTRUCTION AND OPERATION OF THE PROJECT COVERED BY THIS APPROVAL."

THESE SPECIFICATIONS HAVE BEEN DEVELOPED FOR THE PURPOSE OF ADDRESSING CONSTRUCTION-DEWATERING ACTIVITIES WITH THE CONTINGENCY THAT UNPREDICTABLE WEATHER CAN CREATE. THE SPECIFICATION IS INTENDED TO "SHARE THE RISK" BETWEEN THE CONTRACTOR AND OWNER. IT IS ANTICIPATED THAT THIS METHOD WILL ALLOW THE BASE BID FOR THE PROJECT TO HAVE A REDUCED BUILT-IN CONTINGENCY COST FOR CERTAIN WEATHER-RELATED FACTORS.

THIS SPECIFICATION IS NOT INTENDED TO DIMINISH THE RECOGNIZED AND POTENTIAL AID OF THE PROPOSED SEDIMENT SWALES TO ACT AS THE PRIMARY DEVICE TO CAPTURE AND RETAIN SUSPENDED SEDIMENT. THIS BENEFIT IS A PRINCIPAL REASON WHY THE CONSTRUCTION OF THE SWALES EARLY IN THE PROJECT IS SO IMPORTANT.

ACCEPTABLE METHODS OF DISCHARGING CONSTRUCTION SITE RUNOFF:

DEWATERING OF THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED USING ONE OF THE FOLLOWING MEASURES:

· THE DIRECTION OF THE RUNOFF TO SEDIMENTATION SWALES BY SHEET FLOW.

· THE PUMPING OF DIRTBAGS WITH A DISCHARGE TO THE SWALES OR MUNICIPAL DRAINAGE SYSTEM.

· THE PUMPING OF CONSTRUCTION SITE WATER AND COLLECTED RUNOFF TO A **DIRTBAG** (PATENTED PRODUCT BY ACF ENVIRONMENTAL PRODUCTS) WITH RELEASE THROUGH A VEGETATED BUFFER AT LEAST 50 FEET UPGRADIENT OF SHOREFRONT.

REQUIREMENTS FOR DIRTBAGS:

THE SITE CONTRACTOR SHALL INCLUDE THE PRICE OF INSTALLING, OPERATING, AND REMOVAL AND DISPOSAL OF FOUR **DIRTBAG 55'S** AS PART OF THE BASE BID. A UNIT PRICE SHALL BE PROVIDED FOR ADDITIONAL **DIRTBAGS.**

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE **DIRTBAG** ACTIVE OR READY FOR USE. THE **DIRTBAGS** SHALL BE FIELD LOCATED BY THE CONTRACTOR BUT ARE NOT TO BE INSTALLED IN ANY **"CRITICAL"** AREA. (THE SITE CRITICAL AREAS ARE SHOWN ON THE EROSION-SEDIMENT CONTROL PLAN.) THE **DIRTBAG** SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 600X, AND 18 INCHES OF ¾ INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE **DIRTBAG** BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE **DIRTBAG** SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

CONSTRUCTION DEWATERING OPERATIONS:

ALL CONSTRUCTION-DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE **DIRTBAG**, THE SELECTION OF THE USE OF THE **DIRTBAG** OR THE SEDIMENTATION BASIN FOR DIRECTING DEWATERING, EXCEPT THAT THE OWNER MAY DIRECT THE SITE CONTRACTOR TO ALTER THE SELECTED OPERATION IF TURBID DISCHARGE TO THE WATER FRONT IS OBSERVED.

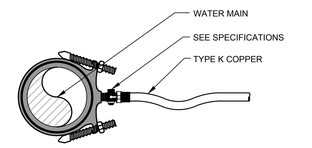
WINTER OPERATIONS:

IN THE EVENT THAT WINTER OPERATIONS ARE REQUIRED, THE CONTRACTOR SHALL "POLY", ENCLOSE, AND PROVIDE TEMPORARY HEAT TO PREVENT THE **DIRTBAG** FROM SUBSTANTIAL FREEZING.

RECORD KEEPING

THE WEEKLY EROSION-SEDIMENT CONTROL REPORTS PREPARED IN ACCORDANCE WITH THE MAINE CONSTRUCTION GENERAL PERMIT SHALL MAINTAIN A LOG OF THE LOCATION, USE, AND REMOVAL OF **DIRTBAGS.** IN THE EVENT THAT THE STONE UNDER THE **DIRTBAG** BECOMES HIGHLY CONTAMINATED WITH FINES, THE NEXT **DIRTBAG** SHALL BE INSTALLED IN A DIFFERENT LOCATION.

J DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.



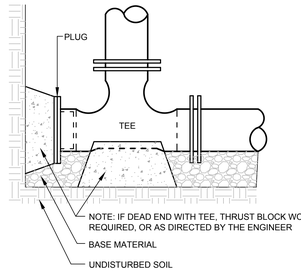
NOTE:
SERVICE CONNECTIONS (DIRECT TAPS AND SERVICE CLAMPS) WILL BE INSTALLED SO THAT THE OUTLET IS AT AN ANGLE OF NOT MORE THAN 45° ABOVE THE HORIZONTAL. ALWAYS PUT A BEND OR 'GOOSENECK' IN THE SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND 'GIVE' TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

L WATER SERVICE DETAIL
N.T.S.

PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURES
K N.T.S.

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



USE GRIPRINGS™ AT ALL RESTRAINED JOINTS

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

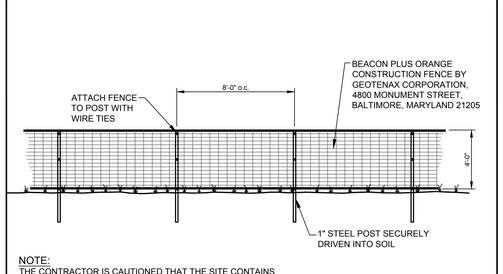
B STANDARD TEE BLOCKING DETAIL
N.T.S.

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THEPORTLAND WATER DISTRICT SPECIFICATIONS.
4. ALL RESTRAINED JOINTS MUST HAVE GRIPRING™.

BEARING SURFACE REQUIRED IN SQUARE FEET

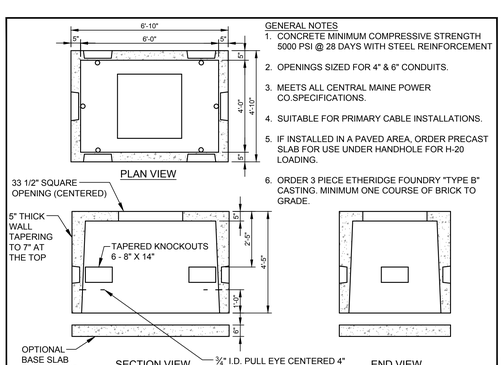
PIPE SIZE	½ BEND	⅛ BEND	1/16 BEND	¼ BEND	TEES/CAPS
6" / 8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

C THRUST BLOCK NOTES
N.T.S.



NOTE:
THE CONTRACTOR IS CAUTIONED THAT THE SITE CONTAINS UNDERGROUND POWER AND GAS FACILITIES AND THAT ALL POST LOCATIONS SHALL BE REVIEWED AND APPROVED BY THE SERVING UTILITY COMPANIES PRIOR TO INSTALLATION. ALL COORDINATION EFFORTS SHALL BE AT NO EXTRA EXPENSE TO THE OWNER.

D ORANGE CONSTRUCTION FENCE
N.T.S.

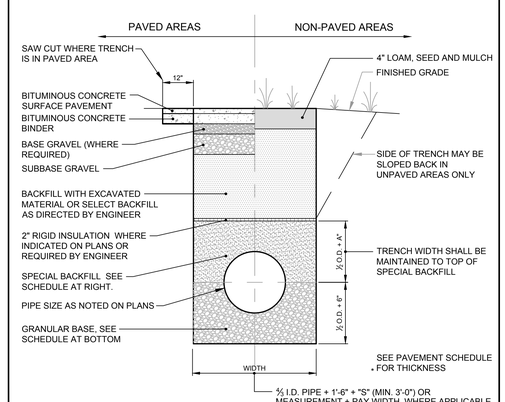


GENERAL NOTES

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 5000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT
2. OPENINGS SIZED FOR 4" & 6" CONDUITS.
3. MEETS ALL CENTRAL MAINE POWER CO.SPECIFICATIONS.
4. SUITABLE FOR PRIMARY CABLE INSTALLATIONS.
5. IF INSTALLED IN A PAVED AREA, ORDER PRECAST SLAB FOR USE UNDER HANDHOLE FOR H-20 LOADING.
6. ORDER 3 PIECE ETHERIDGE FOUNDRY "TYPE 8" CASTING. MINIMUM ONE COURSE OF BRICK TO GRADE.

E SPLICE BOX DETAIL
N.T.S.

TRENCH SECTION BACKFILL SCHEDULE				
TYPE OF PIPE	GRANULAR BASE MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER "A" (IN)	SELECT BACKFILL
CONCRETE	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	12"	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
UNDER-DRAINS	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER

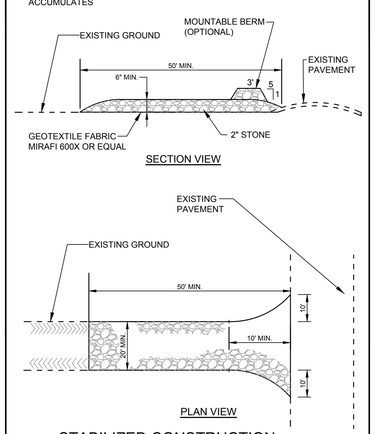


NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. WHERE APPLICABLE, SERVICES TO BE SIMILAR EXCEPT MINIMUM PAY WIDTH IS 2 1/2 FT.

H TYPICAL UTILITY PIPE TRENCH SECTION DETAIL
N.T.S.

NOTE:
CONTRACTOR SHALL ADD STONE TO OR REMOVE AND RECONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES



M STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.

REV	DATE	DESCRIPTION
1	11.13.18	RESUBMITTED TO CITY - FINAL PLAN

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 11/13/18 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

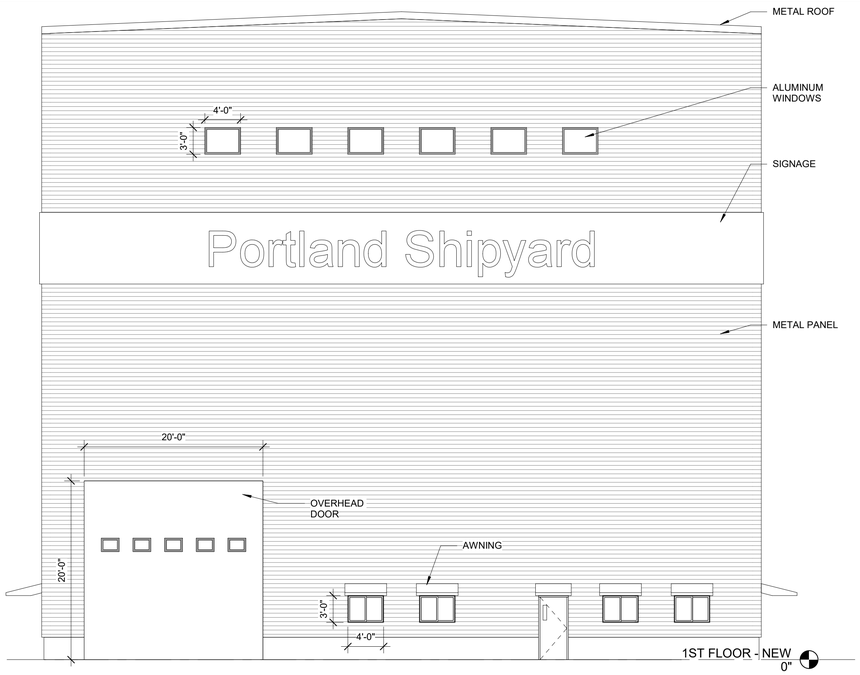
PROJECT
CANAL LANDING
AMENDED SITE PLAN

SHEET TITLE
PHASE IV DETAILS

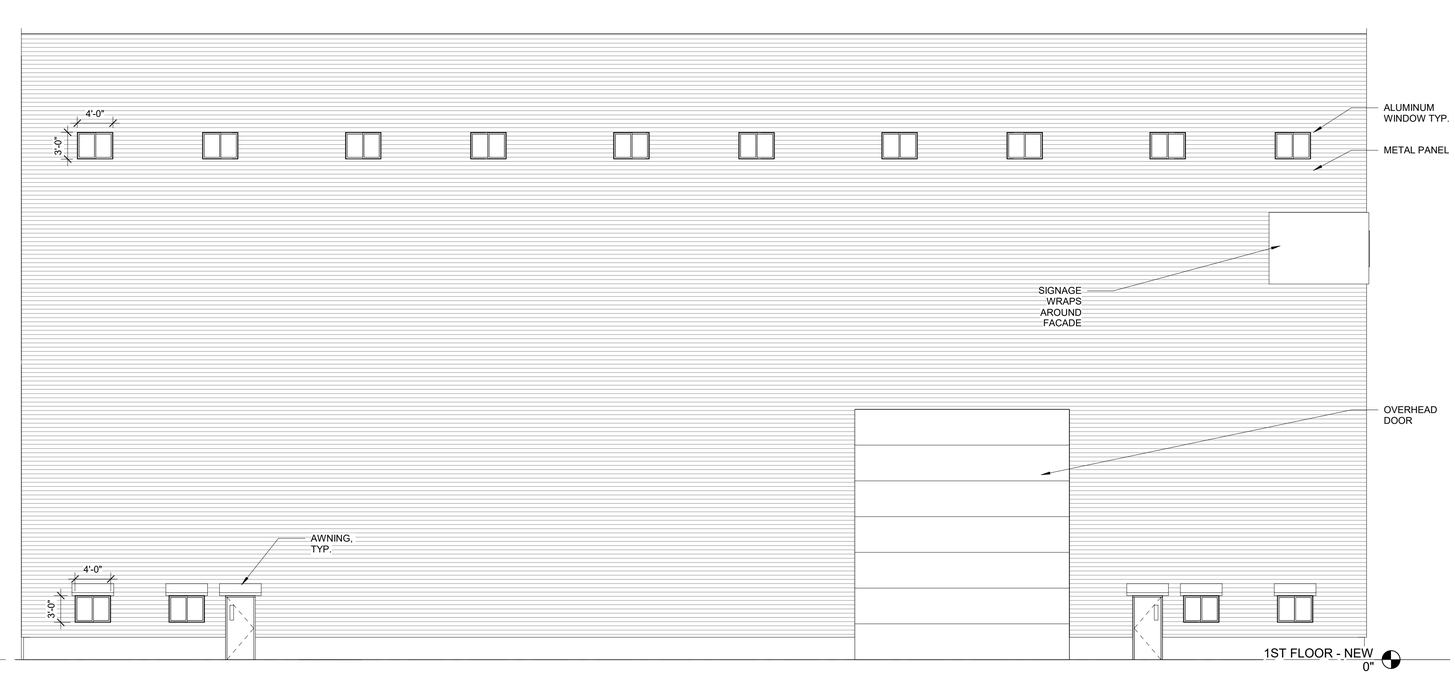
CLIENT
NEW YARD LLC
400 WEST COMMERCIAL STREET
PORTLAND, ME 04101

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, ME 04074
WWW.STANTEC.COM
Stantec

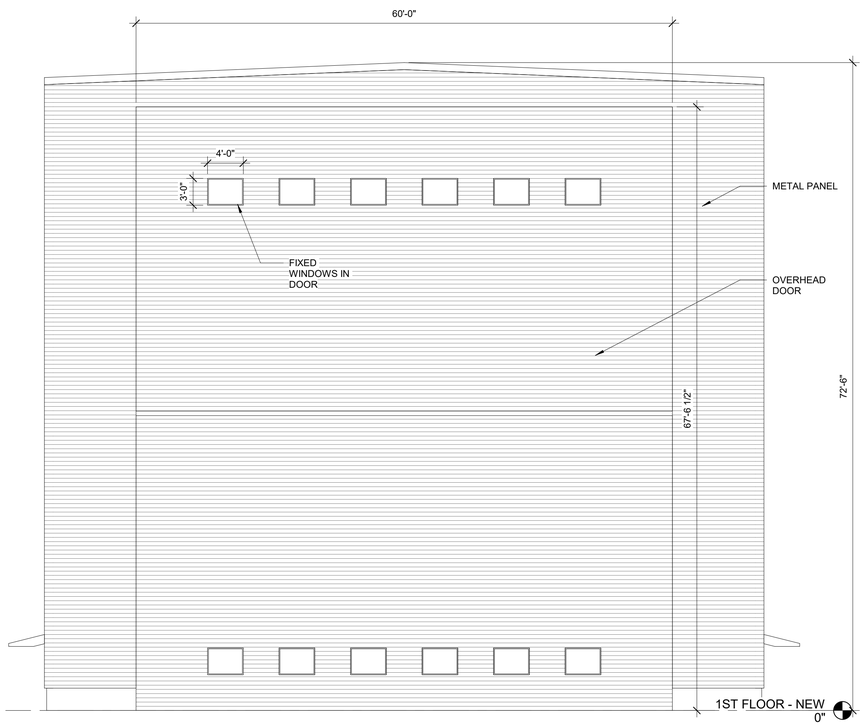
DRAWN: PBF	DATE: OCTOBER 2017
DESIGNED: SRB	SCALE: AS SHOWN
CHECKED: SRB	JOB NO. 195350129
FILE NAME: 3091.04-DET	
SHEET C-3.0	



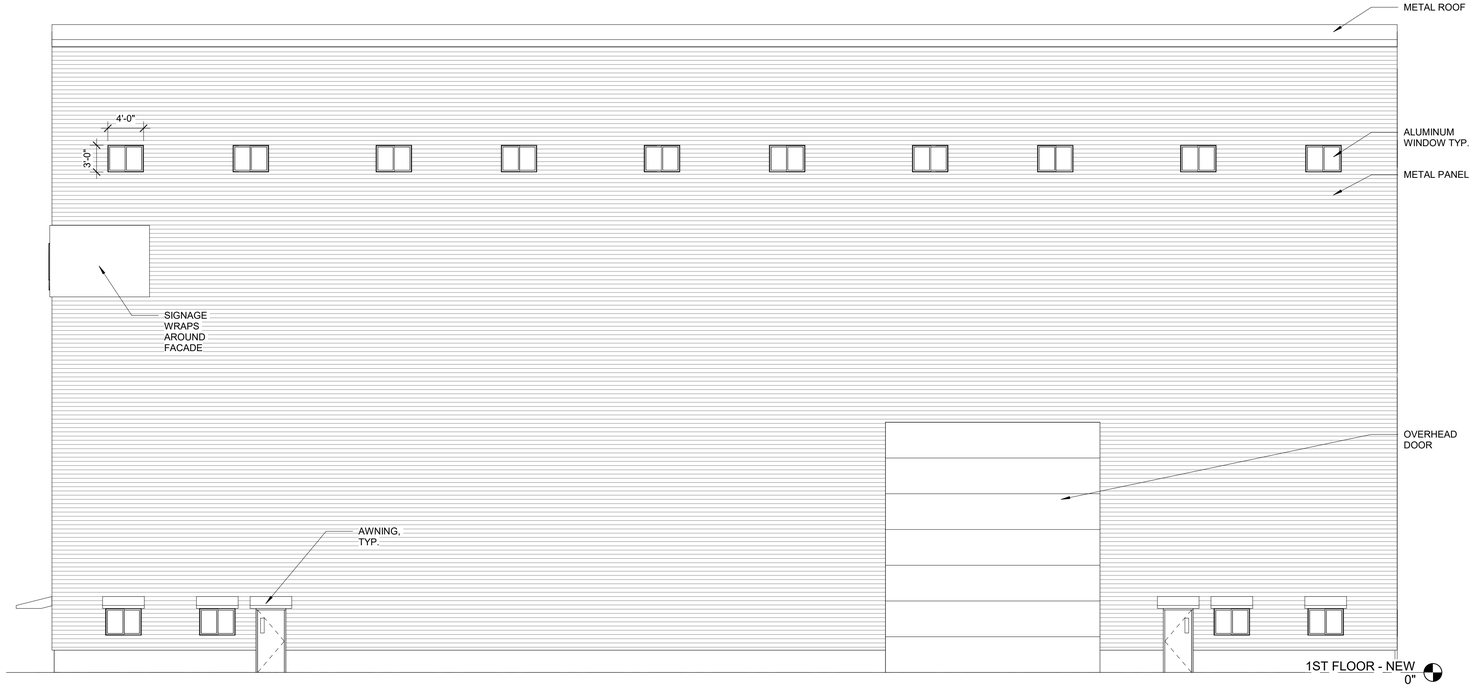
1 NORTH ELEVATION
1/8" = 1'-0"



2 EAST ELEVATION
1/8" = 1'-0"



3 SOUTH ELEVATION
1/8" = 1'-0"



4 WEST ELEVATION
1/8" = 1'-0"

Prepared For:
NEW YARD LLC

Consultant:

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

Project:
CANAL LANDING
BUILDING E

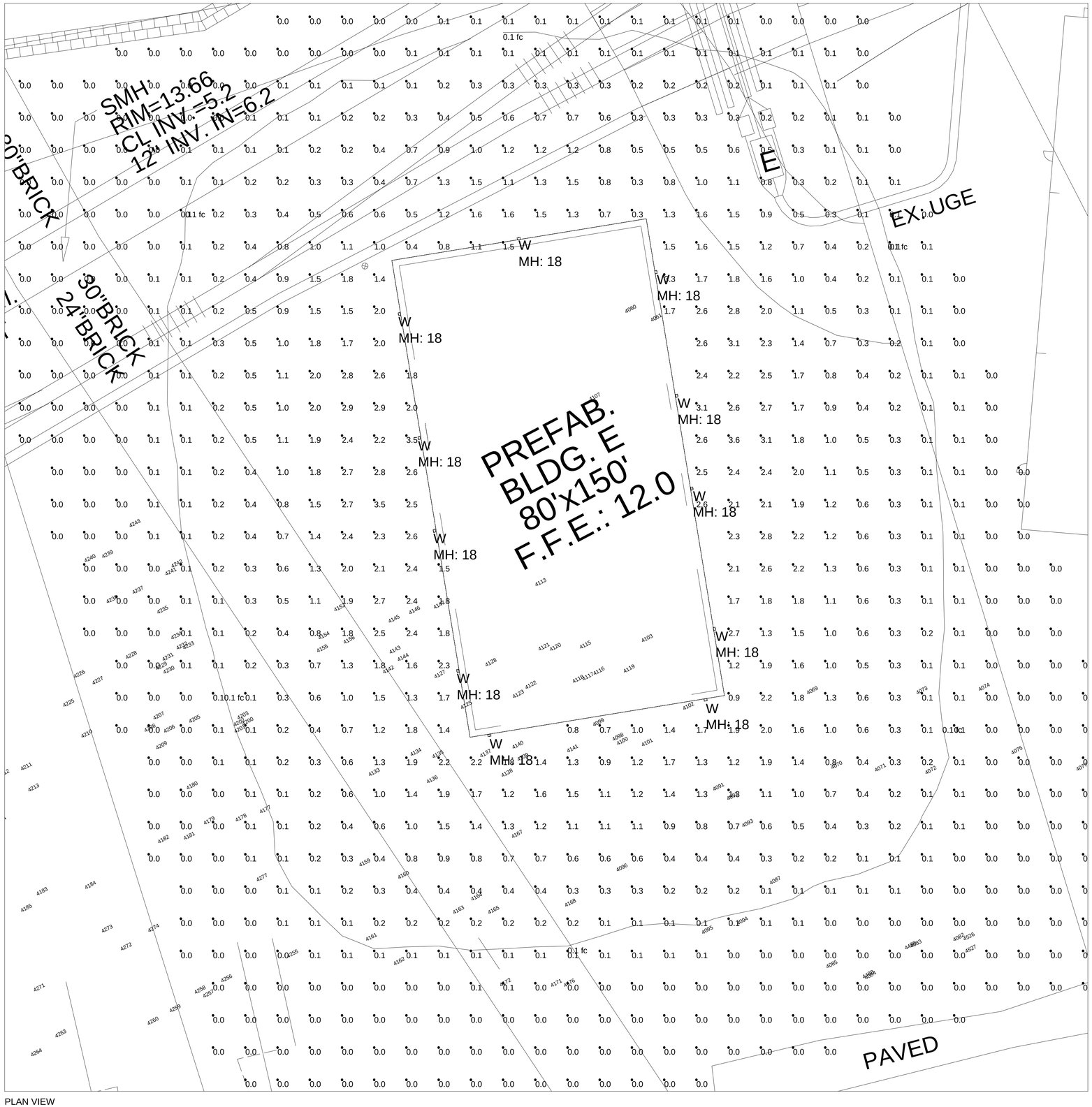
Revisions:

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

Date:
NOV. 13, 2018

BUILDING
ELEVATIONS

A2.01



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	0.48	3.6	0.0	N.A.	N.A.

Luminaire Schedule (note fixture catalogue numbers are not complete)

Type	Symbol	Qty	Lum. Lumens	LLF	Lum. Watts	Description
W		11	5461	0.900	72.5	LMC-30LU-4K-4

site 37715.AGI

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

TITLE
CANAL LANDING BUILDING E
PORTLAND, ME
SITE LIGHTING LAYOUT

Date:10/29/2018

GENERATED FOR:
STANTEC

SCALE NOT TO SCALE

Page 1 of 1

SWANEY LIGHTING ASSOCIATES, INC.

NOTICE: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SWANEY LIGHTING ASSOCIATES. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT THE DRAWING WILL BE TREATED AS CONFIDENTIAL; THIS DRAWING IS TO BE USED FOR NO PURPOSE OTHER THAN AS DETAILED HEREIN; IT IS NOT TO BE COPIED, REPRODUCED, LOANED OR DISCLOSED; IT IS TO BE RETURNED UPON REQUEST AND IS NOT TO BE COMMUNICATED, DISCLOSED OR COPIED; EXCEPT AS PER THE TERMS OF THIS LEGEND AND AGREEMENT. ALL INFORMATION IS THE BEST UTILIZATION OF LIGHTING FIXTURES INCLUDED IN THIS DRAWING. IT IS PROVIDED USING FIXTURE PHOTOMETRICS SUBMITTED BY THE MANUFACTURER. ANY VARIATION OF FIXTURES FROM THOSE SHOWN ON THIS DRAWING MAY AFFECT THE PERFORMANCE SHOWN IN IES FILE IS NOT THE RESPONSIBILITY OF THE MANUFACTURER. IT'S USE FOR ANY OTHER PURPOSE IS NOT AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.

PLANNING BOARD REPORT
PORTLAND, MAINE

New Dunkin Donut restaurant and drive-through
325 St John Street
Level III Site Plan, Traffic Movement Permit, and Conditional Use
Project # PL000047-2018 (Site Plan) and CU-000172-2018 (Conditional Use)
Applicant**:** Dunkin' Brands, Inc
CBL: 065 C004001

Submitted to: Portland Planning Board Public Hearing Date: November 27th, 2018	Prepared by: Jean Fraser, Planner Date: November 20th, 2018

I. INTRODUCTION

Plymouth Engineering Inc, on behalf of Dunkin' Brands, Inc, has requested approval to the submitted Level III Site Plan, Traffic Movement Permit, and Conditional Use applications for a new Dunkin Donuts restaurant comprising a new 2,277 sq ft building with drive-through. The 30,239 sq ft site abuts the existing Dunkin donuts and is currently occupied by Langs restaurant and located in the B2 zone.

The project was considered at a Board Workshop on July 24th, 2018 and since then the applicant has been working to address the Workshop comments and to meet the TMP mitigation requirement for creation of a three lane configuration in St john Street.





The proposal is located on the site immediately south of the current Dunkin Donuts (with drive-through) on St John Street. The new location provides a larger site and allows for more stacking capacity, and the drive-through egress will be changed from Valley Street to St John Street. The proposal includes 24 parking spaces, two drive through lanes (one for mobile app pick up; no second ordering location), and associated lighting and landscaping.

This use requires a conditional use permit for the drive-through to be approved by the Planning Board and to meet the requirements of the standards for all Conditional Uses (§14-474), the B2 zone Conditional Use standards (§14-183 (a)6), , as well as the B2 Design Standards.

Applicant: Dunkin' Brands, Inc (Robert Mahoney)
Engineer: Plymouth Engineering Inc (Jon Whitten, PE)
Traffic Engineer (TMP): Maine Traffic Resources (Diane Morabito, PE, PTOE)

II. REQUIRED REVIEWS

Applicant's Proposal	*Applicable Standards*
New structure of 2,277 sq ft	Level III Site Plan
Restaurant Drive-through in B2 zone	Conditional Use in the B2 zone (§14-183(a) 6)
Traffic Movement Permit (delegated from State)	State Regulations

III. WAIVER REQUESTS (Note: Waiver request for # of curb cuts has been withdrawn)

Applicant's Proposal	*Applicable Standards*
Parking aisle widths: The applicant has requested a waiver to allow a wider drive aisle to accommodate both parking maneuvers and the stacking lane for the drive-through (Att. J)	*Technical Manual Section 1.14* specifies that the parking aisle shall be 24 feet wide for perpendicular parking. The City Traffic Engineering Reviewer supports the waiver (Attachment 4).
Location and spacing of Driveways: The applicant has requested a waiver for the proposed driveway spacing, noting that on St John Street they are an improvement over existing conditions with only one separation substantially below 100 feet (Att. X2).	*Technical Manual Section 1.7.2.7* specifies the acceptable spacing between driveways as related to the speed limit of the street, with 100 feet separation a minimum. The City Traffic Engineering Reviewer supports the waiver (Att. 4).
Sidewalk Materials: The applicant has requested a waiver request to maintain the existing concrete sidewalk on St John Street (Attachments X1) , due to the limited scale of disturbance proposed.	*Technical Manual Section* and *1.8.2 Technical Manual Appendices 15.1* specifies that the sidewalk material should be brick for St John Street, and outlines waiver criteria for existing sidewalks. The existing sidewalk along the St John Street frontage is concrete in generally good condition and the proposals meet the waiver criteria. The City Engineer supports the waiver (Attachment 5).

IV. PROJECT DATA

SUBJECT	*DATA*
Existing Zoning	B- 2
Existing Use	Restaurant
Proposed Use	Restaurant and associated drive-through (new building)
Parcel Size	30,239 sq ft
Total Disturbed Area	30,239 sq ft
Impervious Surface Area **--Existing** **--Proposed** **--Net Change**	 25,595 sq ft 19,228 sq ft (6,367 sq ft)
Building Footprint **--Existing** **--Proposed** **--Net Change**	 3,406 sq ft 2,277 sq ft (1,129 sq ft)
Building Floor Area **--Existing** **--Proposed** **--Net Change**	 3,406 sq ft 2,277 sq ft (1,129 sq ft)
Parking Spaces **-Existing** **-Proposed** **# handicapped**	 50 25 (16 required by zoning) 2
Bicycle parking Spaces **-Existing** **-Proposed**	 0 Not known (3 required)
Estimated cost of the project	tbc

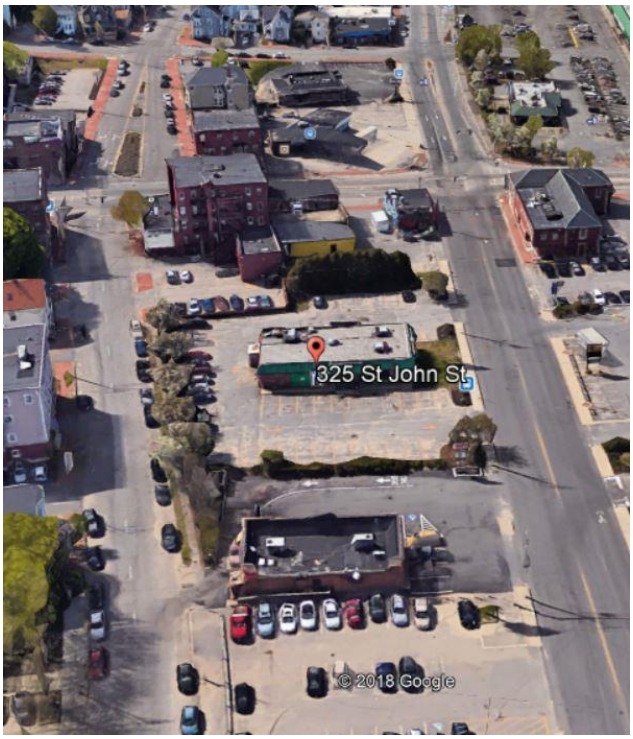
V. EXISTING CONDITIONS

The development site is immediately south of the existing Dunkin Donuts, located opposite Amatos and MacDonalds on St John Street. The uses near the proposed Dunkin Donuts to the south, north and west are commercial. The Inn at St John is located immediately to the south and overlooks the site.

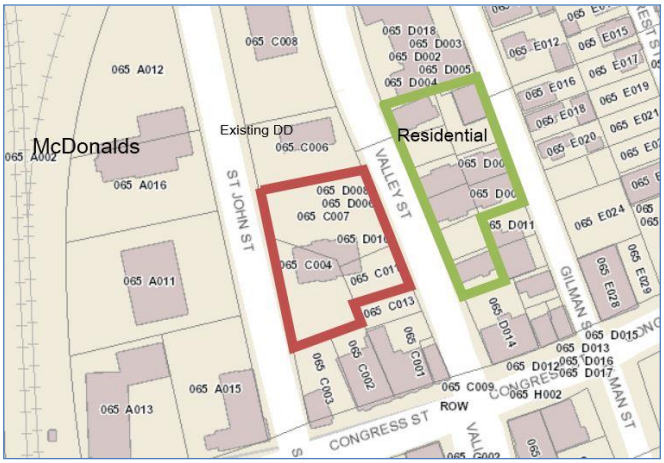
Looking north on St John Street (site on right, green roof):



Birdseye view looking south:



To the east the site abuts the R7 overlay zone as shown below; the area encircled in green includes approximately 30 dwelling units, including some managed by the nearby Shalom House.



Looking north on Valley Street:

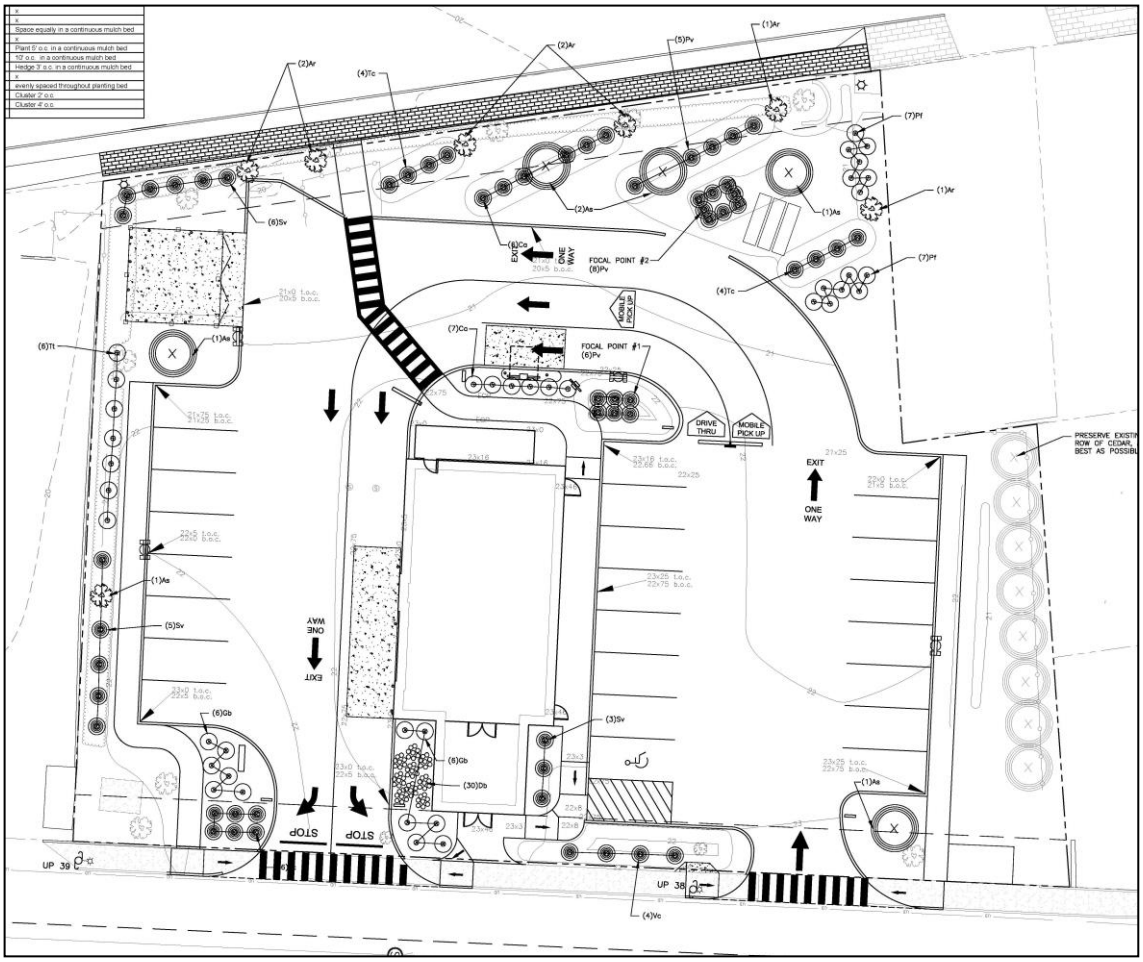


VI. PROPOSED DEVELOPMENT

The proposals have been revised to address comments, as outlined in the updated Project Summary in Attachment Y and shown in the Plan Set. The site layout now includes the following:

- New building of 2,277 sq ft footprint set back 10 feet from ROW in accordance with B2 Design Standards
- Design of building is Dunkin' Donut corporate design
- Main 2-door entrance faces St john Street as part of the extended glass-enclosed enclosed front eating area
- One other entrance is located on south side accessible to parking spaces
- Two curb cuts are proposed from St John Street, both with marked cross-walks to connect sidewalks
- Parking for 24 vehicles, all accessed via St John Street only
- Two lanes drive through, both exiting to St John Street
- New planting along both street frontages and side boundaries
- Berms and planting along the Valley Street side to buffer headlights while also maintaining CPTED overlooking (see P4 Landscape Plan below)
- Stormwater management incorporating focal points

Plan 4 Landscape:



VII. PLANNING BOARD WORKSHOP SUMMARY - July 24, 2018

The boards comments related to the original proposal that did not include any specified pedestrian walkway from Valley Street and included a third vehicle access from Valley Street. The main concerns raised by the Board were:

- Considered more needed to be done to ensure pedestrian access and safety;
- Concerned that the third access from Valley Street into the site would be difficult to enforce as being for service vehicles only;
- Requested increased landscaping, including to the dumpster enclosure and along boundaries;
- Confirmed that the sidewalk along Valley Street should be brick, which is the required material for that street; and
- Agreed with the public comment that a mixed use development without a drive-through would be preferable, but note that the project meets the current zoning requirements.

VIII. PUBLIC COMMENTS

A total of 95 notices of this Hearing were sent to neighbors and interested parties within 500 feet, and the legal notice appeared in the November 16th and 17th, 2018 editions of the *Portland Press-Herald*. A Neighborhood meeting was held on July 6, 2018, and attended by two neighbors (see notes in Att. P). A further Neighborhood meeting focused on the TMP mitigation requirements in St John Street was held November 15, 2018 and attended by a neighbor and representatives of two neighborhood associations (see notes in Attachment Z1).

One member of the public spoke at the Planning Board Workshop and noted that the proposal for a drive-through was disappointing as it does not contribute to the creation of a walkable city and encourages more cars. The Planning Office has not received and written public comments as of the completion of this report.

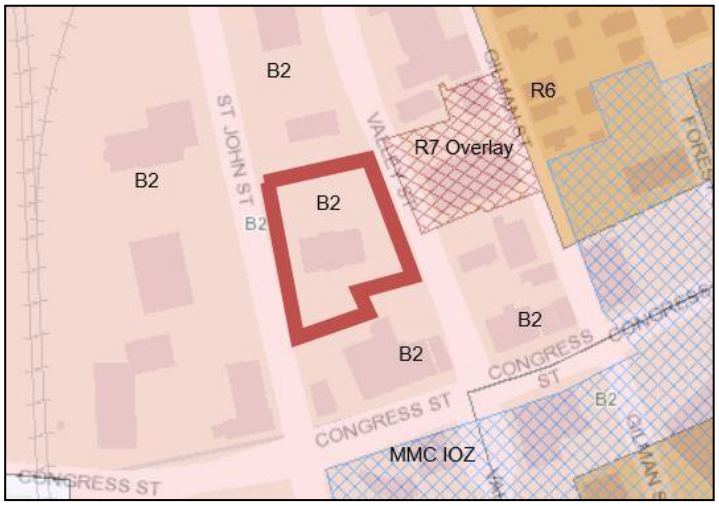
IX. STAFF REVIEW

A. RIGHT, TITLE AND INTEREST

The applicant has submitted a signed agreement to lease the site to be developed (Attachment C). The Agreement appears to be with a different entity than the applicant, and a letter has been submitted that confirms that the leasing party is the legally connected to the applicant.

B. ZONING ASSESSMENT

The proposal is a conditional use in the B2 zone and meets all of the B2 dimensional requirements, including the requirement that the front setback shall be a maximum of 10 feet. It is near a group of apartments in the R7 overlay zone ion Valley Street and near the MMC Institutional Overlay Zone and associated new hospital expansion (gray hatch on zone plan to right).



The current zoning standards came into force since the development of most of the sites along this stretch of St John Street, and the B2 zone now includes the following purpose statement, with associated Design Standards and dimensional requirements:

> *The B-2 zone will provide a broad range of goods and services and general businesses with a mixture of large and small buildings such as grocery stores, shops and services located in major shopping centers and along arterial streets. Such establishments should be readily accessible by automobile, by pedestrians and by bicycle. Development in the B-2 zone should relate to the surrounding neighborhoods by design, orientation, and circulation patterns*.

The proposals have been revised to add a pedestrian entrance and walkway from Valley Street and the project includes bicycle racks. The parking requirement under zoning is one space per 150 sq ft, which would result in a requirement for 16 spaces. The applicant has provided 24 spaces and this is supported by the Traffic Engineering reviewer due to the nature of the use (Attachment 4).

The B2 Zoning states that the restaurant must close at 11pm unless authorized by the City Council (interpreted to be through the business licensing process). The City Council has granted a business license that allows 24 hour service (Attachment 7).

C. CONDITIONAL USE REVIEW

The applicant has submitted an analysis of how the proposal meets the B2 Conditional Use Standards (14-183 and 14-474) in Attachment M (Conditional Use Application).

The following B2 Conditional Use standards are the basis of the review (14-183 (a) 6):

6. Drive-throughs: Notwithstanding section 14-474(a)of this article or any other provision of this code, the Planning Board shall be substituted for the Board of Appeals as the reviewing authority and shall apply the following standards in addition to the provisions of section 14-474:

a. Location of Drive-throughs: Features, such as windows, vacuum cleaners and menu/order boards, stacking lanes, must be placed, where practicable, to the side and rear of the principal building except where such placement will be detrimental to an adjacent residential zone or use, and shall be located no nearer than forty (40) feet from any adjoining property located in a residential zone. This distance shall be measured from the outermost edge of the outside drive-through feature to such property line. In addition, drive-through features shall not extend nearer than twenty-five (25) feet to the street line. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular circulation or creating hazards to vehicular circulation on adjoining streets.

Staff comment: The Site Plan (Plan 1) notation and dimensions confirm that the drive-through features meet the conditional use standards. The proposal shows a 15 car queue for the drive-through, but it is understood the typical maximum is 13 cars.

b. Noise: Any speakers, intercom systems, or other audible means of communication shall not play prerecorded messages. Any speakers, intercom systems, audible signals, computer prompts, or other noises generated by the drive-through services or fixtures shall not exceed 55 dB or shall be undetectable above the ambient noise level as measured by a noise meter at the property line, whichever is greater.

Staff comment: The applicant (Attachment M) has indicated that the ordering microphone can be set at a particular sound level, and this conditional use requirement is included in a suggested condition of approval.

c. Lighting: Drive-through facilities shall be designed so that site and vehicular light sources shall not unreasonably spill over or be directed onto adjacent residential properties and shall otherwise conform to the lighting standards set forth in 14-526.

Staff comment: The landscaping proposals are described below and in Attachment Y and are anticipated to be effective, in conjunction with the existing trees along Valley Street, in deflecting vehicular headlights away from the residential properties on Valley Street. The final site lighting is subject of a suggested condition of approval requiring further submissions for review and approval.

d. Screening and Enclosure: Where automobiles may queue, waiting for drive-through services, their impacts must be substantially mitigated to protect adjacent residential properties from headlight glare, exhaust fumes, noise, etc. As deemed necessary by the reviewing authority, mitigation measures shall consist of installation of solid fencing with landscaping along any residential property line which is exposed to the drive-through or the enclosure of the drive-through fixtures and lanes so as to buffer abutting residential properties and to further contain all associated impacts; and

Staff comment: In discussions with staff the applicant concluded that solid fencing would potentially create an area alongside the sidewalk and the drive-through queuing area that would be hidden from overlooking and potentially attract crime. The landscape design is described by the applicant in Attachment Y and comprises raised planted berms at an angle that will mitigate sound and light impacts from the drive-through while also allowing visual connection between the site activity and the public sidewalk and street.

e. Pedestrian access: Drive-through lanes shall be designed and placed to minimize crossing principal pedestrian access-ways or otherwise impeding pedestrian access.

Staff comment: The applicant has added a pedestrian walkway from Valley Street at the north end of the frontage. This location was chosen because of the need to avoid an "opening" at the southern end that would allow headlights to shine through the site towards the residential properties on Valley Street. Wherever the pedestrian connection to Valley Street is located it would require pedestrians to cross the drive-through lanes.

Staff consider the proposed location acceptable subject to adding measures, such as raised surfaces, that slow down or stop vehicles proceeding through the outer two lanes. The Traffic Engineering Reviewer has commented (Attachment 4):

> *I do have concerns regarding pedestrian safety entering the site from Valley Street via the proposed crosswalk and conflicts with circulating vehicles. The applicant shall propose strategies for enhancing pedestrian safety at this crosswalk for review and approval. These strategies may consist of signing, pavement markings, or creating a raised crosswalk.*

A suggested condition requires submission of a detailed plan for staff review and approval.

f. Hours of Operation: The Board, as part of its review, may take into consideration the impact hours of operation may have on adjoining uses.

Staff comment: B2 Zoning states that the restaurant must close at 11pm unless authorized by the City Council (interpreted to be through the business licensing process). The City Council has granted a business license that allows 24 hour service.

The following standards in 14-474 apply to all conditional uses:

1. *Standards. The Board shall, after review of required materials, authorize issuance of a conditional use permit, upon a showing that the proposed use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zoning district. The Board shall find that this standard is satisfied if it finds that:*

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

Staff comment: The applicant is addressing this through the TMP review, and the associated mitigation would address any impacts.

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

Staff comment: The proposal is not expected to create harmful conditions, as the revised plans have addressed the issue of headlight glare satisfactorily.

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

Staff comment: Subject to the suggested conditions of approval (that aim to create a positive environment along Valley Street), the proposals meet this standard.

D. TRAFFIC MOVEMENT PERMIT (TMP)

The applicant submitted a full TMP permit application (Attachment W) and the Scoping meeting was held on 7.16.18 which identified the preferred mitigation for the additional drive-through trip generation as being the creation of a central turning lane in St John Street. Since then there have been two further staff meetings and the applicant has developed a striping plan to create a three lane configuration in St John Street that provides for a central turning lane and bicycle lanes (see Plan 15 TMP Re-Striping Plan). The re-striping plan was discussed with the MDOT and they support the proposals subject to minor revisions.

It should be noted that the proposed Dunkin' Donut is being evaluated as a new proposal with new trip generation, as the former Dunkin' Donut site next door could be reused as a restaurant and drive-through by the new owner.

A special Neighborhood Meeting was held on November 15, 2018 at staff request, to ensure that neighboring businesses and neighborhoods were advised of the proposed TMP mitigation that would change the lane configuration in St John Street. The meeting was attended by a DPW representative and Site Plan review engineers; the notes of this meeting are included at Attachment Z1. Although the applicant went to considerable lengths to ensure that the local business managers received detailed invitations to the meeting, none of the local businesses were represented at the meeting.

Staff consider the three-lane modification to be an essential mitigation in relation to the addition of the drive-through and the associated trip generation. The applicant's Traffic Engineer has submitted a note summarizing the safety benefits of the three lane modification (Attachment Z2) and quoted below:

The submitted note of *"Expected Benefits of Saint John Street "Road Diet""* (Att. Z2) includes the following:

- *By reducing to single travel lanes in each direction lane change/sideswipe type collisions are eliminated.*
- *Rear-end collisions due to left-turns are greatly reduced or eliminated since left-turning traffic can get out of the through traffic stream and have a safe place to wait in the center turn lane for a gap to turn left.*
- *Angle accidents as vehicles enter or exit drives are reduced. Many of these collisions now occur when drivers are waved through one lane to collide with an approaching vehicle in the other lane. These type of accidents also often happen as sight lines to a vehicle in the inner lane is obstructed by a vehicle in the outer lane. Angle crashes for these reasons are eliminated with the proposed 3-lane section.*
- *There were 28 crashes along this stretch of Saint John Street in the 3-year study period. My analysis indicates that 15 of them would be eliminated for the above three reasons. Federal Highway studies cite typical crash reduction rates of up to 47 percent when reducing a roadway from 4 to 3 lanes.*
- *Vehicles taking a left to enter a drive only have to cross one lane of traffic so it is both easier and safer.*
- *Similarly vehicles exiting a drive as a left-turn will only have to cross one lane of traffic and can also sometimes use the center two-way left turn lane to pause to enter the other traffic stream.*
- *The speed differential is decreased since all through traffic is in a single travel lane, also enhancing safety along the corridor.*
- *FHWA research indicates that roadways with Average Daily Traffic volumes less than 20,000 are good candidates for Road Diets. This section of St. John Street only has an ADT of 14,000 so there are no capacity concerns with the proposed lane reductions.*
- *The additional roadway width from the road diet is used to create bike lanes increasing safety for bicyclists and contributing to a "Complete Street".*

Tom Errico, the consultant Traffic Engineering Reviewer, has provided the following update (Att. 4):

> *The project meets the requirement for a Traffic Movement Permit (TMP). The applicant has submitted a TMP Application, attended a Scoping Meeting, and submitted a Traffic Study (Section 7). The key item identified for review and consideration was changing the configuration of St. John Street from a four-lane roadway to a three-lane section with a center turn lane and bicycle lanes. This change is intended to mitigate crash patterns (St. John Street is a High Crash Location) associated with turning movements entering and exiting driveways. Based upon concept improvements plans prepared by the applicant the following is required as a condition of approval for the TMP:*
>
> - *The applicant shall submit draft final construction/design plans and specifications for review and approval.*
> - *The applicant shall be responsible for implementation/construction of all aspects of the improvement plan.*
> - *The implementation of the improvement plan shall be completed prior to the certificate of occupancy for the project.*
> - *The applicant shall submit a construction management plan for review and approval.*

These comments have been incorporated into a suggested condition of approval.

E. DEVELOPMENT REVIEW (SITE PLAN STANDARDS in 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, with comments provided as follows:

i. Transportation Standards

Impact on Surrounding Street system- this standard will be addressed by the TMP review.

Access and Circulation/Loading and Servicing

The original proposals included three curb cuts (two on St John Street and one on Valley Street), and a waiver was requested from the Technical Standards (which limit the number of curb cuts to two). The layout has been revised to omit the third curb cut on Valley Street, so that there is a one-way in and a one-way out on St John Street. The width of the curb-cuts is slightly wider than necessary for one way working to accommodate the tractor trailer service vehicles.

The project requires waivers for the parking aisle width and for driveway spacing related to abutting driveways. Staff support both of these waivers (Attachment 4).

Sidewalks: The applicant had originally requested waivers from the provision of sidewalks meeting the City's brick sidewalk and apron material policy for both Valley Street and St John Street. The final proposals include a five foot wide brick sidewalk in Valley Street and a waiver to retain the existing concrete sidewalk on the St John Street frontage.

Staff note that the sidewalks on this section of St John Street, including along the frontage of the site, are concrete and in generally good condition. The proposals do not disturb the existing sidewalk except to narrow the existing curb cuts. Staff support the waiver (see Attachment 5) as the circumstances meet the waiver criteria which are noted below:

a. *A substantial portion of sidewalks adjacent to and in the area surround the portion to be constructed or disturbed are of a material other than that designated on the Sidewalk Material map, and*
b. *Existing sidewalks on the affected street frontage, other than those in the area to be disturbed, are in sound conditions, and*
c. *Less than 50% of the existing sidewalk on the affected block is to be disturbed.*

The design of the sidewalks does not fully meet the City's technical standards and the Transportation Program Manager has noted several aspects that need to be clarified on the Site Plan and Detail sheets - see comments in Attachment 6.

Public Transit Access: The METRO Route 1 operates a northbound service with a stop along the frontage of the project site. The proposals show the bus stop relocated to the south and provided with an expanded area (easement from the site) near the bus stop. The scale of the development does not rigger the requirement for a bus shelter or other facility, but the proposed bus stop landing area requires minor modifications to meet ADA requirements, as per the comments of the Transportation Program Manager (Attachment 6).

Parking: The site layout includes parking for 24 vehicles, which is 8 above the zoning requirement of 16. The Traffic Engineer reviewer has determined that this is appropriate in view of the high peak customer levels (Attachment 4).

Bicycle parking spaces are shown on the site plan and 3 spaces would be required. A bike rack is indicated on the Site Plan (Plan 1) and the Transportation Program Manager notes that the surrounding area is too small and that the location conflicts with the Landscaping Plan (Plan 4). A suggested condition of approval is included to require the location, number and design of bike racks to be revised for staff review and approval.

TDM: The scale of the proposal does not trigger the requirement for a TDM Plan.

Construction Management Plan: the applicant submitted a narrative and plan (Attachment G and Plan 12) which is not considered acceptable due to the impacts on pedestrian safety. A suggested condition of approval is included in the proposed Motion that refers to the Traffic Engineering comments on this concern (Attachment 4).

ii. Environmental Quality Standards

Landscape Preservation
The proposals have been revised to omit the third curb cut from Valley Street, and therefore all 5 of the existing trees along the Valley Street frontage are preserved.

Buffers and Parking Lot Landscaping
The Landscape Plan is extracted above (under "Proposals") and indicates new planting, which has been revised substantially since the Planning Board Workshop to address the City Arborist comments (Attachment 3) and to achieve the following objectives:

- Screen the headlights from cars entering the site from St John Street so that they do not impact the housing on the other side of Valley Street; and
- Address the CPTED standards that encourage overlooking to minimize the potential for crime.

It is noted that although a new tree has been planted near the dumpster enclosure, the enclosure remains chain link without any screen planting. A suggested condition of approval requires that either the enclosure is upgraded to wood materials, or screened with planting, with the final proposals subject to final staff review and approval.

Street Trees
The City Arborist comments (Attachment 3) included recommendations for new street trees along St john Street and the final proposals address these comments.

Water quality; Stormwater Management; Erosion Control:
The project has been reviewed by Lauren Swett, consultant Peer Engineering Reviewer, who has provided detailed comments Attachment 1. These comments requested further information to confirm the areas that need to be treated and whether the focal points are adequate. The comments also request that the Hydrocad model be updated and submitted so that the City can evaluate whether the increased stormwater flows can be accommodated in the City's combined system.

The applicant has satisfactorily addressed these comments and the only other Peer Engineer comments relate to utilities (see below).

iii. Public Infrastructure and Community Safety Standards

Public Safety (CPTED) and Fire Prevention
The applicant has addressed the previous staff concerns and suggestions regarding the Valley Street frontage. In particular , staff recommended that the layout create a positive environment along the frontage and include a welcoming pedestrian entrance, adequate lighting, and screening of the drive-through that does not create areas that attract crime. The final proposals generally meet those objectives, although the detailing of the pedestrian walkway and its safety and lighting have not been finalized and are the subject of conditions.

The Fire Department have not identified any concerns.

Public Utilities - The Peer Engineer final comments in Attachment 1 note that the utility capacity letters need to address several specific issues regarding this site.

iv. Site Design Standards (as applicable)

Exterior Lighting: The applicant has not submitted the final site and building lighting details and associated photometric plan (although they ae indicated on the site plan and elevations). These proposals need to address the safety requirements of the rear pedestrian walkway and also ensure adequate lighting for the entrance on St John Street, while also ensuring there is no impact on the residential areas on Valley Street. A suggested condition of approval requires these final details for review an approval.

Noise & Vibration (Mechanical Equipment) - It is understood that mechanical equipment will be installed on the roof. The location of these elements is important as the site is viewed from Valley Street as well as St John Street and the location and screening of the equipment needs to be considered in the context of all elevations. A suggested condition of approval requires that these details be submitted for final review and approval.

B2 Design Standards: The East elevation of the new building (see Plan 9) is a "blank" wall with a walk in cooler located along it. This elevation "faces" Valley Street and is the primary (drive-through) customer environment. Staff suggest that the applicant should enhance the elevation to give it more visual interest and relating it better to the rest of the building without adding signage. A suggested condition of approval requires that this elevation be revised to add visual interest.



X. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed Dunkin Donuts restaurant and drive-through at 325 St John Street. The applicant has modified the proposal significantly to address the TMP, site plan and conditional use standards.

XI. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations, contained in the Planning Board Report for the public hearing on November 27, 2018 for application # PL000047-2018 (Site Plan) (new Dunkin Donut restaurant at 325 St John Street) relevant to Portland's Technical and Design Standards, the B2 Design Guidelines and Standards and other regulations, and the testimony presented at the Planning Board hearing:

1. Parking aisle Widths: The Planning Board [**finds/does not find**], based upon the consulting Traffic Engineer's review *(*Attachment 4*),* that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.14 *Parking Lot and Parking Space Design.* The Planning Board [**waives/does not waive]** the *Technical Manual* standard (Technical Manual Section 1.14) to allow the parking lot aisle widths as shown on the site plan 11.16.2018, as supported by the Traffic Engineering reviewer.

2. Driveway Separation
   The Planning Board [**finds/does not find**], based upon the consulting Traffic Engineer's review *(*Attachment 4*),* that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.7.1.7 *Location and spacing of driveways.* The Planning Board [**waives/does not waive**] Technical Design Standard Section 1.7.1.7 *Location and spacing of driveways* to allow the proposed driveways (each one-way) to be located as shown on the site plan 11.16.2018as supported by the Traffic Engineering reviewer.

3. Sidewalk materials
   The Planning Board [**finds/does not find**], based upon the City Engineer's review *(*Attachment 5*),* that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.8.2 *Sidewalk Construction and Materials* in respect of the sidewalk along St John Street. The Planning Board [**waives/does not waive]** the *Technical Manual* standard (Technical Manual Section 1.8.2) to allow concrete material for the sidewalk along the site frontage on St John Street, as the retention of the existing concrete sidewalk meets the waiver criteria set out in the Technical Manual *Appendices 15.1.*

B. CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on November 27, 2018 for application CU-000172-2018 (Conditional Use) (new Dunkin Donut restaurant at 325 St John Street), relevant to Portland's Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing:

The Planning Board [**finds/does not find]** that the proposed conditional use for a drive-through associated with the new Dunkin Donuts restaurant at 325 St John Street in the B2 zone [**does / does not]** meet the standards of § 14-474 and the standards of §14-183 for the B2 zone.

Prior to Applying for a Building Permit

1. That the applicant shall submit a revised site plan to incorporate strategies for enhancing pedestrian safety at the crosswalk from Valley Street into the site/across the drive through lanes, for review and approval by the Planning Authority. These strategies may consist of signing, pavement markings, or creating a raised crosswalk.

Prior to the Issuance of a Certificate of Occupancy

2. That any speakers, intercom systems, audible signals, computer prompts, or other noises generated by the drive-through services or fixtures shall not exceed 55 dB or shall be undetectable above the ambient noise level as measured by a noise meter at the property line, whichever is greater.

C. TRAFFIC MOVEMENT PERMIT

Based upon the City of Portland's Delegated Review Authority, the Planning Board [**approves/does not approve]** the Traffic Movement Permit application, as submitted, subject to the following conditions:

1. That the applicant shall modify the configuration of St. John Street from a four-lane roadway to a three-lane section with a center turn lane and bicycle lanes. This change is intended to mitigate crash patterns (St. John Street is a High Crash Location) associated with turning movements entering and exiting driveways. The applicant shall be responsible for implementation/construction of all aspects of the improvement plan.

Prior to Applying for a Building Permit

2. That the applicant shall finalize the submitted concept improvement plan (for the modifications outlined in i above) and submit final construction/design plans, specifications and construction management plan for review and approval by the Planning Authority.

Prior to the Issuance of a Certificate of Occupancy

3. That the implementation of the approved improvement plan, for the required modifications in St John Street, shall be completed prior to the issuance of a certificate of occupancy for the project.

D. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in Planning Board Report for the public hearing on November 27, 2018 for application # PL000047-2018 (Site Plan) (new Dunkin Donut restaurant at 325 St John Street) 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:

Prior to Applying for a Building Permit

1. That the applicant shall revise the building design to clarify the following details for review and approval by the Planning Authority:

    a. The treatment of the rear elevation (facing Valley Street) to integrate the walk-in cooler and add visual interest to this part of the building which faces Valley Street;
    b. The HVAC/Mechanical proposals to show that they meet site plan standards; and
    c. The visible transmittance of the windows along the St John Street frontage, as they are required to be transparent (with a visible transmittance (VT) of .7 or greater).

2. That the applicant shall submit revised civil plans to address the utility, bicycle parking and ROW comments of the Peer Engineer and the Transportation Program Manager, both dated 11.20.2018, for review and approval by the Planning Authority.

3. That the applicant shall submit a revised Landscape Plan, for review and approval by the City Arborist and the Planning Authority, to improve the appearance of the dumpster enclosure either through upgraded materials or landscape screening.

4. That the applicant shall submit, for review and approval by the Planning Authority, a revised lighting plan (both building mounted and site lighting) and associated photometric plan, to meet the Technical Standards, including the provision of adequate lighting levels in the vicinity of the St John Street building entrance and along the pedestrian walkway from Valley Street.

Prior to Issuance of a Building Permit

5. That the applicant shall submit a copy of the ability to serve (water supply and wastewater) letters, and address the Peer Engineer comments of 11.20.2018.

6. That the applicant shall submit a detailed construction management plan (CMP) for work that will impact both St. John Street and Valley Street, for review and approval by the Planning Authority; the CMP should avoid closure of the St John Street sidewalk and address the comments of the Traffic Engineering Reviewer dated November 16, 2018.

7. That the final stormwater maintenance agreement shall be submitted for review and approval by the Planning Authority and then recorded, with a copy to the Planning Authority and the Department of Public Works.

8. That the applicant shall submit the easement or other legal documentation for public access over the bus landing area where it is not in the ROW.

Prior to the Issuance of a Certificate of Occupancy

9. That separate permits are also required for all new signs, including those on the building, and for HVAC systems, which require submission of dBA levels to confirm compliance with the maximum sound limits of the ordinance.

(attachments next page)

ATTACHMENTS:

Report Attachments

1. Peer Engineer Review final comments
2. Design Review comments
3. City Arborist comments
4. Traffic Engineer Traffic Final comments
5. DPW Comments
6. Transportation Program manager comments
7. MDOT comment
8. City Council Business License

Public Comments (none at time Report was completed)

Applicants Submittal

A. Level III Application
B. PROJECT SUMMARY
C. Right, Title and Interest documents
D. Stormwater Report (Revised July)
E. Certificate of Good Standing
F. Soils Map
G. CMP Narrative
H. Level-III-Site-Plan Checklist
I. Zoning-Analysis-Table
J. Aisle Width Explanation
K. Pre-Devel HydroCAD
L. Post-Devel HydroCAD
M. Conditional Use Application
N. LED Pole Light Spec
O. Wall Light Spec
P. Neighborhood Meet Certification
Q. Chapter 500 Redevelopment
R. Focal Point 1 Wrksht
S. Focal Point 2 Wrksht
T. Housekeeping Plan
U. Maintenance Plan
V. stormwater maintenance agreement
W. Traffic Movement Permit Application
X1. Waiver - St. John St. Brick Sidewalk Waiver
X2. Waiver - Driveway Spacing Waiver
Y. Updated Project Summary
Z1. TMP Neighborhood Meeting 11.15.18 info (Z2 to arrrive mon)
Z2. Summary of Expected Safety Benefits St John 3-lane road diet

Plans

PLAN 1 SITE PLAN
PLAN 2 GRADING DRAINAGE PLAN
PLAN 3 UTILITY PLAN
PLAN 4 LANDSCAPE PLAN
PLAN 5 EROSION CONTROL
PLAN 6 DETAILS
PLAN 7 DETAILS
PLAN 8 SURVEY PLAN
PLAN 9 ELEVATION
PLAN 10 FLOOR PLAN
PLAN 11 Lighting Plan
PLAN 12 CONSTRUCTION MANAGE PLAN
PLAN 13 CULTEC DETAILS
PLAN 14 FOCAL POINT DETAILS
PLAN 15 TMP RE-STRIPING PLAN
PLAN 16 ARCH DETAILS A02
PLAN 17 ARCH DETAILS A03

Att. 1

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Fwd: PB Hearing dunkin donuts on St John Street- draft of suggested conditions

1 message

Jean Fraser <jf@portlandmaine.gov> Tue, Nov 20, 2018 at 12:39 PM
To: "Fraser, Jean" <jf@portlandmaine.gov>

FINAL PEER ENGINEER COMMENTS

---------- Forwarded message ---------
From: **Lauren Swett** <lswett@woodardcurran.com>
Date: Tue, Nov 20, 2018 at 7:38 AM
Subject: RE: PB Hearing dunkin donuts on St John Street- draft of suggested conditions
To: Jean Fraser <jf@portlandmaine.gov>

Hi Jean,

I don't have very many comments left, but I've added them to eplan, and will list them here too. Basically, I think you can replace your general comment on providing utility ability to serve requests with these 4 comments on their utilities:

- The Applicant has noted a connection to the sewer within St. John Street. The Applicant is still waiting for an ability to serve from the Department of Public Works. The Applicant should coordinate the location of the connection with DPW, as there are multiple sewer lines identified in St. John Street. The Applicant should coordinate the sizing and location of their grease trap. In addition, the installation should be coordinated with the street moratorium, which remains in place until May 2019.
- The ability to serve from DPW should also include the stormdrain connection to the combined sewer on Valley Street, noting that there is a slight increase in stormwater flow to this system. The project is not required to meet the Flooding Standard as there is no increase in impervious surface.
- The Applicant will be required to receive verification of ability to serve for the site's water service.
- The Applicant should show pavement repair limits within the City of Portland Right-of-Way and provide a detail.

I am headed to a site visit in Brunswick (I think…) but if you have questions, feel free to call my cell phone 207-219-3591

Thanks,

Lauren

PLAN CORRECTIONS REPORT PL-000047-2018
FOR CITY OF PORTLAND

PLAN ADDRESS: 325 Saint John St
Portland, Maine 04102

PARCEL: 065 C004001

APPLICATION DATE: 04/06/2018

SQUARE FEET: 0.00

DESCRIPTION: Dunkin Donuts at 325 St. John Street

EXPIRATION DATE:

VALUATION: $0.00

CONTACTS	Name	Company	Address
Agent/Representative	Jon Whitten	Plymouth Engineering	30 Lower Detroit Road Plymouth, ME 04969

Corrections Required

City Arborist — Jeff Tarling

Civil Engineering - Third Party Reviewer — Lauren Swett

v.1.00 - Not Resolved

Correction: General
The applicant is proposing a connection to the existing combined sewer infrastructure within Valley Street, please show the proposed connection on the design drawings. As the connection is greater than 8 inches, a manhole will be required.
Corrective Action: Update the utility plan to show the stormdrain connection.

Correction: General
The Applicant should show pavement repair limits within the City of Portland Right-of-Way and provide a detail. Additionally, note that St. John Street which will remain under moratorium until May 2019. Any impact within that street will be required to meet the current moratorium standards for repair until that time.
Corrective Action: Provide additional information for work within City streets.

Correction: General
The Stormwater Management Plan should include a stormwater inspection and maintenance plan developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances. A stormwater agreement will be required for the project.
Corrective Action: Provide a stormwater inspection and maintenance plan and a stormwater agreement.

Correction: General
Sizing calculations have not been provided for the proposed Focal Point systems.
Corrective Action: Provide sizing calculations.

Correction: General
Locations of erosion and sediment control features should be shown in plan view.
Corrective Action: Provide erosion and sediment control on the site plan or grading and drainage plan.

Correction: General
The plans should note a location for snow storage. The snow storage location should be sited outside of existing and proposed drainage courses.
Corrective Action: Provide for snow storage or identify a snow management plan.

Correction: General
The Construction Management Plan narrative references a drawing showing the location of construction staging areas that was not provided.
Corrective Action: Provide Construction Management Plan figure.

Correction: General
The Applicant will be required to provide verification of utilities' ability to serve the proposed project.
Corrective Action: Provide verification of utility ability to serve.

Correction: General
The project will result in a decrease in impervious surface on the entire site. The Applicant should provide an evaluation of the amount of redeveloped, non-roof, impervious surface. Per the City's stormwater standards, if greater than 5,000 SF of redeveloped, non-roof impervious surface is created as part of the project, at least 50% of that area is required to be treated. The Applicant is proposing to provide treatment using focal point treatment systems, and likely will meet the standard using this treatment.
Corrective Action: Provide clarification of redeveloped, non-roof, impervious surface.

Correction: General

The project is not required to meet the flooding standard, as it is not increasing impervious surface. The stormwater report indicated that post-development flows will be increased in the 10-year and 25-year storms. No HydroCAD model has been provided (a model is in eplan, but it appears to be for another project). The report also references storm frequencies used for modeling that are not in accordance with the current MaineDEP Chapter 500 Guidance. The HydroCAD model should be updated and provided for review so that the City can verify that the increase in flow will not be an issue with the existing system.

Corrective Action: Provide HydroCAD model and verify that the City's system has the capacity to accept additional flow.

Correction: General

The project is located within a brick sidewalk district. Note that driveway aprons are required to match the sidewalk material.

Corrective Action: Provide required sidewalk and driveway apron materials.

Fire	Pool Fire
Parking	John Peverada
Planning	Jean Fraser
Public Works Engineering	Keith Gray
Traffic - Third Party Reviewer	Tom Errico
Transportation/Planning	Bruce Hyman
Zoning	Pool Zoning

Conditions Required

Planning and Urban Development Department
Planning Division

Subject: B-2 Design Review – 325 St. John Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Monday, July 16 2018

The project at 325 St. John Street was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer against *the B2 Commercial Business Zones Standards* (Section (d) of the Design Manual).

Design Review Comments*:*

(d) B-2 Commercial Business Zones

Standard (1) a. Urban Street Wall – Not applicable; Building does create a dining area and entrance close to the street, improving the existing condition.

Standard (1) b. Mixed Uses – Not applicable – restaurant use

Standard (1) c. Building Entrances – One of several building entrances is placed close to the street and is street-facing with direct access. The entrances are emphasized with canopy, color change, signage, and a high level of fenestration.

Standard (1) d. Windows – Storefront windows provided on the street-facing façade/dining area. .7 VT required.

Standard (1) e. Façade Character – Public areas - entrance and dining area – are oriented towards street with high level of fenestration.

Standard (1) f. Building Design – The building design is consistent with the type of commercial building in the same streetscape. Though only one-story, building has a parapet making it slightly more appropriate height for the wide commercial street.

Standard (1) g. Building Materials – Brick and clapboard are more common than panel but fiber cement panel is acceptable. Brick (though thin brick) on rear of building. Variation and articulation is part of the design and gives visual interest. Material color palette is neutral tones appropriate to context.

Standard (1) h. Building Scale – Not applicable

Standard (1) i. Landscaping and Buffers – Surface parking areas somewhat screened from street by plantings. Fence provided between properties. Planner will provide more guidance on this site plan criteria.

10.31.18

To: Jean Fraser

St. John Street Dunkin Donuts tree and landscape review.

Street trees - Street trees along St John Street should be deciduous type along the frontage. The proposed Frasier Fir might be best suited for the landscape edges where there conical shape does not obscure turning traffic movement. Street trees along Valley Street – the existing trees can be pruned and improved or replaced. The sidewalk along Valley Street can be full width since tree planting space behind the sidewalk exists.

Parking lot tree and landscape - recommend adding additional shade trees to the North side edge into the existing shrub bed. Note – any vegetation saves will require 'tree save' measures and protection.

This would add a total of three additional shade trees, two along the parking spaces and one near the dumpster enclosure. Wooden fence dumpster enclosure details needed.

The front entrance planting beds should have a better design that complements the site. As proposed the landscape does not meet the recommended landscape function. (Recommend a landscape design consultant) The open landscape space near Valley Street tree and landscape should add buffering of the nearby residential neighbors. The design concept could use some adjustment to provide the screening without creating unwanted uses. Again, would recommend taking a closer look with a landscape consultant. The proposed daylilies for example do not provide buffering along the edge. On a positive note, the amount of 'green space' gives the site potential. Creating a more natural looking landscape with a percentage of native plants would be recommended. A walkway connection from Valley Street to the site is recommended.

Jeff Tarling
City Arborist

PLANT LIST				
ABBREV.	LATIN NAME	COMMON NAME	SIZE	NOTES
AF	Abies fraseri	Fraser Fir	5'–6' ht.	
SR	Syringa reticulata	Japanese Lilac Tree	6'–8' ht.	
JP	Juniperus pfitzeriana 'Glauca'	Blue Pfitzer Juniper	#3 cont.	
HS	Hemerocallis "Stella in Red"	Daylily – red	#2 Pot	2' o.c.
TT	Taxus x media 'Tauntonii'	Tauntoni Yew	18"–24" ht.	
PF	Potentilla Fruticosa "Katherine Dykes	Potentilla	#5 Cont.	

Annotated by Jeff Tarling City Arborist 10-31-18

fence

Add Parking Lot trees

Improve Landscape

(5) HS

(2) HS

(7) PF

(2) HS

(12) JP

(5) JP

(2) AF

(2) AF

PF

NOTE: INSTALL CATCH BASIN SEDIMENT CONTROL INSERTS IN ALL NEW AND EXISTING CATCH BASIN FRAMES UNTIL SUCH TIME THAT THE SITE SOILS ARE STABILIZED WITH VIGOROUS GROWTH OF VEGETATIO, PERMANENT MULCH OR PAVEMENT,TYP.

REMOVE PORTIONS OF EXIST. CONCRETE SIDEWALK AND GRANITE CURB.

RIM:19.32
10"INV.IN:11.87
INV.OUT:11.77

EXISTING 12" PVC TO REMAIN
INV.IN:13.12

RIM:17.
FULL OI

RIM:19.00

RIM:19.61

RIM:22.46

RIM:22.84

RIM:23.83
12"CMP
OUT:19.33

RIM:24.14
OUT:18.04
12"IN:18.14
6"IN

21x0 t.o.c.
20x5 b.o.c.

21x75 t.o.c.
21x25 b.o.c.

22x5 t.o.c.
22x0 b.o.c.

23x16 t.o.c.
22.66 b.o.c.

22x25

23x25 t.o.c.
22x75 b.o.c.

23x0 t.o.c.
22x5 b.o.c.

21x25

22x0 t.o.c.
21x5 b.o.c.

PB-1
PB-2
PB-3
PB-4
PB-5

UP 39
UP 38

SIGHT DISTANCE
>500'

SIGHT DISTANCE
>500' (320' TO LIGHT)

PAVEMENT JOINT, SEE DETAIL,TYP.

12" HDPE

6" HDPE

CONSTRUCTION ENTRANCE

CONSTRUCTION ENTRANCE

EXIST. 30" RCCP

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

? bus stops
? tree saves

REVISIONS			
NO.	DATE	DESCRIPTION	DRAWN / APPR.
2	10/30/18	REVISED PER ENGINEERING COMMENTS	JHW

ST. JOHN STREET
DUNKIN DONUTS
PORTLAND MAINE

LANDSCAPE PLAN

DESIGNED:	JHW
DRAWN:	JHW
CHECKED:	SEB
APPROVED:	SEB
PLAN DATE:	05-04-18
PROJECT NO.	17140
DRAWING NO.	17140 B
FILENAME:	
SCALE:	
DATE ISSUED:	05-04-18

CLIENT & OWNER: Brandle, Inc.
130 Royall St.
Canton, MA 02021

Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257-2271 Fax: (207) 257-2150
info@plymouthengineering.com
www.plymouthengineering.com

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

SHEET 4 OF 9

C4

Att. 4

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Dunkin Donuts - St. John Street - Final Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com> Fri, Nov 16, 2018 at 12:52 PM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Jean – I have reviewed application materials and offer the following final traffic comments for the project.

- The project meets the requirement for a Traffic Movement Permit (TMP). The applicant has submitted a TMP Application, attended a Scoping Meeting, and submitted a Traffic Study (Section 7). The key item identified for review and consideration was changing the configuration of St. John Street from a four-lane roadway to a three-lane section with a center turn lane and bicycle lanes. This change is intended to mitigate crash patterns (St. John Street is a High Crash Location) associated with turning movements entering and exiting driveways. Based upon concept improvements plans prepared by the applicant the following is required as a condition of approval for the TMP:
  - The applicant shall submit draft final construction/design plans and specifications for review and approval.
  - The applicant shall be responsible for implementation/construction of all aspects of the improvement plan.
  - The implementation of the improvement plan shall be completed prior to the certificate of occupancy for the project.
  - The applicant shall submit a construction management plan for review and approval.

- Parking aisle widths exceed City standards. Given the need to provide vehicle queuing space for drive-through movements I support a waiver from City standards.

- The spacing of the proposed driveways both on the project site and in proximity to adjacent properties do not meet City standards. Given that the driveways currently exist, and the applicant is implementing improvements to St. John Street, I support a waiver from City standards.

- I do have concerns regarding pedestrian safety entering the site from Valley Street via the proposed crosswalk and conflicts with circulating vehicles. The applicant shall propose strategies for enhancing pedestrian safety at this crosswalk for review and approval. These strategies may consist of signing, pavement markings, or creating a raised crosswalk.

- The applicant shall submit detailed construction management plans for work that will impact both St. John Street and Valley Street for review and approval. I would note that closure of the St. John Street sidewalk is not acceptable, and the plan should note specific timing and safe pedestrian alternatives during construction activities (detouring to the west side of St. John Street is not likely to be adhered to and thus may create unsafe conditions).

- I would note that the proposed parking supply exceeds the minimum zoning requirement by more than 10%. In my professional opinion this is appropriate given the parking supply will provide overflow parking for drive-through customers during peak demand times.

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. 5

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Fwd: Dunkin Donuts - St. John Street - Final Traffic Comments

1 message

Jean Fraser <jf@portlandmaine.gov> Tue, Nov 20, 2018 at 4:17 PM
To: "Fraser, Jean" <jf@portlandmaine.gov>

DPW SUPPORT WAIVER ST JOHN SIDEWALK MATERIALS

---------- Forwarded message ---------
From: **Keith Gray** <kgray@portlandmaine.gov>
Date: Fri, Nov 16, 2018 at 11:44 AM
Subject: Re: Dunkin Donuts - St. John Street - Final Traffic Comments
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Tom Errico <thomas.ericco@tylin.com>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Jennifer Ladd <jwl@portlandmaine.gov>

Hello,

We are in support of the sidewalk material, concrete instead of brick, along the St. John Street frontage. The sidewalk extension around the utility pole should be lengthened another panel/section to facilitate movement around the pole. I've noticed a couple other items while looking at the Site Plan that we have noted before:

- Unable to locate the proposed underground electric location
- The applicant should look at angled parking in combination with the One-Way flow
- The parking configuration conflicts with the drive-thru queue. Can the parking area be separated from the queue? It's doubtful that the engineer or applicant will spend the time for an "improved" layout at this time but I'll bring it up again because it doesn't seem ideal.

Thank you,
Keith

2 attachments

TYLIN INTERNATIONAL **image001.gif**
2K

PLAN 1 SITE PLAN.pdf
589K

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Fwd: Dunkin Donuts - St. John Street - Final Streetscape/Site Plan Comments

1 message

Jean Fraser <jf@portlandmaine.gov> Tue, Nov 20, 2018 at 2:49 PM
To: "Fraser, Jean" <jf@portlandmaine.gov>

Final Streetscape/Site Plan Comments
from Transportation Program Manager

> On Tue, Nov 20, 2018 at 11:53 AM Bruce Hyman <bhyman@portlandmaine.gov> wrote:
>
> Good morning, Jean,
>
> I have reviewed application materials and offer the following final streetscape, detail sheets & site plan comments for the project.
>
> - The applicant shall provide a minimum 5' wide (parallel to the street) x 8' deep (perpendicular to the street) bus stop landing area to meet ADA requirements within the northerly edge of the bus easement area for the bus stop - this may involve adding one to two feet of depth along the back side of the new concrete sidewalk along this frontage. - I believe the sidewalk shown is 7'.
> - The applicant shall ensure that there is a minimum of 5' of clear width of sidewalk at all locations with utility poles within all existing or new concrete sidewalk along its frontage.
> - The driveways shall be constructed to have a maximum cross-slope of 2% for a minimum 5' of width across the pedestrian access route connecting the sidewalks. This is to be reflected on the driveway detail sheet (Detail Sheet 6).
> - The detail for the concrete sidewalk shall indicate a maximum 2% cross-slope (Detail Sheet 6). The detail for the brick sidewalk shall indicate a maximum 2% cross-slope (Detail Sheet 7).
> - A more durable material than pavers is to be used for Detectable Warning Panels (Detail Sheet 6).
> - The brick sidewalk to be constructed on Valley Street is to match the same width as the rest of the sidewalk (Site Plan).
> - The location shown for the Bike Racks is too small (parked bikes will conflict with the on-site sidewalk) and the location also conflicts with the landscaping plan - there are three plants shown immediately adjacent to the bike racks. I also could not find information on the number of racks proposed for the site.
>
> Please don't hesitate to contact me if you or the applicant have any questions related to the above items.
>
> Best regards,
>
> 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 ....*

Order 59-18/19
Passed 8-0 (Ali absent)
September 5, 2018

ETHAN K. STRIMLING (MAYOR)
BELINDA S. RAY (1)
SPENCER R. THIBODEAU (2)
BRIAN E. BATSON (3)
JUSTIN COSTA (4)

CITY OF PORTLAND
IN THE CITY COUNCIL

KIMBERLY M. COOK (5)
JILL C. DUSON (A/L)
PIOUS ALI (A/L)
NICHOLAS M. MAVODONES, JR (A/L)

ORDER
GRANTING MUNICIPAL OFFICERS' APPROVAL OF:

Portland Donuts, Inc. dba Dunkin Donuts. Application for a Food Service Establishment with Preparation at 325 St. John Street for 24 hour service.

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:	Dunkin' Donuts
Proposed Development Address:	325 St. John Street
Project Description:	New 2,277 s.f. drive thru restaurant w. parking
Chart/Block/Lot:	065 C004001
Preliminary Plan	✔
Final Plan	☐

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

APPLICANT

Name:	
Business Name:	Dunkin' Brands, Inc.
Address:	130 Royall Street
City/State:	Canton, MA
Zip Code:	02021
Work #:	
Home #:	
Cell #:	617-510-4543
Fax #:	
E-mail:	robert.mahoney@dunkinbrands.com

OWNER

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

AGENT/REPRESENTATIVE

Name:	Plymouth Engineering, Inc. c/o Jon H. Whitten, Jr.. P.E.
Address:	PO Box 46
City/State:	Plymouth, Maine
Zip Code:	04969
Work #:	207-257-2071
Home #:	
Cell #:	207-329-5190
Fax #:	207-257-2130
E-mail:	jon.whitten@plymouthengineering.com

BILLING (to whom invoices will be forwarded to)

Name:	Dunkin' Brands, Inc.
Address:	130 Royall Street
City/State:	Canton, MA
Zip Code:	02021
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

ENGINEER

Name:	Plymouth Engineering, Inc. c/o Jon H. Whitten, Jr.. P.E.
Address:	PO Box 46
City/State:	Plymouth, Maine
Zip Code:	04969
Work #:	207-257-2071
Home #:	
Cell #:	207-329-5190
Fax #:	207-257-2130
E-mail:	jon.whitten@plymouthengineering.com

SURVEYOR

Name:	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:	

ARCHITECT

Name:	Aharonian & Associates, Inc. - Architects
Address:	310 George Washington Highway - Suite 100
City/State:	Smithfield, RI
Zip Code:	02917
Work #:	401-232-5010
Home #:	
Cell #:	
Fax #:	401-232-5080
E-mail:	jbrousseau@arch-eng.com

ATTORNEY

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

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Jon H. Whitten, Jr., P.E.
E-mail:	jon.whitten@plymouthengineering.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 [ ] x $25.00 each	$
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$

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	30,239	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	30,239	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)	25,595	sq. ft.
Impervious Area (Total Proposed)	19,228	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	3,406	sq. ft.
Building Footprint (Total Proposed)	2,277	sq. ft.
Building Floor Area (Total Existing)	3,406	sq. ft.
Building Floor Area (Total Proposed)	2,277	sq. ft.
ZONING		
Existing	B2	
Proposed, if applicable	No Change Proposed	
LAND USE		
Existing	Sit Down Restaurant	
Proposed	Drive Thru Restaurant	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)		
# of Residential Units (Total Proposed)		
# of Lots (Total Proposed)		
# of Affordable Housing Units (Total Proposed)		
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)		
# of One-Bedroom Units (Total Proposed)		
# of Two-Bedroom Units (Total Proposed)		
# of Three-Bedroom Units (Total Proposed)		
PARKING SPACES		
# of Parking Spaces (Total Existing)	50	
# of Parking Spaces (Total Proposed)	25	
# of Handicapped Spaces (Total Proposed)	2	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)		
# of Bicycle Spaces (Total Proposed)		
ESTIMATED COST OF THE PROJECT	$	

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:	

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
X		1	Completed Application form
X		1	Application fees
X		1	Written description of project
X		1	Evidence of right, title and interest
		1	Evidence of state and/or federal approvals, if applicable
X		1	Written assessment of proposed project's compliance with applicable zoning requirements
		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
		1	Written requests for waivers from site plan or technical standards, if applicable.
X		1	Evidence of financial and technical capacity
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;	
		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;	
		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);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

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

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

- Continued on next page -

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

PORTLAND FIRE DEPARTMENT
SITE REVIEW
FIRE DEPARTMENT CHECKLIST

A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

1. Name, address, telephone number of applicant
2.
3. Name address, telephone number of architect

4. Proposed uses of any structures [NFPA and IBC classification]
5.
6. Square footage of all structures [total and per story]

7. Elevation of all structures

8. Proposed fire protection of all structures
   - ***As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)***

9. Hydrant locations

10. Water main[s] size and location

11. Access to all structures [min. 2 sides]

12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.

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

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: March 1, 2018

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

Site Address: 325 St. John Street

Chart Block Lot Number: 065 C004001

Proposed Use: Drive Thru Restaurant
Previous Use: Sit Down Restaurant
Existing Sanitary Flows: 240 GPD
Existing Process Flows: _____ GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
Current Lang's Express is connected to sewer in Valley Street.

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

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

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699
Owner/Developer Name: Dunkin' Brands, Inc.
Owner/Developer Address: 130 Royall Street Canton, MA 02021
Phone: 617-510-4543 Fax: E-mail: robert.mahoney@dunkinbrands.com
Engineering Consultant Name: Plymouth Engineering, Inc. c/o Jon H. Whitten, Jr.. P.E.
Engineering Consultant Address: PO Box 46 Plymouth, Maine 04969
Phone: 207-257-2071 Fax: 207-257-2130 E-mail: jon.whitten@plymouthengineering.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: 240 GPD
Peaking Factor/ Peak Times: 5/6:00 AM
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine," __ "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, Other (specify)* _____

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: TBD

Size of External Grease Interceptor: TBD

Retention Time: TBD

Peaking Factor/ Peak Times: TBD

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____ GPD

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

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

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

Peaking Factor/Peak Process Times: _____

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

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

A Guide to Holding Neighborhood Meetings
Portland, Maine

Planning and Urban Development Department
Planning Division and Planning Board

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

Developments requiring a neighborhood meeting

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

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

Timing of meeting

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

Location of meeting

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

Invitation List

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

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

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

When to Send Invitations

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

Notice Description

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

Attendance Sheet and Meeting Minutes

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

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

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

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

Attachments

1. Neighborhood Meeting Invitation Format
2. Neighborhood Meeting Certification

EXAMPLE: Neighborhood Meeting Invitation Format

Applicant/Consultant
Letterhead

(Date)

Dear Neighbor:

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

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

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

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

Sincerely,

(Applicant)

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

EXAMPLE: Neighborhood Meeting Certification

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

I also certify that on (date at least ten (10) days prior to the neighborhood meeting), invitations were mailed to the following:

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

2. Residents on the "interested parties" list.

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

Signed,

_____ _____ (date)

Attached to this certification are:

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

Att. B

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
Tel: (207) 257-2071 fax: (207) 257-2130

May 15, 2018

Planning Division
389 Congress Street
Portland, ME 04101

Project Summary - Preliminary Level III Site Plan Application: Dunkin' Donuts Restaurant, 325 St. John Street, Portland, Maine

On behalf of the owner/applicant, Dunkin' Brands, Inc., we are pleased to submit this Project Summary for a Preliminary Level III Site Plan Application for the proposed construction of a 2,270 square foot Dunkin' Donuts Drive-Thru Restaurant at 325 St. John Street in Portland, Maine. The applicant currently operates a Dunkin' Donuts Drive-Thru restaurant on the lot directly abutting this property and will be moving that use into this proposed, new restaurant building.

The property is 30,239 square feet in size and currently supports an Asian restaurant use. This Asian restaurant is located within a 3,406 s.f. building and is supported by 52 parking spaces and utility connections to public water, sewer, natural gas and storm drain systems within Valley Street.

The applicant is proposing to demolish the existing building and develop an approximately 2,270 s.f. building. The parking area will be re-developed to be smaller in size, while supporting a queue of at least 15 cars for the drive-thru window and 24 parking spaces. Access to the site will be through the two, existing curb cuts on St. John Street, with an additional "exit only" curb cut on Valley Street.

A Traffic Movement Permit will be required for this proposed use and the application for that permit has already been submitted to the City on behalf of the applicant.

We look forward to discussing this proposed project with you and Staff/Board members as this process continues. Please feel free to contact us with any questions in the meantime.

Respectfully,
PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., P.E.
Senior Project Manager

Att. C

DB Real Estate Assets I, LLC
c/o Dunkin' Brands, Inc.
130 Royall Street
Canton, Massachusetts 02021

Writer's direct dial: *781.737.3476*
Writer's direct facsimile: *781.737.4476*
Writer's email address: *maryann.harkins@dunkinbrands.com*

November 20, 2018

RE: Proposed Development Address: 325 St. John Street, Portland, Maine

To whom it may concern,

I am Assistant Secretary for Dunkin' Brands, Inc. and DB Real Estate Assets I, LLC. Please accept this letter as evidence for you that Dunkin' Brands, Inc. is the Manager of DB Real Estate Assets I, LLC and DB Real Estate Assets I, LLC is a wholly owned subsidiary of Dunkin' Brands, Inc.

Should you have any questions, comments or concerns, please do not hesitate to call me at 781-737-3476.

Sincerely,

Mary Ann Harkins
Assistant Secretary
Dunkin' Brands, Inc.
DB Real Estate Assets I, LLC

SECOND AMENDMENT TO
GROUND LEASE WITH EXISTING BUILDING

THIS SECOND AMENDMENT TO GROUND LEASE WITH EXISTING BUILDING ("Second Amendment") is dated May 30, 2018 between **NANCY E. HURST**, having an address at 1876 Harpswell Neck Road, Harpswell, Maine 04079 ("**Landlord**") and **DB REAL ESTATE ASSETS I LLC**, a Delaware limited liability company, having an address of 130 Royall Street, Canton, Massachusetts 02021 ("**Tenant**").

RECITALS

A. The parties have entered into a Ground dated March 31, 2017, affecting the real estate located 325 St. John Street in Portland, Maine, which Lease was amended by a First Amendment between the parties dated September 27, 2017.

B. The parties desire to enter into an agreement further modifying or supplementing the provisions of the aforesaid Ground Lease in order to extend its Contingency Period for certain but not all conditions.

AGREEMENT

In consideration of Tenant's immediate payment of $16,666 to Landlord and the mutual covenants contained herein, the parties agree, effective on the date of this Second Amendment, that the Ground Lease dated March 31, 2017 shall be and hereby is amended as follows:

1. Within ten (10) days of Tenant's receipt of a fully executed copy of this Second Amendment, Tenant shall pay Landlord Sixteen Thousand Six Hundred Sixty-Six and 00/100 Dollars ($16,666.00) ("Payment") in consideration for the extension of Tenant's Contingency Period as set forth herein. Landlord and Tenant acknowledge and agree that (i) Eight Thousand Three Hundred Thirty-Three and 00/100 Dollars ($8,333.00) shall be retained by Landlord regardless of whether or not Tenant exercises its right to terminate the Ground Lease pursuant to Paragraph 2 below and, further, that such portion of the Payment shall not be considered a prepayment of rent, and (ii) Eight Thousand Three Hundred Thirty-Three and 00/100 Dollars ($8,333.00) shall be applied to the payment of the first month's rent under the Lease unless Tenant elects to terminate the Ground Lease pursuant to Paragraph 2 below, in which case Landlord shall be entitled to retain such payment.

2. Section 2.1, and its subsections 2.1.1 through 2.1.7, inclusive, of the Ground Lease are eliminated in their entirety and shall be of no further force and effect, and the following Section 2.1 and its subsections shall be substituted for it:

> 2.1. Tenant's Contingency Period: Tenant shall have the unilateral right to terminate this Lease in the event any of the contingencies set forth below (each, a "contingency" and collectively, the "contingencies") are not satisfied in Tenant's sole and absolute discretion by December 31, 2018 (the "Contingency Deadline"). In the event Tenant shall elect to terminate this Lease pursuant to this Section 2.1, Tenant shall provide Landlord with written notice of its election on or before the Contingency Deadline, in which event this Lease shall be deemed null and void and neither party shall have any further obligation to the other hereunder. The Contingencies are:

2.1.1 Tenant's receipt of written approval of the Lease and the development of the Premises as a Dunkin= Donuts restaurant in accordance with Tenant's corporate approval policies;

2.1.2 Tenant's receipt, at Tenant's expense, of a title search which is free of any exceptions which are unacceptable to Tenant; and

2.1.3 Tenant's receipt of all permits, licenses, and approvals required or deemed appropriate by Tenant for the construction of the improvements on the Premises (including, without limitation, those required for the installation of Tenant's pylon and storefront signs) permitting the operation of a typical Dunkin' Donuts restaurant on the Premises with a drive-up window and patio, seven (7) days per week, twenty-four (24) hours per day ("Necessary Permits").

The parties have duly executed the Second Amendment in duplicate to be effective as of the day and year first above written.

Date Signed:

5.30.18

Landlord:

Nancy E Hurst

By: Nancy E. Hurst

5/30/18

Tenant:

By: Lawrence P. Flynn
VP, Controller & Treasurer

Instr 16840 Bk 9982 Pg 346

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS

WAYNE R. HURST, of South Harpswell, County of Cumberland and State of Maine

FOR CONSIDERATION PAID - GRANTS TO

NANCY E. HURST, of South Harpswell, County of Cumberland and State of Maine

16840

WITH WARRANTY COVENANTS the land in Portland, County of Cumberland and State of Maine

A certain lot or parcel of land, together with the buildings thereon, situated on the easterly side of St. John Street in said Portland, more particularly bounded and described as follows:

BEGINNING at the northeasterly corner of land formerly of Lindley M. Webb, which corner is about one hundred (100) feet northerly from Congress Street;
THENCE running westerly by said Webb land and land formerly of C. M. Carleton ninety-nine and twenty-eight hundredths (99.28) feet, more or less, to St. John Street;
THENCE northerly by St. John Street one hundred fifty-two and thirty-one hundredths (152.31) feet, more or less, to a point distant two hundred fifty-three and seventy-three hundredths (253.73) feet northerly from the intersection of said side of St. John Street with the northerly side of Congress street;
THENCE easterly at right angles with St. John Street seventy and five tenths (70.5) feet to land formerly of Hans Hansen;
THENCE southerly by said Hansen land one hundred forty-three and five tenths (143.5) feet, more or less, to the point of beginning.

Excepting therefrom the portion of the premises conveyed to Philip P. Resnick by Resnick Oil Co., Inc. by Warranty Deed, dated September 6, 1966 and recorded in Cumberland County Registry of Deeds in Book 2972, Page 535.

Meaning and intending to convey the same premises conveyed to the Grantor herein by Warranty Deed of Eugene S. Martin dated December 30, 1983 and recorded in the Cumberland County Registry of Deeds in Book 6361, Page 156.

WITNESS my hand and seals this 27 day of March, 1992.

Wayne R. Hurst
WAYNE R. HURST

STATE OF MAINE

Sagadahoc, ss. March 27, 1992

Then personally appeared the above named WAYNE R. HURST and acknowledged the foregoing instrument to be his free act and deed,

BEFORE ME,

David R. Weiss

~~Notary Public Atty at Law~~
~~My Commission Expires~~

David R. Weiss
Printed or Typed Name of Notary

Recorded
Cumberland County
Registry of Deeds
03/31/92 09:31:26AM
~~Robert P.~~ Titcomb
Register

95

25089

TRUSTEES' DEED

KNOW ALL MEN BY THESE PRESENTS,

That, We, Casco Bank & Trust Company, a banking institution duly organized and existing by law and having a principal place of business at Portland, Maine, and Diana Resnick, both Trustees under an Indenture of Trust dated September 21, 1976, said trust being known as the Philip P. Resnick Revocable Trust, by virtue of the authority given to us in said Trust, in our capacities as Trustees, as aforesaid, and in consideration of One Dollar ($1.00) and other valuable considerations paid to us by Nancy E. Hurst of South Harpswell, County of Cumberland and State of Maine, the receipt whereof is hereby acknowledged, do hereby sell, and convey unto the said Nancy E. Hurst, her heirs and assigns, the following described real estate, with the buildings thereon, situated in Portland, bounded and described as follows:

> A certain lot or parcel of land situated in Portland, County of Cumberland and State of Maine, bounded and described as follows: Beginning at an iron on the easterly side of St. John Street, distant 252.04 feet northerly from Congress Street; thence North 2 degrees 14' East along the easterly side line of St. John Street, a distance of 62.50 feet, to an iron; thence South 87 degrees 46' East, a distance of 141.15 feet to an iron at the westerly side line of Valley Street; thence South 8 degrees 30' East along the westerly side line of Valley Street, a distance of 107.88 feet to an iron; thence South 81 degrees 27' West, a distance of 79.69 feet to an iron; thence North 8 degrees 45' West, a distance of 10 feet to an iron; thence North 56 degrees 55' West, a distance of 94.60 feet to an iron at the easterly side line of St. John Street and the point of beginning.
>
> The premises described being the same as conveyed by Resnick Oil Co. to Philip P. Resnick and recorded in Book 2972, Page 535, Cumberland County Registry of Deeds.

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

Beginning on the westerly side line of Valley Street at a point one hundred thirty-one and seventy-one hundredths (131.71) feet northerly thereon from the northerly side line of Congress Street, being the northeasterly corner of land conveyed by John W. Deering to Emma C. Henderson by deed dated September 1, 1943, and recorded in Cumberland County Registry of Deeds in Book 1724, Page 287; thence northerly by the westerly side line of Valley Street sixty (60) feet to the southeasterly corner of land conveyed by Franklin S. Olsen to Margaret Howard, et al, by deed dated April 2, 1942, and recorded in said Registry of Deeds in Book 1671, Page 150; thence westerly at right angles with Valley Street and by said Howard land seventy-nine and sixty-nine hundredths (79.69) feet to an iron hub in the easterly side line of land conveyed by Gifford Realty Co. to Mary E. Hansen by deed dated November 3, 1969, and recorded in said Registry of Deeds in Book 3107, Page 809; thence southerly by said Hansen land fifty-three and forty-four hundredths (53.44) feet to an iron hub at the northwesterly corner of said Henderson land; thence easterly by said Henderson land seventy-nine and ninety-four hundredths (79.94) feet to the point of beginning.

The premises described being the same conveyed to Philip P. Resnick from Hildegarde M. Ledue, and recorded in Book 2983, Page 372, in the Cumberland County Registry of Deeds.

To Have and to Hold the above granted premises unto the said Nancy E. Hurst and her heirs and assigns forever, and we the said Casco Bank & Trust Company and Diana Resnick, in our said capacities as Trustees do hereby COVENANT to and with the said Nancy E. Hurst that we are the lawful Trustees under the said Philip P. Resnick Revocable Trust; that we have power under said Trust to sell, as aforesaid and that in making this conveyance we have in all respect acted in pursuance of the authority granted in said Trust.

In Witness Whereof, we the said Casco Bank & Trust Company by Ashton Johnson, its Trust Officer, and Diana Resnick, both in their capacity as Trustees aforesaid, have hereunto put their hand and seals this 5th day of October, 1976.

Signed, Sealed and Delivered
in the presence of

CASCO BANK & TRUST COMPANY

Rose M. Bouchard
Witness

By its Trust Officer - Trustee

Rose M. Bouchard
Witness

Diana Resnick
Trustee

45

State of Maine
Cumberland, ss.

October 5, 1976

Then personally appeared the above-named Ashton Johnson, Trust Officer of said Casco Bank & Trust Company, duly authorized, and acknowledged the above instrument to be the free act and deed of said Casco Bank & Trust Company, and his free act and deed in his capacity.

Before me,

Rose M. Bouchard

MY COMMISSION EXPIRES
APRIL 8, 1977

State of Maine
Cumberland, ss

October 5, 1976

Then personally appeared Diana Resnick and acknowledged the above instrument to be her free act and deed.

Before me,

Rose M. Bouchard

MY COMMISSION EXPIRES
APRIL 8, 1977

OCT 15 1976
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 1 H 52M P M, and recorded in
BOOK 3923 PAGE 45. Margaret L Weber Acting Register

STORMWATER MANAGEMENT PLAN

325 St. John Street Dunkin' Donuts
Portland, Maine
Revised July 11, 2018

The following Stormwater Management Plan has been prepared for Dunkin' Donuts to evaluate stormwater runoff and erosion control for the proposed new store and parking area to be located at 325 St. John Street, in Portland, Maine.

Site Calculations

Total Property Area	30,239 square feet (0.69 acres)
Existing Impervious Area	23,749 square feet (0.54 acres)
Total New Impervious Area	20,131 square feet (0.46 acres)
Total New Landscaped Area	10,108 square feet (0.23 acres)
Total Developed Area	30,239 square feet (0.69 acres)

Assumptions

- The entire site will be disturbed during construction, as such the entire site will be considered developed (impervious or landscaped).

Existing Conditions

325 St. John Street in Portland, is currently a restaurant with associated parking. The development parcel is located on the easterly side of St. John Street, between it and Valley Street. The property is approximately 0.69 acres (30,239 square feet) and is currently accessed by St. John Street. The site is surrounded by commercial development on all sides, in the Business Community (B2) district. The property is entirely developed.

The majority of the site's storm water runoff enters the combined storm water – sewer system in Valley Street through on site catch basins. A single catch basin directs flow to the pipe system in St. John Street.

The project area features topography that is relatively flat. There is currently 23,749 square feet (0.54 acres) of impervious area allocated on the site, and 6,490 square feet of landscaping, the existing site is entirely developed.

Proposed Development

Dunkin' Brands, Inc. is proposing a new 2,277 square foot restaurant, which includes a freezer and 3 season room within its footprint, two lane drive thru, and associated parking. There are two, existing curb cuts on St. John Street that will be utilized in the proposed condition, as well as a new, exit only curb cut to Valley Street. The parking and maneuvering areas will be curbed and stormwater will be directed to a catch basin and pipe system. The project stormwater management system will feature two new Focalpoint

Biofiltration Systems provided by ACF Environmental to treat at least 50% of the new impervious area, prior to it flowing to Valley Street.

Drainage Pattern

Roof runoff will be collected and treated by a Focal Point System prior to entering into the stormdrain pipe system. The southern half of the proposed pavement area will flow to a second Focal Point System via overland sheet flow. The northern half of the proposed pavement area will flow to catch basins that will direct the runoff to Valley Street. This is a slight change, as some of the existing pavement in this area was directed to St. John Street through a small drainage pipe. Offsite runoff from the south will be directed to the catch basin system via shallow grass swales and allowed to flow directly to Valley Street as it does today.

Flooding

The property is currently not shown as being in a floodplain, according to current FEMA mapping. There is no known historical flooding on the site.

Modeling Assumptions

The onsite stormwater facilities were sized utilizing the USDA Soil Conservation Service (SCS) TR-20 Runoff Simulation Model, as contained in the HydroCAD computer software program (Version 9.0). Runoff curve numbers were determined for each direct watershed by measuring the area of each hydrologic soil group within each type of land cover. Weighted curve numbers were then calculated using curve numbers for various cover types and hydrologic soil groups, assuming "good" conditions as defined in U.S Soil Conservation Service (SCS) publications. Times of concentration and travel times were entered as a default of 5 minutes, as a minimum, due to paved surface sheet flow.

All of the watersheds' peak runoff rates were analyzed for the 2, 10, and 25-year frequency, 24-hour duration storm events. A Type III rainfall distribution was applied to these storms. The rainfall amounts for Cumberland County are as follows:

Storm Frequency Precipitation (in./24 hr)	
2-year	3.10
10-year	4.60
25-year	5.80

Soils

The soils within the project area were gathered from the Web Soils Survey compiled by the USGS and attached in the application.

Water Quantity (Flooding Standard)

The following table summarizes the results of stormwater calculations for the design storm events for the project area. Calculations and computer modeling sheets are provided with this report.

Table 1 - Stormwater Runoff Summary Table Pre-Development vs. Post-Development						
Study Point #	**2Yr/24Hr (cfs)**		**10Yr/24Hr (cfs)**		**25Yr/24Hr (cfs)**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
POND 5&7	2.23	2.23	3.43	3.87	4.39	4.75

As the above result table shows, the post-development flow rate for the 2, 10, and 25-year/24-hour design storm events are nearly equal to the pre-development condition. This can be attributed to the overall reduction in impervious area on the site and the re-routing of one of the catch basins to Valley Street.

Water Quality (BMP Standard)

The water quality requirements will be met by Focal Point Biofiltration Systems. The structures will provide full treatment for at least 50% of the site's impervious area.

New Impervious Area: The project will result in 20,131 square feet of impervious area, a decrease of 3,618 square feet from existing conditions.

Impervious Area Treatment Summary		
Type	Amount Created	Treatment
Building	2,277 sf	100% (Focal Point)
Southern Parking Area	9,155	100%
Northern Parking Area	8,699	0%
REQUIRED TREATMENT	50%	10,273 SF
PROVIDED TREATMENT		**11,432 SF**

Project Developed Area: The entire parcel is currently developed (impervious & landscaped), the proposed project will be entirely developed area.

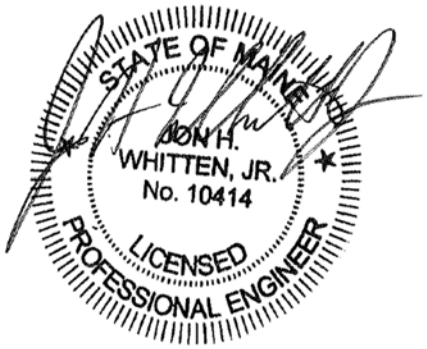
27% (0.06 AC) of the landscaped area will be treated by the stormwater management system.

See attached worksheets for Focalpoint Biofiltration Systems.

Summary

The proposed condition of the site will result in an overall decrease in impervious area and will increase treatment to at least 50 percent. The peak rate of runoff for the site is slightly increased to Valley Street and decreased to St. John Street. The increase is within 12 percent of the pre-development rates and can be categorized as insignificant. Based on the results of this evaluation, the proposed stormwater design is not expected to cause flooding, erosion or other significant adverse effects downstream of the site.

Prepared by:
PLYMOUTH ENGINEERING, INC.



Jon H. Whitten, Jr., P.E.
Senior Project Manager

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Fri Nov 03 2017 08:49:47. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
DUNKIN' BRANDS, INC.	20051118 F	BUSINESS CORPORATION (FOREIGN)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
06/09/2005	N/A	DELAWARE

Other Names **(A=Assumed ; F=Former)**

NONE

Clerk/Registered Agent

C T CORPORATION SYSTEM
128 STATE ST #3
AUGUSTA, ME 04330

Back to previous screen | New Search

Click on a link to obtain additional information.

List of Filings	View list of filings
Obtain additional information:	
Certificate of Existence (more info)	Short Form without amendments ($30.00)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

Get Acrobat Reader

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our Feedback page.

© Department of the Secretary of State

Soil Map—Cumberland County and Part of Oxford County, Maine



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 13, Sep 11, 2017

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
HIB	Hinckley loamy sand, 3 to 8 percent slopes	0.7	100.0%
Totals for Area of Interest		**0.7**	**100.0%**

Construction Management Plan
325 St. John Street

Project Narrative

The applicant/developer is proposing a 2,277 square foot drive thru restaurant with associated parking at 325 St. John Street in the City of Portland. The project sits on a 30,239 SF lot and work will include:

- Installation of erosion control measures
- Removal of existing building
- Removal of existing pavement
- Partial removal of existing utilities
- Installation of new on-site utilities
- Subgrading of parking area
- Construction of new building
- Paving of site
- Installation of site landscaping and stormwater treatment units
- Removal of erosion control measures

Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

As a Level III Site Plan review, the developer of the project will be required to submit a performance guarantee for the proposed work. This performance guarantee and site development inspection fees will be based upon a cost estimate submitted and approved by the City. The form and of the guarantee will be a letter of credit from an approved bank or credit union, a deposit in a bank-held escrow account or a deposit in a City- held escrow account. These fees/guarantees will need to be paid/in place prior to scheduling the pre-construction meeting.

The contractor will be responsible for obtaining street opening and street occupancy permits from the Department of Public Works. All construction in the right-of-way shall conform to Chapter 25 and all sewer and stormwater construction/connections shall conform to Chapters 24 & 32 of the Land Use Code.

Construction Administration and Communication

This project will be managed by a representation of the developer, Dunkin' Brands, Inc. along with a project manager from Plymouth Engineering, Inc.

1. Contact Person and contact information
   Developer - Chris Jesson, Construction Manager, Dunkin' Brands, Inc.
   Cell Phone: 339-222-6471
   Fax: 781-737-4541
   Email: Christopher.Jesson@dunkinbrands.com
   Contractor – TBD
2. Construction Signage will be posted on the site with Contact Information for Contractor
3. Construction Manager will work closely and inform adjacent abutters, businesses and all other parties, as far in advance as possible, of scheduled work.
4. All construction site signage is temporary and shall be removed at project completion.

Construction Schedule

Estimated Site Plan Approval: September, 2018
Estimated Preconstruction Meeting: August, 2018
Estimated Construction Time----------15 Weeks +/-
Erosion Control Measures Placed----------Week 1
Site Work---------- Week 2-6
Street Utility Connections----------Week 6

Foundation----------Week 5-6
Framing----------Week 6-8
Building Envelope Close In----------Week 8
Interior Work ----------Week 8-14
Final Site Work----------Week 14-15
Site Landscaping----------Week 15

1. 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 buildings. From June 1st to August 31st construction activity may continue until 8:00 p.m.
2. 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."
3. Pursuant to Section 25-129: "Each permittee shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. To the fullest extent practicable, the permittee shall take appropriate measures to reduce noise, dust and unsightly debris in the performance of the excavation work. Excavation work, including the use of any tool, appliance, or equipment, shall be performed between the hours of 7:00 a.m. and 10:00 p.m. only, exclusive of emergency work. Time waiver requests may be submitted to the public works authority for work outside of this time period and will be subject to neighborhood concerns. Excavation work shall not occur on Sundays, holidays or on major holiday weekends, unless expressly authorized by the public works authority or as a result of emergency need.
4. If allowed, no construction activity shall begin before 8:00 a.m. on a Saturday, Sunday or legal holiday.
5. All deliveries for materials will comply with the noise requirements listed above or be restricted to the hours allowed for construction work.

Security & Public Safety

1. Prior to commencing construction, site contractor shall install "Construction Ahead" sign to warn bicyclists and motorists of construction with the area.
2. Contractor shall be responsible for the setup of construction staging area before construction begins. Contractor may provide fencing for staging area at their discretion. Fenced in areas shall be provided with gates passable by emergency vehicles and equipped with a Knox locking device.
3. Contractor shall be responsible for the safe storage of materials or equipment on-site.
4. Contractor shall have weekly meetings which shall include discussions relative to security and public security.
5. Contractor shall develop a fire safety and emergency protocol and contact the nearest fire station to advise them of the ongoing construction project.
6. All excavations within the right-of-way shall be filled or plated at night. Excavations within the site shall be provided with adequate barricades or warnings (i.e. construction area tape around excavation) at night.
7. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

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.

4. 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.

Site Management and Controls

1. Building contractors will be responsible for the site management on individual lots.
2. Contractor will be responsible for providing and maintaining waste removal during construction.
3. Contractor will maintain the construction entrance as shown on the plans and will maintain St. John Street and Valley Street by including sweeping as necessary for removal of tracked materials.
4. Contractor shall be responsible for maintaining construction BMP's and executing good housekeeping measures as depicted on the approved plans and as included in the Inspection, Maintenance and Housekeeping Plan.
5. Dust controls: The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris.
6. 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. The Contractor and City will be responsible for adjusting work should noise become an issue.
7. Rodent Control is not expected for this project but should it become necessary, it will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code or City of Portland Public Works.
8. 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.

9. Site management and controls shall be discussed at each tailgate meeting including maintenance of BMP's and good housekeeping measures.

Erosion Control and Preservation of Trees

1. The site 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 site contractor shall maintain storage and of materials and equipment away from or under trees.
3. The existing street trees shall be preserved, if feasible by construction.

Construction Staging Area

1. The Construction Management Plan depicts the location of the material (open storage) and equipment storage area. The exact location of these areas shall be up to the contractor but will be in the general area depicted on the CMP.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be adjacent to the site storage area 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 property 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, the contractor shall provide an area along the adjacent shoulder of St. John Street for offloading. This area shall be provided within the buffer area of a maintenance of traffic area with the appropriate cones, advanced warning signs and flaggers as necessary. All off-loading shall occur from the project side of the truck and not within the roadway.

Parking During Construction

1. Construction Parking: Parking for construction workers shall be on the site as indicted on the Construction Management Plan.
2. Truck Routes and Volumes: All deliveries to and from site shall occur on the arterial roads to St. John Street and proceed along St. John Street to the site.

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

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below

Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

Checklist	Items to be Provided
Yes NA Plan ☐ ☐ ☐	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes NA Plan ☐ ☐ ☐	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes NA Plan ☐ ☐ ☐	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes NA Plan ☐ ☐ ☐	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes NA Plan ☐ ☐ ☐	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes NA Plan ☐ ☐ ☐	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS, if applicable • Evidence of existing easements and any proposed easements
Yes NA Plan ☐ ☐ ☐	WAIVER REQUESTS • Written request for waiver describing request and reason. Waiver Table
Yes NA Plan ☐ ☐ ☐	FINANCIAL CAPABILITY • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA Plan ☐ ☐ ☐	TECHNICAL CAPABILITY • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Submit each Tab as one PDF file and bookmark the items as noted below

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☐ ☐	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ☐ ☐ ☐	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
Yes NA Plan ☐ ☐ ☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
Yes NA Plan ☐ ☐ ☐	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☐ ☐ ☐	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☐ ☐ ☐	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☐ ☐ ☐	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☐ ☐ ✔	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ✔ ☐ ☐	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☐ ✔	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ☐ ☐ ✔	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ☐ ☐ ✔	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ☐ ✔	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ☐ ☐ ✔	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

Tab 4 - ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

Tab 6 - SITE DESIGN

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appendix 1)

Yes NA Plan ☐ ✔ ☐	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes NA Plan ✔ ☐ ☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ✔ ☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ☐ ✔	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes NA Plan ✔ ☐ ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Check list	
Yes NA Plan ✔ ☐ ☐	**Construction Management Plan** • Construction Management Document and Plan

Level II and Level III Site Plan Checklist

Please upload the following drawings with the listed details into e-Plan

☐ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☐ **Existing Conditions**

- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☐ **Proposed Site Plan**

- Ground floor area, and grade elevations for all buildings

☐ **Access, Circulation, and Parking**

- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☐ **Site Considerations**

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☐ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

☐	**GRADING and DRAINAGE PLAN** including:
	• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☐	**EROSION CONTROL**
	• Must be in compliance with Technical Manual, Section 5
☐	**LANDSCAPE PLAN** including:
	• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☐	**RECORDING PLAT**, if applicable
	• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☐	**ARCHITECTURAL PLANS & RENDERINGS** including:
	• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B-2

All Projects:

	Required	Proposed
Lot Size	NONE	30,239 S.F.+/-
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	20'	213.12'
Front Yard Minimum	NONE	NONE
Front Yard Maximum	10'	10'
Rear Yard	10'	61'
Yard Right	NONE	102'
Yard Left	NONE	67'
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	80%	
Minimum Lot Coverage	N/A	N/A
Maximum Height	45'	
Open Space	N/A	N/A
Maximum Impervious Area	80%	
Pavement Setback	10'	10'
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces		
Loading Bays	N/A	N/A
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Att. J

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
Tel: (207) 257-2071 fax: (207) 257-2130

July 19, 2018 Project No. 17140

Ms. Jean Fraser, Planner
City of Portland Planning & Urban Development Department
389 Congress Street, 4th Floor
Portland, ME 04101

Explanation of Parking Aisle Width – Proposed Dunkin Donuts Restaurant, 325 St. John Street, Portland, Maine. (PL-000047-2018)

Ms. Fraser:

The applicant, Dunkin' Brands, Inc. is proposing to replace an existing restaurant with a new Dunkin' Donuts Restaurant at 325 St. John Street, Portland, Maine. The proposed site layout includes a parking aisle on either side of the building with a width of 36 feet, maximum. The aisle width is proposed to be 36 feet in order to support a single lane of queued cars while providing a full 24-foot aisle for the maneuvering of vehicles utilizing the standard 90-degree parking spaces. This site has been designed to offer three alternatives for vehicles utilizing the site:

1. Queue up to get serviced at the drive-thru window,
2. Park and enter the building for service, and/or
3. Proceed through the site without entering the queue.

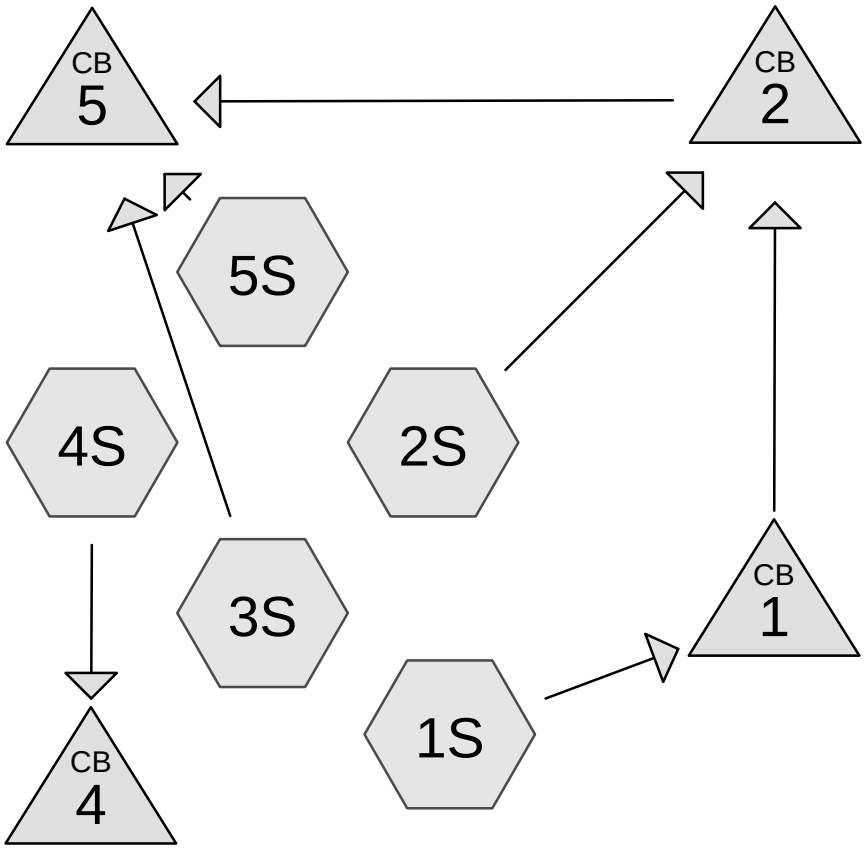
In most cases this requires a full 36 feet of pavement width to ensure that vehicles can proceed through the site without entering the queue.

We believe this aisle width is permitted as Section 1.14 of the City of Portland Technical Manual states that "vehicular access shall be provided by one or more aisle. Minimum widths of aisles are illustrated in Figures I-28 thru 31." When looking at Figure I-29, the minimum aisle width for a standard parking space at 90-degrees is 24-feet.

We look forward to continuing to discuss this project with City Staff and the Planning Board. Please let us know if you have any questions in the meantime.

Sincerely,
PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., PE
Senior Project Manager



Subcat Reach Pond Link

Drainage Diagram for 17140 pre
Prepared by Plymouth Engineering, Inc., Printed 7/11/2018
HydroCAD® 9.00 s/n 03654 © 2009 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
5,329	74	>75% Grass cover, Good, HSG C (1S, 2S, 4S, 5S)
38,037	98	Impervious Area (1S, 2S, 3S, 4S, 5S)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=13,665 sf 74.01% Impervious Runoff Depth>2.26"
Tc=5.0 min CN=92 Runoff=0.76 cfs 2,569 cf

Subcatchment 2S: Runoff Area=14,286 sf 96.50% Impervious Runoff Depth>2.76"
Tc=5.0 min CN=97 Runoff=0.92 cfs 3,283 cf

Subcatchment 3S: Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>2.87"
Tc=5.0 min CN=98 Runoff=0.22 cfs 789 cf

Subcatchment 4S: Runoff Area=6,884 sf 85.97% Impervious Runoff Depth>2.55"
Tc=5.0 min CN=95 Runoff=0.42 cfs 1,461 cf

Subcatchment 5S: Runoff Area=5,231 sf 94.04% Impervious Runoff Depth>2.76"
Tc=5.0 min CN=97 Runoff=0.34 cfs 1,202 cf

Pond 1: Peak Elev=18.92' Inflow=0.76 cfs 2,569 cf
12.0" Round Culvert n=0.013 L=86.0' S=0.0053 '/' Outflow=0.76 cfs 2,569 cf

Pond 2: Peak Elev=18.73' Inflow=1.68 cfs 5,851 cf
12.0" Round Culvert n=0.013 L=126.0' S=0.0191 '/' Outflow=1.68 cfs 5,851 cf

Pond 4: Peak Elev=16.91' Inflow=0.42 cfs 1,461 cf
12.0" Round Culvert n=0.013 L=68.0' S=0.0154 '/' Outflow=0.42 cfs 1,461 cf

Pond 5: Peak Elev=16.52' Inflow=2.23 cfs 7,842 cf
12.0" Round Culvert n=0.013 L=44.0' S=0.0548 '/' Outflow=2.23 cfs 7,842 cf

Summary for Subcatchment 1S:

Runoff = 0.76 cfs @ 12.02 hrs, Volume= 2,569 cf, Depth> 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	3,551	74	>75% Grass cover, Good, HSG C
*	10,114	98	Impervious Area
	13,665	92	Weighted Average
	3,551		25.99% Pervious Area
	10,114		74.01% Impervious Area

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

Summary for Subcatchment 2S:

Runoff = 0.92 cfs @ 12.02 hrs, Volume= 3,283 cf, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	13,786	98	Impervious Area
	500	74	>75% Grass cover, Good, HSG C
	14,286	97	Weighted Average
	500		3.50% Pervious Area
	13,786		96.50% Impervious Area

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

Summary for Subcatchment 3S:

Runoff = 0.22 cfs @ 12.02 hrs, Volume= 789 cf, Depth> 2.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,300	98	Impervious Area
	3,300		100.00% Impervious Area

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

Summary for Subcatchment 4S:

Runoff = 0.42 cfs @ 12.02 hrs, Volume= 1,461 cf, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	966	74	>75% Grass cover, Good, HSG C
*	5,918	98	Impervious Area
	6,884	95	Weighted Average
	966		14.03% Pervious Area
	5,918		85.97% Impervious Area

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

Summary for Subcatchment 5S:

Runoff = 0.34 cfs @ 12.02 hrs, Volume= 1,202 cf, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	312	74	>75% Grass cover, Good, HSG C
*	4,919	98	Impervious Area
	5,231	97	Weighted Average
	312		5.96% Pervious Area
	4,919		94.04% Impervious Area

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

Summary for Pond 1:

Inflow Area = 13,665 sf, 74.01% Impervious, Inflow Depth > 2.26" for 2-Year event
Inflow = 0.76 cfs @ 12.02 hrs, Volume= 2,569 cf
Outflow = 0.76 cfs @ 12.02 hrs, Volume= 2,569 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.76 cfs @ 12.02 hrs, Volume= 2,569 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.92' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.40'	**12.0" Round Culvert** L= 86.0' Ke= 0.800 Outlet Invert= 17.94' S= 0.0053 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.72 cfs @ 12.02 hrs HW=18.90' (Free Discharge)
1=Culvert (Barrel Controls 0.72 cfs @ 2.66 fps)

Summary for Pond 2:

Inflow Area = 27,951 sf, 85.51% Impervious, Inflow Depth > 2.51" for 2-Year event
Inflow = 1.68 cfs @ 12.02 hrs, Volume= 5,851 cf
Outflow = 1.68 cfs @ 12.02 hrs, Volume= 5,851 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.68 cfs @ 12.02 hrs, Volume= 5,851 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.73' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.94'	**12.0" Round Culvert** L= 126.0' Ke= 0.800 Outlet Invert= 15.53' S= 0.0191 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=1.60 cfs @ 12.02 hrs HW=18.70' (Free Discharge)
1=Culvert (Inlet Controls 1.60 cfs @ 2.48 fps)

Summary for Pond 4:

Inflow Area = 6,884 sf, 85.97% Impervious, Inflow Depth > 2.55" for 2-Year event
Inflow = 0.42 cfs @ 12.02 hrs, Volume= 1,461 cf
Outflow = 0.42 cfs @ 12.02 hrs, Volume= 1,461 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.42 cfs @ 12.02 hrs, Volume= 1,461 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.91' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.55'	**12.0" Round Culvert** L= 68.0' Ke= 0.800 Outlet Invert= 15.50' S= 0.0154 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.40 cfs @ 12.02 hrs HW=16.89' (Free Discharge)
1=Culvert (Inlet Controls 0.40 cfs @ 1.67 fps)

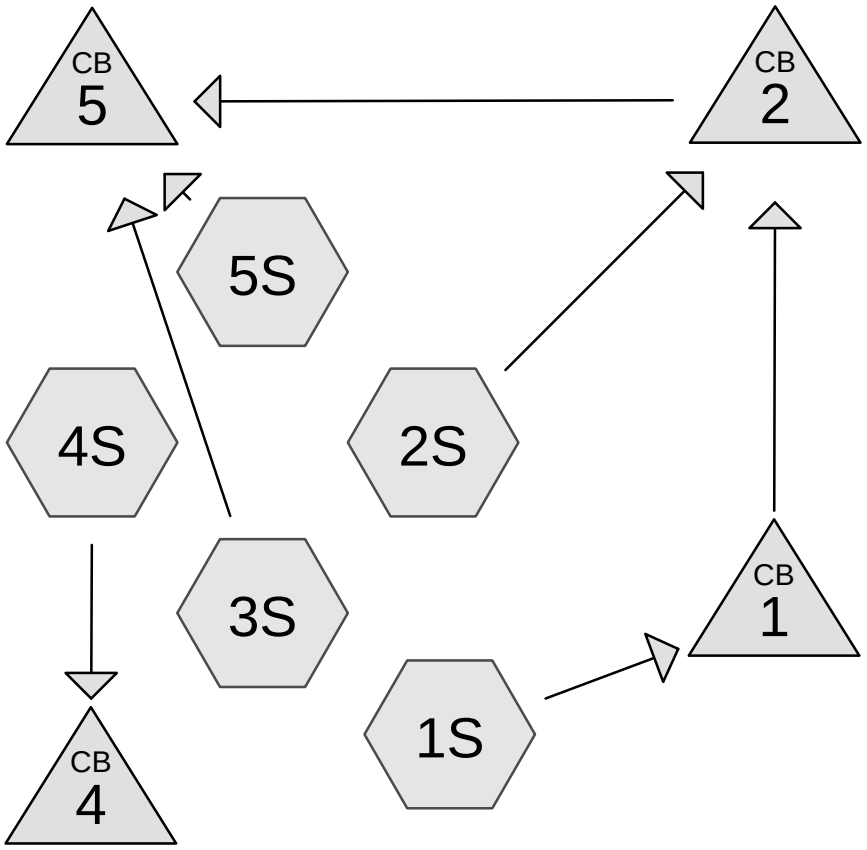
Summary for Pond 5:

Inflow Area = 36,482 sf, 88.04% Impervious, Inflow Depth > 2.58" for 2-Year event
Inflow = 2.23 cfs @ 12.02 hrs, Volume= 7,842 cf
Outflow = 2.23 cfs @ 12.02 hrs, Volume= 7,842 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.23 cfs @ 12.02 hrs, Volume= 7,842 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.52' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.53'	**12.0" Round Culvert** L= 44.0' Ke= 0.800 Outlet Invert= 13.12' S= 0.0548 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=2.14 cfs @ 12.02 hrs HW=16.49' (Free Discharge)
1=Culvert (Inlet Controls 2.14 cfs @ 2.77 fps)



Subcat Reach Pond Link

Drainage Diagram for 17140 pre

Prepared by Plymouth Engineering, Inc., Printed 7/11/2018

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
5,329	74	>75% Grass cover, Good, HSG C (1S, 2S, 4S, 5S)
38,037	98	Impervious Area (1S, 2S, 3S, 4S, 5S)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=13,665 sf 74.01% Impervious Runoff Depth>3.70"
Tc=5.0 min CN=92 Runoff=1.22 cfs 4,212 cf

Subcatchment 2S: Runoff Area=14,286 sf 96.50% Impervious Runoff Depth>4.25"
Tc=5.0 min CN=97 Runoff=1.38 cfs 5,058 cf

Subcatchment 3S: Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>4.36"
Tc=5.0 min CN=98 Runoff=0.32 cfs 1,200 cf

Subcatchment 4S: Runoff Area=6,884 sf 85.97% Impervious Runoff Depth>4.02"
Tc=5.0 min CN=95 Runoff=0.65 cfs 2,308 cf

Subcatchment 5S: Runoff Area=5,231 sf 94.04% Impervious Runoff Depth>4.25"
Tc=5.0 min CN=97 Runoff=0.51 cfs 1,852 cf

Pond 1: Peak Elev=19.08' Inflow=1.22 cfs 4,212 cf
12.0" Round Culvert n=0.013 L=86.0' S=0.0053 '/' Outflow=1.22 cfs 4,212 cf

Pond 2: Peak Elev=19.12' Inflow=2.61 cfs 9,270 cf
12.0" Round Culvert n=0.013 L=126.0' S=0.0191 '/' Outflow=2.61 cfs 9,270 cf

Pond 4: Peak Elev=17.00' Inflow=0.65 cfs 2,308 cf
12.0" Round Culvert n=0.013 L=68.0' S=0.0154 '/' Outflow=0.65 cfs 2,308 cf

Pond 5: Peak Elev=17.21' Inflow=3.43 cfs 12,322 cf
12.0" Round Culvert n=0.013 L=44.0' S=0.0548 '/' Outflow=3.43 cfs 12,322 cf

Summary for Subcatchment 1S:

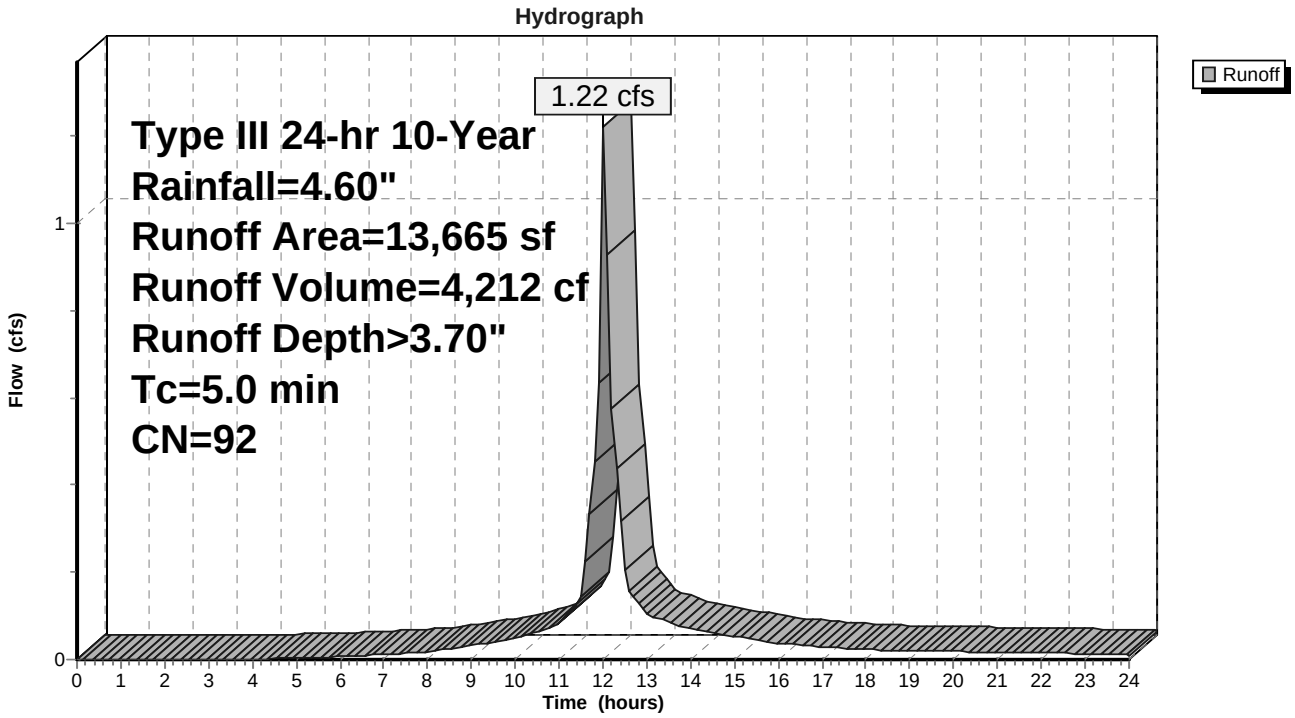
Runoff = 1.22 cfs @ 12.02 hrs, Volume= 4,212 cf, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	3,551	74	>75% Grass cover, Good, HSG C
*	10,114	98	Impervious Area
	13,665	92	Weighted Average
	3,551		25.99% Pervious Area
	10,114		74.01% Impervious Area

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

Subcatchment 1S:



Summary for Subcatchment 2S:

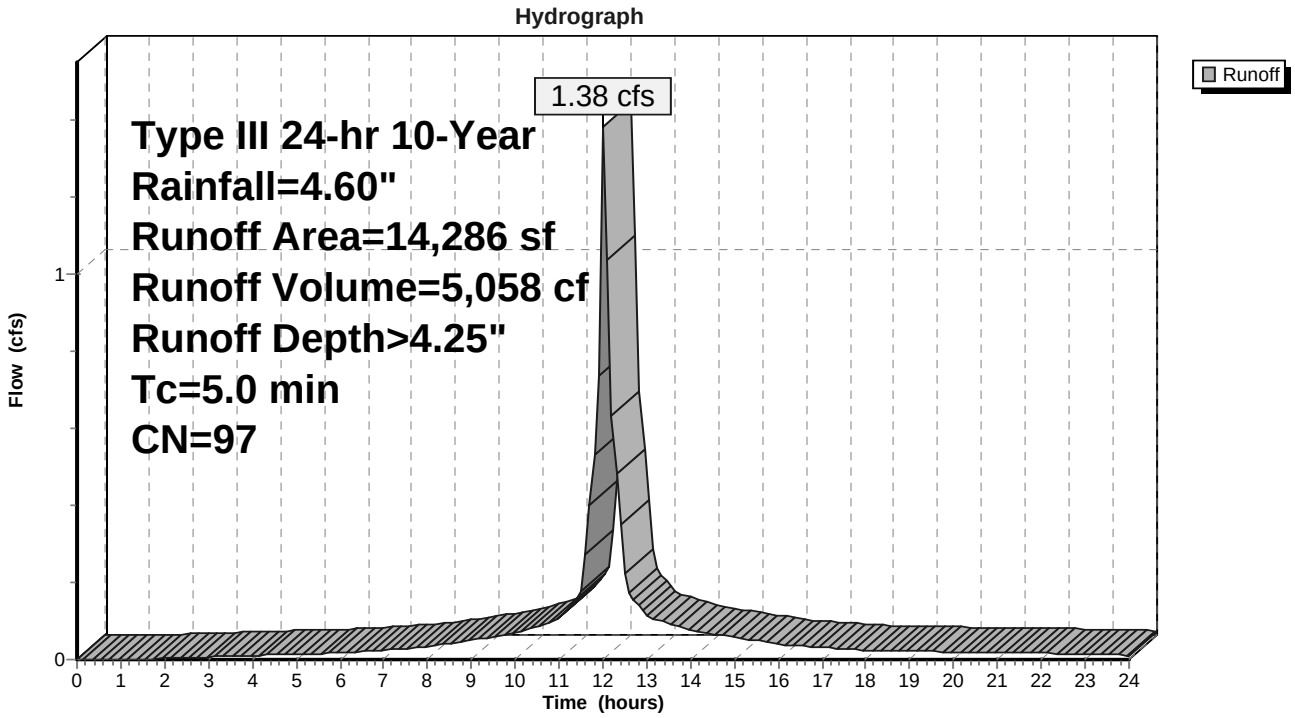
Runoff = 1.38 cfs @ 12.02 hrs, Volume= 5,058 cf, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	13,786	98	Impervious Area
	500	74	>75% Grass cover, Good, HSG C
	14,286	97	Weighted Average
	500		3.50% Pervious Area
	13,786		96.50% Impervious Area

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

Subcatchment 2S:



Summary for Subcatchment 3S:

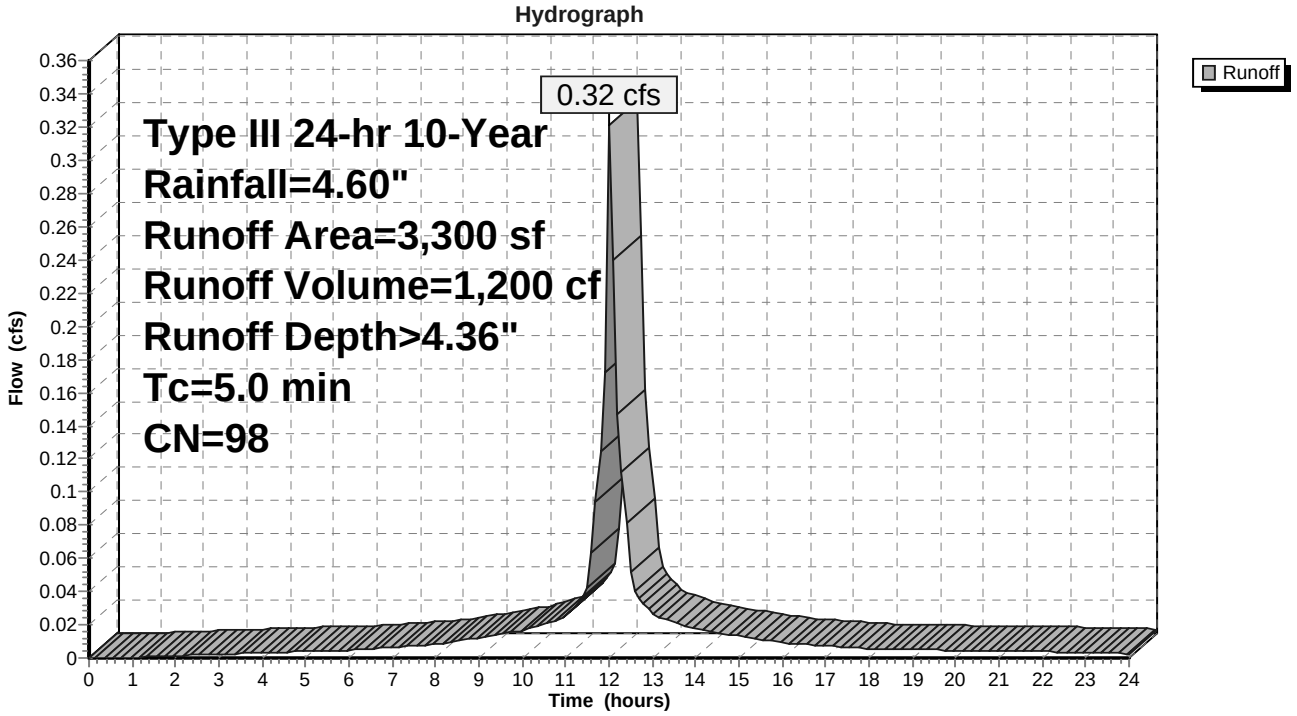
Runoff = 0.32 cfs @ 12.02 hrs, Volume= 1,200 cf, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,300	98	Impervious Area
	3,300		100.00% Impervious Area

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

Subcatchment 3S:



Summary for Subcatchment 4S:

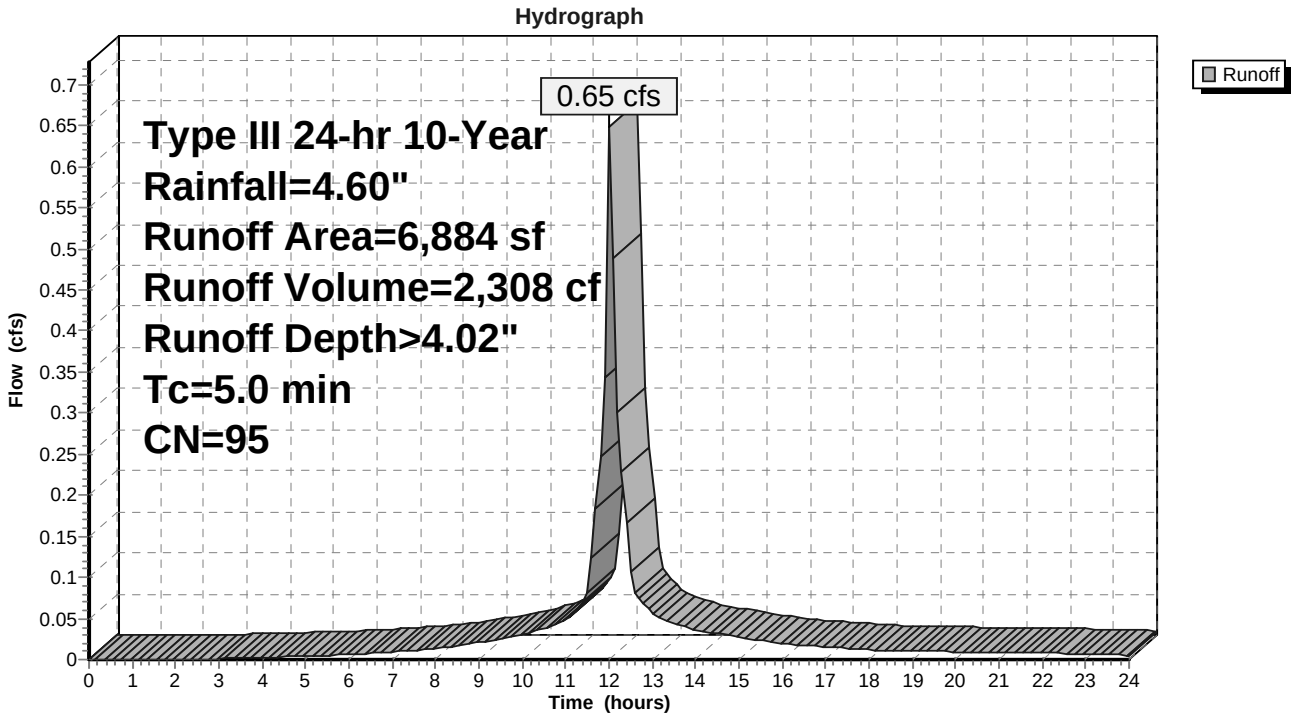
Runoff = 0.65 cfs @ 12.02 hrs, Volume= 2,308 cf, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	966	74	>75% Grass cover, Good, HSG C
*	5,918	98	Impervious Area
	6,884	95	Weighted Average
	966		14.03% Pervious Area
	5,918		85.97% Impervious Area

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

Subcatchment 4S:



Summary for Subcatchment 5S:

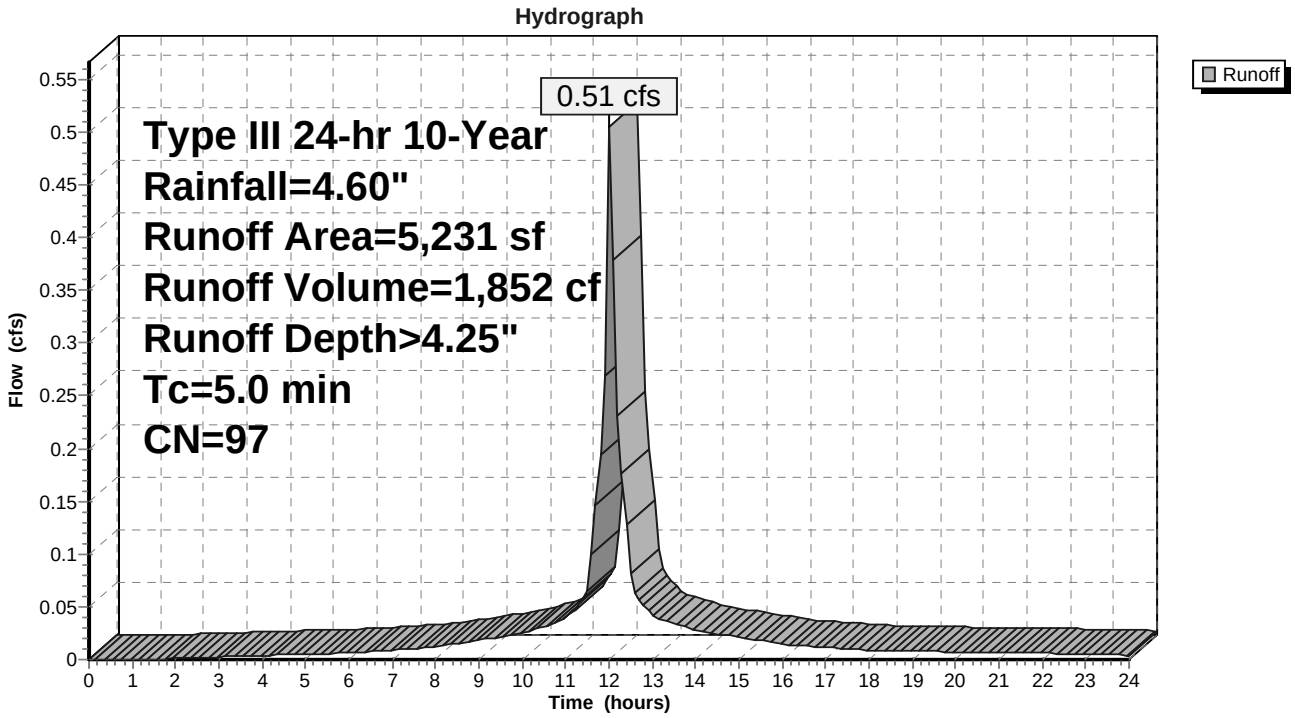
Runoff = 0.51 cfs @ 12.02 hrs, Volume= 1,852 cf, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	312	74	>75% Grass cover, Good, HSG C
*	4,919	98	Impervious Area
	5,231	97	Weighted Average
	312		5.96% Pervious Area
	4,919		94.04% Impervious Area

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

Subcatchment 5S:



Summary for Pond 1:

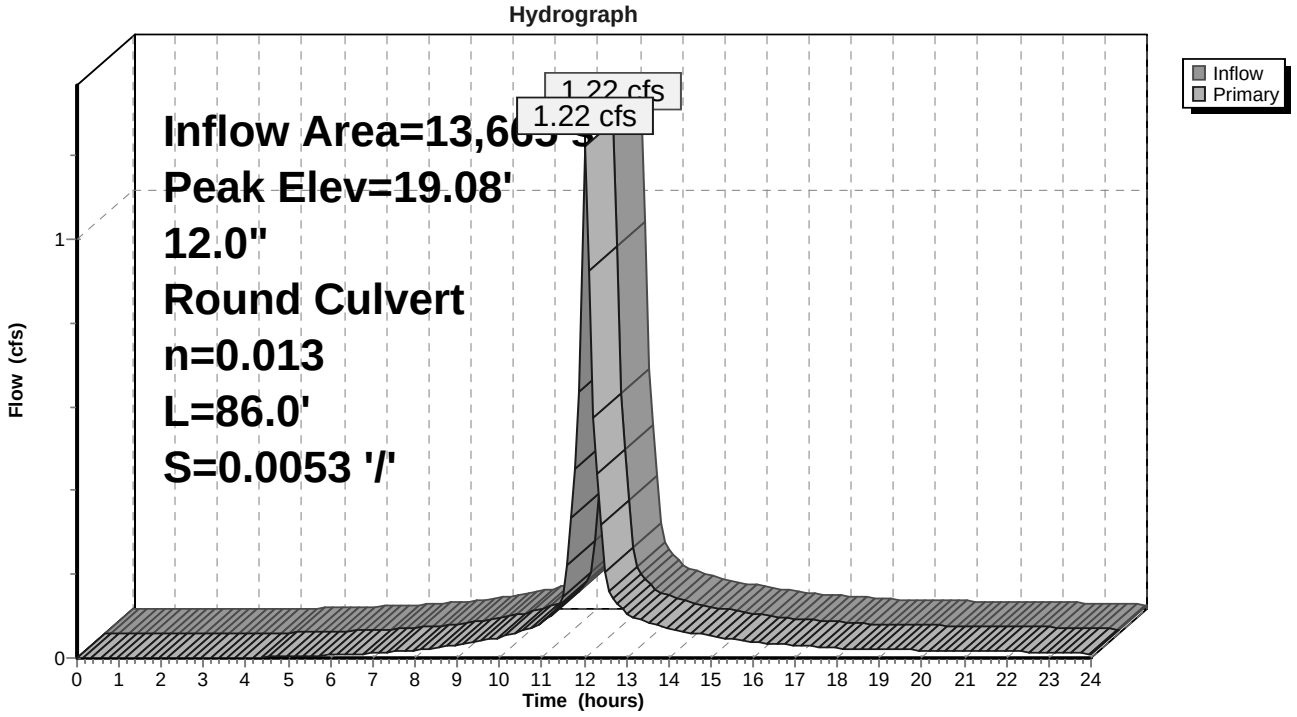
Inflow Area = 13,665 sf, 74.01% Impervious, Inflow Depth > 3.70" for 10-Year event
Inflow = 1.22 cfs @ 12.02 hrs, Volume= 4,212 cf
Outflow = 1.22 cfs @ 12.02 hrs, Volume= 4,212 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.22 cfs @ 12.02 hrs, Volume= 4,212 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 19.08' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.40'	**12.0" Round Culvert** L= 86.0' Ke= 0.800 Outlet Invert= 17.94' S= 0.0053 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=1.16 cfs @ 12.02 hrs HW=19.06' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.16 cfs @ 2.99 fps)

Pond 1:



Summary for Pond 2:

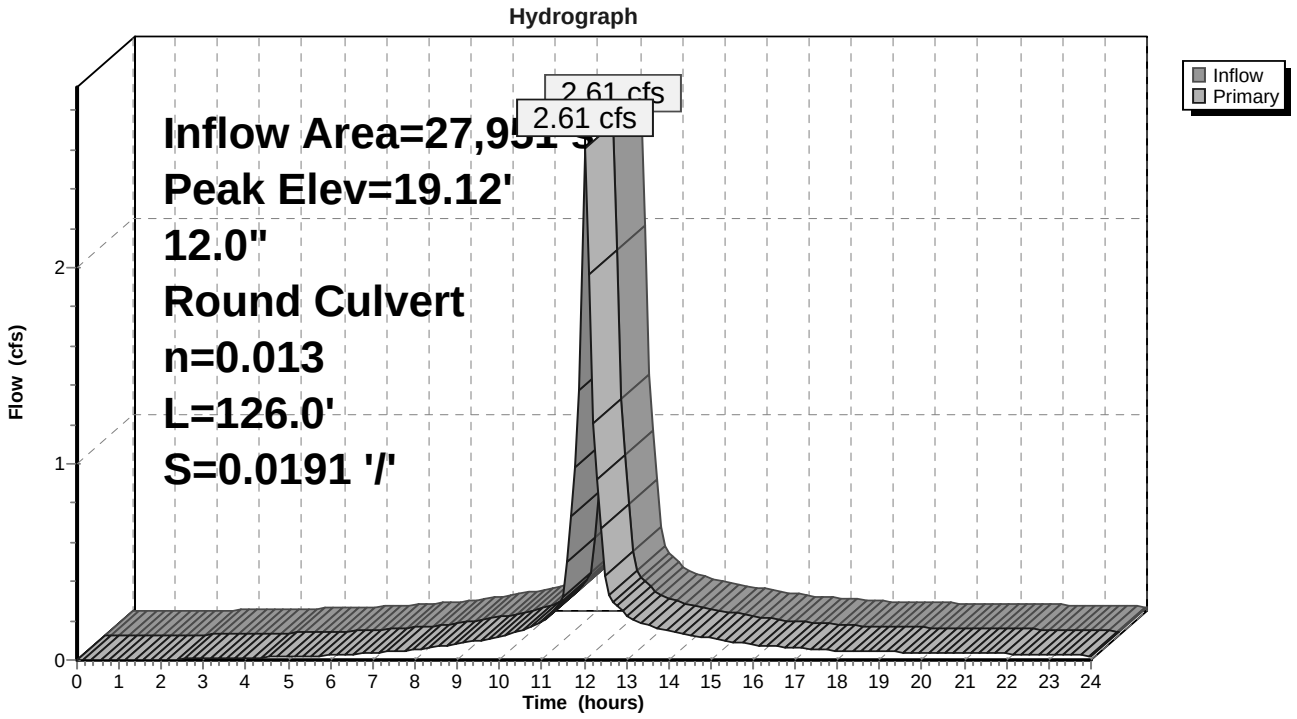
Inflow Area = 27,951 sf, 85.51% Impervious, Inflow Depth > 3.98" for 10-Year event
Inflow = 2.61 cfs @ 12.02 hrs, Volume= 9,270 cf
Outflow = 2.61 cfs @ 12.02 hrs, Volume= 9,270 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.61 cfs @ 12.02 hrs, Volume= 9,270 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 19.12' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.94'	**12.0" Round Culvert** L= 126.0' Ke= 0.800 Outlet Invert= 15.53' S= 0.0191 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=2.49 cfs @ 12.02 hrs HW=19.06' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.49 cfs @ 3.17 fps)

Pond 2:



Summary for Pond 4:

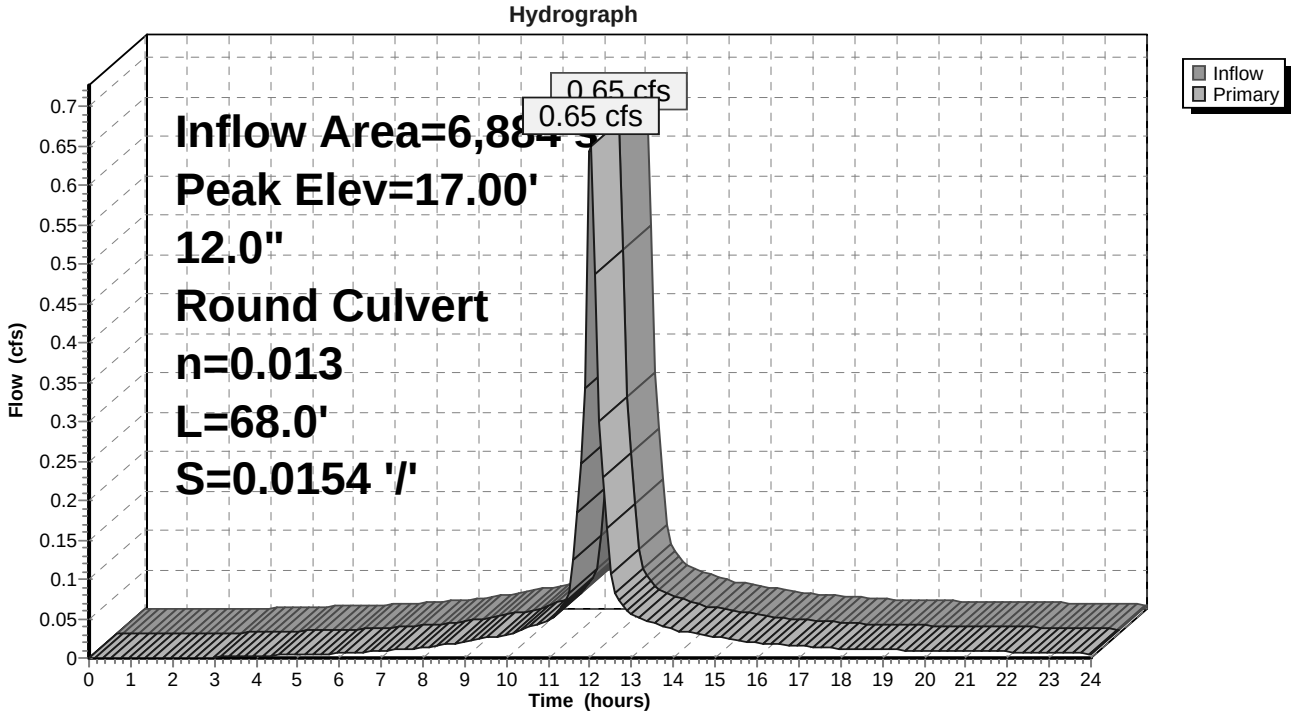
Inflow Area = 6,884 sf, 85.97% Impervious, Inflow Depth > 4.02" for 10-Year event
Inflow = 0.65 cfs @ 12.02 hrs, Volume= 2,308 cf
Outflow = 0.65 cfs @ 12.02 hrs, Volume= 2,308 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.65 cfs @ 12.02 hrs, Volume= 2,308 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.00' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.55'	**12.0" Round Culvert** L= 68.0' Ke= 0.800 Outlet Invert= 15.50' S= 0.0154 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.62 cfs @ 12.02 hrs HW=16.99' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.62 cfs @ 1.87 fps)

Pond 4:



Summary for Pond 5:

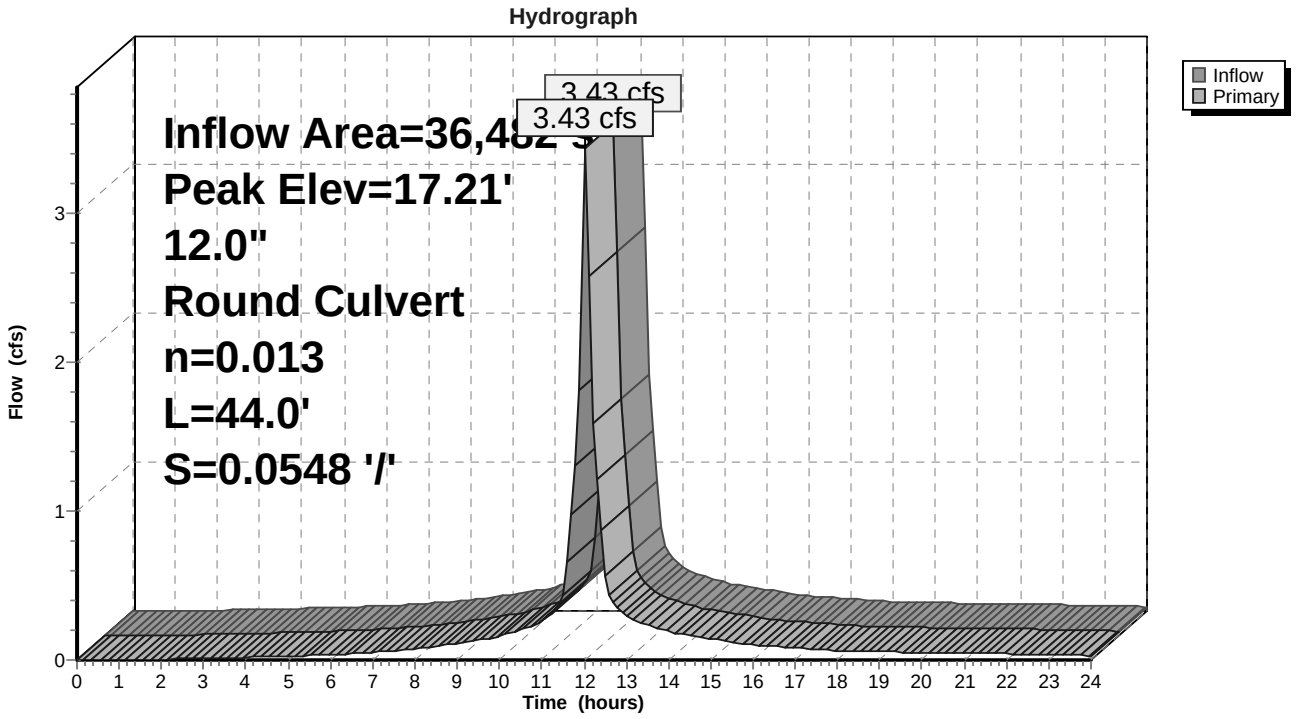
Inflow Area = 36,482 sf, 88.04% Impervious, Inflow Depth > 4.05" for 10-Year event
Inflow = 3.43 cfs @ 12.02 hrs, Volume= 12,322 cf
Outflow = 3.43 cfs @ 12.02 hrs, Volume= 12,322 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.43 cfs @ 12.02 hrs, Volume= 12,322 cf

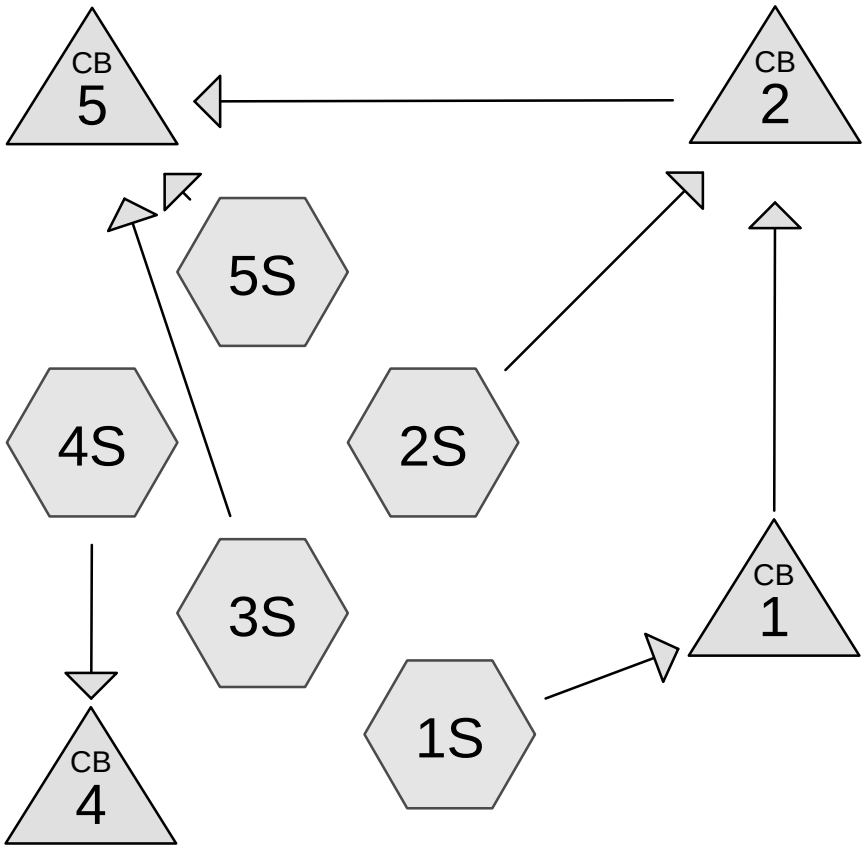
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.21' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.53'	**12.0" Round Culvert** L= 44.0' Ke= 0.800 Outlet Invert= 13.12' S= 0.0548 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=3.29 cfs @ 12.02 hrs HW=17.12' (Free Discharge)
1=Culvert (Inlet Controls 3.29 cfs @ 4.18 fps)

Pond 5:





Subcat Reach Pond Link

Drainage Diagram for 17140 pre

Prepared by Plymouth Engineering, Inc., Printed 7/11/2018

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
5,329	74	>75% Grass cover, Good, HSG C (1S, 2S, 4S, 5S)
38,037	98	Impervious Area (1S, 2S, 3S, 4S, 5S)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=13,665 sf 74.01% Impervious Runoff Depth>4.87"
Tc=5.0 min CN=92 Runoff=1.59 cfs 5,549 cf

Subcatchment 2S: Runoff Area=14,286 sf 96.50% Impervious Runoff Depth>5.44"
Tc=5.0 min CN=97 Runoff=1.75 cfs 6,481 cf

Subcatchment 3S: Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>5.56"
Tc=5.0 min CN=98 Runoff=0.41 cfs 1,529 cf

Subcatchment 4S: Runoff Area=6,884 sf 85.97% Impervious Runoff Depth>5.21"
Tc=5.0 min CN=95 Runoff=0.83 cfs 2,990 cf

Subcatchment 5S: Runoff Area=5,231 sf 94.04% Impervious Runoff Depth>5.44"
Tc=5.0 min CN=97 Runoff=0.64 cfs 2,373 cf

Pond 1: Peak Elev=19.20' Inflow=1.59 cfs 5,549 cf
12.0" Round Culvert n=0.013 L=86.0' S=0.0053 '/' Outflow=1.59 cfs 5,549 cf

Pond 2: Peak Elev=19.55' Inflow=3.34 cfs 12,030 cf
12.0" Round Culvert n=0.013 L=126.0' S=0.0191 '/' Outflow=3.34 cfs 12,030 cf

Pond 4: Peak Elev=17.07' Inflow=0.83 cfs 2,990 cf
12.0" Round Culvert n=0.013 L=68.0' S=0.0154 '/' Outflow=0.83 cfs 2,990 cf

Pond 5: Peak Elev=17.95' Inflow=4.39 cfs 15,933 cf
12.0" Round Culvert n=0.013 L=44.0' S=0.0548 '/' Outflow=4.39 cfs 15,933 cf

Summary for Subcatchment 1S:

Runoff = 1.59 cfs @ 12.02 hrs, Volume= 5,549 cf, Depth> 4.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	3,551	74	>75% Grass cover, Good, HSG C
*	10,114	98	Impervious Area
	13,665	92	Weighted Average
	3,551		25.99% Pervious Area
	10,114		74.01% Impervious Area

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

Summary for Subcatchment 2S:

Runoff = 1.75 cfs @ 12.02 hrs, Volume= 6,481 cf, Depth> 5.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	13,786	98	Impervious Area
	500	74	>75% Grass cover, Good, HSG C
	14,286	97	Weighted Average
	500		3.50% Pervious Area
	13,786		96.50% Impervious Area

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

Summary for Subcatchment 3S:

Runoff = 0.41 cfs @ 12.02 hrs, Volume= 1,529 cf, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,300	98	Impervious Area
	3,300		100.00% Impervious Area

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

Summary for Subcatchment 4S:

Runoff = 0.83 cfs @ 12.02 hrs, Volume= 2,990 cf, Depth> 5.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	966	74	>75% Grass cover, Good, HSG C
*	5,918	98	Impervious Area
	6,884	95	Weighted Average
	966		14.03% Pervious Area
	5,918		85.97% Impervious Area

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

Summary for Subcatchment 5S:

Runoff = 0.64 cfs @ 12.02 hrs, Volume= 2,373 cf, Depth> 5.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	312	74	>75% Grass cover, Good, HSG C
*	4,919	98	Impervious Area
	5,231	97	Weighted Average
	312		5.96% Pervious Area
	4,919		94.04% Impervious Area

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

Summary for Pond 1:

Inflow Area = 13,665 sf, 74.01% Impervious, Inflow Depth > 4.87" for 25-Year event
Inflow = 1.59 cfs @ 12.02 hrs, Volume= 5,549 cf
Outflow = 1.59 cfs @ 12.02 hrs, Volume= 5,549 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.59 cfs @ 12.02 hrs, Volume= 5,549 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 19.20' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.40'	**12.0" Round Culvert** L= 86.0' Ke= 0.800 Outlet Invert= 17.94' S= 0.0053 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=1.51 cfs @ 12.02 hrs HW=19.18' (Free Discharge)
1=Culvert (Barrel Controls 1.51 cfs @ 3.17 fps)

Summary for Pond 2:

Inflow Area = 27,951 sf, 85.51% Impervious, Inflow Depth > 5.16" for 25-Year event
Inflow = 3.34 cfs @ 12.02 hrs, Volume= 12,030 cf
Outflow = 3.34 cfs @ 12.02 hrs, Volume= 12,030 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.34 cfs @ 12.02 hrs, Volume= 12,030 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 19.55' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.94'	**12.0" Round Culvert** L= 126.0' Ke= 0.800 Outlet Invert= 15.53' S= 0.0191 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=3.20 cfs @ 12.02 hrs HW=19.47' (Free Discharge)
1=Culvert (Inlet Controls 3.20 cfs @ 4.07 fps)

Summary for Pond 4:

Inflow Area = 6,884 sf, 85.97% Impervious, Inflow Depth > 5.21" for 25-Year event
Inflow = 0.83 cfs @ 12.02 hrs, Volume= 2,990 cf
Outflow = 0.83 cfs @ 12.02 hrs, Volume= 2,990 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.83 cfs @ 12.02 hrs, Volume= 2,990 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.07' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.55'	**12.0" Round Culvert** L= 68.0' Ke= 0.800 Outlet Invert= 15.50' S= 0.0154 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.79 cfs @ 12.02 hrs HW=17.05' (Free Discharge)
1=Culvert (Inlet Controls 0.79 cfs @ 2.01 fps)

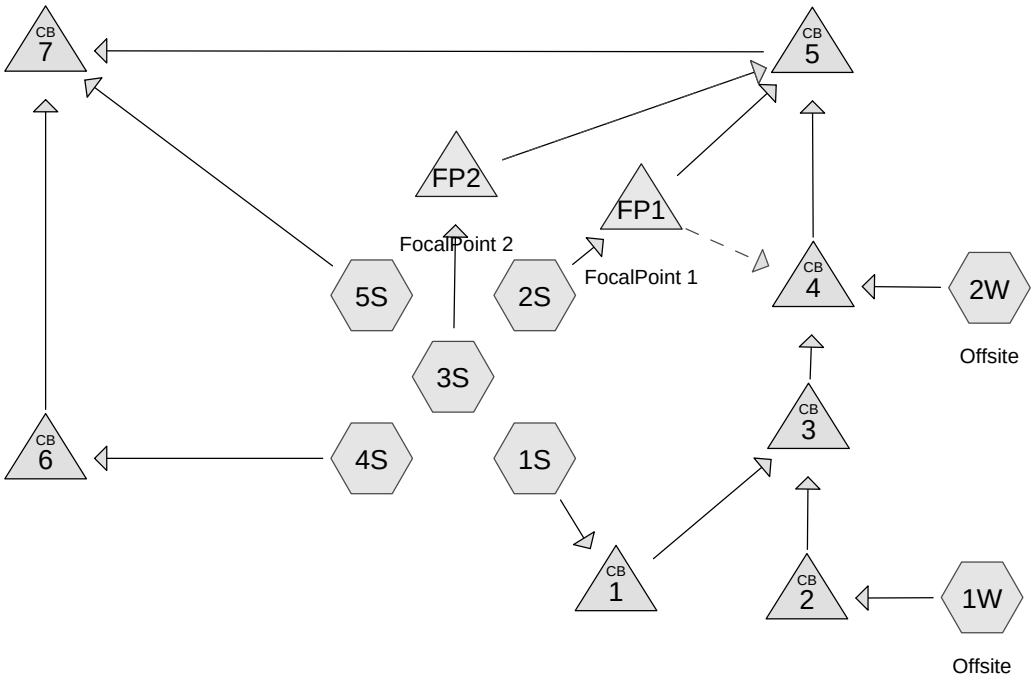
Summary for Pond 5:

Inflow Area = 36,482 sf, 88.04% Impervious, Inflow Depth > 5.24" for 25-Year event
Inflow = 4.39 cfs @ 12.02 hrs, Volume= 15,933 cf
Outflow = 4.39 cfs @ 12.02 hrs, Volume= 15,933 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.39 cfs @ 12.02 hrs, Volume= 15,933 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.95' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.53'	**12.0" Round Culvert** L= 44.0' Ke= 0.800 Outlet Invert= 13.12' S= 0.0548 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=4.20 cfs @ 12.02 hrs HW=17.81' (Free Discharge)
1=Culvert (Inlet Controls 4.20 cfs @ 5.35 fps)



Subcat Reach Pond Link

Drainage Diagram for 17140 post
Prepared by Plymouth Engineering, Inc., Printed 7/11/2018
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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,687	74	>75% Grass cover, Good, HSG C (1S, 1W, 2S, 2W, 3S, 4S, 5S)
20,546	98	Impervious Area (1S, 2S, 3S, 4S, 5S)
14,619	98	Impervious Surface (1W, 2W)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=684 sf 37.28% Impervious Runoff Depth>1.53"
Tc=5.0 min CN=83 Runoff=0.03 cfs 87 cf

Subcatchment 1W: Offsite Runoff Area=8,028 sf 64.39% Impervious Runoff Depth>1.99"
Tc=5.0 min CN=89 Runoff=0.40 cfs 1,332 cf

Subcatchment 2S: Runoff Area=11,411 sf 80.23% Impervious Runoff Depth>2.35"
Tc=5.0 min CN=93 Runoff=0.66 cfs 2,234 cf

Subcatchment 2W: Offsite Runoff Area=10,149 sf 93.11% Impervious Runoff Depth>2.65"
Tc=5.0 min CN=96 Runoff=0.64 cfs 2,242 cf

Subcatchment 3S: Runoff Area=2,647 sf 86.02% Impervious Runoff Depth>2.55"
Tc=5.0 min CN=95 Runoff=0.16 cfs 562 cf

Subcatchment 4S: Runoff Area=4,303 sf 71.86% Impervious Runoff Depth>2.16"
Tc=5.0 min CN=91 Runoff=0.23 cfs 776 cf

Subcatchment 5S: Runoff Area=6,630 sf 86.98% Impervious Runoff Depth>2.55"
Tc=5.0 min CN=95 Runoff=0.41 cfs 1,407 cf

Pond 1: Peak Elev=18.39' Inflow=0.03 cfs 87 cf
12.0" Round Culvert n=0.013 L=91.0' S=0.0051 '/' Outflow=0.03 cfs 87 cf

Pond 2: Peak Elev=18.36' Inflow=0.40 cfs 1,332 cf
12.0" Round Culvert n=0.013 L=23.0' S=0.0074 '/' Outflow=0.40 cfs 1,332 cf

Pond 3: Peak Elev=18.12' Inflow=0.43 cfs 1,419 cf
12.0" Round Culvert n=0.013 L=41.0' S=0.0051 '/' Outflow=0.43 cfs 1,419 cf

Pond 4: Peak Elev=18.16' Inflow=1.50 cfs 4,063 cf
12.0" Round Culvert n=0.013 L=43.0' S=0.0295 '/' Outflow=1.50 cfs 4,063 cf

Pond 5: Peak Elev=16.90' Inflow=1.70 cfs 6,531 cf
12.0" Round Culvert n=0.013 L=83.0' S=0.0051 '/' Outflow=1.70 cfs 6,531 cf

Pond 6: Peak Elev=16.81' Inflow=0.23 cfs 776 cf
12.0" Round Culvert n=0.013 L=77.0' S=0.0119 '/' Outflow=0.23 cfs 776 cf

Pond 7: Peak Elev=16.51' Inflow=2.23 cfs 8,714 cf
12.0" Round Culvert n=0.013 L=44.0' S=0.0548 '/' Outflow=2.23 cfs 8,714 cf

Pond FP1: FocalPoint 1 Peak Elev=20.88' Storage=265 cf Inflow=0.66 cfs 2,234 cf
Primary=0.11 cfs 1,875 cf Secondary=0.66 cfs 403 cf Outflow=0.77 cfs 2,278 cf

Pond FP2: FocalPoint 2 Peak Elev=21.39' Storage=42 cf Inflow=0.16 cfs 562 cf
Primary=0.08 cfs 592 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 592 cf

Summary for Subcatchment 1S:

Runoff = 0.03 cfs @ 12.02 hrs, Volume= 87 cf, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	429	74	>75% Grass cover, Good, HSG C
*	255	98	Impervious Area
	684	83	Weighted Average
	429		62.72% Pervious Area
	255		37.28% Impervious Area

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

Summary for Subcatchment 1W: Offsite

Runoff = 0.40 cfs @ 12.02 hrs, Volume= 1,332 cf, Depth> 1.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	5,169	98	Impervious Surface
	2,859	74	>75% Grass cover, Good, HSG C
	8,028	89	Weighted Average
	2,859		35.61% Pervious Area
	5,169		64.39% Impervious Area

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

Summary for Subcatchment 2S:

Runoff = 0.66 cfs @ 12.02 hrs, Volume= 2,234 cf, Depth> 2.35"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	9,155	98	Impervious Area
	2,256	74	>75% Grass cover, Good, HSG C
	11,411	93	Weighted Average
	2,256		19.77% Pervious Area
	9,155		80.23% Impervious Area

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

Summary for Subcatchment 2W: Offsite

Runoff = 0.64 cfs @ 12.02 hrs, Volume= 2,242 cf, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	9,450	98	Impervious Surface
	699	74	>75% Grass cover, Good, HSG C
	10,149	96	Weighted Average
	699		6.89% Pervious Area
	9,450		93.11% Impervious Area

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

Summary for Subcatchment 3S:

Runoff = 0.16 cfs @ 12.02 hrs, Volume= 562 cf, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,277	98	Impervious Area
	370	74	>75% Grass cover, Good, HSG C
	2,647	95	Weighted Average
	370		13.98% Pervious Area
	2,277		86.02% Impervious Area

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

Summary for Subcatchment 4S:

Runoff = 0.23 cfs @ 12.02 hrs, Volume= 776 cf, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	1,211	74	>75% Grass cover, Good, HSG C
*	3,092	98	Impervious Area
	4,303	91	Weighted Average
	1,211		28.14% Pervious Area
	3,092		71.86% Impervious Area

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

Summary for Subcatchment 5S:

Runoff = 0.41 cfs @ 12.02 hrs, Volume= 1,407 cf, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	863	74	>75% Grass cover, Good, HSG C
*	5,767	98	Impervious Area
	6,630	95	Weighted Average
	863		13.02% Pervious Area
	5,767		86.98% Impervious Area

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

Summary for Pond 1:

Inflow Area = 684 sf, 37.28% Impervious, Inflow Depth > 1.53" for 2-Year event
Inflow = 0.03 cfs @ 12.02 hrs, Volume= 87 cf
Outflow = 0.03 cfs @ 12.02 hrs, Volume= 87 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.03 cfs @ 12.02 hrs, Volume= 87 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.39' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.29'	**12.0" Round Culvert** L= 91.0' Ke= 0.800 Outlet Invert= 17.83' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior

Primary OutFlow Max=0.02 cfs @ 12.02 hrs HW=18.38' (Free Discharge)
1=Culvert (Barrel Controls 0.02 cfs @ 1.02 fps)

Summary for Pond 2:

Inflow Area = 8,028 sf, 64.39% Impervious, Inflow Depth > 1.99" for 2-Year event
Inflow = 0.40 cfs @ 12.02 hrs, Volume= 1,332 cf
Outflow = 0.40 cfs @ 12.02 hrs, Volume= 1,332 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.40 cfs @ 12.02 hrs, Volume= 1,332 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.36' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.00'	**12.0" Round Culvert** L= 23.0' Ke= 0.800 Outlet Invert= 17.83' S= 0.0074 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.38 cfs @ 12.02 hrs HW=18.35' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.38 cfs @ 2.28 fps)

Summary for Pond 3:

Inflow Area = 8,712 sf, 62.26% Impervious, Inflow Depth > 1.95" for 2-Year event
Inflow = 0.43 cfs @ 12.02 hrs, Volume= 1,419 cf
Outflow = 0.43 cfs @ 12.02 hrs, Volume= 1,419 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.43 cfs @ 12.02 hrs, Volume= 1,419 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.12' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.73'	**12.0" Round Culvert** L= 41.0' Ke= 0.800 Outlet Invert= 17.52' S= 0.0051 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=0.40 cfs @ 12.02 hrs HW=18.11' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.40 cfs @ 2.19 fps)

Summary for Pond 4:

Inflow Area = 18,861 sf, 78.86% Impervious, Inflow Depth > 2.59" for 2-Year event
Inflow = 1.50 cfs @ 12.08 hrs, Volume= 4,063 cf
Outflow = 1.50 cfs @ 12.08 hrs, Volume= 4,063 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.50 cfs @ 12.08 hrs, Volume= 4,063 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.16' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.42'	**12.0" Round Culvert** L= 43.0' Ke= 0.800 Outlet Invert= 16.15' S= 0.0295 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=1.40 cfs @ 12.08 hrs HW=18.12' (Free Discharge)
1=Culvert (Inlet Controls 1.40 cfs @ 2.38 fps)

Summary for Pond 5:

Inflow Area = 32,919 sf, 79.91% Impervious, Inflow Depth > 2.38" for 2-Year event
Inflow = 1.70 cfs @ 12.08 hrs, Volume= 6,531 cf
Outflow = 1.70 cfs @ 12.08 hrs, Volume= 6,531 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.70 cfs @ 12.08 hrs, Volume= 6,531 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.90' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.05'	**12.0" Round Culvert** L= 83.0' Ke= 0.800 Outlet Invert= 15.63' S= 0.0051 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=1.60 cfs @ 12.08 hrs HW=16.87' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.60 cfs @ 3.16 fps)

Summary for Pond 6:

Inflow Area = 4,303 sf, 71.86% Impervious, Inflow Depth > 2.16" for 2-Year event
Inflow = 0.23 cfs @ 12.02 hrs, Volume= 776 cf
Outflow = 0.23 cfs @ 12.02 hrs, Volume= 776 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.23 cfs @ 12.02 hrs, Volume= 776 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.81' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.55'	**12.0" Round Culvert** L= 77.0' Ke= 0.800 Outlet Invert= 15.63' S= 0.0119 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.22 cfs @ 12.02 hrs HW=16.80' (Free Discharge)
1=Culvert (Inlet Controls 0.22 cfs @ 1.42 fps)

Summary for Pond 7:

Inflow Area = 43,852 sf, 80.19% Impervious, Inflow Depth > 2.38" for 2-Year event
Inflow = 2.23 cfs @ 12.07 hrs, Volume= 8,714 cf
Outflow = 2.23 cfs @ 12.07 hrs, Volume= 8,714 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.23 cfs @ 12.07 hrs, Volume= 8,714 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.51' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.53'	**12.0" Round Culvert** L= 44.0' Ke= 0.800 Outlet Invert= 13.12' S= 0.0548 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=2.10 cfs @ 12.07 hrs HW=16.47' (Free Discharge)
1=Culvert (Inlet Controls 2.10 cfs @ 2.74 fps)

Summary for Pond FP1: FocalPoint 1

Inflow Area = 11,411 sf, 80.23% Impervious, Inflow Depth > 2.35" for 2-Year event
Inflow = 0.66 cfs @ 12.02 hrs, Volume= 2,234 cf
Outflow = 0.77 cfs @ 12.10 hrs, Volume= 2,278 cf, Atten= 0%, Lag= 5.0 min
Primary = 0.11 cfs @ 0.00 hrs, Volume= 1,875 cf
Secondary = 0.66 cfs @ 12.10 hrs, Volume= 403 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Starting Elev= 19.50' Surf.Area= 49 sf Storage= 22 cf
Peak Elev= 20.88' @ 12.10 hrs Surf.Area= 49 sf Storage= 265 cf (243 cf above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	17.25'	22 cf	**7.00'W x 7.00'L x 2.25'H FocalPoint** 110 cf Overall x 20.0% Voids
#2	20.00'	287 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		309 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
20.00	204	0	0
21.00	369	287	287

Device	Routing	Invert	Outlet Devices
#1	Primary	17.25'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#2	Secondary	20.75'	**6.0' long x 6.0' 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) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.11 cfs @ 0.00 hrs HW=19.50' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.65 cfs @ 12.10 hrs HW=20.88' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 0.65 cfs @ 0.85 fps)

Summary for Pond FP2: FocalPoint 2

Inflow Area = 2,647 sf, 86.02% Impervious, Inflow Depth > 2.55" for 2-Year event
Inflow = 0.16 cfs @ 12.02 hrs, Volume= 562 cf
Outflow = 0.08 cfs @ 0.00 hrs, Volume= 592 cf, Atten= 49%, Lag= 0.0 min
Primary = 0.08 cfs @ 0.00 hrs, Volume= 592 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Starting Elev= 20.75' Surf.Area= 36 sf Storage= 2 cf
Peak Elev= 21.39' @ 12.20 hrs Surf.Area= 36 sf Storage= 42 cf (40 cf above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

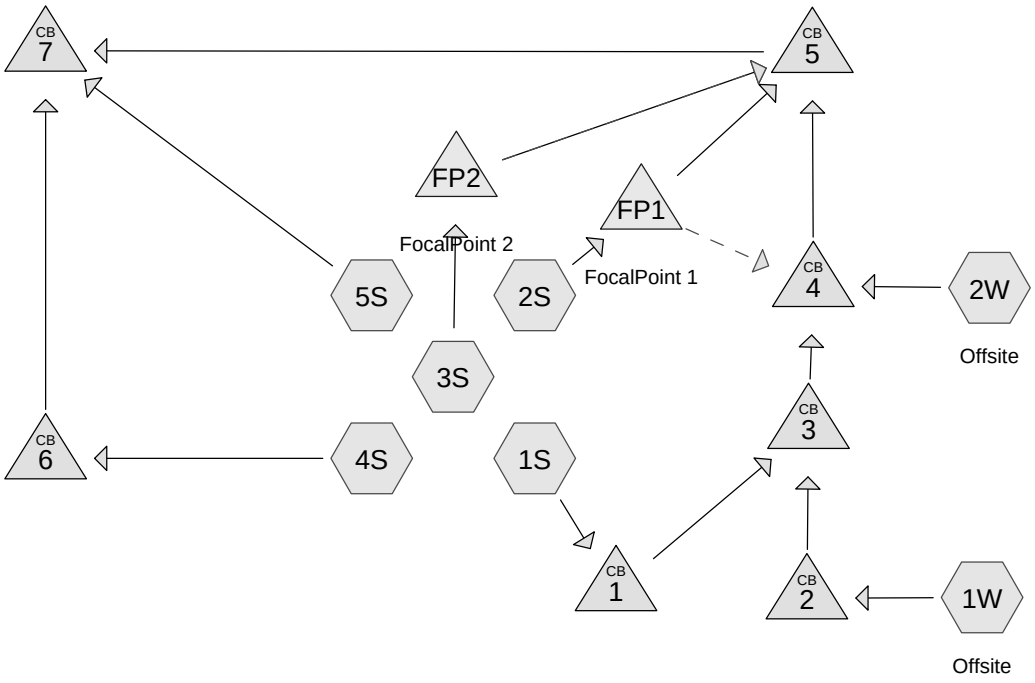
Volume	Invert	Avail.Storage	Storage Description
#1	20.50'	16 cf	**6.00'W x 6.00'L x 2.25'H FocalPoint** 81 cf Overall x 20.0% Voids
#2	21.00'	254 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		270 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.00	62	0	0
22.00	200	131	131
22.50	290	123	254

Device	Routing	Invert	Outlet Devices
#1	Primary	20.50'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#2	Secondary	22.75'	**4.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.08 cfs @ 0.00 hrs HW=20.75' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=20.75' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)



Subcat Reach Pond Link

Drainage Diagram for 17140 post

Prepared by Plymouth Engineering, Inc., Printed 7/11/2018

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,687	74	>75% Grass cover, Good, HSG C (1S, 1W, 2S, 2W, 3S, 4S, 5S)
20,546	98	Impervious Area (1S, 2S, 3S, 4S, 5S)
14,619	98	Impervious Surface (1W, 2W)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=684 sf 37.28% Impervious Runoff Depth>2.81"
Tc=5.0 min CN=83 Runoff=0.05 cfs 160 cf

Subcatchment 1W: Offsite Runoff Area=8,028 sf 64.39% Impervious Runoff Depth>3.39"
Tc=5.0 min CN=89 Runoff=0.67 cfs 2,268 cf

Subcatchment 2S: Runoff Area=11,411 sf 80.23% Impervious Runoff Depth>3.81"
Tc=5.0 min CN=93 Runoff=1.04 cfs 3,619 cf

Subcatchment 2W: Offsite Runoff Area=10,149 sf 93.11% Impervious Runoff Depth>4.13"
Tc=5.0 min CN=96 Runoff=0.97 cfs 3,497 cf

Subcatchment 3S: Runoff Area=2,647 sf 86.02% Impervious Runoff Depth>4.02"
Tc=5.0 min CN=95 Runoff=0.25 cfs 887 cf

Subcatchment 4S: Runoff Area=4,303 sf 71.86% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=91 Runoff=0.38 cfs 1,289 cf

Subcatchment 5S: Runoff Area=6,630 sf 86.98% Impervious Runoff Depth>4.02"
Tc=5.0 min CN=95 Runoff=0.63 cfs 2,223 cf

Pond 1: Peak Elev=18.42' Inflow=0.05 cfs 160 cf
12.0" Round Culvert n=0.013 L=91.0' S=0.0051 '/' Outflow=0.05 cfs 160 cf

Pond 2: Peak Elev=18.49' Inflow=0.67 cfs 2,268 cf
12.0" Round Culvert n=0.013 L=23.0' S=0.0074 '/' Outflow=0.67 cfs 2,268 cf

Pond 3: Peak Elev=18.25' Inflow=0.72 cfs 2,428 cf
12.0" Round Culvert n=0.013 L=41.0' S=0.0051 '/' Outflow=0.72 cfs 2,428 cf

Pond 4: Peak Elev=18.63' Inflow=2.67 cfs 6,943 cf
12.0" Round Culvert n=0.013 L=43.0' S=0.0295 '/' Outflow=2.67 cfs 6,943 cf

Pond 5: Peak Elev=17.52' Inflow=2.87 cfs 10,508 cf
12.0" Round Culvert n=0.013 L=83.0' S=0.0051 '/' Outflow=2.87 cfs 10,508 cf

Pond 6: Peak Elev=16.88' Inflow=0.38 cfs 1,289 cf
12.0" Round Culvert n=0.013 L=77.0' S=0.0119 '/' Outflow=0.38 cfs 1,289 cf

Pond 7: Peak Elev=17.52' Inflow=3.87 cfs 14,020 cf
12.0" Round Culvert n=0.013 L=44.0' S=0.0548 '/' Outflow=3.87 cfs 14,020 cf

Pond FP1: FocalPoint 1 Peak Elev=20.92' Storage=279 cf Inflow=1.04 cfs 3,619 cf
Primary=0.11 cfs 2,645 cf Secondary=0.98 cfs 1,018 cf Outflow=1.10 cfs 3,663 cf

Pond FP2: FocalPoint 2 Peak Elev=21.95' Storage=132 cf Inflow=0.25 cfs 887 cf
Primary=0.08 cfs 920 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 920 cf

Summary for Subcatchment 1S:

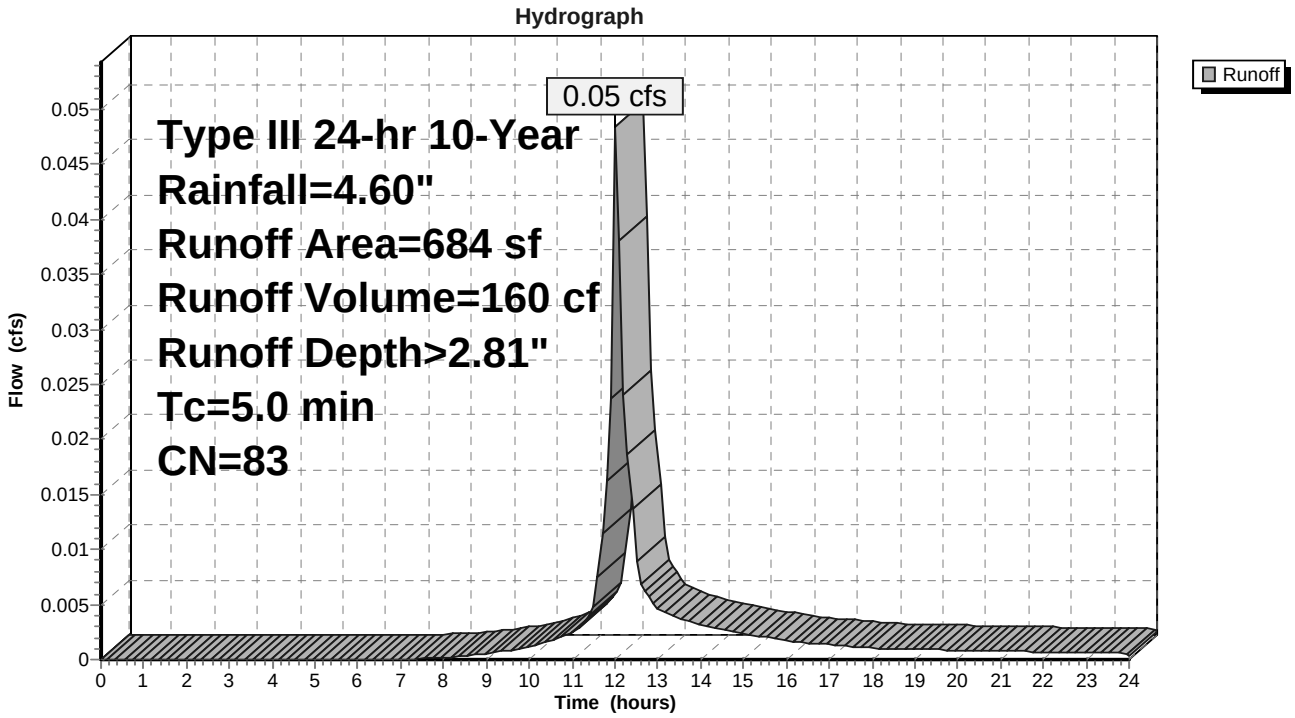
Runoff = 0.05 cfs @ 12.02 hrs, Volume= 160 cf, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	429	74	>75% Grass cover, Good, HSG C
*	255	98	Impervious Area
	684	83	Weighted Average
	429		62.72% Pervious Area
	255		37.28% Impervious Area

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

Subcatchment 1S:



Summary for Subcatchment 1W: Offsite

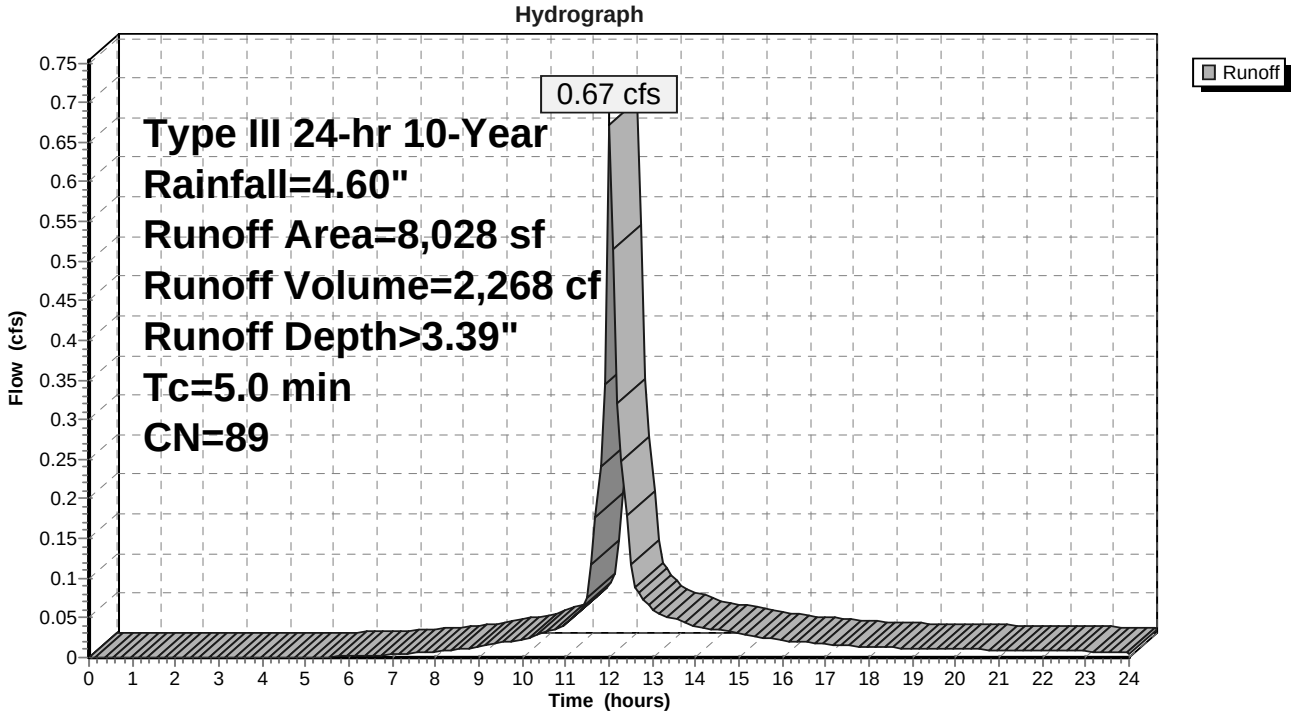
Runoff = 0.67 cfs @ 12.02 hrs, Volume= 2,268 cf, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	5,169	98	Impervious Surface
	2,859	74	>75% Grass cover, Good, HSG C
	8,028	89	Weighted Average
	2,859		35.61% Pervious Area
	5,169		64.39% Impervious Area

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

Subcatchment 1W: Offsite



Summary for Subcatchment 2S:

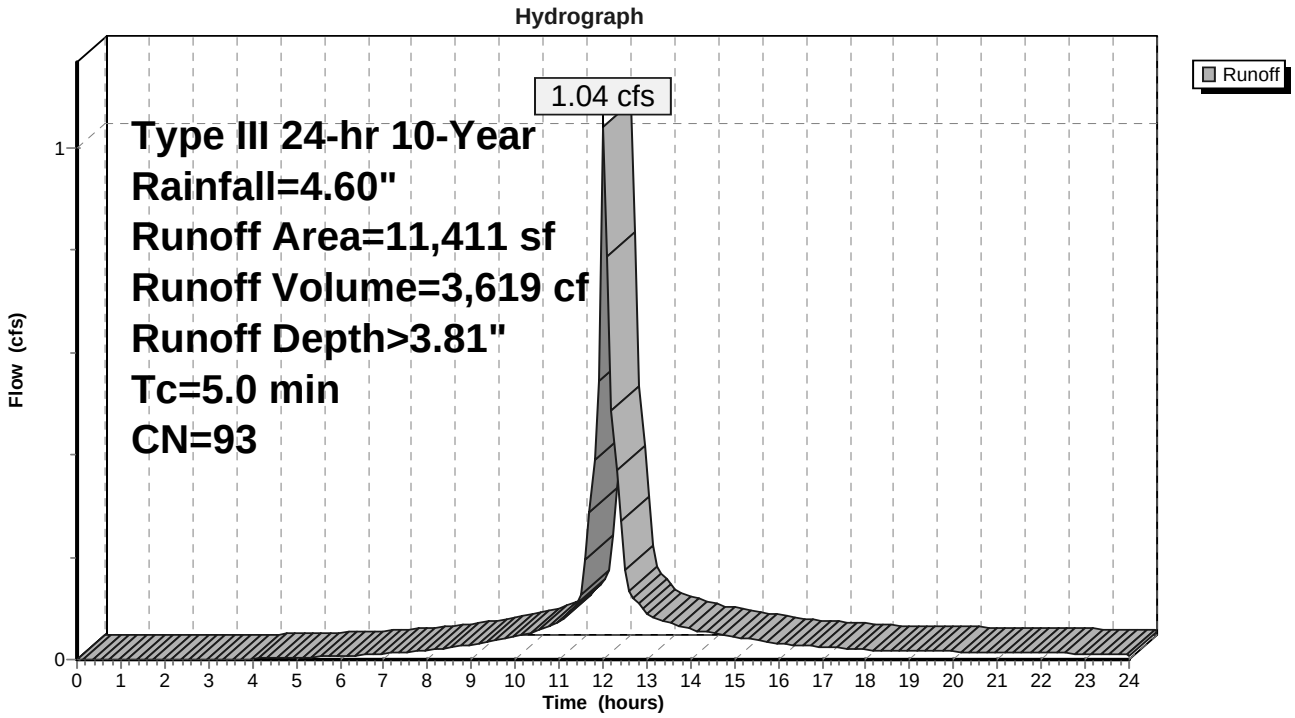
Runoff = 1.04 cfs @ 12.02 hrs, Volume= 3,619 cf, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	9,155	98	Impervious Area
	2,256	74	>75% Grass cover, Good, HSG C
	11,411	93	Weighted Average
	2,256		19.77% Pervious Area
	9,155		80.23% Impervious Area

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

Subcatchment 2S:



Summary for Subcatchment 2W: Offsite

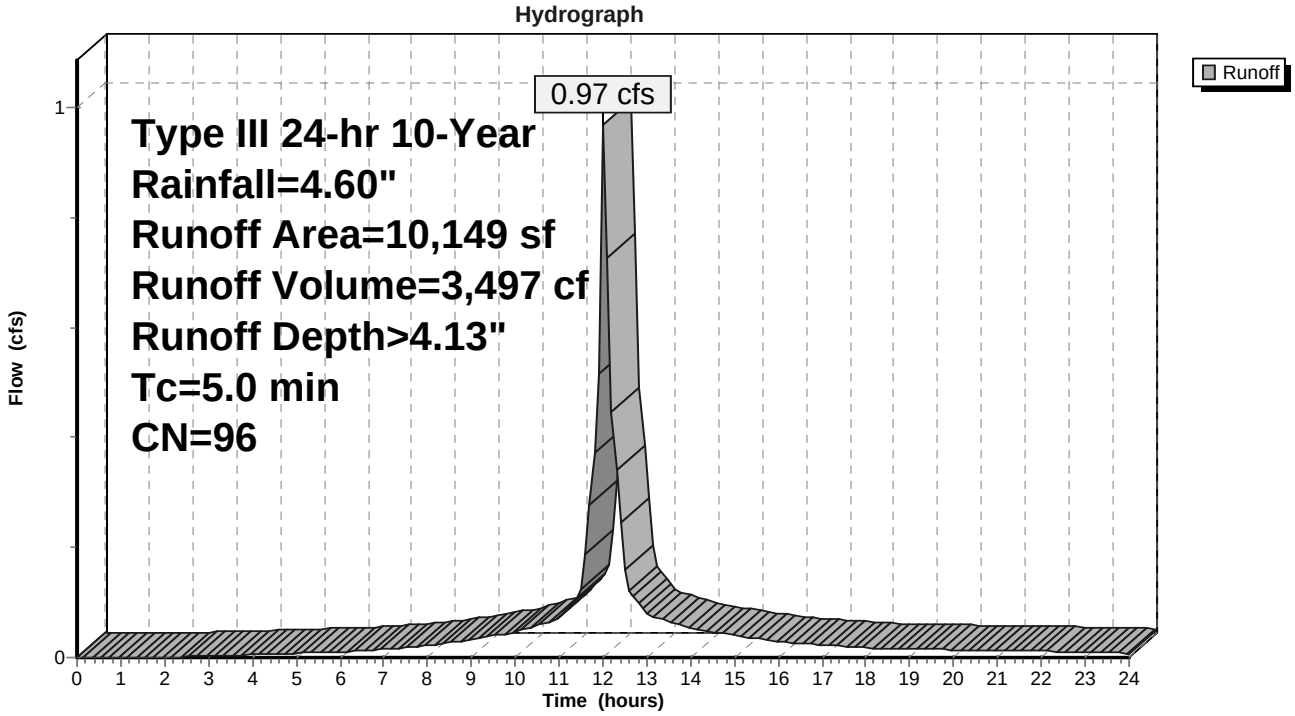
Runoff = 0.97 cfs @ 12.02 hrs, Volume= 3,497 cf, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	9,450	98	Impervious Surface
	699	74	>75% Grass cover, Good, HSG C
	10,149	96	Weighted Average
	699		6.89% Pervious Area
	9,450		93.11% Impervious Area

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

Subcatchment 2W: Offsite



Summary for Subcatchment 3S:

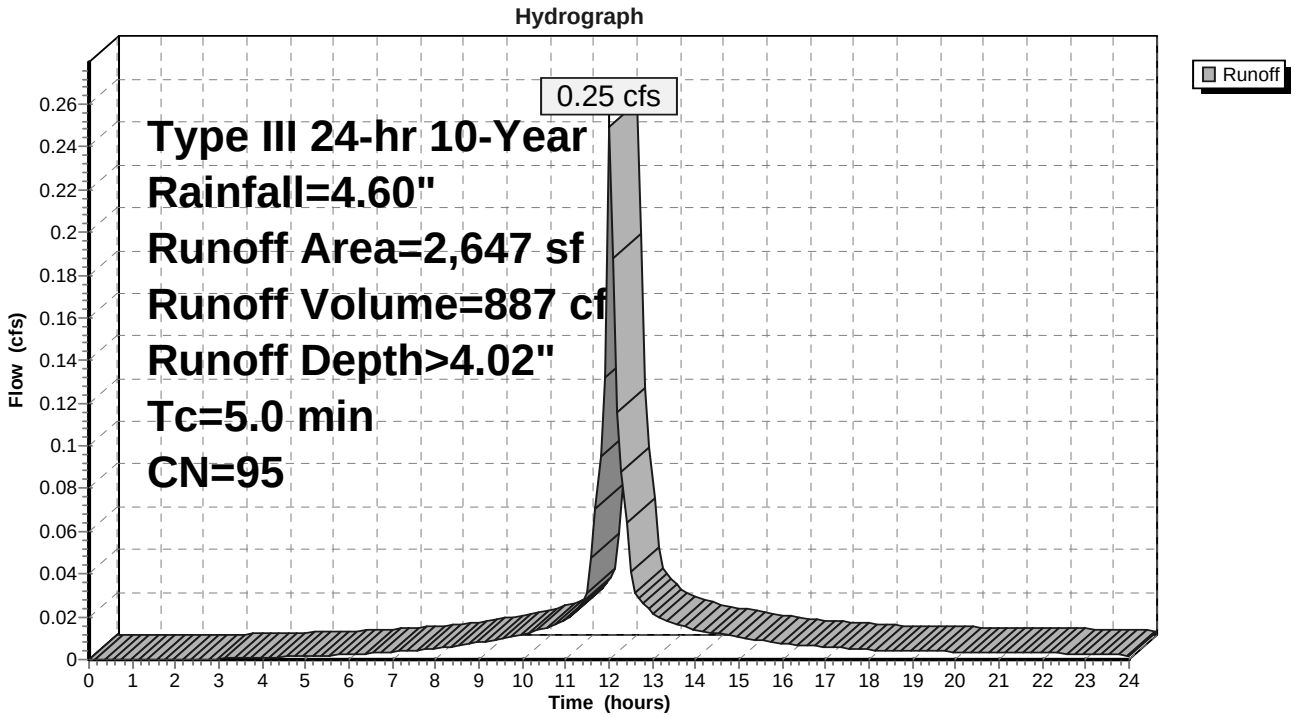
Runoff = 0.25 cfs @ 12.02 hrs, Volume= 887 cf, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,277	98	Impervious Area
	370	74	>75% Grass cover, Good, HSG C
	2,647	95	Weighted Average
	370		13.98% Pervious Area
	2,277		86.02% Impervious Area

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

Subcatchment 3S:



Summary for Subcatchment 4S:

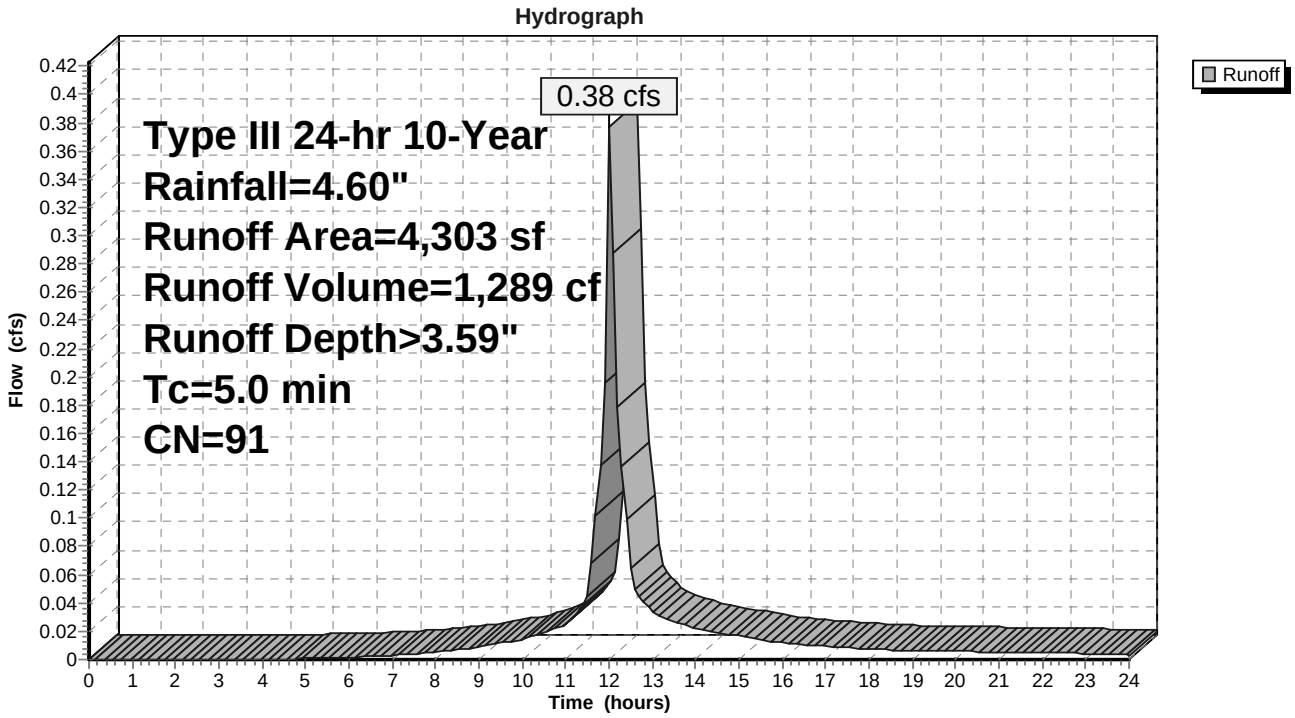
Runoff = 0.38 cfs @ 12.02 hrs, Volume= 1,289 cf, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	1,211	74	>75% Grass cover, Good, HSG C
*	3,092	98	Impervious Area
	4,303	91	Weighted Average
	1,211		28.14% Pervious Area
	3,092		71.86% Impervious Area

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

Subcatchment 4S:



Summary for Subcatchment 5S:

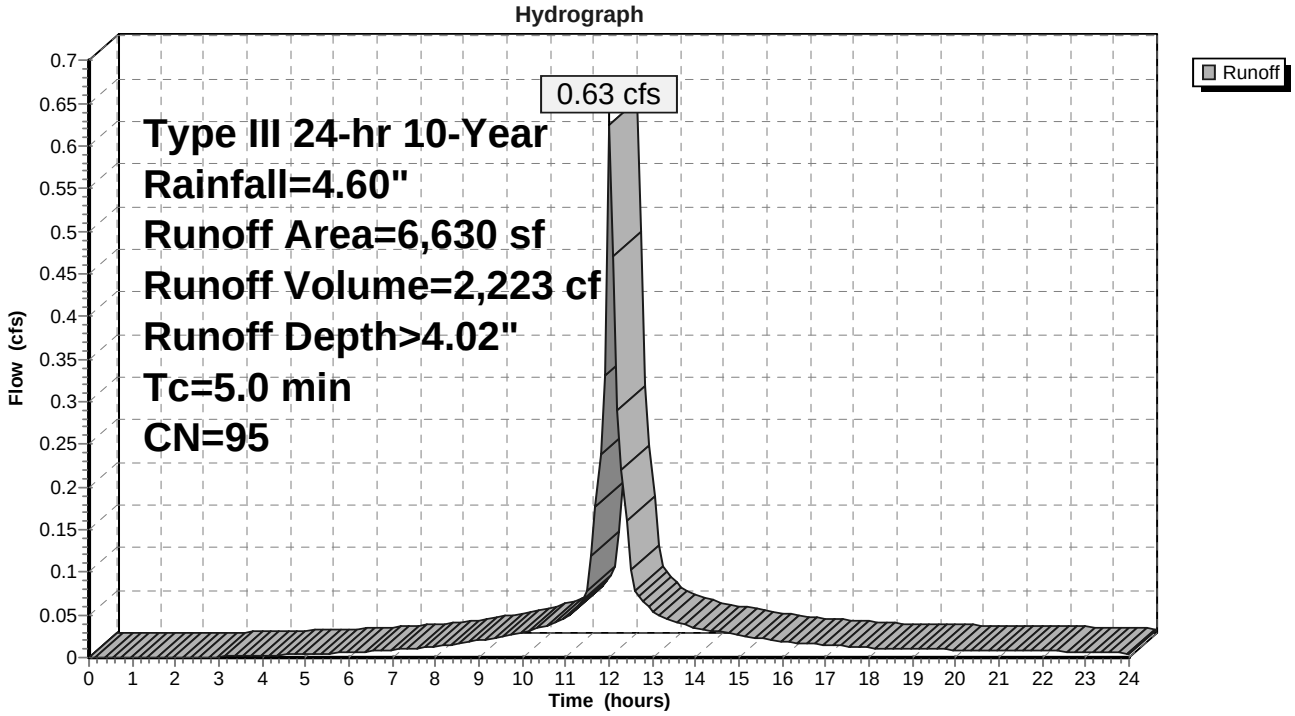
Runoff = 0.63 cfs @ 12.02 hrs, Volume= 2,223 cf, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	863	74	>75% Grass cover, Good, HSG C
*	5,767	98	Impervious Area
	6,630	95	Weighted Average
	863		13.02% Pervious Area
	5,767		86.98% Impervious Area

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

Subcatchment 5S:



Summary for Pond 1:

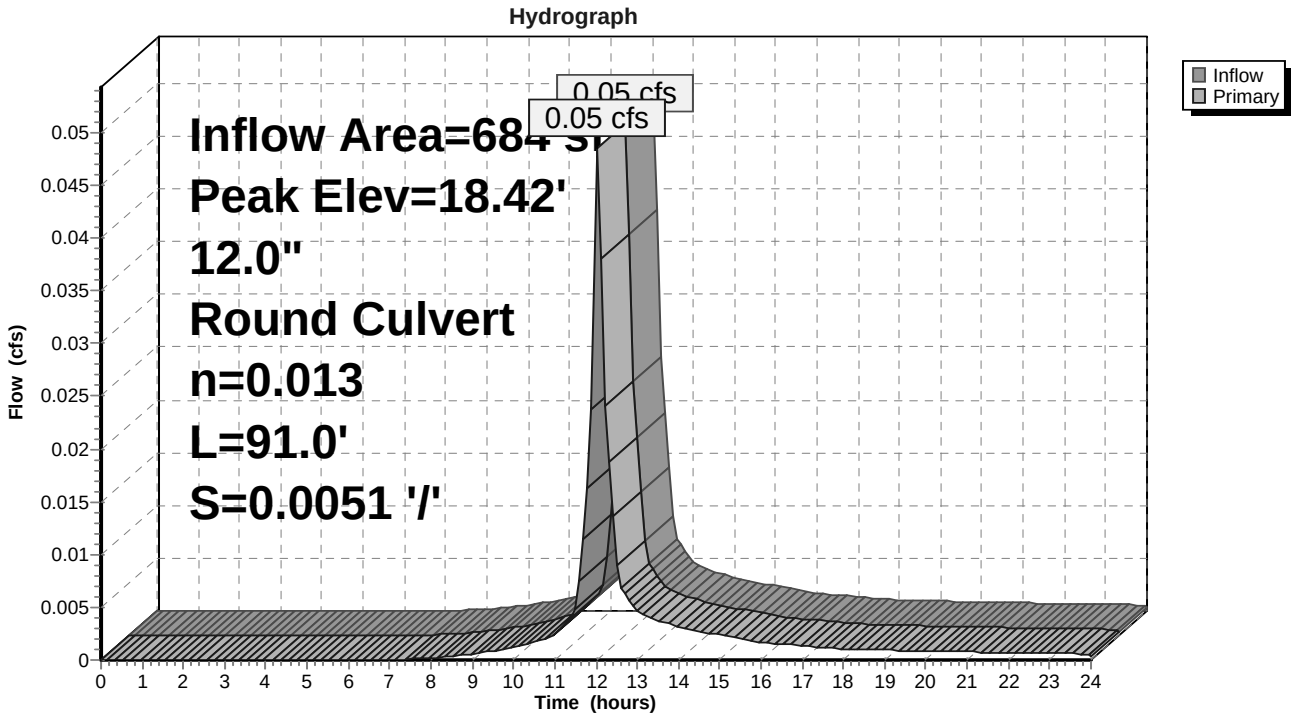
Inflow Area = 684 sf, 37.28% Impervious, Inflow Depth > 2.81" for 10-Year event
Inflow = 0.05 cfs @ 12.02 hrs, Volume= 160 cf
Outflow = 0.05 cfs @ 12.02 hrs, Volume= 160 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.05 cfs @ 12.02 hrs, Volume= 160 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.42' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.29'	**12.0" Round Culvert** L= 91.0' Ke= 0.800 Outlet Invert= 17.83' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior

Primary OutFlow Max=0.05 cfs @ 12.02 hrs HW=18.41' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.05 cfs @ 1.23 fps)

Pond 1:



Summary for Pond 2:

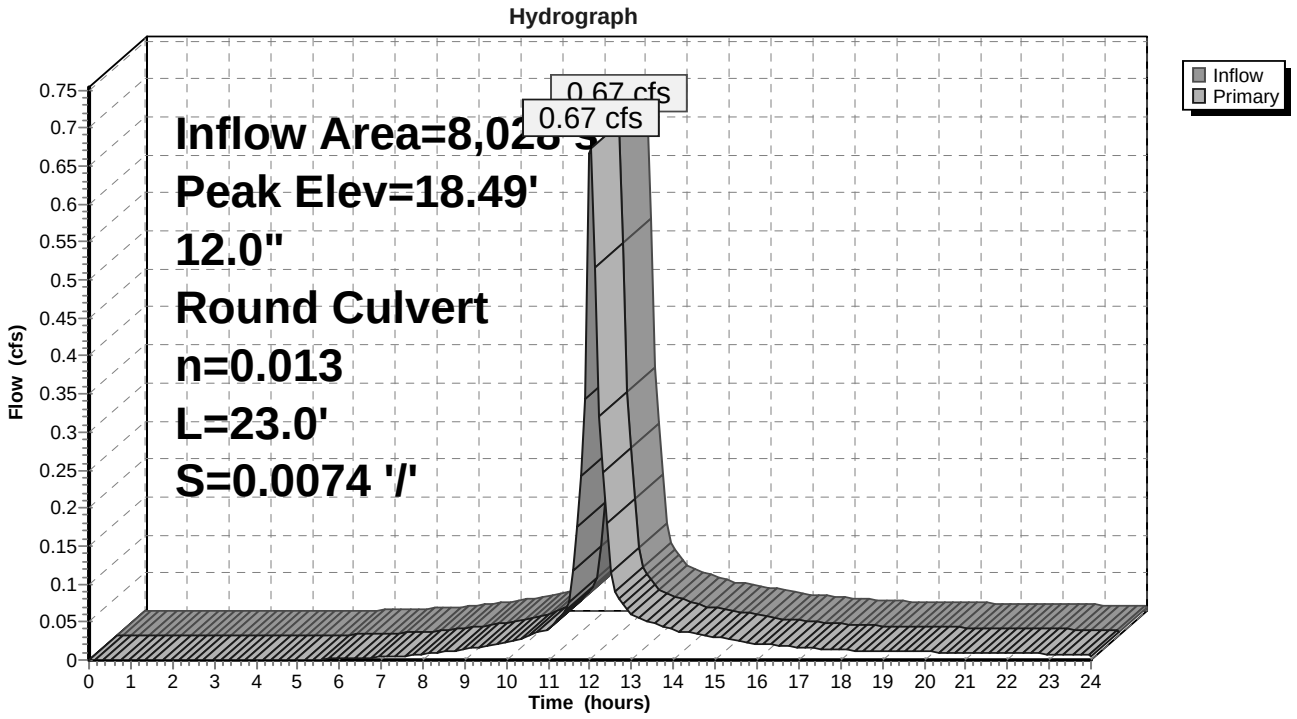
Inflow Area = 8,028 sf, 64.39% Impervious, Inflow Depth > 3.39" for 10-Year event
Inflow = 0.67 cfs @ 12.02 hrs, Volume= 2,268 cf
Outflow = 0.67 cfs @ 12.02 hrs, Volume= 2,268 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.67 cfs @ 12.02 hrs, Volume= 2,268 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.49' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.00'	**12.0" Round Culvert** L= 23.0' Ke= 0.800 Outlet Invert= 17.83' S= 0.0074 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.64 cfs @ 12.02 hrs HW=18.47' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.64 cfs @ 2.57 fps)

Pond 2:



Summary for Pond 3:

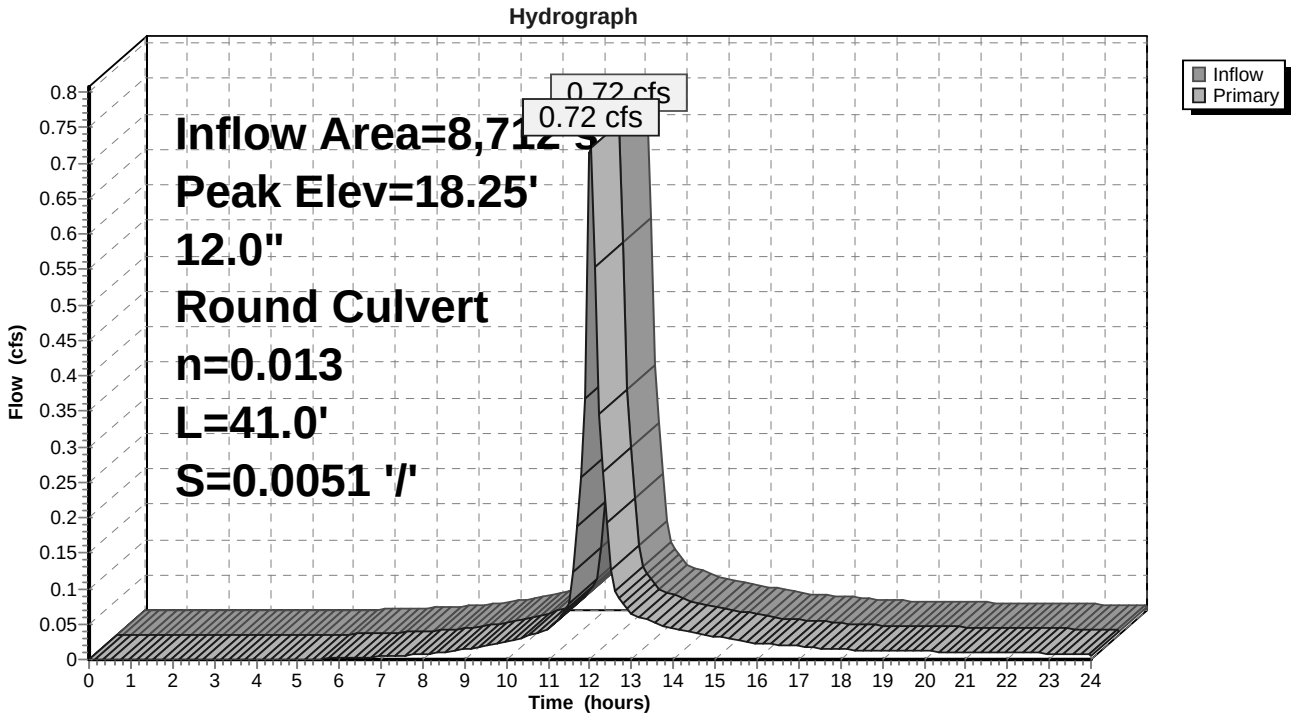
Inflow Area = 8,712 sf, 62.26% Impervious, Inflow Depth > 3.34" for 10-Year event
Inflow = 0.72 cfs @ 12.02 hrs, Volume= 2,428 cf
Outflow = 0.72 cfs @ 12.02 hrs, Volume= 2,428 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.72 cfs @ 12.02 hrs, Volume= 2,428 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.25' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.73'	**12.0" Round Culvert** L= 41.0' Ke= 0.800 Outlet Invert= 17.52' S= 0.0051 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=0.68 cfs @ 12.02 hrs HW=18.24' (Free Discharge)
1=Culvert (Barrel Controls 0.68 cfs @ 2.50 fps)

Pond 3:



Summary for Pond 4:

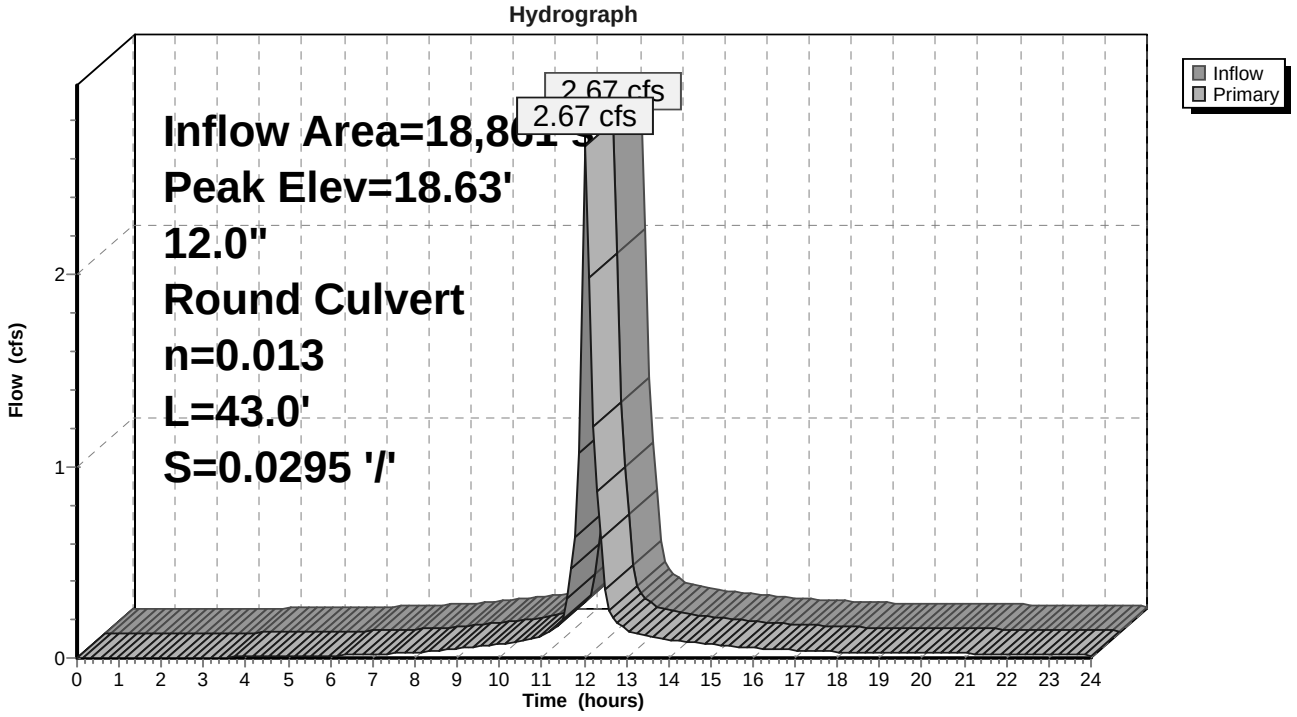
Inflow Area = 18,861 sf, 78.86% Impervious, Inflow Depth > 4.42" for 10-Year event
Inflow = 2.67 cfs @ 12.02 hrs, Volume= 6,943 cf
Outflow = 2.67 cfs @ 12.02 hrs, Volume= 6,943 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.67 cfs @ 12.02 hrs, Volume= 6,943 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.63' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.42'	**12.0" Round Culvert** L= 43.0' Ke= 0.800 Outlet Invert= 16.15' S= 0.0295 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=2.50 cfs @ 12.02 hrs HW=18.55' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.50 cfs @ 3.19 fps)

Pond 4:



Summary for Pond 5:

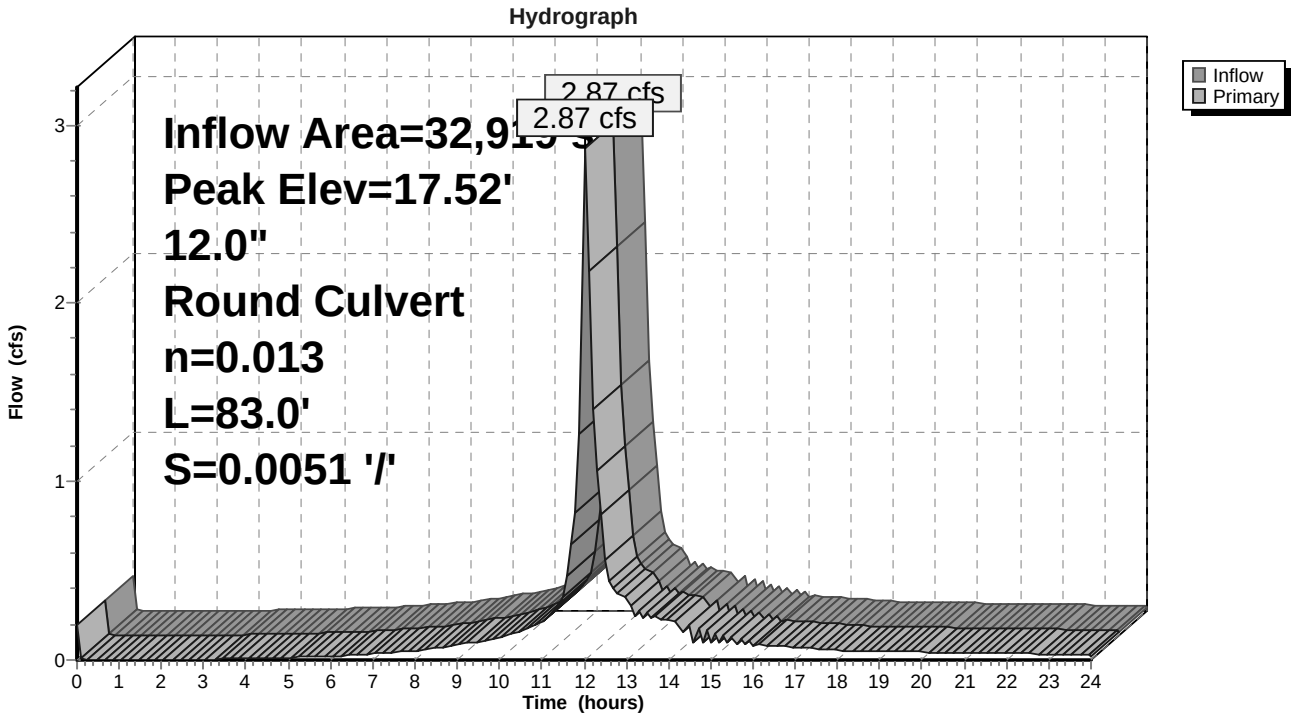
Inflow Area = 32,919 sf, 79.91% Impervious, Inflow Depth > 3.83" for 10-Year event
Inflow = 2.87 cfs @ 12.02 hrs, Volume= 10,508 cf
Outflow = 2.87 cfs @ 12.02 hrs, Volume= 10,508 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.87 cfs @ 12.02 hrs, Volume= 10,508 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.52' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.05'	**12.0" Round Culvert** L= 83.0' Ke= 0.800 Outlet Invert= 15.63' S= 0.0051 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=2.67 cfs @ 12.02 hrs HW=17.42' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.67 cfs @ 3.40 fps)

Pond 5:



Summary for Pond 6:

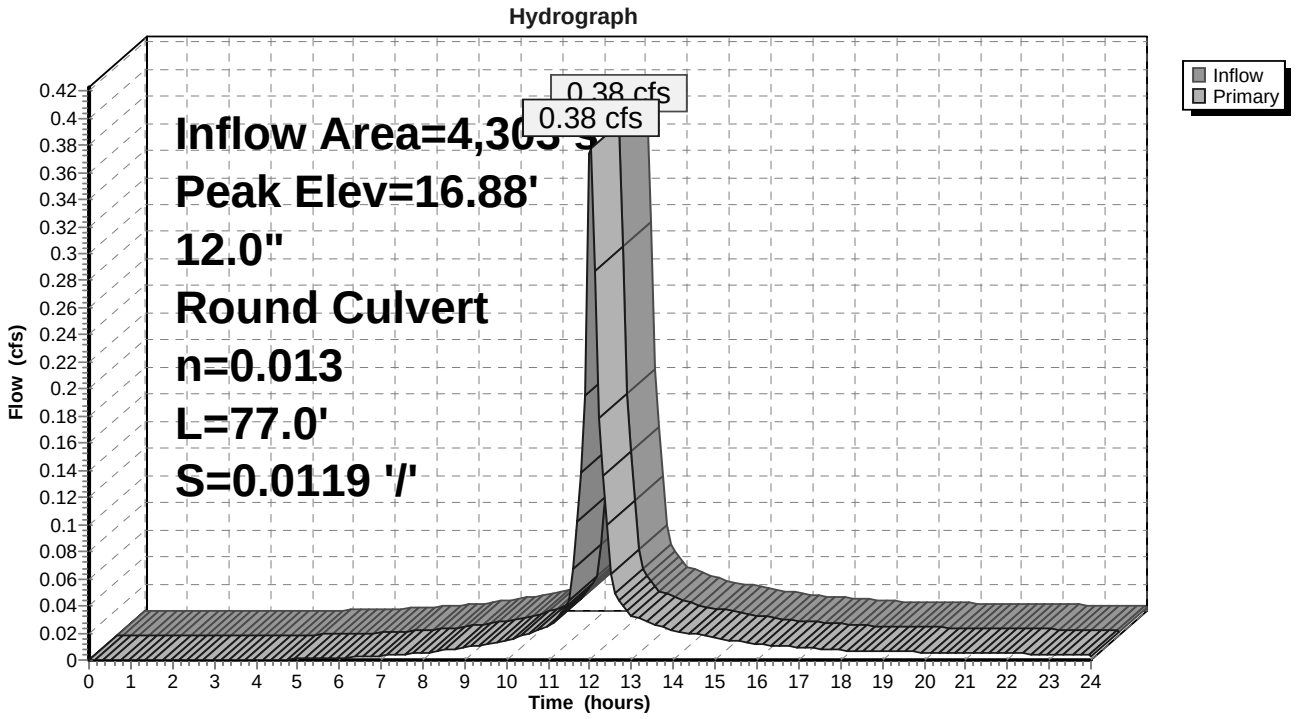
Inflow Area = 4,303 sf, 71.86% Impervious, Inflow Depth > 3.59" for 10-Year event
Inflow = 0.38 cfs @ 12.02 hrs, Volume= 1,289 cf
Outflow = 0.38 cfs @ 12.02 hrs, Volume= 1,289 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.38 cfs @ 12.02 hrs, Volume= 1,289 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.88' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.55'	**12.0" Round Culvert** L= 77.0' Ke= 0.800 Outlet Invert= 15.63' S= 0.0119 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.36 cfs @ 12.02 hrs HW=16.87' (Free Discharge)
1=Culvert (Inlet Controls 0.36 cfs @ 1.62 fps)

Pond 6:



Summary for Pond 7:

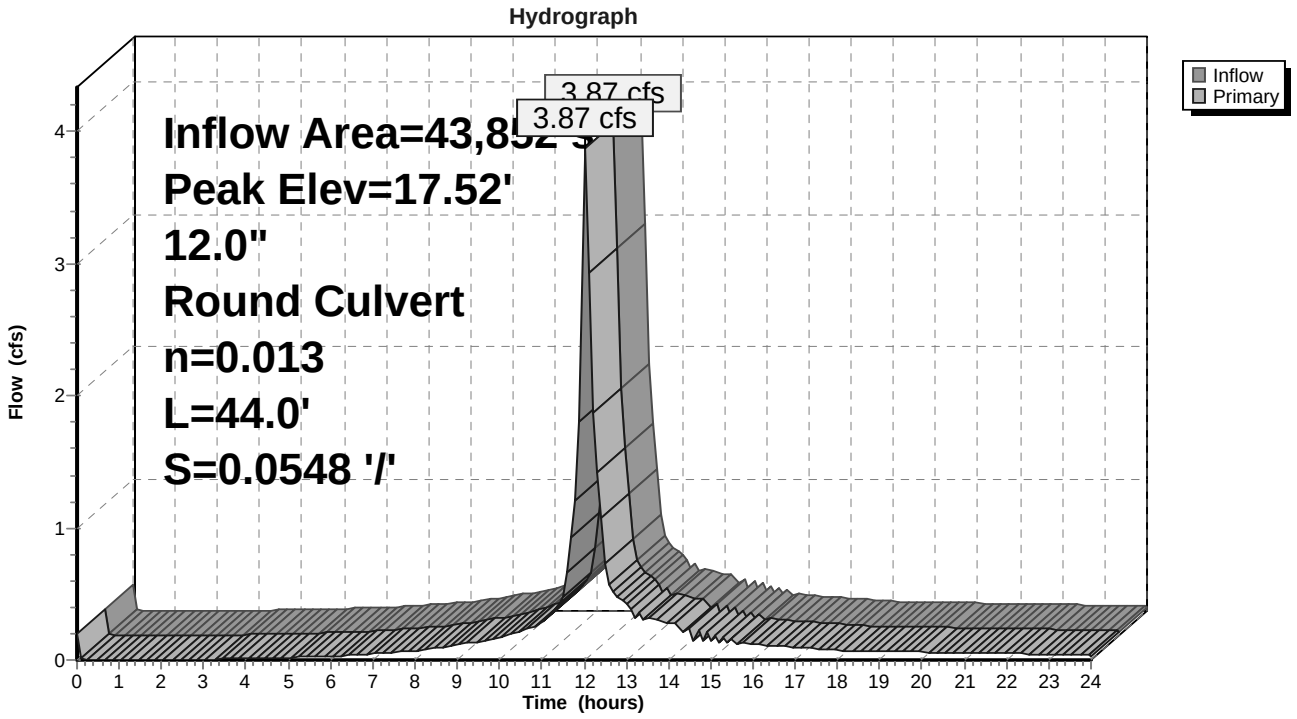
Inflow Area = 43,852 sf, 80.19% Impervious, Inflow Depth > 3.84" for 10-Year event
Inflow = 3.87 cfs @ 12.02 hrs, Volume= 14,020 cf
Outflow = 3.87 cfs @ 12.02 hrs, Volume= 14,020 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.87 cfs @ 12.02 hrs, Volume= 14,020 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.52' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.53'	**12.0" Round Culvert** L= 44.0' Ke= 0.800 Outlet Invert= 13.12' S= 0.0548 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=3.66 cfs @ 12.02 hrs HW=17.38' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.66 cfs @ 4.66 fps)

Pond 7:



Summary for Pond FP1: FocalPoint 1

Inflow Area = 11,411 sf, 80.23% Impervious, Inflow Depth > 3.81" for 10-Year event
Inflow = 1.04 cfs @ 12.02 hrs, Volume= 3,619 cf
Outflow = 1.10 cfs @ 12.03 hrs, Volume= 3,663 cf, Atten= 0%, Lag= 0.5 min
Primary = 0.11 cfs @ 0.00 hrs, Volume= 2,645 cf
Secondary = 0.98 cfs @ 12.03 hrs, Volume= 1,018 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Starting Elev= 19.50' Surf.Area= 49 sf Storage= 22 cf
Peak Elev= 20.92' @ 12.03 hrs Surf.Area= 49 sf Storage= 279 cf (257 cf above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	17.25'	22 cf	**7.00'W x 7.00'L x 2.25'H FocalPoint** 110 cf Overall x 20.0% Voids
#2	20.00'	287 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		309 cf	Total Available Storage

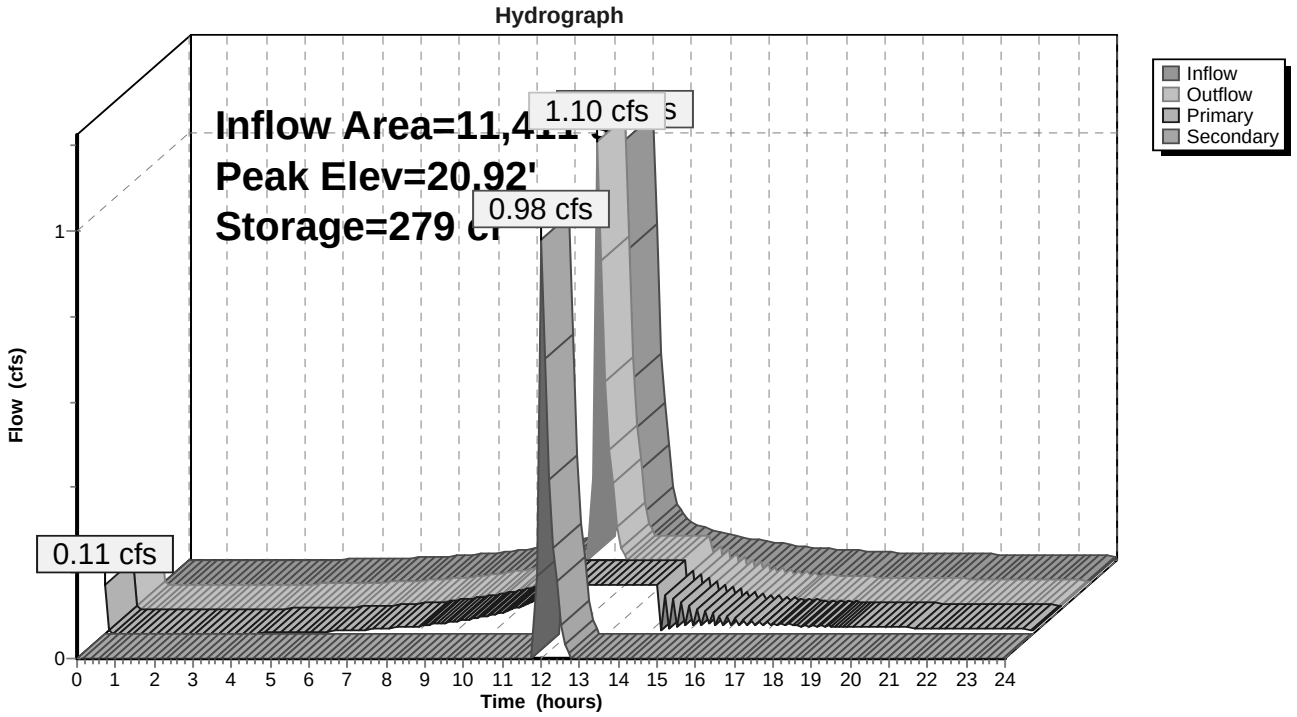
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
20.00	204	0	0
21.00	369	287	287

Device	Routing	Invert	Outlet Devices
#1	Primary	17.25'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#2	Secondary	20.75'	**6.0' long x 6.0' 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) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.11 cfs @ 0.00 hrs HW=19.50' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.88 cfs @ 12.03 hrs HW=20.91' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 0.88 cfs @ 0.94 fps)

Pond FP1: FocalPoint 1



Summary for Pond FP2: FocalPoint 2

Inflow Area = 2,647 sf, 86.02% Impervious, Inflow Depth > 4.02" for 10-Year event
Inflow = 0.25 cfs @ 12.02 hrs, Volume= 887 cf
Outflow = 0.08 cfs @ 0.00 hrs, Volume= 920 cf, Atten= 67%, Lag= 0.0 min
Primary = 0.08 cfs @ 0.00 hrs, Volume= 920 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Starting Elev= 20.75' Surf.Area= 36 sf Storage= 2 cf
Peak Elev= 21.95' @ 12.32 hrs Surf.Area= 36 sf Storage= 132 cf (130 cf above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	20.50'	16 cf	**6.00'W x 6.00'L x 2.25'H FocalPoint** 81 cf Overall x 20.0% Voids
#2	21.00'	254 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		270 cf	Total Available Storage

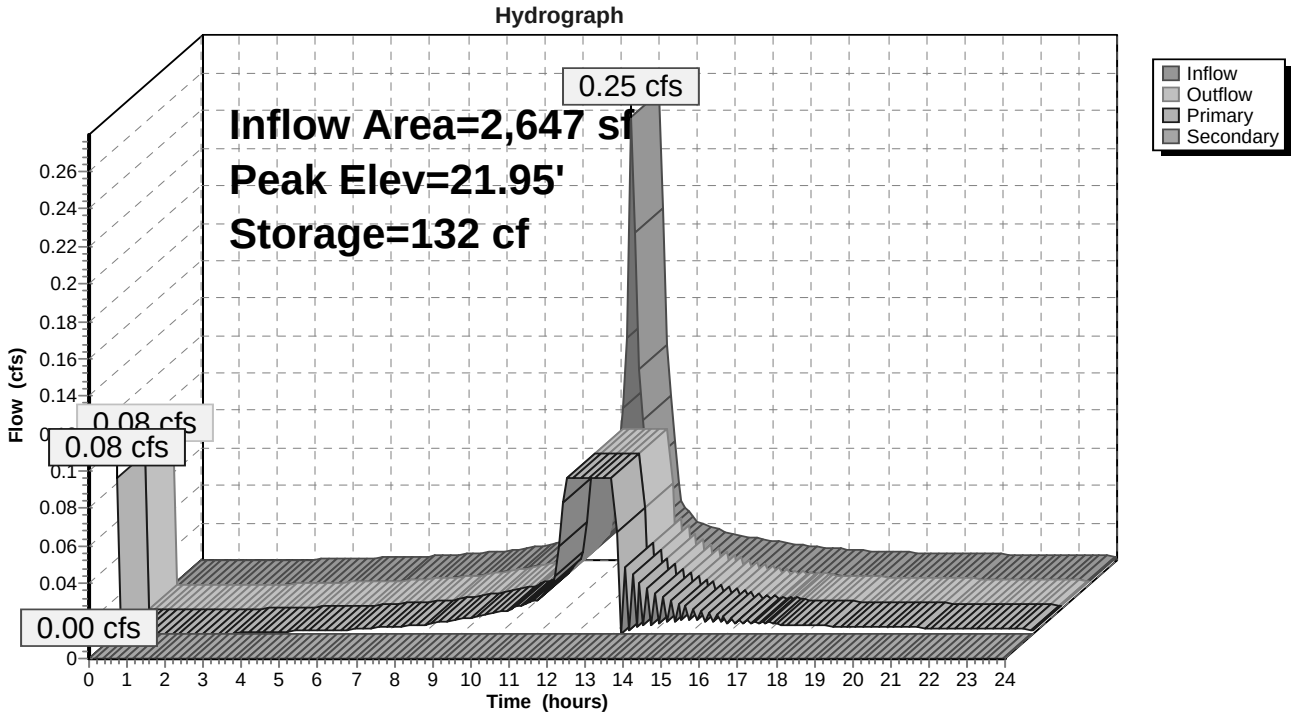
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.00	62	0	0
22.00	200	131	131
22.50	290	123	254

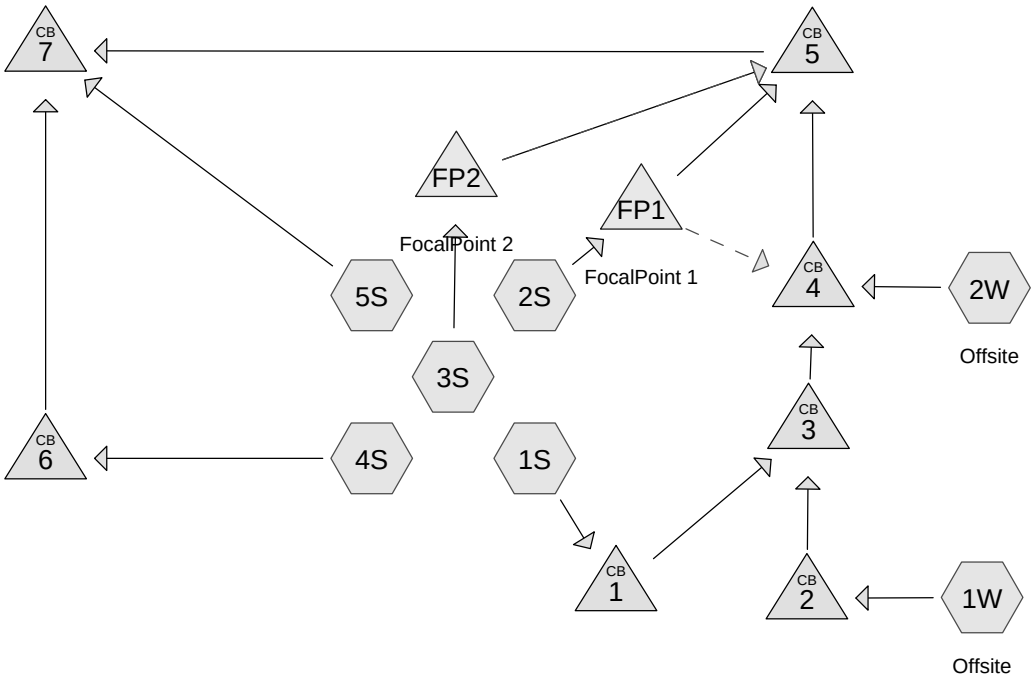
Device	Routing	Invert	Outlet Devices
#1	Primary	20.50'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#2	Secondary	22.75'	**4.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.08 cfs @ 0.00 hrs HW=20.75' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=20.75' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond FP2: FocalPoint 2





Subcat Reach Pond Link

Drainage Diagram for 17140 post

Prepared by Plymouth Engineering, Inc., Printed 7/11/2018

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,687	74	>75% Grass cover, Good, HSG C (1S, 1W, 2S, 2W, 3S, 4S, 5S)
20,546	98	Impervious Area (1S, 2S, 3S, 4S, 5S)
14,619	98	Impervious Surface (1W, 2W)

Time span=0.00-24.00 hrs, dt=0.10 hrs, 241 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=684 sf 37.28% Impervious Runoff Depth>3.91"
Tc=5.0 min CN=83 Runoff=0.07 cfs 223 cf

Subcatchment 1W: Offsite Runoff Area=8,028 sf 64.39% Impervious Runoff Depth>4.54"
Tc=5.0 min CN=89 Runoff=0.89 cfs 3,038 cf

Subcatchment 2S: Runoff Area=11,411 sf 80.23% Impervious Runoff Depth>4.98"
Tc=5.0 min CN=93 Runoff=1.34 cfs 4,740 cf

Subcatchment 2W: Offsite Runoff Area=10,149 sf 93.11% Impervious Runoff Depth>5.33"
Tc=5.0 min CN=96 Runoff=1.23 cfs 4,506 cf

Subcatchment 3S: Runoff Area=2,647 sf 86.02% Impervious Runoff Depth>5.21"
Tc=5.0 min CN=95 Runoff=0.32 cfs 1,150 cf

Subcatchment 4S: Runoff Area=4,303 sf 71.86% Impervious Runoff Depth>4.76"
Tc=5.0 min CN=91 Runoff=0.49 cfs 1,707 cf

Subcatchment 5S: Runoff Area=6,630 sf 86.98% Impervious Runoff Depth>5.21"
Tc=5.0 min CN=95 Runoff=0.80 cfs 2,880 cf

Pond 1: Peak Elev=18.44' Inflow=0.07 cfs 223 cf
12.0" Round Culvert n=0.013 L=91.0' S=0.0051 '/' Outflow=0.07 cfs 223 cf

Pond 2: Peak Elev=18.57' Inflow=0.89 cfs 3,038 cf
12.0" Round Culvert n=0.013 L=23.0' S=0.0074 '/' Outflow=0.89 cfs 3,038 cf

Pond 3: Peak Elev=18.34' Inflow=0.96 cfs 3,261 cf
12.0" Round Culvert n=0.013 L=41.0' S=0.0051 '/' Outflow=0.96 cfs 3,261 cf

Pond 4: Peak Elev=18.98' Inflow=3.27 cfs 9,337 cf
12.0" Round Culvert n=0.013 L=43.0' S=0.0295 '/' Outflow=3.27 cfs 9,337 cf

Pond 5: Peak Elev=17.95' Inflow=3.46 cfs 13,737 cf
12.0" Round Culvert n=0.013 L=83.0' S=0.0051 '/' Outflow=3.46 cfs 13,737 cf

Pond 6: Peak Elev=16.94' Inflow=0.49 cfs 1,707 cf
12.0" Round Culvert n=0.013 L=77.0' S=0.0119 '/' Outflow=0.49 cfs 1,707 cf

Pond 7: Peak Elev=18.28' Inflow=4.75 cfs 18,324 cf
12.0" Round Culvert n=0.013 L=44.0' S=0.0548 '/' Outflow=4.75 cfs 18,324 cf

Pond FP1: FocalPoint 1 Peak Elev=20.94' Storage=285 cf Inflow=1.34 cfs 4,740 cf
Primary=0.11 cfs 3,214 cf Secondary=1.13 cfs 1,570 cf Outflow=1.25 cfs 4,784 cf

Pond FP2: FocalPoint 2 Peak Elev=22.33' Storage=221 cf Inflow=0.32 cfs 1,150 cf
Primary=0.08 cfs 1,186 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 1,186 cf

Summary for Subcatchment 1S:

Runoff = 0.07 cfs @ 12.02 hrs, Volume= 223 cf, Depth> 3.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	429	74	>75% Grass cover, Good, HSG C
*	255	98	Impervious Area
	684	83	Weighted Average
	429		62.72% Pervious Area
	255		37.28% Impervious Area

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

Summary for Subcatchment 1W: Offsite

Runoff = 0.89 cfs @ 12.02 hrs, Volume= 3,038 cf, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	5,169	98	Impervious Surface
	2,859	74	>75% Grass cover, Good, HSG C
	8,028	89	Weighted Average
	2,859		35.61% Pervious Area
	5,169		64.39% Impervious Area

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

Summary for Subcatchment 2S:

Runoff = 1.34 cfs @ 12.02 hrs, Volume= 4,740 cf, Depth> 4.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	9,155	98	Impervious Area
	2,256	74	>75% Grass cover, Good, HSG C
	11,411	93	Weighted Average
	2,256		19.77% Pervious Area
	9,155		80.23% Impervious Area

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

Summary for Subcatchment 2W: Offsite

Runoff = 1.23 cfs @ 12.02 hrs, Volume= 4,506 cf, Depth> 5.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	9,450	98	Impervious Surface
	699	74	>75% Grass cover, Good, HSG C
	10,149	96	Weighted Average
	699		6.89% Pervious Area
	9,450		93.11% Impervious Area

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

Summary for Subcatchment 3S:

Runoff = 0.32 cfs @ 12.02 hrs, Volume= 1,150 cf, Depth> 5.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,277	98	Impervious Area
	370	74	>75% Grass cover, Good, HSG C
	2,647	95	Weighted Average
	370		13.98% Pervious Area
	2,277		86.02% Impervious Area

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

Summary for Subcatchment 4S:

Runoff = 0.49 cfs @ 12.02 hrs, Volume= 1,707 cf, Depth> 4.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	1,211	74	>75% Grass cover, Good, HSG C
*	3,092	98	Impervious Area
	4,303	91	Weighted Average
	1,211		28.14% Pervious Area
	3,092		71.86% Impervious Area

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

Summary for Subcatchment 5S:

Runoff = 0.80 cfs @ 12.02 hrs, Volume= 2,880 cf, Depth> 5.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	863	74	>75% Grass cover, Good, HSG C
*	5,767	98	Impervious Area
	6,630	95	Weighted Average
	863		13.02% Pervious Area
	5,767		86.98% Impervious Area

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

Summary for Pond 1:

Inflow Area = 684 sf, 37.28% Impervious, Inflow Depth > 3.91" for 25-Year event
Inflow = 0.07 cfs @ 12.02 hrs, Volume= 223 cf
Outflow = 0.07 cfs @ 12.02 hrs, Volume= 223 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.07 cfs @ 12.02 hrs, Volume= 223 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.44' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.29'	**12.0" Round Culvert** L= 91.0' Ke= 0.800 Outlet Invert= 17.83' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior

Primary OutFlow Max=0.06 cfs @ 12.02 hrs HW=18.44' (Free Discharge)
1=Culvert (Barrel Controls 0.06 cfs @ 1.35 fps)

Summary for Pond 2:

Inflow Area = 8,028 sf, 64.39% Impervious, Inflow Depth > 4.54" for 25-Year event
Inflow = 0.89 cfs @ 12.02 hrs, Volume= 3,038 cf
Outflow = 0.89 cfs @ 12.02 hrs, Volume= 3,038 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.89 cfs @ 12.02 hrs, Volume= 3,038 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.57' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	18.00'	**12.0" Round Culvert** L= 23.0' Ke= 0.800 Outlet Invert= 17.83' S= 0.0074 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.84 cfs @ 12.02 hrs HW=18.55' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.84 cfs @ 2.74 fps)

Summary for Pond 3:

Inflow Area = 8,712 sf, 62.26% Impervious, Inflow Depth > 4.49" for 25-Year event
Inflow = 0.96 cfs @ 12.02 hrs, Volume= 3,261 cf
Outflow = 0.96 cfs @ 12.02 hrs, Volume= 3,261 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.96 cfs @ 12.02 hrs, Volume= 3,261 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.34' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.73'	**12.0" Round Culvert** L= 41.0' Ke= 0.800 Outlet Invert= 17.52' S= 0.0051 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=0.91 cfs @ 12.02 hrs HW=18.32' (Free Discharge)
1=Culvert (Barrel Controls 0.91 cfs @ 2.68 fps)

Summary for Pond 4:

Inflow Area = 18,861 sf, 78.86% Impervious, Inflow Depth > 5.94" for 25-Year event
Inflow = 3.27 cfs @ 12.02 hrs, Volume= 9,337 cf
Outflow = 3.27 cfs @ 12.02 hrs, Volume= 9,337 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.27 cfs @ 12.02 hrs, Volume= 9,337 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.98' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	17.42'	**12.0" Round Culvert** L= 43.0' Ke= 0.800 Outlet Invert= 16.15' S= 0.0295 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=3.10 cfs @ 12.02 hrs HW=18.89' (Free Discharge)
1=Culvert (Inlet Controls 3.10 cfs @ 3.95 fps)

Summary for Pond 5:

Inflow Area = 32,919 sf, 79.91% Impervious, Inflow Depth > 5.01" for 25-Year event
Inflow = 3.46 cfs @ 12.02 hrs, Volume= 13,737 cf
Outflow = 3.46 cfs @ 12.02 hrs, Volume= 13,737 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.46 cfs @ 12.02 hrs, Volume= 13,737 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 17.95' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.05'	**12.0" Round Culvert** L= 83.0' Ke= 0.800 Outlet Invert= 15.63' S= 0.0051 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=3.30 cfs @ 12.02 hrs HW=17.84' (Free Discharge)
1=Culvert (Barrel Controls 3.30 cfs @ 4.20 fps)

Summary for Pond 6:

Inflow Area = 4,303 sf, 71.86% Impervious, Inflow Depth > 4.76" for 25-Year event
Inflow = 0.49 cfs @ 12.02 hrs, Volume= 1,707 cf
Outflow = 0.49 cfs @ 12.02 hrs, Volume= 1,707 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.49 cfs @ 12.02 hrs, Volume= 1,707 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 16.94' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.55'	**12.0" Round Culvert** L= 77.0' Ke= 0.800 Outlet Invert= 15.63' S= 0.0119 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=0.47 cfs @ 12.02 hrs HW=16.93' (Free Discharge)
1=Culvert (Inlet Controls 0.47 cfs @ 1.74 fps)

Summary for Pond 7:

Inflow Area = 43,852 sf, 80.19% Impervious, Inflow Depth > 5.01" for 25-Year event
Inflow = 4.75 cfs @ 12.02 hrs, Volume= 18,324 cf
Outflow = 4.75 cfs @ 12.02 hrs, Volume= 18,324 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.75 cfs @ 12.02 hrs, Volume= 18,324 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 18.28' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.53'	**12.0" Round Culvert** L= 44.0' Ke= 0.800 Outlet Invert= 13.12' S= 0.0548 '/' Cc= 0.900 n= 0.013 Concrete sewer w/manholes & inlets

Primary OutFlow Max=4.53 cfs @ 12.02 hrs HW=18.10' (Free Discharge)
1=Culvert (Inlet Controls 4.53 cfs @ 5.77 fps)

Summary for Pond FP1: FocalPoint 1

Inflow Area = 11,411 sf, 80.23% Impervious, Inflow Depth > 4.98" for 25-Year event
Inflow = 1.34 cfs @ 12.02 hrs, Volume= 4,740 cf
Outflow = 1.25 cfs @ 12.05 hrs, Volume= 4,784 cf, Atten= 7%, Lag= 2.3 min
Primary = 0.11 cfs @ 0.00 hrs, Volume= 3,214 cf
Secondary = 1.13 cfs @ 12.05 hrs, Volume= 1,570 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Starting Elev= 19.50' Surf.Area= 49 sf Storage= 22 cf
Peak Elev= 20.94' @ 12.05 hrs Surf.Area= 49 sf Storage= 285 cf (263 cf above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.4 min (770.4 - 770.0)

Volume	Invert	Avail.Storage	Storage Description
#1	17.25'	22 cf	**7.00'W x 7.00'L x 2.25'H FocalPoint** 110 cf Overall x 20.0% Voids
#2	20.00'	287 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		309 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
20.00	204	0	0
21.00	369	287	287

Device	Routing	Invert	Outlet Devices
#1	Primary	17.25'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#2	Secondary	20.75'	**6.0' long x 6.0' 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) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.11 cfs @ 0.00 hrs HW=19.50' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=1.06 cfs @ 12.05 hrs HW=20.93' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 1.06 cfs @ 1.00 fps)

Summary for Pond FP2: FocalPoint 2

Inflow Area = 2,647 sf, 86.02% Impervious, Inflow Depth > 5.21" for 25-Year event
Inflow = 0.32 cfs @ 12.02 hrs, Volume= 1,150 cf
Outflow = 0.08 cfs @ 0.00 hrs, Volume= 1,186 cf, Atten= 74%, Lag= 0.0 min
Primary = 0.08 cfs @ 0.00 hrs, Volume= 1,186 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Starting Elev= 20.75' Surf.Area= 36 sf Storage= 2 cf
Peak Elev= 22.33' @ 12.39 hrs Surf.Area= 36 sf Storage= 221 cf (219 cf above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	20.50'	16 cf	**6.00'W x 6.00'L x 2.25'H FocalPoint** 81 cf Overall x 20.0% Voids
#2	21.00'	254 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		270 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.00	62	0	0
22.00	200	131	131
22.50	290	123	254

Device	Routing	Invert	Outlet Devices
#1	Primary	20.50'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#2	Secondary	22.75'	**4.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.08 cfs @ 0.00 hrs HW=20.75' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=20.75' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

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:

Dunkin' Donuts

PROPOSED DEVELOPMENT ADDRESS:

325 St. John Street

CHART/BLOCK/LOT (s): 065 C004001 **Applicable Zone**: B2

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Dunkin' Brands, Inc. Business Name, if applicable: Address: 130 Royall Street City/State : Canton, MA Zip Code: 02021	**Applicant Contact Information** Work # 617-510-4543 Home# Cell # Fax# e-mail: robert.mahoney@dunkinbrands.com
Owner – (if different from Applicant) Name: Nancy E. Hurst Address: 1876 Harpswell Neck Road City/State : Harpswell, ME Zip Code: 04079	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Billing Information Name: Dunkin' Brands, Inc. Address: 130 Royall Street City/State : Canton, MA Zip Code: 02021	**Billing Information** Work # 617-510-4543 Cell # Fax# e-mail: robert.mahoney@dunkinbrands.com
Designated person/person(s) for uploading to e-Plan: Name: Plymouth Engineering, Inc. c/o Jon Whitten, Jr., P.E. e-mail: jon.whitten@plymouthengineering.com Name: e-mail: Name: e-mail:	

RIGHT, TITLE OR INTEREST:

lease

(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.

sit down restaurant

PROPOSED USE: Describe the proposed use of the subject property

drive through restaurant

TYPE OF CONDITIONAL USE PROPOSED (Refer To Specific Provisions Of Land Use Code Authorizing The Proposed Conditional Use).

drive through restaurant

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- 183

Address any specific conditional use standards for the specific use contained in the zoning code in the written submission.

APPLICATION FEES:

x ___ Conditional Use Review ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($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:
	6/7/18

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
   The addition of drive through to a permitted restaurant in the B2 zone will not create a substantial change in the use of the property. Currently, the applicant is operating the use on an adjacent parcel in the same zone. The current use of the parcel is a sit-down restaurant. This parcel will provide for a longer queueing distance on the parcel, and for traffic to be directed onto St. John Street instead of Valley Street, which is where the traffic is currently be directed by the proposed use which is currently located on an adjacent parcel. The scale of the building and parking area on the site will decrease from the existing conditions on the site. A traffic movement is currently under review by City under a TMP application.
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
   The proposed use will not create unsanitary or harmful conditions on the site. There will be no discernable change in the noise generated by the use on the site from the existing. Sewage disposal will be through the use of the existing City of Portland system located on St. John Street. Glare, dust, emissions, odor, lighting and litter will not diminish from the existing use of the site as a sit-down restaurant to the proposed use of a drive through restaurant. The applicant will maintain the site to corporate standards.
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.
   Overall the use is similar to the permitted use of a restaurant in the B2 zone, and is surrounded by similar uses on adjacent parcels, as well as across St. John Street. The reconfiguration of traffic movement will redirect existing traffic that is currently on Valley Street, to St. John Street. The residences on the opposite side of Valley Street will encounter less traffic generated by the use on the street.

CONDITIONAL USE STANDARDS AND CONDITIONS – 14-183

Drive-throughs: Notwithstanding section 14- 474(a)of this article or any other provision of this code, the Planning Board shall be substituted for the Board of Appeals as the reviewing authority and shall apply the following standards in addition to the provisions of section 14-474:

a. Location of Drive-throughs: Features, such as windows, vacuum cleaners and menu/order boards, stacking lanes, must be placed, where practicable, to the side and rear of the principal building except where such placement will be detrimental to an adjacent residential zone or use, and shall be located no nearer than forty (40) feet from any adjoining property located in a residential zone. This distance shall be measured from the outermost edge of the outside drive-through feature to such property line. In addition, drive-through features shall not extend nearer than twenty-five (25) feet

to the street line. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular circulation or creating hazards to vehicular circulation on adjoining streets.

See previously submitted site plans. All of the dimensional standards set forth have been met.

b. Noise: Any speakers, intercom systems, or other audible means of communication shall not play prerecorded messages. Any speakers, intercom systems, audible signals, computer prompts, or other noises generated by the drive-through services or fixtures shall not exceed 55 dB or shall be undetectable above the ambient noise level as measured by a noise meter at the property line, whichever is greater.

The intercom system can be set to a specific level and will be set to the allowable limit in the zone.

c. Lighting: Drive-through facilities shall be City of Portland Land Use Code of Ordinances Chapter 14 Sec. 14-183 Rev. 3-20-2017 14-258 designed so that site and vehicular light sources shall not unreasonably spill over or be directed onto adjacent residential properties and shall otherwise conform to the lighting standards set forth in 14-526.

As shown on the site plans, a row of planting will be located on the Valley Street frontage of the parcel, to prevent spill over of vehicular light sources to the residential properties located across the street.

d. Screening and Enclosure: Where automobiles may queue, waiting for drive-through services, their impacts must be substantially mitigated to protect adjacent residential properties from headlight glare, exhaust fumes, noise, etc. As deemed necessary by the reviewing authority, mitigation measures shall consist of installation of solid fencing with landscaping along any residential property line which is exposed to the drive-through or the enclosure of the drive-through fixtures and lanes so as to buffer abutting residential properties and to further contain all associated impacts; and

As shown on the site plans, a row of planting will be located on the Valley Street frontage of the parcel, to prevent spillover of vehicular light sources to the residential properties located across the street.

e. Pedestrian access: Drive-through lanes shall be designed and placed to minimize crossing principal pedestrian access-ways or otherwise impeding pedestrian access.

The drive through lanes are primarily located to the rear of the site, with no parking located on the outside of the lanes from the building. There is parking located on the same side of the building as the drive through window but does not necessitate a pedestrian passing through the drive through queue.

f. Hours of Operation: The Board, as part of its review, may take into consideration the impact hours of operation may have on adjoining uses.

The proposed hours of operation will be similar to adjacent uses that exist along both sides of St. John Street.



D-Series Size 0
LED Area Luminaire

Catalog Number

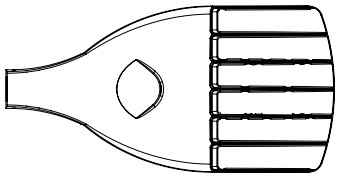
Notes

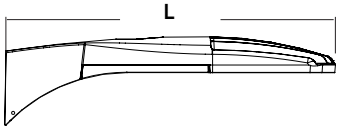
Type

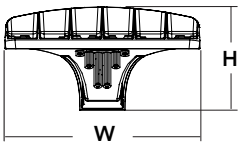
Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.95 ft² (.09 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height:	7" (17.8 cm)
Weight (max):	16 lbs (7.25 kg)







A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA DDBXD

DSX0 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** P1 P4 P7 P2 P5 P3 P6 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[2]	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control[2,3] LCCO Left corner cutoff[2,3] RCCO Right corner cutoff[2,3]	MVOLT[4,5] 120[6] 208[5,6] 240[5,6] 277[6] 347[5,6,7] 480[5,6,7]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[8] RPUMBA Round pole universal mounting adaptor[8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

Control options

Shipped installed

NLTAIR2	nLight AIR generation 2 enabled[10]
PER	NEMA twist-lock receptacle only (control ordered separate)[11]
PER5	Five-wire receptacle only (control ordered separate)[11,12]
PER7	Seven-wire receptacle only (control ordered separate)[11,12]
DMG	0-10V dimming extend out back of housing for external control (control ordered separate)
PIR	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[5,13,14]
PIRH	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[5,13,14]
PIRHN	Network, Bi-Level motion/ambient sensor[15]
PIR1FC3V	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[5,13,14]
PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5,13,14]
BL30	Bi-level switched dimming, 30%[5,16,17]
BL50	Bi-level switched dimming, 50%[5,16,17]
PNMTDD3	Part night, dim till dawn[5,18]
PNMT5D3	Part night, dim 5 hrs[5,18]
PNMT6D3	Part night, dim 6 hrs[5,18]
PNMT7D3	Part night, dim 7 hrs[5,18]
FAO	Field adjustable output[19]

Other options

Shipped installed

HS	House-side shield[20]
SF	Single fuse (120, 277, 347V)[6]
DF	Double fuse (208, 240, 480V)[6]
L90	Left rotated optics[1]
R90	Right rotated optics[1]
DDL	Diffused drop lens[20]

Shipped separately

BS	Bird spikes[21]
EGS	External glare shield[21]

Finish *(required)*

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

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Ordering Information

Accessories

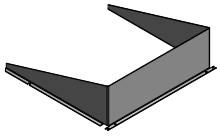
Ordered and shipped separately.

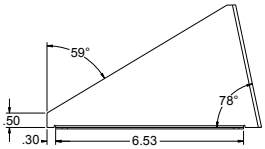
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [22]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [22]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [22]
DSHORT SBK U	Shorting cap [22]
DSX0HS 20C U	House-side shield for 20 LED unit [20]
DSX0HS 30C U	House-side shield for 30 LED unit [20]
DSX0HS 40C U	House-side shield for 40 LED unit [20]
DSX0DDL U	Diffused drop lens (polycarbonate) [20]
PUMBA DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish) [23]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [8]

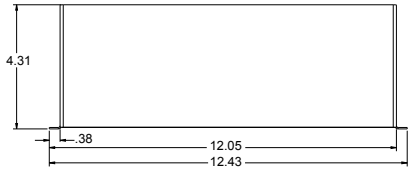
For more control options, visit DTL and ROAM online.

NOTES
1 P10, P11, P12 and P13 and rotated options (L90 or R90) only available together.
2 AMBPC is not available with BLC, LCCO, RCCO, P4, P7 or P13.
3 Not available with HS or DDL.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 Any PIRx with BL30, BL50 or PNMT, is not available with 208V, 240V, 347V, 480V or MVOLT. It is only available in 120V or 277V specified.
6 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
7 Not available in P4, P7 or P13. Not available with BL30, BL50 or PNMT options.
8 Existing drilled pole only. Available as a separate combination accessory; for retrofit use only: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
9 Must order fixture with SPA mounting. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
10 Must be ordered with PIRHN.
11 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
12 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
13 Reference Motion Sensor table on page 3.
14 Reference PER Table on page 3 to see functionality.
15 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
16 Requires (2) separately switched circuits.
17 Not available with 347V, 480V or PNMT. For PER5 or PER7 see PER Table on page 3. Requires isolated neutral.
18 Not available with 347V, 480V, BL30 and BL50. For PER5 or PER7 see PER Table on page 3. Separate Dusk to Dawn required.
19 Not available with other dimming controls options.
20 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 Must be ordered with fixture for factory pre-drilling.
22 Requires luminaire to be specified with PER, PER5 or PER7 option. See PER Table on page 3.
23 For retrofit use only.

External Glare Shield

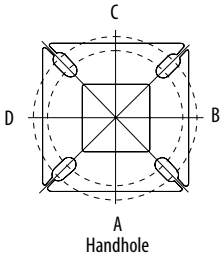




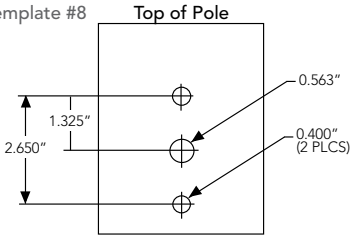


Drilling

HANDHOLE ORIENTATION



Template #8



Tenon Mounting Slipfitter **

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

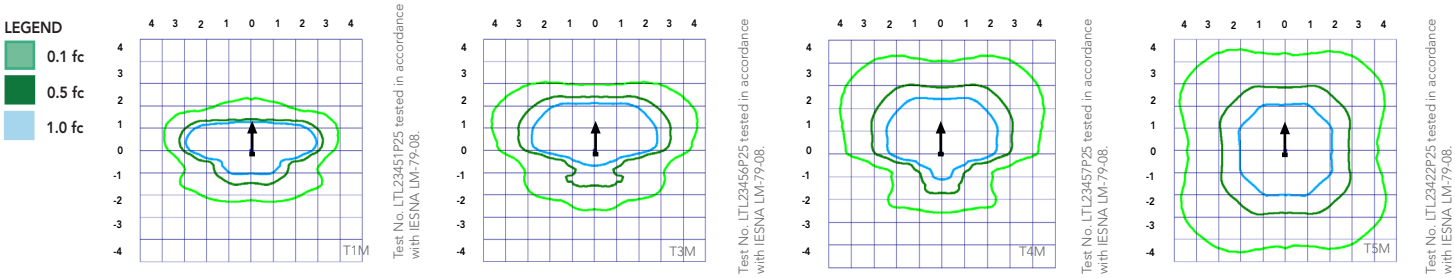
Pole drilling nomenclature: # of heads at degree from handhole (default side A)					
DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS
1 @ 90°	2 @ 280°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
Side B	Side B & D	Side B & C	Round pole only	Side B, C, & D	Sides A, B, C, D
Note: Review luminaire spec sheet for specific nomenclature					

Pole top or tenon O.D.	4.5" @ 90°	4" @ 90°	3.5" @ 90°	3" @ 90°	4.5" @ 120°	4" @ 120°	3.5" @ 120°	3" @ 120°
DSX SPA	Y	Y	Y	N	-	-	-	-
DSX RPA	Y	Y	N	N	Y	Y	Y	Y
DSX SPUMBA	Y	N	N	N	-	-	-	-
DSX RPUMBA	N	N	N	N	Y	Y	Y	N
					*3 fixtures @120 require round pole top/tenon.			

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 0 homepage.

Isofootcandle plots for the DSX0 LED 40C 1000 40K. Distances are in units of mounting height (20').



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Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	25000	50000	100000
Lumen Maintenance Factor	0.96	0.92	0.85

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A)					
					120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	20	530	38	0.32	0.18	0.15	0.15	0.10	0.08
	P2	20	700	49	0.41	0.23	0.20	0.19	0.14	0.11
	P3	20	1050	71	0.60	0.37	0.32	0.27	0.21	0.15
	P4	20	1400	92	0.77	0.45	0.39	0.35	0.28	0.20
	P5	40	700	89	0.74	0.43	0.38	0.34	0.26	0.20
	P6	40	1050	134	1.13	0.65	0.55	0.48	0.39	0.29
	P7	40	1300	166	1.38	0.80	0.69	0.60	0.50	0.37
Rotated Optics (Requires L90 or R90)	P10	30	530	53	0.45	0.26	0.23	0.21	0.16	0.12
	P11	30	700	72	0.60	0.35	0.30	0.27	0.20	0.16
	P12	30	1050	104	0.88	0.50	0.44	0.39	0.31	0.23
	P13	30	1300	128	1.08	0.62	0.54	0.48	0.37	0.27

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use with Inline Dusk to Dawn or timer.						

PER Table						
Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✔	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	⊘	✔	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	⊘	⚠	Wires Capped inside fixture	⚠	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	⊘	⚠	Wired to dimming leads on driver	✔	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	⊘	⚠	Wires Capped inside fixture	✔	Wires Capped inside fixture	Wires Capped inside fixture

✔ Recommended
⊘ Will not work
⚠ Alternate

*Future-proof means: Ability to change controls in the future.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20	530	**P1**	38W	T1S	4,369	1	0	1	115	4,706	1	0	1	124	4,766	1	0	1	125	2,541	1	0	1	73
				T2S	4,364	1	0	1	115	4,701	1	0	1	124	4,761	1	0	1	125	2,589	1	0	1	74
				T2M	4,387	1	0	1	115	4,726	1	0	1	124	4,785	1	0	1	126	2,539	1	0	1	73
				T3S	4,248	1	0	1	112	4,577	1	0	1	120	4,634	1	0	1	122	2,558	1	0	1	73
				T3M	4,376	1	0	1	115	4,714	1	0	1	124	4,774	1	0	1	126	2,583	1	0	1	74
				T4M	4,281	1	0	1	113	4,612	1	0	2	121	4,670	1	0	2	123	2,570	1	0	1	73
				TFTM	4,373	1	0	1	115	4,711	1	0	2	124	4,771	1	0	2	126	2,540	1	0	1	73
				T5VS	4,548	2	0	0	120	4,900	2	0	0	129	4,962	2	0	0	131	2,650	1	0	0	76
				T5S	4,552	2	0	0	120	4,904	2	0	0	129	4,966	2	0	0	131	2,690	1	0	0	77
				T5M	4,541	3	0	1	120	4,891	3	0	1	129	4,953	3	0	1	130	2,658	2	0	0	76
				T5W	4,576	3	0	2	120	4,929	3	0	2	130	4,992	3	0	2	131	2,663	2	0	1	73
				BLC	3,586	1	0	1	94	3,863	1	0	1	102	3,912	1	0	1	103					
				LCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77					
				RCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77					
20	700	**P2**	49W	T1S	5,570	1	0	1	114	6,001	1	0	1	122	6,077	2	0	2	124	3,144	1	0	1	70
				T2S	5,564	1	0	2	114	5,994	1	0	2	122	6,070	2	0	2	124	3,203	1	0	1	71
				T2M	5,593	1	0	1	114	6,025	1	0	1	123	6,102	1	0	1	125	3,141	1	0	1	70
				T3S	5,417	1	0	2	111	5,835	1	0	2	119	5,909	2	0	2	121	3,165	1	0	1	70
				T3M	5,580	1	0	2	114	6,011	1	0	2	123	6,087	1	0	2	124	3,196	1	0	1	71
				T4M	5,458	1	0	2	111	5,880	1	0	2	120	5,955	1	0	2	122	3,179	1	0	1	71
				TFTM	5,576	1	0	2	114	6,007	1	0	2	123	6,083	1	0	2	124	3,143	1	0	1	70
				T5VS	5,799	2	0	0	118	6,247	2	0	0	127	6,327	2	0	0	129	3,278	2	0	0	73
				T5S	5,804	2	0	0	118	6,252	2	0	0	128	6,332	2	0	1	129	3,328	2	0	0	74
				T5M	5,789	3	0	1	118	6,237	3	0	1	127	6,316	3	0	1	129	3,288	2	0	1	73
				T5W	5,834	3	0	2	119	6,285	3	0	2	128	6,364	3	0	2	130	3,295	2	0	1	73
				BLC	4,572	1	0	1	93	4,925	1	0	1	101	4,987	1	0	1	102					
				LCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76					
				RCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76					
20	1050	**P3**	71W	T1S	7,833	2	0	2	110	8,438	2	0	2	119	8,545	2	0	2	120					
				T2S	7,825	2	0	2	110	8,429	2	0	2	119	8,536	2	0	2	120					
				T2M	7,865	2	0	2	111	8,473	2	0	2	119	8,580	2	0	2	121					
				T3S	7,617	2	0	2	107	8,205	2	0	2	116	8,309	2	0	2	117					
				T3M	7,846	2	0	2	111	8,452	2	0	2	119	8,559	2	0	2	121					
				T4M	7,675	2	0	2	108	8,269	2	0	2	116	8,373	2	0	2	118					
				TFTM	7,841	2	0	2	110	8,447	2	0	2	119	8,554	2	0	2	120					
				T5VS	8,155	3	0	0	115	8,785	3	0	0	124	8,896	3	0	0	125					
				T5S	8,162	3	0	1	115	8,792	3	0	1	124	8,904	3	0	1	125					
				T5M	8,141	3	0	2	115	8,770	3	0	2	124	8,881	3	0	2	125					
				T5W	8,204	3	0	2	116	8,838	4	0	2	124	8,950	4	0	2	126					
				BLC	6,429	1	0	2	91	6,926	1	0	2	98	7,013	1	0	2	99					
				LCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73					
				RCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73					
20	1400	**P4**	92W	T1S	9,791	2	0	2	106	10,547	2	0	2	115	10,681	2	0	2	116					
				T2S	9,780	2	0	2	106	10,536	2	0	2	115	10,669	2	0	2	116					
				T2M	9,831	2	0	2	107	10,590	2	0	2	115	10,724	2	0	2	117					
				T3S	9,521	2	0	2	103	10,256	2	0	2	111	10,386	2	0	2	113					
				T3M	9,807	2	0	2	107	10,565	2	0	2	115	10,698	2	0	2	116					
				T4M	9,594	2	0	2	104	10,335	2	0	3	112	10,466	2	0	3	114					
				TFTM	9,801	2	0	2	107	10,558	2	0	2	115	10,692	2	0	2	116					
				T5VS	10,193	3	0	1	111	10,981	3	0	1	119	11,120	3	0	1	121					
				T5S	10,201	3	0	1	111	10,990	3	0	1	119	11,129	3	0	1	121					
				T5M	10,176	4	0	2	111	10,962	4	0	2	119	11,101	4	0	2	121					
				T5W	10,254	4	0	3	111	11,047	4	0	3	120	11,186	4	0	3	122					
				BLC	8,036	1	0	2	87	8,656	1	0	2	94	8,766	1	0	2	95					
				LCCO	5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71					
					5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71					

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	700	**P5**	89W	T1S	10,831	2	0	2	122	11,668	2	0	2	131	11,816	2	0	2	133					
				T2S	10,820	2	0	2	122	11,656	2	0	2	131	11,803	2	0	2	133					
				T2M	10,876	2	0	2	122	11,716	2	0	2	132	11,864	2	0	2	133					
				T3S	10,532	2	0	2	118	11,346	2	0	2	127	11,490	2	0	2	129					
				T3M	10,849	2	0	2	122	11,687	2	0	2	131	11,835	2	0	2	133					
				T4M	10,613	2	0	3	119	11,434	2	0	3	128	11,578	2	0	3	130					
				TFTM	10,842	2	0	2	122	11,680	2	0	2	131	11,828	2	0	2	133					
				T5VS	11,276	3	0	1	127	12,148	3	0	1	136	12,302	3	0	1	138					
				T5S	11,286	3	0	1	127	12,158	3	0	1	137	12,312	3	0	1	138					
				T5M	11,257	4	0	2	126	12,127	4	0	2	136	12,280	4	0	2	138					
				T5W	11,344	4	0	3	127	12,221	4	0	3	137	12,375	4	0	3	139					
				BLC	8,890	1	0	2	100	9,576	1	0	2	108	9,698	1	0	2	109					
				LCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81					
				RCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81					
40	1050	**P6**	134W	T1S	14,805	3	0	3	110	15,949	3	0	3	119	16,151	3	0	3	121	6,206	2	0	2	68
				T2S	14,789	3	0	3	110	15,932	3	0	3	119	16,134	3	0	3	120	6,322	2	0	2	69
				T2M	14,865	3	0	3	111	16,014	3	0	3	120	16,217	3	0	3	121	6,201	2	0	2	68
				T3S	14,396	3	0	3	107	15,509	3	0	3	116	15,705	3	0	3	117	6,247	1	0	2	69
				T3M	14,829	2	0	3	111	15,975	3	0	3	119	16,177	3	0	3	121	6,308	2	0	2	69
				T4M	14,507	2	0	3	108	15,628	3	0	3	117	15,826	3	0	3	118	6,275	1	0	2	69
				TFTM	14,820	2	0	3	111	15,965	3	0	3	119	16,167	3	0	3	121	6,203	1	0	2	68
				T5VS	15,413	4	0	1	115	16,604	4	0	1	124	16,815	4	0	1	125	6,671	2	0	0	73
				T5S	15,426	3	0	1	115	16,618	4	0	1	124	16,828	4	0	1	126	6,569	2	0	0	72
				T5M	15,387	4	0	2	115	16,576	4	0	2	124	16,786	4	0	2	125	6,491	3	0	1	71
				T5W	15,506	4	0	3	116	16,704	4	0	3	125	16,915	4	0	3	126	6,504	3	0	2	71
				BLC	12,151	1	0	2	91	13,090	1	0	2	98	13,255	1	0	2	99					
				LCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74					
				RCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74					
40	1300	**P7**	166W	T1S	17,023	3	0	3	103	18,338	3	0	3	110	18,570	3	0	3	112					
				T2S	17,005	3	0	3	102	18,319	3	0	3	110	18,551	3	0	3	112					
				T2M	17,092	3	0	3	103	18,413	3	0	3	111	18,646	3	0	3	112					
				T3S	16,553	3	0	3	100	17,832	3	0	3	107	18,058	3	0	3	109					
				T3M	17,051	3	0	3	103	18,369	3	0	3	111	18,601	3	0	3	112					
				T4M	16,681	3	0	3	100	17,969	3	0	3	108	18,197	3	0	3	110					
				TFTM	17,040	3	0	3	103	18,357	3	0	4	111	18,590	3	0	4	112					
				T5VS	17,723	4	0	1	107	19,092	4	0	1	115	19,334	4	0	1	116					
				T5S	17,737	4	0	2	107	19,108	4	0	2	115	19,349	4	0	2	117					
				T5M	17,692	4	0	2	107	19,059	4	0	2	115	19,301	4	0	2	116					
				T5W	17,829	5	0	3	107	19,207	5	0	3	116	19,450	5	0	3	117					
				BLC	13,971	2	0	2	84	15,051	2	0	2	91	15,241	2	0	2	92					
				LCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68					
					10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68					

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	**P10**	53W	T1S	6,727	2	0	2	127	7,247	3	0	3	137	7,339	3	0	3	138					
				T2S	6,689	3	0	3	126	7,205	3	0	3	136	7,297	3	0	3	138					
				T2M	6,809	3	0	3	128	7,336	3	0	3	138	7,428	3	0	3	140					
				T3S	6,585	3	0	3	124	7,094	3	0	3	134	7,183	3	0	3	136					
				T3M	6,805	3	0	3	128	7,331	3	0	3	138	7,424	3	0	3	140					
				T4M	6,677	3	0	3	126	7,193	3	0	3	136	7,284	3	0	3	137					
				TFTM	6,850	3	0	3	129	7,379	3	0	3	139	7,472	3	0	3	141					
				T5VS	6,898	3	0	0	130	7,431	3	0	0	140	7,525	3	0	0	142					
				T5S	6,840	2	0	1	129	7,368	2	0	1	139	7,461	2	0	1	141					
				T5M	6,838	3	0	1	129	7,366	3	0	2	139	7,460	3	0	2	141					
				T5W	6,777	3	0	2	128	7,300	3	0	2	138	7,393	3	0	2	139					
				BLC	5,626	2	0	2	106	6,060	2	0	2	114	6,137	2	0	2	116					
				LCCO	4,018	1	0	2	76	4,328	1	0	2	82	4,383	1	0	2	83					
				RCCO	4,013	3	0	3	76	4,323	3	0	3	82	4,377	3	0	3	83					
30	700	**P11**	72W	T1S	8,594	3	0	3	119	9,258	3	0	3	129	9,376	3	0	3	130					
				T2S	8,545	3	0	3	119	9,205	3	0	3	128	9,322	3	0	3	129					
				T2M	8,699	3	0	3	121	9,371	3	0	3	130	9,490	3	0	3	132					
				T3S	8,412	3	0	3	117	9,062	3	0	3	126	9,177	3	0	3	127					
				T3M	8,694	3	0	3	121	9,366	3	0	3	130	9,484	3	0	3	132					
				T4M	8,530	3	0	3	118	9,189	3	0	3	128	9,305	3	0	3	129					
				TFTM	8,750	3	0	3	122	9,427	3	0	3	131	9,546	3	0	3	133					
				T5VS	8,812	3	0	0	122	9,493	3	0	0	132	9,613	3	0	0	134					
				T5S	8,738	3	0	1	121	9,413	3	0	1	131	9,532	3	0	1	132					
				T5M	8,736	3	0	2	121	9,411	3	0	2	131	9,530	3	0	2	132					
				T5W	8,657	4	0	2	120	9,326	4	0	2	130	9,444	4	0	2	131					
				BLC	7,187	3	0	3	100	7,742	3	0	3	108	7,840	3	0	3	109					
				LCCO	5,133	1	0	2	71	5,529	1	0	2	77	5,599	1	0	2	78					
				RCCO	5,126	3	0	3	71	5,522	3	0	3	77	5,592	3	0	3	78					
30	1050	**P12**	104W	T1S	12,149	3	0	3	117	13,088	3	0	3	126	13,253	3	0	3	127					
				T2S	12,079	4	0	4	116	13,012	4	0	4	125	13,177	4	0	4	127					
				T2M	12,297	3	0	3	118	13,247	3	0	3	127	13,415	3	0	3	129					
				T3S	11,891	4	0	4	114	12,810	4	0	4	123	12,972	4	0	4	125					
				T3M	12,290	3	0	3	118	13,239	4	0	4	127	13,407	4	0	4	129					
				T4M	12,058	4	0	4	116	12,990	4	0	4	125	13,154	4	0	4	126					
				TFTM	12,369	4	0	4	119	13,325	4	0	4	128	13,494	4	0	4	130					
				T5VS	12,456	3	0	1	120	13,419	3	0	1	129	13,589	4	0	1	131					
				T5S	12,351	3	0	1	119	13,306	3	0	1	128	13,474	3	0	1	130					
				T5M	12,349	4	0	2	119	13,303	4	0	2	128	13,471	4	0	2	130					
				T5W	12,238	4	0	3	118	13,183	4	0	3	127	13,350	4	0	3	128					
				BLC	10,159	3	0	3	98	10,944	3	0	3	105	11,083	3	0	3	107					
				LCCO	7,256	1	0	3	70	7,816	1	0	3	75	7,915	1	0	3	76					
				RCCO	7,246	3	0	3	70	7,806	4	0	4	75	7,905	4	0	4	76					
30	1300	**P13**	128W	T1S	14,438	3	0	3	113	15,554	3	0	3	122	15,751	3	0	3	123					
				T2S	14,355	4	0	4	112	15,465	4	0	4	121	15,660	4	0	4	122					
				T2M	14,614	3	0	3	114	15,744	4	0	4	123	15,943	4	0	4	125					
				T3S	14,132	4	0	4	110	15,224	4	0	4	119	15,417	4	0	4	120					
				T3M	14,606	4	0	4	114	15,735	4	0	4	123	15,934	4	0	4	124					
				T4M	14,330	4	0	4	112	15,438	4	0	4	121	15,633	4	0	4	122					
				TFTM	14,701	4	0	4	115	15,836	4	0	4	124	16,037	4	0	4	125					
				T5VS	14,804	4	0	1	116	15,948	4	0	1	125	16,150	4	0	1	126					
				T5S	14,679	3	0	1	115	15,814	3	0	1	124	16,014	3	0	1	125					
				T5M	14,676	4	0	2	115	15,810	4	0	2	124	16,010	4	0	2	125					
				T5W	14,544	4	0	3	114	15,668	4	0	3	122	15,866	4	0	3	124					
				BLC	7919	3	0	3	62	8531	3	0	3	67	8639	3	0	3	67					
				LCCO	5145	1	0	2	40	5543	1	0	2	43	5613	1	0	2	44					
					5139	3	0	3	40	5536	3	0	3	43	5606	3	0	3	44					

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.95 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

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.

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Att. O



D-Series Size 1
LED Wall Luminaire

Catalog Number

Notes

Type

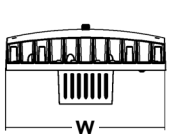
Hit the Tab key or mouse over the page to see all interactive elements.

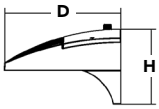
d-series

Specifications

Luminaire

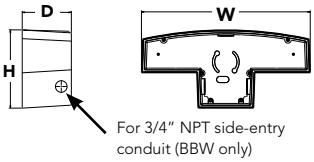
Width:	13-3/4" *(34.9 cm)*	**Weight:**	12 lbs *(5.4 kg)*
Depth:	10" *(25.4 cm)*		
Height:	6-3/8" *(16.2 cm)*		





Back Box (BBW, ELCW)

Width:	13-3/4" *(34.9 cm)*	**BBW Weight:**	5 lbs *(2.3 kg)*
Depth:	4" *(10.2 cm)*	**ELCW Weight:**	10 lbs *(4.5 kg)*
Height:	6-3/8" *(16.2 cm)*		



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines) [1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A) [1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium ASYDF Asymmetric diffuse	MVOLT [2] 120 [3] 208 [3] 240 [3] 277 [3] 347 [3,4] 480 [3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry) [5]	**Shipped installed** PE Photoelectric cell, button type [6] DMG 0-10V dimming driver (no controls; wires pulled outside fixture)) PIR 180° motion/ambient light sensor, <15' mtg ht [1,7] PIRH 180° motion/ambient light sensor, 15-30' mtg ht [1,7] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [1,7] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [1,7] ELCW Emergency battery backup (includes external component enclosure), non CEC compliant [8]

Other Options

Shipped installed

SF	Single fuse (120, 277 or 347V) [3,9]
DF	Double fuse (208, 240 or 480V) [3,9]
HS	House-side shield [10]
SPD	Separate surge protection

Shipped separately [10]

BSW	Bird-deterrent spikes
WG	Wire guard
VG	Vandal guard
DDL	Diffused drop lens

Finish *(required)*

DDBXD	Dark bronze	DSSXD	Sandstone	DWHGXD	Textured white
DBLXD	Black	DDBTXD	Textured dark bronze	DSSTXD	Textured sandstone
DNAXD	Natural aluminum	DBLBXD	Textured black		
DWHXD	White	DNATXD	Textured natural aluminum		

Accessories

Ordered and shipped separately.

DSXWHS U	House-side shield (one per light engine)
DSXWBSW U	Bird-deterrent spikes
DSXW1WG U	Wire guard accessory
DSXW1VG U	Vandal guard accessory

NOTES

1 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4 Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5 Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6 Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7 Reference Motion Sensor table on page 3.
8 Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
9 Not available with ELCW.
10 Also available as a separate accessory; see Accessories information.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70CRI)					40K (4000 K, 70CRI)					50K (5000 K, 70CRI)					AMBPC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	350mA	13W	T2S	1,415	0	0	1	109	1,520	0	0	1	117	1,530	0	0	1	118	894	0	0	1	69
			T2M	1,349	0	0	1	104	1,448	0	0	1	111	1,458	0	0	1	112	852	0	0	1	66
			T3S	1,399	0	0	1	108	1,503	0	0	1	116	1,512	0	0	1	116	884	0	0	1	68
			T3M	1,385	0	0	1	107	1,488	0	0	1	114	1,497	0	0	1	115	876	0	0	1	67
			T4M	1,357	0	0	1	104	1,458	0	0	1	112	1,467	0	0	1	113	858	0	0	1	66
			TFTM	1,411	0	0	1	109	1,515	0	0	1	117	1,525	0	0	1	117	892	0	0	1	69
			ASYDF	1,262	1	0	1	97	1,354	1	0	1	104	1,363	1	0	1	105	797	0	0	1	61
	530 mA	19W	T2S	2,053	1	0	1	108	2,205	1	0	1	116	2,220	1	0	1	117	1,264	0	0	1	67
			T2M	1,957	1	0	1	103	2,102	1	0	1	111	2,115	1	0	1	111	1,205	0	0	1	63
			T3S	2,031	1	0	1	107	2,181	1	0	1	115	2,194	1	0	1	115	1,250	0	0	1	66
			T3M	2,010	1	0	1	106	2,159	1	0	1	114	2,172	1	0	1	114	1,237	0	0	1	65
			T4M	1,970	1	0	1	104	2,115	1	0	1	111	2,129	1	0	1	112	1,212	0	0	1	64
			TFTM	2,047	0	0	1	108	2,198	1	0	1	116	2,212	1	0	1	116	1,260	0	0	1	66
			ASYDF	1,831	1	0	1	96	1,966	1	0	1	103	1,978	1	0	1	104	1,127	0	0	1	59
	700 mA	26W	T2S	2,623	1	0	1	101	2,816	1	0	1	108	2,834	1	0	1	109	1,544	0	0	1	59
			T2M	2,499	1	0	1	96	2,684	1	0	1	103	2,701	1	0	1	104	1,472	0	0	1	57
			T3S	2,593	1	0	1	100	2,785	1	0	1	107	2,802	1	0	1	108	1,527	0	0	1	59
			T3M	2,567	1	0	1	99	2,757	1	0	1	106	2,774	1	0	1	107	1,512	0	0	1	58
			T4M	2,515	1	0	1	97	2,701	1	0	1	104	2,718	1	0	1	105	1,481	0	0	1	57
			TFTM	2,614	1	0	1	101	2,808	1	0	1	108	2,825	1	0	1	109	1,539	0	0	1	59
			ASYDF	2,337	1	0	1	90	2,510	1	0	1	97	2,525	1	0	1	97	1,376	1	0	1	53
	1000 mA	39W	T2S	3,685	1	0	1	94	3,957	1	0	1	101	3,982	1	0	1	102	2,235	1	0	1	57
			T2M	3,512	1	0	1	90	3,771	1	0	1	97	3,794	1	0	1	97	2,130	1	0	1	55
			T3S	3,644	1	0	1	93	3,913	1	0	1	100	3,938	1	0	1	101	2,210	1	0	1	57
			T3M	3,607	1	0	1	92	3,873	1	0	1	99	3,898	1	0	1	100	2,187	1	0	1	56
			T4M	3,534	1	0	2	91	3,796	1	0	2	97	3,819	1	0	2	98	2,143	1	0	1	55
			TFTM	3,673	1	0	1	94	3,945	1	0	1	101	3,969	1	0	1	102	2,228	1	0	1	57
			ASYDF	3,284	1	0	2	84	3,527	1	0	2	90	3,549	1	0	2	91	1,992	1	0	1	51
20C (20 LEDs)	350mA	23W	T2S	2,820	1	0	1	123	3,028	1	0	1	132	3,047	1	0	1	132	1,777	1	0	1	77
			T2M	2,688	1	0	1	117	2,886	1	0	1	125	2,904	1	0	1	126	1,693	1	0	1	74
			T3S	2,789	1	0	1	121	2,994	1	0	1	130	3,014	1	0	1	131	1,757	0	0	1	76
			T3M	2,760	1	0	1	120	2,965	1	0	1	129	2,983	1	0	1	130	1,739	1	0	1	76
			T4M	2,704	1	0	1	118	2,905	1	0	1	126	2,922	1	0	1	127	1,704	1	0	1	74
			TFTM	2,811	1	0	1	122	3,019	1	0	1	131	3,038	1	0	1	132	1,771	0	0	1	77
			ASYDF	2,514	1	0	1	109	2,699	1	0	1	117	2,716	1	0	1	118	1,584	1	0	1	69
	530 mA	35W	T2S	4,079	1	0	1	117	4,380	1	0	1	125	4,407	1	0	1	126	2,504	1	0	1	72
			T2M	3,887	1	0	1	111	4,174	1	0	1	119	4,201	1	0	1	120	2,387	1	0	1	68
			T3S	4,033	1	0	1	115	4,331	1	0	1	124	4,359	1	0	1	125	2,477	1	0	1	71
			T3M	3,993	1	0	2	114	4,288	1	0	2	123	4,315	1	0	2	123	2,451	1	0	1	70
			T4M	3,912	1	0	2	112	4,201	1	0	2	120	4,227	1	0	2	121	2,402	1	0	1	69
			TFTM	4,066	1	0	2	116	4,366	1	0	2	125	4,394	1	0	2	126	2,496	1	0	1	71
			ASYDF	3,636	1	0	2	104	3,904	1	0	2	112	3,928	1	0	2	112	2,232	1	0	1	64
	700 mA	46W	T2S	5,188	1	0	1	113	5,572	1	0	1	121	5,607	1	0	1	122	3,065	1	0	1	67
			T2M	4,945	1	0	2	108	5,309	1	0	2	115	5,343	1	0	2	116	2,921	1	0	1	64
			T3S	5,131	1	0	2	112	5,510	1	0	2	120	5,544	1	0	2	121	3,031	1	0	1	66
			T3M	5,078	1	0	2	110	5,454	1	0	2	119	5,487	1	0	2	119	3,000	1	0	1	65
			T4M	4,975	1	0	2	108	5,343	1	0	2	116	5,376	1	0	2	117	2,939	1	0	1	64
			TFTM	5,172	1	0	2	112	5,554	1	0	2	121	5,589	1	0	2	122	3,055	1	0	1	66
			ASYDF	4,624	1	0	2	101	4,965	1	0	2	108	4,996	1	0	2	109	2,732	1	0	1	59
	1000 mA	73W	T2S	7,204	1	0	2	99	7,736	2	0	2	106	7,784	2	0	2	107	4,429	1	0	1	61
			T2M	6,865	1	0	2	94	7,373	2	0	2	101	7,419	2	0	2	102	4,221	1	0	1	58
			T3S	7,125	1	0	2	98	7,651	1	0	2	105	7,698	1	0	2	105	4,380	1	0	1	60
			T3M	7,052	1	0	2	97	7,573	2	0	2	104	7,620	2	0	2	104	4,335	1	0	2	59
			T4M	6,909	1	0	2	95	7,420	1	0	2	102	7,466	1	0	2	102	4,248	1	0	2	58
			TFTM	7,182	1	0	2	98	7,712	1	0	2	106	7,761	1	0	2	106	4,415	1	0	2	60
			ASYDF	6,421	2	0	2	88	6,896	2	0	3	94	6,938	2	0	3	95	3,947	1	0	2	54

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXW1 LED 20C 1000** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.93	0.88

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A) 120V	208V	240V	277V	347V	480V
10C	350	14 W	0.13	0.07	0.06	0.06	-	-
	530	20 W	0.19	0.11	0.09	0.08	-	-
	700	27 W	0.25	0.14	0.13	0.11	-	-
	1000	40 W	0.37	0.21	0.19	0.16	-	-
20C	350	24 W	0.23	0.13	0.12	0.10	-	-
	530	36 W	0.33	0.19	0.17	0.14	-	-
	700	47 W	0.44	0.25	0.22	0.19	0.15	0.11
	1000	74 W	0.69	0.40	0.35	0.30	0.23	0.17

Motion Sensor Default Settings

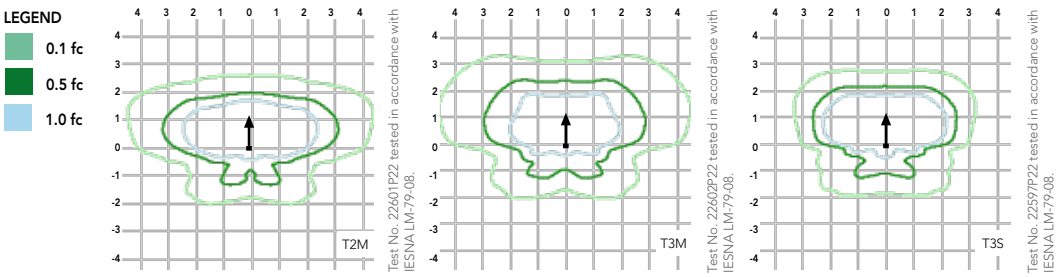
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
*PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*for use with Inline Dusk to Dawn or timer

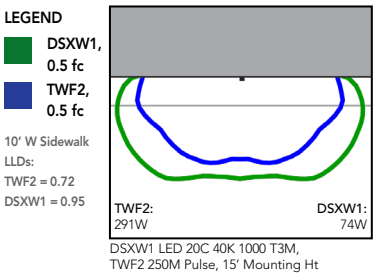
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 1 homepage.

Isofootcandle plots for the DSXW1 LED 20C 1000 40K. Distances are in units of mounting height (15').



Distribution overlay comparison to 250W metal halide.



DSXW1 LED 20C 40K 1000 T3M, TWF2 250M Pulse, 15' Mounting Ht

Options and Accessories



T3M (left), ASYDF (right) lenses



HS - House-side shields



BSW - Bird-deterrent spikes



WG - Wire guard



VG - Vandal guard



DDL - Diffused drop lens

FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings, long life and easy-to-install design of the D-Series Wall Size 1 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (70 min. CRI), 4000 K (70 min. CRI) or 5000 K (70 min. CRI) configurations.

ELECTRICAL

Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L88/100,000 hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and a minimum 2.5KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION

Included universal mounting bracket attaches securely to any 4" round or square outlet box for quick and easy installation. Luminaire has a slotted gasket wireway and attaches to the mounting bracket via corrosion-resistant screws.

LISTINGS

CSA certified to U.S. and Canadian standards. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

Five-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.

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Att. P

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
tel: (207) 257-2071 fax: (207) 257-2130

July 9, 2018 Job #: 17140

I, Jon H. Whitten, Jr., project manager at Plymouth Engineering, hereby certify that a neighborhood meeting was held on July 6, 2018, at King Middle School at 5:00 PM.

I also certify that on June 22, 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 1,000 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 (jym@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

7/9/2018 (date)

Attached to this certification are:

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

Plymouth Engineering, Inc.

P.O. Box 46 - 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
tel: (207) 257-2071 fax: (207) 257-2130

June 22, 2018 Job #: 17140

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a Dunkin' Donuts drive-thru restaurant located at 325 St. John Street, Portland, Maine.

Meeting Location: King Middle School, 92 Deering Avenue, Portland, ME

Meeting Date: Friday, July 6, 2018

Meeting Time: 5:00 PM

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

If you have any questions, please call (207) 257-2071.

Sincerely,

PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., PE
Sr. Project Manager

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 plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street, Portland, ME 04101 or by email to: bab@portlandmaine.gov.

SIGN IN SHEET
NEIGHBORHOOD MEETING
325 ST JOHN ST DUNKIN DONUTS DRIVE THRU
July 6, 2018

NAME	ADDRESS	TEL
Terry Morrison	939 Congress	207-773-6481
TFMorrison16@MSN.com		

Plymouth Engineering, Inc.

P.O. Box 46 - 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
Tel: (207) 257-2071 fax: (207) 257-2130

July 9, 2018

Meeting Minutes
Neighborhood Meeting
For
Proposed Dunkin' Donuts at
325 St. John Street, Portland

Meeting Date:	July 6, 2018
Meeting Time:	5:00 PM
Meeting Location:	King Middle School Library
Meeting Conducted by:	Jon Whitten, Jr., P.E. of Plymouth Engineering, Inc.
Minutes Prepared by:	Jon Whitten, Jr., P.E. of Plymouth Engineering, Inc.

Number of people in attendance: 1

Meeting Started at 5:00 PM. One person, Terry Morrison of the Inn at St. John Street (939 Congress Street, Portland) arrived at approximately 5:10 PM and was the only person from the public in attendance. Mr. Morrison asked if the proposed development could retain/add some parking spaces along the Valley Street frontage so he could lease 8 to 10 parking spaces for his hotel business. He stated that he currently leases 10 spaces from the Lang's. (The Lang's currently operated a restaurant at 325 St. John Street and will be vacating the parcel upon approval of the Dunkin' Donuts project.) I told him I would contact the applicant and present his request to them. He thanked me and suggested that he was in favor of the project and liked the overall layout of the project. His only concern was the loss of the 10 spaces he has been using for his hotel.

Meeting adjourned at 5:35 PM.

Prepared by:
PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., P.E.
Senior Project Manager

Date: 7/11/2018
Job Name: St. John Street, Dunkin Donuts
Job #: 17140
Location: St. John Street, Portland

Att. Q

Treatment Levels for Redevelopment Projects

Land Use	Pollutant Ranking	Existing Area (sf)	Existing Points	Proposed Area (sf)	Proposed Points
Roads where idling may occur periodically due to traffic volume and intersections	5		0.00		0.00
High Use Parking Lots	5	19506	2.24	17317	1.99
Other roads	4		0.00		0.00
Medium Use parking lots	4		0.00		0.00
Other lots and driveways	3		0.00		0.00
flat asphalt rooftops	3	3406	0.23	2518	0.17
roofs on an industrial facility	3		0.00		0.00
other rooftops	2		0.00		0.00
bikeways, grassed area mowed more than twice per year	2	6550	0.30	8652	0.40
walkways/ foot traffic only pavement	2	777	0.04	1690	0.08
non-grass landscaped areas	1		0.00		0.00
storm water treatment, storage systems (except buffers)	1	0	0.00	62	0.00
forest	0		0.00		0.00
meadow mowed no more than twice per year	0		0.00		0.00
Total	30239	30239	2.81	30239	2.64

Net Increase
-0.17

FOCALPOINT #1

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM

St. John Street, Dunkin Donuts

Att. R

MAINE – CHAPTER 500 DESIGN WORKSHEET/CHECKLIST

1. FocalPoint Bed Area (min 174 square feet per acre of impervious area (e.g. 0.2 acres = 35 sf))

- Tributary Impervious area = 0.057 ac. (A)
- Tributary Pervious area = 0.00 ac. (B)
- Min FocalPoint bed area req'd = (((A) x 1.0) + ((B) x 0.4)) * 174 = 10.06 sf.
- FocalPoint Bed Area provided * = 20 sf.
- Dimensions of Proposed FocalPoint = 4 ft x 5 ft

* see criteria 2. to determine if minimum size is appropriate.

2. A 0.95 inch Type III 24hr rainfall event shall be modelled to demonstrate the entire storm volume is treated prior to activation of the overflow (typically set at 6-12" above the mulch)

- Temporary storage depth provided = 4 inches (typ 6" to 12")
- Temporary storage volume provided at above depth = 4 cubic feet.
- Peak ponding depth from 0.95" 24hr storm event = 4 inches

3. Ratio of the surface area of the filter media (sf) to the temporary ponding volume (cf) shall be no less that 1:5

- Ratio of FocalPoint Bed Area : Temporary Storage Vol = 1 : 3

4. Subsurface Chamber Treatment Row must be sized to treat the peak flow from a 1 yr-24hr storm event.

- 1yr 24hr Peak Flowrate = 0.12 cfs
- Chamber model selected
  - Cultec 330 XLHD (1 chamber per 0.227 cfs) ☐
  - Cultec 150XLHD (1 chamber per 0.185 cfs) ☆

- Number of Chambers required = 1

5. Controlled release of the Channel Protection over 24-48 hrs (Not Applicable for this project)

- Controlled release of the channel protection volume is being achieved by:
  - Expanded subsurface storage basin with OCS ☐
  - Surface detention basin with OCS ☐

6. The Design shall be reviewed by the manufacturer's representative prior to submission and installation will be overseen by the manufacturer's representative.

- The Design has been reviewed by ACF Environmental ☐
- Engineer will coordinate installation inspection with ACF ☐

Contact ACF Environmental at 1800 448 3636 with any questions
or contact Rob Woodman – Senior Stormwater Engineer at rwoodman@acfenv.com

FOCALPOINT #2

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM

St. John Street, Dunkin Donuts

Att. S

MAINE – CHAPTER 500 DESIGN WORKSHEET/CHECKLIST

1. FocalPoint Bed Area (min 174 square feet per acre of impervious area (e.g. 0.2 acres = 35 sf))

- Tributary Impervious area = 0.26 ac. (A)
- Tributary Pervious area = 0.00 ac. (B)
- Min FocalPoint bed area req'd = (((A) x 1.0) + ((B) x 0.4)) * 174 = 45.24 sf.
- FocalPoint Bed Area provided * = 45.5 sf.
- Dimensions of Proposed FocalPoint = 7 ft x 6.5 ft

* see criteria 2. to determine if minimum size is appropriate.

2. A 0.95 inch Type III 24hr rainfall event shall be modelled to demonstrate the entire storm volume is treated prior to activation of the overflow (typically set at 6-12" above the mulch)

- Temporary storage depth provided = 0 inches (typ 6" to 12")
- Temporary storage volume provided at above depth = 0 cubic feet.
- Peak ponding depth from 0.95" 24hr storm event = 0 inches

3. Ratio of the surface area of the filter media (sf) to the temporary ponding volume (cf) shall be no less that 1:5

- Ratio of FocalPoint Bed Area : Temporary Storage Vol = 1 : 4

4. Subsurface Chamber Treatment Row must be sized to treat the peak flow from a 1 yr-24hr storm event.

- 1yr 24hr Peak Flowrate = 0.40 cfs
- Chamber model selected
  - Cultec 330 XLHD (1 chamber per 0.227 cfs) ☐
  - Cultec 150XLHD (1 chamber per 0.185 cfs) ☒

- Number of Chambers required = 3

5. Controlled release of the Channel Protection over 24-48 hrs (Not Applicable for this project)

- Controlled release of the channel protection volume is being achieved by:
  - Expanded subsurface storage basin with OCS ☐
  - Surface detention basin with OCS ☐

6. The Design shall be reviewed by the manufacturer's representative prior to submission and installation will be overseen by the manufacturer's representative.

- The Design has been reviewed by ACF Environmental ☐
- Engineer will coordinate installation inspection with ACF ☐

HOUSEKEEPING PERFORMANCE STANDARDS
FOR:
Dunkin Donuts
325 St. John Street, Portland, Maine

Land Owner: **Dunkin' Brands, Inc.**
130 Royall Street
Canton, MA 02021
Tel: 617-510-4543

Project Developer: **Dunkin' Brands, Inc.**

Responsible Party: **Dunkin' Brands, Inc.**

Prepared By: **Plymouth Engineering, Inc.**
PO Box 46
Plymouth, ME 04969
Tel: 207-257-2071 email: info@plymouthengineering.com

Introduction:
The owner/developer's contractor shall be responsible for maintaining proper housekeeping standards throughout the construction phase of the project. After the construction phase has been completed, the owner and/or operator of the project will be responsible.

Standards:
In accordance with the housekeeping performance standards required by MDEP chapter 500 stormwater regulations, the following standards shall be met:

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.

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. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

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.

   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 Department.

6. **Authorized Non-stormwater discharges.** Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

   (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.

7. **Unauthorized non-stormwater discharges .** The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with Appendix C (6). Specifically, the Department's approval does not authorize discharges of the following:

   (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.

8. **Additional requirements.** Additional requirements may be applied on a site-specific basis.

MAINTENANCE PLAN OF STORMWATER MANAGEMENT FACILITIES
FOR:
Dunkin Donuts
325 St. John Street, Portland, Maine

Land Owner: **Dunkin' Brands, Inc.**
130 Royall Street
Canton, MA 02021
Tel: 617-510-4543

Project Developer: **Dunkin' Brands, Inc.**

Responsible Party: **Dunkin' Brands, Inc.**

Plan Prepared by: **Plymouth Engineering, Inc.**
PO Box 46
Plymouth, ME 04969
Tel: 207-257-2071 Email: info@plymouthengineering.com

List of Stormwater Measures:
Vegetated Areas
Conveyance & Distribution System (Stormwater Channels & Culverts)
Roadways and Parking Surfaces
Runoff Filtration Systems

Introduction:
The **Responsible Party** of the project shall be responsible for the maintenance of all stormwater management measures/features, the establishment of any contract services required to implement the program, and the keeping of records and maintenance log book. In no way shall this document be construed to mean that the Responsible Party themselves are necessarily qualified to perform any of these duties. Records of all inspections and maintenance work accomplished must be kept on file and retained for a minimum 5-year time span. The maintenance log book will be made available to the MeDEP upon request. At a minimum, the appropriate and relevant activities for each of the stormwater management features will be performed on the prescribed schedule.

Inspection & Maintenance Tasks:
NOTE: The following instructions are excerpts from the Maine Department of Environmental Protection's *Stormwater Management for Maine, Volume III BMPs Technical Design Manual*, latest edition.

Vegetated Areas:

1. Inspect vegetated areas for vigorous growth. Re-seed areas of sparse growth, as needed.
2. Inspect all vegetated areas, especially sloped areas and embankments for signs of erosion. Erosion rills need to be repaired so as not to promote channelized flow and continued damage.
3. Fertilization of vegetated areas is not recommended for maintaining water quality.

Conveyance & Distribution Systems: (Stormwater Channels & Culverts, etc.)

1. **Mowing:** Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended (Galli, 1993).
2. **Routine Maintenance and Inspection:** The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, reseeding/ sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation and to check the condition and integrity of the check dams.
3. **Aeration:** The buffer strip may require periodic mechanical aeration to restore infiltration capacity. This aeration must be done during a time when the area can be reseeded and mulched prior to any significant rainfall.
4. **Erosion:** It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter in the bottom of the trench.
5. **Fertilization:** Routine fertilization and/or use of pesticides is strongly discouraged. If complete re-seeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of seed.
6. **Sediment Removal:** The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel.
7. **Catch Basins**: All catch basins, and any other field inlets throughout the collection system, need to be inspected on a monthly basis to assure that the inlet entry point is clear of debris and will allow the intended water entry. At that time, these will be cleared, if necessary on a yearly basis or when sediment reaches two thirds of total volume. Catch basins need to be vacuumed and cleaned of all accumulated sediment. This work must be done by a vacuum truck under contract. The removed material must be disposed of in accordance with the Maine Solid Waste Disposal Rules.

Roadways & Parking Surfaces:

Paved surfaces shall be swept or vacuumed at least twice annually in the Spring to remove all Winter sand, and periodically during the year on an as-needed basis to minimize transportation of sediment during rainfall events.

Runoff Filtration Systems:

1. **First Year Inspection:** During the first year, the basin will be inspected semi-annually and following major storm events. Mowing of a grassed basin can occur semi-annually to a height no less than 6 inches. Any bare area of erosion rills shall be repaired with new filter media or sandy loam then seeded and mulched. Maintaining good grass cover will minimize clogging with fine sediments and if ponding exceeds 48 hours, the top of the filter bed must be rototilled to reestablish the soil's filtration capacity.

2. **Soil Filter Inspection:** The soil filter should be inspected after every storm in the first year to be sure it is functioning properly. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 48 hours following a one-inch storm or greater. IF the system drains too fast, an orifice may need to be added on the underdrain outlet or, if already present, may need to be modified.
3. **Soil Filter Replacement:** The top several inches of the filter shall be replaced with fresh material when water ponds on the surface of the bed for more than 72 hours. The removed sediments should be disposed of in an acceptable manner.
4. **Sediment Removal:** Sediment and debris should be removed from the grass strip between the pavement and filter depression at least annually.
5. **Mowing:** If mowing is desired, only handheld string trimmers or push mowers are allowed on the filter (no tractor) and the grass bed should be mowed no more than 2 times per growing season to maintain grass heights of no less than 6 inches.
6. **Fertilization:** Fertilization of the underdrained soil filter area should be avoided unless absolutely necessary to established vegetation.
7. **Harvesting and Weeding:** Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary. Add new mulch only as necessary.

Task Frequency:

Table 11-1 Long-Term Inspection & Maintenance Plan	Spring	Fall or Yearly	After a Major Storm	Every 2-5 Years
Vegetated Areas				
Inspect all slopes and embankments	X		X	
Replant bare areas or areas with sparse growth	X		X	
Armor areas with rill erosion with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows. See Appendix A(5) of Rule.	X		X	
Stormwater Channels				
Inspect ditches, swales and other open stormwater channels	X	X	X	
Remove any obstructions and accumulated sediments or debris	X	X		
Control vegetated growth and woody vegetation		X		
Repair any erosion of the ditch lining		X		
Mow vegetated ditches		X		
Remove woody vegetation growing through riprap		X		
Repair any slumping side slopes		X		
Replace riprap where underlying filter fabric or underdrain gravel is showing or where stones have dislodge		X		
Culverts				
Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit	X	X	X	
Repair any erosion damage at the culvert's inlet and outlet	X	X	X	
Catch Basin Systems				
Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.	X			
Remove floating debris and floating oils (using oil absorptive pads) from any trap designed for such	X			
Roadways and Parking Surfaces				
Clear accumulated winter sand in parking lots and along roadways	X			
Sweep pavement to remove sediment	X			
Grade road shoulders and remove excess sand either manually or by a front-end loader	X			
Grade gravel roads and gravel shoulders	X			
Clean-out the sediment within water bars or open-top culverts	X			
Ensure that stormwater is not impeded by accumulations of material or false ditches in the shoulder	X			

Table 11-1
Long-Term Inspection & Maintenance Plan

	Spring	Fall or Yearly	After a Major Storm	Every 2-5 Years
Buffers				
Inspect treatment buffers for evidence of erosion, concentrated flow, or encroachment by development		X		
Manage the buffer's vegetation with the requirements in any deed restrictions		X		
Mow vegetation in non-wooded buffers no shorter than six inches and less than three times per year		X		
Repair any sign of erosion within a buffer		X		
Inspect and repair down-slope of all spreaders and turn-outs for erosion		X		
Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow		X		
Clean-out any accumulation of sediment within the spreader bays or turnout pools		X		
Stormwater Detention and Retention Facilities				
Inspect the embankments for settlement, slope erosion, internal piping, and downstream swamping. A professional engineer must review these immediately.		X	X	
Mow the embankment to control woody vegetation		X		
Inspect the outlet control structure for broken seals, obstructed orifices, and plugged trash racks		X	X	
Remove and dispose of sediments and debris within the control structure		X		
Repair any damage to trash racks or debris guards		X		
Mow vegetated spillways to control woody vegetation and replace any dislodged stone in riprap spillways		X		
Remove and dispose of accumulated sediments within the impoundment and forebay				X
Runoff Filtration Facilities				
Inspect and clean-out any pre-treatment measures that collect sediment and hydrocarbons entering an infiltration measure	X	X		
Provide for the removal and disposal of accumulated sediments within the filtration area				X
Renew the filter media if it fails to drain within 72 hours after a rainfall of one-inch or more				X
Till and replant the soil of vegetated filtration basins				X
Reconstruct rock-lined basins or stone-filled trenches by removing the stones, replacing new underlying filter fabric, and tilling or removing the underlying soil				X
Proprietary Treatment Devices (Not Applicable)				
Contract with a third-party for the removal of accumulated sediments, oils,and debris within the device and replacement of any absorptive filters.	The frequency of maintenance is established by the unit's storage capacity, the pollutant load and the manufacturer recommendations			
Other Practices and Measures				
Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures.				

Maintenance Log Sheet:

Maintenance Log Sheet 325 St. John Street			
BMP's	**Date Inspected**	**Repairs Needed?**	**Date Repaired**
Example	3/11/18	Y	3/15/18
1. Vegetated Areas			
2. Stormwater Channels			
3. Culverts			
4. Catch Basins			
5. Roadways and Parking Surfaces			
6. Stormwater Detention and Retention Facilities			
7.			
8.			
9.			

Detailed Repair Notes:		
BMP Type	**Date**	**Description of Repair Made**
2	3/15/18	Sodded over eroded section (Example)

STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

For SITE PLANS (THAT ARE NOT SUBDIVISIONS)

IN CONSIDERATION OF the site plan approval granted by the Planning Board/Planning Authority of the City of Portland to the proposed 325 St. John Street Dunkin Donuts, Project ID PL-000047-2018, and the associated Grading & Utility Plan (Exhibit A) submitted by Dunkin' Brands, Inc., prepared by Jon H. Whitten, Jr., PE, of Plymouth Engineering, Inc., PO Box 46, Plymouth, ME 04969, dated _____, and pursuant to a condition thereof, Dunkin' Brands, Inc., a Maine company with a principal place of business in Canton, Massachusetts, and having a mailing address of 130 Royall Street, Canton, MA 02021, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the FocalPoint subsurface sand filter BMP systems (hereinafter collectively referred to as the "stormwater system"), as shown on the Grading & Utility Plan in Exhibit A and in strict compliance with the approved Maintenance Plan of Stormwater Management Facilities prepared for the Owner by Plymouth Engineering, Inc. (copy attached at Exhibit B) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the site plan most recently and formally approved by the Planning Board/Planning Authority of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any Condominium Association or management company, and to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

Dated at Portland, Maine this _____ day of _____, 2018.

_____

(name of company)

_____

(representative of owner, name and title)

STATE OF MAINE

CUMBERLAND, ss. Date: _____

Personally appeared the above-named _____(name and title), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me, _____

Notary Public/Attorney at Law

Print name: _____

Exhibit A: Approved Grading and Drainage Plan (name of the plan showing the Stormwater System in detail)

Exhibit B: Approved Stormwater Maintenance and Inspection Agreement

Att. W

PROPOSED NEW DUNKIN' DONUTS
325 SAINT JOHN STREET
PORTLAND, MAINE

SECTIONS 1 – 6
TRAFFIC MOVEMENT PERMIT APPLICATION

Submitted to:

CITY OF PORTLAND

March 26, 2018

Applicant:

Dunkin' Brands
130 Royall Street
Canton, MA 02021

Prepared by:

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

Department of Transportation
Traffic Engineering Division
16 State House Station
Augusta, Maine 04333
Telephone: 207-287-3775

FOR MDOT USE 1/2001
ID #:

Total Fees:
Date: Received

****

PERMIT APPLICATION – TRAFFIC
TRAFFIC MOVEMENT PERMIT, 23 M.R.S.A.§ 704 -A

Please type or print:
This application is for (check all that applies): Traffic 100-200 PCE's _____
Traffic 200+ PCE's X

Name of Applicant: Dunkin' Brands Attn: Robert Mahoney

Address: 130 Royall Street, Canton, MA 02021 Telephone: (617) 510-4543

Name of local contact or agent: Diane W. Morabito, P.E. PTOE Maine Traffic Resources

Address: 25 Vine Street, Gardiner, ME 04345 Telephone: (207) 582-5252

Name and type of development: A new 2,350 square foot Dunkin' Donuts with Drive-Through Window

Location of development: 325 St. John Street (easterly side) and westerly side of Valley Street, between intersections of Park Avenue and Congress Street

City/Town/Plantation: Portland County: Cumberland Tax Map # 65 Lot # C 4001

Do you want a consolidated review with DEP pursuant to 23 M.R.S.A.§ 704-A (7)?
Yes_____ No X

Was this development started prior to obtaining traffic permit? No

Is the project located in an area designated as a growth area (as defined in M.R.S.A. title 30-A, chapter 187)?
Yes _____ No _____

Is project located within a compact area of an urban compact municipality? Yes X No ____

Is this development or any portion of the site currently subject to state or municipal enforcement action?

Not Known

Existing DEP or MDOT permit number (if applicable):

Name(s) of DOT staff person(s) contacted concerning this application:

Name(s) of DOT staff person(s) present at the scoping meeting for 200+ applications:

1/2000

CERTIFICATION

The traffic engineer responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the application for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: Diane W. Morabito Re/Cert/Lic No.: Maine PE # 5077
PTOE # 571

Name(print): Diane W. Morabito

Date: 3/26/18

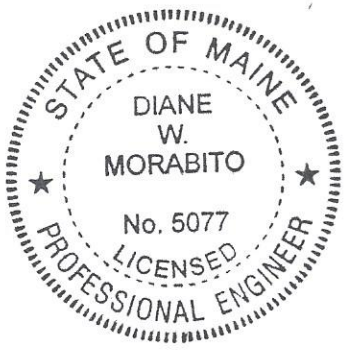
If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

"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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature of Applicant

3.20.2018
Date

FORM C 7/97



Maine
Traffic
Resources

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

NOTICE OF INTENT TO FILE

Please take notice that Dunkin' Brands, Attn: Robert Mahoney, 130 Royall Street, Canton, MA 02021, Telephone (617) 510-4543 is intending to file a Traffic Movement Permit application with the City of Portland Department of Planning and Urban Development pursuant to the provisions of 23 M.R.S.A. § 704-A on or about March 28, 2018.

The application is for a new Dunkin' Donuts with drive-through facility at 325 Saint John Street, just south of the existing Dunkin' Donuts, in Portland, Maine. The proposed new Dunkin' Donuts will be 2,350 square feet in size. Construction is expected to be completed for occupancy in late 2018 or early 2019. The new Dunkin' Donuts is expected to generate approximately 255 one-way trips during the weekday AM peak hour and 101 trips during the PM peak hour.

A request for a public hearing must be received by The City of Portland, in writing, no later than 20 days after the application is found by the City to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at Department of Planning and Urban Development, which is located Portland City Hall, 389 Congress Street, Portland, Maine 04101, during normal working hours. A copy of the application may also be seen at the Maine Department of Transportation Southern Region 1 Office, 51 Pleasant Hill Road, Scarborough, ME 04070-0358.

Written public comments may be sent to the Department of Planning and Urban Development, City of Portland, 389 Congress Street, Portland, Maine 04101.

Diane W. Morabito, P.E. PTOE

Portland – Saint John Street Dunkin' Donuts Abutters

Portland Carry Out Rest Inc.
P.O. Box 10048
Portland, ME 04104

Dominic Reali Realty LLC
312 St John Street, 2nd Floor
Portland, ME 04102

M A C Realty LLC
959 Congress Street, Suite 1
Portland, ME 04102

Arcand Properties LLC
128 Free Street
Portland, ME 04101

Li Ri Teng & Wei Yi Wang
P.O. Box 495
Moody, ME 04054

Inn at St John
939 Congress Street
Portland, ME 04102

Valley 301 LLC
62 Cumberland Avenue, # 3
Portland, ME 04101

CR Ventures LLC
302 Chandler's Wharf
Portland, ME 04101

315 Valley Street LP
106 Gilman Street
Portland, ME 04102

Glassman Jack I Etals
15 Oak Street, # 2
Charlestown, MA 02129

INTRODUCTION

The purpose of this application is to summarize the information required in a Traffic Movement Permit application to request a Scoping Meeting for a proposed new Dunkin' Donuts on Saint John Street in Portland, Maine. Trip generation analysis shows that the project will generate in excess of 100 new peak hour trips. As a result, the project requires a Traffic Movement Permit (TMP) from the Maine Department of Transportation (MaineDOT). The City of Portland has Delegated Review Authority to review the application materials and issue the TMP on behalf of MaineDOT.

SITE DESCRIPTION - SECTION 1A

The proposed site is located at 325 Saint John Street in Portland. The site extends from Saint John Street to Valley Street and is located between Park Avenue and Congress Street, just south of the existing Dunkin' Donuts. The overall parcel is approximately 0.68 acres in size, based upon the site plan prepared by Plymouth Engineering, which is included with this application. The existing terrain is generally flat.

EXISTING AND PROPOSED USES - SECTION 1B

The site currently is the location of a Lang's Express restaurant, which is 3,400 square feet (S.F.) in size. The existing Lang's Express building will be replaced by a 2,350 S.F. Dunkin' Donuts with a drive-through facility.

SITE VICINITY - SECTION 1C

The site location and vicinity are shown on the map in Figure 1.

OTHER DEVELOPMENT - SECTION 1D

The City of Portland was contacted to determine if there are any other proposed or approved developments that are expected to significantly impact traffic volumes in the study area. The City identified the Maine Medical Center Expansion and Thompson's Point projects and provided traffic information for them. The City also indicated that they are performing a Libbytown Traffic Circulation Study, which may also need to be considered in the analysis. These other development projects will be discussed further at the Scoping Meeting.

TRIP GENERATION - SECTION 1E

The number of trips to be generated by the Dunkin' Donuts was estimated using the Institute of Transportation Engineers (ITE) "Trip Generation, 9th Edition" report and Maine's Dunkin' Donuts equations. The ITE 9th edition is accepted by the Maine Department of Transportation for estimating the non AM peak hour trips for Dunkin' Donuts. The ITE data is included in the appendix for reference. Maine's Dunkin' Donuts equations were utilized for the AM peak hour. The Maine Dunkin' Donuts equation results for the proposed 2,350 S.F. facility are shown below:

Square Footage $y = 0.0536 (2,350) + 142.75 = 125.96 + 142.75 = 269$ trips

AADT $y = 0.0081X + 139.36$

AADT on St. John Street (S/O Park Avenue) = 14,000

$y = 0.0081 (14,000) + 139.36 = 113.40 + 139.36 = 253$ trips

AM Peak Traffic $y = 0.1061 X + 144.49$

$y = 0.1061 (938) + 144.49 = 99.52 + 144.49 = 244$ trips

Average of Equations = 255 peak hour trips

As can be seen above, the Dunkin' Donuts is projected to generate 255 one-way trips during the AM peak hour. Trip generation for the Dunkin' Donuts on a daily basis and during the PM peak hour was estimated using the ITE report referenced above. Land use code (LUC) 937 – Coffee/Donut Shop with Drive-Through Window was utilized on the basis of 2,350 S.F. The results are summarized below:

	Trip Generation
Time Period	# of Trips
Weekday	1,924
AM Peak Hour	255
PM Peak Hour	101

There is a credit allowed for the grandfathered trips to the existing Lang's Express restaurant. The trips generated by this development were estimated using LUC 932 – High-Turnover Sit-Down Restaurant on the basis of 3,400 S.F. The results are summarized in the following table along with the Dunkin' Donuts trips:

Overall Trip Generation (one-way trip ends)

Time Period	New Dunkin'	Former Langs	New Trips
Weekday	1,924	432	1,492
AM Peak Hour	255	0 *	255
PM Peak Hour	101	37	64

*While ITE provides data for the AM peak hour it was assumed that Lang's Express was not open and therefore not generating any trips.

Since the project is expected to generate over 100 new trips during the AM peak, it requires a TMP. Given that the Dunkin' Donuts is expected to generate far fewer trips during the PM peak hour, and less than the 100-trip threshold, the AM peak hour is expected to be the analysis period for the traffic study.

Not all of the trips generated by Dunkin' Donuts will be new trips. Many of the trips will be pass-by trips, trips that are already on St. John Street. Based upon Maine's Dunkin' Donuts study, 70 % of the AM peak hour trips are pass-by trips. This results in the following trip summary for the Dunkin' Donuts for the AM analysis period:

Time Period	Pass-by Trips	Primary Trips	Total Trips
AM Peak Hour	178	77	255
Entering	89	44	133
Exiting	89	43	132

As shown above, the proposed Dunkin' Donuts will generate just 77 primary or new trips during the AM peak hour. The majority of the trips, 178, will be pass-by trips, trips that are already on Saint John Street.

TRIP DISTRIBUTION AND ASSIGNMENT - SECTION 1F & G

Turning movement/classification counts were conducted by Maine Traffic Resources during the AM peak hour period (6:30 – 9:00 AM) at the following study area intersections:

Intersection Description (AM Peak Hour)	Count Date	Peak Hour
Park Avenue & St. John Street	June 15, 2017	7:30 – 8:30 AM
Congress Street and St. John Street	June 15, 2017	7:30 – 8:30 AM
St. John Street and Existing Dunkin' Drive	June 20, 2017	7:30 – 8:30 AM

The count records are included in this application. The count data was factored to 30th highest hour volumes, volumes typically used for design and traffic analysis purposes, using published MaineDOT group mean urban factors. The existing 2017 volumes, expected to be representative of peak summer volumes in late July or early August are shown in Figure 2.

In addition, it is important to note that the existing Dunkin' Donuts generated the maximum number of trips from 7:15 to 8:15 AM. The Dunkin' generated 108 total trips into the site via the St. John Street driveway. At this drive, there were also 43 peak hour exit trips. As such, it was assumed that the remaining 65 exit trips were using the drive-through and exiting to Valley Street given Dunkin' Donuts peak hour distribution of 50 % entering and 50 % exiting obtained in the Maine Dunkin' Donuts study. Based upon this assumption, the existing Dunkin' is generating a total of 216 trips during their AM peak hour period. Additionally, the patterns observed during the turning movement counts demonstrated that 60 % of entering trips were from the south with 40 % from the north. Exiting trips were found to be 70 % destined to the north and 30 % percent to the south. The pass-by trips were assigned based upon the traffic volumes on Saint John Street. The known Dunkin' patterns were applied to obtain the overall trip assignments for the new Dunkin' Donuts, shown in Figure 3.



Figure 1

Site Location Map

St. John Street Dunkin' Donuts

Portland, Maine

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

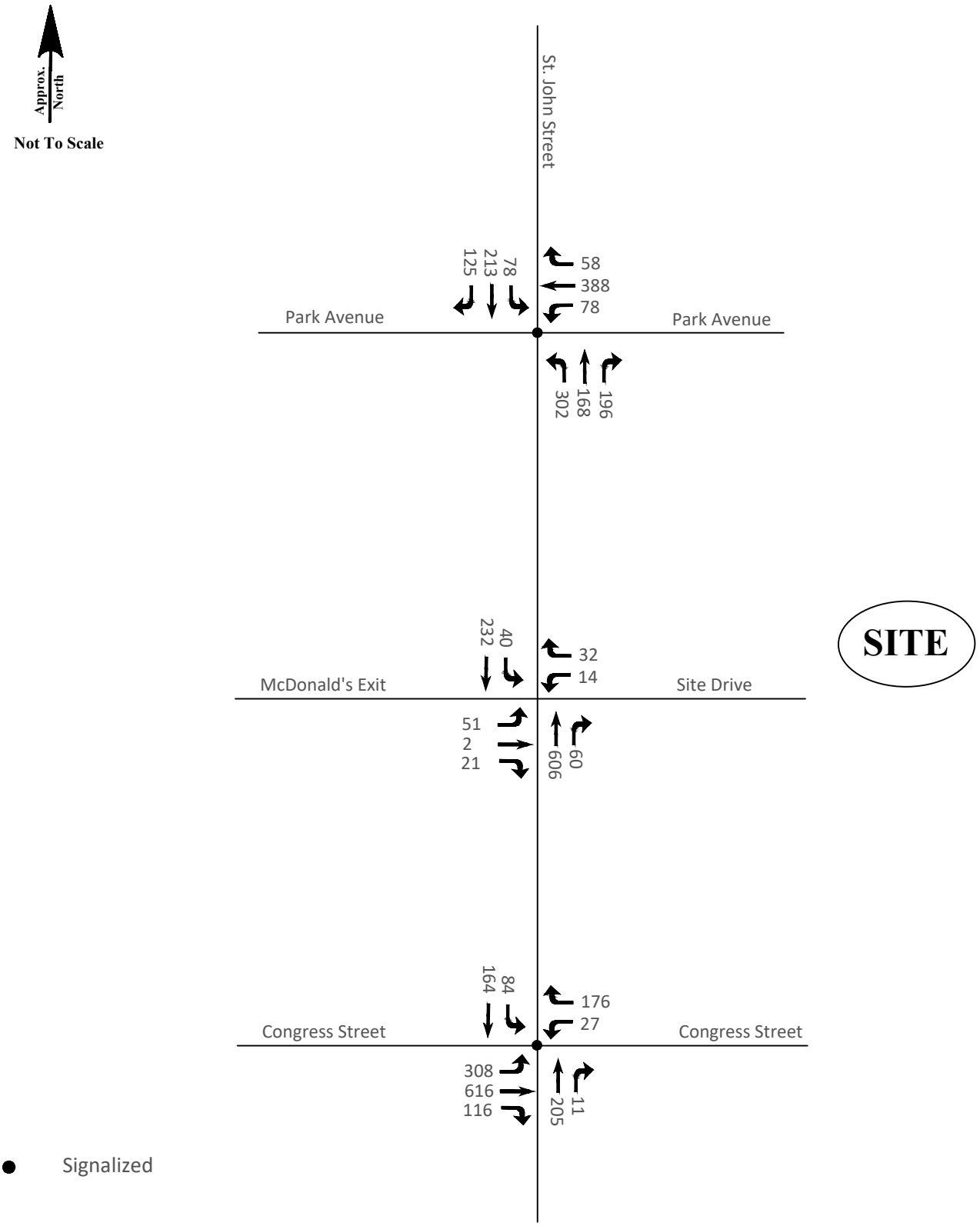


Figure 2

2017 Existing AM Peak Hour Volumes

St. John Street Dunkin' Donuts

Portland, Maine

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

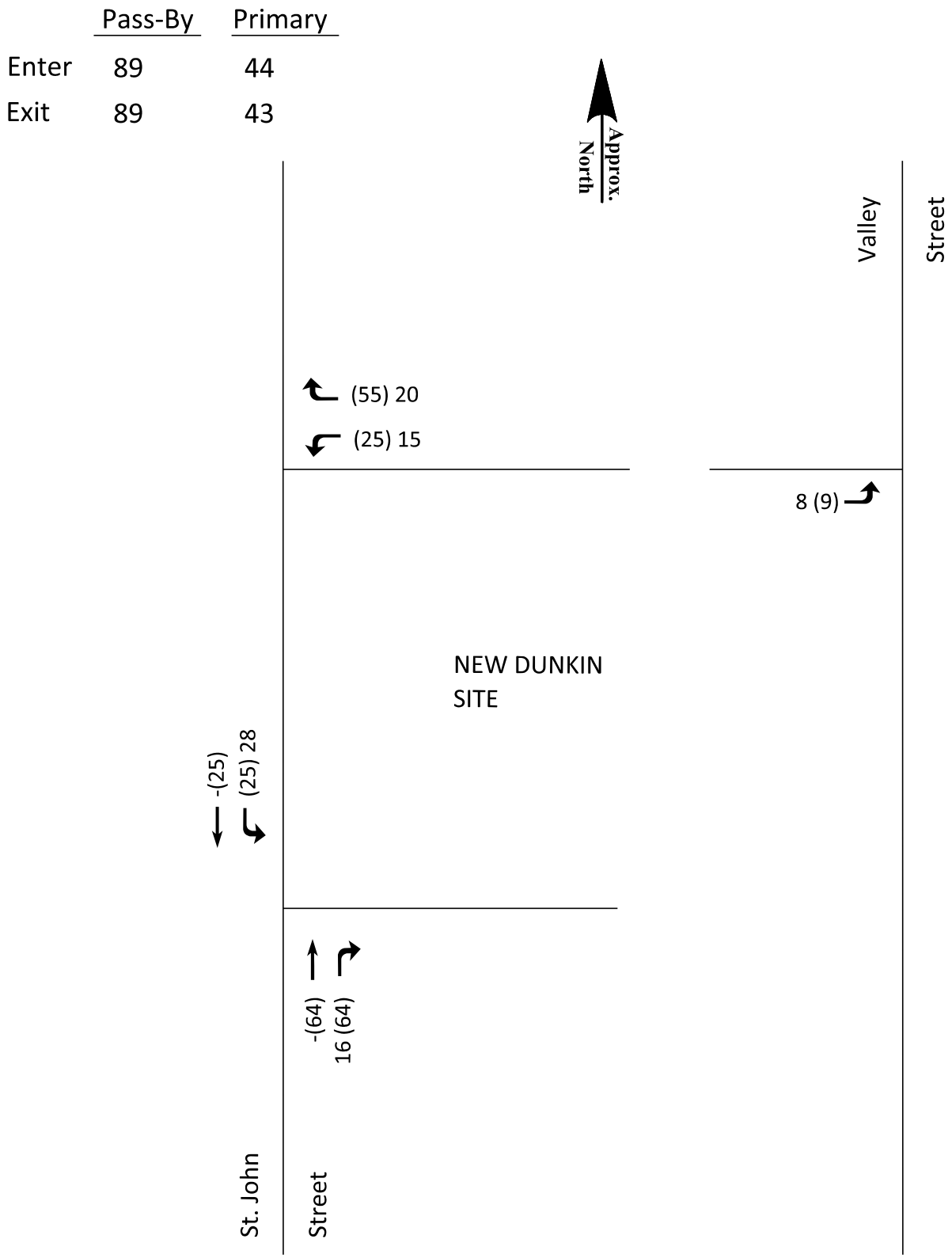


Figure 3

AM Peak HR Trip Assignments
St. John Street Dunkin' Donuts
Portland, Maine

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

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

Title: Congress Street & St. John Street
Town: Portland, Maine
Counter: NLS
Weather: Partly Cloudy

File Name : PortlandCongressStJohnAM
Site Code : 00000000
Start Date : 6/15/2017

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	St. John Street From North					Congress Street From East					St. John Street From South					Congress Street (Route 22) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	51	39	3	93	29	0	10	3	42	7	21	0	1	29	26	148	32	1	207	371
06:45 AM	0	35	32	5	72	23	0	5	1	29	6	18	0	0	24	42	157	50	0	249	374
Total	0	86	71	8	165	52	0	15	4	71	13	39	0	1	53	68	305	82	1	456	745
07:00 AM	0	32	21	7	60	35	0	13	3	51	3	31	0	0	34	30	106	56	0	192	337
07:15 AM	0	30	34	9	73	33	0	4	6	43	5	58	0	2	65	23	117	62	0	202	383
07:30 AM	0	40	27	4	71	49	0	5	6	60	3	51	0	2	56	24	156	77	1	258	445
07:45 AM	0	44	33	8	85	48	0	9	3	60	1	56	0	1	58	37	143	81	3	264	467
Total	0	146	115	28	289	165	0	31	18	214	12	196	0	5	213	114	522	276	4	916	1632
08:00 AM	0	40	13	3	56	44	0	11	2	57	3	47	0	2	52	27	164	87	2	280	445
08:15 AM	0	40	11	2	53	35	0	2	1	38	4	51	0	0	55	28	153	63	3	247	393
08:30 AM	0	32	15	2	49	29	0	6	4	39	6	42	0	1	49	32	125	43	4	204	341
08:45 AM	0	43	17	0	60	43	0	9	2	54	3	46	0	1	50	36	121	53	2	212	376
Total	0	155	56	7	218	151	0	28	9	188	16	186	0	4	206	123	563	246	11	943	1555
Grand Total	0	387	242	43	672	368	0	74	31	473	41	421	0	10	472	305	1390	604	16	2315	3932
Apprch %	0.0	57.6	36.0	6.4		77.8	0.0	15.6	6.6		8.7	89.2	0.0	2.1		13.2	60.0	26.1	0.7		
Total %	0.0	9.8	6.2	1.1	17.1	9.4	0.0	1.9	0.8	12.0	1.0	10.7	0.0	0.3	12.0	7.8	35.4	15.4	0.4	58.9	

	St. John Street From North					Congress Street From East					St. John Street From South					Congress Street (Route 22) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	0	164	84	17	265	176	0	27	12	215	11	205	0	5	221	116	616	308	9	1049	1750
Percent	0.0	61.9	31.7	6.4		81.9	0.0	12.6	5.6		5.0	92.8	0.0	2.3		11.1	58.7	29.4	0.9		
07:45 Volume	0	44	33	8	85	48	0	9	3	60	1	56	0	1	58	37	143	81	3	264	467
Peak Factor																					0.937
High Int.	07:45 AM					07:30 AM					07:45 AM					08:00 AM					
Volume	0	44	33	8	85	49	0	5	6	60	1	56	0	1	58	27	164	87	2	280	
Peak Factor					0.779					0.896					0.953					0.937	

Congress Street & St. John Street: Group I - 0.88/0.88 = 1.00
No Factor Necessary

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

Title: Park Avenue & St. John Street
Town: Portland, Maine
Counter: DWM
Weather: Partly Cloudy

File Name : PortlandParkAveStJohnStAM
Site Code : 00000000
Start Date : 6/15/2017
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	St. John Street From North					Park Avenue (Route 22) From East					St. John Street From South					Park Avenue (Route 22) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	15	85	11	0	111	5	43	7	3	58	26	18	29	0	73	0	0	0	1	1	243
06:45 AM	16	61	20	1	98	11	56	7	3	77	20	19	29	1	69	0	0	0	0	0	244
Total	31	146	31	1	209	16	99	14	6	135	46	37	58	1	142	0	0	0	1	1	487
07:00 AM	22	42	14	4	82	16	58	11	2	87	34	22	50	0	106	0	0	0	0	0	275
07:15 AM	31	70	18	1	120	11	74	10	1	96	29	30	71	1	131	0	0	0	0	0	347
07:30 AM	29	59	19	5	112	18	101	16	3	138	40	42	83	2	167	0	0	0	0	0	417
07:45 AM	41	68	21	6	136	14	120	18	1	153	58	52	78	1	189	0	0	0	0	0	478
Total	123	239	72	16	450	59	353	55	7	474	161	146	282	4	593	0	0	0	0	0	1517
08:00 AM	28	44	18	5	95	13	92	23	3	131	56	39	67	0	162	0	0	0	1	1	389
08:15 AM	27	42	20	0	89	13	75	21	2	111	42	35	74	1	152	0	0	0	2	2	354
08:30 AM	33	39	16	5	93	9	86	20	2	117	42	25	49	5	121	0	0	0	1	1	332
08:45 AM	29	52	21	3	105	17	83	20	2	122	41	30	62	2	135	0	0	0	1	1	363
Total	117	177	75	13	382	52	336	84	9	481	181	129	252	8	570	0	0	0	5	5	1438
Grand Total	271	562	178	30	1041	127	788	153	22	1090	388	312	592	13	1305	0	0	0	6	6	3442
Apprch %	26.0	54.0	17.1	2.9		11.7	72.3	14.0	2.0		29.7	23.9	45.4	1.0		0.0	0.0	0.0	100.0		
Total %	7.9	16.3	5.2	0.9	30.2	3.7	22.9	4.4	0.6	31.7	11.3	9.1	17.2	0.4	37.9	0.0	0.0	0.0	0.2	0.2	

	St. John Street From North					Park Avenue (Route 22) From East					St. John Street From South					Park Avenue (Route 22) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	125	213	78	16	432	58	388	78	9	533	196	168	302	4	670	0	0	0	3	3	1638
Percent	28.9	49.3	18.1	3.7		10.9	72.8	14.6	1.7		29.3	25.1	45.1	0.6		0.0	0.0	0.0	100.0		
07:45 Volume	41	68	21	6	136	14	120	18	1	153	58	52	78	1	189	0	0	0	0	0	478
Peak Factor																					0.857
High Int.	07:45 AM					07:45 AM					07:45 AM					08:15 AM					
Volume	41	68	21	6	136	14	120	18	1	153	58	52	78	1	189	0	0	0	2	2	
Peak Factor					0.794					0.871					0.886					0.375	

Park Avenue & St. John Street: Group I - 0.88/0.88 = 1.00
No Factor Necessary

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

Title: St. John St & Dunkin' Donuts
Town: Portland, Maine
Counter: NLS
Weather: Cloudy, Some Showers

File Name : PortlandStJohnDDSiteAM
Site Code : 00000000
Start Date : 6/20/2017
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	St. John Street From North					Dunkin' Donuts Drive From East					St. John Street From South					McDonald's Exit Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	67	8	0	75	7	0	0	2	9	12	51	0	0	63	3	0	5	2	10	157
06:45 AM	0	62	10	0	72	6	0	2	3	11	14	75	0	0	89	4	0	6	0	10	182
Total	0	129	18	0	147	13	0	2	5	20	26	126	0	0	152	7	0	11	2	20	339
07:00 AM	0	41	2	0	43	7	0	0	2	9	18	114	0	1	133	5	0	9	1	15	200
07:15 AM	0	51	8	0	59	6	0	2	1	9	23	114	0	0	137	5	1	5	0	11	216
07:30 AM	0	66	9	2	77	8	0	5	2	15	20	160	0	0	180	4	0	15	0	19	291
07:45 AM	0	71	5	1	77	10	0	5	4	19	15	180	0	0	195	3	0	14	2	19	310
Total	0	229	24	3	256	31	0	12	9	52	76	568	0	1	645	17	1	43	3	64	1017
08:00 AM	0	49	14	0	63	6	0	1	0	7	12	133	0	1	146	7	1	12	0	20	236
08:15 AM	0	41	12	0	53	8	0	3	2	13	13	119	0	0	132	7	1	10	1	19	217
08:30 AM	0	57	6	0	63	10	0	2	0	12	14	134	0	0	148	5	0	7	1	13	236
Grand Total	0	505	74	3	582	68	0	20	16	104	141	1080	0	2	1223	43	3	83	7	136	2045
Apprch %	0.0	86.8	12.7	0.5		65.4	0.0	19.2	15.4		11.5	88.3	0.0	0.2		31.6	2.2	61.0	5.1		
Total %	0.0	24.7	3.6	0.1	28.5	3.3	0.0	1.0	0.8	5.1	6.9	52.8	0.0	0.1	59.8	2.1	0.1	4.1	0.3	6.7	

	St. John Street From North					Dunkin' Donuts Drive From East					St. John Street From South					McDonald's Exit Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	0	227	40	3	270	32	0	14	8	54	60	592	0	1	653	21	2	51	3	77	1054
Percent	0.0	84.1	14.8	1.1		59.3	0.0	25.9	14.8		9.2	90.7	0.0	0.2		27.3	2.6	66.2	3.9		
07:45 Volume	0	71	5	1	77	10	0	5	4	19	15	180	0	0	195	3	0	14	2	19	310
Peak Factor																					0.850
High Int.	07:30 AM					07:45 AM					07:45 AM					08:00 AM					
Volume	0	66	9	2	77	10	0	5	4	19	15	180	0	0	195	7	1	12	0	20	
Peak Factor					0.877					0.711					0.837					0.963	

232

606

St. John Street: Group I - 0.90/0.88 = 1.023

ACCIDENT REVIEW - SECTION 2

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

The second criterion, which must also be met, is based upon the number of accidents that occur at a particular location. Eight or more accidents must occur over the three-year study period for the location to be considered a high crash location. Accident data was obtained from MaineDOT for the Saint John Street and Valley Street study area. The CRF and number of accidents are summarized by location for the most recent three-year period 2014 to 2016 below:

St. John Street Location Description	# of Acc.	CRF
Intersection of Congress Street	25	0.71
Between Congress Street and 0.14 miles north	**28**	**2.94**
Intersection 0.14 miles north of Congress Street	1	0.30
Intersection of Park Avenue	**36**	**1.95**

Valley Street Location Description	# of Acc.	CRF
Intersection of Congress Street	17	0.91
Between Congress Street and Park Avenue	1	0.38
Intersection of Park Avenue	**8**	**1.53**

As can be seen in the above accident table, there are two high crash locations on St. John Street within the vicinity of the proposed Dunkin' Donuts. Additionally, the intersection of Park Avenue and Valley Street just meets the high crash criteria. Individual accident reports were obtained and collision diagrams were prepared to determine if there are any accident patterns or trends evident that may indicate a correctable safety deficiency. The diagrams are included in the appendix and are evaluated below:

Intersection of Park Avenue and St. John Street

The signalized intersection of Park Avenue and St. John Street had 36 accidents during the three-year period from 2014 – 2016 and a CRF of 1.95. One of the accidents was miscoded to the intersection. There were eight rear-end collisions, three on the northbound approach, three on the westbound approach and two on the southbound approach. Eight of

the accidents involved northbound St. John Street vehicles that attempted to continue through to St. John Street from the left-turn lane, while the vehicle in the through-left lane was turning left. An additional three accidents occurred when the driver realized he or she was in the left-turn only lane and wanted to continue through on St. John Street. As such, he or she attempted to change lanes and sideswiped the vehicle in the through-left lane. Seven of the accidents occurred when vehicles in the left and through-left St. John Street lanes began turning and failed to stay in their lane, thus causing a sideswipe collision. Eight accidents were cause by drivers running a red light, seven of which resulted in angle collisions. Of those eight accidents, one was cause by a driver under the influence and the other when stop signs were put out due to a malfunctioning signal. The final accident was a sideswipe with an unknown cause.

There is a pattern of crashes involving northbound St. John Street vehicles attempted to travel through from the left-turn only lane, ultimately resulting in a crash with another left-turning vehicle, or a sideswipe due to an improper lane change. Based on a review of the northbound St. John Street corridor approaching the signal, there is adequate advanced lane use signage, both post mounted and overhead. However, it may be beneficial to provide some additional signage next to the signal heads, such as an R3-7L "Left Lane Must Turn Left". There is also a pattern of northbound St. John Street left-turns failing to stay in their lane as both the left-turn only and left-through lane turn left. Based on images from GoogleEarth dated October 2016 a white dotted skip line is marked on the pavement to separate the two lanes. However, as of June 2017, the pavement markings had worn off and not been restriped. Therefore, Maine Traffic Resources recommends this striping be repainted and should be maintained more often to try to reduce this pattern of accidents.

St. John Street Link Between Congress Street and 0.14 Miles North

The St. John Street link between Congress Street and 0.14 miles north had 28 accidents over the three-year period from 2014 – 2016 and a CRF of 2.94. Seven of the accidents occurred in 2014, twelve in 2015 and nine in 2016. There were seven rear-end collisions in stop and go traffic. Five of the accidents involved a vehicle attempting to exit a driveway in traffic. A vehicle traveling on St. John Street on the outermost lane would stop and wave on the vehicle to exit the drive. When the vehicle began to exit they would fail to yield to the innermost lane, thus causing the collision. Five additional accidents involved vehicles failing to yield right-of-way, one being attributed to a truck limiting sight distance. Four of the accidents involved a vehicle turning right from the improper lane (closest lane to center) and failing to yield to the vehicle in the outermost lane. Four of the accidents were sideswipe collisions cause by improper lane changes. Two accidents were single vehicle loss of control type, one due to over acceleration on a turn and the other left the roadway for an unknown reason. The final accident involved a garbage truck hitting a pedestrian.

This link demonstrates patterns of rear-ends, failing to yield due to being waved on, improper lane changes and right-turns from the incorrect lane. These patterns are typical of busy corridors with multiple travel lanes and driveways. Generally, access management would be recommended as properties are redeveloped. However, this portion of St. John Street generally provides adequate access management, with driveways aligned and limited as necessary. Therefore, Maine Traffic Resources considers this section of St. John Street an ideal candidate for a "road diet." The roadway should be restriped to provide a single through lane northbound and southbound with a continuous two-way center turn-lane. This would eliminate crashes that were caused by right-turns from the wrong lane and would be expected to reduce improper lane changes. Additionally, the continuous left-turn lane would provide a safe area for left-turning vehicles and would serve all of the commercial businesses along this section of roadway.

Intersection of Park Avenue and Valley Street

The unsignalized intersection of Park Avenue and Valley Street had 8 reported accidents during the three-year period from 2014 – 2016 with a CRF of 1.53, two (2) in 2015 and six (6) in 2016. One of the accidents was a single vehicle run off road due to OUI. There were five angle type collisions as vehicles exited Valley Street and failed to yield to Park Avenue vehicles. One accident involved a pedestrian in a crosswalk crossing Valley Street. A similar accident involved a bicyclist being struck crossing Valley Street in the bike lane. There is no pattern of accidents that would indicate a particular intersection deficiency or any pattern of correctable type collisions. Hence, there are no recommendations for improvements.

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

St John

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2016 End Month: 12

Route: **0022S**	Start Node: **16765**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **16770**	End Offset: **0**	☐ **Exclude Last Node**

Crash Summary I

Nodes

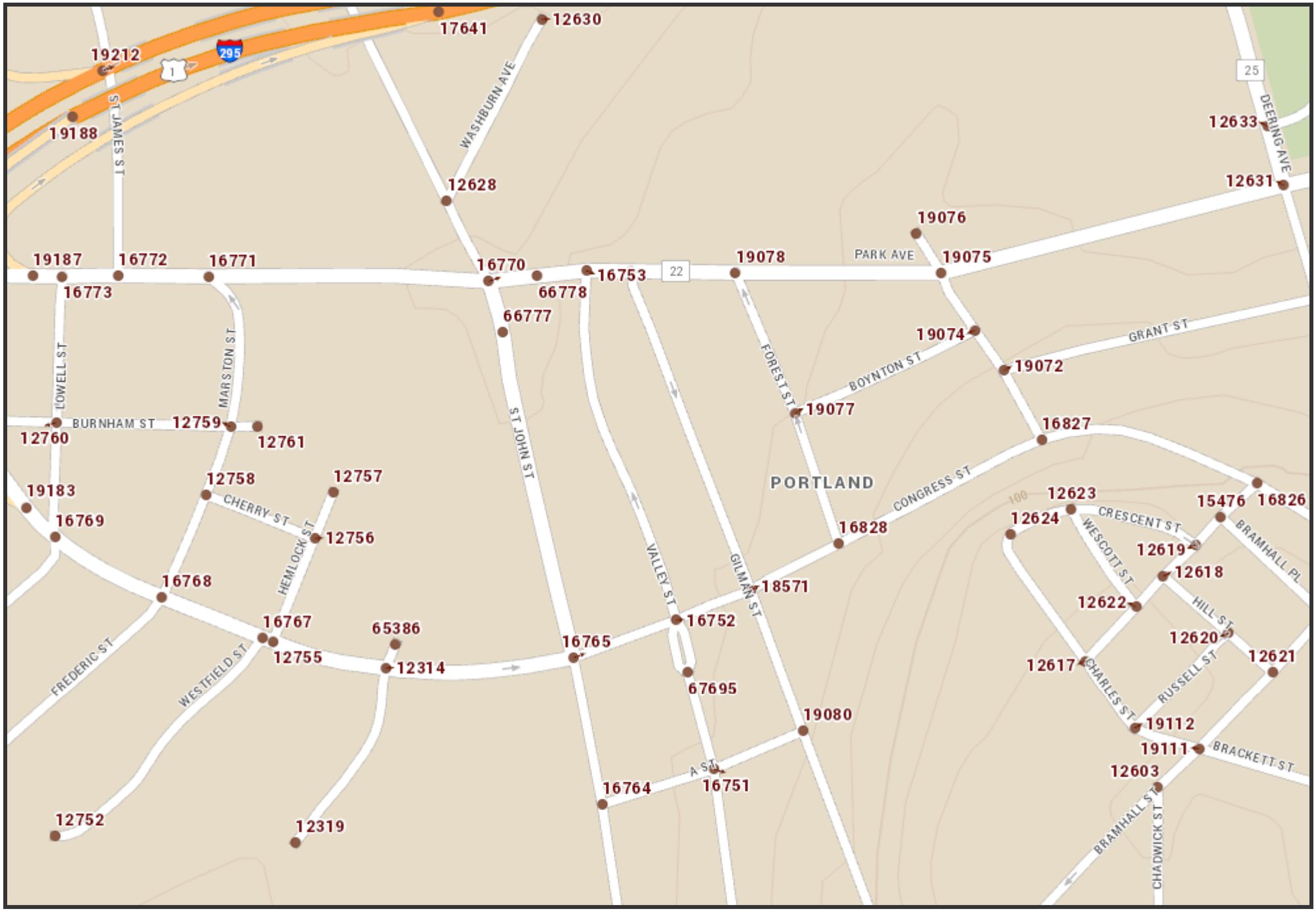
Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
16765	0022S - 0.88	Int of CONGRESS ST ST JOHN ST	9	25	0	0	1	3	21	16.0	11.025	0.76	1.07	0.71
											Statewide Crash Rate:	0.71		
66777	0022S - 1.02	Non Int ST JOHN ST	2	1	0	0	0	0	1	0.0	2.595	0.13	0.44	0.30
											Statewide Crash Rate:	0.15		
16770	0022S - 1.04	Int of PARK AV ST JOHN ST	9	36	0	0	2	4	30	16.7	4.971	2.41	1.24	1.95
											Statewide Crash Rate:	0.71		
Study Years:	3.00	**NODE TOTALS:**		62	0	0	3	7	52	16.1	18.591	1.11	0.90	1.24

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
16765	66777	3155094	0 - 0.14	0022S - 0.88	0.14	2	28	0	0	2	5	20	25.9	0.00727	1284.45	436.56	2.94
Int of CONGRESS ST	ST JOHN ST			ST RTE 22S											Statewide Crash Rate: 207.92		
66777	16770	3154475	0 - 0.02	0022S - 1.02	0.02	2	0	0	0	0	0	0	0.0	0.00104	0.00	712.98	0.00
Non Int ST JOHN ST				ST RTE 22S											Statewide Crash Rate: 207.92		
Study Years: 3.00				**Section Totals:**	0.16		28	0	0	2	5	20	25.0	0.00830	1123.89	423.18	2.66
				Grand Totals:	0.16		90	0	0	5	12	72	18.9	0.00830	3612.51	579.72	6.23

PORTLAND MAP



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.

0.1 Miles

1 inch = 0.07 miles

Date: 6/12/2017
Time: 2:55:08 PM

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

Valley St. from Congress St. to Park Ave.

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2016 End Month: 12

Route:	**3201019**	Start Node:	**16752**	Start Offset: **0**	☐ **Exclude First Node**
		End Node:	**16753**	End Offset: **0**	☐ **Exclude Last Node**

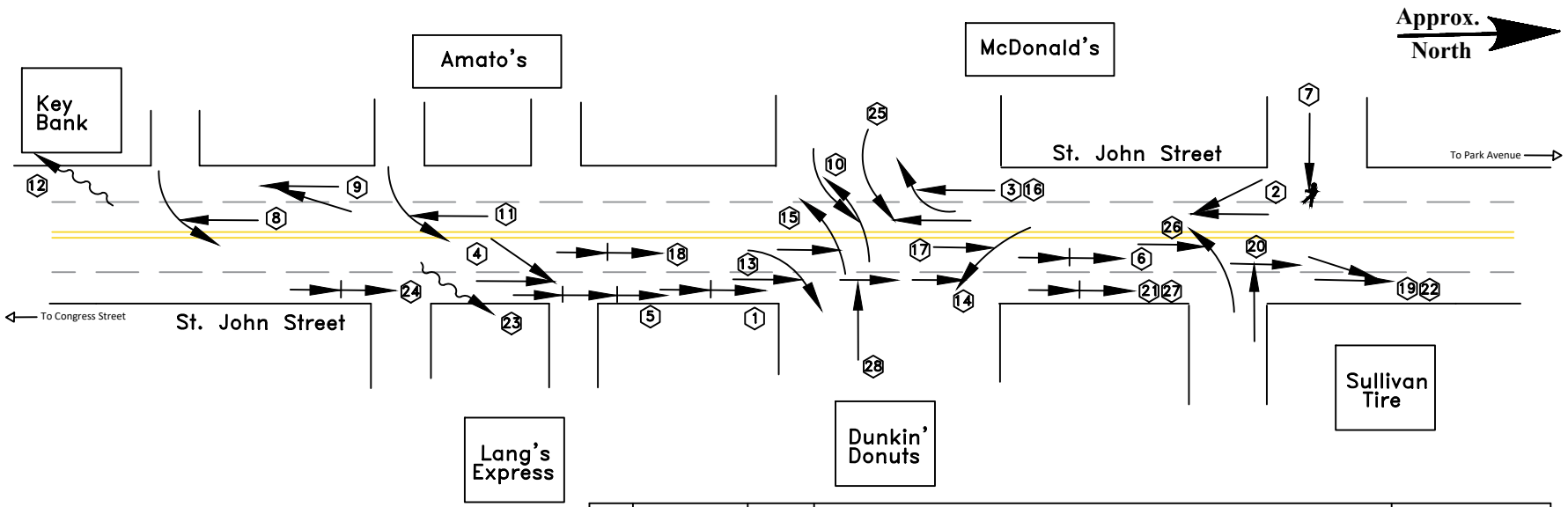
Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
16753	3201019 - 0.82	Int of PARK AV VALLEY ST	2	8	0	0	1	3	4	50.0	4.562	0.58	0.38	1.53
												Statewide Crash Rate:	0.15	
16752	3201019 - 0.66	Int of CONGRESS ST VALLEY ST	9	17	0	0	0	2	15	11.8	5.123	1.11	1.22	0.00
												Statewide Crash Rate:	0.70	
Study Years:	3.00	**NODE TOTALS:**		25	0	0	1	5	19	24.0	9.685	0.86	0.74	1.16

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
16752	16753	3118516	0 - 0.16	3201019 - 0.66	0.16	2	1	0	0	0	0	1	0.0	0.00132	252.56	670.56	0.00
Int of CONGRESS ST	VALLEY ST			RD INV 3201019											Statewide Crash Rate: 207.35		
Study Years: 3.00				**Section Totals:**	0.16		1	0	0	0	0	1	0.0	0.00132	252.56	670.56	0.38
				Grand Totals:	0.16		26	0	0	1	5	20	23.1	0.00132	6566.45	908.01	7.23



CRF = 2.94

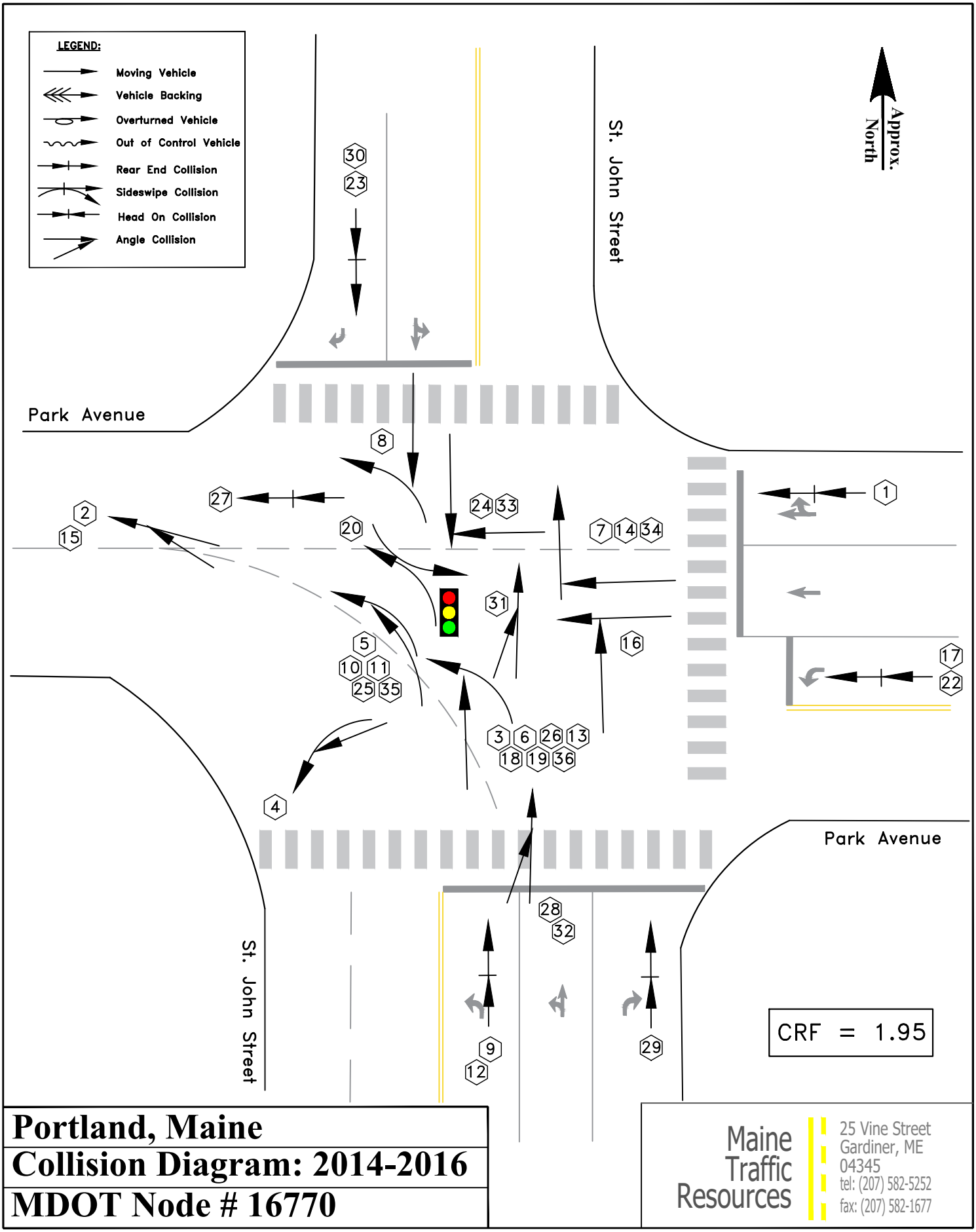
LEGEND:

- Moving Vehicle
- Vehicle Backing
- Overturned Vehicle
- Out of Control Vehicle
- Rear End Collision
- Sideswipe Collision
- Head On Collision
- Angle Collision

#	DATE	TIME	CONTRIBUTING FACTOR	MDOT REPORT #
1	01/23/14	06:31	REAR-END WHILE TURNING RIGHT INTO DUNKIN' DONUTS	14-000299
2	04/04/14	13:00	SIDESWIPE - UNKNOWN CAUSE - FLED SCENE	14-001129
3	07/10/14	06:08	ATTEMPTED RIGHT-TURN FROM OUTER LANE	14-001990
4	08/12/14	14:30	ATTEMPTED RIGHT-TURN FROM OUTER LANE	14-002345
5	10/23/14	18:01	REAR-END - SLAMMED ON BRAKES TO AVOID PED - RAINY	14-003141
6	10/29/14	16:03	REAR-END - SLOWING IN TRAFFIC	14-003202
7	12/29/14	00:55	GARBAGE TRUCK HIT PEDESTRIAN	14-003836
8	03/05/15	14:47	WAVED ON BY OUTSIDE LANE - DID NOT YIELD TO INSIDE	15-001075
9	03/11/15	08:00	DID NOT SEE VEHICLE ON ATTEMPTED LANE CHANGE	15-001142
10	03/17/15	14:58	FAILED TO YIELD R.O.W - FLED SCENE	15-001208
11	04/13/15	12:00	WAVED ON BY OUTSIDE LANE - DID NOT YIELD TO INSIDE	15-001458
12	05/05/15	15:24	ACCELERATED ON TURN FROM WRONG LANE - HIT BUILDING	15-001654
13	05/26/15	20:18	ATTEMPTED RIGHT-TURN FROM OUTER LANE	15-001861
14	07/08/15	19:21	SIGHT DISTANCE BLOCKED BY CAR STOPPED IN OUTER LANE	15-002343
15	08/27/15	15:49	WAVED ON BY INSIDE LANE - DID NOT YIELD TO OUTSIDE	15-002908
16	09/25/15	16:04	ATTEMPTED RIGHT-TURN FROM OUTER LANE	15-003228
17	10/30/15	10:41	FAILED TO YIELD R.O.W	15-003635
18	11/03/15	11:50	REAR-END - STARTING IN TRAFFIC	15-003684
19	11/17/15	12:17	SIDESWIPE - ATTEMPTED LANE CHANGE	15-003841
20	01/05/16	15:09	FAILED TO YIELD R.O.W	16-000030
21	01/11/16	14:15	REAR-END - SWERVED TO AVOID OTHER VEHICLE	16-000108
22	02/09/16	16:09	SIDESWIPE - ATTEMPTING TO CHANGE LANES	16-000489
23	03/19/16	18:45	LEFT ROADWAY AND STRUCK SIGN - DRIVER FLED SCENE	16-000902
24	04/24/16	16:24	REAR-ENDED BUS - DRIVING ALONE WITH LEARNERS PERMIT	16-001219
25	04/27/16	12:02	WAVED ON BY INSIDE LANE - DID NOT YIELD TO OUTSIDE	16-001251
26	07/21/16	17:52	WAVED ON BY INSIDE LANE - DID NOT YIELD TO OUTSIDE	16-002261
27	09/22/16	11:08	REAR-END - IN TRAFFIC	16-002929
28	11/05/16	10:30	FAILED TO YIELD R.O.W	16-003415

Portland, Maine
Collision Diagram: 2014-2016
MDOT Link # 66777 - # 16765

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



Portland, Maine
Collision Diagram: 2014-2016
MDOT Node # 16770

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

#	DATE	TIME	CONTRIBUTING FACTOR	MDOT REPORT #
1	01/08/14	16:36	REAR-END - FOOT SLIPPED OFF BRAKE	14-000131
2	04/10/14	09:27	DID NOT REALIZE THERE WERE TWO TURN LANES	14-001176
3	05/27/14	14:55	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	14-001574
4	06/07/14	20:50	SIDESWIPE - UNKNOWN CAUSE	14-001683
5	06/09/14	16:37	IMPROPER WIDE LEFT-TURN - FAILED TO STAY IN LANE	14-001705
6	07/03/14	12:19	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	14-1927
7	07/04/14	11:20	WB VEHICLE RAN RED LIGHT	14-001940
8	07/04/14	17:37	UNDER THE INFLUENCE - RAN RED LIGHT	14-001947
9	08/14/14	16:57	REAR-END - IN TRAFFIC	14-002382
10	08/22/14	12:41	IMPROPER LEFT-TURN - FAILED TO STAY IN LANE	14-002466
11	11/14/14	23:52	IMPROPER LEFT-TURN - FAILED TO STAY IN LANE	14-003368
12	11/24/14	09:52	REAR-END - STOPPED FOR RED LIGHT	14-003463
13	12/23/14	16:02	FAILED TO STAY IN CORRECT LANE	14-003793
14	01/05/15	15:28	RAN RED LIGHT	15-000051
15	03/02/15	20:45	IMPROPER LEFT-TURN - FAILED TO STAY IN LANE	15-001037
16	03/08/15	11:39	DID NOT STOP AT STOP SIGN - MALFUNCTIONING LIGHTS	15-001106
17	03/13/15	13:58	REAR-END - MISSED BRAKE PEDAL	15-001164
18	03/24/15	15:30	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	15-001273
19	06/13/15	16:42	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	15-002027
20	06/25/15	18:55	SB VEHICLE RAN RED LIGHT	15-002184
21	08/03/15	17:20	** MISCODED **	15-002605
22	09/06/15	14:31	REAR-END - DID NOT SEE STOPPED VEHICLE	15-003014
23	09/16/15	14:28	REAR-END - FOOT SLIPPED OFF BRAKE	15-003110
24	09/21/15	05:36	RAN RED LIGHT	15-003164
25	09/28/15	10:29	IMPROPER LEFT-TURNS	15-003253
26	12/03/15	17:09	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	15-004031
27	12/17/15	14:58	CHANGED LANES AND SLAMMED ON BRAKES	15-004211
28	12/21/15	20:35	SIDESWIPE - IMPROPER LANE CHANGE	15-004278
29	01/18/16	15:00	REAR-END - SLID ON SNOWY ROADWAY SURFACE	16-000208
30	04/05/16	15:42	REAR-END - URGENT BRAKE FOR PEDESTRIAN	16-001078
31	05/13/16	13:17	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	16-001420
32	05/19/16	17:32	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	16-001502
33	07/11/16	13:10	RAN RED LIGHT	16-002107
34	07/28/16	20:06	WB VEHICLE RAN RED LIGHT	16-002341
35	09/21/16	16:33	IMPROPER LEFT-TURN - FAILED TO STAY IN LANE	16-002921
36	12/21/16	12:47	ATTEMPTED TO GO THROUGH FROM LEFT-TURN LANE	16-003906

Portland, Maine
Collision Diagram: 2014-2016
MDOT Node # 16770

Maine Traffic Resources
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04345
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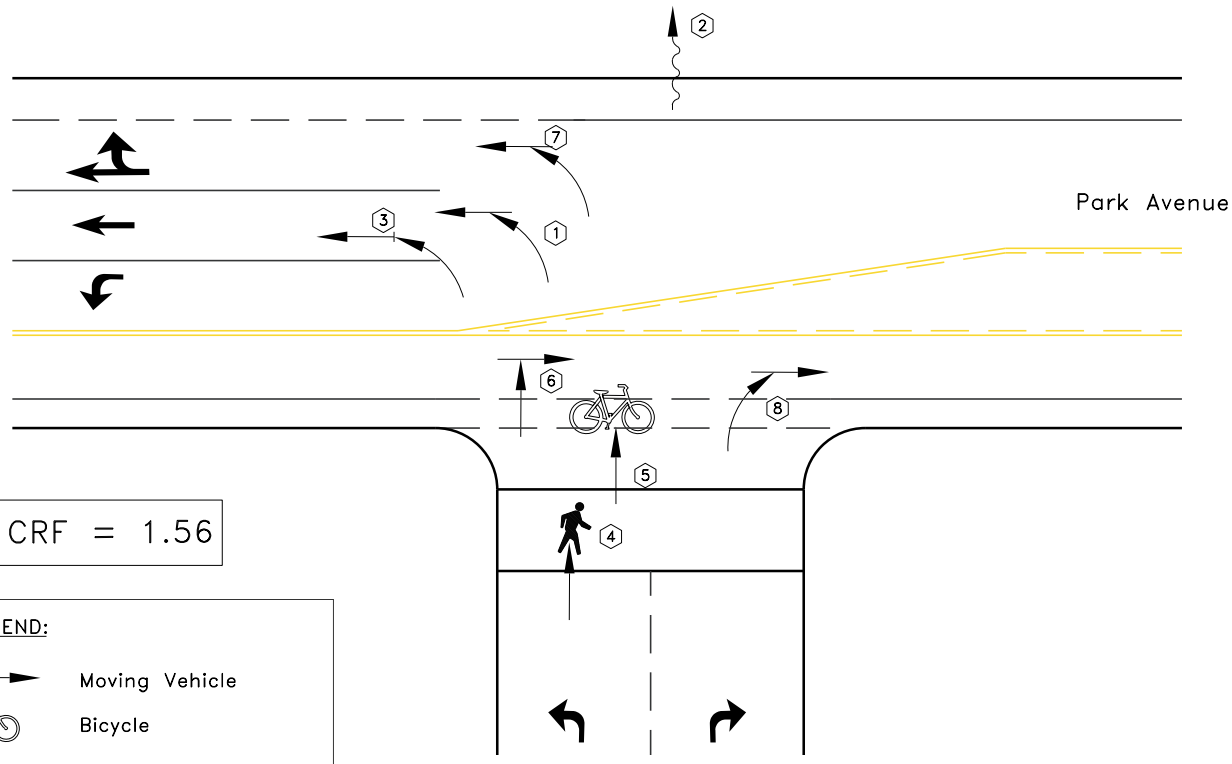

Approx. North

CRF = 1.56

LEGEND:

- Moving Vehicle
- Bicycle
- Pedestrian
- Out of Control Vehicle
- Rear End Collision
- Sideswipe Collision
- Head On Collision
- Angle Collision

#	DATE	TIME	CONTRIBUTING FACTOR	MDOT REPORT #
1	1/14/2015	12:40	Failed to yield merging	15-1264
2	7/29/2015	17:30	OUI	15-37419
3	2/1/2016	14:50	Hit rear of vehicle in queue turning	16-3446
4	5/23/2016	22:02	Hit Pedestrian in crosswalk	16-14150
5	7/20/2016	17:24	Hit bicycle in bike lane	16-20777
6	7/22/2016	13:48	failed to yield inching forward	16-20707
7	11/14/2016	12:20	Failed to see and yield	16-32426
8	12/24/2016	11:10	Failed to see and yield	16-38297

Portland, Maine
Collision Diagram: 2015-2016
MDOT Node # 16753

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

ENTRANCES AND EXITS - SECTION 3

Access to and from the proposed new Dunkin' Donuts will be provided by a single entrance to Saint John Street, a single exit to Saint John Street and by an exit to Valley Street. It is understood that the occasional large delivery vehicles will need to enter the site from the Valley Street exit. To accommodate this, this exit will be signed and marked appropriately as exit only. A small authorized vehicle only sign faced towards Valley Street will provide for the delivery truck entrance. It is recommended that these delivery trucks be restricted to non-peak times to minimize site disruption.

The speed limit and sight distances were measured by Plymouth Engineering and are shown on their site plan included in this application package.

TITLE, RIGHT OR INTEREST - SECTION 4

The lease and the deed for the parcel are included in this application package.

FIRST AMENDMENT TO
GROUND LEASE WITH EXISTING BUILDING

THIS FIRST AMENDMENT TO GROUND LEASE WITH EXISTING BUILDING ("Lease") is dated September 27, 2017 between **Nancy E. Hurst**, having an address at 1876 Harpswell Neck Road, Harpswell, Maine 04079 ("**Landlord**") and **DB Real Estate Assets I LLC**, a Delaware limited liability company, having an address of 130 Royall Street, Canton, Massachusetts 02021 ("**Tenant**").

RECITALS

A. The parties have entered into a Ground Lease dated March 31, 2017, affecting the real estate located 325 St. John Street in Portland, Maine.

B. The parties desire to enter into an agreement modifying or supplementing the provisions of the aforesaid Ground Lease in order to extend its Contingency Period for certain but not all conditions.

AGREEMENT

In consideration of the mutual covenants contained herein, the parties agree, effective on the date of this First Amendment, that the Ground Lease dated March 31, 2017 shall be and hereby is amended as follows:

Section 2.1, and its subsections 2.1.1 through 2.1.7, inclusive, of the Ground Lease are eliminated in their entirety and shall be of no further force and effect, and the following Section 2.1 and its subsections shall be substituted for it:

2.1. Tenant's Contingency Period: Tenant shall have the unilateral right to terminate this Lease in the event any of the contingencies set forth below (each, a "contingency" and collectively, the "contingencies") are not satisfied in Tenant's sole and absolute discretion by May 31, 2018 (the "Contingency Deadline"). In the event Tenant shall elect to terminate this Lease pursuant to this Section 2.1, Tenant shall provide Landlord with written notice of its election on or before the Contingency Deadline, in which event this Lease shall be deemed null and void and neither party shall have any further obligation to the other hereunder. The Contingencies are:

2.1.1 Tenant's receipt of written approval of the Lease and the development of the Premises as a Dunkin' Donuts restaurant in accordance with Tenant's corporate approval policies;

2.1.2 Tenant's receipt, at Tenant's expense, of a title search which is free of any exceptions which are unacceptable to Tenant; and

2.1.3 Tenant's receipt of all permits, licenses, and approvals required or deemed appropriate by Tenant for the construction of the improvements on the Premises (including, without limitation, those required for the installation of Tenant's pylon and storefront signs) permitting the operation of a typical Dunkin' Donuts restaurant on the Premises with a drive-up window and patio, seven (7) days per week, twenty-four (24) hours per day ("Necessary Permits").

2.1.4 Tenant's receipt, at Tenant's option of a current Phase I, Phase II or any other environmental report pertaining to the Premises certified to Tenant, which report shall confirm there are no hazardous substances in existence in or upon the Premises, subject only to exceptions and qualifications as may be usual and customary. Tenant agrees that all testing in or under the existing building will conducted by Tenant's agents or contractors subject to the following representations by Tenant:

a) Tenant or its agents or contractors shall provide Landlord 48 hours' notice of its intention to conduct testing within or beneath the building (notice from Tenant's counsel to Landlord's counsel shall be deemed to comply with the terms of this paragraph);

b) All testing shall be performed in a manner which minimizes the disruption to Landlord's existing tenant, including performing all work, to the extent possible, between 8 AM and 11 AM (prior to opening of existing tenant's business hours); and

c) All testing causing damage to any part of the existing building shall be repaired immediately by Tenant to its condition prior to the testing.

The parties have duly executed the Lease Amendment Agreement in duplicate effective as of the day and year first above written.

Landlord:

Nancy E. Hurst

Nancy E. Hurst

Tenant:

By: :

Dennis McCarthy
VP, Finance and Treasury

GROUND LEASE WITH EXISTING BUILDING

THIS GROUND LEASE WITH EXISTING BUILDING ("Lease") is dated MARCH 31 2017 2017 ("Effective Date") between **Nancy E. Hurst**, having an address at 1876 Harpswell Neck Road, Harpswell, Maine 04079 ("**Landlord**") and **DB Real Estate Assets I LLC**, a Delaware limited liability company, having an address of 130 Royall Street, Canton, Massachusetts 02021 ("**Tenant**").

PREMISES

1.1 Description: Landlord, for and in consideration of the covenants contained in this Lease and made on the part of Tenant, demises and leases unto Tenant, and Tenant leases from Landlord the parcel of land of approximately .68 acres in size depicted as Map 65, Block C, Lots 4, 7 and 11 on the City of Portland Tax Maps, known as 325 St. John Street in the City of Portland, County of Cumberland, and State of Maine with an existing approximately 2800 square foot building located thereon (not including roads or public rights-of-way), and being more particularly described on **Exhibit A**, attached hereto and incorporated herein for all purposes, together with all of Landlord's easement rights and appurtenances thereto, and all necessary easements and appurtenances in Landlord's adjoining and adjacent land, highways, roads, streets, lanes, whether public or private, reasonably required for the installation, maintenance, operation and service of sewers, water, gas, drainage, electricity and other utilities and for driveways and approaches to and from abutting highways, for the use and benefit of the parcel, including the improvements to be erected thereon (the parcel, together with the easements, appurtenances, buildings and improvements described above are collectively hereinafter referred to as the "**Premises**").

1.2 Liens, Mortgages, Encumbrances, Easements, Tenancies and Restrictions: The liens, mortgages, encumbrances, easements, tenancies and restrictions, if any, are described on **Exhibit A-1** attached hereto and incorporated herein for all purposes and Landlord shall obtain, execute (or cause to be executed), delivered and recorded, all easements referred to in this Lease and easements for ingress, egress and parking over and across land adjacent to the Premises as may be necessary, in Tenant's reasonable judgment for the operation of Tenant's business in the Premises, and so as to enable Tenant, its agents, employees and invitees to have ingress and egress to the Premises as more fully shown on the Site Plan *(to be attached hereto following its approval by both parties)* and incorporated herein for all purposes as **Exhibit B**. Such easements shall be paramount to any lien on the servient property, shall run with the land described as the Premises and shall be in such form and content reasonable acceptable to Tenant.

1.3 Survey: If Landlord has one, Landlord agrees to provide Tenant with a copy of Landlord's Survey for the Premises. If Landlord does not have a Survey and if Tenant elects to have the Premises or any portion thereof surveyed (which will be at Tenant's sole cost and expense, if

done at all), then, at Tenant's option, the parties shall execute an amendment by which survey descriptions shall be inserted in lieu of the descriptions contained on **Exhibit A** and **Exhibit A-1**, but Tenant shall not be obligated to lease less than is described above.

CONTINGENCIES

2.1. Tenant's Contingency Period: Tenant shall have the unilateral right to terminate this Lease in the event any of the contingencies set forth below (each, a **"contingency"** and collectively, the **"contingencies"**) are not satisfied in Tenant's sole and absolute discretion within one hundred and twenty (120) days of the Effective Date (**"Contingency Period"**). Notwithstanding the foregoing, Tenant shall have the right to extend the Contingency Period for two (2) extensions of thirty (30) days each. In the event Tenant shall elect to terminate this Lease pursuant to this Section 2.1, Tenant shall provide Landlord with written notice of its election on or before the expiration of the Contingency Period, in which event this Lease shall be deemed null and void and neither party shall have any further obligation to the other hereunder. The Contingencies are:

2.1.1 Tenant's receipt of written approval of the Lease and the development of the Premises as a Dunkin' Donuts restaurant in accordance with Tenant's corporate approval policies;

2.1.2 Tenant's receipt of an SNDA from Landlord, and each of Landlord's lenders and ground lessors, to the extent applicable;

2.1.3 Tenant's receipt, from Landlord, and approval of all applicable covenants, conditions and restrictions pertaining to the Premises;

2.1.4 Tenant's receipt, at Tenant's expense, of a title search which is free of any exceptions which are unacceptable to Tenant;

2.1.5 Tenant's receipt of all permits, licenses, and approvals required or deemed appropriate by Tenant for the construction of the improvements on the Premises (including, without limitation, those required for the installation of Tenant's pylon and storefront signs) permitting the operation of a typical Dunkin- Donuts restaurant on the Premises with a drive-up window and patio, seven (7) days per week, twenty-four (24) hours per day (**"Necessary Permits"**);

2.1.6 Tenant's receipt, at Tenant's option and its sole expense, of a current Phase I environmental report pertaining to the Premises certified to Tenant, which report shall confirm there are no hazardous substances in existence in or upon the Premises, subject only to exceptions and qualifications as may be usual and customary; and

2.1.7 Tenant's receipt, at Tenant's option and sole cost, of a certified survey of the Premises showing the location of utilities, easements, encroachments and restrictions, if any.

2.2 Good Faith: Landlord agrees to work in good faith to assist Tenant in Tenant's efforts to seek all permits, licenses, and approvals as described in Section 2.1.5 above including, without limitation, promptly executing any documents deemed necessary by Tenant, all at no cost to Landlord.

INITIAL TERM AND OPTION PERIODS

3.1 Initial Term: Tenant shall have and hold the Premises for an Initial Term commencing upon Tenant's receipt of possession of the Premises from Landlord (**"Commencement Date"**) and ending ten (10) years from the date upon which the restaurant developed on the Premises is first opened for business to serve the public for its Permitted Use (**"Expiration Date"**) (**"Initial Term"**).

3.2 Option Period(s): Landlord agrees that Tenant may elect to extend the Term of this Lease for six (6) successive periods of five (5) years each upon the same terms and conditions as contained in this Lease except that the Fixed Rent for each Option Period will be as set forth in Exhibit C (each, an **"Option Period"** and collectively, the **"Option Periods"**). If Tenant so elects to extend the Term of this Lease for one or more of the Option Periods, Tenant shall do so by providing Landlord with written notice thereof given not less than one hundred and eighty (180) days prior to the expiration of the Initial Term or the then current Option Period, as the case may be.

3.3 Term: The word **"Term"** as hereinafter used in this Lease shall include the Initial Term and the Option Period(s) exercised by Tenant, if any.

FIXED RENT

4.1 Rent Commencement Date: Tenant shall begin paying Fixed Rent (as defined below) to Landlord on the date that is sixty (60) days from the Commencement Date (**"Rent Commencement Date"**).

4.2 Fixed Rent for the Initial Term: Tenant, in consideration of the covenants made by Landlord, promises to pay Fixed Rent in equal monthly installments during the Term of this Lease, commencing on the Rent Commencement Date, and thereafter in advance on the first day of each month to Landlord at the address provided in the Notice section of this Lease (or such other address as Landlord may designate in writing from time to time to Tenant) according to the **Exhibit C**, attached hereto and incorporated herein for all purposes (**"Fixed Rent"**). For purposes of this Lease, the first **"Lease Year"** shall be defined as the period beginning with the Rent Commencement Date and ending on the last day of the month that is twelve (12) months after the day the restaurant on the Premises first opens to serve the general public. Subsequent Lease Years shall be consecutive twelve (12) calendar month periods thereafter. If the Rent Commencement Date is other than the first day of the month, the first payment of Fixed Rent shall be adjusted for the proportionate fraction of the whole month.

TAXES AND UTILITIES

5.1 Taxes: Landlord represents and warrants that the Premises is separately assessed and is three individual tax parcels. Effective on the Rent Commencement Date, Tenant shall pay all real property taxes and assessments accruing during the Term pertaining to the Premises (**"taxes"**) directly to the taxing authority on or before the date the same become due. All

payments of Taxes for the first and last Lease Year of the Term shall be prorated between Landlord and Tenant so that Tenant shall be responsible for only that portion of the Taxes attributable to the Term. Tenant shall pay all personal property taxes pertaining to Tenant=s furniture, fixtures and equipment located on the Premises directly to the taxing authority on or before the date the same become due. Tenant may, at its own expense and in the name of either or both Landlord or Tenant, initiate and prosecute proceedings for an abatement or review of any such real estate tax or assessment. Any refunds obtained by Tenant shall be retained by Tenant. Notwithstanding anything to the contrary contained herein, in no event shall Tenant be liable for nor shall Taxes include income, franchise, transfer, inheritance, business privilege, or capital stock taxes imposed upon Landlord or the estate of Landlord, nor shall Tenant pay any income, franchise, excise, business privilege, or sales taxes assessed by any taxing authority on the rental income received by Landlord, or excess profits tax levied upon, required to be collected by, or assessed against Landlord.

5.2 Utilities: Tenant shall pay directly to the provider for all water, sanitary services, storm sewer charges, electricity, gas, oil and all other required utilities (collectively, the "**Utilities**") consumed by Tenant in its use and occupancy of the Premises.

5.3 Triple Net Lease. Landlord and Tenant agree that they intend this Lease to operate as a "true triple net lease", except as otherwise expressly set forth herein, in which the Tenant remains solely responsible for all property taxes, insurance, utilities of any kind, and maintenance of all buildings, structures and improvements on the Premises.

REPRESENTATIONS, WARRANTIES AND COVENANTS

6.1 Tenant's Covenants: Tenant covenants and agrees, during the Term:

6.1.1 Payments: To pay Fixed Rent and all other sums required to be paid by Tenant hereunder on the days and in the manner as provided in this Lease.

6.1.2 Insurance: At its own expense to insure and keep insured (or cause its sublessee to insure and keep insured), from the Delivery Date, the building and improvements constructed by Tenant on the Premises against loss or damage by means of all-risk insurance on a replacement cost basis by responsible insurance companies licensed in the state in which the Premises are located. Subject to the terms of this Lease, such insurance shall be made payable in case of loss to Tenant.

Tenant shall also maintain and keep in force Comprehensive General Liability insurance, on an occurrence basis, insuring against claims for personal injury, death or property damage occurring in, on or about the Premises with a combined single limit of $2,000,000.00 for Bodily Injury, Death and Property Damage Liability. Tenant shall deliver to Landlord, upon request, a certificate of insurance naming Landlord and its mortgagee as an additional insured and evidence of any renewals from time to time made during the Term of this Lease.

Notwithstanding anything to the contrary contained in this Section 6.1.2, Tenant may self-insure for any or all of Tenant's insurance coverages to the extent that it is not prohibited by law from doing so.

6.1.3 **Indemnity:** Tenant agrees to indemnify, defend and save Landlord harmless from any liability, loss, cost, expense or claim of any nature resulting from any damage to person or property arising out of the failure of Tenant or Tenant's agents, employees, servants, licensees or contractors, in any respect, to keep the Premises in a safe condition or to comply with and perform all of the requirements and provisions of this Lease. In the event of an adverse judgment against Landlord on such claims, the judgment having become final, and the time for all appeals having expired, Tenant agrees to cause such judgment to be satisfied, and agrees to indemnify and hold Landlord harmless from and against any and all losses, costs, expenses, damages, liabilities or reasonable attorney's fees that arise if such judgment is not so satisfied.

Tenant shall have the sole and exclusive right to retain counsel of its choice, to determine all litigation issues including, without limitation, trial strategy, trial preparation, discovery techniques and strategy, right of appeal, and settlement decisions.

Landlord agrees to notify Tenant in writing by delivery to Tenant within ten (10) days and by telephone immediately after Landlord receives any such complaint or claim. The delivery of written notification shall include a copy of all pleadings if a complaint is filed or of all correspondence and exhibits if a claim is filed.

6.1.4 **Repairs:** To keep the Premises in a safe and good condition and repair, subject to ordinary wear and tear, damage or destruction by casualty or other unavoidable causes, and to Landlord's obligations under this Lease, if any.

6.1.5 **Compliance with Law:** To comply with all governmental laws, rules and regulations applicable to Tenant's Permitted Use, Tenant's development, and Tenant's operation of the Premises, including, but not limited to, the following ADA matters:

A. GENERAL ADA INDEMNITY

Tenant shall indemnify, defend and hold Landlord harmless from and against any and all claims, judgments, damages, penalties, fines, costs, liabilities, or losses (including, without limitation, sums paid in settlement of claims, reasonable attorney fees, paralegal consultant fees, and expert fees) that arise during the Term from Tenant's use of the Premises or the conduct of its business or from any activity, work or thing done, permitted, or suffered by Tenant, in or on the Premises by virtue of the application of the Maine Human Rights Act, the

Americans with Disabilities Act, and their respective implementing regulations, as they may be amended.

B. INDEMNITY FOR ALTERATIONS

Tenant shall indemnify, defend and hold Landlord harmless from and against any and all claims, judgments, damages, penalties, fines, costs, liabilities, or losses (including, without limitation, sums paid in settlement of claims, reasonable attorney fees, paralegal fees, consultant fees, and expert fees) that arise during the Term from or in connection with alterations made by Tenant to the Premises by virtue of the application of the Maine Human Rights Act, the Americans with Disabilities Act and their respective implementing regulations, as they may be amended.

C. OBLIGATION FOR COMPLIANCE IF ALTERATIONS ARE MADE

Landlord and Tenant agree that Tenant shall, during the Term of this Lease, be entitled to make improvements, alterations, and repairs to the Premises. Landlord and Tenant agree that Tenant shall be obligated to ensure that all improvements, alterations, and repairs comply with the Maine Human Rights Act, the Americans with Disabilities Act and their respective governing regulations, as they may be amended.

6.1.6 Surrender: Tenant agrees to remove its goods and effects upon the expiration or earlier termination of this Lease and to peaceably yield up the Premises in as good order, repair and condition as the same may have been in at the commencement of the Term or may be put in thereafter, except for reasonable wear and use and damage resulting from fire or other casualty and damage resulting from default by Landlord. At or prior to the expiration of the Term, or for thirty (30) days after the sooner termination thereof, Tenant shall have the right to remove all fixtures, signs and equipment installed by it or on its behalf and shall also have the right to remove or change any particular features of the Premises which may be distinctive of a Dunkin' Donuts restaurant, irrespective of the degree or character of annexation to the realty (all fixtures, signs and equipment being deemed at all times to be personal property), provided that any damage caused by any such removals or changes shall be repaired forthwith by Tenant at its expense.

6.2 Landlord's Covenants, Representations, and Warranties: Landlord covenants, represents and warrants that:

6.2.1 Zoning: The Premises is properly zoned for Tenant's Permitted Use (as defined in Section 7.1 below). To the extent the Premises is not properly zoned for Tenant's Permitted Use, Landlord shall obtain the approval of all public and governmental authorities as to all matters relating to zoning (including any special or

conditional use approvals), subdivision, lot splits, lot ties, replats or similar requirements for use of the Premises as a Dunkin' Donuts restaurant in accordance with Tenant's plans and specifications as will permit Tenant to obtain all Necessary Permits (as defined in Section 2.1 above). Landlord agrees to dedicate or grant any easements for public ways and to diligently perform and pay for any improvements located off the Premises required as a condition of approval and/or recordation of the final parcel map or subdivision plat.

6.2.2 **Utilities:** All Utilities are located within the boundary of the Premises not less than ten (10) feet from the location of Tenant's building on the Premises and are available and adequate for Tenant's Permitted Use. If any Utility(ies) are not located as set forth above, or are not available, Landlord agrees to extend such Utility(ies) meeting Tenant's specifications to a point that is not less than ten (10) feet from the location of Tenant's building on the Premises within thirty (30) days from the date that Tenant notifies Landlord that it has satisfied or waived all Contingencies (as defined in Section 2.1 above) and Tenant delivers its plans and specifications for Utilities to Landlord. Any and all impact, tap and connection fees associated with Utilities shall be paid by Tenant.

6.2.3 **Hazardous Substances:** The Premises are free of Hazardous Substances. **Hazardous Substances**, as that term is used herein, shall include, but not be limited to: (a) any "hazardous substance" as that term is defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 United States Code section 9601-9675); (b) "Hazardous waste", as that term is defined in the Resource Conservation and Recovery Act of 1976 (RCRA) (42 United States Code sections 6901-6992k); (c) any pollutant, contaminant, or hazardous, dangerous, or toxic chemical, material, or substance, within the meaning of any other applicable federal, state, or local law, regulation, ordinance, or requirement (including consent decrees and administrative orders imposing liability or standards of conduct concerning any hazardous, dangerous, or toxic waste, substance or material, now or hereafter in effect); (d) petroleum products; (e) radioactive material, including any source, special nuclear, or byproduct material a defined in United States Code sections 2011-2297g-4; (f) asbestos in any form or condition; and (g) polychlorinated biphenyls (PCBs) and substances or compounds containing PCBs. Landlord represents and warrants that it has never generated, stored, handled or disposed of any Hazardous Substance in or upon the Premises. Landlord shall indemnify, defend upon demand with counsel reasonably acceptable to Tenant, and hold Tenant and each of its affiliates, directors, officers, employees, agents and representatives harmless from and against any liabilities, losses, claims damages, interest, penalties, fines, attorneys fees, experts fees, court costs, remediation costs, and other expenses (collectively, "losses") which result from or arise out of or in connection with (i) any use, storage, handling, generation, processing, treatment, transportation, release, discharge, migration or disposal of Hazardous Materials in, on at or under the Premises, which occurred prior to

the Term Commencement Date; (ii) any past or future exposure to Hazardous Materials in, on, at or under the Premises (whether the Hazardous Materials originated from the Premises or migrated to the Premises from an adjacent property), except to the extent that such exposure is the result of Tenant's use of Hazardous Materials on or about the Premises after the Term Commencement Date; (iii) Landlord's violation of, or failure to take reasonably necessary measures to minimize Landlord's liability under any environmental law.

6.2.4 **Possession:** The Premises is free and clear of all tenancies, whether oral or written, and as of the Delivery Date, Tenant shall have sole and actual possession of the Premises.

6.2.5 **Covenant of Title and Quiet Enjoyment:** Landlord is well seized of and has good title to the Premises and all improvements located on it as of the Effective Date, free and clear of all liens, mortgages, encumbrances, easements, tenancies and restrictions except as set forth on **Exhibit A-1** (Landlord agrees to provide copies of any and all such documentation related thereto). Landlord warrants and will defend title, and will indemnify Tenant against any damage and expense which Tenant may suffer by reason of any claim against title or defect in the title or description of the Premises. In addition, Landlord agrees that Tenant's quiet enjoyment of the Premises will not be disturbed or interfered with by Landlord or by anyone claiming by, through or under Landlord. If, at any time, Landlord's title or right to receive rent under this Lease is disputed, or there is a change of ownership of Landlord's estate by act of the parties or operation of law, Tenant may withhold rent thereafter accruing until Tenant is furnished proof satisfactory to it as to the party entitled to the rent.

6.2.6 **Tenant's Exclusive Use:** That no property (other than the Premises) now or hereafter owned, leased or controlled, directly or indirectly, by Landlord or, if Landlord is a corporation, any subsidiary or affiliate of Landlord, adjacent or contiguous to the Premises or within one (1) mile of the perimeter of the Premises (whether or not such other property is subsequently voluntarily conveyed by Landlord) shall, during the term of this Lease and any extensions, be leased, used or occupied (i) for the manufacture or sale of coffee (including, but not limited to, frozen beverages), smoothies, donuts, bagels, breakfast sandwiches, pastry or bakery products, except that the sale of coffee, smoothies, donuts, bagels, pastry and bakery products at retail, if not manufactured on the premises, may be made in connection with the operation of supermarkets and waiter/ess service restaurants which do not specialize in the sale of any such items. Landlord further agrees that it shall not lease to any of the following: Starbuck's Coffee Company, Seattle's Best Coffee, Tim Horton's, Krispy Kreme Doughnuts, Caribou Coffee, Peet's Coffee & Tea, Einstein Bros. Bagels, McDonald's, Bruegger's Bagels, Coffee Beanery, Manhattan Bagels, Panera Bread Co., WaWa, Quick Chek, or 7-Eleven. If the covenant referenced in this Section

6.2.6 is broken, one-half (1/2) of all payments required to be made by Tenant under this Lease shall be abated for so long as such breach continues. The total sums so abated shall be liquidated damages for such breach and not a penalty, the parties agreeing that Tenant, or its subtenant, inevitably must sustain proximate and substantial damages from such breach, but that it will be very difficult, if not impossible, to ascertain the amount of such damage. In addition to this remedy, Tenant shall be entitled to injunctive and other appropriate relief, whether under the provisions of this Lease or otherwise. If Landlord's breach of this Section 6.2.6 continues for one (1) year or more, Tenant shall have the right to terminate this Lease by written notice to Landlord in which case Landlord shall be required to reimburse Tenant for the unamortized value of Tenant's leasehold and other improvements to the Premises.

6.2.7 **Indemnity:** Landlord shall defend, indemnify and hold Tenant and its affiliates, officers, directors, agents and employees (each, an "Indemnified Party") harmless from and against any and all claims, demands, actions, suits, liabilities, costs or expenses (including reasonable attorneys' fees and any other costs of investigation and/or defense) (collectively, "damages") arising directly or indirectly out of Landlord's conduct (or that of its affiliates, officers, directors, agents or employees) or its violation of any of the terms of this Lease; provided that Tenant shall not be entitled to indemnification hereunder to the extent that the relevant Damages arise out of Tenant's (or that of its affiliates, officers, directors, agents or employees) own negligence or willful misconduct.

6.2.8 **Landlord's W-9:** Landlord's accurate and current W-9 is attached hereto and incorporated herein as **Exhibit E**.

USE, ALTERATIONS, DELIVERY, DEVELOPMENT, AND TITLE TO IMPROVEMENTS

7.1 **Permitted Use:** Tenant shall have the right to use and occupy the Premises for the operation of a Dunkin'Donuts restaurant and for any other legally permissible use ("Permitted Use").

7.2 **Alterations and Title to Improvements:** Tenant shall have the right to make, or permit any subtenant to make, alterations, additions and improvements to the Premises from time to time. All of such alterations, additions and improvements constructed by Tenant or such subtenant shall be and remain the property of Tenant or such subtenant, as the case may be, at all times during the Term. Landlord agrees to execute such documents, make such appearances and do such other things as Tenant may reasonably request so as to comply with the intent of this Section 7.2. Tenant and any subtenant shall have the right to remove any such alterations, additions and improvements at any time during the Term, and for a period of thirty (30) days after the termination of this Lease. However, neither Tenant not any such subtenant shall be required to remove any such alterations, additions or improvements, and Tenant's (or such subtenant's) failure to do so after the expiration of such period of thirty (30) days shall be

deemed to be an abandonment and the same shall, at such time, become a part of the real estate with title vesting in the Landlord.

7.3 Landlord's Delivery: No later than January 1, 2019, but in no event earlier than the expiration or waiver by Tenant of the Contingency Period, Landlord, at Landlord's sole cost and expense, shall deliver the Premises to Tenant in the condition required by the terms of this Lease ("**Delivery Date**"). If Landlord fails to deliver the Premises by the Delivery Date, Tenant may (i) elect to receive credit(s) against Fixed Rent of two (2) days of Fixed Rent for each day of delay after the expiration of the Delivery Date (calculated based on a 30 day month); or (ii) Tenant may terminate the Lease by written notice to Landlord, in which case neither party shall have any further rights or obligations hereunder, provided that, Landlord shall reimburse Tenant for its out-of-pocket expenses incurred in negotiating this Lease (including, without limitation, reasonable attorney's fees), inspecting and investigating the Premises and preparing Tenant's plans (including, without limitation, architectural and engineering fees).

7.4 Landlord's Approval of Tenant's Plans: During the Contingency Period, Tenant shall deliver Tenant's plans and specifications for the construction or material alteration (including, if applicable, demolition of the existing building on the Premises) of Tenant's improvements ("**tenant's Plans**") to Landlord. Landlord agrees to provide its written approval of or objections to Tenant's Plans within ten (10) days from Landlord's receipt thereof, such approval not to be unreasonably withheld, delayed or conditioned. Any objections to Tenant's Plans provided by Landlord shall be accompanied by detailed written reasons for such objection(s). Tenant agrees to review Landlord's objection(s) and provide a response to Landlord (which response may include modification(s) to Tenant's Plans) within ten (10) days from Tenant's receipt thereof. If Landlord shall fail to provide its approval or rejection of Tenant's Plans, or any revisions thereof, within any such ten (10) day period, Tenant's Plans shall be deemed approved by Landlord in all respects. Notwithstanding anything to the contrary contained herein, if Landlord and Tenant are unable to agree as to Tenant's Plans within thirty (30) days of Tenant's original submission of Tenant's Plans to Landlord, Tenant may terminate this Lease upon written notice to Landlord.

7.5 Tenant's Construction Obligations: Provided that Tenant has not terminated this Lease as permitted herein, Tenant shall, at its sole cost and expense, perform its construction of the improvements in accordance with Tenant's Plans. Tenant shall employ a licensed contractor of its choosing to construct the improvements upon the Premises. Landlord expressly acknowledges and agrees that Tenant shall have no obligation to use union labor for any portion or portions of Tenant's construction. Prior to commencement of construction, Tenant shall procure and deliver to Landlord all certificates of insurance required hereunder. Tenant shall perform all work in a good and workmanlike manner and in accordance with Tenant's Plans and all applicable laws. Tenant acknowledges that it assumes sole responsibility for the construction and maintenance of all buildings, structures and improvements on the Premises, and that Landlord shall not be required to construct, repair, maintain, or make capital improvements to any such buildings, structures or improvements at any time.

7.6 Mechanic's Liens: Tenant agrees to pay when due the entire cost of any work on the Premises undertaken by Tenant so that the Premises shall at all times remain free of liens for labor and materials; provided that, Tenant may contest any such liens so long as such lien is bonded, removed or satisfied within sixty (60) days after receipt by Tenant of written notice of the filing thereof or such shorter time as may be required to prevent a judgment of sale thereunder. In the event that Tenant fails to discharge the mechanic's lien as provided in this Section 7.6, then Landlord, may, but shall not be obligated to, following fifteen (15) days prior written notice to Tenant of its intention to do so and Tenant's failure to cure within said fifteen (15) day period, discharge the same by paying the amount of the claim to be due or by bonding or other commercially reasonable proceeding deemed appropriate by Landlord, and the amount so paid by Landlord shall be deemed to be additional monies due and payable under this Lease by Tenant to Landlord which shall be paid within ten (10) days of Landlord's written demand therefor (provided that Landlord shall include adequate supporting information related thereto with such demand notice).

7.7 Signage: Tenant's prototypical building elevations and signage is attached hereto as **Exhibit D** which Landlord has approved. Notwithstanding the foregoing, Landlord hereby agrees that Tenant may utilize any elevations and signage that Tenant desires so long as it is permitted by the applicable governmental authorities. Tenant agrees to maintain its signs, awnings, canopies, decorations, lettering, and advertising in good condition, operating order and repair at all times. Tenant may also put signs and placards within the interior of the building(s) on the Premises consistent with its business practice; construct and maintain a dedicated pylon or monument sign on the Premises; and install temporary "Now Hiring" and "Grand Opening" signage on the Premises.

ASSIGNMENT AND SUBLETTING

8.1 Consent Required: Tenant shall not sublease the Premises or assign this Lease without first obtaining the prior written consent of Landlord, such consent not to be unreasonably withheld, conditioned or delayed.

8.2 Consent Not Required: Tenant shall have the right, without the need to obtain Landlord's consent, to sublet the Premises or assign this Lease to an approved franchisee of Dunkin'Donuts Franchising LLC ("franchisor") or to an entity related to Tenant provided Tenant remains liable for the payment of Fixed Rent and the performance of Tenant's duties under this Lease. In the case of an assignment of this Lease to an approved franchisee of Franchisor, Landlord agrees, within ten (10) days of Tenant's request, to execute and deliver to Tenant a copy of Tenant's standard form Option to Assume Lease, which is attached hereto and incorporated herein for all purposes as **Exhibit F**.

DEFAULT

9.1 Default by Tenant: If Tenant defaults in any payment of Fixed Rent or other payments required to be made by Tenant herein contained and such default continues for five (5) days after Tenant's receipt of written notice thereof from Landlord (provided however, that Landlord

shall not be required to provide Tenant with written notice of Tenant's failure to make any required payments hereunder more than two (2) times in any lease year, or if Tenant defaults in any of its other (non-monetary) obligation herein contained and such default continues for thirty (30) days after Tenant=s receipt of written notice thereof from Landlord specifying such default (or, if the same cannot reasonably be cured within such thirty (30) day period, Tenant has not begun to cure such default within such thirty (30) day period and thereafter diligently pursued such cure to completion), Landlord shall be entitled to seek any available legal remedies in Maine, including, but not limited to, any of the following remedies:

9.1.1 Upon entry of a court order, Landlord may declare this Lease ended and terminated and, with appropriate judicial decree, re-enter the Premises and take possession thereof, and eject and remove all persons and, remove all property therefrom and place any such property in storage in a public warehouse at the expense and risk of Tenant.

9.1.2 If Landlord has terminated this Lease pursuant to legal proceedings, Landlord may either continue to recover Fixed Rent as and when it becomes due for the remainder of the then current term or relet the Premises or any part thereof for such term or terms and upon such provisions as Landlord, in its sole judgment, may deem advisable.

9.2 Default by Landlord: If Landlord defaults in any of its covenants herein contained and fails to cure the same within a period of thirty (30) days after receipt of written notice from Tenant specifying such default (or, if the same cannot reasonably be cured within such thirty (30) day period, Landlord has not begun to cure such default and thereafter diligently pursued such cure to completion), Tenant may, at its option, either cure such default at Landlord=s expense (or offset such sums against Fixed Rent next coming due until Tenant is reimbursed in full), terminate this Lease, and/or avail itself of any other remedies available in equity and at law.

CASUALTY

10.1 Notice of Casualty: If the improvements on the Premises, or any material part thereto, should be destroyed or damaged by fire or other casualty, then Tenant shall promptly deliver written notice thereof to Landlord.

10.2 Reconstruction of Premises: If the improvements on the Premises should be damaged by fire or other casualty within the extended coverage of the property insurance policies carried by Tenant during the Term of this Lease, then Tenant shall, within ninety (90) days after Tenant's receipt of such insurance proceeds, commence (and shall thereafter diligently and continuously prosecute to completion) restore, replace and/or rebuild the improvements to substantially the same condition in which they existed prior to such damage (**"Restoration"**). If it is not reasonably possible to complete the Restoration in accordance with the preceding sentence within one hundred eighty (180) days after such casualty, subject to force majeure, Tenant, at Tenant's option, may elect to terminate this Lease upon written notice to Landlord. Upon termination pursuant to the preceding sentence, Tenant shall remove all damaged

buildings and improvements, and thereafter neither party shall have any further rights, duties or other obligations under this Lease accruing from and after the effective date of said termination, except as specifically otherwise provided in this Lease. To the extent the Premises is rendered all or partially untenantable as a result of said casualty, Fixed Rent shall abate for the period commencing upon the date of said casualty and continuing until Tenant's completion of the Restoration, but not for greater than 90 days after Tenant's receipt of all necessary permits to complete such restoration, provided however, that if such restoration cannot be reasonably commenced and completed due to winter weather, such period of time shall be extended until such time as the work may be reasonably completed. If, despite such damage, Tenant elects to continue occupancy of the Premises, then from the date of such damage until the date that the Restoration is completed, there shall be an equitable adjustment in Fixed Rent, for up to a maximum of 90 days, taking into account the interference with Tenant's normal conduct of business and loss of profit resulting therefrom.

10.3 Final Two (2) Years: If the improvements on the Premises should be totally or materially damaged by fire or other casualty within the last two (2) years of the Initial Term or during any Option Period, Tenant may elect to terminate this Lease upon written notice to Landlord given within ninety (90) days after the date of said casualty. Upon termination of this Lease pursuant to this Section 10.3, neither party shall have any further rights, duties or obligations under this Lease, except as specifically provided otherwise in this Lease. In the event that this Lease is terminated by Tenant within the last two (2) years of the Initial Term or during any Option Period as set forth herein, all insurance proceeds relating to the improvements on the Premises (but not Tenant's Property) shall be retained by Landlord.

10.4 Application of Insurance Proceeds: Except as otherwise provided in Section 10.3 above, insurance proceeds received on account of any damage to or destruction of the improvements on the Premises (or any part thereof) shall be applied solely to pay for the cost of Restoration. If the insurance proceeds exceed the cost of Restoration, Tenant shall be entitled to retain such excess proceeds but only after Landlord has been furnished with reasonably satisfactory evidence that all Restoration has been completed and that no mechanic's liens exist in connection with the Restoration.

CONDEMNATION

11.1 Taking: If the whole or any part of the Premises is taken or condemned by any competent authority for any public use or purpose during the Term, Tenant reserves unto itself the right to claim and prosecute its claim in all appropriate courts and agencies for an award or damages for such taking based upon its leasehold interest, business, and ownership of buildings, alterations and improvements located on the Premises. Landlord shall have the right to make a claim for the taking of or injury to the reversion.

11.2 Partial Taking: If a part of the Premises shall be taken or condemned which, in the sole judgment of Tenant, is sufficient to render the remaining portion unsuitable for its continued use or occupancy, then Tenant may, at any time, either prior to or within a period of ninety (90) days after the date when possession of the Premises shall be required by the condemning

authority, elect to terminate this Lease, or, if an option to purchase the Premises is conferred upon Tenant by any other provision of this Lease, may as an alternative to such termination of this Lease, elect to purchase the Premises in accordance with such purchase option, except that there shall be deducted from the purchase price to be paid for the Premises all of Landlord's award from the condemnation proceeding.

11.3 No Termination: In the event of any taking or condemnation not resulting in termination of this Lease, this Lease shall continue in effect with respect to the portion of the Premises not so taken, except that the Fixed Rent and other charges payable hereunder shall be reduced by a fraction, the numerator of which shall be the number of square feet taken or condemned, and the denominator of which shall be the square footage of the Premises prior to the taking or condemnation. Tenant will, with all due diligence and at its own cost and expense, repair and restore the Premises or what may remain of it to its former condition to the extent practicable, and to the extent that Tenant has received an award or compensation for such repair or restoration. Until the completion of such work, the obligation of Tenant to pay Fixed Rent and other charges payable hereunder shall abate.

11.4 Notice: Landlord shall give Tenant prompt notice of a taking or proposed taking by eminent domain or through temporary or permanent easements of all or any portion of the Premises, and Landlord shall include Tenant in any discussions or negotiations with the right of way agent or other condemning authority.

TRADE FIXTURES, MACHINERY AND EQUIPMENT

12.1 Landlord agrees that all trade fixtures, machinery, equipment, furniture and other personal property of whatever kind and nature kept or installed in the Premises by Tenant or Tenant's assignees or subtenants shall not become the property of Landlord or a part of the realty no matter how affixed to the Premises and may be removed by Tenant or Tenant's assignees or subtenants, in their discretion, at any time and from time to time during the Term. Upon request of Tenant or Tenant's assignees or subtenants, Landlord shall execute and deliver any real estate consent or waiver forms submitted by any vendors, lessors, chattel mortgagees or holders or owners of any trade fixtures, machinery, equipment, furniture or other personal property of any kind and description kept or installed in the Premises by any subtenant or assignee setting forth the fact that Landlord waives, in favor of such vendors, lessors, chattel mortgagees or any holders or owners, any lien, claim, interest or other right superior to that of such vendors, lessors, chattel mortgagees, owners or holders. Landlord shall further acknowledge that property covered by such consent or waiver forms is personal property and is not to become a part of the realty no matter how affixed to it, and that such property may be removed from the Premises by the vendors, lessors, chattel mortgagees, owners or holders at any time upon default by the subtenant or assignee in the terms of such chattel mortgage or other similar documents, free and clear of any claim or lien of Landlord.

ESTOPPEL CERTIFICATES, ATTORNMENT AND SUBORDINATION

13.1 Estoppel Certificates: Within twenty (20) days after written request from a party hereto, the other party shall execute and deliver to the requesting party a statement, in writing, certifying (a) that this Lease is in full force and effect, (b) the Rent Commencement Date, (c) that Fixed Rent is paid currently without any off-set or defense thereto, or, if delinquent, stating the delinquency, (d) the amount of Fixed Rent then in effect and, if any, paid in advance, (e) that, to the knowledge of the certifying party, there are no uncured defaults by Landlord or Tenant, or stating those claimed, and (f) any other information reasonably requested.

13.2 Attornment: In the event any proceedings are brought for the foreclosure of, or in the event of conveyance by deed-in-lieu of foreclosure of, or in the event of exercise of the power of sale under any mortgage made by Landlord covering the Premises, Tenant hereby attorns to the successor in interest and covenants and agrees to execute an instrument in writing reasonably satisfactory to such successor and Tenant whereby Tenant attorns to such successor in interest and recognizes such successor in interest as Landlord hereunder.

13.3 Subordination: Tenant agrees that this Lease shall, at the request of Landlord, be subordinate to any first mortgages or deeds of trust that may be placed upon the Premises and to any and all advances to be made thereunder, and to the interest thereon, and all renewals, replacements and extensions thereof; provided that, (a) if there are no existing defaults hereunder beyond applicable notice and cure periods on the part of Tenant, the right of possession of Tenant to the Premises and Tenant's rights under this Lease shall not be affected or disturbed by the mortgagee, or the trustee or the beneficiary under the mortgage or deed of trust in the exercise of any of its rights under the mortgage or the deed of trust; (b) Tenant shall not, in any foreclosure or other proceeding under the mortgage or deed of trust, nor in any other way, be deprived of its rights under this Lease, nor shall this Lease be terminated or affected by any foreclosure or sale or any proceeding under any mortgage or deed of trust; and (c) Landlord shall cause the mortgagee, trustee and/or beneficiary under any mortgage or deed of trust to execute, acknowledge and deliver to Tenant a written and recordable subordination, non-disturbance and attornment agreement ("SNDA") in form reasonably acceptable to Tenant prior to the execution of any mortgage or deed of trust or, if the same is in place at the time of execution of this Lease, on or before the expiration of the Contingency Period. Landlord agrees that in the event of any foreclosure of any mortgage or deed of trust, Tenant shall have the right to rely on any written communication from any mortgagee or trustee without the need to investigate the validity thereof and, as such, Tenant may withhold the payment of Fixed Rent or other amounts due hereunder and pay the same directly to the mortgagee or trustee in satisfaction of any of said indebtedness.

MISCELLANEOUS PROVISIONS

14.1 Holding Over: If Tenant continues to occupy the Premises after the last day of the Term, and Landlord elects to accept rent thereafter, a tenancy from month-to-month only shall be created, and not for any longer period. Fixed Rent payable during any such month-to-month tenancy shall be an amount equal to one hundred twenty-five percent (125%) of the Fixed Rent in effect at the expiration of the Term.

14.2 Invalidity: If any term or provision of this Lease or the application to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term or provision to persons whose circumstances other than those as to which it is held invalid or unenforceable, shall not be affected.

14.3 Recording: At the request of either party hereto, Tenant and Landlord agree to execute and record a short form or memorandum of this Lease as soon as Tenant has obtained an approved survey and legal description of the Premises. The recording fees shall be paid by the requesting party.

14.4 Successors: The terms, conditions and covenants of this Lease shall be binding upon and shall inure to the benefit of each of the parties, their heirs, personal representatives, successors or assigns, and shall run with the land; and where more than one party shall be lessors under this Lease, the word "Landlord" whenever used in this Lease shall be deemed to include all lessors jointly and severally.

14.5 Writing: No waivers, alterations or modifications of this Lease or any agreements in connection with this Lease shall be valid unless in writing duly executed by both Landlord and Tenant.

14.6 Construction: The captions appearing in this Lease are inserted only as a matter of convenience and in no way define, limit, construe or describe the scope or intent of such paragraphs of this Lease or in any way affect this Lease. Any gender used shall be deemed to refer to any other gender more grammatically applicable to the party to whom such use of gender relates. The use of singular shall be deemed to include the plural and, conversely, the plural shall be deemed to include the singular.

14.7 Notice: If at any time after the execution of this Lease, it shall become necessary or convenient for one of the parties to serve any notice, demand or communication upon the other party, such notice, demand or communication shall be in writing signed by the party serving notice, sent by (i) nationally recognized overnight carrier or (ii) registered or certified United States mail, return receipt requested and postage or other charges prepaid.

If intended for Landlord, the notice shall be addressed to:

Nancy E. Hurst
1876 Harpswell Neck Road
Harpswell, ME 04079

If intended for Tenant, the notice shall be addressed to:

DB Real Estate Assets I LLC
c/o Dunkin' Brands, Inc., as Manager
130 Royall Street, Canton, Massachusetts 02021
Attention: Manager, Corporate Real Estate

or such other address as either party may have furnished to the other in writing as a place for the service of notice. Any notice sent as set forth herein shall be deemed to have been given as of the date it is received (or, if delivery is refused, the date of refusal) as evidenced by the receipt.

14.8 Waiver of Jury Trial: Landlord and Tenant agree to waive any right to have a trial by jury with respect to any lawsuit based on, or arising under this Lease or any course of conduct, course of dealing, statements or actions of Landlord or Tenant in connection with this Lease.

14.9 Authority to Sign: No employee or agent of Tenant (other than an authorized signatory) has authority to make a lease or any other warranty, representation, agreement or undertaking. The submission of this document for examination and negotiation does not constitute an offer to lease or a reservation of or option for the Premises, and this document will become effective and binding only upon execution and delivery by Landlord and an authorized signatory of Tenant. All negotiations, considerations, representations and understandings between the parties are incorporated in this document and may be modified or altered only by agreement in writing between the parties, and no act or omission of any employee or agent of the parties or any broker, if any, shall alter, change or modify any of the provisions of this Lease. The parties executing this Lease on behalf of Landlord and Tenant represent that they have authority and power to sign this Lease on behalf of Landlord and Tenant.

14.10 Counterparts/Electronic Execution: This Lease may be executed in one or more counterparts and shall become effective when the appropriate counterparts have been signed by all of the parties hereto. Each counterpart shall be deemed an original but all counterparts shall constitute a single instrument. The parties agree that they may enter into this Lease (including any amendments and riders hereto) via facsimile and/or email/scan and execution in such a manner, including facsimile and/or emailed/scanned signatures, shall be binding and be deemed as originals for all purposes and shall in no way affect the validity or enforceability of the provisions of this Lease.

14.11 Quiet Enjoyment: Landlord hereby covenants and agrees that if Tenant shall not be in default beyond any period for the cure thereof, Tenant shall, at all times during the Term have peaceable and quiet enjoyment and possession of the Premises without hindrance, disturbance or interruption from Landlord or any other Person.

14.12 Broker's Commission: The parties hereto represent and warrant that they have dealt with no broker regarding this Lease.

14.13 Force Majeure: Each party shall be excused for the period of any delay and shall not be deemed in default with respect to the performance of any of the terms, covenants and conditions of this Lease when prevented from doing so by delays beyond the control of a party due to unusually inclement weather, acts of God, inability to obtain labor or materials, strikes, lock outs, labor troubles, government restrictions, enemy action, civil commotion, fire, flood,

casualty loss, war, government restrictions, revolution, terrorism, delays caused by the other party or its employees, agents or representatives, and other causes whether similar or dissimilar to the foregoing which are beyond the control of the party.

14.14 Confidentiality: The terms of this Lease and all related agreements are highly confidential. In no event shall the parties disclose any information concerning terms of this Lease to any third party unless (i) specifically required to do so by operation of law or (ii) after receiving the approval of the other party hereto permitting such disclosure. Notwithstanding the foregoing, Tenant shall be permitted to provide its subtenant, if any, with a copy of this Lease and Tenant shall be permitted to provide its permitted assignee(s) with a copy of this Lease. In addition, the parties shall be permitted to disclose the terms of this Lease to their accountants, attorneys, prospective lenders and/or operating management.

14.15 Exhibits: This Lease includes the following Exhibits, which shall take precedence over conflicting provisions (if any) of this Lease, and are made an integral part of this Lease and fully incorporated by reference:

Exhibit A	Legal Description
Exhibit A-1	Covenant, Conditions, Restrictions, and Easements
Exhibit B	Site Plan
Exhibit C	Schedule of Fixed Rent
Exhibit D	Tenant's Prototypical Signage and Elevations
Exhibit E	Landlord's Form W-9
Exhibit F	Tenant's Option to Assume Lease

[the remainder of this page intentionally left blank,the next page is the signature page]

Landlord and Tenant, by their execution below, indicate their consent to the terms of this Lease.

Landlord:

Nancy E. Hurst

Nancy E. Hurst

Witness:

Tenant:
DB Real Estate Assets I LLC

By:
Name: Jason S. Maceda
Its: VP, Finance

Witness:

EXHIBIT A
LEGAL DESCRIPTION

PARCEL 1:

A certain lot or parcel of land situated on the easterly side of St. John Street in the City of Portland, County of Cumberland, and State of Maine, being bounded and described as follows:

BEGINNING at an iron on the easterly side of St. John Street, a distance of two hundred fifty-two and four hundredths (252.04) feet northerly from Congress Street;
THENCE North 2 14' East, along the easterly sideline of St. John Street, a distance of sixty-two and fifty hundredths (62.50) feet to an iron;
THENCE South 87 46' East, a distance of one hundred forty-one and fifteen hundredths (141.15) feet-to an iron at the westerly sideline of Valley Street;
THENCE South 8 30' East, along the westerly sideline of Valley Street, a distance of one hundred seven and eighty-eight hundredths (107.88) feet to an iron;
THENCE South 81 27' West, a distance of seventy-nine and sixty-nine hundredths (79.69) feet to an iron;
THENCE North 8 45' West, a distance of ten (10) feet to an iron;
THENCE North 56 55' West, a distance of ninety-four and sixty hundredths (94.60) feet to an iron at the easterly sideline of St. John Street and the point of beginning.

Reference may be had to a deed from Resnick Oil Company to Philip R. Resnick dated September 6, 1966, and recorded in the Cumberland County Registry of Deeds, Book 2972, Page 535. Further reference may be had to a Trustees Deed from Casco Bank & Trust Company and Diana Resnick, Trustees for the Philip P. Resnick Revocable Trust, to Nancy R. Hurst dated October 5, 1976, and recorded in the Cumberland County Registry of Deeds, Book 3923, Page 45.

PARCEL 2:

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

BEGINNING on the westerly sideline of Valley Street at a point one hundred thirty-one and seventy-one hundredths (131.71) feet northerly thereon from the northerly sideline of Congress Street, being the northeasterly corner of land conveyed by John W. Deering to Emma C. Henderson by deed dated September 1, 1943 and recorded in the Cumberland County, Registry of Deeds, Book 1724, Page 287;
THENCE northerly by the westerly sideline of Valley Street sixty (60) feet to the southeasterly corner of land conveyed by Franklin S. Olsen to Margaret Howard, et al by deed dated April 2, 1942 and recorded in said Registry of Deeds, Book 1671, Page 150;

THENCE westerly at right angles with Valley Street and by said Howard land seventy-nine and sixty-nine hundredths (79.69) feet to an iron hub in the easterly sideline of land conveyed by Gifford Realty Co. to Mary E. Hansen by deed dated November 3, 1969 and recorded in said Registry of Deeds, Book 3107, Page 809;
THENCE southerly by said Hansen land fifty-three and forty-four hundredths (53.44) feet to an iron hub at the northwesterly corner of said Henderson land;
THENCE easterly by said Henderson land seventy-nine and ninety-four hundredths (79.94) feet to the point of beginning.

Reference may be had to a deed from Hildegarde M. Ledue to Philip P. Resnick recorded in the Cumberland County Registry of Deeds, Book 2983, Page 372. Further reference may be had to a Trustees Deed from Casco Bank & Trust Company and Diana Resnick, Trustees for the Philip P. Resnick Revocable Trust, to Nancy R. Hurst, dated October 5, 1976 and recorded in the Cumberland County Registry of Deeds, Book 3923, Page 45.

PARCEL 3:

A certain lot or parcel of land situated in the City of Portland, County of Cumberland and State of Maine, being bounded and described as follows:

BEGINNING at the northeasterly corner of land formerly of Lindley M. Webb, which corner is about one hundred (100)' feet northerly from Congress Street;
THENCE running westerly by said Webb land and land formerly of C.N. Carleton, a distance of ninety-nine and twenty-eight (99.28) feet, more or less, to St. John Street;
THENCE northerly by St. John Street one hundred fifty-two and thirty-one hundredths (152.31) feet, more or less, to a point distant two hundred fifty-three and seventy-three hundredths (253.73) feet northerly from the intersection of said side of St. John Street with the northerly side of Congress Street;
THENCE easterly at right angles with St. John Street seventy and five tenths (70.5) feet to land formerly of Hans Hansen;
THENCE southerly by said Hansen land one hundred forty-three and five tenths (143.5) feet, more or less, to the point of beginning.

EXCEPTING therefrom the portion of the premises conveyed to Philip P. Resnick by Resnick Oil Co., Inc. by Warranty Deed dated September 6, 1966, and recorded in the Cumberland County Registry of Deeds, Book 2972, Page 535.

Reference may be had to a deed from C.H. McKenzie Company to Eugene S. Martin dated June 30, 1979, and recorded in the Cumberland County Registry of Deeds, Book 4465, Page 18. Further reference may be had to a deed from Eugene S. Martin to Wayne R. Hurst dated December 30 1983 and recorded in the Cumberland County Registry of Deeds, Book 6361, Page 156.

Further reference may be had to the Quit Claim Deed of Wayne R. Hurst to Nancy E. Hurst dated March 27, 1992 and recorded in the Cumberland County Registry of Deeds, Book 9982, Page 346.

EXHIBIT F

OPTION TO ASSUME LEASE

Option to Assume Lease (PC _____)

1. If _____ ("tenant") defaults under the Lease dated _____ ("lease") by and between _____ ("landlord") and Tenant for the premises located at _____ _____ ("Premises"), or if Dunkin' Donuts Franchising LLC or Baskin-Robbins Franchising LLC ("Franchisor@) terminates Tenant's franchise agreement covering the Premises, Landlord and Tenant acknowledge and agree that Franchisor will have the option to assume the Lease pursuant to the terms of this Option which supplements and forms a part of the Lease.

2. Landlord agrees to give Franchisor written notice specifying all default(s) of Tenant under the Lease. Franchisor agrees to give written notice to Landlord if Franchisor terminates Tenant"s franchise agreement and, in such notice, will request that Landlord provide Franchisor with a copy of the Lease and specify any of Tenant's defaults thereunder. All notices will be by nationally recognized overnight courier (with tracking capability).

3. Franchisor may, within 30 days from receipt of notice from Landlord that Tenant has defaulted under the Lease and failed to cure such default(s) as required or permitted by the terms of the Lease, or sending of notice to Landlord that Franchisor has terminated Tenant's franchise agreement covering the Premises, notify Landlord of Franchisor's decision to assume the Lease. If Franchisor exercises its right to assume the Lease by sending Landlord the required notice, immediately upon Franchisor's receipt of possession of the Premises, Franchisor will cure all of Tenant's monetary defaults under the Lease, begin curing all of Tenant's non-monetary defaults under the Lease, and execute an agreement pursuant to which Franchisor agrees to assume all of Tenant's rights and obligations under the Lease, subject to (i) Franchisor's right, without the need to obtain Landlord's consent, to sublet the Premises or assign the Lease to an approved franchisee of Franchisor provided Franchisor remains liable for the payment of rent and the performance of Tenant's duties under the Lease (ii) Franchisor not being subject to any provision of the Lease that requires Tenant to continuously operate a business in the Premises during any period that the Premises is closed for remodeling or while Franchisor is seeking to obtain and train a new franchisee, provided however, that such period of closure will not exceed 90 days in each instance and provided further that Franchisor continues to pay rent during such period of closure pursuant to the terms of the Lease; and (iii) Franchisor=s right, if it subleases the Premises to a franchisee as provided above, to retain all consideration payable under such sublease.

4. If Franchisor exercises its right to assume the Lease, Tenant agrees to assign all of its right, title and interest in the Lease to Franchisor and, if Tenant does not do so within ten (10) days of Franchisor's written notice, Tenant appoints Franchisor as its agent to execute all documents that may be necessary for Franchisor to take assignment of the Lease. Notwithstanding anything to the contrary contained herein, Tenant shall remain liable to Landlord for all of its obligations under the Lease and to Franchisor for all amounts that Franchisor pays to Landlord to cure Tenant's defaults under the Lease, including interest, reasonable collection costs and de-identification costs (the parties acknowledging that Franchisor may enter the Premises without being guilty of trespass or tort to de-identify the Premises). Franchisor may assign this Option and its rights hereunder to any affiliate, subsidiary or parent of Franchisor. This Option may be signed in any number of counterparts by facsimile or otherwise, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. A facsimile signature may be used for any purpose in lieu of an original signature.

This Option is dated _____, 20____.

LANDLORD

_____

Nancy E. Hurst

Address _____

_____

Phone _____

TENANT

_____

By: _____

Its: _____

By: _____

, Individually

By: _____

, Individually

By: _____

, Individually

FRANCHISOR

_____

By: _____

Its: _____

c/o Dunkin= Brands, Inc., as Manager
130 Royall Street

Canton, Massachusetts 02021
Attention: Legal Department

95

25089

TRUSTEES' DEED

KNOW ALL MEN BY THESE PRESENTS,

That, We, Casco Bank & Trust Company, a banking institution duly organized and existing by law and having a principal place of business at Portland, Maine, and Diana Resnick, both Trustees under an Indenture of Trust dated September 21, 1976, said trust being known as the Philip P. Resnick Revocable Trust, by virtue of the authority given to us in said Trust, in our capacities as Trustees, as aforesaid, and in consideration of One Dollar ($1.00) and other valuable considerations paid to us by Nancy E. Hurst of South Harpswell, County of Cumberland and State of Maine, the receipt whereof is hereby acknowledged, do hereby sell, and convey unto the said Nancy E. Hurst, her heirs and assigns, the following described real estate, with the buildings thereon, situated in Portland, bounded and described as follows:

> A certain lot or parcel of land situated in Portland, County of Cumberland and State of Maine, bounded and described as follows: Beginning at an iron on the easterly side of St. John Street, distant 252.04 feet northerly from Congress Street; thence North 2 degrees 14' East along the easterly side line of St. John Street, a distance of 62.50 feet, to an iron; thence South 87 degrees 46' East, a distance of 141.15 feet to an iron at the westerly side line of Valley Street; thence South 8 degrees 30' East along the westerly side line of Valley Street, a distance of 107.88 feet to an iron; thence South 81 degrees 27' West, a distance of 79.69 feet to an iron; thence North 8 degrees 45' West, a distance of 10 feet to an iron; thence North 56 degrees 55' West, a distance of 94.60 feet to an iron at the easterly side line of St. John Street and the point of beginning.
>
> The premises described being the same as conveyed by Resnick Oil Co. to Philip P. Resnick and recorded in Book 2972, Page 535, Cumberland County Registry of Deeds.

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

Beginning on the westerly side line of Valley Street at a point one hundred thirty-one and seventy-one hundredths (131.71) feet northerly thereon from the northerly side line of Congress Street, being the northeasterly corner of land conveyed by John W. Deering to Emma C. Henderson by deed dated September 1, 1943, and recorded in Cumberland County Registry of Deeds in Book 1724, Page 287; thence northerly by the westerly side line of Valley Street sixty (60) feet to the southeasterly corner of land conveyed by Franklin S. Olsen to Margaret Howard, et al, by deed dated April 2, 1942, and recorded in said Registry of Deeds in Book 1671, Page 150; thence westerly at right angles with Valley Street and by said Howard land seventy-nine and sixty-nine hundredths (79.69) feet to an iron hub in the easterly side line of land conveyed by Gifford Realty Co. to Mary E. Hansen by deed dated November 3, 1969, and recorded in said Registry of Deeds in Book 3107, Page 809; thence southerly by said Hansen land fifty-three and forty-four hundredths (53.44) feet to an iron hub at the northwesterly corner of said Henderson land; thence easterly by said Henderson land seventy-nine and ninety-four hundredths (79.94) feet to the point of beginning.

The premises described being the same conveyed to Philip P. Resnick from Hildegarde M. Ledue, and recorded in Book 2983, Page 372, in the Cumberland County Registry of Deeds.

To Have and to Hold the above granted premises unto the said Nancy E. Hurst and her heirs and assigns forever, and we the said Casco Bank & Trust Company and Diana Resnick, in our said capacities as Trustees do hereby COVENANT to and with the said Nancy E. Hurst that we are the lawful Trustees under the said Philip P. Resnick Revocable Trust; that we have power under said Trust to sell, as aforesaid and that in making this conveyance we have in all respect acted in pursuance of the authority granted in said Trust.

In Witness Whereof, we the said Casco Bank & Trust Company by Ashton Johnson, its Trust Officer, and Diana Resnick, both in their capacity as Trustees aforesaid, have hereunto put their hand and seals this 5th day of October, 1976.

Signed, Sealed and Delivered
in the presence of

CASCO BANK & TRUST COMPANY

Rose M. Bouchard
Witness

By its Trust Officer - Trustee

Rose M. Bouchard
Witness

Diana Resnick
Trustee

45

State of Maine
Cumberland, ss.

October 5, 1976

Then personally appeared the above-named Ashton Johnson, Trust Officer of said Casco Bank & Trust Company, duly authorized, and acknowledged the above instrument to be the free act and deed of said Casco Bank & Trust Company, and his free act and deed in his capacity.

Before me,

Rose M. Bouchard

MY COMMISSION EXPIRES
APRIL 8, 1977

State of Maine
Cumberland, ss

October 5, 1976

Then personally appeared Diana Resnick and acknowledged the above instrument to be her free act and deed.

Before me,

Rose M. Bouchard

MY COMMISSION EXPIRES
APRIL 8, 1977

OCT 15 1976
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 1 H 52M P M, and recorded in
BOOK 3923 PAGE 45. Margaret L Weber Acting Register

Instr 16840 Bk 9982 Pg 346

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS

WAYNE R. HURST, of South Harpswell, County of Cumberland and State of Maine

FOR CONSIDERATION PAID - GRANTS TO

NANCY E. HURST, of South Harpswell, County of Cumberland and State of Maine

16840

WITH WARRANTY COVENANTS the land in Portland, County of Cumberland and State of Maine

A certain lot or parcel of land, together with the buildings thereon, situated on the easterly side of St. John Street in said Portland, more particularly bounded and described as follows:

BEGINNING at the northeasterly corner of land formerly of Lindley M. Webb, which corner is about one hundred (100) feet northerly from Congress Street;
THENCE running westerly by said Webb land and land formerly of C. M. Carleton ninety-nine and twenty-eight hundredths (99.28) feet, more or less, to St. John Street;
THENCE northerly by St. John Street one hundred fifty-two and thirty-one hundredths (152.31) feet, more or less, to a point distant two hundred fifty-three and seventy-three hundredths (253.73) feet northerly from the intersection of said side of St. John Street with the northerly side of Congress street;
THENCE easterly at right angles with St. John Street seventy and five tenths (70.5) feet to land formerly of Hans Hansen;
THENCE southerly by said Hansen land one hundred forty-three and five tenths (143.5) feet, more or less, to the point of beginning.

Excepting therefrom the portion of the premises conveyed to Philip P. Resnick by Resnick Oil Co., Inc. by Warranty Deed, dated September 6, 1966 and recorded in Cumberland County Registry of Deeds in Book 2972, Page 535.

Meaning and intending to convey the same premises conveyed to the Grantor herein by Warranty Deed of Eugene S. Martin dated December 30, 1983 and recorded in the Cumberland County Registry of Deeds in Book 6361, Page 156.

WITNESS my hand and seals this 27 day of March, 1992.

Wayne R. Hurst
WAYNE R. HURST

STATE OF MAINE

Sagadahoc, ss. March 27, 1992

Then personally appeared the above named WAYNE R. HURST and acknowledged the foregoing instrument to be his free act and deed,

BEFORE ME,

David R. Weiss

~~Notary Public Atty at Law~~
~~My Commission Expires~~

David R. Weiss
Printed or Typed Name of Notary

Recorded
Cumberland County
Registry of Deeds
03/31/92 09:31:26AM
~~Robert P.~~ Titcomb
Register

PUBLIC OR PRIVATE RIGHTS-OF-WAY - SECTION 5

No new public or private right-of-ways are proposed for this project.

SCHEDULE - SECTION 6

Construction is expected to begin in 2018 as soon as permits are issued. Construction is expected to be completed approximately 36 weeks later.

Plymouth Engineering, Inc.
P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
Tel: (207) 257-2071 fax: (207) 257-2130

July 19, 2018 Project No. 17140

Ms. Jean Fraser, Planner
City of Portland Planning & Urban Development Department
389 Congress Street, 4th Floor
Portland, ME 04101

Request for Deviation from the City Sidewalk & Driveway Apron Material Policy for St. John Street – Proposed Dunkin Donuts Restaurant, 325 St. John Street, Portland, Maine. (PL-000047-2018)

Ms. Fraser:

The applicant, Dunkin' Brands, Inc. is proposing to replace an existing restaurant with a new Dunkin' Donuts Restaurant at 325 St. John Street, Portland, Maine. St. John Street is currently within the Brick Sidewalk Zone of the City Sidewalk & Driveway Apron Material Policy Map and is not located within a Historic District. It is the applicant's understanding that, based on the "City Sidewalk & Driveway Apron Material Policy" found in Appendix A of the *City of Portland Technical Manual*, they will be required to remove the existing concrete sidewalk along the frontage of the 325 St. John Street parcel and replace it with a brick sidewalk and entrance aprons. Based on this information and the following excerpt from the Technical Manual, the applicant offers the following information in support of a deviation from this policy for this project.

Excerpt from the "City Sidewalk & Driveway Apron Material Policy" found in Appendix A of the *City of Portland Technical Manual:*

The following policy is intended to be used as a standard for all sidewalk construction in the City of Portland, Maine. This policy will be employed when reviewing development proposals involving public infrastructure within the City of Portland.

Sidewalk Material

The Sidewalk Material map identifies three sidewalk materials, brick, concrete, and asphalt, specific to each city street. Within the City's historic districts, only brick shall be used. Note that the following exceptions may apply:

- *Exception to brick sidewalks: On sidewalks, or sections of sidewalks, where the slope exceeds 10% percent, the Department of Public Works may approve the use of alternative material in lieu of brick if such alternative material would provide a more slip resistant surface to improve pedestrian safety. The alternative material includes concrete for sidewalks outside of the designated historic districts, and Pinehall/Pathway Lachance item #193623 Brick Pavers, for sidewalks within all designated historic districts.*
- *Partial replacement: The Department of Public Works may approve a deviation from the sidewalk material policy to match existing sidewalks in cases where:*
    1. *A substantial portion of sidewalks adjacent to and in the area surround(ing) the portion to be constructed or disturbed are of a material other than that designated on the Sidewalk Material map, and:*
        a. *Existing sidewalks on the affected street frontage, other than those in the area to be disturbed, are in sound conditions, and*
        b. *Less than 50% of the existing sidewalk on the affected block is to be disturbed; or*
    2. *Other unusual circumstances exist, subject to the approval of the City Manager*

The applicant respectfully requests that the Department of Public Works consider and approve a deviation from the Sidewalk & Driveway Apron Material Policy to match existing sidewalks for this project based on the fact that:

1. A substantial portion of sidewalks adjacent to and in the area surrounding the portion to be constructed or disturbed are of a material other than that designated on the Sidewalk Material map, and:
   a. Existing sidewalks on the affected street frontage, other than those in the area to be disturbed, are in sound conditions, and
   b. Less than 50% of the existing sidewalk on the affected block is to be disturbed.

This project meets the criteria based on the following:

a. The existing sidewalks within the City's right of way of St. John Street, between Congress Street and Park Ave., are almost exclusively concrete material and appear to be in sound condition. There is a section of brick sidewalk on both sides of St. John Street, at its intersection with Congress Street. The brick materials terminate at the first paved entrance on either side. This is the only brick within this area of St. John Street. There are no brick sidewalks at the intersection of St. John and Park. Additionally, it appears all existing entrances on St. John Street, between Congress Street and Park Ave., are constructed of pavement material

b. The proposed project is to be located on a site with approximately 215 feet of frontage on St. John Street. There are currently two paved entrances and approximately 165 feet of concrete sidewalk along the property's frontage. The proposed site layout will include two paved entrances and approximately 148 feet of sidewalk. There will be approximately 72 feet of existing concrete sidewalk that will be disturbed by the construction of the proposed project. This is a 44% disturbance within the property frontage of St. John Street. Much of the disturbance will be constructing new ADA access ramps on either side of the entrances.

We look forward to discussing this request further with City Staff and the Planning Board. Please let us know if you have any questions in the meantime.

Sincerely,
PLYMOUTH ENGINEERING, INC.



Jon H. Whitten, Jr., PE
Senior Project Manager

Att. X2

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
Tel: (207) 257-2071 fax: (207) 257-2130

July 19, 2018 Project No. 17140

Ms. Jean Fraser, Planner
City of Portland Planning & Urban Development Department
389 Congress Street, 4th Floor
Portland, ME 04101

Request for Waiver from Location and Spacing of Driveways, Section 1.7.2.7 of the City of Portland Technical Manual – Proposed Dunkin Donuts Restaurant, 325 St. John Street, Portland, Maine. (PL-000047-2018)

Ms. Fraser:

The applicant, Dunkin' Brands, Inc. is proposing to replace an existing restaurant with a new Dunkin' Donuts Restaurant at 325 St. John Street, Portland, Maine. The proposed site layout includes three driveway entrances for the site:

1. A one-way entrance off St. John Street,
2. A one-way exit onto St. John Street, and
3. A one-way exit onto Valley Street.

According to Section 1.7.2.7 of the City of Portland Technical Manual, the required spacing between double driveways either on the same lot or on adjacent properties is 100 feet for commercial driveways on any roadway with a speed limit of 25 or less. The proposed spacing on for this project is:

1. Distance from the one-way entrance off St. John Street to the adjacent driveway on the lot to the south = 91.7 feet
2. Distance from the one-way entrance off St. John Street to the one-way exit onto St. John Street = 100.2 feet
3. Distance from the one-way exit onto St. John Street to the adjacent driveway on the lot to the north = 77.8 feet
4. Distance from the one-way exit onto Valley Street to the adjacent driveway on the lot to the north = 117.7 feet.
5. Distance from the one-way exit onto Valley Street from the adjacent driveway on the lot to the south = 155.7 feet

The proposed location of the driveways on St. John Street are proposed to provide safe access into, through and out of the site. We have worked with City Staff in the past to look at alternative site layouts for this use, on this property. This layout worked the best for everyone. Additionally, the proposed locations provide for greater separation distances from the neighboring properties when compared to the existing conditions. There is an increase of approximately 16 feet from the driveway to the north of the site and approximately 2 feet from the driveway to the south. All measurements are taken centerline to centerline.

The applicant is of the opinion that the three driveways are critical to the safe and successful operation of the restaurant and respectfully requests that a waiver of the minimum spacing between driveways be granted for this project.

Plymouth Engineering, Inc.

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Tel: (207) 257-2071 fax: (207) 257-2130

Att. Y

November 16, 2018

Ms. Jean Fraser, Planning Division
City of Portland
389 Congress Street
Portland, ME 04101

Site Plan Application: Dunkin' Donuts Restaurant, 325 St. John Street, Portland, Maine

General Description:
On behalf of the owner/applicant, Dunkin' Brands, Inc., we are pleased to submit this updated Level III Site Plan Application for the proposed construction of a 2,277 square foot Dunkin' Donuts Drive-Thru Restaurant at 325 St. John Street in Portland, Maine. The property currently supports an Asian restaurant use with no drive-thru. There is an existing Dunkin' Donuts restaurant on the lot directly abutting this property and that business will move into this proposed, new building.

The property is 29,804 square feet in size and currently supports an Asian Restaurant use within a 3,406 s.f. building and 52 parking spaces. Access to the site is via two curb cuts on St. John Street. Utility connections for water, sewer, gas and stormwater currently run to Valley Street.

The applicant is proposing to develop an approximately 2,277 s.f. building and re-construct the parking area to support a queue for the drive-thru window and 24 parking spaces. Access to the site will be through the two, modified curb cuts on St. John Street.

We offer the following clarifications and response to comments regarding the current set of plans and updates to the application that have occurred in the past few months:

1. Site Vehicle Access:
    a. The Site will be accessed by two curb cuts on St. John Street. There will be one entrance and one exit only. The exit access will have proper width to support a right turn lane and left turn lane out.
    b. The applicant is no longer requesting a waiver to allow an exit only access to Valley Street.
    c. Delivery trucks will enter the site from St. John Street and proceed around the building and exit onto St. John Street through the proposed exit. Deliveries will be made during non-peak times so that interference with the vehicle queue is minimized.
2. Site Pedestrian Access:
    a. The applicant has added a paved sidewalk access to Valley Street with painted crosswalk area to the rear of the building. Pedestrians will continue to utilize the sidewalks on the exterior of the building to access the customer entrances near the front of the building.
    b. The typical building layout has been altered to include an extended dining area toward St. John Street, to promote pedestrian access from St. John Street. There is a two-door customer entrance within 10 feet of the existing St. John Street concrete sidewalk.
    c. Crosswalks are proposed to be painted along the alignment of the St. John Street sidewalk to clearly notify vehicle drivers that pedestrians will be accessing the building from the sidewalk. This allows for safe travel of pedestrians from the parking lot as well as off-site to the building.
3. Traffic Impact:

a. As a result of the new use on this property, additional turning movements will occur on St. John Street, as a result, the applicant has submitted a Traffic Movement Permit to the City. A re-striping plan for St. John Street has been prepared and reviewed by the City and MDOT and is attached to the Planning Board packet for review. The proposal includes instituting a City and MDOT design from 2012 where St. John Street is reduced from four lanes of traffic to two thru lanes and a single center turning lane. Bike lanes will also be delineated on either side of the road.
b. A neighborhood meeting will be conducted on November 15, 2018 to discuss this proposed re-striping plan with area businesses and land owners.

4. Stormwater Treatment:
    a. We have finalized our design of two Focal Point Stormwater Treatment Features to treat 75% of the proposed impervious area on the site. The design elements are included within the plan set.
5. Sidewalk Construction:
    a. The applicant is proposing to upgrade the Valley Street sidewalk from a 4-foot wide paved sidewalk to a 5-foot wide brick sidewalk and is no longer requesting a waiver to maintain the pavement material.
    b. The applicant continues to request a waiver so they may maintain the concrete material for the St. John Street sidewalk. The existing concrete walk is in good shape and most sidewalks on St. John Street are constructed of concrete.
6. Architectural Design:
    a. The architectural design of the building is represented in an exterior elevation drawing from the applicant's architect. The mechanical units that will be roof mounted and the architect is preparing final elevation drawings that will include roof screening for the units from all sides. Venting units will be on the roof and will be screened from view as well.
    b. The applicant and architect will work to break-up and/or beautify the rear elevation of the building as well. We understand that such a design process can be included as a condition of approval through the City Staff.
    c. Architectural elevations and plans detailing the site signage and pavement markings, etc. is included in the plan set for review.
7. Landscaping:
    a. An updated landscape plan has been included in the plan set for review.
    b. The rear area of the site will include raised landscape berms that will be constructed at an angle between the access aisles and Valley Street. The berms will overlap in an effort to buffer headlight pollution to Valley Street while opening up lanes of sight from the site and Valley Street to promote responsible use of the area.
8. Parking:
    a. The applicant is proposing a total of 24 parking spaces. The zoning calculation for the 15 parking spaces based on the size of the building is assumed by the applicant to be a calculation of a minimum number of customer spaces. Up to 6 parking spaces will be needed for employee parking bringing the minimum need to 21. A balanced site layout supports 24 and the applicant feels as though this number is needed for a successful business in this location.
    b. Sidewalks are provided at the end of each parking space that allow safe access to the building directly or to the sidewalk along St. John Street. Pedestrian access from St. John Street is a focus for this site, due to the requirements of the zone.
9. Lighting:
    a. The light poles throughout the parking lot as well as on the building are proposed. We will work with staff to finalize a lighting plan that is sure to provide safe, lighted pedestrian access areas for each sidewalk and crosswalk.
10. Utility Services:
    a. The site is to be serviced by a new sewer connection to St. John Street, connection to an existing water service to Valley Street, connection to an existing electrical transformer on the site and connection to the existing stormwater outlet to Valley Street.

b. Letters of service from the Portland Water District and City of Portland are in process and we expect to have final letters prior to the Planning Board meeting.

11. Hours of Operation:
    a. The current Dunkin' restaurant adjacent to this site operates 24-hours a day.
    b. The franchisee owner recently got a business license approved by the City of Portland City Council for a 24-hour Dunkin' Restaurant on 325 St. John Street. The applicant is proposing that the 24-hour operation be approved as part of this Site Plan and Conditional Use permit.
12. Neighborhood Meeting:
    a. An initial neighborhood meeting was conducted in early July and one neighbor attended.
    b. A second neighborhood meeting was conducted on November 15, 2018 to specifically discuss the re-striping of St. John Street. Three members of the public attended.
    c. A packet of information regarding the latest neighborhood meeting has been submitted to Staff.

We have worked extensively with City Staff to get this proposed, exciting project to this point and thank Staff for efforts thus far. We look forward to discussing this proposal with the Planning Board and finalizing all the details for an approval of the project. Please let us know if you have any questions in the meantime.

Respectfully,
PLYMOUTH ENGINEERING, INC.



Jon H. Whitten, Jr., P.E.
Senior Project Manager

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
Tel: (207) 257-2071 fax: (207) 257-2130

November 7, 2018

Jean Fraser, Planner
City of Portland
389 Congress Street
Portland, ME 04101

Narrative Description of Landscape Design - Site Plan Application - Dunkin' Donuts Restaurant, 325 St. John Street, Portland, Maine

Dear Jean,

We are proposing a creative earthen berm and planting scenario at the rear of the proposed Dunkin' Donuts Restaurant site at 325 St. John Street. The berms will be two (2) feet tall and have two to three-foot-tall evergreen plantings along the top, with some larger tree plantings to break up the sight lines. This height is expected to buffer vehicle headlights of vehicles in the site from Valley Street.

The angled orientation of the berms is an effort to buffer the headlights from the site as well as open up other viewing angles into the site so that there are no areas on the site that are completely blocked from view. For example, vehicles and pedestrians heading down Valley Street will be able to see through the landscaped area and see the rear of the restaurant at certain points. This will help to minimize people from using the landscaped areas for unauthorized activities.

We will submit a revised landscape plan that will better define the plant species in each area of the site and will take into account the suggestions made by Jeff Tarling, City Arborist when preparing that layout. We look forward to finalizing this design with you and other Staff members. Please feel free to contact us with any questions.

Respectfully,
PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., P.E.
Senior Project Manager

Att. Z1

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
tel: (207) 257-2071 fax: (207) 257-2130

November 2, 2018 Job #: 17140

Dear Business Owners and Neighbors:

Please join us for a neighborhood traffic meeting to discuss the proposed new Dunkin' Donuts restaurant at 325 St. John Street, Portland, Maine and the associated requirement to implement a re-striping plan of St. John Street between the intersections of Congress Street and Park Ave. This is based on the City's previous determination – and confirmed during the site plan review process - that a reconfiguration of the travel lanes along this section of St. John Street would lessen the number of vehicle accidents and make the roadway safer.

As the applicant, Dunkin Brands, Inc. is proposing to increase the number of vehicles entering/exiting this section of St. John Street and is therefore required to implement this re-striping plan as part of its Site Plan and Traffic Movement Permit review and approvals to mitigate existing and future safety issues.

The plan calls for the creation a single through lane on either side of a center turn lane with appropriate lane striping at the existing traffic lights. It will be a three-lane roadway instead of a four-lane roadway. The change will be in how the roadway surface is painted, no other alterations to the roadway (roadway width, curbing, islands, sidewalks, etc.) are currently proposed.

Meeting Location: King Middle School, 92 Deering Avenue, Portland, ME

Meeting Date: Thursday, November 15, 2018

Meeting Time: 4:00 PM

The City code requires that property owners within 500 feet (1,000 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. Business owners with businesses that appear to be dependent upon vehicle access directly from this portion of St. John Street have also been invited. A sign-in sheet will be circulated, and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board. If you have any questions, please call Plymouth Engineering, Inc. at (207) 257-2071.

Sincerely,

PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., PE
Sr. Project Manager

Note:
The applicant has been required to host this meeting by the City of Portland as part of the City's review of the applicant's Site Plan Permit application and Traffic Movement Permit application. 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: jf@portlandmaine.gov.

SIGN IN SHEET
NEIGHBORHOOD MEETING
325 ST JOHN ST DUNKIN DONUTS DRIVE THRU
November ~~12~~ 15, 2018

NAME	ADDRESS	TEL
Jay Whitten	Engineer - PEI	
DIANE MORABITO	Traffic Engineer	592-5252
Brenda CeRB	1215 Roosevelt Trail Raymond me	6020571
Marie Gray	263 State St. PHd	773-5329
Zack Barowitz	22 Huntress St	838-6120

Plymouth Engineering, Inc.

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November 16, 2018

Meeting Minutes
Neighborhood Meeting
For
Proposed Dunkin' Donuts at
325 St. John Street, Portland

Meeting Date: November 15, 2018
Meeting Time: 4:00 PM
Meeting Location: King Middle School Library
Meeting Conducted by: Jon Whitten, Jr., P.E. of Plymouth Engineering, Inc.
Minutes Prepared by: Jon Whitten, Jr., P.E. of Plymouth Engineering, Inc.
Number of people in attendance: 3

Meeting Started at 4:05 PM and was concluded at 4:40 PM. Three people of the public were in attendance as well as three representatives of the applicant and four representatives of the City.

A presentation of the project and the re=striping layout for St. John Street was conducted and during that presentation some questions and concerns brought up by the public and are summarized below:

1. Right, Title or Interest:
    a. Brenda Cobb, a Lang's Express employee stated that the Lang's are unaware of the proposal for a new development on the site where their restaurant is currently located.
    b. We explained that Dunkin Brands, Inc. is under a legal agreement to lease the land from the landowner, contingent upon City approval of the project and that the Lang's lease from the landowner, so they should be in contact with the landowner with any questions.
2. Bike Path:
    a. Two other attendees had various clarification questions regarding the bike path orientation and layout.
3. Pedestrian Access:
    a. A question was raised about ensuring safe pedestrian access from Valley Street.
    b. A question was raised about the sidewalk and driveway entrance construction materials. It was pointed out that the City should review the construction material of the entrances while reviewing the waiver request for the sidewalk re-construction. Mr. Barowitz stated that he would prefer to see the entrances be concrete, the same as the sidewalk.

All questions were discussed and explanations made using the plans that were previously prepared for the permit applications. Overall there didn't seem to be any serious concerns with the proposals that were presented.

Prepared by:
PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., P.E.
Senior Project Manager

Plymouth Engineering, Inc.

P.O. Box 46 – 30 Lower Detroit Road
Plymouth, Maine 04969
info@plymouthengineering.com
tel: (207) 257-2071 fax: (207) 257-2130

November 2, 2018 Job #: 17140

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Sincerely,

PLYMOUTH ENGINEERING, INC.

Jon H. Whitten, Jr., PE
Sr. Project Manager

Note:
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Abutters Addresses (Excel Forma

Friday, November 16, 2018
8:48:46 AM

ID	Name	Address	City State Zip
1	101 Gilman Llc	3 Carroll St	Portland ME 04102
2	274 Park Ave Llc	248 Preble St # 3	South Portland ME 04106
3	315 Valley Street Lp	106 Gilman St	Portland ME 04102
4	Arcand Properties Llc	128 Free St	Portland ME 04101
5	Armfield Robert E	317 Valley St	Portland ME 04102
6	Bjb Realty Llc	1024 Forest Ave	Portland ME 04103
7	Bunker Michael D	103 Gray St	Portland ME 04102
8	Burke Raymond W Etal	260 Park Ave # 5	Portland ME 04102
9	Carey Meghan	24 Forest St	Portland ME 04102
10	Charlebois John A & Nancy P Charlebois Jts	14 Kettle Cove Rd	Cape Elizabeth ME 04107
11	Chen Hsueh-Chen	89 Gilman St	Portland ME 04102
12	City Of Portland	389 Congress St	Portland ME 04101
13	Cloutier Ann K & Paul J Jts	14 Whitehall Ave	South Portland ME 04106
14	Cr Ventures Llc	302 Chandler'S Wharf	Portland ME 04101
15	Dominic Reali Realty Llc	312 St John St 2Nd Fl	Portland ME 04102
16	East End Corp	One Canal Plaza	Portland ME 04112
17	East End Corp	Po Box 10291	Portland ME 04104
18	East End Development Llc	Po Box 10291	Portland ME 04104
19	East End Holdings Llc	Po Box 10291	Portland ME 04104
20	Gilman Gwen K	260 Park Ave # 6	Portland ME 04102
21	Glassman Jack I Etals	15 Oak St # 2	Charlestown MA 02129
22	Gli Realty Company	Po Box 52427	Atlanta GA 30355
23	Hall Christine A & Troy R Bennett	35 Forest St	Portland ME 04102
24	Hemlock Street Llc	Po Box 924	Portland ME 04104
25	Hessian William James	26 Frederic St # 2	Portland ME 04102
26	Holloway Micah L & Hannah Monaco Jts	29 Boynton St	Portland ME 04102
27	Hurst Nancy E	1876 Harpswell Neck Rd	Harpswell ME 04079
28	Inhabitants Of The County Of Cumberland	42 Federal St	Portland ME 04101
29	Inn At St John The	939 Congress St	Portland ME 04102

ID	Name	Address	City State Zip
30	Jh Holdings Llc	42 Gray Rd	Cumberland ME 04021
31	Jordan Robert K Trustee	1050 Island Ave	Long Island ME 04050
32	Kilmartin Katherine B Wid Kw Vet	32 Forest St	Portland ME 04102
33	Kotzur Ashley J & Sarah P Kotzur Jts	226 Danforth St # 3	Portland ME 04102
34	Kyco Llc	300 Park Ave	Portland ME 04102
35	Lawrence Sylvia Llc	16 Castine Ave	Portland ME 04103
36	Lawson Properties Llc	4 Middle Jam Rd	Gorham ME 04038
37	Lee Jeffrey D	260 Park Ave # 8	Portland ME 04102
38	Li Ri Teng & Wei Yi Wang	Po Box 495	Moody ME 04054
39	Lq Portfolio East Llc	909 Hidden Ridge Ste 600	Irving TX 75038
40	M A C Realty Llc	340 Fore St	Portland ME 04103
41	M A C Realty Llc	959 Congress St Ste 1	Portland ME 04102
42	Macdonald Alexandra L	71 Rocky Hill	Saco ME 04072
43	Maine Medical Center	22 Bramhall St	Portland ME 04101
44	Maine Medical Center	22 Bramhall St	Portland ME 04102
45	Mardigan Stephen E	460 Baxter Blvd	Portland ME 04101
46	Mcdonald`S Corporation	Po Box 10048	Portland ME 04104
47	Mjeco Llc	342 Danforth St	Portland ME 04102
48	Mmc Realty Corp	22 Bramhall St	Portland ME 04102
49	Nedeljkovic Aleksandar Trustee	107 Cottage Rd	Windham ME 04062
50	Ng Alex & Jennifer Chadburn Jts	28 Blossom St	Lexington MA 02421
51	Northern Utilities Inc	6 Liberty Lane West	Hampton NH 03842
52	Null	Null	Null NULL Null
53	Portland Carry Out Rest Inc	Po Box 10048	Portland ME 04104
54	Postolache Ionel	3 Cherry St	Portland ME 04102
55	Rahem Llc	Po Box 6149	Falmouth ME 04105
56	Rahmon Llc	Po Box 6149	Falmouth ME 04105
57	Sellers Jennifer D & Bruce R Sellers Jts	23 Hemlock St	Portland ME 04102
58	Shalom House Inc	Po Box 560	Portland ME 04112
59	Shaw Jeffrey D	260 Park Ave # 1	Portland ME 04102
60	Siteman Richard & Loraine A Lowell Jts	28 Forest St	Portland ME 04102

ID	Name	Address	City State Zip
61	Sullivan Robert D Trustee	41 Accord Park Dr	Norwell MA 02061
62	Toddville Llc	136 Baxter Blvd	Portland ME 04101
63	Tpa Associates	940 Congress St	Portland ME 04102
64	Truchoice Federal Credit Union	Po Box 10659	Portland ME 04104
65	Union Station Lmt Partnership	12 Brook St	Wellesley MA 02482
66	Valley 301 Llc	62 Cumberland Ave # 3	Portland ME 04101
67	Weisberg Elizabeth C & Tracey Weisberg Jts	260 Park Ave # 3	Portland ME 04102
68	Woramalee Saengtong	921 Congress St	Portland ME 04102
69	Republicash	682 Main St.	S. Portland, ME 04106
70	Langs Express	325 St. John St.	Portland, ME 04102
71	Portland Physical Therapy	959 Congress St. #2	Portland, ME 04102
72	Amato's	312 St. John St.	Portland, ME 04102
73	Sullivan Tire	333 St. John St.	Portland, ME 04102
74	Key Bank ATM	23 Water St.	Bangor, ME 04401
75	McDonald's	332 St. John St.	Portland, ME 04401
76	Portland Chiropractic Neurology	959 Congress St. #1	Portland, ME 04102

Anthony Donovan
27 Riverview Street
Portland, ME 04102

Barb Wood
125 Emery Street
Portland, ME 04102

Chris Castelsky
Fairpoint Communications
521 East Morehead Street
Charlotte, NC 28202

David Nowlin
215 Oxford Street
Portland, ME 04102

Deb Keenan
28 Dorothy Street
Portland, ME 04103

Devon and Pamela Platte
26 North Street, #3
Portland, ME 04101

Edward Suslovic
District 3
46 Kenwood St.
Portland, Me 04103

Greater Portland Council of Governments
970 Baxter Blvd., 2nd Floor
Portland, ME 04103

Henry Leclair
209 Range Road
Windham, ME 03087

Janice Carpenter
9 West Commonwealth Drive
Portland, ME 04103

Jennifer Munson
City of Portland
389 Congress Street
Portland, ME 04101

Jesse Thompson, RA, LEED AP
Kaplan Thompson Architects
424 Fore Street
Portland, ME 04101

John Leavitt
NE Regional Council of Carpenters
68 Bishop Street, Unit 1
Portland, ME 04103

Len Anderson
543 Allen Avenue
Portland, ME 04103

Lynn Clarkson
145 Marlborough Road
Portland, ME 04103

Mary Griffith
6 E. Promenade, Unit #2
Portland, ME 04101

Mr. Vahan Tufankijan
Seaside Healthcare Room 416-1
850 Baxter Boulevard
Portland, ME 04103

Nancy Bartlett
PO Box 7965
Portland, ME 04112

Pam Burnside
64 Lester Drive
Portland, ME 04103

Paul Dubois
Kimberly Dubois
1915 Congress Street
Portland, Me 04102

Peggy Morin
66 Farnham Street
Portland, ME 04101

Philip Haughey
1660 Soldiers Field Road
Boston, MA 02135

Portland Society of Architects
c/o James Sterling, AIA
PO Box 7305
Portland, ME 04112

Priscilla D. LaVallee
190 US Route 1, Unit 2
Falmouth, ME 04105-1380

Rebecca Halla
Waste Management
2000 Forest Avenue
Portland, ME 04103

REP Benjamin Dudley III
District 30
9 Ponce Street
Portland, ME 04101

REP Glenn Cummings
District 37
24 Nevens Street
Portland, ME 04103

Robert Hains
1369 Hilltop Drive
Naples, FL 34103

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

Expected Benefits of Saint John Street "Road Diet"

- By reducing to single travel lanes in each direction lane change/sideswipe type collisions are eliminated.

- Rear-end collisions due to left-turns are greatly reduced or eliminated since left-turning traffic can get out of the through traffic stream and have a safe place to wait in the center turn lane for a gap to turn left.

- Angle accidents as vehicles enter or exit drives are reduced. Many of these collisions now occur when drivers are waved through one lane to collide with an approaching vehicle in the other lane. These type of accidents also often happen as sight lines to a vehicle in the inner lane is obstructed by a vehicle in the outer lane. Angle crashes for these reasons are eliminated with the proposed 3-lane section.

- There were 28 crashes along this stretch of Saint John Street in the 3-year study period. My analysis indicates that 15 of them would be eliminated for the above three reasons. Federal Highway studies cite typical crash reduction rates of up to 47 percent when reducing a roadway from 4 to 3 lanes.

- Vehicles taking a left to enter a drive only have to cross one lane of traffic so it is both easier and safer.

- Similarly vehicles exiting a drive as a left-turn will only have to cross one lane of traffic and can also sometimes use the center two-way left turn lane to pause to enter the other traffic stream.

- The speed differential is decreased since all through traffic is in a single travel lane, also enhancing safety along the corridor.

- FHWA research indicates that roadways with Average Daily Traffic volumes less than 20,000 are good candidates for Road Diets. This section of St. John Street only has an ADT of 14,000 so there are no capacity concerns with the proposed lane reductions.

- The additional roadway width from the road diet is used to create bike lanes increasing safety for bicyclists and contributing to a "Complete Street".

VALLEY STREET
(SPEED LIMIT 25 MPH)

VALLEY STREET (ONE-WAY)

S23°09'18"E
167.68'

NEW 5' WIDE BRICK SIDEWALK TO REPLACE EXISTING PAVED SIDEWALK, SEE DETAILS.

6' PAVED SIDEWALK

10' REAR SETBACK

79.93'

N/F
THE INN AT ST. JOHN
14301/177
65-C013 & 65-C001

LANE DIRECTIONAL ARROWS TO MEET DUNKIN' STANDARDS

SNOW STORAGE

VERTICAL CONCRETE CURB, TYP.

CURB INLET FOR STORMWATER TREATMENT STRUCTURE

6' CHAINLINK FENCE WITH VINYL INSERTS, SEE DETAIL

LANE SEPARATION LINES TO MEET DUNKIN' STANDARDS, SEE ARCHITECTURAL PLANS

EXIT ONE WAY

12'

R52'

R33'

LANE DIRECTIONAL ARROWS TO MEET DUNKIN' STANDARDS

S71°32'42"W

DUMPSTER ENCLOSER

17±

HIGH POINT

SNOW STORAGE

R25'

R15'

R5'

SNOW STORAGE

MENU BOARD AND SPEAKER BOX

PREVIEW MENU BOARD

R15'

DRIVE THRU

MOBILE PICK UP

S23° 09' 18"E
28.97

EXISTING FENCE TO REMAIN

7'X25' FREEZER

12'

R5'

CLEARANCE BAR TO MEET DUNKIN' STANDARDS

EXIT ONE WAY

EMPLOYEE ONLY DOOR

VERTICAL CONCRETE CURB, TYP.

N/F
RI TENG LI & WEI YI WANG
25137/258
65-C002

14X73 LOADING ZONE

8 SPACES

141.11'

N77°37'01"E

BOLLARDS (TYP)

DRIVE THRU WINDOW

2,277 S.F.
DUNKIN'
DONUTS
BUILDING
FFE=23.5

18'

DRIVE THRU LANE

ON-THE-GO LANE

BY-PASS LANE

VERTICAL CONCRETE CURB.

SNOW STORAGE

99.08'

8 SPACES

36'

8 SPACES

ONE WAY

EXIT

DISTANCE FROM DRIVE THRU WINDOW TO PROPERTY LINE SUMMARY:

NORTH	67'
SOUTH	138'
EAST	92' (VALLEY)
WEST	52' (ST.JOHN)

24'

9'

CUSTOMER ENTRANCE

BIKE RACK

5' PAVED SIDEWALK

S70°57'46"W

EXISTING TRANSFORMER

R5'

5'

R10'

R15'

EXIT/DO NOT ENTER SIGNS

7' CONCRETE TIPDOWN

DINING ROOM

CUSTOMER ENTRANCE

SNOW STORAGE

PYLON SIGN

24'

STOP

STOP

R15'

R5'

R4'

ENTER SIGN

10' MAX. FRONT SETBACK

8'X14' BUS STOP EASEMENT

N/F
ARCAND PROPERTIES, LLC

R4' NEW CONCRETE SIDEWALK

N12°22'26"W 213.12'

20'

R20'

EXISTING CONCRETE SIDEWALK

UTILITY POLE WITH LIGHTING

7' GRANITE TIPDOWN

SIGHT DISTANCE >500'

SIGHT DISTANCE >500' (320' TO LIGHT)

7' GRANITE TIPDOWN

NEW CONCRETE SIDEWALK AT ENTRANCES (TYP.)

UTILITY POLE WITH LIGHTING

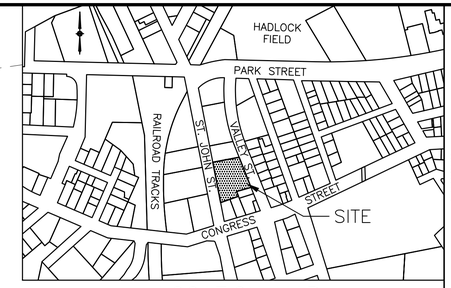
7' GRANITE TIPDOWN

R10'

7' GRANITE TIPDOWN

EXISTING CONCRETE SIDEWALK

ST. JOHN STREET
(SPEED LIMIT 30 MPH)



LOCATION MAP

GENERAL NOTES:

1. THE RECORD OWNER IS NANCY E. HURST, WHOSE ADDRESS IS 1876 HARPSWELL NECK ROAD, HARPSWELL, MAINE, 04079.

2. THE APPLICANT IS DUNKIN BRANDS, INC. WHOSE ADDRESS IS 130 ROYALL STREET, CONTON, MA 02021

3. THE PROPERTY IS LOCATED AT 325 SAINT JOHN STREET, PORTLAND, MAINE AND AND IS DESCRIBED AS CHART, BLOCK, LOT 065 C004001 WITHIN THE CITY OF PORTLAND ASSESSOR'S DATABASE AND INTERACTIVE GIS MAP.

4. THE PURPOSE OF THIS PLAN SET IS TO PERMIT THE DEVELOPMENT OF A NEW DUNKIN' DONUTS DRIVE-THRU RESTAURANT WITH ASSOCIATED PARKING AND MANEUVERING AREAS.

5. THE SITE IS LOCATED WITHIN B-2 COMMUNITY BUSINESS ZONE.

6. TOTAL AREA OF PARCEL: . . . . . 30,239 S.F.+/-, OR 0.69 AC.+/-

7. SPACE AND BULK INFORMATION FOR B-2 ZONE:

MIN. LOT AREA:	NONE
MIN. STREET FRONTAGE	20'
MIN. FRONT YARD SETBACK	NONE
MAX. FRONT YARD SETBACK	10'
REAR YARD SETBACK	10' (5' ACCESS. STRUCTURE)
SIDE YARD SETBACK.	NONE (5' ACCESS. STRUCTURE)
MAX. IMPERVIOUS RATIO.	80%
MAX. BUILDING HEIGHT	45'
MIN. PAVEMENT SETBACK	10' FROM BOUNDARY LINES

8. BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY JONES ASSOCIATES, INC., AUBURN, MAINE. ELEVATIONS BASED ON GRID NORTH, MAINE STATE COORDINATE SYSTEM – MAINE WEST ZONE (2 ZONE) NAD 83.

9. SITE ENGINEERING PROVIDED BY JON H. WHITTEN, JR., P.E. #10414 OF PLYMOUTH ENGINEERING, INC., WHOSE ADDRESS IS PO BOX 46, PLYMOUTH, ME 04969.

APPROVAL–
CITY OF PORTLAND
PLANNING BOARD

DATE

CHAIRPERSON

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING CURB
- PROPOSED CURB
- EXISTING STREAM
- (7) PARKING SPACE QUANTITY
- PROPOSED SIGN
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED PAVEMENT

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD
1	07/11/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW
2	11/16/18	REVISED DRIVETHRU WINDOW INFORMATION	JHW	JHW

ST. JOHN STREET
DUNKIN DONUTS

PROJECT NAME:

PORTLAND MAINE

SHEET NAME:

PRELIMINARY SITE PLAN

DESIGNED: JHW
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05-04-18

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05-04-18

CLIENT & OWNER:
Dunkin' Brands, Inc.
130 Royall St.
Canton, MA 02021

Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257-2071 Fax: (207) 257-2130
info@plymouthengineering.com
www.plymouthengineering.com

STATE OF MAINE
JON H. WHITTEN JR.
NO. 10414
LICENSED
PROFESSIONAL ENGINEER

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

VALLEY STREET
(SPEED LIMIT 25 MPH)

ST. JOHN STREET
(SPEED LIMIT 30 MPH)

RIM:18.29
INV.IN:10.44
INV.OUT:10.39

RIM:19.32
10"INV.IN:11.87
INV.OUT:11.77

EXISTING 12" PVC TO REMAIN
INV.IN:13.12

RIM:17.73
FULL OF SAND

INSTALL SEDIMENT INSERT

NEW CB-7
RIM=20.1
INV.IN=15.63 (FROM CB-4)
INV.IN=15.63 (FROM CB-6)
INV.OUT=15.53

20x0 t.o.c.
19x5 b.o.c.

CB-4
RIM=20.00
INV.IN=16.30 (FROM CB-4)
INV.IN=16.30 (FROM CB-3)
INV.IN=16.30 (FROM CULTEC)
INV.OUT=16.20

12" SD

FOCAL POINT B
TOP OF MULCH=19.50
INV. OUT=16.50

(3) CULTEC 150 XLHD
INV.IN&OUT=16.30

EXIT
ONE WAY

21x0 t.o.c.
20x5 b.o.c.

MOBILE PICK UP

CB-3
RIM=21.70
INV.IN=17.04 (FROM CB-4)
INV.IN=17.04 (FROM USF-1)
INV.OUT=16.94

RIM:19.00

21x75 t.o.c.
21x25 b.o.c.

22x75
22x25
EOP
23x0
23x16
23x46

DRIVE THRU
MOBILE PICK UP

FOCAL POINT A
TOP OF MULCH=20.75
INV. OUT=17.75

23x16 t.o.c. 22x25
22.66 b.o.c.

21x25
EXIT
ONE WAY

22x0 t.o.c.
21x5 b.o.c.

CB-2 (TYPE F BASIN)
RIM=20.90
INV.OUT=17.25

NOTE: INSTALL CATCH BASIN SEDIMENT CONTROL INSERTS IN ALL NEW AND EXISTING CATCH BASIN FRAMES UNTIL SUCH TIME THAT THE SITE SOILS ARE STABILIZED WITH VIGOROUS GROWTH OF VEGETATIO, PERMANENT MULCH OR PAVEMENT,TYP.

NEW CB-6
RIM=21.85
INV.OUT=16.38

RIM:19.61

22x5 t.o.c.
22x0 b.o.c.

CB #6
RIM:21.6
INV.:16.55

23x0 t.o.c.
22x5 b.o.c.

ONE WAY
EXIT

STOP

23x25 t.o.c.
22x75 b.o.c.

CB-1 (TYPE F BASIN)
RIM=21.90
INV.OUT=17.94

RIM:23.83
12"CMP
OUT:19.33

UP 39

UP 38

12" HDPE

6" HDPE

PAVEMENT JOINT, SEE DETAIL,TYP.

REMOVE PORTIONS OF EXIST. CONCRETE SIDEWALK AND GRANITE CURB.

CONSTRUCTION ENTRANCE

RIM:24.14
OUT:18.04
&
12"IN:18.14

RIM:22.46

RIM:22.84

EXIST. 30" RCCP

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.
1	07/11/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME:
ST. JOHN STREET
DUNKIN DONUTS
PORTLAND MAINE

SHEET NAME:
GRADING & DRAINAGE PLAN

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05-04-18

DESIGNED: JHW
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05-04-18

CLIENT & OWNER: Dunkin' Brands, Inc.
130 Royall St.
Canton, MA 02021

Plymouth Engineering, Inc.
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Plymouth, Maine 04969
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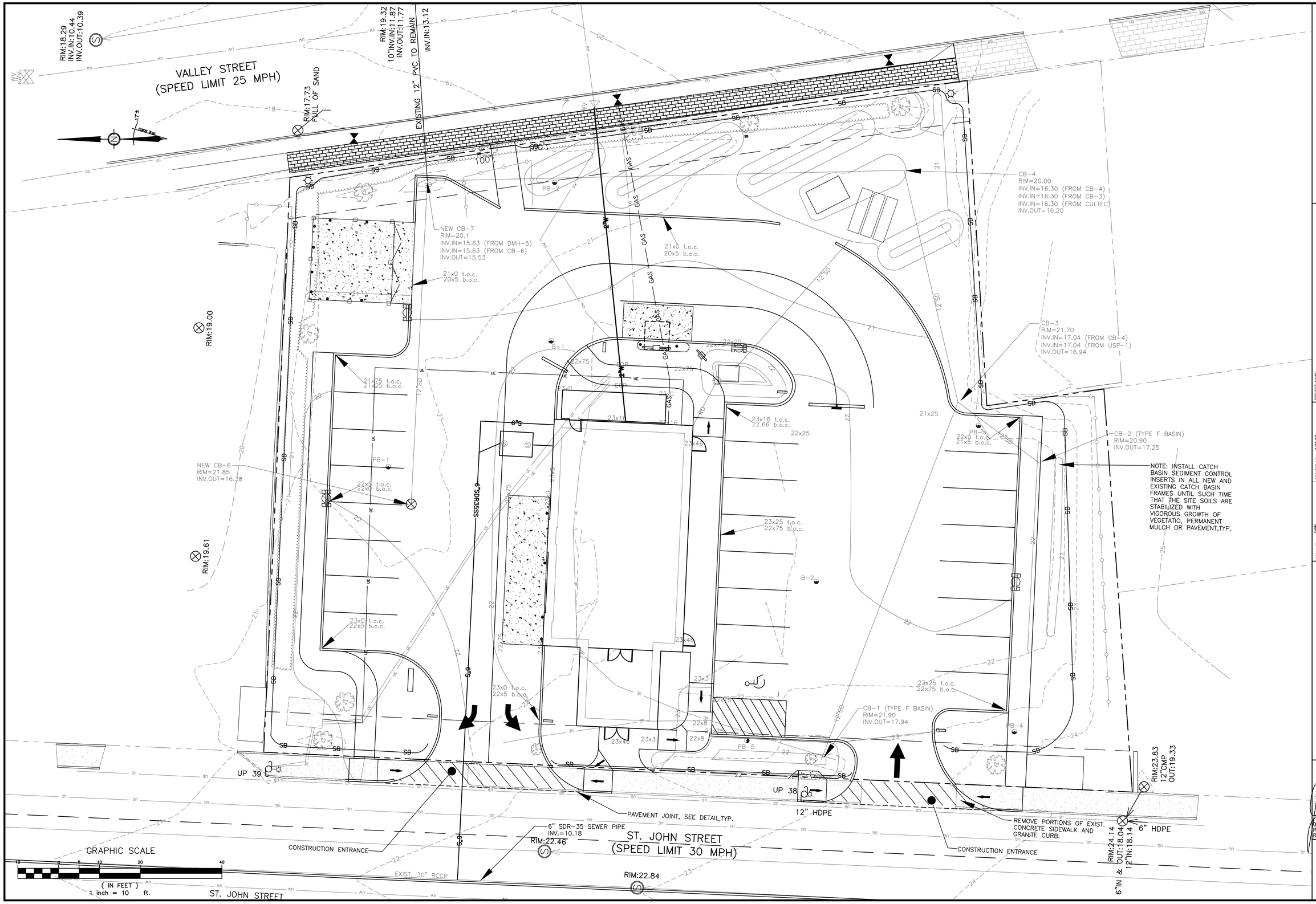
STATE OF MAINE
JOHN H. WHITEN, JR.
No. 10121
LICENSED PROFESSIONAL ENGINEER

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

SHEET 2 OF 9

C2



REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME: ST. JOHN STREET DUNKIN DONUTS

PORTLAND MAINE

SHEET NAME: UTILITY PLAN

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05-04-18

DESIGNED: JHW
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05-04-18
CLIENT & OWNER: Dunkin' Brands, Inc. 130 Royall St. Canton, MA 02021

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STATE OF MAINE
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PROFESSIONAL ENGINEER

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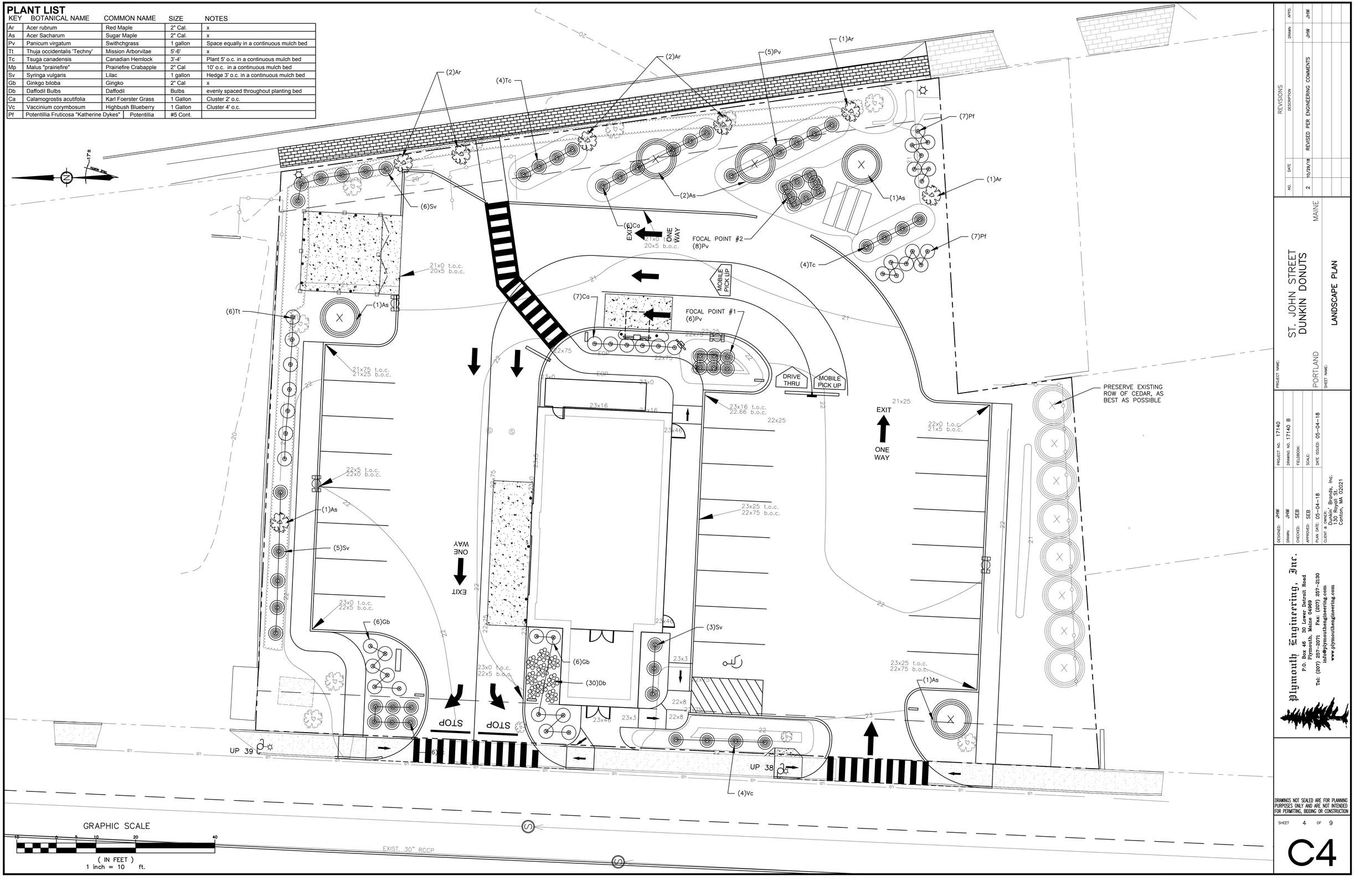
SHEET 3 OF 9

C3

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
Ar	Acer rubrum	Red Maple	2" Cal.	x
As	Acer Sacharum	Sugar Maple	2" Cal.	x
Pv	Panicum virgatum	Swithchgrass	1 gallon	Space equally in a continuous mulch bed
Tt	Thuja occidentalis 'Techny'	Mission Arborvitae	5'-6'	x
Tc	Tsuga canadensis	Canadian Hemlock	3'-4'	Plant 5' o.c. in a continuous mulch bed
Mp	Malus "prairiefire"	Prairiefire Crabapple	2" Cal	10' o.c. in a continuous mulch bed
Sv	Syringa vulgaris	Lilac	1 gallon	Hedge 3' o.c. in a continuous mulch bed
Gb	Ginkgo biloba	Gingko	2" Cal	x
Db	Daffodil Bulbs	Daffodil	Bulbs	evenly spaced throughout planting bed
Ca	Calamogrostis acutifolia	Karl Foerster Grass	1 Gallon	Cluster 2' o.c.
Vc	Vaccinium corymbosum	Highbush Blueberry	1 Gallon	Cluster 4' o.c.
Pf	Potentillia Fruticosa "Katherine Dykes"	Potentillia	#5 Cont.	



REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	APPD.
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME:
ST. JOHN STREET
DUNKIN DONUTS
PORTLAND MAINE

SHEET NAME:
LANDSCAPE PLAN

DESIGNED:	JHW
DRAWN:	JHW
CHECKED:	SEB
APPROVED:	SEB
PLAN DATE:	05-04-18
CLIENT & OWNER:	Dunkin' Brands, Inc. 130 Royall St. Canton, MA 02021

PROJECT NO.	17140
DRAWING NO.	17140 B
FIELDBOOK:	
SCALE:	
DATE ISSUED:	05-04-18

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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 preparation, 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.

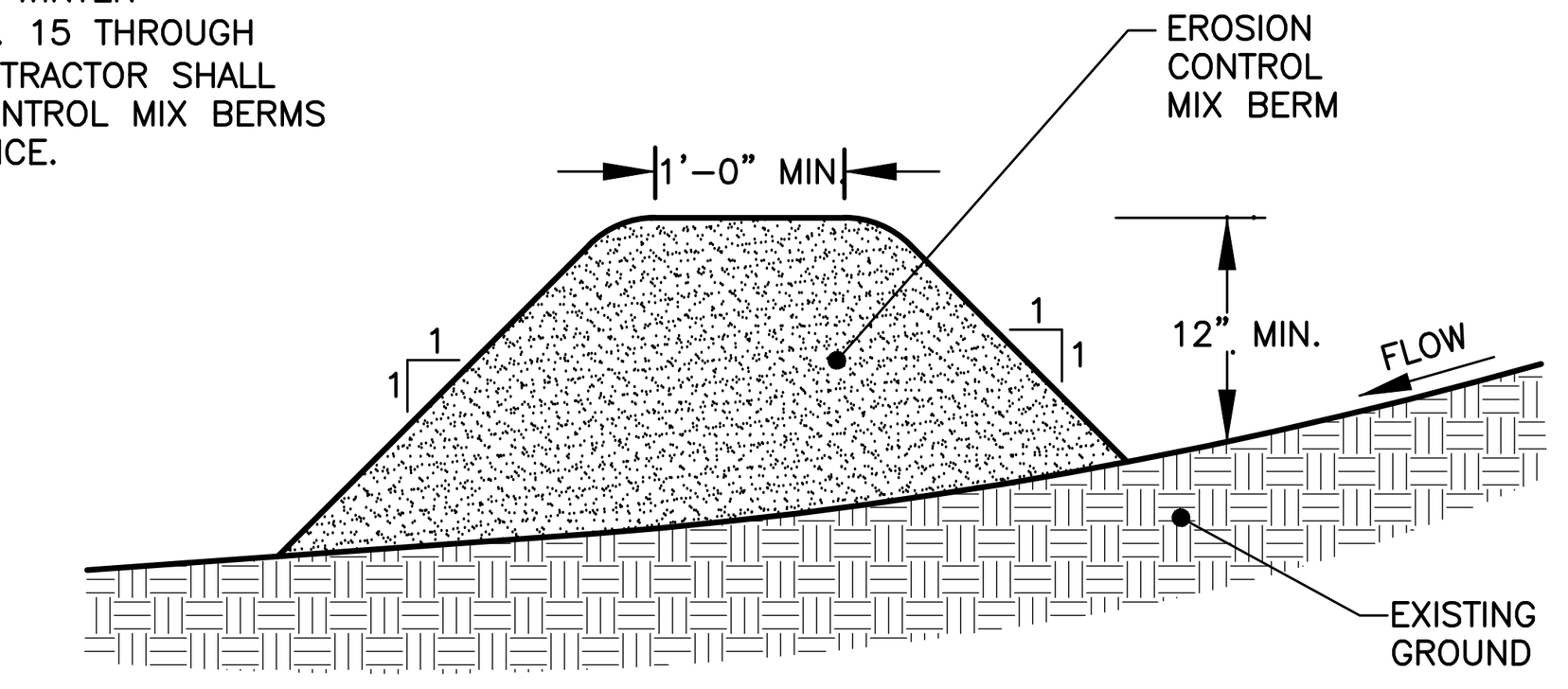
L. Loam shall be free of frozen clumps before it is applied.

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. Contractor shall inspect disturbed and impervious areas, and erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the parcel at least once a week and before and after a storm event, prior to completion of permanent stabilization. A person with knowledge of erosion and stormwater must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

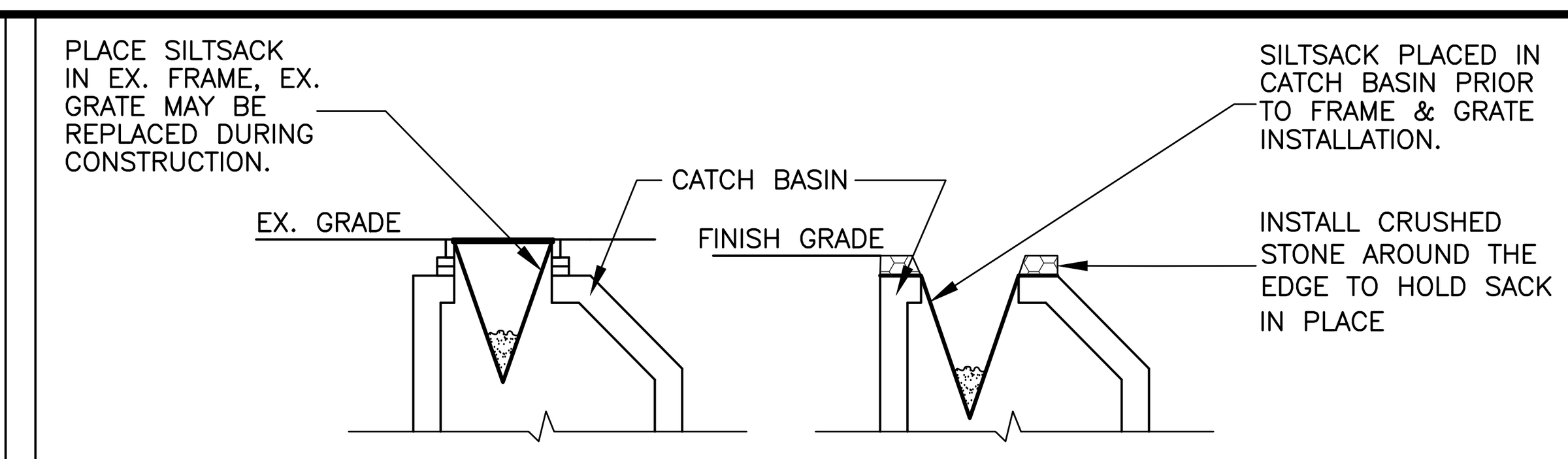
B. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations 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.

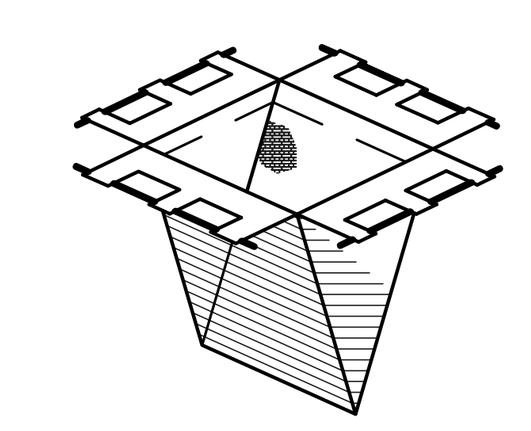
NOTE:
DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.



EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & 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:
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- ph SHALL FALL BETWEEN 5.0 - 8.0.

EROSION CONTROL MIX BERM
NOT TO SCALE

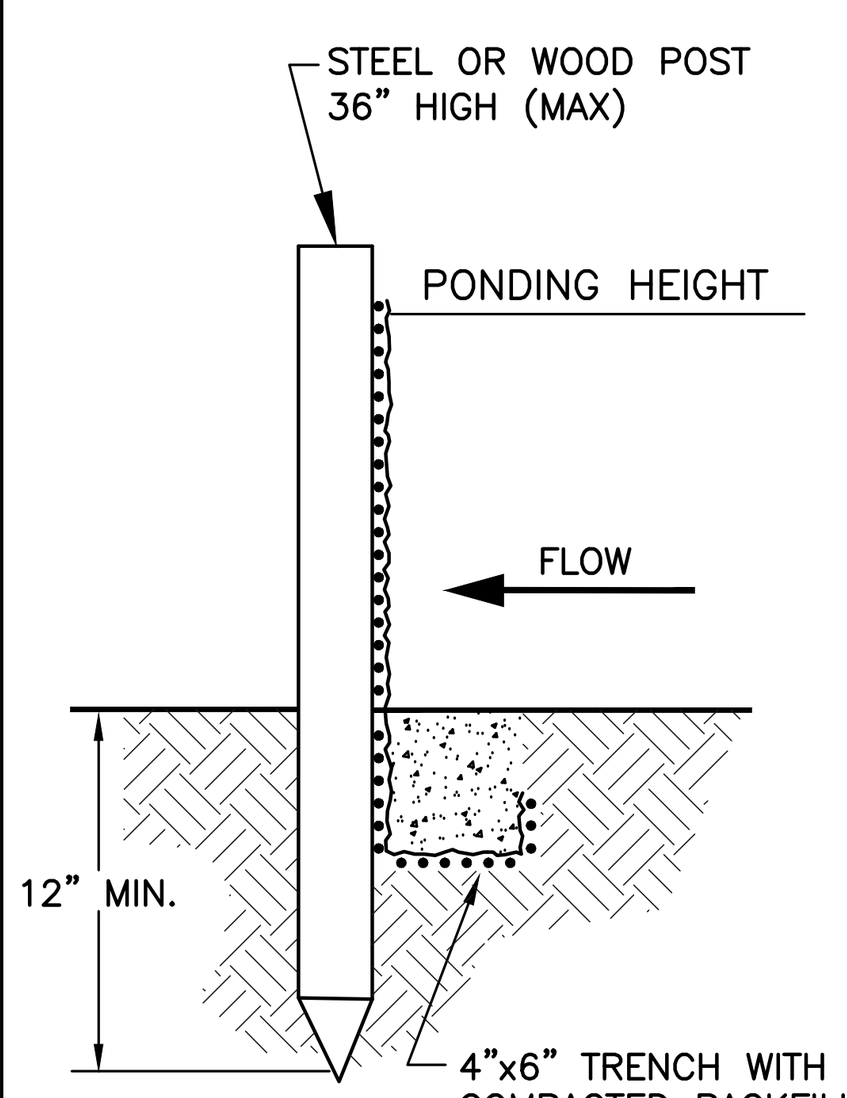




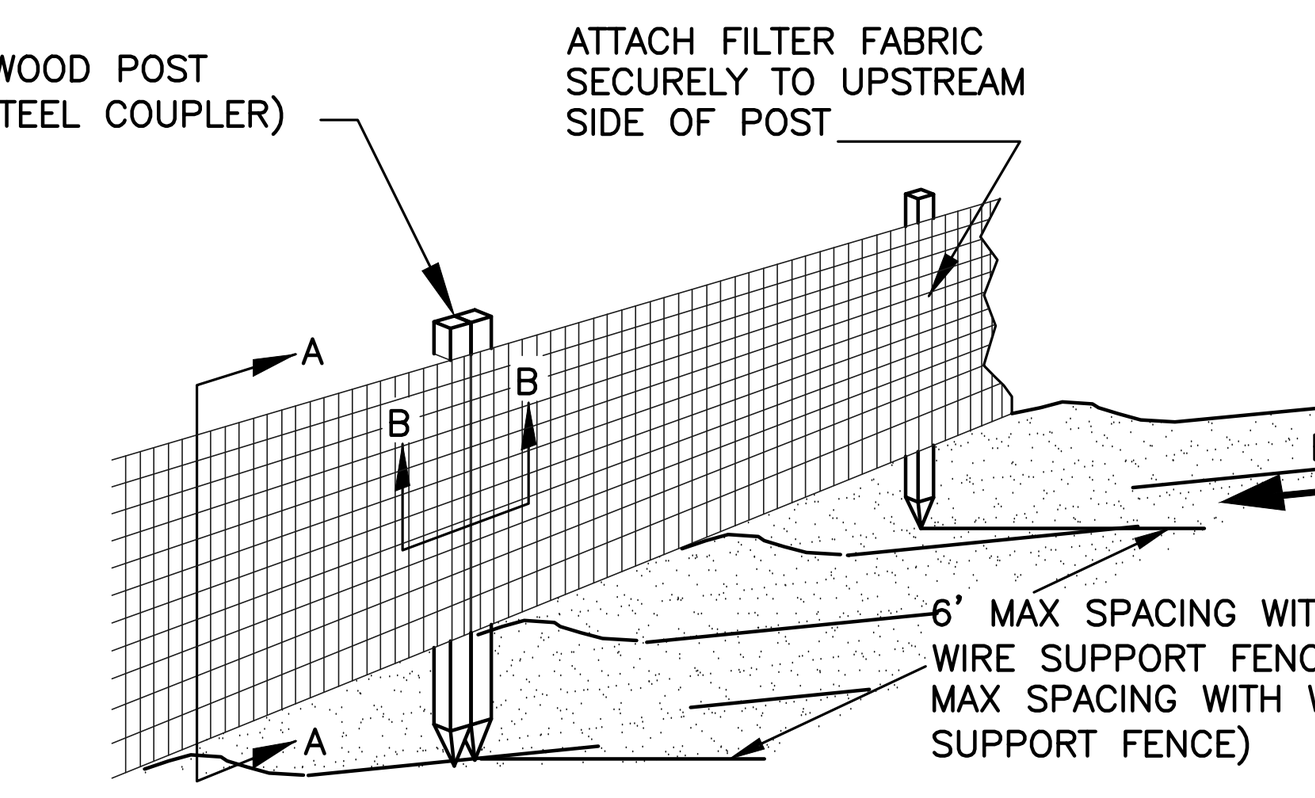
SILT SACK PROTECTION

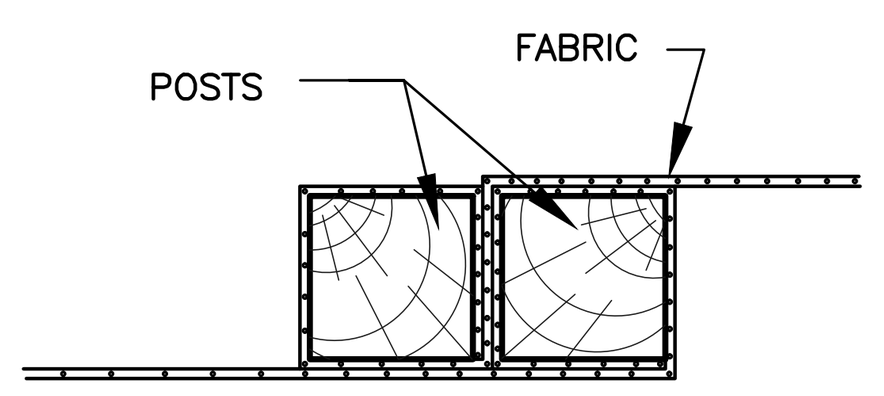
NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN, A CATCH BASIN INSERT (SUCH AS A SILT SACK OR A DANDY BAG II) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.

CATCH BASIN EROSION CONTROL INSERT
NOT TO SCALE



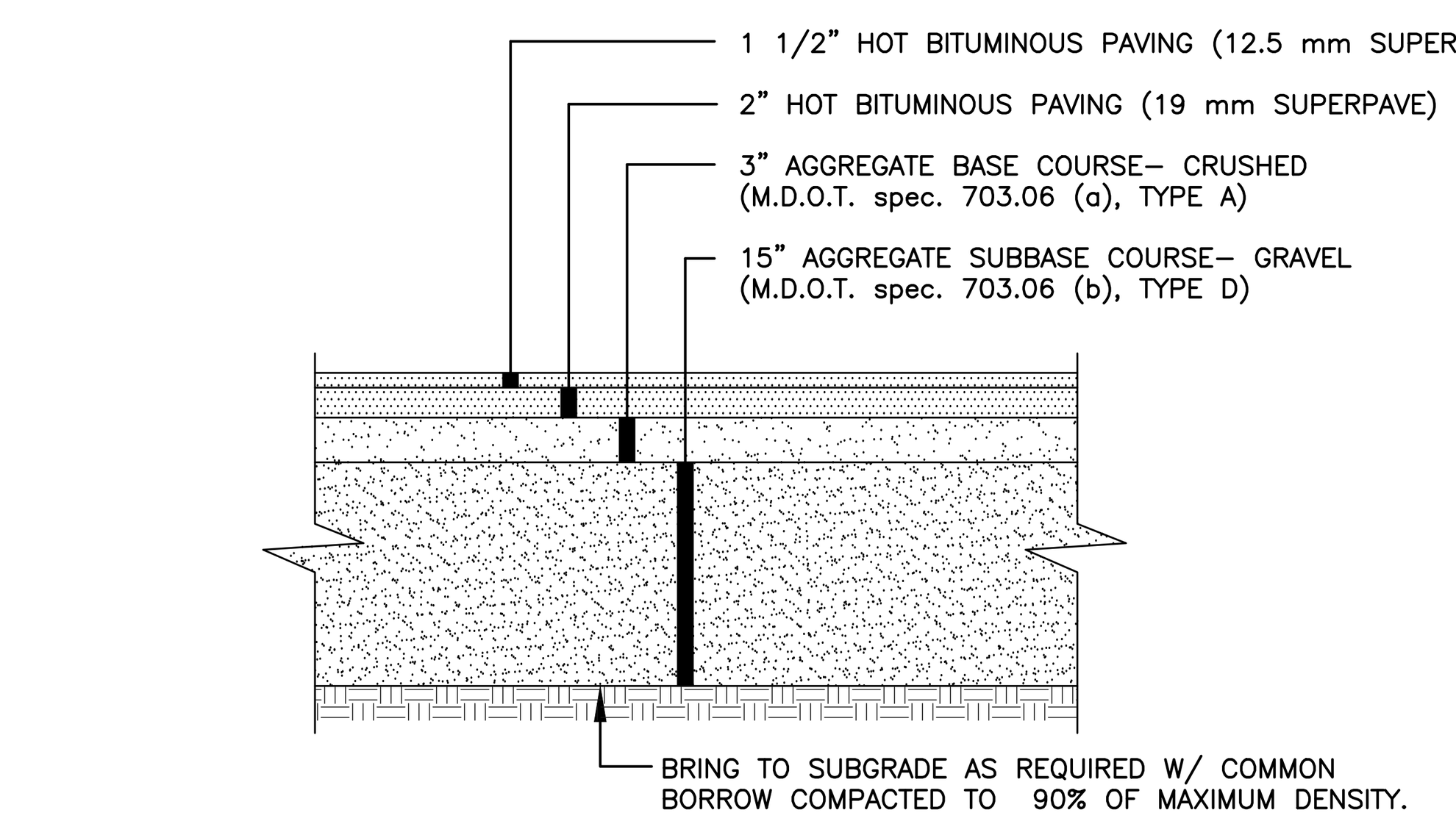
SECTION A-A





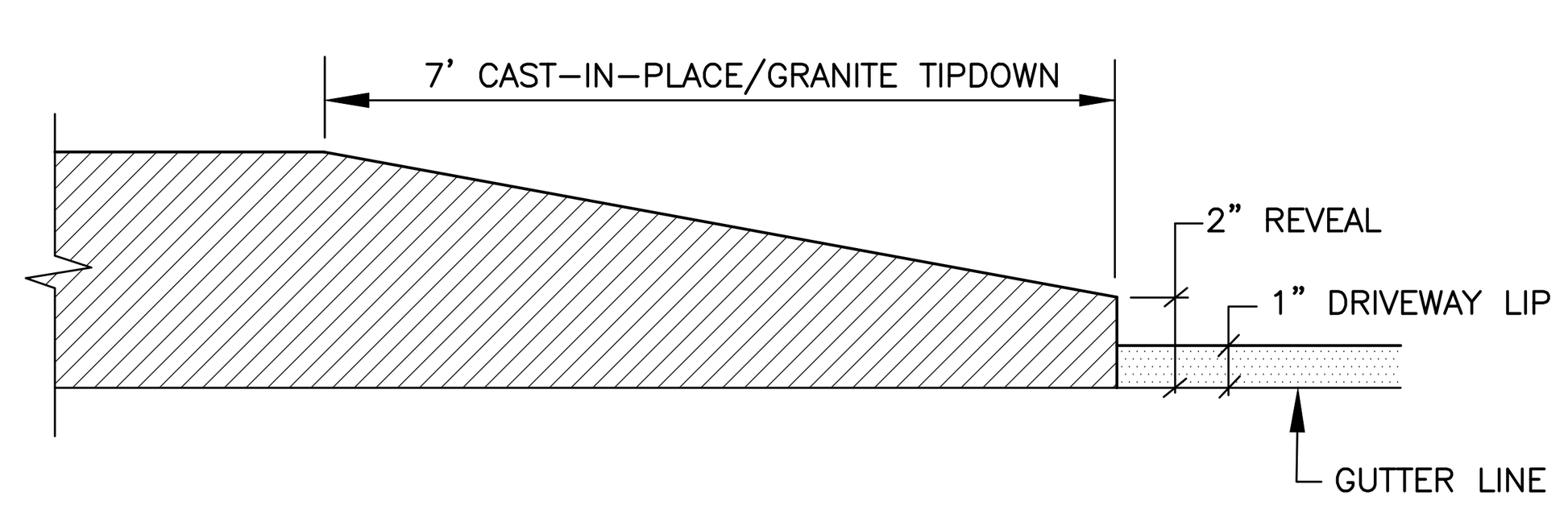
SECTION B-B

SILT FENCE
NOT TO SCALE

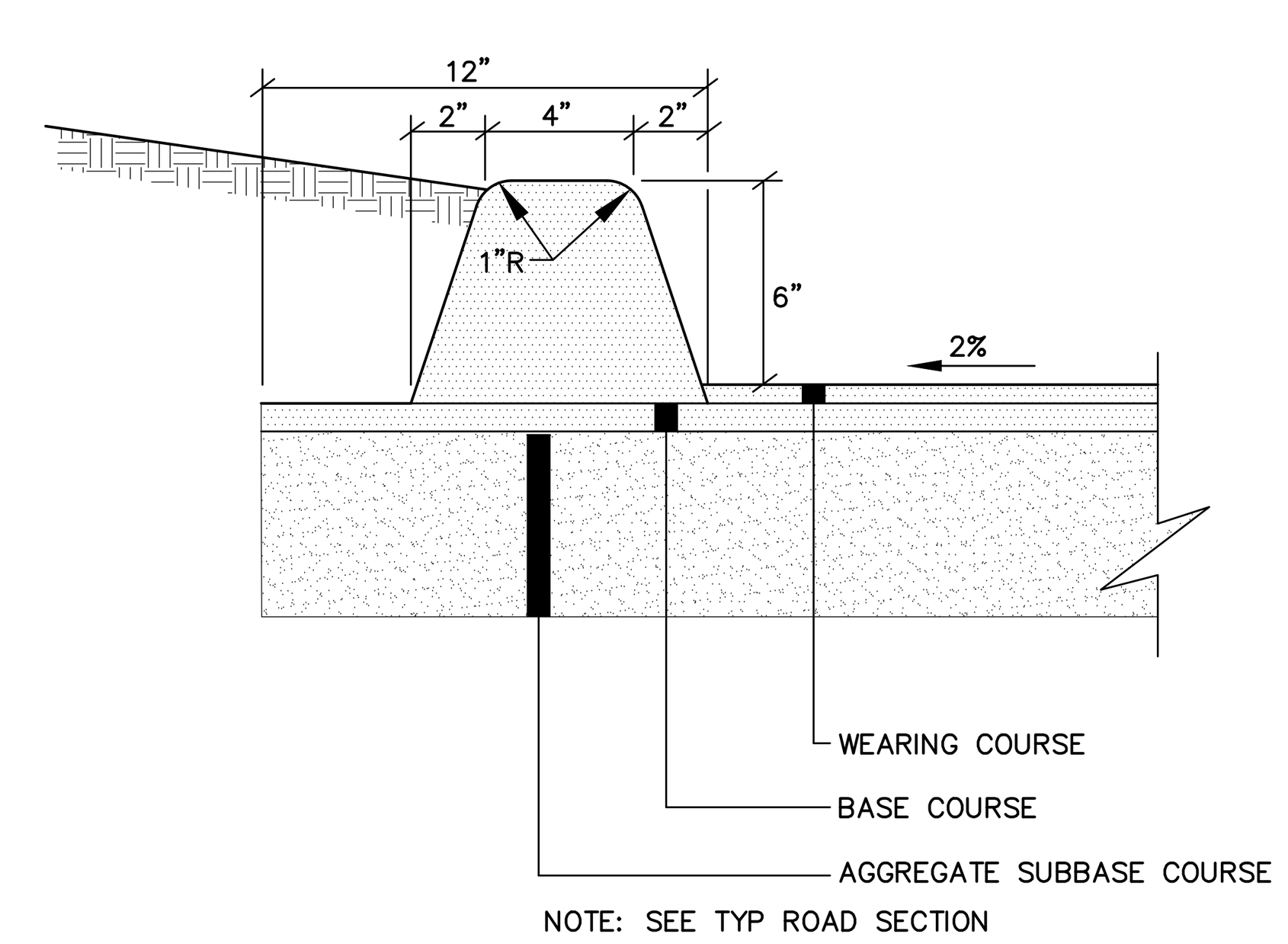


NOTES:
1. COMPACT GRAVEL SUBBASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

PAVED PARKING LOT SECTION
NOT TO SCALE

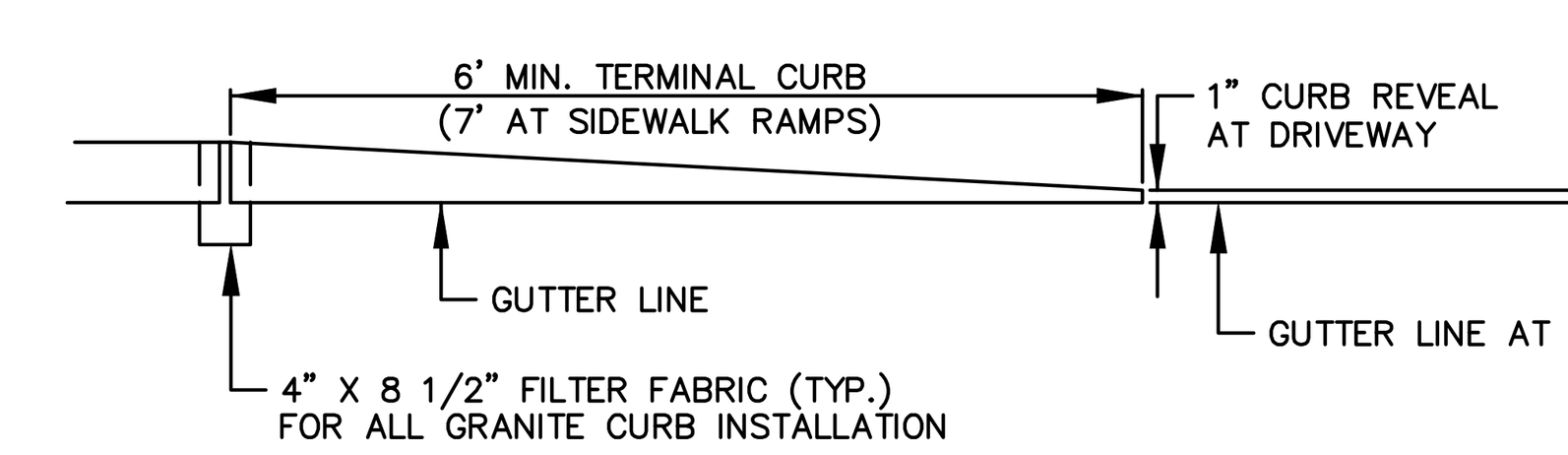


TYPICAL TIPDOWN CURB INSTALLATION
NOT TO SCALE

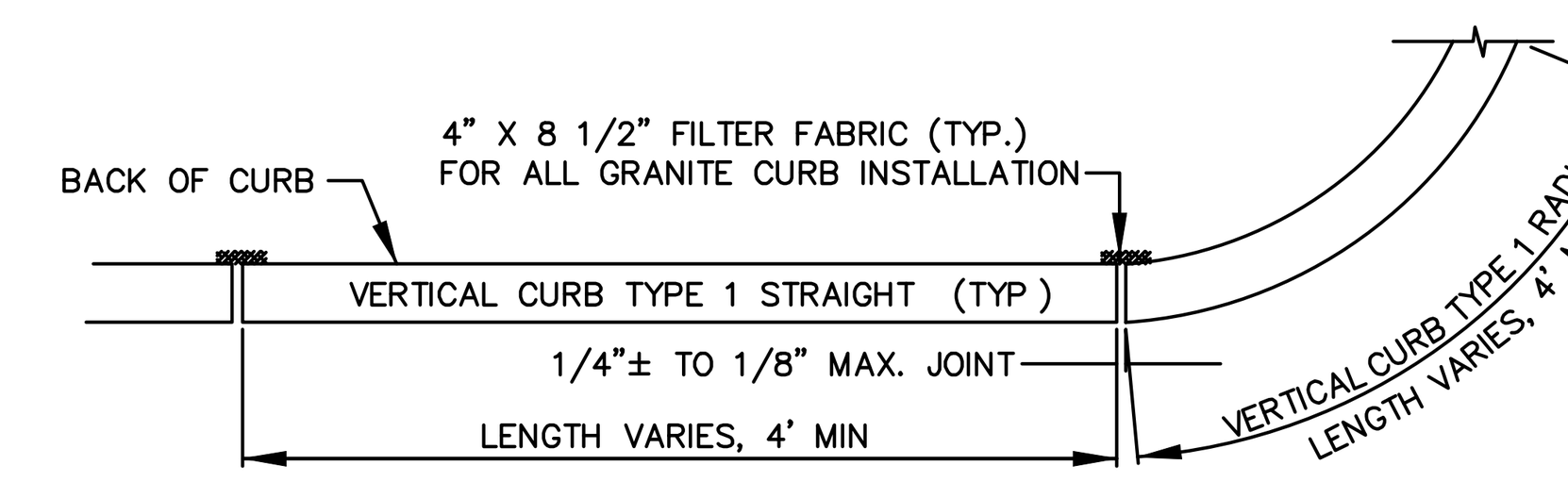


NOTE: SEE TYP ROAD SECTION

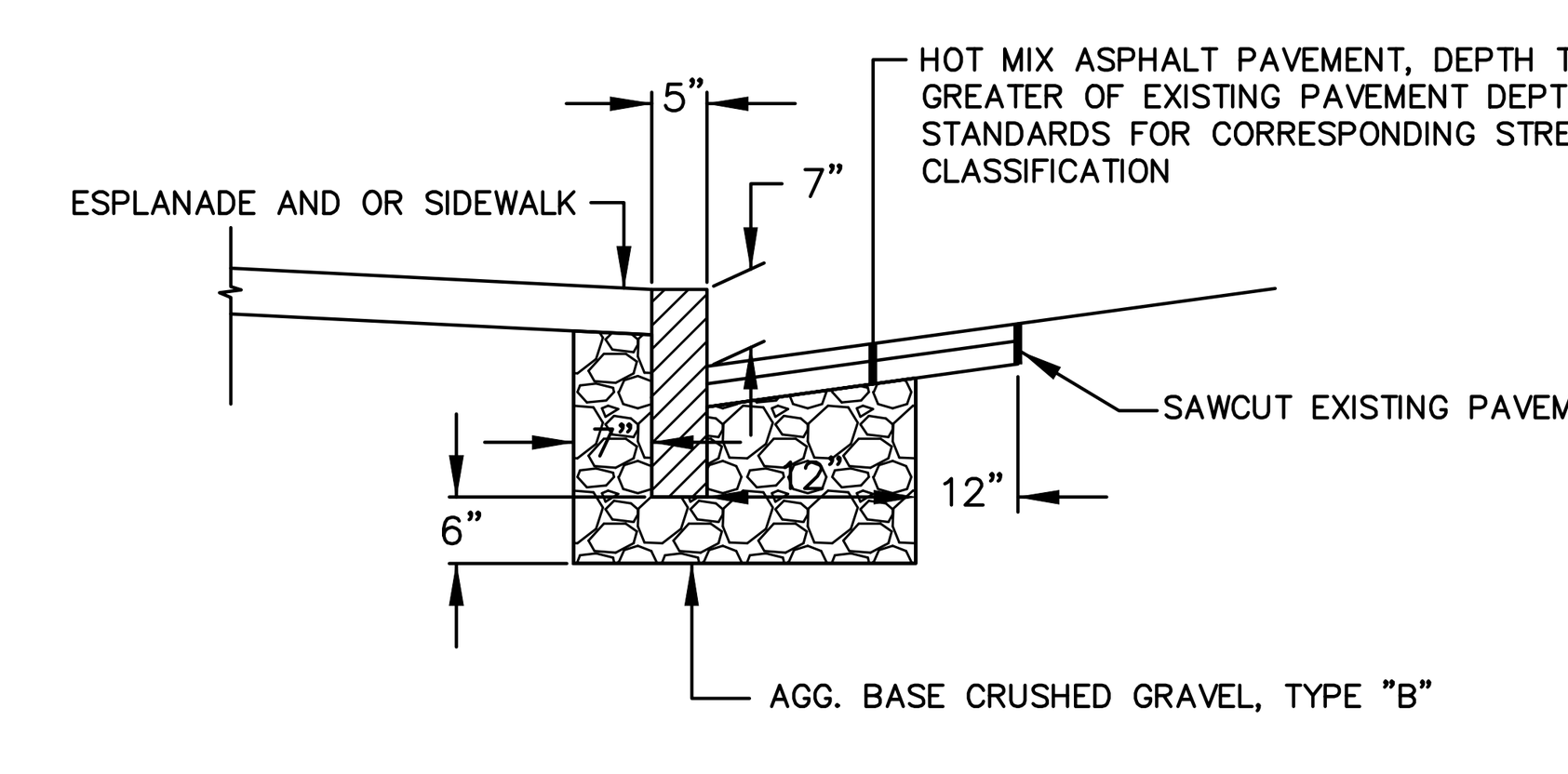
CAST IN PLACE CONCRETE CURB
NOT TO SCALE



TERMINAL CURB PROFILE

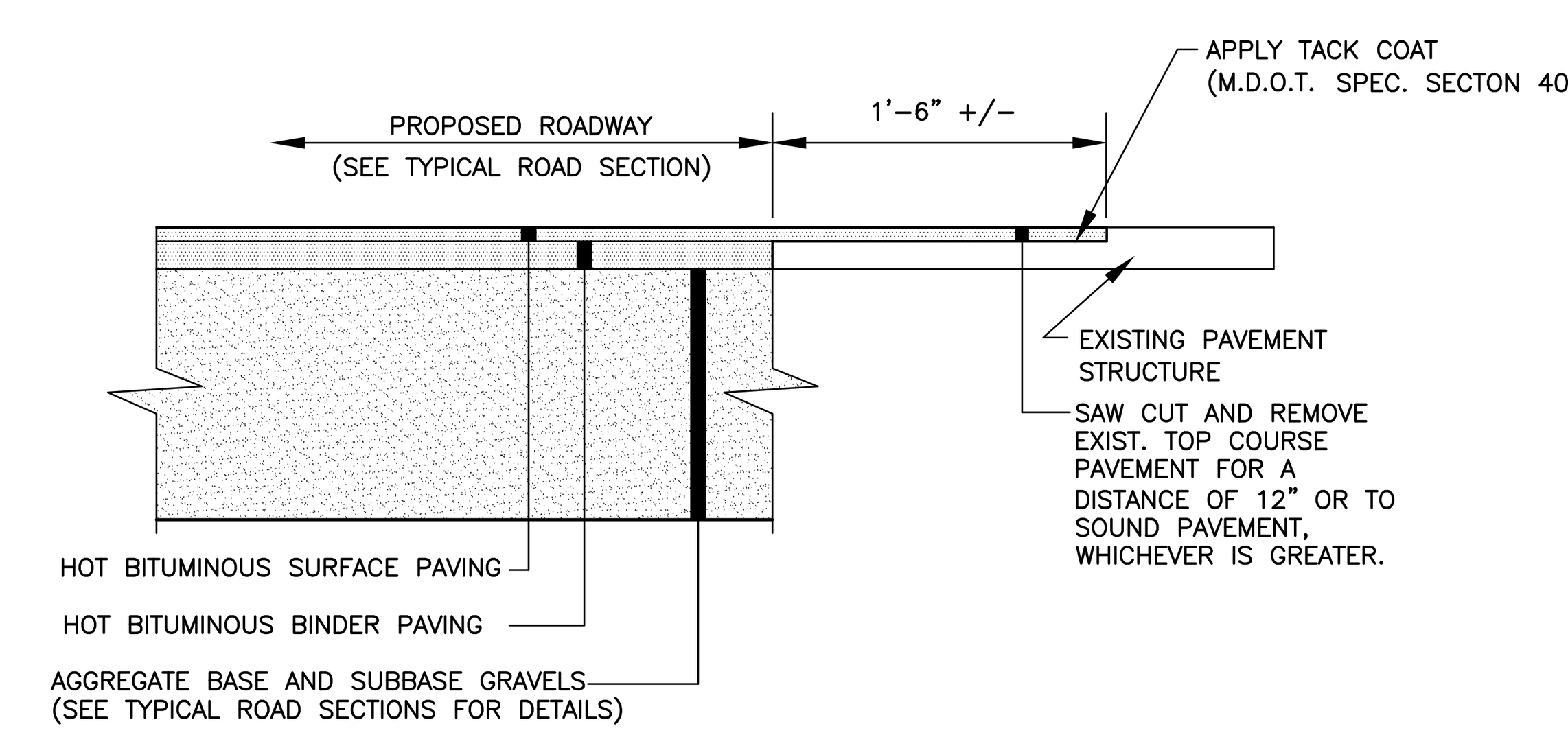


VERTICAL GRANITE CURB PLAN VIEW

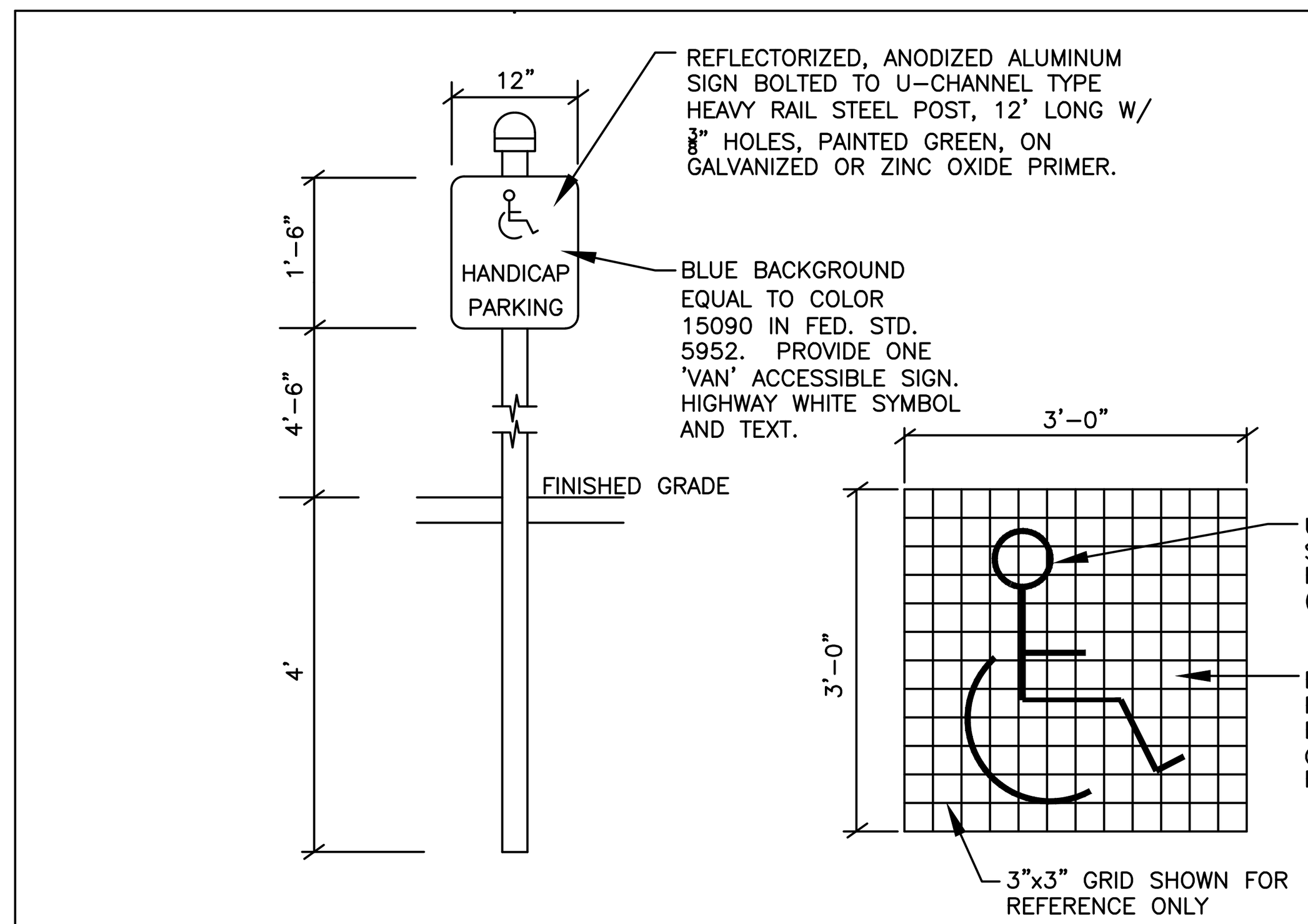


VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS
NOT TO SCALE



TYPICAL PAVEMENT JOINT
NOT TO SCALE



NOTE: PLACEMENT AND SPECIFICATIONS OF ALL SIGNAGE SHALL MEET CURRENT ADA AND MUTCD STANDARDS.

HANDICAP SIGNS
NOT TO SCALE

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME: ST. JOHN STREET DUNKIN DONUTS
PORTLAND MAINE
SHEET NAME: EROSION & SEDIMENTATION CONTROL DETAILS

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05-04-18

DESIGNED: JHW
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05-04-18
CLIENT & OWNER: Dunkin' Brands, Inc. 130 Royall St. Canton, MA 02021

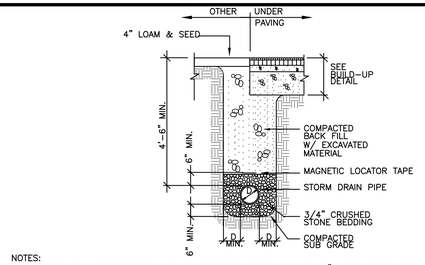
Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257-2071 Fax: (207) 257-2130
info@plymouthengineering.com
www.plymouthengineering.com

STATE OF MAINE
JON H. WHITTEN, JR.
No. 10414
LICENSED
PROFESSIONAL ENGINEER

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

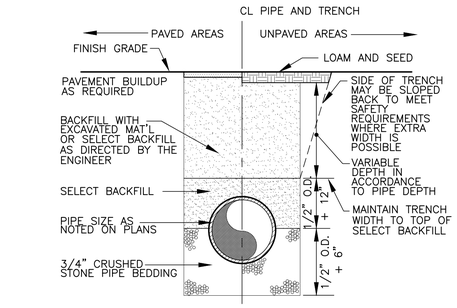
SHEET 5 OF 9

C5

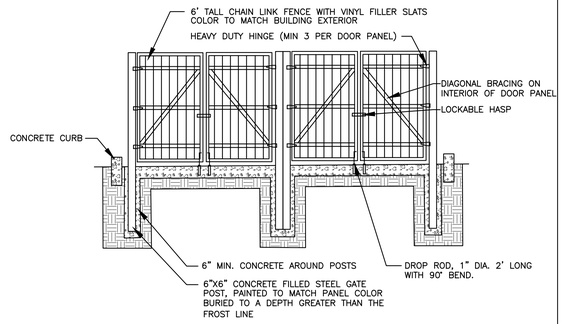


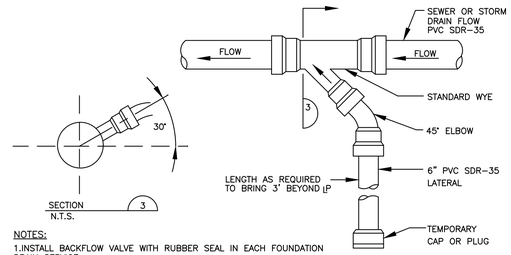
NOTES:
1. ALL BACKFILL PROCEDURES MUST BE PROVIDED USING MAXIMUM 8" LIFTS, LOOSE MEASURE.
2. ANY LINE TO BE PLACED WITH LESS THAN 4'-6" OF COVER MUST BE AUTHORIZED BY THE OWNER/ENGINEER AND MUST BE INSULATED WITH 2" RIGID INSULATION. WIDTH OF INSULATION SHALL BE BASED UPON DEPTH AND LOCATION.
3. ANY LINE CROSSING OF OTHER UTILITIES WHERE THE VERTICAL SEPARATION DISTANCE IS LESS THAN 2-FEET SHALL BE INSULATED WITH 2" RIGID INSULATION, IN ALL DIRECTIONS FOR A DISTANCE OF 2' FROM THE CROSSING. (SEE DETAIL)

STORM DRAIN/SANITARY SEWER TRENCH DETAIL
NOT TO SCALE



TYPICAL TRENCH SECTION
NOT TO SCALE

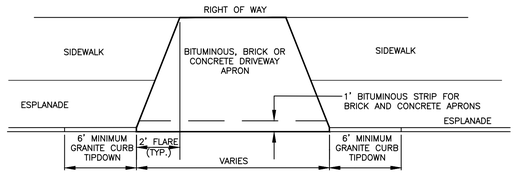




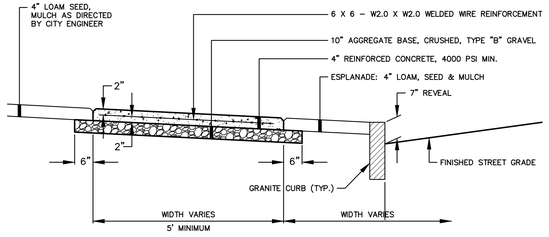
NOTES:
1.INSTALL BACKFLOW VALVE WITH RUBBER SEAL IN EACH FOUNDATION DRAIN SERVICE.
2. IF SUMP PUMP IS UTILIZED INSTALL CHECK VALVE AT SUMP PUMP.

SEWER / FOUNDATION DRAIN SERVICE CONNECTION
NOT TO SCALE

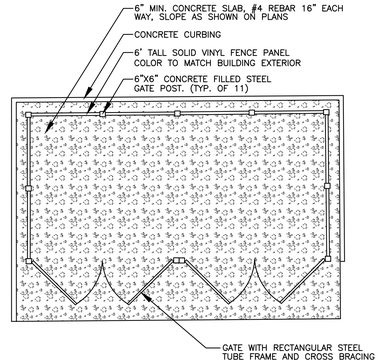
NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R.O.W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.



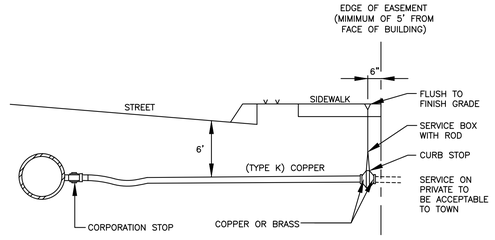
DRIVEWAY APRON LAYOUT
NOT TO SCALE



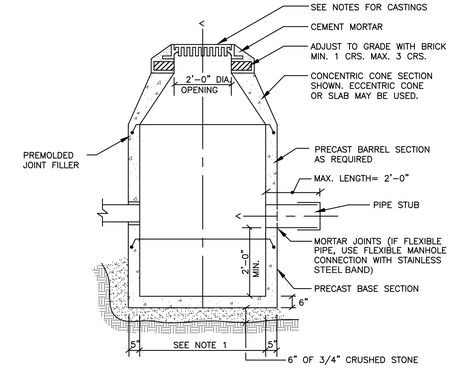
REINFORCED CONCRETE SIDEWALK
NOT TO SCALE



DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE

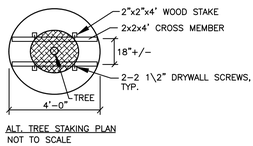


TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE

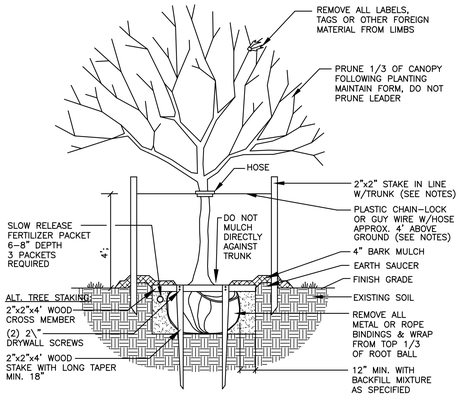


NOTES:
1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE ETHERIDGE FOUNDRY SA248, TYPE M OR C OR APPROVED EQUAL.
5. DRAINAGE MANHOLE FRAME AND COVER TO BE ETHERIDGE FOUNDRY M248S OR APPROVED EQUAL. COVER SHALL BE MARKED "DRAIN".

TYPICAL CATCH BASIN
NOT TO SCALE

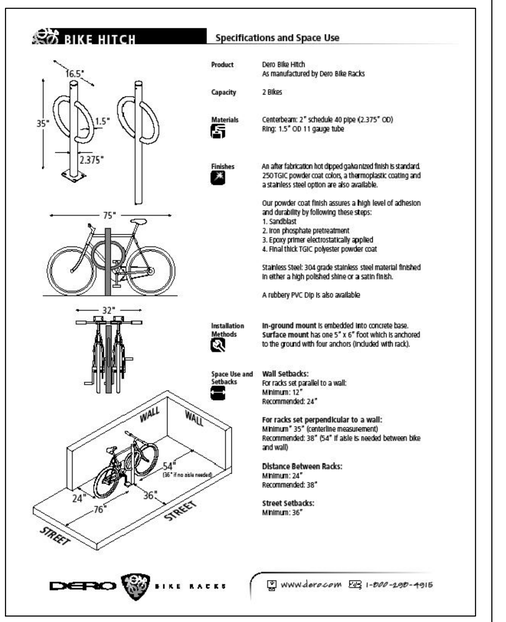


ALT. TREE STAKING PLAN
NOT TO SCALE



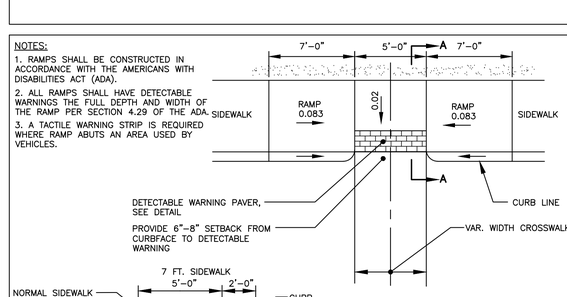
NOTES:
INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:
1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

DECIDUOUS TREES 2" TO 4" CALIPER
NOT TO SCALE



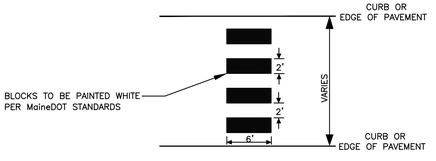
DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	TRANSPORTATION SYSTEMS AND STREET DESIGN SECTION 1	FIGURE:
REVISED:	BICYCLE RACK SPECIFICATION - BIKE HITCH		I-33a

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.



SECTION A-A

HANDICAP RAMP
NOT TO SCALE



CROSS WALK DETAIL
NOT TO SCALE

NO.	DATE	REVISIONS DESCRIPTION	DRAWN	APPD.
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME: ST. JOHN STREET DUNKIN DONUTS PORTLAND MAINE
SHEET NAME: CONSTRUCTION DETAILS

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05-04-18
PLAN DATE: 05-04-18
CLIENT & OWNER: Dunkin' Brands, Inc. 130 Royall St. Canton, MA 02021
DESIGNED: JHW
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB

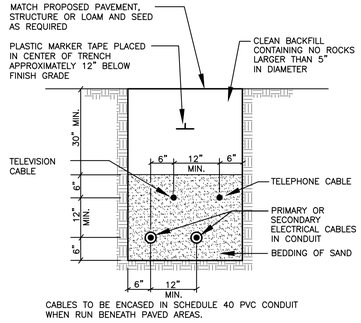
Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969 Fax: (207) 257-2130
Tel: (207) 257-2071 info@plymouthengineering.com
www.plymouthengineering.com

STATE OF MAINE
JOHN H. WHITTEN, JR.
NO. 10078
REGISTERED PROFESSIONAL ENGINEER

DRAWINGS NOT SIGNED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

SHEET 6 OF 9

C6

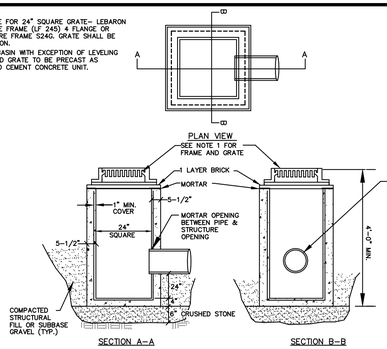


CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE

NOTES:
1. FRAME SHALL BE FOR 24" SQUARE GRATE- LEBARON TYPE "F" SQUARE FRAME (LF 245) A FLANGE OR ETHERIDGE SQUARE FRAME 524G. GRATE SHALL BE 24"x24" CAST IRON.
2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS SINGLE PORTLAND CEMENT CONCRETE UNIT.



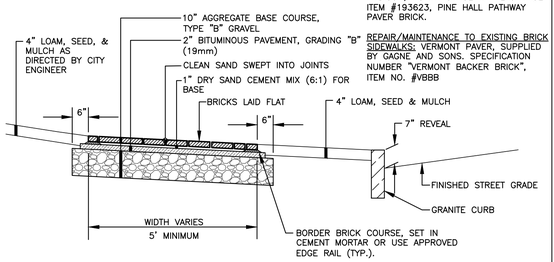
TYP. TYPE "F" CATCH BASIN

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.

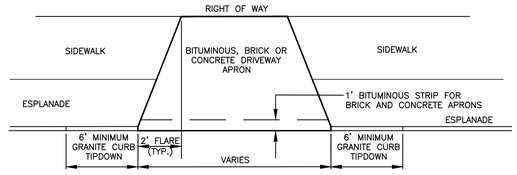
REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER, SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER "VERMONT BACKER BRICK", ITEM NO. #VBBB



BRICK SIDEWALK WITH BITUMINOUS BASE

NOT TO SCALE

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R.O.W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.



DRIVEWAY APRON LAYOUT

NOT TO SCALE

CONSTRUCTION NOTES:

1. All work shall conform to the applicable codes and ordinances.

2. Contractor shall visit the site and familiarize him or herself with all conditions affecting the proposed work and shall make provisions as to the cost thereof. Contractor shall be responsible for familiarizing him or herself with all contract documents, field conditions and dimensions and confirming that the work may be accomplished as shown prior to proceeding with construction. Any discrepancies shall be brought to the attention of the engineer prior to the commencement of work.

3. Contractor shall notify engineer of all products or items noted as "existing" which are not found in the field.

4. Install all equipment and materials in accordance with manufacturer's recommendations and owner's requirements unless specifically otherwise indicated or where local codes or regulations take precedence.

5. 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 attention of the engineer.

6. Contractor shall clean and remove debris and sediment deposited on public streets, sidewalks, adjacent areas, or other public ways due to construction.

7. Contractor shall incorporate provisions as necessary in construction to protect existing structures, physical features, and maintain site stability during construction. Contractor shall restore all areas to original condition and as directed by design drawings.

8. Site contractor shall obtain all required permits prior to construction.

9. All erosion and sediment control measures shall be installed in accordance with "Maine Erosion and Sedimentation Control Handbook for Construction: Best Management Practices" published by the Cumberland County Soil and Water Conservation District and Maine Department of Environmental Protection, March 2004 or latest edition. It shall be the responsibility of the contractor to possess a copy of the erosion control plan at all times.

10. The contractor is hereby cautioned that all site features shown hereon are based on field observations by the surveyor and by information provided by utility companies. 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.

11. Contractor shall be aware that Dig Safe only notifies its "member" utilities about the dig. When notified, Dig Safe will advise contractor of member utilities in the area. Contractor is responsible for identifying and contacting non-member utilities directly. Non-member utilities may include town or city water and sewer districts and small local utilities, as well as USG public works systems.

12. Contractors shall be responsible for compliance with the requirements of 23 MRSA 3360-A. It shall be the responsibility of the contractor to coordinate with the appropriate utilities to obtain authorization prior to relocation of any existing utilities which conflict with the proposed improvements shown on these plans. If a utility conflict arises, the contractor shall immediately notify the owner, the municipality and appropriate utility company prior to proceeding with any relocation.

13. All pavement markings and directional signage shown on the plan shall conform to the Manual of Uniform Traffic Control Devices (MUTCD) standards.

14. All pavement joints shall be sawcut prior to paving to provide a durable and uniform joint.

15. No holes, trenches or structures shall be left open overnight in any excavation accessible to the public or in public rights-of-way.

16. All work within the public right-of-way shall require a M.D.O.T. Permit as well as permits from the town as applicable.

17. The proposed limits of clearing shown hereon are approximate based upon the proposed limits of site grading. The applicant reserves the right to perform normal forest management activities outside of the clearing limit as shown. Tree removal outside of the limits of clearing may be necessary to remove dead or dying trees or tree limbs. This removal is due to potential safety hazards and to promote proper forest growth.

18. Immediately upon completion of cuts/fills, the contractor shall stabilize disturbed areas in accordance with erosion control notes and as specified on plans.

19. The contractor shall be fully and solely responsible for the removal, replacement and rectification of all damaged and defective material and workmanship in connection with the contract work. The contractor shall replace or repair as directed by the owner all such damaged or defective materials which appear within a period of one year from the date of substantial completion.

20. All work performed by the general contractor and/or trade subcontractor shall conform to the requirements of local, state or federal laws, as well as any other governing requirements, whether or not specified on the drawings.

21. Where the terms "approved equal", "other approved", "equal to", "acceptable" or other general qualifying terms are used in these notes, it shall be understood that reference is made to the ruling and judgment of the owner and/or owner's engineer.

22. The general contractor shall provide all necessary protection for the work until turned over to the owner.

23. The general contractor shall maintain a current and complete set of construction drawings on site during all phases of construction for use of all trades.

24. The contractor shall take full responsibility for any changes and deviation of approved plans not authorized by the architect/engineer and/or client/owner.

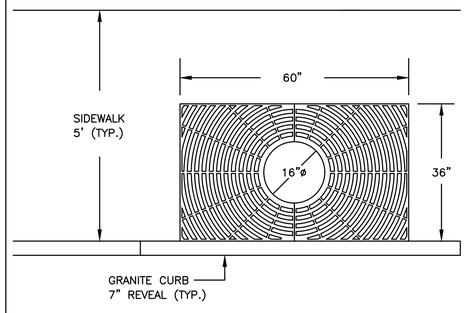
25. Details are intended to show end result of design. Any modification to suit field dimension and condition shall be submitted to the engineer for review and approval prior to any work.

26. Before the final acceptance of the project, the contractor shall remove all equipment and materials, repair or replace private or public property which may have been damaged or destroyed during construction, clean the areas within and adjacent to the project which have been obstructed by his/her operations, and leave the project area neat and presentable.

NOTES:
16"ø EXPANDABLE TREE OPENING. 0.25" SLOT OPENINGS.

SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

WHEN THE TREE GRATE IS INSTALLED IN A CONCRETE SIDEWALK, A NOTCH MUST BE INSTALLED ALONG THE EDGE TO HOLD THE GRATE, WHEN INSTALLED IN A BRICK SIDEWALK IT REQUIRES A FRAME TO BE INSTALLED TO HOLD THE GRATE IN PLACE.



PLAN VIEW

EXPANDABLE TREE GRATE
NEENAH MODEL R-8810

NOT TO SCALE

http://www.nfco.com/literature/TreeGrateCatalog22/Avenue.pdf

DATE: MARCH 2011	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION SECTION IV	FIGURE:
REVISED:	EXPANDABLE TREE GRATE FOR NARROW RESIDENTIAL URBAN STREETS		IV-4A

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME:
ST. JOHN STREET
DUNKIN DONUTS
PORTLAND MAINE

SHEET NAME:
CONSTRUCTION DETAILS

PROJECT NO. 17140
DRAWING NO. 17140 B
FILE/BOOK:
SCALE:
DATE ISSUED: 05-04-18

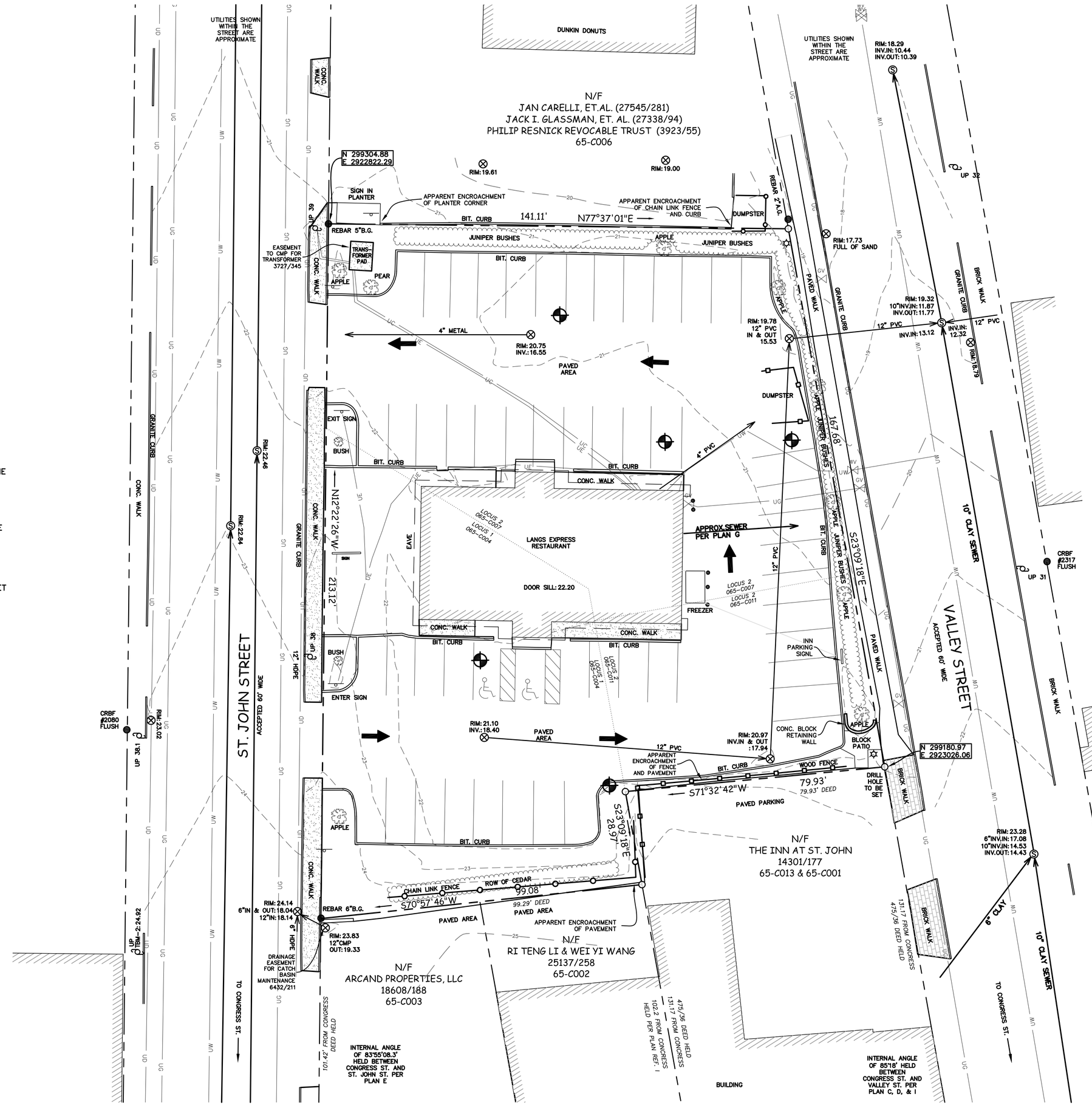
DESIGNED: JHW
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05-04-18

CLIENT & OWNER:
Dunkin' Brands, Inc.
130 Royall St.
Canton, MA 02021

Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257-2071 Fax: (207) 257-2130
info@plymouthengineering.com
www.plymouthengineering.com

STATE OF MAINE
JOHN H. WEM, JR.
REGISTERED PROFESSIONAL ENGINEER
LICENSED

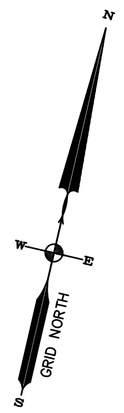
DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

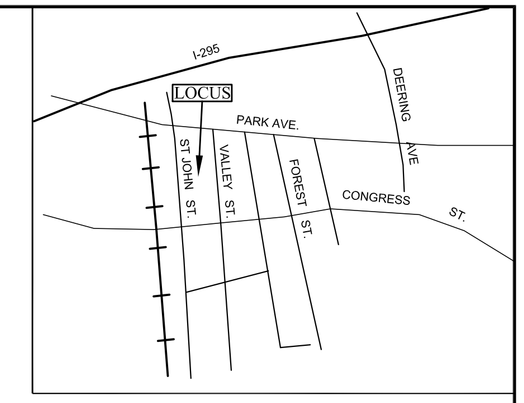


LEGEND

SUBJECT BOUNDARY LINE	
ABUTTER OR RIGHT OF WAY LINE	
N/F	NOW OR FORMERLY
000/000	DEED BOOK PAGE REFERENCE
000-000	TAX MAP AND LOT NUMBER
	DECIDUOUS / CONIFEROUS TREE
MF	GRANITE MONUMENT FOUND
IPF/IRF/RBF	IRON PIPE/ROD/REBAR FOUND
DHF	DRILL HOLE FOUND
CRBS	5/8" REBAR W/ CAP TO BE SET
	UTILITY POLE
S	SEWER MANHOLE
D	DRAIN MANHOLE
	CATCH BASINS
	BORING
UW	UNDERGROUND WATER
UC	UNDERGROUND CABLE
UG	UNDERGROUND GAS
UE	UNDERGROUND ELECTRIC
UD	UNDERGROUND DRAIN
GV	GAS VALVE
WV	WATER VALVE

GRAPHIC SCALE
0 10 20 40
1 inch = 20 ft.





LOCATION PLAN
Not to Scale

NOTES:

1. RECORD OWNER: NANCY E. HURST
2. PARCEL DEED REFERENCE:

   LOCUS 1: SEE DEED FROM WAYNE R. HURST TO NANCY E. HURST DATED MARCH 27, 1992, RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 9982, PAGE 346.

   LOCUS 2: SEE DEED FROM CASCO BANK & TRUST CO., AND DIANA RESNICK, TRUTEES OF PHILIP P. RESNICK REVOCABLE TRUST TO NANCY E. HURST DATED OCTOBER 5, 1976, RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 3923, PAGE 45.
3. ALL BOOK AND PAGE REFERENCES REFER TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
4. PARCEL TAX MAP REFERENCE:
   LOCUS 1: CITY OF PORTLAND, TAX MAP 65, LOT C004
   LOCUS 2: CITY OF PORTLAND, TAX MAP 65, LOT C011, & LOT C007
5. TOTAL AREA OF PARCEL 30,239 SQUARE FEET.
6. ALL BEARINGS ARE REFERENCED TO MAINE STATE PLANE WEST ZONE, U.S. SURVEY FEET BY LOCATION OF MONUMENTS WITH COORDINATES PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
7. ELEVATIONS SHOWN ARE TIED TO THE CITY OF PORTLAND VERTICAL DATUM (NGVD29) BY LOCATION OF TBM 2 (PK NAIL IN 1ST WOOD UTILITY POLE, ALONG W'LY SIDE OF ST. JOHN ST. N'LY OF CONGRESS ST.) WITH AN ELEVATION OF 24.92' AS PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
8. THE LOCATION, SIZE, AND DEPTH OF UNDERGROUND UTILITY LINES, TANKS, AND OR STRUCTURES NOT DETERMINED BY THIS SURVEY EXCEPT UNDERGROUND MARKINGS PROVIDED BY DIG-SMART OF MAINE AS LOCATED.
9. THIS PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE AS DEPICTED ON FEMA FLOOD PANEL #230051-0013-B.
10. PLAN REFERENCES:
    A.) STANDARD BOUNDARY SURVEY OF HURLEY AND JOHNSTON PROPERTY PREPARED FOR AMATO'S ITALIAN SANDWICH SHOPS, INC PREPARED BY SEBAGO TECHNICS DATED 4-17-96 RECORDED IN PLAN BOOK 196, PAGE 284.
    B.) ST. JOHN STREET, SHEETS NO. 2 AND NO. 3, CITY OF PORTLAND ENGINEERING DEPARTMENT, VOLUME 1, PAGE 39 AND VOLUME 1, PAGE 40 DATED JULY 1925.
    C.) CONGRESS STREET, SHEETS NO. 3 AND NO. 4, CITY OF PORTLAND ENGINEERING DEPARTMENT, VOLUME 2, PAGE 150 AND VOLUME 2, PAGE 151 DATED DECEMBER 1925.
    D.) PLAN SHOWING FOREST, GILMAN, VALLEY AND CONGRESS, CITY OF PORTLAND ENGINEERING DEPARTMENT, VOLUME 2, PAGE 177 DATED FEBRUARY 1926.
    E.) MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, STATE HIGHWAY "I", FEDERAL AID PROJECT NO. M-0640(1), DOT FILE NO 3-317, SHEETS 1, 2, AND 3 DATED OCTOBER 1983, RECORDED IN PLAN BOOK 163, PAGES 20, 21, & 22.
    F.) BOUNDARY & TOPOGRAPHY SURVEY ON VALLEY STREET, PORTLAND, MAINE MADE FOR SHALOM HOUSE, INC PREAPRED BY OWEN HASKELL, INC. DATED JUNE 16, 2005, REVISED 06-27-05 RECORDED IN PLAN BOOK 205, PAGE 417.
    G.) LISA'S PIZZA, ST. JOHN ST. LOCATION, SITE PLAN PREPARED FOR LISA'S PIZZA INC PREPARED BY E.C. JORDAN CO. DATED 12-11-84, REVISED 12-13-84 NOT RECORDED.
    H.) WORKSHEET PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT DEPICTING SAINT JOHN STREET, NOT DATED.
    I.) PLAN OF THE ESTATE OF THE LATE LEVI WEYMOUTH, PORTLAND MAINE, BY E.C. JORDAN. C.E., RECORDED IN PLAN BOOK 3, PAGE 53.

CERTIFICATION:

I HEREBY CERTIFY THAT THIS BOUNDARY SURVEY CONFORMS TO THE STATE OF MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS, STANDARDS OF PRACTICE (CHAPTER 90, SECTIONS 1 & 2).

Michael A. Hartman

MICHAEL A. HARTMAN, P.L.S. #2433
FOR JONES ASSOCIATES INC.

STATE OF MAINE
MICHAEL A. HARTMAN
NO. 2433
PROFESSIONAL LAND SURVEYOR

REVISIONS			
NO.	DATE	DESCRIPTION	BY

DRAFT PLAN OF LAND OF

NANCY E. HURST

305-319 ST JOHN ST. & 302-314 VALLEY ST.
PORTLAND, MAINE

PREPARED FOR: DUNKIN BRANDS, INC
130 ROYALL STREET
CANTON, MA 02021

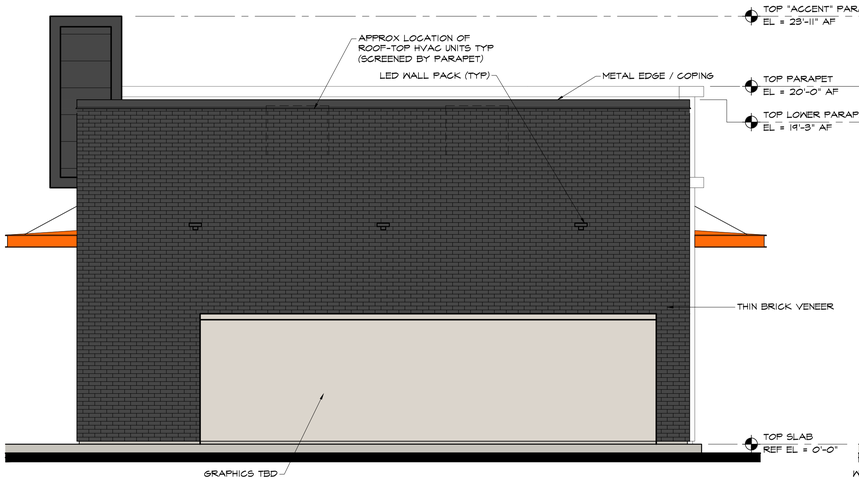
PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

RECORD OWNERS:
NANCY E. HURST
1876 HAPRSWELL NECK RD
HARPSWELL, ME 04079

PLAN DATE: MAY 24, 2017

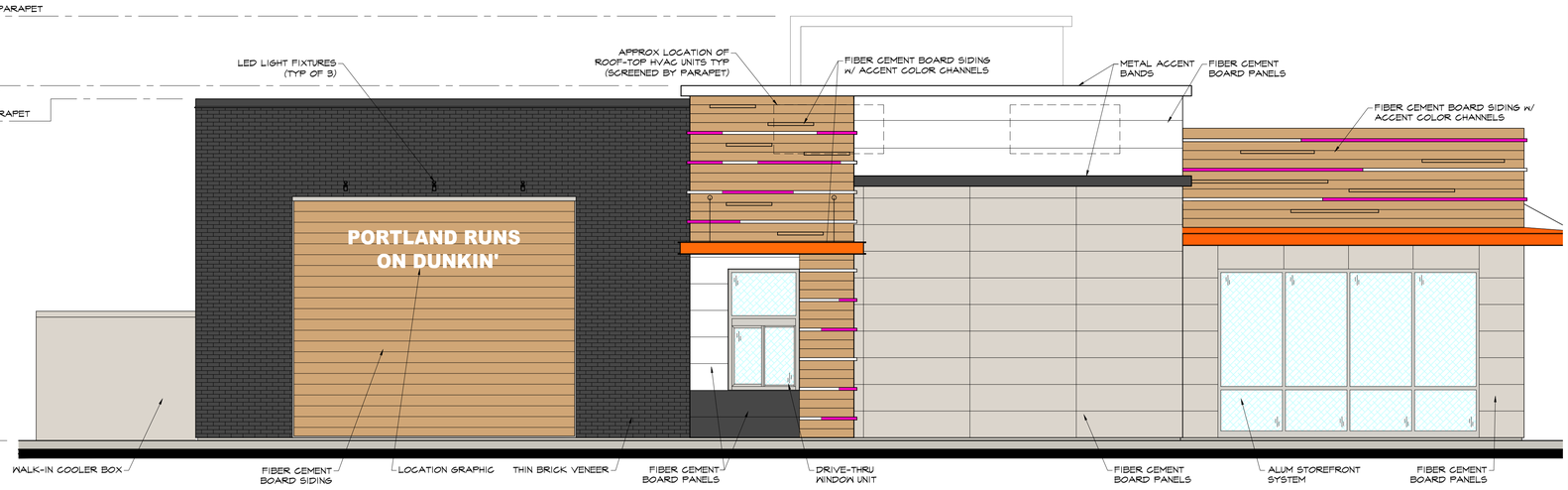
SCALE: 1" = 20'

PROJ. #: 17-043PD



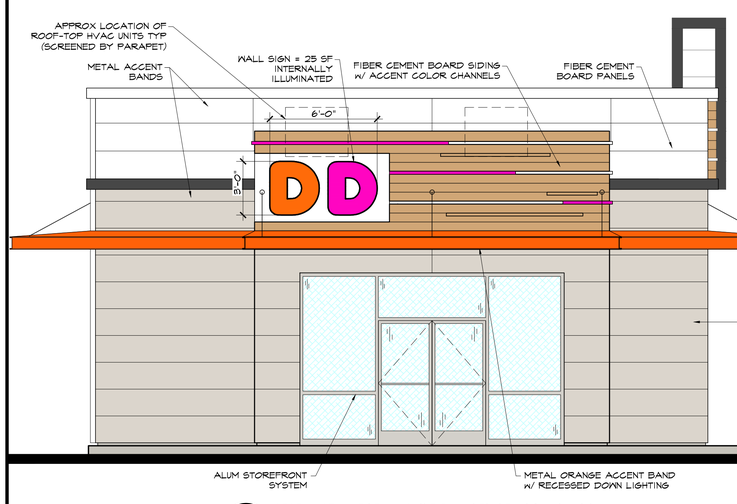
5 PROPOSED EAST ELEVATION

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



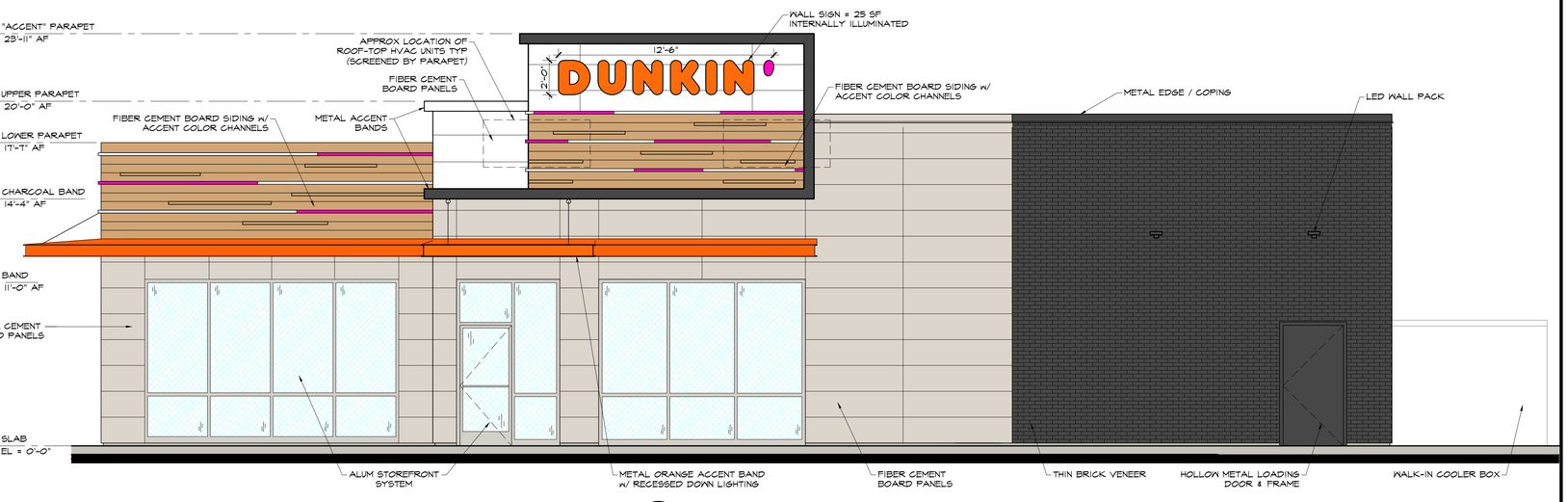
4 PROPOSED NORTH ELEVATION

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



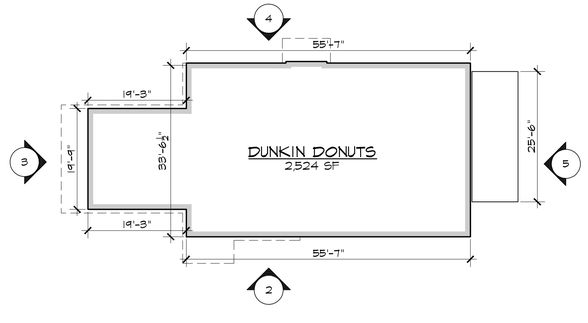
3 PROPOSED WEST ELEVATION

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



2 PROPOSED SOUTH ELEVATION

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



1 KEYPLAN

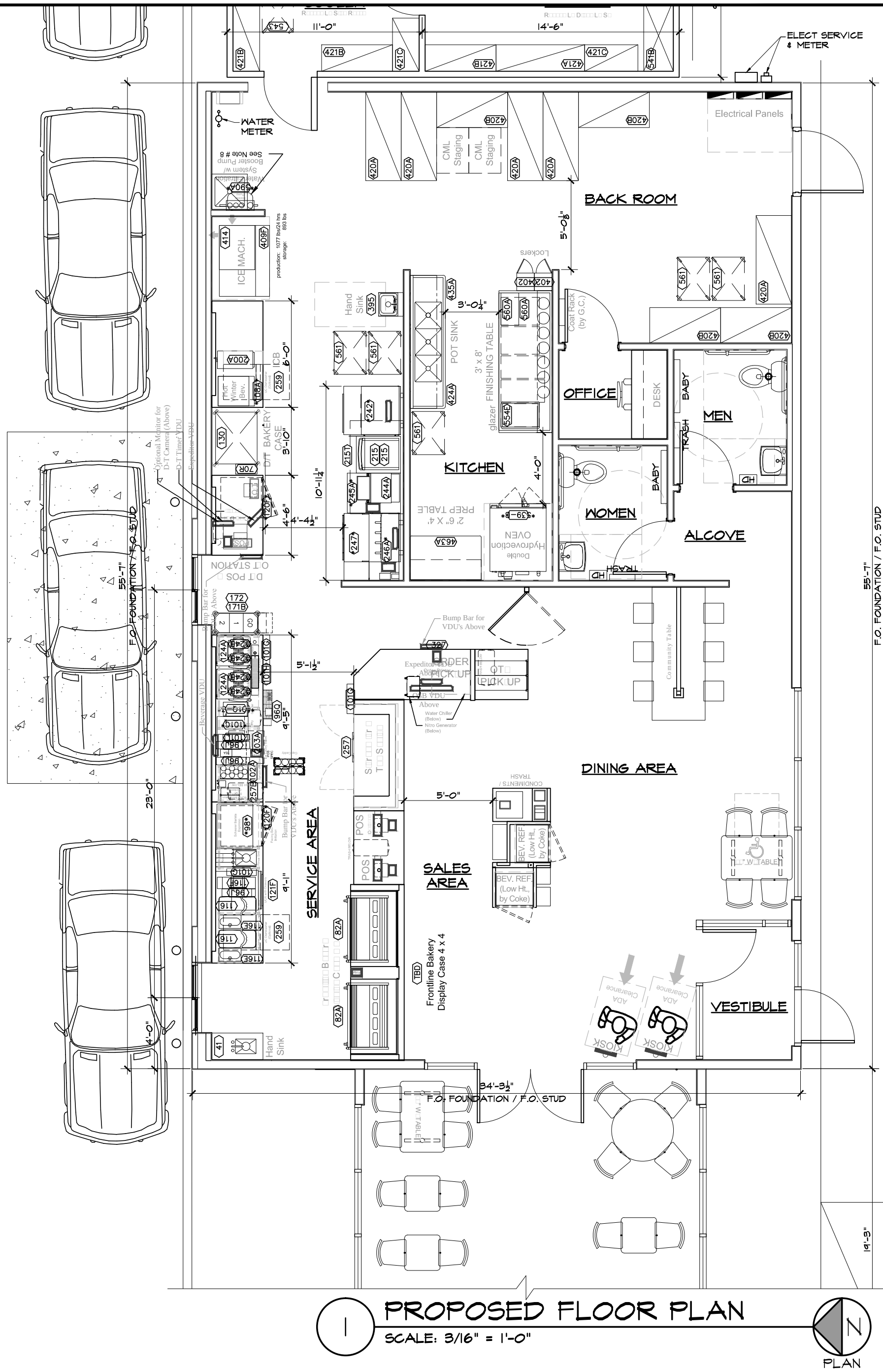
SCALE: 1/16" = 1'-0"

N
PLAN

AHARONIAN
& ASSOCIATES, INC.
Architects
401·232·5010
www.arch-eng.com

DUNKIN' DONUTS

325 ST. JOHN STREET
PORTLAND, ME 04102
NOV 16, 2018



1 PROPOSED FLOOR PLAN

SCALE: 3/16" = 1'-0"

PLAN

©AHARONIAN & ASSOCIATES INC 2018

AHARONIAN & ASSOCIATES INC.
ARCHITECTS

310 George Washington Highway
Suite 100
Smithfield, Rhode Island
0 2 9 1 7

T 401-232-5010
F 401-232-5080
WWW.ARCH-ENG.COM

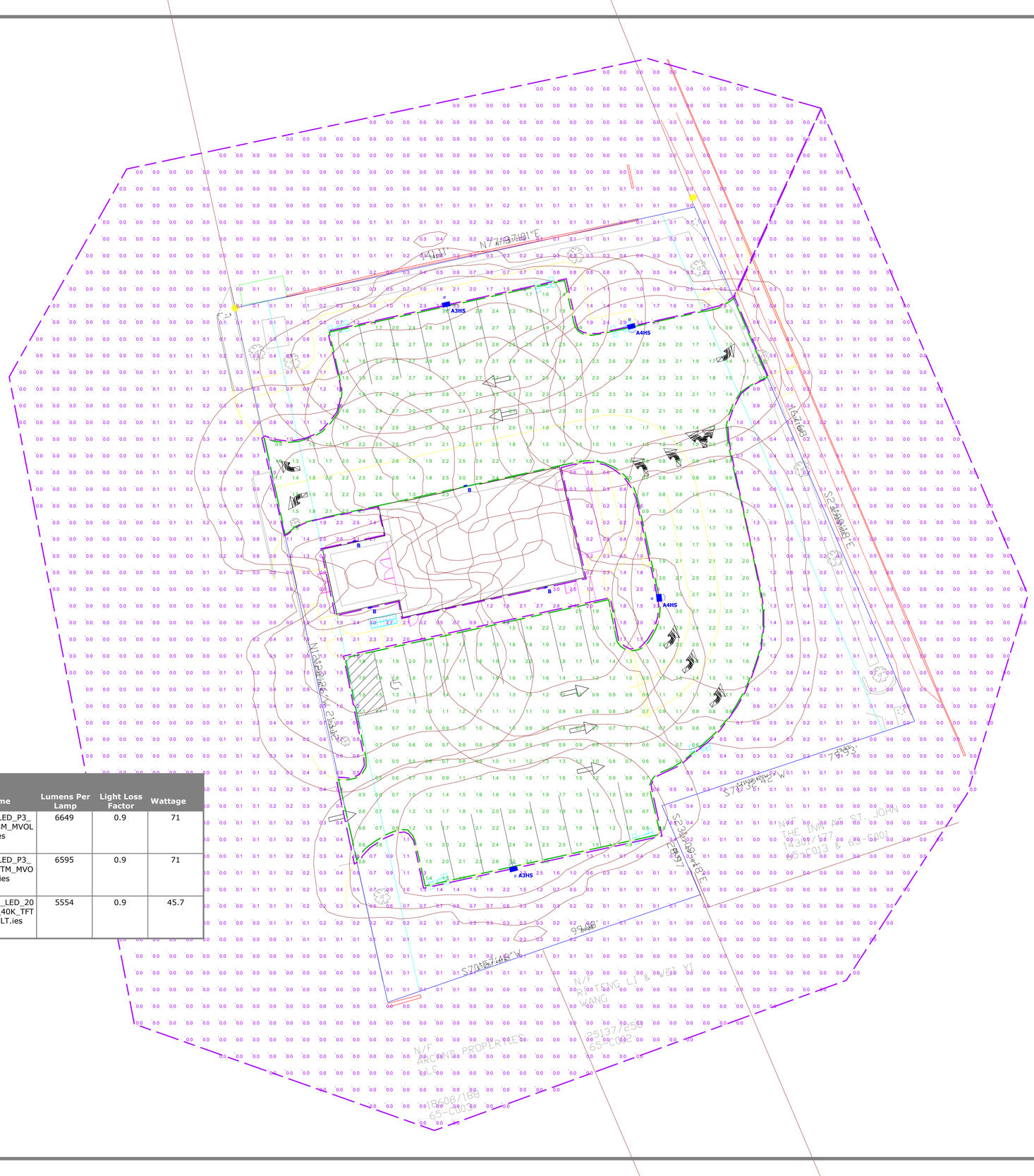
REVISIONS NUMBER	REMARKS	DATE
1	UTILITY COORD	4/17/18

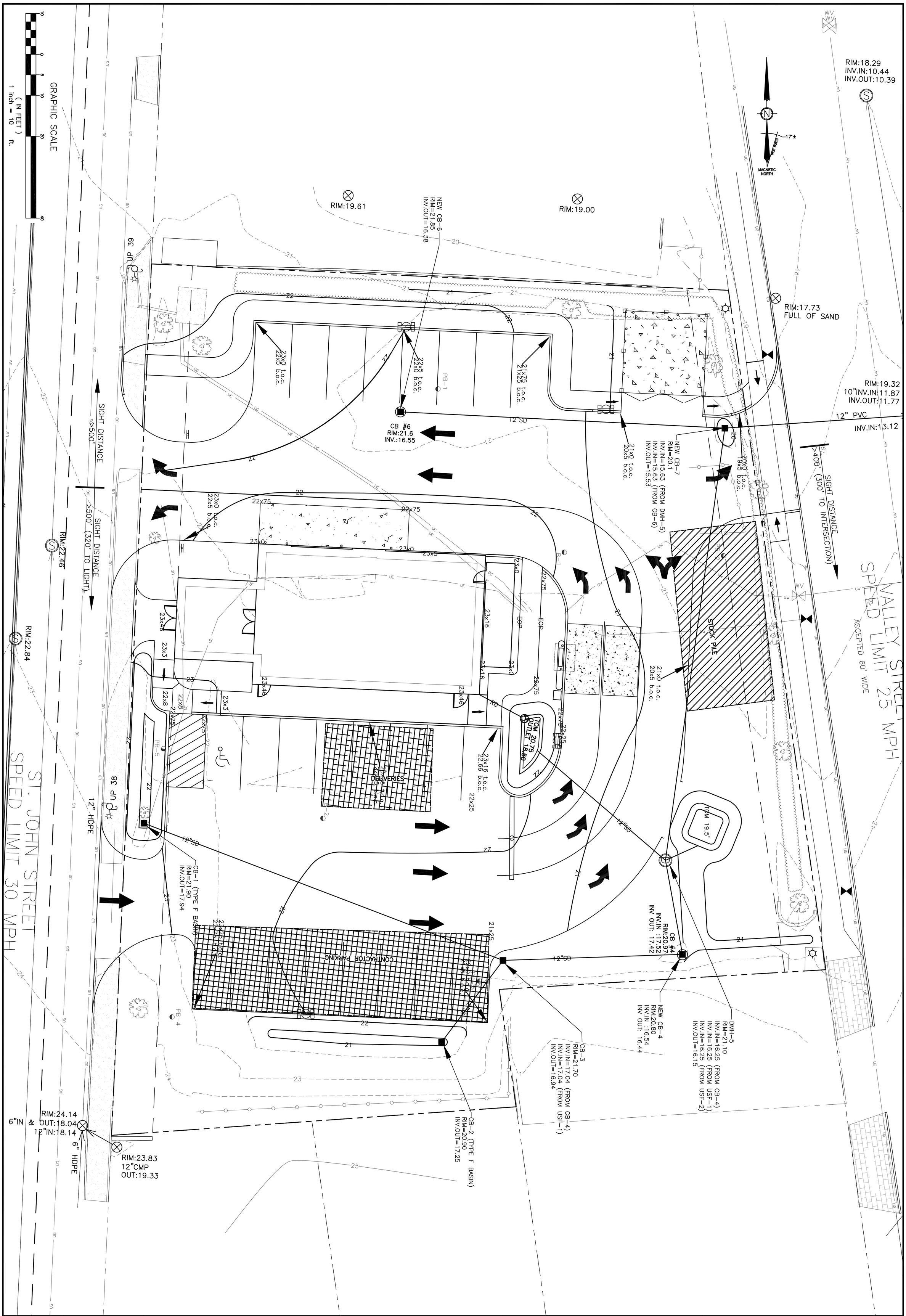
PROJECT TITLE
DUNKIN' BRANDS
[eatdrinkthink]
PC# 356088
325 ST. JOHN STREET
PORTLAND, ME 04102
CUMBERLAND COUNTY
FOR REVIEW

DRAWING TITLE
PROPOSED FLOOR PLAN

DATE	PROJ NO
APR 9, 2018	18047
DRAWN BY: AH	CHECKED BY: JB

DRAWING NUMBER
K1.1


A3HS
A4HS
B
N/F
S70°36'46"W
S25°37'46"E
S25°37'46"E
S70°36'46"W
N/F
RAFFENG LI & WEI YI WANG
S25°37'46"E
65-C002
N/F
ARGENTA PROPERTIES LLC
S25°37'46"E
65-C003
S70°36'46"W
S70°36'46"W
S25°37'46"E
S25°37'46"E



C2

SHEET 2 OF 7

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257-2071 Fax: (207) 257-2130
info@plymouthengineering.com
www.plymouthengineering.com

DESIGNED:	JHW	PROJECT NO.	17140
DRAWN:	JHW	DRAWING NO.	17140 B
CHECKED:	SEB	FIELDBOOK:	
APPROVED:	SEB	SCALE:	
PLAN DATE:	05-04-18	DATE ISSUED:	05-04-18

CLIENT & OWNER:
Dunkin' Brands, Inc.
130 Royall St.
Canton, MA 02021

PROJECT NAME:

ST. JOHN STREET
DUNKIN DONUTS

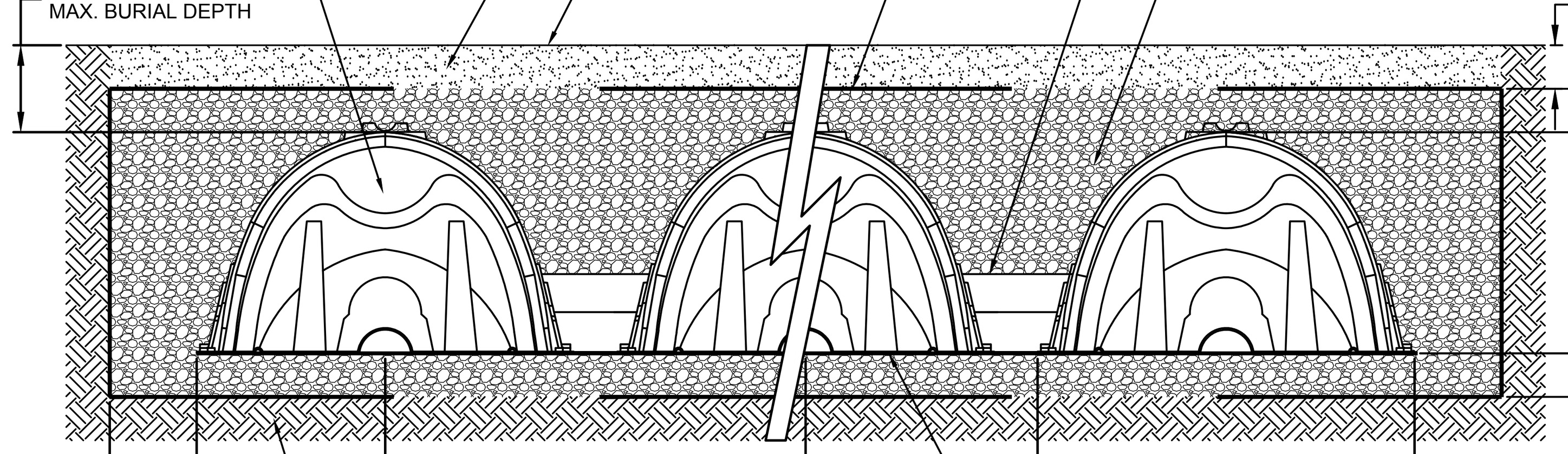
PORTLAND MAINE

SHEET NAME:

CONSTRUCTION MANAGEMENT PLAN

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.



GENERAL NOTES

RECHARGER 150XL HD BY CULTEC, INC. OF BROOKFIELD, CT.
STORAGE PROVIDED = 11.32 CF/FT [1.05 m^3/m] PER DESIGN UNIT.
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS

ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS

CULTEC 150 XLHD CROSS–SECTION

NOT TO SCALE

CULTEC RECHARGER® 330XLHD PRODUCT SPECIFICATIONS

GENERAL

CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS WILL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832).
2. THE CHAMBER WILL BE VACUUM THERMOFORMED OF BLACK POLYETHYLENE.
3. THE CHAMBER WILL BE ARCHED IN SHAPE.
4. THE CHAMBER WILL BE OPEN-BOTTOMED.
5. THE CHAMBER WILL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS
6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 30.5 INCHES (775 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m).
7. MAXIMUM INLET OPENING ON THE CHAMBER END WALL IS 24 INCHES (600 mm).
8. THE CHAMBER WILL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS OF EACH SIDE PORTAL WILL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 11.75 INCHES (298 mm).
9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER WILL BE 7.459 FT^3 / FT (0.693 m^3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 330XLHD SHALL BE 52.213 FT^3 / UNIT (1.478 m^3 / UNIT) - WITHOUT STONE.
11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR WILL BE 0.913 FT^3 / FT (0.085 m^3 / m) - WITHOUT STONE.
12. THE RECHARGER 330XLHD CHAMBER WILL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
13. THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 CORRUGATIONS.
14. THE END WALL OF THE CHAMBER, WHEN PRESENT, WILL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
15. THE RECHARGER 330XLRHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
16. THE RECHARGER 330XLSHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL END WALL AND ONE PARTIALLY FORMED INTEGRAL END WALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
17. THE RECHARGER 330XLIHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL END WALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
18. THE RECHARGER 330XLEHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL END WALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE RECHARGER 330XLHD AND ACT AS CROSS FEED CONNECTIONS.
20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
21. HEAVY DUTY UNITS ARE DESIGNATED BY A COLORED STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
22. THE CHAMBER WILL HAVE A 6 INCH (152 mm) DIAMETER RAISED INTEGRAL CAP LOCATED ON TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
23. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
24. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.
25. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m)
26. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL

CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 330XLHD STORMWATER CHAMBERS.

CHAMBER PARAMETERS

1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER WILL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE).
3. THE CHAMBER WILL BE ARCHED IN SHAPE.
4. THE CHAMBER WILL BE OPEN-BOTTOMED.
5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR WILL BE 0.913 FT^3 / FT (0.085 m^3 / m) - WITHOUT STONE.
7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS.
8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 66™ WOVEN GEOTEXTILE

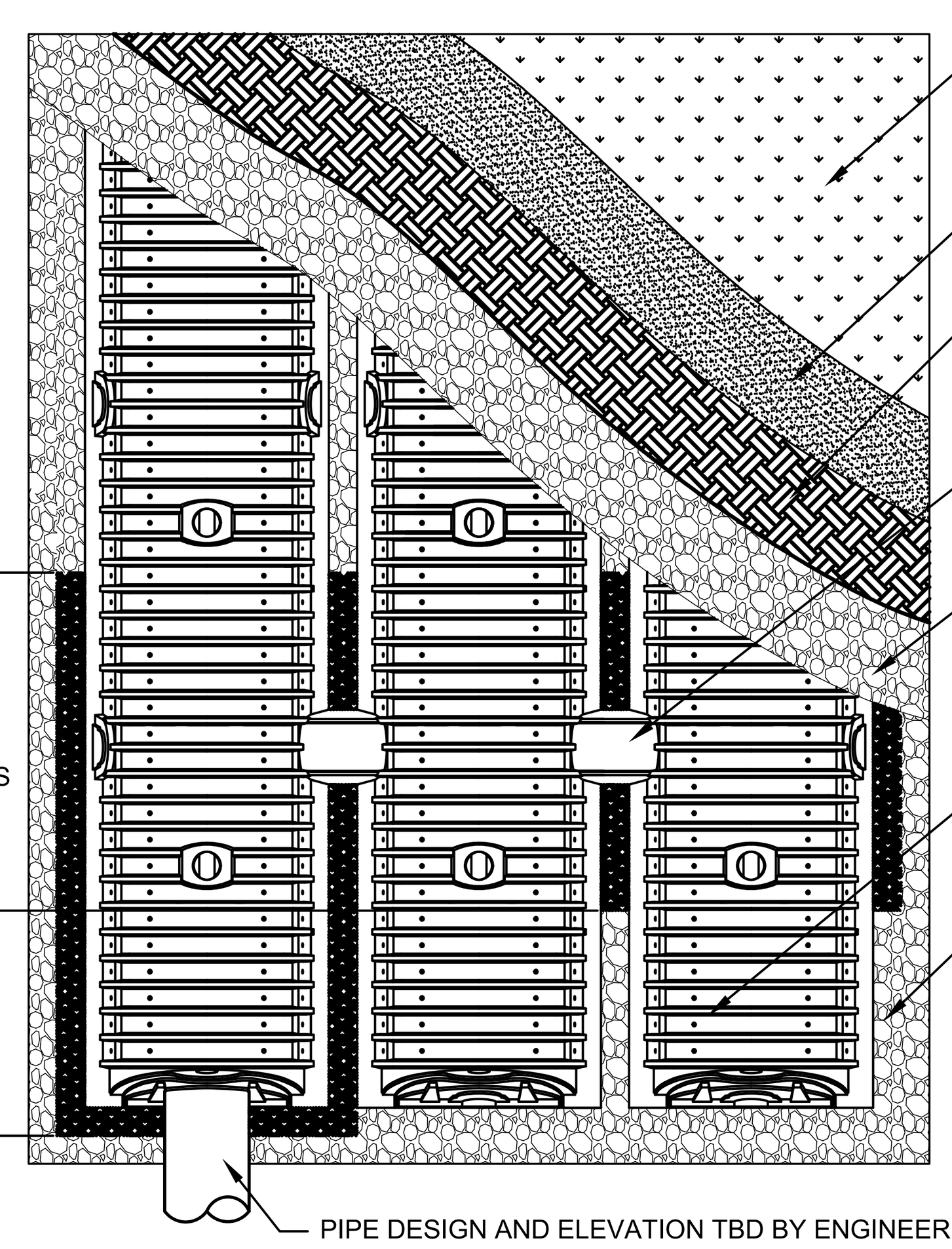
GENERAL

CULTEC NO. 66™ WOVEN GEOTEXTILE IS UTILIZED AS AN UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE.

GEOTEXTILE PARAMETERS

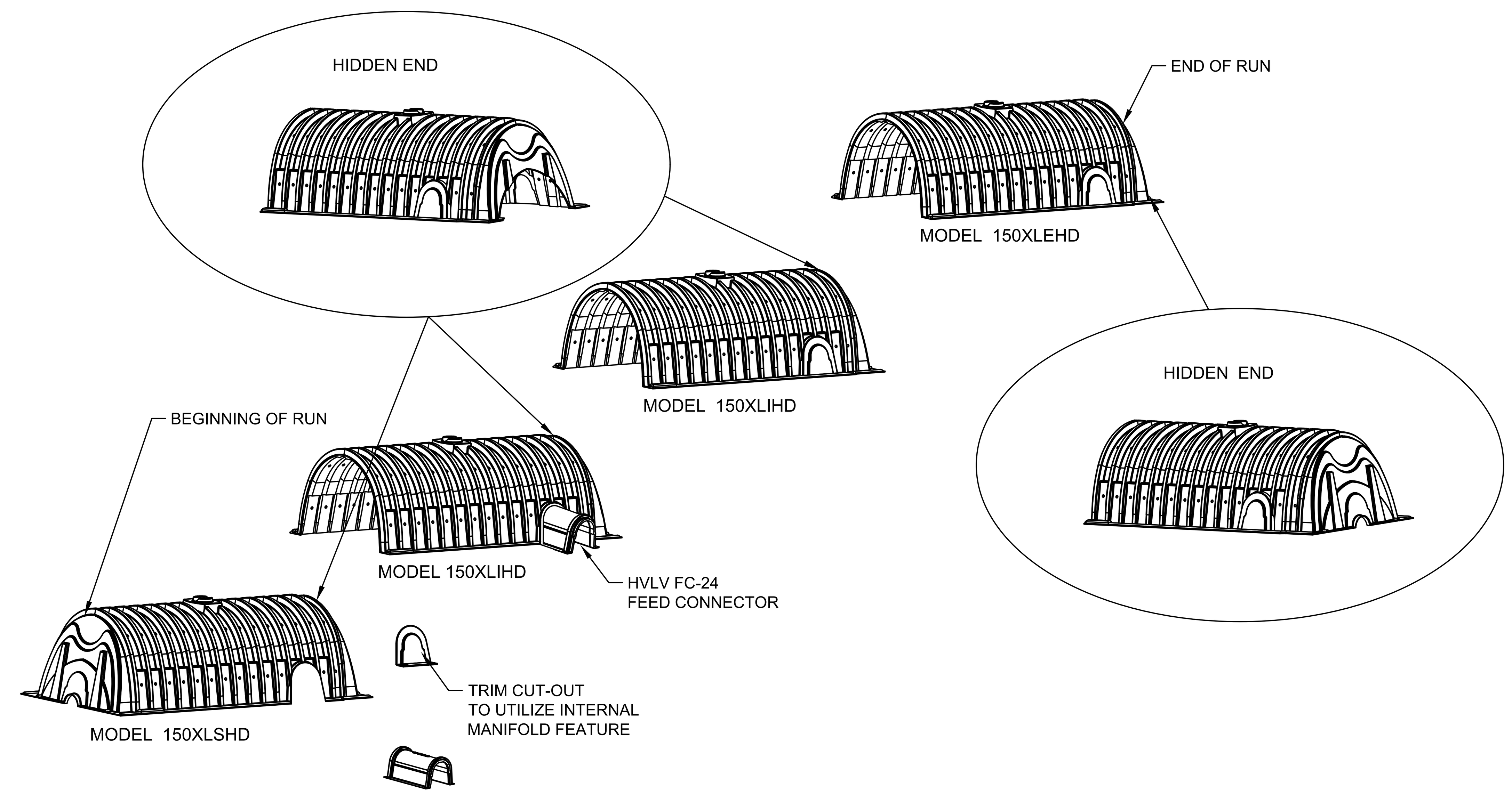
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 315 LBS (1.40KN) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A TENSILE ELONGATION RESISTANCE OF 15% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A MULLEN BURST RESISTANCE OF 600PSI (4138 KPA) PER ASTM D3786 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A TEAR RESISTANCE OF 115 LBS (0.51 KN) PER ASTM D4533 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE RESISTANCE OF 150 LBS (0.66 KN) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 900 LBS (4.00 KN) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 70% @ 500 HRS. PER ASTM D4355 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.05 SEC-1 PER ASTM D4491 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 4 GPM/FT2 (160 LPM/M2) PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERCENT OPEN AREA OF <1% PER CW-02215 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
14. THE GEOTEXTILE SHALL CONSIST OF A 100% HIGH-TENACITY, SILT-FILM POLYPROPYLENE YARNS.

GENERAL NOTES



CULTEC 150 XLHD PLAN VIEW

NOT TO SCALE



RECHARGER TYPICAL INTERLOCK

NOT TO SCALE

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.
2	10/29/18	REVISED PER ENGINEERING COMMENTS	JHW	JHW

PROJECT NAME: ST. JOHN STREET DUNKIN DONUTS
PORTLAND MAINE

SHEET NAME: CONSTRUCTION DETAILS

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05–04–18

DESIGNED:
DRAWN: JHW
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05–04–18
CLIENT & OWNER: Dunkin' Brands, Inc. 130 Royall St. Canton, MA 02021

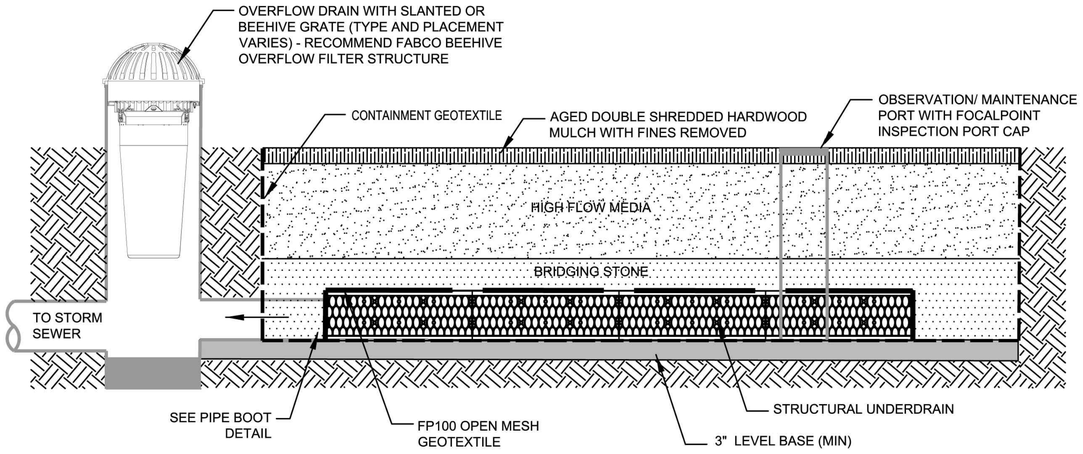
Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257–2071 Fax: (207) 257–2130
info@plymouthengineering.com
www.plymouthengineering.com

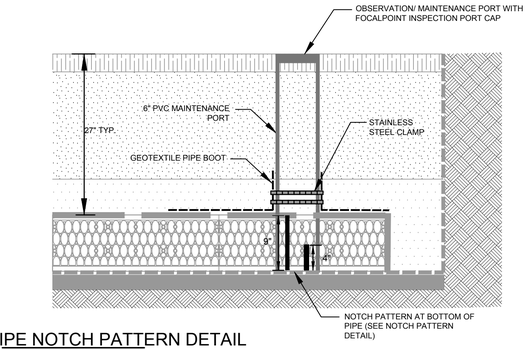
STATE OF MAINE JON H. WHITTEN, JR. No. 10414 LICENSED PROFESSIONAL ENGINEER

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

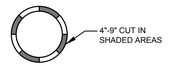
SHEET 8 OF 9

C8

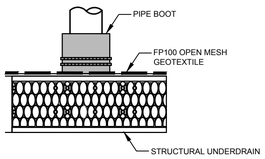




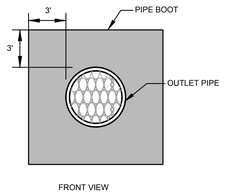
PIPE NOTCH PATTERN DETAIL



OBSERVATION/ MAINTENANCE PORT CONNECTION

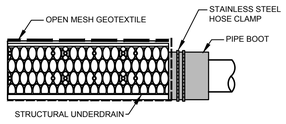


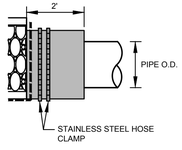
PIPE BOOT DETAIL



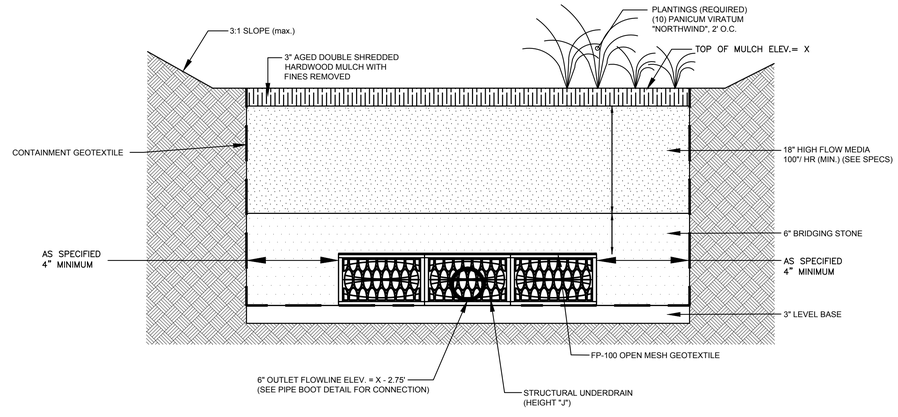
FRONT VIEW

OUTLET/ INLET PIPE CONNECTION





SECTION Y-Y



TYPE "F" CATCH BASIN WITH 2' SUMP

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.

PROJECT NAME: ST. JOHN STREET DUNKIN DONUTS PORTLAND MAINE

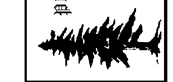
SHEET NAME: CONSTRUCTION DETAILS

PROJECT NO. 17140
DRAWING NO. 17140 B
FIELDBOOK:
SCALE:
DATE ISSUED: 05-04-18

DESIGNED: JHW
DRAWN:
CHECKED: SEB
APPROVED: SEB
PLAN DATE: 05-04-18

CLIENT & OWNER: Dunkin' Brands, Inc. 130 Royall St. Canton, MA 02021

Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
Plymouth, Maine 04969
Tel: (207) 257-2071 Fax: (207) 257-2130
info@plymouthengineering.com
www.plymouthengineering.com

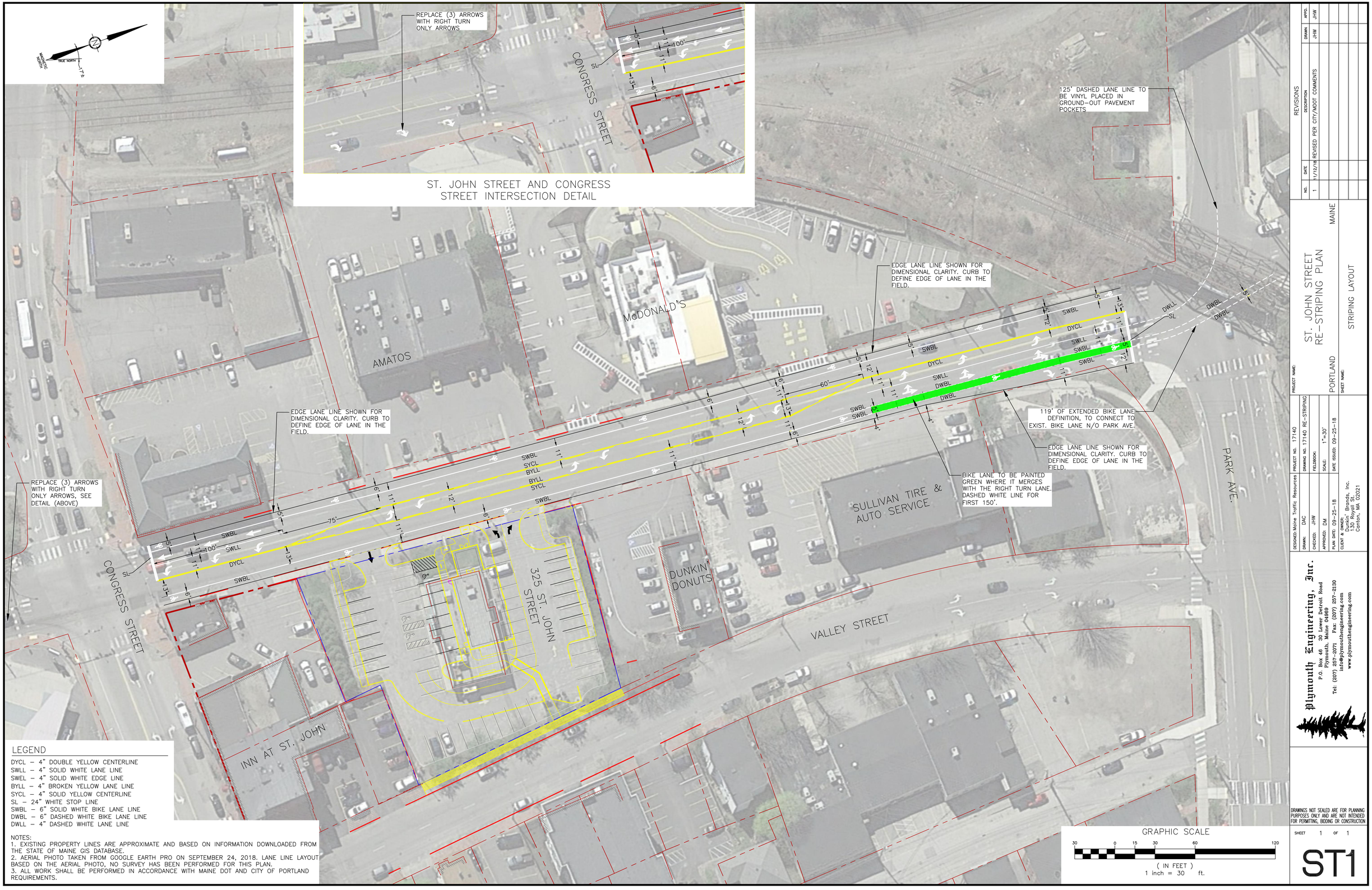




DRAWINGS NOT SIGNED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

SHEET 9 OF 9

C9



LEGEND

DYCL – 4" DOUBLE YELLOW CENTERLINE
SWLL – 4" SOLID WHITE LANE LINE
SWEL – 4" SOLID WHITE EDGE LINE
BYLL – 4" BROKEN YELLOW LANE LINE
SYCL – 4" SOLID YELLOW CENTERLINE
SL – 24" WHITE STOP LINE
SWBL – 6" SOLID WHITE BIKE LANE LINE
DWBL – 6" DASHED WHITE BIKE LANE LINE
DWLL – 4" DASHED WHITE LANE LINE

NOTES:
1. EXISTING PROPERTY LINES ARE APPROXIMATE AND BASED ON INFORMATION DOWNLOADED FROM THE STATE OF MAINE GIS DATABASE.
2. AERIAL PHOTO TAKEN FROM GOOGLE EARTH PRO ON SEPTEMBER 24, 2018. LANE LINE LAYOUT BASED ON THE AERIAL PHOTO, NO SURVEY HAS BEEN PERFORMED FOR THIS PLAN.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH MAINE DOT AND CITY OF PORTLAND REQUIREMENTS.

REVISIONS

NO.	DATE	DESCRIPTION	DRAWN	APPD.
1	11/12/18	REVISED PER CITY/MDOT COMMENTS	JHW	JHW

PROJECT NAME:
ST. JOHN STREET RE-STRIPING PLAN
PORTLAND MAINE

SHEET NAME:
STRIPING LAYOUT

DESIGNED:	Maine Traffic Resources
DRAWN:	DAC
CHECKED:	JHW
APPROVED:	DM
PLAN DATE:	09-25-18
CLIENT & OWNER:	Dunkin' Brands, Inc. 130 Royall Street Canton, MA 02021

PROJECT NO.	17140
DRAWING NO.	17140 RE-STRIPING
FIELDBOOK:	
SCALE:	1"=30'
DATE ISSUED:	09-25-18

Plymouth Engineering, Inc.
P.O. Box 46 30 Lower Detroit Road
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Tel: (207) 257-2071 Fax: (207) 257-2130
info@plymouthengineering.com
www.plymouthengineering.com

DRAWINGS NOT SEALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION

SHEET 1 OF 1

ST1

SITE NOTES:

1. LOCATE EXTERIOR MENU SYSTEM AT 5th CAR FROM THE DRIVE THRU WINDOW, PREVIEW BOARD AT NEXT CAR.
2. CONCRETE PAD AT DRIVE THRU LOOP/DETECTORS SHOULD MATCH THE ADJACENT LOT SURFACE MATERIAL AS MUCH AS POSSIBLE-PROVIDE BLACK STAINED CONCRETE WHEN USED ADJACENT TO ASPHALT MATERIAL.
3. FOLLOW LOCAL REQUIREMENTS TO MEET MINIMUM EROSION & SEDIMENTATION CONTROL STANDARDS TO ENSURE PROJECT REDUCES EROSION, ELIMINATES STORM WATER RUNOFF FROM SITE, AND PROVIDES INLET PROTECTION DURING CONSTRUCTION. DOCUMENT PROTECTION METHODS AT 25%, 50%, AND 75% CONSTRUCTION STAGES WITH PHOTOGRAPHS.
4. GC TO COORDINATE W/ FRANCHISEE EXACT SIZE OF PAD FOR MENUBOARD, SPEAKER TOWER, CANOPY & ORDER CONFIRMATION BOARD - SEE WEBSITE FOR MOUNTING REQUIREMENTS & FOR COMPLETE INSTALLATION INFORMATION AND DETAILS, http://extranet.dunkinbrands.com
5. GC TO PROVIDE PVC CONDUIT FOR ALL GROUND LOOP LOCATIONS, SEE SITE PLAN, DETAILS & ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION ON LOOP REQUIREMENTS; SAW-CUT AT EXISTING LOCATION WHERE NECESSARY
6. REFER TO ELECTRICAL DRAWINGS FOR DRIVE THRU ELEMENTS CONDUIT AND TECHNOLOGY REQUIREMENTS.
7. REFER TO CIVIL ENGINEERED DRAWINGS & PLUMBING DRAWINGS FOR WATER SERVICE AND GAS SERVICE INFORMATION.
8. REFER TO CIVIL ENGINEERED DRAWINGS & ELECTRICAL DRAWINGS FOR ELECTRICAL SERVICE INFORMATION.

GENERAL NOTES:

1. LOOP PLACEMENT IS DEFINED IN TERMS OF WHERE THE VEHICLE ENGINE BLOCK WOULD BE OVER THE LOOP IF THE CENTER OF THE DRIVER'S SIDE WINDOW IS AT THE SERVICE POINT . THE GOAL IS TO ENSURE THERE IS ONLY ROOM FOR ONE VEHICLE BEHIND THE PREVIOUS LOOP AND THE MERGE POINT; THIS IS HOW SEQUENCING IS POSSIBLE.
2. SEE SITE PLAN, DETAILS & ELECTRICAL DRAWINGS FOR FURTHER INFORMATION ON CONDUIT LOCATIONS AND QUANTITY CORRESPONDING TO EACH DRIVE THRU SET UP OPTION.
3. SEE A0.2 FOR SITE FINISH MATERIAL SCHEDULE FOR TRAFFIC STRIPING PAINT.
4. SEE A3.2 FOR ALL MATERIALS NOT LISTED ON A0.3.

SPACE ALLOCATION & TRASH ENCLOSURE GUIDELINES :

1. PROVIDE CONCRETE PAD AND FENCE AROUND DUMPSTER. FENCE TO BE CHAIN LINK WITH VINYL SLATS.
2. DUMPSTER ENCLOSURE MUST ABIDE BY LOCAL COMMUNITY CODE.
3. GENERALLY, IF (2) 8-YARD TRASH DUMPSTERS ARE REQUIRED, DUNKIN BRANDS RECOMMENDS 16'X10' IF WOOD/FENCE ENCLOSURE OR 18'X10' IF CMU BLOCK ENCLOSURE. STANDARD 8-YARD DUMPSTER DIMENSIONS ARE NOMINAL 7'-0" (6'-10")W BY 7'-10"D.
4. (2) 8-YARD TRASH DUMPSTERS WILL NOT FIT INSIDE 12'-0"X10'-0" FENCED OR CMU BLOCK ENCLOSURE.

* **COORDINATE ALL GUIDELINES W/ CIVIL ENGINEER & FRANCHISEE PRIOR TO START OF CONSTR.**

DD GREEN NOTES

1) SITE PROTECTION; MEET MINIMUM STORMWATER PROTECTION STANDARDS, FOLLOWING LOCAL BUILDING CODE REQUIREMENTS. CONTRACTOR TO MAINTAIN THE PROTECTION METHODS REQUIRED THROUGHOUT CONSTRUCTION.
2) REGIONALLY FRIENDLY LANDSCAPING; SPECIFY LOW MAINTENANCE, REGIONALLY FRIENDLY LANDSCAPING SPECIES FOR ALL EXTERIOR LANDSCAPE.
3) EFFICIENT IRRIGATION SYSTEM; INCLUDE IRRIGATION CONTROLLER WITH RAINWATER SENSOR.

* **SEE CIVIL ENGINEER DRAWINGS FOR ADDITIONAL INFO.**

SIGN SCHEDULE

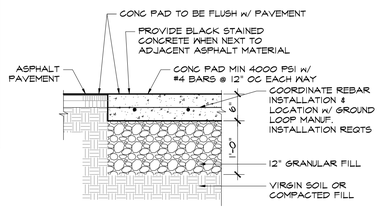
QTY	LOCATION	OVERALL DIMENSIONS	LETTERS	AREA
4	DIRECTIONAL SIGN	2'-10 1/2"L x 4'-10"H x 4"D	9"± H	2.75 SF
1	WAYFINDING SIGN (POST MOUNTED)	1'-6"L x 3'-8"H x 4"D	-	5.5 SF
1	PYLON	2'-6"L x 12'-0"H x 2'-1"D	10"± H	30± SF
1	CAUTION "MERGING" SIGN	TBD	TBD	TBD

LANE DELINEATORS NOTES

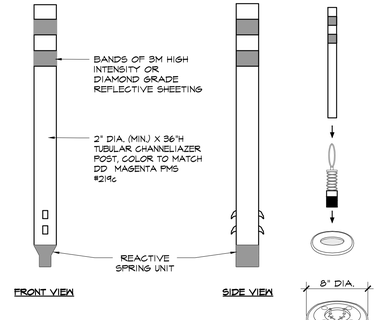
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. DELINEATOR CAN BE MECHANICALLY FASTENED OR INSTALLED WITH EPOXY ADHESIVE
2. POST SHALL BE CONSTRUCTED OF SEMI-FLEXIBLE HIGH IMPACT POLYMER RESISTANT TO: ULTRAVIOLET LIGHT, OZONE, AND HYDROCARBONS.
3. UNIT SHALL HAVE A REACTIVE SPRING ASSEMBLY TESTED TO 145LB. TENSION WITH STAINLESS STEEL CABLE.
4. DELINEATOR SHALL HAVE AN "ANTI-TWIST" FEATURE THAT ASSURES THE SIGN WILL RETURN TO ITS ORIGINAL POSITION AFTER IMPACT.
5. SHALL MEET M.U.T.C.D. SPECIFICATIONS.
6. NCHRP-350 APPROVED.
7. REFER TO NATIONAL ACCOUNTS FOR ADDITIONAL INFORMATION

XX-XX FINISH MATERIAL SCHEDULE - TRAFFIC STRIPING PAINT

CODE	MATERIAL	MANUFACTURER	PRODUCT NUMBER	DESCRIPTION/REMARKS
BC-03	BOLLARD COVER	IDEAL SHIELD	PANTONE 11C	"DARK GRAY" W/ METALLIC BAND
BC-04	BOLLARD COVER	IDEAL SHIELD	PANTONE 1375C	"ORANGE
TP-01	PAINT	SHERWIN WILLIAMS	PRO PARK	"WHITE" B47WD2494
TP-02	PAINT	SHERWIN WILLIAMS	PRO PARK	"BLUE" B47LD2022
TP-03	PAINT	SHERWIN WILLIAMS	PRO PARK	"YELLOW" B47YD2467
TP-04	PAINT	SHERWIN WILLIAMS	PRO PARK	"ORANGE" CUSTOM MIX B47YD2467 CGE* COLORANT OZ 32 64 128 W1-WHITE -- 6 1 -- R4-NEW RED 4 53 1 -- Y3-DEEP GOLD -- 06 -- 1
TP-05	PAINT	SHERWIN WILLIAMS	PRO PARK	"PINK" CUSTOM MIX B47RD2012 CGE* COLORANT OZ 32 64 128 W1-WHITE 6 -- -- -- L1-BLUE -- 6 -- --



8 AO.2 SECTION @ CONC PAD
SCALE: 3/4" = 1'-0"



5 AO.2 LANE DELINEATER DETAIL
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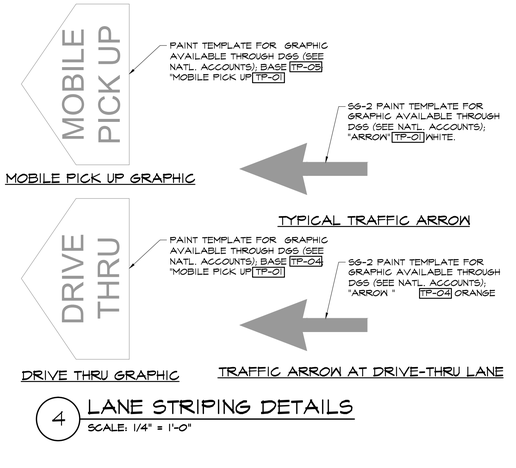

4 LANE STRIPING DETAILS
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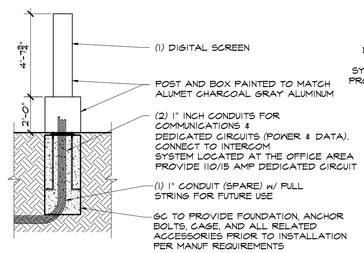

7 AO.2 PREVIEW BOARD DETAIL
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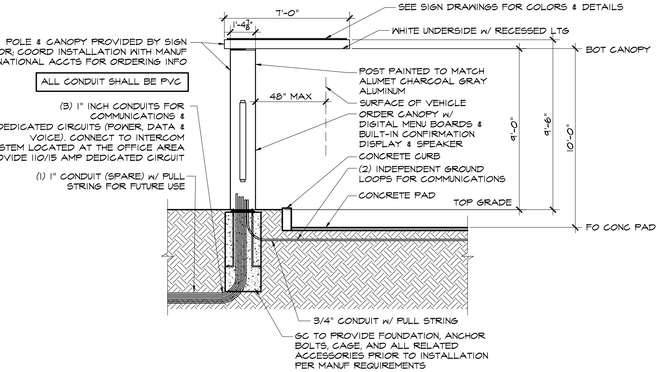

6 AO.2 MENU BOARD & SPEAKER TOWER DETAIL
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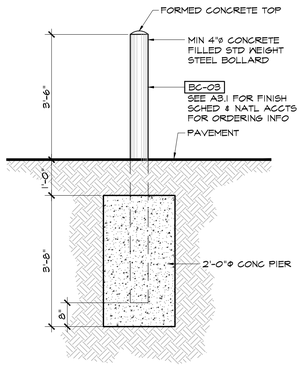
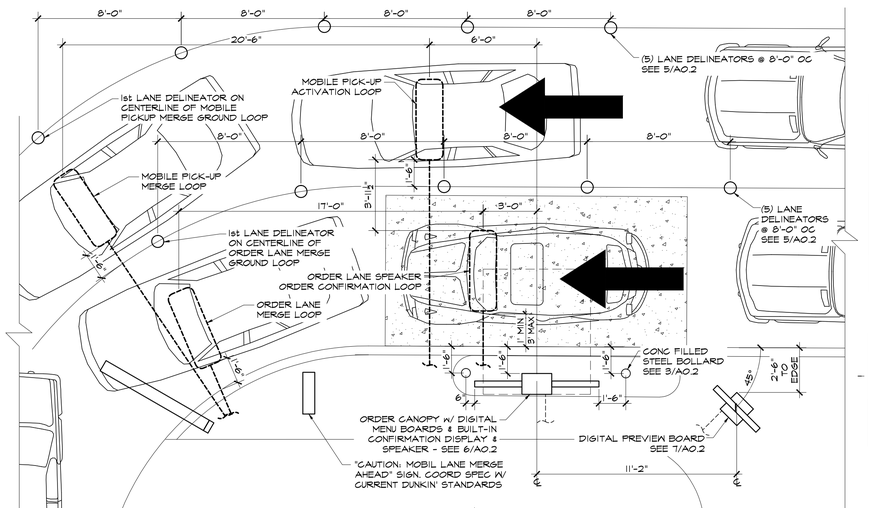
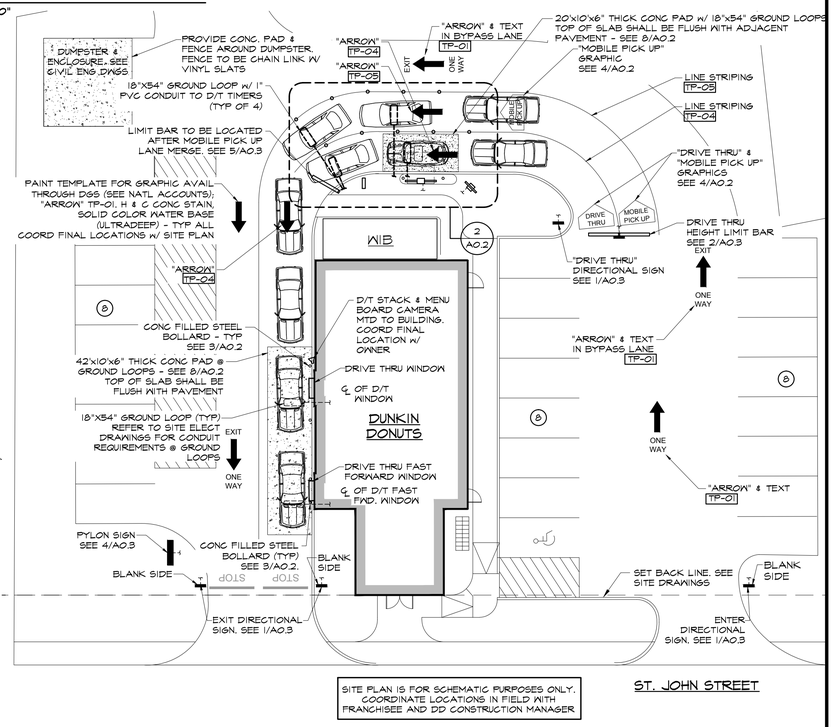


3 AO.2 BOLLARD DETAIL
SCALE: 1/4" = 1'-0"



2 AO.2 MENU BOARD LOCATION
SCALE: 1/4" = 1'-0"



SITE PLAN IS FOR SCHEMATIC PURPOSES ONLY. COORDINATE LOCATIONS IN FIELD WITH FRANCHISEE AND DD CONSTRUCTION MANAGER

1 SCHEMATIC SITE PLAN
SCALE: 1/16" = 1'-0"

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REVISIONS

NUMBER	REMARKS	DATE

PRELIMINARY
NOT FOR CONSTRUCTION

FOR REVIEW

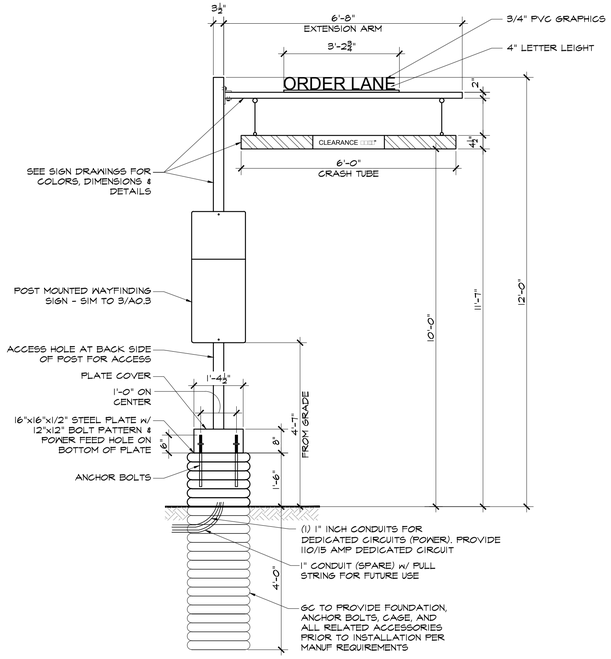
PROJECT TITLE
DUNKIN' BRANDS
[eat drink think]
PC# 356088
NEXTGEN IMAGE

325 ST. JOHN STREET
PORTLAND, ME 04105
Cumberland County

DRAWING TITLE
SCHEMATIC SITE PLAN, SCHEDULE & DETAILS

DATE	PROJ NO
NOV. 07, 2018	18047
DRAWN BY	CHECKED BY
ERM	JN

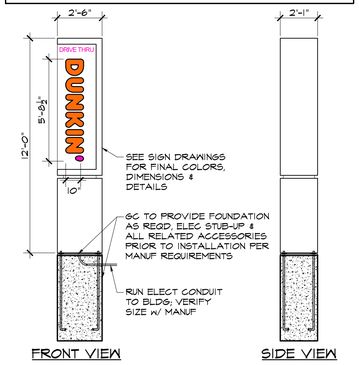
DRAWING NUMBER
A0.2



5 LIMIT BAR DETAIL
A0.2 SCALE: 1/4" = 1'-0"

PYLON SIGN NOTES

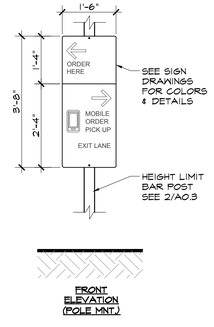
1) FACE TO BE FORMED CLEAR POLYCARBONATE, DECORATED SECOND SURFACE VINYL.
2) COFFEE CUP PORTION OF LOGO TO BE EMBOSSED - BALANCE OF LETTERS TO BE FLAT (NOT EMBOSSED).
3) VINYL COLORS TO BE: DD ORANGE 3M #3630-3128, DD MAGENTA 3M #3630-1374, DARK BROWN (ON CUP LOGO) 3M #3630-54.
4) FORMED "CAP-OVER" FACE FITS OVER ALUMINUM RETURNS PTD. TO MATCH BENJAMIN MOORE 2116-10 NIGHTSHADE SEMI-GLOSS FINISH.
5) ILLUMINATION: WHITE NICHIA LEDs. CHECK LOCAL ZONING CODES FOR INTERNAL ILLUMINATION ALLOWANCE
6) SEE NATIONAL ACCOUNTS FOR ORDERING INFORMATION.
7) SEE A3.2 FOR FINISH INFORMATION.



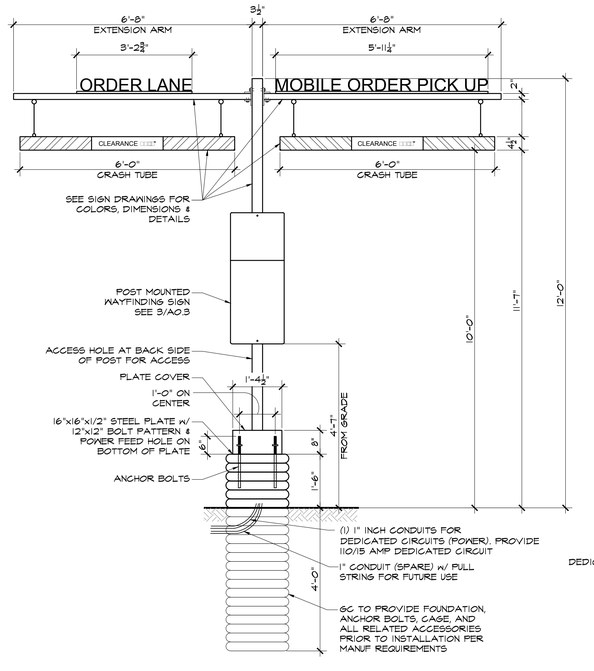
4 PYLON SIGN DETAILS
A0.2 SCALE: 1/4" = 1'-0"

WAY FINDING SIGN NOTES

1. SEE DUNKIN' BRANDS WEBSITE FOR COMPLETE INFORMATION AND DETAILS.
2. SINGLE SIDED FREESTANDING SIGN; AREA OF SIGN = 9 SF.
3. SINGLE SIDED POLE MOUNTED; AREA OF SIGN = 5.5 SF.
4. LOCATE WAY FINDING SIGN PER SITE PLAN. VERIFY FINAL LOCATIONS W/ OWNER & DUNKIN' DONUTS CM PRIOR TO ORDERING.
5. GC TO PROVIDE FOUNDATION AND ALL RELATED ACCESSORIES PRIOR TO INSTALLATION PER MANUF REQUIREMENTS FOR FREE STANDING SIGN & POLE MOUNTED SIGN.



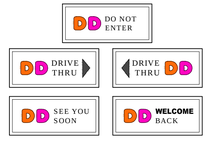
WAYFINDING SIGN DETAIL
3 A0.3 SCALE: 1/2" = 1'-0"



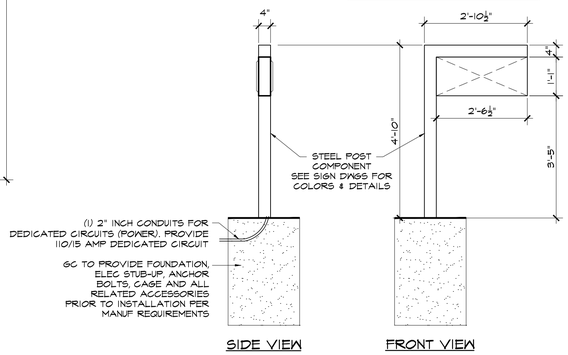
2 LIMIT BAR DETAIL
A0.2 SCALE: 1/4" = 1'-0"

DIRECTIONAL SIGN NOTES

1) SEE DUNKIN' BRANDS WEBSITE FOR COMPLETE INFORMATION AND DETAILS.
2) AREA OF SIGN = 2.75 SF.
3) LIGHTING = INTERNALLY ILLUMINATED. VERIFY WITH TOWN CODE & PROVIDE NON-INTERNAL ILLUMINATED SIGNS AS REQD.
4) LOCATE DIRECTIONAL SIGNS PER SITE PLAN. VERIFY FINAL LOCATIONS W/ OWNER & DUNKIN' DONUTS CM PRIOR TO ORDERING.



DIRECTIONAL SIGN FACES



1 DIRECTIONAL SIGN DETAILS
A0.2 SCALE: 1/4" = 1'-0"

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REVISIONS

NUMBER	REMARKS	DATE

PRELIMINARY
NOT FOR CONSTRUCTION

FOR REVIEW

PROJECT TITLE

DUNKIN' BRANDS
[eatdrinkthink]
PC# 356088
NEXTGEN IMAGE

325 ST. JOHN STREET
PORTLAND, ME 04105
Cumberland County

DRAWING TITLE

SITE DETAILS

DATE	PROJ NO
NOV. 07, 2018	18047
DRAWN BY	CHECKED BY
AH	JN

DRAWING NUMBER

A0.3