

1. Legal Ad

Documents:

[PB LEGAL AD 7-25-17.PDF.PDF](#)

2. Agenda

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3. India Street Form Based Code (ISFBC)

3.I. Memo And Attachment

Documents:

[ISFBC \(MEMO AND ATTACHMENT\).PDF](#)

4. 990 Ocean Avenue (Maintenance)

4.I. Report

Documents:

[OCEAN AVE. - 990 \(REPORT - MAINTENANCE\).PDF](#)

4.II. Report Attachments

Documents:

[OCEAN AVE. - 990 \(REPORT ATTACHMENTS - MAINTENANCE\).PDF](#)

4.III. Applicants Submittal

Documents:

[OCEAN AVE. - 990 \(APPLICANTS SUBMITTAL - MAINTENANCE\).PDF](#)

4.IV. Plans

Documents:

[OCEAN AVE. - 990 \(PLANS - MAINTENANCE\).PDF](#)

5. 990 Ocean Avenue (Solar Energy)

5.I. Report

Documents:

[OCEAN AVE. - 990 \(REPORT - SOLAR ENERGY\).PDF](#)

5.II. Report Attachments

Documents:

[OCEAN AVE. - 990 \(REPORT ATTACHMENTS - SOLAR ENERGY\).PDF](#)

5.III. Applicants Submittal

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5.IV. Plans

Documents:

[OCEAN AVE. - 990 \(PLANS - SOLAR ENERGY\).PDF](#)

6. 88 Walnut Street

6.I. Report

Documents:

[WALNUT ST. - 88 \(REPORT\).PDF](#)

6.II. Report Attachments

Documents:

[WALNUT ST. - 88 \(REPORT ATTACHMENTS\).PDF](#)

6.III. Applicants Submittal

Documents:

[WALNUT ST. - 88 \(APPLICANTS SUBMITTAL\).PDF](#)

6.IV. Plans

Documents:

[WALNUT ST. - 88 \(PLANS\).PDF](#)

**LEGAL ADVERTISEMENT
PORTLAND PLANNING BOARD MEETING
REVISED AGENDA**

The Portland Planning Board will hold a meeting on Tuesday, July 25, 2017, Council Chambers, 2nd Floor, City Hall, 389 Congress Street.

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

Workshop – 5:00 p.m. (note change in time)

- i. Zoning Map and Text Amendments to India Street Form Based Code (ISFBC), City of Portland, Applicant. (5:00 estimated time). The Board will hold a workshop to consider Land Use Code text and map amendments to Division 15.2 Section 14-275 (IS-FBC India Street Form-based Code zone) to clarify intent, revise some dimensional standards, add a waiver provision, and revise the extent of the boundary of the Urban Transition sub district between Franklin and Hampshire streets.

Public Hearing – 7:00 p.m.

- i. Level III Site Plan: 990 Ocean Avenue Landfill; Maintenance to Landfill Cap; City of Portland, Applicant. (7:00 – 7:45 p.m. estimated time) The Board will hold a public hearing on proposed maintenance work which will raise, regrade and revegetate the top section of the landfill cap in order to limit settlement and maintain the integrity of the landfill cap, as required by Maine DEP. The site is within the Recreational Open Space Zone and will be reviewed for compliance with the site plan ordinance.
- ii. Conditional Use (Solar Energy Generation Ordinance) and Level I Site Alteration; 990 Ocean Avenue Landfill; Sunfill North, LLC, Applicant. (7:45 – 8:30 p.m. estimated time) The Board will hold a public hearing on the proposed solar array (2,800 panels) to be installed on the top section of the landfill cap, to include associated fencing and a new CMP service to provide a grid connection. The project is part of a partnership between the City and ReVision Energy to generate electricity which will be credited to the City of Portland. The proposal is within the Recreational Open Space Zone and will be reviewed for compliance with the Conditional Use (Solar Energy Generation Ordinance) and Site Plan ordinances.
- iii. Level III Subdivision and Site Plan Review; 88 Walnut Street; JP Sheridan, LLC., Applicant. (8:30 p.m. estimated time) The Portland Planning Board will hold a public hearing to consider a proposed 3 unit building with 2 two-bedroom units and 1 three-bedroom unit. Parking for 3 vehicles is provided in a ground-level garage. The lot is on the corner of Walnut and Sheridan Street and is located in the B-2b zone. The proposal will be reviewed under Portland's subdivision and site plan ordinances.

ELIZABETH BOEPPLE, CHAIR – PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE

PLANNING BOARD



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

AGENDA PORTLAND PLANNING BOARD MEETING

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BREAK FOR DINNER

PUBLIC HEARING – 7:00 p.m.

1. **ROLL CALL AND DECLARATION OF QUORUM**
2. **COMMUNICATIONS AND REPORTS**
3. **REPORT OF ATTENDANCE AT THE MEETINGS HELD ON JULY 18, 2017:**

Afternoon Site Walk: Boepple, Eaton, Mazer, Morrisette, Stanley, Whited (arrived at 5:10 p.m.) present; Dundon, absent and Mazer recused.

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

4. **REPORT OF DECISIONS AT THE MEETINGS HELD ON JULY 18, 2017:**

- i. Proposed Amendments to Chapter 30, Affordable Housing; City of Portland, Applicant.
Morrisette moved and Eaton seconded a motion to find the proposed text amendment to add R-7 as an eligible zone for affordable housing incentives in Division 30 Affordable Housing, Section 14-488, consistent with the comprehensive plan and to recommend adoption to the City Council.
Vote: 6-0, Dundon absent.

- ii. Proposed Amendments to Division 18.5, Waterfront Port Development Zone; City of Portland, Applicant. Morrisette moved and Eaton seconded a motion to find the proposed text amendments to Division 18.5 Waterfront Port Development Zone consistent with the comprehensive plan and to recommend adoption to the City Council. Vote: 6-0, Dundon absent.

5. NEW BUSINESS

- i. Level III Site Plan: 990 Ocean Avenue Landfill; Maintenance to Landfill Cap; City of Portland, Applicant. (7:00 – 7:45 p.m. estimated time) The Board will hold a public hearing on proposed maintenance work which will raise, regrade and revegetate the top section of the landfill cap in order to limit settlement and maintain the integrity of the landfill cap, as required by Maine DEP. The site is within the Recreational Open Space Zone and will be reviewed for compliance with the site plan ordinance.
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To: Beth Boepple, Chair and Members of the Portland Planning Board

From: Caitlin Cameron, Urban Designer

Date: July 21, 2017

Re: India Street Form-based Code District – Workshop 1

Meeting Date: July 25, 2017

I. Introduction

The intent of the Form-Based Code (IS-FBC) text and map amendments is to address three issues:

- Items in the code where there is a need for clarity of interpretation to meet the original intent
- Adding content that addresses oversights or omissions in the original zoning
- Revising dimensional requirements that are too difficult to meet or are inappropriate

Staff is requesting revisions to the ISFBC based on the experience of applying the code to Site Plan and Building Permit applications over the last year and a half. As a new code with a format different from the other zones in Chapter 14, there are some parts of the code that are unclear or could be interpreted differently from the original intent. The amendments proposed seek to address these interpretation issues and provide clarity to the zoning language and Regulating Plan. Additionally, the proposed changes bring all Building Design Standards that have dimensional requirements into the zoning code. Finally, a waiver provision is proposed to add some flexibility to the zone.

This is the first Planning Board Workshop on the draft revisions to the zoning code and subdistrict map.

No public comment has been received to date. Staff sent proposed amendments to the former members of the India Street Neighborhood Advisory Committee and interested parties list for review and comment. Staff also received inquiries from two property owners on Hampshire Street with questions about the nature of the map amendment.

II. Summary of Revisions (Attachment 1)

- a. Definitions – Some definitions removed as superfluous
Removed = Alteration, Buildable Area, Expression Line, Lot Layer,
- b. Definitions Illustrated
Removed = Lot Layer illustration
Revised = label explaining Maximum Building Length
- c. Regulating Plan

- i. Revise ISFBC boundary to reflect 2016 map amendment
 - ii. Depict new historic landmarks
 - iii. Extend UA subdistrict to occupy whole length of Congress Street
 - iv. Define UN boundary on Federal Street, and Newbury Street to end 50' from Hampshire Street line – the original zone shows the UT boundary drawn two parcel depths in from Franklin Street without written description of the boundary. Due to the changing nature of the parcel lines, staff is recommending that this boundary where UN ends and UT starts should be better defined and independent of the parcel lines and to reflect the depth of one lot facing Hampshire Street. The revisions include adjustment of the drawing and the addition of a note defining this boundary (see LEGEND).
- d. General Development Standards –
 - i. Frontage Requirements
 - 1. Add a minimum lot frontage of 35' – to ensure that new subdivisions result in buildable lots. This change would result in approximately 24 legally non-conforming lots.
 - 2. Additional Building Length – “module” is better defined
 - ii. Setbacks
 - 1. Side Yard Setbacks for Small Lots – clarify that exemption applies to any frontage of less than 35', rather than total frontage. Again, this change affects approximately 24 existing lots.
 - 2. Reduced Side Yard Setbacks – clarify that this may only be applied to one side yard for a corner lot
 - iii. Building Additions
 - 1. Building Addition Length – clarify that building length maximums apply except when the existing building is legally non-conforming in length and addition has street frontage.
 - 2. Building Addition Height – clarify that building height minimums and maximums apply except when the existing building is legally non-conforming in number of stories.
 - iv. Height Standards
 - 1. Applicability – clarify that height bonuses are allowed on buildings with frontage facing a UT, UN street, or Congress Street.
 - 2. Provision 3 – add requirement that 20% means number of units and that units must be of equivalent size as market rate units
- e. Subdistrict Dimensional Requirements - remove references to LOT LAYERS; Add blank façade length requirements
 - i. Frontage Requirements
 - Add = Blank Façade length requirements from BDS
 - ii. Height Standards
 - 1. UA Ground Story Height – 12' clear requirement removed
 - iii. Parking Standards
 - 1. Lot Layers translated to setbacks
- f. Corner Conditions
 - i. Lot Layers translated to setbacks

- ii. UA Ground Story Height – requirement removed
- g. Additional Diagrams – Existing diagrams were updated and new diagrams added:
 - i. BUILDING ADDITION diagram – clarifying language regarding length + height requirements
 - ii. Building Length – Lot Layers translated to setbacks
- h. Other Considerations –
 - i. Building Design Standards (BDS)
 - 1. Standard 3.3 Blank Facades = add BLANK FAÇADE length maximums to the zone
 - 2. Standard 7.2 = revised to say “All **simple** roof forms are allowed in all Subdistricts.”
 - ii. Add a waiver provision for design standards within the code – Due to site constraints, some requirements have been difficult for projects to achieve such as number of modules for additional building length, building entry elevation, length of blank façade, entry orientation. Staff suggests that these aspects of the IS-FBC be eligible for a waiver under specific conditions.

Attachments

- 1. Ch. 14.275.7 India Street Form-based Code Draft text and map amendments

City of Portland
Code of Ordinances
Sec. 14-275.1

Land Use
Chapter 14
Rev. 07-25-2017

DIVISION 15.2. INDIA STREET FORM-BASED CODE ZONE (IS-FBC)

Sec. 14-275.1 Purpose.

The India Street Form-based Code is different than traditional zoning, placing the primary emphasis on a building's physical form and its relationship to the street, and de-emphasizing land use. The intent of the India Street Form-based Code Zone is to establish a zoning district that encourages a vibrant, walkable, mixed-use urban district, preserves and values the existing historic neighborhood fabric, and fosters and supports local businesses and residential areas. The components of a Form-Based Code include the Guiding Principles, REGULATING PLAN, Subdistricts, General Development Standards, Dimensional Requirements, BUILDING DESIGN STANDARDS, Diagrams, and Definitions.

The goal of the India Street Form-based Code is the creation and preservation of an active and human-scale public realm and the reinforcement of existing neighborhood character through good street space design.

(a) GENERAL GUIDING PRINCIPLES: The General Guiding Principles set forth here shall be applicable to all subdistricts within the India Street Form-based Code Zone.

1. The street is a coherent space, with consistent building and streetscape character on both sides of the street. This agreement of buildings and streetscape across the street contributes to a clear public space and district identity.
2. The street wall is visually well defined. Land should be clearly public or private. Buildings contribute to the vital and safe public space while providing a clear boundary to the private, protected realm.
3. Street walls are engaged with the street environment. Buildings are inviting places that interact with and contribute to the street vitality. Inactive edges, vehicle storage, garbage, and mechanical equipment should be kept away from the street. Shared infrastructure, to the extent practicable, including, but not limited

to, service alleys, parking areas, stormwater treatment, public transportation facilities, and driveways, shall be utilized.

4. Buildings are designed for the urban environment. Buildings must be designed for the urban situation within the subdistrict which often includes mixed-uses. Buildings are positioned near the street and FACADES are oriented to the street.
5. Respect historic character. If a property is within the India Street Historic District, Article IX Historic Preservation is applicable. New construction, BUILDING ADDITIONS, or ALTERATIONS alterations in the India Street Historic District shall reflect and complement the character defining features and elements of the existing historic development to which it is visually related.

(Ord. 83-15/16, 11-2-2015)

Sec. 14-275.2. Applicability.

The requirements set forth in this Division shall apply to all new development, primary and accessory structures, including BUILDING ADDITIONS within the India Street Form-based Code Zone as designated on the India Street REGULATING PLAN. The Planning Authority may grant a partial waiver from the following zoning requirements:

- (a) Building orientation
- (b) BLANK FAÇADE length (max)
- (c) Building entry frequency, orientation, or elevation
- (d) Garage door frontage requirements
- (e) Additional Building Length - ground floor partition or module requirements

if it can be demonstrated that the waiver meets the intent of the ISFBC zone and that at least one of the following applies:

- (a) The proposed alternative better achieves the zone intent; or
- (b) The zone intent will not be met by applying the requirement in this particular circumstance; or
- (c) There is a legal or practical necessity for unique conditions; or
- (d) Unique site factors make the zoning requirement impractical or cost prohibitive.

The following waiver conditions apply:

- a. The waiver shall be of the least adjustment reasonable necessary to satisfy the practical, programmatic, or functional needs of the proposed development; and
- b. The applicant shall demonstrate the need for the waiver to the satisfaction of the Planning Authority.

(Ord. 83-15/16, 11-2-2015)

Sec. 14-275.3. Establishment of subdistricts.

The India Street Form-based Code Zone as shown on the REGULATING PLAN is divided into three subdistricts:

- (a) Urban Neighborhood (UN) Subdistrict;
- (b) Urban Transitional (UT) Subdistrict; and
- (c) Urban Active (UA) Subdistrict.

(Ord. 83-15/16, 11-2-2015)

Sec. 14-275.4. Definitions.

Terms used throughout this India Street Form-based Code Zone may be defined in Section 14-47 or elsewhere in Article III, Zoning. Terms not so defined shall be accorded their commonly accepted meanings. In the event of any conflict between the definitions in this section and those in Section 14-47, or any other sections of Article III, Zoning, the Subdivision Rules and Regulations, or any other local land use ordinances, rules or regulations, those of this India Street Form-based Code Zone shall take precedence.

~~**ALTERATION** means a change or rearrangement in the structural supports, exterior appearance, or removing from or otherwise affecting the exterior appearance of a structure.~~

BUILDING ADDITION means any increase to footprint or volume of an existing structure. See Table 14.275.4c. Building - Principal & Accessory

~~**BUILDABLE AREA** means the area enclosed by the front, side, and rear yard setbacks and limited by lot coverage.~~

BUILDING, ACCESSORY means detached structure that is incidental and subordinate in area and extent, and/or use to the principal building(s) on the property. A lot may have more than one accessory building. See Table 14.275.4c. Building - Principal & Accessory.

BUILDING, PRINCIPAL means the main structure(s) on a lot having the predominant area and extent, and/or use. A lot may have more than one principal building. See Table 14.275.4c. Building - Principal & Accessory.

BUILDINGS, ATTACHED means two or more independent buildings that share at least one common PARTY WALL but have full building separation and independent PRINCIPAL ENTRIES; not free-standing. Attached buildings may or may not have common ownership.

BUILDING DESIGN STANDARD (BDS) means the basic design parameters governing building form, including intent, guidelines, and standards for architectural elements such as proportion, articulation, fenestration, entries, roof lines, and materials.

ELEVATION means an exterior wall of a building not along a frontage line. See FAÇADE and Table 14.275.4~~de~~. Frontage & Lot Lines.

ENTRANCE, PRINCIPAL means the main point of access for pedestrians into a building. A building may have more than one principal entrance.

~~**EXPRESSION LINE** means a line prescribed at a certain level of a building for the major part of the width of a FAÇADE, expressed by a variation in material or by a limited projection such as a molding or balcony.~~

FAÇADE means any exterior wall of a structure exposed to public view from a public right-of-way. See ELEVATION and Table 14.275.4~~de~~. Frontage & Lot Lines.

FAÇADE, BLANK means a building façade that contains expanses of wall area with no windows, no entrances, no articulation, and no other elements or features, or is otherwise undifferentiated.

GREEN ROOF means a roof of a building that is partially or completely covered with vegetation and designed to meet the Maine Stormwater Best Management Practices Manual standards and recommendations. A green roof installation must serve the purpose

of reducing stormwater runoff through retention or slowing and consist of an assembly that at a minimum includes a root repellent system, a drainage system, a filtering layer, a growing medium and plants, and shall be installed on a waterproof membrane. The vegetated area of a green roof may be considered pervious for zoning impervious calculations.

~~**LOT LAYER** means a range of depth of a lot within which certain elements are permitted. See Table 14.275.4d. Lot Layers.~~

MID-BLOCK PERMEABILITY means a continuous, open-air corridor at least 20' in width that connects two streets or public rights-of-way and physically provides a break in the street wall. The corridor must be unobstructed and open to the sky for the majority of its length.

PARTY WALL means any partition wall common to two adjacent or attached buildings.

REGULATING PLAN means a zoning map that shows the boundary of the area and subdistricts subject to regulation by the India Street Form-based Code.

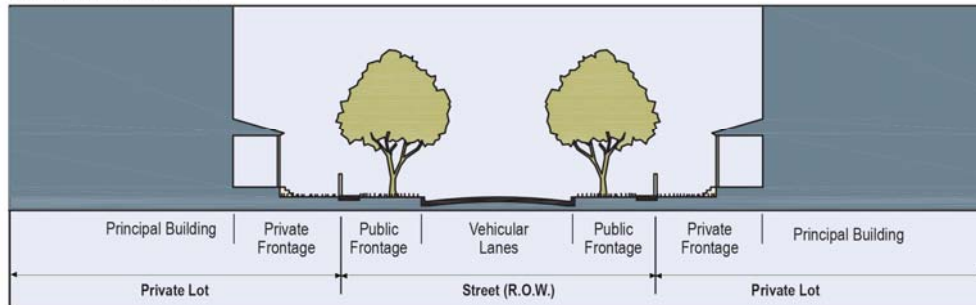
STEPBACK means a building setback of a specified distance measured from the ground floor building face that occurs at a prescribed number of stories or height above the ground and excludes the minimum necessary housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy.

YARD, SIDE means a yard adjoining a side lot line extending from the front yard to the rear yard, the width of which shall be the shortest horizontal distance between the side lot line and any structure. On corner lots, non-frontage yards shall be considered side yards. See Table 14.275.4b. Setback Designations.

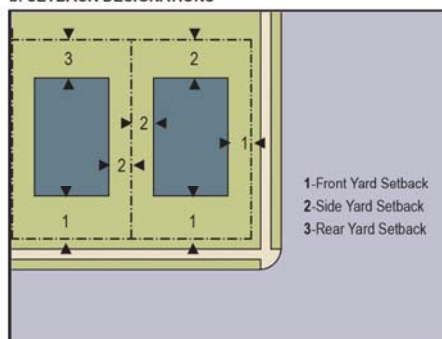
ZERO LOT LINE means the location of a structure on a lot such that one or more of the structure sides rests directly on a lot line. See Table 14.275.4~~de~~. Frontage & Lot Lines.

TABLE 14.275.4 DEFINITIONS ILLUSTRATED

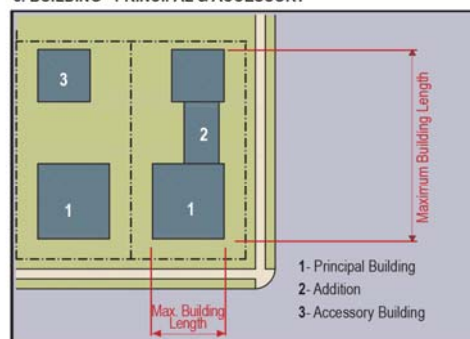
a. STREETS & FRONTAGES



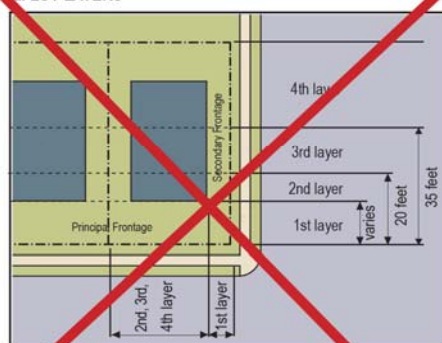
b. SETBACK DESIGNATIONS



c. BUILDING - PRINCIPAL & ACCESSORY

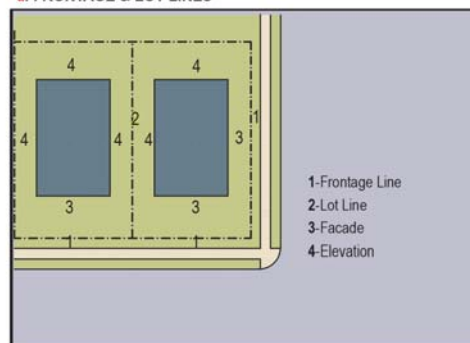


d. LOT LAYERS



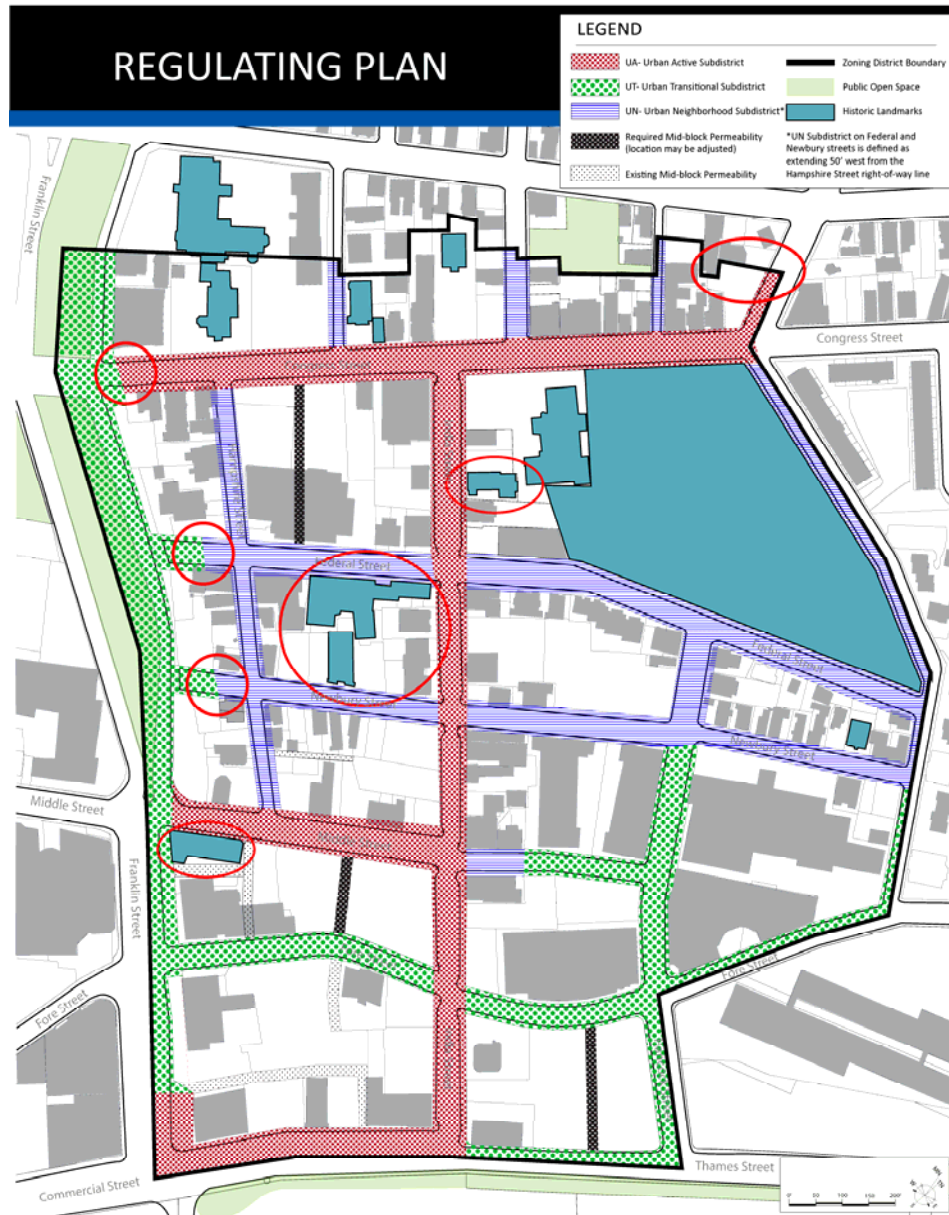
(Ord. 83-15/16, 11-2-2015)

d. FRONTAGE & LOT LINES



Sec. 14-275.5. Regulating Plan.

The REGULATING PLAN shows the location of the zone boundary and subdistricts subject to regulation by the IS-FBC zone.



Sec. 14-275.6. General development standards.

The following standards apply to all subdistricts unless expressly stated otherwise.

(a) *Prohibited uses* – uses not to be established in the India Street Form-based Code Zone include:

1. Correctional facilities;
2. Cremation facilities;
3. Drive-through facilities;
4. High-impact industrial uses, including industrial uses that are prohibited in the IL zone, specifically Section 14-233(c), (e - y), (aa);
5. Major/minor auto-service station;
6. Truck terminals;
7. Waste related services; and
8. Storage and parking facilities for Class 1 flammable and combustible liquids (having an aggregate total of more than 100 gallons) but excluding storage that is part of a motorized vehicle or pleasure craft facility.

(b) *Siting standards.*

1. MID-BLOCK PERMEABILITY.
 - a. Lots with frontage on two streets roughly parallel to Commercial/Thames Street, for each and every 200 feet in street line length of lot, a full break between structures of at least 20 feet in width shall be provided roughly perpendicular to Commercial/Thames Street and within the middle third of the applicable street frontage. (see Table 14.275.7a. Mid-Block Permeability)

- b. Is encouraged in any location that connects existing public or private alleys, passages, or streets.
- c. Any development providing MID-BLOCK PERMEABILITY with public access between two streets is eligible for one (1) additional story of up to 12' in height (see Sec. 14-275.6(c) Height Standards). Public access shall be defined through a legal agreement such as an easement or license.
- d. Refer to REGULATING PLAN for identified required MID-BLOCK PERMEABILITY locations.

2. Frontage requirements—

- a. Minimum street frontage = 35'
- b. Additional Building Length is allowed beyond the maximum building length under the following circumstances and according to the table below:

1. ATTACHED BUILDINGS: An unlimited number of ATTACHED BUILDINGS having up to 30' street-facing building length is allowed. A PARTY WALL condition is required at least every 30' and for the entire height of each building. (see Table 14.275.7d Additional Building Length - ATTACHED BUILDINGS).

2. Ground Floor Partitions: Additional building length is permitted with the provision of ground floor partitions where the following conditions are met: (see Table 14.275.7f Additional Building Length - Ground Floor Partitions)

- i. Partitions must extend from the FAÇADE at least 2/3rds of the building depth.
- ii. Partitions must be architecturally expressed on the building exterior.
- iii. Each module created by partition must have at least one functional, street-facing entry.

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iv. Modules created by partition shall be sized to have reasonable function and proportion in relation to overall building length.

~~iv.~~ In the UA subdistrict, number of modules are required based on building length:

Building length >50' but <100' = at least 2 modules

Building length >100' but ≤150' = at least 3 modules

3. Massing Variation: Additional building length is permitted where at least 30% and up to 40% of the total FACADE building length is set back ~~to the 3rd LOT LAYER~~ (at least 20') (see Table 14.275.7e Additional Building Length - Massing Variation).

4. Structured Parking Exception: Additional building length for one FACADE without partition walls is allowed for the use of ground-level structured parking.

Additional Building Length				
Subdistrict	ATTACHED BUILDINGS	Ground Floor Partitions	Massing Variation	Structured Parking Exception
UN	unlimited run	Not allowed	Not allowed	Not allowed
UT	unlimited run	200' max. length; 2 modules	200' max. length	200' max. length
UA	unlimited run	150' max. length; <u>Up to 3</u> modules	Not allowed	150' max. length

3. Setbacks.

a. Side Yard Setbacks for Small Lots - Lots with a street frontage of less than 35' are not required to have side yards.

b. Where new construction or BUILDING ADDITION creates a side yard of less than 5', a

maintenance easement is required where a combination of the side yard and easement must be at least 5'. PARTY WALL conditions are exempt from providing a maintenance easement.

- c. Building FACADES within 10' of a corner are exempt from setback requirements in order to allow special corner architectural treatments.
- d. ATTACHED BUILDINGS on Individual Lots - Subdivision developments consisting of horizontally attached buildings on individual lots are not required to have side yards between buildings where a PARTY WALL condition will exist, but shall be required to meet the applicable side yard requirements at the external and internal subdivision lot boundaries between buildings that are not attached to each other.

4. Landscaping and screening.

- a. Surface parking areas shall be screened from view from sidewalks, public-right-of-ways, and public open spaces using landscaping, walls, fencing, or a combination thereof.
- b. Wall/Fence Dimensional Requirements

Wall/Fence Dimensional Requirements		
LOT LAYER	Height	Visual Permeability
1 ST	6' max.	Required above 2' from sidewalk grade
2 ND - 4 TH	8' max.	n/a

5. BUILDING ADDITIONS.

- a. BUILDING ADDITIONS which exceed the footprint of the existing building to which it is an addition or which exceeds 50,000 square feet shall be subject to Level III Site Plan review.

b. Exemptions

1. If the existing building is legally non-conforming in maximum building length on a street frontage, a BUILDING ADDITION may not add to the non-conformity. A BUILDING ADDITION is exempt from the maximum building length if it extends towards the street from that non-conforming building length in which case the BUILDING ADDITION length may match but not exceed the length of the existing building to which it is an addition. ~~All other Subdistrict Dimensional Requirements shall apply.~~ (See Table 14.275.7b. Addition)
2. If the existing building is legally non-conforming in number of stories, BUILDING ADDITIONS are exempt from story minimums or maximums in order to ~~may~~ match existing building in number and height of stories. All other Subdistrict Height Standards shall apply including height minimum and maximums in feet.

(c) Height standards.

1. Height bonus.

a. Applicability:

1. If ~~principal~~any lot frontage faces a UT street, UN street, or Congress Street, then the building is eligible for a height bonus.
2. Only one height bonus may be applied per structure.

b. One (1) additional story of up to 12 feet in height is allowed if one of the following provisions is met:

1. For residential development with residential density equal to or greater than 150 dwelling units per acre (density may be achieved with the bonus floor);
2. For any development providing a GREEN ROOF, where:

i At least 50% of the cumulative lot area is pervious; and

ii At least 50% of the cumulative roof area is a GREEN ROOF. GREEN ROOF area may be applied towards the 50% lot area requirement.

3. For residential development where 20% of the number of units meets the definition of either "Workforce Housing Unit for Sale" or "Low-income Housing Unit for Rent" as per Section 14-485 and shall meet the equivalency standards as per Section 14-485.

Sub-district	Height Bonuses						
	Max. Pre-bonus Height	MID-BLOCK PERMEABILITY (publicly accessible)	Res. Density	GREEN ROOF	Afford. Housing	Max. Height w/ Bonus	Min. Bonus Floor Stepback *
UN	45' and 4 stories	n/a	n/a	n/a	1 story Up to 12'	57' up to 5 stories	15'
UT	65' and 6 stories	1 story Up to 12'	1 story Up to 12'	1 story Up to 12'	1 story Up to 12'	77' up to 7 stories	15'
UA (Congress Street only)	50' and 4 stories	1 story Up to 12'	1 story Up to 12'	1 story Up to 12'	1 story Up to 12'	62' up to 5 stories	15'

*measured from the ground floor building edge facing any public right-of-way

(d) Parking standards.

- Parking shall be provided as per Division 20 Off-Street Parking of Chapter 14 Land Use Code.
- Structured parking must meet the BDS for *Structured Parking* (see *City of Portland Design Manual*).

3. In the case of a BUILDING ADDITION, non-conforming existing surface parking may remain. In the case of new construction, surface parking must be brought into conformance with IS-FBC standards.

(Ord. 83-15/16, 11-2-2015)

Sec. 14-275.7. Subdistrict dimensional requirements.

- (a) Urban Neighborhood (UN) subdistrict.

Intent: The intent of this subdistrict is to maintain and promote a small-scale, less active urban fabric. Buildings may be more private in character and have smaller footprints with building types including, but not limited to, single-family, rowhouses, duplexes, triple-deckers, and double-triples. Building frontages may be less transparent and entries may be raised above sidewalk level with frontage types including raised, recessed doorways, porches, and stoops. The streetscape has variable setbacks and landscaping with many buildings within one block and streets tend to be narrow.

UN

SITING STANDARDS

Orientation - Principal Frontage	determined by applicant
Lot Coverage	90% max
FRONTAGE REQUIREMENTS (1st LOT LAYER)	
Building Length - Principal facade	50' max.
Building Length - Secondary fac.	50' max.
BLANK FACADE length (max)	15'
Additional Building Length	(see also Table 14.275.7)
ATTACHED BUILDINGS	unlimited run
Ground Floor Partitions	not allowed
Massing Variation	not allowed
Structured Parking Exception	not allowed

SETBACKS

Principal Building	
(a) Front Yard (1st LOT LAYER)	5' min.
Setback Applicability (see Table 14.275.7 c.)	75% of total building length must meet front yard setback
(b) Side Yard*	5' min. - May be reduced to zero provided that the cumulative side yards are not less than 10'
(c) Rear Yard	10' min.
Accessory Building Front Yard	
Side Yard	5' min.
Rear Yard	5' min.

BUILDING ENTRIES (SEE ALSO BDS)

Frequency at frontage	at least 35'
Principal Entries	
Orientation	any orientation allowed
Elevated Stoop (> 1 step)	allowed

HEIGHT STANDARDS

Principal Building	
Building Height Min.	25', at least 2 stories
Building Height Max.	45', up to 4 stories
Ground-Story Height	n/a
Accessory Building	
Building Height Max.	25'

PARKING STANDARDS

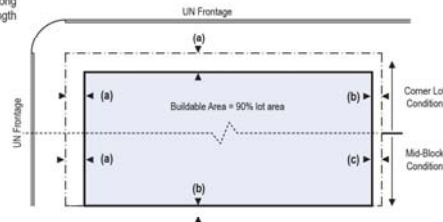
Surface Parking Location	35' min. setback from street
Within Side Yard	20' max in width per lot, may not exceed 50% of frontage length
Rear Yard	4th LOT LAYER only
Garage at frontage (attached or detached)	
Garage Door Setback (min)	2nd LOT LAYER 5'
Garage Door Opening (max)	9' up to 40% of facade length
	20' max. limit

Notes and Exceptions

* Reduced side yards and zero lot lines are allowed under certain conditions (see Sec. 14.275.6(b) 3. Setbacks)

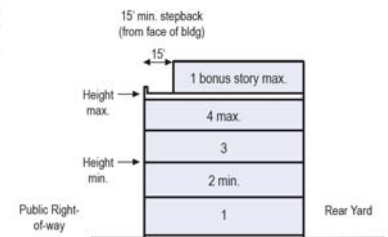
SITING STANDARDS

- The FACADES and ELEVATIONS of Principal Buildings shall be distanced from the lot lines as shown.
- FACADES shall be built along the frontage lines to the length specified in the table.



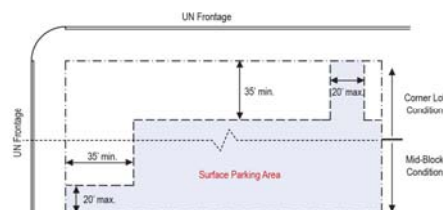
HEIGHT STANDARDS

- Height shall be measured as specified in Sec. 14-47 Definitions "Building, height of."
- Number of Stories excludes attics and raised basements.



PARKING STANDARDS

- Surface parking areas may be provided within the shaded area shown.



(b) Urban Transitional (UT) subdistrict.

Intent: The intent of this subdistrict is to encourage higher density, mixed-use building types that accommodate any use. Building frontages are a mix of activity level, have larger footprints, and the most flexibility of height and scale. Building ground floor spaces tend to accommodate flexible and changing uses with frontage types including doorways, forecourts, arcades, and storefronts. The streetscape may be less active than the UA subdistrict with wide sidewalks, street trees, and setbacks and stepbacks providing relief from large building masses.

UT

SITING STANDARDS

Orientation - Principal Frontage	determined by applicant
Lot Coverage	90% max
FRONTAGE REQUIREMENTS (1st LOT LAYER)	
Building Length	100' max.
BLANK FACADE length (max)	30'
Additional Building Length	(see also Table 14.275.7)
ATTACHED BUILDINGS	unlimited run
Ground Floor Partitions	200' max., 2 modules
Massing Variation	200' max.
Structured Parking Exception	200' max.

SETBACKS

Principal Building	
(a) Front Yard (1st LOT LAYER)	10' max.
Setback Applicability (see Table 14.275.7 c.)	75% of total building length must meet front yard setback
(b) Side Yard*	10' min. - May be reduced to zero provided that the cumulative side yards are not less than 20'
(c) Rear Yard	10' min.
(d) STEPBACK (adjacent to UN)	10' min. stepback after 45' height
Accessory Building	
Side Yard	2nd thru 4th LOT LAYER
Rear Yard	5' min.

BUILDING ENTRIES (SEE ALSO BDS)

Frequency at frontage	at least 95'
Principal Entries	
Orientation	any allowed
Elevated Stoop (>1 step)	allowed

HEIGHT STANDARDS

Principal Building	
Building Height Min.	3 stories
Building Height Max.	65', up to 6 stories
Ground Story Height	n/a
Accessory Building	
Building Height Max.	25'

PARKING STANDARDS

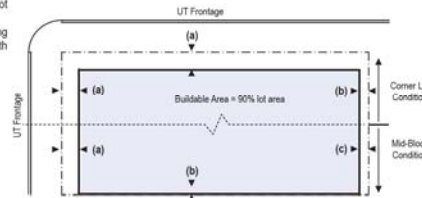
Surface Parking Location	35' min. setback from street
Garage at frontage (attached or detached)	
Garage Door Setback (min)	2nd LOT LAYER 10'
Garage Door Opening (max)	9' up to 40% of facade length
	20' max. limit

Notes and Exceptions

* Reduced side yards and zero lot lines are allowed under certain conditions (see Sec. 14.275.6(b) 3. Setbacks)

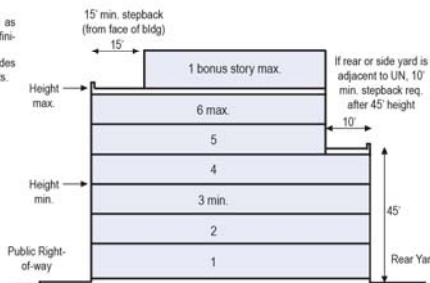
SITING STANDARDS

- The FACADES and ELEVATIONS of Principal Structures shall be distanced from the lot lines as shown.
- FACADES shall be built along the frontage lines to the length specified in the table.



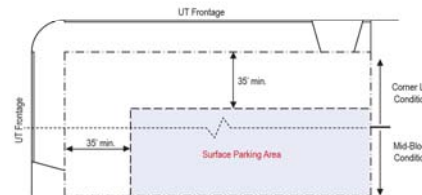
HEIGHT STANDARDS

- Height shall be measured as specified in Sec. 14.47 Definitions "Building, height of."
- Number of Stories excludes attics and raised basements.



PARKING STANDARDS

- Surface parking areas may be provided within the 4th LOT LAYER (shaded area) as shown.



(c) Urban Active (UA) subdistrict.

Intent: The intent of this subdistrict is to maintain and promote a moderate-scale, diverse, mixed-use neighborhood with vibrant streets and active ground floor spaces. Buildings are more active and engage the street at the ground level. Building frontages are transparent and entries are at sidewalk level with frontage types including storefronts and recessed doorways. The streetscape has steady street planting, and buildings set close to the street providing a consistent street wall.

UA

SITING STANDARDS

Orientation - Principal Frontage	face a UA street
Lot Coverage	90% max
FRONTAGE REQUIREMENTS (1st LOT LAYER)	
Building Length	50' max.
BLANK FACADE length (max)	15'
Additional Building Length	(see also Table 14.275.7)
ATTACHED BUILDINGS	unlimited run
Ground Floor Partitions	150' max., up to 3 modules
Massing Variation	not allowed
Structured Parking Exception	150' max.
Fenestration, ground floor	60-90% (see BDS) facade area

SETBACKS

Principal Building	
(a) Front Yard* (1st LOT LAYER)	5' max.
Setback Applicability (see Table 14.275.7 c.)	75% of total building length must meet front yard setback
(b) Side Yard**	5' min. - May be reduced to zero provided that the cumulative side yards are not less than 10'
(c) Rear Yard	10' min.
Accessory Building Front Yard	
2nd thru 4th LOT LAYERS	5' min.
Side Yard	5' min.
Rear Yard	5' min.

BUILDING ENTRIES (SEE ALSO BDS)

Frequency at frontage	at least 40'
Principal Entries	
Orientation	at least 1 facing UA street or corner
Elevated Stoop (>1 step)	not allowed

HEIGHT STANDARDS

Principal Building	
Building Height Min.	3 stories
Building Height Max.	50', up to 4 stories
Ground-Story Height	12'-0" min-clear
Accessory Building	
Building Height Max.	25'

PARKING STANDARDS

Surface Parking Location	4th LOT LAYER only 35' from street
Garage at frontage (attached or detached)	
Garage Door Setback	3rd LOT LAYER 20' from street
Garage Door Opening (max)	n/a

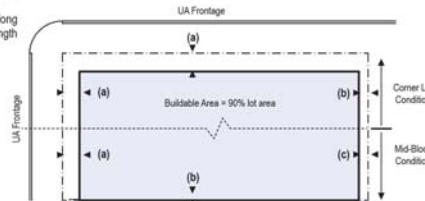
Notes and Exceptions

* Up to 10'0" max. front yard setback is allowed if ground plane at frontage is a continuation of the accessible public right-of-way

** Reduced side yards and zero lot lines are allowed under certain conditions (see Sec. 14.275.6(b) 3. Setbacks)

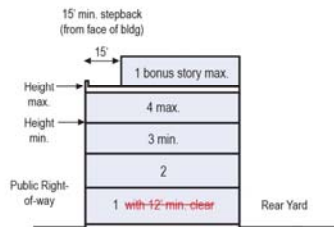
SITING STANDARDS

- The FACADES and ELEVATIONS of Principal Buildings shall be distanced from the lot lines as shown.
- FACADES shall be built along the frontage lines to the length specified in the table.



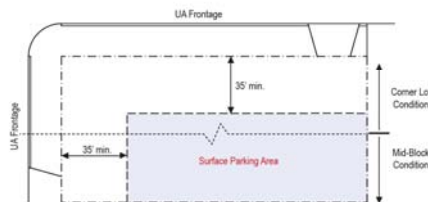
HEIGHT STANDARDS

- Height shall be measured as specified in Sec. 14-47 Definitions "Building height of."
- Number of Stories excludes attics and raised basements.



PARKING STANDARDS

- Surface parking areas may be provided within the 4th LOT LAYER (shaded area) as shown.



(d) Corner conditions.

For corner lots where two subdistricts intersect at a street corner, the **Dimensional Requirements** and **Building Design Standards** of the "dominant" subdistrict shall apply from the 1st through 3rd LOT LAYER (35 feet deep into the lot measured from the dominant lot line) along its associated street frontage or public ways including required mid-block permeability. Otherwise, **Dimensional Requirements** shall be according to the subdistrict onto which the building FAÇADE faces.

CORNER

ORIENTATION

- Corner lots shall be treated as having street frontage on all streets regardless of building orientation
- Principal Building shall designate a Principal Frontage and Secondary Frontage*
- In the case of a corner lot having UA frontage, the Principal Frontage must face a UA street*

SETBACKS

- (a) Front Yard (~~Front Lot Layer~~) | according to subdistrict
- (b) Side Yard | according to subdistrict
- Building facades within 10' of a corner are exempt from setback requirements in order to allow special architectural treatments

UA INTERSECTS UT

Dominant Subdistrict (35' deep)	UA
Orientation - Principal Frontage	UA street
Dominant Building Design Standards (applicable 35' deep)	
Ground-Story-Height	42'-min-clear
Entry, Frequency at frontage	at least 40'
Entry, Orientation	at least 1 facing UA street or corner
Entry, Elevated Stoop (>1 step)	not allowed on principal UA entry
BLANK FAÇADE, max. length	15'
Fenestration, ground floor	60-90% (see BDS) facade area
(measured as a percentage of the FAÇADE that is 2' above sidewalk grade)	

UA INTERSECTS UN

Dominant Subdistrict (35' deep)	UA
Orientation - Principal Frontage	UA street
Building Length - UN FAÇADES	100' max.
Dominant Building Design Standards (applicable 35' deep)	
Ground-Story-Height	42'-min-clear
Entry, Frequency at frontage	at least 40'
Entry, Orientation	at least 1 facing UA street or corner
Entry, Elevated Stoop (>1 step)	not allowed on principal UA entry
BLANK FAÇADE, max. length	15'
Fenestration, ground floor	60-90% (see BDS) facade area
(measured as a percentage of the FAÇADE that is 2' above sidewalk grade)	

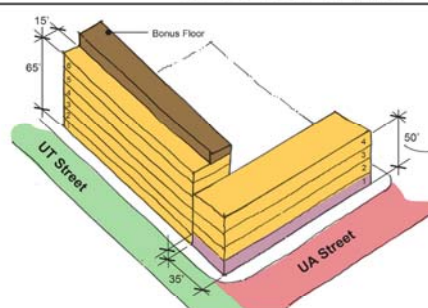
UT INTERSECTS UN

Dominant Subdistrict (35' deep)	UN
Orientation - Principal Frontage	determined by applicant
• Corner lots shall be treated as having street frontage on all streets regardless of building orientation	

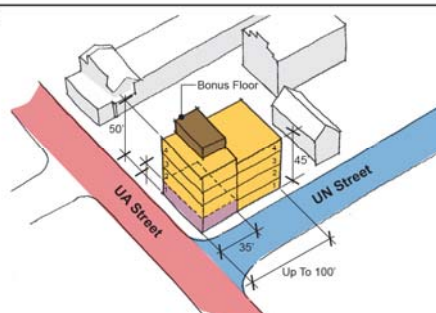
Notes and Exceptions

- * Does not have to correspond to legal building address

UA INTERSECTS UT
(example only)



UA INTERSECTS UN
(example only)



UT INTERSECTS UN
(example only)

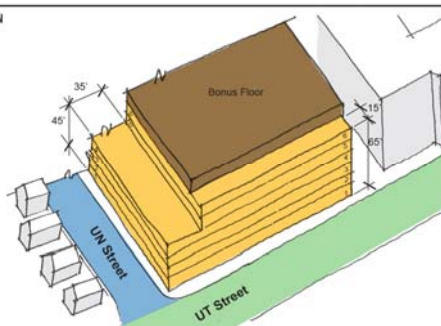
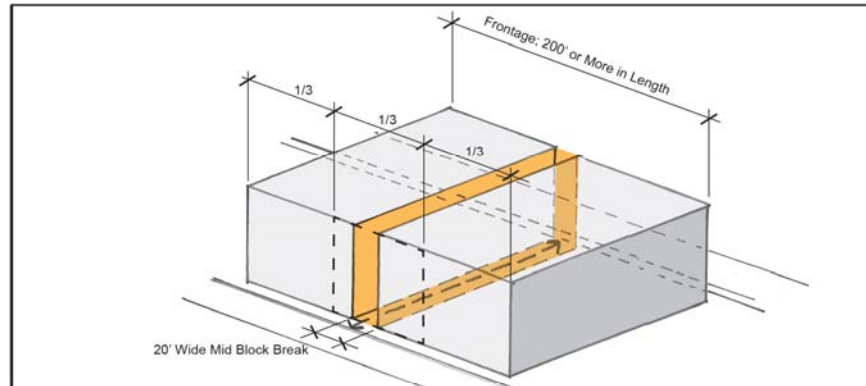
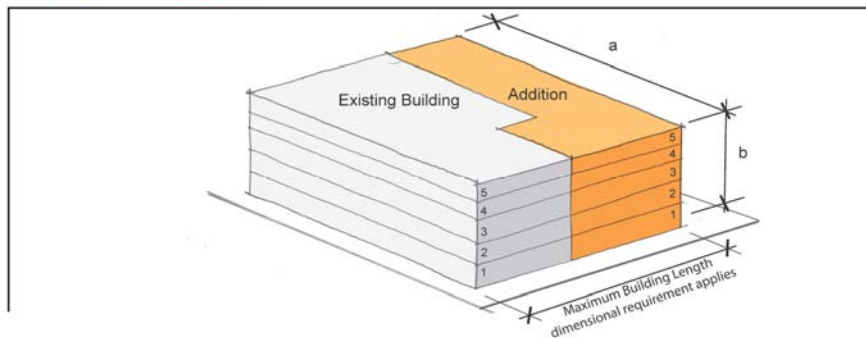


TABLE 14.275.7 DIMENSIONAL REQUIREMENTS ILLUSTRATED

a. MID-BLOCK PERMEABILITY

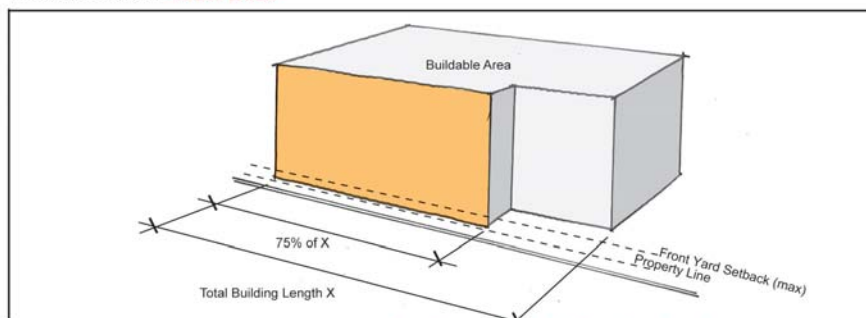


b. BUILDING ADDITION EXEMPTIONS



- a** - If the existing building is legally non-conforming in max building length on a street frontage, a BUILDING ADDITION may not add to the non-conformity. A BUILDING ADDITION is exempt from the max building length if it extends towards the street from that non-conforming building length in which case the BUILDING ADDITION length may match but not exceed the length of the existing building to which it is an addition.
- b** - If the existing building is legally non-conforming in number of stories, BUILDING ADDITIONS are exempt from story minimums or maximums in order to match existing building in number of stories. All other Subdistrict Height Standards shall apply including height minimum and maximums in feet.

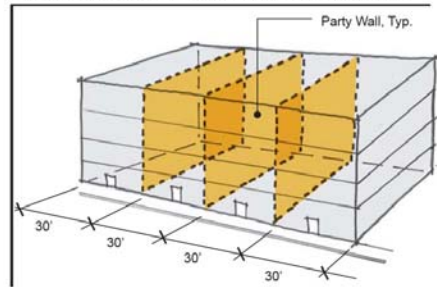
c. BUILDING LENGTH - 1st LOT LAYER



At least 75% of the total building length must meet the front yard setback dimensional requirements.

TABLE 14.275.7 DIMENSIONAL REQUIREMENTS ILLUSTRATED (CONTINUED)

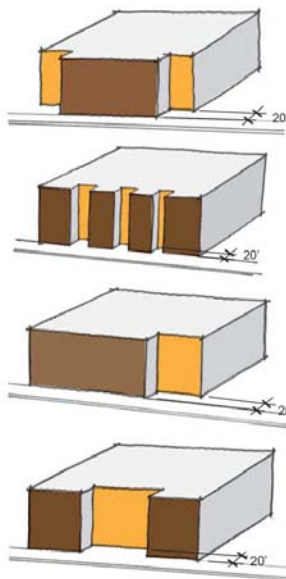
d. ADDITIONAL BUILDING LENGTH - ATTACHED BUILDINGS



An unlimited number of ATTACHED BUILDINGS having up to 30' street-facing building length is allowed.

A PARTY WALL condition is required at least every 30' and for the entire height of each building.

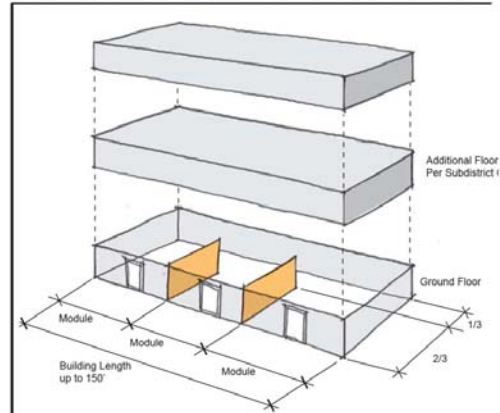
e. ADDITIONAL BUILDING LENGTH - MASSING VARIATION (UT)



Additional building length is permitted where at least 30% and up to 40% of the total building length is setback to the 3rd LOT LAYER (20').

(Ord. 83-15/16, 11-2-2015)

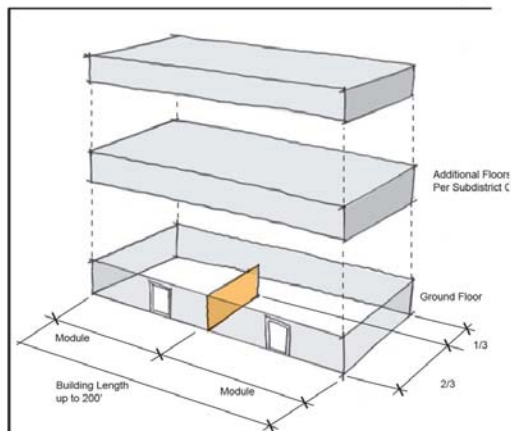
f.1. ADDITIONAL BUILDING LENGTH - GROUND FLOOR PARTITIONS (UA)



Additional Building Length is permitted up to 150' with the provision of a least two Ground Floor Partitions

See General Development Standards and BDS for additional requirements.

f.2. ADDITIONAL BUILDING LENGTH - GROUND FLOOR PARTITIONS (UT)



Additional Building Length is permitted up to 200' with the provision of at least one Ground Floor Partition.

See General Development Standards and the BDS for additional requirements.



PLANNING BOARD REPORT PORTLAND, MAINE

Ocean Avenue Landfill Maintenance

vicinity of 990 Ocean Avenue

Final Level III Site Plan

Project ID #: 2017-150 CBL 405 L033001

City of Portland, Troy Moon, Sustainability Coordinator, DPS, applicant

Submitted to: Portland Planning Board Public Hearing Date: July 25 th , 2017	Prepared by: Jean Fraser, Planner Date: July 21 st , 2017
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I. INTRODUCTION

Sebago Technics, Inc have submitted a Final Level III Site plan application on behalf of the City of Portland for a project to carry out required fill and grading maintenance to the cap of the landfill within the City's land off of Ocean Avenue. The maintenance work is required by the MDEP and affects about 4 acres (green line on plan below) within the City's 30+acre landfill. The landfill is located within the approximately 60 acre area of City land (yellow line on plan below) that includes walking trails.

The western part of the City's land has been a landfill site since the 1970s and was capped in the mid-1990's to provide a low permeable cover to contain the landfill and minimize leachates. The cap has settled and the City is required, under the MDEP Landfill rules, to fill, raise and grade this section to maintain the integrity of the landfill cap so it drains more effectively. The project involves bringing in fill material and grading it according to the proposed plans, including revegetating the disturbed area with loam and seed after the grading work is complete.



The City's land is zoned Recreational Open Space though technically the landfill area itself is limited for recreation because of the need to protect the cap from damage. The trail around the perimeter of the trail is not affected by the project except that construction vehicles will need to share the access road from Ocean Avenue for about 6-8 weeks and there will be occasional closures of the trail to ensure public safety. The City's Parks Department, with Portland Trails, manages the public recreational use in the vicinity of the landfill,

Applicant: City of Portland (Troy Moon, City of Portland Sustainability Coordinator)

Agent/Representative: Sebago Technics, Inc (Owens McCullough, Sebago Technics, consultant to the City)

Required reviews:

The project is being reviewed as a Level III Site Plan because the scale of the disturbance is over 3 acres. It does not require a Site Location of Development review as the MDEP considers the project to be essential maintenance.

II. PROJECT DATA

Area of site:	30+/- acres
Proposed area of disturbance:	188,197 sq ft (4.2 acres)
Impervious surfaces:	Existing and to be maintained
Zoning:	ROS
Land Use:	Closed landfill; surrounding trails
Estimated Cost of the Project:	tbd

III. BACKGROUND/EXISTING CONDITIONS

The landfill site is open meadow surrounded by trees, with sloping sides and flatter on the “crown”. There is one east-west trail (informal) across the site and an identified larger trail around the perimeter generally along the tree line. The nearby City-run “Quarry Run Dog Park” is located between the site and Ocean Avenue and includes a parking area on the access road.

IV. PROPOSALS

The proposals are described in detail in [Attachment B](#) and illustrated in the [Plans P2 and P3](#). The area affected by the work is within the contour lines on the plan at right, and the project would result in the overall height of the landfill cap crown being raised 2-3 feet.

The maintenance work will comprise the removal of existing loam, the application of a low permeable fill material and grading to re-establish the crown, and then replacing the loam along with seeding and mulching to re-establish the vegetative cover.



V. PUBLIC COMMENT

This hearing has been noticed to 141 local neighbors and interested citizens with a legal advertisement in the *Portland Press Herald* on July 17th and 18th, 2017. A Neighborhood Meeting was held on July 18th, 2017 and attended by nine neighbors. Comments focused on concerns regarding the previous and ongoing management of the landfill and questions about its safety for users of the area and nearby residents ([Attachment E](#)). The applicant outlined that the MDEP (Bureau of Solid Waste) has extensive protocols in place for inspections and water testing, and the landfill cap maintenance was being scheduled for this summer so it could be done prior to the installation of the solar array proposed for the same part of the landfill cap (see separate Hearing Report on the Solar Array project).

The Planning office has not received any written public comments at the time this report was finalized.

VI. RIGHT, TITLE AND INTEREST

The City acquired the site for landfill purposes in 1959 as shown on the submitted boundary survey and parcel identification [Plan P6](#), and the submitted documents ([Attachment C](#)) include the associated deeds.

VII. STAFF REVIEW

A. ZONING ASSESSMENT

The entirety of the City’s land is zoned Recreational Open Space although the landfill cap is technically limited for recreational use (by the MDEP) in order to protect the landfill cap. The proposals are for maintenance only and will not introduce a different use nor alter the site; therefore they are consistent with the zoning.

B. SITE PLAN STANDARDS

The project is unusual in that it does not involve building construction and many of the site plan standards are not applicable. However, the project affects a considerable area and the review below addresses the potential impacts of the project.

(A) **Transportation**

- ***Impact on surrounding street system, access and circulation, loading and servicing***

There will be a short term (6-8 weeks) impact resulting from the vehicles bringing in fill, which will enter via the existing access for the Dog Park and leave via the same route or via the road between the site and Dragon Cement to the west. The Dragon access drive is actually owned by Dragon Cement and a temporary construction easement would be required if used for construction access.

- ***Construction Management Plan***

The submitted plans (Plans P3 and P4) include erosion control notes and measures and the Construction Management Plan (Attachment F and Plan P5) reiterates the measures required and notes that the MDEP will be carrying out inspections. The submissions address the Technical Standards CMP Template concerning traffic/parking control and access, site management, safety and security, and erosion control. The proposed access is via the Dog Park access road and part of the perimeter road; it goes by the parking area for the Dog Park, though construction vehicles would not be parking in this area.

The area of the solar array is different and larger than the area of the maintenance work to the cap, so staff recommend that the City expand the erosion control measures so they would also encircle the solar array site. This would ensure that the erosion measures would remain in place between the two projects and not have to be redone/alterd for the solar project. ReVision will need to take over responsibility for the maintenance of the soil erosion control measures during their solar panel installation project.

The Construction Management Plan has been reviewed and the Department of Public Works Reviewer Keith Gray, provided the following comments (Attachment 2), and the applicant has revised the Construction Management Plan to address these comments:

I have reviewed the Construction Management Plan submitted by Sebago Technics and have the following comments:

- *The CM plan & narrative should be updated to indicate that the trails located over the landfill cap shall be permanently closed. This includes the installation of a permanent barricade and signage indicating, "Trail Closed, Do Not Enter".*
- *Similar signage shall be installed for the temporary closure of the trail located along the access road.*

Additionally, ReVision has requested to utilize the erosion control to be installed within this phase of construction. Is it possible to revise the filter barrier to the extents of the ReVision's solar project construction limits?

- ***Sidewalk and ROW***

The area of cap repair does not include any formal trails or any pedestrian routes, and the informal paths are a contravention of the MDEP requirements that seek to preserve the integrity of landfill caps. There is a walking trail around the perimeter of the site and this will not be affected directly by the work except for construction traffic on some sections. The Construction Management Plan (Attachment E and Plan P5) outlines steps to be taken to ensure the safety of pedestrians using this trail, including temporary closures of trail sections. The Parks Department manage the Dog Park area and the Parks Director has noted (Attachment 1):

We are supportive of this project.

During the two meetings I have attended on the project, we have simply asked that access be maintained to the Dog Park and to the walking/hiking trails. We understand that there will be impacts from construction with increased truck traffic, but as long as public access and parking is maintained, we do not have any objections.

- ***Public Transit Access; Parking; Bike Parking; Snow Storage; TDM*** - these do not apply to this project.

(B) **Environmental Quality Standards**

- ***Preservation of Significant Natural Features***

There are no significant natural features on the proposal site.

- **Landscaping and Landscape Preservation**

The proposed project includes loaming and seeding of the top surface of the cap once the grading is completed (Plan P3) . The Parks Director has recommended a particular seed mix (Attachment 1):

We also would want to be sure that after construction the site is returned to current conditions (or better). Specifically, we would like to recommend any reseeding in the project area to use a solar wildflower/grass mix: <http://www.americanmeadows.com/grass-and-groundcover-seeds/solar-farm-color-seed-mix>

- **Stormwater and Erosion control**

The objective of the proposed maintenance work is to modify and reinforce the cap so that it is impervious and sloped to drain stormwater effectively. The only concern is that during the regrading work (when the vegetation will have been temporarily removed) the site needs to have adequate erosion control measures installed. Therefore these will be part of the Construction Management Plan and are discussed above.

(C) Public Infrastructure and Community Safety Standards - these do not apply to this project.

(D) Site Design Standards - these do not apply to this project

VIII. STAFF RECOMMENDATION

The project aims to reshape and recap the crown of the old landfill; it is in the public interest with no long term impacts to the appearance of the area or the use of the perimeter trail. Staff recommend approval of the project subject to the suggested conditions of approval, which address the short term impacts of construction vehicles/equipment over a period of 6-8 weeks.

IX. MOTION FOR THE BOARD TO CONSIDER

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on July 25, 2017 for application #2017-150 Ocean Avenue Landfill Maintenance, relevant to the Site Plan reviews and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board finds the following:

SITE PLAN REVIEW

Potential conditions of approval:

- i. That the applicant shall obtain easements or temporary construction agreements for all work outside the boundaries of the site, including the Dragon Cement access road if that is to be used, with copies provided to the Planning Authority prior to the issuance of a building permit for site work only; and
- ii. That the applicant and contractors and all associated truck and equipment operators shall follow the submitted Construction Management Plan prepared Owens McCullough, Sebago Technics dated 7.20.2017, including the truck routing plan and all safety measures to manage access for members of the public to the Dog Park and its parking area and nearby walking trails; and
- iii. That the applicant shall expand the erosion control measures to include the area for the solar panel and fencing installation and shall maintain the erosion control measures after the completion of the landfill cap regrading until the reseeding has become established, or the site is taken over by another party who will take over responsibility for the erosion control measures under license from the City, whichever is sooner; and
- iv. That the applicant shall reinstate the site to existing or improved conditions, including reseeding the entire disturbed area with a solar/wildflower seed mix as recommended by the Parks Director in his comments dated 7.13.2017; and
- v. That the applicant shall hold a Pre-Construction site meeting prior to the start of work on site, to include representatives of the Planning Authority, Parks Department and ReVision Energy, to coordinate all aspects of the Construction Management Plan and associated erosion control, signage, and trail closure.

ATTACHMENTS

Staff Review Comments

1. Parks Director comments 7.13.2017
2. DPW comments 7.19.2017 (which have been addressed)
3. Peer Engineer comments

Public Comments

(None received as of completion of this Report)

Applicants Submittal

- A. Application
- B. Cover letter including description
- C. Right, Title and Interest
- D. Location Maps
- E. Neighborhood Meeting Documentation
- F. Construction Management Plan narrative

Plans

- P1. Overall Site Plan
- P2. Site and Grading Plan
- P3. Section of Cap final grading
- P4. Details including erosion control (2 sheets)
- P5. Construction Management Plan graphic

Fwd: Site Plan applications re solar array on Ocean Ave landfill

1 message

Jean Fraser <jf@portlandmaine.gov>
To: "Fraser, Jean" <jf@portlandmaine.gov>

Mon, Jul 17, 2017 at 3:49 PM

----- Forwarded message -----

From: **Ethan Hipple** <ehipple@portlandmaine.gov>
Date: Thu, Jul 13, 2017 at 5:10 PM
Subject: Re: Site Plan applications re solar array on Ocean Ave landfill
To: Jean Fraser <jf@portlandmaine.gov>
Cc: "O'Brien, Stuart" <sgo@portlandmaine.gov>, "Barhydt, Barbara" <bab@portlandmaine.gov>

Hi Jean,
We are supportive of this project.

During the two meetings I have attended on the project, we have simply asked that access be maintained to the Dog Park and to the walking/hiking trails. We understand that there will be impacts from construction with increased truck traffic, but as long as public access and parking is maintained, we do not have any objections.

We also would want to be sure that after construction the site is returned to current conditions (or better). Specifically, we would like to recommend any reseeding in the project area to use a solar wildflower/grass mix: <http://www.americanmeadows.com/grass-and-groundcover-seeds/solar-farm-color-seed-mix>

Take care,
Ethan

Ethan Hipple, CPRP
Parks Director
City of Portland
212 Canco Rd.
Portland, Maine 04103
o: 207.808-5400
ehipple@portlandmaine.gov

www.portlandmaine.gov
Portland, Maine | Yes. Life's good here.

Ocean Ave. Landfill Cap Maintenance CMPlan

1 message

Keith Gray <kgray@portlandmaine.gov>

Wed, Jul 19, 2017 at 3:50 PM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Christopher Branch <cbranch@portlandmaine.gov>, Katherine Earley
<kas@portlandmaine.gov>, "Swett, Lauren" <lszett@woodardcurran.com>

Hello Jean,

I have reviewed the Construction Management Plan submitted by Sebago Technics and have the following comments:

- The CM plan & narrative should be updated to indicate that the trails located over the landfill cap shall be permanently closed. This includes the installation of a permanent barricade and signage indicating, "Trail Closed, Do Not Enter".
- Similar signage shall be installed for the temporary closure of the trail located along the access road.

Additionally, ReVision has requested to utilize the erosion control to be installed within this phase of construction. Is it possible to revise the filter barrier to the extents of the ReVision's solar project construction limits?

Thank you,
Keith

--

Keith D. Gray, PE
Senior Engineer
Dept. of Public Works
City of Portland Maine

[207.874.8834](tel:207.874.8834)

kgray@portlandmaine.gov

RE: Landfill cap maintenance and solar array projects- Construction Management Plans

1 message

Lauren Swett <lswett@woodardcurran.com> Thu, Jul 20, 2017 at 2:10 PM
To: Jean Fraser <jf@portlandmaine.gov>, "Bartlett, Jeremiah"
<jbartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Ethan Hipple
<ehipple@portlandmaine.gov>, "Tarling, Jeff" <jst@portlandmaine.gov>
Cc: "Errico, Thomas" <thomas.errico@tylin.com>

Hi Jean,

I have reviewed both construction management plans for the Landfill Cap Maintenance and Solar Array projects. I agree with the comments provided by Keith Gray related to signage and trail closure, and the Applicant has adequately addressed this. I also reiterate Keith's concerns with regards to consistency with erosion control:

Based on a review of all provided documents, all erosion control measures will be installed by the City as part of the Landfill Cap Maintenance project, and will remain in place to be utilized by Revision during the Solar Array project. The filter barrier shown on the plans for the maintenance project does not appear to cover an adequate area to provide erosion control for the solar array work. The plans for the maintenance project should be modified to include erosion control over the entire required area, or the solar array project will be required to install additional erosion control for impacted areas of the site beyond the maintenance project limit of work.

Revision also states that they will coordinate with the City to ensure stable vegetation prior to removal of erosion control. It is noted, that due to the proposed project timing with completion anticipated in the winter, final stabilization and erosion control removal likely will not occur until the spring. The site will need to be maintained as stable during the winter, after construction has been completed.

Jean, since these comments relate to the coordination between the two projects/applicants, I think they apply to both project applications.

Let me know if you have any additional questions.



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:	Ocean Avenue Landfill Maintenance
Proposed Development Address:	
Project Description:	Grading and raising of landfill cap
Chart/Block/Lot:	
Preliminary Plan	N/A
Final Plan	attached

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

Name:	Troy Moon
Business Name:	City of Portland
Address:	55 Portland Street
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-874-8467
Home #:	
Cell #:	207-232-5564
Fax #:	
E-mail:	THM@portlandmaine.gov

OWNER

Name:	City of Portland
Address:	55 Portland Street
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-874-8467
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Sebago Technics, Inc. Attn: Owens McCullough
Address:	75 John Roberts Road
City/State:	South Portland, ME
Zip Code:	04106
Work #:	207-200-2073
Home #:	
Cell #:	207-232-1649
Fax #:	
E-mail:	omccullough@sebagotechnics.com

BILLING (to whom invoices will be forwarded to)

Name:	Troy Moon
Address:	55 Portland Street
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-874-8467
Home #:	
Cell #:	207-232-5564
Fax #:	
E-mail:	THM@portlandmaine.gov

ENGINEER

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

SURVEYOR

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

ARCHITECT

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

ATTORNEY

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

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Emmy Irvin
E-mail:	eirvin@sebagotechnics.com
Name:	Owens McCullough
E-mail:	omccullough@sebagotechnics.com
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

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

PLAN AMENDMENTS (check applicable review)

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

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	\$1,500.00
☐	Stormwater Quality	\$250.00
☐	Subdivision	\$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [] 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 (\$50.00 hour)
- Legal Review (\$75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

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

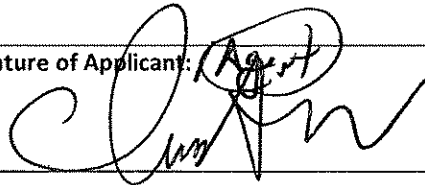
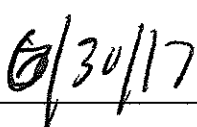
TOTAL AREA OF SITE	30 +/- acres	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	188,197	sq. ft.
<i>If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.</i>		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	N/A	sq. ft.
Impervious Area (Total Proposed)	N/A	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	N/A	sq. ft.
Building Footprint (Total Proposed)	N/A	sq. ft.
Building Floor Area (Total Existing)	N/A	sq. ft.
Building Floor Area (Total Proposed)	N/A	sq. ft.
ZONING		
Existing	N/A	
Proposed, if applicable	N/A	
LAND USE		
Existing	Landfill	
Proposed	Landfill	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	N/A	
# of Residential Units (Total Proposed)	N/A	
# of Lots (Total Proposed)	N/A	
# of Affordable Housing Units (Total Proposed)	N/A	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	N/A	
# of One-Bedroom Units (Total Proposed)	N/A	
# of Two-Bedroom Units (Total Proposed)	N/A	
# of Three-Bedroom Units (Total Proposed)	N/A	
PARKING SPACES		
# of Parking Spaces (Total Existing)	N/A	
# of Parking Spaces (Total Proposed)	N/A	
# of Handicapped Spaces (Total Proposed)	N/A	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	N/A	
# of Bicycle Spaces (Total Proposed)	N/A	
ESTIMATED COST OF THE PROJECT		
City Project - TBD		

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

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

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)
x		1	* Completed Application form
N/A		1	* Application fees
x		1	* Written description of project
N/A		1	* Evidence of right, title and interest
None		1	* Evidence of state and/or federal permits
x		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
x		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
N/A		1	* Evidence of financial and technical capacity
x		1	Construction Management Plan
N/A		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
N/A		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
N/A		1	Stormwater management plan and stormwater calculations
N/A		1	Written summary of project's consistency with related city master plans
N/A		1	Evidence of utility capacity to serve
N/A		1	Written summary of solid waste generation and proposed management of solid waste
N/A		1	A code summary referencing NFPA 1 and all Fire Department technical standards
N/A		1	Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual
N/A		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)
N/A		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
x		1	Final Site Plans including the following:
N/A			Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);
N/A			Existing and proposed structures on parcels abutting site;
N/A			All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;
N/A			Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;
N/A			Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;
N/A			Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;
N/A			Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;
N/A			Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;
N/A			Location of all snow storage areas and/or a snow removal plan;
N/A			A traffic control plan as detailed in Section 1 of the Technical Manual;
N/A			Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);
N/A			Location and proposed alteration to any watercourse;
N/A			A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;
N/A			Proposed buffers and preservation measures for wetlands;
N/A			Existing soil conditions and location of test pits and test borings;
N/A			Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;
N/A			A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;
x			Grading plan;
N/A			Ground water protection measures;
N/A			Existing and proposed sewer mains and connections;

- Continued on next page -

N/A		Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;
N/A		Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;
N/A		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
N/A		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
N/A		Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;
N/A		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
N/A		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
N/A		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
N/A		An exterior lighting plan in accordance with Section 12 of the Technical Manual;
N/A		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
N/A		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: 6/30/17

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

Site Address: _____

Chart Block Lot Number: _____

Proposed Use: Landfill

Previous Use: Landfill

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.

No Services

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: 874-8699

Owner/Developer Name: City of Portland

Owner/Developer Address: 55 Portland Street

Phone: 207-874-8467

Fax: _____ E-mail: THM@portlandmaine.gov

Engineering Consultant Name: Sebago Technics, Inc attn: Owens McCullough

Engineering Consultant Address: 75 John Roberts Road South Portland, ME

Phone: 207-200-2073

Fax: _____ E-mail: omccullough@sebagotechnics.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: 0 GPD

Peaking Factor/ Peak Times: N/A

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) NO SERVICE NEEDED

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.

N/A

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____ GPD

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

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

OSHA Standard Industrial Code (SIC): _____

(<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times: _____

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

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, 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



June 30, 2017

Ms. Barbara Bardet
Development Review Services Manager
City of Portland
389 Congress Street
Portland, ME 04101

Ocean Avenue Landfill Cap Maintenance – Level III Site Plan Application

Dear Ms. Barhydt:

On behalf of the City of Portland, we have prepared this Level III Site Plan Application in support of maintenance work at the Ocean Avenue Landfill located off Ocean Avenue in Portland. The Ocean Avenue Landfill is municipal landfill that was active in the 1970's and discontinued in the late 1970's. Through a state funded project, the landfill was capped in the mid 1990's to include placing fill material on the landfill, covering the landfill with 18 inches of a low permeable cover and applying 6 inches of a loam material. Since the closure in the 1990's, the landfill has experienced some settlement at the top of the landfill requiring maintenance work to re-establish the crown of the landfill.

In support of this work, we have assembled the following Level III permit application to complete maintenance on approximately 4 acres of the landfill.

Project Site: The project site is currently a closed landfill owned by the City of Portland.

1. The City Chart, Block and Lot number: Several Parcels (See Attached Map).
2. Property Owner: City of Portland with sublease to the Northeast Air.
3. Physical Address: 1022 Ocean Avenue.
4. Current and Proposed Use: Closed Municipal Landfill.
5. Zoning: Recreation and Open Space.

Development Program: The project will include the following:

1. Strip and stockpile the existing loam within the work area with comprises approximately 4 acres of a 30 acre landfill.
2. Apply a low permeable fill material to re-establish the crown of the landfill.
3. Re-apply the stripped growing medium, seed and mulch to establish a vegetative cover.

We note that this work is required by the Maine DEP based upon a recent inspection completed as part of the planning work for the solar farm at the landfill. Revision Energy will be filling a separate application for the solar field which is expected to be constructed this fall once the landfill maintenance work is completed.

Zoning: The project parcel is in the City's Recreation and Open Space Zone. The trail at the base of the landfill will remain unaffected. There are a couple of eroded trails that were established on the landfill cap itself which is not permitted. The Maine DEP landfill closure requirements do on permit trails or activities that could compromise of impact the cap. These areas will be revegetated as part of the project.

Hours of Operation: The maintenance work that will be completed over a period of 4 to 6 weeks during weekday daytime hours (7 a.m. to 7 p.m.).

Parking/Traffic: None required. Access to the work area will be from the existing landfill access road off Ocean Avenue. Appropriate construction traffic signage will be installed by the City Department of Public Works.

Stormwater Management Plan: The project is simply maintenance work to re-establish the crown of the landfill that had settled over time. As a result, not changes in stormwater are anticipated. The project plans include an erosion and sedimentation control plan with notation.

Landscaping: None required. Project is by nature open undeveloped land that will be revegetated to provide an open field area that is mowed periodically to ensure trees and rooted vegetation do not compromise the landfill cover system.

Lighting: None required.

Signage: Temporary construction signage only.

Water/Sewer: Project requires no utility services.

Waivers: Waiver request for a formal property survey. The City has several record plans of the project site and the work will be limited to maintenance of the existing landfill cap.

Closure:

On behalf of City of Portland, we look forward to working with the staff and Planning Board to permit this maintenance project. As you consider the application, please contact us if you have any questions.

Sincerely,

SEBAGO TECHNICS, INC.



Owens A. McCullough, P.E., LEED-AP
Vice President, Engineering/Project Development
OAM:oam

Cc: Christopher Branch, P.E., Public Works Director
Troy Moon, Sustainability Coordinator

Ocean Ave Landfill Deed References

1 message

Jon Giles <jgiles@sebagotechnics.com>

Tue, Jul 18, 2017 at 4:53 PM

To: "jf@portlandmaine.gov" <jf@portlandmaine.gov>

Cc: Owens McCullough <omccullough@sebagotechnics.com>

Jean,

Owens McCullough asked me to send you this plan I made for the City and Revision Energy back on 5/22/2017. It shows the approximate location of the deeds into the City of Portland which make up the Ocean Ave Landfill. The only survey plan of the City holdings is from the Engineering Vault (see attached Vault Plan 636/8). The survey does not encompass the whole landfill property though and parts of it are out of date. I have also spent time in the Engineering Vault researching this project and have not found an overall survey plan for the Landfill, just miscellaneous adjacent surveys and deeds. The deeds are summarized on the attached deed composite plan. Please note the legend on the PDF deed composite plan, "16479 OceanAveLandfill ReVisionWorksheetv2.pdf", as it explains the various deeds into the City that all together make up the current Ocean Ave Landfill property. The PDF "16479 OceanAveLandfill ReVisionWorksheetv2.pdf" was created from the City's GIS parcel mapping and orthoimagery data, with deed references from deed research performed by Sebago Technics. Please let me know if you have any questions or if I can assist further.

Jon Giles, PLS, GISP *GIS Coordinator*

Office: [207.200.2100](tel:207.200.2100) | Direct: [207.200.2128](tel:207.200.2128)

75 John Roberts Rd., Suite 1A, South Portland, ME 04106

jgiles@sebagotechnics.com | www.sebagotechnics.com

An Employee-Owned Company

Wilson
to
Portland
City of
--
War

KNOW ALL MEN BY THESE PRESENTS THAT GEORGE WILSON of Portland in the County of Cumberland and State of Maine, in consideration of ONE (\$1.00) DOLLAR AND OTHER GOOD AND VALUABLE CONSIDERATIONS paid by the CITY OF PORTLAND, a body politic and corporate, located in said County and State, the receipt whereof he does hereby acknowledge, does hereby give, grant, bargain, sell and convey unto the said CITY OF PORTLAND, its successors and assigns forever, a certain parcel of land located off the westerly side of Ocean Avenue in said City of Portland and bounded and described as follows:

Beginning at a point in a stone wall marking the division line between land now or formerly of Martin P. and Arlene D. Smart and land of this Grantor, at a point distant northwesterly along said division line, 1,000 feet from the northwesterly side line of Ocean Avenue; thence northwesterly by said division line between said Smart and Wilson and by a stone wall a distance of 842.73 feet to a point in the division line between the Town of Falmouth and the City of Portland; thence southwesterly by the said town line and making an included angle through the south of $90^{\circ}50'$ with the easterly direction of the last described course a distance of 74.38 feet to a point and a monument marking an angle in the said town line; thence southwesterly by the said town line and making an included angle through the south of $230^{\circ}00'$ with the northerly direction of the last described course a distance of 203.74 feet to a point and a monument marking an angle in the said town line; thence northwesterly by the said town line and making an included angle through the south of $246^{\circ}04'$ with the easterly direction of the last described course a distance of 136.42 feet to a point and a monument marking an angle in the said town line; thence southwesterly by the said town line and making an included angle through the south of $112^{\circ}21'$ with the southeasterly direction of the last described line a distance of 509.04 feet to a point and a monument marking an angle in said town line; thence westerly by the said town line and making an included angle through the south of $193^{\circ}08'$ with the easterly direction of the last described line a distance of 247.20 feet to a point and a monument marking an angle in the said town line; thence southwesterly and making an included angle through the south of $120^{\circ}19'$ with the easterly direction of the last described course a distance of 382.50 feet to a point; thence southerly by a stone wall and making an included angle through the east of $132^{\circ}48'$ with the northerly direction of the last described line a distance of 1190.73 feet to a point; thence northeasterly by a stone wall and making an included angle through the north of $92^{\circ}44'$ with the northerly direction of the last described course a distance of 1059.86 feet to a point; thence northerly and making an angle of $90^{\circ}00'$ with the last described course a distance of 120.50 feet to a point, said point being the most westerly terminus of, and an intersection with, the center line of a fifty foot wide strip of land being conveyed by George Wilson to the City of Portland by this same deed and described below; thence northerly in a prolongation in a straight line of the last described course a distance of 299.50 feet to a point; thence northeasterly and making an included angle through the east of $109^{\circ}13'$ with the southerly direction of the last described course a distance of 895.66 feet to the point of beginning in the division line between land now or formerly of said Smart and this Grantor.

Also another certain parcel of land leading from Ocean Avenue to the premises above conveyed and bounded and described as follows:

Beginning at a point in the westerly side line of Ocean Avenue, said point being distant 329.46 feet more or less, southerly along the westerly side line of Ocean Avenue from the first angle southerly of the town line between the Town of Falmouth and the City of Portland; thence northwesterly and making an included angle of $71^{\circ}31'$ through the north with the northerly direction of the westerly side line of Ocean Avenue, a distance of 157.54 feet to a point; thence northwesterly and making an included angle of $177^{\circ}29\frac{1}{2}'$ through the west with the southeasterly direction of the last described course, a distance of 262.12 feet to a point; thence northwesterly and making an included angle of $170^{\circ}32'$ through the west with the southeasterly direction of the last described course, a distance of 81.66 feet to a point; thence northwesterly and making an included angle of $165^{\circ}06'$ through the south with the southeasterly direction of the last described course, a distance of 58.77 feet to a point; thence northwesterly and making an included angle of $166^{\circ}31'$ through the south with the southeasterly direction of the last described course, a distance of 94.90 feet to a point; thence westerly and making an included angle of $170^{\circ}40\frac{1}{2}'$ through the south with the southeasterly direction of the last described course, a distance of 86.05 feet to a point; thence southwesterly and making an included angle of $168^{\circ}55\frac{1}{2}'$ through the south with the easterly direction of the last described course a distance of 113.07 feet to a point; thence westerly and making an included angle of $188^{\circ}35\frac{1}{2}'$ through the south with the northeasterly direction of the last described course, a distance of 29.33 feet to a point; thence northwesterly and making an included angle of $196^{\circ}23'$ through the south with the easterly direction of the last described course, a distance of 28.54 feet to a point; thence northwesterly and making an included angle of $187^{\circ}47\frac{1}{2}'$ through the south with the southeasterly direction of the last described course, a distance of 101.84 feet to a point; thence northwesterly and making an included angle of $170^{\circ}17'$ through the south with the southeasterly direction of the last described course, a distance of 53.48 feet to a point; thence westerly and making an included angle of $167^{\circ}30\frac{1}{2}'$ through the south with the southeasterly direction of the last described course, a distance of 96.15 feet to a point; thence southwesterly and making an included angle of $173^{\circ}12'$ through the south with the southeasterly direction of the last described course, a distance of 339.73 feet to a point in the easterly boundary line of other property being conveyed to the City of Portland by this same deed as described above. Said above described strip of land to be fifty (50) feet wide and to lie equally on either side of the above described center line.

Also another certain parcel of land located at the intersection of Ocean Avenue and Presumpscot Street and bounded and described as follows:

Beginning at the intersection of the easterly side line of Ocean Avenue and the westerly side line of Presumpscot Street; thence southerly by the said easterly side line of Ocean Avenue a distance of 139.35 feet to a point; thence northerly and easterly on a curve tangent to the last described course and having a radius of 25.60 feet a distance of 73.16 feet measured on the arc to a point in the westerly side line of Presumpscot Street; thence northerly by the said westerly side line of Presumpscot Street said side line being tangent to the curve above described a distance of 139.35 feet to a point of beginning.

Meaning and intending to convey hereby portions of the premises conveyed to George Wilson by Jorena Doughty by warranty deed, dated December 30, 1925, and recorded in Cumberland County Registry of Deeds in Book 1223, Page 219, and by Elizabeth J. Fogg by warranty deed, dated October 15, 1926, and recorded in said Cumberland County Registry of Deeds in Book 1246, Page 472.

The above premises are conveyed subject to any rights existing under the following easements granted by the said George Wilson:

George Wilson to New England Telephone and Telegraph Company by warranty deed, dated March 18, 1927, and recorded in Cumberland County Registry of Deeds in Book 1263, Page 118.

George Wilson to Central Maine Power Company and New England Telephone and Telegraph Company by release deed, dated July 16, 1953, and recorded in Cumberland County Registry of Deeds in Book 2146, Page 127.

George Wilson to Portland Water District by warranty deed, dated December 22, 1953, and recorded in Cumberland County Registry of Deeds in Book 2161, Page 50.

George Wilson to Central Maine Power Company by warranty deed, dated April 5, 1954, and recorded in Cumberland County Registry of Deeds in Book 2172, Page 337.

George Wilson and others to Central Maine Power Company by warranty deed, dated March 29, 1954, and recorded in Cumberland County Registry of Deeds in Book 2176, Page 301.

TO HAVE AND TO HOLD the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said CITY OF PORTLAND, its successors and assigns, to it and their use and behoof forever.

AND I do covenant with the said Grantee, its successors and assigns, that I am lawfully seized in fee of the premises, that they are free of all incumbrances, except as set forth above, that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, I the said GEORGE WILSON, being unmarried, have hereunto set my hand and seal this 24th day of December, 1958

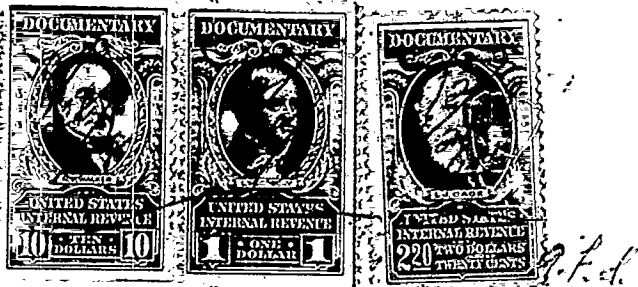
Signed, Sealed and Delivered
in presence of

Barney J. Shive

George Wilson
Dec. 24, 1958

STATE OF MAINE
CUMBERLAND, ss.

Personally appeared the above named GEORGE WILSON and acknowledged the foregoing instrument to be his free act and deed.



Before me,

Barney J. Shive
Justice of the Peace
Notary Public

STATE OF MAINE

CUMBERLAND, ss.

REGISTRY OF DEEDS

Received at 10 H 47 M A on DEC 29 1958 and recorded in
Book 2451 Page 442 ATTEST

George Wilson Register

42570
KNOW ALL MEN BY THESE PRESENTS, That THE COOK CONCRETE COMPANY, a corporation organized and existing under the laws of the State of Maine, and having a place of business at Portland in the County of Cumberland and State of Maine, in consideration of One Dollar (\$1.00) and other good and valuable considerations paid by the CITY OF PORTLAND, a Maine municipal corporation whose mailing address is 389 Congress Street, Portland, Maine 04101, the receipt whereof it does hereby acknowledge, does hereby remise, release, bargain, sell and convey, and forever quitclaim unto the said City of Portland, its successors and assigns forever, the following described real estate:

A certain strip of land in said Portland, sixty (60) feet in width, lying adjacent to the southerly sideline of premises now or formerly owned by Dale A. Williams and Eleanor F. Williams, described in a deed from Clara M. Smart to Dale A. Williams and Eleanor F. Williams dated June 21, 1966, recorded in Cumberland County Registry of Deeds in Book 2962, page 753, bounded as follows: easterly by the westerly side of Ocean Avenue, northerly by said southerly sideline of said Williams land, westerly by the southeasterly sideline of land of the Grantee herein, and southerly by a line which is continuously sixty (60) feet southerly of and continuously parallel to said southerly sideline of said Williams land.

Also another certain lot or parcel of land lying northwesterly of said Ocean Avenue and bounded and described as follows:

Commencing at a point on the northwesterly sideline of land of the Grantor, which point is 691.80 feet on a course of S 55° 54" W from the northeasterly corner of the parcel first above described. Thence S 55° 54" W a distance of 203.86 feet along the land of the Grantor and land of the City of Portland a distance of 203.86 feet to an iron rod, thence S 14° 53" W a distance of 273.82 feet along land of the Grantor and land of the City of Portland to an iron rod. Thence N 23° 44" 30' E a distance of 308.38 feet along other land of the Grantor to the point of beginning.

Said parcel is triangular in shape and contains 16,730 feet and is shown as "parcel to be conveyed to City of Portland" on "Plan of Land in Portland, Maine, Ocean Avenue for The Cook Concrete Company dated January 4, 1984, Revised March 30, 1990 by Owen Haskell, Inc."

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging, to the said City of Portland, its successors and assigns forever.

Instr 42570 Bk 9695 Pg 71

AND the said The Cook Concrete Company does COVENANT with the said City of Portland, its successors and assigns, that it will WARRANT and DEFEND the premises to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under it.

IN WITNESS WHEREOF, the said The Cook Concrete Company has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Jeanne Marie Boylan, its Vice President, thereunto duly authorized, this 12th day of August, 1991.

SIGNED, SEALED AND DELIVERED

In Presence of

Bruce A. Coggeshall

THE COOK CONCRETE COMPANY

By: Jeanne Marie Boylan

Name: Jeanne Marie Boylan

Its: Vice President

STATE OF MAINE
CUMBERLAND, SS

August 12, 1991

Then personally appeared the above-named Jeanne Marie Boylan of said The Cook Concrete Company as aforesaid, and acknowledged and foregoing instrument to be his free act and deed and the free act and deed of said Company.

Before me,

Bruce A. Coggeshall
Notary Public Attorney at Law
Print: Bruce A. Coggeshall

Recorded
Cumberland County
Registry of Deeds
08/30/91 12:17:29PM
Robert P. Titcomb
Register

BK | 4 | 9 | PG 33 |

- 70263

QUITCLAIM DEED WITH COVENANT
Statutory Short Form

KNOW ALL BY THESE PRESENTS, That THE COOK CONCRETE
COMPANY, a Maine corporation, for consideration paid, grants to the CITY OF
PORTLAND, a body politic and corporate located in Cumberland County, Maine, with
Quitclaim Covenant, the land and buildings in Portland, Cumberland County, Maine,
described more particularly on Exhibit A attached hereto.

IN WITNESS WHEREOF, The Cook Concrete Company, has caused this
instrument to be sealed with its corporate seal and signed in its corporate name by
Dean M. Boylan, its President, thereunto duly authorized, this 19
day of May, 1998.

THE COOK CONCRETE COMPANY

By: Dean M. Boylan Pres
Its:
Printed Name: Dean M. Boylan

COMMONWEALTH of Massachusetts
COUNTY OF Suffolk, ss.

On Aug. 19, 1998, personally appeared the above-named
Dean M. Boylan Pres. of said corporation in his/her said
capacity, and acknowledged the foregoing to be his/her free act and deed and the free act
and deed of said corporation.

Before me,

Allison Clark
Notary Public

SEAL

MAINE REAL ESTATE TAX PAID

EXHIBIT A

PARCEL I

Certain lots or parcels of land situated in the City of Portland, County of Cumberland and State of Maine and bounded and described as follows:

A parcel of land situated on the easterly side of Presumpscot Street and shown on the City Assessor's Plan for the City of Portland as Lots 415-B-6, 419-A-5, 418-C-1 and 419-A-1 to which Plan reference is made, and bounded northeasterly by land now or formerly of David B. Estabrook, et al.; easterly by the Grand Trunk Railroad, and southerly by land conveyed by Danish Park Association to Vincent G. DeVito by deed dated May 11, 1946 and recorded in the Cumberland County Registry of Deeds in Book 1819, Page 266, excepting, however, from this parcel the strip of land on the northerly end thereof 275 feet wide measuring perpendicularly from the most northerly sideline of said parcel.

Being the same premises described as Parcel 1 in the deed from Cook & Company, Inc. to The Cook Concrete Company dated November 4, 1968 and recorded in Cumberland County Registry of Deeds in Book 3064, Page 756.

EXCEPTING from the above-described Parcel I, the land conveyed by The Cook Concrete Company to Merrill Industries, Inc. by deed dated August 19, 1987 and recorded in said Registry of Deeds in Book 7942, Page 175.

PARCEL II

A certain lot or parcel of land situated easterly of, but not adjacent to Presumpscot Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the southeasterly corner of land conveyed to Paul E. Merrill by deed recorded in the Cumberland County Registry of Deeds in Book 3104, Page 403, and shown on a Plan entitled, "Plan of Land on Presumpscot Street, Portland, Maine for Merrill Industries," by Owen Haskell, Inc., dated August 24, 1982; thence North 60°41'10" West along land now or formerly of Cook Concrete Company, 227.84 feet to a point; thence South 86°32'10" East across land of the Grantor 212.08 feet to center of a five foot metal culvert and land now or formerly of the Canadian National Railroad; thence in general southerly direction along a curve to the right with a radius of 5688.34 feet and land now or formerly of said Canadian National Railroad, 99.59 feet to the POINT OF BEGINNING, containing 10,549 square feet.

Being the same premises described in the deed from Merrill Industries, Inc. to Cook Concrete Company dated July 24, 1987 and recorded in Cumberland County Registry of Deeds in Book 7936, Page 115.

PARCEL III

A certain lot or parcel of land situated in the City of Portland, County of Cumberland, and State of Maine and more particularly described as follows:

Land situated on the northwesterly side of Ocean Avenue, numbered 994-1028 thereon, and bounded as follows: southwesterly by the Dump Road, so-called; northeasterly by the former Josiah Cobb farm, now of Patrick J. Smart and Clara Smart; and northwesterly by a line marked by a stone wall and located 527 feet from Ocean Avenue along said Dump Road and 453 feet from Ocean Avenue along the Cobb or Smart line.

The foregoing premises are conveyed SUBJECT TO all utility easements of record.

Being the same premises described in the deed from Paul E. Merrill to The Cook Concrete Company dated July 29, 1974 and recorded in Cumberland County Registry of Deeds in Book 3604, Page 93.

PARCEL IV

Certain lots or parcels of land, together with all improvements thereon and appurtenances thereto, located in the City of Portland, County of Cumberland and State of Maine, westerly of Ocean Avenue and bounded on the south by the Dump Road, so-called and on the east by land of The Cook Concrete Company, such parcels being designated on the Tax Assessor's Maps for the City of Portland, as follows:

Real Estate, Portland, Maine, Ocean Avenue R. 994-1028, Assessors Plan 414-A-2, 415-A-3, 417-A-7 and 418-A-8.

Real Estate, Portland, Maine, Ocean Avenue, R. 976-988, Assessors Plan 415-A-5 and 417-A-6.

Being the same premises described in the deed from Richard A. Davis and Adam W. Wilson to The Cook Concrete Company dated September 9, 1987 and recorded in the Cumberland County Registry of Deeds in Book 7962, Page 346.

EXCEPTING from the above-described Parcels III and IV, the land conveyed by The Cook Concrete Company to the City of Portland by deed dated August 12, 1991 and recorded in said Registry of Deeds in Book 9695, Page 70; as corrected by the deed dated October 16, 1991 and recorded in said Registry of Deeds in Book 9758, Page 66.

cook concrete*jfw*exhibit a

RECEIVED
RECORDED REGISTRY OF DEEDS

1998 OCT -1 PM 2: 30

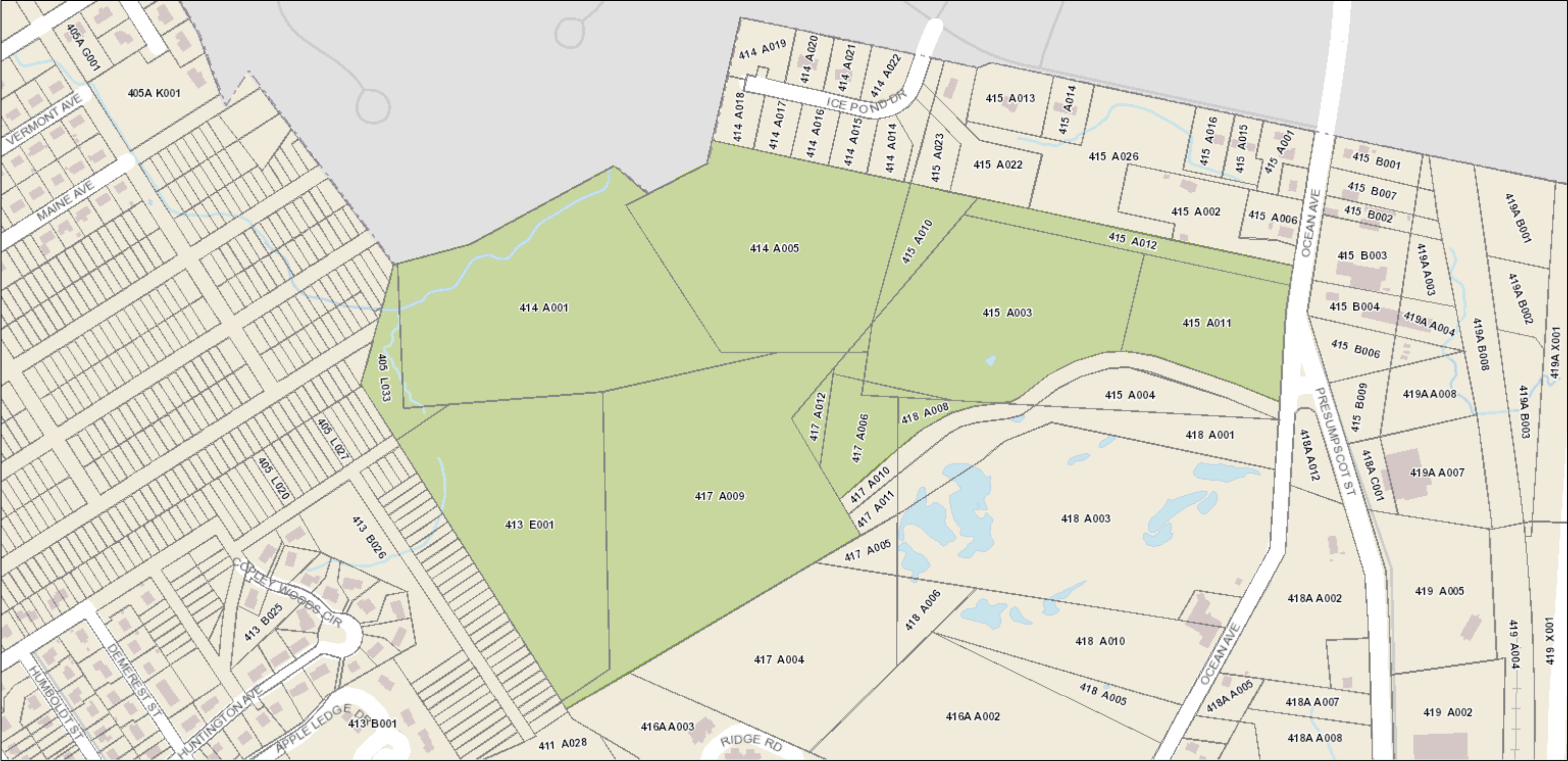
CUMBERLAND COUNTY

John B O'Brien

Exhibit 2

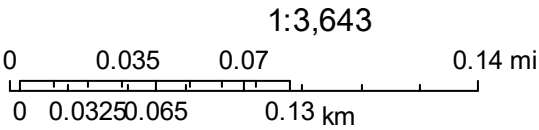
Tax Map

ArcGIS Web Map



June 30, 2017

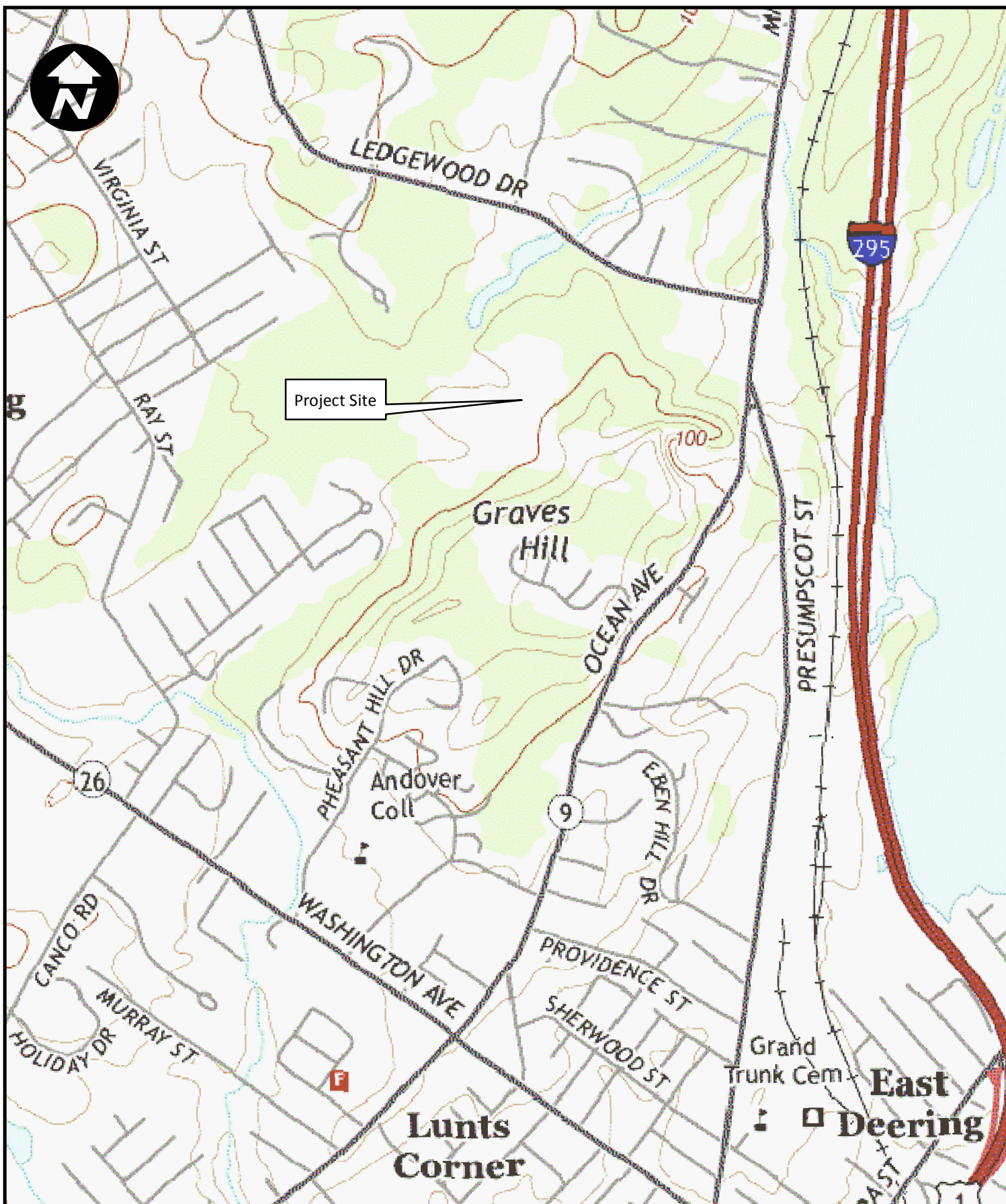
- Parcels
- Parcels



City of Portland, DPS

Exhibit 3

USGS Location Map



SEBAGO
TECHNICS

WWW.SEBAGOTECHNICS.COM

75 John Roberts Rd. - Suite 1A
South Portland, ME 04106
Tel. 207-200-2100

250 Goddard Rd. - Suite B
Lewiston, ME 04240
Tel. 207-783-5656

Site Location Diagram of: 1022 Ocean Ave
For: City of Portland

LOCATION:

1022 Ocean Avenue
Portland, ME 04103

INFORMATION:

USGS Quadrangle-Portland West

SCALE: 1" = 1,000'

DATE: 6/29/2017

I, Troy Moon, hereby certify that a neighborhood meeting was held on 7/18 at 5:30 at City Hall.

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,



7/19/2017 (date)

Attached to this certification are:

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



Executive Department
Jon P. Jennings, City Manager

July 7, 2017

Dear Neighbor,

Please join us for a neighborhood meeting to discuss plans to do maintenance on the cap of the Ocean Avenue Landfill and, following the completion of that work, the installation of a solar array. The cap maintenance work is designed to increase the grade at the top of the landfill in order to reduce water infiltration into the landfill. The solar project will install solar panels on a portion of the landfill that will generate approximately 660 kW of electricity that will be net metered against City electricity accounts.

Meeting location: Portland City Hall, Room 24
389 Congress Street
Portland, ME 04101

Meeting date: July 18, 2017

Meeting time: 5:30 PM

The City Code requires that property owners within 500 feet of the proposed development and residents on an "interested parties" list be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign in sheet and the minutes will be submitted to the Planning Board.

If you have any questions about this project please contact me at thm@portlandmaine.gov or by phone at 207-756-8362.

Sincerely,

Troy Moon
Sustainability Coordinator

Note: Under Section 14-32(C) and 14-524(a) of the City Code of Ordinances, an applicant for a Level III development, subdivision over five lots/units, or zone change is required to hold a neighborhood meeting within 30 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

Portland City Hall

[illegible]

Public Meeting
Ocean Avenue Regrading and Solar

7/18/2017

City representatives in attendance:

Troy Moon (Sustainability Coordinator), Christopher Branch (DPW Director), Josh Baston (Revision Energy), Owens McCullough (Sebago Technics), Jean Fraser (Planning)

Mr. Moon welcomed everyone to the meeting and provided an overview of maintenance work and regrading that the DEP has requested the City to perform at the Ocean Avenue Landfill. He also described the solar array proposed for about 3 acres on the very top of the landfill. Mr. Branch emphasized that the regrading and maintenance work proposed is not optional. The City will need to do the work to remain in compliance with its permits and agreements with the DEP.

Mr. Moon introduced Owens McCullough from Sebago Technics and noted that Mr. McCullough was the engineer involved with the closure of the facility in 1996 and is the person with the most historical knowledge of the landfill.

Mr. McCullough began his remarks by describing the closure process in 1996. The City discontinued using Ocean Avenue Dump in the late 70s but it wasn't formally closed. The state was interested in closing landfills all around the state and created a program to fund 75% of the work if it could be completed by Dec. 31, 1996. The City took advantage of this program and completed the work. Mr. McCullough noted that there was a wide variety of materials brought to the old dump over the years including household trash, construction debris, and possibly other materials. There are no good records of what was deposited. He indicated that before the dump was closed it used to catch on fire frequently enough that water lines were installed all around the perimeter of the facility in order to put them out. Mr. McCullough indicated that the closure in 1996 met the standards required by the DEP but that over the years the material has settled and the slopes have become less. He showed a topographic map that shows the current slope at the top of the landfill is almost zero. The map was overlayed with proposed lines to indicate increasing the slopes to between 3% - 5%. This would promote water to flow of the cap instead of infiltrating into it.

Mr. Moon added the DEP had several requests in addition to the regrading to include removing the informal paths on the landfill, testing for the presence of landfill gas, and replacing the existing snow fence on the perimeter road with a permanent fence. These measures are all designed to protect the integrity of the cap.

Mr. McCullough explained that that the contractor would fill in the paths where they have caused erosion on the landfill cap and would then loam and seed them to promote grass growth.

Mr. Branch added that public access would be allowed to continue around the perimeter road of landfill. It is very popular with residents and visitors and there are no plans to restrict it. The DEP is comfortable using the area for recreation as long as the City takes measures to protect the cap.

Mr. McCullough and Mr. Branch indicated that the City hopes to coordinate with the contractor doing work on State Street to be able to bring material excavated from the street to the landfill and use it for the regrading project. The material from street is clay and tills that would be appropriate. The project requires between 5,000 – 7,000 cubic yards of material. Using the material would reduce the overall cost of the project. Deliveries of materials would enter the site at the Dog Park entrance and would use the access road to the landfill. The Dog Park would not need to be closed. Equipment at the landfill for the regrading would be a bulldozer, an excavator, and a roller to compact the material in place. The project would peel back the existing layer of loam and reuse it to cover the fill material.

Residents had a number of questions:

Does the City have a maintenance plan? Mr. Moon responded that there is a plan filed with the DEP that requires annual mowing and testing of the surface water at several locations. He showed a map of the testing locations.

Why are you testing for landfill gas? Is there gas being generated there? Mr. McCullough indicated that the DEP is requesting the test for gas as a precaution. He noted that no gas was detected during the closure in 1996 and that the fires that occurred frequently when it was an active dump likely consumed the materials that could cause gas. The amount of construction debris in the landfill also makes gas unlikely. But, the DEP observed some spots on the landfill with less plant growth and thought it would be a good idea to check. He believes the areas noted by the DEP were likely areas where the City had taken measure to eradicate invasive knotweed that had grown up on the cap. The test to be conducted will sample air just below the clay liner. This will be effective because any gas that might be present would be trapped there.

Was there waste characterization done of the material in the landfill? Mr. McCullough said that waste characterization done at the time of closure was pretty limited. There are no records of what is in the landfill.

Was medical waste put in the landfill? No records were kept of what went into the landfill.

What records are there about the landfill? Mr. McCullough noted that the closure predates electronic record keeping so many of the old records are lost. The City has some documents as does the DEP. Mr. Moon added that, as part of the solar project, a local engineering firm completed an environmental site assessment that has been shared with the DEP.

Does the City test water in test wells? Mr. Branch indicated that we don't as it is not required by the DEP.

Is there a way to have walking paths on the landfill after the regrading? Mr. Branch indicated that walking paths can cause erosion and the DEP is very concerned about that. Bikes and ATVs are a bigger

problem than walkers. He added that we won't be policing the site closely so if people are just walking around it probably won't be a problem. We don't want to create wear paths, though.

Mr. Moon then introduced Mr. Baston of Revision Energy to describe the solar project.

Mr. Baston showed a map indicating the location of the solar panels as well as the power line that would bring the electricity produced to the street. The panels will be on the top part of the landfill surrounded by a fence. The panels and the fence will be held in place by concrete ballast as the DEP does not want any intrusion into the landfill. Trucks with equipment and staff would enter the facility at the dog park entrance. Revision is hoping to get an easement to use the road next to Dragon as an exit so trucks can do a loop without turning around. Mr. Baston showed pictures of the Belfast solar landfill project to give people an idea of what it will look like.

Residents had several questions:

Will there be glare that could impact property owners? Mr. Baston noted that we always need to be concerned about glare. He explained that the City's solar ordinance addresses that. He noted that the panels would be higher than any of the surrounding properties so glare would not be a factor. Despite that, Revision has looked carefully at this and doesn't believe the panels will create a problem based on the studies they have conducted.

Will people see the panes from their houses? Mr. Baston indicated that the panels will only be about 11 feet high. He has looked around from the proposed location and doesn't think they will be very visible to residents. A resident added that they might be more visible during the winter when there are not leaves on the trees.

What kind of fence will surround the solar panels and will it have barbed wire? Mr. Baston indicated the fence will be chain link ballasted by concrete blocks, 7' tall, and will not have barbed wire.

Will there be lights or reflectors on the fence so people will know where they are in the dark? Mr. Baston said that would be possible.

Who is responsible from a liability perspective? Mr. Moon indicated that Revision would not be liable for any issues that existed at the landfill before installing the array. They would be liable for a damage they cause during construction or if the array causes damage. The owner of the array will be responsible for the equipment when it is in place.

Mr. Moon thanked everyone for coming and invited them to attend the Planning Board meeting on July 25th. He also invited them to reach out to City staff with any questions.

*General Construction Management Plan Ocean
Avenue Landfill Maintenance Project*

**Construction Management Plan
July 20, 2017
City of Portland
Ocean Avenue Landfill Maintenance Project**

Purpose:

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

Project Narrative:

The City of Portland is mandated to complete landfill cap maintenance by the Maine Department of Environmental Protection over an area of approximately 4 acres. This work will include:

1. Install erosion control measures.
2. Strip and stockpile loam for reuse.
3. Place fill material to raise the elevation of the cap and provide for positive drainage as depicted on the site drawings.
4. Compact the fill material and grade.
5. Re-apply the stripped loam, seed and mulch.
6. Restore cover over the eroded trails on the landfill. These trails are not permitted by the MDEP Closure order and therefore will be removed and revegetated.

Project Schedule:

- Site Plan Approval: Expected - August 25, 2017.
- Preconstruction Meeting: First week in September
- Maintenance Work: Approximately 6-8 weeks. Expected Completion – late October/early November.

Traffic Control and Site Access:

The project site is closed municipal landfill with one point of city owned access from Ocean Avenue. The access is shared in common with the City Dog Park located off Ocean Avenue. The following traffic control provisions shall be implemented.

1. Construction vehicles shall not impede or utilize any of the parking areas for the dog park.
2. Construction signage shall be installed on Ocean Avenue indicating a construction area and trucks entering/exiting.
3. The paved area adjacent the dog park and entrance onto Ocean Avenue shall be maintained (swept and kept free from debris and tracking).
4. "Construction Work Area" signage shall be installed at the gravel access road beyond the dog park parking area. This location is currently gated which shall be closed at the end of each day.
5. Since the landfill perimeter access road also serves as a pedestrian trail, signage (as needed) shall be installed warning pedestrians of the construction. At times, the trail maybe temporarily closed when moving heavy equipment or during heavy truck haul periods. Warning barricades shall be installed at the sections of closed trials. Signage shall be installed stating "Trail Closed, Do Not Enter."
6. During construction, the City or Contractor may install or modify the locations of signage and trail closures responsive to safety and security of the site and pedestrians utilizing the trail.
7. Barricades will be installed at the "over the cap" trails the traverse the actual landfill. This trails are not authorized and will be restored. As a result, permanent barricades shall be installed and maintained. Barricades shall be Jersey Barriers or equal. Install signage, "Trail Closed, Do Not Enter."

Site Safety and Security:

Site safety and security will be the responsibility of the contractor completing the work. As with any construction projects, the contractor is required to be compliant with applicable health, safety and welfare rules and regulations. At the pre-construction meeting, the City and Contractor will review site safety and security and any special considerations.

Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits:

As a City project, no Performance Guarantees and Inspection Fees will be required. The City has contracted with Sebago Technics, Inc. to provide project design, inspection and coordination services for the project. A City of Portland Level Three site plan approval is required for the project and expected on August 25, 2017.

Street Opening and Street Occupancy Permits:

1. Street Opening: This project requires no work within a public right-of-way and therefore is not expected to require a Street Opening permit. Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform to the approved construction management plan.

2. **Blasting:** The project will not require any blasting. Blasting, if required, shall conform to all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

Construction Administration and Communication:

This project will be City project and therefore managed by the City and its contracted engineer (Sebago Technics, Inc.).

1. **Contact Person and contact information:**
 - Owner (City of Portland): Troy Moon, Sustainability Coordinator (Work 874-8467, Cell 207-232-5564).
 - Engineer (Sebago Technics, Inc.): Owens McCullough, P.E. (Work 200-2100, Cell 207-232-1649).
2. No site signage is proposed as this is a City project.
3. The contractor shall be instructed to direct any public or project related concerns to the contacts listed above.

Site Management and Controls:

1. Site will not involve activities other than earthmoving. As a result, no trash or debris associated is expected. The contractor and City (Public Works) shall police the area and remove any minor debris that may result from operations.
2. Street cleaning to include sweeping as necessary for removal of tracked materials.
3. Due to the short duration of the project, dust control is not expected. However, the City and Contractor will coordinate to apply water for dust control should that become a concern.
4. **Noise:** The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2). The Contractor and City will be responsible for adjusting work should noise become an issue.
5. **Rodent Control** is not expected for this project as it is limited to earthwork maintenance. 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.
6. **Snow Removal** is not expected given the timing of the work.

Erosion Control and Preservation of Trees:

1. The contractor shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide

these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.

2. No Tree removal is required for the project. Some limited tree limbing may be required along the access road to accommodate construction vehicles.
3. The storage of materials shall avoid being located under/near trees.

Construction Staging Area

1. The construction staging area will be located within the limits of the work area shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall not que in the area of the dog park or interfere with traffic movement on Ocean Avenue. A transport/delivery trucks shall que along the internal access road of the project area.

Parking During Construction:

1. All parking for contractor employees and equipment shall occur within the project work area. No parking will be allowed at the dog park.

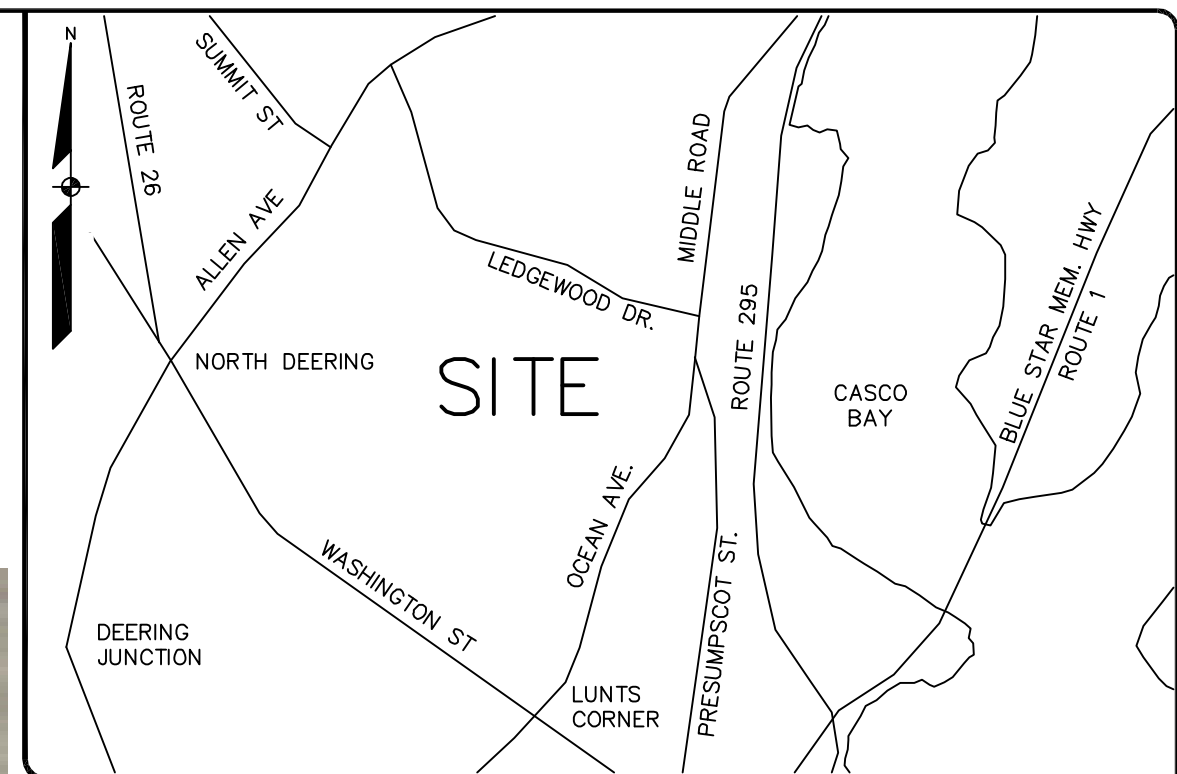
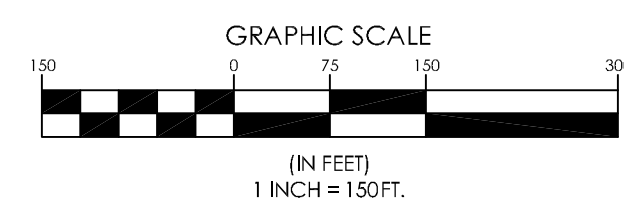
Prepared by:

Sebago Technics, Inc.

Owens A. McCullough, P.E., LEED AP



AREA/OVERALL PLAN

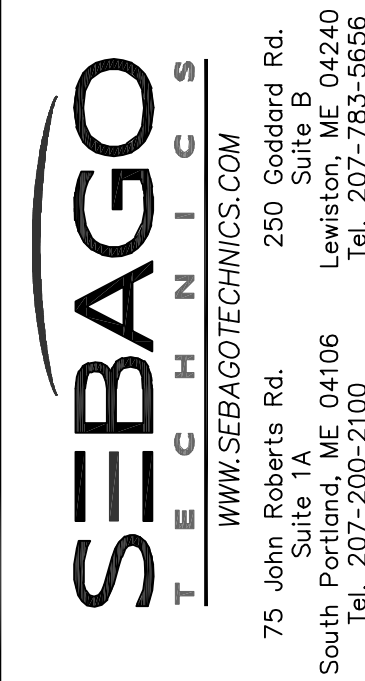


LOCATION MAP

N.T.S.

OWENS A. McCULLOUGH, PE 7122

	DESIGNED	CHECKED
OAM	OAM	OAM
B OAM	06-30-17 ISSUED FOR SITE PLAN REVIEW	
A OAM	05-03-17 ISSUED FOR CLIENT REVIEW	
REV:	BY: DATE: STATUS:	
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.		



INDEX OF PLANS

SHEET NO.	SHEET TITLE
1	OVERALL SITE PLAN
2	SITE & GRADING PLAN
3	CROSS-SECTION A-A
4	DETAILS
5	DETAILS

LEGEND

EXISTING	PROPOSED
	
PROPERTY LINE/R.O.W.	
	
EDGE GRAVEL	
---120--- ---118---	120
CONTOURS	
FILTER BARRIER	FB
	
CONSTRUCTION ENTRANCE	

OVERALL SITE PLAN
OF:
OCEAN AVENUE LANDFILL
1022 OCEAN AVE
PORTLAND, MAINE
FOR:
CITY OF PORTLAND
55 PORTLAND ST.
PORTLAND, MAINE 04101

PROJECT NO.	SCALE
16479	1" = 150'

SHEET 1 OF 5

16479-01S.dwg, TAB: OAS

George Wilson To City of Portland
Dec. 29, 1958 C.C.R.D. Book 2451-442

George Wilson to City of Portland
Dec. 29, 1958 C.C.R.D. Book 2451-442 (In Fee)
City of Portland to George Wilson
Dec. 29, 1958, C.C.R.D. Book 2451-440 (R/W)

George Wilson to City of Portland
Dec. 29, 1958 C.C.R.D. Book 2451-442

WILSON To C.M.P.
Deed 2176 / 301 3/29/54

WILSON To C.M.P. (135 ft. wide)
Deed 2172 / 337 4/15/54

CITY OF PORTLAND To
NEW ENGLAND TELEPHONE
(50 feet wide)
Deed 2676 / 125 5/28/62

Note: This Right-of-Way
Has Been Vacated
5/11/62 5/157

NOW OR FORMERLY COOK & CO. INC.

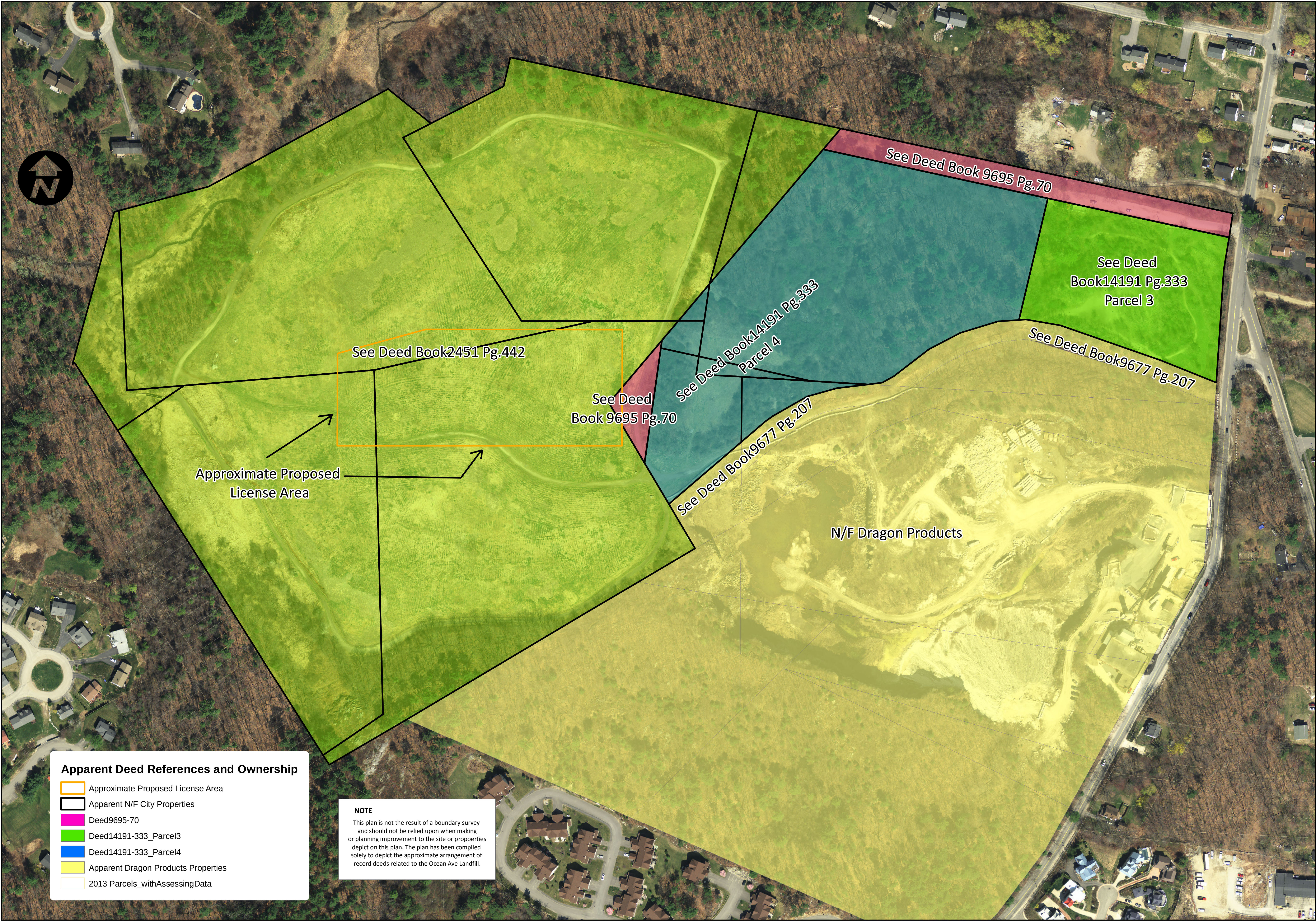
GEORGE WILSON

CITY OF PORTLAND

Scale 1 In = 100'

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
PLAN OF GEORGE WILSON
PROPERTY
PURCHASED FOR DUMP SITE

REFERENCES		SCALE
DRAWN	DVB/1959	As Noted
TRACED	723	
CHECKED	723	
DIRECTED	EEB	
APPROVED Jan 30, 1959		636 CITY ENGINEER 8



Apparent Deed References and Ownership

- Approximate Proposed License Area
- Apparent N/F City Properties
- Deed9695-70
- Deed14191-333_Parcel3
- Deed14191-333_Parcel4
- Apparent Dragon Products Properties
- 2013 Parcels_withAssessingData

NOTE

This plan is not the result of a boundary survey and should not be relied upon when making or planning improvement to the site or properties depict on this plan. The plan has been compiled solely to depict the approximate arrangement of record deeds related to the Ocean Ave Landfill.

DEED RESEARCH WORKSHEET

OF: OCEAN AVE LANDFILL
PORTLAND, ME

FOR: REVISION ENERGY
142 PRESUMPSHOT ST
PORTLAND, MAINE 04103

DATE: 05-22-2017

SCALE: 1"=100'

SHEET 1 OF 1

SEBAGO
TECHNICS

100 GARDEN ST., SUITE 1A
PORTLAND, ME 04103
WWW.SEBAGOTECHNICS.COM
TEL: 207-262-2100

JOB NUMBER: 16479

DRAWN BY: JAG

DATA SOURCES

2013 City of Portland
Parcel Mapping
Spring 2012 Orthoimagery,
State of Maine

REV: V2

JAG

DATE: 5/22/2017

BY: JAG

STATUS: ADDED APPROX. PROPOSED LICENSE AREA

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.



Vicinity of 990 Ocean Avenue

Conditional Use (Solar Energy Generation Ordinance) and Level I Site Alteration

Project ID#: 2017-142; 2017-143 CBL 405 L033001

Sunfill North LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: July 25 th , 20147	Prepared by: Jean Fraser, Planner Date: July 21 st , 2017
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I. INTRODUCTION

Sunfill North LLC has submitted Final Conditional Use and Level I applications, on behalf of the partnership between ReVision Energy and the City of Portland, to generate electricity from solar panels which will be credited to the City of Portland. The proposal includes installation of a solar array of 2,800 photovoltaic panels and associated fencing to be installed by ReVision Energy on the landfill cap within the City's land near the quarry on Ocean Avenue. The panels will be ballasted on concrete slabs and connected to the grid via a new CMP connection to Ocean Avenue.

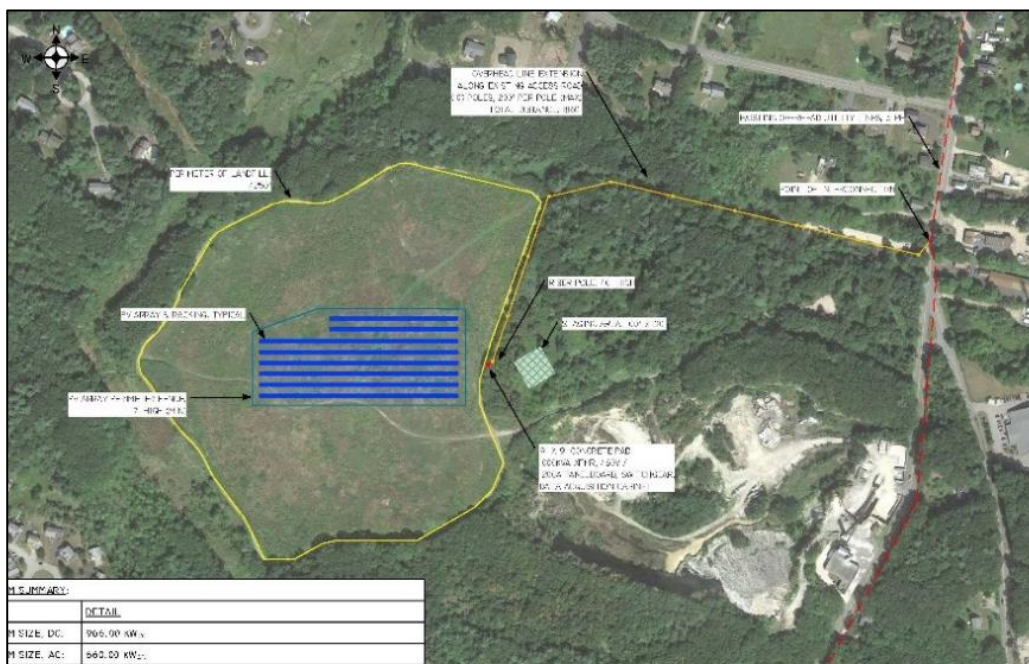
The proposed location for the panels extends over and further north of the landfill maintenance project being presented to the Board concurrently; the panels would be installed after the completion of the maintenance work. The area covered by the panels and associated fencing is about 4 acres within the 30 acre landfill cap, which in turn comprises about half of the City's land at this location.

As noted in relation to the landfill cap maintenance project, the City's land is zoned Recreational Open Space, though technically the landfill area itself is not available for recreation because of the need to protect the cap from damage. For this reason the solar array must get approval from the MDEP (legislation regarding Solid Waste Management and Landfills) to ensure that the ballasting construction, weight loading and stormwater management does not damage the cap or cause settlement. A similar solar array installation by ReVision has been permitted by the MDEP in South Portland and a similar approval is anticipated for the Portland proposal (a copy of the South Portland approval is included at [Attachment J](#) for information).

This project is being brought before the Board for a conditional use review as specified in the recently adopted Solar Energy Generation Ordinance. This is the first solar energy project of this scale in Portland.

Applicant: Sunfill North, LLC (partnership arrangement with City of Portland)

Agent: ReVision Energy (Josh Baston)



Required reviews:

Installation of 2800 photovoltaic solar panels totaling an area of 174,240 sq ft (“large scale ground mounted system”)	Conditional Use under Article X Alternative Energy, Div 2 Solar Energy Generation Section 14-779
Disturbance of land area less than one acre (for panel supports)	Level I Site Alteration (Site Plan) under Article V Site Plan Section 14-523

The project does not require a Site Location of Development review as the disturbed area is under one acre.

II. PROJECT DATA

Area of site:	30+/- acres (landfill area) (about half of overall city land)
Fenced area and panels	174,240 sq ft (4 acres)
Proposed area of disturbance:	>34,848 sq ft (.8 acres)
Impervious surfaces: - Existing - Proposed	Existing on cap to be maintained (as upgraded by landfill maintenance project) Additional 500 sq ft
Zoning:	ROS
Land Use:	Closed landfill; surrounding trails
Estimated Cost of the Project:	tbd

III. BACKGROUND/EXISTING CONDITONS

The project site is currently a gently sloping open meadow overlaying the old landfill, with informal tracks, but this will have been modified by the landfill cap maintenance project prior to the solar array installation. There is a public trail around the perimeter of the landfill and the landfill area is surrounded by trees except for a small part of the perimeter near the quarry.

IV. PROPOSALS

The proposed solar array is located in the northern section of the landfill cap, partly over the area of completed maintenance fill and grading as proposed by the City, but extending farther north. The photovoltaic system consists of 2,800 solar modules mounted on aluminum racking which can handle wind and snow loads. The modules are ballasted by cast concrete blocks in order to avoid any penetration of the landfill cap (Plan P2). The solar array is anticipated to have a 25-40 year lifespan.

The staff plan below indicates the approximate location of the solar array (looking east), though the exact layout depends on the final grading that results from the cap maintenance project:



The power generated by the array would be fed into the CMP electric grid via a new service line installed to the east along the edge of the landfill and along the access drive from Ocean Avenue. The new grid connection comprises 10-11 new poles at 30-40 feet in height, though the connection will be underground between the array and the new service along the perimeter of the landfill.

A 7 foot high chain link fence on ballasted concrete supports will surround the array; details included in Plan P3.

V. PUBLIC COMMENT

Notice of this hearing was sent to 141 property owners and interested citizens, and appeared in the July 17th and 18th, 2017 editions of the *Portland Press-Herald*. A Neighborhood Meeting is not required for this project. At the time of preparing this Report the Planning office had not received any public comments.

A Neighborhood Meeting was held on July 18, 2017 as required for the Level III application for the Landfill Cap Maintenance project. As part of that meeting the agent presented information regarding the Solar Array and the discussion centered on potential impacts as covered in this Report. The notes of that meeting are included for information in Attachment K.

VI. RIGHT, TITLE AND INTEREST

The City acquired the site for landfill purposes in 1959 as shown on the submitted boundary survey and parcel identification Plan P1, and the submitted documents (Attachment C) include the associated deeds.

VII. STAFF REVIEW

A. ZONING ASSESSMENT

The entirety of the City's land is zoned Recreational Open Space although the landfill cap is technically limited for recreational use (by the MDEP) in order to protect the landfill cap. The proposal is allowed as a conditional use in the Recreational Open Space Zone by the provisions of the Solar Energy Generation Ordinance Section 14-779. The proposal meets the dimensional standards and relevant development standards of the ROS zone as they were incorporated into the Solar Energy Generation standards (14-780).

B. CONDITONAL USE REVIEW - SOLAR ENERGY GENERATION ORDINANCE

The Solar Energy Generation ordinance 14-780 (a), (b) and (c) sets out specific requirements for large ground mounted solar energy systems within the ROS zone. The applicant has submitted an assessment of how the project complies with these requirements (Attachment G). The applicable ordinance requirements are listed below in ***bold italics*** and staff comments confirm that the proposed solar array is in compliance with the standards;

- ***Height above Ground - the absolute height of the solar energy system shall meet the following requirements:***
 - a. ***Ground mounted: 20 feet above the ground as measured from the base of the support.***

Staff Comments: The proposed solar panels will be installed with the upper edge at 11-12 feet from the ground, and therefore meets this requirement.

- ***Meet technical, safety and maintenance requirements as set out in Technical Manual***

Staff Comments: The applicant has submitted a separate narrative addressing the additional detailed technical requirements set out in the Technical Manual (Attachment H) and has met this standard.

This narrative notes that after the solar array is constructed the site is expected to have a higher wildlife habitat value as it will provide a protected area of meadow grassland.

- ***The applicant shall minimize impacts resulting from construction and maintenance of the solar energy system, including lighting, security measures, traffic, and grid connections.***

Staff Comments: The project would create some impacts during the 3 month construction period that relate primarily to construction traffic along the Dog Park access road and intermittent closures to the perimeter walking trail to the south of the landfill site. The utility connections within the landfill area will be underground within the landfill area and tie in to the new overhead new service at the tree line to the south. The overhead service is along an existing road access into the site, with some limited tree clearing. The submissions have addressed these

impacts in the submitted Construction Management Plan narrative ([Attachment L](#)), Staging and Erosion Control Information ([Attachment I](#)), and the CMP graphic ([Plan P5](#)). The applicant has confirmed that the areas disturbed by the installation will be returned to the vegetated state with the exception of the ballasts.

In the longer term the solar array will have no impacts of this nature, as it requires a low level of maintenance and no lighting. Thus this standard is met, subject to compliance with the submitted and approved Construction Management Plan.

- ***Glare: Solar panels are designed to absorb (not reflect) sunlight and are generally less reflective than other varnished or glass exterior materials. However, solar panel placement should minimize or negate any solar glare impacting nearby properties or roadways, without unduly impacting the functionality or efficiency of the solar energy system.***

Staff Comments: The location of the array is buffered on all sides by trees and ridgeline features, as can be seen in the birdseye photo above. The panels are set at a 35 degree tilt to the south and located on the top of the landfill cap, so any potential glare would only be viewed from above the project. Thus, this standard is met.

- ***Designed to avoid safety impacts;***

Staff Comments: The narrative addressing the Technical Standards ([Attachment H](#)) addresses these points and meets the standard. The project will also require building and electrical permits.

- ***Located in side or rear yards, wherever possible; Set back 75 feet from residential, RP, B1 and B2 zones; Located away and screened from public ways and nearby residential /institutional uses to extent possible***

Staff Comments: The project is located near the center of the landfill site and the closest point of the array to any zone other than ROS is 200 feet (at southeast towards Dragon Cement). The project is located away and screened from public ways and nearby residential/institutional uses by the existing vegetation, though in the winter months parts of the array may be visible from residential areas though these would be long distance views from at least 600 feet. Staff recommend that the proposal meets these standards.

- ***If over 10,000 sq ft, locate on landfills or co-terminus with public industrial, utility or highway facilities***

Staff Comments: The proposal is located on a landfill that falls under the MDEP landfill rules and therefore meets this standard.

- ***Be supported by Land Bank Commission and Parks Commission where applicable***

Staff Comments: The Land Bank supports the project. The area is not defined as a Park in terms of the Parks Commission so this requirement is not applicable. Thus, this standard has been met.

- ***Layout and fencing to be integrated with the landscape to the extent possible; Screen from abutters and minimize impact on significant scenic views to the extent possible***

Staff Comments: The fencing layout is shown in [Plan P3](#) and hugs the panel array to avoid being located on the steeper landfill slopes (since it is ballasted this is an important issue). The proposal is for the fence to be 7 feet high galvanized wire mesh, although a detail of the fencing has not been submitted. The City Arborist has suggested that wire mesh using black vinyl covered wiring would be preferable ([Att. 4](#)).

The issue of screening is addressed above and the array would not affect any significant views as the local trails and public access are below the level of the array. The project meets this standard subject to a proposed condition to submit final fencing details for review and approval.

- ***Not required to meet the conditional use requirements of the zone; for ROS see 14-156***

Staff Comments: The conditional use requirements of the ROS zone relate to proposals for indoor recreation projects and are not applicable to this type of project.

- ***The applicant shall provide an Operations and Maintenance Plan prepared and stamped by a licensed Professional Engineer or other licensed professional as appropriate. In the case of medium and large ground mounted solar energy systems, the submitted Operations and Maintenance Plan shall include an estimate of the life of the project and outline the anticipated options/action when it has reached the end of its estimated useful life***

Staff Comments: The applicant has summarized the anticipated maintenance requirements which largely comprise an inspection regime for the various components and annual mowing of the surrounding grassland. Since the project is a partnership with the City (subject to a license), the submission is adequate to meet the standard subject to a recommendation that the final O&M Plan be submitted when the project is complete.

C. CONDITIONAL USE REVIEW – 14-474

All conditional uses must address the more general standards outlined in 14-474 and the applicant has submitted a narrative outlined how the proposal address these standards (Attachment G.). The standards are listed below in ***bold italics*** along with staff comments that confirm the proposed solar array is in compliance with the standards:

(14-474) 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 Comments: There will be a short period (3 months) of construction traffic, but after installation the solar panel array will not introduce any increases in these elements. The project meets this standard.

- 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 Comments: The proposal is not expected to create any of the listed impacts and meets this standard. While in some cases solar panels can create temporary glare, in this case the location, angle of the panels and height above the surrounding land will ensure that glare is not created.

- 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 Comments: The proposed use comprises low structures within a vegetated open area surrounded and screened by the existing trees. It would not generate loading, trash or waste not include any material storage, with infrequent access for maintenance purposes, and therefore meets this standard.

D. LEVEL I SITE ALTERATION (SITE PLAN)

The Level I Site Alteration review is normally a staff level review and the proposals are not expected to comply with all of the site plan standards set out in 14-526. The list below includes all the site plan standards that apply to the Site Alteration Review. Staff have recommended a number of conditions for the Board's consideration.

Transportation Standards

- ***Impact on surrounding street systems***

During the construction period of about 3 months there will be impacts resulting from the vehicles bringing in materials, some of which will be large vehicles. The applicant has arranged for these deliveries to be undertaken via a one way route: in via the Dog Park access and out via the Dragon Cement road. The Dragon access drive is owned by Dragon Cement and a temporary access easement would be required if used for construction access.

- ***Parking***

During construction the construction vehicle parking will be located in the designated staging areas and along the southern access road ([Attachment L](#)).

- ***Construction Management Plan***

The applicant has submitted a Construction Management Plan narrative ([Attachment L](#)) and associated Graphic ([Plan P5](#)) and staff consider it to be acceptable ([Attachments 2 and 3](#)).

Environmental Standards

- ***Preservation of significant natural features*** - this does not apply to this project.

- ***Landscaping and landscape preservation***

The proposed installation of the ballasts to support the solar panels and fencing will disturb the existing vegetation, and the proposals include revegetation after the installation is complete. The proposals include a construction staging area located in an open area to the east of the landfill and possibly some minor disturbance associated with the overhead grid connection ([Plan P2](#)), which will also need to be revegetated when the construction phase is completed. The Parks Director has emphasized the importance of reseeding and recommended a wildflower meadow seed mix ([Attachment 1](#)), and these recommendations have been incorporated into a suggested condition of approval.

- ***Water quality, stormwater management and erosion control***

The proposed solar array does not significantly increase the impervious surface because the landfill cap is intended to be generally impervious and the concrete ballasts are designed to avoid damage to the cap. A small area of additional impervious surface is created where the electrical connection between the array and the grid is located at the edge of the landfill.

The solar array project must obtain a permit from the MDEP under the Landfill Rules and that review and approval will include these aspects; confirmation of the project's application is included at [Att. F](#). A suggested condition requires the receipt of the MDEP permit prior to the start of work on site.

The erosion control measures are anticipated to have already been installed as part of the City's landfill cap maintenance project (concurrently being considered at this Hearing) and the applicant has confirmed they will maintain these measures during construction and after ([Att. L](#)). The Peer Engineering review has noted that ([Att. 3](#)):

Revision also states that they will coordinate with the City to ensure stable vegetation prior to removal of erosion control. It is noted, that due to the proposed project timing with completion anticipated in the winter, final stabilization and erosion control removal likely will not occur until the spring. The site will need to be maintained as stable during the winter, after construction has been completed

This requirement is the subject of a suggested condition of approval has been included.

Public Infrastructure and community safety standards

- ***Consistency with Master Plans***

The project does not affect the City's public facilities in the area (the perimeter trail around the base of the landfill, and the Dog Park area and parking) once the installation is complete. During the 3 month construction period there will be a need to close sections of the perimeter path for public safety reasons, and the Construction Management Plan has included appropriate measures ([Attachment L and Plan 5](#)).

Site design standards

- **Historic Resources** - this does not apply to this project.

- **Exterior lighting**

The applicant has confirmed that there will be no lighting associated with the project after the installation is complete (Attachment G).

- **Signage and wayfinding**

The applicant has indicated that there will be signage during construction and that has been reviewed as part of the Construction Management Plan. It is anticipated that permanent signage would be placed on or near the solar array once its installation is complete (that might include educational information as well as warning signs regarding the danger from electricity) and a final signage plan is requested in a suggested condition of approval so that this may be integrated with Parks Department signage.

- **Zoning related design standards** - this does not apply to this project.

VIII. STAFF RECOMMENDATION

The project is part of a City initiative to utilize solar energy generation to offset the City's electricity needs and reduce the City's carbon footprint. The proposal makes use of a closed landfill that is still subject to environmental restrictions, and allows the solar array to be located where it is largely enclosed by existing trees and creates few impacts. Staff recommend approval of the project subject to the suggested conditions of approval, which primarily address the short-term impacts of construction over a period of 3 months.

IX. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on July 25, 2017 for application #2017-142 (Level I Site Alteration) and #2017-143 (Conditional Use) for a Solar Array on the Ocean Avenue Landfill, relevant to the Site Plan and Solar Energy Generation ordinances and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board finds the following:

A. CONDITONAL USE REVIEW

The Planning Board finds that the plan (**is/is not**) in conformance with the Conditional Use Standards of the Solar Energy Generation ordinance in the Land Use Code, and (**approves/does not approve**) the application subject to the following condition(s) of approval:

Potential conditions of approval:

- i. That the applicant and contractors and all associated truck and equipment operators shall follow the submitted Construction Management Plan prepared Josh Baston of ReVision Energy dated 7.19.2017, including the truck routing plan and all safety measures to manage access for members of the public to the Dog Park and its parking area and nearby walking trails; and
- ii. That the applicant shall submit the fencing details for review and approval prior to ordering for installation, with black vinyl covered wire mesh recommended for the fencing material; and
- iii. That the final Operations and Maintenance Plan be submitted within one month of the completed solar array starting to generate electricity.

B. LEVEL I SITE ALTERATION REVIEW

The Planning Board finds that the plan (**is/is not**) in conformance with the site plan standards of the Land Use Code, and (**approves/does not approve**) the application subject to the following condition(s) of approval:

Potential conditions of approval:

- i. That the applicant shall submit the Solid Waste License Permit from MDEP prior to the start of work on the site; and
- ii. That the applicant shall obtain easements or temporary construction agreements for all work outside the boundaries of the site, including the Dragon Cement access road if that is to be used, with copies provided to the Planning Authority prior to the issuance of a building permit; and
- iii. That the applicant shall reinstate the site, including the staging area to the east of the landfill and any disturbance associated with the grid connections, to existing or improved conditions, including reseeding the disturbed areas with a solar/wildflower seed mix as recommended by the Parks Director in his comments dated 7.13.2017; and
- iv. That the applicant shall have responsibility for the erosion control measures during this solar array project and shall maintain the site so it is stable during the winter, after construction has been completed; and
- v. That the applicant shall submit a Signage Plan for all permanent signage on the City's land associated with the project, for review and approval by the Planning Authority and Parks Department prior to the placement of permanent signs.

ATTACHMENTS

Report attachments

1. Parks Director comments 7.13.2017
2. DPW Comments 7.20.2017
3. Peer Engineer Review comments 7.20.2017
4. City Arborist comments (awaited)

Public comments

(none received at the time the Report was finalized)

Applicant's Submittal

- A. Application for Conditional Use Review
- B. Application for Level I Site Alteration
- C. Right, Title and Interest
- D. Financial and Technical Capacity
- E. Project Description
- F. MDEP Solid Waste License Permit- confirmation of application
- G. Zoning Narratives- Conditional use
- H. Narrative addressing Technical Standards
- I. Staging and Erosion Control Information
- J. South Portland MDEP Permit for information
- K. Neighborhood Meeting information
- L. Construction Management Plan narrative 7.19.2017

Plans

- P 1 Boundary Survey and Plan of parcels
- P 2 Solar Array System Overview
- P 3 Solar Array Fencing and spacing detail
- P 4 Site Topography
- P 5 Construction Management Plan graphic 7.19.2017
- P 6 Electrical Connection Design and Specifications

Fwd: Site Plan applications re solar array on Ocean Ave landfill

1 message

Jean Fraser <jf@portlandmaine.gov>
To: "Fraser, Jean" <jf@portlandmaine.gov>

Mon, Jul 17, 2017 at 3:49 PM

----- Forwarded message -----

From: **Ethan Hipple** <ehipple@portlandmaine.gov>
Date: Thu, Jul 13, 2017 at 5:10 PM
Subject: Re: Site Plan applications re solar array on Ocean Ave landfill
To: Jean Fraser <jf@portlandmaine.gov>
Cc: "O'Brien, Stuart" <sgo@portlandmaine.gov>, "Barhydt, Barbara" <bab@portlandmaine.gov>

Hi Jean,
We are supportive of this project.

During the two meetings I have attended on the project, we have simply asked that access be maintained to the Dog Park and to the walking/hiking trails. We understand that there will be impacts from construction with increased truck traffic, but as long as public access and parking is maintained, we do not have any objections.

We also would want to be sure that after construction the site is returned to current conditions (or better). Specifically, we would like to recommend any reseeding in the project area to use a solar wildflower/grass mix: <http://www.americanmeadows.com/grass-and-groundcover-seeds/solar-farm-color-seed-mix>

Take care,
Ethan

Ethan Hipple, CPRP
Parks Director
City of Portland
212 Canco Rd.
Portland, Maine 04103
o: 207.808-5400
ehipple@portlandmaine.gov

www.portlandmaine.gov
Portland, Maine | Yes. Life's good here.



Jean Fraser <jf@portlandmaine.gov>

Fwd: Construction Management Plan

1 message

Jean Fraser <jf@portlandmaine.gov>
To: "Fraser, Jean" <jf@portlandmaine.gov>

Thu, Jul 20, 2017 at 5:41 PM

----- Forwarded message -----

From: **Keith Gray** <kgray@portlandmaine.gov>
Date: Thu, Jul 20, 2017 at 8:16 AM
Subject: Re: Construction Management Plan
To: Jean Fraser <jf@portlandmaine.gov>
Cc: "Swett, Lauren" <lszett@woodardcurran.com>, "Bartlett, Jeremiah" <jbartlett@portlandmaine.gov>, joshb@revisionenergy.com

Hello Jean,

I have reviewed the Construction Management Plan provided by ReVision and have no further comments.

Nice work Josh. Thank you for your quick response.

-Keith

RE: Landfill cap maintenance and solar array projects- Construction Management Plans

1 message

Lauren Swett <lswett@woodardcurran.com>

Thu, Jul 20, 2017 at 2:10 PM

To: Jean Fraser <jf@portlandmaine.gov>, "Bartlett, Jeremiah"

<jbartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Ethan Hipple

<ehipple@portlandmaine.gov>, "Tarling, Jeff" <jst@portlandmaine.gov>

Cc: "Errico, Thomas" <thomas.errico@tylin.com>

Hi Jean,

I have reviewed both construction management plans for the Landfill Cap Maintenance and Solar Array projects. I agree with the comments provided by Keith Gray related to signage and trail closure, and the Applicant has adequately addressed this. I also reiterate Keith's concerns with regards to consistency with erosion control:

Based on a review of all provided documents, all erosion control measures will be installed by the City as part of the Landfill Cap Maintenance project, and will remain in place to be utilized by Revision during the Solar Array project. The filter barrier shown on the plans for the maintenance project does not appear to cover an adequate area to provide erosion control for the solar array work. The plans for the maintenance project should be modified to include erosion control over the entire required area, or the solar array project will be required to install additional erosion control for impacted areas of the site beyond the maintenance project limit of work.

Revision also states that they will coordinate with the City to ensure stable vegetation prior to removal of erosion control. It is noted, that due to the proposed project timing with completion anticipated in the winter, final stabilization and erosion control removal likely will not occur until the spring. The site will need to be maintained as stable during the winter, after construction has been completed.

Jean, since these comments relate to the coordination between the two projects/applicants, I think they apply to both project applications.

Let me know if you have any additional questions.



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: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

Planning Division

Fourth Floor, City Hall

389 Congress Street

(207) 874-8719

planning@portlandmaine.gov

Office Hours

Monday thru Friday

8:00 a.m. – 4:30 p.m.

PROJECT NAME:

City of Portland Ocean Ave. Landfill Solar Array

PROPOSED DEVELOPMENT ADDRESS:

Old City Landfill, Ocean Ave. Portland

CHART/BLOCK/LOT (s): See attached map **Applicable Zone:** ROS

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Sunfill North, LLC c/o Josh Baston Business Name, if applicable: Address: 91 W Main St City/State : Liberty, ME Zip Code: 04949	Applicant Contact Information Work # 207-221-6342 Home# 207-595-2445 Cell # 207-595-2445 Fax# e-mail: joshb@revisionenergy.com
Owner – (if different from Applicant) Name: City of Portland c/o Troy Moon Address: 389 Congress St City/State : Portland, ME Zip Code: 04101	Owner Contact Information Work # 207-756-8362 Home# Cell # Fax# e-mail: thm@portlandmaine.gov
Billing Information Name: Sunfill North, LLC Address: 91 W Main St City/State : Liberty ME Zip Code: 04949	Billing Information Work # 207-589-4171 Cell # Fax# e-mail: holly@revisionenergy.com
Designated person/person(s) for uploading to e-Plan: Name: Josh Baston e-mail: joshb@revisionenergy.com Name: Allison Gehnrich e-mail: agehnrich@revisionenergy.com Name: e-mail:	

RIGHT, TITLE OR INTEREST:

See PPA/Site Licence

(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.

Zoned ROS, the existing use is a capped landfill

PROPOSED USE: Describe the proposed use of the subject property

The proposed project will install 2,800 solar panels on the cap of the landfill. A new CMP service

will be installed to allow this solar array to feed power back to CMP to credit City of Portland meters.

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

Per the Solar Energy Generation ordinance, this large scale ground mounted system is allowed

as a conditional use in zone ROS.

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- 775 ET SEQ

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.
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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
		1	Completed Application Form
		1	Cover letter stating the nature of the project.
		1	Evidence of right, title and interest.
		1	Written Submittals that address the conditional use standards of Sec. 14-474.
		1	Written submittals that address any applicable standards of review contained in the zoning code for the specific use.
		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.
		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:
-------------------------	-------



Conditional Use for Planning Board Review
Development Review Application

A. Conditional Use: Standards and Criteria - Section 14-474 and Zone Related Criteria
Per section 14-779 of the adopted Solar Energy Generation ordinance, Large Scale Ground mounted solar is a conditional use in zone ROS.

B. The Conditional Use application will be submitted in addition to a Level 1 Site Plan application.

Conditional Use Standards and Conditions - 14-474

- a. During construction traffic will be generated during normal working hours of 7:00 AM to 6:00 PM. Every effort will be made to utilize parking on the landfill work site and not in the dog park parking lot. Post construction traffic will be limited to occasional O&M visits with a single vehicle. There will be no paving associated with this project.
- b. The proposed use of a landfill solar array will not create any noise, dust, sewage, disposal, emissions, odor, lighting or litter. A glare analysis will be submitted as required in the solar Energy Ordinance, but the effect will be minimal.
- c. Post construction of the landfill solar array, the disturbed site will be returned to a vegetated state with the exception of the roughly 20,000 sq feet occupied by the concrete ballast blocks anchoring the solar array. The array will be installed behind a 7' tall chain link fence as required by the National Electric Code, and for public safety. Post construction there will not be any loading, deliveries, trash or waste generation, or material storage. Any signs will be strictly informational about the project and will be coordinated with the land bank or other interested parties.



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 I: Site Alterations. 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) 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>

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Office Hours

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

PROJECT NAME:

City of Portland Ocean Ave. Landfill solar Array

PROPOSED DEVELOPMENT ADDRESS:

Old City Landfill, Ocean Ave. Portland

PROJECT DESCRIPTION:

The proposed project will install 2800 solar panels on the cap of the landfill. A new CMP service will be installed to allow this solar array to feed power back to CMP to credit City of Portland meters.

CHART/BLOCK/LOT: see attached parcel map.

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Sunfill North, LLC c/o Josh Baston Business Name, if applicable: Address: 91 W Main St City/State : Liberty, ME Zip Code: 04949	Applicant Contact Information Work # 207-221-6342 Home# Cell # 207-595-2445 Fax# e-mail: joshb@revisionenergy.com
Owner – (if different from Applicant) Name: City of Portland c/o Troy Moon Address: 389 Congress St City/State : Portland, ME Zip Code: 04101	Owner Contact Information Work # 207-756-8362 Home# Cell # Fax# e-mail:
Agent/ Representative Name: Josh Baston Address: 142 Presumpscot St. City/State : Portland, ME Zip Code: 04101	Agent/Representative Contact information Work # 207-221-6342 Cell # 207-595-2445 e-mail: joshb@revisionenergy.com
Billing Information Name: Holly McFaul Address: 91 W Main St. City/State : Liberty, ME Zip Code: 04949	Billing Contact Information Work # 207-589-4171 Cell # Fax# e-mail: holly@revisionenergy.com

Engineer Name: Jeffrey Read, SME Engineers Address: 4 Blanchard Rd. City/State : Cumberland, ME Zip Code: 04021	Engineer Contact Information Work # 207-829-1321 Cell # Fax# e-mail:
Surveyor Name: Sebago Technics (see also City of Portland) Address: 75 John Roberts Road City/State : S. Portland, ME Zip Code: 04106	Surveyor Contact Information Work # 207-200-2100 Cell # Fax# e-mail:
Architect Name: Address: City/State : Zip Code:	Architect Contact Information Work # Cell # Fax# e-mail:
Attorney Name: Steve Hinchman Address: 142 Presumpscot St. City/State : Portland, ME Zip Code: 04103	Attorney Contact Information Work # 207-837-8637 Cell # Fax# e-mail: steveh@revisionenergy.com
Designated person/person(s) for uploading to e-Plan Name: Allison Gehrich e-mail: agehrich@revisionenergy.com Name: Josh Baston e-mail: joshb@revisionenergy.com Name: e-mail:	

APPLICATION FEES:

____ Level 1 Site Alteration (\$200.00)	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.
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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-mailed 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 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 II Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant: Josh Baston	Date: 6/15/2017
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PROJECT DATA

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

Total Area of Site	174,240	sq. ft.
Proposed Total Disturbed Area of the Site	>34,848	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)	Existing Landfill Cap	sq. ft.
Impervious Area (Total Proposed)	18,377 (on cap)	sq. ft.
	500 (off cap)	
Parking Spaces		
# of Parking Spaces (Total Existing)	0 (at solar location)	sq. ft.
# of Parking Spaces (Total Proposed)	0	sq. ft.
# of Handicapped Spaces (Total Proposed)	0	sq. ft.

Level 1 Site Alteration			
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
		1	Completed Application form
		1	Application fees
		1	Written description of project
		1	Evidence of right, title and interest
		1	Evidence of state and/or federal approvals, if applicable
		1	Written assessment of proposed project's compliance with applicable zoning requirements
		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
		1	Written requests for waivers from site plan or technical standards, if applicable.
		1	Evidence of financial and technical capacity
Applicant Checklist	Planner Checklist	# of Copies	SITE PLAN SUBMISSIONS CHECKLIST
		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
		1	Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)
			Proposed grading and contours;
			Existing structures with distances from property line;
			Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;
			Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);
			Preliminary infrastructure improvements;
			Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;

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

Ocean Ave Landfill Deed References

1 message

Jon Giles <jgiles@sebagotechnics.com>

Tue, Jul 18, 2017 at 4:53 PM

To: "jf@portlandmaine.gov" <jf@portlandmaine.gov>

Cc: Owens McCullough <omccullough@sebagotechnics.com>

Jean,

Owens McCullough asked me to send you this plan I made for the City and Revision Energy back on 5/22/2017. It shows the approximate location of the deeds into the City of Portland which make up the Ocean Ave Landfill. The only survey plan of the City holdings is from the Engineering Vault (see attached Vault Plan 636/8). The survey does not encompass the whole landfill property though and parts of it are out of date. I have also spent time in the Engineering Vault researching this project and have not found an overall survey plan for the Landfill, just miscellaneous adjacent surveys and deeds. The deeds are summarized on the attached deed composite plan. Please note the legend on the PDF deed composite plan, "16479 OceanAveLandfill ReVisionWorksheetv2.pdf", as it explains the various deeds into the City that all together make up the current Ocean Ave Landfill property. The PDF "16479 OceanAveLandfill ReVisionWorksheetv2.pdf" was created from the City's GIS parcel mapping and orthoimagery data, with deed references from deed research performed by Sebago Technics. Please let me know if you have any questions or if I can assist further.

Jon Giles, PLS, GISP *GIS Coordinator*

Office: [207.200.2100](tel:207.200.2100) | Direct: [207.200.2128](tel:207.200.2128)

75 John Roberts Rd., Suite 1A, South Portland, ME 04106

jgiles@sebagotechnics.com | www.sebagotechnics.com

An Employee-Owned Company

Wilson
to
Portland
City of
--
War

KNOW ALL MEN BY THESE PRESENTS THAT GEORGE WILSON of Portland in the County of Cumberland and State of Maine, in consideration of ONE (\$1.00) DOLLAR AND OTHER GOOD AND VALUABLE CONSIDERATIONS paid by the CITY OF PORTLAND, a body politic and corporate, located in said County and State, the receipt whereof he does hereby acknowledge, does hereby give, grant, bargain, sell and convey unto the said CITY OF PORTLAND, its successors and assigns forever, a certain parcel of land located off the westerly side of Ocean Avenue in said City of Portland and bounded and described as follows:

Beginning at a point in a stone wall marking the division line between land now or formerly of Martin P. and Arlene D. Smart and land of this Grantor, at a point distant northwesterly along said division line, 1,000 feet from the northwesterly side line of Ocean Avenue; thence northwesterly by said division line between said Smart and Wilson and by a stone wall a distance of 842.73 feet to a point in the division line between the Town of Falmouth and the City of Portland; thence southwesterly by the said town line and making an included angle through the south of $90^{\circ}50'$ with the easterly direction of the last described course a distance of 74.38 feet to a point and a monument marking an angle in the said town line; thence southwesterly by the said town line and making an included angle through the south of $230^{\circ}00'$ with the northerly direction of the last described course a distance of 203.74 feet to a point and a monument marking an angle in the said town line; thence northwesterly by the said town line and making an included angle through the south of $246^{\circ}04'$ with the easterly direction of the last described course a distance of 136.42 feet to a point and a monument marking an angle in the said town line; thence southwesterly by the said town line and making an included angle through the south of $112^{\circ}21'$ with the southeasterly direction of the last described line a distance of 509.04 feet to a point and a monument marking an angle in said town line; thence westerly by the said town line and making an included angle through the south of $193^{\circ}08'$ with the easterly direction of the last described line a distance of 247.20 feet to a point and a monument marking an angle in the said town line; thence southwesterly and making an included angle through the south of $120^{\circ}19'$ with the easterly direction of the last described course a distance of 382.50 feet to a point; thence southerly by a stone wall and making an included angle through the east of $132^{\circ}48'$ with the northerly direction of the last described line a distance of 1190.73 feet to a point; thence northeasterly by a stone wall and making an included angle through the north of $92^{\circ}44'$ with the northerly direction of the last described course a distance of 1059.86 feet to a point; thence northerly and making an angle of $90^{\circ}00'$ with the last described course a distance of 120.50 feet to a point, said point being the most westerly terminus of, and an intersection with, the center line of a fifty foot wide strip of land being conveyed by George Wilson to the City of Portland by this same deed and described below; thence northerly in a prolongation in a straight line of the last described course a distance of 299.50 feet to a point; thence northeasterly and making an included angle through the east of $109^{\circ}13'$ with the southerly direction of the last described course a distance of 895.66 feet to the point of beginning in the division line between land now or formerly of said Smart and this Grantor.

Also another certain parcel of land leading from Ocean Avenue to the premises above conveyed and bounded and described as follows:

Beginning at a point in the westerly side line of Ocean Avenue, said point being distant 329.46 feet more or less, southerly along the westerly side line of Ocean Avenue from the first angle southerly of the town line between the Town of Falmouth and the City of Portland; thence northwesterly and making an included angle of $71^{\circ}31'$ through the north with the northerly direction of the westerly side line of Ocean Avenue, a distance of 157.54 feet to a point; thence northwesterly and making an included angle of $177^{\circ}29\frac{1}{2}'$ through the west with the southeasterly direction of the last described course, a distance of 262.12 feet to a point; thence northwesterly and making an included angle of $170^{\circ}32'$ through the west with the southeasterly direction of the last described course, a distance of 81.66 feet to a point; thence northwesterly and making an included angle of $165^{\circ}06'$ through the south with the southeasterly direction of the last described course, a distance of 58.77 feet to a point; thence northwesterly and making an included angle of $166^{\circ}31'$ through the south with the southeasterly direction of the last described course, a distance of 94.90 feet to a point; thence westerly and making an included angle of $170^{\circ}40\frac{1}{2}'$ through the south with the southeasterly direction of the last described course, a distance of 86.05 feet to a point; thence southwesterly and making an included angle of $168^{\circ}55\frac{1}{2}'$ through the south with the easterly direction of the last described course a distance of 113.07 feet to a point; thence westerly and making an included angle of $188^{\circ}35\frac{1}{2}'$ through the south with the northeasterly direction of the last described course, a distance of 29.33 feet to a point; thence northwesterly and making an included angle of $196^{\circ}23'$ through the south with the easterly direction of the last described course, a distance of 28.54 feet to a point; thence northwesterly and making an included angle of $187^{\circ}47\frac{1}{2}'$ through the south with the southeasterly direction of the last described course, a distance of 101.84 feet to a point; thence northwesterly and making an included angle of $170^{\circ}17'$ through the south with the southeasterly direction of the last described course, a distance of 53.48 feet to a point; thence westerly and making an included angle of $167^{\circ}30\frac{1}{2}'$ through the south with the southeasterly direction of the last described course, a distance of 96.15 feet to a point; thence southwesterly and making an included angle of $173^{\circ}12'$ through the south with the southeasterly direction of the last described course, a distance of 339.73 feet to a point in the easterly boundary line of other property being conveyed to the City of Portland by this same deed as described above. Said above described strip of land to be fifty (50) feet wide and to lie equally on either side of the above described center line.

Also another certain parcel of land located at the intersection of Ocean Avenue and Presumpscot Street and bounded and described as follows:

Beginning at the intersection of the easterly side line of Ocean Avenue and the westerly side line of Presumpscot Street; thence southerly by the said easterly side line of Ocean Avenue a distance of 139.35 feet to a point; thence northerly and easterly on a curve tangent to the last described course and having a radius of 25.60 feet a distance of 73.16 feet measured on the arc to a point in the westerly side line of Presumpscot Street; thence northerly by the said westerly side line of Presumpscot Street said side line being tangent to the curve above described a distance of 139.35 feet to a point of beginning.

Meaning and intending to convey hereby portions of the premises conveyed to George Wilson by Jorena Doughty by warranty deed, dated December 30, 1925, and recorded in Cumberland County Registry of Deeds in Book 1223, Page 219, and by Elizabeth J. Fogg by warranty deed, dated October 15, 1926, and recorded in said Cumberland County Registry of Deeds in Book 1246, Page 472.

The above premises are conveyed subject to any rights existing under the following easements granted by the said George Wilson:

George Wilson to New England Telephone and Telegraph Company by warranty deed, dated March 18, 1927, and recorded in Cumberland County Registry of Deeds in Book 1263, Page 118.

George Wilson to Central Maine Power Company and New England Telephone and Telegraph Company by release deed, dated July 16, 1953, and recorded in Cumberland County Registry of Deeds in Book 2146, Page 127.

George Wilson to Portland Water District by warranty deed, dated December 22, 1953, and recorded in Cumberland County Registry of Deeds in Book 2161, Page 50.

George Wilson to Central Maine Power Company by warranty deed, dated April 5, 1954, and recorded in Cumberland County Registry of Deeds in Book 2172, Page 337.

George Wilson and others to Central Maine Power Company by warranty deed, dated March 29, 1954, and recorded in Cumberland County Registry of Deeds in Book 2176, Page 301.

TO HAVE AND TO HOLD the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said CITY OF PORTLAND, its successors and assigns, to it and their use and behoof forever.

AND I do covenant with the said Grantee, its successors and assigns, that I am lawfully seized in fee of the premises, that they are free of all incumbrances, except as set forth above, that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, I the said GEORGE WILSON, being unmarried, have hereunto set my hand and seal this 24th day of December, 1958

Signed, Sealed and Delivered
in presence of

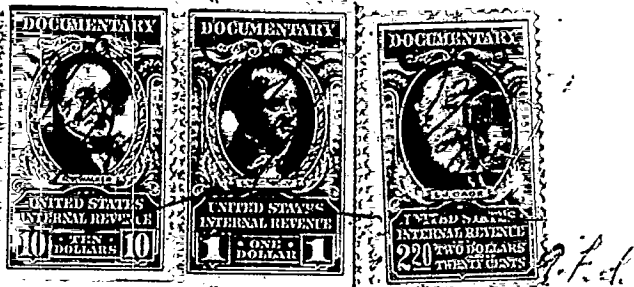
Barney J. Shive

George Wilson

STATE OF MAINE
CUMBERLAND, ss.

Dec. 24, 1958

Personally appeared the above named GEORGE WILSON and acknowledged the foregoing instrument to be his free act and deed.



Before me,

Barney J. Shive

Justice of the Peace

Notary Public

STATE OF MAINE

CUMBERLAND, ss.

REGISTRY OF DEEDS

Received at 10 H 47 M A on DEC 29 1958 and recorded in

Book 2451 Page 442 ATTEST

George Wilson Register

42570
KNOW ALL MEN BY THESE PRESENTS, That THE COOK CONCRETE COMPANY, a corporation organized and existing under the laws of the State of Maine, and having a place of business at Portland in the County of Cumberland and State of Maine, in consideration of One Dollar (\$1.00) and other good and valuable considerations paid by the CITY OF PORTLAND, a Maine municipal corporation whose mailing address is 389 Congress Street, Portland, Maine 04101, the receipt whereof it does hereby acknowledge, does hereby remise, release, bargain, sell and convey, and forever quitclaim unto the said City of Portland, its successors and assigns forever, the following described real estate:

A certain strip of land in said Portland, sixty (60) feet in width, lying adjacent to the southerly sideline of premises now or formerly owned by Dale A. Williams and Eleanor F. Williams, described in a deed from Clara M. Smart to Dale A. Williams and Eleanor F. Williams dated June 21, 1966, recorded in Cumberland County Registry of Deeds in Book 2962, page 753, bounded as follows: easterly by the westerly side of Ocean Avenue, northerly by said southerly sideline of said Williams land, westerly by the southeasterly sideline of land of the Grantee herein, and southerly by a line which is continuously sixty (60) feet southerly of and continuously parallel to said southerly sideline of said Williams land.

Also another certain lot or parcel of land lying northwesterly of said Ocean Avenue and bounded and described as follows:

Commencing at a point on the northwesterly sideline of land of the Grantor, which point is 691.80 feet on a course of S 55° 54" W from the northeasterly corner of the parcel first above described. Thence S 55° 54" W a distance of 203.86 feet along the land of the Grantor and land of the City of Portland a distance of 203.86 feet to an iron rod, thence S 14° 53" W a distance of 273.82 feet along land of the Grantor and land of the City of Portland to an iron rod. Thence N 23° 44" 30' E a distance of 308.38 feet along other land of the Grantor to the point of beginning.

Said parcel is triangular in shape and contains 16,730 feet and is shown as "parcel to be conveyed to City of Portland" on "Plan of Land in Portland, Maine, Ocean Avenue for The Cook Concrete Company dated January 4, 1984, Revised March 30, 1990 by Owen Haskell, Inc."

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging, to the said City of Portland, its successors and assigns forever.

Instr 42570 Bk 9695 Pg 71

AND the said The Cook Concrete Company does COVENANT with the said City of Portland, its successors and assigns, that it will WARRANT and DEFEND the premises to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under it.

IN WITNESS WHEREOF, the said The Cook Concrete Company has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Jeanne Marie Boylan, its Vice President, thereunto duly authorized, this 12th day of August, 1991.

SIGNED, SEALED AND DELIVERED

In Presence of

Bruce A. Coggeshall

THE COOK CONCRETE COMPANY

By: Jeanne Marie Boylan

Name: Jeanne Marie Boylan

Its: Vice President

STATE OF MAINE
CUMBERLAND, SS

August 12, 1991

Then personally appeared the above-named Jeanne Marie Boylan of said The Cook Concrete Company as aforesaid, and acknowledged and foregoing instrument to be his free act and deed and the free act and deed of said Company.

Before me,

Bruce A. Coggeshall
Notary Public Attorney at Law
Print: Bruce A. Coggeshall

Recorded
Cumberland County
Registry of Deeds
08/30/91 12:17:29PM
Robert P. Titcomb
Register

BK | 4 | 9 | PG 33 |

- 70263

QUITCLAIM DEED WITH COVENANT
Statutory Short Form

KNOW ALL BY THESE PRESENTS, That THE COOK CONCRETE
COMPANY, a Maine corporation, for consideration paid, grants to the CITY OF
PORTLAND, a body politic and corporate located in Cumberland County, Maine, with
Quitclaim Covenant, the land and buildings in Portland, Cumberland County, Maine,
described more particularly on Exhibit A attached hereto.

IN WITNESS WHEREOF, The Cook Concrete Company, has caused this
instrument to be sealed with its corporate seal and signed in its corporate name by
Dean M. Boylan, its President, thereunto duly authorized, this 19
day of May, 1998.

THE COOK CONCRETE COMPANY

By: Dean M. Boylan Pres
Its:
Printed Name: Dean M. Boylan

COMMONWEALTH of Massachusetts
COUNTY OF Suffolk, ss.

On Aug. 19, 1998, personally appeared the above-named
Dean M. Boylan Pres. of said corporation in his/her said
capacity, and acknowledged the foregoing to be his/her free act and deed and the free act
and deed of said corporation.

Before me,

Allison Clark
Notary Public

SEAL

MAINE REAL ESTATE TAX PAID

EXHIBIT A

PARCEL I

Certain lots or parcels of land situated in the City of Portland, County of Cumberland and State of Maine and bounded and described as follows:

A parcel of land situated on the easterly side of Presumpscot Street and shown on the City Assessor's Plan for the City of Portland as Lots 415-B-6, 419-A-5, 418-C-1 and 419-A-1 to which Plan reference is made, and bounded northeasterly by land now or formerly of David B. Estabrook, et al.; easterly by the Grand Trunk Railroad, and southerly by land conveyed by Danish Park Association to Vincent G. DeVito by deed dated May 11, 1946 and recorded in the Cumberland County Registry of Deeds in Book 1819, Page 266, excepting, however, from this parcel the strip of land on the northerly end thereof 275 feet wide measuring perpendicularly from the most northerly sideline of said parcel.

Being the same premises described as Parcel 1 in the deed from Cook & Company, Inc. to The Cook Concrete Company dated November 4, 1968 and recorded in Cumberland County Registry of Deeds in Book 3064, Page 756.

EXCEPTING from the above-described Parcel I, the land conveyed by The Cook Concrete Company to Merrill Industries, Inc. by deed dated August 19, 1987 and recorded in said Registry of Deeds in Book 7942, Page 175.

PARCEL II

A certain lot or parcel of land situated easterly of, but not adjacent to Presumpscot Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the southeasterly corner of land conveyed to Paul E. Merrill by deed recorded in the Cumberland County Registry of Deeds in Book 3104, Page 403, and shown on a Plan entitled, "Plan of Land on Presumpscot Street, Portland, Maine for Merrill Industries," by Owen Haskell, Inc., dated August 24, 1982; thence North 60°41'10" West along land now or formerly of Cook Concrete Company, 227.84 feet to a point; thence South 86°32'10" East across land of the Grantor 212.08 feet to center of a five foot metal culvert and land now or formerly of the Canadian National Railroad; thence in general southerly direction along a curve to the right with a radius of 5688.34 feet and land now or formerly of said Canadian National Railroad, 99.59 feet to the POINT OF BEGINNING, containing 10,549 square feet.

Being the same premises described in the deed from Merrill Industries, Inc. to Cook Concrete Company dated July 24, 1987 and recorded in Cumberland County Registry of Deeds in Book 7936, Page 115.

PARCEL III

A certain lot or parcel of land situated in the City of Portland, County of Cumberland, and State of Maine and more particularly described as follows:

Land situated on the northwesterly side of Ocean Avenue, numbered 994-1028 thereon, and bounded as follows: southwesterly by the Dump Road, so-called; northeasterly by the former Josiah Cobb farm, now of Patrick J. Smart and Clara Smart; and northwesterly by a line marked by a stone wall and located 527 feet from Ocean Avenue along said Dump Road and 453 feet from Ocean Avenue along the Cobb or Smart line.

The foregoing premises are conveyed SUBJECT TO all utility easements of record.

Being the same premises described in the deed from Paul E. Merrill to The Cook Concrete Company dated July 29, 1974 and recorded in Cumberland County Registry of Deeds in Book 3604, Page 93.

PARCEL IV

Certain lots or parcels of land, together with all improvements thereon and appurtenances thereto, located in the City of Portland, County of Cumberland and State of Maine, westerly of Ocean Avenue and bounded on the south by the Dump Road, so-called and on the east by land of The Cook Concrete Company, such parcels being designated on the Tax Assessor's Maps for the City of Portland, as follows:

Real Estate, Portland, Maine, Ocean Avenue R. 994-1028, Assessors Plan 414-A-2, 415-A-3, 417-A-7 and 418-A-8.

Real Estate, Portland, Maine, Ocean Avenue, R. 976-988, Assessors Plan 415-A-5 and 417-A-6.

Being the same premises described in the deed from Richard A. Davis and Adam W. Wilson to The Cook Concrete Company dated September 9, 1987 and recorded in the Cumberland County Registry of Deeds in Book 7962, Page 346.

EXCEPTING from the above-described Parcels III and IV, the land conveyed by The Cook Concrete Company to the City of Portland by deed dated August 12, 1991 and recorded in said Registry of Deeds in Book 9695, Page 70; as corrected by the deed dated October 16, 1991 and recorded in said Registry of Deeds in Book 9758, Page 66.

cook concrete*jfw*exhibit a

RECEIVED
RECORDED REGISTRY OF DEEDS

1998 OCT -1 PM 2: 30

CUMBERLAND COUNTY

John B O'Brien

Please see attached Property Description and Plan granting a site license, access, interconnection and temporary work areas for the solar project on the Ocean Avenue landfill site. Additional easements will include a CMP utility corridor along the northern access road and a temporary access easements across the southern access road (which traverses Dragon Cement property, Deed 9677:207). These are shown on the site map.

Exhibit 6
Attachment A

Description of the Premises and Facility

A certain area to be licensed to Sunfill North, LLC at the former Ocean Avenue Landfill of the City of Portland Maine, situated on the westerly side of Ocean Avenue, in the City of Portland, County of Cumberland, State of Maine, and being more particularly described as follows:

Commencing at a 6" X 6" 3 foot offset monument with a brass plug and chiseled "X" along the easterly 3 foot offset line of Ocean Avenue being at the fifth angle point southerly of the intersection of Ocean Avenue and Presumpscot Street;

Thence N 42°32'52" E, a distance of 2421.33 feet, more or less to a set survey spike at the Old City Landfill;

Thence N 51°56'17" E along a baseline for the above described license area, a distance of 910.77 feet to a second set survey spike;

Thence S 29°48'31" E a distance of 569.01 feet to the point of beginning at the northeasterly corner of the license area herein described;

Thence S 0°00'54" W along the easterly side of the license area, a distance of 289.89 feet to a point at the southeasterly corner of the license area;

Thence N 89°59'27" W along the southerly side of the license area, a distance of 709.83 feet to a point at the southwesterly corner of the license area;

Thence N 0°05'36" E along the westerly side of the license area, a distance of 229.88 feet to a point on the northwesterly side of the license area;

Thence N 74°47'23" E along the northwesterly side of the license area, a distance of 228.11 feet to a point on the northerly side of the license area;

Thence N 89°59'38" E along the northerly side of the license area, a distance of 489.42 feet to the point of beginning.

The total area of the above described license area being approximately 4.57 acres and is depicted on a plan to be filed with the City of Portland's Department of Public Works within the City Engineer's Archives, a copy of which is attached hereto as Attachment B (the "Plan").

The basis of bearing herein is Grid North.

Together with the right to use temporary staging areas generally depicted on the plan for construction and, if required, while conducting maintenance and repairs, and, to permanently interconnect to the electrical grid, and to access the above-described licensed area over the Access Road generally depicted on the Plan.

Financial and Technical Capability

ReVision Energy has designed and installed several thousand solar electric installations across Maine, New Hampshire and Massachusetts since 2003. Many of these have been ground mounted arrays on a scale similar to the system proposed here. The equipment and components proposed have proven to be reliable in installations across the country and around the world, and the techniques required for working on landfills have been established in neighboring states such as Massachusetts. Please see attached letter from Bangor Savings demonstrating Financial capacity.



You matter more.

June 19, 2017

City of Portland
389 Congress Street – 4th Floor
Portland, ME 04101

Dear Sir or Madam:

William Behrens, Managing Partner of ReVision Energy, has requested that the Bank evidence their financial capacity to complete the proposed solar installation for the City of Portland. It is my understanding that the estimated cost of the project is \$2.2 million. ReVision Energy maintains significant deposits with the Bank and have average deposit balances that are in excess of the estimated cost of the project. In addition, they have a working capital line of credit that provides a secondary liquidity option for completing jobs. In their time with Bangor Savings Bank they have worked on many similar, and larger scope, projects and always shown the ability to adequately complete and fund the work to the agreed upon specifications. If I can answer any additional questions please do not hesitate to call me at (207) 990-6453. For non-traditional business hours I can be reached on my cell phone at (207) 649-8708.

Sincerely,

A handwritten signature in black ink, appearing to read "David Holden", written in a cursive style.

David Holden
Senior Vice President



Level 1 Site Alteration

Project Description

The proposed solar project is to be installed on the old Portland landfill located off Ocean Ave. This system is proposed to be installed by ReVision Energy on behalf of ReVision Sunfill, LLC.

The Old Portland landfill is a closed solid waste landfill occupying approximately 45 acres behind Ridge Rd. in Portland. The portion of the landfill under current consideration for the installation of a solar array is the Northern section of the gently sloping cap as depicted in the attached site map. This landfill is a closed solid waste facility located in ROS zone. The proposed PV system consists of 2,800 solar modules mounted on aluminum racking which is ballasted by cast concrete blocks. The design of this ballasted system is to comply with Maine DEP standards of not penetrating the landfill cap, while having a robust system design capable of handling required wind and snow loading.

The location of the PV array on the landfill cap provides a secondary use for a facility which will always remain a waste storage site. The system is designed for an expected 25 - 40 year lifespan. Power generated by this PV project will be fed back into the CMP electric grid via a new service which will be installed to the east of the landfill cap. This service location is detailed on the accompanying site map. A ballasted concrete fence will be installed around the perimeter of the solar array, this is detailed on the accompanying site map.



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

June 22, 2017

Mr. Troy Moon, Sustainability Coordinator
City of Portland
389 Congress St.
Portland, ME 04101

Re: City of Portland - Application for Minor Revision
DEP# S-022489-W1-B-M

Dear Mr. Moon:

Your application for approval to construct a new solar electric array on the closed Portland Ocean Avenue landfill was received by the Department on June 12, 2017 and assigned DEP# S-022489-W1-B-M. Please refer to this number in any future correspondence to the Department regarding this application. This application complies with the submission requirements of 06-096 CMR 400.3.C and 405.6 of Maine's Solid Waste Management Rules, and was accepted for processing on June 22, 2017.

The quality and completeness of the technical information contained in the application package is the principal factor affecting the processing time. During the application processing period, you may expect the Department to request additional information necessary to complete the processing of the application.

Please be aware that after an application has been filed, if the Department determines that the applicant submits significant new or additional information or substantially modifies its application at any time after acceptance of the application as complete, the applicant shall provide additional notice to interested persons who have commented on that application.

Please feel free to contact me at 207- 215-7841, if you have questions regarding the processing of your application.

Sincerely,

Matthew R. Young
Project Manager - Landfill Closure and Remediation Program
Division of Remediation
Maine Department of Environmental Protection
Ph: (207) 215-7841/email: matthew.r.young@maine.gov

CC: Mr. Josh Baston, Project Supervisor Revision Energy. 142 Presumpscot St. Portland, ME04106;
File.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

Zoning Assessment

This project is consistent with the adopted Solar Energy Generation ordinance, Large Scale Ground mounted solar is a conditional use in zone ROS. A conditional use application will be submitted in addition to the Level 1 site plan. See conditional use application for detailed description of technical standards for this project



Conditional Use for Planning Board Review
Development Review Application

A. Conditional Use: Standards and Criteria - Section 14-474 and Zone Related Criteria
Per section 14-779 of the adopted Solar Energy Generation ordinance, Large Scale Ground mounted solar is a conditional use in zone ROS.

B. The Conditional Use application will be submitted in addition to a Level 1 Site Plan application.

Conditional Use Standards and Conditions - 14-474

- a. During construction traffic will be generated during normal working hours of 7:00 AM to 6:00 PM. Every effort will be made to utilize parking on the landfill work site and not in the dog park parking lot. Post construction traffic will be limited to occasional O&M visits with a single vehicle. There will be no paving associated with this project.
- b. The proposed use of a landfill solar array will not create any noise, dust, sewage, disposal, emissions, odor, lighting or litter. A glare analysis will be submitted as required in the solar Energy Ordinance, but the effect will be minimal.
- c. Post construction of the landfill solar array, the disturbed site will be returned to a vegetated state with the exception of the roughly 20,000 sq feet occupied by the concrete ballast blocks anchoring the solar array. The array will be installed behind a 7' tall chain link fence as required by the National Electric Code, and for public safety. Post construction there will not be any loading, deliveries, trash or waste generation, or material storage. Any signs will be strictly informational about the project and will be coordinated with the land bank or other interested parties.



14-780

iii. Height

The rows of solar panels which make up the array, have a 35 degree tilt to the South. The Southern edge will be the low edge with a height of 3' off the grade, the Northern edge will have a height of 12' off grade.

vii. Glare

The Ocean Ave. landfill site is buffered from all structures on adjacent residential properties by trees and ridgeline features on the East, West, and Southern sides. There is no line of sight to any roadway. These physical buffers will prevent any glare impact on neighboring property.

Setback

The proposed solar array on the Ocean Ave. landfill is located near the center of the landfill site (this site is made up of several city owned parcels zoned ROS). The closest point of the array to any zone other than ROS is 200', this is from the S/E corner of the array to the parcel owned by Dragon Cement.

Screening

The proposed array is screened from public ways and properties by natural barriers (trees and terrain) on the Southern, Eastern, and Western sides. Portions of the array may be visible from sections of Ledgewood Drive and Garden Way (both in Falmouth).

Layout and Fencing

The layout is shown in the site plan included with this application. It is a rectangular layout designed to utilize the flatter central section of the cap of the landfill vs the sloping sides. This creates a much more visually appealing array and also maximizes distance from adjacent residential properties. The fencing will run in square lines around the perimeter of the array set back roughly 20'. The fencing will run with the terrain and will be no taller than 8'.

Scenic impact

The proposed array is screened from abutters by natural barriers (trees and terrain) on the Southern, Eastern, and Western sides. Portions of the array may be visible from sections of Ledgewood Drive and Garden Way (both in Falmouth), but will be at a distance of 600' or more. While the solar array will be visible from the landfill perimeter trail, it will not block other potential scenic vistas. It is a requirement of Maine DEP that the public can not utilize the landfill cap area for recreational purposes.



Leading Northern New England's Clean Energy Transition



15.2 Technical Standards

15.1.1 Applicability

The capped Ocean Ave. landfill where the proposed PV system will be installed, is located in an ROS zone. Based on Sec. 14-779 of the Solar Energy Generation Ordinance, large scale ground mounted PV is a conditional use in zone ROS.

15.1.2

n/a

15.1.3

n/a

15.1.4

As a conditional use in zone ROS, this PV system will require a planning board approval in addition to a level 1 planning application, building, and electrical permit.

15.2.1 Site Layout

The system layout is designed to maximise the usable space on the landfill cap for both the current proposed system while also leaving room for a possible future expansion. The public walking trail running around the perimeter of the landfill is generally far below the elevation where the array will be visible, with the exception of the intersection area of trail on the SE side. Utility connections will be underground running from the array on the landfill cap to the new service to be installed off the cap. The new service will be fed by a CMP owned overhead line as detailed on the site map. There will be no lighting associated with this project.

15.2.2 Site Plan Review Standards

The siting of the project on the landfill cap takes advantage of an already impermeable surface, and provides a secondary use beyond the primary use of containing solid waste. The total additional impervious surface will be limited to around 20,000 sq. feet while the rest of the site will remain vegetated including the area under the solar array. There is no wetland impact associated with this project and the addition of the solar array will not create an increase in sheet flow off the landfill cap. This project has been endorsed by Maine Audubon and the Portland Land Bank and will not present adverse hazards to wildlife. Since part of this project includes creating 4 acres of fenced in area, foot and dog traffic will be substantially reduced post construction. This will increase the value of the bird nesting habitat.

The solar array rests on concrete ballast blocks which constitute around 20,000 feet of impervious surface. The solar modules themselves do not constitute impervious surface since



vegetation will grow beneath the array as it is in pre-construction conditions. The landfill cap is designed to be an impervious surface and to shed water rather than allow it to percolate through the waste. The additional impervious surface created by the solar array will have no dramatic effect on this design and will not add additional burden on the existing erosion control features of the site. During construction, erosion control measures will be implemented and inspected to ensure their effectiveness. These erosion control measures will remain in place until vegetation has been re-established post construction.

The FAA glare analysis tool looks at glare on approach, 2 miles out from the runway. The solar array does not fall on this flight path. A separate glare analysis is provided with this application.

15.2.3 Security

The solar array site will be surrounded by a 7' tall chain link fence supported by concrete ballast blocks. The utility service located off the landfill cap will also be behind a 7' tall chain link fence. Utility, Fire, and City access will be provided to both of these restricted areas.

15.2.4 Screening

The location of the solar array on the capped landfill does not border a public way with the exception of the walking path. Per Maine DEP regulations, no vegetation can be allowed on the landfill cap besides grass which will be mowed annually.

15.2.5 Construction Impacts

Construction activities will be occurring primarily on the landfill cap. Site access will occur via the old landfill access road running along the edge of the quarry as well as via the dog park parking lot and Northern access rd. This is detailed on the site plan - Plan 5. The quarry side rd will be used as the primary construction access to minimize disruption to the dog park users. Large truck deliveries will enter the site via the dog park access and exit the site via the quarry rd, this is to avoid turning large trucks on the landfill cap.

The CMP line extension will run through the dog park parking lot where there is existing overhead service, and will continue along the northern access rd to the cap. See attached line extension site map - Plan 6. Tree trimming will be performed by CMP per their standards, every effort will be made to minimize this trimming while providing the required clearances for the power line. This is a very public site and some portions of the perimeter walking path will need to be closed for public safety during daytime construction activities. Every effort will be made to open these paths up after work hours. An erosion and sedimentation control plan will be developed and implemented prior to construction activity commencing. Erosion control measures will remain in place until vegetation has stabilized.

15.2.6 Lighting, signage and materials



There will be no lighting associated with this project. During construction signs will be installed notating ReVision Energy's contact information and will also be installed to keep the public out of construction areas. Educational/Information signs will also be installed during construction to educate the public about the project.

15.2.7 Stormwater Management

Prior to construction a stormwater management plan will be provided by Sevee & Maher Engineers. We are waiting to resolve additional work on the cap as required by Maine DEP prior to submitting this plan. The City will be coordinating this additional work.

15.3.1

A building permit will be pulled along with a level 1 site plan review. The system will be installed by ReVision Energy.

15.3.2

All installed equipment will be both UL listed and installed according to manufacturer's, National Electric Code, and industry best practice standards.

15.3.3

While there are very small amounts of hazardous materials in the solar modules, they are primarily composed of readily recyclable aluminum and glass. While there are small scale recycling programs currently available for PV modules, it is assumed based on the huge numbers of panels installed across the country that large scale recycling will exist at end of life for this system.

15.4.1 Maintenance

PV systems are designed to be low maintenance but with any system this size, there are ongoing maintenance needs to ensure the system is working safely and effectively. See attached operations and maintenance plan describing maintenance of a commercial scale PV system. Once the PV system is complete, an O&M contract will be signed along with a more detailed site specific O&M plan.

The city has existing maintenance obligations which will still continue after the PV system has been completed. These include but are not limited to mowing on at least an annual basis, monitoring the condition of the landfill cap, maintenance of ground cover, and maintenance of the existing stormwater systems. While the city must mow the site at least once annually, that mowing can be coordinated to have the lowest impact on wildlife. The contractor (ReVision Energy) will be responsible for erosion control during construction, and after construction until the solar array area has been returned to a stable vegetated state.



15.4.2

Annual O&M plan



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O&M Annual Inspection

Project Information	
Project Name:	
Project Address:	
Commissioning Engineer:	
Commissioning Date:	
System Size in KWdc:	
System Size in KWac:	

PV System Status Prior to Commissioning (<i>Including Weather Conditions</i>)

General Module Information	
Module Manufacturer	
Module Model	
Quantity of Modules	

General Inverter Information	
Inverter Manufacturer	
Inverter Model 1	
Quantity of Inverter Model 1	
Inverter Model Number 1	
Quantity of Inverter Model 2	

Meter Information		
	Meter 1	Meter 2
Meter Serial Number:		
Meter Location:		
Meter Production Reading:		

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Mechanical System Inspection

PV Modules		
Inspection Description	Complete	Notes
Properly secured according to manufacturer specs		
Free of Damage and defects		
Home runs labeled (inverter and string)		
All connectors fully engaged		
Glass free of damage, debris and soiling		
Proper String Voltage and Polarity		
Grounding methodology installed per manufacturer spec		
Wiring in disconnect matches 1-line diagram		
All wiring secure within terminals		

Additional Notes:

DC Power Optimizers		
Inspection Description	Complete	Notes
Properly secured according to manufacturer specs <i>1" clearance from surfaces and 7/lb/ft torque</i>		
Connections to modules tight and with proper polarity		
DC optimizers location matches location map		
Verify proper power optimizer operations <i>Safety voltage should match string optimizer quantity</i>		

Additional Notes:

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Racking					
	Array #	Array #	Array #	Array #	Array #
Document signs of rust					
All wiring managed and protected from sharp edges					
Grounding and bonding complete and all components secure					
All bolts torque and marked					
All strut cuts cleaned and galvanized					
No metal touching roof surfaces					
Slip Sheets installed under blocks/feet					
Ballast matches stamped ballast drawings					

Additional Notes:

Conduit		
	AC	DC
Sized Correctly per NEC (larger ok if noted in as-builts)		
Supported at NEC intervals (close to fittings)		
All straps tightened correctly		
All fittings are tight		
Seals on fittings intact		
Grounding/Bonding complete and tight		
Expansion fittings tight		
Proper material for location (Rigid/EMT/PVC)		
Equipment entries properly sealed, top entries avoided		

Additional Notes:

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Disconnects					
	AC Disco #	AC Disco #	DC Disco #	DC Disco #	DC Disco #
Mounting secure and level (doors operate freely)					
All terminations torqued and marked					
No-ox on terminations					
Stripped termination screws replaced					
Wire neat and protected from sharp edges					
All metal shavings, debris and moisture removed					
Cabinet protected from physical damage					
All working clearances observed					
Fuses correctly sized and properly installed					
Top conduit entries avoided if possible and sealed appropriately					
Blades and arc shuts open and close freely					
Strut cut ends clean and painted					
Labeled with appropriate info (equipment, circuit #s, etc.)					

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String Inverters

	Inverter #	Inverter #	Inverter #	Inverter #	Inverter #
Mounting secure and level					
All terminations torqued and marked					
No-ox on terminations					
Stripped termination screws replaced					
Wires neat and protected from sharp edges					
All metal shavings, debris and moisture removed					
Cabinet protected from physical damage					
All working clearances observed					
Fuses correctly sized and properly installed					
Top conduit entries avoided if possible and sealed appropriately					
String wiring landed on correct inputs and distributed evenly with proper polarity					
String fusing checked for continuity and integrity					
Any changes in wire or pipe size noted on as-builts					
Inverter turns on with no faults and controls operate					
Communications wiring routed separately from electrical					

Additional Notes:

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Combiner Panels				
	Panel #	Panel #	Panel #	Panel #
Mounting secure and level				
All strut cuts clean and coated with galvanized paint				
All terminations torqued and marked				
No-ox on terminations				
Stripped screws replaced				
Wires neat and protected from sharp edges				
All metal shavings, debris and moisture removed				
Cabinet protected from physical damage				
All working clearances observed				
Breaker correctly sized and matching plans				
Top conduit entries avoided if possible and sealed appropriately				
Wiring properly colored and labeled				
Panel schedule completed, accurate and legible				
All labeling completed and accurate per NEC and plans				

Additional Notes:

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DAS/Monitoring Systems	
	Check Box
Mounting secure and level	
All strut cuts clean and coated with galvanized paint	
All terminations torqued and marked	
No-ox on terminations	
Stripped screws replaced	
Wires neat and protected from sharp edges	
All metal shavings, debris and moisture removed	
Cabinet protected from physical damage	
All working clearances observed	
Data/Low Voltage wiring pulled to all devices and labeled	
Pyranometer is secure and mounted ay Plane of Array	
Back of Module temp sensor is secured for longevity	
Sensor wires routed in shade as possible	
Anemometer mounted in area unimpacted by surrounding structures	
Internet or cell modem connection effective	
All inverters visible for inverter direct monitoring	

Additional Notes:

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Thermal Imaging Inspection

Procedure: Confirm solar radiation meets or exceeds 650W/m² and clear with minimal clouds. Thermal image should be taken from rear of panel if feasible for greater accuracy

Environmental Data Collection Form - General Conditions			
Imaging Camera Information	Calibration Date	Brand	Model
Ambient Air Temperature		Weather Conditions	
Irradiance Level			

Thermal Imaging Inspection- Modules

Procedure: If potential anomaly (patchwork pattern, hot spot, etc) is detected, record below data, save thermal screen shot, photograph area

[illegible]



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Thermal Imaging Inspection- DC Optimizers

Procedure: If potential anomaly is detected, record below data, save thermal screen shot, photograph area

Array Number	Row Number	Inverter Number	String Number	Optimizer Serial Number

Thermal Imaging Inspection- DC Combiners

Array Number	Row Number	Combiner #	Equipment Serial Number



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Thermal Imaging Inspection- DC Disconnects			
Array Number	Row Number	Inverter Number	Equipment Serial Number

Thermal Imaging Inspection- AC Disconnects			
Array Number	Row Number	Inverter Number	Equipment Serial Number

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Thermal Imaging Inspection- Inverters			
Array Number	Row Number	Inverter Number	Equipment Serial Number

Additional Thermal Imaging Inspection Notes

Commissioning Agent Name:_____

Commissioning Agent Title:_____

Commissioning Agent Signature:_____

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Electrical System Inspection

Megger Strings at Inverter/Combiner

Date/Time:

Meter Model:

Inverter	Manufacturer and Model	Serial Number	String	# of Modules	Termination Torqued	Wire Size	IRT - Pos	IRT - Neg
			1					
			2					
			3					
			4					
			5					
			6					
			7					
			8					
			1					
			2					
			3					
			4					
			5					
			6					
			7					
			8					
			1					
			2					
			3					
			4					
			5					
			6					
			7					
			8					
			1					
			2					
			3					
			4					
			5					
			6					
			7					
			8					

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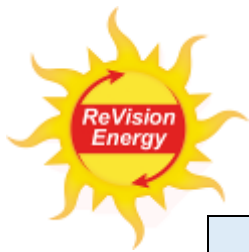
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Inverter Pre-Start Up							
Date/Time:					Cell/Ambient Temperature:		
Inverter	String	Polarity Correct (y/n)	POA (w/m2)	VOC (volts)	Pos to Gnd (volts)	Neg to Gnd	Fuse Continuity
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						

Print additional sheets if needed



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Inverter Startup				
Date/Time:		Cell/Ambient Temperature:		
Inverter	String	POA (w/m2)	VMP (volts)	IMP (volts)
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			

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Procedure: With all of the string combiner box fuses closed, check and measure the following at each DC disconnect:

Yes/No

Procedure: Test each conductor to all others and ground @ 1kV for 1 minute. Minimum 205MΩ on circuit conductors to pass test

Example



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Insulation Resistance Test-AC Feeder Conductors

Procedure: With all of the string combiner box fuses closed, check and measure the following at each DC disconnect:

Megohmmeter Information	Calibration Date	Brand	Model
DC Circuit Grounding Jumper Open @ Inverter	Yes/No	All Circuit Conductors Labeled	Yes/No
Raceway Installation Complete	Yes/No	All Ground Conductors are Terminated	Yes/No

Procedure: Test each conductor to all others and ground @ 1kV for 1 minute. Minimum 205M Ω on circuit conductors to pass test

Feeder Description		Megohmmeter Readings (M Ω): 1kV Test Voltage; Stable for 30 seconds)						
From	To	A-Gnd	B-Gnd	C-Gnd	N-Gnd	A-B	A-C	B-C
Example-Inverter	Example-AC Disco	2.2G Ω	2.2G Ω	2.2G Ω	2.2G Ω	2.2G Ω	2.2G Ω	2.2G Ω

91 West Main Street
Liberty, ME 04949

(207) 589-4171

142 Presumpscot Street
Portland, ME 04103

(207) 221-6342

www.revisionenergy.com

7 Commercial Drive
Exeter, NH 03833

(603) 501-1822

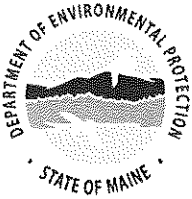


Leading Northern New England's Clean Energy Transition

Additional information for Ocean Ave. Landfill Solar Project as requested during the planning meeting on 7/7/17. Information submitted by ReVision Energy on behalf of Sunfill North, LLC (the applicant).

The applicant was requested to provide more information on the 100'x100' staging area denoted on the site plan. This area is an existing grassy clearing with a small accessway leading from the 4-way trail intersection on the Southeast side of the landfill cap. This area will be utilized for material staging since it is both out of the way and out of public view. It appears that this area has been mowed at some point in the last several years. No additional clearing will be necessary to utilize this area and any damage to vegetation will be restored upon completion of the project.

The applicant was requested to provide more detail on erosion control measures. Erosion control will be placed by the City prior to commencing work on the remedial cap work detailed in their level 3 planning application. The vast majority of disturbance will be the result of the remedial cap work and this erosion control will remain in place throughout the construction of the solar array. During remedial cap work it will be the responsibility of the city to inspect and maintain this erosion control, once work commences on the solar array it will be the responsibility of the applicant to inspect and maintain erosion control and to ensure its removal once vegetation is stabilized upon completion of the project.



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

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF SOUTH PORTLAND	)	SOLID WASTE LICENSE
SOUTH PORTLAND	)	
CUMBERLAND COUNTY, MAINE	)	
CLOSED MUNICIPAL LANDFILL	)	
SOLAR ELECTRIC PANELS INSTALLATION	)	
#S-021757-WB-F-M	)	
(APPROVAL WITH CONDITIONS)	)	MINOR REVISION

Pursuant to the *Maine Hazardous Waste, Septage and Solid Management Act*, 38 M.R.S. §§ 1301 - 1319 and the *Maine Solid Waste Management Rules: General Provisions*, 06-096 C.M.R. ch. 400 (last amended April 6, 2015) and *Landfill Siting, Design and Operation*, 06-096 C.M.R. ch. 401 (last amended April 12, 2015), the Department of Environmental Protection ("Department") has considered the application of the CITY OF SOUTH PORTLAND ("City") with supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

A. Application: The City has submitted an application for a minor revision (hereinafter "Application") to the license for its closed municipal solid waste landfill (Department license #S-021757-WO-B-N, dated September 13, 1997) located at 929 Highland Avenue, South Portland, Maine. The Application was prepared by ReVision Energy, LLC ("Revision"). The City seeks approval to have solar electric panels installed on a 12-acre section of Phase III of the closed landfill.

B. History:

- (1) The City began operating the landfill in 1965.
- (2) The landfill is approximately 40 acres in size, which encompasses Phases I through III that underwent closure in 1999.
- (3) The 12-acre Phase III section was capped with an earthen cover system.
- (4) The City is responsible for maintaining the final cover system. A site visit by Department staff in September 2016 confirmed that the City is meeting its maintenance responsibility for the Phase III section of the landfill.

CITY OF SOUTH PORTLAND	2	SOLID WASTE LICENSE
SOUTH PORTLAND	)	
CUMBERLAND COUNTY, MAINE	)	
CLOSED MUNICIPAL LANDFILL	)	
SOLAR ELECTRIC PANELS INSTALLATION	)	
#S-021757-WB-F-M	)	
(APPROVAL WITH CONDITIONS)	)	MINOR REVISION

- C. Summary of Proposal: The City proposes to install solar electric panels on the Phase III section of the closed landfill that was used predominantly for wood waste along with construction and demolition debris. The panel configuration and design details are described in the Application, which was jointly submitted by ReVision and the City.

The City and ReVision have entered into a Power Purchase Agreement ("PPA") for a term of 25 years. The City will have the option beginning on the seventh year to purchase the solar generation system ("System"). If the City has not pursued its option, then at the completion of the twenty-fifth year of service the City may purchase the array and all rights, title and ownership of the System will be deemed transferred to the City including any warranties or guarantees related to the System, and ReVision shall have no further obligation to the City. If the City opts not to keep the System, then ReVision shall remove the System and all related equipment at no cost to the City. The estimated useful life of the System is 40 years. If during or at the close of the 25-year agreement the System is to be removed, ReVision will be responsible for restoring the landfill cover to its original condition. If the City has exercised its purchasing option, the City will be responsible for restoring the landfill cover to its original condition.

2. PROJECT DESIGN AND CONSTRUCTION

The area of the landfill cover to be used by the System is approximately 6.2 acres. The System will have a total electric generation capacity of 660 kilowatts. The project will consist of 2,904 solar panels arranged in seven parallel rows. The panels will be mounted on aluminum racks fastened to precast concrete ballast blocks. Gravel will be placed under the blocks for levelling and to increase friction between the blocks and the cover soils. The System as proposed contributes a dead load of a maximum of 4.5 pounds per square inch (psi).

Twenty-two solar inverters will be mounted directly to the ballasted array rack. AC output circuits from each inverter will be run underground to the AC combiner panel located off of the landfill cover system. This combiner panel will be installed next to the existing 1-MW transformer where the point of utility interconnection will occur. Conduit will not be buried deeper than the existing 6-inch topsoil layer. Additional material will be bermed over the top to obtain burial depth.

The System will be surrounded by a chain link fence. The fence will be installed completely around the cover system on which the System will be placed upon. The fence will protect exposed array conductors from anyone other than qualified personnel.

CITY OF SOUTH PORTLAND	3	SOLID WASTE LICENSE
SOUTH PORTLAND	)	
CUMBERLAND COUNTY, MAINE	)	
CLOSED MUNICIPAL LANDFILL	)	
SOLAR ELECTRIC PANELS INSTALLATION	)	
#S-021757-WB-F-M	)	
(APPROVAL WITH CONDITIONS)	)	MINOR REVISION

The Department finds that the City has submitted a complete System design and construction details, provided that a pre-construction conference with ReVision, the City, and the Department is scheduled and held at the site prior to initiation of on-site construction activities.

3. LANDFILL LOADING

There has been little evidence of waste settlement since the final cover system was installed in 1999. The proposed solar equipment, including panels and concrete with a dead load maximum of 4.5 psi, is not expected to significantly increase the risk of settlement.

The Department finds that the City has evaluated the potential for settlement of the landfill based upon the increased loading and that the proposed System will not impact the integrity of the final cover system.

4. GAS MANAGEMENT

There is an existing gas management system in place at the landfill. The City has established a minimum six foot setback distance between the array and power conduits and any of the gas control vents.

There has been no evidence of uncontrolled gas migration through the soil barrier into the vegetated soil layer. ReVision plans to bury the electrical conduit in the topsoil layer and add more soil on top to achieve the minimum cover depth per National Electrical Code (NEC 2014 300.5(A)) standards. The additional soil placed on the conduit will be graded to allow for access to the area by grass cutting machinery.

The Department finds that the landfill has a functional gas management system and that an appropriate setback distance will be maintained between the array and power conduits and the gas vents.

5. STORMWATER MANAGEMENT

The final cover system currently has adequate positive drainage. The placement of the System is not expected to negatively impact the current stormwater drainage patterns. If the placement of the System does have a deleterious effect on the landfill's stormwater drainage system, then the owner of the System will be responsible to correct the issue as soon as possible after the issue is identified.

CITY OF SOUTH PORTLAND	4	SOLID WASTE LICENSE
SOUTH PORTLAND	)	
CUMBERLAND COUNTY, MAINE	)	
CLOSED MUNICIPAL LANDFILL	)	
SOLAR ELECTRIC PANELS INSTALLATION	)	
#S-021757-WB-F-M	)	
(APPROVAL WITH CONDITIONS)	)	MINOR REVISION

The Department finds that the proposed System will not negatively impact the existing stormwater drainage patterns of the landfill.

6. EROSION CONTROL

Substantial disturbance of the existing landfill vegetation is not anticipated. However, if the System or new conditions at the site do lead to erosion, an erosion control plan will be prepared and implemented in accordance with the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers* (October 2016).

The Department comments that the vegetation directly underneath the arrays may become stressed and that the area under the System should be seeded with shade tolerant non-woody plant species.

The Department finds that the City meets the requirements of the rules pertaining to erosion control, provided that the area directly under the proposed System is seeded with shade tolerant non-woody plant species.

7. LANDFILL MAINTENANCE

The System owner will be responsible for the maintenance of the System. Annual inspections will be conducted to review the attachment points for the System between racking and concrete panels and deficiencies immediately repaired.

ReVision and the City will inspect the final cover system vegetation quarterly during the first year after the System installation, re-seed as necessary and continue to monitor any failed areas to assure germination. Any erosion or other unstable areas will be repaired immediately. ReVision will be responsible for any landfill maintenance or remediation work made necessary by the presence of the System as long as it retains ownership of the system. The City will be responsible for annual mowing of the landfill surface, including the area under and around the System. The present "Owner" is responsible for any additional work or remediation required by the Department to correct for erosion, settlement, or other landfill maintenance and remediation work related to the presence of the System.

The Department finds that the City has established a landfill maintenance plan that meets the requirements of the rules.

CITY OF SOUTH PORTLAND	5	SOLID WASTE LICENSE
SOUTH PORTLAND	)	
CUMBERLAND COUNTY, MAINE	)	
CLOSED MUNICIPAL LANDFILL	)	
SOLAR ELECTRIC PANELS INSTALLATION	)	
#S-021757-WB-F-M	)	
(APPROVAL WITH CONDITIONS)	)	MINOR REVISION

8. VARIANCE REQUEST

- A. Applicable Requirement: 06-096 C.M.R. ch. 400, § 13(A) and 401, § 5(B)(5) requires, in pertinent parts, that post-closure activities on a landfill “must be compatible with the cover system.” To that end, the rules prohibit structures on top or within 100 feet of the landfill solid waste boundary. The Department may grant a variance from this standard if the applicant presents clear and convincing evidence that the proposed activity is designed and will be constructed in a way that meets the purpose and intent of the rule, i.e., in a way that is compatible with the cover system.
- B. Alternative Procedure or Design, and Intent of Rule: To demonstrate that the proposed installation of solar panels is compatible with the landfill final cover system, the City and ReVision have submitted information showing that the activity:
- (1) Will not disturb the landfill barrier soils;
 - (2) Will not require relocation of landfill gas vents or create new exposures to landfill gas;
 - (3) Will not significantly increase stormwater runoff or the potential for erosion;
 - (4) Is unlikely to cause significant landfill settlement; and
 - (5) Will not impede maintenance of the landfill cover.

The Department finds that the City has clearly and convincingly shown that the proposed installation of solar electric panels on the City’s closed landfill, as described in the Application, is compatible with the landfill final cover system and that the proposed design and construction techniques allow for compliance with the purpose and intent of the Department rules pertinent to protecting the integrity of the landfill final cover system.

9. DEPARTMENT REVIEW

The Department finds that the installation of the proposed system on Phase III of the City’s closed landfill, as described in the Application and supporting materials, meets the applicable criteria of 06-096 C.M.R. ch. 400, § 13(A) and ch. 401, § 5(B)(5). The Application specifies how the System will be installed and interconnected without

CITY OF SOUTH PORTLAND	6	SOLID WASTE LICENSE
SOUTH PORTLAND	)	
CUMBERLAND COUNTY, MAINE	)	
CLOSED MUNICIPAL LANDFILL	)	
SOLAR ELECTRIC PANELS INSTALLATION	)	
#S-021757-WB-F-M	)	
(APPROVAL WITH CONDITIONS)	)	MINOR REVISION

damaging the landfill final cover or gas management systems; addresses the potential for increased settlement of the landfill; and appropriately provides for erosion control, stormwater management and landfill maintenance.

BASED on the above Findings of Fact, the Department makes the following CONCLUSIONS:

1. The proposed installation of solar panels on the City's closed landfill will not pollute any waters of the State, contaminate the ambient air, constitute a hazard to health and welfare, or create a nuisance.
2. The City has demonstrated that the proposed installation of solar panels on its closed landfill is compatible with the landfill final cover system and that the proposed design and construction techniques allow for compliance with the purpose and intent of Department rules pertinent to protecting the integrity of landfill final cover system.
3. The City has submitted a complete System design and construction details, provided that a pre-construction conference with ReVision, the City, and the Department is scheduled and held at the site prior to initiation of on-site construction activities.
4. The landfill has a functional gas management system and an appropriate setback distance will be maintained between the array and power conduits and the gas vents.
5. The proposed System will not negatively impact the existing stormwater drainage patterns of the landfill.
6. The City meets the requirements of the rules pertaining to erosion control, provided that area directly under the proposed System is seeded with shade tolerant non-woody plant species.
7. The City has established a landfill maintenance plan that meets the requirements of the rules.

THEREFORE the Department APPROVES the requested variance to 06-096 C.M.R. ch. 400, § 13(A) and ch. 401, § 5(B)(5) and APPROVES WITH THE FOLLOWING CONDITIONS the CITY OF SOUTH PORTLAND'S Application to install solar panels on its landfill located at 929 Highland Avenue:

1. The Standard Conditions of Approval, a copy of which is attached.
2. A pre-construction conference with ReVision, the City, and the Department shall be scheduled and held at the site prior to initiation of on-site construction activities.

CITY OF SOUTH PORTLAND 7 SOLID WASTE LICENSE
SOUTH PORTLAND)
CUMBERLAND COUNTY, MAINE)
CLOSED MUNICIPAL LANDFILL)
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(APPROVAL WITH CONDITIONS)) MINOR REVISION

3. The landfill area under the System shall be seeded with shade tolerant non-woody plant species.
4. The invalidity or unenforceability of any provision, or part thereof, of this license shall not affect the remainder of the provision or any other provisions. This license shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

DONE AND DATED AT AUGUSTA, MAINE THIS 17th DAY OF May, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *David B. Mercer*
PAUL MERCER, COMMISSIONER

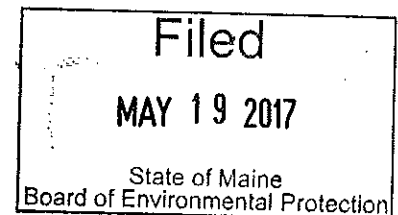
PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date application was received: March 6, 2017

Date application was accepted for processing: March 27, 2017

Date filed with Board of Environmental Protection:

xmy81629



STANDARD CONDITIONS TO ALL SOLID WASTE FACILITY LICENSES

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL. VIOLATIONS OF THE CONDITIONS UNDER WHICH A LICENSE IS ISSUED SHALL CONSTITUTE A VIOLATION OF THAT LICENSE AGAINST WHICH ENFORCEMENT ACTION MAY BE TAKEN, INCLUDING REVOCATION.

1. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed by the licensee. Any consequential variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
2. **Compliance with All Applicable Laws.** The licensee shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
3. **Compliance with All Terms and Conditions of Approval.** The licensee shall submit all reports and information requested by the Department demonstrating that the licensee has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
4. **Transfer of License.** The licensee may not transfer the solid waste facility license or any portion thereof without approval of the Department.
5. **Initiation of Construction or Development Within Two Years.** If the construction or operation of the solid waste facility is not begun within two years of issuance or within 2 years after any administrative and judicial appeals have been resolved, the license lapses and the licensee must reapply to the Department for a new license unless otherwise approved by the Department.
6. **Approval Included in Contract Bids.** A copy of the approval must be included in or attached to all contract bid specifications for the solid waste facility.
7. **Approval Shown to Contractors.** Contractors must be shown the license by the licensee before commencing work on the solid waste facility.
8. **Background of key individuals.** A licensee may not knowingly hire as an officer, director or key solid waste facility employee, or knowingly acquire an equity interest or debt interest in, any person convicted of a felony or found to have violated a State or federal environmental law or rule without first obtaining the approval of the Department.
9. **Fees.** The licensee must comply with annual license and annual reporting fee requirements of the Department's rules.
10. **Recycling and Source Reduction Determination for Solid Waste Disposal Facilities.** This condition does not apply to the expansion of a commercial solid waste disposal facility that accepts only special waste for landfilling.

STANDARD CONDITIONS TO ALL SOLID WASTE FACILITY LICENSES

The solid waste disposal facility shall only accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by 38 MRSA Chapter 13.

11. Deed Requirements for Solid Waste Disposal Facilities. Whenever any lot of land on which an active, inactive, or closed solid waste disposal facility is located is being transferred by deed, the following must be expressly stated in the deed:
 - A. The type of facility located on the lot and the dates of its establishment and closure.
 - B. A description of the location and the composition, extent, and depth of the waste deposited.
 - C. The disposal location coordinates of asbestos wastes must be identified.

I, Troy Moon, hereby certify that a neighborhood meeting was held on 7/18 at 5:30 at City Hall.

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,



7/19/2017 (date)

Attached to this certification are:

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



Executive Department
Jon P. Jennings, City Manager

July 7, 2017

Dear Neighbor,

Please join us for a neighborhood meeting to discuss plans to do maintenance on the cap of the Ocean Avenue Landfill and, following the completion of that work, the installation of a solar array. The cap maintenance work is designed to increase the grade at the top of the landfill in order to reduce water infiltration into the landfill. The solar project will install solar panels on a portion of the landfill that will generate approximately 660 kW of electricity that will be net metered against City electricity accounts.

Meeting location: Portland City Hall, Room 24
389 Congress Street
Portland, ME 04101

Meeting date: July 18, 2017

Meeting time: 5:30 PM

The City Code requires that property owners within 500 feet of the proposed development and residents on an "interested parties" list be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign in sheet and the minutes will be submitted to the Planning Board.

If you have any questions about this project please contact me at thm@portlandmaine.gov or by phone at 207-756-8362.

Sincerely,

Troy Moon
Sustainability Coordinator

Note: Under Section 14-32(C) and 14-524(a) of the City Code of Ordinances, an applicant for a Level III development, subdivision over five lots/units, or zone change is required to hold a neighborhood meeting within 30 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

Portland City Hall

[illegible]

Public Meeting
Ocean Avenue Regrading and Solar

7/18/2017

City representatives in attendance:

Troy Moon (Sustainability Coordinator), Christopher Branch (DPW Director), Josh Baston (Revision Energy), Owens McCullough (Sebago Technics), Jean Fraser (Planning)

Mr. Moon welcomed everyone to the meeting and provided an overview of maintenance work and regrading that the DEP has requested the City to perform at the Ocean Avenue Landfill. He also described the solar array proposed for about 3 acres on the very top of the landfill. Mr. Branch emphasized that the regrading and maintenance work proposed is not optional. The City will need to do the work to remain in compliance with its permits and agreements with the DEP.

Mr. Moon introduced Owens McCullough from Sebago Technics and noted that Mr. McCullough was the engineer involved with the closure of the facility in 1996 and is the person with the most historical knowledge of the landfill.

Mr. McCullough began his remarks by describing the closure process in 1996. The City discontinued using Ocean Avenue Dump in the late 70s but it wasn't formally closed. The state was interested in closing landfills all around the state and created a program to fund 75% of the work if it could be completed by Dec. 31, 1996. The City took advantage of this program and completed the work. Mr. McCullough noted that there was a wide variety of materials brought to the old dump over the years including household trash, construction debris, and possibly other materials. There are no good records of what was deposited. He indicated that before the dump was closed it used to catch on fire frequently enough that water lines were installed all around the perimeter of the facility in order to put them out. Mr. McCullough indicated that the closure in 1996 met the standards required by the DEP but that over the years the material has settled and the slopes have become less. He showed a topographic map that shows the current slope at the top of the landfill is almost zero. The map was overlayed with proposed lines to indicate increasing the slopes to between 3% - 5%. This would promote water to flow of the cap instead of infiltrating into it.

Mr. Moon added the DEP had several requests in addition to the regrading to include removing the informal paths on the landfill, testing for the presence of landfill gas, and replacing the existing snow fence on the perimeter road with a permanent fence. These measures are all designed to protect the integrity of the cap.

Mr. McCullough explained that that the contractor would fill in the paths where they have caused erosion on the landfill cap and would then loam and seed them to promote grass growth.

Mr. Branch added that public access would be allowed to continue around the perimeter road of landfill. It is very popular with residents and visitors and there are no plans to restrict it. The DEP is comfortable using the area for recreation as long as the City takes measures to protect the cap.

Mr. McCullough and Mr. Branch indicated that the City hopes to coordinate with the contractor doing work on State Street to be able to bring material excavated from the street to the landfill and use it for the regrading project. The material from street is clay and tills that would be appropriate. The project requires between 5,000 – 7,000 cubic yards of material. Using the material would reduce the overall cost of the project. Deliveries of materials would enter the site at the Dog Park entrance and would use the access road to the landfill. The Dog Park would not need to be closed. Equipment at the landfill for the regrading would be a bulldozer, an excavator, and a roller to compact the material in place. The project would peel back the existing layer of loam and reuse it to cover the fill material.

Residents had a number of questions:

Does the City have a maintenance plan? Mr. Moon responded that there is a plan filed with the DEP that requires annual mowing and testing of the surface water at several locations. He showed a map of the testing locations.

Why are you testing for landfill gas? Is there gas being generated there? Mr. McCullough indicated that the DEP is requesting the test for gas as a precaution. He noted that no gas was detected during the closure in 1996 and that the fires that occurred frequently when it was an active dump likely consumed the materials that could cause gas. The amount of construction debris in the landfill also makes gas unlikely. But, the DEP observed some spots on the landfill with less plant growth and thought it would be a good idea to check. He believes the areas noted by the DEP were likely areas where the City had taken measure to eradicate invasive knotweed that had grown up on the cap. The test to be conducted will sample air just below the clay liner. This will be effective because any gas that might be present would be trapped there.

Was there waste characterization done of the material in the landfill? Mr. McCullough said that waste characterization done at the time of closure was pretty limited. There are no records of what is in the landfill.

Was medical waste put in the landfill? No records were kept of what went into the landfill.

What records are there about the landfill? Mr. McCullough noted that the closure predates electronic record keeping so many of the old records are lost. The City has some documents as does the DEP. Mr. Moon added that, as part of the solar project, a local engineering firm completed an environmental site assessment that has been shared with the DEP.

Does the City test water in test wells? Mr. Branch indicated that we don't as it is not required by the DEP.

Is there a way to have walking paths on the landfill after the regrading? Mr. Branch indicated that walking paths can cause erosion and the DEP is very concerned about that. Bikes and ATVs are a bigger

problem than walkers. He added that we won't be policing the site closely so if people are just walking around it probably won't be a problem. We don't want to create wear paths, though.

Mr. Moon then introduced Mr. Baston of Revision Energy to describe the solar project.

Mr. Baston showed a map indicating the location of the solar panels as well as the power line that would bring the electricity produced to the street. The panels will be on the top part of the landfill surrounded by a fence. The panels and the fence will be held in place by concrete ballast as the DEP does not want any intrusion into the landfill. Trucks with equipment and staff would enter the facility at the dog park entrance. Revision is hoping to get an easement to use the road next to Dragon as an exit so trucks can do a loop without turning around. Mr. Baston showed pictures of the Belfast solar landfill project to give people an idea of what it will look like.

Residents had several questions:

Will there be glare that could impact property owners? Mr. Baston noted that we always need to be concerned about glare. He explained that the City's solar ordinance addresses that. He noted that the panels would be higher than any of the surrounding properties so glare would not be a factor. Despite that, Revision has looked carefully at this and doesn't believe the panels will create a problem based on the studies they have conducted.

Will people see the panes from their houses? Mr. Baston indicated that the panels will only be about 11 feet high. He has looked around from the proposed location and doesn't think they will be very visible to residents. A resident added that they might be more visible during the winter when there are not leaves on the trees.

What kind of fence will surround the solar panels and will it have barbed wire? Mr. Baston indicated the fence will be chain link ballasted by concrete blocks, 7' tall, and will not have barbed wire.

Will there be lights or reflectors on the fence so people will know where they are in the dark? Mr. Baston said that would be possible.

Who is responsible from a liability perspective? Mr. Moon indicated that Revision would not be liable for any issues that existed at the landfill before installing the array. They would be liable for a damage they cause during construction or if the array causes damage. The owner of the array will be responsible for the equipment when it is in place.

Mr. Moon thanked everyone for coming and invited them to attend the Planning Board meeting on July 25th. He also invited them to reach out to City staff with any questions.



Construction Management Plan for Ocean Ave. Landfill Solar Project

Purpose

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

Project Narrative

The Old Portland landfill is a closed solid waste landfill occupying approximately 45 acres behind Ridge Rd. in Portland. The portion of the landfill under current consideration for the installation of a solar array is the Northern section of the gently sloping cap as depicted in the attached site map. This landfill is a closed solid waste facility located in ROS zone. The proposed PV system consists of 2,800 solar modules mounted on aluminum racking which is ballasted by cast concrete blocks. The design of this ballasted system is to comply with Maine DEP standards of not penetrating the landfill cap, while having a robust system design capable of handling required wind and snow loading. This work will include:

1. Inspect existing erosion control measures and layout site
2. Install perimeter fencing and construction signage
3. Build steel solar array racking.
4. Pour concrete into ballast forms for array
5. Install all PV modules
6. Install all AC and DC wiring, combiner panels, inverters and disconnects. Trench from array to new CMP service and berm trench to achieve conduit burial depth.
7. Inspect system for compliance with NEC and City standards and commission system
8. Ensure stable vegetation growth and remove erosion control measures



Construction Administration and Communication

Contact Person and Contact Information:

ReVision Energy: Josh Baston

Work 221-6342, Cell 595-2445

Construction Schedule and Signage

Construction is anticipated to take approximately 3 months although start date will depend on the timeline of not only City and DEP approval, but also the timeline of additional cap remediation work to be completed by the City. Anticipated start date is October 1st. A pre-construction meeting will be scheduled at least 1 week prior to construction. Construction will occur between the hours of 7:00 AM and 7:00 PM Monday through Saturday. Noise will only be created by the driving of construction equipment (dump trucks, excavators, ect) and battery powered power tools. There will be no drilling, blasting, or high noise activities. No noise will be created outside of the stated construction hours. Signs will be installed to denote the perimeter of the construction site and to restrict public access. Signs will also be installed to educate the public about the project and to describe the benefits of installing solar on a capped landfill.

Materials will be delivered to the site utilizing both the northern dog park access road and the southern access road which is owned by Dragon Cement. Large trucks will be looped through the site entering at the dog park and exiting on the southern road. Both access roads were used by City dump trucks for decades while the landfill was active and have good sight lines. Every effort will be made to schedule deliveries between the hours of 9:00 a.m and 3:00 pm to avoid the peak usage hours of the dog park

Security, Public Safety, and Public Access

1. The entire solar array will be fenced both for security and to meet National Electrical Code standards. The fencing installation will occur at the beginning of the construction timeline to provide a safe and secure site during construction.
2. The entire cap of the landfill will be off limits to the public, this is not only a construction requirement but is also a requirement of the Maine DEP. It will be the responsibility of ReVision Energy to sign and secure the solar construction site, and it will be the responsibility of the City to sign the remaining area of the landfill cap.
3. Public access to the dog park will not be restricted during or after construction, and access to the perimeter walking path will not be impacted by the solar array post construction. There may however, be times during construction where access will need



to be restricted along the southern end of the perimeter walking path. Access will be restricted when it is deemed that construction activities may represent a hazard to the public. Whenever feasible this access restriction will only occur during working hours and will be lifted during evenings and Sundays.

4. When areas of the perimeter trail need to be closed for construction activities, temporary construction fencing will be used along with signs in the areas denoted on the accompanying construction management site plan.
5. During construction, the City or Contractor may install or modify the locations of signage and trail closures responsive to safety and security of the site and pedestrians utilizing the trail.
6. There will be no blasting associated with this project

Traffic Control

Overall there will not be a large traffic demand created during this project, and there will be no traffic demand post construction aside from occasional inspection and maintenance visits. During construction there may 5-8 standard size vehicles visiting the site a day as well as both tractor trailer and dump truck material deliveries. The amount of deliveries per day will vary with up to 8 on busy days with none on many days. Speed limits of trucks will be limited to 5 mph on site and all delivery routes will be signed with directions of traffic flow. Every effort will be made to schedule deliveries between the hours of 9:00 a.m and 3:00 pm to avoid the peak usage hours of the dog park.

Erosion Control

The City will be required to install and maintain erosion control measures for the duration of the DEP required landfill cap remediation work. After that work has concluded, ReVision Energy will be responsible to maintain the erosion control and remove it once vegetation has been re-stabilized. Post construction, the site will be returned to pre-construction (or better) vegetative conditions. ReVision Energy will be responsible for re-seeding any soils disturbed by the construction of the solar project however will not be responsible for disturbed area outside of the solar array as a result of the cap remediation work. ReVision Energy will coordinate with the city to ensure stable vegetation prior to removing erosion control.

Site Management

1. The construction site will be kept tidy and all construction trash and waste will be sorted for recycling and placed in a dumpster or removed off-site. Any dumpster will be maintained and emptied when full.



2. Dust control if needed will comply with Portland requirements under Section 17-18

Construction Staging Area

1. Construction staging areas are detailed on the construction management site plan submitted with this application. These staging areas will not impact public use of the perimeter walking path or dog park.
2. Delivery holding area is marked on construction management site plan however deliveries will be scheduled to minimize the possibility of trucks stacking up.
3. The off site truck holding area if needed will be at ReVision Energy, 142 Presumpscot st.

Construction Parking

Parking will occur in designated staging areas and along the southern access road. The public dog park parking areas will not be impacted by this project either during or post construction.

George Wilson To City of Portland
Dec. 29, 1958 C.C.R.D. Book 2451-442

George Wilson to City of Portland
Dec. 29, 1958 C.C.R.D. Book 2451-442 (In Fee)
City of Portland to George Wilson
Dec. 29, 1958, C.C.R.D. Book 2451-440 (R/W)

George Wilson to City of Portland
Dec. 29, 1958 C.C.R.D. Book 2451-442

WILSON To C.M.P.
Deed 2176 / 301 3/29/54

WILSON To C.M.P. (135 ft. wide)
Deed 2172 / 337 4/15/54

CITY OF PORTLAND TO
NEW ENGLAND TELEPHONE
(50 feet wide)
Deed 2676 / 125 5/28/62

Note: This Right-of-Way
Has Been Vacated
5/11/62 157

NOW OR FORMERLY COOK & CO. INC.

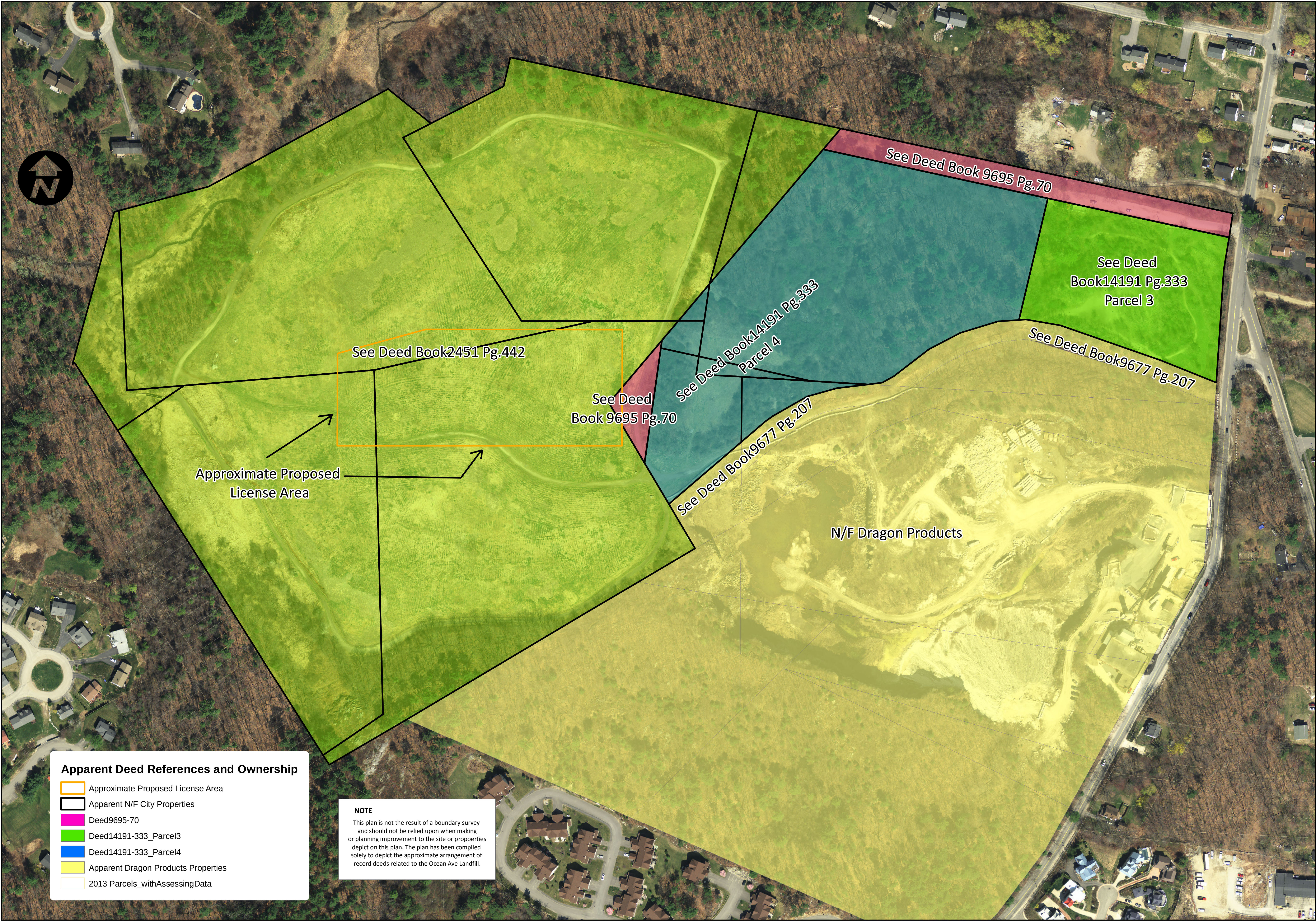
GEORGE WILSON

CITY OF PORTLAND

Scale 1 In = 100'

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
PLAN OF GEORGE WILSON
PROPERTY
PURCHASED FOR DUMP SITE

REFERENCES		SCALE
DRAWN	DVB/12/52	As Noted
TRACED	72/5	
CHECKED	72/5	
DIRECTED	72/5	
APPROVED Jan 30, 1959		636 CITY ENGINEER 8

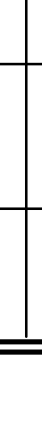


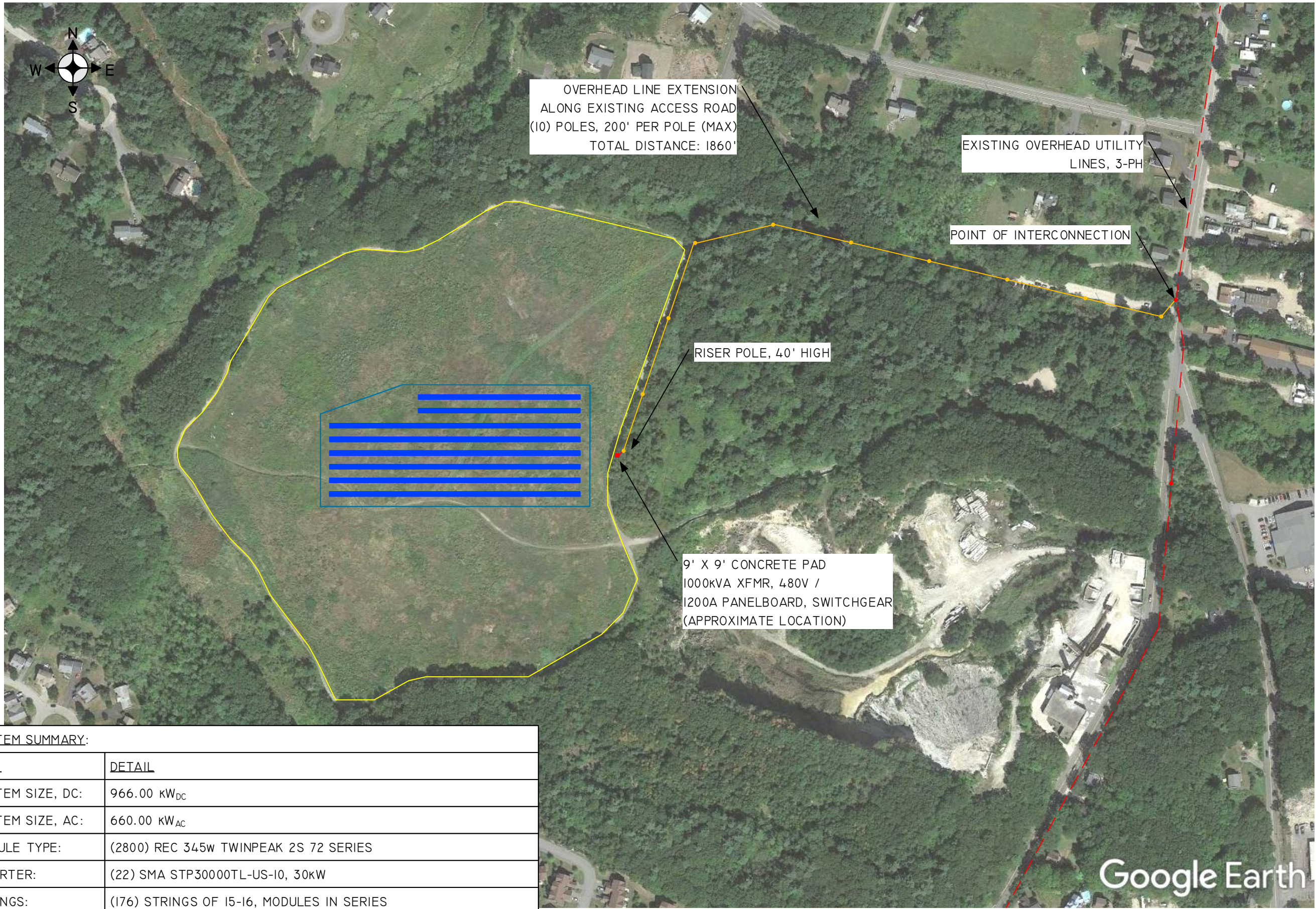
Apparent Deed References and Ownership

- Approximate Proposed License Area
- Apparent N/F City Properties
- Deed9695-70
- Deed14191-333_Parcel3
- Deed14191-333_Parcel4
- Apparent Dragon Products Properties
- 2013 Parcels_withAssessingData

NOTE

This plan is not the result of a boundary survey and should not be relied upon when making or planning improvement to the site or properties depict on this plan. The plan has been compiled solely to depict the approximate arrangement of record deeds related to the Ocean Ave Landfill.

DEED RESEARCH WORKSHEET		 www.sebagotechnics.com 100 Garden St., Suite A Portland, ME 04103 Tel: 207-252-2100 Fax: 207-789-9636																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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SYSTEM SUMMARY:	
ITEM	DETAIL
SYSTEM SIZE, DC:	966.00 kW _{DC}
SYSTEM SIZE, AC:	660.00 kW _{AC}
MODULE TYPE:	(2800) REC 345W TWINPEAK 2S 72 SERIES
INVERTER:	(22) SMA STP30000TL-US-10, 30kW
STRINGS:	(176) STRINGS OF 15-16, MODULES IN SERIES
ORIENTATION:	30° TILT, 180° AZIMUTH
RACKING:	FIXED-TILT, GROUND MOUNT, BALLAST FOUNDATION, 2X PORTRAIT
PROJECT ACREAGE:	AREA ENCLOSED BY PV ARRAY BOUNDARY FENCE, 4.3 ACRES
FENCE:	7' HEIGHT, GALVANIZED CHAINLINK, 1900' (MIN)



142 PRESUMPCOT STREET
PORTLAND, ME 04103
(207) 221-6342

CLIENT:

CITY OF PORTLAND, ME

PROJECT ADDRESS:

OLD CITY LANDFILL
RIDGE ROAD
PORTLAND, ME 04103

SYSTEM TYPE:

966.00 kW_{DC}
PHOTOVOLTAIC ARRAY

DESIGNED BY: LB

REVISION: 4

PRINT SIZE: 17" x 11"

SCALE: 1" = 250'

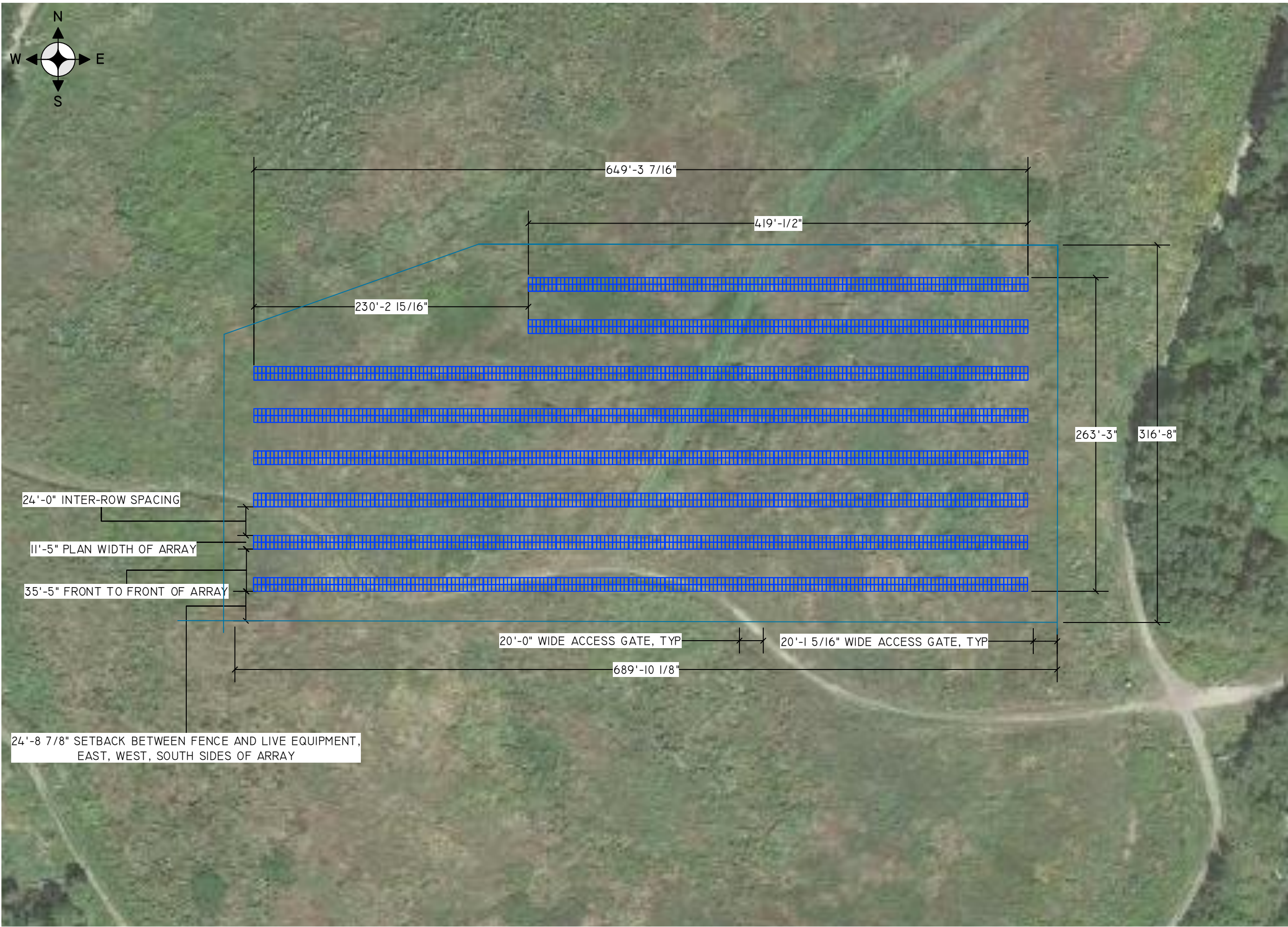
DATE: JUNE 15, 2017

DWG TITLE:
LINE EXTENSION MAP

DWG NUMBER:
AO1

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PORTLAND, ME 04103

SYSTEM TYPE:

966.00 kW_{DC}
PHOTOVOLTAIC ARRAY

DESIGNED BY: LB

REVISION: 4

PRINT SIZE: 17" x 11"

SCALE: 1" = 75'

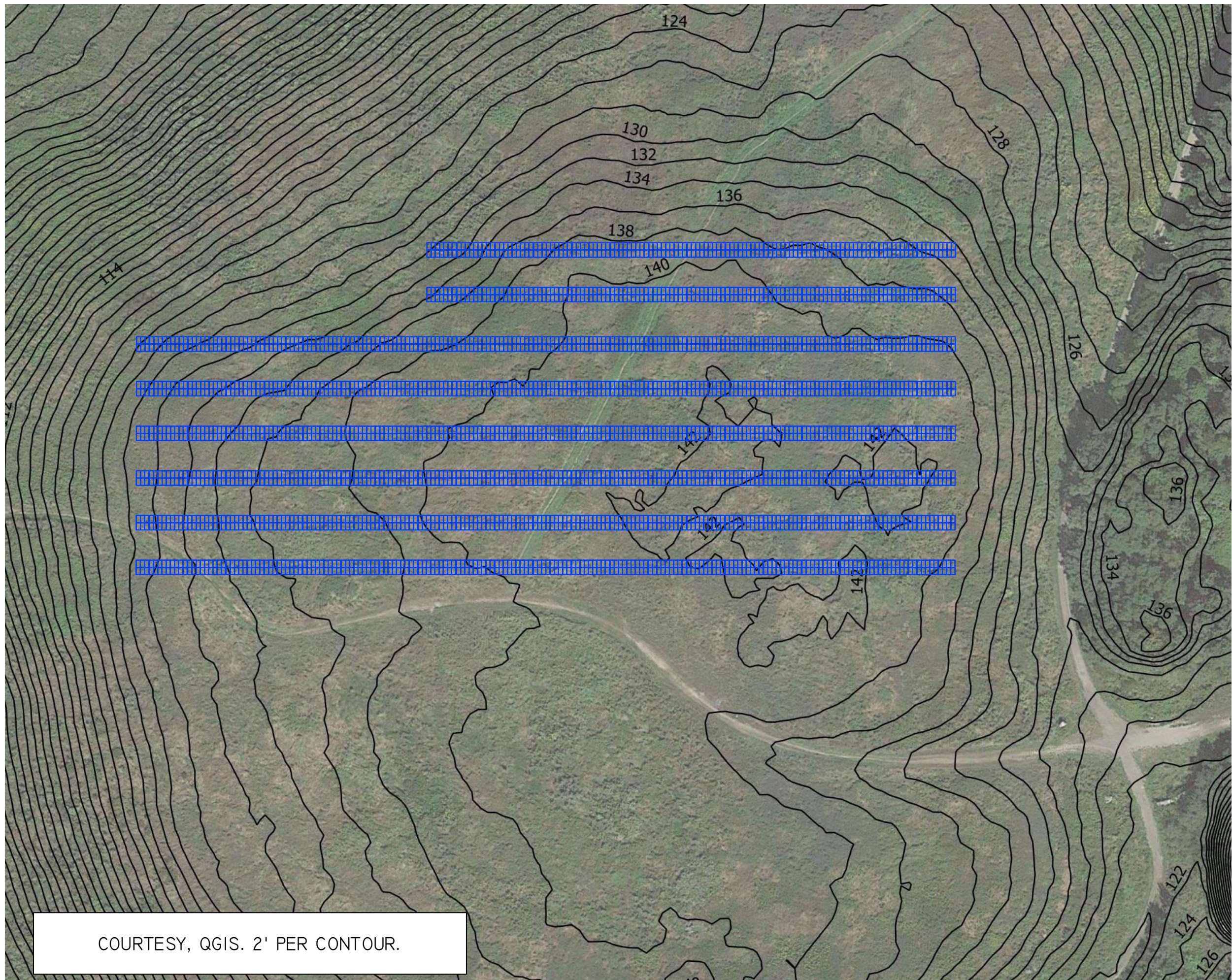
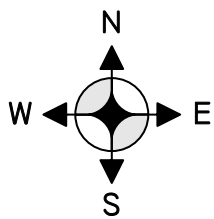
DATE: JUNE 15, 2017

DWG TITLE:
SITE LAYOUT

DWG NUMBER:
A02

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PORTLAND, ME 04103

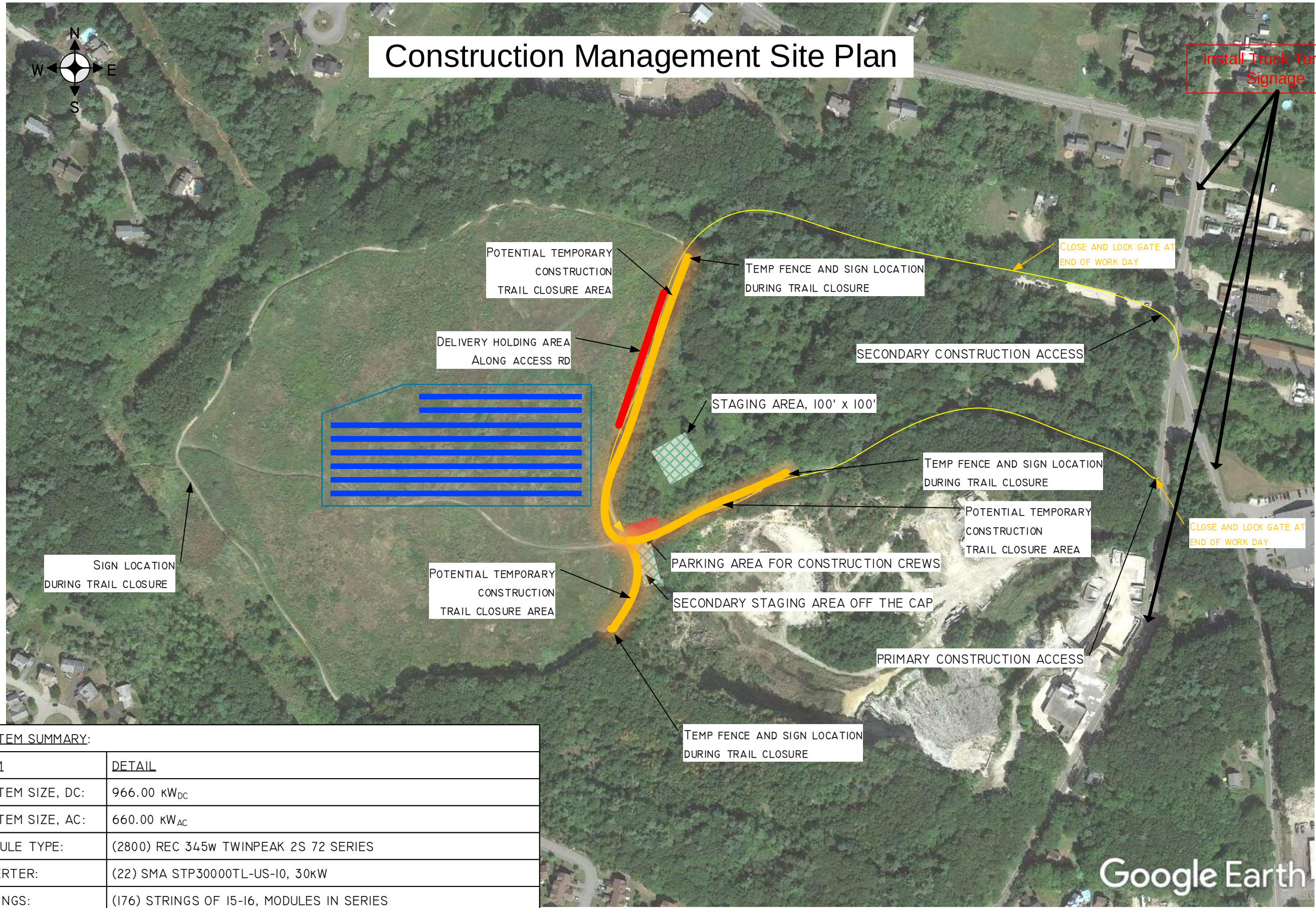
SYSTEM TYPE:

966.00 kW_{DC}
PHOTOVOLTAIC ARRAY

DESIGNED BY:	LB
REVISION:	4
PRINT SIZE:	17" x 11"
SCALE:	1" = 75'
DATE:	JUNE 15, 2017
DWG TITLE:	SITE TOPOGRAPHY
DWG NUMBER:	A03

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SYSTEM SUMMARY:	
ITEM	DETAIL
SYSTEM SIZE, DC:	966.00 kW _{DC}
SYSTEM SIZE, AC:	660.00 kW _{AC}
MODULE TYPE:	(2800) REC 345W TWINPEAK 2S 72 SERIES
INVERTER:	(22) SMA STP30000TL-US-I0, 30kW
STRINGS:	(176) STRINGS OF 15-16, MODULES IN SERIES
ORIENTATION:	30° TILT, 180° AZIMUTH
RACKING:	FIXED-TILT, GROUND MOUNT, BALLAST FOUNDATION, 2X PORTRAIT
PROJECT ACREAGE:	AREA ENCLOSED BY PV ARRAY BOUNDARY FENCE, 4.3 ACRES
FENCE:	7' HEIGHT, GALVANIZED CHAINLINK, 1900' (MIN)



142 PRESUMPCOT STREET
PORTLAND, ME 04103
(207) 221-6342

CLIENT:

CITY OF PORTLAND, ME

PROJECT ADDRESS:

OLD CITY LANDFILL
RIDGE ROAD
PORTLAND, ME 04103

SYSTEM TYPE:

966.00 kW_{DC}
PHOTOVOLTAIC ARRAY

DESIGNED BY: LB

REVISION: 4

PRINT SIZE: 17" x 11"

SCALE: 1" = 250'

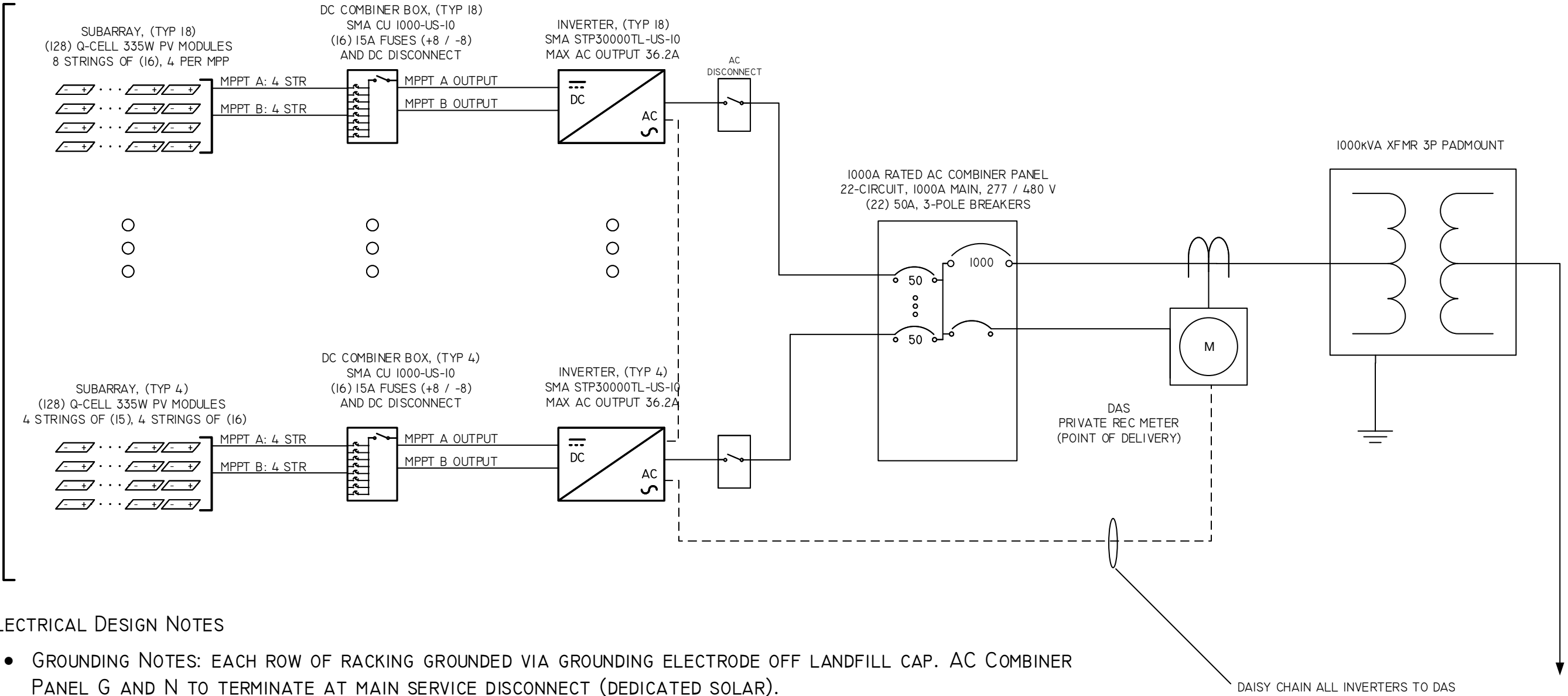
DATE: JUNE 15, 2017

DWG TITLE:
SITE ACCESS & LAYDOWN AREA

DWG NUMBER:
A04

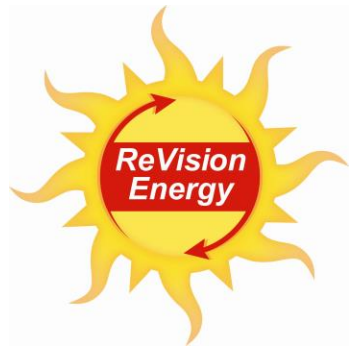
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ELECTRICAL DESIGN NOTES

- GROUNDING NOTES: EACH ROW OF RACKING GROUNDED VIA GROUNDING ELECTRODE OFF LANDFILL CAP. AC COMBINER PANEL G AND N TO TERMINATE AT MAIN SERVICE DISCONNECT (DEDICATED SOLAR).
- ALL PHOTOVOLTAIC EQUIPMENT IS RATED FOR USE AND LISTED BY A RECOGNIZED LABORATORY.
- ALL PHOTOVOLTAIC EQUIPMENT IS OUTDOOR RATED AND LISTED FOR 1000 VDC.
- LOWEST EXPECTED AMBIENT TEMPERATURE IS BASED ON ASHRAE EXTREME MIN FOR THE SPECIFIED LOCATION.
- AVERAGE HIGH TEMPERATURE IS BASED ON ASHRAE 2% AVG. FOR THE SPECIFIED LOCATION.
- SYSTEM-WIDE VOLTAGE DROP SHALL NOT EXCEED 5%.
- GROUNDING AND BONDING PROCEDURES FOR ALL PHOTOVOLTAIC EQUIPMENT COMPLY WITH NEC 2014.
- RAPID SHUTDOWN REQUIREMENTS ARE IN ACCORDANCE WITH NEC 690.12.
- CONDUCTORS GUARDED AT RACKING PER NEC 690.31(A).
- CONDUIT BETWEEN SUBARRAYS, COMBINERS, AND DISCONNECTS SHALL TAKE THE SHORTEST REASONABLE PATH.
- SPACE REQUIREMENTS FOR ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC ARTICLE 110.



142 PRESUMPCOT STREET
PORTLAND, ME 04103
(207) 221-6342

CLIENT:

CITY OF PORTLAND, ME

PROJECT ADDRESS:

OLD CITY LANDFILL
RIDGE ROAD
PORTLAND, ME 04103

SYSTEM TYPE:

966.00 kW_{DC}
PHOTOVOLTAIC ARRAY

DESIGNED BY:	LB
REVISION:	4
PRINT SIZE:	17" x 11"
SCALE:	
DATE:	JUNE 15, 2017
DWG TITLE:	ONE-LINE DIAGRAM
DWG NUMBER:	E01

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MODULE SPECIFICATIONS	
REC 345 TP-2S-72	
STC RATING	345.00
V _{MP}	38.7
I _{MP}	8.92
V _{OC}	46.5
I _{SC}	9.36
TEMP COEFF. V _{OC} [%/°C]	-0.31%

INVERTER SPECIFICATIONS	
SMA SUNNY TRIPOWER STP30000TL-US-10	
NOMINAL AC RATING [W]	30000.0
RATED MPPT RANGE V _{DC}	500 - 800
MAX INPUT V _{DC}	1000.0
NOMINAL V _{AC}	480 / 277 WYE
MAX I _{AC}	36.2
CEC EFFICIENCY	98.0%

SYSTEM SPECIFICATIONS		
MAX DC VOLTAGE (-27°C)	863.93	V
DC OPERATING VOLTAGE (MAX)	619.20	V
MAX DC CURRENT, PER STRING	11.70	A
DC OPERATING CURRENT, PER STRING	8.92	A
MAX AC INVERTER OUTPUT	36.20	A
AC NOMINAL VOLTAGE	480 / 277 WYE	V



142 PRESUMPCOT STREET
PORTLAND, ME 04103
(207) 221-6342

CLIENT:

CITY OF PORTLAND, ME

PROJECT ADDRESS:

OLD CITY LANDFILL
RIDGE ROAD
PORTLAND, ME 04103

SYSTEM TYPE:

966.00 kW_{DC}
PHOTOVOLTAIC ARRAY

ELECTRICAL DESIGN NOTES

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- RAPID SHUTDOWN REQUIREMENTS ARE IN ACCORDANCE WITH NEC 690.12.
- CONDUCTORS GUARDED AT RACKING PER NEC 690.31(A).
- CONDUIT BETWEEN SUBARRAYS, COMBINERS, AND DISCONNECTS SHALL TAKE THE SHORTEST REASONABLE PATH.
- SPACE REQUIREMENTS FOR ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC ARTICLE 110.

DESIGNED BY:	LB
REVISION:	4
PRINT SIZE:	17" x 11"
SCALE:	
DATE:	JUNE 15, 2017
DWG TITLE:	ONE-LINE DIAGRAM
DWG NUMBER:	E02

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PLANNING BOARD REPORT PORTLAND, MAINE



Three-unit Apartment Development
88 Walnut Street
Level III Site Plan and Subdivision Review
2017-099
JP Sheridan, LLC

Submitted to: Portland Planning Board
Public Hearing Date: July 25, 2017

Prepared by: Shukria Wiar, Planner
Date: July 21, 2017

I. INTRODUCTION

JP Sheridan, LLC has submitted a Level III Site Plan and Subdivision application for the construction of a three-unit residential building on a 5,759 square feet “urban infill” site at 88 Walnut Street in the East End. The building will be a two-story structure, with a three-car garage on the ground floor and the three apartments above. Currently there is a parking garage on the site. It is surrounded by multifamily houses. The site is within the Commercial Business B-2b zone.

This proposal is being reviewed as a final plan subject to the Site Plan and Subdivision Ordinance of Land Use Code. The project will also be reviewed against the *B-2 and B-2b Commercial Business Zone Standards* and the *Two-Family, Special Needs Independent Living Units, Multiple-Family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters Standards*.

Two hundred and sixty-seven (267) notices were sent to area residents within 500 feet of the site and the interested party list. A notice also appeared in the June 12th and 13th, 2017 editions of the *Portland Press Herald*.

Applicant Name	JP Sheridan, LLC
Consultants	
Agent Representative	Eric Dube of Casco Bay Engineering
Engineer	Eric Dube of Casco Bay Engineering
Surveyor	John Schwanda of Owen Haskell Inc.
Architect	Anne Callender, Whipple-Callender Architects

II. Summary of Planning Board Workshop

The applicant requested a review and the Planning Board considered the preliminary submission at a workshop on June 22, 2017. The Planning Board members at the workshop supported the proposed project but noted there were a number of concerns listed below and staff has worked with the applicant to address these concerns:

1. Sidewalk Waiver – Generally the Board expressed support of the sidewalk waiver on Sheridan Street, but wanted more information and a creative approach to other potential improvements pedestrian or bicycle improvements.

Staff Comments – The Staff continues to find feasible a sidewalk along Sheridan Street (refer to Keith Gray, Senior Engineer memo, Attachment 1). The staff met with the applicant on July 20, 2017 to discuss installing the sidewalk and other potential options for sidewalk improvements. The City has identified that the sidewalk along Sheridan on the opposite side of the street has a gap along the frontage of Fort Sumner Park and that the ramps at the Sheridan and Walnut intersection does not have ADA panels. The applicant has stated in their revised waiver request (dated July 21) a willingness to contribute to the construction of the sidewalk gap along the Fort Sumner frontage or contribute to the addition of a rubber tactile pad on the corners of Walnut and Sheridan Streets. Public Works has evaluated the waiver request (Attachment 1) and staff continues to evaluate the cost and viability of the

two alternative options.

2. Main Entrance to Building – The primary building entrance is midblock due to site constraints and building configuration. Several of the Board members supported the entrance at this location and recommended that its prominence be enhanced. A couple of members recommended the applicant create a direct entrance off of Walnut Street for the one unit.

Staff Comments – The applicant has revised the main entrance to include design features such as building address, lamp post, sidewalk connection with steps, and increased the overhang extending from the sidewalk to the entrance for a more porch-like appearance. According to the applicant, they are not proposing a direct stair to the Walnut Street porch due to the topography and site constraints. The staff has determined that the building does meet the applicable design standards.

3. Building Façade on Sheridan Street – The Board felt that the building façade along Sheridan Street was reading as a back of the building.

Staff Comments – This façade has not changed much, except that windows are now double hung. Due to privacy constraints, the size of windows stayed the same. The applicant is proposing adding understory landscaping along the Sheridan Street frontage.

4. Guardrails – The Board recommended that the metal guardrails should be removed and replaced with an improved version.

Staff Comments – The applicant will remove the metal guardrail along the building and add a short section of a wooden one beyond the building.

Project Review

<i>Review</i>	<i>Applicable Standards</i>
Site Plan	14-526
Subdivision	14-491
Design Manual	B-2 and B-2b Commercial Business Zones Standards, and (i) Two-Family, Special Needs Independent Living Units, Multiple-Family, Lodging Houses, Bed and Breakfasts, And Emergency Shelters

Requests for Waivers

<i>Waiver Request</i>	<i>Applicable Standards</i>
Sidewalk Waiver- To allow no sidewalk on Sheridan Street.	Section 14-498 8(a) Sidewalks and curbs: <i>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.</i>
Location and spacing of driveways- To allow driveway spacing of about 3 feet.	Technical Manual Section 1.7.1 Residential development with nine (9) parking spaces or less: <i>Minimum/maximum driveway width: Any site shall have a minimum driveway width of ten (10) feet and a maximum width of twenty (20) feet measured at the property line. Location of driveway: A driveway shall be located on the lot in a manner to provide a minimum</i>

distance of twenty (20) ft spacing between it and adjacent driveways. This spacing shall be measured between edge of driveways at the property line. If the development is a Level III site plan with frontage on an arterial roadway, the standards listed in the table under section 1.6.1.7 shall apply. No more than one (1) driveway shall be permitted.

III. PROJECT DATA

Existing Zoning	B-2b Commercial Business Zone
Existing Use	Residential
Proposed Use	Residential- Apartments for Rental
Proposed Development Program	3 residential units
- Bedroom Mix	2 two-bedroom units, 1 three-bedroom unit
Parcel Size	5,759 SF
Proposed Parking	3 spaces

	Existing	Proposed	Net Change
Building Footprint	621 SF	1,932 SF	1,311 SF
Building Floor Area	621 SF	5,506 SF	4,885 SF
Impervious Surface Area	1,886 SF	3,182 SF	1,296 SF
Parking Spaces (on site)	3	3	0
Bicycle Parking Spaces	0	0	0
Estimated Cost of Project	\$1,000,000		

IV. EXISTING CONDITIONS

The site is 5,759 SF that has an existing curb cut on Walnut Street. Currently the parcel has a one-story, three-car garage, which will be demolished. The site is surrounded by single-family and multifamily homes. The property does have an extended curb cut that is shared with an existing adjacent lot.



Figure 1: Proposed Site



IV. PROPOSED DEVELOPMENT

The proposal, including floor plans and elevations, are included in the plan set and have been revised to address staff concerns. The development project is proposed as new construction of a two-story building with a three-car garage on the ground floor and the three apartments above. At two stories high, the scale of this building will be in balance the

residential uses of the street and neighborhood.

Vehicle access is proposed from Walnut Street via the existing drive shared with the existing house. Three parking spaces are proposed and bicycle parking will be accommodated within the garages. No external spaces are proposed on site. The parking area is not visible from Sheridan Street and slightly visible from Walnut Street since it is tucked-away in the building.

The building is proposed at the sidewalk on Walnut Street with no direct entrance from Walnut Street. The only entrance to the building is off a 'court yard' that is approximately 20 feet from Walnut Street. A covered porch is proposed over the main building entrance, two balconies are shown on the northern façade, and a gabled roof with three separate dormers, which is similar to other buildings along the street. No direct entrance is proposed off of Sheridan Street.



Below are the renderings of the proposed building from the Walnut and Sheridan Streets.



VIEW FROM WALNUT OF WEST SIDE



CORNER OF SHERIDAN AND WALNUT



SHERIDAN STREET ELEVATION

V. PUBLIC COMMENT

As of the writing of this report, two public comments have been submitted, Attachment 5. Both of the public comments state that a sidewalk waiver should not be granted. The applicant did not hold a neighborhood meeting since the subdivision is for three units only; project developments that have five or greater units or lots are required to hold a neighborhood meeting.

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

a. The owner of the property is JP Sheridan LLC. The applicant has provided a copy of a short form quitclaim deed, recorded at the Cumberland County Registry of Deeds (Book 33444 Page 11), which demonstrates their right, title and interest in the property.

b. The estimated cost of the development is \$1,000,000. The applicant has submitted a letter from Camden National Bank, dated June 12, 2017, as demonstration of their financial and technical capacity to complete the proposed development.

VII. ZONING ASSESSMENT

The proposed project is to build a two-story, three-unit apartment building and is a permitted use in the B-2b zone since the zone allows multi-family dwellings. Under the zone all of the dimensional requirements are being met. For off street parking, Division 20 requires one parking space per unit for residential uses on the peninsula. Three parking spaces are shown. Under external effects, section 14-167(b), the maximum noise requirement of 55 decibels at lot boundaries shall be maintained.

VIII. DEVELOPMENT REVIEW

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

The applicant has submitted a draft subdivision plat, Plan ##. The draft plat has been reviewed by the city's surveyor, Bill Scott, who notes,

1. The "Boundary Plan for Jon Edwards" is an older plan, dated November 2015 and revised thru April of this year. This plan shows an existing structure on Parcel A and contours, both of which are not shown on the Recording Plat. The "Boundary Plan" is referenced on the Recording Plat.

The Recording Plat is the only one of the two that has the "Approved by Planning Board" block for signatures. I'm not sure if any of this is important or not, but I mention it just in case.

2. There are no engineering plans included in this set. No grading plan, no utility plan, no gas/water/sewer connections shown to the proposed new house. The plan also does not show the water main location on Sheridan Street.

A final plat addressing these comments and meeting the requirements of *Section 14-496* has been included as a condition of approval. The plat will also need to note the number of proposed units and associated parking on site and be revised to reflect any waivers and conditions of approval that relate to the subdivision plan. Any waivers granted must be recorded at the Registry of Deeds within 90 days of a Planning Board decision.

B. SUBDIVISION (Section 14-497)

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

1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)

Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the erosion and sediment control plan and finds them acceptable.

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)

The project site does not currently have existing water service. A new 2-inch domestic water service will be installed from the new water main in Walnut Street. There is a 16-inch diameter cast iron water main within Walnut Street that is planned for renewal with a 12-inch ductile iron main in the summer of 2017. A public fire hydrant located 100 feet from the site. The Applicant has submitted confirmation of ability to serve water from the Portland Water District.

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)

The applicant is proposing access to the site from an existing curb cut on Walnut Street. This curb cut is about two to three feet from an existing curb cut on the abutting site, and does not meet the driveway separation standard. The Technical Manual Section 1.7.1 Driveway Separation Standard for Residential development with nine (9) parking spaces or less states:

Minimum/maximum driveway width: Any site shall have a minimum driveway width of ten (10) feet and a maximum width of twenty (20) feet measured at the property line.

Location of driveway: A driveway shall be located on the lot in a manner to provide a minimum distance of twenty (20) ft spacing between it and adjacent driveways. This spacing shall be measured between edge of driveways at the property line. If the development is a Level III site plan with frontage on an arterial roadway, the standards listed in the table under section 1.6.1.7 shall apply.

No more than one (1) driveway shall be permitted.

Keith Gray, Senior Engineer reviewed the proposal's details, including the access, parking, and vehicle circulation (Attachment 1) and states the following regarding the driveway separation:

Staff has reviewed the Applicant's request for a waiver from the City's driveway separation requirements. We concur with the request's arguments regarding various site constraints and believe that the proposed location, also the current location, minimizes overall safety issues and challenges with grades and slopes on Walnut Street.

The proposed project is not anticipated to cause unreasonable traffic congestion.

4. Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)

The applicant has submitted a wastewater capacity application to the Department of Public Works and awaiting on the capacity letter. Once the confirmation letter is available, it should be forwarded to the Planning Authority.

5. Scenic Beauty, Natural, Historic, Habitat and other Resources (Section 14-497 (a) 8)

The proposal site is not within an historic district but is with 100 feet of historic landmark. It is in an urban neighborhood surrounded by a variety of residential building types. The proposed building does not impact the natural beauty of the area or adversely affect any significant wildlife habitat, rare or irreplaceable natural areas, or any public access to the shoreline. Deb Andrews, Historic Preservation Program Manager, participated in the design review and the staff finds the proposal in conformance with this standard.

6. Comprehensive Plan (Section 14-497 (a) 9)

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

Housing: A Livable City

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

Local Goals:

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

Goals from Future Strategies:

9. Adopt Affordable Housing

- Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.

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

The estimated cost of the development is \$1,000,000. The applicant has submitted a letter from Camden National Bank, dated June 12, 2017, as demonstration of their financial and technical capacity to complete the proposed development.

C. **SITE PLAN STANDARDS** (Section 14-526)

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

1. Transportation Standards

a. Impact on Surrounding Street Systems and Access and Circulation

See Subdivision, Paragraph VIII (B) (3), above.

b. Construction Management Plan

A construction management plan has not been submitted by the applicant for review but has submitted a narrative of the proposed construction work. All construction needs to be proposed within the limits of the property lines. Submission of a construction management plan has also been included as a condition of approval.

c. Sidewalks

There is an existing concrete sidewalk on Walnut Street and no sidewalk along the site's frontage on Sheridan Street. The applicant is not proposing to install new sidewalk along either of their

Figure 3: Location of Sheridan Street with no sidewalk and associated measurements



frontages on Walnut Street or Sheridan Street. Given the extent of utility work being proposed in the right-of-way of Walnut Street, that sidewalk may have to be replaced. The existing sidewalk material policy is brick on Walnut Street and the current plan maintains the existing concrete surface. Accordingly, this may not meet City sidewalk material standards. There is a provision for use of alternative materials if the sidewalk is in good condition and the disturbed section represents less than 50% of the block. It should also be noted that the City Policy is for the driveway apron material to match the sidewalk material. A condition of approval is suggested that seeks additional documentation on the extent of utility work and final plans for review and approval by the Department of Public Works.

a) Sidewalk Waiver Criteria

The applicant is seeking a waiver from installing a sidewalk along the property frontage along Sheridan Street. The sidewalk waiver criteria from the ordinance are listed below.

Sec. 14-506. Modifications.

(a) *Except for the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and sidewalks, the Planning Board if it finds that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations may vary the regulations so that substantial justice may be done and the public interest secured; provided that such variation will not have the effect of nullifying the intent and purpose of the land development plan and the regulations of this article.*

(b) *Where the Planning Board or planning authority finds that, for each of the requirements listed below, two or more of the conditions exist with respect to compliance with the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and/or sidewalks, it may waive, in whole or in part, the regulations so that substantial justice may be done and the public interest secured:*

Sidewalks-

- 1. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.*
- 2. 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.*
- 3. A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.*
- 4. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.*
- 5. The street has been constructed or reconstructed without sidewalks within the last 24 months.*
- 6. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.*

b) Applicant's Request

The applicant has provided a detail analysis of the how they are meeting these sidewalk criteria. Below is the written analysis from the applicant and please refer to Attachment J for their complete analysis and images:

Request for Waiver for a sidewalk on the Sheridan Street side of the property.

Existing conditions: The 88 Walnut Street property is a corner lot at Walnut and Sheridan. The primary building façade will be facing Walnut Street and the drive access to the site is on Walnut Street. Walnut Street has an existing concrete sidewalk that runs from Washington Ave to North Street. There is no existing sidewalk on the Sheridan Street side of the property but it has granite curbing in place with a guardrail approximately 2' off of the curb. The guardrail protects cars and pedestrians from a very steep slope. It is a 40 to 60% grade change along this edge. There is an existing concrete sidewalk on the east side of Sheridan Street that ends in a crosswalk across Walnut Street.

Under Sec. 14-506 Modifications (b) Paragraphs 1 and 3 under Sidewalks are true for the property.

- 1. No. 1. There is no reasonable expectation for pedestrian usage coming from or going to our site along this street.** Our building does not have any doors on the Sheridan Street side to warrant a sidewalk. The site is a steep slope so that we are building the lower level into the hill. The lower level is where all the entry and garage doors are located. Access will be from Walnut only. The next building on our side of Sheridan is 240' away and the topography transitions from a steep slope to a 26-foot drop-off.
- 2. No. 3. A safe alternate-walking route is reasonably and safely available on the other side of the street.** There is a sidewalk on the opposite side of the street available for pedestrians which ties into the crosswalk at Walnut.

We are requesting a variance to the sidewalk due to the following extraordinary conditions: Sec. 14-506 Modifications (a)

1. Steep grade change on the edge of Sheridan Street. There is a 12'-0" grade change from Sheridan to our driveway elevation. We would need to increase the height of our building foundation and floor-to-floor height to retain the additional fill needed to create a level grade for a sidewalk. Increasing the floor-to-floor height would require more internal stairs that would require we increase the building footprint to accommodate the stairs. All these factors would increase the cost of construction by tens of thousands of dollars.
2. Sheridan Street is only a 40' right-of-way, not the 50' City standard. There is only 6' available between property line and existing granite curb for sidewalk and esplanade. This does not meet minimum city standard for the two, so only a sidewalk could be built.
3. There is a sidewalk on the opposite side of the street available for pedestrians that runs the length of Sheridan Street from Cumberland to Walnut with the exception of a gap at Fort Sumner park. It intersects Walnut Street "level" so that it provides a safe landing and turning point for handicapped individuals. There is also a crosswalk for Walnut on that side of the road. This would be difficult to achieve on our corner due to the slope intersections of Walnut Street, Sheridan Street and our property. There is a 1'-0" foot drop in an 8'-0" area at the corner.
Please note: We are happy to contribute to the construction required to bridge the sidewalk gap at Fort Sumner when the City installs that sidewalk or contribute to the addition of a rubber tactile pad on the corner of Walnut and Sheridan, where there is currently none.
4. The next building on Sheridan Street on the west side of the road is 240' away from the end of our property and 344' from the intersection of Walnut. There is no sidewalk existing along this stretch. All of it is protected with a guardrail due to a very steep slope. (See topography map below.) [See Attachment J] The property in between is the former Creighton's property. Its only access is from Washington Ave. It is under redevelopment right now with no changes to the building, the lot is now being built out as a 160+ car parking lot, and the new tenant has a 10-year lease, so there is no expectation for a connecting sidewalk in the near future. It would put an undue burden on the property owner to maintain a clear sidewalk in winter months. They would be obligated to shovel over 103' of sidewalk that would in turn place the snow plowed from the street up against our building foundation because of the lack of an esplanade.

Due to all these unique and extraordinary conditions, we request a waiver on placement of a new sidewalk on Sheridan Street. We will remove the existing guardrail parallel with the house and replace the last 20' of guardrail beyond the edge of the building to the property line with a new wooden guardrail.

c) Staff Analysis

Staff suggested the changes to the foundation, which could accommodate the installation of a sidewalk along Sheridan Street and the staff continues to find this as feasible option at this location. The applicant has addressed this concept in their revised response above. In addition, the staff surveyed the conditions on Sheridan Street and identified the gap in the sidewalk system along the Fort Sumner Park frontage and the lack of ADA panels at the Walnut and Sheridan intersection.

The Planning Board asked the City for more information regarding this waiver, which has been evaluated by Keith Gray (Senior Project Engineer at DPW), Bruce Hyman (Transportation Manager) and Tom Errico (Consultant Traffic Engineer). Mr. Gray has reviewed the application and offers analysis on the sidewalk request waiver (Attachment 1):

The following comments/concerns are in regards to the Sidewalk and Driveway Waivers submitted by the applicant on July 20th, 2017 and July 12th, 2017 respectively. Please feel free to contact me with questions.

Sidewalk Waiver:

The Applicant is requesting a waiver for a sidewalk on the Sheridan Street under Section 14-506 Modifications of the Land Use Ordinance.

Under Sec. 14-506 Modifications (a) the applicant is requesting a sidewalk waiver based on extraordinary conditions of:

- 1) Costs associated with increasing the finished floor height (raise the foundation height by 1 to 2 feet) to an elevation that would allow the City to build a sidewalk at a later date if the sidewalk requirement was to be waived.*
 - The Department of Public Works position is that a sidewalk should be built on Sheridan Street. If the Planning Board decides to waive this requirement; we expect that the allowed construction will not preclude or increase the cost of the future construction of a sidewalk. Therefore, the Department has requested the applicant to raise the foundation (FFE) elevation to an elevation calculated from the high point of the existing curb elevation on Sheridan Street plus approximately 2 feet. We also point out that raising the finish floor elevation (FFE) would improve the site's drainage conditions by directing roof runoff towards Sheridan Street and not towards the proposed foundation or neighboring property.*
- 2) Sheridan Street has only a 40-foot ROW with only 6 feet from edge of existing curb to the property line. Applicant states that Sheridan Street does not meet minimum City standards for a sidewalk on that side of the street.*
 - The Applicant is referring to the Local Street Cross Section from the City's Technical Standards Manual. The referenced cross section is intended for the construction of new streets with a 50-foot right-of-way. Sheridan Street has an existing 40-foot ROW which does not allow for an esplanade between curb line and sidewalk but a 5-foot sidewalk could be constructed without an esplanade as is typical for the rest of the street on both sides.*
- 3) There is a sidewalk on the opposite side of Sheridan Street that runs from Cumberland to Walnut Street with the exception of a gap at Fort Sumner Park. The applicant has offered to contribute to the construction required to eliminate the sidewalk gap at Fort Sumner Park along Sheridan Street OR the addition of detectable warning panels on the 2 corners of Walnut and Sheridan Street.*
 - The Applicant's contribution is valued and would benefit in the construction of the sidewalk along Fort Sumner Park, provided the value of such a contribution would be comparable to the value of constructing a sidewalk along the Applicant's property on Sheridan Street.*
- 4) There is no sidewalk on that side of Sheridan Street from the intersection of Sheridan/Walnut to 156 Sheridan Street (344 feet) with no expectation for connection based on current property use and steep grades.*

- *The City has seen a surge in development on progressively challenging sites and it is not unrealistic that the neighboring properties propose development that would require a sidewalk on Sheridan Street, particularly since these properties do not share frontage on another street. When/if this development were to occur, the Applicant's property would provide a vital sidewalk connection to the intersection.*

5) *Burden on the property owner to maintain sidewalk in winter months with snow being plowed against proposed foundation due to lack of esplanade.*

- *Snow will accumulate close to the foundation regardless of the presence of a sidewalk. To this point, we encourage positive drainage towards the street so melting snow will not back up against the foundation. Additionally, many miles of sidewalk exist in the City without an esplanade and are maintained by private property owners; this is simply not a hardship.*

Under Sec. 14-506 Modifications (b) the applicant is requesting a sidewalk waiver based on meeting two of the six requirements listed for sidewalks:

1) Condition Number 1 - There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.

The proposed building does not have any doors on the Sheridan Street side to warrant a sidewalk.

- *The applicant has provided access from Walnut Street only and no doors are located on Sheridan Street. However, the construction of a sidewalk on Sheridan Street along the applicant's property would provide the necessary link for future continuity that provides enhanced pedestrian usage to and from the site and the general area. It is also the applicant's design (with no doors fronting Sheridan) that creates this condition.*
- *Condition Number 3 - A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled. There is a sidewalk on the opposite side of the street available for pedestrians which ties into the crosswalk at Walnut.*
- *The existing sidewalk on the opposite side of Sheridan Street is accessible from the site but would need to be brought up to ADA compliance. The sidewalk runs the length of Sheridan Street from Cumberland to Walnut with the exception of a 100' gap at Fort Sumner Park. The two curb ramps on the corners of Walnut and Sheridan Streets are also not ADA-compliant.*

Thus, the city staff supports installing a sidewalk. The Board's idea of a bike lane was not feasible along Sheridan Street due to the narrow width and on-street parking. As noted above, the staff did identify a gap in the sidewalk system along the Fort Sumner frontage along Sheridan Street (opposite side of the street) and that the two ramps at Sheridan and Walnut lack detectable warning panels. If the Planning Board finds that the applicant has made a sufficient case for waiving the sidewalk along their Sheridan Street frontage under the waiver criteria and/or the hardship criteria, the staff recommends that the other improvements identified in Mr. Gray's memo be considered. The staff is seeking additional input from the Parks and Recreation Department regarding the Fort Sumner frontage and seeking more information from project engineers at DPW regarding a pending sewer separation project that may impact the ADA ramps at the intersection. The staff intends to have more information at the public hearing.

d. Public Transit Access

The public transit requirements do not apply to this project.

e. Parking

There are three parking spaces in the proposed garage, which is located on the side of the property and away from the street. Per zoning, development on the peninsula, is required to have one parking space per unit. This development is meeting the parking standards.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation

The site will have landscaping along the front of the building as well as a rain garden along the back of the property. The applicant is proposing three trees on the site as part of the development, one in front of the building that will be visible from the right-of way, and one at the rear of the building which may be visible from the street but is a distant away. The street tree requirement would be one tree per unit, or three street trees, in or within 20 feet of the ROW. Additional landscaping is proposed along Sheridan Street. This standard is being met.

c. Water Quality, Storm Water Management and Erosion Control

Currently the stormwater drainage from the site flows southwest along the property before running off onto abutters' property towards Washington Avenue. In this area, there is no separated storm drain system. Instead of draining the stormwater in the City's combined sewer system, the applicant is proposing to infiltrate, retain, and reduce the peak runoff rate that leaves the site. As part of this, a rain garden is proposed on site. This garden is designed to be able to hold runoff from the 2-,10- and 25- year storm.

Under Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the drainage plan and stormwater report, and offers her recommendations; please see Attachment 3 for the complete analysis.

In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:

a) Basic Standards: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.

b) General Standards: The project will result in an increase in impervious surface. The Applicant is proposing to install a rain garden that will provide adequate treatment for the proposed project. We have the following comments:

i) The Applicant should provide sizing calculations showing that the rain garden has been sized per MaineDEP Stormwater Best Management Practices manual. The Applicant had noted that sizing calculations were provided, but we do not see sizing calculations for the rain garden in the current submission. The calculations should show that the system has been sized per MaineDEP standards, including water quality volume and area requirements.

c) Flooding Standards: The project will result in an increase in impervious surface. The model indicates that peak flows will be reduced in the post-development condition in accordance with the requirements of the Flooding Standard. Note that prior to this project, stormwater was not discharged directly to the City's stormwater infrastructure. The proposed flow is very small, but the City will need to verify capacity, and the Applicant will also be required to provide additional information on how the proposed stormwater connection will be made. The Applicant has noted that they are coordinating with the City to verify stormwater capacity requirements.

3. *Public Infrastructure and Community Safety Standards*

a. Consistency with Master Plans

See Subdivision, Paragraph VIII (B)6 above.

b. Public Safety and Fire Prevention

The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime. The applicant is proposing wall mounted lighting at the front entrance as well as a lamp post at entrance of the driveway.

c. Availability and Adequate Capacity of Public Utilities

The project will be served by the existing utility services located in Walnut Street. The Applicant has contacted the City Department of Public Services requesting ability to serve sewer demand, and awaits response. Confirmation of ability to serve sewer from DPS should be forwarded to the Planning Authority prior to the issuance of a building permit.

4. *Site Design Standards*

a. Snow and Ice Loading

The applicant has not shown proposed on-site snow storage on the site plans will be hauled off. The applicant has hired a third-party entity to handle the snow removal at the site.

b. View Corridors

This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

c. Historic Resources

The site is within the 100-foot setback of the historic landmark, the Portland Water District Pumping Station. The project does have to be reviewed by Historic Preservation staff and as part of the design review of the project, Deb Andrews, Historic Preservation Program Manager, was among one the reviewers.

d. Exterior Lighting

A lighting and photometric plan has been submitted for review. The applicant is proposing wall mounted lighting at the front entrance as well as a lamp post at entrance of the driveway. All exterior site lighting including lamp post will be cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties or streets.

e. 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. This mechanical equipment should be located to the interior of the site, away from abutting residential properties, and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

f. Signage and Wayfinding

This standard does not apply to the proposal.

g. Zoning Related Design Standards

The project at 88 Walnut Street was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager against the *B2 Commercial Business Zones Standards* (Section (d) of the Design Manual) and *Multiple-Family Standards*. The site is within 100' of a historic landmark.

At the workshop, the Board recommended the main entrance be more prominent and the building façade on Sheridan Street does not read as back of the house. The applicant has modified the design to address these comments. For the main entrance, the applicant now includes features like building address, lamp post, sidewalk connection with steps, and increased overhang extending from sidewalk to entrance. To address the latter comment, the windows on Sheridan Street side are now double hung. Ms. Cameron has found the proposal to be in general compliance. However, there is one standard have not been met, which that there is still no entrance off on Walnut or Sheridan Streets (Attachment 3). Excerpts from Ms. Cameron memo are below:

Design Review Comments:

(d) B-2b Commercial Business Zones

Standard (1) c. Building Entrances – Typically, entrance would be provided at front porch or side porch that extends to the street, however with this project the primary building entrance is mid-block due to site challenges and building configuration. The steep topography of the site does create some challenges here – steps are provided from sidewalk to the entrance. Design revisions that bring more emphasis to the entry include building address, lamp post, sidewalk connection with steps, increased overhang extending from sidewalk to entrance, and revised details on the entrance cover to appear more porch-like. Staff concludes these elements do bring more emphasis and legibility to the building entrance if site constraints do not allow the entrance to move closer to the street.

Standard (1) e. Façade Character – No active or public portions of this building – porch provided as an architectural feature facing Walnut Street.

(i) Two-Family, . . . Multiple-Family . . . :

Standard (2). Relationship to Street – Building placement is typical of the residential properties in the context – slightly setback to allow for stoops, porches, landscaping and privacy. The building sits on a corner with the principal orientation to Walnut Street with Sheridan as the side elevation – the façade designs appropriately indicate this hierarchy of orientation. In this case, the building provides a multi-story porch and landscaping at the street. However, entrance is a side-entry and mid-block which is atypical. The side elevation design is consistent with other corner lot side elevation treatment in terms of size and placement of fenestration (see for example Walnut and North street corner).

IX. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed three-unit development at 88 Walnut Street.

X. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on July 25, 2017 for application 2017-099 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [**finds/does not find**], based upon the consulting transportation engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with Section 14-498 8(a) Sidewalks and curbs: *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.* The Planning Board [**waives/does not waive**]

the Section 14-498 8(a) Sidewalks and curbs to allow no sidewalk along the parcel on Sheridan Street.

2. The Planning Board [**finds/does not find**], based upon the consulting transportation engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.7.1 Residential Development with Nine Parking Spaces or Less, Location of a Driveway states that *[a] driveway shall be located on the lot in a manner to provide a minimum distance of twenty (20) ft spacing between it and adjacent driveways*. The Planning Board [**waives/does not waive**] the Technical Manual standard (Technical Manual Section 1.7.1) to allow a separation of 2 feet between the existing driveways.

B. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on July 25, 2017 for application 2017-099 relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [**is/is not**] in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat:

1. The applicant shall finalize the subdivision plat for review and approval by Corporation Counsel, the Department of Public Services, and the Planning Authority.

C. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on July 25, 2017 for application 2017-099 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [**is/is not**] in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. The applicant shall submit a construction management plan for review and approval by the Department of Public Works and the Planning Authority, and
2. The applicant shall address Lauren Swett's memorandum dated 07.20.2017 comments.
3. Confirmation of ability to serve sewer from DPS should be forwarded to the Planning Authority.
4. That 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 with any changes to be approved by Corporation Counsel, shall be submitted, signed, and recorded prior to the issuance of a building permit with a copy to the Department of Public Works.
5. The applicant shall provide additional documentation on the extent of utility work and disturbance of the sidewalk along Walnut Street. Final plans meeting the sidewalk materials policy will be submitted for review and approval by the Department of Public Works.

ATTACHMENTS:

Staff Review Comments and Background Information

1. Department of Public Services Review, Keith Gray, dated 07.21.2017
2. Civic Engineer Review, Lauren Swett, dated 07.20.2017
3. Urban Designer Review, Caitlin Cameron, dated 07.20.2017
4. Fire Department Review, Keith Gautreau, 07.17.2017
5. Public Comment
PC – Christian MilNeil 06.23.2017
PC – Bobbi Keppel 06.28.2017

Applicant's Submittal

- A. Section 1 - Narrative (update) Application
- B. Section 2 - Level III Site Plan App
- C. Section 3 - Site Plan and Code Review Summary
- D. Section 4 - Property Deed
- E. Section 5 - Stamped Survey
- F. Section 7 - Stormwater Report (update)
- G. JP Sheridan proof of funds
- H. City Comments w answers
- I. Design Standards
- J. Request for Sidewalk Waiver revised
- K. Request for Driveway Waiver
- L. Construction-Management
- M. Snow Removal Les Wilson
- N. Ability to Serve Letter

Plans

- Plan 1 Cover Sheet C0
Plan 2 Site Utilities and Drainage Plan C100
Plan 3 Pre and Post Watershed Plan C101
Plan 4 Site Details C200
Plan 5 Site Details C201
Plan 6 Erosion Control Details C0-C300
Plan 7 RECORDING PLAT
Plan 8 Survey stamped
Plan 9 Walnut planting sketch
Plan 10 A1 MODEL VIEWS & PHOTOS
Plan 11 Model Views
Plan 12 Photos
Plan 13 Exterior Lighting Plan
Plan 14 A2 PLANS & ELEVATIONS
Plan 15 A ELEVATION CHANGES
Plan 16 B ELEVATION CHANGES_WALK FROM WALNUT
Plan 17 C ELEVATION CHANGES_WALNUT & SHERIDAN
Plan 18 D ELEVATION CHANGES
Plan 19 E ELEVATION CHANGES

City of Portland Maine
Dept. of Public Works
Engineering Division

Memo

To: Shukria Wiar - Planner
From: Keith Gray, PE – Senior Engineer, DPW
Date: July 21, 2017
Re: 88 Walnut Street (2017-099) Site Plan Review, Sidewalk & Driveway Waiver

The following comments/concerns are in regards to the Sidewalk and Driveway Waivers submitted by the applicant on July 20th, 2017 and July 12th, 2017 respectively. Please feel free to contact me with questions.

Sidewalk Waiver:

The Applicant is requesting a waiver for a sidewalk on the Sheridan Street under Section 14-506 Modifications of the Land Use Ordinance.

Under Sec. 14-506 Modifications (a) the applicant is requesting a sidewalk waiver based on extraordinary conditions of:

- 1) Costs associated with increasing the finished floor height (raise the foundation height by 1 to 2 feet) to an elevation that would allow the City to build a sidewalk at a later date if the sidewalk requirement was to be waived.
 - The Department of Public Works position is that a sidewalk should be built on Sheridan Street. If the Planning Board decides to waive this requirement; we expect that the allowed construction will not preclude or increase the cost of the future construction of a sidewalk. Therefore the Department has requested the applicant to raise the foundation (FFE) elevation to an elevation calculated from the high point of the existing curb elevation on Sheridan Street plus approximately .2 feet. We also point out that raising the finish floor elevation (FFE) would improve the site's drainage conditions by directing roof runoff

towards Sheridan Street and not towards the proposed foundation or neighboring property.

- 2) Sheridan Street has only a 40 foot ROW with only 6 feet from edge of existing curb to the property line. Applicant states that Sheridan Street does not meet minimum City standards for a sidewalk on that side of the street.
 - The Applicant is referring to the Local Street Cross Section from the City's Technical Standards Manual. The referenced cross section is intended for the construction of new streets with a 50 foot right-of-way. Sheridan Street has an existing 40 foot ROW which does not allow for an esplanade between curb line and sidewalk but a 5 foot sidewalk could be constructed without an esplanade as is typical for the rest of the street on both sides.
- 3) There is a sidewalk on the opposite side of Sheridan Street that runs from Cumberland to Walnut Street with the exception of a gap at Fort Sumner Park. The applicant has offered to contribute to the construction required to eliminate the sidewalk gap at Fort Sumner Park along Sheridan Street OR the addition of detectable warning panels on the 2 corners of Walnut and Sheridan Street.
 - The Applicant's contribution is valued and would benefit in the construction of the sidewalk along Fort Sumner Park, provided the value of such a contribution would be comparable to the value of constructing a sidewalk along the Applicant's property on Sheridan Street.
- 4) There is no sidewalk on that side of Sheridan Street from the intersection of Sheridan/Walnut to 156 Sheridan Street (344 feet) with no expectation for connection based on current property use and steep grades.
 - The City has seen a surge in development on progressively challenging sites and it is not unrealistic that the neighboring properties propose development that would require a sidewalk on Sheridan Street, particularly since these properties do not share frontage on another street. When/if this development were to occur, the Applicant's property would provide a vital sidewalk connection to the intersection.
- 5) Burden on the property owner to maintain sidewalk in winter months with snow being plowed against proposed foundation due to lack of esplanade.
 - Snow will accumulate close to the foundation regardless of the presence of a sidewalk. To this point, we encourage positive drainage towards the street so melting snow will not back up against the foundation. Additionally, many miles of sidewalk exist in the City without an esplanade and are maintained by private property owners; this is simply not a hardship.

Under Sec. 14-506 Modifications (b) the applicant is requesting a sidewalk waiver based on meeting two of the six requirements listed for sidewalks:

- 1) *Condition Number 1 - There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.*

The proposed building does not have any doors on the Sheridan Street side to warrant a sidewalk.

- The applicant has provided access from Walnut Street only and no doors are located on Sheridan Street. However, the construction of a sidewalk on Sheridan Street along the applicant's property would provide the necessary link for future continuity that provides enhanced pedestrian usage to and from the site and the general area. It is also the applicant's design (with no doors fronting Sheridan) that creates this condition.

- 2) *Condition Number 3 - A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.*

There is a sidewalk on the opposite side of the street available for pedestrians which ties into the crosswalk at Walnut.

- The existing sidewalk on the opposite side of Sheridan Street is accessible from the site but would need to be brought up to ADA compliance. The sidewalk runs the length of Sheridan Street from Cumberland to Walnut with the exception of a 100' gap at Fort Sumner Park. The two curb ramps on the corners of Walnut and Sheridan Streets are also not ADA-compliant.

Driveway Waiver:

The Applicant is requesting a waiver for location and spacing of driveways on Walnut Street under Section 1.7.1 of the City's Technical Manual.

- 1) We request a waiver from this standard due to the unique characteristics of the site and the inability to achieve a 20' separation without creating other site problems.
 - Staff has reviewed the Applicant's request for a waiver from the City's driveway separation requirements. We concur with the request's arguments regarding various site constraints and believe that the proposed location, also the current location, minimizes overall safety issues and challenges with grades and slopes on Walnut Street.

MEMORANDUM



TO: Shukria Wiar, Planner
FROM: Lauren Swett, P.E.
DATE: July 30, 2017
RE: J.P. Sheridan, LLC Apartments , Level III Site Plan Application Response to Comments

Woodard & Curran has reviewed the Level III Site Plan Application Response to Comments for the proposed development located at 88 Walnut Street in Portland, Maine. The project involves the construction of a two-story apartment building with a three car garage on the ground floor and three (3) units above.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Response to Comments and attachments, dated June 20, 2017 prepared by Casco Bay Engineering , on behalf of J.P. Sheridan, LLC Apartments.
- Engineering Plans, dated June 20, 2017 prepared by Casco Bay Engineering , on behalf of J.P. Sheridan, LLC Apartments.

Comments *Comments from prior memos are included in italics*

- 1) *Per Section 12 of the City's Technical Manual, the Applicant is required to submit a photometric plan demonstrating minimal light trespass from the site. Applicant has noted that they are working on providing a photometric plan.*
- 2) *In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:*
 - a) *Basic Standards: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.*
 - b) *General Standards: The project will result in an increase in impervious surface. The Applicant is proposing to install a rain garden that will provide adequate treatment for the proposed project. We have the following comments:*
 - i) *The Applicant should provide sizing calculations showing that the rain garden has been sized per MaineDEP Stormwater Best Management Practices manual. The Applicant had noted that sizing calculations were provided, but we do not see sizing calculations for the rain garden in the current submission. The calculations should show that the system has been sized per MaineDEP standards, including water quality volume and area requirements.*
 - c) *Flooding Standards: The project will result in an increase in impervious surface. The model indicates that peak flows will be reduced in the post-development condition in accordance with the requirements of the Flooding Standard. Note that prior to this project, stormwater was not discharged directly to the City's stormwater infrastructure. The proposed flow is very small, but the City will need to verify capacity, and the Applicant will also be required to provide additional information on how the proposed stormwater connection will be made. The Applicant has noted that they are coordinating with the City to verify stormwater capacity requirements.*
- 3) *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. The Applicant has included some information in their stormwater management plan with regards to inspection and maintenance. A detailed plan including*



required inspection and maintenance tasks should be developed for the project. The Applicant will be required to execute a stormwater agreement with the City in accordance with the requirements of Chapter 32.

Planning and Urban Development Department Planning Division



Subject: B-2 Design Review – 88 Walnut Street
Written by: Caitlin Cameron, Urban Designer
Date of Review: Tuesday, July 18 2017

The project at 88 Walnut Street was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager against the *B2 Commercial Business Zones Standards* (Section (d) of the Design Manual) and *Multiple-Family Standards*.

Design Review Comments:

(d) B-2b Commercial Business Zones

Standard (1) a. Urban Street Wall – Building placement is near the property lines on both streets with a setback on Walnut to accommodate a porch structure. Project is facing predominantly residential streets and adopts residential orientation and placement with principal façade on Walnut Street.

Standard (1) b. Mixed Uses – Not applicable

Standard (1) c. Building Entrances – Typically, entrance would be provided at front porch or side porch that extends to the street, however with this project the primary building entrance is mid-block due to site challenges and building configuration. The steep topography of the site does create some challenges here – steps are provided from sidewalk to the entrance. Design revisions that bring more emphasis to the entry include building address, lamp post, sidewalk connection with steps, increased overhang extending from sidewalk to entrance, and revised details on the entrance cover to appear more porch-like. Staff concludes these elements do bring more emphasis and legibility to the building entrance if site constraints do not allow the entrance to move closer to the street.

Standard (1) d. Windows – Windows are provided along both street frontages.

Standard (1) e. Façade Character – No active or public portions of this building – porch provided as an architectural feature facing Walnut Street.

Standard (1) f. Building Design – Not applicable

Standard (1) g. Building Materials – Primary material is clapboard with trim details in keeping with traditional residential character of the neighborhood.

Standard (1) h. Building Scale – Building is in scale with traditional residential context on both streets.

Standard (1) i. Landscaping and Buffers – Parking is structured, drive is now screened from neighboring property. Landscaping provided along front setback as required.

(i) Two-Family, . . . Multiple-Family . . . :

Standard (1) . Exterior Design – Building is quite traditional in character with a front-end gable roof line and two and a half story height – all in keeping with the single and two-family traditional vernacular on Walnut Street. Sheridan Street façade is treated as secondary with subsidiary gable roof forms, smaller and fewer window openings. Windows have vertical proportion and facades have mostly symmetrical composition. Porch is provided on front façade though without the front entry.

Standard (2). Relationship to Street – Building placement is typical of the residential properties in the context – slightly setback to allow for stoops, porches, landscaping and privacy. The building sits on a corner with the principal orientation to Walnut Street with Sheridan as the side elevation – the façade designs appropriately indicate this hierarchy of orientation. In this case, the building provides a multi-story porch and landscaping at the street. However, entrance is a side-entry and mid-block which is atypical. The side elevation design is consistent with other corner lot side elevation treatment in terms of size and placement of fenestration (see for example Walnut and North street corner).

Standard (3). Open Space – Open spaces provided with porches.

Standard (4). Light and Air – All units provided with ample windows.

Standard (5). Parking – Parking is structured; planting plan now shows landscaping to screen driveway from neighboring property.

Standard (6). Not applicable

MEMORANDUM

To: FILE
From: Shukria Wiar
Subject: Application ID: 2017-099
Date: 7/21/2017

Comments Submitted by: Keith Gautreau/Fire on 7/17/2017

Emergency access is good as the proposed building is on the corner of Walnut and Sheridan.

Comments Submitted by: Keith Gautreau/Fire on 7/17/2017

Water supply in the area is adequate for this size structure.

Comments Submitted by: Keith Gautreau/Fire on 7/17/2017**Premises Identification**

The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.

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

If the building entry faces a different street, both the street name and number should be large enough to read from the street.

Address numbers must be a minimum of 6 inches high.

The number should be in Arabic numerals rather than spelled out (for example, "130" instead of "One Hundred and Thirty").

Color: Addresses should be in a color that contrasts with the background.

Whenever possible, should be illuminated.



Shukria Wiar <shukriaw@portlandmaine.gov>

Fwd: [pbpac] 88 Walnut – opposed to sidewalk waiver, supportive of new curb extension/green infrastructure at the corner

BobBi Keppel <bobbik@zwi.net>

Wed, Jun 28, 2017 at 9:14 PM

To: shukriaw@portlandmaine.gov

This is an email I sent to the bike/ped committee's email list. Please share it with the Planning Board. As you can see, there are compelling reasons not to grant a sidewalk waiver at this particular site; in fact, the city has been lax about sidewalk installation in that block of Sheridan St. And in maintaining the current sidewalks on Walnut.

Barbara Keppel

On Tue, Jun 27, 2017 at 6:19 PM, BobBi Keppel <bobbik@zwi.net> wrote:

Another reason to be sure there's no sidewalk waiver on Sheridan at Walnut: Portland Trails connects along that block of Sheridan. The trail head is on North St. Next to the community garden, winds around the back of Bayview Heights, goes thru the new condos' driveway (I've forgotten their name), out onto Walnut, jogs across Walnut onto Sheridan and down the block to where it goes both up to Fort Sumner and down toward WA Ave.

As it is now, there are incomplete sidewalks on both sides of Sheridan forcing pedestrians like me to walk part way in the street. That's dangerous because there's a lot of vehicular traffic on that block of Sheridan, parking along both sides in some places, and not really enough clearance for walkers or cyclists.

The solution is not to give up sidewalks but to be sure they are installed and maintained.

Brick sidewalks on Walnut St. Between North and Washington are a disaster. When wet or snowy or icy, walking there is a sure ticket to the ER. Fortunately, the sidewalks are concrete on the other side, and need to stay that way for pedestrian safety. Walk in the street instead? Very dangerous. Lots of traffic gunning up the hill or diving down it. The street is narrow, not giving much clearance for bikes or peds.

Keep the trails open. Put in sidewalks where there are none. Provide walkable surfaces. No waiver there.

Bobbi

Sent from my iPad,

88 Walnut – opposed to sidewalk waiver, supportive of new curb extension/green infrastructure at the corner

Christian MilNeil <c.neal.milneil@gmail.com>

Fri, Jun 23, 2017 at 3:12 PM

To: "Shukria Wiar (shukriaw@portlandmaine.gov)" <shukriaw@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Bruce Hyman <BHYMAN@portlandmaine.gov>, "PBPAC@googlegroups.com" <pbpac@googlegroups.com>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Please share the following as public input re: the site plan application for 88 Walnut Street.

To the Planning Board:

While I support the rest of the application, I must voice my objection to the developers' request for a sidewalk waiver on Sheridan Street.

According to their application, the developers of 88 Walnut Street are planning to spend tens of thousands of dollars on new parking garages and driveways for the private use of 3 households. That design choice is a clear indication that the developers can also afford to contribute a small fraction of that sum to remove the guardrail and build a sidewalk.

Sheridan Street is getting an increasing volume of foot traffic with new development in the area. This is also an important walking route for children walking to the East End School and the Eastern Promenade Park via Jack Path.

In fact, the city should be advocating not only for the developers to fund a sidewalk, but also a new curb extension at the intersection to improve sight lines for automotive traffic at the intersection and enhance the existing crosswalks across Walnut and Sheridan for pedestrians (see attachment).

Judging by the elevation contours on the applicant's plans, this corner would be an ideal location for some green infrastructure to capture runoff from Sheridan Street.

When my young daughter begins attending the East End School in a few years, I hope that the planning board's prudent actions today will give her a safer route to walk to and from school.

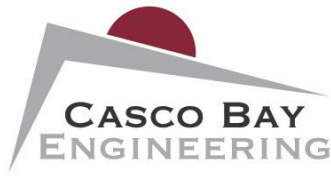
Thank you for your consideration on this matter.

Yours,
Christian MilNeil
45 Smith Street

[double u double u double u dot christianmilneil dot com](mailto:doubleudoubleu@christianmilneil.com)



88Walnut.png
754K

**SECTION 1:**

June 20, 2017

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

RE: 88 Walnut Street – Proposed Building
Project Narrative

Dear Planning:

We are providing this project narrative for our Level III and site plan submission. This project proposes the creation of a 1,950 square foot building along with the removal of an existing garage. The building will be a two-story structure, with a three car garage on the ground floor and three (3) single family apartments above.

The existing building was originally developed in 1927 for residential living with parking in the adjacent one-story garage.

Parking

In lieu of the demolished garage, a new driveway will be built north of the existing retaining wall leading directly to the new building. The new building will include a three-car garage, which is to be used for parking. The existing driveway south of the retaining wall will remain in place.

Drainage

The existing lot is predominantly vegetated on a significant slope and does not employ any drainage systems to handle the pre-developed stormwater runoff. Included in the site plan is a design for a rain garden that will be used to retain and treat a portion of the proposed stormwater. Stormwater runoff from the north side of the roof and the entirety of the new parking lot will drain towards the rain garden, treating a total of 2,720 square feet of impervious cover. Additionally, the rain gardens drainage area will also treat 964 square feet of runoff from landscaped terrain.

Due to the steep slope on the southeast side of the property, the rain garden will not treat the runoff produced from the southeast side of the new building's roof. Additionally, the impervious area to the west of the retaining wall will remain untreated, leaving approximately 691 square feet of untreated impervious area.

When factoring in the demolition of the existing garage, this project reduces the amount of untreated impervious runoff coming from the property. In its existing state, the area of interest contains 1,931 square feet of impervious cover, all of which leads to untreated runoff. In the proposed plan, the overall impervious area would increase to 3,411 square feet, but only 691 square feet of impervious area would not fall into the rain gardens drainage area. This net decrease in untreated impervious area, combined with the additional 964 square feet of landscaped area being treated by the rain garden will ultimately improve and increase the quality of stormwater leaving the site. Please refer to the watershed plans and the stormwater analysis attached to this submittal for additional information.

Utilities

We are proposing a new 4 inch sewer service from the new building to the proposed sewer line located in Walnut Street. We are also proposing two new water lines from the proposed building to the existing water line in Walnut Street. Both lines will connect through the southwest side of the house, passing under the proposed driveway. Electrical service will be provided by attaching an overhead electric line to an electric meter on the north side of the proposed building. This service will be tied in to Utility Pole 23 on Sheridan Street.

The rain garden will discharge stormwater runoff via infiltration and an emergency 6" PVC pipe overflow and grate system into the existing street storm drain system in Walnut Street. There will be no utility changes to the existing two-story structure located south of the retaining wall.

Lighting

The proposed building will feature two building mounted exterior lights, one each on the south and west faces. On the south side, the wall light will be placed adjacent to the front door. The light on the west side will serve a similar function.

Landscaping

Existing landscaping begins with a steep slope going east to west, featuring a mostly landscaped terrain that becomes more vegetated near the southern property line. The slope levels out at the existing driveway and garage before reaching an approximate three-foot drop at the retaining wall. Everything past the retaining wall will not be disturbed, and the landscaping will remain unchanged.

New landscaping will be created in all disturbed areas. Trees and bushes shall be planted alongside the north property line, and a riprap slope shall be installed on the southwest corner of the disturbed area. See the attached landscaping plan for further details.

Waivers

We are requesting two separate waivers for the proposed project as follows:

1. The first is for the driveway distance requirements. We have an existing curb cut opening that is shared with the existing building on Walnut street. Due to the steep grading and proximity to Sheridan street, it would be nearly impossible for us to provide a curb cut between the existing curb cut and Sheridan street. We are requesting permission to utilize the existing curb cut that accesses the existing garage that is scheduled to be removed as part of this project.
2. The second is for the sidewalk requirement on Sheridan street. There is an existing sidewalk on the northeast side of Sheridan street for pedestrian access. We are proposing to have the new building directly adjacent to the existing street and guardrail. With this proposed design we will not be able to construct a sidewalk with an esplanade. A proposed sidewalk would also be constructed to the limits of the new building foundation. Walking south on Sheridan street past the proposed building is a very steep slope for approximately 200 feet that would be nearly impossible to extend a proposed sidewalk from the front of the proposed building. For these reasons we are requesting a waiver.

Planning Board Approval

Please see the attached site plan application which includes the following:

- Mail notification of site plan application to all abutters.
- Soil erosion and sedimentation plan
- Stormwater Management Plan
- Existing and Proposed site plans showing property line, setbacks, building additions, parking, grading, utilities, drainage, wetlands, lighting, landscaping and any other exterior features.
- Parking space allocation based on City requirements.

We look forward to working with you through the planning board approval phase. Please contact me if you have any questions or need additional information.

Sincerely,

Eric Dube, P.E.
Casco Bay Engineering



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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

Planning Division

Fourth Floor, City Hall
389 Congress Street
p.m. (207) 874-8719

planning@portlandmaine.gov

Office Hours

Monday thru Friday
8:00 a.m. – 4:30

PROJECT NAME:J.P. Sheridan LLC Apartment**PROPOSED DEVELOPMENT ADDRESS:**88 Walnut St**PROJECT DESCRIPTION:**New three family apartment building with attached three car garage**CHART/BLOCK/LOT:** 12, P. 3**PRELIMINARY PLAN** _____ (date)**FINAL PLAN** _____ (date)**CONTACT INFORMATION:**

Applicant – must be owner, Lessee or Buyer Name: <u>Jake Edwards</u> Business Name, if applicable: <u>JP Sheridan, LLC</u> Address: <u>PO Box 715</u> City/State: <u>So. Freeport, ME</u> Zip Code: <u>04078</u>	Applicant Contact Information Work #: Home #: Cell #: <u>207.415.3037</u> Fax#: e-mail: <u>jedward3@gmail.com</u>
Owner – (if different from Applicant) Name: Address: City/State: Zip Code:	Owner Contact Information Work #: Home #: Cell #: Fax#: e-mail:
Agent/ Representative Name: <u>Eric Dube</u> <u>Casco Bay Engineering</u> Address: <u>424 Fore St</u> City/State: <u>Portland, ME</u> Zip Code: <u>04101</u>	Agent/Representative Contact information Work #: <u>207-842-2800</u> Home #: Cell #: <u>207-712-7022</u> Fax#: <u>842-2828</u> e-mail: <u>ericd@cascobayengineering.com</u>
Billing Information Name: <u>Jake Edwards</u> Address: <u>JP Sheridan, LLC</u> <u>PO Box 715</u> City/State: Zip Code: <u>So. Freeport, ME 04078</u>	Billing Information Work #: Home #: Cell #: <u>207.415.3037</u> Fax#: e-mail: <u>jedward3@gmail.com</u>

Engineer ERIC DUBE Name: CASCO BAY ENGINEERING Address: 424 FORE ST City/State: PORTLAND ME Zip Code: 04101	Engineer Contact Information Work #: 842.2800 Home #: _____ Cell #: 712.7022 Fax#: 842.2828 e-mail: ericd@cascobayengineering.com
Surveyor JOHN SCHWANDA Name: OWEN HASKELL INC. Address: 390 US ROUTE ONE City/State: FALMOUTH ME Zip Code: 04105	Surveyor Contact Information Home #: _____ Work #: 774.0424 X30 Cell #: _____ Fax#: 774.0511 e-mail: jschwanda@owenhaskell.com
Architect ANNE CALLENDER Name: WHIPPLE · CALLENDER ARCHITECTS Address: PO BOX 1276 City/State: PORTLAND ME Zip Code: 04104	Architect Contact Information Work #: 207.775.2696 X105 Home #: _____ Cell #: _____ Fax#: 775.3631 e-mail: anne@whipplecallender.com
Attorney Name: Address: City/State: Zip Code:	Attorney Contact Information Work #: Home #: Cell #: Fax#:
Designated person/person(s) for uploading to e-Plan: Name: ANNE CALLENDER e-mail: anne@whipplecallender.com Name: ERIC DUBE e-mail: ericd@cascobayengineering.com Name: JAKE EDWARDS e-mail: jedward3@gmail.com	

APPLICATION FEES:

Level III Development (check applicable reviews) ☒ Less than 50,000 sq. ft. (\$750.00) ☐ 50,000 - 100,000 sq. ft. (\$1,000) ☐ 100,000 - 200,000 sq. ft. (\$2,000) ☐ 200,000 - 300,000 sq. ft. (\$3,000) ☐ over 300,000 sq. ft. (\$5,000) ☐ Parking lots over 11 spaces (\$1,000) ☐ After-the-fact Review (\$1,000.00 plus applicable application fee) Plan Amendments (check applicable reviews) ☐ Planning Staff Review (\$250) ☐ Planning Board Review (\$500) The City invoices separately for the following: • Notices (\$.75 each) • Legal Ad (% of total Ad) • Planning Review (\$50.00 hour) • Legal Review (\$75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.	Other Reviews (check applicable reviews) ☐ Traffic Movement (\$1,500) ☐ Stormwater Quality (\$250) ☐ Subdivisions (\$500 + \$25/lot) ☐ # of Lots x \$25/lot = ☐ Site Location (\$3,500, except for residential projects which shall be \$200/lot) ☐ # of Lots x \$200/lot = ☐ Other ☐ Change of Use ☐ Flood Plain ☐ Shoreland ☐ Design Review ☐ Housing Replacement ☐ Historic Preservation
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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-mailed 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 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: 4/26/17
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PROJECT DATA

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

Total Area of Site	5759 sq. ft.
Proposed Total Disturbed Area of the Site	4594 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)	1886 sq. ft.
Impervious Area (Total Proposed)	3182 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	621 sq. ft.
Building Footprint (Total Proposed)	1932 sq. ft.
Building Floor Area (Total Existing)	621 sq. ft.
Building Floor Area (Total Proposed)	5506 sq. ft.
Zoning	
Existing	B2b
Proposed, if applicable	NO CHANGE
Land Use	
Existing	RESIDENTIAL
Proposed	RESIDENTIAL
Residential, If applicable	
# of Residential Units (Total Existing)	0
# of Residential Units (Total Proposed)	3
# of Lots (Total Proposed)	1
# of Affordable Housing Units (Total Proposed)	0
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	0
# of One-Bedroom Units (Total Proposed)	0
# of Two-Bedroom Units (Total Proposed)	2
# of Three-Bedroom Units (Total Proposed)	1
Parking Spaces	
# of Parking Spaces (Total Existing)	3
# of Parking Spaces (Total Proposed)	3
# of Handicapped Spaces (Total Proposed)	0
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	N/A
# of Bicycle Spaces (Total Proposed)	N/A GARAGE
Estimated Cost of Project	\$1,000,000

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

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)
✓		1	* Completed Application form
		1	* Application fees
✓		1	* Written description of project
✓		1	* Evidence of right, title and interest
N/A		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
N/A		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
N/A		1	Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual
		1	Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

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

- Continued on next page -

N/A		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;
PL		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
N/A		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;
N/A		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
N/A		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
N/A		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;
N/A		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
N/A ✓		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 CityCode. (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: 5/2/17

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

Site Address: 88 Walnut St

Chart Block Lot Number: 12. P, 3

Proposed Use: Multi-Family Residential

Previous Use: _____

Existing Sanitary Flows: _____ GPD

Existing Process Flows: _____ GPD

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

Sewage lateral to discharge to 12"
sewer line located on Walnut St

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: Helen Donaldson Phone: 207-874-8723

Owner/Developer Name: Jake Edwards, JP Sheridan, LLC

Owner/Developer Address: PO Box 715, South Freeport, ME 04078

Phone: 207-415-3037 Fax: _____ E-mail: jedward3@gmail.com

Engineering Consultant Name: Eric Dube, Casco Bay Engineering

Engineering Consultant Address: 424 Fore St, Portland ME 04101

Phone: 207-712-7022 Fax: 842-2828 E-mail: ericd@casco bay engineering.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: 630 GPD

Peaking Factor/ Peak Times: 6:00 - 8:00 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) Ch. 241 STATE OF MAINE SUBSURFACE WASTEWATER DISPOSAL RULES

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time.

Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____

GPD

Do you currently hold Federal or State discharge permits? _____

Yes _____ No _____

Is the process wastewater termed categorical under CFR 40? _____

Yes _____ No _____

OSHA Standard Industrial Code (SIC): _____

(<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times: _____

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

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

CALCULATION For (3)

Per Section 4(E)(2) - design flow = 90 gal/bedroom for multiple bedroom units.

- Each unit has multiple bedrooms; grand total of 7

$$7 \text{ bedrooms} \times \frac{90 \text{ gal}}{\text{bedroom}} = 630 \text{ GPD}$$



WHIPPLE-CALLENDER ARCHITECTS

SECTION 3:

88 WALNUT STREET LEVEL III SITE PLAN AND CODE REVIEW SUMMARY:

Includes reference to IBC 2015, NFPA 2015 & Portland zoning regulations.

OWNER: Jake Edwards
J.P. Sheridan LLC
PO Box 715
South Freeport, ME 04078
207-415-3037

ARCHITECT: Anne Callender
Whipple | Callender Architects
PO Box 1276
Portland, ME 04104
207-775-2696 x 105

BUILDING USE: NFPA - New Apartment Building
IBC - R-2
Three story building
Three apartment units

SQUARE FOOTAGE: TOTAL BUILDING: 5,506 SF + 380 SF PORCHES
1ST FLOOR: 1932 SF
2ND FLOOR: 1932 SF + 274 SF PORCHES
3RD FLOOR: 1642 SF + 106 SF PORCH

CONSTRUCTION TYPES: NFPA type V 000
IBC V B

PROJECT DESCRIPTION:

The project is a new three-story building with ground level parking garages for three cars. One housing unit is a townhouse with an entrance adjacent to the garage bays. The other two units are flats above the garage spaces.

Site is located on the corner of Walnut Street and Sheridan Street. Site is 5,949 square feet in a B2b [Community Business] zone.

The main building façade faces Walnut Street as it is the primary residential street for this lot in the neighborhood. The site is a steep slope from Sheridan Street continuing down to Washington Ave. There is an existing three-car garage on the site that will be removed and the new building will be situated so that the garage bays are built into the hill and will be below the Sheridan Street grade. This allows the greatest distance between the new three family home and an existing single family home at 94 Walnut Street as well as use of the existing driveway and curb cut. The building orientation makes the most of the city views and daylight orientation. It also creates a street presence along Sheridan Street

The building is designed to be in scale with the existing neighborhood single-family homes and uses traditional Portland home detailing. There are 4 single-family homes directly across the street, a single family home to the west on Walnut Street and a historic water district pump house to the east across Sheridan Street. The building is designed to be a story and a half structure if viewed from Sheridan Street. It will have a double decker front porch facing Walnut Street and gable roofs with gabled dormers along Sheridan Street and the driveway side of the building. Siding will be clapboards with traditional trim details and soffited roof overhangs which is consistent with the neighborhood.

RIGHT, TITLE AND INTEREST:

The lot of 88 - 96 Walnut Street was purchased by J.P. Sheridan LLC in the summer of 2016. They have full title and interest in the property.

STATE OR FEDERAL PERMITS:

No State or Federal permits are required for this project.

PORTLAND ZONING – 2009 –Zone B2b:

Sec. 14-182. Permitted uses.

(a) Residential:

1. Attached single-family and two-family dwelling;
2. **Multi-family dwellings;**
3. Handicapped family units;
4. Combined living/working spaces including, but not limited to, artist residences with studio space

Sec. 14-185. Dimensional requirements.

No minimum lot size

Setback requirements

Street frontage - 20' min. **Proposed Building Property has 57' on Walnut**

Front setback - none, **The front porch is setback 2' at one corner.**

Side setback - none for main, 5' for accessory. **Side setback is 23'-9" from property line of the abutter at 94 Walnut.**

Side yard on side street - none. **The building is set back 3' on the Sheridan Street side.**

Rear yard - 10', 5' for accessory, **We are in excess of 10'. Proposed building is placed @16' to 20' from angled rear yard/side yard property line.**

Front yard – 10' max. **We are less than 10'. The front porch is setback 2' at one corner.**

Structure setbacks

Portions of a structure above 35 feet shall be no closer than 5 feet from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone. **N/A**

Height maximum - 45'. **We do not exceed 45'. The proposed building is 38' to the ridge from the driveway level.**

Maximum impervious surface ratio - for residential uses: none. **Proposed building impervious surface ratio is 55%**

Minimum lot area per dwelling unit – On-peninsula locations: 435 sq ft. **We exceed 435 sq. ft. of lot area per dwelling unit. Proposed building of 3 units requires 1215 sq. ft. lot. Actual lot is 5,949 sq. ft.**

Sec. 14-332. Uses requiring off-street parking.

3. For residential development in the B-2, B-2b, B-2c zones:
 - a. One (1) parking space per dwelling unit. **We have one garage for each unit.**

SITE BURDENS:

There are no easements, covenants, right-of-ways, or any other burdens or restrictions to this site.

CONSTRUCTION MANAGEMENT PLAN:

Owner to hire Papi and Romano Builders to construct the project.

TRAFFIC STUDY:

N/A.

SIGNIFICANT NATURAL FEATURES:

There are not significant natural features or habitats located on this site.

SOLID WASTE:

Solid waste will consist of 3 - 15 gallon bags per week for residential trash pick-up.

FIRE PROTECTION FEATURES:

- Sprinkler System installed to NFPA 13R standards
- 5/8" Type X ceiling/floor separation between garage and habitable spaces (**IBC 460**)
- 1 hour wall separation between garage and main stair to apartments (**IBC 713.4**)
- 1 hour wall separation between apartments and stair (**IBC 713.4**)
- 60 minute doors on automatic door closer from apartments to stair hall (**NFPA 101 30.2.4.6**)
- 20 minute door between garage and Apt 1 mudroom (**IBC 460**)

HYDRANT LOC: Walnut Street uphill side, opposite side of Sheridan Street intersection

WATER MAINS: Walnut Street has 16" and 20" lines

SITE ACCESS: Access to site, Walnut Street, Sheridan Street and driveway

CODE SUMMARY: NFPA 101 - 2015 - Chapter 30 New Apartment Buildings

- **30.1 General Requirements**
 - 30.1.1.1 - The requirements of this chapter shall apply to new buildings or portions thereof used as apartment occupancies.
 - 30.1.5 - Classification of Hazard of Contents. The contents of residential occupancies shall be classified as ordinary hazard in accordance with 6.2.2.
 - 30.1.7 - Occupant Load. The occupant load, in number of persons for whom means of egress and other provisions are required, shall be determined on the basis of the occupant factors of Table 7.3.1.2 that are characteristics of the use of the space or shall be determined as the maximum probable population of the space under consideration, whichever is greater.
 - Apartment buildings 200 sq.ft. per person (habitable space load 16)
- **30.2 Means of Egress Requirements and Components**

- **30.2.1.2** Means of escape within a dwelling unit shall comply with the provisions of Section 24.2 for one and two family dwellings.
 - **24.2.2 Number and Types of Means of Escape.**
 - In dwellings or dwelling units of two rooms or more, every sleeping room and every living area shall have not less than one primary means of escape and one secondary means of escape.
 - A secondary means of escape shall not be required where one of the following conditions is met:
 1. The bedroom or living area has a door leading directly to the outside of the building at or to the finished ground level.
 2. The dwelling unit is protected throughout by an approved automatic sprinkler system in accordance with 24.3.5
- **30.2.2.1.2** - In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 30.3.5, exit enclosures shall have a minimum 1-hour fire resistance rating, and doors shall have a minimum 1-hour fire protection rating. **OK. See fire protection features listed above.**
- **30.2.2.3.1** Stairs complying with 7.2.2 shall be permitted.
 - **7.2.2.2.1.2 Minimum New Stair Width.**
 - A. Where the total occupant load of all stories served by the stair is fewer than 50, the minimum width clear of all obstructions, except projections not more than 4-1/2" at or below the handrail height on each side, shall be 36".
 - a. max. ht. of risers 7 in.; min. ht. of riser 4 in.
 - b. min. tread depth 11 in.
 - c. min. headroom 6'-8"
 - d. max. ht. between landings 12 ft.
- **31.2.4 Number of Exits**
- **30.2.4.6** - A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided that all of the following conditions are met:
 1. There are four or fewer dwelling units per story. **We only have 3 stories.**
 2. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 30.3.5. **Yes, sprinkler system installed to NFPA 13R standards.**
 3. The exit stairway does not serve more than one-half story below the level of exit discharge. **Exit stairways do not serve below level of exit discharge.**
 4. The travel distance from the entrance door of any dwelling unit to an exit does not exceed 35 ft. **Entrance door of dwelling units open directly into protected exit stair or exterior.**
 5. The exit stairway is completely enclosed or separated from the rest of the building by barriers having a minimum 1-hour fire protection rating. **Exit stairway is protected by 1-hour rated walls, ceilings, and doors.**
 6. All openings between the exit stairway enclosure and the building are protected with self-closing door assemblies having a minimum 1-hour fire protection rating. **Exit stairway doors are self-closing and 1-hour rated.**
 7. All corridors serving as access to exits have a minimum 1-hour fire resistance rating. **Not applicable, as entrance door of dwelling units open directly into protected exit stair or exterior.**

8. Horizontal and vertical separation having a minimum ½-hour fire resistance rating is provided between dwelling units. **Dwelling units are separated by a minimum ½ hour fire resistance rating.**
- 30.2.6.2 - Travel distance within a dwelling unit (apartment) to a corridor door shall not exceed 125 ft in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5. **We do not exceed 125 ft travel distance and are fully sprinkled.**
 - 30.2.9 - Emergency lighting. Emergency lighting in accordance with Section 7.9 shall be provided in all buildings four or more stories in height or with more than 12 dwelling units, unless every dwelling unit has a direct exit to the outside of the building at the finished ground level. **Emergency lighting not required because we are less than 4 stories and less than 12 units.**
 - 30.2.10 - Marking of Means of Egress. Means of egress shall have signs in accordance with Section 7.1 in all buildings requiring more than one exit. **Not applicable; only one exit for each dwelling unit.**
 - 30.3.2.1 - Hazardous Areas. Any hazardous area shall be protected in accordance with Section 8.7. **According to the hazardous areas listed in Table 30.3.2.1.1, we do not have to protect heater rooms, as the fuel-fired heaters are in dwelling units and each only serve one dwelling unit. Garages will be one hour protected and sprinkled.**
 - 30.3.4.1 – Apartment buildings four or more stories in height or with more than 11 dwelling units, other than those meeting the requirements of 30.3.4.1.2, shall be provided with a fire alarm system in accordance with Section 9.6, except as modified by 30.3.4.2 through 30.3.4.5. **We do not have four or more stories and do not exceed 11 dwelling units, so a fire alarm system is not required.**
 - 30.3.4.5 - Smoke Alarms. Smoke alarms shall be installed in accordance with 9.6.2.10 in every sleeping area, outside every sleeping area, in the immediate vicinity of the bedrooms, and on all levels of the dwelling unit, including basements. **Smoke Detectors in every sleeping room, outside every sleeping room, and on all levels.**
 - 30.3.4.6 – Carbon Monoxide Alarms and Carbon Monoxide Detection Systems.
 - 30.3.4.6.1 - Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.12 and 30.3.4.6 shall be provided in new apartment buildings where either of the following conditions exists:
 1. Dwelling units with communicating attached garages, unless otherwise exempted by 30.3.4.6.3
 2. Dwelling units containing a permanently installed fuel-burning appliance or fuel-burning fireplace.
 - 30.3.4.6.2 - Where required by 30.3.4.6.1, carbon monoxide alarms or carbon monoxide detectors shall be installed in the following locations:
 1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the sleeping rooms.

2. On every occupiable level of a dwelling unit.

30.3.4.6.3 - Carbon monoxide alarms and carbon monoxide detectors as specified in 30.3.4.6.1 shall not be required in the following locations:

1. In garages

Carbon Monoxide Detectors in every sleeping room, outside every sleeping room, and on all levels, excluding garages.

- 30.3.5.13 - Portable Fire extinguishers in accordance with Section 9.9 shall be provided in hazardous areas addressed by 30.3.2.1, unless the building is protected throughout with an approved, supervised automatic sprinkler system in accordance with 30.3.5.2.
Portable fire extinguishers are not required due to sprinkler system.

IBC- 2015

- **Section 310 Residential Group R**
 - 310.4 Residential Group R-2 occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including: apartment houses
- **Section 312 Utility and Misc. Group U**
 - Private Garages
- **Section 406 Motor-Vehicle-Related Occupancies**
 - 406.3.1 Each Private garage shall not be greater than 1,000 sq.f.t in area. Multiple private garages are permitted in a building where each private garage is separated from the other private garages by 1-hour fire barriers in accordance with Section 707 or horizontal assemblies in accordance with section 711, or both.
 - 406.3.4 Separation of private garages from dwelling units shall comply with 406.3.4.1 - 406.3.4.3
 - Garages shall be separated from all habitable rooms by not less than a 5/8" Type X gypsum board.
 - Door openings between a private garage and the dwelling unit shall have a fire protection rating of not less than 20 minutes. Doors shall be self-closing and self-latching.
 - 406.3.6 Automatic garage door openers shall be listed in accordance with UL325.
- **Section 420 Groups I-1, R-1, R-2, R-3 and R-4**
 - 420.1 General - comply to this section
 - 420.2 Separation walls. Walls separating dwelling units in the same building... shall be constructed as fire partitions in accordance with Section 708.
 - 420.3 Horizontal Separation. Floor assemblies separating dwelling units in the same building.... shall be constructed as horizontal assemblies in accordance with Section 711.
 - 420.5 Automatic sprinkler systems. Group R occupancies shall be equipped throughout with an automatic sprinkler system in accordance with section 903.2.8
 - 420.6 Fire alarm systems and smoke alarms. Fire alarm systems and smoke alarm systems shall be provided in Group R-2 occupancies in accordance with Sections 907.2.9 respectively. Single or multiple-station smoke alarms shall be provided in Groups R-2 in accordance with Section 907.2.11
 - 907.2.9 R-2 **building is not required to have a manual fire alarm system per criteria listed**
 - 907.2.11.2 single or multiple station smoke alarms shall be installed and maintained at all the following locations:
 - On the ceiling or wall outside of each sleeping area

- In each bedroom
- In each story within a dwelling unit
- **Section 501 General Building Heights and Areas**
 - Table 504.3 Allowable Height in feet above grade: Type VB/S13R - 60 feet
 - Table 504.4 Allowable number of stories above grade plane: Type VB/S13R - 3
 - Table 506.2 Allowable area factor in square feet. Type VB/S13R 7,000 s.f.
 - 509.4.2 Protection incidental uses not required to have fire barrier with automatic sprinkler system.
- **Section 601 Types of Construction**
 - Table 601 Fire Resistance Rating Type VB, no fire-resistance rating required for building elements

Section 4:

SHORT FORM QUITCLAIM DEED

NICHOLAS A. MANCINI, JR., of North Conway, New Hampshire and **ANTHONY C. MANCINI**, of Falmouth, Maine (the "Grantors"), FOR CONSIDERATION PAID, grant to **JP SHERIDAN, LLC**, a Maine limited liability company, with a mailing address of PO Box 715, South Freeport, Maine 04078 ("Grantee"), certain real property, together with any improvements thereon, located in the City of Portland, Cumberland County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

Meaning and intending to describe the same property conveyed to the Grantors by virtue of a Trustee's Deed of Distribution dated February 26, 2015 granted by Anthony C. Mancini and Steven D. Scott, Co-Trustees of the Mary A. Mancini Marital Trust u/a dated October 4, 1979, and recorded in the Cumberland County Registry of Deeds in Book 32237, Page 156.

WITNESS our hands and seals, as of this 14th day of September, 2016.

WITNESSETH:

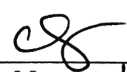

 Print Name: Kimberly Gilpatrick 
 Nicholas A. Mancini, Jr.

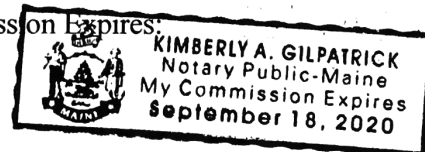
State of Maine
 County of Cumberland ss.

September 14, 2016

PERSONALLY APPEARED the above-named Nicholas A. Mancini, Jr., and acknowledged the foregoing instrument to be his free act and deed.

Before me,


 Print Name: Kimberly Gilpatrick
 Notary Public
 Notary Commission Expires:



MAINE REAL ESTATE TAX PAID

WITNESSETH:

Kimberly A. Gilpatrick
Print Name:

Anthony C. Mancini
Anthony C. Mancini

State of Maine

County of Cumberland ss.

September 13, 2016

PERSONALLY APPEARED the above-named Anthony C. Mancini, and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Kimberly A. Gilpatrick
Print Name:
Notary Public/Attorney at Law
Notary Commission Expires:

SEAL

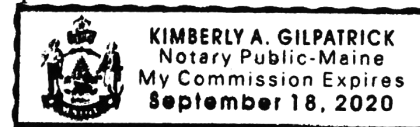


EXHIBIT A

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

Beginning at a point made by the intersection of the southwesterly sideline of Sheridan Street with the southeasterly sideline of Walnut Street, thence southeasterly along the southwesterly sideline of Sheridan Street one hundred three and ninety-four hundredths (103.94) feet, more or less, to land now or formerly of T. Shanahan; thence southwesterly by the northwesterly sideline of the said Shanahan land one hundred twenty-four and twenty-five hundredths (124.25) feet to a point; thence northerly by a line seventy-one and seventy-two hundredths (71.72) feet more or less to a point in the southeasterly sideline of Walnut Street; thence by said Walnut Street northeasterly one hundred fifteen (115) feet to the point of beginning and containing about ten thousand four hundred four (10,404) square feet, more or less.

Received
Recorded Register of Deeds
Sep 15, 2016 01:34:18P
Cumberland County
Nancy A. Lane

THIS IS NOT A BOUNDARY SURVEY

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MORTGAGE INSPECTION OF: DEED BOOK 32237 PAGE 156 COUNTY Cumberland
PLAN BOOK --- PAGE --- LOT ---

ADDRESS: 94 Walnut Street, Portland, Maine

Job Number: 911-64

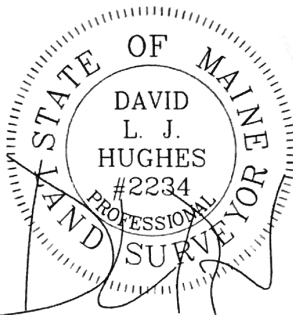
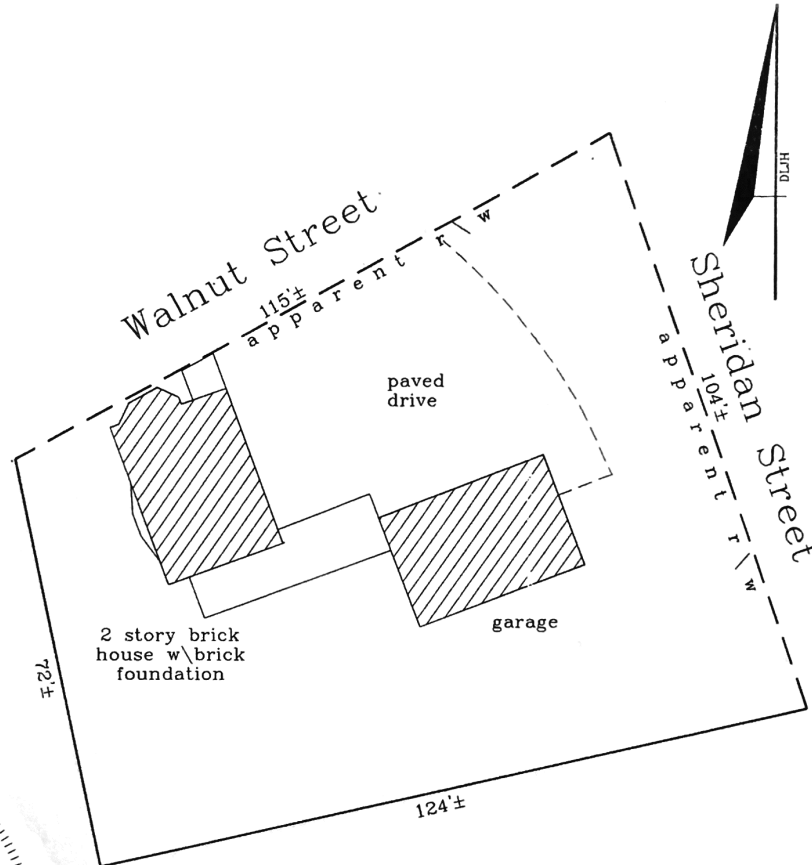
Inspection Date: 09-12-16

Scale: 1" = 30'

Client File #: 22183.7

Buyers: JP Sheridan, LLC

Sellers: Anthony C. and Nicholas A. Mancini, Jr.



NOTE: Lines of occupation are shown. A boundary survey may yield different results.

I HEREBY CERTIFY TO: Jensen, Baird, Gardner, & Henry, JP Sheridan LLC,
and Chicago Title Insurance Company.

Monuments found did not conflict with the deed description.

The dwelling setbacks do not violate town zoning requirements.

As delineated on the Federal Emergency Management Agency Community Panel 230051-0014B:

The structure does not fall within the special flood hazard zone.

The land does not fall within the special flood hazard zone.

A wetlands study has not been performed.

APPARENT EASEMENTS AND RIGHTS OF WAY ARE SHOWN. OTHER ENCUMBRANCES, RECORDED OR NOT, MAY EXIST. THIS SKETCH WILL NOT REVEAL ABUTTING DEED CONFLICTS, IF ANY.

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Livingston-Hughes

Professional Land Surveyors

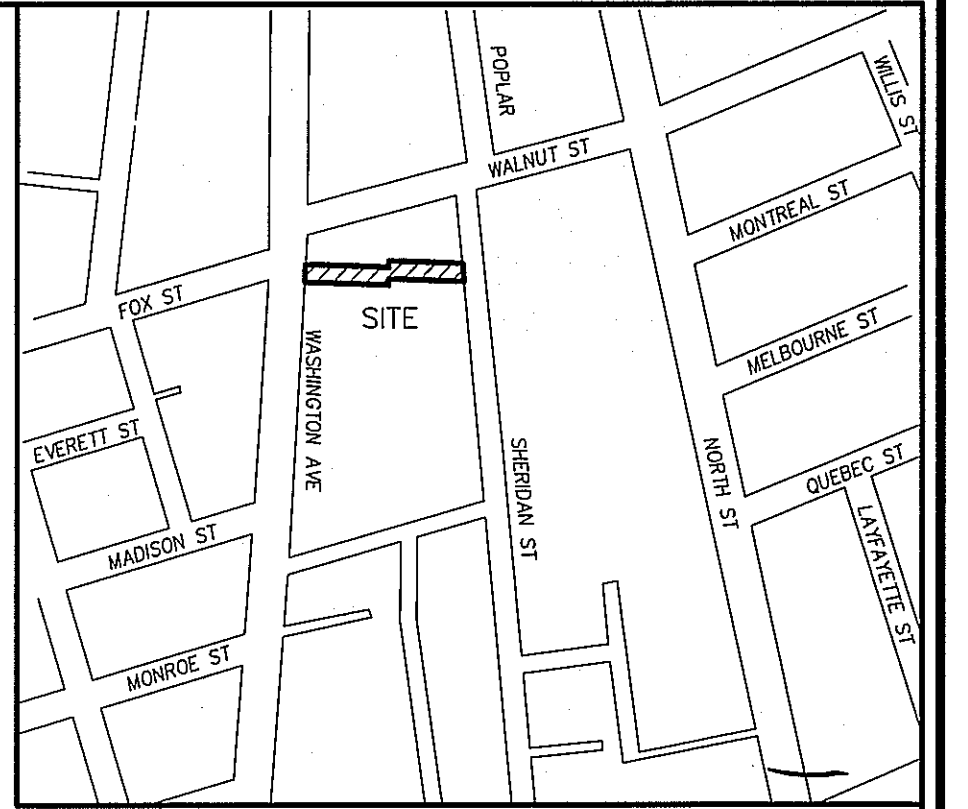
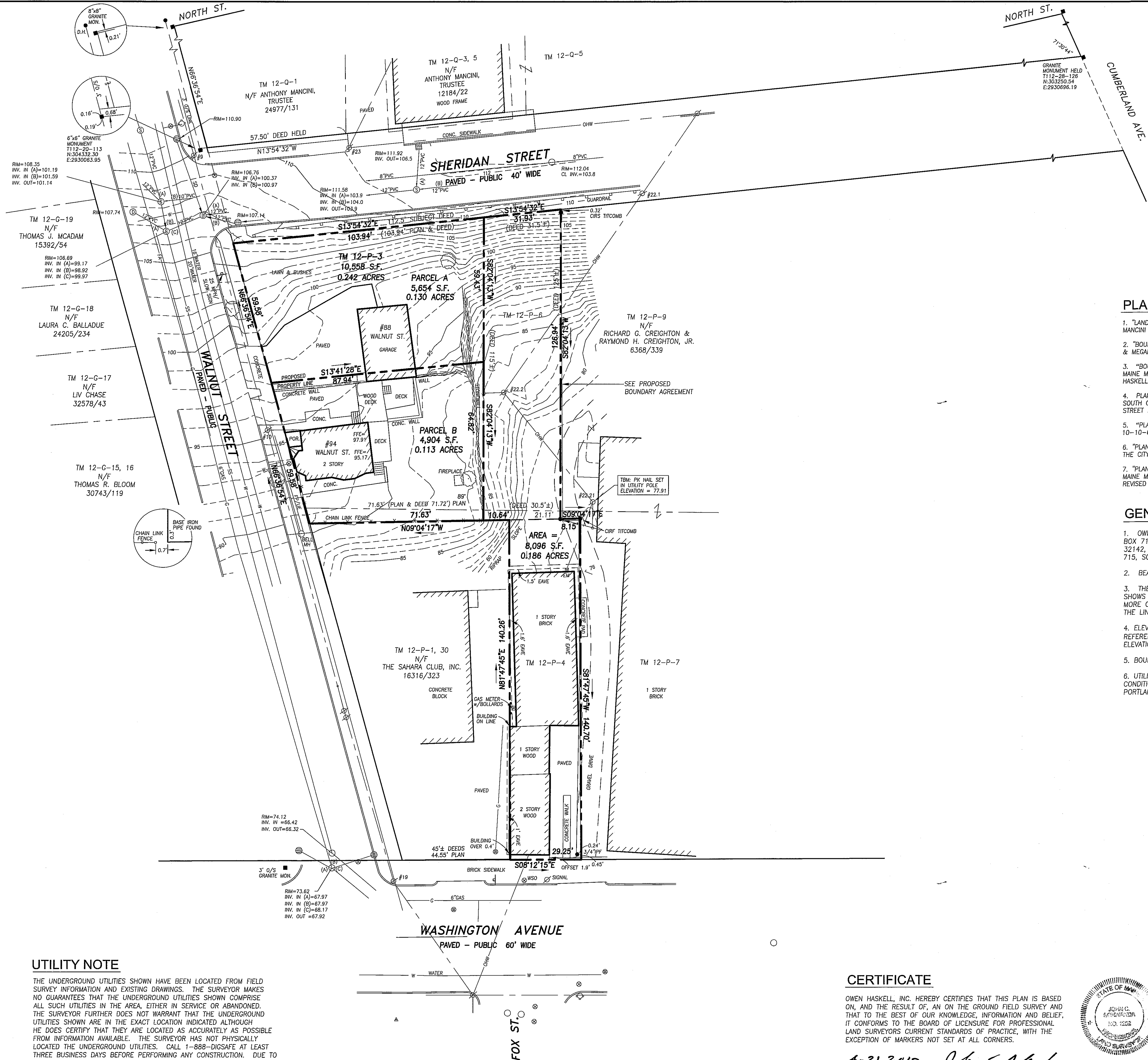
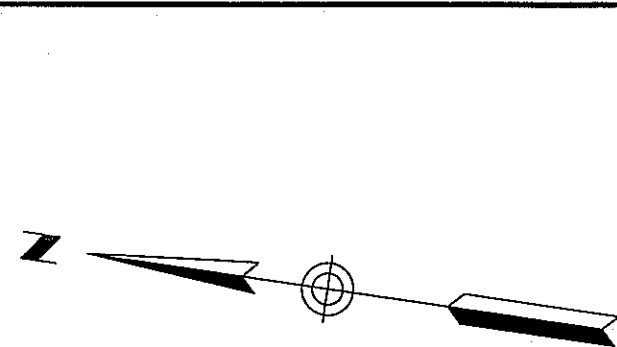
88 Guinea Road

Kennebunkport, Maine 04046

207-967-9761 phone 207-967-4831 fax

www.livingstonhughes.com

THIS SKETCH IS FOR MORTGAGE PURPOSES ONLY



LOCATION MAP
N.T.S.

Att. E

PLAN REFERENCES

- "LAND TITLE SURVEY ON SHERIDAN STREET, PORTLAND, MAINE MADE FOR ANTHONY MANCINI NOV. 2, 1995 OWEN HASKELL, INC."
- "BOUNDARY SURVEY AT 110 SHERIDAN STREET, PORTLAND, MAINE MADE FOR THOMAS & MEGAN HAMBRICK" FEBRUARY 10, 2015 REV. 1 07/01/15 BY OWEN HASKELL, INC.
- "BOUNDARY & TOPOGRAPHIC SURVEY AT 134 WASHINGTON AVENUE, PORTLAND, MAINE MADE FOR AVESTA HOUSING DEVELOPMENT CORP. FEB. 13, 2014 OWEN HASKELL, INC. JOB NO. 2014-008P" REVISED 05-12-14
- PLAN OF LOTS BETWEEN WASHINGTON STREET (AVENUE) AND NORTH STREET, SOUTH OF MECHANIC (NOW WALNUT) STREET AND INCLUDING POPLAR (NOW SHERIDAN) STREET RECORDED JULY 18, 1809 IN DEED BOOK 51, PAGE 297.
- "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR UNIVERSAL WATKINS 10-10-69 H.I. & E.C. JORDAN - SURVEYORS"
- "PLAN AND PROFILE OF WASHINGTON AVENUE AND FOX ST. PORTLAND, MAINE MADE FOR THE CITY OF PORTLAND" BY OWEN HASKELL, INC. DATED JULY 2000.
- "PLAN OF ALTA/NSPS LAND TITLE SURVEY, 1211 WASHINGTON AVENUE, PORTLAND, MAINE MADE FOR COTTON STREET HOLDINGS, LLC 08/08/2016 TITCOMB ASSOCIATES" REVISED 09/14/16.

GENERAL NOTES

- OWNER OF RECORD: TAX MAP 12 BLOCK P LOT 4 - FOX STREET, LLC, P.O. BOX 715, SOUTH FREEPORT, ME, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 32142, PAGE 229; TAX MAP 12 BLOCK P LOT 6 - JP SHERIDAN, LLC, P.O. BOX 715, SOUTH FREEPORT, ME, BOOK 32142, PAGE 232
- BEARINGS ARE MAGNETIC 1954 PER PLAN REFERENCE 1.
- THE LINES OF LOT 4 ARE TAKEN FROM PLAN REFERENCE 5. THAT PLAN SHOWS THE LOT WIDTH AS 29.25 FEET WHILE THE OLD DEEDS CALL FOR 26 FEET, MORE OR LESS. A BOUNDARY AGREEMENT IS RECOMMENDED WITH CREIGHTON FOR THE LINE FROM WASHINGTON AVENUE TO SHERIDAN STREET.
- ELEVATIONS ARE BASED ON NOVD 1929 PER BENCHMARK SHOWN ON PLAN REFERENCE 6, PK IN POLE #11 CORNER OF ANDERSON AND EVERETT STREET ELEVATION 12.42 CITY LEVEL BOOK 737 PAGE 77.
- BOUNDARY AGREEMENT RECOMMENDED WITH THE SAHARA CLUB, INC.
- UTILITY INFORMATION SHOWN IN WALNUT STREET TAKEN FROM EXISTING CONDITIONS SURVEY PREPARED BY TITCOMB ASSOCIATES FOR THE CITY OF PORTLAND, PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- SIGN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- ELECTRIC OR GAS METER
- STONE WALL
- CURB
- OVERHEAD WIRES
- WATER LINE
- GAS LINE
- TAX MAP
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK AND PAGE

UTILITY NOTE

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

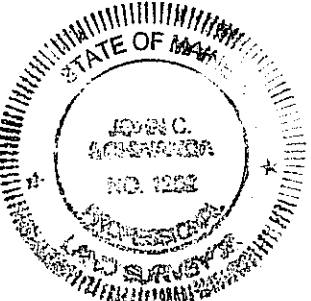
WASHINGTON AVENUE

PAVED - PUBLIC 60' WIDE

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

DATE 4-21-2017
JOHN C. SCHWANDA, PLS NO. 1252



REV. 4	04/21/17	DIVIDE LOT 12-P-3
REV. 3	11/14/16	ADD IRONS ALONG CREIGHTON, PLAN REF. 7
REV. 2	10/14/16	ADD LOT TM 12-P-3
REV. 1	07/25/16	ADDED TOPOGRAPHY
BOUNDARY SURVEY ON WASHINGTON AVENUE & SHERIDAN STREET PORTLAND, MAINE MADE FOR JON EDWARDS 131 WASHINGTON AVENUE, PORTLAND, MAINE OWEN HASKELL, INC. 390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424 PROFESSIONAL LAND SURVEYORS		
Drawn By	JCS	Date
Trace By	JLW	NOV. 12, 2015
Check By	JCS	Scale
Book No.	FILE	1" = 20'
Job No.	2015-155P	Drwg. No.
		1

SECTION 7

STORMWATER MANAGEMENT REPORT

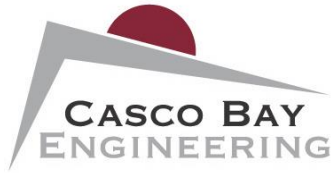
J.P. SHERIDAN, LLC APARTMENTS

PROPOSED MULTI-FAMILY BUILDING
PORTLAND, MAINE

June 20, 2017

PREPARED BY:

CASCO BAY ENGINEERING
424 FORE STREET
PORTLAND, ME 04101
(207) 842-2800



A. Project Background:

The applicant proposes to erect a new building on a portion of a 0.137+/- acre parcel (Chart/Block/Lot 12.P.3). No state or federal permits are required to complete this project. The project involves tearing down an existing garage and driveway and replacing it with a three-family apartment building with a built-in garage.

Access to the site is via Walnut St that connects to Sheridan St and Washington Avenue. The new building is to be served by public water, public sewer, public gas and aboveground electricity/telephone/cable as may be applicable. The majority of the site drainage is to be by sheet/concentrated flow from northernmost face of the property into a proposed rain garden, where the runoff will be discharged into the public storm drain system. A slight remainder of the stormwater shall runoff onto the abutting property towards Washington Avenue (see C101, Pre- and Post-Watershed Plan). It is anticipated that this projects' site infrastructure will be constructed in one construction season.

B. Existing Site Conditions

The existing site is currently developed with an existing garage and driveway. However, even though the site is developed, there is still heavy brush along the south property line. The topography of the site is shown at a one-foot contour interval. The slope of the property is steep, especially along the eastern property line facing Sheridan St, with some slopes as steep as 1.5:1. Drainage from the site flows southwest along the property before running off into abutters territory towards Washington Avenue.

C. Wetlands and Streams

There are no wetlands and streams that will be affected by the proposed use.

D. Soils

All soils on site are rated Hydrologic Group "A", via the USGS Web Soil Survey.

E. Proposed Use

The proposed development will include a 1,950 square foot multi-family building along with a driveway and deck comprising of 1,461 additional square feet. This will be built on a combination of existing lawn area and over existing impervious area to be removed. Just west of the driveway, a rain garden will be constructed to catch the additional runoff caused by the proposed building and driveway. This pond is designed to be able to hold runoff from the 2-, 10- and 25- year storm. A copy of the HydroCAD stormwater report has been included. The rain garden has been designed in accordance with the latest version of the Maine DEP BMP's for Stormwater.

F. Stormwater

We have been authorized to perform a drainage analysis on the site that would meet the standards of the City of Portland, Maine and the Maine Department of Environmental Protection. I have reviewed the drainage characteristics of the site, which includes proposed driveways and buildings. The analysis required post construction stormwater flows to be substantially equal to or less than the existing stormwater flow rates.

We have used the SCS TR-20 (HydroCAD 10.00 stormwater model) method of computing stormwater runoff peak flow rates. This method accounts for soil types, existing land uses, topography, vegetative cover, and proposed land use for the parcel to be developed. The future conditions were analyzed using data for a design frequency of occurrence of 2/10/25 years. The Type III, 24 hour storm distribution rainfall has a 3.1, 4.6 and 5.8 inches/day respectively has been analyzed. All supporting calculations and data are submitted with this report.

The existing and proposed site conditions were evaluated using information taken from the existing condition and proposed design plan of the area. Impervious, lawns/fields, and woods areas for each hydrologic soil condition were measured by HydroCAD in order to calculate a weighted curve number that typifies the drainage condition of the site.

Pre-Condition Modeling

The pre-condition is modeled as it is currently found today. Note that only the area east of the existing retaining wall was taken into account for this calculation. Any non-impervious area was assumed to be considered good quality grass and was assigned the accompanying curve number.

Post-Condition Modeling

The stormwater management system (rain garden) is intended to capture runoff from 3,684 square feet of the proposed site, 2,720 square feet of which will be new impervious area from either the building or the driveway. This system will transport the runoff to the public storm drain system on Walnut St. The rain garden will detain and discharge the inflow without overflowing in the case of the 2-,10-, and 25-year storms. The rain garden will usually revert to dry bottom condition in between rain events.

Impervious area to rain garden: 2,720 SF

Impervious area not treated: 691 SF

Percent Impervious area treated: 79.8%

Stormwater Model Summary

CFS (Cubic Feet per Second = Rate)

Value based on flow leaving site to Analysis Point #1

YEAR	PRE	POST
2	.02	.01
10	.13	.05
25	.24	.09

Calculations for the 2,10 and 25 year Pre- and Post-Drainage are included in the attached stormwater reports.

Evaluation of Results

The runoff peak flow rate of the stormwater leaving the site has been drastically reduced from 0.24 cfs to 0.09 cfs in the 25-year event.

G. Water Quantity and Quality

Quantity: Any increases in runoff from undetained areas are minimized by the proposed system. Any increases due to the development are contained in the rain garden and discharged to the public system.

Quality: Water quality is addressed by directing roof and driveway runoff towards the rain garden, where it will undergo treatment before discharging and leaving the site.

H. Maintenance Plan for Rain Gardens & Best Management Practices

Site Inspection & Maintenance During Construction: Weekly inspections, as well as routine inspections following rainfalls, shall be conducted by the General Contractor of all temporary and permanent erosion control devices until final acceptance of the project (85% grass catch). Necessary repairs shall be made to correct undermining or deterioration.

Final acceptance shall include a site inspection to verify the stability of all disturbed areas and slopes. Until final inspection, all erosion and sedimentation control measures shall immediately be cleaned, and repaired by the General Contractor as required. Disposal of all temporary erosion control devices shall be the responsibility of the General Contractor.

We recommend that the Owner hire a design engineer, or other qualified individual, to provide compliance inspections (during active construction) relative to the Stormwater and Erosion Control Plans. Such inspections should be at least weekly during construction.

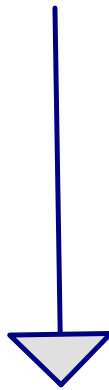
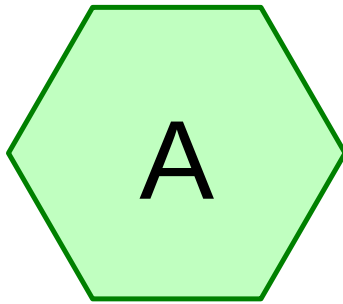
Maintenance Agreement: The Contractor shall be responsible for short-term sedimentation maintenance and shall clean out all swales, structures and grass basins prior to turning project over to Owner. After project turnover, the Owner will be responsible for inspecting and maintaining all stormwater conveyances.

Conclusion

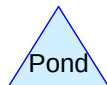
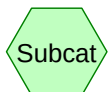
We believe that this project will not have any adverse impacts on abutters, down gradient systems or adjacent resources. Moreover, this plan includes all appropriate measures to prevent negative impacts and to keep post development flows and impacts to the resources at a minimum through the use of land grading, reductions in allowable disturbed area, erosion control practices and land use. It is important to note that proper erosion control and re-vegetation of disturbed areas is essential for the proper operation of the stormwater facilities. Maintenance of the yard areas, driveway, and careful attention to the cleanliness of the rain garden must be a top priority in order for the system to function properly. Please feel free to contact me if you have any questions concerning the calculations of stormwater from this project. Thank you for involving us on your project.

Sincerely yours,

Eric Dube
Casco Bay Engineering, Inc.



Down Property



16-195 Pre

Prepared by Hewlett-Packard

Printed 4/25/2017

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.093	39	>75% Grass cover, Good, HSG A (A)
0.044	98	Impervious (A)
0.137	58	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.093	HSG A	A
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.044	Other	A
0.137		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.093	0.000	0.000	0.000	0.000	0.093	>75% Grass cover, Good	A
0.000	0.000	0.000	0.000	0.044	0.044	Impervious	A
0.093	0.000	0.000	0.000	0.044	0.137	TOTAL AREA	

16-195 Pre*Type III 24-hr 2-yr Storm Rainfall=3.10"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A:

Runoff Area=5,962 sf 32.39% Impervious Runoff Depth>0.26"

Tc=5.0 min CN=58 Runoff=0.02 cfs 0.003 af

Link AP1: Down Property

Inflow=0.02 cfs 0.003 af

Primary=0.02 cfs 0.003 af

Total Runoff Area = 0.137 ac Runoff Volume = 0.003 af Average Runoff Depth = 0.26"
67.61% Pervious = 0.093 ac 32.39% Impervious = 0.044 ac

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Type III 24-hr 2-yr Storm Rainfall=3.10"

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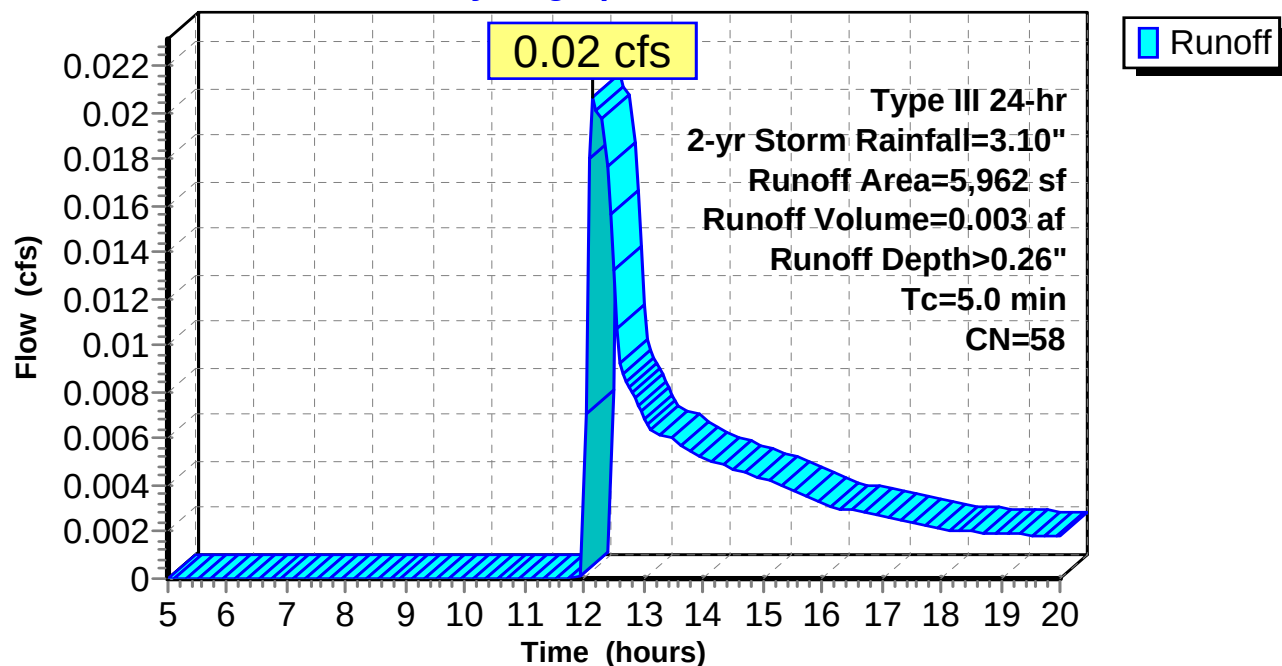
Summary for Subcatchment A:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.02 cfs @ 12.15 hrs, Volume= 0.003 af, Depth> 0.26"

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

	Area (sf)	CN	Description
*	1,931	98	Impervious
	4,031	39	>75% Grass cover, Good, HSG A
	5,962	58	Weighted Average
	4,031		67.61% Pervious Area
	1,931		32.39% Impervious Area

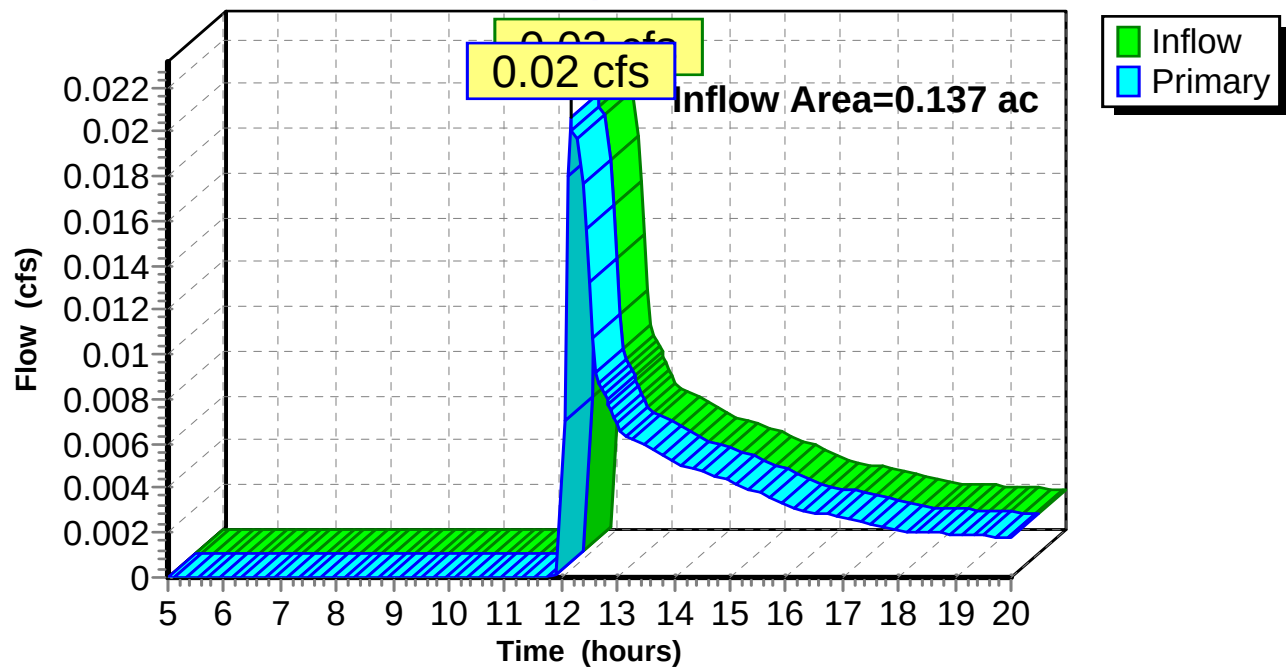
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment A:**Hydrograph**

Summary for Link AP1: Down Property

Inflow Area = 0.137 ac, 32.39% Impervious, Inflow Depth > 0.26" for 2-yr Storm event
Inflow = 0.02 cfs @ 12.15 hrs, Volume= 0.003 af
Primary = 0.02 cfs @ 12.15 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP1: Down Property**Hydrograph**

16-195 Pre*Type III 24-hr 10-yr Storm Rainfall=4.60"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A:

Runoff Area=5,962 sf 32.39% Impervious Runoff Depth>0.85"

Tc=5.0 min CN=58 Runoff=0.13 cfs 0.010 af

Link AP1: Down Property

Inflow=0.13 cfs 0.010 af

Primary=0.13 cfs 0.010 af

Total Runoff Area = 0.137 ac Runoff Volume = 0.010 af Average Runoff Depth = 0.85"
67.61% Pervious = 0.093 ac 32.39% Impervious = 0.044 ac

Summary for Subcatchment A:

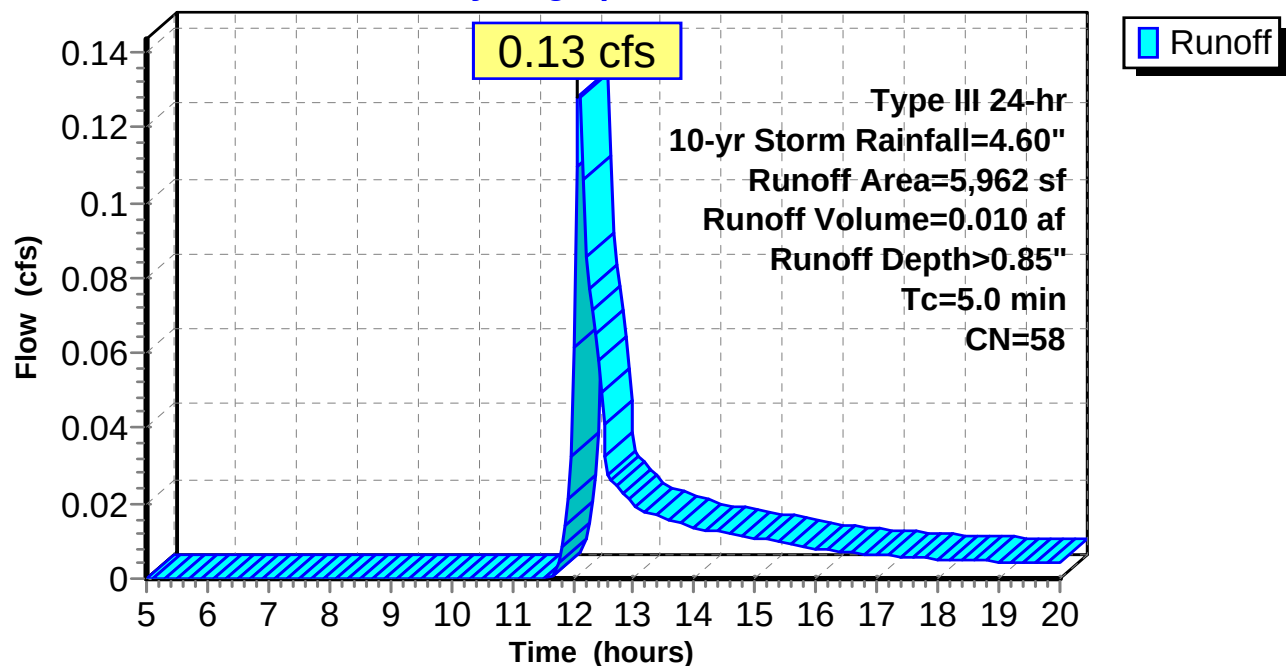
[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.13 cfs @ 12.10 hrs, Volume= 0.010 af, Depth> 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-yr Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	1,931	98	Impervious
	4,031	39	>75% Grass cover, Good, HSG A
	5,962	58	Weighted Average
	4,031		67.61% Pervious Area
	1,931		32.39% Impervious Area

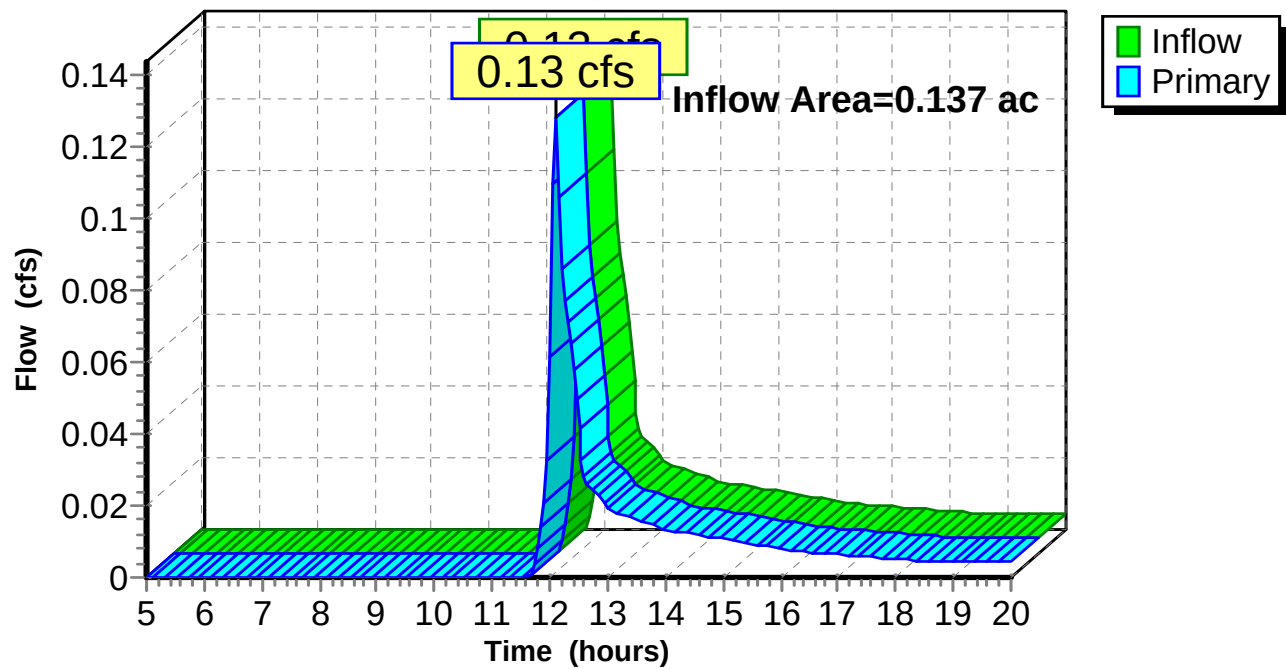
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment A:**Hydrograph**

Summary for Link AP1: Down Property

Inflow Area = 0.137 ac, 32.39% Impervious, Inflow Depth > 0.85" for 10-yr Storm event
Inflow = 0.13 cfs @ 12.10 hrs, Volume= 0.010 af
Primary = 0.13 cfs @ 12.10 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP1: Down Property**Hydrograph**

16-195 Pre*Type III 24-hr 25-yr Storm Rainfall=5.80"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A:

Runoff Area=5,962 sf 32.39% Impervious Runoff Depth>1.48"

Tc=5.0 min CN=58 Runoff=0.24 cfs 0.017 af

Link AP1: Down Property

Inflow=0.24 cfs 0.017 af

Primary=0.24 cfs 0.017 af

Total Runoff Area = 0.137 ac Runoff Volume = 0.017 af Average Runoff Depth = 1.48"
67.61% Pervious = 0.093 ac 32.39% Impervious = 0.044 ac

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Type III 24-hr 25-yr Storm Rainfall=5.80"

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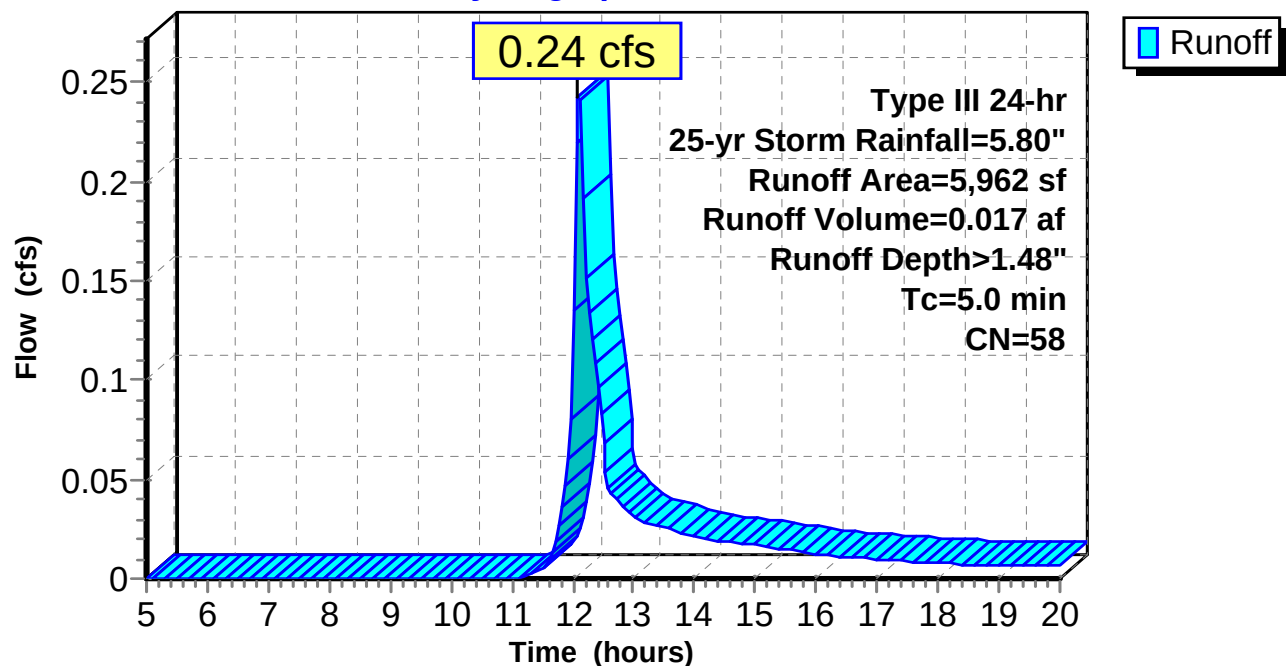
Summary for Subcatchment A:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-yr Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	1,931	98	Impervious
	4,031	39	>75% Grass cover, Good, HSG A
	5,962	58	Weighted Average
	4,031		67.61% Pervious Area
	1,931		32.39% Impervious Area

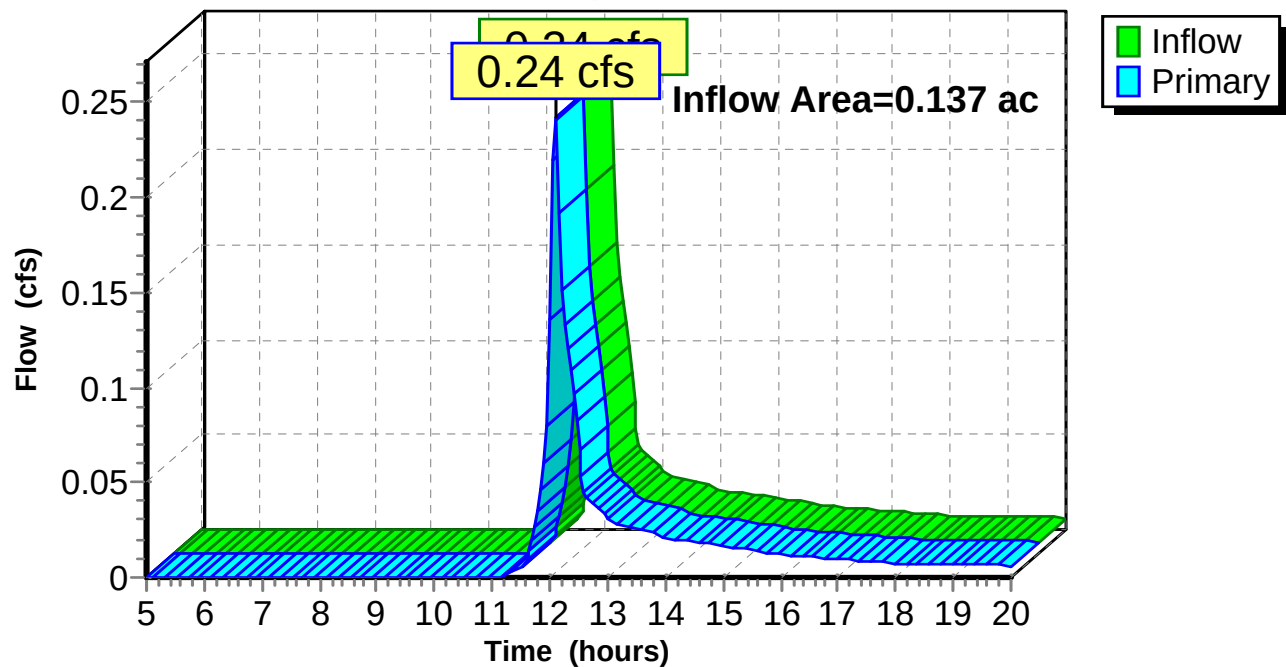
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

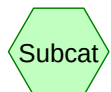
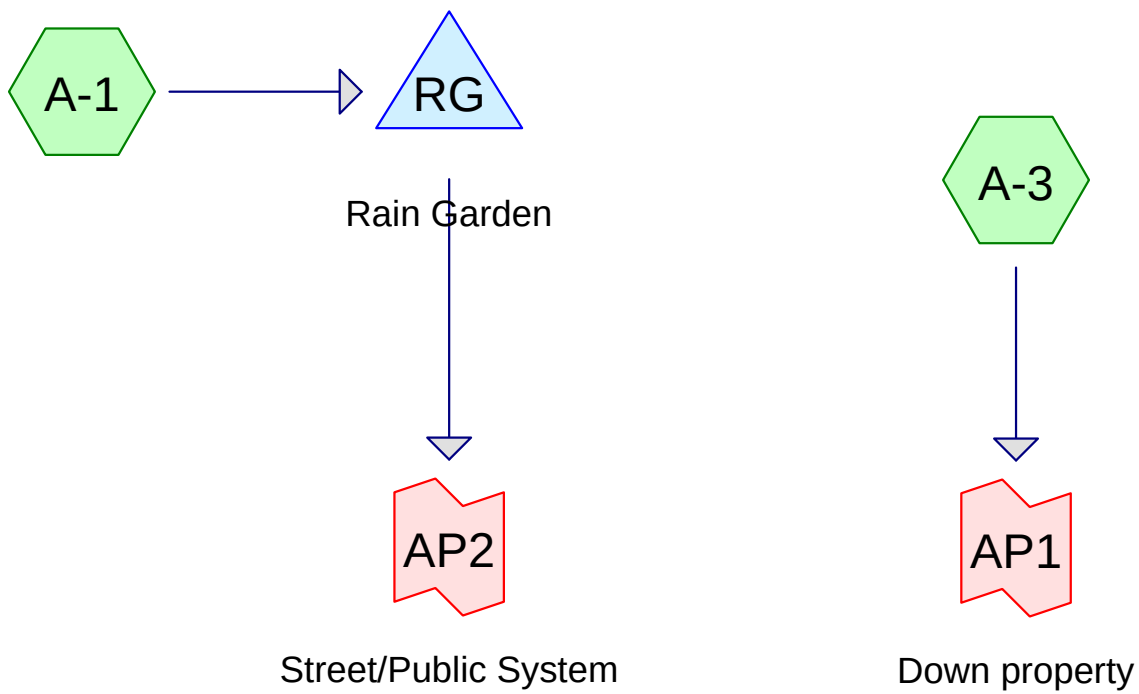
Subcatchment A:**Hydrograph**

Summary for Link AP1: Down Property

Inflow Area = 0.137 ac, 32.39% Impervious, Inflow Depth > 1.48" for 25-yr Storm event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af
Primary = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

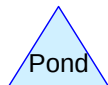
Link AP1: Down Property**Hydrograph**



Subcat



Reach



Pond



Link

Routing Diagram for 16-195 Post

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.059	39	>75% Grass cover, Good, HSG A (A-1, A-3)
0.078	98	Impervious (A-1, A-3)
0.137	73	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.059	HSG A	A-1, A-3
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.078	Other	A-1, A-3
0.137		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.059	0.000	0.000	0.000	0.000	0.059	>75% Grass cover, Good	A-1, A-3
0.000	0.000	0.000	0.000	0.078	0.078	Impervious	A-1, A-3
0.059	0.000	0.000	0.000	0.078	0.137	TOTAL AREA	

16-195 Post*Type III 24-hr 2-yr Storm Rainfall=3.17"*

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

Subcatchment A-1: Runoff Area=3,684 sf 73.83% Impervious Runoff Depth>1.47"
Tc=5.0 min CN=83 Runoff=0.16 cfs 0.010 af

Subcatchment A-3: Runoff Area=2,278 sf 30.33% Impervious Runoff Depth>0.26"
Tc=5.0 min CN=57 Runoff=0.01 cfs 0.001 af

Pond RG: Rain Garden Peak Elev=97.47' Storage=63 cf Inflow=0.16 cfs 0.010 af
Discarded=0.01 cfs 0.005 af Primary=0.13 cfs 0.005 af Outflow=0.14 cfs 0.010 af

Link AP1: Down property Inflow=0.01 cfs 0.001 af
Primary=0.01 cfs 0.001 af

Link AP2: Street/Public System Inflow=0.13 cfs 0.005 af
Primary=0.13 cfs 0.005 af

Total Runoff Area = 0.137 ac Runoff Volume = 0.011 af Average Runoff Depth = 1.01"
42.79% Pervious = 0.059 ac 57.21% Impervious = 0.078 ac

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Type III 24-hr 2-yr Storm Rainfall=3.17"

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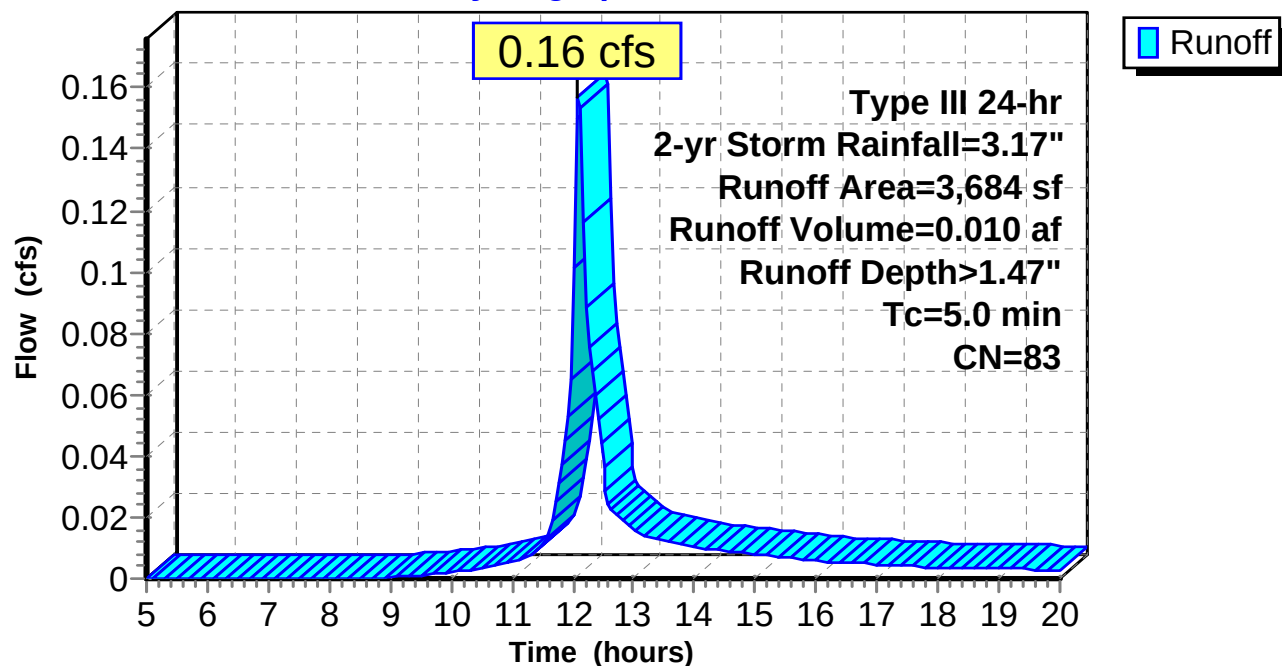
Summary for Subcatchment A-1:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.16 cfs @ 12.08 hrs, Volume= 0.010 af, Depth> 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 2-yr Storm Rainfall=3.17"

	Area (sf)	CN	Description
*	2,720	98	Impervious
	964	39	>75% Grass cover, Good, HSG A
	3,684	83	Weighted Average
	964		26.17% Pervious Area
	2,720		73.83% Impervious Area

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

Subcatchment A-1:**Hydrograph**

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Type III 24-hr 2-yr Storm Rainfall=3.17"

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Hydrograph for Subcatchment A-1:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00	18.25	2.95	1.41	0.00
5.25	0.19	0.00	0.00	18.50	2.97	1.42	0.00
5.50	0.20	0.00	0.00	18.75	2.98	1.43	0.00
5.75	0.22	0.00	0.00	19.00	2.99	1.44	0.00
6.00	0.23	0.00	0.00	19.25	3.00	1.45	0.00
6.25	0.24	0.00	0.00	19.50	3.01	1.46	0.00
6.50	0.26	0.00	0.00	19.75	3.02	1.47	0.00
6.75	0.27	0.00	0.00	20.00	3.03	1.47	0.00
7.00	0.29	0.00	0.00				
7.25	0.30	0.00	0.00				
7.50	0.32	0.00	0.00				
7.75	0.34	0.00	0.00				
8.00	0.36	0.00	0.00				
8.25	0.38	0.00	0.00				
8.50	0.41	0.00	0.00				
8.75	0.43	0.00	0.00				
9.00	0.46	0.00	0.00				
9.25	0.49	0.00	0.00				
9.50	0.53	0.01	0.00				
9.75	0.56	0.01	0.00				
10.00	0.60	0.02	0.00				
10.25	0.64	0.02	0.00				
10.50	0.69	0.03	0.00				
10.75	0.74	0.05	0.00				
11.00	0.79	0.06	0.01				
11.25	0.86	0.08	0.01				
11.50	0.94	0.11	0.01				
11.75	1.13	0.19	0.03				
12.00	1.58	0.43	0.10				
12.25	2.04	0.73	0.08				
12.50	2.23	0.85	0.04				
12.75	2.31	0.91	0.02				
13.00	2.38	0.96	0.02				
13.25	2.43	1.01	0.01				
13.50	2.48	1.04	0.01				
13.75	2.53	1.08	0.01				
14.00	2.57	1.11	0.01				
14.25	2.61	1.14	0.01				
14.50	2.64	1.17	0.01				
14.75	2.68	1.19	0.01				
15.00	2.71	1.22	0.01				
15.25	2.74	1.24	0.01				
15.50	2.76	1.26	0.01				
15.75	2.79	1.28	0.01				
16.00	2.81	1.29	0.01				
16.25	2.83	1.31	0.01				
16.50	2.85	1.33	0.01				
16.75	2.87	1.34	0.00				
17.00	2.88	1.35	0.00				
17.25	2.90	1.37	0.00				
17.50	2.91	1.38	0.00				
17.75	2.93	1.39	0.00				
18.00	2.94	1.40	0.00				

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Type III 24-hr 2-yr Storm Rainfall=3.17"

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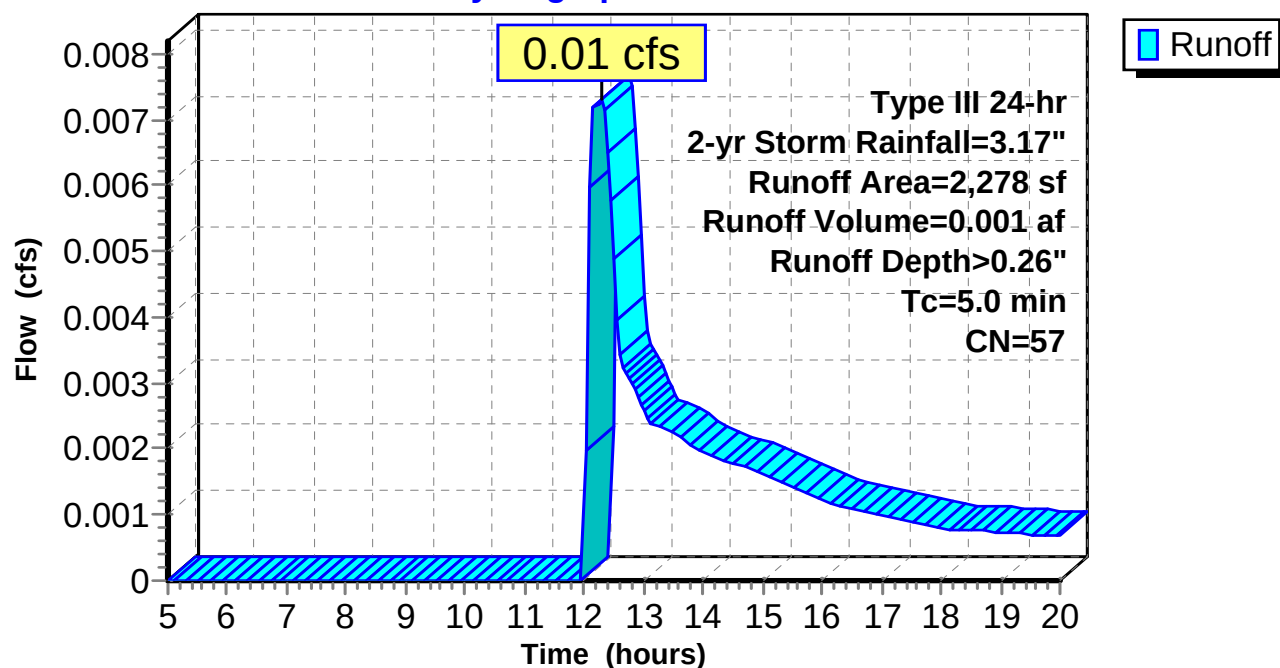
Summary for Subcatchment A-3:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.01 cfs @ 12.27 hrs, Volume= 0.001 af, Depth> 0.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 2-yr Storm Rainfall=3.17"

	Area (sf)	CN	Description
*	691	98	Impervious
	1,587	39	>75% Grass cover, Good, HSG A
	2,278	57	Weighted Average
	1,587		69.67% Pervious Area
	691		30.33% Impervious Area

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

Subcatchment A-3:**Hydrograph**

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Type III 24-hr 2-yr Storm Rainfall=3.17"

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Hydrograph for Subcatchment A-3:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00	18.25	2.95	0.23	0.00
5.25	0.19	0.00	0.00	18.50	2.97	0.24	0.00
5.50	0.20	0.00	0.00	18.75	2.98	0.24	0.00
5.75	0.22	0.00	0.00	19.00	2.99	0.24	0.00
6.00	0.23	0.00	0.00	19.25	3.00	0.25	0.00
6.25	0.24	0.00	0.00	19.50	3.01	0.25	0.00
6.50	0.26	0.00	0.00	19.75	3.02	0.25	0.00
6.75	0.27	0.00	0.00	20.00	3.03	0.26	0.00
7.00	0.29	0.00	0.00				
7.25	0.30	0.00	0.00				
7.50	0.32	0.00	0.00				
7.75	0.34	0.00	0.00				
8.00	0.36	0.00	0.00				
8.25	0.38	0.00	0.00				
8.50	0.41	0.00	0.00				
8.75	0.43	0.00	0.00				
9.00	0.46	0.00	0.00				
9.25	0.49	0.00	0.00				
9.50	0.53	0.00	0.00				
9.75	0.56	0.00	0.00				
10.00	0.60	0.00	0.00				
10.25	0.64	0.00	0.00				
10.50	0.69	0.00	0.00				
10.75	0.74	0.00	0.00				
11.00	0.79	0.00	0.00				
11.25	0.86	0.00	0.00				
11.50	0.94	0.00	0.00				
11.75	1.13	0.00	0.00				
12.00	1.58	0.00	0.00				
12.25	2.04	0.04	0.01				
12.50	2.23	0.06	0.00				
12.75	2.31	0.08	0.00				
13.00	2.38	0.09	0.00				
13.25	2.43	0.10	0.00				
13.50	2.48	0.11	0.00				
13.75	2.53	0.12	0.00				
14.00	2.57	0.13	0.00				
14.25	2.61	0.14	0.00				
14.50	2.64	0.15	0.00				
14.75	2.68	0.16	0.00				
15.00	2.71	0.16	0.00				
15.25	2.74	0.17	0.00				
15.50	2.76	0.18	0.00				
15.75	2.79	0.19	0.00				
16.00	2.81	0.19	0.00				
16.25	2.83	0.20	0.00				
16.50	2.85	0.20	0.00				
16.75	2.87	0.21	0.00				
17.00	2.88	0.21	0.00				
17.25	2.90	0.22	0.00				
17.50	2.91	0.22	0.00				
17.75	2.93	0.22	0.00				
18.00	2.94	0.23	0.00				

16-195 Post

Type III 24-hr 2-yr Storm Rainfall=3.17"

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Summary for Pond RG: Rain Garden

Inflow Area = 0.085 ac, 73.83% Impervious, Inflow Depth > 1.47" for 2-yr Storm event
 Inflow = 0.16 cfs @ 12.08 hrs, Volume= 0.010 af
 Outflow = 0.14 cfs @ 12.13 hrs, Volume= 0.010 af, Atten= 13%, Lag= 2.8 min
 Discarded = 0.01 cfs @ 12.13 hrs, Volume= 0.005 af
 Primary = 0.13 cfs @ 12.13 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 97.47' @ 12.13 hrs Surf.Area= 197 sf Storage= 63 cf

Plug-Flow detention time= 31.0 min calculated for 0.010 af (98% of inflow)
 Center-of-Mass det. time= 23.9 min (819.5 - 795.6)

Volume	Invert	Avail.Storage	Storage Description
#1	96.76'	211 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
96.76	0	0	0
97.00	47	6	6
98.00	363	205	211

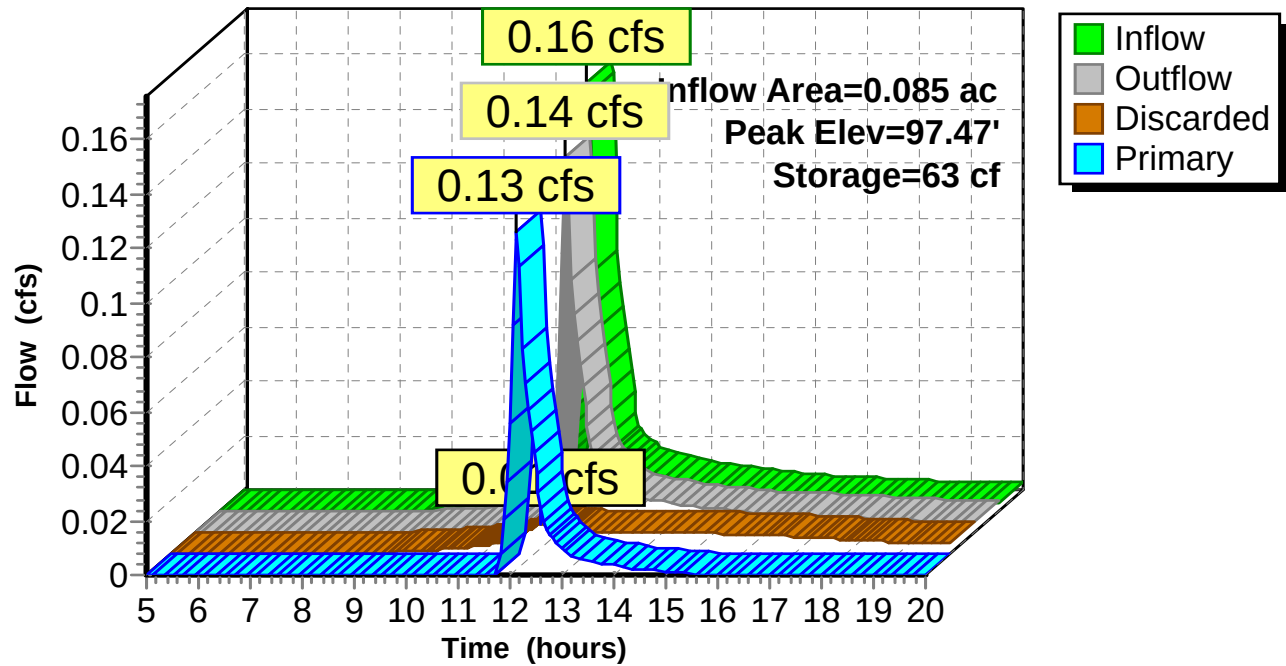
Device	Routing	Invert	Outlet Devices
#1	Discarded	96.76'	2.410 in/hr Exfiltration over Surface area
#2	Primary	97.26'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.01 cfs @ 12.13 hrs HW=97.47' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.12 cfs @ 12.13 hrs HW=97.47' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 0.12 cfs @ 1.57 fps)

Pond RG: Rain Garden

Hydrograph



16-195 Post

Type III 24-hr 2-yr Storm Rainfall=3.17"

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Hydrograph for Pond RG: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
5.00	0.00	0	96.76	0.00	0.00	0.00
5.50	0.00	0	96.76	0.00	0.00	0.00
6.00	0.00	0	96.76	0.00	0.00	0.00
6.50	0.00	0	96.76	0.00	0.00	0.00
7.00	0.00	0	96.76	0.00	0.00	0.00
7.50	0.00	0	96.76	0.00	0.00	0.00
8.00	0.00	0	96.76	0.00	0.00	0.00
8.50	0.00	0	96.76	0.00	0.00	0.00
9.00	0.00	0	96.79	0.00	0.00	0.00
9.50	0.00	0	96.83	0.00	0.00	0.00
10.00	0.00	1	96.88	0.00	0.00	0.00
10.50	0.00	3	96.94	0.00	0.00	0.00
11.00	0.01	7	97.02	0.00	0.00	0.00
11.50	0.01	14	97.12	0.00	0.00	0.00
12.00	0.10	49	97.40	0.07	0.01	0.06
12.50	0.04	45	97.37	0.05	0.01	0.04
13.00	0.02	36	97.32	0.02	0.01	0.01
13.50	0.01	34	97.30	0.01	0.01	0.01
14.00	0.01	33	97.29	0.01	0.01	0.00
14.50	0.01	32	97.28	0.01	0.01	0.00
15.00	0.01	31	97.28	0.01	0.01	0.00
15.50	0.01	30	97.27	0.01	0.01	0.00
16.00	0.01	28	97.25	0.01	0.01	0.00
16.50	0.01	25	97.23	0.01	0.01	0.00
17.00	0.00	22	97.21	0.01	0.01	0.00
17.50	0.00	19	97.18	0.01	0.01	0.00
18.00	0.00	16	97.15	0.01	0.01	0.00
18.50	0.00	13	97.12	0.00	0.00	0.00
19.00	0.00	11	97.09	0.00	0.00	0.00
19.50	0.00	10	97.07	0.00	0.00	0.00
20.00	0.00	8	97.05	0.00	0.00	0.00

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Type III 24-hr 2-yr Storm Rainfall=3.17"

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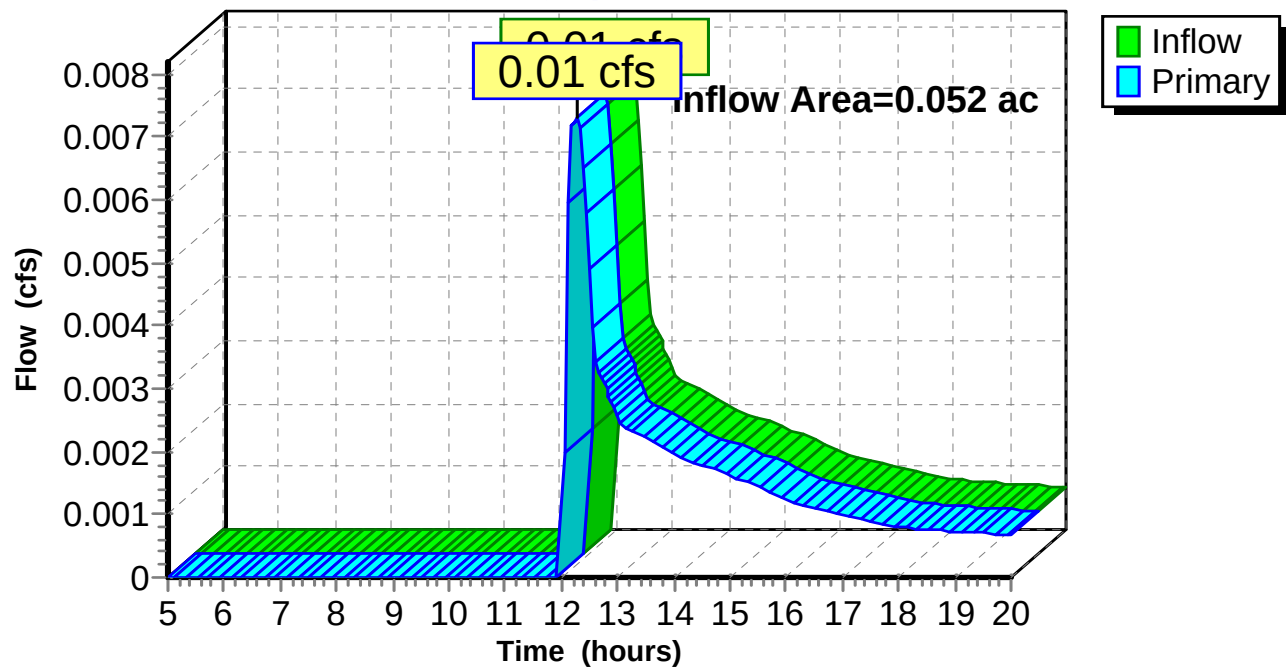
Summary for Link AP1: Down property

Inflow Area = 0.052 ac, 30.33% Impervious, Inflow Depth > 0.26" for 2-yr Storm event
Inflow = 0.01 cfs @ 12.27 hrs, Volume= 0.001 af
Primary = 0.01 cfs @ 12.27 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP1: Down property

Hydrograph



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Type III 24-hr 2-yr Storm Rainfall=3.17"

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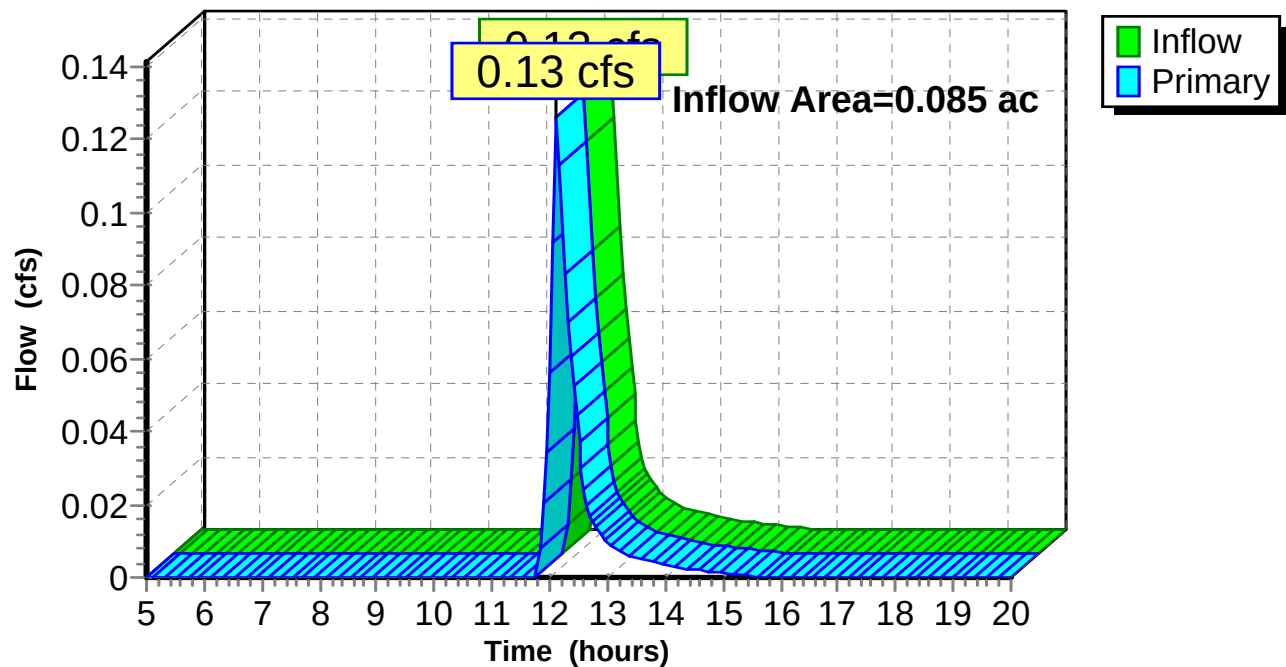
Hydrograph for Link AP1: Down property

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00
5.25	0.00	0.00	0.00	18.50	0.00	0.00	0.00
5.50	0.00	0.00	0.00	18.75	0.00	0.00	0.00
5.75	0.00	0.00	0.00	19.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	19.25	0.00	0.00	0.00
6.25	0.00	0.00	0.00	19.50	0.00	0.00	0.00
6.50	0.00	0.00	0.00	19.75	0.00	0.00	0.00
6.75	0.00	0.00	0.00	20.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00				
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.00	0.00	0.00				
10.50	0.00	0.00	0.00				
10.75	0.00	0.00	0.00				
11.00	0.00	0.00	0.00				
11.25	0.00	0.00	0.00				
11.50	0.00	0.00	0.00				
11.75	0.00	0.00	0.00				
12.00	0.00	0.00	0.00				
12.25	0.01	0.00	0.01				
12.50	0.00	0.00	0.00				
12.75	0.00	0.00	0.00				
13.00	0.00	0.00	0.00				
13.25	0.00	0.00	0.00				
13.50	0.00	0.00	0.00				
13.75	0.00	0.00	0.00				
14.00	0.00	0.00	0.00				
14.25	0.00	0.00	0.00				
14.50	0.00	0.00	0.00				
14.75	0.00	0.00	0.00				
15.00	0.00	0.00	0.00				
15.25	0.00	0.00	0.00				
15.50	0.00	0.00	0.00				
15.75	0.00	0.00	0.00				
16.00	0.00	0.00	0.00				
16.25	0.00	0.00	0.00				
16.50	0.00	0.00	0.00				
16.75	0.00	0.00	0.00				
17.00	0.00	0.00	0.00				
17.25	0.00	0.00	0.00				
17.50	0.00	0.00	0.00				
17.75	0.00	0.00	0.00				
18.00	0.00	0.00	0.00				

Summary for Link AP2: Street/Public System

Inflow Area = 0.085 ac, 73.83% Impervious, Inflow Depth = 0.72" for 2-yr Storm event
Inflow = 0.13 cfs @ 12.13 hrs, Volume= 0.005 af
Primary = 0.13 cfs @ 12.13 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP2: Street/Public System**Hydrograph**

16-195 Post

Type III 24-hr 2-yr Storm Rainfall=3.17"

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Hydrograph for Link AP2: Street/Public System

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00
5.25	0.00	0.00	0.00	18.50	0.00	0.00	0.00
5.50	0.00	0.00	0.00	18.75	0.00	0.00	0.00
5.75	0.00	0.00	0.00	19.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	19.25	0.00	0.00	0.00
6.25	0.00	0.00	0.00	19.50	0.00	0.00	0.00
6.50	0.00	0.00	0.00	19.75	0.00	0.00	0.00
6.75	0.00	0.00	0.00	20.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00				
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.00	0.00	0.00				
10.50	0.00	0.00	0.00				
10.75	0.00	0.00	0.00				
11.00	0.00	0.00	0.00				
11.25	0.00	0.00	0.00				
11.50	0.00	0.00	0.00				
11.75	0.00	0.00	0.00				
12.00	0.06	0.00	0.06				
12.25	0.08	0.00	0.08				
12.50	0.04	0.00	0.04				
12.75	0.01	0.00	0.01				
13.00	0.01	0.00	0.01				
13.25	0.01	0.00	0.01				
13.50	0.01	0.00	0.01				
13.75	0.00	0.00	0.00				
14.00	0.00	0.00	0.00				
14.25	0.00	0.00	0.00				
14.50	0.00	0.00	0.00				
14.75	0.00	0.00	0.00				
15.00	0.00	0.00	0.00				
15.25	0.00	0.00	0.00				
15.50	0.00	0.00	0.00				
15.75	0.00	0.00	0.00				
16.00	0.00	0.00	0.00				
16.25	0.00	0.00	0.00				
16.50	0.00	0.00	0.00				
16.75	0.00	0.00	0.00				
17.00	0.00	0.00	0.00				
17.25	0.00	0.00	0.00				
17.50	0.00	0.00	0.00				
17.75	0.00	0.00	0.00				
18.00	0.00	0.00	0.00				

16-195 Post*Type III 24-hr 10-yr Storm Rainfall=4.72"*

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

Subcatchment A-1:

Runoff Area=3,684 sf 73.83% Impervious Runoff Depth>2.74"
Tc=5.0 min CN=83 Runoff=0.29 cfs 0.019 af

Subcatchment A-3:

Runoff Area=2,278 sf 30.33% Impervious Runoff Depth>0.86"
Tc=5.0 min CN=57 Runoff=0.05 cfs 0.004 af

Pond RG: Rain Garden

Peak Elev=97.57' Storage=85 cf Inflow=0.29 cfs 0.019 af
Discarded=0.01 cfs 0.007 af Primary=0.25 cfs 0.012 af Outflow=0.26 cfs 0.019 af

Link AP1: Down property

Inflow=0.05 cfs 0.004 af
Primary=0.05 cfs 0.004 af

Link AP2: Street/Public System

Inflow=0.25 cfs 0.012 af
Primary=0.25 cfs 0.012 af

Total Runoff Area = 0.137 ac Runoff Volume = 0.023 af Average Runoff Depth = 2.02"
42.79% Pervious = 0.059 ac 57.21% Impervious = 0.078 ac

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Type III 24-hr 10-yr Storm Rainfall=4.72"

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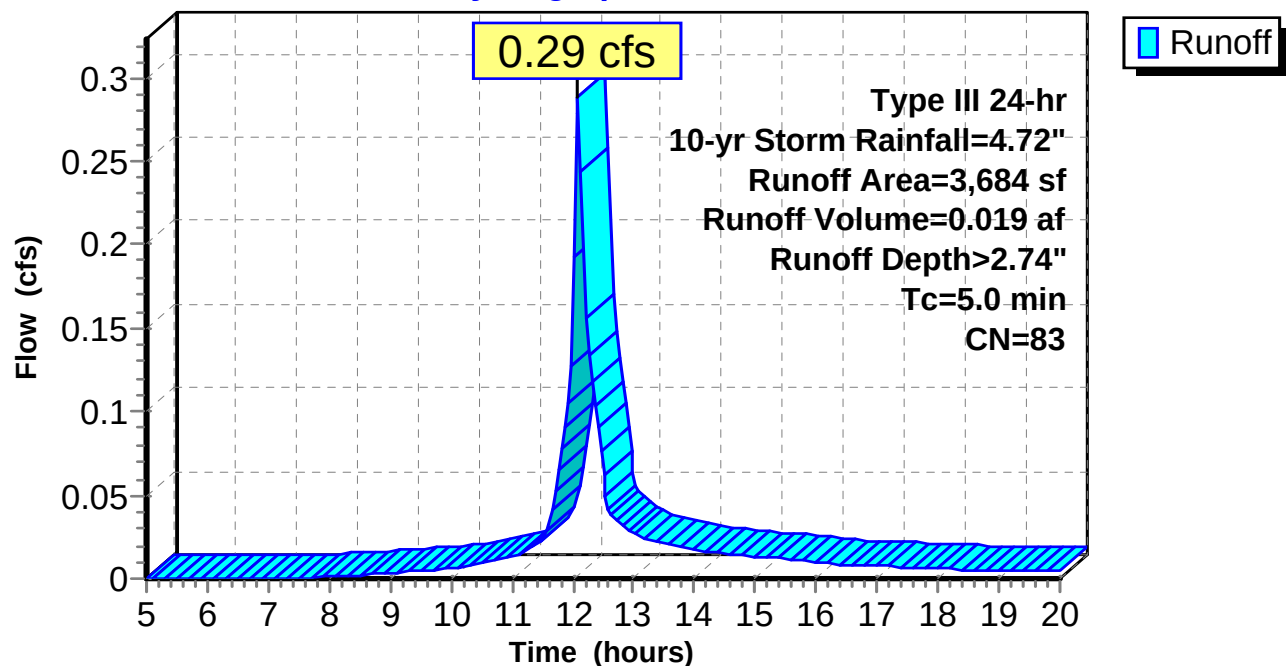
Summary for Subcatchment A-1:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.019 af, Depth> 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-yr Storm Rainfall=4.72"

	Area (sf)	CN	Description
*	2,720	98	Impervious
	964	39	>75% Grass cover, Good, HSG A
	3,684	83	Weighted Average
	964		26.17% Pervious Area
	2,720		73.83% Impervious Area

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

Subcatchment A-1:**Hydrograph**

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Type III 24-hr 10-yr Storm Rainfall=4.72"

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Hydrograph for Subcatchment A-1:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.27	0.00	0.00	18.25	4.40	2.64	0.01
5.25	0.29	0.00	0.00	18.50	4.42	2.65	0.01
5.50	0.30	0.00	0.00	18.75	4.43	2.67	0.01
5.75	0.32	0.00	0.00	19.00	4.45	2.68	0.01
6.00	0.34	0.00	0.00	19.25	4.47	2.70	0.01
6.25	0.36	0.00	0.00	19.50	4.49	2.71	0.00
6.50	0.38	0.00	0.00	19.75	4.50	2.73	0.00
6.75	0.40	0.00	0.00	20.00	4.52	2.74	0.00
7.00	0.43	0.00	0.00				
7.25	0.45	0.00	0.00				
7.50	0.48	0.00	0.00				
7.75	0.51	0.00	0.00				
8.00	0.54	0.01	0.00				
8.25	0.57	0.01	0.00				
8.50	0.61	0.02	0.00				
8.75	0.65	0.02	0.00				
9.00	0.69	0.03	0.00				
9.25	0.73	0.04	0.00				
9.50	0.78	0.06	0.00				
9.75	0.84	0.07	0.01				
10.00	0.89	0.09	0.01				
10.25	0.95	0.11	0.01				
10.50	1.02	0.14	0.01				
10.75	1.10	0.17	0.01				
11.00	1.18	0.21	0.01				
11.25	1.28	0.26	0.02				
11.50	1.41	0.33	0.02				
11.75	1.68	0.48	0.06				
12.00	2.36	0.95	0.19				
12.25	3.04	1.48	0.13				
12.50	3.31	1.70	0.06				
12.75	3.44	1.81	0.03				
13.00	3.54	1.89	0.03				
13.25	3.62	1.96	0.02				
13.50	3.70	2.03	0.02				
13.75	3.77	2.08	0.02				
14.00	3.83	2.14	0.02				
14.25	3.88	2.19	0.02				
14.50	3.94	2.23	0.02				
14.75	3.99	2.27	0.01				
15.00	4.03	2.31	0.01				
15.25	4.07	2.35	0.01				
15.50	4.11	2.39	0.01				
15.75	4.15	2.42	0.01				
16.00	4.18	2.44	0.01				
16.25	4.21	2.47	0.01				
16.50	4.24	2.50	0.01				
16.75	4.27	2.52	0.01				
17.00	4.29	2.54	0.01				
17.25	4.32	2.56	0.01				
17.50	4.34	2.58	0.01				
17.75	4.36	2.60	0.01				
18.00	4.38	2.62	0.01				

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Type III 24-hr 10-yr Storm Rainfall=4.72"

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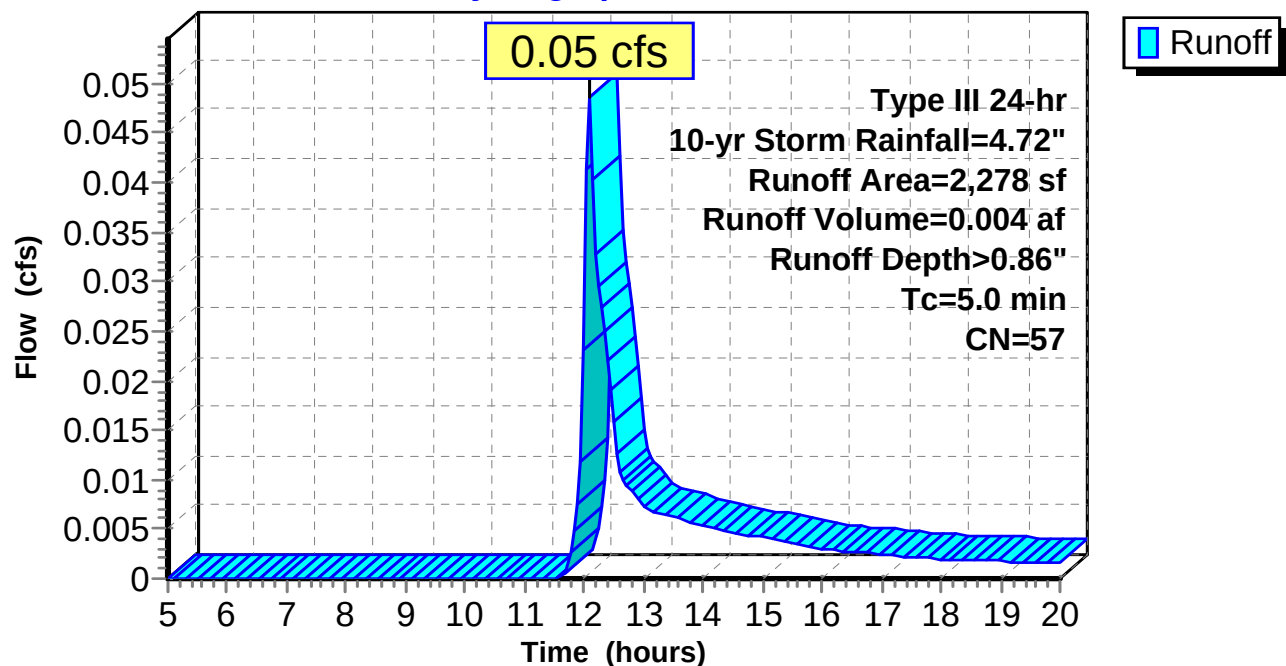
Summary for Subcatchment A-3:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.05 cfs @ 12.10 hrs, Volume= 0.004 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-yr Storm Rainfall=4.72"

	Area (sf)	CN	Description
*	691	98	Impervious
	1,587	39	>75% Grass cover, Good, HSG A
	2,278	57	Weighted Average
	1,587		69.67% Pervious Area
	691		30.33% Impervious Area

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

Subcatchment A-3:**Hydrograph**

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Hydrograph for Subcatchment A-3:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.27	0.00	0.00	18.25	4.40	0.80	0.00
5.25	0.29	0.00	0.00	18.50	4.42	0.81	0.00
5.50	0.30	0.00	0.00	18.75	4.43	0.82	0.00
5.75	0.32	0.00	0.00	19.00	4.45	0.83	0.00
6.00	0.34	0.00	0.00	19.25	4.47	0.83	0.00
6.25	0.36	0.00	0.00	19.50	4.49	0.84	0.00
6.50	0.38	0.00	0.00	19.75	4.50	0.85	0.00
6.75	0.40	0.00	0.00	20.00	4.52	0.86	0.00
7.00	0.43	0.00	0.00				
7.25	0.45	0.00	0.00				
7.50	0.48	0.00	0.00				
7.75	0.51	0.00	0.00				
8.00	0.54	0.00	0.00				
8.25	0.57	0.00	0.00				
8.50	0.61	0.00	0.00				
8.75	0.65	0.00	0.00				
9.00	0.69	0.00	0.00				
9.25	0.73	0.00	0.00				
9.50	0.78	0.00	0.00				
9.75	0.84	0.00	0.00				
10.00	0.89	0.00	0.00				
10.25	0.95	0.00	0.00				
10.50	1.02	0.00	0.00				
10.75	1.10	0.00	0.00				
11.00	1.18	0.00	0.00				
11.25	1.28	0.00	0.00				
11.50	1.41	0.00	0.00				
11.75	1.68	0.00	0.00				
12.00	2.36	0.09	0.02				
12.25	3.04	0.26	0.03				
12.50	3.31	0.35	0.02				
12.75	3.44	0.39	0.01				
13.00	3.54	0.43	0.01				
13.25	3.62	0.46	0.01				
13.50	3.70	0.49	0.01				
13.75	3.77	0.52	0.01				
14.00	3.83	0.55	0.01				
14.25	3.88	0.57	0.00				
14.50	3.94	0.59	0.00				
14.75	3.99	0.61	0.00				
15.00	4.03	0.63	0.00				
15.25	4.07	0.65	0.00				
15.50	4.11	0.67	0.00				
15.75	4.15	0.68	0.00				
16.00	4.18	0.70	0.00				
16.25	4.21	0.71	0.00				
16.50	4.24	0.73	0.00				
16.75	4.27	0.74	0.00				
17.00	4.29	0.75	0.00				
17.25	4.32	0.76	0.00				
17.50	4.34	0.77	0.00				
17.75	4.36	0.78	0.00				
18.00	4.38	0.79	0.00				

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Type III 24-hr 10-yr Storm Rainfall=4.72"

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Summary for Pond RG: Rain Garden

Inflow Area = 0.085 ac, 73.83% Impervious, Inflow Depth > 2.74" for 10-yr Storm event
 Inflow = 0.29 cfs @ 12.08 hrs, Volume= 0.019 af
 Outflow = 0.26 cfs @ 12.12 hrs, Volume= 0.019 af, Atten= 10%, Lag= 2.5 min
 Discarded = 0.01 cfs @ 12.12 hrs, Volume= 0.007 af
 Primary = 0.25 cfs @ 12.12 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 97.57' @ 12.12 hrs Surf.Area= 228 sf Storage= 85 cf

Plug-Flow detention time= 23.6 min calculated for 0.019 af (98% of inflow)
 Center-of-Mass det. time= 14.7 min (796.0 - 781.3)

Volume	Invert	Avail.Storage	Storage Description
#1	96.76'	211 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
96.76	0	0	0
97.00	47	6	6
98.00	363	205	211

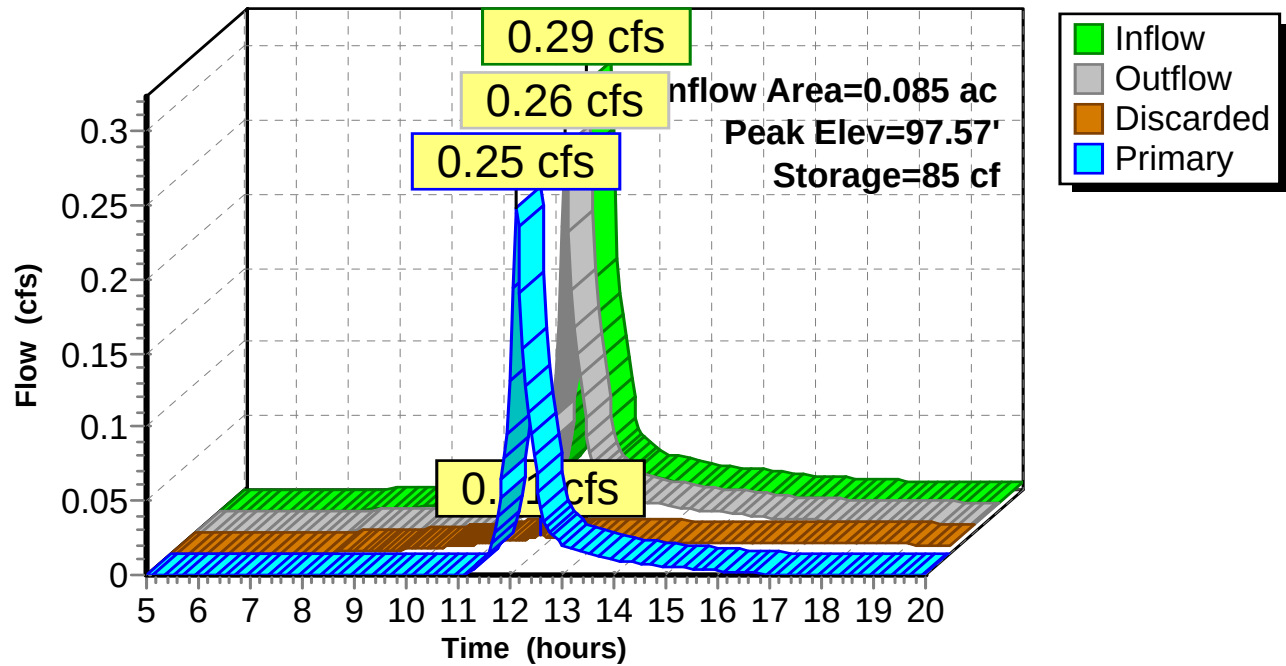
Device	Routing	Invert	Outlet Devices
#1	Discarded	96.76'	2.410 in/hr Exfiltration over Surface area
#2	Primary	97.26'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.01 cfs @ 12.12 hrs HW=97.57' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.24 cfs @ 12.12 hrs HW=97.57' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 0.24 cfs @ 1.89 fps)

Pond RG: Rain Garden

Hydrograph



16-195 Post*Type III 24-hr 10-yr Storm Rainfall=4.72"*

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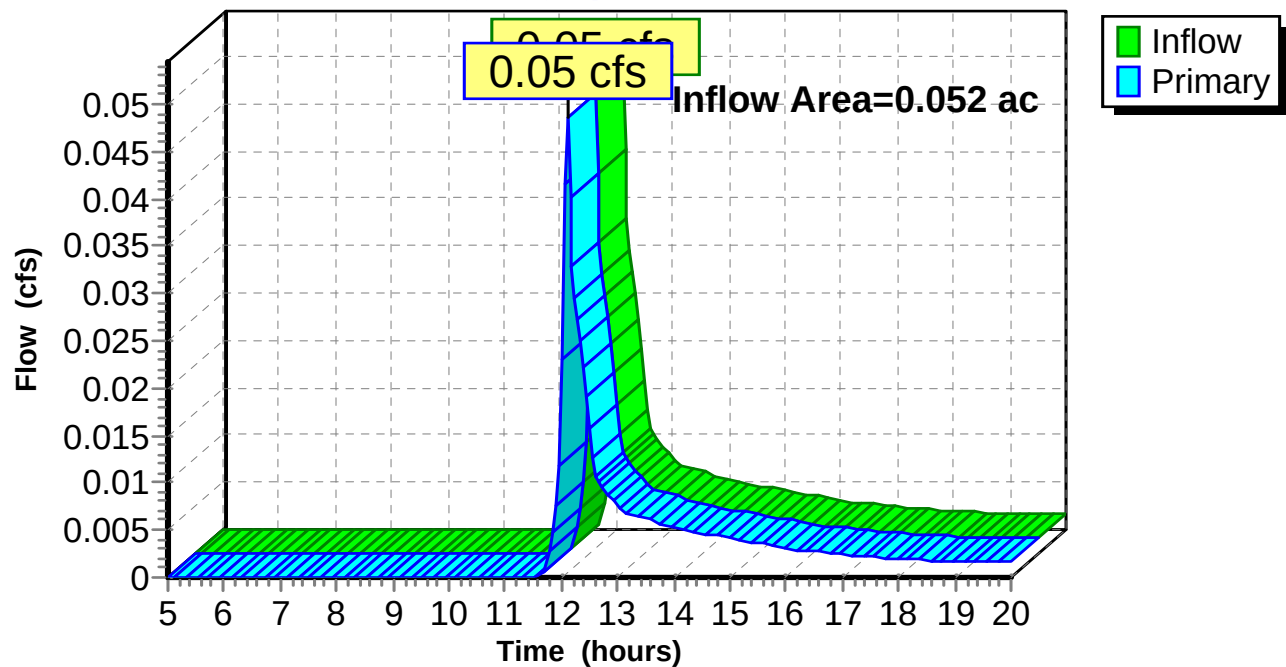
Hydrograph for Pond RG: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
5.00	0.00	0	96.76	0.00	0.00	0.00
5.50	0.00	0	96.76	0.00	0.00	0.00
6.00	0.00	0	96.76	0.00	0.00	0.00
6.50	0.00	0	96.76	0.00	0.00	0.00
7.00	0.00	0	96.77	0.00	0.00	0.00
7.50	0.00	0	96.80	0.00	0.00	0.00
8.00	0.00	1	96.83	0.00	0.00	0.00
8.50	0.00	1	96.88	0.00	0.00	0.00
9.00	0.00	3	96.94	0.00	0.00	0.00
9.50	0.00	6	97.01	0.00	0.00	0.00
10.00	0.01	10	97.07	0.00	0.00	0.00
10.50	0.01	16	97.15	0.01	0.01	0.00
11.00	0.01	26	97.24	0.01	0.01	0.00
11.50	0.02	37	97.32	0.02	0.01	0.01
12.00	0.19	64	97.48	0.14	0.01	0.13
12.50	0.06	52	97.41	0.08	0.01	0.07
13.00	0.03	40	97.34	0.03	0.01	0.02
13.50	0.02	38	97.33	0.02	0.01	0.01
14.00	0.02	36	97.32	0.02	0.01	0.01
14.50	0.02	35	97.31	0.02	0.01	0.01
15.00	0.01	34	97.30	0.01	0.01	0.01
15.50	0.01	33	97.30	0.01	0.01	0.00
16.00	0.01	32	97.29	0.01	0.01	0.00
16.50	0.01	31	97.28	0.01	0.01	0.00
17.00	0.01	30	97.27	0.01	0.01	0.00
17.50	0.01	29	97.27	0.01	0.01	0.00
18.00	0.01	28	97.25	0.01	0.01	0.00
18.50	0.01	25	97.23	0.01	0.01	0.00
19.00	0.01	23	97.21	0.01	0.01	0.00
19.50	0.00	21	97.20	0.01	0.01	0.00
20.00	0.00	19	97.18	0.01	0.01	0.00

Summary for Link AP1: Down property

Inflow Area = 0.052 ac, 30.33% Impervious, Inflow Depth > 0.86" for 10-yr Storm event
Inflow = 0.05 cfs @ 12.10 hrs, Volume= 0.004 af
Primary = 0.05 cfs @ 12.10 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP1: Down property**Hydrograph**

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Type III 24-hr 10-yr Storm Rainfall=4.72"

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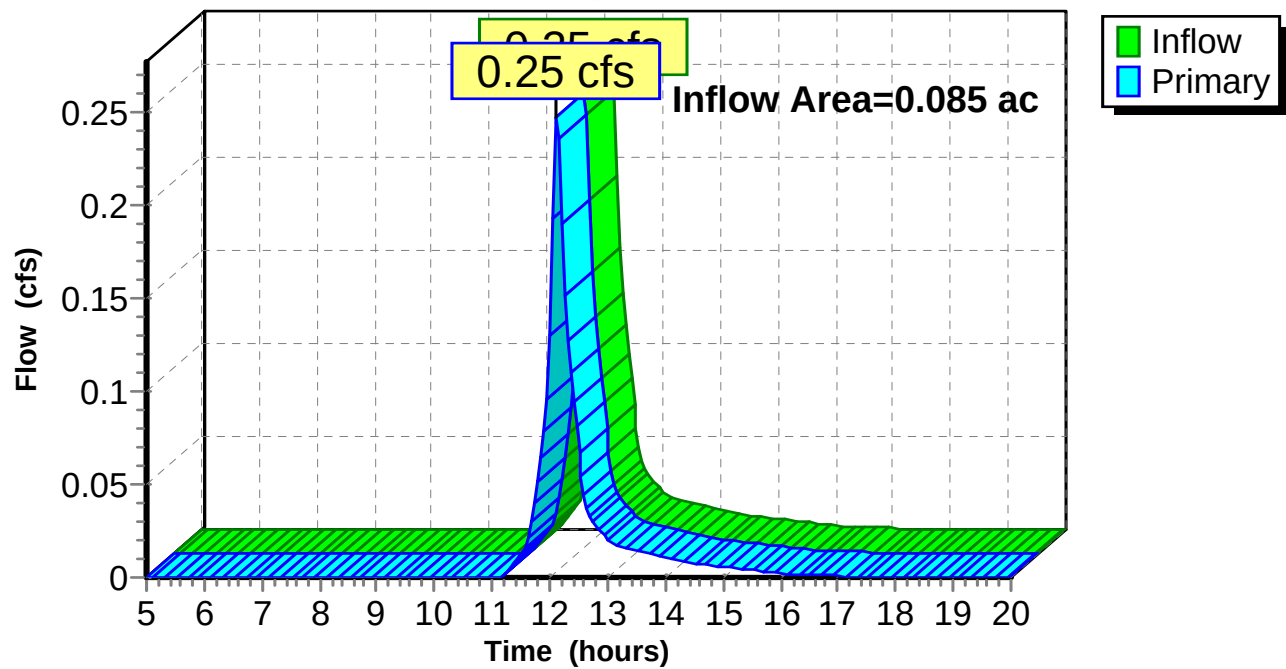
Hydrograph for Link AP1: Down property

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00
5.25	0.00	0.00	0.00	18.50	0.00	0.00	0.00
5.50	0.00	0.00	0.00	18.75	0.00	0.00	0.00
5.75	0.00	0.00	0.00	19.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	19.25	0.00	0.00	0.00
6.25	0.00	0.00	0.00	19.50	0.00	0.00	0.00
6.50	0.00	0.00	0.00	19.75	0.00	0.00	0.00
6.75	0.00	0.00	0.00	20.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00				
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.00	0.00	0.00				
10.50	0.00	0.00	0.00				
10.75	0.00	0.00	0.00				
11.00	0.00	0.00	0.00				
11.25	0.00	0.00	0.00				
11.50	0.00	0.00	0.00				
11.75	0.00	0.00	0.00				
12.00	0.02	0.00	0.02				
12.25	0.03	0.00	0.03				
12.50	0.02	0.00	0.02				
12.75	0.01	0.00	0.01				
13.00	0.01	0.00	0.01				
13.25	0.01	0.00	0.01				
13.50	0.01	0.00	0.01				
13.75	0.01	0.00	0.01				
14.00	0.01	0.00	0.01				
14.25	0.00	0.00	0.00				
14.50	0.00	0.00	0.00				
14.75	0.00	0.00	0.00				
15.00	0.00	0.00	0.00				
15.25	0.00	0.00	0.00				
15.50	0.00	0.00	0.00				
15.75	0.00	0.00	0.00				
16.00	0.00	0.00	0.00				
16.25	0.00	0.00	0.00				
16.50	0.00	0.00	0.00				
16.75	0.00	0.00	0.00				
17.00	0.00	0.00	0.00				
17.25	0.00	0.00	0.00				
17.50	0.00	0.00	0.00				
17.75	0.00	0.00	0.00				
18.00	0.00	0.00	0.00				

Summary for Link AP2: Street/Public System

Inflow Area = 0.085 ac, 73.83% Impervious, Inflow Depth = 1.73" for 10-yr Storm event
Inflow = 0.25 cfs @ 12.12 hrs, Volume= 0.012 af
Primary = 0.25 cfs @ 12.12 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP2: Street/Public System**Hydrograph**

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Hydrograph for Link AP2: Street/Public System

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00
5.25	0.00	0.00	0.00	18.50	0.00	0.00	0.00
5.50	0.00	0.00	0.00	18.75	0.00	0.00	0.00
5.75	0.00	0.00	0.00	19.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	19.25	0.00	0.00	0.00
6.25	0.00	0.00	0.00	19.50	0.00	0.00	0.00
6.50	0.00	0.00	0.00	19.75	0.00	0.00	0.00
6.75	0.00	0.00	0.00	20.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00				
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.00	0.00	0.00				
10.50	0.00	0.00	0.00				
10.75	0.00	0.00	0.00				
11.00	0.00	0.00	0.00				
11.25	0.00	0.00	0.00				
11.50	0.01	0.00	0.01				
11.75	0.04	0.00	0.04				
12.00	0.13	0.00	0.13				
12.25	0.15	0.00	0.15				
12.50	0.07	0.00	0.07				
12.75	0.03	0.00	0.03				
13.00	0.02	0.00	0.02				
13.25	0.02	0.00	0.02				
13.50	0.01	0.00	0.01				
13.75	0.01	0.00	0.01				
14.00	0.01	0.00	0.01				
14.25	0.01	0.00	0.01				
14.50	0.01	0.00	0.01				
14.75	0.01	0.00	0.01				
15.00	0.01	0.00	0.01				
15.25	0.01	0.00	0.01				
15.50	0.00	0.00	0.00				
15.75	0.00	0.00	0.00				
16.00	0.00	0.00	0.00				
16.25	0.00	0.00	0.00				
16.50	0.00	0.00	0.00				
16.75	0.00	0.00	0.00				
17.00	0.00	0.00	0.00				
17.25	0.00	0.00	0.00				
17.50	0.00	0.00	0.00				
17.75	0.00	0.00	0.00				
18.00	0.00	0.00	0.00				

16-195 Post*Type III 24-hr 25-yr Storm Rainfall=5.94"*

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

Subcatchment A-1: Runoff Area=3,684 sf 73.83% Impervious Runoff Depth>3.80"
Tc=5.0 min CN=83 Runoff=0.40 cfs 0.027 af

Subcatchment A-3: Runoff Area=2,278 sf 30.33% Impervious Runoff Depth>1.49"
Tc=5.0 min CN=57 Runoff=0.09 cfs 0.006 af

Pond RG: Rain Garden Peak Elev=97.64' Storage=102 cf Inflow=0.40 cfs 0.027 af
Discarded=0.01 cfs 0.008 af Primary=0.34 cfs 0.019 af Outflow=0.36 cfs 0.026 af

Link AP1: Down property Inflow=0.09 cfs 0.006 af
Primary=0.09 cfs 0.006 af

Link AP2: Street/Public System Inflow=0.34 cfs 0.019 af
Primary=0.34 cfs 0.019 af

Total Runoff Area = 0.137 ac Runoff Volume = 0.033 af Average Runoff Depth = 2.91"
42.79% Pervious = 0.059 ac 57.21% Impervious = 0.078 ac

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Type III 24-hr 25-yr Storm Rainfall=5.94"

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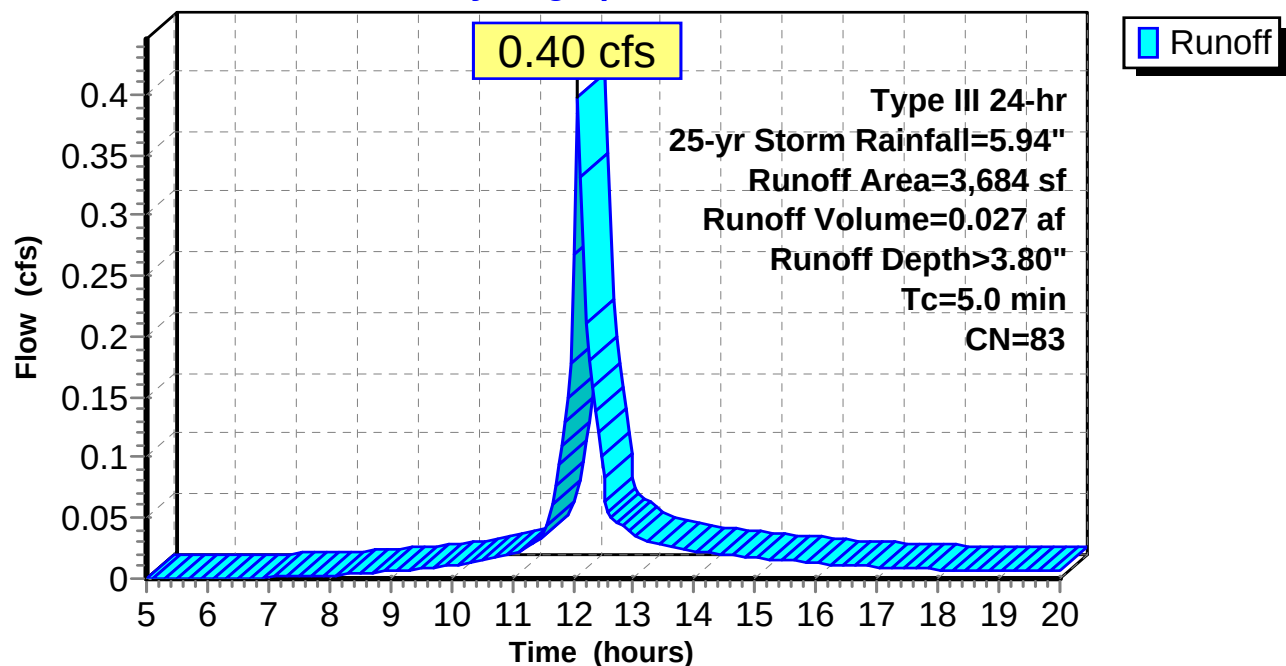
Summary for Subcatchment A-1:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.40 cfs @ 12.07 hrs, Volume= 0.027 af, Depth> 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-yr Storm Rainfall=5.94"

	Area (sf)	CN	Description
*	2,720	98	Impervious
	964	39	>75% Grass cover, Good, HSG A
	3,684	83	Weighted Average
	964		26.17% Pervious Area
	2,720		73.83% Impervious Area

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

Subcatchment A-1:**Hydrograph**

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Type III 24-hr 25-yr Storm Rainfall=5.94"

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Hydrograph for Subcatchment A-1:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.34	0.00	0.00	18.25	5.54	3.66	0.01
5.25	0.36	0.00	0.00	18.50	5.56	3.68	0.01
5.50	0.38	0.00	0.00	18.75	5.58	3.70	0.01
5.75	0.40	0.00	0.00	19.00	5.60	3.72	0.01
6.00	0.43	0.00	0.00	19.25	5.62	3.74	0.01
6.25	0.45	0.00	0.00	19.50	5.64	3.76	0.01
6.50	0.48	0.00	0.00	19.75	5.66	3.78	0.01
6.75	0.51	0.00	0.00	20.00	5.68	3.80	0.01
7.00	0.54	0.01	0.00				
7.25	0.57	0.01	0.00				
7.50	0.60	0.02	0.00				
7.75	0.64	0.02	0.00				
8.00	0.68	0.03	0.00				
8.25	0.72	0.04	0.00				
8.50	0.76	0.05	0.00				
8.75	0.81	0.07	0.01				
9.00	0.87	0.08	0.01				
9.25	0.92	0.10	0.01				
9.50	0.99	0.13	0.01				
9.75	1.05	0.15	0.01				
10.00	1.12	0.18	0.01				
10.25	1.20	0.22	0.01				
10.50	1.29	0.26	0.01				
10.75	1.38	0.31	0.02				
11.00	1.48	0.37	0.02				
11.25	1.61	0.44	0.03				
11.50	1.77	0.54	0.04				
11.75	2.11	0.77	0.09				
12.00	2.97	1.42	0.27				
12.25	3.83	2.14	0.18				
12.50	4.17	2.43	0.08				
12.75	4.33	2.57	0.05				
13.00	4.45	2.69	0.04				
13.25	4.56	2.78	0.03				
13.50	4.65	2.86	0.03				
13.75	4.74	2.94	0.03				
14.00	4.82	3.01	0.02				
14.25	4.89	3.07	0.02				
14.50	4.95	3.13	0.02				
14.75	5.02	3.19	0.02				
15.00	5.07	3.24	0.02				
15.25	5.13	3.29	0.02				
15.50	5.18	3.33	0.02				
15.75	5.22	3.38	0.01				
16.00	5.26	3.41	0.01				
16.25	5.30	3.45	0.01				
16.50	5.34	3.48	0.01				
16.75	5.37	3.51	0.01				
17.00	5.40	3.54	0.01				
17.25	5.43	3.57	0.01				
17.50	5.46	3.59	0.01				
17.75	5.49	3.62	0.01				
18.00	5.51	3.64	0.01				

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Type III 24-hr 25-yr Storm Rainfall=5.94"

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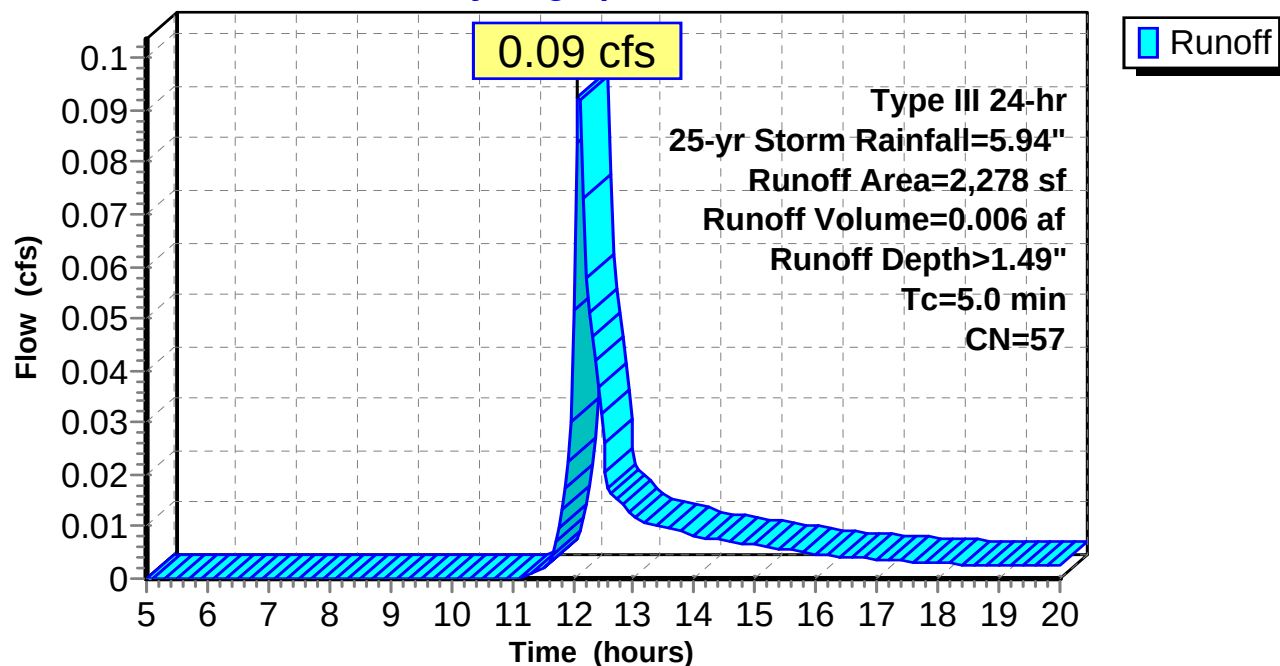
Summary for Subcatchment A-3:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 1.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-yr Storm Rainfall=5.94"

	Area (sf)	CN	Description
*	691	98	Impervious
	1,587	39	>75% Grass cover, Good, HSG A
	2,278	57	Weighted Average
	1,587		69.67% Pervious Area
	691		30.33% Impervious Area

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

Subcatchment A-3:**Hydrograph**

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Hydrograph for Subcatchment A-3:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.34	0.00	0.00	18.25	5.54	1.40	0.00
5.25	0.36	0.00	0.00	18.50	5.56	1.41	0.00
5.50	0.38	0.00	0.00	18.75	5.58	1.43	0.00
5.75	0.40	0.00	0.00	19.00	5.60	1.44	0.00
6.00	0.43	0.00	0.00	19.25	5.62	1.45	0.00
6.25	0.45	0.00	0.00	19.50	5.64	1.46	0.00
6.50	0.48	0.00	0.00	19.75	5.66	1.48	0.00
6.75	0.51	0.00	0.00	20.00	5.68	1.49	0.00
7.00	0.54	0.00	0.00				
7.25	0.57	0.00	0.00				
7.50	0.60	0.00	0.00				
7.75	0.64	0.00	0.00				
8.00	0.68	0.00	0.00				
8.25	0.72	0.00	0.00				
8.50	0.76	0.00	0.00				
8.75	0.81	0.00	0.00				
9.00	0.87	0.00	0.00				
9.25	0.92	0.00	0.00				
9.50	0.99	0.00	0.00				
9.75	1.05	0.00	0.00				
10.00	1.12	0.00	0.00				
10.25	1.20	0.00	0.00				
10.50	1.29	0.00	0.00				
10.75	1.38	0.00	0.00				
11.00	1.48	0.00	0.00				
11.25	1.61	0.00	0.00				
11.50	1.77	0.01	0.00				
11.75	2.11	0.04	0.01				
12.00	2.97	0.24	0.05				
12.25	3.83	0.55	0.05				
12.50	4.17	0.69	0.03				
12.75	4.33	0.77	0.02				
13.00	4.45	0.83	0.01				
13.25	4.56	0.88	0.01				
13.50	4.65	0.93	0.01				
13.75	4.74	0.97	0.01				
14.00	4.82	1.01	0.01				
14.25	4.89	1.05	0.01				
14.50	4.95	1.08	0.01				
14.75	5.02	1.11	0.01				
15.00	5.07	1.14	0.01				
15.25	5.13	1.17	0.01				
15.50	5.18	1.20	0.01				
15.75	5.22	1.22	0.01				
16.00	5.26	1.25	0.00				
16.25	5.30	1.27	0.00				
16.50	5.34	1.29	0.00				
16.75	5.37	1.31	0.00				
17.00	5.40	1.33	0.00				
17.25	5.43	1.34	0.00				
17.50	5.46	1.36	0.00				
17.75	5.49	1.37	0.00				
18.00	5.51	1.39	0.00				

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Type III 24-hr 25-yr Storm Rainfall=5.94"

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Summary for Pond RG: Rain Garden

Inflow Area = 0.085 ac, 73.83% Impervious, Inflow Depth > 3.80" for 25-yr Storm event
 Inflow = 0.40 cfs @ 12.07 hrs, Volume= 0.027 af
 Outflow = 0.36 cfs @ 12.12 hrs, Volume= 0.026 af, Atten= 11%, Lag= 2.6 min
 Discarded = 0.01 cfs @ 12.12 hrs, Volume= 0.008 af
 Primary = 0.34 cfs @ 12.12 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 97.64' @ 12.12 hrs Surf.Area= 251 sf Storage= 102 cf

Plug-Flow detention time= 20.0 min calculated for 0.026 af (98% of inflow)
 Center-of-Mass det. time= 10.9 min (784.4 - 773.5)

Volume	Invert	Avail.Storage	Storage Description
#1	96.76'	211 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
96.76	0	0	0
97.00	47	6	6
98.00	363	205	211

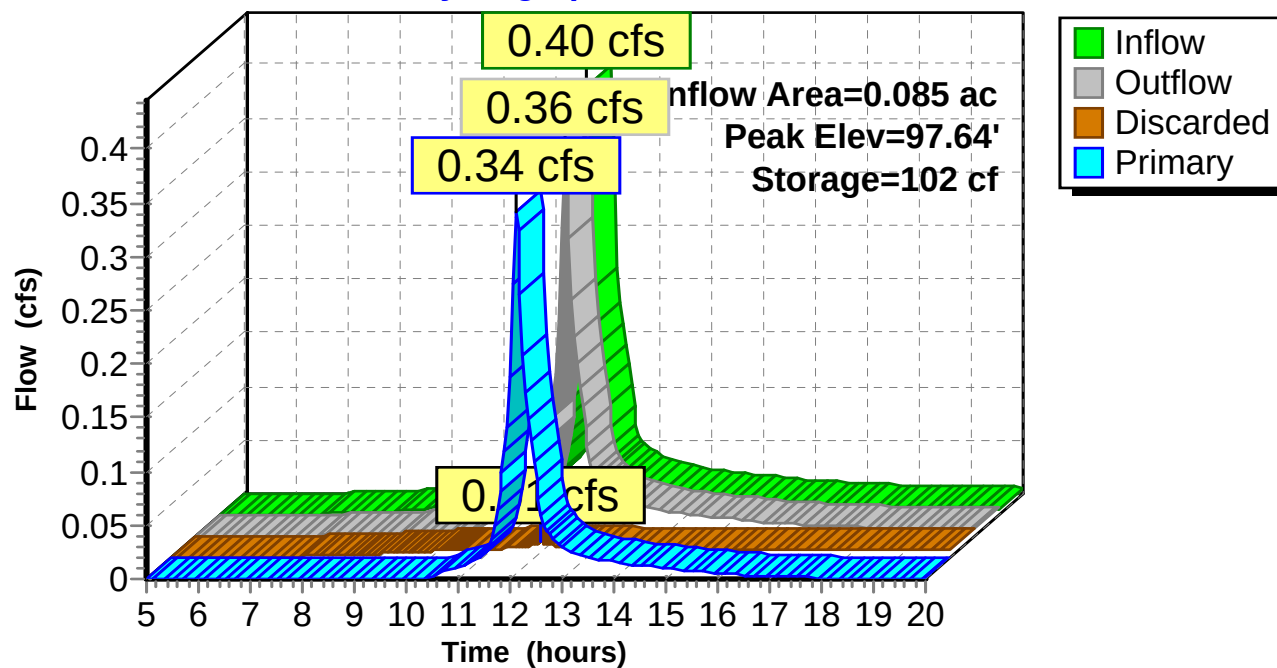
Device	Routing	Invert	Outlet Devices
#1	Discarded	96.76'	2.410 in/hr Exfiltration over Surface area
#2	Primary	97.26'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.01 cfs @ 12.12 hrs HW=97.64' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.33 cfs @ 12.12 hrs HW=97.64' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 0.33 cfs @ 2.09 fps)

Pond RG: Rain Garden

Hydrograph



16-195 Post

Type III 24-hr 25-yr Storm Rainfall=5.94"

Prepared by Hewlett-Packard

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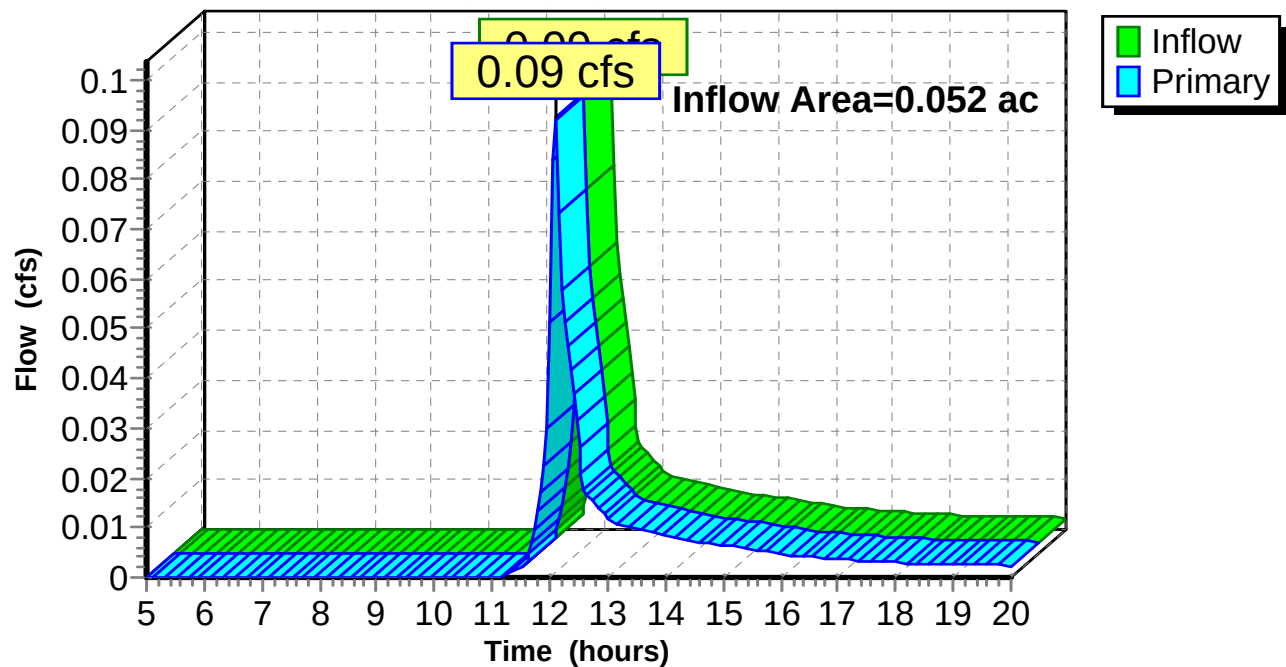
Hydrograph for Pond RG: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
5.00	0.00	0	96.76	0.00	0.00	0.00
5.50	0.00	0	96.76	0.00	0.00	0.00
6.00	0.00	0	96.77	0.00	0.00	0.00
6.50	0.00	0	96.80	0.00	0.00	0.00
7.00	0.00	1	96.83	0.00	0.00	0.00
7.50	0.00	1	96.88	0.00	0.00	0.00
8.00	0.00	3	96.92	0.00	0.00	0.00
8.50	0.00	5	96.98	0.00	0.00	0.00
9.00	0.01	9	97.05	0.00	0.00	0.00
9.50	0.01	14	97.12	0.00	0.00	0.00
10.00	0.01	21	97.20	0.01	0.01	0.00
10.50	0.01	31	97.28	0.01	0.01	0.00
11.00	0.02	37	97.32	0.02	0.01	0.01
11.50	0.04	41	97.35	0.03	0.01	0.02
12.00	0.27	74	97.53	0.20	0.01	0.19
12.50	0.08	57	97.44	0.10	0.01	0.09
13.00	0.04	43	97.36	0.04	0.01	0.03
13.50	0.03	40	97.34	0.03	0.01	0.02
14.00	0.02	39	97.33	0.02	0.01	0.02
14.50	0.02	37	97.32	0.02	0.01	0.01
15.00	0.02	36	97.32	0.02	0.01	0.01
15.50	0.02	35	97.31	0.02	0.01	0.01
16.00	0.01	34	97.30	0.01	0.01	0.01
16.50	0.01	33	97.29	0.01	0.01	0.00
17.00	0.01	32	97.29	0.01	0.01	0.00
17.50	0.01	32	97.28	0.01	0.01	0.00
18.00	0.01	31	97.27	0.01	0.01	0.00
18.50	0.01	30	97.27	0.01	0.01	0.00
19.00	0.01	29	97.26	0.01	0.01	0.00
19.50	0.01	28	97.25	0.01	0.01	0.00
20.00	0.01	26	97.24	0.01	0.01	0.00

Summary for Link AP1: Down property

Inflow Area = 0.052 ac, 30.33% Impervious, Inflow Depth > 1.49" for 25-yr Storm 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

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP1: Down property**Hydrograph**

16-195 Post

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Type III 24-hr 25-yr Storm Rainfall=5.94"

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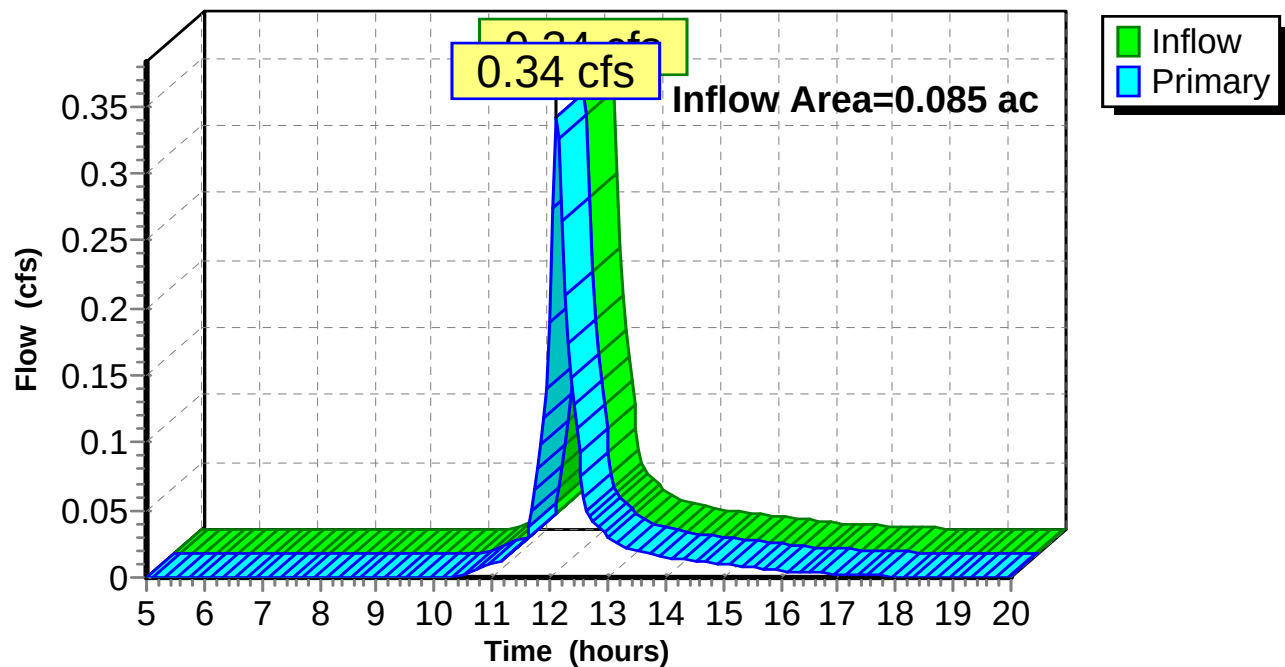
Hydrograph for Link AP1: Down property

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00
5.25	0.00	0.00	0.00	18.50	0.00	0.00	0.00
5.50	0.00	0.00	0.00	18.75	0.00	0.00	0.00
5.75	0.00	0.00	0.00	19.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	19.25	0.00	0.00	0.00
6.25	0.00	0.00	0.00	19.50	0.00	0.00	0.00
6.50	0.00	0.00	0.00	19.75	0.00	0.00	0.00
6.75	0.00	0.00	0.00	20.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00				
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.00	0.00	0.00				
10.50	0.00	0.00	0.00				
10.75	0.00	0.00	0.00				
11.00	0.00	0.00	0.00				
11.25	0.00	0.00	0.00				
11.50	0.00	0.00	0.00				
11.75	0.01	0.00	0.01				
12.00	0.05	0.00	0.05				
12.25	0.05	0.00	0.05				
12.50	0.03	0.00	0.03				
12.75	0.02	0.00	0.02				
13.00	0.01	0.00	0.01				
13.25	0.01	0.00	0.01				
13.50	0.01	0.00	0.01				
13.75	0.01	0.00	0.01				
14.00	0.01	0.00	0.01				
14.25	0.01	0.00	0.01				
14.50	0.01	0.00	0.01				
14.75	0.01	0.00	0.01				
15.00	0.01	0.00	0.01				
15.25	0.01	0.00	0.01				
15.50	0.01	0.00	0.01				
15.75	0.01	0.00	0.01				
16.00	0.00	0.00	0.00				
16.25	0.00	0.00	0.00				
16.50	0.00	0.00	0.00				
16.75	0.00	0.00	0.00				
17.00	0.00	0.00	0.00				
17.25	0.00	0.00	0.00				
17.50	0.00	0.00	0.00				
17.75	0.00	0.00	0.00				
18.00	0.00	0.00	0.00				

Summary for Link AP2: Street/Public System

Inflow Area = 0.085 ac, 73.83% Impervious, Inflow Depth = 2.64" for 25-yr Storm event
Inflow = 0.34 cfs @ 12.12 hrs, Volume= 0.019 af
Primary = 0.34 cfs @ 12.12 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP2: Street/Public System**Hydrograph**

16-195 Post

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Type III 24-hr 25-yr Storm Rainfall=5.94"

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Hydrograph for Link AP2: Street/Public System

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00
5.25	0.00	0.00	0.00	18.50	0.00	0.00	0.00
5.50	0.00	0.00	0.00	18.75	0.00	0.00	0.00
5.75	0.00	0.00	0.00	19.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	19.25	0.00	0.00	0.00
6.25	0.00	0.00	0.00	19.50	0.00	0.00	0.00
6.50	0.00	0.00	0.00	19.75	0.00	0.00	0.00
6.75	0.00	0.00	0.00	20.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00				
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.00	0.00	0.00				
10.50	0.00	0.00	0.00				
10.75	0.01	0.00	0.01				
11.00	0.01	0.00	0.01				
11.25	0.02	0.00	0.02				
11.50	0.02	0.00	0.02				
11.75	0.06	0.00	0.06				
12.00	0.19	0.00	0.19				
12.25	0.21	0.00	0.21				
12.50	0.09	0.00	0.09				
12.75	0.04	0.00	0.04				
13.00	0.03	0.00	0.03				
13.25	0.02	0.00	0.02				
13.50	0.02	0.00	0.02				
13.75	0.02	0.00	0.02				
14.00	0.02	0.00	0.02				
14.25	0.01	0.00	0.01				
14.50	0.01	0.00	0.01				
14.75	0.01	0.00	0.01				
15.00	0.01	0.00	0.01				
15.25	0.01	0.00	0.01				
15.50	0.01	0.00	0.01				
15.75	0.01	0.00	0.01				
16.00	0.01	0.00	0.01				
16.25	0.00	0.00	0.00				
16.50	0.00	0.00	0.00				
16.75	0.00	0.00	0.00				
17.00	0.00	0.00	0.00				
17.25	0.00	0.00	0.00				
17.50	0.00	0.00	0.00				
17.75	0.00	0.00	0.00				
18.00	0.00	0.00	0.00				

5/12/2017

To Whom It May Concern,

This letter is to confirm that as of 5/12/2017, JP Sheridan LLC has at Camden National Bank the funds to cover the estimated project cost listed in the site plan for 88 Walnut St.



Kathleen Dodge

Branch Operations Supervisor II

2 Canal Plaza

Portland ME 04101

207-774-6736 ext. 1116

kdodge@camdennational.com

88 Walnut Street – City Meeting and Comments

Upload the individual site plan sheets into ePlan, rather than the whole set in one PDF.

- The sheets have been uploaded individually.

Address sidewalk waiver criteria for the sidewalk on Sheridan Street.

- The sidewalk waiver has been uploaded to the ePlan project folder entitled “EHP Request for Sidewalk Waiver”

Driveway separation is not being met, could the driveway be shared with the abutting parcel? A waiver needs to be requested. Explain the need for the waiver.

- The waiver is being required due to the following extraordinary conditions. We are currently working on formally applying for said waiver.
 - The site is located on the corner of Walnut Street and Sheridan Street. Moving the driveway any closer to the intersection could pose a potential traffic risk and could break the City code.
 - The site also features a steep grade change and an approximately 3’ high retaining wall just past the proposed property line. Moving the driveway back to match the abutting driveway would cause significant grade issues. Additionally, if the driveways were to be combined, the abutting property would lose some of its parking space.

Street tress – three are required and one being proposed. Is it possible to have a couple along the Sheridan Street frontage?

- We believe the site to be too tight to add any additional trees along the frontage. Keeping with the city’s 30’ recommended spacing, the only place to put a tree along Walnut Street would be next to the intersection of Sheridan St. Placing a tree here poses a potential traffic hazard and would limit road visibility. Putting another tree along Sheridan St would be unwise due to the steep slope along the property as well as the narrow gap between the proposed house and the existing guardrail.

No bike racks are on the site plan, are any being proposed?

- Bike racks will not be provided. Each unit is given a garage; therefore, a bike rack would be unnecessary.

The details of the retaining wall need to be provided.

- The details of the proposed curved retaining wall have been added to the building plan.

The property is in the brick district. If there are significant impact on the existing concrete sidewalk, it will have to be replaced in brick.

- The project proposed no impact on the existing concrete sidewalk. The driveway will connect to the existing driveway apron and there will be no proposed grading taking place on the sidewalk.

Please provide the property line on the plans.

- All property lines, both existing and proposed, have been shown on the plans.

The applicant shall conduct a sidewalk waiver evaluation per City Ordinance Criteria. My initial assessment and field review of area conditions is that a sidewalk is required.

- A request for a sidewalk waiver has been written and uploaded to the ePlan portal.

The applicant shall provide documentation in support of a waiver from the City's driveway separation standard. While an existing condition, the driveway separation is significantly non-compliant

- A request for a driveway separation waiver is being filled out. We feel our project qualifies for all the reasons previously mentioned.

The design of the driveway apron shall account for a sidewalk accessibility route that shall not exceed 2 percent

- We are proposing to connect the proposed driveway to the existing driveway apron, leaving it in place and making no changes in any form to the existing sidewalk.

The existing sidewalk material policy is brick on Walnut Street and the current plan maintains the existing concrete surface. Accordingly, this may not meet City sidewalk material standards. There is a provision for use of alternative materials if the sidewalk is in good condition and the disturbed section represents less than 50% of the block. This needs to be evaluated. I would also note that the City Policy is for the driveway apron material to match the sidewalk material.

- No changes in any form are being proposed to the sidewalk or driveway apron.

Per Section 13 of the City's Technical Manual, the Applicant is required to submit a Boundary Survey that has been Stamped by a Maine Licensed Professional Surveyor. The included Boundary Survey has not been stamped or signed.

- A stamped and signed boundary survey has been uploaded to the ePlan portal.

Final plans must be stamped by a professional engineer (Section 14-527, sub-section (e) of the City of Portland Land Use Ordinance).

- Updated stamped plans have been uploaded to the ePlan portal.

Per Section 12 of the City's Technical Manual, a Level III development project is required to submit a photometric plan demonstrating minimal light trespass from the site

- We are in the process of securing a photometric plan to meet the City's requirements.

In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:

Basic standards: Plans, notes and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, and C of MaineDEP Chapter 500

General Standards: The project will result in an increase in impervious surface. The area of increase is unclear as the areas vary on the application narrative and the application form. The Applicant is proposing to install a rain garden that will provide adequate treatment for the proposed project. We have the following comments:

The Applicant should provide sizing calculations showing that the rain garden has been sized per MaineDEP Stormwater Best Management Practices manual.

- Sizing calculations and tables have been included in the attached stormwater narrative and HydroCAD reports.

The Rain Garden elevations provided on drawing Sheet C200 do not match elevations provided within the post-development HydroCAD model. Please clarify.

- The issue has been resolved and updated to accurately reflect the designed system.

The proposed snow storage should not be located within the rain garden swale.

- The proposed snow storage is located just out of the swale. The idea in the design is that the snow will be stored outside of the swale, and when it melts, the runoff will be caught in the swale, treated and then discharged to the public system.

Flooding Standards: The project will result in an increase in impervious surface (area unclear as noted above). The model indicates that peak flows will be reduced in the post-development condition in accordance with the requirements of the Flooding Standard. Note that prior to this project, stormwater was not discharged directly to the City's stormwater infrastructure. The proposed flow is very small, but the City will need to verify capacity, and the Applicant will also be required to provide additional information on how the proposed stormwater connection will be made.

- We are currently coordinating with City officials to verify the system can handle the proposed flow. The drawings have been updated to show a service tie connection to the existing storm drain system.

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.

- The stormwater narrative contains a section discussing the maintenance plan for the rain gardens and best management practices.

All work within the City Right-of-Way is required to comply with City of Portland Technical Standards. Applicant should provide details for the following items, and any others that may be required, in accordance with the standards: Reinforced Concrete Sidewalk, Vertical Granite Curb and Tipdowns, Typical Pipe Trench Installation, and Pavement Repair

- The specified details have been added to the plans on Sheet C201.

88 WALNUT STREET - JP SHERIDAN LLC
Zoning Related Design Standards

We looked first to the (i) *TWO-FAMILY, SPECIAL NEEDS INDEPENDENT LIVING UNITS, MULTIPLE-FAMILY, LODGING HOUSES, BED AND BREAKFASTS, AND EMERGENCY SHELTERS*: as the design guidelines to follow and we have achieved all those standards. The only standard that we found conflicted with our design needs is the primary building entry oriented to the street. We felt that providing a traditional two-story front porch would provide wonderful living spaces for the tenant and provide the street with an element where the tenants could interact with the neighborhood. Traditionally there is a front stair associated with these porches but the steepness of site presented a challenge with having enough space to physically build the exterior stairs to a porch deck, and the distance it would create for the tenant to travel from their garage to their front door. Placing the interior stair at the front of the building also changed the layout in a negative way where the access to the porch would be hindered and less private. Without a stair, there is direct flow from the living area to the outdoor space and light and views to the street visible from both the living room and a bedroom.

We feel the best location for the entry stair to the building is adjacent to the garage bays in the middle of the building. The stair also is being used as a sound barrier between the two flat style units and the larger townhouse unit. We are providing a landscaped stair with lighting post and covered area leading to the entry door. There will be house numbers attached to the house next to the landscaped walk and stairs and a decorative trim element with house number at the end of the covered area in front of the door. We have increased the depth of the roof above the garage doors to provide more shelter to pedestrians. We feel that these elements will alert all the visitors to this entry, and being only a three family dwelling, it will not present itself as a disadvantage for the limited number of visitors. In turn, having the entry off the driveway provides easy access for the tenants to their garage for their car or bike.

88 WALNUT STREET - JP SHERIDAN LLC**Request for Waiver for a sidewalk on the Sheridan Street side of the property.**

Existing conditions: The 88 Walnut Street property is a corner lot at Walnut and Sheridan. The primary building façade will be facing Walnut Street and the drive access to the site is on Walnut Street. Walnut Street has an existing concrete sidewalk that runs from Washington Ave to North Street. There is no existing sidewalk on the Sheridan Street side of the property but it has granite curbing in place with a guardrail approximately 2' off of the curb. The guardrail protects cars and pedestrians from a very steep slope. It is a 40 to 60% grade change along this edge. There is an existing concrete sidewalk on the east side of Sheridan Street that ends in a crosswalk across Walnut Street.

Under Sec. 14-506 Modifications (b)

Paragraphs 1 and 3 under Sidewalks are true for the property.

1. **No. 1. There is no reasonable expectation for pedestrian usage coming from or going to our site along this street.** Our building does not have any doors on the Sheridan Street side to warrant a sidewalk. The site is a steep slope so that we are building the lower level into the hill. The lower level is where all the entry and garage doors are located. Access will be from Walnut only.
The next building on our side of Sheridan is 240' away and the topography transitions from a steep slope to a 26-foot drop-off.
2. **No. 3. A safe alternate-walking route is reasonably and safely available on the other side of the street.** There is a sidewalk on the opposite side of the street available for pedestrians which ties into the crosswalk at Walnut.

We are requesting a variance to the sidewalk due to the following extraordinary conditions: Sec. 14-506 Modifications (a)

1. Steep grade change on the edge of Sheridan Street. There is a 12'-0" grade change from Sheridan to our driveway elevation. We would need to increase the height of our building foundation and floor-to-floor height to retain the additional fill needed to create a level grade for a sidewalk. Increasing the floor-to-floor height would require more internal stairs that would require we increase the building footprint to accommodate the stairs. All these factors would increase the cost of construction by tens of thousands of dollars.
2. Sheridan Street is only a 40' right-of-way, not the 50' City standard. There is only 6' available between property line and existing granite curb for sidewalk and esplanade. This does not meet minimum city standard for the two, so only a sidewalk could be built.
3. There is a sidewalk on the opposite side of the street available for pedestrians that runs the length of Sheridan Street from Cumberland to Walnut with the exception of a gap at Fort Sumner park. It intersects Walnut Street "level" so that it provides a safe landing and turning point for handicapped individuals. There is also a crosswalk for Walnut on that side of the road. This would be difficult to achieve on our corner due to the slope intersections of Walnut Street, Sheridan Street and our property. There is a 1'-0" foot drop in an 8'-0" area at the corner. **Please note:** We are happy to contribute to the construction required to bridge the sidewalk gap at Fort Sumner when the City installs that sidewalk or contribute to the addition of a rubber tactile pad on the corner of Walnut and Sheridan, where there is currently none.
4. The next building on Sheridan Street on the west side of the road is 240' away from the end of our property and 344' from the intersection of Walnut. There is no sidewalk existing along this stretch. All of it is protected with a guardrail due to a very steep slope.

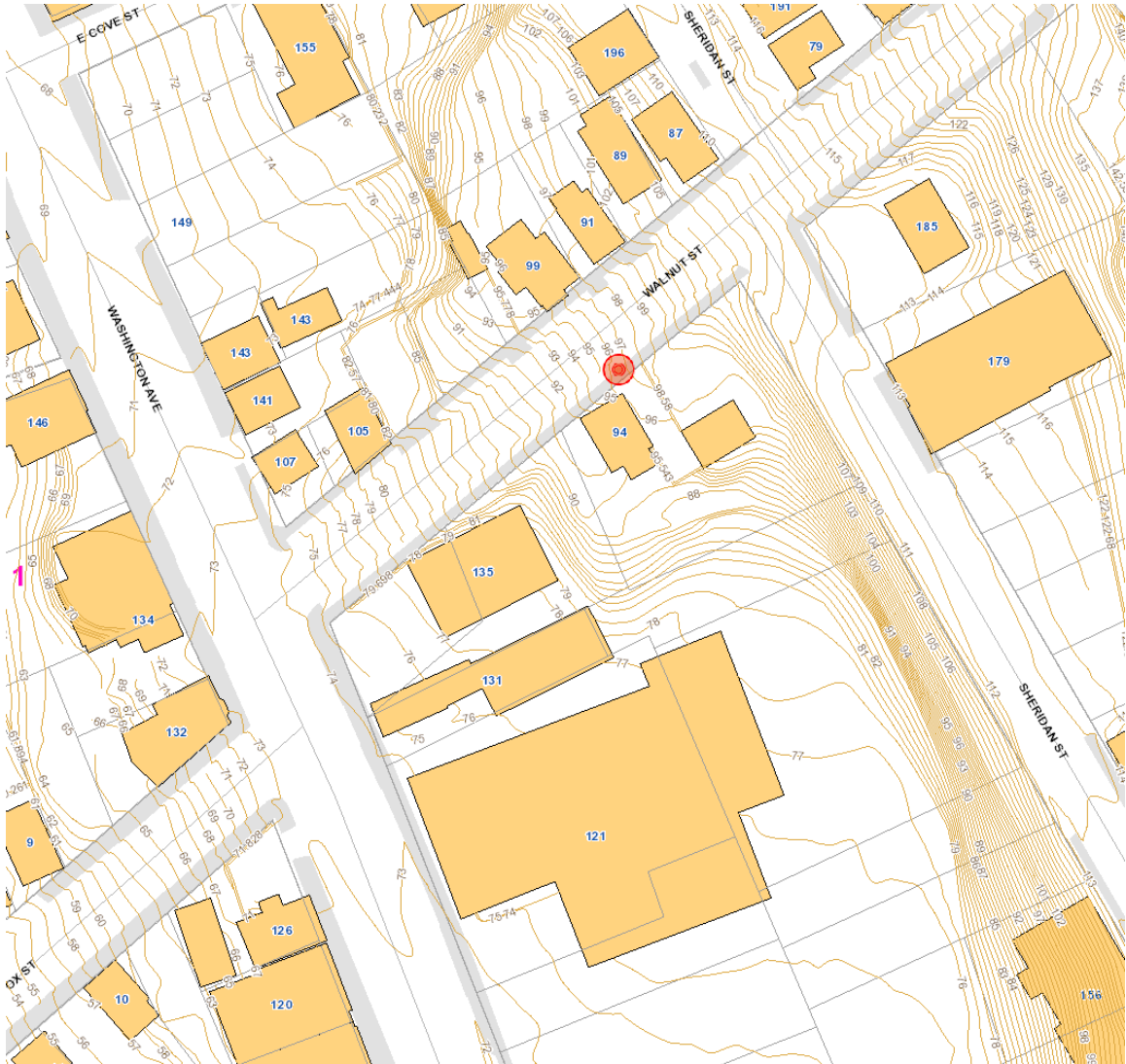
(See topography map below.) The property in between is the former Creighton's property. Its only access is from Washington Ave. It is under redevelopment right now with no changes to the building, the lot is now being built out as a 160+ car parking lot, and the new tenant has a 10-year lease, so there is no expectation for a connecting sidewalk in the near future.

5. It would put an undue burden on the property owner to maintain a clear sidewalk in winter months. They would be obligated to shovel over 103' of sidewalk that would in turn place the snow plowed from the street up against our building foundation because of the lack of an esplanade.

Due to all these unique and extraordinary conditions, we request a waiver on placement of a new sidewalk on Sheridan Street and request we be allowed the continued use of the guardrail that is in place.



View of Site and abutting properties.



Topography of site and abutting properties.



Existing Driveway Views





View up Sheridan from Walnut

View of adjacent property from
Sheridan St.





Sheridan Street Views

88 WALNUT STREET - JP SHERIDAN LLC
Request for Waiver for Location and Spacing of Driveways

Technical Manual Section 1.7.1

Residential development with nine (9) parking spaces or less:

Minimum/maximum driveway width: Any site shall have a minimum driveway width of ten (10) feet and a maximum width of twenty (20) feet measured at the property line.

Location of driveway: A driveway shall be located on the lot in a manner to provide a minimum distance of twenty (20) ft spacing between it and adjacent driveways. This spacing shall be measured between edge of driveways at the property line. If the development is a Level III site plan with frontage on an arterial roadway, the standards listed in the table under section 1.6.1.7 shall apply.

No more than one (1) driveway shall be permitted.

We request a waiver from this standard due to the unique characteristics of the site and the inability to achieve a 20' separation without creating other site problems.

The development is an infill project where the existing lot has a dual driveway with curb cuts. The site is unique in that it is a corner lot with a steep drop of 10' from Sheridan Street to the existing curb cut on Walnut Street. The drive is located about 48' from the intersection with Sheridan Street. Using the existing driveway curb cut was the best, if not only option for the site. It is in the desired location for a 26' garage with a 24' back-up area of the driveway with the building being sited into the hill of the property. The design standards for a B2b zone encourage the creation of an urban street wall as well so it made the most sense to bury the garage bays into the hill.

Moving the driveway closer to Sheridan Street to provide separation was not desirable or economical. We would lose the turning radius needed to drive into the garage. It would require a taller retaining wall between properties, fill to raise the driveway elevation, the removal of a street tree, and would place the drive closer to the intersection of Sheridan Street.

The existing driveways currently abut at the property line with about 3' separation at the street. We will be removing a portion of the existing asphalt to provide for drainage and planting, and a privacy screen, between the existing house and new apartment building. This will create about 9' of separation between the driveways at the property line and 12' of separation at the street.

Combining driveways is not an option as there is a 2' grade change between the two, with an existing retaining wall separating them, and the lower drive will lose its parking area.

Construction Management - 88 Walnut

Summary

We are hoping to begin site work for the project in the Fall of 2017. Site work and construction will be performed continuously through the fall (pending permit approval) and into the winter, in two phases. Phase one includes the required site work, pilings, cofferdam, retaining wall and foundation/slab pour, to begin in October. Phase 2 will begin immediately following, in November/December 2017, and continue through March 2018. Construction will be performed by Papi and Romano builders. Site work will be performed by Les Wilson & Sons. Cofferdam and pilings will be done by HB Fleming. Concrete work will be done by Tristone Industries. Work will be performed Monday-Friday, excluding holidays, beginning after 7am and ending at 6pm daily. The work site will be closed off to pedestrian access throughout construction with temporary fencing along the Walnut St entrance point.

Throughout both phases of construction, site work and parking will be contained to the 88 Walnut St property, and the abutting property at 176 Sheridan St. During Phase 2, there may be a need to access the building from Sheridan street via a parked boom, at which point we will file the necessary paperwork to get parking permits to reserve 2 parking spots on Sheridan St above the site. As is, there is parking on the side of the street, and the parked boom will not interrupt traffic or pedestrian flow.

Construction Administration and Communication

Point of contact for Papi and Romano Builders, who will be managing the site throughout all site work and construction: Rick Romano (207)-650-3670 , and Ken Booth (207)-650-3579. The 24hr contact is Jake Edwards (207)-415-3037.

Construction Schedule

Phase I - October-November 2017

- Demo existing 3 car garage. Dig safe has been notified of the demolition, and the required demo permits will be filed upon Planning Board approval of the project.
- Site work
 - Excavating, pilings & cofferdam, build retaining wall into the back of Sheridan Street
 - Foundation and slab pour - access site from below, on 88 Walnut property
- Street opening - we have been in touch with Nathaniel Smith at the City to coordinate with the contractor that will be performing the Walnut Street opening for sewer work, so that if timing allows we can pull the sewer/water/gas connections from Walnut Street when it is open. Last we were aware, the project had not yet gone out to bid. If we cannot

coordinate the timing, we hope to perform the street opening during Phase 1 of construction, during the site work, and will file for the necessary street opening permits. Work will be done by Les Wilson & Sons.

Phase II - December 2017-April 2018

- Papi and Romano builders, and all subcontractors, will be accessing the building site off of Walnut St from the bottom of the building. Off-street parking for work vehicles will be provided at the base of the work site, in what is shown as the new driveway on the site plan. Should we need to access the site from Sheridan St, the proper Parking Ban permitting will be acquired through the City's Public Works department with no parking signs posted at least 24 hours in advance.
- We will landscape the site as soon as the weather allows in the Spring of 2018, per the submitted landscape plan.

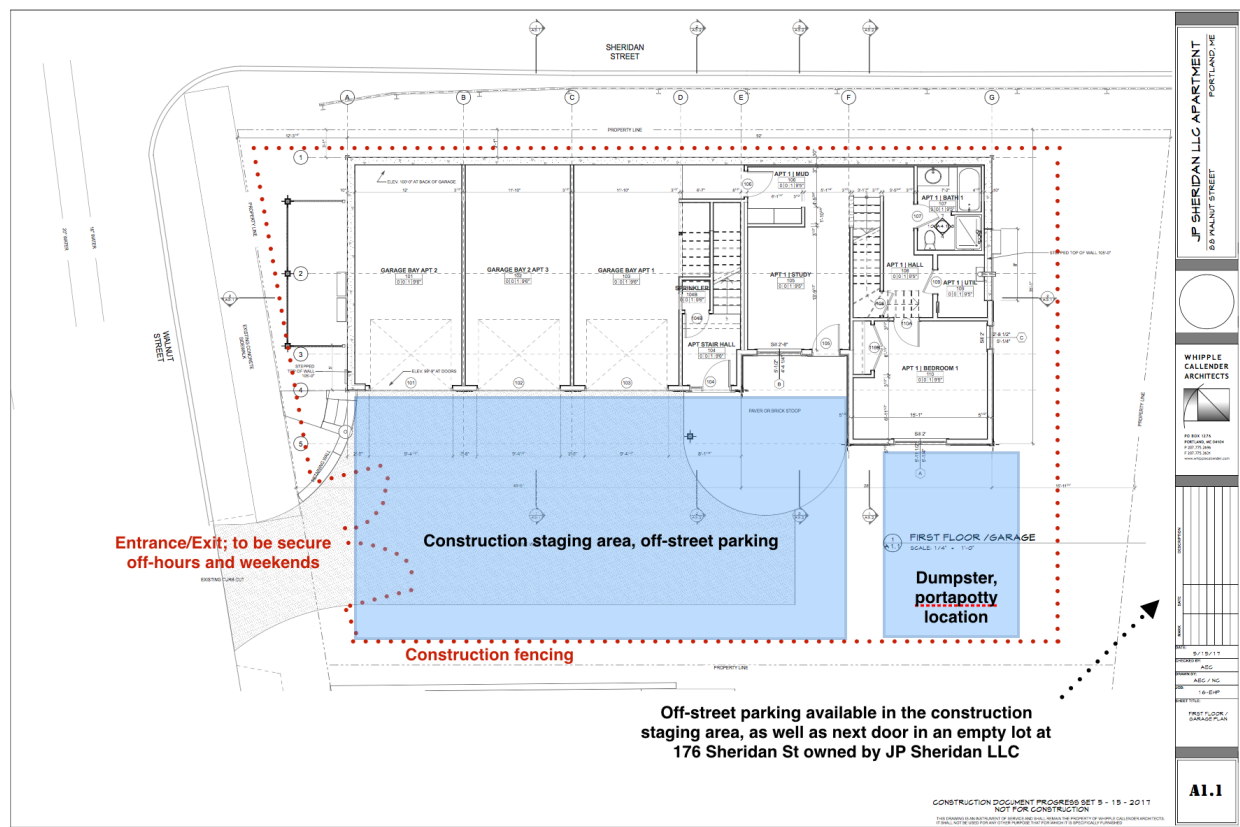
Security & Public Safety

- A temporary perimeter fence will enclose the work site, running on the property from the intersection of Walnut St and Sheridan down to the northeast point of the property, and then perpendicular to Walnut St, along the existing retaining wall that separate 88 Walnut from 94 Walnut.

Site Management

- Papi and Romano will be responsible for removing all trash and debris weekly, at a minimum. Les Wilson & Sons will do any necessary snow removal from the work site as well as snow removal, sanding and salting of the work site and Walnut St sidewalk during construction.

Site Overview, Plan



Les Wilson and Sons Excavating Contractors
P.O. Box 1028, Westbrook, ME 04098

Att. M

JP Sheridan LLC
C/O Jake Edwards

July 14, 2017

Les Wilson and Sons is pleased to submit the following proposal for snow plowing, sanding and removal services for the coming 2017 – 2018 winter season.

Contract price: \$3,600.00

***Our contract price Includes unlimited plowing of all storms with 2" or more of accumulation and 14 applications of salted sand. Any work other than stated (snow removal, push back or hand shoveling) will only be performed at your request and will be considered an extra and billed at the below referenced rates. There is a one-hour minimum charge on all equipment. Storms with more than 16" of accumulation will be charged out at \$20.00 per additional inch.*

Invoicing will be as follows: \$1,200.00 on December 1, 2017, January 1, 2018 and February 1, 2018. The invoice terms are "due upon receipt."

EXTRA SERVICE RATES:

Salted sand (after 14 applications)	\$125.00 per application
Loader	\$150.00 per hour
14 yard dump truck	\$70.00 per hour
18 yard dump truck	\$80 per hour
Dump fees	\$30.00 per load

Les Wilson & Sons will stake out the property prior to the plow season, but will not be responsible for repairs or replacement of lawn areas, shrubs, trees, fencing or curbing that may be damaged during the winter season.

Les Wilson and Sons Excavating Contractors
P.O. Box 1028, Westbrook, ME 04098

ALL MATERIAL IS GUARANTEED TO BE AS SPECIFIED. ALL WORK IS TO BE COMPLETED IN A WORKMANLIKE MANNER ACCORDING TO STANDARD PRACTICES. ANY ALTERATION OR DEVIATION FROM SPECIFICATIONS ABOVE INVOLVING EXTRA COSTS WILL BECOME AN EXTRA CHARGE OVER AND ABOVE THE ESTIMATE. ALL AGREEMENTS CONTINGENT UPON STRIKES, ACCIDENTS OR DELAYS BEYOND OUR CONTROL. OWNER TO CARRY FIRE, TORNADO AND OTHER NECESSARY INSURANCE. OUR WORKERS ARE FULLY COVERED BY WORKMAN'S COMPENSATION INSURANCE. CUSTOMER IS RESPONSIBLE FOR ANY AND ALL COLLECTION FEES INCLUDING, BUT NOT LIMITED TO, ATTORNEY FEES AND COURT COSTS.

Please note, this proposal may be withdrawn by us if not accepted within 30 days.

If this is acceptable to you, please sign and return one copy to us. Thank you.

Les Wilson & Sons

Chris Wilson

Chris Wilson
President

ACCEPTANCE OF PROPOSAL: The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance: _____

Signature: _____



Att. N

May 12, 2017

David Latham
424 Fore Street
Portland, ME 04101

Re: 389936-94 Walnut Street, Portland
Ability to Serve with PWD Water

Dear Applicant:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on April 20, 2017. Based on the information provided per the Site Utility and Drainage Plan (C100), approved on 4/25/17, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 2-inch domestic water service and 4-inch fire sprinkler service may be installed from the new water main in Walnut Street. The service(s) should enter through the properties frontage at least 10-feet from any side property lines.
- The services will be installed as part of the water main renewal project. The PWD contractor awarded the renewal project work will install the services from the main to the property line, including the tees and valves. Prices for the work to be determined at a later date and fees collected during the service application.
- Service installation will need to be coordinated with the schedule of the water main renewal project.

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

Existing Site Service

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



Water System Characteristics

According to District records, there is an 16-inch diameter cast iron water main within Walnut Street that is planned for renewal with a 12-inch ductile iron main in the summer of 2017, and a public fire hydrant located 100 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading of the hydrant was 61 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.

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

A handwritten signature in black ink, appearing to read 'Robert A. Bartels', written in a cursive style.

Robert A. Bartels, P.E.
Senior Project Engineer

J.P. SHERIDAN LLC APARTMENTS

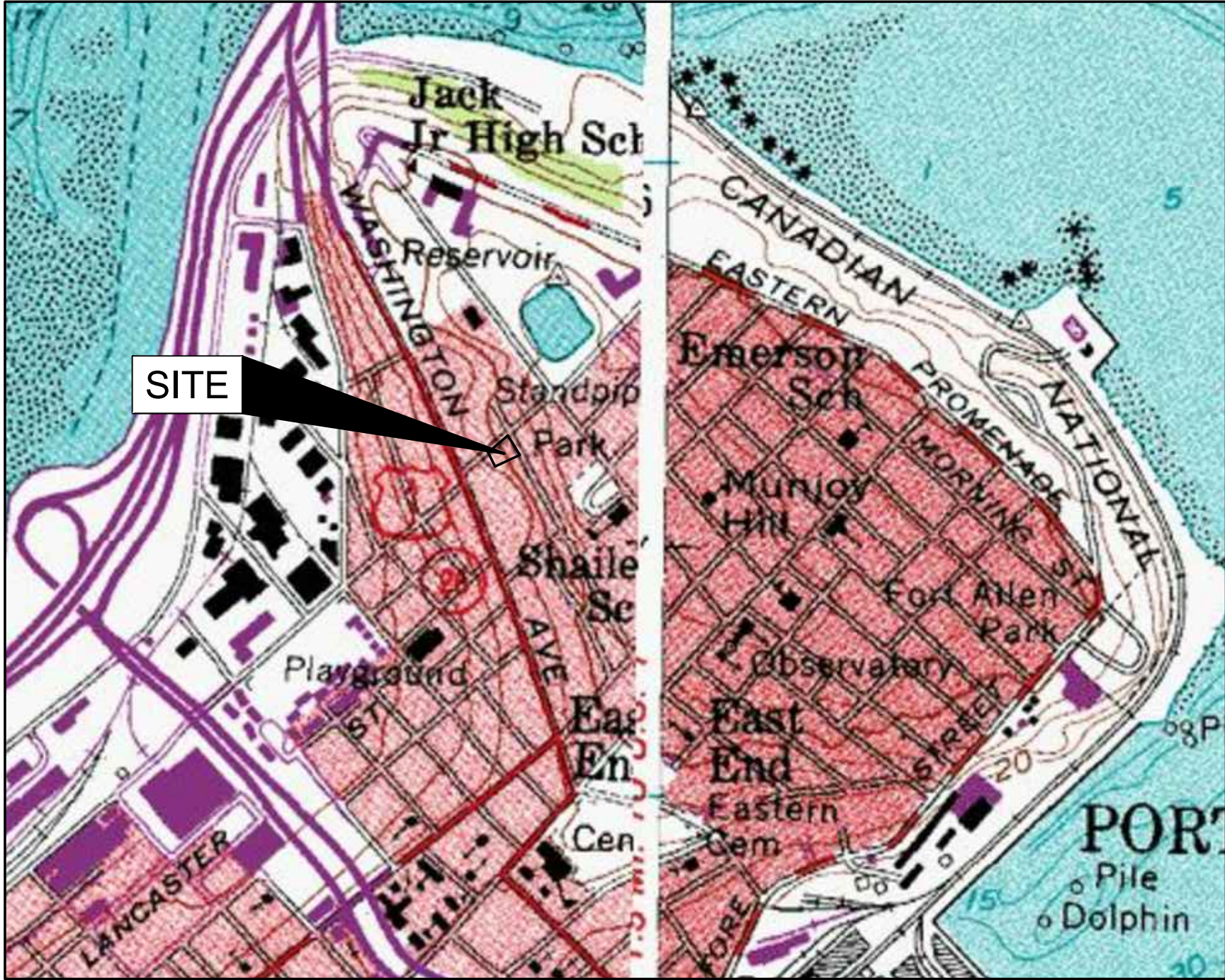
88 WALNUT STREET
JUNE 20, 2017

GENERAL NOTES

- 2) THE CONTRACT WORK TO BE PERFORMED ON THIS PROJECT CONSISTS OF FURNISHING ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, IMPLEMENTS, PARTS AND SUPPLIES NECESSARY FOR OR APPURTENANT TO, THE INSTALLATION OF CONSTRUCTION IMPROVEMENTS IN ACCORDANCE WITH THESE DRAWINGS AND AS FURTHER ELABORATED IN ANY ACCOMPANYING SPECIFICATIONS.
- 3) THE WORK SHALL BE PERFORMED IN A THOROUGH WORKMANLIKE MANNER. ALL CONTRACTORS TO CONFORM TO ALL APPLICABLE OSHA STANDARDS. ANY REFERENCE TO A SPECIFICATION OR DESIGNATION OF THE AMERICAN SOCIETY FOR TESTING MATERIALS, FEDERAL SPECIFICATIONS, OR OTHER STANDARDS, CODES OR ORDERS, REFERS TO THE MOST RECENT OR LATEST SPECIFICATION OR DESIGNATION.
- 4) ALL CONSTRUCTION WITHIN THE TOWN RIGHT OF WAY SHALL COMPLY WITH TOWN PUBLIC WORKS STANDARDS. ALL CONSTRUCTION WITHIN A STATE RIGHT OF WAY SHALL COMPLY WITH MAINE D.O.T. STANDARDS. ALL UTILITY CONSTRUCTION SHALL CONFORM TO RESPECTIVE UTILITY STANDARDS.
- 5) THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS REQUIRED BY THE TOWN PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE TOWN REQUIRED TO PERFORM ALL THE WORK (STREET OPENINGS, BUILDING PERMIT, ETC.). THE CONTRACTOR SHALL POST ALL BONDS AS REQUIRED, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- 6) PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR IS TO INFORM ALL AREA UTILITY COMPANIES AND GOVERNMENTAL AGENCIES OF PLANNED CONSTRUCTION. THE SITE CONTRACTOR IS REQUIRED TO CONTACT DIG-SAFE (1-800-4225-4977) AT LEAST 3 BUSINESS DAYS PRIOR TO ANY EXCAVATION TO VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY LOCATIONS.
- 7) THE PROJECT DRAWINGS ARE GENERALLY SCHEMATIC AND INDICATE THE POSSIBLE LOCATION OF EXISTING UNDERGROUND UTILITIES. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY MAPS, MUNICIPAL RECORD MAPS, AND FIELD SURVEY. IT IS NOT GUARANTEED TO BE CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES, INCLUDING SERVICES, WHEN THOSE SERVICES ARE TO BE LEFT IN PLACE. THE CONTRACTOR IS TO PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING THE EXCAVATING AND BACKFILLING OPERATIONS. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED UTILITIES BE FOUND, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH THE WORK IN THIS AREA.
- 8) OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN TEN FEET (10') OF ANY ELECTRIC LINE. IF THE CONTRACTOR MUST OPERATE CLOSER THAN 10', THE CONTRACTOR MUST CONTACT THE POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS BEFORE ENCRDACHING ON THIS REQUIREMENT.
- 9) IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLANS, APPROVALS, AND DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL THE SITE CONDITIONS IN THE FIELD AND CONTACT THE DESIGN ENGINEER IF THERE ARE ANY DISCREPANCIES REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT AN APPROPRIATE REVISION CAN BE MADE PRIOR TO BIDDING.
- 10) THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF THE BUILDING AREA, BUILDING AND CURBSHAWNS SHOWN ARE CONCEPTUAL. ALL SITE DIMENSIONS ARE REFERENCED TO PROPERTY LINES, THE FACE OF DRIVEWAYS, OUTSIDE FACE OF WALLS, OR EDGE OF PAVING UNLESS OTHERWISE NOTED.
- 11) ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED IN WRITING BY THE OWNER, DESIGN ENGINEER, AND APPROPRIATE GOVERNMENTAL AGENCY PRIOR TO INSTALLATION.
- 12) THE CONTRACTOR SHALL RESTORE ALL UTILITY STRUCTURES, PIPE, UTILITIES, PAVEMENT, CURBS, SIDEWALKS, AND LANDSCAPED AREAS DISTURBED BY CONSTRUCTION TO AS GOOD AS BEFORE BEING DISTURBED AS DETERMINED BY CITY CODE ENFORCEMENT OFFICIALS. ANY DAMAGES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 13) ALL EXCAVATION SHALL BE BACKFILLED TO EXISTING GRADE BEFORE THE END OF THE DAY OR ADEQUATELY PROTECTED FROM DANGER TO HUMANS AND ANIMALS.
- 14) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE OWNER WILL PROVIDE A BENCH MARK AT THE CONSTRUCTION SITE FROM WHICH TO BEGIN LAYOUT.
- 15) THE CONTRACTOR SHALL GUARANTEE THE FAITHFUL REMEDY OF ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND GUARANTEE PAYMENT FOR ANY RESULTING DAMAGE WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OF THE PROJECT.
- 16) THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
- 17) A PRE-CONSTRUCTION CONFERENCE WITH THE OWNER, DESIGNERS, TOWN OFFICIALS AND CONTRACTOR SHALL BE REQUIRED BEFORE ANY CONSTRUCTION OCCURS ON THE PROJECT. DURING CONSTRUCTION THERE SHALL BE WEEKLY PROGRESS MEETINGS WITH THE OWNER (ON SITE OR TELECONFERENCE) UNTIL PROJECT COMPLETION.
- 18) PROPER IMPLEMENTATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE OF PARAMOUNT IMPORTANCE FOR THIS PROJECT. THE CONTRACTOR SHALL BE 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 STATE/LOCAL/ FEDERAL INSPECTORS AT NO ADDITIONAL COST TO THE OWNER.

DRAWING LIST

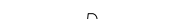
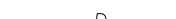
C100	SITE UTILITY AND DRAINAGE PLAN
C101	PRE AND POST WATERSHED PLAN
C200	SITE DETAILS
C201	SITE DETAILS
C300	EROSION CONTROL DETAILS



LOCUS MAP
NOT TO SCALE

SIGNATURE BLOCK

LEGEND

EXISTING		PROPOSED
	MONUMENT FOUND	
	UTILITY POLE	
	MANHOLE	
	SIGN	
	HYDRANT	
	WATER VALVE OR SHUTOFF	
	GAS VALVE	
	ELECTRIC OR GAS METER	
	STONE WALL	
	CURB	
	OVERHEAD ELECTRIC	
	STORM DRAIN LINE	
	GAS LINE	
	TAX MAP	
	NOW OR FORMERLY	
	DEED BOOK AND PAGE	
	PAVEMENT	
	CONTOUR LINES	
	BUILDING	
	SUBCATCHMENT LINE	
	TIME OF CONCENTRATION	

OWNER:

JP SHERIDAN LLC
88 WALNUT STREET
PORTLAND, ME 04101

ARCHITECT:

WHIPPLE CALLENDER ARCHITECTS
136 PLEASANT AVE
PORTLAND, ME 04103

CONSULTANTS:

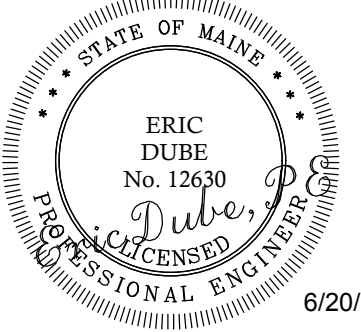
CASCO BAY ENGINEERING
424 FORE STREET
PORTLAND, ME 04101



CLIENT:

WHIPPLE CALLENDER
ARCHITECTS

136 PLEASANT AVE.
PORTLAND, MAINE 04103



UP SHERIDAN LLC APARTMENT
88 WALNUT STREET
PORTLAND, ME

PROPOSED BUILDING

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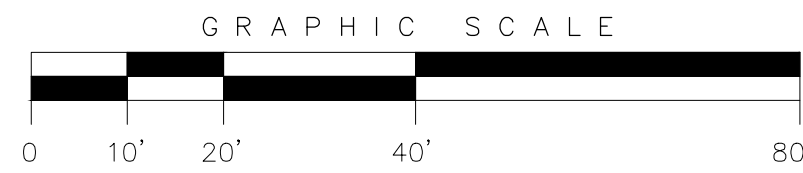
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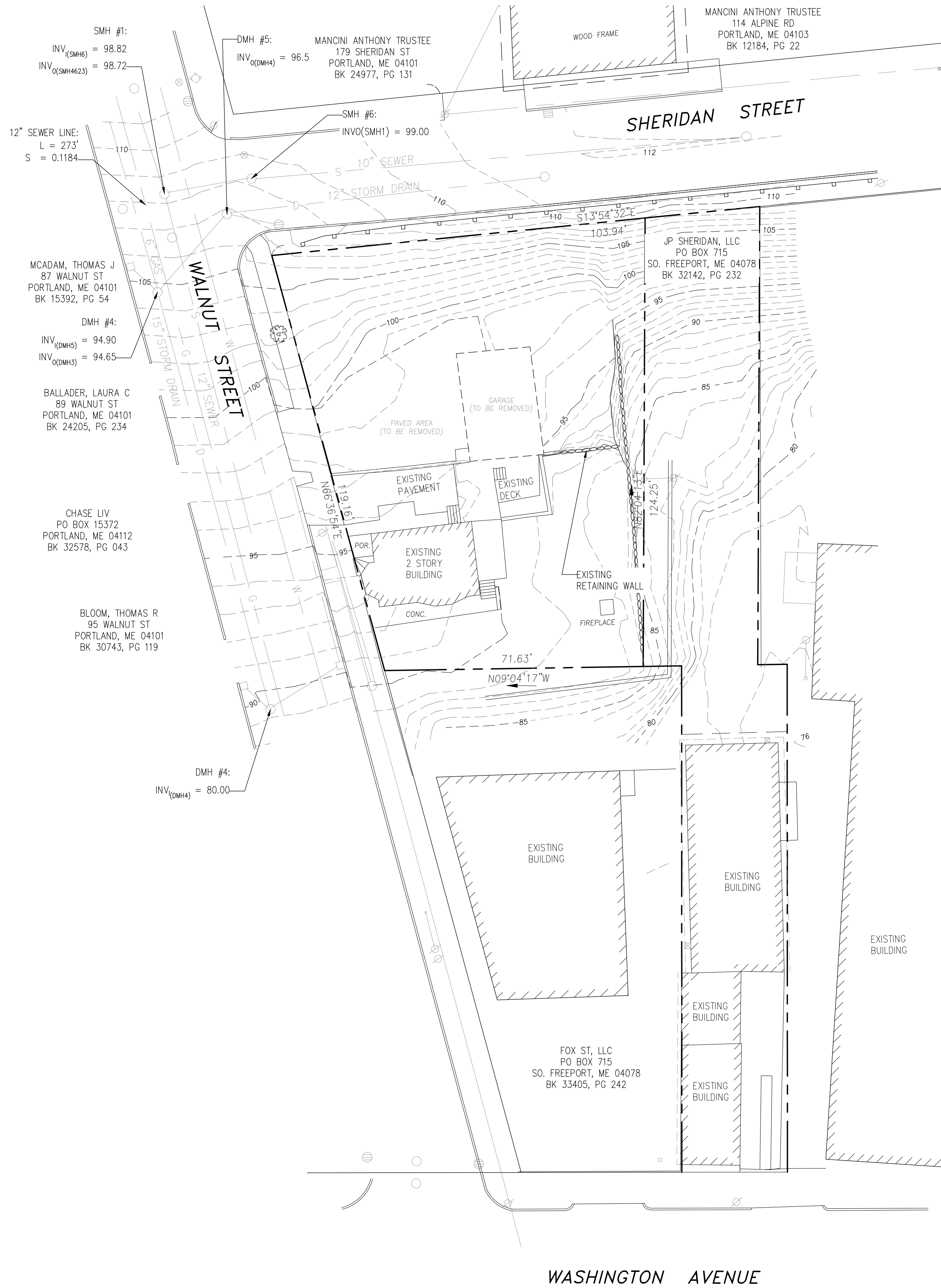
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CADD FILE:	16-195-C100.DWG
PROJECT NUMBER:	16-195

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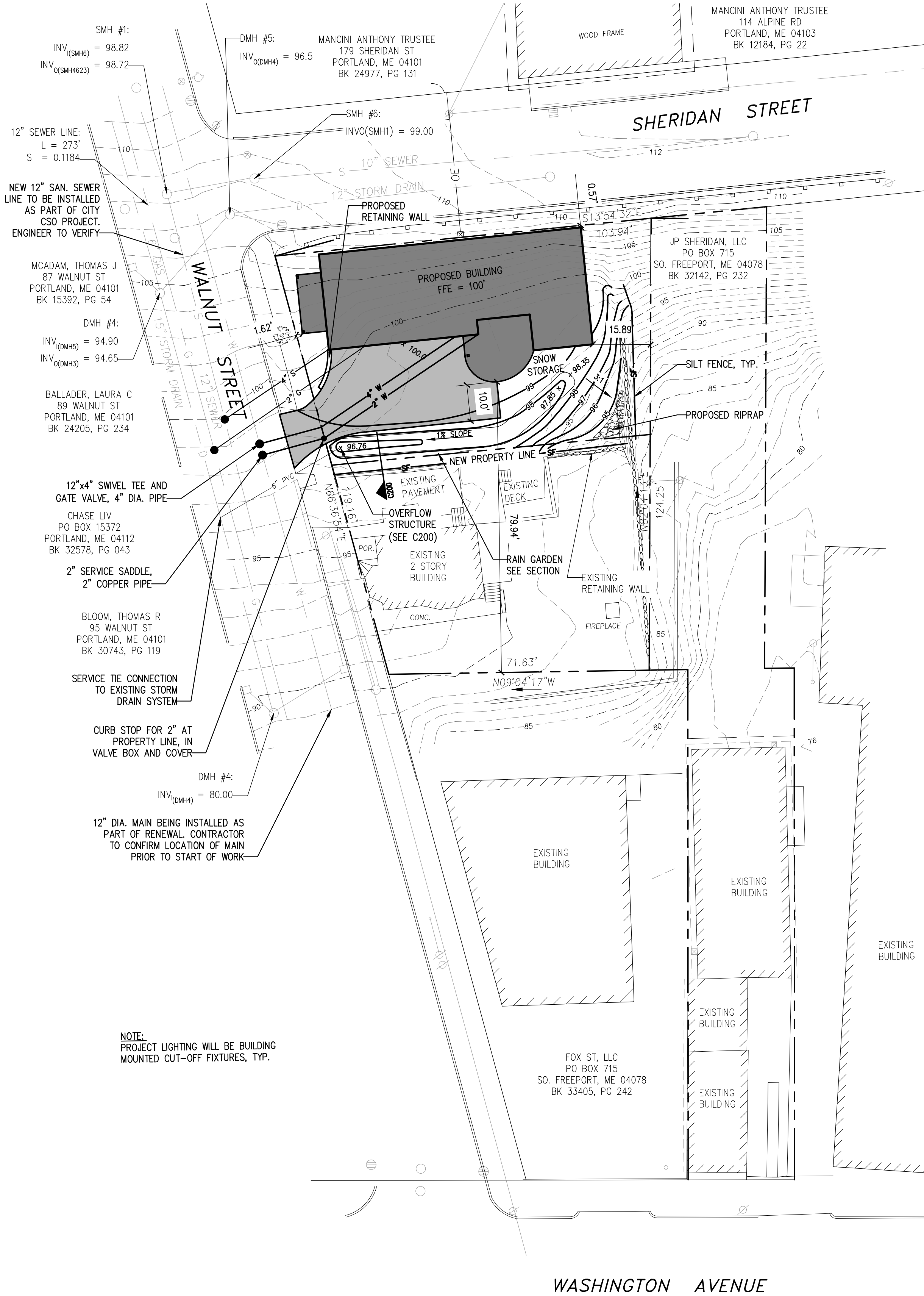
PRINTED: Jun 20, 2017



SITE PLAN

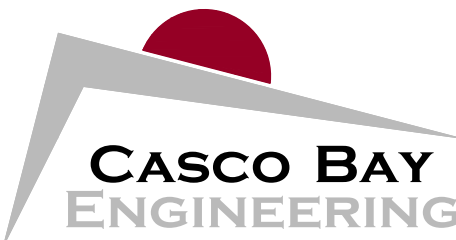
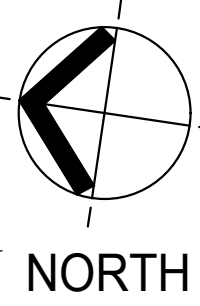


EXISTING SITE PLAN



PROPOSED SITE PLAN

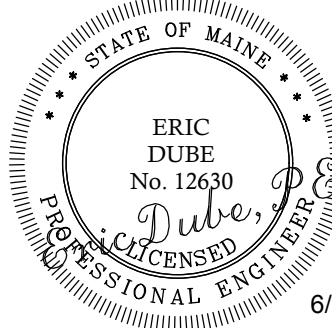
SCALE: 1:20



424 Fore Street
Portland, ME 04101
Phone 207.842.2800
Fax 207.842.2828
www.cascobayengineering.com

CLIENT:
**WHIPPLE CALLENDER
ARCHITECTS**

136 PLEASANT AVE.
PORTLAND, MAINE 04103



JP SHERIDAN LLC APARTMENT
88 WALNUT STREET
PORTLAND, MAINE

PROPOSED BUILDING

ISSUED	DESCRIPTION	DR. BY	CHK. BY	DATE
No.				

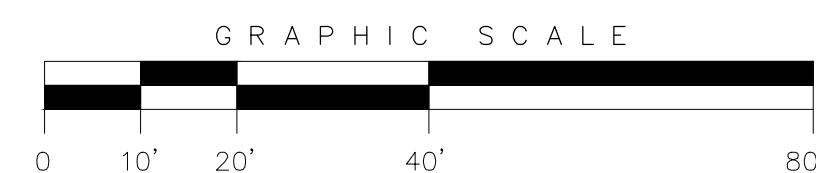
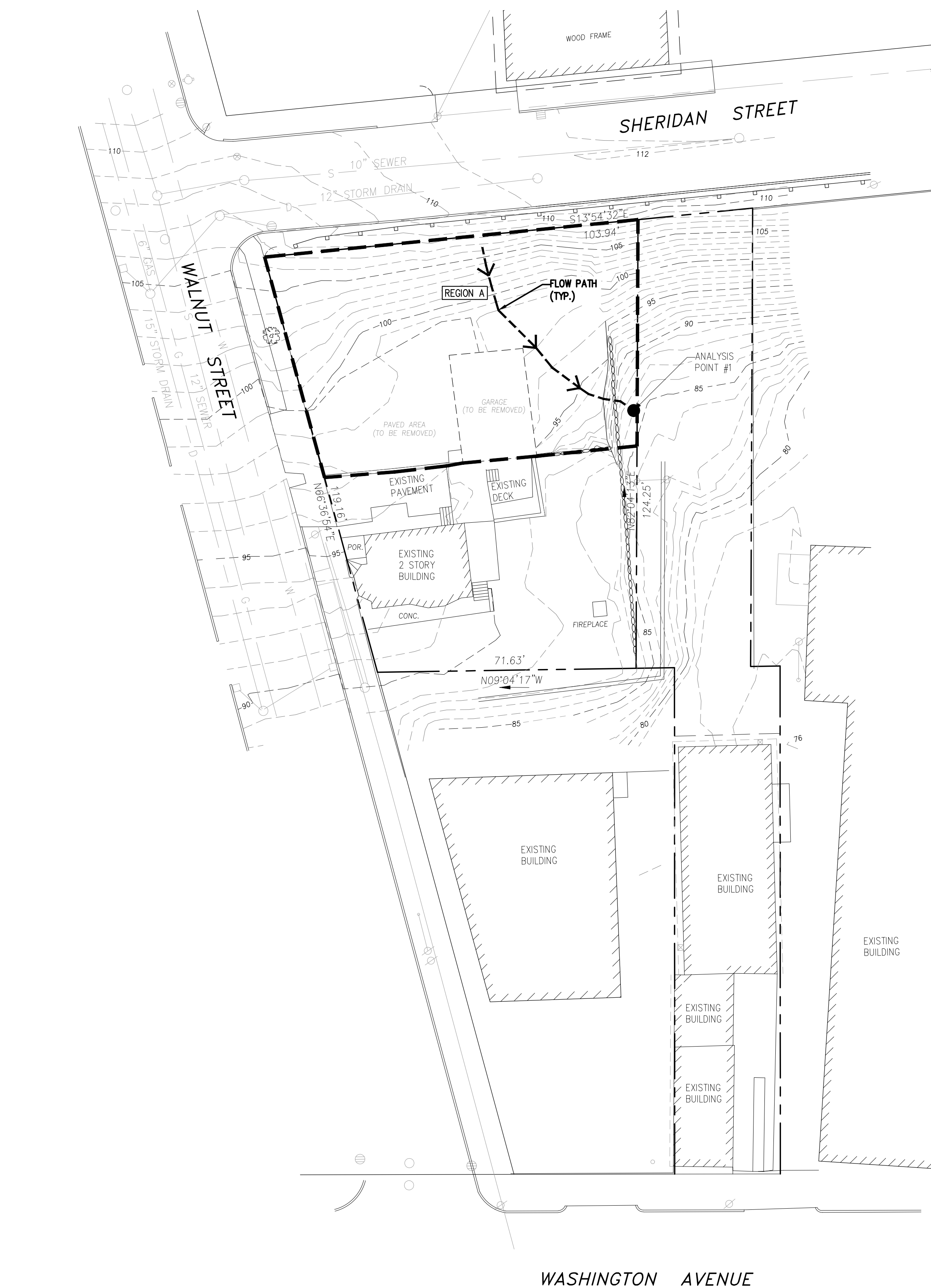
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**SITE UTILITY AND
DRAINAGE PLAN**

DESIGNED: ED
DRAWN: DL
DATE: 6-20-17
PROJECT NUMBER: 16-195

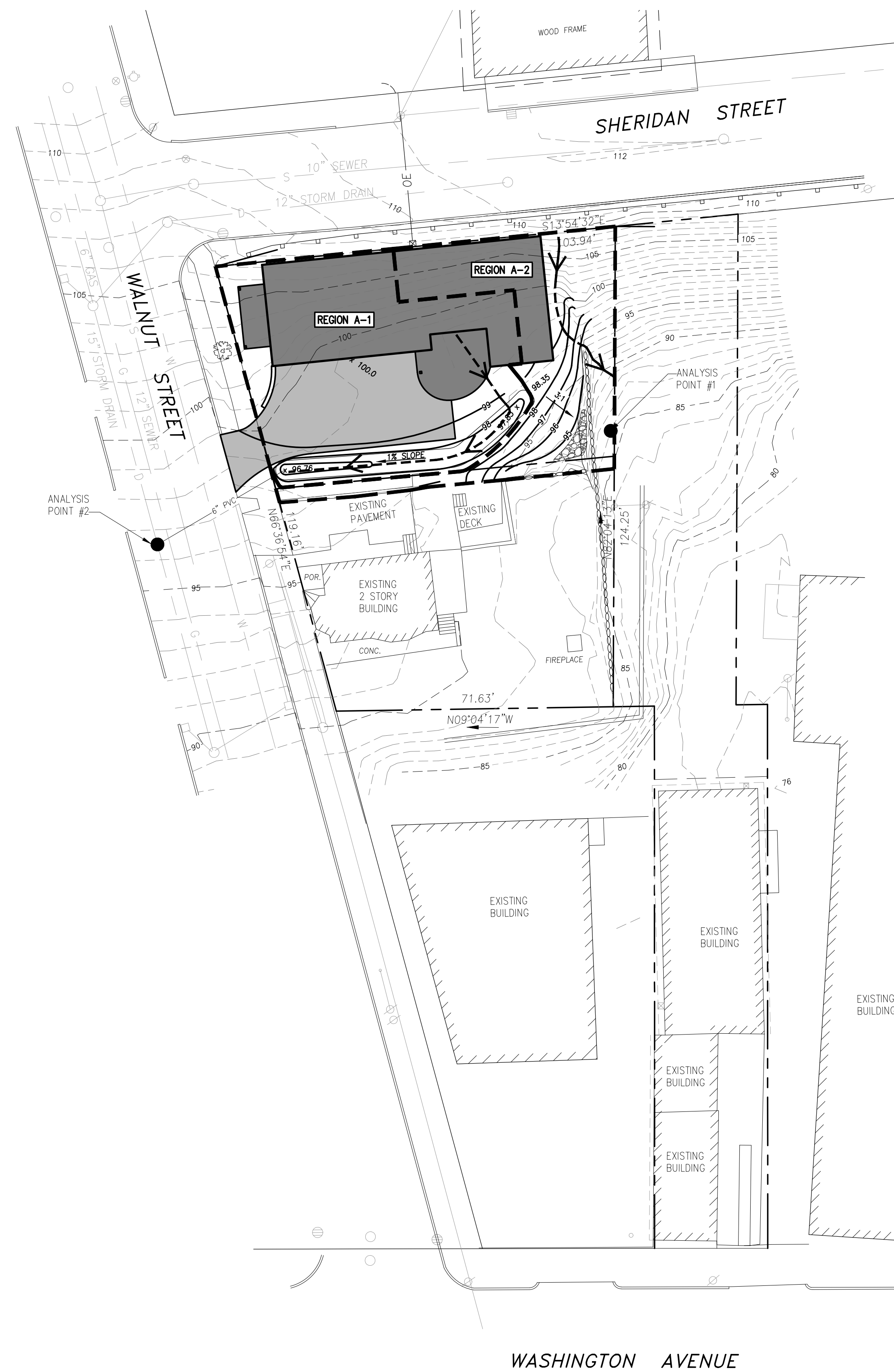
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PRINTED: Jun 20, 2017



PRE DEVELOPMENT WATERSHED PLAN

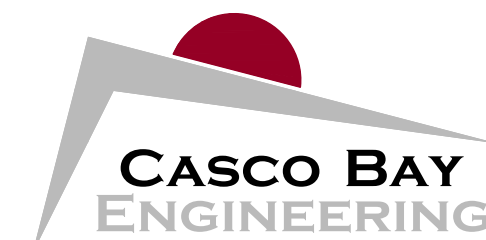
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NOTE: ALL SOILS ON SITE ARE HYDROLOGIC SOIL GROUP "A"

POST DEVELOPMENT WATERSHED PLAN

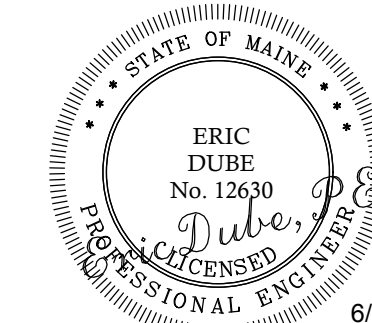
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424 Fore Street
Portland, ME 04101
Phone 207.842.2800
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CLIENT:
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ARCHITECTS

136 PLEASANT AVE.
PORTLAND, MAINE 04103



JP SHERIDAN LLC APARTMENT
88 WALNUT STREET
PORTLAND, MAINE

PROPOSED BUILDING

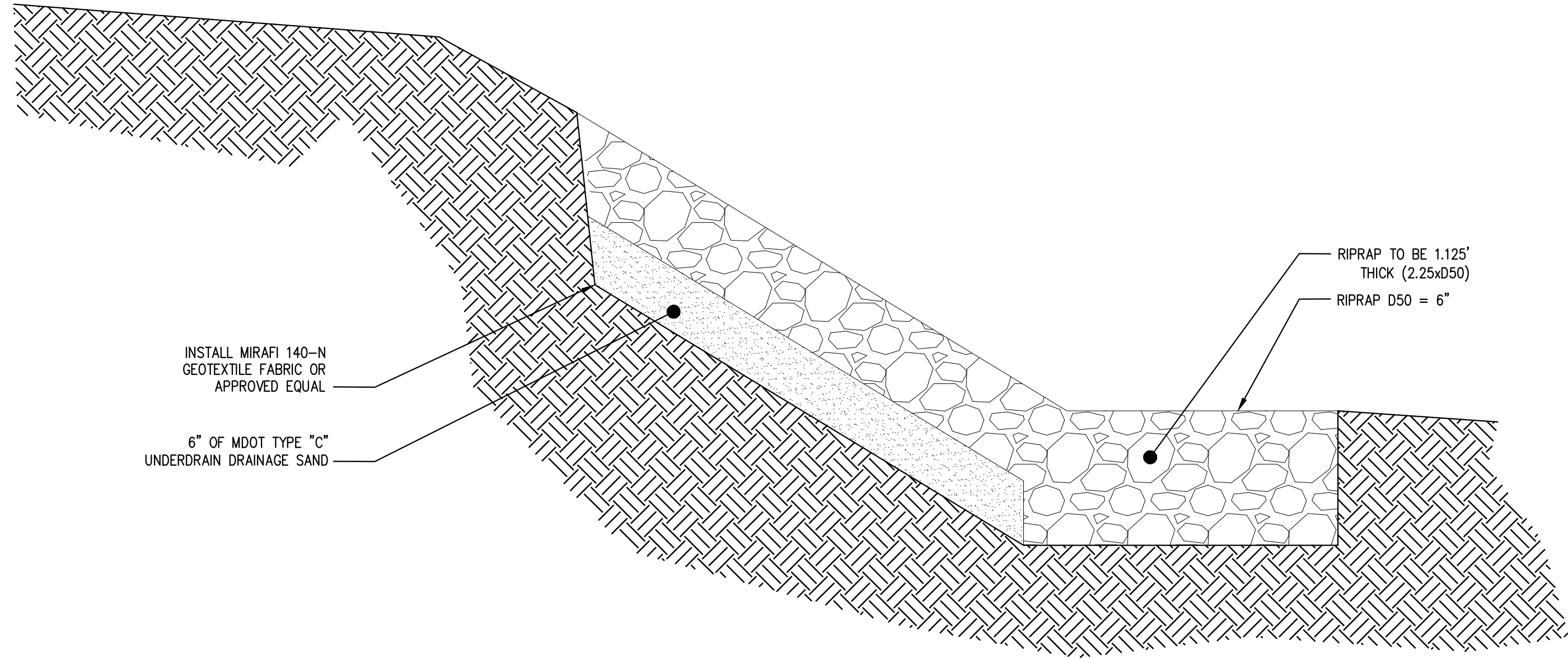
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PRE AND POST WATERSHED PLAN

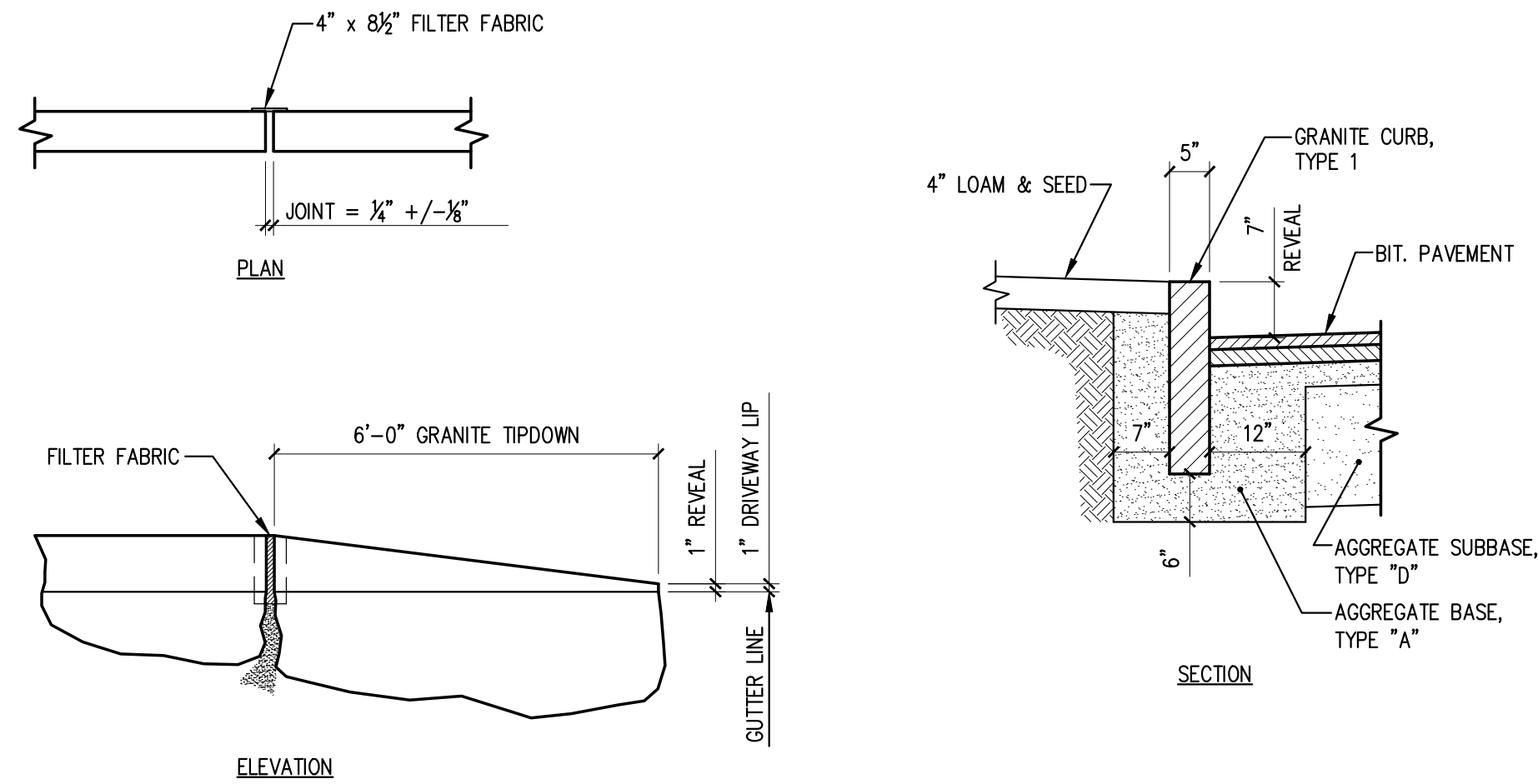
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DRAWN:	DL
DATE:	6-20-17
PROJECT NUMBER:	16-195

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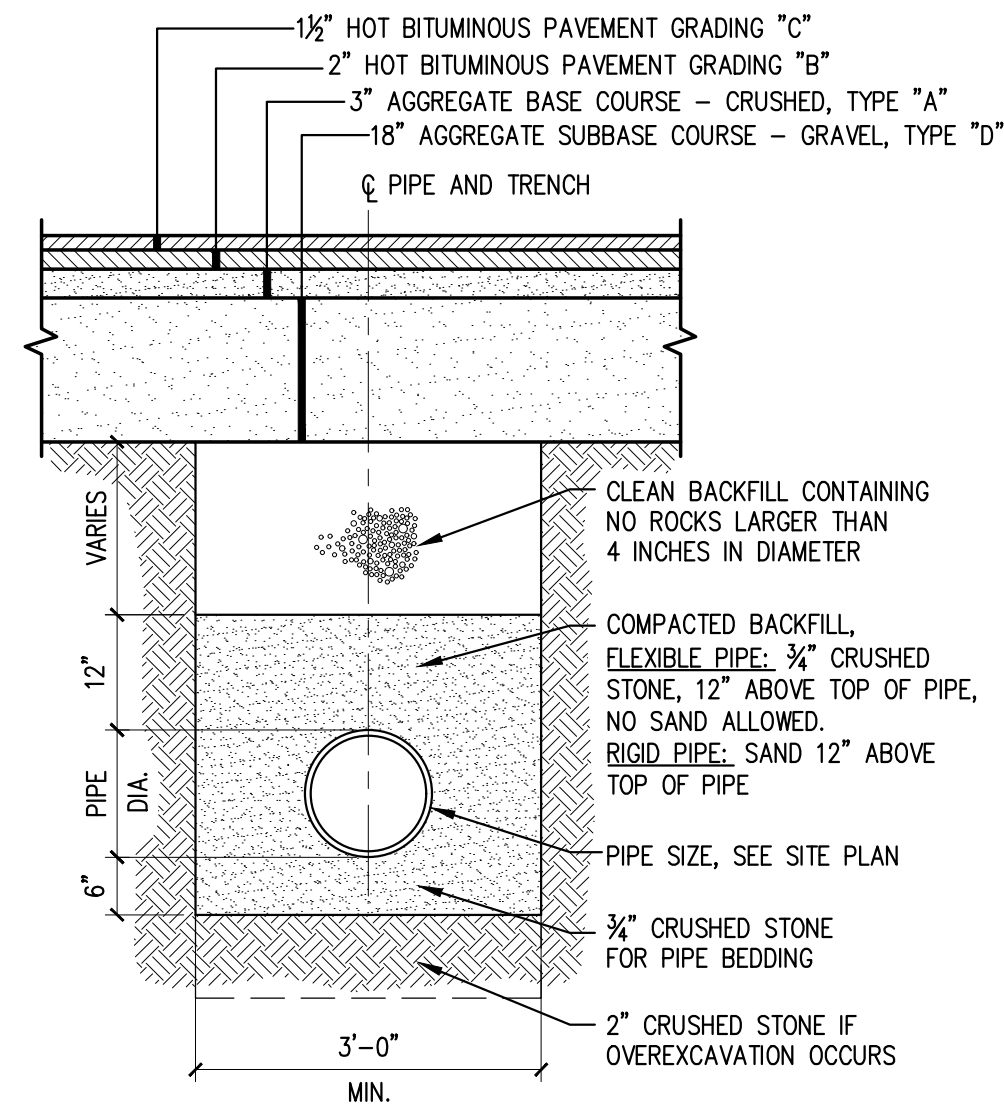
SLOPE STABILIZATION WITH RIPRAP DETAIL

NTS



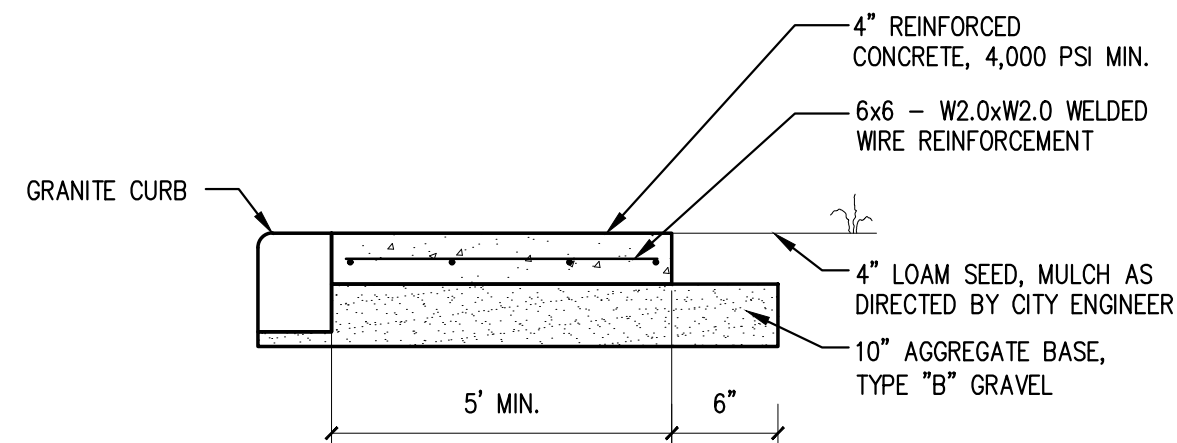
VERTICAL GRANITE CURB INSTALLATION AND TIPDOWN DETAIL

NTS



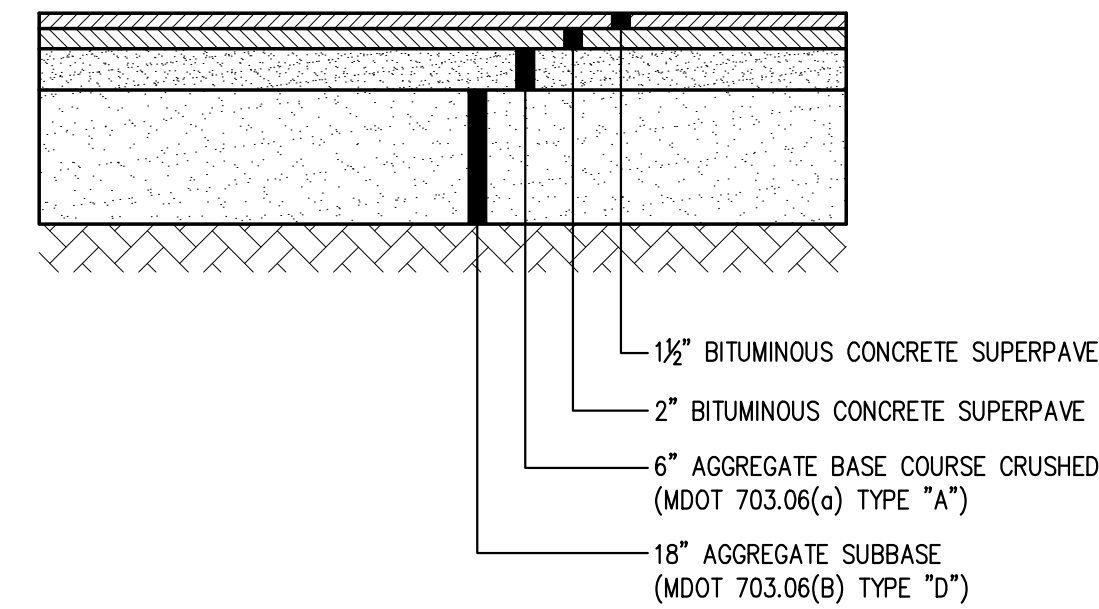
TYPICAL PIPE TRENCH INSTALLATION DETAIL

NTS



TYPICAL REINFORCED CONCRETE SIDEWALK DETAIL

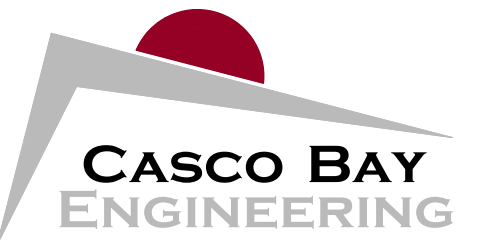
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TYPICAL PAVEMENT REPAIR DETAIL

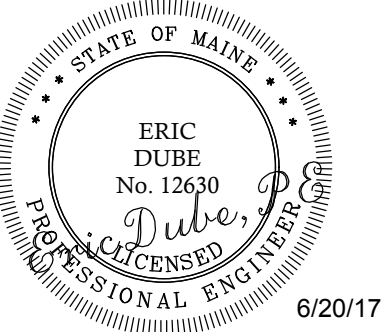
NTS

NOTE:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.



424 Fore Street
Portland, ME 04101
Phone 207.842.2800
Fax 207.842.2828
www.cascobayengineering.com

CLIENT:
WHIPPLE CALLENDER
ARCHITECTS
136 PLEASANT AVE
PORTLAND, ME 04103



JP SHERIDAN LLC APARTMENTS

88 WALNUT ST
PORTLAND, ME

PROPOSED BUILDING

No.	DESCRIPTION FOR REVIEW	DR.	BY	CHKD.	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE
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SHEET TITLE:

SITE DETAILS

DESIGNED: ED
DRAWN: DL
DATE: 6-20-17
PROJECT NUMBER: 16-195

C201

EROSION AND SEDIMENTATION NOTES

1. THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR DEALING WITH SOIL EROSION AND SEDIMENTATION DURING AND AFTER PROJECT CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARD AND SPECIFICATIONS FOR EROSION PREVENTION AS CONTAINED IN THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION, "MAINE EROSION AND SEDIMENT CONTROL BMPs" PUBLISHED BY THE MAINE DEP, LATEST EDITION.

GENERAL EROSION AND SEDIMENTATION CONTROL PRACTICES

1. EROSION/SEDIMENT CONTROL DEVICES
- THE FOLLOWING EROSION SEDIMENTATION CONTROL DEVICES ARE PROPOSED FOR CONSTRUCTION ON THIS PROJECT. INSTALL THESE DEVICES AS INDICATED ON THE PLANS.
- 1.1 SILT FENCE: SILT FENCE WILL BE INSTALLED ALONG THE DOWN GRADING EDGES OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS STABILIZED. IN AREAS WHERE STORMWATER DISCHARGES THE SILT FENCE WILL BE REINFORCED WITH HAY BALES TO HELP MAINTAIN THE INTEGRITY OF THE SILT FENCE AND TO PROVIDE ADDITIONAL TREATMENT.
- 1.2 HAY BALES TO BE PLACED IN LOW FLOW DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES. DO NOT PLACE HAY BALES IN FLOWING WATER OR STREAMS.
- 1.3 RIPRAP: PROVIDE RIPRAP IN AREAS WHERE CULVERTS DISCHARGE OR AS SHOWN ON THE PLANS.
- 1.4 LOAM, SEED, & MULCH: ALL DISTURBED AREAS, WHICH ARE NOT OTHERWISE TREATED, SHALL RECEIVE PERMANENT SEEDING AND MULCH TO STABILIZE THE DISTURBED AREAS. THE DISTURBED AREAS WILL BE REVEGETATED WITHIN 5 DAYS OF FINAL GRADING. SEEDING REQUIREMENTS ARE PROVIDED AT THE END OF THIS SPECIFICATION.
- 1.5 STRAW AND HAY MULCH: USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH BY ITSELF CAN BE USED ON SLOPES LESS THAN 15% IN SUMMER AND 8% IN WINTER. ALL OTHER SLOPES MUST BE COVERED WITH JUTE MESH OVER MULCH, OR CURLEX II OR EXCELSIOR MAY BE USED IN PLACE OF JUTE MESH AND MULCH OVER LOAM AND SEED.
- 1.6 MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELSIOR OR CURLEX.
2. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES
- PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:
- 2.1 SILTATION FENCE ALONG THE DOWNGRADED SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE SITE IS 85% REVEGETATED.
- 2.2 HAY BALES PLACED AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.
- 2.3 PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION AS FOLLOWS:
- A. SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
- B. AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES. SEE ITEM 3 IN CONSTRUCTION PHASE NOTES BELOW.
- C. STABILIZE STOCKPILES WITHIN 15 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
- D. SURROUND STOCKPILE SOIL WITH SILTATION FENCE AT BASE OF PILE.
- 2.4 ALL DENUDED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA SHALL RECEIVE MULCH WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL OR WITHIN 15 DAYS AFTER COMPLETING THE ROUGH GRADING OPERATIONS. IN THE EVENT THE CONTRACTOR COMPLETES FINAL GRADING AND INSTALLATION OF LOAM AND SOD WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE, IS NOT REQUIRED.
- 2.5 IF WORK IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15, ALL DENUDED AREAS ARE TO BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.
- 2.6 TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE HAS BEEN STABILIZED OR IN AREAS WHERE PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
3. PERMANENT EROSION CONTROL MEASURES
- THE FOLLOWING PERMANENT CONTROL MEASURES ARE REQUIRED BY THIS EROSION/SEDIMENTATION CONTROL PLAN:
- 3.1 ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAYING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SEEDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
- 3.2 SLOPES GREATER THAN 2:1 WILL RECEIVE RIPRAP.

CONSTRUCTION PHASE

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

1. ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION WILL BE CLEARED AND LEFT IN AN UNTREATED OR UNVEGETATED CONDITION. IF FINAL GRADING, LOAMING AND SEEDING WILL NOT OCCUR WITHIN 15 DAYS, SEE ITEM NO. 4.
2. PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SILT FENCING AND/OR HAY BALES WILL BE INSTALLED AT THE TOE OF SLOPE AND IN AREAS AS LOCATED ON THE PLANS TO PROTECT AGAINST ANY CONSTRUCTION RELATED EROSION. IMMEDIATELY FOLLOWING CONSTRUCTION OF CULVERTS AND SWALES, RIP RAP APRONS SHALL BE INSTALLED, AS SHOWN ON THE PLANS.
3. TOPSOIL WILL BE STOCKPILED WHEN NECESSARY IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION AND WILL BE KEPT AS FAR AS POSSIBLE FROM THE EXISTING DRAINAGE COURSE. NO STOCKPILE SHALL BE CLOSER THEN 100' OF A RESOURCE INCLUDING, BUT NOT LIMITED TO, WETLANDS, STREAMS, AND OPEN WATER BODIES. ALL STOCKPILES SHALL HAVE A SILTATION FENCE BELOW THEM REGARDLESS OF TIME OF PRESENCE. ALL STOCKPILES EXPECTED TO REMAIN LONGER THAN 15 DAYS SHALL BE:
- A. TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
- B. SEEDDED WITH CONSERVATION MIX AND MULCHED IMMEDIATELY.
- C. INSTALL SILT FENCE AROUND STOCKPILE AT BASE OF PILE.
- STOCKPILES TO HAVE SILT FENCE INSTALLED AT TIME OF ESTABLISHMENT AT BASE OF PILE.
4. ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE EITHER:
- A. TREATED WITH ANCHORED MULCH IMMEDIATELY, OR
- B. SEEDDED WITH CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LBS/1000 SQ. FT) AND MULCHED IMMEDIATELY.
5. ALL GRADING WILL BE HELD TO A MAXIMUM 2:1 SLOPE WHERE PRACTICAL. ALL SLOPES WILL BE STABILIZED WITH PERMANENT SEEDING, OR WITH STONE, WITHIN 5 DAYS AFTER FINAL GRADING IS COMPLETE. (SEE POST-CONSTRUCTION REVEGETATION FOR SEEDING SPECIFICATION).
6. ALL CULVERTS WILL BE PROTECTED WITH STONE RIPRAP (D50 = 6" UNLESS OTHERWISE SPECIFIED) AT INLETS AND OUTLETS.

POST-CONSTRUCTION REVEGETATION

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION AS SOON AS AN AREA IS READY TO UNDERGO FINAL GRADING.

1. A MINIMUM OF 4" OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND GRADED TO A UNIFORM DEPTH AND NATURAL APPEARANCE, OR STONE WILL BE PLACED ON SLOPES TO STABILIZE SURFACES.
2. IF FINAL GRADING IS REACHED DURING THE NORMAL GROWING SEASON (4/15 TO 9/15), PERMANENT SEEDING WILL BE DONE AS SPECIFIED BELOW. PRIOR TO SEEDING, LIMESTONE SHALL BE APPLIED AT A RATE OF 138 LBS/1000 SQ. FT. AND 10:20:20 FERTILIZER AT A RATE OF 18.4 LBS/1000 SQ.FT WILL BE APPLIED. BROADCAST SEEDING AT THE FOLLOWING RATES:

LAWS	SWALES
KENTUCKY BLUEGRASS 0.46 LBS/1000 SF.	RED TOP 0.05 LBS/1000 SF.
CREeping RED FESCUE 0.46 LBS/1000 SF.	TALL FESCUE 0.46 LBS/1000 SF.
PERENNIAL RYE GRASS 0.11 LB/1000 SF.	

3. AN AREA SHALL BE MULCHED IMMEDIATELY AFTER IS HAS BEEN SEEDDED. MULCHING SHALL CONSIST OF HAY MULCH, HYDRO-MULCH, JUTE NET OVER MULCH, PRE-MANUFACTURED EROSION MATS OR ANY SUITABLE SUBSTITUTE DEEMED ACCEPTABLE BY THE DESIGNER.

A. HAY MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. HAY MULCH SHALL BE SECURED BY EITHER: (NOTE: SOIL SHALL NOT BE VISIBLE)

I. BEING DRIVEN OVER BY TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.

II. BLANKETED BY TACKED PHOTODEGRADABLE/BIODEGRADABLE NETTING, OR WITH SPRAY, ON GRADES GREATER THAN 5%.

III. SEE NOTE 6, GENERAL NOTES, AND NOTE 8, WINTER CONSTRUCTION.

B. HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF EITHER ASPHALT, WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 9/15 AND 4/15.

4. CONSTRUCTION SHALL BE PLANNED TO ELIMINATE THE NEED FOR SEEDING BETWEEN SEPTEMBER 15 AND APRIL 15. SHOULD SEEDING BE NECESSARY BETWEEN SEPTEMBER 15 AND APRIL 15 THE FOLLOWING PROCEDURE SHALL BE FOLLOWED. ALSO REFER TO NOTE 9 OF WINTER CONSTRUCTION.

A. ONLY UNFROZEN LOAM SHALL BE USED.

B. LOAMING, SEEDING AND MULCHING WILL NOT BE DONE OVER SNOW OR ICE COVER. IF SNOW EXISTS, IT MUST BE REMOVED PRIOR TO PLACEMENT OF SEED.

C. WHERE PERMANENT SEEDING IS NECESSARY, ANNUAL WINTER RYE (1.2 LBS/1000 SQ.FT) SHALL BE ADDED TO THE PREVIOUSLY NOTED AREAS.

D. WHERE TEMPORARY SEEDING IS REQUIRED, ANNUAL WINTER RYE (2.6 LBS/1000 SQ. FT.) SHALL BE SOON INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.

E. FERTILIZING, SEEDING AND MULCHING SHALL BE APPLIED TO LOAM THE DAY THE LOAM IS SPREAD BY MACHINERY.

F. ALTERNATIVE HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.

5. FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED EVERY 30 DAYS UNTIL 85% COVER HAS BEEN ESTABLISHED. RESEEDING WILL BE CARRIED OUT BY THE CONTRACTOR WITHIN 10 DAYS OF NOTIFICATION BY THE ENGINEER THAT THE EXISTING CATCH IS INADEQUATE.

MONITORING SCHEDULE

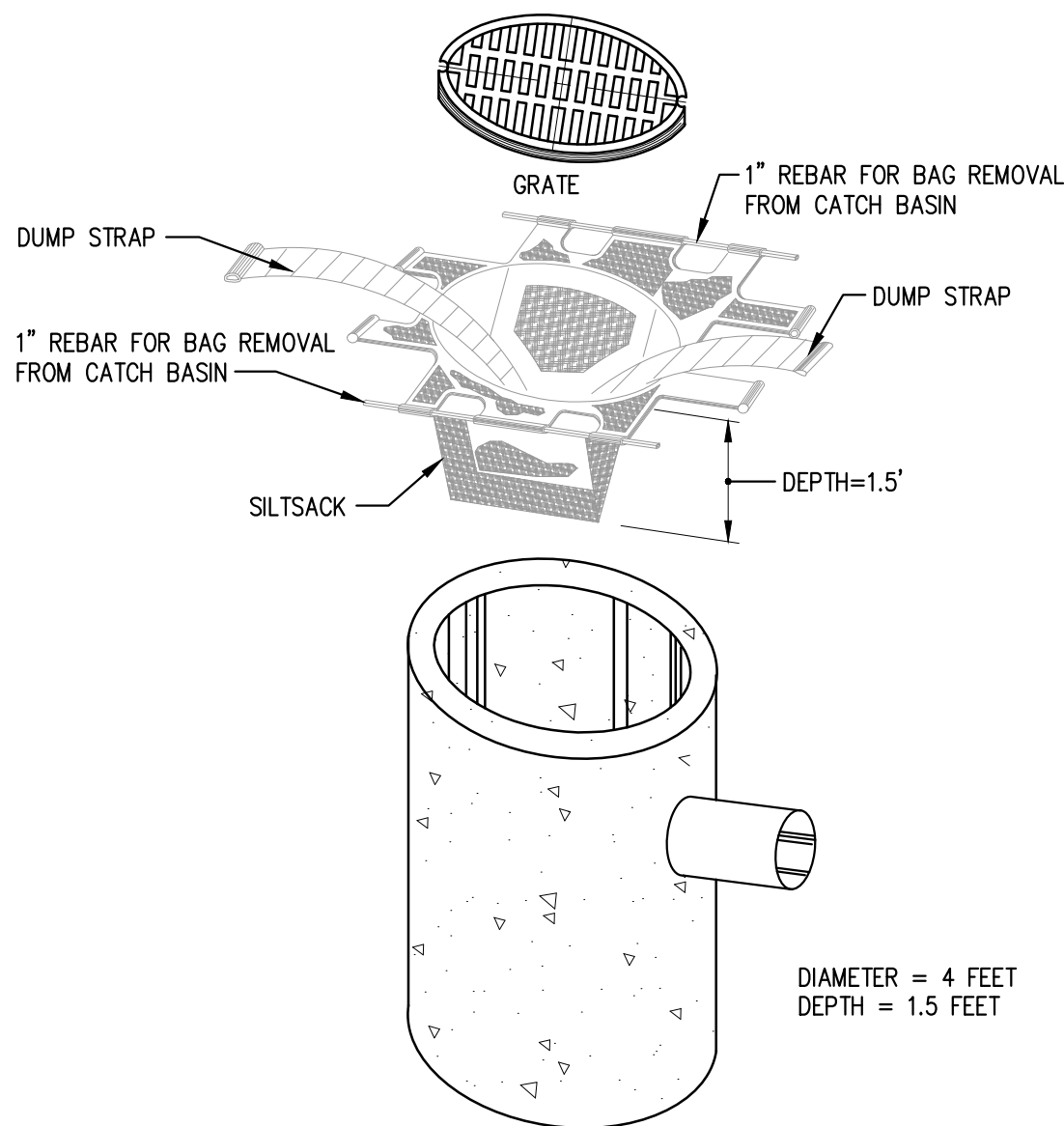
THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MONITORING, MAINTAINING, REPAIRING, REPLACING AND REMOVING ALL OF THE EROSION AND SEDIMENTATION CONTROLS OR APPOINTING A QUALIFIED SUBCONTRACTOR TO DO SO.

MAINTENANCE MEASURES WILL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, A VISUAL INSPECTION WILL BE MADE OF ALL EROSION AND SEDIMENTATION CONTROLS AS FOLLOWS:

1. HAY BALE BARRIERS, SILT FENCE, AND STONE CHECK DAMS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REDISTRIBUTED TO AREAS UNDERGOING FINAL GRADING. SHOULD THE HAY BALE BARRIERS PROVE TO BE INEFFECTIVE, THE CONTRACTOR SHALL INSTALL SILT FENCE BEHIND THE HAY BALES.

2. VISUALLY INSPECT RIPRAP ONCE A WEEK OR AFTER EACH SIGNIFICANT RAINFALL AND REPAIR AS NEEDED. REMOVE SEDIMENT TRAPPED BEHIND THESE DEVICES ONCE IT ATTAINS A DEPTH EQUAL TO 1/2 THE HEIGHT OF THE DAM OR RISER. DISTRIBUTE REMOVED SEDIMENT OFF-SITE OR TO AN AREA UNDERGOING FINAL GRADING.

3. REVEGETATION OF DISTURBED AREAS WITHIN 25' OF DRAINAGE-COURSE/STREAM WILL BE SEEDDED WITH THE "MEADOW AREA MIX" AND INSPECTED ON A WEEKLY BASIS OR AFTER EACH SIGNIFICANT RAINFALL AND RESEEDDED AS NEEDED. EXPOSED AREAS WILL BE RESEEDDED AS NEEDED UNTIL THE AREA HAS OBTAINED 100% GROWTH RATE. PROVIDE PERMANENT RIPRAP FOR SLOPES IN EXCESS OF 3:1 AND WITHIN 25' OF DRAINAGE COURSE.



"SILTSACK" INSTALLATION INSTRUCTION

1. REMOVE THE CATCH BASIN GRATE AND PLACE THE SACK INTO THE OPENING. HOLD OUT APPROXIMATELY SIX (6) INCHES OF THE SACK BEYOND THE BASIN FRAME TO ALLOW ACCESS TO THE "SILTSACK" LIFTING STRAPS. REPLACING THE GRATE BACK INSIDE OF ITS FRAME WILL HOLD THE SACK IN PLACE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING THIS SEDIMENT CONTROL DEVICE. THE SACK IS CONSIDERED FULL AND READY TO EMPTY WHEN THE THE "RESTRAINT CORD" IS NO LONGER VISIBLE.
3. THE "SILTSACK" IS REMOVED BY PLACING TWO (2) PIECES IF 1 INCH DIAMETER REBAR THROUGH THE LIFTING LOOPS LOCATED ON EACH SIDE OF THE SACK AND LIFTING WITH AN APPROPRIATE PIECE OF CONSTRUCTION EQUIPMENT. THE LIFTING STRAPS ARE CONNECTED TO THE BOTTOM OF THE SACK AND THE LIFTING ACTION WILL CAUSE THE SACK TO TURN INSIDE OUT, AND EMPTYING THE CONTENTS. THE SACK SHOULD THEN BE CLEANED, RINSED AND RETURNED TO ITS ORIGINAL SHAPE AND PLACED BACK IN THE BASIN.
4. THE "SILTSACK" IS REUSABLE, THEREFORE, ONCE THE CONSTRUCTION CYCLE IS COMPLETE, REMOVE THE SACK FROM THE BASIN, CLEAN AND STORE OUT OF DIRECT SUNLIGHT UNTIL ITS NEXT USE.
5. THE "SILTSACK" SEDIMENT CONTROL DEVICE IS MANUFACTURED BY: ACF ENVIRONMENTAL

EROSION CONTROL DURING WINTER CONSTRUCTION

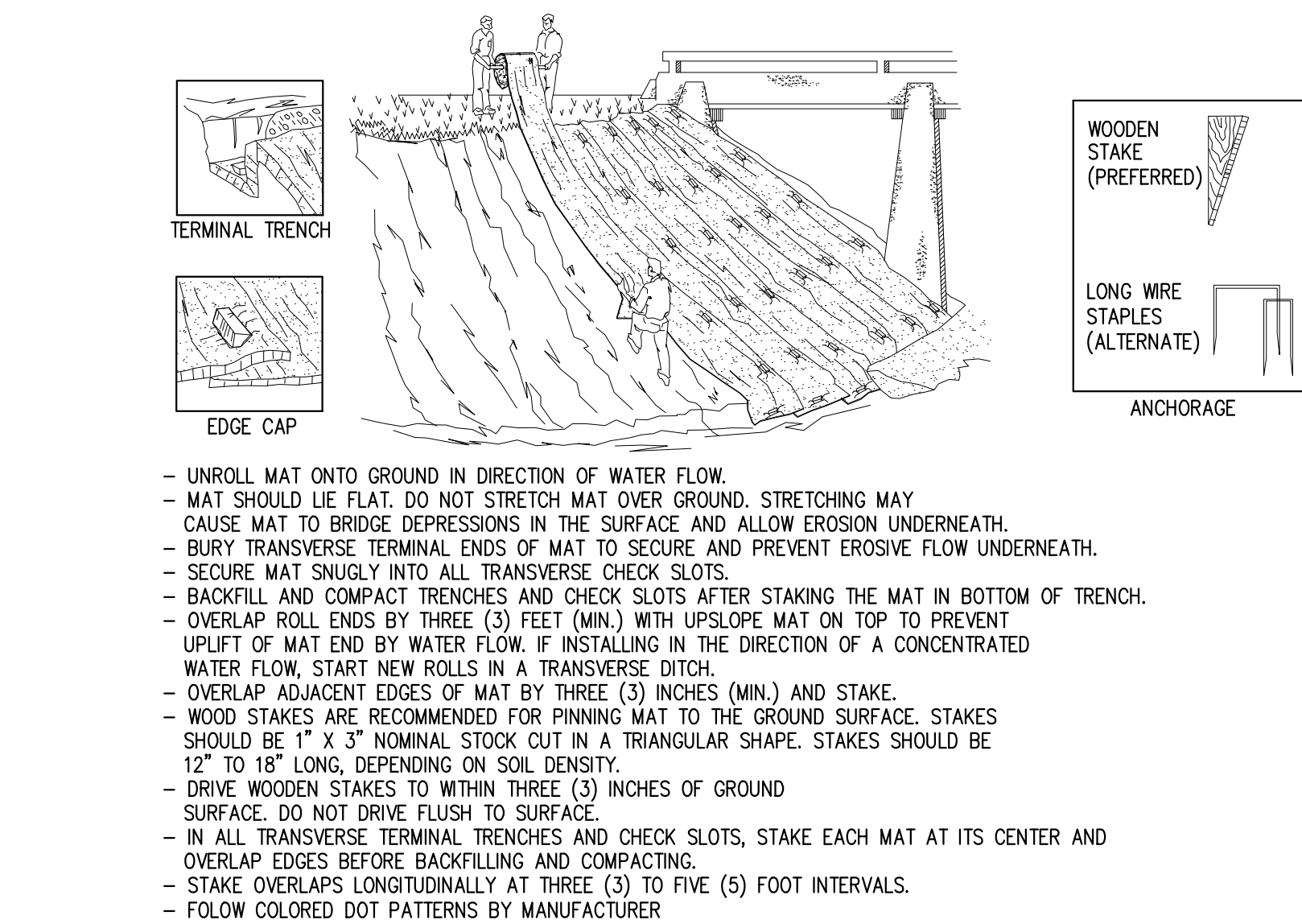
1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS TO BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK NO AREAS MAY BE LEFT UNSTABILIZED OVER THE WEEKEND.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1000 S.F. (WITH OR WITHOUT SEEDING) OR DORMANT SEEDDED, MULCHED AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH. NOTE: AN AREA IS ALSO CONSIDERED STABLE IF SODDED, COVERED WITH GRAVEL (PARKING LOTS) OR STRUCTURAL SAND.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW, DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT; EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY, SILT FENCE OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS SHOWN ON THE DESIGN DRAWINGS. NOTE: DORMANT SEEDING SHOULD NOT BE ATTEMPTED UNLESS SOIL TEMPERATURE REMAINS BELOW 50 DEGREES AND DAY TIME TEMPERATURES REMAIN IN THE 30's.
7. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8% VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELSIOR OR CURLEX.
8. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1 THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
9. BETWEEN THE DATES OF OCTOBER 15 TO NOVEMBER 1, WINTER RYE IS RECOMMENDED FOR STABILIZATION. AFTER NOVEMBER 1, WINTER RYE IS NOT EFFECTIVE. AROUND NOVEMBER 15 OR LATER, ONCE TEMPERATURES OF THE AIR AND SOIL PERMIT, DORMANT SEEDING IS EFFECTIVE.
10. IN THE EVENT OF SNOWFALL (FRESH OR CUMULATIVE) GREATER THAN 1 INCH DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM THE AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

SITE INSPECTION AND MAINTENANCE

1. WEEKLY INSPECTIONS, AS WELL AS ROUTINE INSPECTIONS FOLLOWING RAIN FALLS, SHALL BE CONDUCTED BY THE GENERAL CONTRACTOR OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES UNTIL FINAL ACCEPTANCE OF THE PROJECT (85% GRASS CATCH). NECESSARY REPAIRS SHALL BE MADE TO CORRECT UNDERMINING OR DETERIORATION. FINAL ACCEPTANCE SHALL INCLUDE A SITE INSPECTION TO VERIFY THE STABILITY OF ALL DISTURBED AREAS AND SLOPES. UNTIL FINAL INSPECTION, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL IMMEDIATELY BE CLEANED, AND REPAIRED BY THE GENERAL CONTRACTOR AS REQUIRED. DISPOSAL OF ALL TEMPORARY EROSION AND CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- IT IS RECOMMENDED THAT THE OWNER HIRE THE SERVICES OF THE DESIGN ENGINEER TO PROVIDE COMPLIANCE INSPECTIONS (DURING ACTIVE CONSTRUCTION) RELATIVE TO IMPLEMENTATION OF THE STORMWATER AND EROSION CONTROL PLANS. SUCH INSPECTIONS SHOULD BE LIMITED TO ONCE A WEEK OR AS NECESSARY AND BE REPORTABLE TO THE OWNER, TOWN AND DEP.
2. SHORT-TERM SEDIMENTATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAN OUT ALL SWALES AND STRUCTURES PRIOR TO TURNING PROJECT OVER TO THE CITY.

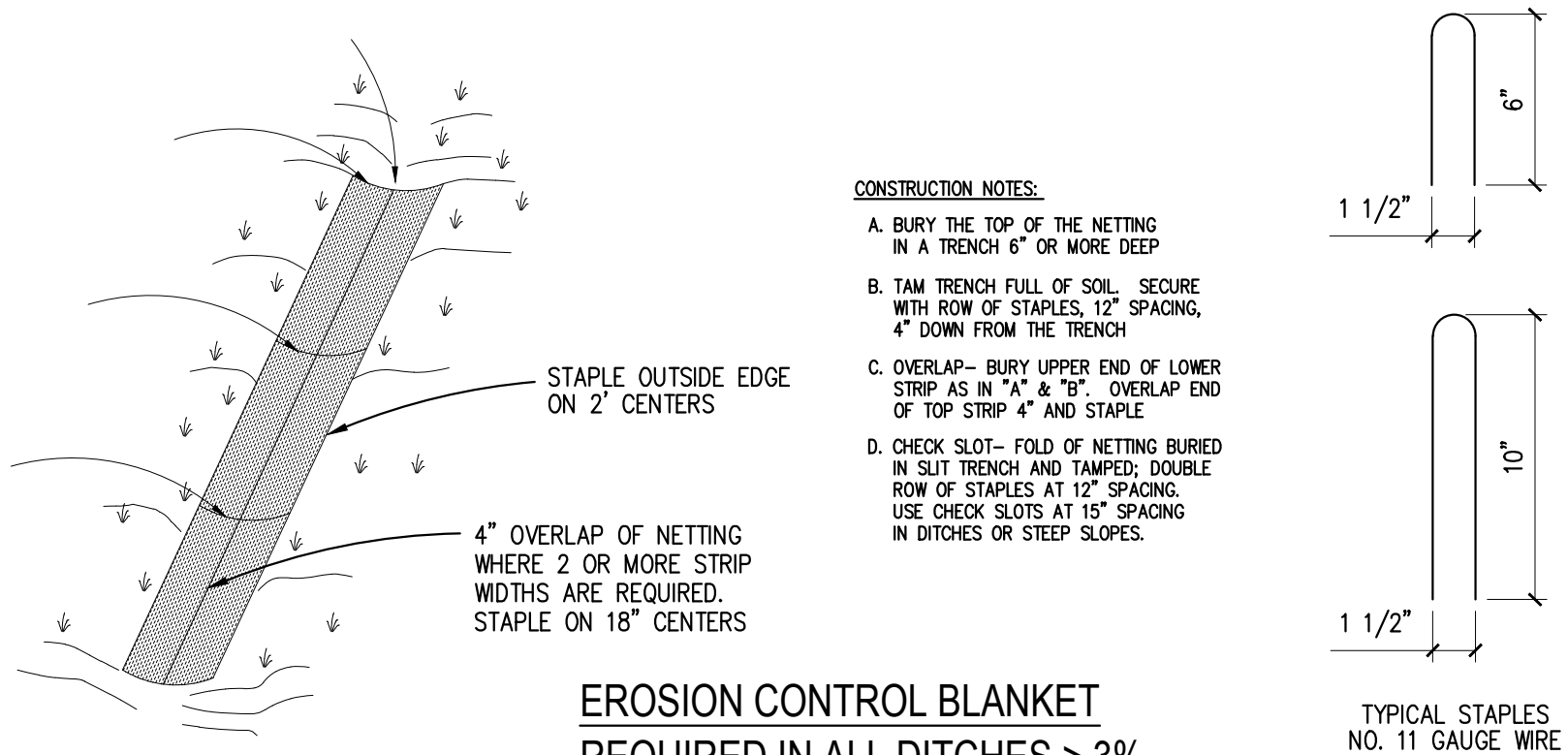
MAINTENANCE AFTER CONSTRUCTION

1. LONG-TERM PROVISIONS FOR PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL FACILITIES AFTER ACCEPTANCE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER OR THEIR DESIGNEE. SUCH RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO THOSE DETAILED AS FOLLOWS:
- A. PARKING LOT SHALL BE MECHANICALLY SWEEPED TWICE PER YEAR. THE FIRST SHALL TAKE PLACE IN THE MID WINTER (JANUARY THRU) TO REMOVE ACCUMULATED SANDS FROM WINTER SANDING TO THIS POINT. THE SECOND SWEEPING SHALL TAKE PLACE AFTER WINTER SANDING OPERATIONS TERMINATE BUT PRIOR TO MAY 1.
- B. INSPECTION OF STORMWATER OUTLET STRUCTURE SHOULD BE CONDUCTED TWICE PER YEAR. ACCESS TO THE STRUCTURE IS THROUGH THE TOP. THE OIL/WATER SEPARATOR UNIT SHALL BE PUMPED DOWN AND THE SEDIMENT AND TRASH SHALL BE REMOVED AT THE TIME OF THE INSPECTION. THE REMOVAL OF ALL SEDIMENT AND TRASH WILL HELP MINIMIZE VOLUME LOSS.
2. THE OWNER SHALL FILE A YEARLY MAINTENANCE REPORT TO THE CITY DOCUMENTING THE REQUIRED MAINTENANCE FOR THE STORMWATER SYSTEM.

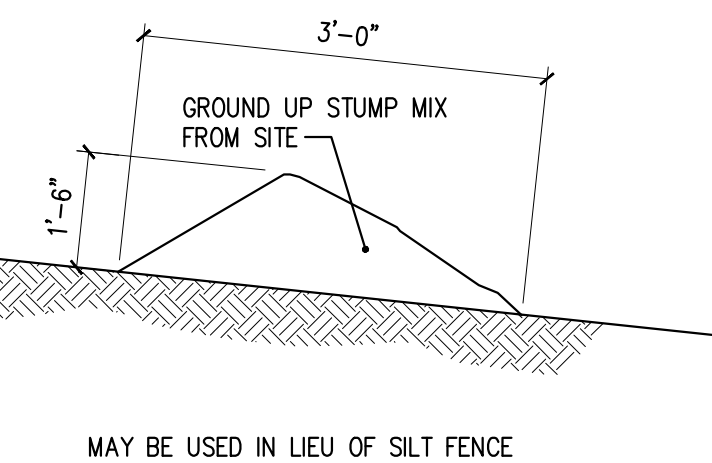
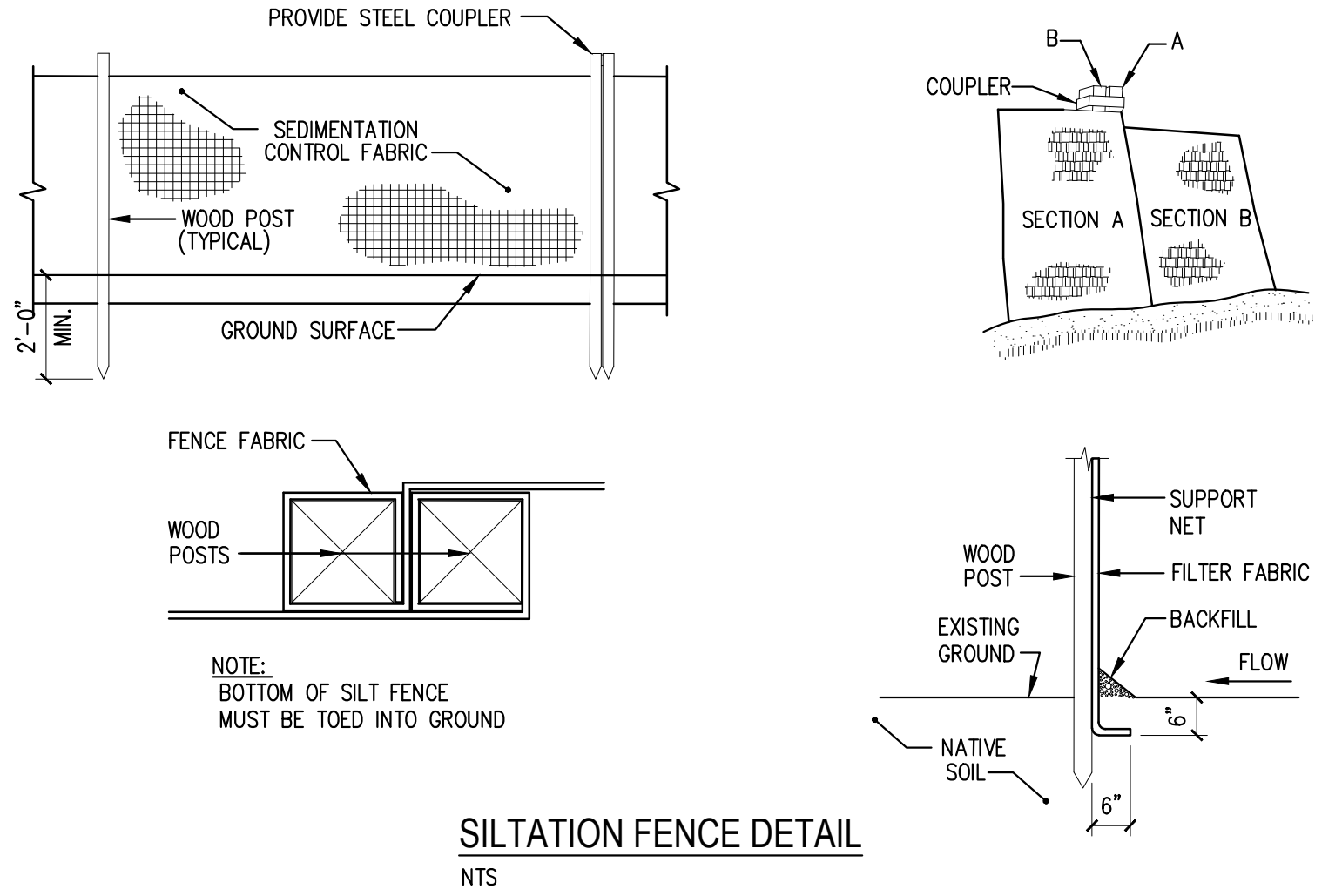


REQUIRED ON ALL SLOPES > 8% (WINTER CONSTRUCTION)
REQUIRED ON ALL SLOPES > 15% (SUMMER CONSTRUCTION)

EROSION CONTROL BLANKET
GENERAL INSTALLATION GUIDELINES ON SLOPES
NTS



EROSION CONTROL BLANKET
REQUIRED IN ALL DITCHES > 3%
NOTE: GRADING PLAN GOVERNS IN ALL LOCATIONS



EROSION CONTROL MIX DETAIL
N.T.S.

EROSION CONTROL DETAILS

CASCO BAY ENGINEERING

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CLIENT:
WHIPPLE CALLENDER ARCHITECTS
138 PLEASANT AVE
PORTLAND, ME 04103

ERIC DUBRE
No. 12630
LICENSED PROFESSIONAL ENGINEER
6/20/17

JP SHERIDAN LLC APARTMENT
88 WALNUT STREET
PORTLAND, ME
PROPOSED BUILDING

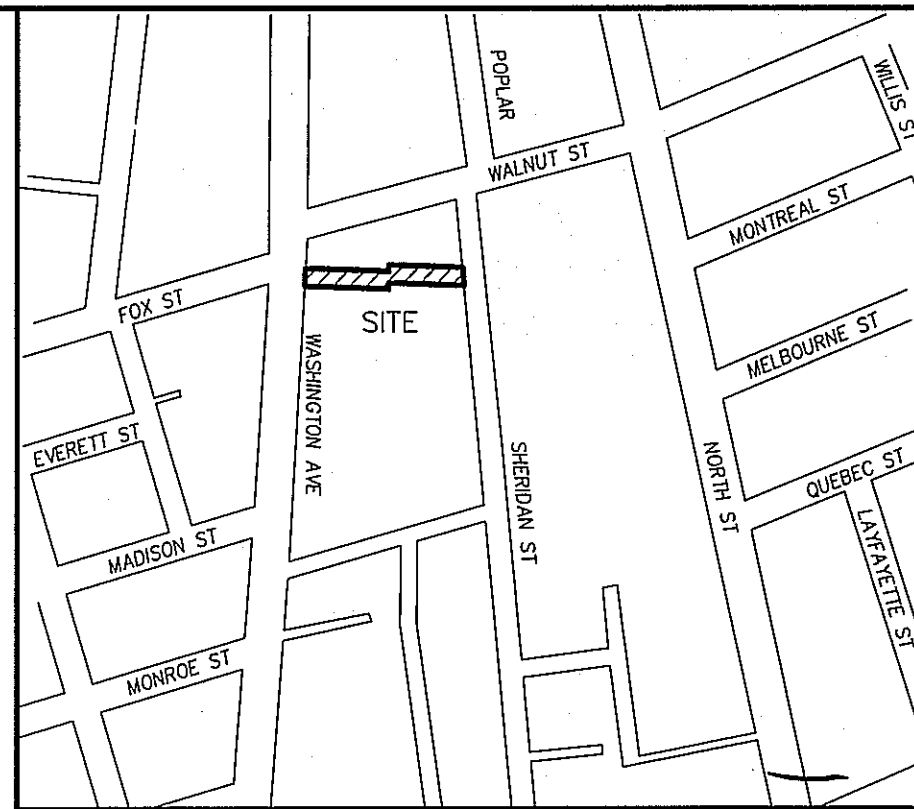
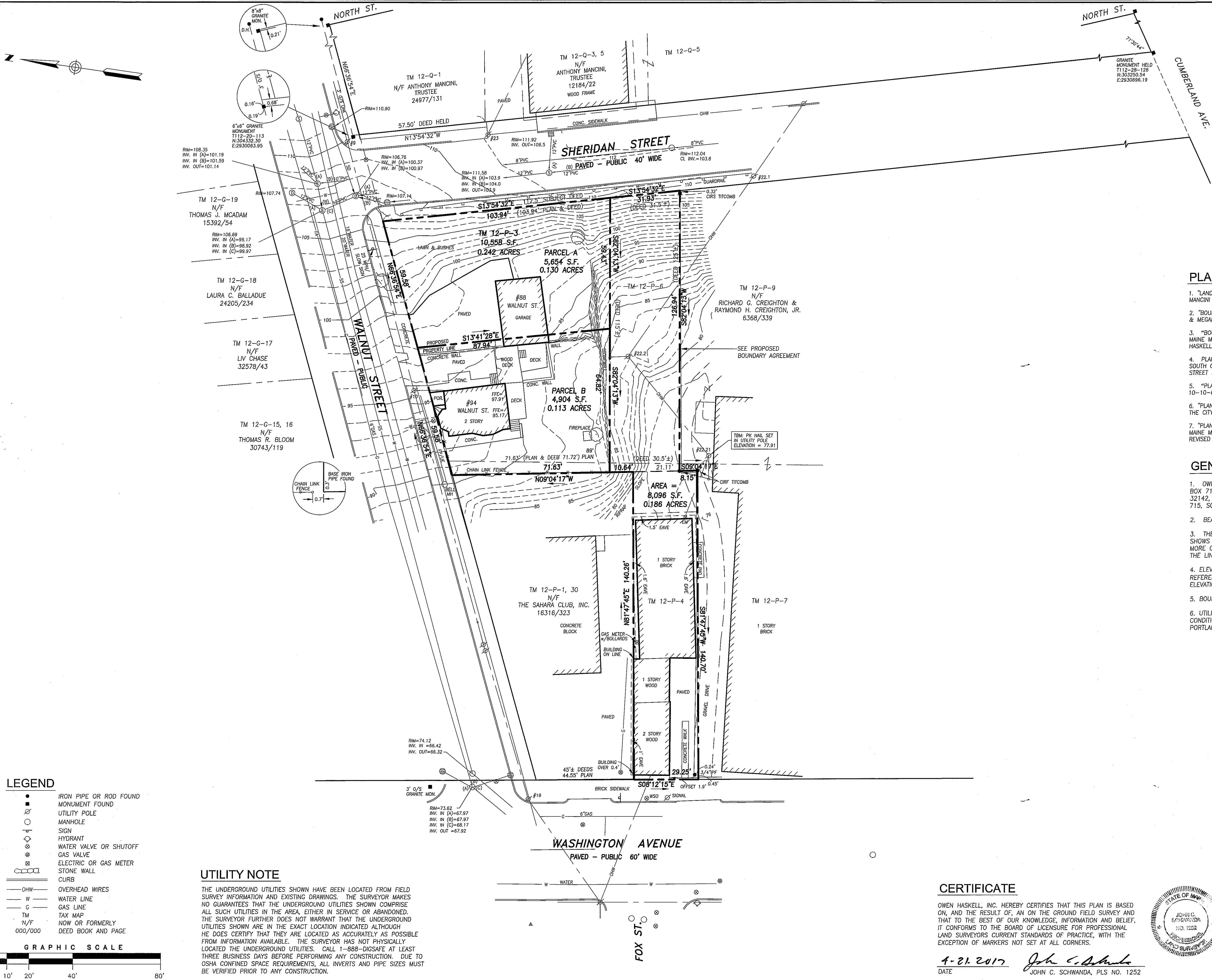
ISSUED	NO.	DESCRIPTION	DATE	CHKD.	BY	ED	8-25-16
FOR REVIEW	A						

SHEET TITLE:

EROSION CONTROL DETAILS

DESIGNED: ED
DRAWN: DL
DATE: 6-20-17
PROJECT NUMBER: 16-135

C300



LOCATION MAP
N.T.S.

PLAN REFERENCES

- "LAND TITLE SURVEY ON SHERIDAN STREET, PORTLAND, MAINE MADE FOR ANTHONY MANCINI NOV. 2, 1995 OWEN HASKELL, INC."
- "BOUNDARY SURVEY AT 110 SHERIDAN STREET, PORTLAND, MAINE MADE FOR THOMAS & MEGAN HAMBRICK" FEBRUARY 10, 2015 REV. 1 07/01/15 BY OWEN HASKELL, INC.
- "BOUNDARY & TOPOGRAPHIC SURVEY AT 134 WASHINGTON AVENUE, PORTLAND, MAINE MADE FOR AVESTA HOUSING DEVELOPMENT CORP. FEB. 13, 2014 OWEN HASKELL, INC. JOB NO. 2014-008P" REVISED 05-12-14
- PLAN OF LOTS BETWEEN WASHINGTON STREET (AVENUE) AND NORTH STREET, SOUTH OF MECHANIC (NOW WALNUT) STREET AND INCLUDING POPLAR (NOW SHERIDAN) STREET RECORDED JULY 18, 1809 IN DEED BOOK 51, PAGE 297.
- "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR UNIVERSAL WATKINS 10-10-69 H.I. & E.C. JORDAN - SURVEYORS"
- "PLAN AND PROFILE OF WASHINGTON AVE. AND FOX ST. PORTLAND, MAINE MADE FOR THE CITY OF PORTLAND" BY OWEN HASKELL, INC. DATED JULY 2000.
- "PLAN OF ALTA/NSPS LAND TITLE SURVEY, 1211 WASHINGTON AVENUE, PORTLAND, MAINE MADE FOR COTTON STREET HOLDINGS, LLC 08/08/2016 TITCOMB ASSOCIATES" REVISED 09/14/16.

GENERAL NOTES

- OWNER OF RECORD: TAX MAP 12 BLOCK P LOT 4 - FOX STREET, LLC, P.O. BOX 715, SOUTH FREEPORT, ME, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 32142, PAGE 229; TAX MAP 12 BLOCK P LOT 6 - JP SHERIDAN, LLC, P.O. BOX 715, SOUTH FREEPORT, ME, BOOK 32142, PAGE 232
- BEARINGS ARE MAGNETIC 1954 PER PLAN REFERENCE 1.
- THE LINES OF LOT 4 ARE TAKEN FROM PLAN REFERENCE 5. THAT PLAN SHOWS THE LOT WIDTH AS 29.25 FEET WHILE THE OLD DEEDS CALL FOR 26 FEET, MORE OR LESS. A BOUNDARY AGREEMENT IS RECOMMENDED WITH CREIGHTON FOR THE LINE FROM WASHINGTON AVENUE TO SHERIDAN STREET.
- ELEVATIONS ARE BASED ON NVD 1929 PER BENCHMARK SHOWN ON PLAN REFERENCE 6, PK IN POLE #11 CORNER OF ANDERSON AND EVERETT STREET ELEVATION 12.42 CITY LEVEL BOOK 737 PAGE 77.
- BOUNDARY AGREEMENT RECOMMENDED WITH THE SAHARA CLUB, INC.
- UTILITY INFORMATION SHOWN IN WALNUT STREET TAKEN FROM EXISTING CONDITIONS SURVEY PREPARED BY TITCOMB ASSOCIATES FOR THE CITY OF PORTLAND, PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- SIGN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- ELECTRIC OR GAS METER
- STONE WALL
- CURB
- OVERHEAD WIRES
- WATER LINE
- GAS LINE
- TAX MAP
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK AND PAGE

UTILITY NOTE

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

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

4-21-2017 John C. Schwanda
DATE JOHN C. SCHWANDA, PLS NO. 1252

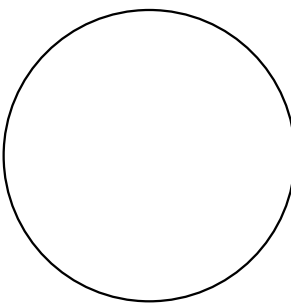
REV. 4	04/21/17	DIVIDE LOT 12-P-3
REV. 3	11/14/16	ADD IRONS ALONG CREIGHTON, PLAN REF. 7
REV. 2	10/14/16	ADD LOT TM 12-P-3
REV. 1	07/25/16	ADDED TOPOGRAPHY

BOUNDARY SURVEY ON WASHINGTON AVENUE & SHERIDAN STREET PORTLAND, MAINE MADE FOR JON EDWARDS 131 WASHINGTON AVENUE, PORTLAND, MAINE		
OWEN HASKELL, INC. 390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424 PROFESSIONAL LAND SURVEYORS		
Drawn By	JCS	Date
Trace By	JLW	NOV. 12, 2015
Check By	JCS	Scale
Book No.	FILE	1" = 20'
Job No.	2015-155P	Drwg. No.
		1

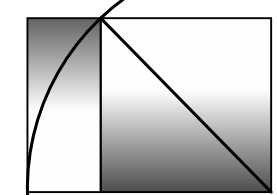


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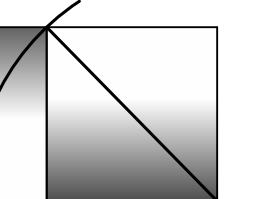
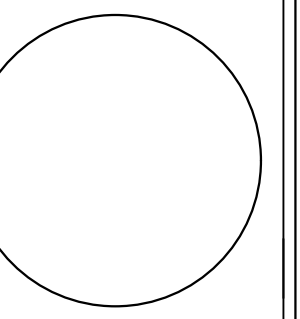
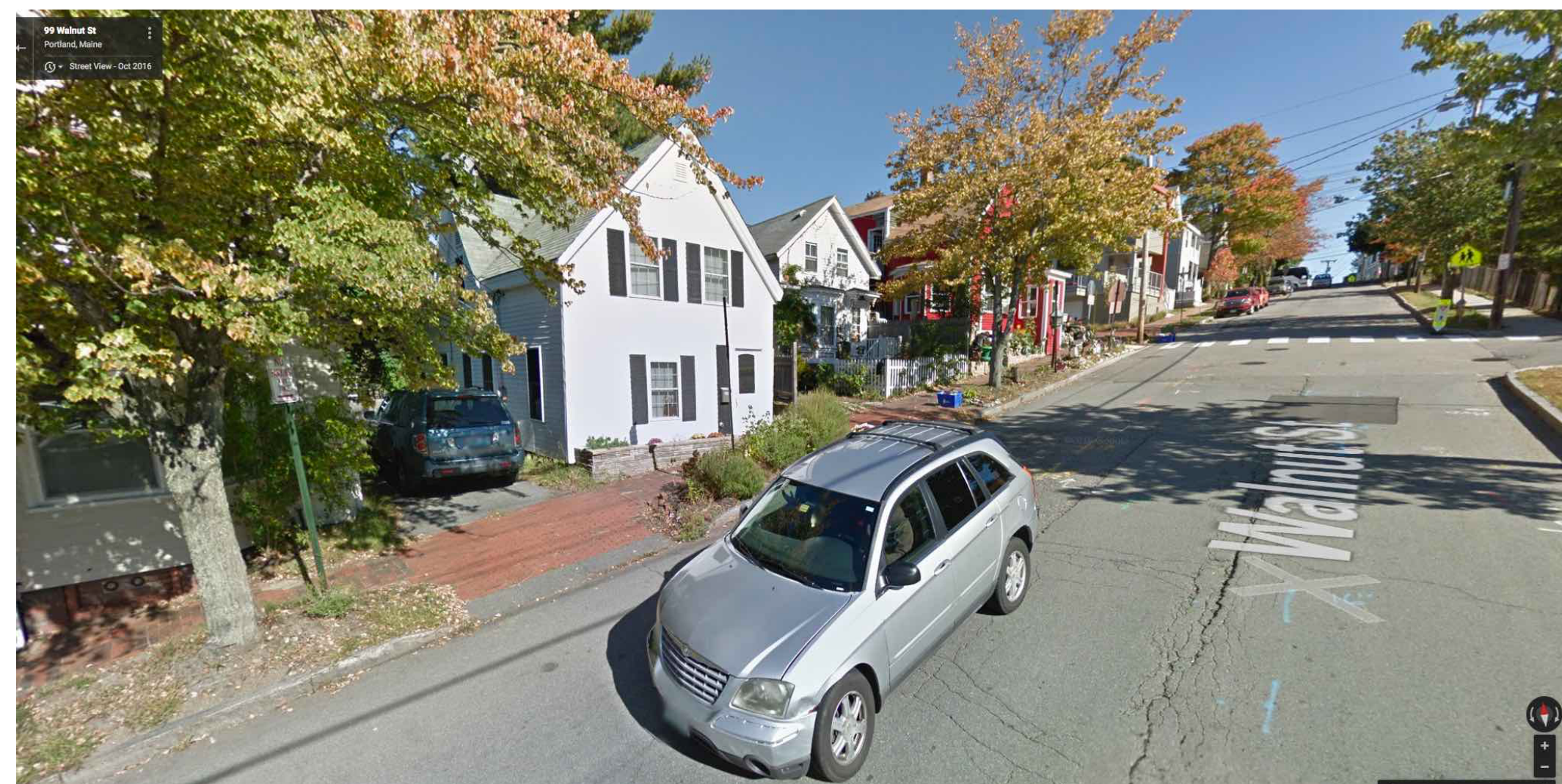
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[illegible]

DATE: 7/12/17
CHECKED BY: AEC
DRAWN BY: AEC / NC
JOB: 16-EHP
SHEET TITLE:

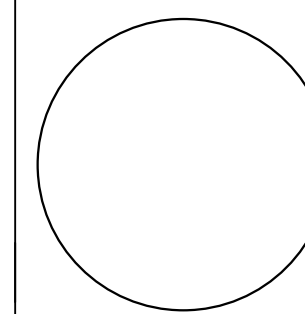
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OWN BY:	AEC / NC
:	16-EHP
ET TITLE:	MODEL VIEWS OF NEW BUILDING AND EXISTING CONDITION PHOTOGRAPHS



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AEC / NC

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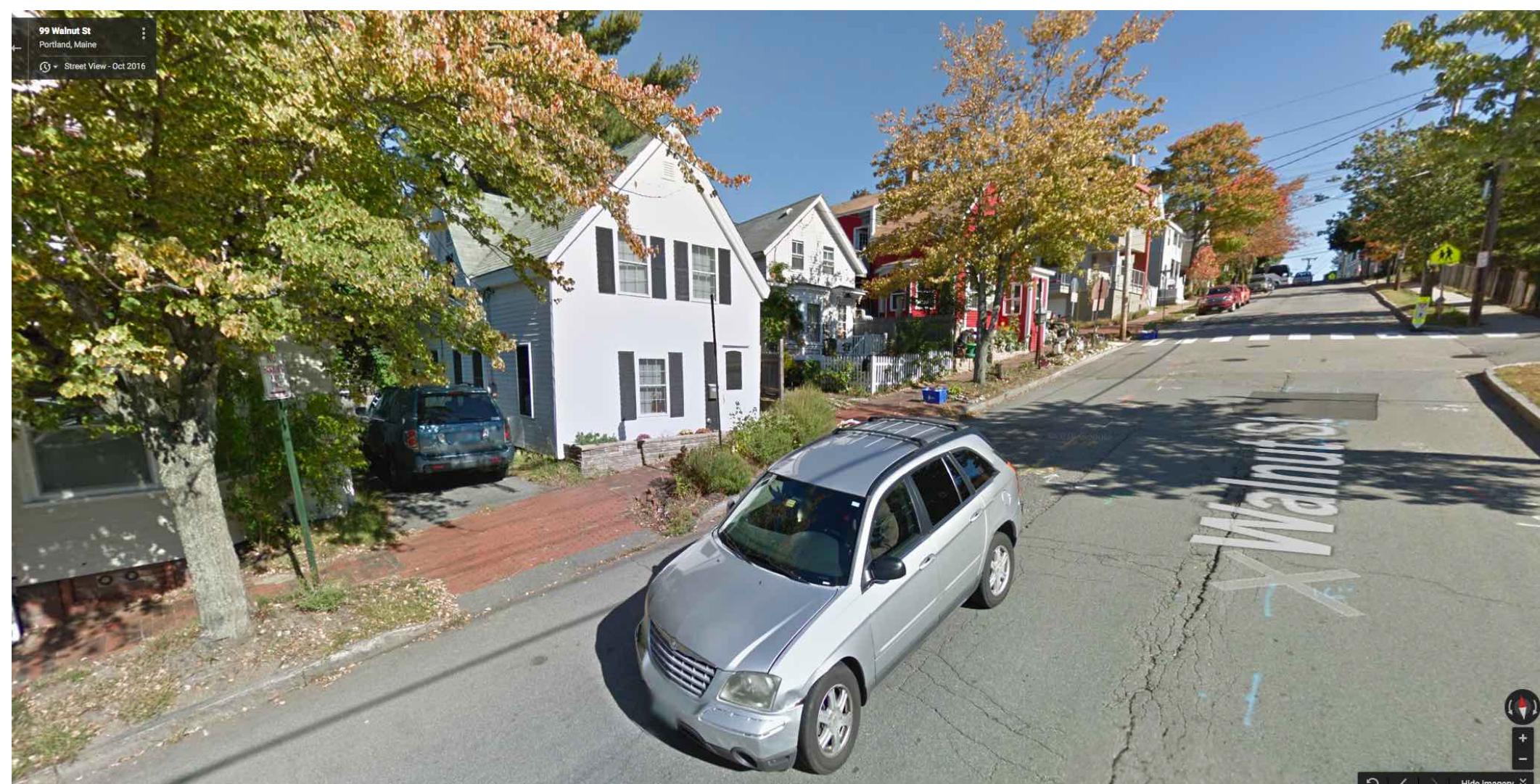
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MODEL VIEWS OF NEW
BUILDING AND EXISTING
CONDITION
PHOTOGRAPHS

A1

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WALNUT STREET NEIGHBORHOOD
SINGLE FAMILY HOMES ACROSS THE STREET FROM THE PROPERTY



CORNER OF SHERIDAN & WALNUT



EXISTING 3 CAR BRICK GARAGE TO BE REMOVED, NEW BUILDING TO BE BUILT PARALLEL TO SHERIDAN, CUT INTO HILL

NOT FOR CONSTRUCTION

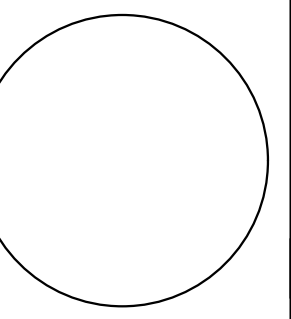
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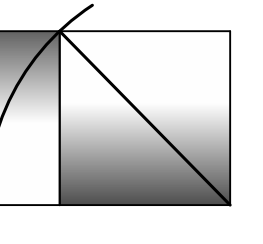
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E: 7/13/17

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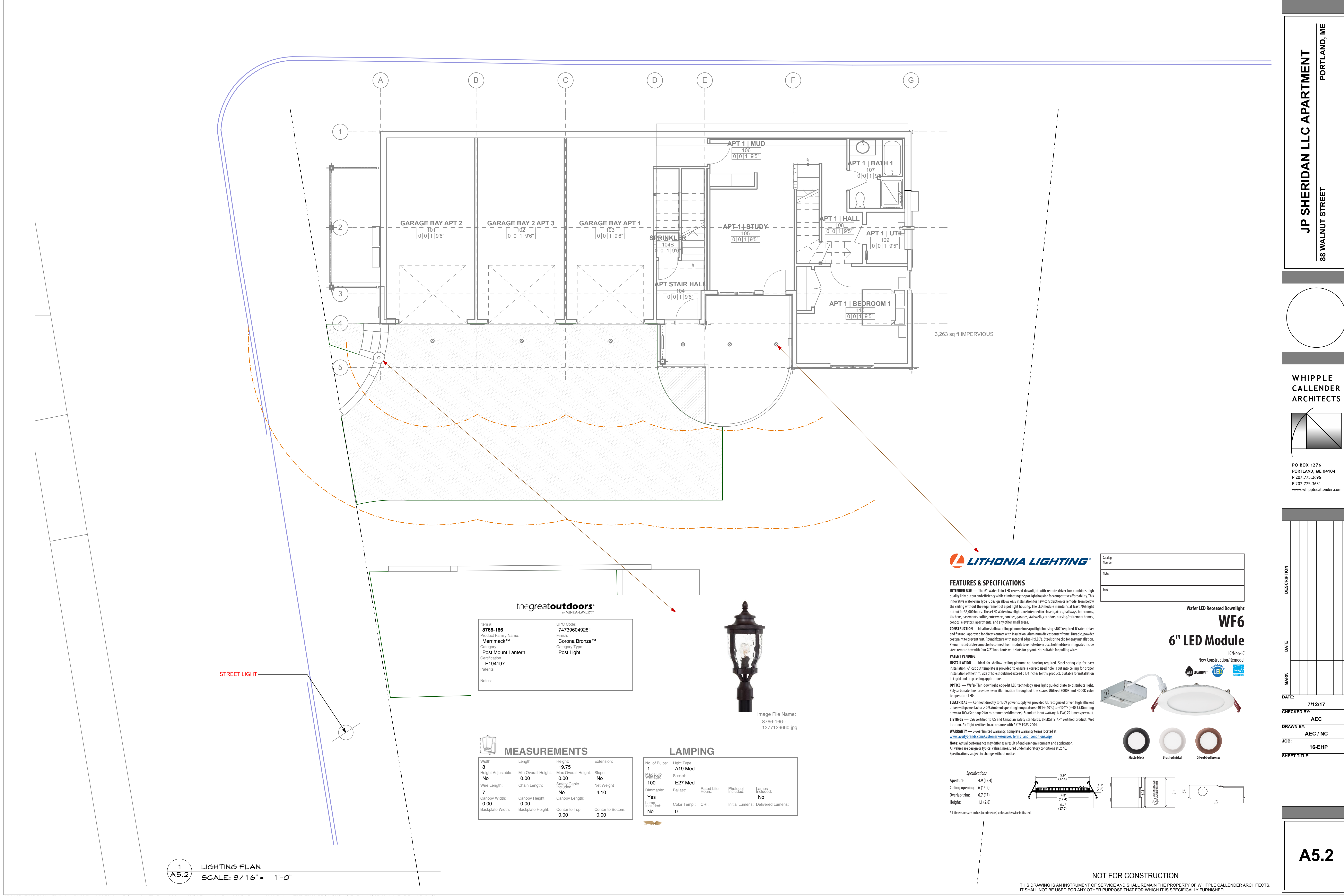
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AFC / NC

16-EHP

ET TITLE: _____

MODEL VIEWS OF NEW
BUILDING AND EXISTING
CONDITION
PHOTOGRAPHS

A1



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DESCRIPTION	
DATE	
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DRAWN BY:	AEC / NC
JOB:	16-EHP
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A5.2



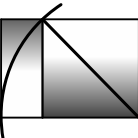
VIEW FROM WALNUT STREET

- CHANGES TO ELEVATIONS:
- INCREASED ROOF OVERHANG DEPTH OVER GARAGE DOORS TO PROVIDE SHELTER ACROSS DRIVEWAY TO ENTRY
 - ADDED STOOP AT ENTRY PORCH
 - CHANGED RAILING TO SOLID WALL ABOVE ENTRY
 - ADDED DETAIL TO COLUMN AT ENTRY AS WELL AS TRIM DETAIL ABOVE STOOP WITH BUILDING NUMBER
 - ADDED ADDITIONAL SITE PLANTINGS



VIEW FROM WALNUT STREET

A



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REVISED VIEW: WALKWAY FROM WALNUT STREET

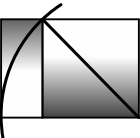
CHANGES TO ENTRY SEQUENCE:

- INCREASED ROOF OVERHANG DEPTH OVER GARAGE DOORS TO PROVIDE SHELTER ACROSS DRIVEWAY TO ENTRY
- ADDED STOOP AT ENTRY PORCH
- CHANGED RAILING TO SOLID WALL ABOVE ENTRY
- ADDED DETAIL TO COLUMN AT ENTRY AS WELL AS TRIM DETAIL ABOVE STOOP WITH BUILDING NUMBER



ORIGINAL SUBMISSION: WALKWAY FROM WALNUT STREET

B



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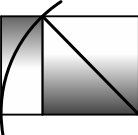
VIEW FROM WALNUT AND SHERIDAN

- CHANGES TO ELEVATIONS:
- ADDED PORCH ROOF
 - CHANGED WINDOWS ON SHERIDAN TO ALL DOUBLE HUNG
 - REMOVED GUARD RAIL



VIEW FROM WALNUT AND SHERIDAN

C



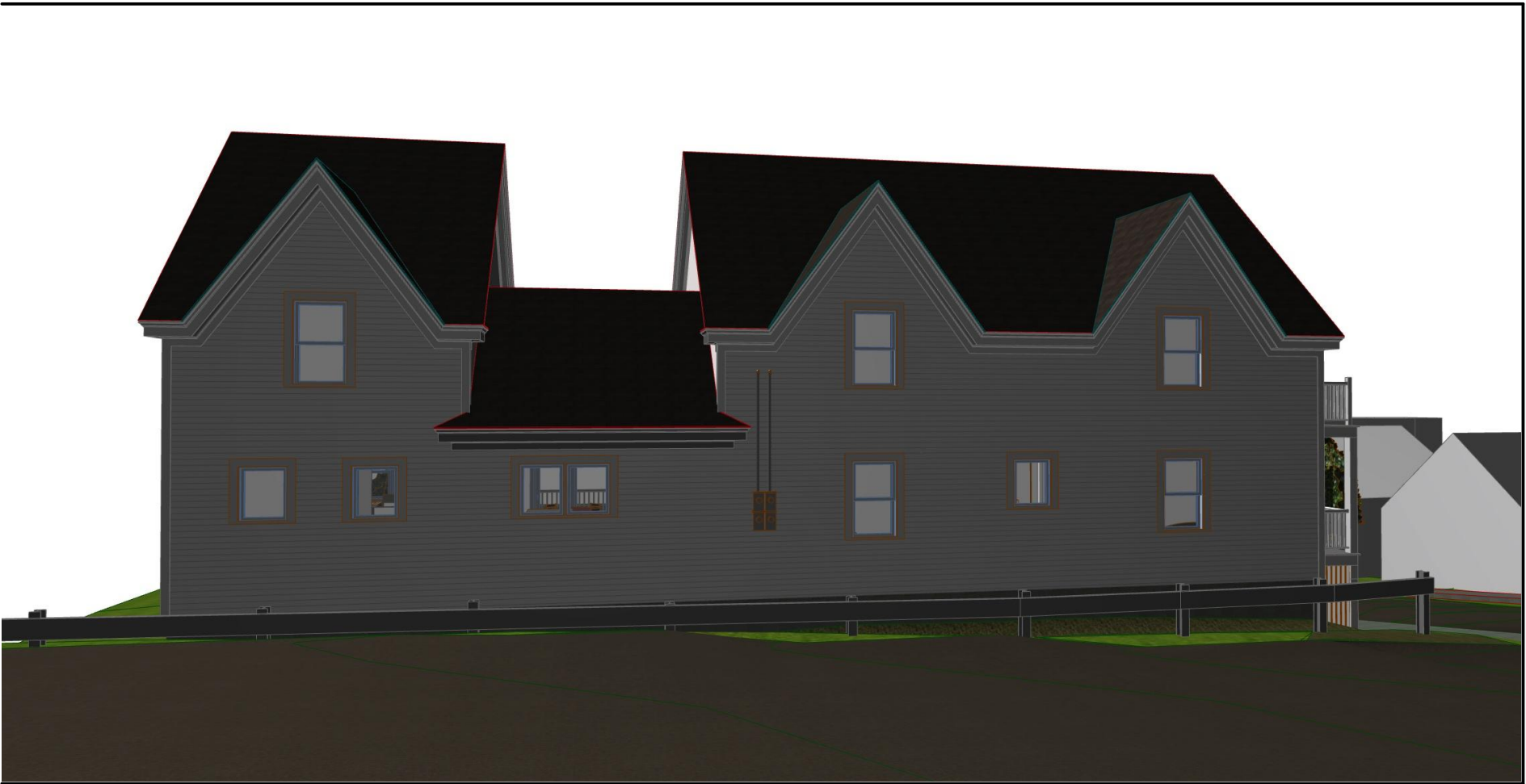
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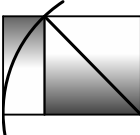


SHERIDAN STREET ELEVATION

- CHANGES TO ELEVATIONS:
- ADDED PORCH ROOF
 - CHANGED WINDOWS ON SHERIDAN TO ALL DOUBLE-HUNG UNITS AND INCREASED SIZE
 - REMOVED GUARD RAIL
 - ADDED FOUNDATION PLANTINGS AND STREET TREE



SHERIDAN STREET ELEVATION





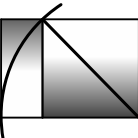
VIEW FROM SHERIDAN STREET

- CHANGES TO ELEVATIONS:
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 - REMOVED GUARD RAIL
 - ADDED FOUNDATION PLANTINGS
 - ADDED STREET TREE



VIEW FROM SHERIDAN STREET

E



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