PLANNING BOARD

Tuesday, November 4, 2025 at 4:30 PM
This meeting will be held **REMOTELY**

MEMBERS
Brandon Mazer, Chair
David Silk, Vice Chair
Austin Smith
Nicholas Messina
Joseph Zamboni
Kelsey Robertson
Michael Joseph Fox

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PUBLIC COMMENT INFORMATION
To submit written public comment on an agenda item, email planningboard@portlandmaine.gov. Submissions must be received by 12:00 pm the day before the Planning Board meeting to guarantee their inclusion in the

agenda packet. All submissions must include the commenter's name and legal address. To help ensure your comment is submitted for the correct item, please include the name of the agenda item (see below).

AGENDA:

WORKSHOP - 4:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON OCTOBER 28, 2025

Workshop
45 Union Street: Fox, Mazer, Messina, Robertson, Silk, and Zamboni present. Smith recused.

Public Hearing
161 York Street: Fox, Mazer, Messina, Robertson, Silk, Smith, and Zamboni present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON OCTOBER 28, 2025

i. Major Site Plan; 161 York Street; 161 York Street LLC, Applicant. Silk motioned and Zamboni seconded a motion to waive Technical Manual Section 1.10.7, which requires a minimum two-way drive aisle width of 24 feet for right-angle parking. Vote 7-0. Silk motioned and Zamboni seconded a motion to approve the major site plan application. Vote 7-0. Silk motioned and Zamboni seconded a motion to adopt the draft approval letter as the Board's decision, and to authorize the Board Chair to sign the letter as drafted Vote 7-0.

5. NEW BUSINESS

i. Major Site Plan and Subdivision; 57 Castine Avenue; Habitat for Humanity of Greater Portland, Applicant. The Planning Board will hold a remote workshop to consider an application for the creation of a nine-lot conservation residential development (CRD) subdivision with nine single-family dwellings and community open space. The project is located at 57 Castine Avenue within the Residential Neighborhood RN-1 zone. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/ by referencing Plan Number PL-003433-2025).

To:	Chair Brandon Mazer & Members of the Planning Board
From:	Sean King
Date:	October 29, 2025
Re:	57 Castine Avenue
Project ID:	PL-003433-2025
CBL:	309 D022001
Meeting Date:	November 4, 2025

I. INTRODUCTION

Habitat for Humanity of Greater Portland and Northeast Civil Solutions, Inc. have submitted a Major Site Plan and Subdivision application that would facilitate the creation of nine new lots with single-family homes, located at 57 Castine Avenue within the Residential Neighborhood-1 (RN-1) zone.

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code (LUC) Site Plan Standards, Section 13.6, Subdivision standards, Section 14.4, and is designed as a Conservation Residential Development (CRD) in accordance with LUC, Section 7.4.1.

The Planning and Urban Development Department mailed 157 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the October 23 and 24, 2025 edition of the Portland Press Herald.

Applicant: Habitat for Humanity of Greater Portland
Applicant Representatives: Northeast Civil Solutions, Inc.

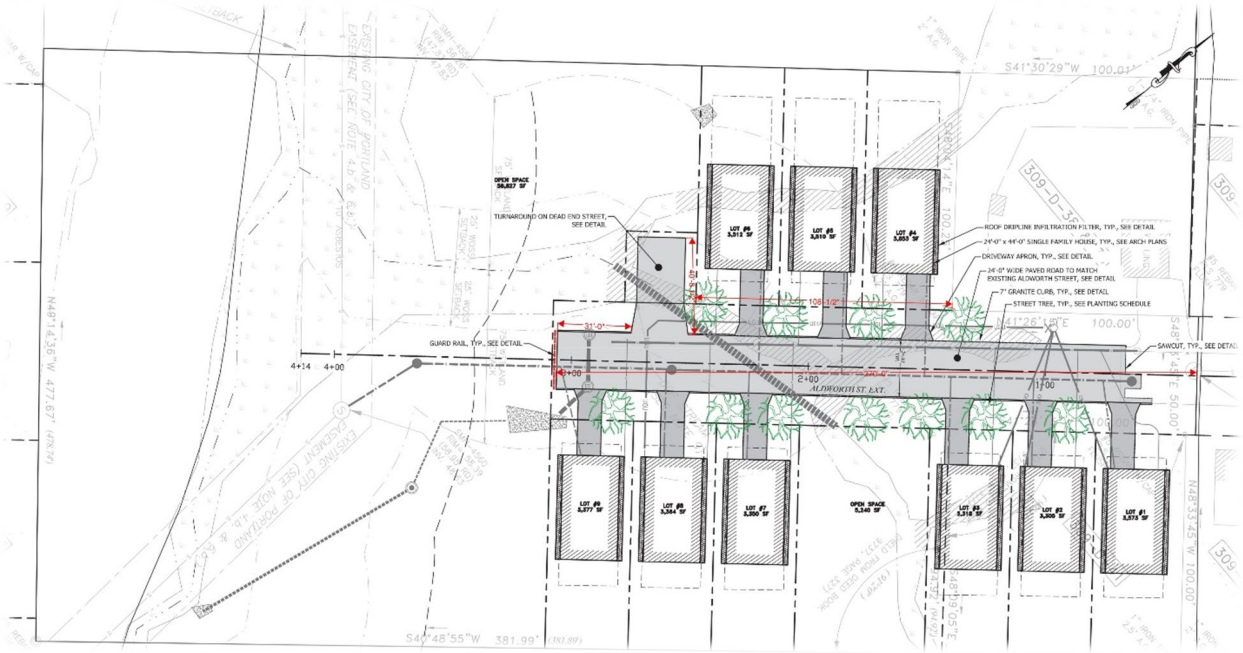


Figure 1: Project Site Plan

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 13.6
Subdivision	Section 14.4

Project Data	
Existing Zoning	RN-1 Residential Neighborhood
Property Size	100,302 square feet
Existing Use	Residential, vacant lot
Proposed Development Program	A nine-lot subdivision, each with a single-family homes, designed in accordance with standards for a conservation residential development.

III. EXISTING CONDITIONS AND SURROUNDING AREA

The existing site is located in the Riverton neighborhood and is primarily forested with existing wetlands and a Maine Department of Environmental Protection (DEP) designated stream. The property at 57 Castine Avenue is approximately 5.3 acres and contains an existing single-family home that is proposed to remain. The applicant intends to purchase a portion of the existing property at 57 Castine Avenue and utilize a property owned at 84 Aldworth Street to create approximately 2.3 acres for the proposed development.

The surrounding neighborhood is comprised of residential structures, primarily single-family homes with frontage on low-volume local streets. Forest Avenue is within two blocks of the site, which includes an existing transit route and access to commercial businesses within a quarter-mile radius.

Figure 2: Existing Conditions aerial, 2024

IV. PROPOSED DEVELOPMENT

A. Site Plan

This application is designed in accordance with the CRD standards, as an alternative residential development option under the LUC, Section 7.4, to preserve natural features such as mature trees, intermittent streams and wetlands that exist on the site. The proposed development would preserve approximately 50% of natural areas associated with the lower areas of the site which are occupied by streams, linear wetlands and vegetation. The creation of nine new lots is organized along a new public street extension of Aldworth Street; with the project being designed to minimize the disturbance area within the environmentally sensitive areas of the site.

Each subdivided lot is designed in accordance with the CRD dimensional standards that allow for a reduction in lot size, building setbacks, street frontage, lot coverage and landscape open space requirements. This zoning relief is provided in order to enable a developer to thoughtfully design the development to minimize impact on critical natural resources, and also requires that a project conserve at least 30% of the total land area as common open space. The site plan indicates the preservation of open space areas that will manage natural drainage through the site and mitigate impacts to natural resources

A single-family home would be constructed on each subdivided lot based on the applicant's submission of two building types in the ranch and cape style with a range in floor area from

960 – 1,410 square feet. Each single-family home would include a primary entrance oriented toward the street, a private driveway and lawn areas around the building's perimeter.

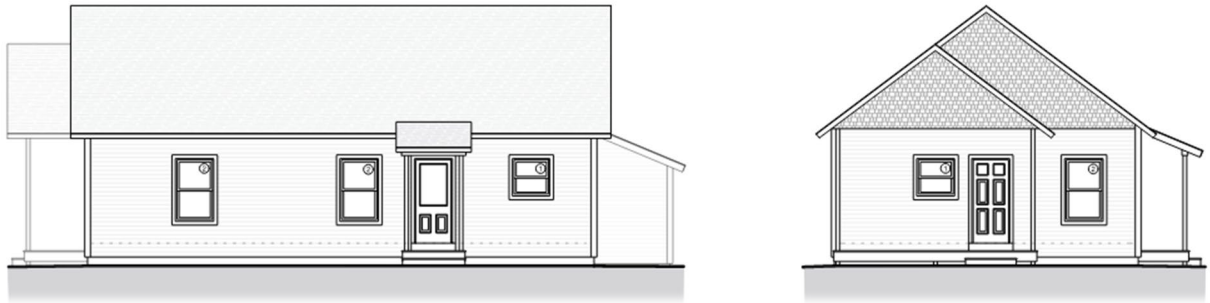


Figure 3: Proposed single-family ranch-style building type

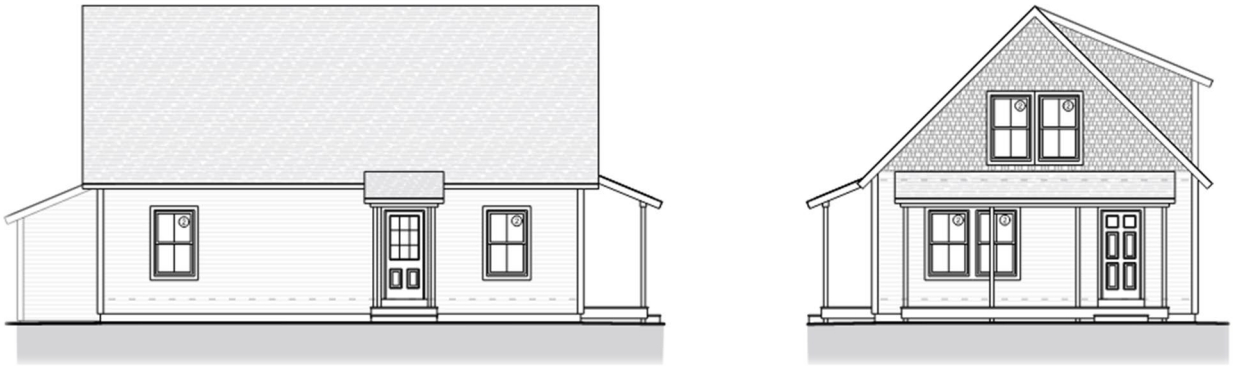


Figure 4: Proposed single-family cape-style building type

V. RIGHT, TITLE, & INTEREST

The applicant has demonstrated right, title, and interest through a Purchase and Sale Agreement (and Extension) with the property owner at 57 Castine Street. The property is recorded as a quitclaim deed in the Cumberland County Registry of Deeds, Book 9737, Page 328 (Attachment B), with the Purchase and Sale materials included as Attachments C and D.

The applicant has a recorded quitclaim deed, at the Cumberland County Registry of Deeds, Book 41250, Page 305, for a lot of land fifty feet wide and approximately four feet deep at the extension in the southwesterly direction of Aldworth Street and a recorded quitclaim deed, at the Cumberland County Registry of Deeds, Book 41250, Page 229, for a 10,000 square foot parcel located at 84 Aldworth Street.

The final conveyance of the lot split parcel is necessary to obtain sufficient right, title and interest and recording within the Cumberland Country Registry of Deeds. Recorded deed information is included in attachment B.

VI. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided financial capacity that includes internal capital and a secured line of credit from Maine Community Bank. The applicant will pursue grant funding with

MaineHousing as an affordable housing development upon closure of the Purchase & Sale agreement.

The applicant has contracted with Northeast Civil Solutions, a licensed engineering and land surveying company, to provide the technical capacity for this application.

Financial and Technical capacity is included as attachment E, F, & G.

VII. ZONING ANALYSIS

The site is located within the Residential Neighborhood 1 (RN-1) zone. Relevant sections of the RN-1 purpose statement include:

- RN-1: "To *provide for a residential neighborhood environment predominantly characterized by dwellings on lots of at least 6,500 square feet. Conversion of existing nonresidential structures to multi-family dwellings is permitted within the RN-1 zone, subject to standards encouraging compatibility and context sensitivity to ensure the stability of established residential neighborhoods."*

A. Conservation Residential Development.

This application proposes to utilize the CRD residential development form as outlined in Section 7.4.1 of the Land Use Code, which is a permitted alternative development form in the RN-1 zone. A CRD permits a reduction in specific dimensional standards, as detailed in the table below, in exchange for the provision of common open space and the preservation of Portland's natural resources.

A CRD is required to be designed to prioritize the preservation of natural features to the greatest extent practical, and to maintain interconnected streams, wetlands, stands of mature trees and critical wildlife habitat; incorporating natural site features into the development's overall design. For example, buildings, walkways and parking area should be designed to minimize impacts to identified natural features on-site, including within the general area of disturbance. A minimum of 30% of the total site area of a CRD must be maintained as common open space, as defined in Section 7.4.1.E.2.

A zoning analysis of the proposed project is provided in the table below:

Conservation residential development	Required	Proposed
Total acreage	87,120 sf (2 acres)	100, 302 sf (2.3 acres)
Maximum lots (allowable)	15	9
Lot size (minimum)	3,250 sf	3,364 sf
Street frontage (ft)	20 ft.	35 ft.
Setbacks (front)	5ft. minimum or align with abutting properties	20 ft.
Setbacks (sides)	5 ft. at interior side, 8 ft. at abutting properties	5 ft. at interior side, 8 ft. at abutting properties
Setbacks (rear)	25 ft	> 25 ft

Lot coverage	None	30%
Landscape open space (per lot)	None	60%
Common open space	30% of lot area	63% of lot area

VIII. SITE PLAN STANDARDS (Section 13.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 13.6. Staff comments are below.

1. Transportation Standards (Section 13.6.1)

A. Impact on surrounding street systems

The proposed CRD intends to construct a new public street extension at Aldworth Street to provide access for individual private driveways. The City's consulting traffic engineer finds that the addition of nine new lots is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety on surrounding streets. In addition, the City's consulting traffic engineer finds the proposed spacing of the driveways to be acceptable, given the context of the site and location at the end of a dead-end street.

The applicant has submitted a waiver to *Figure I-1 Local Street Cross Section* of the City's Technical Manual, Section 1, which requires two travel lanes at a width of fourteen feet in both directions for a two-way local street. The applicant's justification to reduce the travel lane width is to maintain the current condition of the twelve-foot travel lanes along Aldworth Street as a seamless transition with the new public street extension. Staff finds that the new public street extension should be constructed to meet the lane width of fourteen feet for a local street cross section to allow for on-street parking on one side of Aldworth Street throughout the subdivision and allow for sufficient access for emergency vehicles

B. Access and circulation

The applicant has indicated new curbing along the frontage of each subdivided lot along the new public street extension. Staff provided comments that require the applicant to add new curbing along the length of the new street under the City's technical manual, Section 1 and provide an internal pathway to connect front entries to the proposed driveways.

The applicant has submitted a sidewalk waiver to the City's LUC 13.6.1.B.2 that requires all development provide a sidewalk along frontages. The applicant has provided justification, stating that the existing Aldworth Street currently has no sidewalks on either side within 1000 feet, and the street serves as a quiet, low-traffic residential road. Additional justification by the applicant states that installing new sidewalks along the extension while none exist on the original street would create an abrupt and disconnected pedestrian network with no connection to adjacent infrastructure.

C. Public transit access

The proposed CRD is within a two-block radius from an existing transit route on Forest Avenue and does not consist of 20 or more dwelling units to necessitate a new transit shelter thus, this standard is not applicable.

D. Parking

The proposed conservation residential development intends to park vehicles within private driveways for each of the new nine subdivided lots. Staff finds that the current driveway design could accommodate one parked vehicle, based on a parking area measuring eight feet by 16 feet in accordance with the City's Technical Manual, Section 1, ensuring no encroachment into the public right-of-way. Staff requests revisions to the site layout and placement of single-family homes to sufficiently accommodate the applicant's proposal for two parked vehicles in order to meet this standard.

2. Environmental Quality Standards (Section 13.6.2)

A. Preservation of significant natural features

The existing site includes MaineDEP designated streams, local intermittent streams, along with forested wetlands and existing stands of mature trees. The MaineDEP has an active NRPA permit under review associated with a proposed stream crossing to construct a culvert at approximately 115 feet in length and impact wetlands within 25 feet of a designated stream. The proposed CRD preserves approximately 50% of the property area for the preservation of existing trees and natural typography. The applicant has stated that approximately 47,500 square feet of disturbance area will impact the existing site to construct the new street extension, establish the new lots, connect to public utilities and manage stormwater. Staff recommends a reduction in the grass open space amenity area and adjusting the location of the proposed infiltration basin to avoid encroachment within the 100-foot stream buffer, shown as dashed blue line in Figure 5.

The applicant has provided a Low-Impact Development (LID) scorecard to demonstrate compliance with LID standards, and has indicated 85 out of a possible 178 points. Staff has reviewed the LID scorecard and provided comments that disagree with the applicant's points claimed for protection of wetlands, perennial stream encroachment, tree preservation, site-specific soil survey, locally-sourced landscape materials, reduction of impervious surfaces and winter maintenance agreement. Staff recommends further consideration that mitigate wetland impacts that manage natural drainage areas, enhance natural buffering at stream crossings, upsize culvert at stream crossing, and provide a detailed tree survey, updated landscape plan, a narrative to describe reduction of impervious surface on site, and a draft of winter maintenance agreement.

The full LID scorecard is included as attachment Y.

B. Site landscaping and buffers

The proposed CRD sets aside roughly 50% of the property as protected open space, natural topography, and retaining existing shade trees and vegetation. Staff requests that the applicant provide an existing tree inventory with the locations, size, and species of the trees that are 10" DBH and greater as required under the City's Technical Manual, Section 3.2.4.A, and indicate tree removals on the demolition plan.

The proposed development provides 11 new street trees along the property frontage at the new public street extension at Aldworth Street which meets the requirement for one street tree per 25-35 linear feet of frontage along a city right-of-way.

Staff requests that the applicant add a vegetated buffer at existing abutting properties to meet the City's Technical Manual, Section 4.

C. Water quality/storm water management/erosion control
The applicant has submitted a stormwater management report and plans that include erosion and sedimentation control measures. The plan includes treatment of stormwater runoff from the proposed public street extension and impervious areas for the majority of the development by the proposed soil filtration system. The applicant has stated upland soils are suitable for the proposed infiltration practices for the development.

Staff and the City's consulting stormwater engineer have provided comments to the applicant for additional clarification to demonstrate how the project is meeting the required thresholds for treatment to comply with the stormwater management standards.

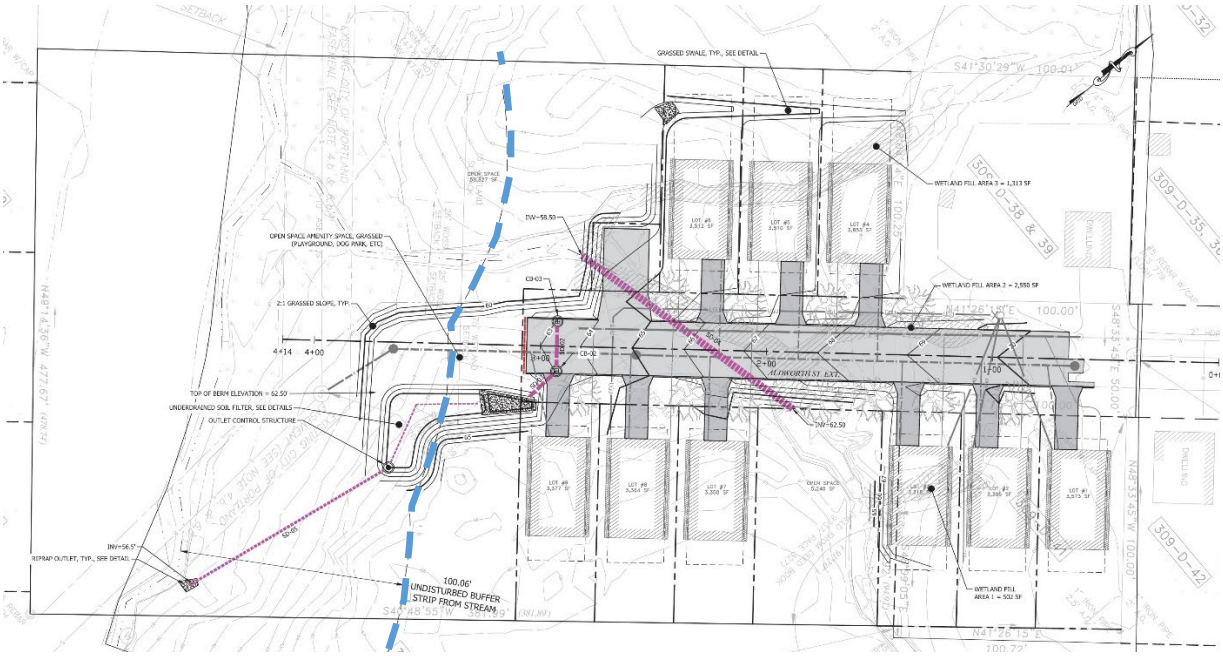


Figure 5: Project grading, erosion and sedimentation control plan

3. Public Infrastructure and Community Safety Standards (Section 13.6.3)

A. Consistency with City Master Plans
This application meets the dimensional requirements and use standards of the RN-1 zone as contained in the Land Use Code, which was recommended by the Planning Board and adopted by the City Council in November of 2024 on the basis of its consistency with Portland's Plan 2030, the City's Comprehensive Plan.

B. Public Safety and Fire Prevention
Staff finds that the new public street extension and proposed development are designed in accordance with the City's public safety standards for emergency vehicles, providing required access to each single-family home.

The development is designed in accordance with the standards of a CRD that allow for a reduction in lot sizes with new single-family homes arranged within close proximity to promote natural surveillance. Staff recommends the addition of municipal lighting to maintain visibility along the new public street extension.

C. Availability and capacity of public utilities
The proposed CRD includes new public water, sanitary sewer, and underground electric service to each subdivision lot. The Department of Public Works has commented that the plans should be revised to add underdrains to the new public street extension, modify the proposed sewer connection to comply with Section 10 of the City's Technical Manual and standard details, and include perimeter drainage for each single-family home.

The applicant is required to submit ability to serve letters from the Department of Public Works, Central Maine Power, and the Portland Water district.

4. Site Design Standards (Section 13.6.4)

A. Massing, ventilation, and wind impact
The applicant proposes nine single-family homes, each on an individual lot, arranged to meet the CRD standards and the underlying zoning regulations. The applicant has submitted architectural plans to indicate two building types in the ranch and cape style that staff find are consistent with the residential structures found within the surrounding neighborhood.

Staff has provided comments for the applicant to indicate the proposed building type and front door locations on the plans.

B. Shadows
Not applicable, the proposed development does not exceed 65 feet in height.

C. Snow and ice loading
The applicant has indicated that snow removal will be managed by individual property owners and not encroach into the public right-of-way.

Staff has indicated that a guardrail could be omitted from the end of the new street extension of Aldworth Street to accommodate a snow storage area. This would require an easement provided to the City to allow snow storage area at the end of the street.

View corridors
Not applicable, the CRD is located in a low-density residential neighborhood and is not designated as a view corridor.

D. Historic resources
Not applicable, the CRD is not located within a designated historic district and the applicant has indicated no archaeological resources have been identified on the property.

E. Exterior lighting
The applicant has stated that individual property owner will meet site lighting requirements in accordance with this standard for single-family homes with full cutoff and illumination

levels. Existing cobrahead lighting is located along Aldworth Street and mounted to electrical poles. Staff request that the applicant provide an updated site plan to add municipal lighting along the new public street extension at spacing to meet the City's Technical Manual, section 8.2.

F. Noise and vibration
The proposed CRD incorporates residential-scaled HVAC on each individual lot.

G. Signage and wayfinding
No wayfinding or traffic signage is required beyond standard street signage, which is already installed at the existing intersection of Aldworth Street and Wyndham Street.

H. Zoning-related design standards
Not applicable, the proposed CRD will construct single-family homes on individual lots in the RN-1 zone.

IX. SUBDIVISION REVIEW

Section 14.4.1 of the City's Land Use Code establishes standards under which Subdivision applications must be reviewed. Per this section, Subdivisions shall adhere to the following requirements:

A. Water or Air Pollution
The proposed subdivision intends to mitigate disturbance areas with stormwater best management practices and provide erosion and sedimentation control measures throughout construction. Refer to site plan assessment for preservation of significant natural features in Section VIII of this memo under §13.6.2.(A) for assessed impacts to mitigate disturbances to water resources.

B. Sufficient Water Supply
The proposed subdivision will utilize public water service extended from Aldworth Street. The applicant shall submit an ability to serve letter from the Portland Water District for Staff review in accordance with this standard.

C. Impacts to Existing Water Supply
The proposed subdivision will utilize public water service extended from Aldworth Street. The applicant shall submit an ability to serve letter from the Portland Water District for Staff review in accordance with this standard.

D. Soil Erosion & Stormwater Detention
The applicant has provided an erosion control plan that indicates disturbance areas, silt fencing and erosion control matting for slopes proposed at a 2:1 ratio. Refer to site plan assessment for the preservation of significant natural features in Section VIII. of this memo under §13.6.2.(A) for assessed impacts to soil erosion and stormwater detention.

E. Impacts to Highways & Public Roads
The proposed subdivision is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety.

F. Adequate Sewer & Stormwater Disposal

The proposed subdivision provides a new sanitary waste disposal connection for the nine single-family homes at the existing sewer easement that runs through the property. The proposed subdivision provides storm water disposal for each property and separated storm water disposal from the City's drainage system that will not cause an unreasonable burden on municipal services. Refer to site plan assessment of public utilities in Section VIII. of this memo under §13.6.3.(C) for assessed impacts to the City's sewer system.

G. Impacts to City Solid Waste & Sewage

The applicant has indicated that each of the nine lots will manage solid waste through bins provided by the City of Portland. Refer to site plan assessment of public utilities in Section VIII of this report under §13.6.3.(C) for assessed impacts to the City's sewer system.

H. Adverse Impacts on Visual, Historic & Natural Resources

The proposed subdivision will minimize impact to existing wetlands, MaineDEP designated streams, and existing mature trees by preserving approximately 50% of the existing site for natural resources and mitigating the impacted streams with engineered solutions. Refer to the site plan assessment of impacts to preservation of significant natural features and site landscaping in Section VIII of this memo under §13.6.2.(A&B).

I. Compliance with Comprehensive Plan

The proposed subdivision is in conformance with the City's comprehensive plan *Portland's Plan 2030* through the principles of complete neighborhoods to have access to the basic necessities of daily life – high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services – within a walkable, bikeable distance.

J. Financial and Technical Capacity

Refer to Section VI of this report.

K. Shoreland Zone Impacts

Not applicable. The project is not located within the shoreland zone.

L. Groundwater Quality & Quantity

The proposed subdivision proposes to connect to public water service and will not drill wells to tap water from existing aquifers. In addition, the proposed subdivision will provide stormwater treatment in accordance with state and local requirements, and therefore water infiltrating beneath the surface is unlikely to contaminate existing groundwater. Refer to site plan assessment of water quality, stormwater management, and erosion control standards in Section VIII of this report under §13.6.2.(C).

M. Flood Risk

Not Applicable. The site is not located in a flood zone.

N. Stormwater Management

The applicant has provided a stormwater management report and plan for the proposed subdivision to demonstrate compliance with the City's Technical Manual, Section 5 standards for erosion and sedimentation control, water quality treatment, flooding and detention volume. Refer to the site plan assessment of the site plan stormwater management review in Section VIII of this report under §13.6.2.(C).

O. Depth-to-Shore Frontage Ratio
Not Applicable. The proposed subdivision does not include shore frontage.

P. Subdivisions Located in Two or More Municipalities
Not Applicable. The proposed subdivision does not cross municipal boundaries.

X. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held an in-person neighborhood meeting on September 29, 2025, at Habitat for Humanity of Greater Portland ReStore located at 659 Warren Avenue, Suite A in Portland. Fourteen members of the public were in attendance.

Public comment centered on:

- Addressing of the proposed subdivision and location of new street extension at Aldworth Street.
- Delineation of existing wetlands and potential impacts.
- Impacts to wildlife in the area.
- Extent of disturbance area and extent of tree cutting on the property.
- Impacts to stormwater and increased traffic on the neighborhood.
- Construction management, schedule and noise mitigation.

A full sign-in sheet and meeting minutes are included as attachment Z & AA.

XI. NEXT STEPS

Staff will continue to review resubmitted plans and documents to ensure the proposed project complies with all applicable standards, and specifically:

1. Address any outstanding Staff comments
2. Address additional comments from the Planning Board.
3. Prepare final plan submission.
4. Schedule and hold planning board public hearing

XII. ATTACHMENTS

Public Comment

PC1. Mike James
PC2. Megan Porter
PC3. Tyra Mazzer

Report Attachments

S1. Staff comment letter
S2. Site Plan Worksheet

S3. Zoning worksheet

Applicants Submittal

A. Cover letter
B. Deed ownership
C. Purchase and sale agreement – original as drafted
D. Purchase and sale agreement – amended as extension
E. Financial and technical capacity letter
F. Financial capacity letter – Habitat for Humanity
G. Financial capacity letter – Maine Community Bank
H. Technical capacity authorization letter – Northeast Civil Solutions
I. Natural Resources - Habitat map viewer
J. Site plan standards narrative
K. Subdivision standard narrative
L. Zoning assessment table
M. Site plan form
N. Site plan checklist
O. Subdivision checklist
P. Solid waste narrative
Q. Life safety narrative
R. Masterplan narrative
S. Waiver request narrative
T. Conservation residential development narrative
U. Construction management plan
V. Wetland delineation report
W. Stormwater report
X. Traffic analysis report
Y. LID Scorecard
Z. Neighborhood meeting invitation
AA. Neighborhood meeting certification
BB. Notice to abutters- Major site plan application
CC. Notice of public meeting certificate – Planning Board Workshop 11/4/2025

Plans

1. Preliminary boundary and lot split
2. Subdivision plan
3. Cover sheet
4. Erosion control notes and details
5. Erosion control plan
6. Grading and drainage plan
7. Road profile
8. Site and landscape plan
9. Utility plan
10. Architectural option 1 – Ranch house
11. Architectural option 2 – Cape house
12. Construction detail
13. Construction detail

14. Construction detail
15. Construction detail
16. Construction detail

S1

Dear Applicant,

We have completed our review of your application (PL-003433-2025) proposing to create nine lots to facilitate the construction of nine single family residential buildings and an extension of Aldworth Street, a public street. The proposed development is designed in accordance with the conservation residential development standards at 57 Castine Avenue in the RN-1 Residential Neighborhood zone. This review is based on the application submitted on September 10, 2025. This development triggers major site plan and subdivision review, and is subject to the following regulations:

- Site Plan – Article 13.6
- Zoning – Article 6 & 7
- Subdivision – Article 14

An overview of the City's review can be viewed in the attached project review worksheets and peer review comments. In addition to the application's project review, the MaineDEP is reviewing a permit application based on state jurisdiction of the stream that passes through the property. Staff requests that the applicant participate in a site visit with the assigned project manager from MaineDEP and City of Portland staff to review delineation of natural features on the property site.

Next Steps
Please review all feedback and reach out to the assigned planner if you have any questions or would like to discuss this feedback in more detail. In order to proceed, the applicant shall prepare a written response to all feedback, and shall update plans, documents and other materials as necessary to address review comments. The applicant shall notify the planner when a resubmission is uploaded to ProjectDox. Once received, the planner will notify the applicant of their scheduled review timeline for this resubmission.

Sincerely,

Sean King, Urban Designer

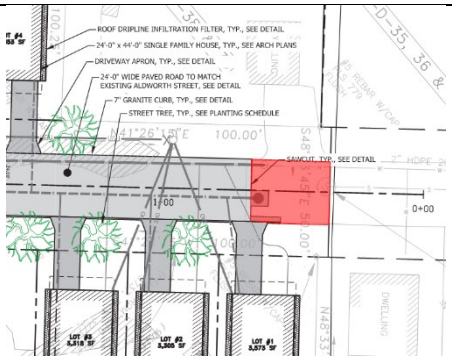
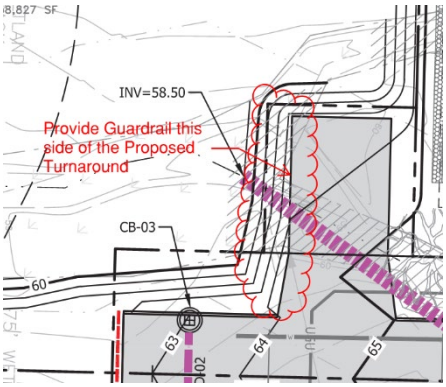
Attachments

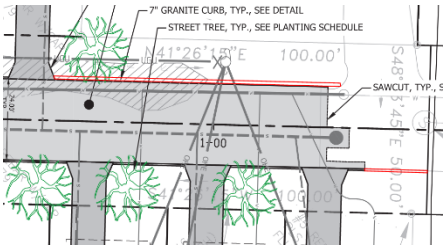
1. Site Plan and Subdivision Worksheet
2. Zoning Worksheet

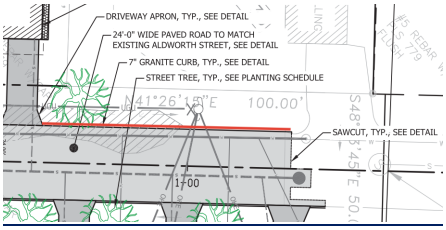
Site Plan Review Standards (Sec. 13.6)

Transportation Standards (Sec. 13.6.1)

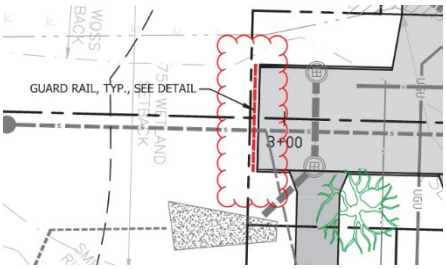
Standard		***How the standard is being met***	***Finding***
Impact on Surrounding Street Systems	**13.6.1.A.1** The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of vehicular, bicycle, pedestrian, and transit traffic will not: 1. Create or aggravate any significant hazard to safety on the surrounding street network.	The proposed project is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety. **What still needs to be addressed:** Public Works does not support the proposed waiver to the Local Street Cross Section Design. The standard cross section should be maintained to allow for on street parking on one side of Aldworth Street throughout the subdivision while also allowing for emergency vehicle access. No Parking on this Side Street signage should be provided on one side of the proposed public street.	Not Met
	13.6.1.A.2 The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of vehicular, bicycle, pedestrian, and transit traffic will not: 2. Substantially increase congestion on any street without mitigation proportionate to the level of impact.	The proposed project is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
Access and Circulation	**13.6.1.B.1.a** ***In General*** All development subject to this article shall provide safe and reasonable access and internal circulation for all users of the site and shall comply with the transportation systems and street design standards of the Technical Manual.	The proposed subdivision will add nine lots to facilitate 9 new single-family houses, each with a private driveway to accommodate one parked vehicle. The City's consulting traffic engineer finds the proposed spacing of the driveways are close, but given the context of the site, and that the driveways are location at the end of a dead-end street, find that the proposed design is acceptable. **What still needs to be addressed:** Awaiting Fire Marshall review to confirm turning radius at end of street. Public works requires the proposed street extension must extend to the current accepted portion of Aldworth Street. Label the street as Extension of Aldworth Street rather than Aldworth Street Extension.	More Information Required

		 Provide Guardrail on the west side of the proposed Turnaround.  	
	<u>13.6.1.B.1.b</u> ***In General*** Shared circulation, parking, and transportation infrastructure shall be provided to the extent practicable, with utilization of joint curb cuts, walkways, service alleys, bus pull-out areas, and related infrastructure shared with abutting lots and roadways. Easements for access for abutting properties and shared internal access points at property lines shall be provided where possible to facilitate present or future sharing of access and infrastructure.	The applicant has submitted a waiver request for new sidewalks in the public right-of-way, and has provided justification that no sidewalk currently exists on Aldworth Street or within proximity to the proposed development. **<u>What still needs to be addressed:</u>** As currently configured the proposed driveways do not allow enough room for parking a vehicle without it encroaching into the right of Way. See Technical Manual Section 1 Table 1-B.K, the applicant should either revise Driveway or request a waiver from this requirement.	More information needed
	<u>13.6.1.B.1.c</u> ***In General*** Continuous internal walkways shall be provided between existing or planned public sidewalks adjacent to the site, transit stops and street crossings, and building entrances on the site.	The subdivision plan proposes nine individual lots with no internal walks between lots that aligns with the surrounding neighborhood context. **<u>What still needs to be addressed:</u>** Staff requests pathways to connect to the front entries of the proposed single-family homes from the proposed driveways.	Not met
	<u>13.6.1.B.1.d</u> ***In General*** Where the site abuts or includes an existing or planned publicly accessible trail, a connection to or integration of such trail shall	Not applicable, the site does not abut an existing or planning publicly accessible trail or connection.	Not Applicable

	be provided to the extent practicable, including rights of public access.		
	13.6.1.B.1.e ***In General*** Points of access and egress shall be located to avoid conflicts with turning movements and traffic flows.	The City's consulting traffic engineer finds the proposed spacing of the driveways are close, but given the context of the site, and that the driveways are location at the end of a dead-end street, these are acceptable. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.1.B.2.a ***Curb and sidewalks*** All development shall provide curb and sidewalks along all frontages, installed to specifications as described in the transportation systems and street design standards of the Technical Manual.	The proposed subdivision provides curbing along the frontages. The applicant has submitted a waiver request to not install new sidewalks along the frontages. **What still needs to be addressed:** Provide curbing for the entire street extension  Multiple versions of granite curb details have been provided. The detail for curbing within the street should meet the City's standard detail for granite curb.	More information needed
	13.6.1.B.2.b ***Curb and sidewalks*** Where sidewalks already exist but are in substandard condition, they shall be repaired or replaced in conformance with Chapter 25 of the City of Portland Code of Ordinances and the transportation systems and street design standards of the Technical Manual.	Not applicable, no sidewalks exist to repair along the property frontage.	Not Applicable
	13.6.1.B.2.c ***Curb and sidewalks*** An applicant may request a waiver from sidewalk installation requirements if they meet two or more applicable waiver criteria as listed below: i. There is no reasonable expectation for pedestrian usage coming from, going to, and traversing the site. ii. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of pedestrian-oriented infrastructure. iii. A safe alternative walking route is reasonably available, for example, by way of	The applicant has submitted a sidewalk waiver with justification that the existing Aldworth Street currently has no sidewalks on either side within 1000 feet, and the street serves as a quiet, low-traffic residential road. Installing new sidewalks along the extension while none exist on the original street would create an abrupt and disconnected pedestrian network with no connection to adjacent infrastructure. Additional justification by the applicant includes: Sidewalks would terminate at a dead end, offering no meaningful pedestrian	More information requested

	a sidewalk on the other side of the street that is lightly traveled. iv. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program (CIP) or has been funded through an earlier CIP or through other sources. v. The street has been constructed or reconstructed without sidewalks within the last 24 months. vi. 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.	connection; the development includes only nine homes, resulting in minimal pedestrian traffic; a sidewalk would require additional grading and stormwater impacts, contrary to the goals of the Conservation Residential Development standards. **What still needs to be addressed:** Public works is not opposed to the sidewalk waiver in this location but the waiver request should be revised to specifically call out the applicable criteria as allowed in the Land Use Code under 13.6.1.B.2.c	
	13.6.1.B.2.d ***Curb and sidewalks*** An applicant may request a waiver from curb installation requirements if they meet two or more applicable waiver criteria as listed below: i. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost. ii. The reconstruction of the street is specifically identified and approved in the first or second year of the current CIP or has been funded through an earlier CIP or through other sources. iii. The street has been rehabilitated without curbing in the last 60 months and the proposed use and design of the site does not necessitate the installation of curbing. iv. Strict adherence to the curb 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. v. Runoff from the development site or within the street does not require curbing for stormwater management.	The applicant has not submitted a waiver from curb installation. **What still needs to be addressed:** Staff recommends that new curbing be added along frontage for Aldworth Street extension.  	More Information Required
Public Transit Access	**13.6.1.C.1** All residential development consisting of 20 or more dwelling units and all commercial and institutional developments of at least 20,000 square feet gross floor area shall provide a transit shelter adjacent to or within the public right-of-way along its frontage, or at a nearby high-volume transit stop without a transit shelter, when the following criteria are met: A. The development is proposed along an existing public transit route on a principal or minor arterial roadway, as shown in the Federal Street Classification Map. B. The nearest existing transit shelter on the route is more than ¼ mile from the site, measured along rights-of-way.	Not applicable, the proposed subdivision does not consist of 20 or more dwelling units to necessitate a transit shelter.	Not Applicable

	13.6.1.C.2 Transit facilities shall be connected to the public sidewalk system.	Not applicable, no new transit facility is required.	Not Applicable
	13.6.1.C.3 All or some of this standard may be waived if the review authority determines that the development is not anticipated to generate public transit usage due to particular characteristics of the development or proposed use.	Not applicable, no new transit facility is required.	Not Applicable
Parking	**13.6.1.D.1.a** ***Vehicular parking*** Developments shall comply with the parking standards of Article 18.	Each individual lot proposes two spaces per dwelling unit to comply with parking standards of Article 18. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.1.D.1.b ***Vehicular parking*** Where provided, parking spaces and aisles shall not be located in front and corner side yards, unless the applicant can demonstrate that site constraints preclude the location of parking elsewhere on the site.	The applicant has submitted an application for a conservation residential development with a reduced lot area with driveway in the front setback due to lot constraints. **What still needs to be addressed:**	More Information Required
	13.6.1.D.1.c ***Vehicular parking*** Where provided, parking spaces and aisles shall meet applicable dimensional standards as detailed in the transportation systems and street design standards of the Technical Manual.	The development proposes to create two parking spaces at each lot, however only approximately 28 feet is shown. **What still needs to be addressed:** The Technical Manual section 1 requires a parking area size of at least 8' x 16' and shall not encroach upon the public right-of-way. Staff request that the building footprint is setback further into the lot to accommodate for 2 parked cars in the private driveway.	More Information Required
	13.6.1.D.2.a ***Bicycle parking*** All development shall provide secure bicycle parking in accordance with the parking requirements of Article 18 and the transportation systems and street design standards of the Technical Manual.	Not applicable, single family residents do not require bicycle parking.	Not Applicable
	13.6.1.D.2.b ***Bicycle parking*** The review authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to particular site characteristics or proposed uses.	Not applicable, single family residents do not require bicycle parking.	Not Applicable
	13.6.1.D.3.a ***Snow storage*** All developments shall include areas for snow storage or provide an acceptable snow removal plan.	The proposed development includes a street extension and individual driveways for each lot is to be managed by individual occupants. Subdivisions are required to include areas for snow storage to not impede on the public right-of-way. **What still needs to be addressed:** The applicant needs to indicate snow storage on plans for each proposed lot.	More Information Required
	13.6.1.D.3.b ***Snow storage*** Snow storage areas may not encroach on adjacent properties, public ways, and pedestrian walkways, and shall not be located where	The proposed development includes a street extension and individual driveways for each lot.	More Information Required

	they would adversely impact the functionality of stormwater management systems.	**What still needs to be addressed:** Guardrail can be omitted from the end of Aldworth Street, end of Aldworth street can be designated a snow storage area. An easement will need to be provided for the snow storage area.  	
	13.6.1.D.3.c ***Snow storage*** Landscaping in designated snow storage areas shall be such that it can withstand the snow pile.	The proposed development includes individual driveways for each lot. **What still needs to be addressed:** The applicant to indicate snow storage on plans for each proposed lot.	
	13.6.1.D.4 ***Electric vehicle (EV) charging*** All development shall meet applicable EV standards as provided in Section 1 of the Technical Manual.	Not applicable, proposed surface parking on each subdivide lot is below 5 spaces	
Transportation Demand Management	**13.6.1.E.1** The following types of development shall design and implement a Transportation Demand Management (TDM) plan: A. All commercial, institutional, or mixed-use developments of 50,000 square feet or more in total floor area. B. All commercial or institutional uses designed to accommodate 100 or more employees or, for educational institutions, 100 or more students.	Not applicable, the proposed residential subdivision does not meet the threshold to require a TDM plan	Not Applicable
	13.6.1.E.2 The TDM Plan shall comply with the standards for transportation studies and plans as contained in the Technical Manual.	Not applicable, the proposed residential subdivision does not meet the threshold to require a TDM plan	Not Applicable
Environmental Quality Standards (Sec. 13.6.2)			
Standard		***How the standard is being met***	***Finding***
Preservation of Significant Natural Features	**13.6.2.A.1** All development shall preserve and protect significant natural features by incorporating the principles of Low-Impact Development (LID) in accordance with the LID standards of the Technical Manual.	The proposed development preserves a selection of existing natural features that includes existing wetlands, a portion of the MaineDEP designated stream and existing trees throughout the property site. **What still needs to be addressed:** The applicant is claiming 5 points for avoiding wetlands impacts but is proposing to fill wetlands on site. No points can be awarded in this category if there are any wetlands impacts. We recommend the project reconsider the site layout to avoid wetlands impacts. If wetlands alteration can't be avoided, it should be minimized to	Not met

		the extent practicable and a narrative justifying the impacts must accompany the scoring tool. The applicant is required to mitigate wetland impacts due to more than 500 square feet of disturbance. Refer to acceptable forms of mitigation in the City's technical manual section 3.2.1.B.1.a The applicant has claimed 5 points for conducting a detailed, site-specific soil survey. Please provide the high-intensity soil survey in support of the points claimed in this category. The applicant has claimed 6 points for using locally-sourced landscape materials, using native vegetation, and for more than 50% of pervious developed area being landscaping (not lawn). The landscape plan should be updated to include the requirements for locally-sourced materials and native vegetation and must provide sufficient detail to determine which areas will be lawn and which will be densely planted landscaping. The applicant has claimed 6 points for reducing impervious on site. Please provide a narrative detailing how impervious has been minimized, including proposed and minimum required roadway dimensions and number and dimensions of proposed parking spaces. The applicant has claimed 4 points for providing a detailed winter maintenance agreement to reduce chlorides. Please provide a draft of the agreement for review and approval. A finalized agreement must be recorded at the Registry of Deeds prior to issuance of any C of O for the property.	
	13.6.2.A.2 Where complete preservation of significant natural features substantially compromises development of the site as otherwise permitted by zoning, the review authority may reduce the requirement in accordance with the LID standards of the Technical Manual provided that the applicant implements preservation measures to the extent practicable and demonstrates compliance with applicable state and federal regulations.	The proposed conservation residential development preserves approximately 50% of the property area for the preservation of existing trees and natural typography. **What still needs to be addressed:** The applicant has claimed 6 points for protecting 50% or more of trees on site with DBH of 10" or more but has not provided a detailed tree survey to support this. Please submit a tree survey for the entire site showing all trees 10" DBH or greater clearly indicating which trees will be preserved. Additionally, tree protection measures must be detailed in the ESC plan and areas of protection included in the construction management plans.	Not met

		The applicant has submitted a NRPA permit which is currently being reviewed by MaineDEP, Water Resources staff would like to conduct a site visit to review and confirm the wetland delineation for this project. The applicant is claiming 6 points for preserving shoreline buffers and 10 points for avoiding stream crossings. The proposal shows encroachment into the perennial stream buffer and shows the roadway extension across another stream channel necessitating a 100' culvert to carry the stream. We recommend the project reconsider the site layout to avoid stream crossings and impacts to the buffers. If stream crossings are proposed, they must meet the Maine Stream Smart standards, and the LID scoring tool must be updated accordingly. For the culvert design, a drainage analysis must be completed and documentation provided showing how the culvert size was determined. The design must meet the Maine DOT Hydraulic Capacity Standard and Guidance and comply with Maine Stream Smart Principles, in accordance with Technical Manual Standard 3.2.1-B-2. A full plan, profile, and detailed drawings of the culvert must also be provided.	
	13.6.2.A.3 The site plan shall include adequate measures to protect significant natural features to be preserved from construction impacts, in accordance with the LID standards of the Technical Manual.	The proposed conservation residential development preserves approximately 50% of the property area for the preservation of existing trees and natural typography. **What still needs to be addressed:** The applicant has claimed 6 points for tilling soils prior to revegetation and adding soil amendments based on soil tests. These requirements must be noted on the landscape plan. There are some patches of Japanese Knotweed starting to develop at the end of the existing portion of Aldworth and some dispersed multiflora rose following the drainage creek into the lot. The City Arborist is concerned that the excavation spoils could spread knotweed throughout the site if the soil isn't handled properly.	Not met
Site Landscaping and Buffers	**13.6.2.B.1.a** ***On-site landscaping*** All development subject to this article shall provide a minimum of one shade tree consisting of species identified on the City of Portland Recommended Tree list or six plantings, defined as one shrub, one ornamental grass, and/or three perennials, per 5,000 square feet of lot area in accordance with the landscaping standards of the Technical Manual.	Not applicable, the lot sizes are reduced under 5,000 sf as a conservation residential development.	Not Applicable

	13.6.2.B.1.b ***On-site landscaping*** Existing vegetation to be preserved on the site may be counted towards this requirement as described in the landscaping and landscape preservation standards of the Technical Manual.	The proposed conservation residential development preserves approximately 50% of the property area for the preservation of existing trees and natural typography. **What still needs to be addressed:** The applicant needs to complete a tree inventory with the locations, size, and species of the trees that are 10" DBH and greater, and then also indicate which ones they are proposing to remove on the demo plan.	More information requested
	13.6.2.B.1.c ***On-site landscaping*** Where site constraints prevent the planting of required shade trees or plantings at the development site, the reviewing authority may approve an alternative as described in the landscaping standards of the Technical Manual.	The conservation residential development includes shade trees within the right-of-way with minimal plantings within the private property that Staff finds appropriate based on the lot sizes are reduced under 5,000 sf as a conservation residential development. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.2.B.2.a ***Buffers and screening*** Loading and servicing areas, trash and recycling areas, storage areas, and roof- and ground-mounted utility structures, except for renewable energy systems, shall be screened from view from public sidewalks, streets and adjacent properties by dense evergreen and deciduous landscaping, fencing, architectural screening products, masonry walls, building walls, or a combination thereof.	Not applicable, no loading, service, trash, recycling and storage areas or utility structures are proposed.	Not Applicable
	13.6.2.B.2.b ***Buffers and screening*** Where immediately visible from the right-of-way, surface parking areas shall be screened with dense evergreen and deciduous landscaping, fencing, or masonry wall in accordance with the landscaping standards of the Technical Manual.	The proposed development adds eleven new street trees along the property frontage at Aldworth to meet this standard. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.2.B.2.c ***Buffers and screening*** For nonresidential development abutting a residential zone, an evergreen, densely landscaped buffer of not less than 10 feet in depth and six feet tall is required along the side abutting the residential zone. In cases where architectural fencing is used, the depth of the landscaped buffer may be reduced, so long as the fencing is at least six feet in height and a mix of evergreen and deciduous trees spaced no further than 20 feet apart is planted abutting the residential zone.	Not applicable, the proposed development is residential use.	Not Applicable
	13.6.2.B.2.d ***Buffers and screening*** All residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts of existing surrounding development.	The proposed development will remove existing trees within the disturbed areas shown on the plans, this includes removal of vegetated buffers at adjacent properties along Aldworth Street and rear abutter's property. **What still needs to be addressed:** Applicant is requested to add a vegetated buffer to meet Technical Manual section 4 at	Not met

		existing abutters located at 78 Aldworth & 79 Aldworth and preserve existing vegetation to the greatest extent possible at the rear abutter's property.	
	13.6.2.B.3.a ***Parking and vehicle display lot landscaping*** Developments with more than five parking spaces shall include at least one tree for every 750 square feet of uncovered asphalt parking area (including drive aisles), planted in landscaped islands to screen, shade, and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as described in the landscaping standards of the Technical Manual.	Not applicable, the proposed development will not general more than five parking spaces on each individual lot.	Not Applicable
	13.6.2.B.3.b ***Parking and vehicle display lot landscaping*** Landscaped islands shall be distributed so that uninterrupted pavement does not exceed forty parking spaces.	Not applicable, landscape islands are not required for private driveways for single family houses.	Not Applicable
	13.6.2.B.3.c ***Parking and vehicle display lot landscaping*** Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as determined by the review authority, the reviewing authority may approve an alternative as described in the landscaping standards of the Technical Manual.	Not applicable, private driveways for single family houses do not require parking lot screening.	Not Applicable
	13.6.2.B.4 ***Non-vehicular hardscape*** All uncovered paving for non-vehicular use, including pathways and patios, must either have a minimum Solar Reflective Index (SRI) of 33 initially and 28 once aged three years or include one tree for every 750 square feet of asphalt paving.	Not applicable, no uncovered paving for non-vehicular use is proposed at this time. **What still needs to be addressed:** Staff requests pathways to connect to the front entries of the proposed single-family homes from the proposed driveways.	More information needed
	13.6.2.B.5.a ***Street trees*** All development shall include one street tree per 25-35 linear feet of frontage along a city right-of-way or private roadway as specified in the landscaping standards of the Technical Manual. The provision of measures to enhance tree survival (such as raised planters, irrigation, and structural soils as recommended by the City Arborist) shall be required.	The proposed development adds eleven new street trees along the property frontage at Aldworth to meet this standard. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.2.B.5.b ***Street trees*** Where the applicant can demonstrate that site constraints prevent the planting of required street trees in the city right-of-way, the review authority may permit an alternative subject to the landscaping standards of the Technical Manual.	Not applicable, new street trees are proposed along the property frontage at Aldworth Street	Not Applicable
	13.6.2.B.5.c ***Street trees*** Where the proposed development includes the removal of an existing street tree determined by the City Arborist to be a heritage or feature mature tree, the applicant shall be required to contribute to the Tree Fund at the designated rate in the Technical Manual so that the total replacement cost is significantly higher than planting a new street tree/contributing for a new street tree.	Not applicable, no existing street trees	Not Applicable

Water Quality, Stormwater Management and Erosion Control	**13.6.2.C.1.a** All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following: a) Any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or redirected so as to create ponding on, or flooding of, adjacent lots.	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** Staff requests the applicant clarify access for maintenance for the proposed underdrain soil filter be accessed for maintenance. Figures showing subcatchments have not been included in the materials for review. These should be provided to verify how the areas and times of concentration have been evaluated for the pre- and post-development conditions.	More information needed
	13.6.2.C.1.b All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following: b) Any increase in volume or rate of stormwater draining from the lot onto an adjacent lot or City property following the improvement can be handled on the adjacent lot or City property without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot or City property.	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** The Applicant will need to review the extent of sediment barrier, shown as silt fence, on proposed erosion plan for the development. The sediment barrier should include the full disturbed area, including utility connections and stormdrain outlets on the southern end of the site. Consideration should also be made for the area in the middle of the site that will be draining to the culvert underneath the road. Proximity to natural resources should also be taken into consideration – double sediment barrier may be needed in some locations. Each house lot shows a dripline edge filter system, but the drainage plan for these systems is unclear. The stormwater report suggests they may be designed to infiltrate; however Staff are concerned that site soils may not be suitable for infiltration, and infiltration directly adjacent to building foundations is not recommended. Please clarify the proposed drainage approach for the house lots and whether the storm drain will need to be extended upstream to provide service connections to each lot. If so, the storm drain should be placed in the roadway between the sewer line and the water main, per Standard Detail I-4: *Utility Location in Streets*.	More information needed
	13.6.2.C.1.c All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following: c) Any increase in volume or rate of stormwater draining from the lot into the City's storm sewer system can be	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** No details are provided for the proposed culvert/stream crossing. Inverts are provided on the grading plan, and the road profile indicates a double crossing, but more	More information needed

	accommodated in the system without creating downstream problems or exceeding the capacity of the storm sewer system.	information on the culvert sizing and installation should be provided.	
	13.6.2.C.2 All development shall comply with the stormwater management standards of the Technical Manual.	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** In general, some additional clarity and organization of the information is needed to be able to verify that the project will meet the standards. Some different materials—including calculations, narratives, and other details—seem to reference different elevation datums.. Figures showing subcatchments and treatment areas have not been included. The Applicant needs to provide additional clarification to show how the project is meeting the required thresholds for treatment. The stormwater report includes some narrative discussion, but it is unclear how the areas relate to the design calculations provided, and how the different areas on the site are treated by the different proposed systems. A figure showing the areas being treated by different systems, and how that relates back to the whole site would be useful to show how the project meets the standard. More information should be provided on the roof drip edge systems that are proposed for treatment at each building and outfall from foundations. A detail for construction has not been included in the plans reviewed. The applicant to provide clarification for the underdrained soil filter system to include details about the overflows or spillways, and the elevations on those details do not relate to the site grades. In addition, the applicant should include specifications for the sediment forebay, outlet control structure, and the location and grading of the emergency spillway.	More information needed
	13.6.2.C.3 Development shall not pose a risk of groundwater contamination either during or post-construction, as described in the stormwater management and water supply standards of the Technical Manual.	The applicant has submitted a stormwater management report to include erosion and sedimentation control measures to protect the preserved natural features at the property. And includes treatment of stormwater runoff from the proposed street extension and impervious areas for the majority of the development.	Met

		What still needs to be addressed: Staff are not requesting any additional information related to this standard.	
	13.6.2.C.4 Applicants shall demonstrate that subsurface and/or any adjacent slope conditions are suitable to support the development, and where determined necessary, shall prepare a geotechnical study to demonstrate that the development as designed will not adversely impact the development site or any abutting property. Soil surveys and/or geotechnical studies shall be prepared in accordance with the requirements of the Technical Manual.	The applicant has submitted a stormwater management report to include a soil report in Appendix C with detailed soil maps and survey of soil types. The findings state the entirety of the site is forested with poorly draining soil, the proposed development indicates collection and treatment of stormwater with soil filter treatment system. The applicant has stated upland soils are suitable for the proposed infiltration practices for the development. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
Public Infrastructure and Community Safety Standards (Sec. 13.6.3)			
Standard		***How the standard is being met***	***Finding***
Consistency with City Master Plans	**13.6.3.A.1** All developments shall be designed so as to be consistent with City Council-approved master plans and facilities plans and with off-premises infrastructure.	The proposed development is consistent with the City's comprehensive plan *Portland's Plan 2030* through the principles of complete neighborhoods to have access to the basic necessities of daily life – high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services – within a walkable, bikeable distance. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.A.2 The site plan shall include suitable easements, rights, and improvements to connect or continue off-premises public infrastructure as may be required by the review authority.	The applicant has provided a boundary survey of existing conditions and a proposed subdivision plan to indicate the proposed lot split for the proposed development. What still needs to be addressed: The applicant to meet requirements in the City's Technical Manual section 14 related to site plan, subdivision plat and easements. The applicant shall finalize the subdivision plat with record owner information, total parcel area, assessing information and other rights or easements to be recorded. The applicant shall revise the boundary survey and subdivision plat with the recorded conveyances, proposed property markers, state plane coordinates on at least two corners as specified, and source of contours, vertical datum and benchmarks. The applicant shall include the 50' strip of land at the end of Aldworth St in the survey	

		boundary within the proposed development. The Turnaround and Utility Easement (41251/60) shall be conveyed to the City of Portland to include the proposed street extension at Aldworth Street. And establish a 30-foot-wide utility easement for the new public gravity sewer line that connects to the City's existing sewer easement southwest of the terminus. Lastly, the applicant must provide the City with a maintenance easement for the proposed soil filter area, and shall include a legal description and limits on the plan, to ensure future inspection and maintenance access.	
Public Safety and Fire Prevention	**13.6.3.B.1.a** All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime: a) Natural surveillance that promotes visibility of public spaces and areas.	The development is proposed along a public street extension with individual lots each with separate property owners for natural surveillance of preserved areas of the property. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.B.1.b All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime: b) Access control that promotes authorized and/or appropriate access to the site.	The development is proposed along a public street extension with individual lots each with separate property owners **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.B.1.c All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime: c) Territorial reinforcement that promotes a sense of ownership and responsibility through environmental design.	The development is proposed along a public street extension with individual lots each with separate property owners **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.B.2 All developments shall be designed to provide adequate emergency vehicle access to the site and comply with the Public Safety standards of the Technical Manual.	The public street extension has been designed to meet public safety standards. **What still needs to be addressed:** Staff are awaiting further comments from the Fire Marshall.	More information needed
Public Utilities	**13.6.3.C.1** The development shall not overburden sanitary sewers and storm drains, water lines or supply, or other public infrastructure and utilities. Development shall provide adequate utility	The proposed development indicates new connections for public water and sanitary sewer lines for each proposed subdivision lot.	More information needed

	infrastructure on-site and in connection to surrounding locations and facilities.	**What still needs to be addressed:** A wastewater capacity application must be submitted to DPW for review and approval. Clarity is needed on the downstream connection of the proposed gravity sewer into the existing City manhole near station 4+00. The utility profile should be updated to show the existing invert and pipe size of the manhole, as well as the proposed invert of the 8" pipe. A drop manhole will likely be required and should be constructed in accordance with Technical Manual Detail VI-3. At present, the proposed connection discharges into the manhole opposite the direction of the mainline sewer flow, which must be corrected. Please provide revised design information.	
	13.6.3.C.2 Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant, or complexity of revising existing overhead facilities.	Application indicates underground electrical service. **What still needs to be addressed:** Applicant needs to provide an ability to serve letter from electrical utility company. The utility plan should be reviewed to ensure that the full extent of impact is shown. It appears that underground electric services are not represented on the plan to all proposed buildings. The intent for how electrical service will be brought to the whole subdivision should be shown on the plan to show full impact.	More information needed
	13.6.3.C.3 All sanitary sewer lines, storm drains, water lines, and other utilities proposed as part of the development shall be designed to conform with the sanitary sewer and storm drain and water supply standards of the Technical Manual.	The applicant to indicate snow storage on plans for each proposed lot. **What still needs to be addressed:** Applicant to provide ability to serve letter from water utility company. Utility connections for sanitary sewer, drainage lines are under review by Public Works. DPW Water Resources recommend installing underdrains as part of the roadway reconstruction. These underdrains should also follow the locations shown in Standard Detail I-4.	More information needed
	13.6.3.C.4 All development within 200 feet of a public sanitary collection and treatment system shall connect sanitary sewer lines into the nearest available public	The proposed development indicates a new connection to an existing sanitary sewer line for the street extension at Aldworth Street.	More information

	sewer. If a public sanitary collection and treatment system is not available, a private wastewater system may be used according to the requirements of Chapter 24 of the City Code and the sanitary sewer and storm drain standards of the Technical Manual.	**What still needs to be addressed:** Applicant to submit a formal wastewater capacity application. Utility connections for sanitary sewer, drainage lines are under review by Public Works.	
	13.6.3.C.5 All residential development of 20 units or more, commercial development, and industrial development shall provide for the temporary storage and timely removal of all trash and recyclable materials including, at a minimum, paper, corrugated cardboard, plastics, and metals. Storage containers for recyclable materials shall be separated from trash containers. All exterior storage of trash and recyclables shall be screened from view from public sidewalks, streets, and adjacent properties.	Not applicable, the proposed development does not exceed 20 units or more	Not applicable
Site Design Standards (Sec. 13.6.4)			
Standard		***How the standard is being met***	***Finding***
Massing, Ventilation and Wind Impact	**13.6.4.A.1** The bulk, location, or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.	**What still needs to be addressed:** The applicant is requested to label the proposed house design for each proposed lot and front door entrances on site plan.	More information needed
	13.6.4.A.2 Development shall locate all HVAC venting mechanisms to direct exhaust away from public spaces and residential properties directly adjacent to the site.	**What still needs to be addressed:** Applicant will need to indicate location of proposed HVAC mechanical systems for each proposed single family house.	More information needed
	13.6.4.A.3 In proposed buildings or additions with an aggregate roof area greater than 2,000 square feet, measured horizontally, and, for residential projects, greater than nine residential units, a minimum of 75% of the roof area must meet the following "cool roof" Solar Reflective Index (SRI) standards: a) Roofs with a slope less than 2:12: SRI of 82+ (initial)/64+ (3-year aged) b) Roofs with a slope greater than 2:12: SRI of 25+ (initial)/25+ (3-year aged) Roof areas covered by shade structures with an SRI of 39+, including photovoltaic panels that shade the roof, are considered exempt from roof area calculations for the purposes of this standard.	Not applicable, no roof area exceeds 2,000 square feet **What still needs to be addressed:**	Not applicable
Shadow	**13.6.4.B** All development over 65 feet in height shall be designed to avoid and/or mitigate the adverse impacts of shadows cast by new structures or building additions from falling on publicly accessible open space in accordance with the shadow standards of the Technical Manual.	Not applicable, the proposed development does not exceed 65 feet in height **What still needs to be addressed:**	Not applicable
Snow and Ice Loadin	**13.6.4.C** All development shall be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.	The applicant has indicated that Snow impacts for each single-family house will not accumulate on adjacent properties or public ways.	More informat ion needed

		What still needs to be addressed: The applicant to indicate snow storage on plans for each proposed lot.	
View Corridors	**13.6.4.D** The massing, location, and height of development shall not substantially obstruct public view corridors identified in the City of Portland Design Manual.	Not applicable, the development is located in a low-density residential neighborhood and is not designated as a view corridor. **What still needs to be addressed:**	Not applicable
Historic Resources	**13.6.4.E.1** When a development affects a designated landmark or lies within a designated historic district or historic landscape district, such development shall be required to obtain historic preservation approval under Article 16.	No applicable, the site is not located within a designated historic district **What still needs to be addressed:**	Not applicable
	13.6.4.E.2.a All development shall document and protect state or local archaeological resources known to exist or discovered on the site. a) Protection may include leaving archaeological resources untouched beneath a new development through adaptation of foundation design or architectural layout.	Not applicable, applicant has indicated no archaeological resources have been identified on the property and if discovered during construction appropriate documentation and consultation will require Staff review. **What still needs to be addressed:**	Not applicable
	13.6.4.E.2.b All development shall document and protect state or local archaeological resources known to exist or discovered on the site. b) Where the applicant can demonstrate that complete protection is not feasible, the applicant shall excavate and document archeological resources. Such measures shall be conducted in consultation with the City's historic preservation program and Maine Historic Preservation Commission. For resources of state significance, excavation and documentation shall be conducted by a qualified professional, in coordination with Maine Historic Preservation Commission. Local archeological resources may or may not be recognized by the Maine Historic Preservation Commission as significant and shall include the following: i. Original seawall structure located landward of Commercial Street. ii. Inactive historic family cemetery plots. iii. Historic railroad beds including but not limited to the Portland-Lewiston interurban railroad. iv. Original structure and/or landforms associated with the Cumberland and Oxford Canal. v. Buried portions of colonial and post-colonial period structures or built features located on the	Not applicable, the applicant has indicated no archaeological resources have been identified on the property and if discovered during construction appropriate documentation and consultation will require Staff review. **What still needs to be addressed:**	Not applicable

	Portland Peninsula predating the Great Fire of 1866. vi. Pre-colonial occupation sites identified by shell middens or other evidence. **vii.** Sites listed or eligible for listing on the National Register of Historic Places.		
	13.6.4.E.2.c All development shall document and protect state or local archaeological resources known to exist or discovered on the site. c) In order to preserve archeological resources, the review authority may waive standards listed in the City of Portland Technical Manual where necessary if it is determined that such a waiver would not jeopardize the health, safety, or welfare of the development's occupants, the public, or the natural environment.	Not applicable, , the applicant has indicated no archaeological resources have been identified on the property and if discovered during construction appropriate documentation and consultation will require Staff review. **What still needs to be addressed:**	Not applicable
Exterior Lighting	**13.6.4.F.1.a** ***Site lighting*** All exterior site lighting shall be full cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties. Illumination levels shall be adequate but not excessive for the safety, comfort, and convenience of occupants and users of the site, and shall conform to the lighting standards of the Technical Manual.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard. **What still needs to be addressed:**	Not applicable
	13.6.4.F.1.a ***Site lighting*** Where light from a proposed development may adversely impact adjacent residential properties, exterior lighting shall employ building-side shielding.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard. **What still needs to be addressed:**	Not applicable
	13.6.4.F.2.a ***Architectural and specialty lighting*** Architectural and specialty lighting of such features as architectural details, monuments, public art, or other site features shall be designed to illuminate specific details or attributes only and shall meet the lighting standards of the Technical Manual.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard. **What still needs to be addressed:**	Not applicable
	13.6.4.F.2.b ***Architectural and specialty lighting*** Up-lighting by any method is prohibited except for public buildings and parklands; clock towers and steeples; landscape features; designated historic landmarks; flags of state, federal, or national jurisdictions; and public art. Such light fixtures, brackets, conduits, and all other components shall be designed by a lighting professional and shall be scaled and placed to minimize their visibility and installed in accordance with the lighting standards of the Technical Manual.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard.	Not applicable
	13.6.4.F.3 ***Street lighting*** All development shall provide municipal street lighting adequate for the safety and comfort of pedestrians, bicyclists, and	The proposed development does not indicate municipal lighting as part of the street extension at Aldworth Street.	More information

	motorists and, where applicable, conforming to specific lighting district requirements as specified in the street lighting standards of the Technical Manual.	**What still needs to be addressed:** The City's Public Works Lighting Division will need to review and recommend if a municipal light onto the new electrical pole is recommended.	
Noise and Vibration	**13.6.4.G** All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall be located to the interior of the site, away from abutting properties.	The proposed development incorporates residential scaled HVAC on each individual lot and no large-scale mechanical systems are proposed. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
Signage and Wayfinding	**13.6.4.H.1** On-site directional traffic signage may be provided to enable users to safely and easily navigate into, around and out of the site.	No wayfinding or traffic signage is required beyond standard street signage, which is already installed at the existing intersection **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.4.H.2 Signage shall not adversely affect visibility at intersections on or off the site.	Not applicable, the street extension at Aldworth Street does not require additional wayfinding or traffic signage.	Not applicable
Design Standards	**13.6.4.I.1** Development of certain types and/or proposed in certain zones, as specified in the City of Portland Design Manual, shall meet the design standards of the Design Manual in order to ensure that building and site design contribute to and enhance the goals and policies for specific zones within the city. The City of Portland Design Manual is incorporated by reference as part of this Land Use Code.	Not applicable, the proposed development as single family residential on individual lots in the RN-1 is not applicable as specified in the City's Design Manual	Not applicable
	13.6.4.I.2 If the development is located in a historic district or associated with a historic landmark, the standards of Article 16 shall supersede.	Not applicable, the proposed development is not located in a historic district or associated with a historic landmark.	Not applicable

Subdivision Review Standards (Sec. 14.4)

Standards for review (Sec. 14.4.1)

Standard		***How the standard is being met***	***Finding***
Subdivision	**14.4.1.A.** Will not result in undue water or air pollution. In making this determination, the Planning Board shall at least consider the elevation of land above sea level and its relation to the floodplains; the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its effect on effluents; the availability of streams for disposal of effluents; and conformity with the applicable state and local health and water resources regulations.	The proposed subdivision intends to mitigate disturbance areas with stormwater best management principles and provide eosion and sedimentation control measures throughout construction. A portion of natural resource preservation at the property for the existing stream and forested wetlands. **What still needs to be addressed:** Areas of wetland fill, impact to existing stream as designated by MaineDEP and alterations of the existing drainage pattern of several intermittent streams are proposed	More Information Required

		on the property. The applicant shall mitigate disturbances to these water resources to the greatest extent possible and refer to site plan standards outlined in Section 13.6.2.C.3 of this worksheet.	
	14.4.1.B. Has sufficient water available for the reasonably foreseeable needs of the subdivision.	The proposed subdivision will utilize public water service extended from Aldworth Street. **What still needs to be addressed:** The applicant shall submit an ability to serve letter from the Portland water district for Staff review in accordance with this standard.	More Information Required
	14.4.1.C. Will not cause unreasonable burden on an existing water supply.	**What still needs to be addressed:** The applicant shall submit an ability to serve letter from the Portland water district for Staff review in accordance with this standard.	More information needed
	14.4.1.D. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.	The applicant has provided an erosion control plan that indicates disturbance areas, silt fencing and erosion control matting for slopes proposed at a 2:1 ratio. **What still needs to be addressed:** Add note on plan for existing soil conditions, with identification of high permeability soils. Staff recommends adjustment to the proposed grading for the infiltration basing to be outside of the undisturbed 100' buffer strip at the stream located along the south property line. The applicant shall refer to the site plan standard comments outlines in Section **13.6.2.C.1.b** of this worksheet for additional standards related to erosion and sedimentation control.	More information needed
	14.4.1.E. Will not cause unreasonable highway or public road congestion, or unsafe conditions with respect to use of highways or public roads that are existing or proposed.	The proposed subdivision is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety of the existing public roads in the neighborhood. **What still needs to be addressed:** Staff requests that the boundary survey include the 50' strip of land at the end of Aldworth Street, update record owner information, total parcel area, assessing information for the proposed subdivision.	More information needed

		Staff requests to add record Book and Deed references to record right-of-ways and easements listed on the plan.	
	14.4.1.F. Will provide for adequate sanitary waste and storm water disposal and will not cause an unreasonable burden on municipal services if they are utilized.	The proposed subdivision provides a new sanitary waste disposal connection for the nine single-family houses at the existing sewer easement that runs through the property. The proposed subdivision provides storm water disposal for the property and separated from the City's drainage system to not cause an unreasonable burden on municipal services. **What still needs to be addressed:** The applicant is requested to submit a waste water authorization application and shall refer to the site plan standard comments outlines in Section **13.6.3.C.** of this worksheet.	More information needed
	14.4.1.G. Will not cause an unreasonable burden on the ability of the City to dispose of solid waste and sewage if municipal services are to be utilized.	The applicant has indicated that each of the nine lots would manage solid waste through bins provided by the City of Portland. **What still needs to be addressed:** The applicant is requested to submit a waste water authorization application and shall refer to the site plan standard comments outlines in Section **13.6.3.C.** of this worksheet.	More information needed
	14.4.1.H. Will not have an undue adverse effect on significant natural resources and other environmentally sensitive resources, as demonstrated by compliance with the Low Impact Development standards of the City of Portland Technical Manual, historic sites, or any public rights for physical or visual access to the shoreline. For subdivisions within local historic districts, the Planning Board shall apply the standards of Subsection 16.7.3(C). The Planning Board may request that the Historic Preservation Board prepare an evaluation of the proposed subdivision based upon the standards of Subsection 16.7.3(C).	The proposed subdivision includes a portion of natural resource preservation at the property for the existing stream and forested wetlands. However, the proposed subdivision does propose to fill wetlands, impact an existing stream as designated by MaineDEP and alter the existing drainage pattern of several intermittent streams on the property. The proposed subdivision is not a historic site or with access to shoreline. **What still needs to be addressed:** The applicant shall refer to the site plan standard comments outlines in Section 13.6.2.A of this worksheet.	Not met
	14.4.1.I. Is in conformance with the adopted Comprehensive Plan.	The proposed subdivision is in conformance with the City's comprehensive plan *Portland's Plan 2030* through the principles of complete neighborhoods to have access to the basic necessities of daily life – high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services – within a walkable, bikeable distance. **What still needs to be addressed:**	Met

		Staff are not requesting any additional information related to this standard.	
	14.4.1.J. The subdivider has adequate financial and technical capacity to meet the standards of this subsection.	The applicant has provided financial and technical capacity that include letters from their financial institutes that state ample liquid funds, development expertise and overall capacity to successfully complete the proposed project. In additional to technical capacity by Northeast Civil Solutions as a licensed engineering and land surveying firm based on Scarborough, Maine with extensive experience in subdivision design and permitting. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	14.4.1.K. Whenever situated, in whole or in part, within the watershed of any pond or lake or within 250 feet of any wetland, great pond, or river as defined in Title 38, Chapter 3, Subchapter I, Article 2B, will not adversely affect the quality of such body of water or unreasonably affect the shoreline of such body of water.	The proposed subdivision will impact existing forested wetlands and intermittent streams that flow across the property. **What still needs to be addressed:** Staff recommends that the proposed subdivision eliminate disturbance within the 25-foot setback required for wetlands of special significance.	More information needed
	14.4.1.L. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.	The proposed subdivision will impact existing wetlands and intermittent streams throughout the property site, which may adversely affect the quality or quantity of groundwater flow across the proposed lots. The proposed subdivision includes an underdrain soil filter as an infiltration basin to collect and treat stormwater from the street extension. **What still needs to be addressed:** It is not clear how the proposed subdivision will manage the existing intermittent streams that cross over the proposed lots 2,3,4,5,6. The applicant shall refer to the site plan standard comments outlines in Section 13.6.2.C.3 of this worksheet.	More information needed
	14.4.1.M. Is or is not in a flood prone area, based on the Federal Emergency Management Agency's flood boundary and floodway maps and flood insurance rate maps and/or the City of Portland Coastal Flood Resilience Overlay Zone, and information presented by the applicant. If the subdivision, or any part of it, is in such an area, the subdivider shall determine the 100-year flood elevation and flood hazard boundaries within the subdivision, and/or the applicable SLR-DFE and SLR-BFE per Section 8.1. The proposed subdivision plan must include a condition of plan approval requiring that structures in the	Not applicable, the property is not listed within a FEMA flood boundary or floodway map, nor is the property located on the City's coastal flood resilience overlay zone.	Not applicable

	subdivision will be constructed in compliance with the provisions of Section 8.1 and Article 12.		
	14.4.1.N. Will provide for adequate stormwater management as demonstrated by compliance with the stormwater standards of the City of Portland Technical Manual.	The applicant has provided a stormwater management report and plan for the proposed subdivision to address the City's Technical Manual Section 5 standards for erosion and sedimentation control, water quality treatment, flooding and detention volume. **What still needs to be addressed:** The applicant shall refer to the site plan standard comments outlines in Section 13.6.2.C.2 of this worksheet.	More information needed
	14.4.1.O. Will not have lots with a lot depth-to-shore frontage ratio greater than 5 to 1 if any lots in the proposed subdivision have shore frontage on a river, stream, brook, great pond, or coastal wetland as these features are defined in Title 38 § 480-B. For purposes of this measurement, shore frontage shall be the length of a lot bordering on a water body or wetland measured in a straight line between the intersections of the lot lines with the shoreline.	Not applicable, the proposed subdivision includes a stream and forested wetlands that are impacted. However, the proposed subdivision does not propose shore frontage onto these protected natural resources.	Not applicable
	14.4.1.P. For any proposed subdivision that crosses municipal boundaries, will not cause unreasonable traffic congestion or unsafe conditions with respect to the use of existing public ways in an adjoining municipality in which part of the subdivision is located.	Not applicable, the proposed subdivision does not cross municipal boundaries.	Not applicable

Zoning Use Review (Article 6)

Use Permissions (Table 6-A – Table 6-F)

Proposed Use	***Permitted, Conditional or Accessory Use***	***Zone***	***Use Std***
Single family	**Permitted**	**RN-1**	

Zoning Dimensional Review (Article 7)

Dimensional Standards (Table 7-A – Table 7-H)

Standard	***Requirement 1***	***Requirement 2***	***Proposed***	***Finding***
Lot Size (SF)	***6,500 sf***		**3,364 sf**	**Section 7.4.1 conservation residential development allow for reductions in lot size**
Street Frontage	***40 ft***		**35 ft**	**Section 7.4.1 conservation residential development allow for reductions in street frontage**
Front Setback (Min)	***Average of adjacent front yards minus 5 ft***		**15 ft**	**Met**
Rear Setback	***25 ft***		**35 ft**	**Met**
Side Setback	***8 ft***		**5, 8 ft**	**Section 7.4.1 conservation residential development allow for reduced side setback of 5 ft at internal lots and 8ft from abutting properties.**
Structure Height (Max.)	***35 ft***		**20.5 – 23.75 ft**	**Met**
Lot Coverage (Max)	***60% (Residential uses)***		**35%**	**Maximum lot coverage do not apply under Section 7.4.1 conservation residential development**
Landscape open space ratio	***30% (Residential uses)***		**65%**	**Maximum lot coverage do not apply under Section 7.4.1 conservation residential development**

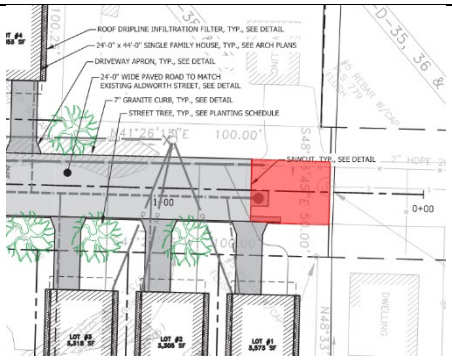
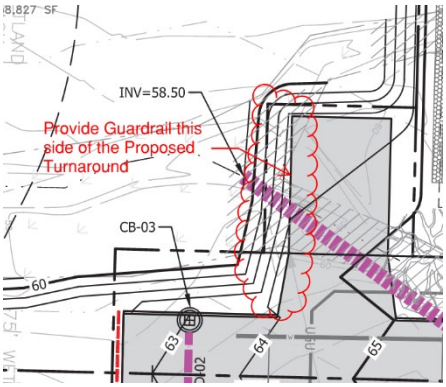
Conservation residential development standards (Section 7.4.1)

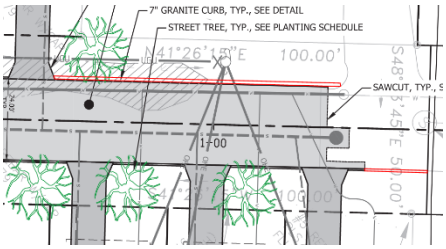
Standard	***Exceptions***	***Requirement 2***	***Proposed***	***Finding***
Lot Size	***3,250 sf***		**3,364 sf**	**50% reduction is being met**
Street frontage	***20 lf***		**35 lf**	**50% reduction is being met**
Lot coverage	***Not applicable***		**35%**	**Lot coverage requirement do not apply to lots of 5,000 sq ft or less**
Landscape open space	***Not applicable***		**65%**	**Landscape open space requirement do not apply to lots of 5,000 sq ft or less**
Front Setback (Min)	***Average of adjacent front yards minus 5 ft, reduced by 50%***		**15 ft**	**Met**
Rear Setback	***12.5 ft***		**35 ft**	**Met, the applicant is requested to update and label building envelop according to the dimensional standards for Section 7.4.1.**
Side Setback	***5 ft from internal lots, 8 ft from abutting properties***		**5 ft, 8 ft**	**Met, however the applicant should revise the subdivision plan to show to accurate building envelop as 8 ft from abutting properties.**

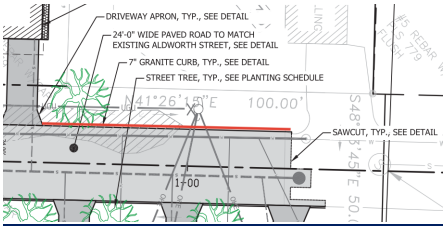
Site Plan Review Standards (Sec. 13.6)

Transportation Standards (Sec. 13.6.1)

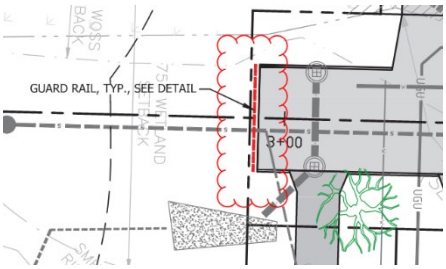
Standard		***How the standard is being met***	***Finding***
Impact on Surrounding Street Systems	**13.6.1.A.1** The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of vehicular, bicycle, pedestrian, and transit traffic will not: 1. Create or aggravate any significant hazard to safety on the surrounding street network.	The proposed project is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety. **What still needs to be addressed:** Public Works does not support the proposed waiver to the Local Street Cross Section Design. The standard cross section should be maintained to allow for on street parking on one side of Aldworth Street throughout the subdivision while also allowing for emergency vehicle access. No Parking on this Side Street signage should be provided on one side of the proposed public street.	Not Met
	13.6.1.A.2 The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of vehicular, bicycle, pedestrian, and transit traffic will not: 2. Substantially increase congestion on any street without mitigation proportionate to the level of impact.	The proposed project is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
Access and Circulation	**13.6.1.B.1.a *In General*** All development subject to this article shall provide safe and reasonable access and internal circulation for all users of the site and shall comply with the transportation systems and street design standards of the Technical Manual.	The proposed subdivision will add nine lots to facilitate 9 new single-family houses, each with a private driveway to accommodate one parked vehicle. The City's consulting traffic engineer finds the proposed spacing of the driveways are close, but given the context of the site, and that the driveways are location at the end of a dead-end street, find that the proposed design is acceptable. **What still needs to be addressed:** The City's Fire Marshall finds that the proposed termination of the street extension at Aldworth Street meets the street design requirements. Public works requires the proposed street extension must extend to the current accepted portion of Aldworth Street. Label the street as Extension of Aldworth Street rather than Aldworth Street Extension.	More Information Required

		 Provide Guardrail on the west side of the proposed Turnaround.  	
	<u>13.6.1.B.1.b</u> ***In General*** Shared circulation, parking, and transportation infrastructure shall be provided to the extent practicable, with utilization of joint curb cuts, walkways, service alleys, bus pull-out areas, and related infrastructure shared with abutting lots and roadways. Easements for access for abutting properties and shared internal access points at property lines shall be provided where possible to facilitate present or future sharing of access and infrastructure.	The applicant has submitted a waiver request for new sidewalks in the public right-of-way, and has provided justification that no sidewalk currently exists on Aldworth Street or within proximity to the proposed development. **<u>What still needs to be addressed:</u>** As currently configured the proposed driveways do not allow enough room for parking a vehicle without it encroaching into the right of Way. See Technical Manual Section 1 Table 1-B.K, the applicant should either revise Driveway or request a waiver from this requirement.	More information needed
	<u>13.6.1.B.1.c</u> ***In General*** Continuous internal walkways shall be provided between existing or planned public sidewalks adjacent to the site, transit stops and street crossings, and building entrances on the site.	The subdivision plan proposes nine individual lots with no internal walks between lots that aligns with the surrounding neighborhood context. **<u>What still needs to be addressed:</u>** Staff requests pathways to connect to the front entries of the proposed single-family homes from the proposed driveways.	Not met
	<u>13.6.1.B.1.d</u> ***In General*** Where the site abuts or includes an existing or planned publicly accessible trail, a connection to or integration of such trail shall	Not applicable, the site does not abut an existing or planning publicly accessible trail or connection.	Not Applicable

	be provided to the extent practicable, including rights of public access.		
	13.6.1.B.1.e ***In General*** Points of access and egress shall be located to avoid conflicts with turning movements and traffic flows.	The City's consulting traffic engineer finds the proposed spacing of the driveways are close, but given the context of the site, and that the driveways are location at the end of a dead-end street, these are acceptable. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.1.B.2.a ***Curb and sidewalks*** All development shall provide curb and sidewalks along all frontages, installed to specifications as described in the transportation systems and street design standards of the Technical Manual.	The proposed subdivision provides curbing along the frontages. The applicant has submitted a waiver request to not install new sidewalks along the frontages. **What still needs to be addressed:** Provide curbing for the entire street extension  Multiple versions of granite curb details have been provided. The detail for curbing within the street should meet the City's standard detail for granite curb.	More information needed
	13.6.1.B.2.b ***Curb and sidewalks*** Where sidewalks already exist but are in substandard condition, they shall be repaired or replaced in conformance with Chapter 25 of the City of Portland Code of Ordinances and the transportation systems and street design standards of the Technical Manual.	Not applicable, no sidewalks exist to repair along the property frontage.	Not Applicable
	13.6.1.B.2.c ***Curb and sidewalks*** An applicant may request a waiver from sidewalk installation requirements if they meet two or more applicable waiver criteria as listed below: i. There is no reasonable expectation for pedestrian usage coming from, going to, and traversing the site. ii. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of pedestrian-oriented infrastructure. iii. A safe alternative walking route is reasonably available, for example, by way of	The applicant has submitted a sidewalk waiver with justification that the existing Aldworth Street currently has no sidewalks on either side within 1000 feet, and the street serves as a quiet, low-traffic residential road. Installing new sidewalks along the extension while none exist on the original street would create an abrupt and disconnected pedestrian network with no connection to adjacent infrastructure. Additional justification by the applicant includes: Sidewalks would terminate at a dead end, offering no meaningful pedestrian	More information requested

	a sidewalk on the other side of the street that is lightly traveled. iv. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program (CIP) or has been funded through an earlier CIP or through other sources. v. The street has been constructed or reconstructed without sidewalks within the last 24 months. vi. 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.	connection; the development includes only nine homes, resulting in minimal pedestrian traffic; a sidewalk would require additional grading and stormwater impacts, contrary to the goals of the Conservation Residential Development standards. **What still needs to be addressed:** Public works is not opposed to the sidewalk waiver in this location but the waiver request should be revised to specifically call out the applicable criteria as allowed in the Land Use Code under 13.6.1.B.2.c	
	13.6.1.B.2.d ***Curb and sidewalks*** An applicant may request a waiver from curb installation requirements if they meet two or more applicable waiver criteria as listed below: i. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost. ii. The reconstruction of the street is specifically identified and approved in the first or second year of the current CIP or has been funded through an earlier CIP or through other sources. iii. The street has been rehabilitated without curbing in the last 60 months and the proposed use and design of the site does not necessitate the installation of curbing. iv. Strict adherence to the curb 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. v. Runoff from the development site or within the street does not require curbing for stormwater management.	The applicant has not submitted a waiver from curb installation. **What still needs to be addressed:** Staff recommends that new curbing be added along frontage for Aldworth Street extension.  	More Information Required
Public Transit Access	**13.6.1.C.1** All residential development consisting of 20 or more dwelling units and all commercial and institutional developments of at least 20,000 square feet gross floor area shall provide a transit shelter adjacent to or within the public right-of-way along its frontage, or at a nearby high-volume transit stop without a transit shelter, when the following criteria are met: A. The development is proposed along an existing public transit route on a principal or minor arterial roadway, as shown in the Federal Street Classification Map. B. The nearest existing transit shelter on the route is more than ¼ mile from the site, measured along rights-of-way.	Not applicable, the proposed subdivision does not consist of 20 or more dwelling units to necessitate a transit shelter.	Not Applicable

	13.6.1.C.2 Transit facilities shall be connected to the public sidewalk system.	Not applicable, no new transit facility is required.	Not Applicable
	13.6.1.C.3 All or some of this standard may be waived if the review authority determines that the development is not anticipated to generate public transit usage due to particular characteristics of the development or proposed use.	Not applicable, no new transit facility is required.	Not Applicable
Parking	**13.6.1.D.1.a** ***Vehicular parking*** Developments shall comply with the parking standards of Article 18.	Each individual lot proposes two spaces per dwelling unit to comply with parking standards of Article 18. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.1.D.1.b ***Vehicular parking*** Where provided, parking spaces and aisles shall not be located in front and corner side yards, unless the applicant can demonstrate that site constraints preclude the location of parking elsewhere on the site.	The applicant has submitted an application for a conservation residential development with a reduced lot area with driveway in the front setback due to lot constraints. **What still needs to be addressed:**	More Information Required
	13.6.1.D.1.c ***Vehicular parking*** Where provided, parking spaces and aisles shall meet applicable dimensional standards as detailed in the transportation systems and street design standards of the Technical Manual.	The development proposes to create two parking spaces at each lot, however only approximately 28 feet is shown. **What still needs to be addressed:** The Technical Manual section 1 requires a parking area size of at least 8' x 16' and shall not encroach upon the public right-of-way. Staff request that the building footprint is setback further into the lot to accommodate for 2 parked cars in the private driveway.	More Information Required
	13.6.1.D.2.a ***Bicycle parking*** All development shall provide secure bicycle parking in accordance with the parking requirements of Article 18 and the transportation systems and street design standards of the Technical Manual.	Not applicable, single family residents do not require bicycle parking.	Not Applicable
	13.6.1.D.2.b ***Bicycle parking*** The review authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to particular site characteristics or proposed uses.	Not applicable, single family residents do not require bicycle parking.	Not Applicable
	13.6.1.D.3.a ***Snow storage*** All developments shall include areas for snow storage or provide an acceptable snow removal plan.	The proposed development includes a street extension and individual driveways for each lot is to be managed by individual occupants. Subdivisions are required to include areas for snow storage to not impede on the public right-of-way. **What still needs to be addressed:** The applicant needs to indicate snow storage on plans for each proposed lot.	More Information Required
	13.6.1.D.3.b ***Snow storage*** Snow storage areas may not encroach on adjacent properties, public ways, and pedestrian walkways, and shall not be located where	The proposed development includes a street extension and individual driveways for each lot.	More Information Required

	they would adversely impact the functionality of stormwater management systems.	**What still needs to be addressed:** Guardrail can be omitted from the end of Aldworth Street, end of Aldworth street can be designated a snow storage area. An easement will need to be provided for the snow storage area.  	
	13.6.1.D.3.c ***Snow storage*** Landscaping in designated snow storage areas shall be such that it can withstand the snow pile.	The proposed development includes individual driveways for each lot. **What still needs to be addressed:** The applicant to indicate snow storage on plans for each proposed lot.	
	13.6.1.D.4 ***Electric vehicle (EV) charging*** All development shall meet applicable EV standards as provided in Section 1 of the Technical Manual.	Not applicable, proposed surface parking on each subdivide lot is below 5 spaces	
Transportation Demand Management	**13.6.1.E.1** The following types of development shall design and implement a Transportation Demand Management (TDM) plan: A. All commercial, institutional, or mixed-use developments of 50,000 square feet or more in total floor area. B. All commercial or institutional uses designed to accommodate 100 or more employees or, for educational institutions, 100 or more students.	Not applicable, the proposed residential subdivision does not meet the threshold to require a TDM plan	Not Applicable
	13.6.1.E.2 The TDM Plan shall comply with the standards for transportation studies and plans as contained in the Technical Manual.	Not applicable, the proposed residential subdivision does not meet the threshold to require a TDM plan	Not Applicable
Environmental Quality Standards (Sec. 13.6.2)			
Standard		***How the standard is being met***	***Finding***
Preservation of Significant Natural Features	**13.6.2.A.1** All development shall preserve and protect significant natural features by incorporating the principles of Low-Impact Development (LID) in accordance with the LID standards of the Technical Manual.	The proposed development preserves a selection of existing natural features that includes existing wetlands, a portion of the MaineDEP designated stream and existing trees throughout the property site. **What still needs to be addressed:** The applicant is claiming 5 points for avoiding wetlands impacts but is proposing to fill wetlands on site. No points can be awarded in this category if there are any wetlands impacts. We recommend the project reconsider the site layout to avoid wetlands impacts. If wetlands alteration can't be avoided, it should be minimized to	Not met

		the extent practicable and a narrative justifying the impacts must accompany the scoring tool. The applicant is required to mitigate wetland impacts due to more than 500 square feet of disturbance. Refer to acceptable forms of mitigation in the City's technical manual section 3.2.1.B.1.a The applicant has claimed 5 points for conducting a detailed, site-specific soil survey. Please provide the high-intensity soil survey in support of the points claimed in this category. The applicant has claimed 6 points for using locally-sourced landscape materials, using native vegetation, and for more than 50% of pervious developed area being landscaping (not lawn). The landscape plan should be updated to include the requirements for locally-sourced materials and native vegetation and must provide sufficient detail to determine which areas will be lawn and which will be densely planted landscaping. The applicant has claimed 6 points for reducing impervious on site. Please provide a narrative detailing how impervious has been minimized, including proposed and minimum required roadway dimensions and number and dimensions of proposed parking spaces. The applicant has claimed 4 points for providing a detailed winter maintenance agreement to reduce chlorides. Please provide a draft of the agreement for review and approval. A finalized agreement must be recorded at the Registry of Deeds prior to issuance of any C of O for the property.	
	13.6.2.A.2 Where complete preservation of significant natural features substantially compromises development of the site as otherwise permitted by zoning, the review authority may reduce the requirement in accordance with the LID standards of the Technical Manual provided that the applicant implements preservation measures to the extent practicable and demonstrates compliance with applicable state and federal regulations.	The proposed conservation residential development preserves approximately 50% of the property area for the preservation of existing trees and natural typography. **What still needs to be addressed:** The applicant has claimed 6 points for protecting 50% or more of trees on site with DBH of 10" or more but has not provided a detailed tree survey to support this. Please submit a tree survey for the entire site showing all trees 10" DBH or greater clearly indicating which trees will be preserved. Additionally, tree protection measures must be detailed in the ESC plan and areas of protection included in the construction management plans.	Not met

		The applicant has submitted a NRPA permit which is currently being reviewed by MaineDEP, Water Resources staff would like to conduct a site visit to review and confirm the wetland delineation for this project. The applicant is claiming 6 points for preserving shoreline buffers and 10 points for avoiding stream crossings. The proposal shows encroachment into the perennial stream buffer and shows the roadway extension across another stream channel necessitating a 100' culvert to carry the stream. We recommend the project reconsider the site layout to avoid stream crossings and impacts to the buffers. If stream crossings are proposed, they must meet the Maine Stream Smart standards, and the LID scoring tool must be updated accordingly. For the culvert design, a drainage analysis must be completed and documentation provided showing how the culvert size was determined. The design must meet the Maine DOT Hydraulic Capacity Standard and Guidance and comply with Maine Stream Smart Principles, in accordance with Technical Manual Standard 3.2.1-B-2. A full plan, profile, and detailed drawings of the culvert must also be provided.	
	13.6.2.A.3 The site plan shall include adequate measures to protect significant natural features to be preserved from construction impacts, in accordance with the LID standards of the Technical Manual.	The proposed conservation residential development preserves approximately 50% of the property area for the preservation of existing trees and natural typography. **What still needs to be addressed:** The applicant has claimed 6 points for tilling soils prior to revegetation and adding soil amendments based on soil tests. These requirements must be noted on the landscape plan. There are some patches of Japanese Knotweed starting to develop at the end of the existing portion of Aldworth and some dispersed multiflora rose following the drainage creek into the lot. The City Arborist is concerned that the excavation spoils could spread knotweed throughout the site if the soil isn't handled properly.	Not met
Site Landscaping and Buffers	**13.6.2.B.1.a** ***On-site landscaping*** All development subject to this article shall provide a minimum of one shade tree consisting of species identified on the City of Portland Recommended Tree list or six plantings, defined as one shrub, one ornamental grass, and/or three perennials, per 5,000 square feet of lot area in accordance with the landscaping standards of the Technical Manual.	Not applicable, the lot sizes are reduced under 5,000 sf as a conservation residential development.	Not Applicable

	13.6.2.B.1.b ***On-site landscaping*** Existing vegetation to be preserved on the site may be counted towards this requirement as described in the landscaping and landscape preservation standards of the Technical Manual.	The proposed conservation residential development preserves approximately 50% of the property area for the preservation of existing trees and natural typography. **What still needs to be addressed:** The applicant needs to complete a tree inventory with the locations, size, and species of the trees that are 10" DBH and greater, and then also indicate which ones they are proposing to remove on the demo plan.	More information requested
	13.6.2.B.1.c ***On-site landscaping*** Where site constraints prevent the planting of required shade trees or plantings at the development site, the reviewing authority may approve an alternative as described in the landscaping standards of the Technical Manual.	The conservation residential development includes shade trees within the right-of-way with minimal plantings within the private property that Staff finds appropriate based on the lot sizes are reduced under 5,000 sf as a conservation residential development. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.2.B.2.a ***Buffers and screening*** Loading and servicing areas, trash and recycling areas, storage areas, and roof- and ground-mounted utility structures, except for renewable energy systems, shall be screened from view from public sidewalks, streets and adjacent properties by dense evergreen and deciduous landscaping, fencing, architectural screening products, masonry walls, building walls, or a combination thereof.	Not applicable, no loading, service, trash, recycling and storage areas or utility structures are proposed.	Not Applicable
	13.6.2.B.2.b ***Buffers and screening*** Where immediately visible from the right-of-way, surface parking areas shall be screened with dense evergreen and deciduous landscaping, fencing, or masonry wall in accordance with the landscaping standards of the Technical Manual.	The proposed development adds eleven new street trees along the property frontage at Aldworth to meet this standard. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.2.B.2.c ***Buffers and screening*** For nonresidential development abutting a residential zone, an evergreen, densely landscaped buffer of not less than 10 feet in depth and six feet tall is required along the side abutting the residential zone. In cases where architectural fencing is used, the depth of the landscaped buffer may be reduced, so long as the fencing is at least six feet in height and a mix of evergreen and deciduous trees spaced no further than 20 feet apart is planted abutting the residential zone.	Not applicable, the proposed development is residential use.	Not Applicable
	13.6.2.B.2.d ***Buffers and screening*** All residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts of existing surrounding development.	The proposed development will remove existing trees within the disturbed areas shown on the plans, this includes removal of vegetated buffers at adjacent properties along Aldworth Street and rear abutter's property. **What still needs to be addressed:** Applicant is requested to add a vegetated buffer to meet Technical Manual section 4 at	Not met

		existing abutters located at 78 Aldworth & 79 Aldworth and preserve existing vegetation to the greatest extent possible at the rear abutter's property.	
	13.6.2.B.3.a ***Parking and vehicle display lot landscaping*** Developments with more than five parking spaces shall include at least one tree for every 750 square feet of uncovered asphalt parking area (including drive aisles), planted in landscaped islands to screen, shade, and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as described in the landscaping standards of the Technical Manual.	Not applicable, the proposed development will not general more than five parking spaces on each individual lot.	Not Applicable
	13.6.2.B.3.b ***Parking and vehicle display lot landscaping*** Landscaped islands shall be distributed so that uninterrupted pavement does not exceed forty parking spaces.	Not applicable, landscape islands are not required for private driveways for single family houses.	Not Applicable
	13.6.2.B.3.c ***Parking and vehicle display lot landscaping*** Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as determined by the review authority, the reviewing authority may approve an alternative as described in the landscaping standards of the Technical Manual.	Not applicable, private driveways for single family houses do not require parking lot screening.	Not Applicable
	13.6.2.B.4 ***Non-vehicular hardscape*** All uncovered paving for non-vehicular use, including pathways and patios, must either have a minimum Solar Reflective Index (SRI) of 33 initially and 28 once aged three years or include one tree for every 750 square feet of asphalt paving.	Not applicable, no uncovered paving for non-vehicular use is proposed at this time. **What still needs to be addressed:** Staff requests pathways to connect to the front entries of the proposed single-family homes from the proposed driveways.	More information needed
	13.6.2.B.5.a ***Street trees*** All development shall include one street tree per 25-35 linear feet of frontage along a city right-of-way or private roadway as specified in the landscaping standards of the Technical Manual. The provision of measures to enhance tree survival (such as raised planters, irrigation, and structural soils as recommended by the City Arborist) shall be required.	The proposed development adds eleven new street trees along the property frontage at Aldworth to meet this standard. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.2.B.5.b ***Street trees*** Where the applicant can demonstrate that site constraints prevent the planting of required street trees in the city right-of-way, the review authority may permit an alternative subject to the landscaping standards of the Technical Manual.	Not applicable, new street trees are proposed along the property frontage at Aldworth Street	Not Applicable
	13.6.2.B.5.c ***Street trees*** Where the proposed development includes the removal of an existing street tree determined by the City Arborist to be a heritage or feature mature tree, the applicant shall be required to contribute to the Tree Fund at the designated rate in the Technical Manual so that the total replacement cost is significantly higher than planting a new street tree/contributing for a new street tree.	Not applicable, no existing street trees	Not Applicable

Water Quality, Stormwater Management and Erosion Control	**13.6.2.C.1.a** All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following: a) Any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or redirected so as to create ponding on, or flooding of, adjacent lots.	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** Staff requests the applicant clarify access for maintenance for the proposed underdrain soil filter be accessed for maintenance. Figures showing subcatchments have not been included in the materials for review. These should be provided to verify how the areas and times of concentration have been evaluated for the pre- and post-development conditions.	More information needed
	13.6.2.C.1.b All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following: b) Any increase in volume or rate of stormwater draining from the lot onto an adjacent lot or City property following the improvement can be handled on the adjacent lot or City property without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot or City property.	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** The Applicant will need to review the extent of sediment barrier, shown as silt fence, on proposed erosion plan for the development. The sediment barrier should include the full disturbed area, including utility connections and stormdrain outlets on the southern end of the site. Consideration should also be made for the area in the middle of the site that will be draining to the culvert underneath the road. Proximity to natural resources should also be taken into consideration – double sediment barrier may be needed in some locations. Each house lot shows a dripline edge filter system, but the drainage plan for these systems is unclear. The stormwater report suggests they may be designed to infiltrate; however Staff are concerned that site soils may not be suitable for infiltration, and infiltration directly adjacent to building foundations is not recommended. Please clarify the proposed drainage approach for the house lots and whether the storm drain will need to be extended upstream to provide service connections to each lot. If so, the storm drain should be placed in the roadway between the sewer line and the water main, per Standard Detail I-4: *Utility Location in Streets*.	More information needed
	13.6.2.C.1.c All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following: c) Any increase in volume or rate of stormwater draining from the lot into the City's storm sewer system can be	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** No details are provided for the proposed culvert/stream crossing. Inverts are provided on the grading plan, and the road profile indicates a double crossing, but more	More information needed

	accommodated in the system without creating downstream problems or exceeding the capacity of the storm sewer system.	information on the culvert sizing and installation should be provided.	
	13.6.2.C.2 All development shall comply with the stormwater management standards of the Technical Manual.	The applicant has submitted a stormwater management report and plans to address the stormwater management standards. **What still needs to be addressed:** In general, some additional clarity and organization of the information is needed to be able to verify that the project will meet the standards. Some different materials—including calculations, narratives, and other details—seem to reference different elevation datums.. Figures showing subcatchments and treatment areas have not been included. The Applicant needs to provide additional clarification to show how the project is meeting the required thresholds for treatment. The stormwater report includes some narrative discussion, but it is unclear how the areas relate to the design calculations provided, and how the different areas on the site are treated by the different proposed systems. A figure showing the areas being treated by different systems, and how that relates back to the whole site would be useful to show how the project meets the standard. More information should be provided on the roof drip edge systems that are proposed for treatment at each building and outfall from foundations. A detail for construction has not been included in the plans reviewed. The applicant to provide clarification for the underdrained soil filter system to include details about the overflows or spillways, and the elevations on those details do not relate to the site grades. In addition, the applicant should include specifications for the sediment forebay, outlet control structure, and the location and grading of the emergency spillway.	More information needed
	13.6.2.C.3 Development shall not pose a risk of groundwater contamination either during or post-construction, as described in the stormwater management and water supply standards of the Technical Manual.	The applicant has submitted a stormwater management report to include erosion and sedimentation control measures to protect the preserved natural features at the property. And includes treatment of stormwater runoff from the proposed street extension and impervious areas for the majority of the development.	Met

		What still needs to be addressed: Staff are not requesting any additional information related to this standard.	
	13.6.2.C.4 Applicants shall demonstrate that subsurface and/or any adjacent slope conditions are suitable to support the development, and where determined necessary, shall prepare a geotechnical study to demonstrate that the development as designed will not adversely impact the development site or any abutting property. Soil surveys and/or geotechnical studies shall be prepared in accordance with the requirements of the Technical Manual.	The applicant has submitted a stormwater management report to include a soil report in Appendix C with detailed soil maps and survey of soil types. The findings state the entirety of the site is forested with poorly draining soil, the proposed development indicates collection and treatment of stormwater with soil filter treatment system. The applicant has stated upland soils are suitable for the proposed infiltration practices for the development.	Met
		What still needs to be addressed: Staff are not requesting any additional information related to this standard.	
Public Infrastructure and Community Safety Standards (Sec. 13.6.3)			
Standard		***How the standard is being met***	***Finding***
Consistency with City Master Plans	**13.6.3.A.1** All developments shall be designed so as to be consistent with City Council-approved master plans and facilities plans and with off-premises infrastructure.	The proposed development is consistent with the City's comprehensive plan *Portland's Plan 2030* through the principles of complete neighborhoods to have access to the basic necessities of daily life – high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services – within a walkable, bikeable distance.	Met
		What still needs to be addressed: Staff are not requesting any additional information related to this standard.	
	13.6.3.A.2 The site plan shall include suitable easements, rights, and improvements to connect or continue off-premises public infrastructure as may be required by the review authority.	The applicant has provided a boundary survey of existing conditions and a proposed subdivision plan to indicate the proposed lot split for the proposed development.	
		What still needs to be addressed: The applicant to meet requirements in the City's Technical Manual section 14 related to site plan, subdivision plat and easements. The applicant shall finalize the subdivision plat with record owner information, total parcel area, assessing information and other rights or easements to be recorded. The applicant shall revise the boundary survey and subdivision plat with the recorded conveyances, proposed property markers, state plane coordinates on at least two corners as specified, and source of contours, vertical datum and benchmarks. The applicant shall include the 50' strip of land at the end of Aldworth St in the survey	

		boundary within the proposed development. The Turnaround and Utility Easement (41251/60) shall be conveyed to the City of Portland to include the proposed street extension at Aldworth Street. And establish a 30-foot-wide utility easement for the new public gravity sewer line that connects to the City's existing sewer easement southwest of the terminus. Lastly, the applicant must provide the City with a maintenance easement for the proposed soil filter area, and shall include a legal description and limits on the plan, to ensure future inspection and maintenance access.	
Public Safety and Fire Prevention	**13.6.3.B.1.a** All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime: a) Natural surveillance that promotes visibility of public spaces and areas.	The development is proposed along a public street extension with individual lots each with separate property owners for natural surveillance of preserved areas of the property. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.B.1.b All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime: b) Access control that promotes authorized and/or appropriate access to the site.	The development is proposed along a public street extension with individual lots each with separate property owners **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.B.1.c All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime: c) Territorial reinforcement that promotes a sense of ownership and responsibility through environmental design.	The development is proposed along a public street extension with individual lots each with separate property owners **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.3.B.2 All developments shall be designed to provide adequate emergency vehicle access to the site and comply with the Public Safety standards of the Technical Manual.	The public street extension has been designed to meet public safety standards. **What still needs to be addressed:** Staff are awaiting further comments from the Fire Marshall.	More information needed
Public Utilities	**13.6.3.C.1** The development shall not overburden sanitary sewers and storm drains, water lines or supply, or other public infrastructure and utilities. Development shall provide adequate utility	The proposed development indicates new connections for public water and sanitary sewer lines for each proposed subdivision lot.	More information needed

	infrastructure on-site and in connection to surrounding locations and facilities.	**What still needs to be addressed:** A wastewater capacity application must be submitted to DPW for review and approval. Clarity is needed on the downstream connection of the proposed gravity sewer into the existing City manhole near station 4+00. The utility profile should be updated to show the existing invert and pipe size of the manhole, as well as the proposed invert of the 8" pipe. A drop manhole will likely be required and should be constructed in accordance with Technical Manual Detail VI-3. At present, the proposed connection discharges into the manhole opposite the direction of the mainline sewer flow, which must be corrected. Please provide revised design information.	
	13.6.3.C.2 Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant, or complexity of revising existing overhead facilities.	Application indicates underground electrical service. **What still needs to be addressed:** Applicant needs to provide an ability to serve letter from electrical utility company. The utility plan should be reviewed to ensure that the full extent of impact is shown. It appears that underground electric services are not represented on the plan to all proposed buildings. The intent for how electrical service will be brought to the whole subdivision should be shown on the plan to show full impact.	More information needed
	13.6.3.C.3 All sanitary sewer lines, storm drains, water lines, and other utilities proposed as part of the development shall be designed to conform with the sanitary sewer and storm drain and water supply standards of the Technical Manual.	The applicant to indicate snow storage on plans for each proposed lot. **What still needs to be addressed:** Applicant to provide ability to serve letter from water utility company. Utility connections for sanitary sewer, drainage lines are under review by Public Works. DPW Water Resources recommend installing underdrains as part of the roadway reconstruction. These underdrains should also follow the locations shown in Standard Detail I-4.	More information needed
	13.6.3.C.4 All development within 200 feet of a public sanitary collection and treatment system shall connect sanitary sewer lines into the nearest available public	The proposed development indicates a new connection to an existing sanitary sewer line for the street extension at Aldworth Street.	More information

	sewer. If a public sanitary collection and treatment system is not available, a private wastewater system may be used according to the requirements of Chapter 24 of the City Code and the sanitary sewer and storm drain standards of the Technical Manual.	**What still needs to be addressed:** Applicant to submit a formal wastewater capacity application. Utility connections for sanitary sewer, drainage lines are under review by Public Works.	
	13.6.3.C.5 All residential development of 20 units or more, commercial development, and industrial development shall provide for the temporary storage and timely removal of all trash and recyclable materials including, at a minimum, paper, corrugated cardboard, plastics, and metals. Storage containers for recyclable materials shall be separated from trash containers. All exterior storage of trash and recyclables shall be screened from view from public sidewalks, streets, and adjacent properties.	Not applicable, the proposed development does not exceed 20 units or more	Not applicable
Site Design Standards (Sec. 13.6.4)			
Standard		***How the standard is being met***	***Finding***
Massing, Ventilation and Wind Impact	**13.6.4.A.1** The bulk, location, or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.	**What still needs to be addressed:** The applicant is requested to label the proposed house design for each proposed lot and front door entrances on site plan.	More information needed
	13.6.4.A.2 Development shall locate all HVAC venting mechanisms to direct exhaust away from public spaces and residential properties directly adjacent to the site.	**What still needs to be addressed:** Applicant will need to indicate location of proposed HVAC mechanical systems for each proposed single family house.	More information needed
	13.6.4.A.3 In proposed buildings or additions with an aggregate roof area greater than 2,000 square feet, measured horizontally, and, for residential projects, greater than nine residential units, a minimum of 75% of the roof area must meet the following "cool roof" Solar Reflective Index (SRI) standards: a) Roofs with a slope less than 2:12: SRI of 82+ (initial)/64+ (3-year aged) b) Roofs with a slope greater than 2:12: SRI of 25+ (initial)/25+ (3-year aged) Roof areas covered by shade structures with an SRI of 39+, including photovoltaic panels that shade the roof, are considered exempt from roof area calculations for the purposes of this standard.	Not applicable, no roof area exceeds 2,000 square feet **What still needs to be addressed:**	Not applicable
Shadow	**13.6.4.B** All development over 65 feet in height shall be designed to avoid and/or mitigate the adverse impacts of shadows cast by new structures or building additions from falling on publicly accessible open space in accordance with the shadow standards of the Technical Manual.	Not applicable, the proposed development does not exceed 65 feet in height **What still needs to be addressed:**	Not applicable
Snow and Ice Loadin	**13.6.4.C** All development shall be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.	The applicant has indicated that Snow impacts for each single-family house will not accumulate on adjacent properties or public ways.	More informat ion needed

		What still needs to be addressed: The applicant to indicate snow storage on plans for each proposed lot.	
View Corridors	**13.6.4.D** The massing, location, and height of development shall not substantially obstruct public view corridors identified in the City of Portland Design Manual.	Not applicable, the development is located in a low-density residential neighborhood and is not designated as a view corridor. **What still needs to be addressed:**	Not applicable
Historic Resources	**13.6.4.E.1** When a development affects a designated landmark or lies within a designated historic district or historic landscape district, such development shall be required to obtain historic preservation approval under Article 16.	No applicable, the site is not located within a designated historic district **What still needs to be addressed:**	Not applicable
	13.6.4.E.2.a All development shall document and protect state or local archaeological resources known to exist or discovered on the site. a) Protection may include leaving archaeological resources untouched beneath a new development through adaptation of foundation design or architectural layout.	Not applicable, the applicant has indicated no archaeological resources have been identified on the property and if discovered during construction appropriate documentation and consultation will require Staff review. **What still needs to be addressed:**	Not applicable
	13.6.4.E.2.b All development shall document and protect state or local archaeological resources known to exist or discovered on the site. b) Where the applicant can demonstrate that complete protection is not feasible, the applicant shall excavate and document archeological resources. Such measures shall be conducted in consultation with the City's historic preservation program and Maine Historic Preservation Commission. For resources of state significance, excavation and documentation shall be conducted by a qualified professional, in coordination with Maine Historic Preservation Commission. Local archeological resources may or may not be recognized by the Maine Historic Preservation Commission as significant and shall include the following: i. Original seawall structure located landward of Commercial Street. ii. Inactive historic family cemetery plots. iii. Historic railroad beds including but not limited to the Portland-Lewiston interurban railroad. iv. Original structure and/or landforms associated with the Cumberland and Oxford Canal. v. Buried portions of colonial and post-colonial period structures or built features located on the	Not applicable, the applicant has indicated no archaeological resources have been identified on the property and if discovered during construction appropriate documentation and consultation will require Staff review. **What still needs to be addressed:**	Not applicable

	Portland Peninsula predating the Great Fire of 1866. vi. Pre-colonial occupation sites identified by shell middens or other evidence. **vii.** Sites listed or eligible for listing on the National Register of Historic Places.		
	13.6.4.E.2.c All development shall document and protect state or local archaeological resources known to exist or discovered on the site. c) In order to preserve archeological resources, the review authority may waive standards listed in the City of Portland Technical Manual where necessary if it is determined that such a waiver would not jeopardize the health, safety, or welfare of the development's occupants, the public, or the natural environment.	Not applicable, the applicant has indicated no archaeological resources have been identified on the property and if discovered during construction appropriate documentation and consultation will require Staff review. **What still needs to be addressed:**	Not applicable
Exterior Lighting	**13.6.4.F.1.a** ***Site lighting*** All exterior site lighting shall be full cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties. Illumination levels shall be adequate but not excessive for the safety, comfort, and convenience of occupants and users of the site, and shall conform to the lighting standards of the Technical Manual.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard. **What still needs to be addressed:**	Not applicable
	13.6.4.F.1.a ***Site lighting*** Where light from a proposed development may adversely impact adjacent residential properties, exterior lighting shall employ building-side shielding.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard. **What still needs to be addressed:**	Not applicable
	13.6.4.F.2.a ***Architectural and specialty lighting*** Architectural and specialty lighting of such features as architectural details, monuments, public art, or other site features shall be designed to illuminate specific details or attributes only and shall meet the lighting standards of the Technical Manual.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard. **What still needs to be addressed:**	Not applicable
	13.6.4.F.2.b ***Architectural and specialty lighting*** Up-lighting by any method is prohibited except for public buildings and parklands; clock towers and steeples; landscape features; designated historic landmarks; flags of state, federal, or national jurisdictions; and public art. Such light fixtures, brackets, conduits, and all other components shall be designed by a lighting professional and shall be scaled and placed to minimize their visibility and installed in accordance with the lighting standards of the Technical Manual.	Not applicable, the applicant has not proposed any site lighting in accordance with this standard.	Not applicable
	13.6.4.F.3 ***Street lighting*** All development shall provide municipal street lighting adequate for the safety and comfort of pedestrians, bicyclists, and	The proposed development does not indicate municipal lighting as part of the street extension at Aldworth Street.	More information

	motorists and, where applicable, conforming to specific lighting district requirements as specified in the street lighting standards of the Technical Manual.	**What still needs to be addressed:** The applicant is required to add municipal lighting as part of a local public street extension at Aldworth. Existing cobraheads are found along Aldworth Street. The City requests that the proposed development incorporate a new cobrahead at the existing utility pole and add a new lightpole(s) along the new street extension at a spacing to meet the City's Technical Manual, section 8.2	
Noise and Vibration	**13.6.4.G** All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall be located to the interior of the site, away from abutting properties.	The proposed development incorporates residential scaled HVAC on each individual lot and no large-scale mechanical systems are proposed. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
Signage and Wayfinding	**13.6.4.H.1** On-site directional traffic signage may be provided to enable users to safely and easily navigate into, around and out of the site.	No wayfinding or traffic signage is required beyond standard street signage, which is already installed at the existing intersection **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	13.6.4.H.2 Signage shall not adversely affect visibility at intersections on or off the site.	Not applicable, the street extension at Aldworth Street does not require additional wayfinding or traffic signage.	Not applicable
Design Standards	**13.6.4.I.1** Development of certain types and/or proposed in certain zones, as specified in the City of Portland Design Manual, shall meet the design standards of the Design Manual in order to ensure that building and site design contribute to and enhance the goals and policies for specific zones within the city. The City of Portland Design Manual is incorporated by reference as part of this Land Use Code.	Not applicable, the proposed development as single family residential on individual lots in the RN-1 is not applicable as specified in the City's Design Manual	Not applicable
	13.6.4.I.2 If the development is located in a historic district or associated with a historic landmark, the standards of Article 16 shall supersede.	Not applicable, the proposed development is not located in a historic district or associated with a historic landmark.	Not applicable

Subdivision Review Standards (Sec. 14.4)

Standards for review (Sec. 14.4.1)

Standard		***How the standard is being met***	***Finding***
Subdivision	**14.4.1.A.** Will not result in undue water or air pollution. In making this determination, the Planning Board shall at least consider the elevation of land above sea level and its relation to the floodplains; the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its effect on effluents; the availability of streams for disposal of effluents; and	The proposed subdivision intends to mitigate disturbance areas with stormwater best management principles and provide erosion and sedimentation control measures throughout construction. A portion of natural resource preservation at the property for the existing stream and forested wetlands.	More Information Required

	conformity with the applicable state and local health and water resources regulations.	**What still needs to be addressed:** Areas of wetland fill, impact to existing stream as designated by MaineDEP and alterations of the existing drainage pattern of several intermittent streams are proposed on the property. The applicant shall mitigate disturbances to these water resources to the greatest extent possible and refer to site plan standards outlined in Section 13.6.2.C.3 of this worksheet.	
	14.4.1.B. Has sufficient water available for the reasonably foreseeable needs of the subdivision.	The proposed subdivision will utilize public water service extended from Aldworth Street. **What still needs to be addressed:** The applicant shall submit an ability to serve letter from the Portland water district for Staff review in accordance with this standard.	More Information Required
	14.4.1.C. Will not cause unreasonable burden on an existing water supply.	**What still needs to be addressed:** The applicant shall submit an ability to serve letter from the Portland water district for Staff review in accordance with this standard.	More information needed
	14.4.1.D. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.	The applicant has provided an erosion control plan that indicates disturbance areas, silt fencing and erosion control matting for slopes proposed at a 2:1 ratio. **What still needs to be addressed:** Add note on plan for existing soil conditions, with identification of high permeability soils. Staff recommends adjustment to the proposed grading for the infiltration basing to be outside of the undisturbed 100' buffer strip at the stream located along the south property line. The applicant shall refer to the site plan standard comments outlines in Section **13.6.2.C.1.b** of this worksheet for additional standards related to erosion and sedimentation control.	More information needed
	14.4.1.E. Will not cause unreasonable highway or public road congestion, or unsafe conditions with respect to use of highways or public roads that are existing or proposed.	The proposed subdivision is not expected to generate a significant amount of traffic and thus will not have an impact on traffic mobility and safety of the existing public roads in the neighborhood.	More information needed

		What still needs to be addressed: Staff requests that the boundary survey include the 50' strip of land at the end of Aldworth Street, update record owner information, total parcel area, assessing information for the proposed subdivision. Staff requests to add record Book and Deed references to record right-of-ways and easements listed on the plan.	
	14.4.1.F. Will provide for adequate sanitary waste and storm water disposal and will not cause an unreasonable burden on municipal services if they are utilized.	The proposed subdivision provides a new sanitary waste disposal connection for the nine single-family houses at the existing sewer easement that runs through the property. The proposed subdivision provides storm water disposal for the property and separated from the City's drainage system to not cause an unreasonable burden on municipal services. **What still needs to be addressed:** The applicant is requested to submit a waste water authorization application and shall refer to the site plan standard comments outlines in Section **13.6.3.C.** of this worksheet.	More information needed
	14.4.1.G. Will not cause an unreasonable burden on the ability of the City to dispose of solid waste and sewage if municipal services are to be utilized.	The applicant has indicated that each of the nine lots would manage solid waste through bins provided by the City of Portland. **What still needs to be addressed:** The applicant is requested to submit a waste water authorization application and shall refer to the site plan standard comments outlines in Section **13.6.3.C.** of this worksheet.	More information needed
	14.4.1.H. Will not have an undue adverse effect on significant natural resources and other environmentally sensitive resources, as demonstrated by compliance with the Low Impact Development standards of the City of Portland Technical Manual, historic sites, or any public rights for physical or visual access to the shoreline. For subdivisions within local historic districts, the Planning Board shall apply the standards of Subsection 16.7.3(C). The Planning Board may request that the Historic Preservation Board prepare an evaluation of the proposed subdivision based upon the standards of Subsection 16.7.3(C).	The proposed subdivision includes a portion of natural resource preservation at the property for the existing stream and forested wetlands. However, the proposed subdivision does propose to fill wetlands, impact an existing stream as designated by MaineDEP and alter the existing drainage pattern of several intermittent streams on the property. The proposed subdivision is not a historic site or with access to shoreline. **What still needs to be addressed:** The applicant shall refer to the site plan standard comments outlines in Section 13.6.2.A of this worksheet.	Not met
	14.4.1.I. Is in conformance with the adopted Comprehensive Plan.	The proposed subdivision is in conformance with the City's comprehensive plan *Portland's Plan 2030* through the principles of complete neighborhoods to have access	Met

		to the basic necessities of daily life – high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services – within a walkable, bikeable distance. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	
	14.4.1.J. The subdivider has adequate financial and technical capacity to meet the standards of this subsection.	The applicant has provided financial and technical capacity that include letters from their financial institutes that state ample liquid funds, development expertise and overall capacity to successfully complete the proposed project. In additional to technical capacity by Northeast Civil Solutions as a licensed engineering and land surveying firm based on Scarborough, Maine with extensive experience in subdivision design and permitting. **What still needs to be addressed:** Staff are not requesting any additional information related to this standard.	Met
	14.4.1.K. Whenever situated, in whole or in part, within the watershed of any pond or lake or within 250 feet of any wetland, great pond, or river as defined in Title 38, Chapter 3, Subchapter I, Article 2B, will not adversely affect the quality of such body of water or unreasonably affect the shoreline of such body of water.	The proposed subdivision will impact existing forested wetlands and intermittent streams that flow across the property. **What still needs to be addressed:** Staff recommends that the proposed subdivision eliminate disturbance within the 25-foot setback required for wetlands of special significance.	More information needed
	14.4.1.L. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.	The proposed subdivision will impact existing wetlands and intermittent streams throughout the property site, which may adversely affect the quality or quantity of groundwater flow across the proposed lots. The proposed subdivision includes an underdrain soil filter as an infiltration basin to collect and treat stormwater from the street extension. **What still needs to be addressed:** It is not clear how the proposed subdivision will manage the existing intermittent streams that cross over the proposed lots 2,3,4,5,6. The applicant shall refer to the site plan standard comments outlines in Section 13.6.2.C.3 of this worksheet.	More information needed
	14.4.1.M. Is or is not in a flood prone area, based on the Federal Emergency Management Agency's flood boundary and floodway maps and flood insurance rate maps and/or the City of Portland Coastal Flood Resilience Overlay Zone,	Not applicable, the property is not listed within a FEMA flood boundary or floodway map, nor is the property located on the City's coastal flood resilience overlay zone.	Not applicable

	and information presented by the applicant. If the subdivision, or any part of it, is in such an area, the subdivider shall determine the 100-year flood elevation and flood hazard boundaries within the subdivision, and/or the applicable SLR-DFE and SLR-BFE per Section 8.1. The proposed subdivision plan must include a condition of plan approval requiring that structures in the subdivision will be constructed in compliance with the provisions of Section 8.1 and Article 12.		
	14.4.1.N. Will provide for adequate stormwater management as demonstrated by compliance with the stormwater standards of the City of Portland Technical Manual.	The applicant has provided a stormwater management report and plan for the proposed subdivision to address the City's Technical Manual Section 5 standards for erosion and sedimentation control, water quality treatment, flooding and detention volume. **What still needs to be addressed:** The applicant shall refer to the site plan standard comments outlines in Section 13.6.2.C.2 of this worksheet.	More information needed
	14.4.1.O. Will not have lots with a lot depth-to-shore frontage ratio greater than 5 to 1 if any lots in the proposed subdivision have shore frontage on a river, stream, brook, great pond, or coastal wetland as these features are defined in Title 38 § 480-B. For purposes of this measurement, shore frontage shall be the length of a lot bordering on a water body or wetland measured in a straight line between the intersections of the lot lines with the shoreline.	Not applicable, the proposed subdivision includes a stream and forested wetlands that are impacted. However, the proposed subdivision does not propose shore frontage onto these protected natural resources.	Not applicable
	14.4.1.P. For any proposed subdivision that crosses municipal boundaries, will not cause unreasonable traffic congestion or unsafe conditions with respect to the use of existing public ways in an adjoining municipality in which part of the subdivision is located.	Not applicable, the proposed subdivision does not cross municipal boundaries.	Not applicable

Zoning Use Review (Article 6)

Use Permissions (Table 6-A – Table 6-F)

Proposed Use	***Permitted, Conditional or Accessory Use***	***Zone***	***Use Std***
Single family	**Permitted**	**RN-1**	

Zoning Dimensional Review (Article 7)

Dimensional Standards (Table 7-A – Table 7-H)

Standard	***Requirement 1***	***Requirement 2***	***Proposed***	***Finding***
Lot Size (SF)	***6,500 sf***		**3,364 sf**	**Section 7.4.1 conservation residential development allow for reductions in lot size**
Street Frontage	***40 ft***		**35 ft**	**Section 7.4.1 conservation residential development allow for reductions in street frontage**
Front Setback (Min)	***Average of adjacent front yards minus 5 ft***		**15 ft**	**Met**
Rear Setback	***25 ft***		**35 ft**	**Met**
Side Setback	***8 ft***		**5, 8 ft**	**Section 7.4.1 conservation residential development allow for reduced side setback of 5 ft at internal lots and 8ft from abutting properties.**
Structure Height (Max.)	***35 ft***		**20.5 – 23.75 ft**	**Met**
Lot Coverage (Max)	***60% (Residential uses)***		**35%**	**Maximum lot coverage do not apply under Section 7.4.1 conservation residential development**
Landscape open space ratio	***30% (Residential uses)***		**65%**	**Maximum lot coverage do not apply under Section 7.4.1 conservation residential development**

Conservation residential development standards (Section 7.4.1)

Standard	***Exceptions***	***Requirement 2***	***Proposed***	***Finding***
Lot Size	***3,250 sf***		**3,364 sf**	**50% reduction is being met**
Street frontage	***20 lf***		**35 lf**	**50% reduction is being met**
Lot coverage	***Not applicable***		**35%**	**Lot coverage requirement do not apply to lots of 5,000 sq ft or less**
Landscape open space	***Not applicable***		**65%**	**Landscape open space requirement do not apply to lots of 5,000 sq ft or less**
Front Setback (Min)	***Average of adjacent front yards minus 5 ft, reduced by 50%***		**15 ft**	**Met**
Rear Setback	***12.5 ft***		**35 ft**	**Met, the applicant is requested to update and label building envelop according to the dimensional standards for Section 7.4.1.**
Side Setback	***5 ft from internal lots, 8 ft from abutting properties***		**5 ft, 8 ft**	**Met, however the applicant should revise the subdivision plan to show to accurate building envelop as 8 ft from abutting properties.**

SURVEYING ENGINEERING LAND PLANNING

Northeast Civil Solutions

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www.northeastcivilsolutions.com

43015

August 6, 2025

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

RE: Subdivision/Site Plan Application – Habitat for Humanity of Greater Portland Conservation Residential Development – Land of Lane Subdivision

To Whom It May Concern;

On behalf of Habitat for Humanity of Greater Portland, I am pleased to submit the attached application associated plans and documents for a proposed nine-lot residential subdivision located off Aldworth Street in Portland, Maine. This project, Land of Lane Subdivision, is designed in accordance with the City of Portland's Conservation Residential Development standards and represents Habitat for Humanity's continued commitment to providing affordable, sustainable housing within the City.

Project Overview
The proposed subdivision encompasses approximately 4.2 acres and is located within the Residential 1 (R1) zoning district. The project involves the construction of a dead-end public street extension of Aldworth Street, terminating in a standard turnaround to accommodate emergency and service vehicles, as required by City ordinance.

Each of the nine lots has been carefully configured to meet the dimensional requirements outlined under Portland's Conservation Residential Development standards, including minimum lot size, yard setbacks, and building height. New single-family homes are planned for each lot, and the development has been designed to foster neighborhood cohesion while preserving meaningful open space.

Infrastructure and Utilities
As detailed in the attached plan set prepared by Northeast Civil Solutions, the subdivision will include:

- **New public street** construction (Aldworth Street Extension), with full City-standard pavement width and granite curbing.

- **Underground utilities**, including:
  - o Public water connections coordinated with the Portland Water District.
  - o Public sewer connections, with an 8” PVC gravity main and individual laterals to each lot.
  - o Underground electrical and communications utilities, with risers at designated utility poles.

- **Drainage infrastructure**, including an underdrained soil filter and multiple catch basins connected to a storm drain network designed in accordance with the City’s technical standards.

- **Erosion and sediment control** measures, including temporary inlet protection, sediment fences, and a detailed erosion control plan, especially addressing seasonal construction and cold-weather stabilization requirements.

Environmental Considerations

The site includes minor wetland areas, and wetland impacts have been minimized to the greatest extent practicable. The project will fill approximately 4,365 square feet of wetland across three discrete locations, as shown on the Site Plan (Sheet 4). Compensatory mitigation and coordination with state permitting authorities will be pursued as necessary.

All stormwater infrastructure located outside the public right-of-way will be maintained by a future homeowner’s association, as stipulated in a forthcoming Stormwater Drainage System Maintenance Agreement to be recorded with the Cumberland County Registry of Deeds.

Conclusion
Habitat for Humanity of Greater Portland is excited to move forward with this subdivision, which reflects both the organization’s mission and the City’s planning vision for sustainable, inclusive neighborhoods. We respectfully request the City’s review and approval of this Conservation Residential Development application.

Please do not hesitate to contact me if additional information or clarification is needed.

Sincerely,
Northeast Civil Solutions Inc.

Connor Bourassa
Permitting Specialist
connor@necivil.com

224026799

Instr 50295 Bk 9737 Pg 327

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITHOUT COVENANT
(Statutory Short Form)

KNOW ALL MEN BY THESE PRESENTS, that Fleet Bank of Maine, a Maine Banking Corporation, having its principal place of business at One City Center, City of Portland, County of Cumberland and State of Maine, for consideration paid, releases to Wayne H. Nason and Deborah J. Nason, as joint tenants, the land with the improvements thereon located at 57 Castine Avenue, in the City of Portland, County of Cumberland, State of Maine and more particularly described on Exhibit A attached hereto.

ALSO INCLUDING, all fixtures, appliances and personal property, if any, appurtenant to the property conveyed.

IN WITNESS WHEREOF, Fleet Bank of Maine has caused this instrument to be signed in its name by William J. Mann, its Vice President and Assistant Treasurer, hereunto duly authorized this 27th day of September, 1991.

FLEET BANK OF MAINE

Patricia M. Cleaves
Witness

By: _____
Its Vice President & Asst. Treasurer

STATE OF MAINE
CUMBERLAND, ss.

September 27, 1991

Then personally appeared the above named William J. Mann, Vice President & Asst. Treasurer, and acknowledges the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Fleet Bank of Maine.

Before me,

Patricia E. Burdy
Notary Public
PATRICIA E. BURDY
MY COMMISSION EXPIRES
OCTOBER 24, 1994

SEAL

DLG/75798.AGO

EXHIBIT A

a certain lot or parcel of land with the buildings thereon, situated in Portland, in the County of Cumberland and State of Maine, and being bounded and described as follows:

Beginning at a point on the southeasterly sideline of Castine Street at the northwesterly corner of land now or formerly of Robert and Betty Bishop recorded in the Cumberland County Registry of Deeds in Book 3129, Page 886; said point also being the westerly division line of Deering Terrace Subdivision as recorded in the Cumberland County Registry of Deeds in Plan Book 12, Page 6;

Thence S 31° 57' 30" E along said division line 309.79' to the most northerly corner of land now or formerly of Dorothy Jones Small recorded in the Cumberland County Registry of Deeds in Book 3332, Page 201;

Thence S 57° 37' 50" W along land of said Small 100';

Thence S 31° 57' 30" E along land of said Small 100';

Thence N 57° 37' 50" E along land of Small 100' to the southwesterly corner of land now or formerly of John W. Record recorded in the Cumberland County Registry of Deeds in Book 5082, Page 297 and the said westerly division line;

Thence S 31° 57' 30" E along said division line 50' to the most northerly corner of land of John F. and Edna M. Davis Heirs;

Thence S 57° 37' 50" W along Davis Heirs 100';

Thence S 31° 57' 30" E along Davis Heirs 94.92' to land of the Portland Water District recorded in the Cumberland County Registry of Deeds in Book 2156, Page 445;

Thence S 57° 00' 30" W along land of the Portland Water District 381.89' to land presumably of George E. and Patricia Dipaolo;

Thence N 32° 59' 30" W along land of Dipaolo 478.74' to the southeasterly sideline of the Maine Turnpike Authority recorded in the Cumberland County Registry of Deeds in Book 2166, Page 127;

Thence northeasterly along the Maine Turnpike Authority following an arc to the right having a radius of 5,579.58' an arc length of 255.46';

Thence N 42° 09' 30" E along land of Maine Turnpike Authority 353.17';

Thence S 32° 22' 10" E - 37.84' to the northwesterly sideline of Castine Street;

Thence S 57° 37' 50" W along said Castine Street - 93.52' to said division line;

Thence S 31° 57′ 30" E along said division line and the most westerly limits of Castine Street 50′ to the point of beginning.

This parcel is subject to the following easements, right of way and agreements of record.

A right of way which benefits Dorothy Jones Small and John F. and Edna M. Davis Heirs which is an extension of Aldworth Street southwesterly 100′.

Sewer easement conveyed to the City of Portland as shown on a plan entitled "Farnum Street Pumping Station Force Main Gravity Sewer and Future Storm Drain" dated May 15, 1979, City of Portland File No. 499/19.

Easement to Cumberland County Power & Light Company and New England Telephone & Telegraph Company dated August 29, 1936 recorded in Book 1503, Page 484.

Central Maine Power Company dated May 15, 1946 recorded in Book 1823, Page 85.

Central Maine Power Company and New England Telephone & Telegraph Company dated May 14, 1954 recorded in Book 2184, Page 5.

Drainage rights which are affected by an agreement between William H. Chandler and Mary B. Hawkes which gives permission to drain over land of Mary B. Hawkes. Said agreement is recorded in the Cumberland County Registry of Deeds in Book 1503, Page 38.

The property contains 5.74 acres, more or less.

Bearings are referenced to observed magnetic June 1986.

Being the same premises conveyed by Margaret J. Madsen to William James Associates, Inc., by deed dated July 14, 1986, said deed being recorded in said Cumberland County Registry of Deeds in Book 7275, Page 251.

Recorded
Cumberland County
Registry of Deeds
10/02/91 11:06:12AM
Robert P. Titcomb
Register

DocuSign Envelope ID: B17A6139-0CDD-4397-BF11-72E2E11A6D8D

PURCHASE AND SALE AGREEMENT - LAND ONLY

("days" means business days unless otherwise noted, see paragraph 20)

July 3, 2024
Offer Date

JULY 12, 2024, _____ Effective Date
Effective Date is defined in Paragraph 20 of this Agreement.

1. PARTIES: This Agreement is made between **Habitat for Humanity of Greater Portland, Chad Mullin its Executive Director** ("Buyer") and **Deborah J. Nason** ("Seller").

2. DESCRIPTION: Subject to the terms and conditions hereinafter set forth, Seller agrees to sell and Buyer agrees to buy ☐ all ☒ part of (if "part of" see para. 22 for explanation) the property situated in municipality of **Portland**, County of **Cumberland**, State of Maine, located at **0 Aldworth St.** and described in deed(s) recorded at said County's Registry of Deeds Book(s) **9737**, Page(s) **327**.

3. PURCHASE PRICE/EARNEST MONEY: For such Deed and conveyance Buyer agrees to pay the total purchase price of **$425,000.00**. Buyer ☐ has delivered; or ☒ will deliver to the Agency within **5** days of the Effective Date, a deposit of earnest money in the amount **$25,000.00**. Buyer agrees that an additional deposit of earnest money in the amount of **$n/a** will be delivered **n/a**. If Buyer fails to deliver the initial or additional deposit in compliance with the above terms Seller may terminate this Agreement. This right to terminate ends once Buyer has delivered said deposit (s). The remainder of the purchase price shall be paid by wire, certified, cashier's or trust account check upon delivery of the Deed.

This Purchase and Sale Agreement is subject to the following conditions:

4. ESCROW AGENT/ACCEPTANCE: **Greater Portland Realty** ("Agency") shall hold said earnest money and act as escrow agent until closing; this offer shall be valid until **July 12, 2024** (date) **5:00** ☐ AM ☒ PM; and, in the event of non-acceptance, this earnest money shall be returned promptly to Buyer.

5. TITLE AND CLOSING: A deed, conveying good and merchantable title in accordance with the Standards of Title adopted by the Maine Bar Association shall be delivered to Buyer and this transaction shall be closed and Buyer shall pay the balance due and execute all necessary papers on **January 17, 2025** (closing date) or before, if agreed in writing by both parties. If Seller is unable to convey in accordance with the provisions of this paragraph, then Seller shall have a reasonable time period, not to exceed 30 calendar days, from the time Seller is notified of the defect, unless otherwise agreed to in writing by both Buyer and Seller, to remedy the title. Seller hereby agrees to make a good-faith effort to cure any title defect during such period. If, at the later of the closing date set forth above or the expiration of such reasonable time period, Seller is unable to remedy the title, Buyer may close and accept the deed with the title defect or may terminate this Agreement in which case the parties shall be relieved of any further obligations hereunder and any earnest money shall be returned to the Buyer.

6. DEED: The property shall be conveyed by a **warranty** deed, and shall be free and clear of all encumbrances except covenants, conditions, easements and restrictions of record which do not materially and adversely affect the continued current use of the property.

7. POSSESSION: Possession of premises shall be given to Buyer immediately at closing unless otherwise agreed in writing.

8. RISK OF LOSS: Until the closing, the risk of loss or damage to said premises by fire or otherwise, is assumed by Seller. Buyer shall have the right to view the property within 24 hours prior to closing for the purpose of determining that the premises are in substantially the same condition as on the date of this Agreement.

9. PRORATIONS: The following items, where applicable, shall be prorated as of the date of closing: rent, association fees, (other) **n/a**. Real estate taxes shall be prorated as of the date of closing (based on municipality's fiscal year). Seller is responsible for any unpaid taxes for prior years. If the amount of said taxes is not known at the time of closing, they shall be apportioned on the basis of the taxes assessed for the preceding year with a reapportionment as soon as the new tax rate and valuation can be ascertained, which latter provision shall survive closing. Buyer and Seller will each pay their transfer tax as required by State of Maine.

10. DUE DILIGENCE: Buyer is encouraged to seek information from professionals regarding any specific issue or concern. Neither Seller nor Licensee makes any warranties regarding the condition, permitted use or value of Sellers' real property. This Agreement is subject to the following contingencies, with results being satisfactory to Buyer:

CONTINGENCY	YES	NO	FULL RESOLUTION	OBTAINED BY	TO BE PAID FOR BY
1. SURVEY	X		within 30 days	Buyer	Buyer
Purpose:					
2. SOILS TEST		X	within ____ days		
Purpose:					
3. SEPTIC SYSTEM DESIGN		X	within ____ days		
Purpose:					
4. LOCAL PERMITS		X	within ____ days		
Purpose:					
5. HAZARDOUS WASTE REPORTS		X	within ____ days		
Purpose:					
6. UTILITIES		X	within ____ days		
Purpose:					
7. WATER		X	within ____ days		
Purpose:					
8. SUB-DIVISION APPROVAL	X		within 117 days	Buyer	Buyer
Purpose: **Final Planning Board Approval on or before January 14, 2025.**					
9. DEP/LUPC/ACOE APPROVALS		X	within ____ days		
Purpose:					
10. ZONING VARIANCE		X	within ____ days		
Purpose:					
11. HABITAT REVIEW/ WATERFOWL		X	within ____ days		
Purpose:					
12. REGISTERED FARMLAND		X	within ____ days		
Purpose:					
13. MDOT DRIVEWAY/ ENTRANCE PERMIT		X	within ____ days		
Purpose:					
14. DEED RESTRICTION		X	within ____ days		
Purpose:					
15. TAX STATUS*		X	within ____ days		
Purpose:					
16. BUILD PACKAGE		X	within ____ days		
Purpose:					
17. OTHER	X		within 10 days	Buyer	Buyer
Purpose: **Board of Directors approval within 10 days of the effective date of this agreement is subject to approval**					

* If the land is enrolled in the Maine Tree Growth Tax program, Seller agrees to provide Buyer with the current Forest Management and Harvest Plan within **n/a** days. ☐ Yes ☒ No

Further specifications regarding any of the above: **None**

Unless otherwise specified above, all of the above will be obtained and paid for by Buyer. Seller agrees to cooperate with Buyer and shall give Buyer and Buyer's agents and consultants reasonable access to the property in order to undertake the above investigations. Buyer agrees to take reasonable steps to return the property to its pre-inspection condition. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer in Buyer's sole discretion, Buyer will declare the Agreement null and void by notifying Seller in writing within the specified number of days, and any earnest money shall be returned to Buyer. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer, and Buyer wishes to pursue remedies other than voiding the Agreement, Buyer must do so to full resolution within the time period set forth above; otherwise this contingency is waived. If Buyer does not notify Seller that an investigation is unsatisfactory within the time period set forth above, or if any investigation under this paragraph is not performed or completed during the period specified in this paragraph, this contingency and the right to conduct an investigation are waived by Buyer. In the absence of inspection(s) mentioned above, Buyer is relying completely upon Buyer's own opinion as to the condition of the property.

11. FINANCING: Buyer's obligation to close:

Not Subject to Financing

☐ is not subject to a financing contingency. Buyer has provided Seller with acceptable proof of the funds.

☒ is not subject to a financing contingency. Buyer shall provide proof of the funds acceptable to Seller within 5 days. If such proof is unacceptable to Seller, Seller may terminate this Agreement no later than 3 days from receipt. If proof of funds is not provided within such time period, Seller may terminate this Agreement which right shall end once such proof is received, however Seller retains the agreed upon time period to terminate if such proof is unacceptable. If Seller terminates in either case, the earnest money shall be returned to Buyer.

☒ Buyer's ability to purchase ☐ is ☒ is not subject to the sale of another property. See addendum ☐ Yes ☒ No.

☒ Seller agrees to pay up to $ see #22 toward Buyer's actual pre-paids and/or closing costs.

Subject to Financing

☐ Buyer's obligation to close is subject to financing as follows:

a. Buyer's obligation to close is subject to Buyer obtaining a _____ loan of _____% of the purchase price, at an interest rate not to exceed _____% and amortized over a period of _____ years. Buyer is under a good faith obligation to seek and obtain financing on these terms. If such financing is not available to Buyer as of the closing date, Buyer is not obligated to close and may terminate this Agreement in which case the earnest money shall be returned to Buyer.

b. Buyer to provide Seller with letter from lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested within _____ days from the Effective Date of the Agreement. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.

c. Buyer hereby authorizes, instructs and directs its lender to communicate the status of the Buyer's loan application to Seller, Seller's licensee and Buyer's licensee.

d. After (b) is met, if the lender notifies Buyer that it is unable or unwilling to provide said financing, Buyer is obligated to provide Seller with written documentation of the loan denial within two days of receipt. After notifying Seller, Buyer shall have _____ days to provide Seller with a letter from another lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.

e. Buyer agrees to pay no more than _____ points. Seller agrees to pay up to $_____ toward Buyer's actual pre-paids, points and/or closing costs, but no more than allowable by Buyer's lender.

f. Buyer's ability to obtain financing ☐ is ☐ is not subject to the sale of another property. See addendum ☐ Yes ☐ No.

g. Buyer may choose to pay cash instead of obtaining financing. If so, Buyer shall notify Seller in writing including providing proof of funds and the Agreement shall no longer be subject to financing, and Seller's right to terminate pursuant to the provisions of this paragraph shall be void and Seller's obligations pursuant to 11e shall remain in full force and effect.

12. BROKERAGE DISCLOSURE: Buyer and Seller acknowledge they have been advised of the following relationships:

Willie Audet Jr. (001876) of Greater Portland Realty (1371)
Licensee — MLS ID — Agency — MLS ID

is a ☐ Seller Agent ☒ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

---------- (n/a) of ---------- (n/a)
Licensee — MLS ID — Agency — MLS ID

is a ☐ Seller Agent ☐ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

If this transaction involves Disclosed Dual Agency, the Buyer and Seller acknowledge the limited fiduciary duties of the agents and hereby consent to this arrangement. In addition, the Buyer and Seller acknowledge prior receipt and signing of a Disclosed Dual Agency Consent Agreement.

13. PROPERTY DISCLOSURE FORM: Buyer acknowledges receipt of Property Disclosure Form.

14. DEFAULT/RETURN OF EARNEST MONEY: Buyer's failure to fulfill any of Buyer's obligations hereunder shall constitute a default and Seller may employ all legal and equitable remedies, including without limitation, termination of this Agreement and forfeiture by Buyer of the earnest money. Seller's failure to fulfill any of Seller's obligations hereunder shall constitute a default and Buyer may employ all legal and equitable remedies, including without limitation, termination of this Agreement and return to Buyer of the earnest money. Agency acting as escrow agent has the option to require written releases from both parties prior to disbursing the earnest money to either Buyer or Seller. In the event that the Agency is made a party to any lawsuit by virtue of acting as escrow agent, Agency shall be entitled to recover reasonable attorney's fees and costs which shall be assessed as court costs in favor of the prevailing party.

15. MEDIATION: Earnest money or other disputes within the jurisdictional limit of small claims court will be handled in that forum. All other disputes or claims arising out of or relating to this Agreement or the property addressed in this Agreement (other than requests for injunctive relief) shall be submitted to mediation in accordance with generally accepted mediation practices. Buyer and Seller are bound to mediate in good faith and to each pay half of the mediation fees. If a party fails to submit a dispute or claim to mediation prior to initiating litigation (other than requests for injunctive relief), then that party will be liable for the other party's legal fees in any subsequent litigation regarding that same matter in which the party who failed to first submit the dispute or claim to mediation loses in that subsequent litigation. This clause shall survive the closing of the transaction.

16. PRIOR STATEMENTS: Any representations, statements and agreements are not valid unless contained herein. This Agreement completely expresses the obligations of the parties and may only be amended in writing, signed by both parties.

17. HEIRS/ASSIGNS: This Agreement shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns of the Seller and the assigns of the Buyer.

18. COUNTERPARTS: This Agreement may be signed on any number of identical counterparts, such as a faxed copy, with the same binding effect as if the signatures were on one instrument. Original, faxed or other electronically transmitted signatures are binding.

19. NOTICE: Any notice, communication or document delivery requirements hereunder may be satisfied by providing the required notice, communication or documentation to or from the parties or their Licensee. Only withdrawals of offers and withdrawals of counteroffers will be effective upon communication, verbally or in writing.

20. EFFECTIVE DATE/BUSINESS DAYS: This Agreement is a binding contract when the last party signing has caused a paper or electronic copy of the fully executed agreement to be delivered to the other party which shall be the Effective Date. Licensee is authorized to fill in the Effective Date on Page 1 hereof. Except as expressly set forth to the contrary, the use of the term "days" in this Agreement, including all addenda made a part hereof, shall mean business days defined as excluding Saturdays, Sundays and any observed Maine State/Federal holidays. Deadlines in this Agreement, including all addenda, expressed as "within x days" shall be counted from the Effective Date, unless another starting date is expressly set forth, beginning with the first day after the Effective Date, or such other established starting date, and ending at 5:00 p.m. Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda, expressed as a specific date shall end at 5:00 p.m. Eastern Time on such date.

21. CONFIDENTIALITY: Buyer and Seller authorize the disclosure of the information herein to the real estate licensees, attorneys, lenders, appraisers, inspectors, investigators and others involved in the transaction necessary for the purpose of closing this transaction. Buyer and Seller authorize the lender and/or closing agent preparing the entire closing disclosure and/or settlement statement to release a copy of the closing disclosure and/or settlement statement to the parties and their licensees prior to, at and after the closing.

22. OTHER CONDITIONS: **A. Seller to grant 8% of the sales price to Buyer for Buyer Agent Compensation for services related to the purchase.**
B. Seller agrees to grant purchaser 30 day extensions for final subdivision approvals, as long as purchasers are in the review process with the city planning staff.

C. 0 ALDWORTH IS ~~[illegible]~~ MARKED SUBJECT LAND NCS PLAN DATED APRIL 22, 2024. DN

23. GENERAL PROVISIONS:
   a. A copy of this Agreement is to be received by all parties and, by signature, receipt of a copy is hereby acknowledged. If not fully understood, contact an attorney. This is a Maine contract and shall be construed according to the laws of Maine.
   b. Seller acknowledges that State of Maine law requires buyers of property owned by non-resident sellers to withhold a prepayment of capital gains tax unless a waiver has been obtained by Seller from the State of Maine Revenue Services.
   c. Buyer and Seller acknowledge that under Maine law payment of property taxes is the legal responsibility of the person who owns the property on April 1, even if the property is sold before payment is due. If any part of the taxes is not paid when due, the lien will be filed in the name of the owner as of April 1 which could have a negative impact on their credit rating. Buyer and Seller shall agree at closing on their respective obligations regarding actual payment of taxes after closing. Buyer and Seller should make sure they understand their obligations agreed to at closing and what may happen if taxes are not paid as agreed.
   d. Buyer acknowledges that Maine law requires continuing interest in the property and any back up offers to be communicated by the listing agent to the Seller.
   e. Whenever this Agreement provides for earnest money to be returned or released, agency acting as escrow agent must comply with Maine Real Estate Commission rules which may require written notices or obtaining written releases from both parties.

24. ADDENDA: ☐ Yes ☒ No Explain: _____

25. ELECTRONIC SIGNATURES: Pursuant to the Maine Uniform Electronic Transactions Act and Digital Signature Act, the parties authorize and agree to the use of electronic signatures as a method of signing/initialing this Agreement, including all addenda. The parties hereby agree that either party may sign electronically by utilizing an electronic signature service.
26. Upon acceptance of the offer or counteroffer, Seller agrees to deliver the above-described property at the price and upon the terms and conditions set forth and agrees to pay agency a commission for services as specified in the listing agreement.

Buyer's Mailing address is **659 Warren Ave., Portland, ME 04103**.

DocuSigned by: Chad Mullin 7/3/2024

BUYER **Habitat for Humanity of Greater Portland** DATE — BUYER **Chad Mullin its Executive Director** DATE

BUYER DATE — BUYER DATE

Seller hereby accepts the offer set forth above.

Seller's Mailing address is **57 Castine Ave., Portland, ME 04103**.

SELLER **Deborah J. Nason** DATE — SELLER Deborah J Nason 7-11-24 DATE

SELLER DATE — SELLER DATE

COUNTER-OFFER

Seller agrees to sell on the terms and conditions as detailed herein with the following changes and/or conditions:

The parties acknowledge that until signed by Buyer, Seller's signature constitutes only an offer to sell on the above terms and the offer will expire unless accepted by Buyer's signature with communication of such signature to Seller by (date) _____ (time) _____ ☐ AM ☐ PM.

SELLER DATE — SELLER DATE

SELLER DATE — SELLER DATE

The Buyer hereby accepts the counter offer set forth above.

BUYER DATE — BUYER DATE

BUYER DATE — BUYER DATE

EXTENSION

The closing date of this Agreement is extended until _____.
DATE

SELLER DATE — SELLER DATE

SELLER DATE — SELLER DATE

BUYER DATE — BUYER DATE

BUYER DATE — BUYER DATE

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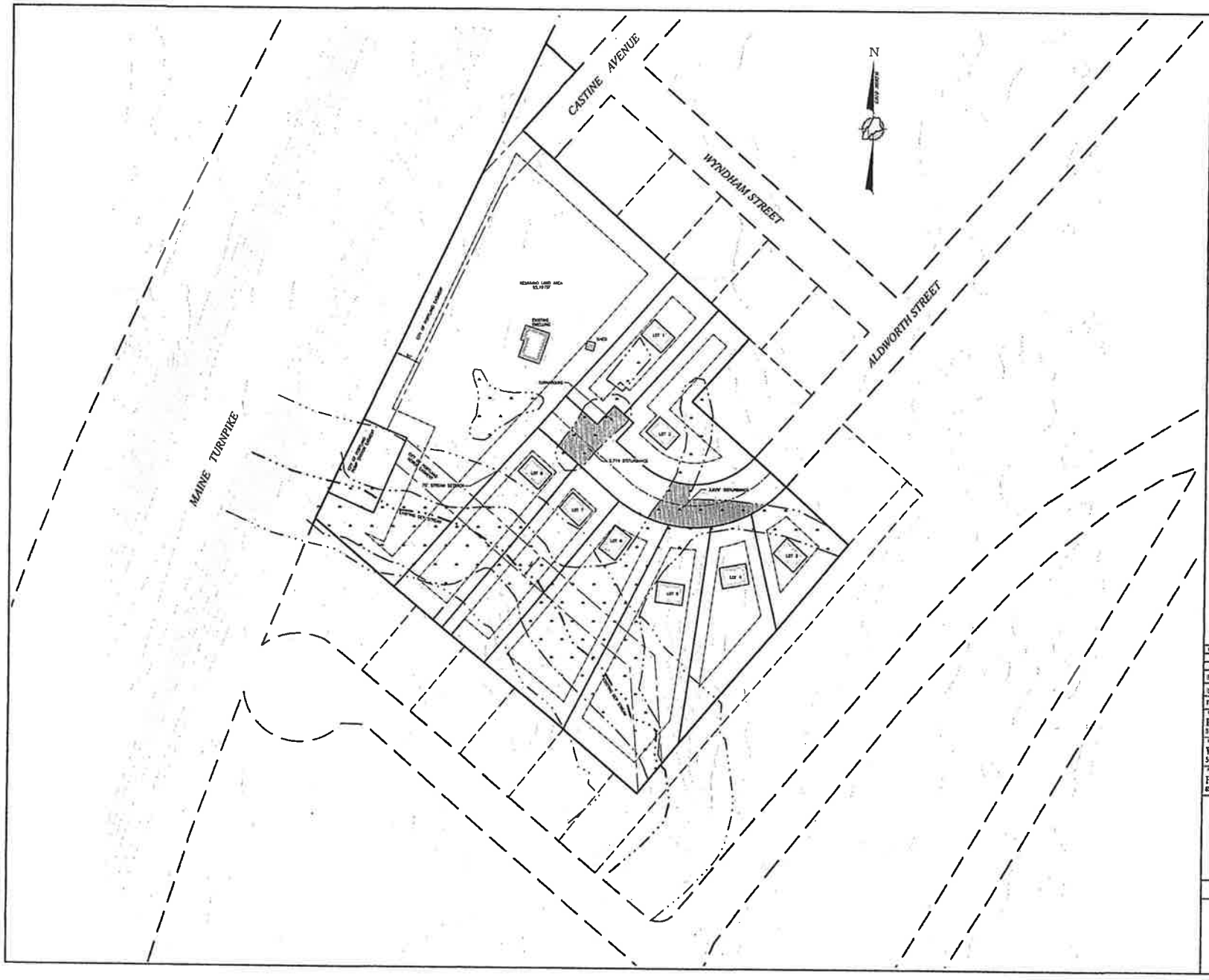
EQUAL HOUSING OPPORTUNITY

Produced with Lone Wolf Transactions (zipForm Edition) 717 N Harwood St, Suite 2200, Dallas, TX 75201 www.lwolf.com

0 Aldworth



LEGEND

- BOUNDARY LINE
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- ABUTTER LINE
- SETBACK LINE
- POSSIBLE WETLAND
- POSSIBLE CENTER LINE OF STREAM
- EXISTING CONTOUR
- POSSIBLE WETLAND DISTURBANCE

NOTES

1. EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED ON INFORMATION PROVIDED BY OTHERS AND WERE NOT FIELD VERIFIED BY NORTHEAST CIVIL SOLUTIONS, INC.
2. THIS IS NOT A BOUNDARY SURVEY. THIS PLAN IS NOT INTENDED TO MEET THE REQUIREMENTS OF CHAPTER 90, PART 2, SECTIONS 6 THROUGH 9 OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYOR RULES. THE RELATIONSHIP BETWEEN THE EXISTING STRUCTURES AND THE PROPERTY LINES ARE CONSIDERED APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.
3. TOTAL POSSIBLE WETLAND DISTURBANCE: 8,543± SF

Revision	By	Date	Reason

PROJECT: 43001	DRAWING NAME: 43001-Aldworth Street.dwg	
ISSUED: APRIL 22, 2024	SCALE: 1"=50' / TB @ N/A	DRAWN BY: CJB
FIELDED BY: N/A	FIELD DATE: N/A	CHECKED BY: DNM / TTM

Drawing Name and Location:

PRELIMINARY SITE CONCEPT PLAN
57 CASTINE AVENUE, PORTLAND, ME

Owner:

WAYNE H. NASON & DEBORAH J. NASON
57 CASTINE AVENUE, PORTLAND, ME 04103

Prepared for:

HABITAT FOR HUMANITY
659 WARREN AVENUE, PORTLAND, ME 04103

SURVEYING • ENGINEERING • LAND PLANNING
Northeast Civil Solutions
INCORPORATED
281 PAYNE ROAD, SCARBOROUGH, MAINE 04074
tel 207.883.7000
e-mail / website
info@northeastcivilsolutions.com
www.northeastcivilsolutions.com

0 50 100 200'

STAMP AND SIGNATURE

SUBJECT LAND

Preliminary

TROY P. MORGAN
MAINE PROFESSIONAL LAND SURVEYOR No. 2081 DATE

DN

Dept. of Professional & Financial Regulation
Office of Professional & Occupational Regulation

MAINE REAL ESTATE COMMISSION

35 State House Station Augusta ME 04333-0035

REAL ESTATE BROKERAGE RELATIONSHIPS FORM

Right Now You Are A Customer

Are you interested in buying or selling residential real estate in Maine? Before you begin working with a real estate licensee it is important for you to understand that Maine Law provides for different levels of brokerage service to buyers and sellers. You should decide whether you want to be represented in a transaction (as a client) or not (as a customer). To assist you in deciding which option is in your best interest, please review the following information about real estate brokerage relationships:

Maine law requires all real estate brokerage companies and their affiliated licensees ("licensee") to perform certain basic duties when dealing with a buyer or seller. You can expect a real estate licensee you deal with to provide the following **customer-level services:**

- ✓ To disclose all material defects pertaining to the physical condition of the real estate that are known by the licensee;
- ✓ To treat both the buyer and seller honestly and not knowingly give false information;
- ✓ To account for all money and property received from or on behalf of the buyer or seller; and
- ✓ To comply with all state and federal laws related to real estate brokerage activity.

Until you enter into a written brokerage agreement with the licensee for client-level representation you are considered a "customer" and the licensee is not your agent. **As a customer, you should not expect the licensee to promote your best interest, or to keep any information you give to the licensee confidential, including your bargaining position.**

You May Become A Client

If you want a licensee to represent you, you will need to enter into a written listing agreement or a written buyer representation agreement. These agreements **create a client-agent relationship** between you and the licensee. As a client you can expect the licensee to provide the following services, **in addition to** the basic services required of all licensees listed above:

- ✓ To perform the terms of the written agreement with skill and care;
- ✓ To promote your best interests;
  - For seller clients this means the agent will put the seller's interests first and negotiate the best price and terms for the seller;
  - For buyer clients this means the agent will put the buyer's interests first and negotiate for the best prices and terms for the buyer; and
- ✓ To maintain the confidentiality of specific client information, including bargaining information.

COMPANY POLICY ON CLIENT-LEVEL SERVICES - WHAT YOU NEED TO KNOW

The real estate brokerage company's policy on client-level services determines which of the three types of agent-client relationships permitted in Maine may be offered to you. The agent-client relationships permitted in Maine are as follows:

- ✓ The company and all of its affiliated licensees represent you as a client (called **"single agency"**);
- ✓ The company appoints, with your written consent, one or more of the affiliated licensees to represent you as an agent(s) (called **"appointed agency"**);
- ✓ The company may offer limited agent level services as a **disclosed dual agent.**

WHAT IS A DISCLOSED DUAL AGENT?

In certain situations a licensee may act as an agent for and represent both the buyer and the seller in the same transaction. This is called **disclosed dual agency**. *Both the buyer and the seller must consent to this type of representation in writing.*

Working with a dual agent is not the same as having your own exclusive agent as a single or appointed agent. For instance, when representing both a buyer and a seller, the dual agent must not disclose to one party any confidential information obtained from the other party.

Remember!
Unless you enter into a written agreement for agency representation, you are a customer—not a client.

THIS IS NOT A CONTRACT

It is important for you to know that this form is not a contract. The licensee's completion of the statement below acknowledges that you have been given the information required by Maine law regarding brokerage relationships so that you may make an informed decision as to the relationship you wish to establish with the licensee/company.

To Be Completed By Licensee

This form was presented on (date) **July 8, 2024**

To **Deborah J. Nason**
Name of Buyer(s) or Seller(s)

by **Willie Audet, Jr.**
Licensee's Name

on behalf of **Greater Portland Realty**
Company/Agency

MREC Form#3 Revised 07/2006
Office Title Changed 09/2011

To check on the license status of the real estate brokerage company or affiliated licensee go to www.maine.gov/professionallicensing. Inactive licensees may not practice real estate brokerage.

LEGEND

- BOUNDARY LINE
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- ABUTTER LINE
- SETBACK LINE
- POSSIBLE WETLAND
- POSSIBLE CENTER LINE OF STREAM
- EXISTING CONTOUR
- POSSIBLE WETLAND DISTURBANCE

NOTES

1. EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED ON INFORMATION PROVIDED BY OTHERS AND WERE NOT FIELD VERIFIED BY NORTHEAST CIVIL SOLUTIONS, INC
2. THIS IS NOT A BOUNDARY SURVEY. THIS PLAN IS NOT INTENDED TO MEET THE REQUIREMENTS OF CHAPTER 90, PART 2, SECTIONS 4 THROUGH 8 OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYOR RULES. THE RELATIONSHIP BETWEEN THE EXISTING STRUCTURES AND THE PROPERTY LINES ARE CONSIDERED APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.
3. TOTAL POSSIBLE WETLAND DISTURBANCE: 6,542± SF

Number	By	Date	Change

PROJECT: 43001	DRAWING NAME: 43001-Aldworth Street.dwg		
ISSUED: APRIL 22, 2024	SCALE: 1"=50'	FB # N/A	DRAWN BY: CJB
FIELDED BY: N/A	FIELD DATE: N/A		CHECKED BY: DMM / TFM

Drawing Name and Location:
PRELIMINARY SITE CONCEPT PLAN
57 CASTINE AVENUE, PORTLAND, ME

Owner:
WAYNE H. NASON & DEBORAH J. NASON
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Northeast Civil Solutions
INCORPORATED
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tel: 207.883.1000
e-mail / website
info@northeastcivilsolutions.com
www.northeastcivilsolutions.com

0 50 100 200

STAMP AND SIGNATURE

Preliminary

TROY F. MACDONALD
MAINE PROFESSIONAL LAND SURVEYOR No. 2080
DATE

25. ELECTRONIC SIGNATURES: Pursuant to the Maine Uniform Electronic Transactions Act and Digital Signature Act, the parties authorize and agree to the use of electronic signatures as a method of signing/initialing this Agreement, including all addenda. The parties hereby agree that either party may sign electronically by utilizing an electronic signature service.
26. Upon acceptance of the offer or counteroffer, Seller agrees to deliver the above-described property at the price and upon the terms and conditions set forth and agrees to pay agency a commission for services as specified in the listing agreement.

Buyer's Mailing address is **659 Warren Ave., Portland, ME 04103**.

DocuSigned by: Chad Mullin 7/3/2024

BUYER **Habitat for Humanity of Greater Portland** DATE — BUYER **Chad Mullin its Executive Director** DATE

BUYER DATE — BUYER DATE

Seller hereby accepts the offer set forth above.

Seller's Mailing address is **57 Castine Ave., Portland, ME 04103**.

SELLER **Deborah J. Nason** DATE — SELLER Deborah J Nason DATE 7-11-24

SELLER DATE — SELLER DATE

COUNTER-OFFER

Seller agrees to sell on the terms and conditions as detailed herein with the following changes and/or conditions:

The parties acknowledge that until signed by Buyer, Seller's signature constitutes only an offer to sell on the above terms and the offer will expire unless accepted by Buyer's signature with communication of such signature to Seller by (date) _____ (time) _____ ☐ AM ☐ PM.

SELLER DATE — SELLER DATE

SELLER DATE — SELLER DATE

The Buyer hereby accepts the counter offer set forth above.

BUYER DATE — BUYER DATE

BUYER DATE — BUYER DATE

EXTENSION

The closing date of this Agreement is extended until JUNE 7, 2025.

DATE

Deborah J Nason 1-10-25
SELLER DATE — SELLER DATE

SELLER DATE — SELLER DATE

Chad Mullin 1-10-25
BUYER DATE — BUYER DATE

BUYER DATE — BUYER DATE

REALTOR®

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EQUAL HOUSING OPPORTUNITY

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0 Aldworth

Habitat for Humanity® Greater Portland

We build strength, stability, self-reliance, *and* shelter.

June 3, 2025

To:
City of Portland
389 Congress Street
Portland, ME 04101

RE: Financial and Technical Capacity for Subdivision Approval – Aldworth Street Extension

Dear Planning Department,

I am writing on behalf of Habitat for Humanity of Greater Portland to affirm that we possess both the financial and technical capacity to successfully complete the proposed subdivision project located at the end of Aldworth Street in the City of Portland.

This development will consist of 9 residential lots and will include site clearing, road construction, stormwater management, utility installation, individual lot preparation, and home construction. We have, or will secure, the necessary funding for this project through a combination of:

- Internal capital in excess of $1 million
- A secured line of credit with **Maine Community Bank** totaling $500,000
- Grant funding to be pursued through **MaineHousing**, potentially totaling an additional $800,000
- Proceeds from home sales, anticipated to generate in excess of $1.75 million

The estimated total cost of the project is approximately $3.475 million, with home sale revenue accounting for the majority of this figure and supplemented by fundraising efforts that exceed $1 million annually.

From a technical standpoint, we have retained **Northeast Civil Solutions**, a licensed engineering and land surveying firm based in Scarborough, Maine, with extensive experience in subdivision design and permitting. They will lead the design, engineering, and permitting phases of the project.

659 Warren Ave, Portland, ME 04103 tel (207) 772-2151 habitatportlandme.org

Equal Housing Opportunity

The construction and infrastructure work will be managed by our in-house team, which includes:

- **Chad Mullin**, Executive Director – With over 20 years of experience in affordable housing development across Maine and North Carolina, I have overseen the successful completion of five independent subdivisions, ranging in size from 3 to 12 lots since 2012.
- **Ryan Carmichael**, Construction Manager – Ryan brings over 15 years of experience building affordable housing in Maine, Pennsylvania, and Hawaii. He will oversee home construction to ensure compliance with all applicable state and local codes, laws, and ordinances.

Habitat for Humanity of Greater Portland fully understands the responsibilities associated with subdivision development. We are committed to complying with all approved plans, ordinances, and conditions of approval. Should the Planning Department require any additional documentation, including proof of financing or professional qualifications, we will gladly provide it.

Thank you for your time and consideration.

Sincerely,

Chad Mullin
Executive Director
Habitat for Humanity of Greater Portland

From: Chad Mullin
To: Connor Bourassa
Cc: Troy McDonald; Maria Frederick
Subject: Re: 57 Castine Ave Review
Date: Tuesday, August 26, 2025 1:07:28 PM

Hi Connor,

I am working on getting the financial capacity letter for you. I'm currently waiting to hear back from our bank to discuss the details of that so they can produce the letter for us.

As for the sale price of the residential units, homes will be sold to buyers based on the following criteria:

- Sale price will be based on buyers income at the time of sale.
- Affordable mortgages will be set at 30% of monthly gross income. This affordable payment includes Principal Mortgage Payment, Interest on the Loan, Property Taxes, and Property Insurance.
- Homes will be sold to individuals or families making between $40k and 80% of AMI annually

These parameters equate to a sale price range between $95,000 and $365,000, depending on interest rates at the time of sale.

Habitat also holds a silent second mortgage on the difference between the sale price and the market appraised value of the property.

Let me know if you need additional clarity on the sale price range. I'll be in touch soon with the financial capacity letter.

Thanks,
Chad

Chad A. Mullin
Executive Director
Habitat for Humanity of Greater Portland

659 Warren Avenue
Portland, ME 04103
Phone: (207) 772-2151 Fax: (207) 772-8113
Mobile: (207) 233-7820

chad@habitatme.org - www.habitatportlandme.org

August 27, 2025

Habitat for Humanity of Greater Portland, Inc
659 Warren Ave
Portland, Maine 04103

RE: Habitat Subdivision - Aldworth Street, Portland, ME

To Whom It May Concern:

We have been working with Habitat for Humanity Greater Portland on their 9-lot affordable housing development on Aldworth Street, Portland. Habitat of Greater Portland is an established and valued customer of Maine Community Bank. They have ample liquid funds, development expertise, and overall capacity to successfully complete the proposed project. We are excited about their plans and look forward to working with them on this project.

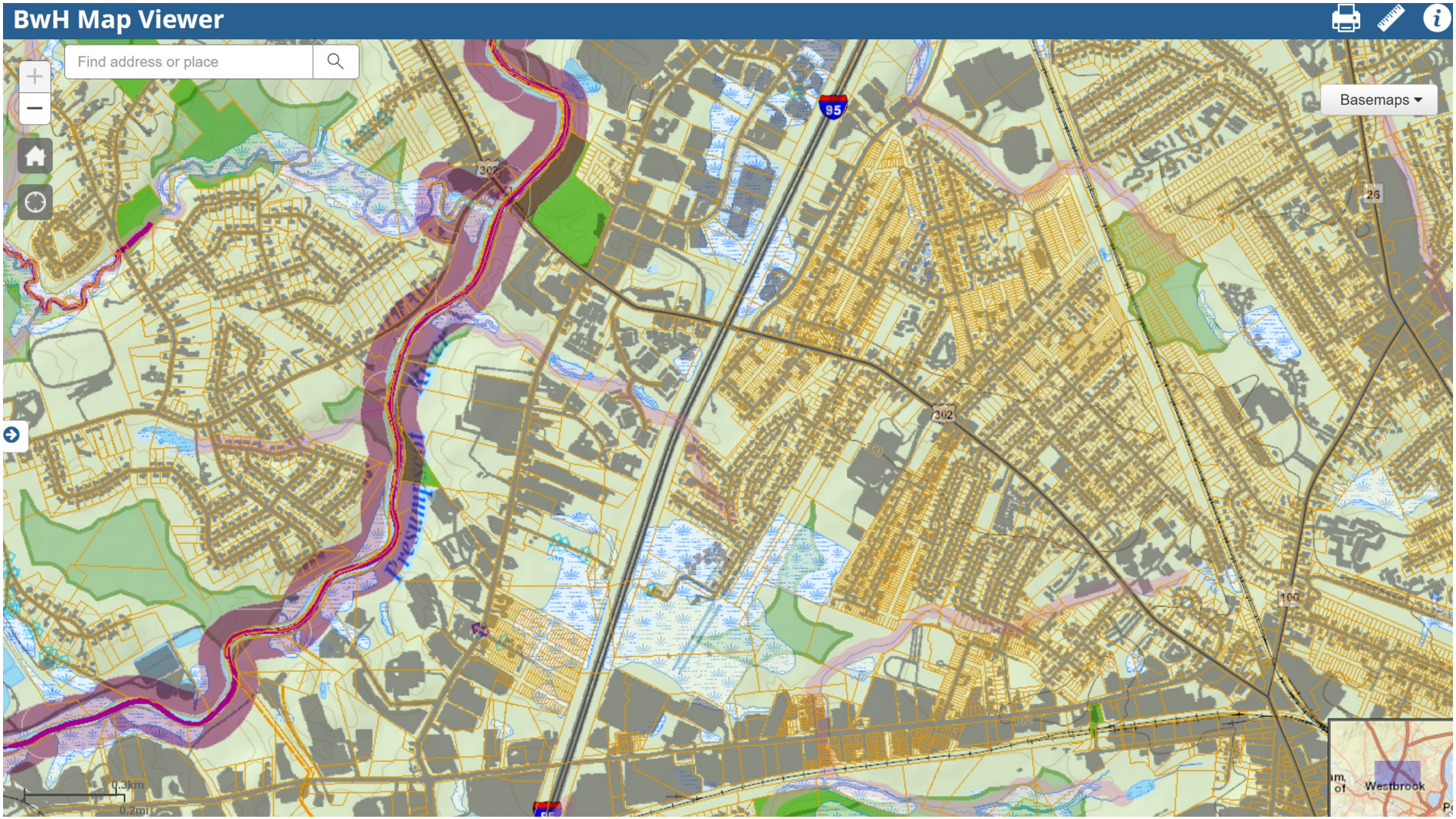
Please feel free to contact me with any questions.

Sincerely,

Matthew W Early

Matthew W. Early
Senior Vice President

MWE/JRS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SURVEYING ENGINEERING LAND PLANNING

Northeast Civil Solutions

INCORPORATED

www.northeastcivilsolutions.com

43105

May 30, 2025

Whom It May Concern:

I, Chad Mullin, of Habitat for Humanity of Greater Portland, authorize Northeast Civil Solutions, Inc. to sign any and all applications, permit requests, and other paperwork in conjunction with the submission of municipal, federal, and/or state applications, as applicable, for the project located at 57 Castine Avenue, Portland, Maine 04103. This authorization is not a contract for any work to be performed. Contracts and/or other correspondence are separate documents.

Chad Mullin
Signature

06/03/2025
Date

Site Plan Standards

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025
Revised August 26, 2025

City of Portland Land Use Code, Chapter 14, Section 13.6: Site Plan Review Standards:

§13.6.1 Transportation Standards

A. Impact on Surrounding Street Systems

Standard. Provisions for on-site circulation, parking, and site access, as well as the incremental traffic generated by the project, shall not create or aggravate safety hazards or substantially increase congestion without proportionate mitigation.
Response to Standard. The 9-lot subdivision will generate a modest number of trips typical of single-family residential use. Access will be provided via a 24-foot-wide extension of Aldsworth Street with a City-standard hammerhead turnaround. The road width and design allow safe circulation and emergency access, and traffic volumes will not create safety hazards or congestion.

B. Access and Circulation

1. General

Standard. Safe and reasonable access must be provided in compliance with the Technical Manual. Shared access and circulation must be used where practicable. Internal walkways must link sidewalks, transit stops, and crossings to building entrances. Connections to public trails are required where applicable. Site access must be located to avoid conflicts with traffic movements.
Response to Standard. The subdivision provides safe access through a single public street built to City standards. Each lot will front directly on the new roadway. There are no existing sidewalks or public trails adjacent to the site, so no connections are required. No shared curb cuts are necessary, as each lot will use individual driveways.

2. Curbs and Sidewalks

Standard. Streets shall include curb and sidewalk improvements as required by the Technical Manual. Where sidewalks are not practicable, a waiver may be granted if at least two of the ordinance's criteria are met. A waiver of curbing may also be granted under specific conditions.
Response to Standard. Granite curbing will be installed along both sides of the new roadway, consistent with standards. No sidewalks are proposed; instead, the subdivision is designed as a Conservation Residential Development, which permits reduced infrastructure. Low pedestrian demand and lack of sidewalk connections nearby support the waiver request.

C. Public Transit Access

Standard. For certain larger developments, improvements such as bus shelters may be required along transit routes.
Response to Standard. Not applicable. The project consists of 9 single-family homes and is not located along a designated transit route.

D. Parking
1. Vehicular Parking
Standard. Parking must meet the requirements of Article 18 and the Technical Manual.
Response to Standard. Parking will be provided on each individual lot by driveways, consistent with single-family zoning and Article 18.

2. Bicycle Parking
Standard. Bicycle parking must be provided consistent with Article 18 and the Technical Manual.
Response to Standard. This standard does not apply to single-family residential lots.

3. Snow Storage
Standard. Adequate snow storage or removal plans must be provided without interfering with circulation, stormwater systems, or landscaping.
Response to Standard. Snow will be stored within the hammerhead turnaround, roadside areas and end of driveways, avoiding conflicts with the stormwater soil filter system or landscaped buffers.

4. Electric Vehicle (EV) Charging
Standard. New development must comply with EV-readiness requirements outlined in the Technical Manual.
Response to Standard. Individual homes will comply with EV-readiness standards (if necessary), at the building permit stage, consistent with City requirements.

E. Transportation Demand Management (TDM)
Standard. A Transportation Demand Management plan is required for large developments with high employee or student populations or large commercial areas.
Response to Standard. Not applicable. The subdivision is limited to 9 single-family residences and does not meet TDM thresholds.

<u>§13.6.2 Environmental Quality Standards</u>

A. Preservation of Significant Natural Features
Standard. Significant natural features, including mature trees, wetlands, water bodies, shorelands, steep slopes, and identified habitats, shall be preserved to the maximum extent practicable. If full preservation would substantially compromise otherwise allowable development, requirements may be reduced per the Low-Impact Development (LID) standards. Site plans must also show protective measures for features being preserved.

Response to Standard. The subdivision has been designed as a Conservation Residential Development, clustering homes and preserving meaningful open space. Natural vegetation and upland features are maintained in protected areas. Construction plans will include fencing, buffers, and erosion control to protect preserved features. No reduction from the preservation standard is required.

B. Site Landscaping and Buffers

Standard. Development must provide landscaping to enhance site appearance, supply shade, aid stormwater management, and buffer uses. Requirements include:

- Shade trees or equivalent plantings based on lot area.
- Credit for preserved vegetation.
- Alternatives if constraints prevent plantings.
- Screening of service areas, utilities, and parking lots.
- Evergreen buffers for residential projects where necessary.
- Landscaping for parking areas greater than 5 spaces.
- Use of high-reflectance paving or shade trees for large non-vehicular paved areas.
- Provision of street trees along all road frontages, or approved alternatives. Removal of heritage or feature trees requires a contribution to the City Tree Fund.

Response to Standard. Preserved vegetation in open space areas will be credited toward landscaping requirements. Street trees will be planted along the new subdivision street at the spacing required. Granite curbing and open space landscaping will enhance the roadway corridor. No shared surface parking lots are proposed; snow storage and individual driveways will handle vehicle needs. No heritage trees are expected to be removed; if necessary, contributions to the Tree Fund will be made.

C. Water Quality, Stormwater Management, and Erosion Control

Standard. Development must minimize impervious surface and manage runoff so that:

1. Pre-development flows across the site are not impeded or redirected to cause off-site flooding.
2. Increases in runoff volume or rate can be managed without problems on adjacent lots or City property, and the developer has the legal right to discharge.
3. Increases into the City's stormwater system can be accommodated without exceeding system capacity.

All projects must comply with the Technical Manual's stormwater standards, avoid groundwater contamination during and after construction, and demonstrate that subsurface and slope conditions are suitable. A geotechnical study may be required.

Response to Standard. Stormwater from the subdivision roadway will be collected by catch basins and conveyed to a soil filter treatment system. Roof runoff will be managed by individual roof dripline filters. These measures reduce impervious impacts, provide treatment, and ensure post-development flows do not exceed pre-development conditions. All BMPs will be designed per the Technical Manual. Upland soils are suitable for the proposed infiltration practices, and construction erosion control measures will prevent temporary impacts.

§13.6.3 Public Infrastructure and Community Safety Standards

A. Consistency with City master plans
Standard.

1. All developments shall be designed so as to be consistent with City Council–approved master plans and facilities plans and with off-premises infrastructure.
2. The site plan shall include suitable easements, rights, and improvements to connect or continue off-premises public infrastructure as may be required by the review authority.

Response to Standard. The subdivision is designed as a local street extension of Aldsworth Street and will connect to existing public water, sewer, and electric utilities. Easements will be provided as necessary for utility extensions, ensuring consistency with City facilities plans.

B. Public safety and fire prevention
Standard.

1. All development shall incorporate the following public safety principles for Crime Prevention Through Environmental Design (CPTED):
   a. Natural surveillance that promotes visibility of public spaces and areas.
   b. Access control that promotes authorized and appropriate access to the site.
   c. Territorial reinforcement that promotes a sense of ownership and responsibility through design.
2. All developments shall be designed to provide adequate emergency vehicle access to the site and comply with the Public Safety standards of the Technical Manual.

Response to Standard. The subdivision layout provides clear frontage for all homes, maintaining natural surveillance. Access is limited to a single public street with a hammerhead turnaround, supporting access control and neighborhood identity. Emergency access is ensured through a 24-foot paved roadway and City-standard turnaround, consistent with fire and public safety standards.

C. Public utilities
Standard.

1. The development shall not overburden sanitary sewers and storm drains, water lines or supply, or other public infrastructure and utilities. Adequate on-site infrastructure shall be provided.
2. Electrical service shall be underground unless exempted.
3. All sanitary sewer lines, storm drains, water lines, and other utilities shall conform with Technical Manual standards.
4. All development within 200 feet of a public sanitary system shall connect. If unavailable, private systems may be used subject to Chapter 24 and Technical Manual standards.
5. Residential development of 20 units or more, commercial, and industrial projects shall provide for screened storage and removal of trash and recyclables.

Response to Standard. The 9-lot subdivision will be fully served by public water and sewer, and drainage facilities will connect to a soil filter stormwater treatment system. Electrical service will be underground. All utility extensions will comply with Technical Manual standards. The scale of the

development (9 units) is below the threshold for centralized trash/recycling facilities; solid waste and recycling will be managed through the City's curbside collection program.

§13.6.4 Site Design Standards

A. Massing, ventilation, wind, and heat impact
Standard.

1. The bulk, location, or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions.
2. Development shall locate all HVAC venting mechanisms to direct exhaust away from public spaces and adjacent residential properties.
3. For buildings or additions with aggregate roof area greater than 2,000 sq. ft. (and for residential, more than nine units), 75% of the roof must meet "cool roof" SRI standards.

Response to Standard. The subdivision proposes 9 single-family homes, each with modest building footprints under the thresholds requiring "cool roof" compliance. Homes will be sited on individual lots without excessive height or bulk, preserving ventilation and not altering wind patterns. HVAC units will be placed on individual lots in compliance with siting requirements.

B. Shadow
Standard. Development over 65 feet in height shall be designed to avoid and/or mitigate adverse impacts of shadows on publicly accessible open space in accordance with the Technical Manual.
Response to Standard. No proposed homes will exceed typical two-story heights. The standard is not applicable.

C. Snow and ice loading
Standard. All development shall be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.
Response to Standard. Snow storage areas will be designated within the subdivision roadway shoulders, hammerhead turnaround and on individual lots. Snow will not be stored in areas that could impact adjacent properties or stormwater systems.

D. View corridors
Standard. The massing, location, and height of development shall not substantially obstruct public view corridors identified in the City of Portland Design Manual.
Response to Standard. The development is located in a low-density residential neighborhood without designated view corridors. The project will not obstruct public views.

E. Historic resources
Standard.

1. Development affecting a designated landmark or property within a historic district must obtain approval under Article 16.

2. All development shall document and protect state or local archaeological resources if known or discovered.

Response to Standard. The site does not contain designated landmarks or lie within a historic district. No archaeological resources have been identified on the property. If resources are discovered during construction, appropriate documentation and consultation will occur.

F. Exterior lighting

Standard.

1. All exterior site lighting shall be full cutoff, prevent light spillover, and meet Technical Manual standards.
2. Where development may impact residential properties, shielding shall be used.
3. Architectural and specialty lighting must be limited to specific features; up-lighting is generally prohibited.
4. All development shall provide municipal street lighting consistent with standards.

Response to Standard. Minimal exterior lighting is anticipated. Any lighting installed for residences or along the subdivision street will comply with City standards, be full cutoff, and prevent spillover onto abutting properties.

G. Noise and vibration

Standard. HVAC, air handling units, emergency generators, and similar equipment must meet state/federal emissions requirements and be located away from abutting properties.

Response to Standard. No large-scale mechanical systems are proposed. Residential HVAC units will be located on individual lots in compliance with standards.

H. Signage and wayfinding

Standard.

1. On-site directional signage may be provided to aid safe navigation.
2. Signage shall not obstruct visibility at intersections.

Response to Standard. The project is a small-scale subdivision. No wayfinding or traffic signage is required beyond standard street signage, which is already installed at the existing intersection.

I. Design standards

Standard. Development in certain zones must comply with the City of Portland Design Manual. If located in a historic district, Article 16 standards supersede.

Response to Standard. The subdivision is not located within a Design Manual zone or historic district. This standard is not applicable.

Subdivision Review Standards

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025

City of Portland Land Use Code, Chapter 14, Section 14.4: Review Standards:

1. Pollution
The subdivision will not result in undue water or air pollution.
The project includes proper stormwater management, erosion control, and dust mitigation practices to prevent pollution. No industrial or high-impact uses are proposed.

2. Water Supply
The water supply is sufficient and meets the standards of the Portland Water District.
The site will be served by public water extended from Aldworth Street, with adequate capacity confirmed by the Portland Water District.

3. Soil Erosion
Erosion and sedimentation will be controlled.
The development includes a detailed erosion control plan with silt fences, inlet protection, and stabilization practices, in compliance with City and DEP guidelines.

4. Traffic
The proposed road network is safe and adequate for the projected traffic.
Aldworth Street Extension includes a public standard cul-de-sac and is designed to safely accommodate the low traffic volumes expected from nine single-family homes.

5. Sewage Disposal
The development provides adequate sewerage.
Each lot will connect to the City's public sewer system via a newly extended gravity main. Sewer capacity and design meet Public Works standards.

6. Solid Waste
Provision is made for solid waste disposal.
Each home will receive City-issued trash and recycling carts, with curbside collection provided by Portland's Department of Public Works.

7. Aesthetic, Cultural, and Natural Values
The design preserves significant scenic or natural features.
The layout preserves a wooded buffer, limits wetland impacts, and retains open space consistent with the Conservation Residential Development ordinance.

8. Conformity with Local Ordinances and Plans
The plan conforms to zoning, the Land Use Code, and the Comprehensive Plan.
The subdivision complies with R1 zoning, Conservation Residential Development standards, and supports the Portland Plan 2030 goals for housing, equity, and smart growth.

9. Financial and Technical Capacity
The applicant has adequate financial and technical resources.
Habitat for Humanity of Greater Portland has a long-established track record of successfully developing affordable housing in Portland and has retained licensed engineers and consultants for design and permitting.

10. Surface Water Quality
The project will not degrade surface waters.
Stormwater is directed to an underdrained soil filter system that treats runoff prior to discharge. No direct discharge to wetlands or surface water bodies is proposed.

11. Groundwater Quality
The project will not harm groundwater quality.
Only residential uses are proposed; there will be no on-site hazardous storage. Erosion control and infiltration features will protect groundwater recharge.

12. Flood Areas
No undue flood risk is created.
The property is not located within a FEMA-designated flood hazard area.

13. Freshwater Wetlands
Wetlands are preserved where practical.
Only 4,365 SF of wetland will be impacted for infrastructure construction. All impacts are minimized and located away from sensitive areas. No wetland fill is proposed on individual lots.

14. Stormwater Management
Post-development flows must not exceed pre-development.
Stormwater infrastructure is sized per City standards, and treatment is provided via soil filter with controlled outflow.

15. Spaghetti Lots Prohibited
Long, narrow, non-functional lots are not allowed.
All lots are compact, rectangular, and meet CRD dimensional standards. No irregular or flag-shaped lots are proposed.

16. Lake Shoreline Protection
Subdivisions near lakes must preserve views and water quality.
Not applicable – the site is not adjacent to any lakes or shorefront

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

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) RN-1

All Projects:

	Required	Proposed
Lot Size	3,250 sf	9 @ 3,318 sf+
Area Per Dwelling Unit		
Minimum Street Frontage	20'	9@ 35'+
Front Yard Minimum	10'	9@ 15'
Front Yard Maximum	n/a	
Rear Yard	12.5'(crd), 25'(rn1	9@ 35'+
Yard Right	5'(crd), 8'(rn1)	8@ 5.5, 1@8.5'
Yard Left	5'(crd), 8'(rn1)	8@ 5.5, 1@8.5'
Side Street Setback	n/a	
Step Back	n/a	
Maximum Lot Coverage	n/a	
Minimum Lot Coverage	n/a	
Maximum Height	35'	9@ 25'
Open Space		
Maximum Impervious Area	n/a	
Pavement Setback	n/a	
Floor Area Ratio	n/a	
Off Street Parking Spaces		
Loading Bays		
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

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

Affordable Housing Density Bonuses (if applicable)

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

City of Portland Site Plan Form

Part 1. Project Description & Site Information			
Application type:	site plan/subdivision	Submission type:	
	Address:	CBL number:	Lot area (square feet):
Main property:	57 CASTINE AVE	309 D022001	100,311
Additional properties (if applicable):	84 ALDWORTH ST	309 D041001	10,000
Project description:	9-lot Conservation Residential Development Subdivision		

Type(s) of work:	(Select which type(s) of work apply from the dropdown list. If not applicable, select N/A.)
New residential construction or additions	yes
New non-residential construction or additions	
Creation of disturbed area	yes
Creation of impervious surface	yes
Construction or paving of parking	
Change of use	

Does this project include State or Federal funding, permits, review, or sponsorship?			X	Yes	No
If yes, list applicable entities:					
Associated applications: (Check all that apply)	X	Maine DEP- GC Permit	X	Subdivision	
Army Corps of Engineers General Permit	X	Maine DEP - NRPA		Traffic Movement Permit	
Floodplain Development Permit		Site Location of Development		Zoning Amendment	
Harbor Commission Construction Permit		Stormwater Quality		Other:	

Part 2. Use Information				Total Existing	Total Proposed	Net New
Residential	General	Residential floor area (square feet)		0		
		For Group Living uses with no dwelling units, list the number of rooming units				
		Dwelling units		0	9	9
		Ownership units		0	9	9
		Rental units				
	Bedrooms	Studio units				
		1-bedroom units				
		2-bedroom units				
		3-bedroom units				
		4+ bedroom units				
	Affordability	Market-rate units		0		
			% AMI			
			% AMI			
			% AMI			
Non-Residential		Commercial/Service floor area (square feet)				
		Industrial floor area (square feet)				
		Institutional floor area (square feet)				
		Other floor area (square feet)				

Part 3. Inclusionary Zoning			Total Existing	Total Proposed	Net New
Inclusionary Zoning (IZ) dwelling units			0		
Ownership IZ units		% AMI			
Rental IZ units		% AMI			
Bedrooms	Studio IZ units				
	1-bedroom IZ units				
	2-bedroom IZ units				
	3-bedroom IZ units				
	4-bedroom IZ units				
IZ fee-in-lieu	$	for	of the required	IZ dwelling units	

City of Portland Site Plan Form

Part 4. Building & Site Metrics	Total Existing	Total Proposed	Net New
Number of buildings	0	9	9
Building floor area (square feet)	0		
Building footprint (square feet)	0		
Street trees	0	13	13
Automobile parking spaces			
ADA-accessible parking spaces	0	0	0
Compact parking spaces	0	0	0
Level 2 Electric Vehicle (EV) charging spaces	0	0	0
Level 3 Electric Vehicle (EV) charging spaces	0	0	0
Bicycle parking spaces	0	0	0
Number of water service connections	0	9	9
Number of sewer service connections	0	9	9
Impervious area (square feet)	0	19,200	19,200
New developed area (square feet)		31,400	
Non-roof redeveloped impervious area (square feet)		0	
Limits of disturbance (square feet)		47,500	
Alteration to wetlands or watercourses (square feet)		4,365	

Part 5. Zoning (You can use this link to view the zoning for your property)					
Base Zone	RN-1 w/CRD		Base Zone #2 (if applicable)		
Local Historic District?	no	Overlay Zone #1 (if applicable)		Overlay Zone #2 (if applicable)	
Zoning Standards – Project Site	**Requirements**		**Proposed**	**Requirements**	**Proposed**
Lot area (square feet)	6,500/3,250		9@3,250+		
Street frontage, Minimum (feet)	40/20		35		
Lot coverage, Maximum (%)	60/na		9@~30%		
Landscaped open space ratio, Minimum (%)	30/na		n/a		
Build-to Zone (feet)					
Build-to percentage, Minimum (%)					
Blank wall area, Maximum (feet)					
Additional standard:					

Zoning Standards by Building (Use Extra Sheets if >2 Buildings)	Building #1 Zone Requirements	Proposed	Building #2 Zone Requirements	Proposed
Front setback, Minimum/Maximum (feet)	20/10	10		
Rear setback, Minimum (feet)	25/12.5	25		
Side setback, Minimum (feet)	8/5	5		
Structure height, Maximum (feet)	35	<35		
Additional standard:				

Affordable Housing Density Bonuses (if applicable)	Maximum Allowable with Bonus	Proposed
Density, Maximum (x base)	no bonus proposed	
Height, Maximum (feet)		

If Needed, Explanatory Text Can Be Provided Below

Open space and lot coverage is not applicable for proposed lots under 5,000 square feet

Planning & Urban Development Department

MAJOR AND MINOR SITE PLAN DOCUMENT CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

General Application Documents

Indicate Below	Required of All Applications
☑	Project Description • Cover letter with detailed project description
☑	Completed Checklist (this document)
☑	Evidence of Right, Title, and Interest • Deeds, leases, or purchase and sale agreements
☑	Financial Capacity • Letter or evidence from a financial institution or third-party verifying financial capacity to undertake the project.
☑	Technical Capacity • Evidence of technical capability of applicant and consultants – resume and/or examples of past projects.
☑	Site Plan Standards • Summary of project compliance with site plan standards of the land use code.
☑	ZoningAssessment (the link to the form can be found here) • Summary of compliance with use and dimensional standards of the land use code.

Indicate Below Yes	N/A	Only if Applicable
☑	☐	Waiver Requests (the link to the form can be found here) • Written request for waiver describing request and compliance with applicable waiver standards.
☑	☐	Summary of Existing or Proposed Easements or Covenants • Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way.
☑	☐	Evidence of State or Federal Approvals • Permits or letters of non-jurisdiction

Additional Documents

Indicate Below Yes	N/A	Only if Applicable
☑	☐	Construction Management Plan, including traffic control plan. • Provide construction management narrative in accordance with the City's Construction Management Template.
☑	☐	Traffic Study and/or other Transportation Plans • Detailed in Sec. 2 of the Technical Manual
☑	☐	Significant Natural Features Narrative

		• Identify significant natural features, wildlife habitats, fisheries habitats, or archaeological sites as detailed Ch. 14, Article 13, located on or near the project site, and describe protection methods during and after construction.
☑	☐	Stormwater Management Report • Detailed in Sec. 14 of the Technical Manual
☑	☐	City Master Plan Narrative • Detail project's consistency with City adopted Master Plans.
☑	☐	Evidence of Utility Capacity • Provide letter from all utility providers demonstrating capacity to service the project.
☑	☐	Solid Waste Narrative • Detail the amount of solid waste and recyclable material anticipated to be generated by the development, and information on how waste will be collected and removed.
☑	☐	Life/Safety Code Analysis Narrative • Detail how the project complies with NFPA 1 and other Fire Department technical standards.
☑	☐	Design Narrative • Detail how the project complies with any applicable design standards contained within the Land Use Code or City of Portland Design Manual.
☐	☑	HVAC and Manufacturing Equipment Verification • Provide verification from manufacturer that equipment meets applicable state and federal emissions requirements.
☑	☐	Low Impact Development (LID) Analysis • Provide a narrative detailing how the subdivision complies with the low impact development requirements listed in Section 3 of the Technical Manual, along with a completed LID scorecard.

MAJOR AND MINOR SITE PLAN DRAWINGS CHECKLIST

Please upload the following drawings with the listed details into ProjectDox as separate PDFs. All drawings must be submitted in a 24 x 36 inch sheet size.

Boundary Survey (Stamped by a Licensed Surveyor in accordance with Sec. 14 of the Technical Manual)

Site Plan(s) (Stamped by a Maine Licensed Professional Engineer)

Indicate Below		**All Sheets** – Include a title block with project title and the following information:
☑		Project street address
☑		Name and address of property owner & applicant.
☑		Licensed design professional, including firm that produced plans.
☑		North arrow
☑		Date of preparation and revision history block.
☑		Tax parcel (chart, block, and lot) number
Indicate Below Yes	N/A	**Existing Conditions Plan**
☑	☐	Existing structures, with distance from primary building façade(s) to the property line.
☑	☐	Approximate location of structures on abutting properties
☑	☐	All streets and intersections adjacent to the site
☑	☐	Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials

☑	☐	Existing public transit infrastructure
☑	☐	Existing vehicle & bicycle parking areas
☑	☐	Existing utilities on site and within adjacent rights-of-way
☑	☐	Existing grades (two-foot contours preferred)
☑	☐	Location of water courses, wetlands, and vegetation, or other significant natural features
☑	☐	Existing soil conditions and locations of test pits and borings
☑	☐	Zoning boundary lines, including overlays
☑	☐	Location of all existing easements and rights-of-way.
Indicate Below Yes	N/A	**Proposed Site Plan**
☑	☐	Proposed structures, including distance from primary building façade(s) to property lines
☑	☐	Ground floor area, and finished floor elevations for all buildings
☑	☐	Any proposed geometric modifications to streets and intersections adjacent to site
☑	☐	Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
☑	☐	Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
☐	☑	Location and dimensions of proposed loading areas, including turning templates
☑	☐	Proposed transit infrastructure with dimensions/ engineering specifications
☑	☐	Location of vehicle and bicycle parking with dimensions and engineering specifications
☑	☐	Location of all snow storage areas
☑	☐	Exterior lighting (please see Technical Manual for photometrics requirements)
☑	☐	Location of fire hydrants
☑	☐	Location of solid waste management receptacles
☐	☐	Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable
☑	☐	Location of proposed easements and rights-of-way, including dimensions
☑	☐	Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
Indicate Below Yes	N/A	**Utility Plan**
☑	☐	Proposed electrical infrastructure
☑	☐	Location, sizing and directional flows of all proposed sewer and stormwater infrastructure
☑	☐	Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to the site
Indicate Below Yes	N/A	**Grading and Drainage Plan**
☑	☐	Proposed grades
☑	☐	Proposed stormwater management measures meeting Technical Manual standards
☑	☐	Any proposed alteration of a watercourse or wetlands
☐	☑	Any groundwater protection measures
☑	☐	Proposed buffers and preservation measures for wetlands or significant natural features
Indicate Below Yes	N/A	**Landscape Plan**
☑	☐	Existing vegetation to be preserved and preservation measures

☑	☐	Proposed landscaping, screening, and street trees, including caliper widths for trees
☑	☐	Planting schedule, including street trees detailing species, quantity of plantings, and size at planting.
Indicate Below Yes	N/A	**Architectural Plans and Renderings**
☑	☐	Exterior building elevations, color renderings, illustrations of all sides.
☐	☑	Axonometric and street-level views for structures greater than three stories in height.
☐	☑	Context drawings
☑	☐	Floor plans
Indicate Below Yes	N/A	**Construction Management Plan**
☑	☐	Specifics on traffic control, sidewalk sheds, and pedestrian rerouting
☑	☐	Construction management plan and narrative based upon site plan in accordance with the City's construction management template.
Indicate Below Yes	N/A	**Other**
☑	☐	Details and cross-sections

Att. O

Planning & Urban Development Department

SUBDIVISION
GENERAL DOCUMENT AND DRAWING CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

General Application Documents

Indicate Below	Required of All Applications
☑	Project Description • Cover letter with detailed project description
☑	Completed Checklist (this document)
☑	Evidence of Right, Title, and Interest • Deeds, leases, or purchase and sale agreements
☑	Financial Capacity • Letter or evidence from a financial institution or third-party verifying financial capacity to undertake the project.
☑	Technical Capacity • Evidence of technical capability of applicant and consultants – resume and/or examples of past projects.
☑	Subdivision Standards • Summary of project compliance with subdivision standards of the land use code.
☑	Zoning Assessment (the link to the form can be found here) • Summary of compliance with use and dimensional standards of the land use code.

Indicate Below Yes	Indicate Below N/A	Only if Applicable
☑	☐	Waiver Requests (the link to the form can be found here) • Written request for waiver describing request and compliance with applicable waiver standards.
☑	☑	Summary of Existing or Proposed Easements or Covenants • Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way.
☑	☐	Evidence of State or Federal Approvals • Permits or letters of non-jurisdiction

Additional Documents

Indicate Below Yes	Indicate Below N/A	Only if Applicable
☐	☑	Soil Test Analysis • Where private sewage systems are used, soil test results and supporting data, as required by Article 14 in the Land Use Code shall be provided.
☐	☐	Load Bearing Analysis • Information demonstrating the property's capacity to support the load of the anticipated new development. If the property's load bearing capacity is in question, the

		applicant shall include a geotechnical report, prepared by a professional engineer, with supporting data, detailing the results of test borings.
☐	☑	Price Range of Residential Units Being Developed
☑	☐	High Intensity Soil Survey • Detailed in Sec. 14 of the Technical Manual
☐	☐	City Master Plan Narrative • Detail project's consistency with City adopted Master Plans.
☑	☑	Evidence of Utility Capacity • Provide letter from all utility providers demonstrating capacity to service the project.
☑	☑	Solid Waste Narrative • Detail the amount of solid waste and recyclable material anticipated to be generated by the development, and information on how waste will be collected and removed.
☐	☐	Life/Safety Code Analysis Narrative • Detail how the project complies with NFPA 1 and other Fire Department technical standards.
☑	☑	Design Narrative • Detail how the project complies with any applicable design standards contained within the Land Use Code or City of Portland Design Manual.
☐	☑	HVAC and Manufacturing Equipment Verification • Provide verification from manufacturer that equipment meets applicable state and federal emissions requirements.
☑	☑	Site Buffer Narrative • Provide a narrative detailing all proposed buffer areas, their dimensions, and long-term maintenance plans and responsibilities.
☑	☑	Significant Natural Features Narrative • Identify significant natural features, wildlife habitats, fisheries habitats, or archaeological sites, located on or near the project site, and describe protection methods during and after construction.
☐	☑	Construction Management Plan • Provide construction management narrative in accordance with the City's Construction Management Template that details the sequence of construction for major site elements, construction timeline, erosion and sedimentation control measures, and pollution abatement measures.
☐	☑	Erosion and Sedimentation Control Plan • Provide an ESC Narrative in accordance with Section 12 of the Technical Manual.
☑	☑	Low Impact Development (LID) Analysis • Provide a narrative detailing how the subdivision complies with the low impact development requirements listed in Section 3 of the Technical Manual, along with a completed LID scorecard.

SUBDIVISION DRAWINGS CHECKLIST

Please upload the following drawings with the listed details into ProjectDox as separate PDFs. All drawings must be submitted in a 24 x 36 inch sheet size.

Subdivision Plat (at a scale not more than 1" = 60', unless lots are more than one acre in size)

Indicate Below	**All Sheets** – Include a title block with project title and the following information:
☑	Project street address
☑	Name and address of property owner & applicant.

☐	Licensed design professional, including firm that produced plans.
☑	North arrow
☐	Date of preparation and revision history block.
☑	Tax parcel (chart, block, and lot) number
Indicate Below	Other Information
☐	Vicinity sketch (may be shown on separate plan)
☑	Names of adjacent property owners with parcels over 25,000 square feet or names of adjacent subdivision(s).
☐	Location and designation of any zoning district boundaries affecting the subdivision.
☑	Site Date - Breakdown of area within the subdivision by street area, lot area (listing out each lot), and recreation and open space area.
☐	Based on a recent survey by the subdivider, existing contours at two-foot intervals or as otherwise required by the Public Works Authority. Existing structures which are to remain shall be delineated;
☑	Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered.
☐	Names of proposed streets, width of rights of way, typical cross section reservation, and depth of construction materials.
☑	Locations, widths and purposes of other rights of way or easements to be recorded.
☐	All appropriate street geometry information, including point of curvature, point of tangency, tangent distance, radii and interior angle, in standard engineering format
☐	Location of those utilities existing on or adjacent to the tract to be subdivided, including size and elevation of buried or underground utilities (may be shown on separate plan)
☐	Designation of flood hazard areas, as defined by the National Flood Insurance Program and shown on the city flood hazard boundary map, as well as any other areas in the subdivision subject to inundation by stormwater or storm sewer overflow
☑	All potential wetlands within the proposed subdivision, regardless of the size of those wetlands
☑	Any river, stream or brook within or abutting the proposed subdivision. For purposes of this section, "river, stream or brook" has the same meaning as in 38 M.R.S. § 480 B, Subsection 9
n/a ☑	Existing historic sites and structures which either appear on the National Register or are nominated to the National Register by the state historic preservation officer
☐	Proposed private and public utility system including water, gas, telephone, fire hydrants, and any other services which shall supply the area (may be shown on separate plan)
☐	Sanitary sewer and storm drain plans and profiles showing size, kind and slope of pipe, proposed manhole rim and invert elevations and catch basin locations and drains (may be shown on separate plan).
☐	Lighting plan showing the location, design, height and spacing from each other of the support poles, in accordance with standards and specifications established by the Public Works Authority (may be shown on separate plan)
☐	Tree plan showing groups of existing, sizeable trees which the subdivider intends to preserve (may be shown on separate plan).
☑	A detailed plan of the entire subdivision and the immediate vicinity showing all existing and proposed drainage both on- and off-site including drainage swales, ditches, etc., with directional flow arrows and approximate slope grades, and showing proposed finished "spot elevations" around the perimeter of the subdivision. Proposed drainage shall be shown as it may affect or restrict development on individual lots and with reference to improvements for which a performance guarantee is required under this article. Where deemed feasible by the Public Works Authority, proposed finished contours at intervals of two feet shall be provided on the drainage plan upon request (may be shown on separate plan)

n/a	☑	All future phases and sections of the subdivision proposed by the subdivider (may be shown on separate plan).
n/a	☐	Proposed parks and school sites, or other public open space that the developer proposes to convey to the city
	☑	Streets and right of way monuments and property line markers
	☐	Profiles of each street or way in the subdivision shall be shown on the subdivision plat. They shall be drawn to a longitudinal scale of 40 feet to one foot and a vertical scale of four feet to one inch. Such profiles shall include separate profiles of each side line and center line of the street or way. Any buildings abutting on the street shall be shown in standard engineering format as requested by the Public Works Authority
	☑	Where submission drawings are available in electronic form, the applicant shall submit any available electronic CAD files with final plans

Solid Waste Narrative

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025

Aldworth Street Extension, Portland, Maine
This narrative describes the solid waste collection and disposal plan for the proposed 9-lot residential subdivision located on a new dead-end public roadway (extension of Aldworth Street) in Portland, Maine.

1. Overview of Development
The project consists of nine (9) single-family residential lots accessed via a newly constructed public right-of-way (Aldworth Street Extension), designed to City of Portland public street standards, including a hammerhead turnaround suitable for public works vehicles. Each home will be developed individually, and upon occupancy, the units will function as permanent year-round residences.

2. Solid Waste Collection Plan
Solid waste and recycling collection for this subdivision will be provided by the **City of Portland Department of Public Works** as part of the City's standard curbside pickup service. The following provisions apply:

- **Each residence** will utilize **standard City-issued trash and recycling carts**, which will be placed curbside by the homeowner on collection days.
- The proposed roadway design includes a full-width turnaround area to allow safe access, maneuvering, and egress of public service vehicles, including trash collection trucks.
- There are **no shared dumpsters** or consolidated trash facilities; each lot will manage its own household waste individually.

3. Waste Storage and Management

- Trash and recycling carts will be stored by each homeowner on their private property between collection days, typically adjacent to garages or side yards, in compliance with City ordinances.
- All waste will be managed in accordance with the City of Portland's **Solid Waste Ordinance (Chapter 12)** and **Recycling and Waste Disposal guidelines**.
- No on-site waste processing or storage facilities are proposed or required.

4. Construction Waste Management
During the construction phase:

- Solid waste generated from road and utility work will be collected and disposed of by the site contractor through a licensed commercial hauler.
- For individual home construction, builders will provide roll-off containers or dumpsters as needed for proper disposal of construction debris, to be emptied regularly by licensed haulers.
- No burying or on-site disposal of construction or demolition waste is permitted.

5. Long-Term Maintenance and Enforcement

Once the homes are occupied, each property owner will be responsible for ensuring compliance with all City requirements for trash and recycling, including:

- Proper placement and retrieval of carts
- Avoidance of overflow or unsecured waste
- Adherence to published collection schedules

Enforcement of solid waste management policies will be under the jurisdiction of the City's Department of Public Works and Neighborhood Prosecutor, as with any other residential neighborhood.

NFPA Life Safety Narrative

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025

The proposed 9-lot residential subdivision has been designed to fully comply with applicable provisions of the **National Fire Protection Association (NFPA) 1 Fire Code**, as adopted by the City of Portland.
Each single-family dwelling will be equipped with an **NFPA 13R-compliant residential fire sprinkler system**. These systems are designed specifically for one- and two-family homes and will:

- Provide automatic interior fire suppression to protect life safety;
- Allow for increased survivability and occupant egress during a fire;
- Significantly reduce risk to both residents and responding fire personnel.

In addition to individual dwelling protection, the site plan incorporates a **public street with a full turnaround**, compliant with fire apparatus access requirements. Hydrant spacing and water pressure will meet Portland Fire Department and Portland Water District standards to ensure adequate fire flow.
Together, these features ensure that the development meets or exceeds all local and national **life safety codes and fire protection standards** for new residential construction.

Master Plan Narrative

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025

The proposed development supports and advances several core objectives of the Portland Plan 2030, which sets the city's policy direction for sustainable and equitable growth over the next decade. Specifically, the subdivision embodies the following goals:

1. Equitable and Affordable Housing (Goal: Everyone can afford to live and thrive in Portland)
The project is developed by Habitat for Humanity of Greater Portland, a nonprofit housing provider committed to creating affordable homeownership opportunities for income-eligible households. By constructing nine modest, energy-efficient homes on small lots, the subdivision addresses the Plan's housing strategy to:

- Increase homeownership access for low- and moderate-income families;
- Diversify the housing stock with a range of unit types;
- Promote equity in housing opportunity across Portland neighborhoods.

This initiative directly supports policies to combat displacement and promote long-term affordability within established residential areas.

2. Smart Growth and Compact Development (Goal: Create a livable city through efficient, inclusive development)
The subdivision follows Conservation Residential Development (CRD) standards, which cluster development on a compact footprint while preserving meaningful open space. This approach advances the Portland Plan's land use strategies to:

- Promote infill development and make efficient use of existing infrastructure;
- Limit sprawl and conserve environmental resources;
- Support complete neighborhoods where residents can live, play, and connect.

The use of a single dead-end public street and clustered lot layout minimizes impervious surfaces and supports future infrastructure sustainability.

3. Environment and Climate Resilience (Goal: A city that leads in climate action and environmental stewardship)
This subdivision limits wetland impact, incorporates Low Impact Development (LID) stormwater techniques, and retains mature vegetation and green space along site edges. Additionally, homes will be built with energy efficiency in mind, consistent with Habitat for Humanity's best practices and Portland's climate action principles. The project supports:

- Urban climate resilience;
- Stormwater and natural resource protection;
- Increased tree canopy and green infrastructure.

4. Safe and Accessible Transportation (Goal: A multimodal city that serves all residents)

The new street will include pedestrian sidewalks, providing walkability within the development and connections to the surrounding neighborhood. The compact layout reduces car dependency and supports the City's goals for complete streets and neighborhood connectivity. While limited in scale, the project:

- Improves local pedestrian safety;
- Encourages active transportation options;
- Is consistent with the city's strategy of retrofitting neighborhoods for walkability.

5. Community and Neighborhood Vitality (Goal: Strong, inclusive neighborhoods with housing choice)
The project integrates seamlessly into an existing residential area, offering modestly scaled housing types that reflect the character of nearby homes. It promotes a sense of community and neighborhood cohesion while supporting broader City goals of:

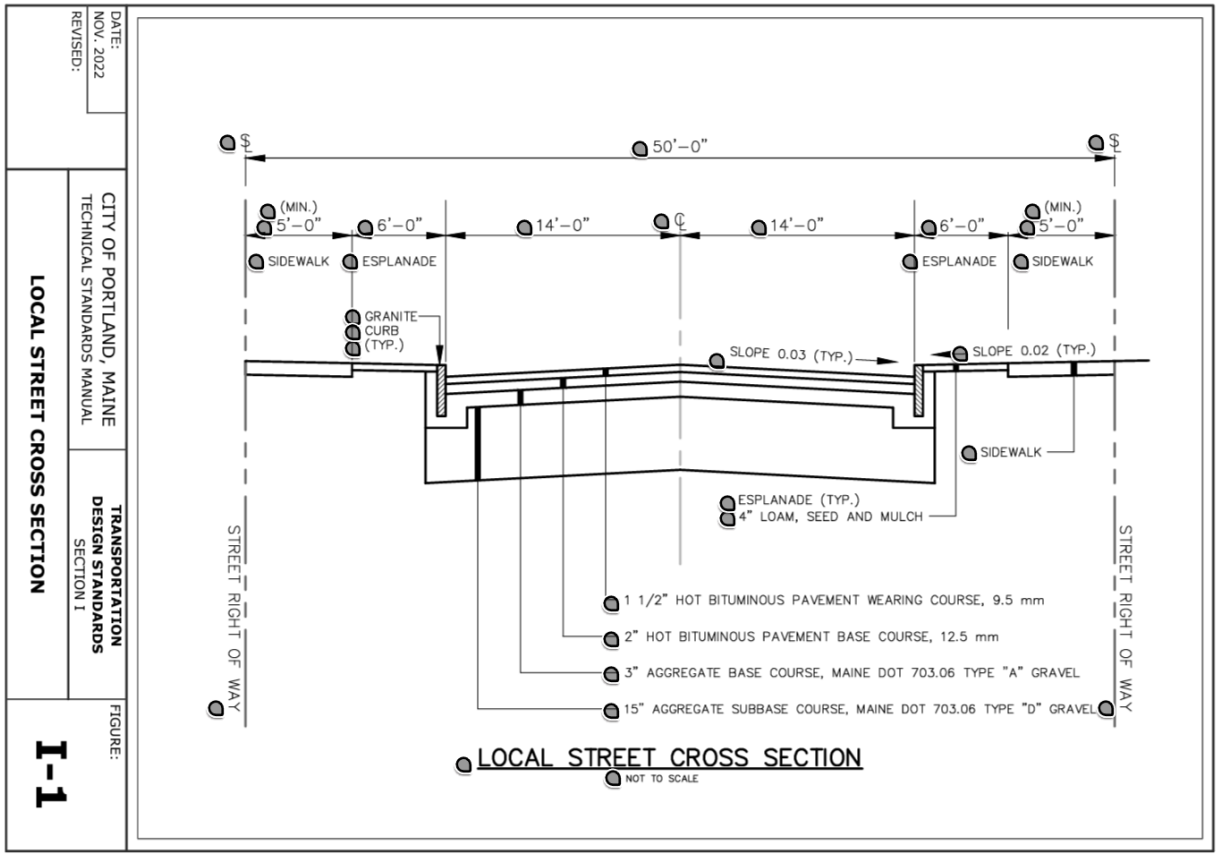
- Social inclusion and access;
- Strengthening local neighborhoods through equitable investment;
- Promoting civic pride and stability through homeownership.

Conclusion
This project is a model of how affordable housing, conservation planning, and sustainable development can be successfully combined in Portland. By aligning with key goals of the Portland Plan 2030, the Habitat for Humanity 9-lot subdivision not only addresses immediate housing needs but contributes to a more resilient, inclusive, and livable city for all residents.

Waiver Request

Ordinance Section(s):
Local Street Cross Section

Ordinance Language:



Waiver Request:

As part of the proposed 9-lot residential subdivision located at the end of **Aldworth Street**, we respectfully request a waiver from the City's standard roadway cross section design, specifically to:

- Reduce the standard **lane width** from **14 feet** to **12 feet**; and
- **Eliminate sidewalks on both sides** of the new roadway extension.

Justification for Waiver Request:

<u>Street Width</u>

The existing portion of Aldworth Street, which this project extends, is constructed with **two 12-foot-wide travel lanes** and no curb or sidewalk infrastructure. The proposed extension continues this layout to ensure a **seamless transition** between the existing and new segments of the roadway. Expanding to 14-foot lanes for only the new section would introduce an

unnecessary and inconsistent condition, create a discontinuity in alignment, and increase impervious surface area without safety benefit for a low-volume local street.

The narrower 12-foot lanes are suitable for:

- Low-speed, local residential traffic;
- Reduced environmental impact due to less pavement;
- Alignment with the City's **complete streets and traffic calming goals**.

Sidewalk

The existing Aldworth Street currently has **no sidewalks on either side**, and the street serves as a quiet, low-traffic residential road. Installing new sidewalks along the extension while none exist on the original street would create an abrupt and disconnected pedestrian network with **no connection to adjacent infrastructure**.

Additional rationale includes:

- **Sidewalks would terminate at a dead end**, offering no meaningful pedestrian connection;
- The development includes **only nine homes**, resulting in minimal pedestrian traffic;
- A sidewalk would require additional grading and stormwater impacts, contrary to the **goals of the Conservation Residential Development** standards.

Conservation Residential Development (CRD) Narrative

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025

The proposed development is designed under the **Conservation Residential Development (CRD) provisions** of the City of Portland's Land Use Code. The CRD option is intended to allow flexibility in the subdivision of land while preserving natural features, reducing infrastructure burdens, and promoting compact, environmentally sensitive residential development.

The following narrative outlines how the proposed 9-lot subdivision meets the specific intent and criteria of the CRD ordinance.

1. Purpose and Intent of CRD
The purpose of CRD is to:

- Preserve natural features, open space, and environmentally sensitive areas;
- Promote efficient land use patterns and reduce impervious surface coverage;
- Create affordable and diverse housing opportunities;
- Maintain the character of Portland's neighborhoods.

This project supports the intent of CRD by clustering nine lots on the least sensitive portions of the site, preserving a significant wooded buffer, minimizing wetland impacts, and providing permanently affordable homeownership opportunities through Habitat for Humanity.

2. Eligibility
CRD is allowed in specific zoning districts, including the **R1 Residential Zone**, subject to meeting minimum parcel size, dimensional flexibility, and open space preservation standards.
The site is located in the R1 Zone and exceeds the minimum lot area required for a conservation subdivision. The layout achieves the goals of CRD while complying with all zoning standards.

3. Lot Size and Dimensional Flexibility
CRD allows reduction in minimum lot size, frontage, and setbacks when offset by meaningful open space preservation and sensitive site design.
The 9 lots are smaller than standard R1 lots, but are well-sized for single-family homes and laid out in a compact, walkable form. Frontages are sufficient for driveway and utility access, and all homes maintain adequate setbacks. Dimensional reductions are offset by significant open space preservation.

4. Open Space Preservation
A minimum percentage of the parcel must be preserved as permanent open space (typically 30% or more). Open space should prioritize natural resource protection, recreational opportunities, or buffering.
The plan preserves approximately 58% of the site as undisturbed open space, including vegetated buffers, and drainage corridors.. This open space is protected through subdivision approval and contributes to stormwater management and neighborhood character.

5. Environmental Protection
CRD developments must minimize environmental impacts by:

- Avoiding development in wetlands, floodplains, and steep slopes;
- Preserving significant trees and vegetation;
- Managing stormwater on-site.

Only minor areas of wetland (~4,365 SF) is proposed for disturbance to allow the road and utilities to be installed. The remainder of the wetland and vegetated buffers are preserved. The subdivision uses an underdrained soil filter for stormwater treatment and includes erosion and sedimentation control measures.

6. Roadway and Infrastructure Efficiency

CRD promotes efficient, context-sensitive roadway design that minimizes impervious area while ensuring access and safety.

The site is served by a single public road extension of Aldworth Street, terminating in a City-standard turnaround. The short road length and compact lot layout reduce pavement area and simplify utility installation.

7. Housing Type and Affordability

CRD developments may promote housing diversity and affordability, especially when aligned with city housing policy.

The subdivision is developed entirely by Habitat for Humanity of Greater Portland, a nonprofit builder of affordable homes. All nine homes will be permanently affordable to low- and moderate-income households and offered as owner-occupied units.

8. Neighborhood Compatibility

Design must respect the context of the surrounding neighborhood in terms of scale, form, and transitions between uses.

The new lots are consistent in scale with surrounding development patterns. Homes will be modest in size, compatible with nearby single-family homes, and maintain a quiet, residential character.

9. Ownership and Long-Term Stewardship

Open space within CRD developments must be protected through deed restrictions, HOA covenants, or easements.

Open space will be protected as part of the subdivision approval, and maintenance responsibilities will be assigned through individual deed restrictions or a shared agreement among property owners, as appropriate.

Conclusion

The proposed 9-lot subdivision exemplifies the intent and implementation of **Conservation Residential Development** by:

- Preserving natural resources and open space;
- Minimizing infrastructure footprint;
- Promoting affordability and neighborhood character;
- Aligning with long-range goals of the Portland Plan 2030.

This development provides a replicable model for environmentally responsible, socially inclusive neighborhood growth within the City of Portland.

Construction Management Plan

Habitat for Humanity of Greater Portland – Land of Lane Subdivision

Prepared by: Northeast Civil Solutions, Inc.
Date: June 30, 2025

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1. Project Overview

Location: Extension of Aldworth Street, Portland, ME 04103
Developer: Habitat for Humanity of Greater Portland
Engineer of Record: Northeast Civil Solutions
Scope of Work: Construction of a 9-lot subdivision under Conservation Residential Development standards, including new public roadway, stormwater infrastructure, utilities, and subsequent single-family home construction.

2. Phased Construction Schedule

Phase I – Subdivision Infrastructure Construction
Estimated Duration: 3–5 months (season-dependent)
Major Tasks:

- Clearing and grubbing
- Installation of erosion and sedimentation control (E&SC) measures
- Site grading and excavation
- Wetland fill activities (as permitted)
- Installation of stormwater infrastructure (catch basins, pipes, soil filter, outlet control structures)
- Installation of sewer and water utilities
- Installation of underground electric and communications
- Construction of Aldworth Street extension with full City standard road section and turnaround
- Curbing, sidewalk (if applicable), and temporary stabilization of disturbed areas

Phase II – Individual Lot Development
Estimated Duration: Varies per lot, ~4–6 months per house
Sequence:

- Foundation excavation and construction
- Utility connections from main lines to houses
- Framing, enclosure, and interior systems installation
- Landscaping and final site stabilization

Homes may be constructed sequentially or in parallel, depending on funding and staffing.

3. Site Access and Construction Traffic

- Primary Access: Via existing Aldworth Street.

- Staging Area: Temporary staging and equipment parking will occur within the proposed turnaround and undeveloped lots.
- Haul Routes: All heavy truck access will follow arterial and collector roads to minimize neighborhood disturbance.

Traffic Mitigation:
- Construction vehicles will avoid peak traffic hours (7:00–9:00 AM and 4:00–6:00 PM).
- All deliveries will be scheduled and coordinated to minimize on-street queuing.

4. Erosion and Sediment Control (E&SC)

Initial Measures (per Sheet C108):
- Stabilized construction entrance
- Silt fences and/or pervious mulch berms around downslope edges
- Inlet protection at all new catch basins
- Erosion control matting on all 2:1 slopes
- Mulching, seeding, or Erosion Control Mix on disturbed areas within 72 hours of grading

Winter Stabilization:
- Areas disturbed after Oct 15 will be covered with anchored mulch or erosion control mix
- Road base gravel will be placed in any incomplete roads

Inspections of E&SC measures will occur:
- Before rain events
- After each 0.5” precipitation event
- At least weekly

5. Stormwater Management During Construction
- Underdrained soil filters and swales will be installed prior to impervious surfacing.
- Runoff will be diverted from disturbed slopes toward temporary basins where applicable.
- Permanent stormwater infrastructure will be protected during house construction using inlet covers and stabilized staging.

6. Material Deliveries and Staging
- All stockpiles (topsoil, loam, gravel) will be surrounded by silt fence and stabilized if not used within 2 weeks.
- Material deliveries will be scheduled outside of school bus hours.
- No materials will be stored in the public right-of-way or adjacent private property.

7. Dust and Debris Control
- Water will be applied via spray truck to suppress dust on dry days.
- Sweeping of the paved roadway will occur weekly and after major soil hauling.
- All loads leaving the site will be covered and truck wheels cleaned to prevent tracking.

8. Noise and Work Hours

- Work Hours: Monday–Friday, 7:00 AM to 6:00 PM; Saturday 8:00 AM to 4:00 PM
- No work on Sundays or holidays unless authorized
- Power tools and machinery will comply with City of Portland noise standards

9. Construction Signage and Safety

- "Construction Entrance – Authorized Personnel Only" signs at entrance
- Temporary fencing or barriers around open trenches or utility work
- Fire access will be maintained throughout construction (per City Fire Department)

10. Utility Coordination

- Water: Portland Water District – coordination for main extension and house connections
- Sewer: City of Portland – inspections before backfill
- Electric/Telecom: Coordination with CMP and telecommunications providers for riser poles and underground service

11. Wetland Impact Compliance

- All wetland fill will comply with DEP permitting requirements
- Wetland disturbance will be confined to areas shown in approved plans
- Contractor will flag limits before excavation

12. Post-Construction Requirements

- Final loam, seed, and landscape installation on all disturbed areas
- Placement of street trees per approved planting plan (Sheet C103)
- As-built survey showing road, utilities, and lot corners
- Final City inspection and street acceptance process for Aldworth Street Extension
- Homeowners Association activation for stormwater system maintenance (as outlined in recorded agreement)

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13. Contact Information

Role	Name / Firm	Contact
Developer	Habitat for Humanity of GP	_____
Civil Engineer	Northeast Civil Solutions	_____
Construction Supervisor	_____	_____
Utility Inspector	City of Portland Public Works	_____

Coppi Environmental, LLC
Wetland & Soil Services, Consulting & Permitting
PO BOX 226 Hollis Center, ME 04042
207.756.3245 cjc1829@gmail.com

Att. V

January 29, 2025

Bill Gerrish, PE, PLS
Vice President
Northeast Civil Solutions, Inc.
381 Payne Road
Scarborough, ME 04074

RE: *Wetland Delineation Report;* Aldworth Street, Portland, MAINE.

Dear Bill:

At your request, I performed a wetland delineation at the above-mentioned property on January 25th, 2025. The property contains a forested wetland which traverses the property from southwest to southeast and contained within is a USGS blue-line stream which is also a DEP stream. Additionally, small linear wetlands starting near the height of land traverse into the main forested wetland. Contained within the center of these linear wetlands, is a DEP stream, identified by ice covering an apparent channel. Wetlands were flagged in blue, and labeled alphanumerically and GPS located using a sub-meter accuracy, Hand-Held Trimble unit. The USGS stream was flagged in pink on both sides while the other DEP stream was GPS located at its center, also with pink flagging, and its banks approximated (the stream is on average, between 2-3 wide). Wetlands were delineated in accordance with the Army Corps of Engineers Regional Supplement Delineation Manual for the Northeast/Northcentral Regions. Enclosed with this report, via email, is the Wetland Delineation Plan illustrating the extent and locations of the wetlands and streams on the property. I have also included some site photos taken during the delineation.

The main forested wetland containing the USGS/DEP stream is situated a topographic low which explains the prevalence of wetland on both sides- the wetland constitutes a forested wetland and contained hydric soils and wetland vegetation, namely Ash and Balsam Fir along with wetland shrubs. The linear wetlands appear to be eroded ravines that connect to ground water which gives rise to their wetland composition. Dogwood and other wetland shrubs were observed in these linear wetlands or no vegetation was observed.

Near the point where the linear wetlands form one main wetland, a DEP stream arises; during this winter conditioned delineation, ice was observed which appears to be the extent of the channel width; *Due to the frozen channel, I was unable to evaluate the substrate and therefore, are assuming that the stream meets the statutory stream definition per NRPA; a follow-up review in April or May is advised to perform a complete assessment of this watercourse for DEP purposes and to render a more accurate opinion of the water course.*

Wetlands of Special Significance (WOSS) are limited to wetlands located within 25' of either stream. This property does not contain vernal pools.

Indirect or direct wetland impacts require a permit from the Maine DEP in accordance with the NRPA and also with the Army Corps of Engineers. WOSS impacts, within 25' of either stream require an Individual NRPA permit unless the impact is associated with a stream crossing Permit by Rule, Section 10. Permit By Rule (PBR) allows impacts to wetlands within 25' of the stream provided the crossing is designed, approved and installed in accordance with Section 10 PBR standards.

According to a recent check of Portland's GIS, no shoreland zones exist on the property. In case other review warrants wetlands protection (e.g. Site Plan review), I would recommend reviewing the ordinance to determine if other wetland protection is warranted by the city.

Additionally, regulated activities such as clearing, soil disturbance, filling or the construction of structures located within 75' of either stream require a DEP permit. Provided a proposed project maintains a 25' setback from the regulated activity to the stream, a PBR maybe eligible. If the 25' setback cannot be maintained, an Individual NRPA permit is necessary. However, even under PBR standards any intrusion into the setback must demonstrate project purpose and need. Please contact me if you have any questions or other matters for discussion. I can be reached by phone at 756-3245 or by email at cjc1829@gmail.com.

Sincerely,

Christopher J. Coppi LSS, LSE, CWS
Consulting Wetland and Soil Scientist

Enclosures in report include; Wetland Delineation Plan, photo gallery

Photo 1: USGS and DEP stream traversing the southern area of the property.

Photo 2: Flood plain wetland (forested) along the USGS stream to the south- sensitive fern fronds (wetland fern) scattered throughout.

Photo 3: One (1) of several eroded ravines (wetlands) which traverse in a southerly direction and towards the DEP stream.

WETLAND MAPPING WAS DONE WITH PARTIAL SNOW COVER, FROZEN GROUND AND ABSENCE OF HERBACEOUS LAYER THERE MAY BE SOME SUBTLE SOIL CHANGES THAT WERE NOT DETECTED DUE TO THE INABILITY TO OBSERVE THE VEGETATIVE UNDERSTORY. MINOR ADJUSTMENT OF WETLAND BOUNDARY LINES MAY BE NECESSARY SHOULD A PARTICULAR AREA OF CONCERN ARISE.

COPPI ENVIRONMENTAL, LLC IS PREPARED TO REVIEW THE WETLAND MAPPING IN THE SPRING AFTER THE SNOW COVER IS GONE, SHOULD THERE BE A NEED FOR A PARTICULAR AREA OF CONCERN

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

MAP COMPILED FROM:

- TOWN OF PORTLAND TAX MAP
- SITE PLAN PROVIDED BY NORTHEAST CIVIL SOLUTIONS
- AERIAL PHOTOGRAPH FROM THE GOOGLE EARTH
- 2' TOPOGRAPHIC CONTOURS FROM THE MAINE OFFICE OF GIS
- ON SITE LOCATIONS UTILIZING TRIMBLE TDC650 HANDHELD UNIT

LEGEND

- WETLAND AREA
- DEP STREAM
- 75' DEP STREAM SETBACK

DATE:	REVISIONS:

Coppi Environmental, LLC
Wetland & Soil Services, Consulting & Permitting
PO BOX 226 Hollis Center, ME 04042
207.756.3245 cjc1829@gmail.com

Drawn By: B.J. | Checked By: C.C.

Date: 1/17/2025 | Scale: 1" = 40'

WETLAND DELINEATION PLAN

PREPARED FOR
NCS
ALDWORTH STREET

PORTLAND, MAINE

STORMWATER MANAGEMENT REPORT

Land of Lane Subdivision

Aldworth Street
Portland, Maine

Prepared for:
Habitat for Humanity of Greater Portland
659 Warren Ave
Portland, Maine 04101

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APPENDICES

Appendix A HydroCAD Output: Pre-Development Condition
Appendix B HydroCAD Output: Post-Development Condition
Appendix C Soil Report
Appendix D Stormwater Calculations
Appendix E Inspection and Maintenance Plan

1) PROJECT DESCRIPTION

This Stormwater Management Report has been prepared for Habitat for Humanity of Greater Portland to present the stormwater runoff results for a proposed subdivision in Portland, Maine. The property is identified parcels 309 D022001 and 309 D041001 with total combined area of roughly 2.5 acres.

The entirety of the site is forested with a stream and sits on poorly draining soil.

The development of the site will result in the following:

Road Development:

Proposed impervious area (on previously vegetated surface)	= 0.44 acres
Proposed developed area	= 0.72 acres
Proposed disturbed area	= 1.06 acres

2) STORMWATER NARRATIVE

2.1 SITE LOCATION

The project site is located on an undeveloped parcel at the end of Aldworth Street in Portland, Maine. The property is currently unoccupied by development and consists of forested area.

2.2 RECEIVING WATERS

The site is drained to an unnamed drainage way that travels north northwest, traveling under the highway and through existing residential development until it finally drains to the Presumpscot River adjacent to the I95 to I295 bypass.

2.3 HISTORIC FLOODING

The project site is not located with a floodplain as indicated on the Flood Insurance Rate Map for the City of Portland. Map number 23005C, dated 06/20/24..

2.4 METHODOLOGY AND MODELING ASSUMPTIONS

Runoff and routing calculations have been performed for the watershed areas affected by the proposed development. Times of concentration and runoff curve number calculations have been determined using the method described in the Natural Resource Conservation Service (NRCS) Technical Release 55, (TR-55). Time of concentration calculations have been amended where the values given by the TR-55 method is less than five minutes. In these cases a standard minimum value of five minutes has been used to keep this parameter within the acceptable working range of the model. Each Tc path and corresponding length and slope is identified in the pre and post development drainage area plan. The TR-20

based HydroCAD (version 10.0) modeling software has been utilized to perform the complex runoff and routing calculations.

Design rainfall has been modeled using the SCS Type III hydrograph for 24-hour duration storm events. The rainfall depth for each return period is taken from the Stormwater Management for Maine: Best Management Practices, Appendix H. The rainfall depth values utilized in the stormwater model are indicated in the table below.

24-Hour Rainfall Depths for Cumberland County			
Stormwater Management for Maine: Best Management Practices Appendix H			
Frequency	2-Year	10-Year	25-Year
Rainfall Depth	3.19	4.77	6.01

2.5 SOILS

Soil types in the area of the project were identified using the NRCS Web Soil Survey. The curve numbers (CN) utilized in this analysis relate to the ground cover that was observed on the site. Soils identified on the site (or within close proximity) are identified in the Table below. These soil boundaries have been identified on the Pre and Post Development Watershed Maps.

Soil Types	Symbol	HSG
Lamoine silt loam	BuB	D
Buxton silt loam	BuC2	D
Deerfield loam fine sand	DeB	A
Elmwood fine sandy loam	EmB	B

2.6 PERMITTING REQUIREMENTS

The City of Portland

General Standard

Developments as specified under Section II Applicability in Portland must comply with the most recent version of the Maine Department of Environmental Protection (Maine DEP) Chapter 500 Rules for Stormwater Management (http://www.maine.gov/dep/land/stormwater/storm.html), including but not limited to the standards for Urban Impaired Stream, Basic, General, and Flooding Standards for the suitability, design, installation, and maintenance of systems to comply with the General and Flooding Standards are provided in Volume III of the Maine Stormwater Best Management Practices Manual

Applicability

Projects that require a Stormwater Permit pursuant to 38 M.R.S.A. Sec. 420-D (Stormwater Management Law) and projects that may substantially affect the environment and require a site location of development (Site Law) permit pursuant to 38 M.R.S.A Sec 481-490 shall be reviewed for conformance with Chapter 500 under the City's Delegated Review Authority or by the Maine Department of Environmental Protection.

MDEP Permitting Requirements:

Basic Standards: The basic standards require that grading and other construction activities on the site do not impede or otherwise alter drainage ways to create an unreasonable adverse impact on a protected natural resource. The basic standards will be met by the implementation of an Erosion and Sedimentation Control Plan addressing erosion and sediment control during construction and post-construction stabilization of the site and through the implementation of Stormwater Management Facilities Maintenance Plan identifying various inspection, maintenance and general housekeeping procedures. A copy or the Stormwater Management Facilities Maintenance Plan is attached to this report.

The Erosion and Sedimentation Control Plan was developed following Best Management Practice (BMP) guidelines and has been placed directly on the design plans for reference during construction.

General Standards: The general standards consist of Best Management Practice (BMP) standards. The BMP standards require a project's stormwater management system to include treatment measures that will mitigate the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This must be achieved by using one or more MDEP approved methods to control runoff from no less than 95% of the proposed impervious area and no less than 80% of the proposed developed area associated with a project. As this project will create greater than one acre of new impervious surface area and is subject to MDEP General Standards. A DEP stormwater permit will be required for this project. It will also meet the MDEP General standards based on the requirements of Post-Construction Stormwater Infrastructure Management Ordinance

Flooding Standard: MDEP requires that projects which create 3 acres or more of impervious area and 20 acres or more of developed area or otherwise require review pursuant to the Site Location of Development Law must control the peak flow of runoff from the site to pre-development rates during the 2-year, 10-year and 25-year, 24-hour storms. As this project does not meet the above criteria the MDEP Flooding Standard does not apply. It will meet the MDEP Flooding standards based on the requirements of Post-Construction Stormwater Infrastructure Management Ordinance

2.7 PROPOSED BMPS

The majority of the site will be collected through a pair of deep sump catch basins that will direct stormwater to a single underdrained soil filter pond.

2.8 PROJECT IMPACTS

The total developed area associated with this project will be 0.72 acres of which 0.44 acres will be impervious cover, consisting of roads, driveways and roofs.

3) STORMWATER QUANTITY ANAYSIS

3.1 PRE-DEVELOPMENT CONDITIONS

Under pre-development conditions the site is modeled as a single watershed.

3.2 POST- DEVELOPMENT CONDITIONS

Under the post-development condition, the site area is divided into three sub catchments in order to separate the developed area of the site from the undisturbed area. The same point of analysis is used for the post development calculations.

The watershed areas and times of concentration of the post-development watersheds vary from the existing conditions based on the proposed site development and grading. The Table below summarizes the results of the hydrologic analysis of the project under pre-development and post-development conditions.

3.3 STORMWATER QUANTITY SUMMARY

Stormwater Runoff Summary Table Pre-Development vs. Post-Development								
Study Point	Total Watershed Area (Ac)		**Peak Rates of Runoff (cfs)**					
			2-Year		**10-Year**		**25-Year**	
	Pre	**Post**	Pre	Post	Pre	**Post**	**Pre**	**Post**
SP-1	2.5	**2.5**	1.7	**1.5**	3.6	**3.1**	5.2	**5.2**

4) STORMWATER QUALITY ANALYSIS

Water quality treatment is provided by capturing sediment within the deep sump catch basins and filtering the stormwater within the filter pond. Treatment of roof runoff will be provided by roof dripline filters running along both sides of all buildings. The stormwater will be captured and infiltrated.

Treatment level:
Overall, the project creates 31,200 square feet of developed area, which includes 18,970 square feet of non-vegetated, impervious, cover.

The combined treatment provided by the underdrained soil filter and roof dripline filters total 28,200 square feet of developed area, including 18,260 square feet of non-vegetated, impervious, cover.

These levels equate to a treatment level of 90.5% of the developed area and 96.2% of the non-vegetated, impervious, area.

5) CONCLUSIONS

The runoff and routing calculations demonstrate that the development will result in decreases in the peak rate to the adjacent stream during the 2-year, 10-year and 25-year storm events.

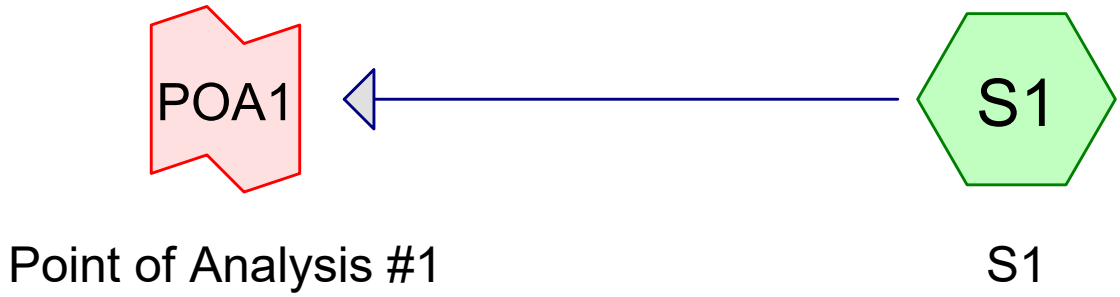
Stormwater runoff from this site has been designed to meet the MDEP Basic and General standards. As summarized, 18,260 square feet of impervious cover and 28,260 square feet of developed area will be treated using standard BMP's.

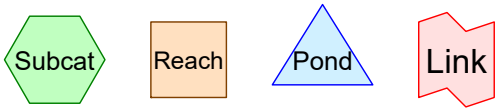
The proposed project is designed to fit into the topography and natural features of the site to the maximum extent practical. Stormwater runoff from the development will be captured, retained, and treated by a series of catch basins and underdrained soil filters before being discharged from the property.

An Erosion and Sedimentation Control Plan will be implemented to address erosion and sediment control during construction and the post-construction stabilization of the site. These construction requirements have been developed following BMP guidelines and have been placed directly on the design plans for construction reference.

APPENDIX A

PRE-DEVELOPMENT HYDROCAD OUTPUT





Routing Diagram for PRE
Prepared by CivilX, LLc, Printed 4/11/2025
HydroCAD® 10.20-5c s/n 13287 © 2023 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 5105 ME Cumberland Se
Rainfall events imported from "NRCS-Rain.txt" for 5105 ME Cumberland Se
Rainfall events imported from "NRCS-Rain.txt" for 5105 ME Cumberland Se

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NRCC 24-hr	D	Default	24.00	1	3.19	2
2	10-Year	NRCC 24-hr	D	Default	24.00	1	4.77	2
3	25-Year	NRCC 24-hr	D	Default	24.00	1	6.01	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
900	98	Unconnected pavement (S1)
20,800	30	Woods, Good, HSG A (S1)
5,800	55	Woods, Good, HSG B (S1)
82,100	77	Woods, Good, HSG D (S1)
109,600	**67**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
20,800	HSG A	S1
5,800	HSG B	S1
0	HSG C	
82,100	HSG D	S1
900	Other	S1
109,600		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subca Numb
0	0	0	0	900	900	Unconnected pavement	
20,800	5,800	0	82,100	0	108,700	Woods, Good	
20,800	**5,800**	**0**	**82,100**	**900**	**109,600**	**TOTAL AREA**	

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S1: S1 Runoff Area=109,600 sf 0.82% Impervious Runoff Depth=0.94"
Flow Length=330' Tc=17.4 min CN=WQ Runoff=1.710 cfs 8,584 cf

Link POA1: Point of Analysis #1 Inflow=1.710 cfs 8,584 cf
Primary=1.710 cfs 8,584 cf

Total Runoff Area = 109,600 sf Runoff Volume = 8,584 cf Average Runoff Depth = 0.94"
99.18% Pervious = 108,700 sf 0.82% Impervious = 900 sf

Summary for Subcatchment S1: S1

Runoff = 1.710 cfs @ 12.27 hrs, Volume= 8,584 cf, Depth= 0.94"
Routed to Link POA1 : Point of Analysis #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 2-Year Rainfall=3.19"

	Area (sf)	CN	Description
	82,100	77	Woods, Good, HSG D
*	900	98	Unconnected pavement
	20,800	30	Woods, Good, HSG A
	5,800	55	Woods, Good, HSG B
	109,600		Weighted Average
	108,700	67	99.18% Pervious Area
	900	98	0.82% Impervious Area
	900		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0600	0.12		**Sheet Flow, A-B Sheet** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	80	0.0600	1.22		**Shallow Concentrated Flow, B-C Shallow** Woodland Kv= 5.0 fps
2.0	150	0.0070	1.25		**Shallow Concentrated Flow, C-D Shallow** Grassed Waterway Kv= 15.0 fps
17.4	330	Total			

Summary for Link POA1: Point of Analysis #1

Inflow Area = 109,600 sf, 0.82% Impervious, Inflow Depth = 0.94" for 2-Year event
Inflow = 1.710 cfs @ 12.27 hrs, Volume= 8,584 cf
Primary = 1.710 cfs @ 12.27 hrs, Volume= 8,584 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S1: S1 Runoff Area=109,600 sf 0.82% Impervious Runoff Depth=1.90"
Flow Length=330' Tc=17.4 min CN=WQ Runoff=3.574 cfs 17,398 cf

Link POA1: Point of Analysis #1 Inflow=3.574 cfs 17,398 cf
Primary=3.574 cfs 17,398 cf

Total Runoff Area = 109,600 sf Runoff Volume = 17,398 cf Average Runoff Depth = 1.90"
99.18% Pervious = 108,700 sf 0.82% Impervious = 900 sf

Summary for Subcatchment S1: S1

Runoff = 3.574 cfs @ 12.26 hrs, Volume= 17,398 cf, Depth= 1.90"
Routed to Link POA1 : Point of Analysis #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 10-Year Rainfall=4.77"

	Area (sf)	CN	Description
	82,100	77	Woods, Good, HSG D
*	900	98	Unconnected pavement
	20,800	30	Woods, Good, HSG A
	5,800	55	Woods, Good, HSG B
	109,600		Weighted Average
	108,700	67	99.18% Pervious Area
	900	98	0.82% Impervious Area
	900		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0600	0.12		**Sheet Flow, A-B Sheet** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	80	0.0600	1.22		**Shallow Concentrated Flow, B-C Shallow** Woodland Kv= 5.0 fps
2.0	150	0.0070	1.25		**Shallow Concentrated Flow, C-D Shallow** Grassed Waterway Kv= 15.0 fps
17.4	330	Total			

Summary for Link POA1: Point of Analysis #1

Inflow Area = 109,600 sf, 0.82% Impervious, Inflow Depth = 1.90" for 10-Year event
Inflow = 3.574 cfs @ 12.26 hrs, Volume= 17,398 cf
Primary = 3.574 cfs @ 12.26 hrs, Volume= 17,398 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S1: S1 Runoff Area=109,600 sf 0.82% Impervious Runoff Depth=2.75"
Flow Length=330' Tc=17.4 min CN=WQ Runoff=5.156 cfs 25,158 cf

Link POA1: Point of Analysis #1 Inflow=5.156 cfs 25,158 cf
Primary=5.156 cfs 25,158 cf

Total Runoff Area = 109,600 sf Runoff Volume = 25,158 cf Average Runoff Depth = 2.75"
99.18% Pervious = 108,700 sf 0.82% Impervious = 900 sf

Summary for Subcatchment S1: S1

Runoff = 5.156 cfs @ 12.26 hrs, Volume= 25,158 cf, Depth= 2.75"
Routed to Link POA1 : Point of Analysis #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 25-Year Rainfall=6.01"

	Area (sf)	CN	Description
	82,100	77	Woods, Good, HSG D
*	900	98	Unconnected pavement
	20,800	30	Woods, Good, HSG A
	5,800	55	Woods, Good, HSG B
	109,600		Weighted Average
	108,700	67	99.18% Pervious Area
	900	98	0.82% Impervious Area
	900		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0600	0.12		**Sheet Flow, A-B Sheet** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	80	0.0600	1.22		**Shallow Concentrated Flow, B-C Shallow** Woodland Kv= 5.0 fps
2.0	150	0.0070	1.25		**Shallow Concentrated Flow, C-D Shallow** Grassed Waterway Kv= 15.0 fps
17.4	330	Total			

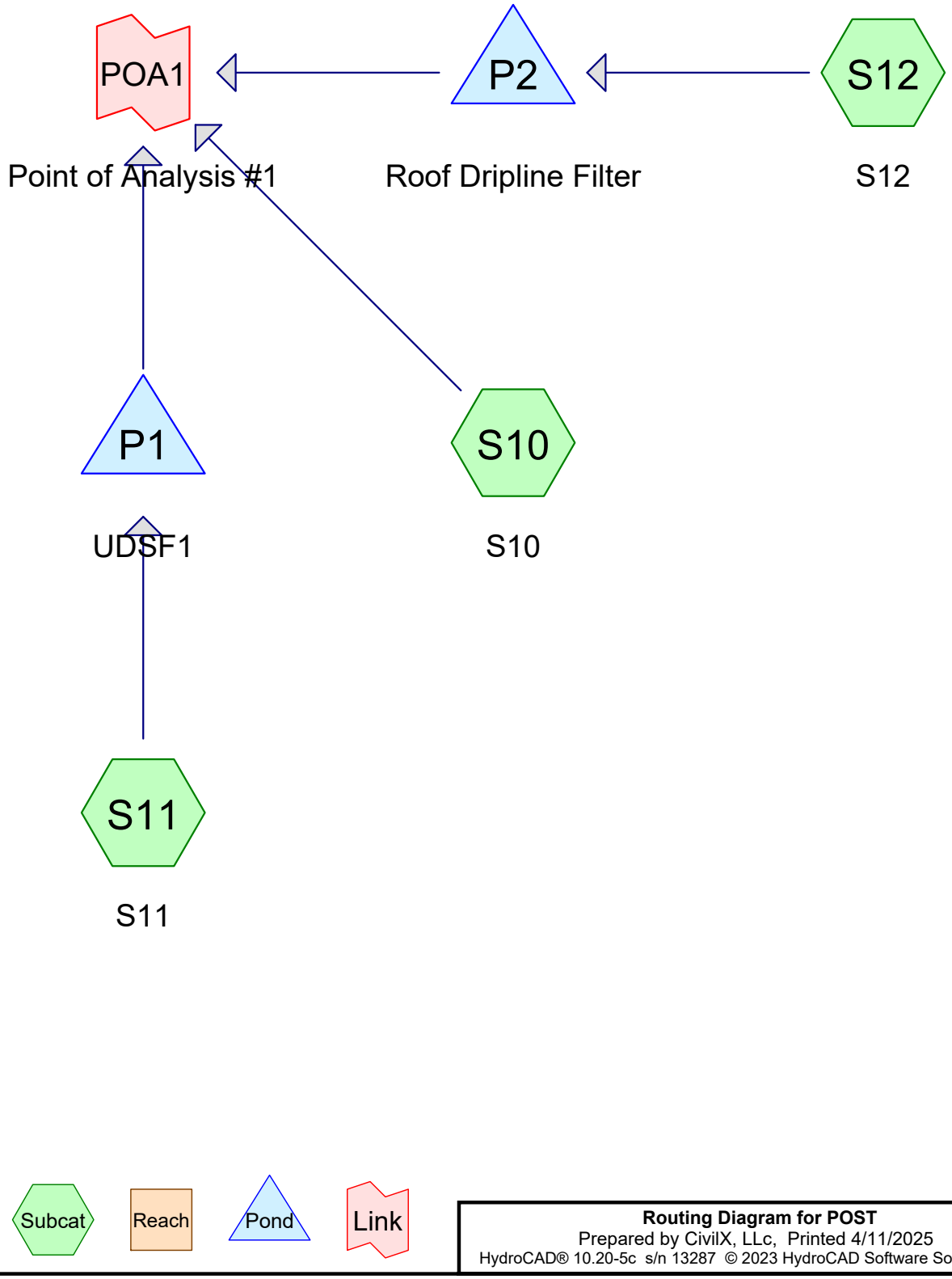
Summary for Link POA1: Point of Analysis #1

Inflow Area = 109,600 sf, 0.82% Impervious, Inflow Depth = 2.75" for 25-Year event
Inflow = 5.156 cfs @ 12.26 hrs, Volume= 25,158 cf
Primary = 5.156 cfs @ 12.26 hrs, Volume= 25,158 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

APPENDIX B

POST DEVELOPMENT HYDROCAD OUTPUT



Routing Diagram for POST
Prepared by CivilX, LLc, Printed 4/11/2025
HydroCAD® 10.20-5c s/n 13287 © 2023 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 5105 ME Cumberland Se
Rainfall events imported from "NRCS-Rain.txt" for 5105 ME Cumberland Se
Rainfall events imported from "NRCS-Rain.txt" for 5105 ME Cumberland Se

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NRCC 24-hr	D	Default	24.00	1	3.19	2
2	10-Year	NRCC 24-hr	D	Default	24.00	1	4.77	2
3	25-Year	NRCC 24-hr	D	Default	24.00	1	6.01	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
6,120	39	>75% Grass cover, Good, HSG A (S11)
6,120	80	>75% Grass cover, Good, HSG D (S11)
9,504	98	Roofs (S12)
9,470	98	Unconnected pavement (S10, S11)
8,500	30	Woods, Good, HSG A (S10)
3,300	55	Woods, Good, HSG B (S10)
66,586	77	Woods, Good, HSG D (S10)
109,600	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
14,620	HSG A	S10, S11
3,300	HSG B	S10
0	HSG C	
72,706	HSG D	S10, S11
18,974	Other	S10, S11, S12
109,600		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
6,120	0	0	6,120	0	12,240	>75% Grass cover, Good	
0	0	0	0	9,504	9,504	Roofs	
0	0	0	0	9,470	9,470	Unconnected pavement	
8,500	3,300	0	66,586	0	78,386	Woods, Good	
14,620	**3,300**	**0**	**72,706**	**18,974**	**109,600**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	P1	57.50	56.50	100.0	0.0100	0.013	0.0	12.0	0.0	

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S10: S10 Runoff Area=79,096 sf 0.90% Impervious Runoff Depth=1.05"
Flow Length=250' Tc=15.4 min CN=WQ Runoff=1.456 cfs 6,928 cf

Subcatchment S11: S11 Runoff Area=21,000 sf 41.71% Impervious Runoff Depth=1.64"
Tc=6.0 min CN=WQ Runoff=0.768 cfs 2,870 cf

Subcatchment S12: S12 Runoff Area=9,504 sf 100.00% Impervious Runoff Depth=2.96"
Tc=6.0 min CN=98 Runoff=0.605 cfs 2,342 cf

Pond P1: UDSF1 Peak Elev=60.96' Storage=954 cf Inflow=0.768 cfs 2,870 cf
Outflow=0.066 cfs 2,870 cf

Pond P2: Roof Dripline Filter Peak Elev=60.38' Storage=369 cf Inflow=0.605 cfs 2,342 cf
Discarded=0.134 cfs 2,349 cf Primary=0.000 cfs 0 cf Outflow=0.134 cfs 2,349 cf

Link POA1: Point of Analysis #1 Inflow=1.517 cfs 9,798 cf
Primary=1.517 cfs 9,798 cf

Total Runoff Area = 109,600 sf Runoff Volume = 12,140 cf Average Runoff Depth = 1.33"
82.69% Pervious = 90,626 sf 17.31% Impervious = 18,974 sf

Summary for Subcatchment S10: S10

Runoff = 1.456 cfs @ 12.25 hrs, Volume= 6,928 cf, Depth= 1.05"
Routed to Link POA1 : Point of Analysis #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 2-Year Rainfall=3.19"

	Area (sf)	CN	Description
*	710	98	Unconnected pavement
	66,586	77	Woods, Good, HSG D
	8,500	30	Woods, Good, HSG A
	3,300	55	Woods, Good, HSG B
	79,096		Weighted Average
	78,386	71	99.10% Pervious Area
	710	98	0.90% Impervious Area
	710		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0700	0.12		**Sheet Flow, A-B Sheet** Woods: Light underbrush n= 0.400 P2= 3.00"
2.0	150	0.0070	1.25		**Shallow Concentrated Flow, B-C Shallow** Grassed Waterway Kv= 15.0 fps
15.4	250	Total			

Summary for Subcatchment S11: S11

Runoff = 0.768 cfs @ 12.13 hrs, Volume= 2,870 cf, Depth= 1.64"
Routed to Pond P1 : UDSF1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 2-Year Rainfall=3.19"

	Area (sf)	CN	Description
*	8,760	98	Unconnected pavement
	6,120	39	>75% Grass cover, Good, HSG A
	6,120	80	>75% Grass cover, Good, HSG D
	21,000		Weighted Average
	12,240	60	58.29% Pervious Area
	8,760	98	41.71% Impervious Area
	8,760		100.00% Unconnected

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

Summary for Subcatchment S12: S12

Runoff = 0.605 cfs @ 12.13 hrs, Volume= 2,342 cf, Depth= 2.96"
Routed to Pond P2 : Roof Dripline Filter

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 2-Year Rainfall=3.19"

	Area (sf)	CN	Description
*	9,504	98	Roofs
	9,504	98	100.00% Impervious Area

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

Summary for Pond P1: UDSF1

Inflow Area = 21,000 sf, 41.71% Impervious, Inflow Depth = 1.64" for 2-Year event
Inflow = 0.768 cfs @ 12.13 hrs, Volume= 2,870 cf
Outflow = 0.066 cfs @ 13.32 hrs, Volume= 2,870 cf, Atten= 91%, Lag= 71.4 min
Primary = 0.066 cfs @ 13.32 hrs, Volume= 2,870 cf
Routed to Link POA1 : Point of Analysis #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 60.96' @ 13.32 hrs Surf.Area= 1,185 sf Storage= 954 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 117.3 min (905.1 - 787.8)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	3,250 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.00	800	0	0
61.00	1,200	1,000	1,000
62.00	1,600	1,400	2,400
62.50	1,800	850	3,250

Device	Routing	Invert	Outlet Devices
#1	Primary	57.50'	**12.0" Round Culvert** L= 100.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.50' / 56.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	60.00'	**2.400 in/hr Exfiltration over Surface area**
#3	Primary	61.50'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.066 cfs @ 13.32 hrs HW=60.96' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.066 cfs of 5.444 cfs potential flow)
  └─**2=Exfiltration** (Exfiltration Controls 0.066 cfs)
└─**3=Orifice/Grate** (Controls 0.000 cfs)

Summary for Pond P2: Roof Dripline Filter

Inflow Area = 9,504 sf,100.00% Impervious, Inflow Depth = 2.96" for 2-Year event
Inflow = 0.605 cfs @ 12.13 hrs, Volume= 2,342 cf
Outflow = 0.134 cfs @ 12.00 hrs, Volume= 2,349 cf, Atten= 78%, Lag= 0.0 min
Discarded = 0.134 cfs @ 12.00 hrs, Volume= 2,349 cf
Primary = 0.000 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link POA1 : Point of Analysis #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 60.38' @ 12.40 hrs Surf.Area= 2,400 sf Storage= 369 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 11.4 min (771.9 - 760.5)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	2,880 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 7,200 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.00	2,400	0	0
63.00	2,400	7,200	7,200

Device	Routing	Invert	Outlet Devices
#1	Discarded	60.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	62.80'	**800.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.134 cfs @ 12.00 hrs HW=60.06' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.134 cfs)

Primary OutFlow Max=0.000 cfs @ 0.00 hrs HW=60.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.000 cfs)

Summary for Link POA1: Point of Analysis #1

Inflow Area = 109,600 sf, 17.31% Impervious, Inflow Depth = 1.07" for 2-Year event
Inflow = 1.517 cfs @ 12.25 hrs, Volume= 9,798 cf
Primary = 1.517 cfs @ 12.25 hrs, Volume= 9,798 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S10: S10 Runoff Area=79,096 sf 0.90% Impervious Runoff Depth=2.12"
Flow Length=250' Tc=15.4 min CN=WQ Runoff=3.022 cfs 14,001 cf

Subcatchment S11: S11 Runoff Area=21,000 sf 41.71% Impervious Runoff Depth=2.72"
Tc=6.0 min CN=WQ Runoff=1.245 cfs 4,763 cf

Subcatchment S12: S12 Runoff Area=9,504 sf 100.00% Impervious Runoff Depth=4.53"
Tc=6.0 min CN=98 Runoff=0.910 cfs 3,591 cf

Pond P1: UDSF1 Peak Elev=61.53' Storage=1,688 cf Inflow=1.245 cfs 4,763 cf
Outflow=0.170 cfs 4,766 cf

Pond P2: Roof Dripline Filter Peak Elev=60.78' Storage=752 cf Inflow=0.910 cfs 3,591 cf
Discarded=0.134 cfs 3,591 cf Primary=0.000 cfs 0 cf Outflow=0.134 cfs 3,591 cf

Link POA1: Point of Analysis #1 Inflow=3.095 cfs 18,767 cf
Primary=3.095 cfs 18,767 cf

Total Runoff Area = 109,600 sf Runoff Volume = 22,354 cf Average Runoff Depth = 2.45"
82.69% Pervious = 90,626 sf 17.31% Impervious = 18,974 sf

Summary for Subcatchment S10: S10

Runoff = 3.022 cfs @ 12.24 hrs, Volume= 14,001 cf, Depth= 2.12"
Routed to Link POA1 : Point of Analysis #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 10-Year Rainfall=4.77"

	Area (sf)	CN	Description
*	710	98	Unconnected pavement
	66,586	77	Woods, Good, HSG D
	8,500	30	Woods, Good, HSG A
	3,300	55	Woods, Good, HSG B
	79,096		Weighted Average
	78,386	71	99.10% Pervious Area
	710	98	0.90% Impervious Area
	710		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0700	0.12		**Sheet Flow, A-B Sheet** Woods: Light underbrush n= 0.400 P2= 3.00"
2.0	150	0.0070	1.25		**Shallow Concentrated Flow, B-C Shallow** Grassed Waterway Kv= 15.0 fps
15.4	250	Total			

Summary for Subcatchment S11: S11

Runoff = 1.245 cfs @ 12.13 hrs, Volume= 4,763 cf, Depth= 2.72"
Routed to Pond P1 : UDSF1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 10-Year Rainfall=4.77"

	Area (sf)	CN	Description
*	8,760	98	Unconnected pavement
	6,120	39	>75% Grass cover, Good, HSG A
	6,120	80	>75% Grass cover, Good, HSG D
	21,000		Weighted Average
	12,240	60	58.29% Pervious Area
	8,760	98	41.71% Impervious Area
	8,760		100.00% Unconnected

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

Summary for Subcatchment S12: S12

Runoff = 0.910 cfs @ 12.13 hrs, Volume= 3,591 cf, Depth= 4.53"
Routed to Pond P2 : Roof Dripline Filter

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 10-Year Rainfall=4.77"

	Area (sf)	CN	Description
*	9,504	98	Roofs
	9,504	98	100.00% Impervious Area

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

Summary for Pond P1: UDSF1

Inflow Area = 21,000 sf, 41.71% Impervious, Inflow Depth = 2.72" for 10-Year event
Inflow = 1.245 cfs @ 12.13 hrs, Volume= 4,763 cf
Outflow = 0.170 cfs @ 12.71 hrs, Volume= 4,766 cf, Atten= 86%, Lag= 35.0 min
Primary = 0.170 cfs @ 12.71 hrs, Volume= 4,766 cf
Routed to Link POA1 : Point of Analysis #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 61.53' @ 12.71 hrs Surf.Area= 1,411 sf Storage= 1,688 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 194.7 min (979.2 - 784.4)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	3,250 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.00	800	0	0
61.00	1,200	1,000	1,000
62.00	1,600	1,400	2,400
62.50	1,800	850	3,250

Device	Routing	Invert	Outlet Devices
#1	Primary	57.50'	**12.0" Round Culvert** L= 100.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.50' / 56.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	60.00'	**2.400 in/hr Exfiltration over Surface area**
#3	Primary	61.50'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.170 cfs @ 12.71 hrs HW=61.53' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.078 cfs of 5.872 cfs potential flow)
  └─**2=Exfiltration** (Exfiltration Controls 0.078 cfs)
└─**3=Orifice/Grate** (Weir Controls 0.092 cfs @ 0.54 fps)

Summary for Pond P2: Roof Dripline Filter

Inflow Area = 9,504 sf,100.00% Impervious, Inflow Depth = 4.53" for 10-Year event
Inflow = 0.910 cfs @ 12.13 hrs, Volume= 3,591 cf
Outflow = 0.134 cfs @ 11.85 hrs, Volume= 3,591 cf, Atten= 85%, Lag= 0.0 min
Discarded = 0.134 cfs @ 11.85 hrs, Volume= 3,591 cf
Primary = 0.000 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link POA1 : Point of Analysis #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 60.78' @ 12.62 hrs Surf.Area= 2,400 sf Storage= 752 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 27.3 min (778.7 - 751.4)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	2,880 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 7,200 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.00	2,400	0	0
63.00	2,400	7,200	7,200

Device	Routing	Invert	Outlet Devices
#1	Discarded	60.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	62.80'	**800.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.134 cfs @ 11.85 hrs HW=60.04' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.134 cfs)

Primary OutFlow Max=0.000 cfs @ 0.00 hrs HW=60.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.000 cfs)

Summary for Link POA1: Point of Analysis #1

Inflow Area = 109,600 sf, 17.31% Impervious, Inflow Depth = 2.05" for 10-Year event
Inflow = 3.095 cfs @ 12.24 hrs, Volume= 18,767 cf
Primary = 3.095 cfs @ 12.24 hrs, Volume= 18,767 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S10: S10 Runoff Area=79,096 sf 0.90% Impervious Runoff Depth=3.06"
Flow Length=250' Tc=15.4 min CN=WQ Runoff=4.346 cfs 20,166 cf

Subcatchment S11: S11 Runoff Area=21,000 sf 41.71% Impervious Runoff Depth=3.64"
Tc=6.0 min CN=WQ Runoff=1.634 cfs 6,375 cf

Subcatchment S12: S12 Runoff Area=9,504 sf 100.00% Impervious Runoff Depth=5.77"
Tc=6.0 min CN=98 Runoff=1.149 cfs 4,571 cf

Pond P1: UDSF1 Peak Elev=61.61' Storage=1,813 cf Inflow=1.634 cfs 6,375 cf
Outflow=0.876 cfs 6,379 cf

Pond P2: Roof Dripline Filter Peak Elev=61.15' Storage=1,104 cf Inflow=1.149 cfs 4,571 cf
Discarded=0.134 cfs 4,574 cf Primary=0.000 cfs 0 cf Outflow=0.134 cfs 4,574 cf

Link POA1: Point of Analysis #1 Inflow=5.221 cfs 26,544 cf
Primary=5.221 cfs 26,544 cf

Total Runoff Area = 109,600 sf Runoff Volume = 31,112 cf Average Runoff Depth = 3.41"
82.69% Pervious = 90,626 sf 17.31% Impervious = 18,974 sf

Summary for Subcatchment S10: S10

Runoff = 4.346 cfs @ 12.24 hrs, Volume= 20,166 cf, Depth= 3.06"
Routed to Link POA1 : Point of Analysis #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 25-Year Rainfall=6.01"

	Area (sf)	CN	Description
*	710	98	Unconnected pavement
	66,586	77	Woods, Good, HSG D
	8,500	30	Woods, Good, HSG A
	3,300	55	Woods, Good, HSG B
	79,096		Weighted Average
	78,386	71	99.10% Pervious Area
	710	98	0.90% Impervious Area
	710		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0700	0.12		**Sheet Flow, A-B Sheet** Woods: Light underbrush n= 0.400 P2= 3.00"
2.0	150	0.0070	1.25		**Shallow Concentrated Flow, B-C Shallow** Grassed Waterway Kv= 15.0 fps
15.4	250	Total			

Summary for Subcatchment S11: S11

Runoff = 1.634 cfs @ 12.13 hrs, Volume= 6,375 cf, Depth= 3.64"
Routed to Pond P1 : UDSF1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 25-Year Rainfall=6.01"

	Area (sf)	CN	Description
*	8,760	98	Unconnected pavement
	6,120	39	>75% Grass cover, Good, HSG A
	6,120	80	>75% Grass cover, Good, HSG D
	21,000		Weighted Average
	12,240	60	58.29% Pervious Area
	8,760	98	41.71% Impervious Area
	8,760		100.00% Unconnected

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

Summary for Subcatchment S12: S12

Runoff = 1.149 cfs @ 12.13 hrs, Volume= 4,571 cf, Depth= 5.77"
Routed to Pond P2 : Roof Dripline Filter

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NRCC 24-hr D 25-Year Rainfall=6.01"

	Area (sf)	CN	Description
*	9,504	98	Roofs
	9,504	98	100.00% Impervious Area

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

Summary for Pond P1: UDSF1

Inflow Area = 21,000 sf, 41.71% Impervious, Inflow Depth = 3.64" for 25-Year event
Inflow = 1.634 cfs @ 12.13 hrs, Volume= 6,375 cf
Outflow = 0.876 cfs @ 12.24 hrs, Volume= 6,379 cf, Atten= 46%, Lag= 6.8 min
Primary = 0.876 cfs @ 12.24 hrs, Volume= 6,379 cf
Routed to Link POA1 : Point of Analysis #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 61.61' @ 12.24 hrs Surf.Area= 1,446 sf Storage= 1,813 cf

Plug-Flow detention time= 175.5 min calculated for 6,368 cf (100% of inflow)
Center-of-Mass det. time= 176.0 min (958.9 - 782.8)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	3,250 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.00	800	0	0
61.00	1,200	1,000	1,000
62.00	1,600	1,400	2,400
62.50	1,800	850	3,250

Device	Routing	Invert	Outlet Devices
#1	Primary	57.50'	**12.0" Round Culvert** L= 100.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.50' / 56.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	60.00'	**2.400 in/hr Exfiltration over Surface area**
#3	Primary	61.50'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.856 cfs @ 12.24 hrs HW=61.61' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.080 cfs of 5.934 cfs potential flow)
  └─**2=Exfiltration** (Exfiltration Controls 0.080 cfs)
└─**3=Orifice/Grate** (Weir Controls 0.776 cfs @ 1.10 fps)

Summary for Pond P2: Roof Dripline Filter

Inflow Area = 9,504 sf,100.00% Impervious, Inflow Depth = 5.77" for 25-Year event
Inflow = 1.149 cfs @ 12.13 hrs, Volume= 4,571 cf
Outflow = 0.134 cfs @ 11.70 hrs, Volume= 4,574 cf, Atten= 88%, Lag= 0.0 min
Discarded = 0.134 cfs @ 11.70 hrs, Volume= 4,574 cf
Primary = 0.000 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link POA1 : Point of Analysis #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 61.15' @ 12.85 hrs Surf.Area= 2,400 sf Storage= 1,104 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 45.0 min (792.2 - 747.1)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	2,880 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 7,200 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.00	2,400	0	0
63.00	2,400	7,200	7,200

Device	Routing	Invert	Outlet Devices
#1	Discarded	60.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	62.80'	**800.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.134 cfs @ 11.70 hrs HW=60.04' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.134 cfs)

Primary OutFlow Max=0.000 cfs @ 0.00 hrs HW=60.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.000 cfs)

Summary for Link POA1: Point of Analysis #1

Inflow Area = 109,600 sf, 17.31% Impervious, Inflow Depth = 2.91" for 25-Year event
Inflow = 5.221 cfs @ 12.24 hrs, Volume= 26,544 cf
Primary = 5.221 cfs @ 12.24 hrs, Volume= 26,544 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

APPENDIX C

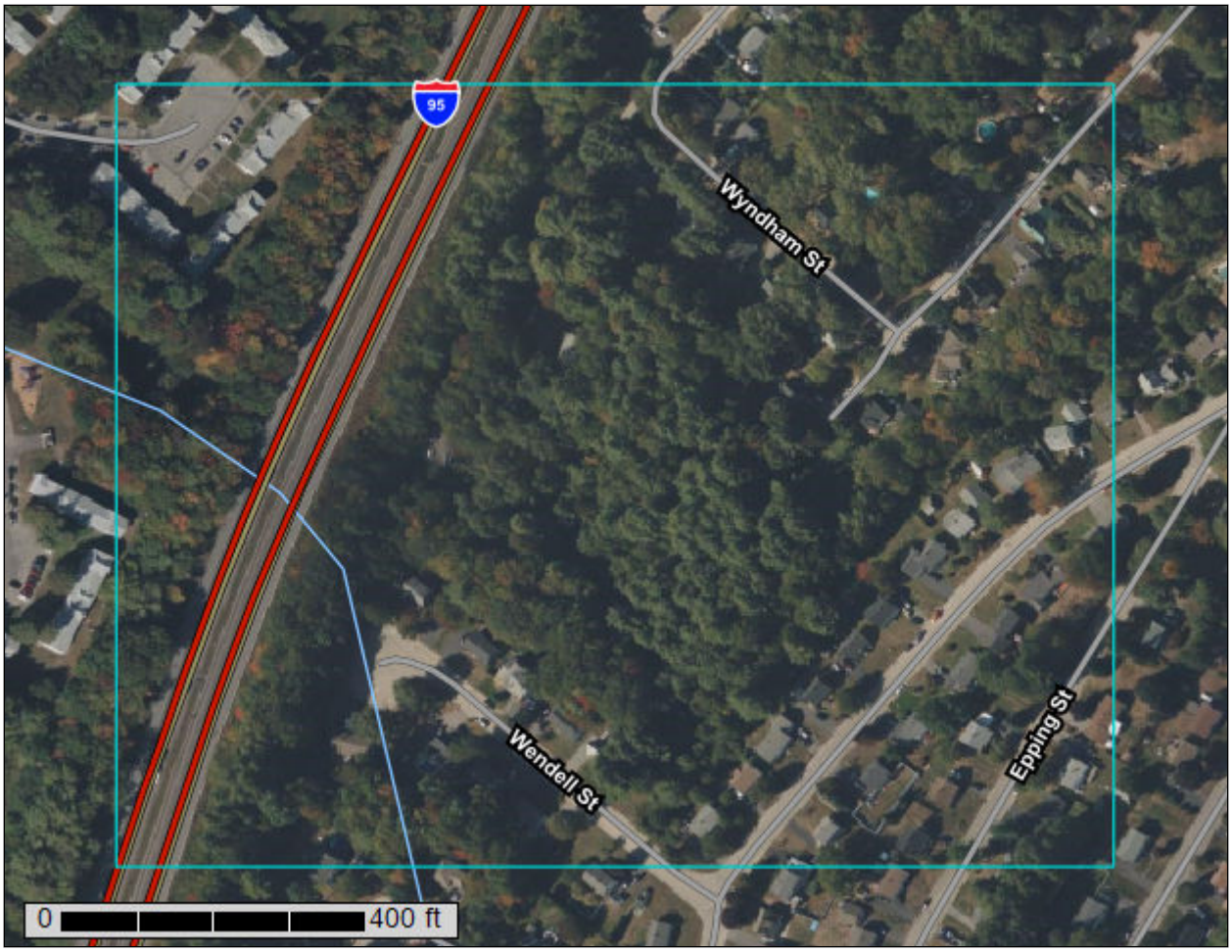
SOIL REPORT

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



April 3, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,660 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 21, Aug 26, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuB	Lamoine silt loam, 3 to 8 percent slopes	12.9	41.2%
BuC2	Buxton silt loam, 8 to 15 percent slopes	6.0	19.3%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	5.2	16.6%
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	6.1	19.7%
Sn	Scantic silt loam, 0 to 3 percent slopes	0.3	0.8%
Sz	Swanton fine sandy loam	0.0	0.0%
WmB	Windsor loamy sand, 0 to 8 percent slopes	0.7	2.3%
Totals for Area of Interest		**31.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor

components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

BuB—Lamoine silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0kc
Elevation: 10 to 490 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lamoine and similar soils: 85 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lamoine

Setting

Landform: Marine terraces, river valleys
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: silt loam
Bw - 7 to 13 inches: silt loam
Bg - 13 to 24 inches: silty clay loam
Cg - 24 to 65 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 17 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F144BY401ME - Clay Flat
Hydric soil rating: No

Minor Components

Scantic

Percent of map unit: 10 percent

Landform: Marine terraces, river valleys
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Biddeford

Percent of map unit: 1 percent
Landform: Marine terraces, river valleys
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F144BY002ME - Marine Terrace Depression
Hydric soil rating: Yes

BuC2—Buxton silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2x1by
Elevation: 10 to 490 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of local importance

Map Unit Composition

Buxton and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buxton

Setting

Landform: Marine terraces, river valleys
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Fine glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 18 inches: silt loam
Bw2 - 18 to 23 inches: silty clay loam
BC - 23 to 35 inches: silty clay loam
C - 35 to 65 inches: silty clay

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 17 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: F144BY402ME - Clay Hills
Hydric soil rating: No

Minor Components

Scantic

Percent of map unit: 5 percent
Landform: Marine terraces, river valleys
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xfg9
Elevation: 0 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Deerfield and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Kame terraces, outwash plains, outwash terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave

Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Wareham

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

EmB—Elmwood fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: blh8
Elevation: 10 to 900 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elmwood and similar soils: 88 percent
Minor components: 9 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting

Landform: Stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 25 inches: sandy loam
H3 - 25 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F144BY402ME - Clay Hills
Hydric soil rating: No

Minor Components

Swanton

Percent of map unit: 7 percent
Landform: Stream terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Whately

Percent of map unit: 2 percent
Landform: Stream terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sn—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2slv3
Elevation: 10 to 900 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of local importance

Map Unit Composition

Scantic and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scantic

Setting

Landform: Marine terraces, river valleys
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Glaciomarine deposits

Typical profile

Ap - 0 to 9 inches: silt loam
Bg1 - 9 to 16 inches: silty clay loam
Bg2 - 16 to 29 inches: silty clay
Cg - 29 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144BY304ME - Wet Clay Flat
Hydric soil rating: Yes

Minor Components

Biddeford

Percent of map unit: 3 percent
Landform: Marine terraces, river valleys
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave, linear
Ecological site: F144BY002ME - Marine Terrace Depression
Hydric soil rating: Yes

Roundabout

Percent of map unit: 2 percent
Landform: River valleys, marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Sz—Swanton fine sandy loam

Map Unit Setting

National map unit symbol: blk4
Elevation: 10 to 900 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of local importance

Map Unit Composition

Swanton and similar soils: 85 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanton

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 32 inches: fine sandy loam
H3 - 32 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Scantic

Percent of map unit: 8 percent
Landform: Coastal plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whately

Percent of map unit: 4 percent
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

WmB—Windsor loamy sand, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w2x2
Elevation: 0 to 1,410 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Windsor and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landform: Outwash terraces, deltas, outwash plains, dunes
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

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APPENDIX D

STORMWATER CALCULATIONS

Northeast Civil Solutions

381 Payne Road, Scarborough, Maine 04074
Tel: 207-883-1000

Project:	Habitat Subdivision		
Sheet No.	1	Of	2
Calc by:	TAL	Date:	4.1.25
Check by:		Date:	
Scale:			

Sizing Calculations

Impervious Area:		8760	sf			
Landscaped Area:		10000	sf			
Filter Area:	A =	(5% impervious area)		+	(2% landscaped area)	
	A =	438	sf	+	200	sf
	A =	**638**	sf	Area Provided =	1374	sf ✓
Volume:	V =	(1" x impervious area)		+	(0.4" x landscaped area)	
	V =	730	cf		333	cf
	V =	**1063**	cf	Volume Provided =	3190	cf ✓
					at elev 364.67	

in a 25 year storm the pond detains 1,182 cf of water

Given:	1.0	in/hr, infiltration rate
	1374	sf, filter area
	3190	cf, detention volume

Time = volume / rate

Rate = area x infiltratio rate

Rate = 1374 x 1.0 = 0.03 cfs

Time = 3190 / 0.03

Time = 27.9 hr

Northeast Civil Solutions

381 Payne Road, Scarborough, Maine 04074
Tel: 207-883-1000

Project:	Habitat Subdivision		
Sheet No.	2	Of	2
Calc by:	TAL	Date:	4.1.25
Check by:		Date:	
Scale:			

Sizing Calcluations

Treated Area

Impervious Area:	8760	sf
Landscaped Area:	12000	sf

Treated Area Volume Calculation

Volume:	V =	(1" x impervious area)	+	(0.4" x landscaped area)		
	V =	730 cf		400 cf		
	V =	**1130** cf	Volume Provided =	1720 cf	✓	
				at elev 61.50		
			Multiple of Required =	**1.52**		

APPENDIX E

INSPECTION AND MAINTENANCE PLAN

STORMWATER SYSTEM

INSPECTION, HOUSKEEPING, and OPERATION & MAINTENANCE PLAN

Habitat Subdivision, Portland, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed in order to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in this inspection and maintenance plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional detail on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the Maine Department of Environmental Protection (MDEP).

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP

requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on a silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Riprap Materials:

- Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Temporary Storm Drain Inlet Protection:

- The inlet protection structure shall be inspected before each rain event and repaired as necessary.
- Sediment shall be removed and the storm drain sediment barrier restored to its original dimensions when the sediment has accumulated to half of the design depth of the trap.
- Structures shall be removed upon permanent stabilization of the tributary area.
- Upon removal of the structure, all accumulated sediments downstream of the structure shall be cleaned from the storm drain system.

D. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

E. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

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

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

prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

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

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

E. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

After Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in all applicable permits, shall conduct the inspections.

2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction.

A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.
- Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

B. Ditches, Swales, and Other Open Channels:

- Inspect ditches, swales and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions

to flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow, and repair any erosion of the ditch lining.

- Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
- Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
- If the ditch has a riprap lining, replace riprap in areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged.
- Check dams located every 40' in roadside ditches along the steep portion of the driveway shall be inspected, cleaned of accumulated sediment, and repaired as needed to conform to original design detail, Exhibit B.

C. Culverts:

- Inspect culverts in the spring, in the late fall, and after heavy rains to remove any obstructions to flow.
- Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.
- Inspect and repair any erosion damage at the culvert's inlet and outlet.

D. Catch Basins/Drywells/Outlet Control Structure:

- Inspect and, if required, clean-out catch basins and outlet control structures at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.
- If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of controls. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a

particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. A sample "Stormwater Inspection and Maintenance Form" has been included as Attachment 1 of this Inspection, Maintenance, and Housekeeping Plan.

4. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system.

Traffic Assessment

Date: May 1, 2025

To: **Bill Gerrish, P.E., PLS**
Vice President
Northeast Civil Solutions, INC.

From: Jacob W. Sirois, E.I.
Engineer II
Barton & Loguidice, LLC

William J. Bray, P.E.
Senior Managing Transportation Engineer
Barton & Loguidice, LLC

Re: **Aldworth Street Subdivision**
Portland, Maine

1 Introduction

The applicant is proposing the development of a 9 lot single-family home subdivision on Aldworth Street in the City of Portland. Refer to Image 1 below for the development site location. Access to the individual lots will be provided directly from Aldworth Street which will be extended by approximately 840 feet with the development of the project. A turnaround will be provided at the end of the Aldworth Street extension.

The purpose of this traffic assessment is to evaluate and measure the level of impact on traffic operations and safety resulting with the development of the proposed project. Site generated trip projections are provided for "key" peak hour time periods throughout a typical week; road safety conditions were determined based upon a review of the MaineDOT's latest crash data, and intersection sight distance was field reviewed and measured to ensure safe and acceptable sight distance is provided at the existing Aldworth Street intersection with Forest Avenue.

Image 1 – Development Site Location

2 Trip Generation

Daily and peak hour site trip generation estimates have been prepared for the proposed development based on the trip generation tables presented in the 11th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. The ITE Manual provides numerous land use codes (LUC) and the volume of site-generated trips produced by each category.

Trip generation estimates for the residential development have been prepared using LUC #210 – Single-Family Detached Housing, described by ITE as *"a single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision."* Calculations of the total number of trips generated per each corresponding time period are summarized below in Table 1:

Table 1
ITE Trip Generation Calculations

Land Use	Single-Family Detached Housing - LUC 210						
Time Period	**Dwelling Units (X)**	**R^2**	**Fitted Curve Equation**	**Trips Generated (T)**	**Distribution Entering / Exiting**	**Enter**	**Exit**
Weekday	9	0.95	Ln(T) = 0.92 Ln(X) + 2.68	110	50% / 50%	55	55
AM Weekday Peak Hour (Street)	9	0.90	Ln(T) = 0.91 Ln(X) + 0.12	8	26% / 74%	2	6
PM Weekday Peak Hour (Street)	9	0.92	Ln(T) = 0.94 Ln(X) + 0.27	10	63% / 37%	7	3
AM Weekday Peak Hour (Generator)	9	0.91	T = 0.71(X) + 7.23	14	26% / 74%	4	10
PM Weekday Peak Hour (Generator)	9	0.92	Ln(T) = 0.93 Ln(X) + 0.36	11	64% / 36%	7	4
Saturday Peak Hour	9	0.89	T = 0.86(X) + 9.72	17	54% / 46%	9	8

Table 1 shows that the proposed development is expected to generate 8 trips during the AM peak hour of the adjacent street and 10 trips during the PM peak hour of the adjacent street. During the peak hours of the generator, the site is expected to produce 14 trips in the AM peak hour, 11 trips in the PM peak hour, and 17 trips during the Saturday peak hour. Overall, the project is a low trip generator and will remain well below the 100-trip threshold required to trigger a Traffic Movement Permit.

3 Intersection Sight Distance

Intersection sight distances were directionally recorded from the Aldworth Street approach at the Forest Avenue intersection in accordance with the criteria established within the MaineDOT's *Highway Driveway and Entrance Rules* publication, which requires the following minimum sight distance for non-mobility roadways based on the posted speed limit:

MaineDOT
Sight Distance Standards

Posted Speed Limit	Minimum Sight Distance
25 mph	200 ft.
30 mph	**250 ft.**
35 mph	305 ft.
40 mph	360 ft.
45 mph	425 ft.
50 mph	495 ft.

The section of Forest Avenue fronting Aldworth Street is posted at 30 mph, requiring a minimum sight distance of 250 feet. MaineDOT's Rules and Regulations require sight distance to be measured in accordance with the following procedures: *"Sight distance is measured to and from the point on the centerline of the proposed access that is located 10 feet from the edge of traveled way. The height of the hypothetical person's view is considered to be 3½ feet above the pavement, and the height of the object being viewed is considered to be 4¼ feet above the pavement."*

Our field measurements looking left and right directionally onto Forest Avenue indicate that existing sightlines exceed the requirements based on the 30 mph posted speed limit. Looking left and right, we recorded sight distances over 250 feet.

4 Existing Road Safety Conditions

Crash data for the latest three-year time period (2022-2024) was provided by MaineDOT's Crash Records Section for Aldworth Street and the section of Forest Avenue located between Lane Avenue and Tucker Avenue. MaineDOT's crash report is attached in *the appendix*, and a summary of the report is provided below:

Table 2
2022 - 2024 Crash Summary
Aldworth St, & Forest Ave between Lane Ave &Tucker Ave

#	Location		Total Crashes	Critical Rate Factor
1	Aldworth St @	Belden St	0	0.00
2	Aldworth St @	Dead End	0	0.00
3	Aldworth St @	Wyndam St	0	0.00
4	Aldworth St @	Forest Ave	0	0.00
5	Forest Ave @	Lane Ave	8	0.84
6	Forest Ave @	Tucker Ave	2	0.36
7	Forest Ave @	Bailey Ave	2	0.34
8	Aldworth St btw.	Forest Ave and Belden St	0	0.00
9	Aldworth St btw.	Belden St and Wyndham St	1	2.74
10	Aldworth St btw.	Wyndam St and Dead End	0	0.00
11	Forest Ave btw.	Lane Ave and Bailey Ave	1	0.26
12	Forest Ave btw.	Bailey Ave and Aldworth St	1	0.19
13	Forest Ave btw.	Aldworth St and Tucker Ave	2	0.53

MaineDOT considers any roadway segment a high crash location if both of the following criteria are met:

- ***8 or more crashes in the most recent three-year period***
- ***A Critical Rate Factor (CRF) greater than or equal to 1.00***

Table 2 shows that there are no high crash locations within the study area.

5 Summary

- The proposed development is expected to generate 8 trips during the AM peak hour of the adjacent street and 10 trips during the PM peak hour of the adjacent street. During the peak hours of the generator, the site is expected to produce 14 trips in the AM peak hour and 11 trips in the PM peak hour. The proposed development is expected to generate 17 trips during the Saturday peak hour. The project will not be a significant traffic generator and will not require a Maine DOT Traffic Movement Permit, as it does not meet the minimum threshold of 100 peak hour trips.

- Vehicle sight distance measurements were field recorded, looking both left and right from the Aldworth Street approach at the Forest Avenue intersection. Our field measurements looking left and right directionally onto Forest Avenue indicate that existing sight distances are satisfactory, based on the 30 mph speed limit. Looking left and right, we recorded sight distances over 250 feet.

- Crash data for the latest three-year time period (2022-2024) was provided by MaineDOT's Crash Records Section for Aldworth Street and the section of Forest Avenue located between Lane Avenue and Tucker Avenue. The crash data shows that there are no high crash locations within the study area.

William J. Bray, P.E.
5/1/2025

APPENDIX

- ## MAINEDOT CRASH DATA

95
13321
16891
72288
16890
16889
16888
16887
16886
12494
13305
13309
13311
13312
19424
18507
19423
18506
EASTMAN AVE
BAILEY AVE
LICKER AVE
BRANDON ST
CASTINE AVE
BELDEN ST
ALDWORTH ST
WYNDHAM ST
FOREST AVE
PORTLAND
LANE AVE
FARNHAM ST
PARI PL
EPPING ST
EUCLID AVE
202
Scale: 1:2027
100ft

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Portland
Aldworth St and Forest Ave area

REPORT PARAMETERS

Year 2022, Start Month 1 through Year 2024 End Month: 12

Route:	**0560009**	Start Node:	**16889**	Start Offset:	**0**	☑ **Exclude First Node**
		End Node:	**13312**	End Offset:	**0**	☐ **Exclude Last Node**
Route:	**0302X**	Start Node:	**16887**	Start Offset:	**0**	☐ **Exclude First Node**
		End Node:	**16890**	End Offset:	**0**	☐ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
13309	0560009 - 0.04	Non Int ALDWORTH ST	2	0	0	0	0	0	0	0.0	0.071	0.00	-0.21	0.00
												Statewide Crash Rate:	0.13	
13312	0560009 - 0.20	0503726 POR,ALDWORTH ST,END	2	0	0	0	0	0	0	0.0	0.004	0.00	-29.82	0.00
												Statewide Crash Rate:	0.13	
13311	0560009 - 0.17	0503725 POR,ALDWORTH,WYNDAM ST.	2	0	0	0	0	0	0	0.0	0.051	0.00	-0.76	0.00
												Statewide Crash Rate:	0.13	
16889	0302X - 3.48	Int of ALDWORTH ST FOREST AV	2	0	0	0	0	0	0	0.0	5.754	0.00	0.32	0.00
												Statewide Crash Rate:	0.13	
16887	0302X - 3.38	Int of FOREST AV LANE AV	2	5	0	1	0	0	4	20.0	6.180	0.27	0.32	0.00
												Statewide Crash Rate:	0.13	
16890	0302X - 3.52	Int of FOREST AV TUCKER AV	2	2	0	0	1	1	0	100.0	5.602	0.12	0.33	0.00
												Statewide Crash Rate:	0.13	
16888	0302X - 3.42	Int of BAILEY AV FOREST AV	2	2	0	0	0	0	2	0.0	5.923	0.11	0.32	0.00
												Statewide Crash Rate:	0.13	
Study Years:	3.00	**NODE TOTALS:**		9	0	1	1	1	6	33.3	23.585	0.13	0.23	0.55

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
13309	16889	5080609	0 - 0.04	0560009 - 0	0.04	2	0	0	0	0	0	0	0.0	0.00003	0.00	128.86	0.00
Non Int ALDWORTH ST				RD INV 05 60009											Statewide Crash Rate: 365.24		
13309	13311	188007	0 - 0.13	0560009 - 0.04	0.13	2	1	0	0	0	0	0	0.0	0.00008	4037.32	1474.69	2.74
Non Int ALDWORTH ST				RD INV 05 60009											Statewide Crash Rate: 365.24		
13311	13312	188012	0 - 0.03	0560009 - 0.17	0.03	2	0	0	0	0	0	0	0.0	0.00000	0.00	-	0.00
0503725 POR,ALDWORTH,WYNDAM ST.				RD INV 05 60009											Statewide Crash Rate: 365.24	45521.12	
16887	16888	3106436	0 - 0.04	0302X - 3.38	0.04	2	1	0	0	0	0	1	0.0	0.00234	142.74	554.41	0.00
Int of FOREST AV LANE AV				US 302											Statewide Crash Rate: 195.48		
16888	16889	3129284	0 - 0.06	0302X - 3.42	0.06	2	1	0	0	0	0	1	0.0	0.00345	96.63	501.20	0.00
Int of BAILEY AV FOREST AV				US 302											Statewide Crash Rate: 195.48		
16889	16890	3122267	0 - 0.04	0302X - 3.48	0.04	2	2	0	0	0	1	1	50.0	0.00227	293.38	558.35	0.00
Int of ALDWORTH ST FOREST AV				US 302											Statewide Crash Rate: 195.48		
Study Years:	3.00			**Section Totals:**	0.34		5	0	0	0	1	3	20.0	0.00817	203.90	408.93	0.50
				Grand Totals:	0.34		14	0	1	1	2	9	28.6	0.00817	570.92	550.99	1.04

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
13309	16889	5080609	0 - 0.04	0560009 - 0	0	0	0	0	0	0				
13309	13311	188007	0 - 0.13	0560009 - 0.04	1	0	0	0	0	0	2022-22148	08/07/2022	0.10	
13311	13312	188012	0 - 0.03	0560009 - 0.17	0	0	0	0	0	0				
16887	16888	3106436	0 - 0.04	0302X - 3.38	1	0	0	0	0	1	2024-18772	07/11/2024	3.40	PD
16888	16889	3129284	0 - 0.06	0302X - 3.42	1	0	0	0	0	1	2022-17344	06/21/2022	3.44	PD
16889	16890	3122267	0 - 0.04	0302X - 3.48	2	0	0	0	1	1	2024-19823	07/19/2024	3.50	C
											2023-22044	08/02/2023	3.50	PD
				Totals:	5	0	0	0	1	3				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												Hour of Day													
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TUESDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	4
WEDNESDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
FRIDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	4
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Totals	0	0	0	0	0	0	0	1	1	1	1	1	1	0	2	1	1	3	0	0	1	0	0	0	0	**14**

Vehicle Counts by Type

Unit Type	Total	Unit Type	Total
1-Passenger Car	12	23-Bicyclist	2
2-(Sport) Utility Vehicle	8	24-Witness	3
3-Passenger Van	0	25-Other	1
4-Cargo Van (10K lbs or Less)	0	26-Construction	0
5-Pickup	6	27-Farm Vehicle	0
6-Motor Home	0	28-Horse and Buggy	0
7-School Bus	0	**Total**	**32**
8-Transit Bus	0		
9-Motor Coach	0		
10-Other Bus	0		
11-Motorcycle	0		
12-Moped	0		
13-Low Speed Vehicle	0		
14-Autocycle	0		
15-Experimental	0		
16-Other Light Trucks (10,000 lbs or Less)	0		
17-Medium/Heavy Trucks (More than 10,000 lbs)	0		
18-ATV - (4 wheel)	0		
20-ATV - (2 wheel)	0		
21-Snowmobile	0		
22-Pedestrian	0		

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	0	9	1	0	0	0	10
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	5	0	0	0	0	0	5
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	1	0	0	0	0	0	1
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	5	0	0	0	0	0	5
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	1	0	0	0	0	0	1
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	0	1	0	0	0	0	1
Unknown	1	1	0	0	0	0	2
Total	**13**	**11**	**1**	**0**	**0**	**0**	**25**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	12	11	1	0	0	2	26
Physically Impaired	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	1	0	0	0	0	0	1
Total	**13**	**11**	**1**	**0**	**0**	**2**	**27**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	2	0	0	0	0	2
20-24	2	0	0	0	0	2
25-29	3	0	0	0	0	3
30-39	5	0	0	0	0	5
40-49	7	0	0	0	0	7
50-59	2	0	0	0	0	2
60-69	3	0	0	0	0	3
70-79	1	0	0	0	0	1
80-Over	0	0	0	0	0	0
Unknown	2	2	0	0	0	4
Total	**27**	**2**	**0**	**0**	**0**	**29**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total
1-Overturn / Rollover	0
2-Fire / Explosion	0
3-Immersion	0
4-Jackknife	0
5-Cargo / Equipment Loss Or Shift	0
6-Fell / Jumped from Motor Vehicle	0
7-Thrown or Falling Object	0
8-Other Non-Collision	0
9-Pedestrian	0
10-Pedalcycle	0
11-Railway Vehicle - Train, Engine	0
12-Animal	0
13-Motor Vehicle in Transport	26
14-Parked Motor Vehicle	0
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0
16-Work Zone / Maintenance Equipment	0
17-Other Non-Fixed Object	0
18-Impact Attenuator / Crash Cushion	0
19-Bridge Overhead Structure	0
20-Bridge Pier or Support	0
21-Bridge Rail	0
22-Cable Barrier	0
23-Culvert	0
24-Curb	0
25-Ditch	0
26-Embankment	0
27-Guardrail Face	0
28-Guardrail End	0
29-Concrete Traffic Barrier	0
30-Other Traffic Barrier	0
31-Tree (Standing)	0
32-Utility Pole / Light Support	0
33-Traffic Sign Support	0
34-Traffic Signal Support	0
35-Fence	0
36-Mailbox	0
37-Other Post, Pole, or Support	0
38-Other Fixed Object (wall, building, tunnel, etc.)	0
39-Unknown	0
40-Gate or Cable	0
41-Pressure Ridge	0
Total	**26**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	0
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	4
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	10
14-Other	0
Total	**14**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	1	1
B	1	1
C	2	2
PD	9	0
Total	**13**	**4**

Road Character

Road Grade	Total
1-Level	11
2-On Grade	3
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**14**

Light

Light Condition	Total
1-Daylight	13
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	0
5-Dark - Not Lighted	1
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**14**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2022	2023	2024	Total
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	0	0	0	0
JUNE	1	0	0	1
JULY	0	0	2	2
AUGUST	1	3	0	4
SEPTEMBER	1	1	2	4
OCTOBER	0	0	0	0
NOVEMBER	0	0	0	0
DECEMBER	2	1	0	3
Total	**5**	**5**	**4**	**14**

Report is limited to the last 10 years of data.

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	4	0	5	0	0	1	0	0	0	0	0	0	0	0	10
Head-on - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**4**	**0**	**9**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	8	0	0	0	0	0	0	0	0	0	0	8
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	4	0	0	0	0	0	0	0	0	0	0	4
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	1	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**14**

City of Portland ME: Low-Impact Design Requirements

Owner / applicant name:	Habitat for Humanity of Greater Portland
Representative name:	
Project address:	Aldworth Street
Project CBL:	
Application ID (if known):	Land of Lane

	Maximum Points	How to Apply	Points Awarded	LID Standard / Approach
CORE METHODS: Wetlands, Streams, & Drainage				
Protect natural drainage paths	Required			
Shoreland Zoning	Required			
Meeting DEP and ACOE standards for stream crossings	Required			
Protect wetlands	12	Select one option		Select a site that does not have wetlands or vernal pools = 12pts
				Project maintains a 50' set-back / no-disturb buffer to all wetlands = 10pts
				Project maintains a 25' set-back / no-disturb buffer to all wetlands = 7pts
			5	Project does not place structures in wetlands and avoids wetlands impacts from construction and stormwater discharges = 5pts
				Project replicates impacted wetlands elsewhere on site or within watershed = 3pt
				Project pays wetlands impact fee = 0pts
Permanently protect stream (intermittent and perennial) and riparian buffers *(exclusive of approved stream crossings; must include a no-disturb zone with markers installed and deed restriction recorded at registry of deeds)*	12	Select one option		Select a site with no streams = 12pts
				Permanently protect all 100ft shoreline buffers = 10pts
				Permanently protect all 75ft shoreline buffers = 7pts
			6	Permanently protect all 50ft shoreline buffers (intermittent streams) = 6pts
				Permanently protect all 50ft shoreline buffers (required minimum for perennial streams) = 5pts
				Permanently protect all 25ft shoreline buffers (required minimum for intermittent streams) = 5pts
Stream crossings	12	Select one option		Select a site with no streams = 12pts
			10	Avoid any stream crossings = 10pts
				All stream crossings use a bridge or open bottom culvert structure sized at 1.2 times the bank full width of the stream = 10pts
				All stream crossings use Maine Stream Smart Principles to preserve natural pre-development drainage pathways = 6pts
CORE METHODS: Natural Areas & Habitat				
Preserve threatened or endangered species habitat	Required (Beginning with Habitat Maps at a minimum)			
Protect 30% of trees over 10" DBH	Required (Tree survey required)			
Protect intact, contiguous forests and native trees over 10" DBH	8	Select one option		All development and land disturbance outside of existing wooded/forested areas (no site clearing in prior 10 years) = 8pts
			6	Protect 50% of trees over 10" DBH = 6pts
				Protect 40% of trees over 10" DBH = 4pt

CORE METHODS: Soils & Slopes				
USDA Web Soil Survey	Required (provide details how soil limitations will be mitigated)			
Avoid steep slope disturbance	5	Select one option	5	Selecting a site without slopes 15% or greater = 5pts
				Maintain >20' undisturbed vegetated buffer to all slopes 15% or greater = 3pts
				Maintain 10-20' undisturbed vegetated buffer to all slopes 15% or greater = 2pts
				Maintain 1-10' undisturbed vegetated buffer to all slopes 15% or greater = 1pt
				Disturbance of any slope 15% or greater = 0pts
Protect soils	5	Select one option		Redevelopment sites = 5pts
			5	Detailed, site-specific soil survey; preparation of a Soil Management and Protection Plan; protect highly permeable soils = 5pts
Limit site disturbance and earthwork	8	Select one option		Redevelopment limits disturbance to existing footprint = 8pts
			8	New development disturbs less than 50% of existing undeveloped site area = 8pts
				New development disturbs less than 75% of existing undeveloped site area = 6pts
				New development disturbs greater than 75% of existing undeveloped site area = 0pts
Soil preparation & minimizing compaction	6	Select all options that apply	3	Till soils to a depth of at least 10" prior to revegetation = 3pts
			3	Organic matter amendments as needed based on soil tests = 3pts
CORE METHODS: Landscaping				
Low-Impact Landscaping	6	Select all options that apply		Redevelopment sites reduce lawn area by 50%, provided no increase in impervious area (lawn becomes landscaping) = 2pt
			2	New development results in >50% non-impervious developed area is landscaping = 2pt
			2	Use only native vegetation for landscaped areas = 2pts
			2	Using only locally-sourced landscape materials = 2pt
CORE METHODS: Impervious Area & SW Management				
Meeting City's stormwater management standards	Required			
Reduce impervious and increase permeable surfaces	10	Select all options that apply, up to a maximum of 10 points		50% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 6pts
			4	Minimize parking impervious area by using only the minimum required number of parking spaces, the minimum required parking lot dimensions, maximizing compact spaces and utilizing low-turnover standard parking space width reductions = 4pt
				25% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 3pts
			2	Minimize roadway impervious area by developing roadways and driveways at the minimum width and using minimum number of curb cuts = 2pt
				Reducing the number of driveways by using a shared driveway design = 2pt
				Providing transportation alternatives (such as bike share, car share, or similar) = 2pt
Use GI / natural stormwater treatment systems	12	Select all options that apply		Treatment requirements and conveyance achieved through vegetated systems = 6pts
			3	No more than 1-acre of drainage per treatment system = 3pts
			3	Increase time of concentration on site (1" 25 year storm event) = 3pts
Limit / eliminate salt use	4	Select one option	4	Detailed winter maintenance agreement, with annual reporting requirement, limiting chloride use (required in UIS watersheds) = 4pts

Bonus Points				
Bonus points are offered for strategies that may go above and beyond typical approaches; may offer particularly innovative site design or engineering ; or may help achieve the larger goal of low-impact development on a regional scale.	10			Utilizing structured parking = 10pts
	10			Utilizing a green roof for at least 50% of a newly developed or redeveloped building roof = 10pts
	10			Restoration of previously disturbed natural resources (minimum 500 square feet of restoration) = 10pts
	10			BMPs designed for known water quality impairment within watershed = 10pts
	10			Connecting to City sewer from a site >200 ft from existing City infrastructure = 10pts
	6		6	Detention of 1.5 times the required volume = 6pts
	6		6	Treatment for 1.5 times the required water quality volume = 6pts
	6			Innovative LID site design and/or stormwater improvement - 6pts
	10			Establishing a Traffic Demand Management plan for projects under 50,000ft = 10pts
	Total Possible Points **178**		**Total Points Awarded** **85**	**Minimum points required for approval of LID strategies and techniques** **80**

SURVEYING ENGINEERING LAND PLANNING

Northeast Civil Solutions

INCORPORATED

www.northeastcivilsolutions.com

Northeast Civil Solutions, Inc.
381 Payne Road
Scarborough, Maine 04074

September 15, 2025

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a proposed 9 lot single-family subdivision located at the end of Aldworth Street on behalf of Habitat for Humanity of Greater Portland.

Meeting Location: Habitat For Humanity of Greater Portland ReStore located at 659 Warren Avenue Suite A, Portland, Maine 04103

Meeting Date: Monday September 29 (9/29/2025)

Meeting Time: 7:00pm

A sign-in sheet will be provided to track attendance to the meeting. Questions and comments about the project will be recorded and submitted to the Portland Planning Board for their review as required by the City of Portland's Land Use Code.

If you have any questions, please call us at 207-883-1000.

Signed,

Northeast Civil Solutions Inc.

Connor Bourassa

Connor Bourassa
Permitting Specialist
connor@necivil.com

Note:
Under the City of Portland land use code, an applicant for a major site plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

Neighborhood Meeting Certification

I, Connor Bourassa of Northeast Civil Solutions, Inc. as acting agent for Habitat for Humanity of Greater Portland (applicant) hereby certify that a neighborhood meeting was held on September 29, 2025 at the Habitat for Humanity of Greater Portland ReStore, 659 Warren Avenue, Portland, Maine 04103 at 7:00pm for the proposed project located at Aldworth Street/57 Castine Avenue.

I also certify that on September 15, 2025, notices 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.

2. Residents on the "interested parties" list.

Signed,

Northeast Civil Solutions Inc.

Connor Bourassa
Permitting Specialist
connor@necivil.com

September 30, 2025

Attachments
1. Copy of the notice sent
2. Abutter's List with Interested Parties
3. Sign-in sheet
4. Record of feedback

SURVEYING ENGINEERING LAND PLANNING

Northeast Civil Solutions

INCORPORATED

www.northeastcivilsolutions.com

Northeast Civil Solutions, Inc.
381 Payne Road
Scarborough, Maine 04074

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Northeast Civil Solutions Inc.

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SCOTT ANDERSON
31 WYNDHAM ST
PORTLAND ME 04103

CARA MACBURNIE
31 WYNDHAM ST
PORTLAND ME 04103

MUSA ANGELO
53 EPPING ST
PORTLAND ME 04103

HANAN ADANA
53 EPPING ST
PORTLAND ME 04103

FRITZ ANTOINE
48 CARVER BLVD
SOUTH PORTLAND ME 04106

PATRICIA APON
32 WENDELL ST
PORTLAND ME 04103

ABDUL AND COURTNEY AZIMI
98 SAWYER ST
SOUTH PORTLAND ME 04106

CAMERON BATHE
114 EPPING ST
PORTLAND ME 04103

SARAH HOWES
114 EPPING ST
PORTLAND ME 04103

EDGARDO & RICAMOR BAYBAYAN
77 EUCLID AVE
PORTLAND ME 04103

BRIAN BEAUCHESNE
20 WENDELL ST
PORTLAND ME 04103

BRANDY CLAPPER
20 WENDELL ST
PORTLAND ME 04103

BARBETTE BEHM
112 EUCLID AVE
PORTLAND ME 04103

MICHELLE BELLINO
46 EPPING ST
PORTLAND ME 04103

JASMIN BILLINGS
PO BOX 120
MORRISVILLE VT 05661

FRANK AND WARREN BLAISDELL
127 LANE AVE
PORTLAND ME 04103

JAMES AND SAVETH BOUCHARD
59 EPPING ST
PORTLAND ME 04103

MARK AND JOAN BOWEN
18 WYNDHAM ST
PORTLAND ME 04103

LUKE BOYLE
64 ILLSLEY ST
PORTLAND ME 04103

MONICA BRASSEUR
203 OAK RD
RIDGWAY CO 81432

TODD GUTZMER
203 OAK RD
RIDGWAY CO 81432

KACIE BURREGI
78 ALDWORTH ST
PORTLAND ME 04103

MICHAEL MANNING
78 ALDWORTH ST
PORTLAND ME 04103

DANIEL AND DORA CARDONA
10 WILKIE ST
PORTLAND ME 04103

REGINA CHAISSON
11 WYNDHAM ST
PORTLAND ME 04103

XUETING CHEN
37 EUCLID AVE
PORTLAND ME 04103

CHENG ZENG
37 EUCLID AVE
PORTLAND ME 04103

THOMAS CLIFFORD
34 EPPING ST
PORTLAND ME 04103

CRAIG AND KATHY COLE
77 EPPING ST
PORTLAND ME 04103

JOEL AND CARRIE COLEMAN
85 EUCLID AVE
PORTLAND ME 04103

KIRK CRAM
74 EUCLID AVE
PORTLAND ME 04103

NICOLE SHIPPEE
74 EUCLID AVE
PORTLAND ME 04103

KATHERINE CURTIS
60 ALDWORTH ST
PORTLAND ME 04103

KEVIN AND JOANNE CURTIS
56 ALDWORTH ST
PORTLAND ME 04103

TEK DANGI
107 EUCLID AVE
PORTLAND ME 04103

LAXMI BISTA
107 EUCLID AVE
PORTLAND ME 04103

ELIZABETH DELANO
68 ALDWORTH ST
PORTLAND ME 04103

OSCAR AND MICHELLE DELGADO
39 ALDWORTH ST
PORTLAND ME 04103

RICHARD AND MARY DELGIZZI
40 EPPING ST
PORTLAND ME 04103

CAROLYN DESCHAINE
33 WILKIE ST
PORTLAND ME 04103

ANTHONY AND SHELLY DIBIASE
23 EPPING ST
PORTLAND ME 04103

CHANUNTHIDA DOBROWOLSKI
49 EUCLID AVE
PORTLAND ME 04103

ROBERT DUNFEY
91 EUCLID AVE
PORTLAND ME 04103

JONATHAN AND CARRIE DYER
37 WILKIE ST
PORTLAND ME 04103

STEVEN AND DELORA EATON
19 WENDELL ST
PORTLAND ME 04103

MARIAH FARRELL
40 WILKIE ST
PORTLAND ME 04103

PAUL FASULO
43 EUCLID AVE
PORTLAND ME 04103

WILLIAM FOSS
3 WYNDHAM ST
PORTLAND ME 04103

HOLLY FRASER
21 CASTINE AVE
PORTLAND ME 04103

RACHAEL AND GREGORY FUSILLO
41 EPPING ST
PORTLAND ME 04103

JIMMY GASVEZ
73 LANE AVE
PORTLAND ME 04103

BERNARD & KATHRYN GATCHELL
26 EUCLID AVE
PORTLAND ME 04103

LINDSEY GIBLIN
106 EUCLID AVE
PORTLAND ME 04103

ANNA GOLENDUKHINA
24 WYNDHAM ST
PORTLAND ME 04103

ALEX AND EMILY GOODHILE
69 EUCLID AVE
PORTLAND ME 04103

ELIZABETH GRACE
35 EPPING ST
PORTLAND ME 04103

JASON WILLARD
35 EPPING ST
PORTLAND ME 04103

MELISSA HAINES
95 EPPING ST
PORTLAND ME 04103

SHANE HATHAWAY
55 EUCLID AVE
PORTLAND ME 04103

KELSEY HARFOUSH
55 EUCLID AVE
PORTLAND ME 04103

ROBERT AND TIFFANY HEATER
15 WILKIE ST
PORTLAND ME 04103

DEVON AND JESSICA HENEGAR
95 LANE AVE
PORTLAND ME 04103

CHRISTOPHER AND LISA HOPPER
16 WILKIE ST
PORTLAND ME 04103

JIA AND CHENA HOU
55 ALDWORTH ST
PORTLAND ME 04103

RODOLPHE AND ARAVE HOUANCE
35 CASTINE AVE
PORTLAND ME 04112

ERIC HUBER
26 WENDELL ST
PORTLAND ME 04103

HIROTOMO AND NORIKO ISHI
118 EUCLID AVE
PORTLAND ME 04103

BRONSON AND SAMAR JARRARD
47 EPPING ST
PORTLAND ME 04103

FLOYDZELL AND SYLVIA JOHNSON
44 EUCLID AVE
PORTLAND ME 04103

MARGARET JOHNSON
52 ALDWORTH ST
PORTLAND ME 04103

BRENDA JORDAN
15 CASTINE AVE
PORTLAND ME 04103

ROBERT JORDAN
100 EUCLID AVE
PORTLAND ME 04103

RENEE GOULETTE
100 EUCLID AVE
PORTLAND ME 04103

JOTHAM KIGOGO
22 EPPING ST
PORTLAND ME 04103

ALEXANDER KINNER
99 EUCLID AVE
PORTLAND ME 04103

MARIAH LITTLE
99 EUCLID AVE
PORTLAND ME 04103

ANDREA KNIGHT
30 ALEXIS LN
HAMPTON FALLS NH 03844

TRU LE
43 CASTINE AVE
PORTLAND ME 04103

EDWARD AND CYNTHIA LEGASSIE
60 EPPING ST
PORTLAND ME 04103

EDWARD LORO
86 EUCLID AVE
PORTLAND ME 04103

ELIZABETH LAKO
86 EUCLID AVE
PORTLAND ME 04103

RICHARD AND AUDREY MARTIN
65 EPPING ST
PORTLAND ME 04103

MICHAEL AND REBECCA MATTHES
28 EPPING ST
PORTLAND ME 04103

TYRA MAZZER
79 ALDWORTH ST
PORTLAND ME 04103

COLIN AND MELISSA MCCRILLIS
1782 FOREST AVE
PORTLAND ME 04103

RONALD AND MARY MCDANIELS
20 WILKIE ST
PORTLAND ME 04103

MICHAEL MCGOVERN
80 EUCLID AVE
PORTLAND ME 04103

MICHAEL AND SUZANNE MCIVER
16 EPPING ST
PORTLAND ME 04103

STEVEN AND KAREN MCLELLAN
81 LANE AVE
PORTLAND ME 04103

NAVANN MEAS
48 JOHANSEN ST
PORTLAND ME 04103

GERALDINE MILLER
4 WYNDHAM ST
PORTLAND ME 04103

ARAFA AND BAGIKER MOHAMED
12 WYNDHAM ST
PORTLAND ME 04103

RACHEL MORALES
13 PARI PL
PORTLAND ME 04103

ELLEN MCKENZIE
13 PARI PL
PORTLAND ME 04103

JAMES MURPHY
19 BRANDON ST
PORTLAND ME 04103

STEPHEN MURPHY
14 CASTINE AVE
PORTLAND ME 04103

WAYNE AND DEBORAH NASON
57 CASTINE AVE
PORTLAND ME 04103

DUYEN NGUYEN
40 CASTINE AVE
PORTLAND ME 04103

HOANG AND CHAU NGUYEN
16 CASTINE AVE
PORTLAND ME 04103

NICHOLAS & HEATHER ORLANDO
38 ALDWORTH ST
PORTLAND ME 04103

MICHELE PETERS
31 CASTINE AVE
PORTLAND ME 04103

ANDREW AND JONA PILLSBURY
PO BOX 6846
PORTLAND ME 04104

EMILY PINETTE
44 WENDELL ST
PORTLAND ME 04102

CALEB GRENIER
44 WENDELL ST
PORTLAND ME 04102

GREGORY AND MEGAN PORTER
45 ALDWORTH ST
PORTLAND ME 04103

IRIS PORTILLO
52 EPPING ST
PORTLAND ME 04103

MARIO FLAMENCO
52 EPPING ST
PORTLAND ME 04103

PORTLAND HOUSING AUTHORITY
970 BAXTER BLVD 3RD FLOOR
PORTLAND ME 04103

PORTLAND WATER DISTRICT
225 DOUGLASS ST
PORTLAND ME 04102

JOHN AND CATHERINE PREISSLER
39 WENDELL ST
PORTLAND ME 04103

SIMON PRITCHARD
87 LANE AVE
PORTLAND ME 04103

ADRIENNE HANSON
87 LANE AVE
PORTLAND ME 04103

GREGORY QUEEN
15 WENDELL ST
PORTLAND ME 04102

JOHN REDMOND
21 WILKIE ST
PORTLAND ME 04103

JAMES AND LAURI RUSSO
122 EUCLID AVE
PORTLAND ME 04103

ADAM AND CHRISTINA SILBERMAN
31 WENDELL ST
PORTLAND ME 04103

ALEXANDRIA SIMONDS
7 CASTINE AVE
PORTLAND ME 04103

JAMES TOWNSEND
7 CASTINE AVE
PORTLAND ME 04103

CRAIG AND JANE SMALL
16 TEAGUE ST
CARIBOU ME 04736

SUSAN SMYTHE
61 EUCLID AVE
PORTLAND ME 04103

MYDUYEN SON
18 CASTINE AVE
PORTLAND ME 04103

WENDY STEELE
185 REAGAN LN
PORTLAND ME 04103

PAUL AND EMILY TAYLOR
34 CASTINE AVE
PORTLAND ME 04103

JOSEPH THIBOUTOT
29 EUCLID AVE
PORTLAND ME 04103

DONNA THIMS
60 EUCLID AVE
PORTLAND ME 04103

GREGORY AND ERIN TOSI
36 EUCLID AVE
PORTLAND ME 04103

LOC TRINH
123 LANE AVE
PORTLAND ME 04103

ROCCO AND MEGAN TRIPALDI
40 ALDWORTH ST
PORTLAND ME 04103

MUKINAYI TSHINDIBU
92 EUCLID AVE
PORTLAND ME 04103

MATONDO GRACIA
92 EUCLID AVE
PORTLAND ME 04103

DOROTHY VALENTE
113 LANE AVE
PORTLAND ME 04103

JAMIE WALSH
56 EUCLID AVE
PORTLAND ME 04103

KELLEY WALSH
19 WYNDHAM ST
PORTLAND ME 04103

WELLESLEY ESTATES LIMITED PARTNERSHIP
1838 FOREST AVE
PORTLAND ME 04102

CHRISTOPHER WHITMORE
182 MUSSEY ST
SOUTH PORTLAND ME 04106

DOROTHY WOODS
25 EUCLID AVE
PORTLAND ME 04103

Anthony Donovan
27 Riverview Street
Portland ME 04102

Barbara Wood
125 Emery Street
Portland ME 04102

David Nowlin
215 Oxford Street
Portland ME 04102

Deb Keenan
28 Dorothy Street
Portland ME 04103

Devon Platte
26 North Street
Portland ME 04101

Edward Suslovic
46 Kenwood Street
Portland ME 04103

Janice Carpenter
9 W. Commonwealth Drive
Portland ME 04103

Jennifer Munson
389 Congress Street, 4th Floor
Portland ME 04101

Kaplan Thompson Architects
Jesse Thompson
100 Exchange Street
Portland ME 04103

Lynn Clarkson
145 Marlborough Road
Portland ME 04103

Mary Griffity
6 E. Prom, Unit 2
Portland ME 04103

Nancy Bartlett
PO Box 7965
Portland ME 04112

Pam Burnside
64 Lester Drive
Portland ME 04103

Paul Dubois
1915 Congress Street
Portland ME 04102

Peggy Morin
66 Farnham Street
Portland ME 04101

Philip Haughey
1660 Soldiers Field Road
Boston MA 02135

Priscilla LaVallee
190 US Route 1, Unit 2
Falmouth ME 04105

Waste Management of Maine
Rebecca Halla
2000 Forest Avenue
Portland ME 04103

Glenn Cummings
24 Nevens Street
Portland ME 04103

Robert Hains
250 Holm Avenue
Portland ME 04102-1208

Neighborhood Meeting Sign-In

9/29/2025
Habitat for Humanity
of Greater Portland
ReStore, 659 Warren
Avenue, Suite A,
Portland, ME 04103
Land of Lane Subdivision, Aldworth Street/57 Castine Avenue

Developer and Consultant Team in Attendance:

Name	Email
Connor Bourassa, NCS	connor@nectrul.com
PAM AUDET	WEBBAUDET@AOL.COM
WILLIE AUDET, JR	AUDETLAND@AOL.COM
Travis Lorenz	travis@civilx.net
CHAD MULLIN	chad@habitatme.org

Members of the Public:

Name	Email/Phone Number
LIZ Delano	edelano@maine.rr.com 207-212-9115
Michael Manning	mmanning@une.edu 207-699-9043
Kacie Burrego	kburregi@gmail.com
Lauren Scaccia	lauren.e.scaccia@gmail.com
Maura Nichols	mauraen1990@gmail.com
Dede Eaton	magickcloset@hotmail
Kirk Cram	Kirkbcram@gmail.com
Stefanie Millette	stefanie.millette@gmail.com
DEAN PELTON	DNATIONPELTON@GMAIL.COM
Candace Hancock	candacehancock1@gmail.com
DEB NOSS	bayside@aol.com
LOGAN ROHRBAUGH	LROHRBAUGH1775@GMAIL.COM
PAUL JONES	psmjones@gmail.com
Laurel LaBauve	laurellabauve@gmail.com

Northeast Civil Solutions, Inc.
381 Payne Road
Scarborough, Maine 04074

September 29, 2025

Meeting Location:
Habitat For Humanity of Greater Portland ReStore located at 659 Warren Avenue Suite A, Portland, Maine 04103

Meeting Date:
Monday September 29 (9/29/2025)

Meeting Start Time:
7:00pm

Meeting End Time:
7:59pm

Representative Speakers:
Chad Mullin – Executive Director, Habitat for Humanity of Greater Portland
Travis Letellier – Consultant Engineer for Northeast Civil Solutions

Meeting Recorder:
Connor Bourassa – Permitting, Northeast Civil Solutions

Documents Shared:
Slideshow by Habitat for Humanity, Site/Landscape Plan by Northeast Civil Solutions, physical copies of Land of Lane Subdivision planset by Northeast Civil Solutions

Meeting called to order at 7:00pm by Chad Mullin.

Overview and background of Habitat for Humanity – Chad Mullin

An overview on who Habitat is as a company. Topics include: mission statement, activity in Cumberland County, examples of built communities, short video of a walkthrough of recently built house, photos of families of past projects. Reasons why people apply for Habitat homes: needs for housing, ability to pay for housing, willingness to partner, benefits of homeownership. Information is presented as a slideshow (to be included with submission of meeting minutes).

Project overview at Aldworth Street/57 Castine Avenue – Chad Mullin & Travis Letellier

The site plan completed by Northeast Civil Solutions is shown on screen. A basic overview of the project is given including: that the development will consist of 9 single-family homes, this will be an extension of the dead end of Aldworth Street. Questions begin.

Questions Comments Concerns – Attendees

* Answers to comments and questions provided by representative speakers will be below in **bold**. *

- Is this project off Castine or Aldworth? The notices we received made it confusing.

  There is a reason for both being mentioned. The existing property that this proposal is seeking subdivision from is located at 57 Castine Avenue. The development itself will be an extension from Aldworth Street, but this address doesn't exist yet because the project is still in review.
- What is that lot in the middle of the two sets of houses on the south side of the road?

  This is covered mostly by wetlands, so this area is included in the project as reserved open space.
- Was there any surveying done near 68 Aldworth where the vernal pool is? We are concerned the project drains there.

  The delineation of wetlands was done in the immediate vicinity of the lot and just abutting it. The delineation did not go that far outside the lot, no. Though, the mapped wetlands show that they drain to the southwest of the lot.
- What are the setbacks for the project?

  There has been a recent recoding of the ordinance in Portland allowing for smaller lots to minimize impacts on the natural features of the overall lot. This allowed us to reduce the minimum setbacks required in this zone. Internal side setbacks are 5 feet, the front setback is 10 feet, and the rear is 12.5 feet. The lots abutting the boundary of the overall lot have the original side setback of 8 feet.
- Will that blank lot in the middle remain uncut/undisturbed?

  Yes, the open space lot as shown will remain in its natural state. There is no proposed cutting in that area.
- How many acres for the whole project?

  The approximate area of the development is a little over an acre out of the total 2.3 acres of the proposed lot, reserving approximately 50% for open space.
- Does that total acreage include the open space shown on the plan?

  Yes, the total acreage includes the open space.
- The 100'x50' right-of-way for 84 & 79 Aldworth, who is the owner?

  This land was owner by the owners of lot 84, which is to be included in this project.
- What will the stormwater impacts be to the water table outside the site?

  No drainage from this site is anticipated to go toward Aldworth Street. It will instead flow to a designed stormwater detention pond located on site.

- What are the impacts from the tree clearing?

  The slopes on site aren't too steep. With proper erosion control, as is proposed

with this project, there shouldn't be much of an impact from tree clearing.

- Comment – You may want to put sump pumps in the development. We all have sump pumps in our homes.

  Your concern is noted, thank you.

- How are you proposing to mitigate traffic? Can we request a stop sign, speed bumps? 50% increase is a lot of extra traffic for this area.

  We can raise this concern with the city during the project review.

- What are the construction impacts for this development?

  Construction will not start for about another 2 years. Once it has, we will start with the road which will take about 6 months then move to building the house which would take about 18 months.

- Will there be any tree cutting before the road construction?

  No, there will be no work done on site before construction for the road starts.

- There has been recent watermain work done by the city along our street (Aldworth) that has settled. Will movement of heavy construction vehicles impact that? Is there designated parking for those vehicles?

  Parking will start on the paved dead end of Aldworth Street, then move into the lot as construction continues. As long as the watermain has settled there should be no issues as the vehicles first move in to begin working.

- Has there been a traffic analysis for this site?

  Yes, there has been a traffic analysis done by licensed traffic engineers at Barton & Loguidice. This development will generate approximately 9 peak hour trips.

- Was that analysis specific to this area?

  Yes, this analysis was done of this street and the streets surrounding it.

- Is the analysis available for us to look at?

  This will be part of the submission to the city. The city will also include traffic analysis as part of their review.

- Comment from Kacie Burregi & Michael Manning at 78 Aldworth Street – Personal issues with feeling as though the aforementioned "right-of-way" or "spite strip" was purchased out from under them. Apparently, they were in the process of drafting a purchase and sales agreement before this land was sold to Habitat.

  Answered by one of the Habitat Board members Stephanie Millette as well as Chad Mullen. The Board had taken the situation seriously. The situation is deeply personal, and the Board respects that. Habitat impresses upon their qualifying families the importance of the areas they are moving into. We hope, in time, that you will have many great community-based experiences as a result of this development.

- Concerned about the wildlife in the area, there is a lot of wildlife in that lot.

  This project is also under DEP review which includes a wildlife impact component which will bring in the IF&W to review proposed impacts on wildlife populations.

- Will this be an HOA? (in reference to open space ownership)

  We are considering conveying the greenspace back to the city.

- Are there any plans in place for knotweed remediation? There is a lot out there and it's illegal to use poison to get rid of it.

There are no written plans to address this no. We normally leave this to the homeowner's discretion.

- What is the plan for utilities? Are they overhead or underground?

  The utilities are proposed to be underground.
- Will the city take ownership of the street?

  We will be requesting that the city adopts the street, yes.
- Would these nine houses count as a sound barrier along the highway. We have been experiencing some sound issues.

  A different abutter answered the question and stated a sound mitigation study is to be done in the near future by a different group.
- Any fencing along the southeastern portion of the development being proposed?

  There is no fencing currently proposed. This is up to the homeowner's discretion/
- Which type house you are proposing to build (out of the options submitted as architecturals) isn't determined at this time?

  The type of homes to be built will be chosen to match the local home sizes and aesthetics.
- Will they be clearing the proposed lots completely?

  Mostly, just the building envelope. The entirety of each lot is not proposed to be clear cut.
- Comment – We would really like a stop sign out there.

  We will make sure to pass this request along to the city.
- Comment from Stephanie Millette, Board member of Habitat- In the future if you have any service people come by your homes, be they the cable company, utility repairmen, mail carriers, etc. make sure to have conversations with them. Tell them about this project and others like it to see if they can qualify. We would like to help as many people as we can find homes as we are proposing to do here with this project.
- Can anyone volunteer, or do we need prior experience?

  Yes, anyone can volunteer. No prior experience is necessary.

Meeting adjourned at 7:59pm.

I, Connor Bourassa of Northeast Civil Solutions, Inc. as acting agent for Habitat for Humanity of Greater Portland, hereby certify that all above information is accurate and recorded to the best of my ability as meeting recorder for this neighborhood meeting.

Signed,

Northeast Civil Solutions Inc.

Connor Bourassa
Permitting Specialist
connor@necivil.com

Habitat for Humanity® Greater Portland

Welcome!!

We Build **Strength, Stability, and Self-Reliance** *thru* **Shelter**

Who We Are:

Habitat for Humanity® Greater Portland

Mission Statement:

Seeking to Put God's Love Into Action, Habitat for Humanity of Greater Portland Bring People Together to Builds Homes, Communities, and Hope.

What We Do:

Habitat for Humanity of Greater Portland exists to provide decent and affordable homeownership opportunities, and low-cost home repairs in Cumberland County.

We are a nonprofit organization that helps families build and improve places to call home. We believe that affordable housing plays a critical role in building strong and stable communities.

Carpenter Court, Scarborough

- 13 detached single-family homes -

We Build **Strength, Stability, and Self-Reliance** *thru* **Shelter**

Sunset Avenue, South Portland

- 8 detached single-family homes -

Habitat for Humanity® Greater Portland

We Build **Strength, Stability, and Self-Reliance** *thru* **Shelter**

We Build **Strength, Stability, and Self-Reliance** *thru* **Shelter**

Who We Serve:

Habitat for Humanity® Greater Portland

We Build **Strength, Stability, and Self-Reliance** *thru* **Shelter**

Need For Housing

- Living in overcrowded or substandard housing situation
- Paying more than 30% of gross income on rent
- Do not currently own a home
- Unable to qualify for a conventional mortgage or afford a downpayment

Ability to Pay for Housing

Habitat for Humanity® Greater Portland

- Must earn at least $40,000 per year and no more than 80% of HUD Area Median Income (AMI) based on your family size.
- $2,000 for closing costs and fees
- Credit score below 640.
- Debt-to-income ratio no higher than 43%.

Willingness to Partner

- Willing to complete 275 volunteer hours in the community where we're building
- Have no serious, recent, criminal history
- Must be a permanent resident

The Need for Housing in Portland, ME

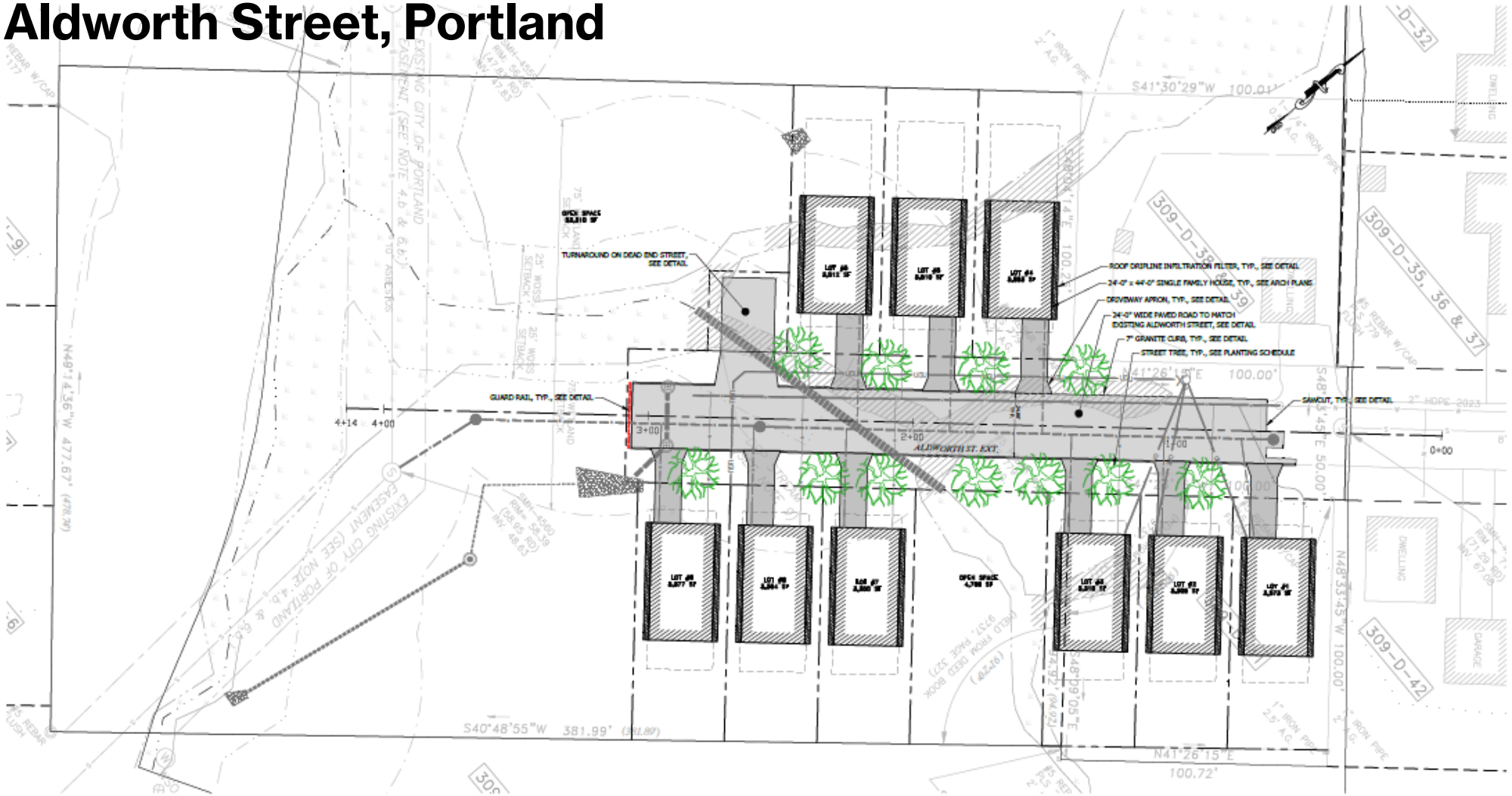
Habitat for Humanity® Greater Portland

- The average home value in the Greater Portland area is now over $525,000, a 65% increase in the past 5 years
- The income currently required to afford the median home in Portland last year was $163,876 - 3x the average salary in the Greater Portland area.
- 52% of Greater Portland households are cost burdened.

The Benefits of Homeownership

- Homeownership promotes civic and social engagement.
- Homeownership is a catalyst to wealth building for U.S. households and represents a significant proportion of net wealth.
- Decent, affordable housing improves both physical and mental health.
- Homeownership leads to better test scores and higher rates of high school graduation and college attendance.

Aldworth Street, Portland



Habitat for Humanity® Greater Portland

Questions?

NOTICE FROM CITY OF PORTLAND PLANNING DIVISION

IN THE VICINITY OF 57 CASTINE AVE

To residents and property owners: Habitat for Humanity of Greater Portland has submitted applications for Major Site Plan and Subdivision to facilitate the creation of nine new residential lots with single-family dwelling units at 57 Castine Avenue. The project is being designed in accordance with the Conservation Residential Development standards of the Land Use Code. The property is located in the Residential Neighborhood RN-1 zone.

In accordance with the Portland Land Use Ordinance, notices of receipt of a Major Site Plan application must be sent to property owners within 500 ft. of the subject property. You will be notified of future Planning Board meetings by receiving notices from the Planning Division prior to any workshops or public hearings.

A project and plan summary is available for viewing on the Citizen Self Service Portal (https://css.portlandmaine.gov/), by referencing Plan Number PL-003433-2025. Written comments should be submitted to planningboard@portlandmaine.gov. If you have any questions regarding the proposal, please contact Sean King, Urban Designer, by phone at (207) 874-8901 or e-mail at sking@portlandmaine.gov.

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Notice of Public Meeting Certification

I, Connor Bourassa of Northeast Civil Solutions, Inc. acting as agent for Habitat for Humanity of Greater Portland, hereby certify that a notice of neighborhood meeting sign was posted on October 24, 2025 prior to the public workshop to be held on November 4, 2025 for the proposed project PL-003433-2025 located at 57 Castine Avenue.

Photo documentation of sign in situ:

Note that it is the applicant's responsibility to remove the notice of public meeting sign within three days following the date of the meeting.

Signed,

Northeast Civil Solutions Inc.

Connor Bourassa

Connor Bourassa
Permitting Specialist
connor@necivil.com
10-24-2025

Sean King <sking@portlandmaine.gov>

Habitat Plan at 57 Castine Ave

Michael James <goober11400@yahoo.com> Wed, Sep 10, 2025 at 4:03 PM
To: "agraminski@portlandmaine.gov" <agraminski@portlandmaine.gov>, "sking@portlandmaine.gov" <sking@portlandmaine.gov>
Cc: Kacie Manning <kburregi@gmail.com>

Good afternoon, my wife Kacie and I are abutters on Aldworth St for the proposed subdivision plan at 57 Castine Ave. We were looking at the "interested parties" excel doc and were curious how those folks were designated as "interested parties"? We requested with the DEP to be "interested persons" with their DEP application. Are those separate things?

Thanks,
Mike and Kacie

Sean King <sking@portlandmaine.gov>

Question Re: Plan PL-003433-2025

Megan <rnporterme@gmail.com> Tue, Sep 16, 2025 at 9:15 AM
To: "sking@portlandmaine.gov" <sking@portlandmaine.gov>

Hello Mr. King,

I am a resident of Aldworth Street and recently received a postcard notifying my household of a nearby housing plan. The postcard says the project is at 57 Castine Avenue, but all of the plan documents on the city's website describe the project as an extension of Aldworth Street. Castine runs parallel to Aldworth and is only connected by Wyndham Street, which is also not mentioned in the plan.
How is the project listed as 57 Castine Ave when it is located nowhere near that address? Is it a typo? Thank you for your time and assistance.

Regards,
Megan Porter

PC3

Tyra Mazzer <tyrakmazzer@gmail.com> Oct 1, 2025, 1:34:58 PM (18 hours ago)
to planning@portlandmaine.gov, planningboard@portlandmaine.gov

Tyra Mazzer

Address:79 Aldworth Street, Portland Maine 04103

Project Site: 57 Castine Ave, Portland, ME 04103

I was not able to make the community meeting this past Monday regarding this project, so I am submitting the following concerns regarding the proposed development project at 57 Castine Ave, particularly as it relates to potential impacts on flooding near my residence and the proposed new residences, and increased environmental noise due to the removal of mature trees and vegetation.

Flooding & Wetlands Impact

My home is in close proximity to the proposed development site, which appears to include filling or building over existing wetland areas. I am deeply concerned about the implications this will have on water management and the potential for increased flooding in the neighborhood. Wetlands in this area currently serve an important role in stormwater absorption, and any alteration could change the natural drainage patterns in a way that negatively impacts surrounding homes — including mine. There are two very clearly established ravines that have been cut over time by runoff, showing there is a significant amount water draining out through this end lot. Has a hydrological impact study been conducted to evaluate downstream effects on nearby residential properties? Did the DEP application include a map showing existing wetlands, vernal pools, and stream buffers, as well as an alternatives analysis as required by NRPA Tier 3 procedures?

What measures will be taken to ensure that displacement of stormwater will not increase runoff or raise the local water table, contributing to foundation or basement flooding at adjacent homes?

Alternatively, building on this land also presents challenges for the new builds as well. Do we really want to riddle these new homeowners with increased insurance costs and headaches down the line as their foundations settle and shift from being built on an unstable surface?

Finally, There is an observed pattern of water flow and pooling in the area between Aldworth St. and Euclid Ave., particularly during heavy rainfall. How will the development mitigate runoff from increased impervious surfaces (e.g., roads, rooftops) in an already sensitive area?

Public Infrastructure Stress

Additional homes (and cars) at the end of a dead-end street may also put pressure on roads, storm drains, and water systems not designed for higher density. The road has already settled after being dug up for new water lines, indicating that there are vulnerabilities.

Tree Removal & Noise Pollution

The current treeline acts as a natural sound barrier between our neighborhood and the nearby highway. If these mature trees are removed during construction, the noise from I-295 will be significantly more audible.

What environmental protections or alternative noise buffers will be implemented if this tree buffer is cleared?

Has an acoustic impact assessment been conducted to determine how the removal of trees may elevate highway

noise in surrounding residential areas?

Is the tree buffer (currently helping mitigate highway noise and stormwater flow) is protected under state setback or buffer requirements—or if it is slated to be replaced with mitigation of equal function?

Additional Clarifications Requested

Will there be opportunities for impacted residents to provide further comment during the Portland Planning Board process, should this project move forward? I have only gotten one letter in the mail thus far and would like to be considered an interested party moving forward.

I'd also like to understand the schedule for future surveys and activities for the lot. In the past, I have blocked in my driveway by the surveyors, and was given no notice they would be there. Since I am at the end of a dead end, there is no other way for me to go- proposing significant concerns in the event of an emergency for both my ability to leave easily or for emergency vehicles to get to me. This concern becomes amplified if the project moves ahead and heavy machinery, volunteer cars and other vehicles now clog the street.

Can the public access the stormwater management plan and tree/vegetation removal plans associated with this development?
From what I understand there have been developments proposed for this area before, and the City Council rejected these plans based on the lot not being sustainable to build on. What has changed?

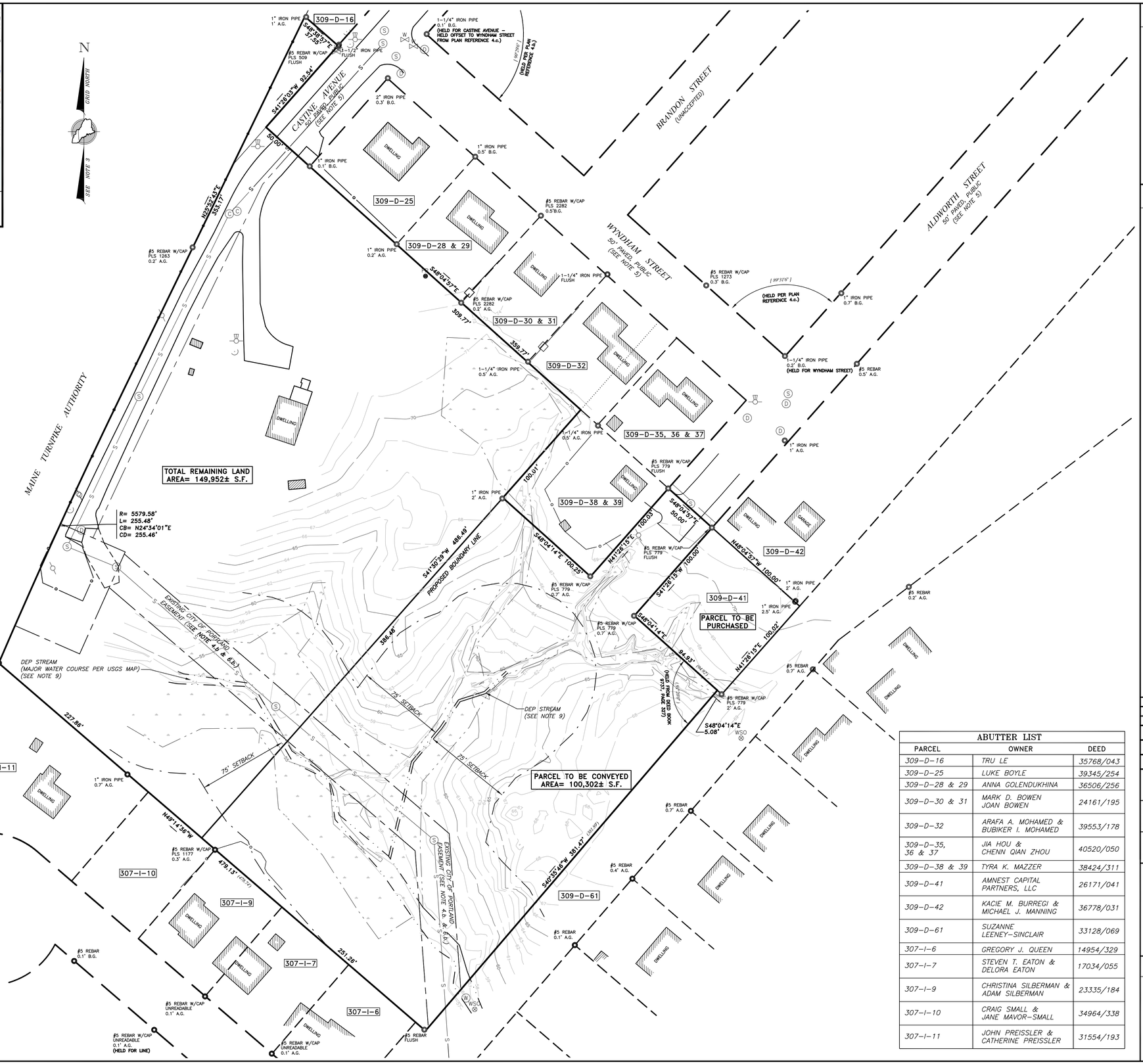
I appreciate your consideration of these concerns and ask that the DEP and Habitat prioritize both ecological preservation and neighborhood livability when evaluating this proposal. The potential consequences of flooding and noise pollution are not abstract risks — they have the ability to directly affect the health, safety, and property values of those living nearby and those proposed to be new residents of the neighborhood.

Sincerely,

Tyra Mazzer

10/1/25

VICINITY MAP
N.T.S.



LEGEND

- #5 REBAR WITH CAP (PROPOSED)
- FOUND IRON (SIZE & TYPE AS NOTED)
- UTILITY POLE (NUMBER AS NOTED)
- GUY WIRE ANCHOR
- BOUNDARY LINE
- EASEMENT LINE
- EDGE OF GRAVEL
- EDGE OF PAVEMENT
- RIGHT-OF-WAY LINE
- ABUTTER LINE
- OHU — OVERHEAD UTILITY
- EDGE OF WETLANDS
- FORMER DEED LINES
- *N/F* — NOW OR FORMERLY OWNED BY
- *1234/567* — DEED BOOK AND PAGE
- *12-34* — TAX MAP-LOT
- *(123.45')* — PARENTHESIS DENOTE RECORD DATA

NOTES

1. RECORD OWNER OF THE PARCEL SURVEYED IS WAYNE H. NASON AND DEBORAH J. NASON AS DESCRIBED IN A DEED FROM FLEET BANK OF MAINE, DATED SEPTEMBER 27, 1991 AND RECORDED IN BOOK 9737, PAGE 327 IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS.

   TOTAL LOT AREA IS: 5.73± Ac.

2. THE PARCEL SURVEYED IS IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 309, BLOCK D, PARCEL 22.

3. THE BEARINGS SHOWN ON THIS PLAN ARE BASED ON MAINE COORDINATE SYSTEM OF 1983, WEST ZONE, GRID NORTH.

4. PLAN REFERENCES:
   a. "DEERING TERRACE, PORTLAND, CUMBERLAND CO., MAINE, OWNED BY J.W. WILBUR CO. INC." BY ERNEST W. BRANCH, CIVIL ENGINEER, DATED APRIL 20, 1915, RECORDED IN PLAN BOOK 12, PAGE 6, CUMBERLAND COUNTRY REGISTRY OF DEEDS.

   b."ALDWORTH EXTENSION SUBDIVISION, ALDWORTH STREET, PORTLAND, ME, SUBDIVISION PLAT" BY LAND USE CONSULTANTS, DATED MARCH 11, 1988, UNRECORDED.

   c. CITY OF PORTLAND ENGINEER RECORDS

   d. "PLAN SHOWING NEW LOTS ONLY, PHASE III ADDENDUM OF PINE TREE TERRACE SUBDIVISION, PORTLAND, MAINE. PLAN MADE FOR EUCLID AMBLER ASSOC." BY D.A. MAXFIELD, JR., LAND SURVEYING, DATED FEBRUARY 1987, RECORDED IN PLAN BOOK 166, PAGE 50, CUMBERLAND COUNTY REGISTRY OF DEEDS.

5. THE WIDTH OF CASTINE AVENUE IS 50' BASED ON PLAN REFERENCE 4.a. THE LAYOUT OF THE RIGHT-OF-WAY LIMITS IS BASED ON PLAN REFERENCE 4.a. AND MONUMENTATION FOUND.

6. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
   a. A RIGHT-OF-WAY WHICH BENEFITS DOROTHY JONES SMALL AND JOHN F. AND EDNA M. DAVISHEIRS WHICH IS AN EXTENSION OF ALDWORTH STREET SOUTHWESTERLY 100'.

   b. SEWER EASEMENT CONVEYED TO THE CITY OF PORTLAND AS SHOWN ON A PLAN ENTITLED "FARNUM STREET PUMPING STATION FORCE MAIN GRAVITY SEWER AND FUTURE STORM DRAIN" DATED MAY 15, 1979, CITY OF PORTLAND FILE NO. 499/19.

   c. EASEMENT TO CUMBERLAND COUNTY POWER & LIGHT COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY DATED AUGUST 29, 1936 RECORDED IN BOOK 1503, PAGE 484.

   d. CENTRAL MAINE POWER COMPANY DATED MAY 16, 1946 RECORDED IN BOOK 1823, PAGE 085.

   e. CENTRAL MAINE POWER COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY DATED MAY 14, 1954, RECORDED IN BOOK 2184, PAGE 005.

   f. DRAINAGE RIGHTS WHICH ARE AFFECTED BY AN AGREEMENT BETWEEN WILLIAM H. CHANDLER AND MARY B. HAWKES WHICH GIVES PERMISSION TO DRAIN OVER LAND OF MARY B. HAWKES. SAID AGREEMENT IS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 1503, PAGE 038.

7. AS OF THE ORIGINAL DATE OF THIS PLAN, THE PARCEL SURVEYED IS LOCATED IN THE R3 ZONE. PORTIONS OF BULK & SPACE REQUIREMENTS ARE AS FOLLOWS:
   MINIMUM LOT AREA = 6,500 S.F.
   MINIMUM FRONTAGE = 50'
   SETBACKS:
   FRONT = 25'
   SIDE = <1.5 STORY TO 1.5 STORY – 8'
   2 STORY – 14'
   3 STORY – 16'
   REAR = 25'
   OTHER MUNICIPAL AND STATE OVERLAY ZONES MAY EXIST AND APPLY. BEFORE PROCEEDING ON ANY PROJECT WE RECOMMEND VERIFYING CURRENT ZONE AND ALL APPLICABLE SETBACKS AND RESTRICTIONS WITH THE APPROPRIATE AGENCIES.

8. THE UTILITIES SHOWN ON THIS PLAN WERE FROM FIELD OBSERVATION ONLY. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTACT DIG-SAFE AT (811) PRIOR TO ANY EXCAVATION WORK.

9. WETLANDS WERE DELINEATED BY COPPI ENVIRONMENTAL, LLC ON JANUARY 17, 2025 AND WERE LOCATED WITH A TRIMBLE TDC650 HANDHELD UNIT.

Revision:	By:	Date:	Change:

PROJECT: 43105	DRAWING NAME: 43105.dwg		
ISSUED: FEBRUARY 24, 2025	SCALE: 1"=40'	FB # NO	DRAWN BY: ASF
FIELDED BY: KSK/JMV	FIELD DATE: 10/23/2024		CHECKED BY: DMM / TFM

Drawing Name and Location:

BOUNDARY SURVEY & PROPOSED LOT SPLIT
57 CASTINE AVENUE, PORTLAND, MAINE 04103

Owner:

WAYNE H. NASON & DEBORAH J. NASON
57 CASTINE AVENUE, PORTLAND, MAINE 04103

Prepared For:

HABITAT FOR HUMANITY
659 WARREN AVENUE, PORTLAND, MAINE 04103

SURVEYING • ENGINEERING • LAND PLANNING
Northeast Civil Solutions
INCORPORATED
381 PAYNE ROAD, SCARBOROUGH, MAINE 04074
tel 207.883.1000
e-mail / website
info@northeastcivilsolutions.com
www.northeastcivilsolutions.com

0 40' 80' 160'

STAMP AND SIGNATURE

Preliminary

TROY F. McDONALD
MAINE PROFESSIONAL LAND SURVEYOR No. 2080
DATE

ABUTTER LIST

PARCEL	OWNER	DEED
309-D-16	TRU LE	35768/043
309-D-25	LUKE BOYLE	39345/254
309-D-28 & 29	ANNA GOLENDUKHINA	36506/256
309-D-30 & 31	MARK D. BOWEN JOAN BOWEN	24161/195
309-D-32	ARAFA A. MOHAMED & BUBIKER I. MOHAMED	39553/178
309-D-35, 36 & 37	JIA HOU & CHENN QIAN ZHOU	40520/050
309-D-38 & 39	TYRA K. MAZZER	38424/311
309-D-41	AMNEST CAPITAL PARTNERS, LLC	26171/041
309-D-42	KACIE M. BURREGI & MICHAEL J. MANNING	36778/031
309-D-61	SUZANNE LEENEY-SINCLAIR	33128/069
307-I-6	GREGORY J. QUEEN	14954/329
307-I-7	STEVEN T. EATON & DELORA EATON	17034/055
307-I-9	CHRISTINA SILBERMAN & ADAM SILBERMAN	23335/184
307-I-10	CRAIG SMALL & JANE MAVOR-SMALL	34964/338
307-I-11	JOHN PREISSLER & CATHERINE PREISSLER	31554/193

E:\Land Projects\43000\43105-Habitat For Humanity-Portland\dwg\43105.dwg

VICINITY MAP

N.T.S.

SUBDIVISION NOTES

S-1. DEVELOPER:
HABITAT FOR HUMANITY OF GREATER PORTLAND
659 WARREN AVENUE
PORTLAND, MAINE 04103

S-2. SURVEYING / ENGINEERING:
NORTHEAST CIVIL SOLUTIONS, INC.
381 PAYNE ROAD
SCARBOROUGH, MAINE 04074

S-3. WETLAND DELINEATION:
COPPI ENVIRONMENTAL, LLC
P.O. BOX 226
HOLLIS CENTER, MAINE 04042

S-4. THE SUBJECT PARCEL IS LOCATED IN R3 DISTRICT. PORTIONS OF BULK & SPACE REQUIREMENTS ARE AS FOLLOWS:
MIN. LOT AREA = 3,250 S.F.
FRONT YARD = 10'
REAR YARD = 12.5'
SIDE YARD = 5'
MIN. LOT FRONTAGE = 20'

S-5. ELEVATIONS AND CONTOURS ARE BASED ON NAVD 1988 DATUM. SEE PLAN FOR TBM DESCRIPTION.

ABUTTER LIST

PARCEL	OWNER	DEED
309-D-16	TRU LE	35768/043
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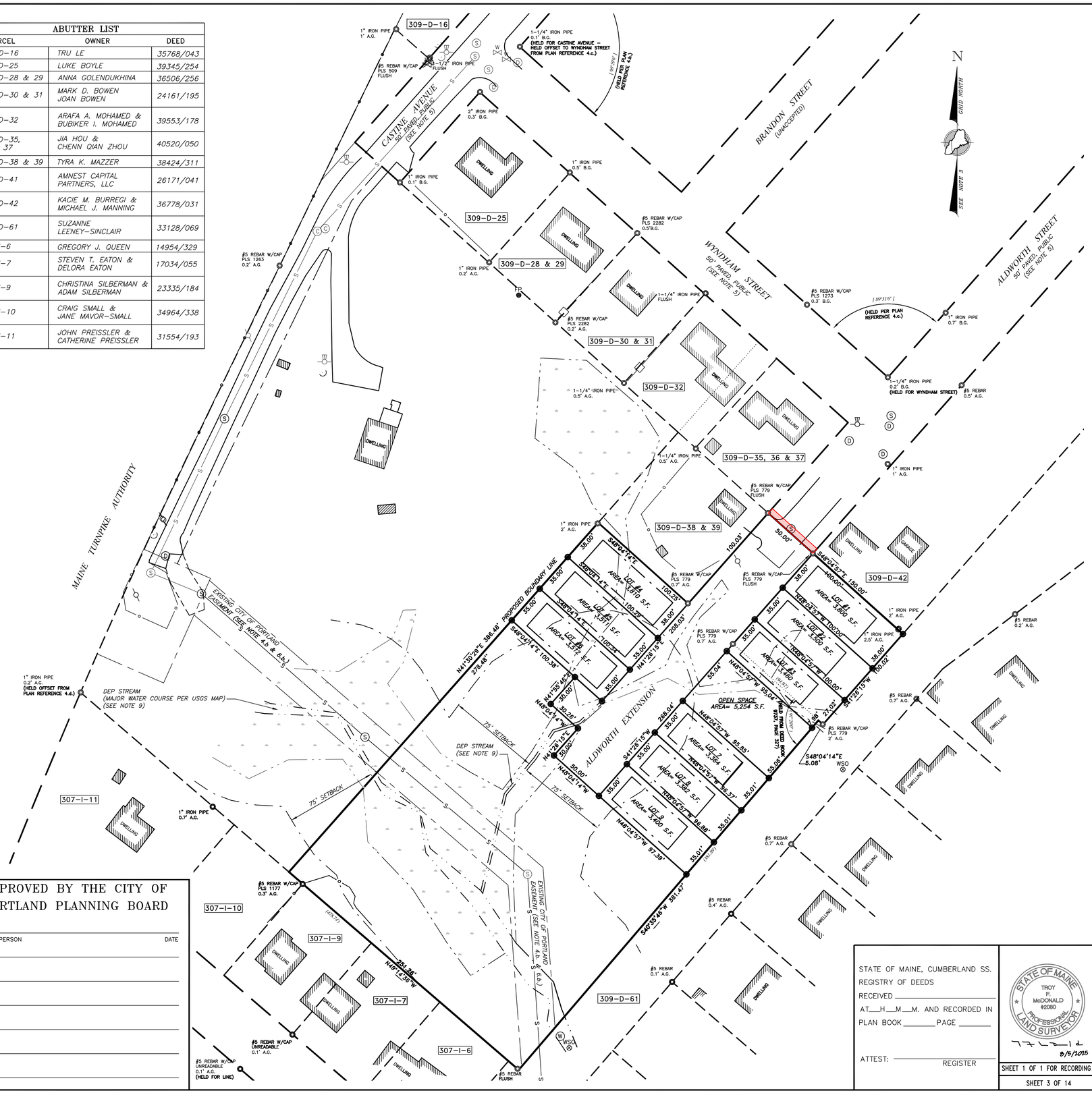

APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

CHAIRPERSON DATE

STATE OF MAINE, CUMBERLAND SS.
REGISTRY OF DEEDS
RECEIVED _____
AT___H___M___M. AND RECORDED IN
PLAN BOOK _____ PAGE _____

ATTEST: _____
REGISTER

STATE OF MAINE
TROY F. McDONALD #2080
PROFESSIONAL LAND SURVEYOR
8/5/2025

SHEET 1 OF 1 FOR RECORDING

SHEET 3 OF 14

LEGEND

- #5 REBAR WITH CAP (PROPOSED)
- SET GRANITE MONUMENT WITH CAP (PROPOSED)
  (PROPOSED MONUMENTATION SHOWN ON THIS SURVEY PLAT MAY OR MAY NOT BE SET BY NCS, INC. AND IF SO WILL BE DONE UPON CLIENT AUTHORIZATION)
- FOUND IRON (SIZE & TYPE AS NOTED)
- FOUND MONUMENT (SIZE & TYPE AS NOTED)
- SOIL TEST PIT
- UTILITY POLE (NUMBER AS NOTED)
- GUY WIRE ANCHOR
- BOUNDARY LINE
- EASEMENT LINE
- EDGE OF GRAVEL
- EDGE OF PAVEMENT
- RIGHT-OF-WAY LINE
- ABUTTER LINE
- BUILDING SETBACK
- OVERHEAD UTILITY
- FORMER DEED LINES
- *N/F* NOW OR FORMERLY OWNED BY
- *1234/567* DEED BOOK AND PAGE
- *12-34* TAX MAP-LOT
- *(123.45')* PARENTHESIS DENOTE RECORD DATA

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   b."ALDWORTH EXTENSION SUBDIVISION, ALDWORTH STREET, PORTLAND, ME, SUBDIVISION PLAT" BY LAND USE CONSULTANTS, DATED MARCH 11, 1988, UNRECORDED.

   c. CITY OF PORTLAND ENGINEER RECORDS

   d. "PLAN SHOWING NEW LOTS ONLY, PHASE III ADDENDUM OF PINE TREE TERRACE SUBDIVISION, PORTLAND, MAINE. PLAN MADE FOR EUCLID AMBLER ASSOC." BY D.A. MAXFIELD, JR., LAND SURVEYING, DATED FEBRUARY 1987, RECORDED IN PLAN BOOK 166, PAGE 50, CUMBERLAND COUNTY REGISTRY OF DEEDS.

5. THE WIDTH OF CASTINE AVENUE IS 50' BASED ON PLAN REFERENCE 4.a. THE LAYOUT OF THE RIGHT-OF-WAY LIMITS IS BASED ON PLAN REFERENCE 4.a. AND MONUMENTATION FOUND.

6. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
   a. A RIGHT-OF-WAY WHICH BENEFITS DOROTHY JONES SMALL AND JOHN F. AND EDNA M. DAVISHEIRS WHICH IS AN EXTENSION OF ALDWORTH STREET SOUTHWESTERLY 100'.

   b. SEWER EASEMENT CONVEYED TO THE CITY OF PORTLAND AS SHOWN ON A PLAN ENTITLED "FARNUM STREET PUMPING STATION FORCE MAIN GRAVITY SEWER AND FUTURE STORM DRAIN" DATED MAY 15, 1979, CITY OF PORTLAND FILE NO. 499/19.

   c. EASEMENT TO CUMBERLAND COUNTY POWER & LIGHT COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY DATED AUGUST 29, 1936 RECORDED IN BOOK 1503, PAGE 484.

   d. CENTRAL MAINE POWER COMPANY DATED MAY 16, 1946 RECORDED IN BOOK 1823, PAGE 085.

   e. CENTRAL MAINE POWER COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY DATED MAY 14, 1954, RECORDED IN BOOK 2184, PAGE 005.

   f. DRAINAGE RIGHTS WHICH ARE AFFECTED BY AN AGREEMENT BETWEEN WILLIAM H. CHANDLER AND MARY B. HAWKES WHICH GIVES PERMISSION TO DRAIN OVER LAND OF MARY B. HAWKES. SAID AGREEMENT IS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 1503, PAGE 038.

7. AS OF THE ORIGINAL DATE OF THIS PLAN, THE PARCEL SURVEYED IS LOCATED IN THE R3 ZONE. PORTIONS OF BULK & SPACE REQUIREMENTS ARE AS FOLLOWS:
   MIN. LOT AREA = 3,250 S.F.
   FRONT YARD = 10'
   REAR YARD = 12.5'
   SIDE YARD = 5'
   MIN. LOT FRONTAGE = 20'

   OTHER MUNICIPAL AND STATE OVERLAY ZONES MAY EXIST AND APPLY. BEFORE PROCEEDING ON ANY PROJECT WE RECOMMEND VERIFYING CURRENT ZONE AND ALL APPLICABLE SETBACKS AND RESTRICTIONS WITH THE APPROPRIATE AGENCIES.

8. THE UTILITIES SHOWN ON THIS PLAN WERE FROM FIELD OBSERVATION ONLY. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTACT DIG-SAFE AT (811) PRIOR TO ANY EXCAVATION WORK.

9. WETLANDS WERE DELINEATED BY COPPI ENVIRONMENTAL, LLC ON JANUARY 17, 2025 AND WERE LOCATED WITH A TRIMBLE TDC650 HANDHELD UNIT.

Revision:	By:	Date:	Change:

PROJECT: 43105	DRAWING NAME: 43105 SUBDIVISION.dwg	
DATE: JUNE 3, 2025	SCALE: 1"=40' FB # NO	DRAWN BY: ASF
FIELDED BY: KSK/JMV	FIELD DATE: 10/23/2024	CHECKED BY: DMM / TFM

Drawing Name and Location:
LAND OF LANE SUBDIVISION PLAT
57 CASTINE AVENUE, PORTLAND, MAINE 04103

Owner:
WAYNE H. NASON & DEBORAH J. NASON
57 CASTINE AVENUE, PORTLAND, MAINE 04103

Prepared For:
HABITAT FOR HUMANITY
659 WARREN AVENUE, PORTLAND, MAINE 04103

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0 40' 80' 160'

E:\Land Projects\43000\43105-Habitat For Humanity-Portland\dwg\43105 SUBDIVISION.dwg

LAND OF LANE SUBDIVISION

CONSERVATION RESIDENTIAL DEVELOPMENT
ALDWORTH STREET
PORTLAND, MAINE 04103

PROJECT DEVELOPMENT TEAM

OWNER:

NASON, WAYNE H,
DEBORAH J JTS
57 CASTINE AVE
PORTLAND, MAINE 04103

APPLICANT:

HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE
PORTLAND, MAINE 041103

CIVIL ENGINEER/AGENT:

NORTHEAST CIVIL SOLUTIONS
381 PAYNE ROAD
SCARBOROUGH, MAINE 04074
BILL GERRISH, P.E.

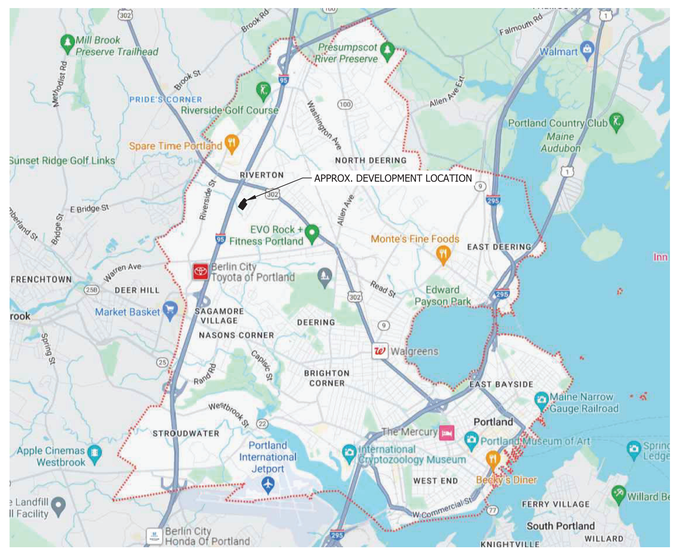
SURVEYOR:

NORTHEAST CIVIL SOLUTIONS
381 PAYNE ROAD
SCARBOROUGH, MAINE 04074
TROY MCDONALD, PLS

TRAFFIC ENGINEER

BARTON & LOGUIDICE
383 US RT 1, SUITE 2A
SCARBOROUGH, MAINE 04074
WILLIAM J. BRAY, P.E.

SOIL SCIENTIST
COPPI ENVIRONMENTAL
CHRIS COPPI, LSS, LSE, CWS



LOCUS MAP
SCALE: 1"=10,000'

THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING

SHEET INDEX

1	COVER/INDEX
2	BOUNDARY SURVEY PLAN
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5	GRADING AND DRAINAGE PLAN
6	ROAD PROFILE
7	UTILITY PLAN
8	EROSION CONTROL PLAN
9	EROSION CONTROL NOTES & DETAIL
10-14	CONSTRUCTION DETAILS

Revisions:	By:	Date:	Changes:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025
DRAWING STATUS	Drawing Name: COVER & SHEET INDEX		
	Project Name: LAND OF LANE SUBDIVISION		
	Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND 659 WARREN AVENUE PORTLAND, MAINE 04103		

STATE OF MAINE
WILLIAM A. GERRISH
No. 8830
LICENSED PROFESSIONAL ENGINEER
04-11-25

SHEET 1 OF 14

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EROSION AND SEDIMENTATION CONTROL PLAN

INTRODUCTION

THE FOLLOWING PLAN FOR CONTROLLING SEDIMENTATION AND EROSION FROM THIS PROJECT IS BASED UPON SOUND CONSERVATION PRACTICES, AND ADHERES TO THE STANDARDS DETAILED IN THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH 2003. THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THE AFOREMENTIONED PUBLICATION AND COMPLY WITH THE PRACTICES PRESENTED THEREIN.

THIS REPORT ADDRESSES THE EROSION CONTROL MEASURES TO BE APPLIED TO THE PROPOSED SITE WORK FOR THE PROJECT. REFERENCE IS MADE TO THE EROSION CONTROL EXHIBITS, SHOWING THE LOCATIONS OF PROPOSED MEASURES INCLUDED IN THIS REPORT.

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 DOWNGRADIENT 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: PLACE IN DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES.

1.3 RIPRAP: PROVIDE RIPRAP IN AREAS WHERE SLOPES ARE STEEPER THAN 2:1 AND 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 WITHIN 5 DAYS OF FINAL GRADING. SEEDING REQUIREMENTS ARE PROVIDED AT THE END OF THIS SPECIFICATION.

1.5 JUTE MESH: STRAW AND HAY MULCH; USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH CAN BE USED ON SLOPES LESS THAN 3:1. USE JUTE MESH ON SLOPES IN EXCESS OF 3:1.

1.6 INLET PROTECTION: STRAW BALE DROP INLET STRUCTURE

1.6.1 BALES SHALL BE EITHER WIRE-BOUND OR STRING TIED WITH THE BINDINGS ORIENTATED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.

1.6.2 BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.

1.6.3 THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED AROUND THE INLET THE WIDTH OF A BALE TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
1.6.4 EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.

1.6.5 LOOSE STRAW SHALL BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.

1.7 MAINTENANCE

1.7.1 THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

2. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES
PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:

2.1 STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY HAUL TO OR FROM THE SITE.

2.2 SILTATION FENCE ALONG THE DOWNGRADIENT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE SITE IS REVEGETATED.

2.3 HAY BALES AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.
2.4 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.

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.

2.5 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.

2.6 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.

2.7 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 STORMWATER RUNOFF GENERATED BY THE DEVELOPMENT OF THIS SITE WILL BE COLLECTED IN A CLOSED DRAINAGE SYSTEM.

3.2 ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SODDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

3.3 SLOPES GREATER THAN 2:1 WILL BE TREATED WITH RIPRAP.

4. CONSTRUCTION PHASE
THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

4.1 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. 4.4

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.

4.3 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. 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. SEEDED WITH CONSERVATION MIX AND MULCHED IMMEDIATELY.

STOCKPILES EXPECTED TO REMAIN LONGER THAN 7 DAYS SHALL BE ENCIRCLED WITH HAY BALES OR SILT FENCE AT THE TOE OF THE PILE.

4.4 ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 7 DAYS SHALL BE EITHER:

A. TREATED WITH ANCHORED MULCH IMMEDIATELY, OR

B. SEEDED WITH CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LBS/1000 SQ. FT) AND MULCHED IMMEDIATELY.

4.5 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.)

4.6 CONSTRUCTION TRAFFIC WILL BE DIRECTED OVER THE PROPOSED ROADWAY SYSTEM. ANY AREAS SUBJECT TO RUTTING WILL BE STABILIZED IMMEDIATELY. THE ENTRANCE WILL BE SWEPT WEEKLY, SHOULD MUD BE TRACKED ONTO IT.

5. POST-CONSTRUCTION REVEGETATION
THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION AS SOON AS AN AREA IS READY TO UNDERGO FINAL GRADING.

5.1 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.
5.2 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:

KENTUCKY BLUEGRASS 0.46 LBS/1000 SF. CREEPING RED FESCUE 0.46
CREEPING RED FESCUE 0.46 LBS/1000 SF. LBS/1000 SF RED TOP 0.05
PERENNIAL RYEGRASS 0.11 LB/1000 SF. LBS/1000 SF. TALL FESCUE 0.46 LBS/1000 SF.

5.3 AN AREA SHALL BE MULCHED IMMEDIATELY AFTER IT HAS BEEN SEEDED. MULCHING SHALL CONSIST OF HAY MULCH, HYDRO- MULCH 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:

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%.

B. HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF EITHER WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 9/15 AND 4/15.

5.5 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.

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 SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.

E. FERTILIZING, SEEDING AND MULCHING SHALL BE DONE ON LOAM THE DAY THE LOAM IS TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.

F. HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/ BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.

5.6 FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED EVERY 30 DAYS UNTIL 80% 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.

6. 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:

6.1 HAY BALE BARRIERS AND SILT FENCE 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.

6.2 VISUALLY INSPECT RIP RAP 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.

6.3 REVEGETATION OF DISTURBED AREAS WITHIN 25' OF DRAINAGE-COURSE/STREAM WILL BE SEEDED WITH THE "MEADOW AREA MIX" AND INSPECTED ON A WEEKLY BASIS OR AFTER EACH SIGNIFICANT RAINFALL AND RESEEDED AS NEEDED. EXPOSED AREAS WILL BE RESEEDED AS NEEDED UNTIL THE AREA HAS OBTAINED 100% GROWTH RATE. PROVIDE PERMANENT RIPRAP FOR SLOPES IN EXCESS OF 3:1 AND WITHIN 25' OR DRAINAGE COARSE.

7. EROSION CONTROL REMOVAL

AN AREA IS CONSIDERED STABLE IF IT IS PAVED, GRAVEL, OR IF 80% GROWTH OF PLANTED SEEDS IS ESTABLISHED. ONCE AN AREA IS CONSIDERED STABLE, THE EROSION CONTROL MEASURES CAN BE REMOVED AS FOLLOWS:

7.1 HAY BALES AND SILT FENCE THE HAY BALES AND SILT FENCE SHALL BE DISPOSED OF LEGALLY AND PROPERLY OFF-SITE. ALL SEDIMENT TRAPPED BEHIND THESE CONTROLS SHALL BE:

A. DISTRIBUTED TO AN AREA UNDERGOING FINAL GRADING.

B. GRADED IN AN AESTHETIC MANNER TO CONFORM TO THE TOPOGRAPHY, FERTILIZED, SEEDED AND MULCHED IN ACCORDANCE WITH THE RATES PREVIOUSLY STATED.

7.2 MISCELLANEOUS: ONCE ALL THE TRAPPED SEDIMENTS HAVE BEEN REMOVED FROM THE TEMPORARY SEDIMENTATION DEVICES, THE DISTURBED AREAS MUST BE REGRADED IN AN AESTHETIC MANNER TO CONFORM TO THE SURROUNDING TOPOGRAPHY. ONCE GRADED,THESE DISTURBED AREAS MUST BE LOAMED (IF NECESSARY) FERTILIZED, SEEDED AND MULCHED IN ACCORDANCE WITH THE RATES PREVIOUSLY STATED.

8. WINTER CONSTRUCTION

8.1 WINTER CONSTRUCTION: CONSTRUCTION PERFORMED ANY TIME BETWEEN NOVEMBER 1 AND APRIL 15 OF ANY YEAR SHALL BE CONSIDERED "WINTER CONSTRUCTION," AND SHALL CONFORM TO THE FOLLOWING CRITERIA.

8.2 MAXIMUM AREAS WITHOUT STABILIZATION: WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. EXPOSED AREAS SHALL BE LIMITED TO THE AREA THAT CAN BE MULCHED IN ONE DAY, PRIOR TO ANY SNOW EVENT. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED WITH EROSION CONTROL PROTECTION.

9. STABILIZATION

9.1 AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 LB PER 1,000 SF. (WITH OR WITHOUT SEEDING), OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT THE SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.

9.2 LOAM OR SEED WILL NOT BE REQUIRED BETWEEN THE DATES OF OCTOBER 15, AND APRIL 15. DURING PERIODS WHEN TEMPERATURES ARE ABOVE FREEZING, EXPOSED SLOPES SHALL BE FINE-GRADED AND PROTECTED WITH MULCH, OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. AFTER NOVEMBER 1, ANY LOAMED, SMOOTH, FINAL GRADED AREAS MAY BE DORMANT SEEDED AT A RATE OF 200% TO 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED, AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING TEMPERATURES, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING, AND THE SURFACE SHALL BE PROTECTED TEMPORARILY FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED DURING 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 PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF HAY BALES OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.

9.3 MULCH ANCHORING: MULCH ANCHORING SHALL BE INSTALLED ACCORDING TO THE FOLLOWING CRITERIA:

A. BETWEEN NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR TRACK OR WOOD CELLULOSE FIBER.

B. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 5%.

C. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 5%.

9.4 DAILY PROTECTION: DURING THE PERIOD OF OCTOBER 1 TO APRIL 15, ALL BARE AND EXPOSED EARTH SHALL BE TREATED WITH A DORMANT SEEDING, MULCHED AND ANCHORED AT THE END OF EACH WORKING DAY.

9.5 SNOW REMOVAL: SNOW SHALL BE REMOVED PRIOR TO THE APPLICATION OF SEED AND MULCH.

10. LIMITS OF CONSTRUCTION

10.1 LIMIT OF CONSTRUCTION: THE LIMIT OF CONSTRUCTION FOR THE SITE SHALL BE AS INDICATED ON THE PLANS. NO DISTURBANCE OF SOILS, VEGETATION, OR WETLANDS WILL BE PERMITTED BEYOND THE LIMIT OF DISTURBANCE, EXCEPT IN THE AREAS OF STORMWATER DITCHES, CULVERTS, AND DISCHARGE APRONS.

10.2 CONSTRUCTION STAGING AREAS: THE CONSTRUCTION AND STAGING AREAS FOR THE SITE SHALL BE LOCATED IN WITHIN THE LIMIT OF DISTURBANCE. SILT FENCING SHALL BE PLACED ALL AROUND THE PERIMETER OF THE STAGING/STORAGE AREAS.

10.3 SCHEDULE: THE ANTICIPATED CONSTRUCTION SCHEDULE IS DURING THE YEAR OF 2014, AND WILL BEGIN WITH THE INSTALLATION OF EROSION CONTROL SYSTEMS TO PROTECT DRAINAGE WAYS AND AREAS OUTSIDE THE CONSTRUCTION LIMITS. SILT FENCING AND DITCH PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE IN THE CONTRIBUTING DRAINAGE AREA. AS SOON AS CONTROL MEASURES ARE IN PLACE, AND PRIOR TO COMMENCING SOIL DISTURBANCE ACTIVITIES, THE CONSTRUCTION ROAD SHALL BE INSTALLED. IT IS IMPERATIVE THAT DISTURBANCES TO VEGETATION BE LIMITED ONLY TO THOSE AREAS, WHICH ARE NECESSARY TO ACCOMPLISH THE WORK.

10.4 THE FINE AND VERY FINE SANDY LOAMS THAT WILL BE EXPOSED DURING SITE PREPARATION MAY BE SUSCEPTIBLE TO EROSION, AND CAN UNDERGO STRENGTH LOSS WHEN SUBJECTED TO CONSTRUCTION TRAFFIC AND EXCAVATION ACTIVITIES, PARTICULARLY DURING PERIODS OF PRECIPITATION AND HIGH GROUND WATER LEVELS. THEREFORE, CARE WILL BE EXERCISED DURING CONSTRUCTION TO MINIMIZE DISTURBANCE OF THE BEARING SOILS. ALL TOPSOIL, ORGANIC AND LOOSE SURFACE SOIL WILL BE STRIPPED AND STORED FOR REUSE LATER. SHOULD THE SUBGRADE BECOME SOFT OR DIFFICULT TO WORK AND/OR WHEREVER SUBSURFACE DRAINAGE CAVITIES ARE ENCOUNTERED, THE SUBGRADE WILL BE OVER EXCAVATED AS REQUIRED, AND BACKFILLED WITH GRANULAR FILL OR CRUSHED STONE.

11 HOUSEKEEPING

11.1 SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

11.2 GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN, OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

11.3 FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

11.4 DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

11.5 TRENCH OR FOUNDATION DE-WATERING: TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

11.6 NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES.

11.7 STREET SWEEPING: ANY SOIL MATERIAL TRACKED ONTO THE PUBLIC ROADWAY SHALL BE SWEPT ON A DAILY BASIS.

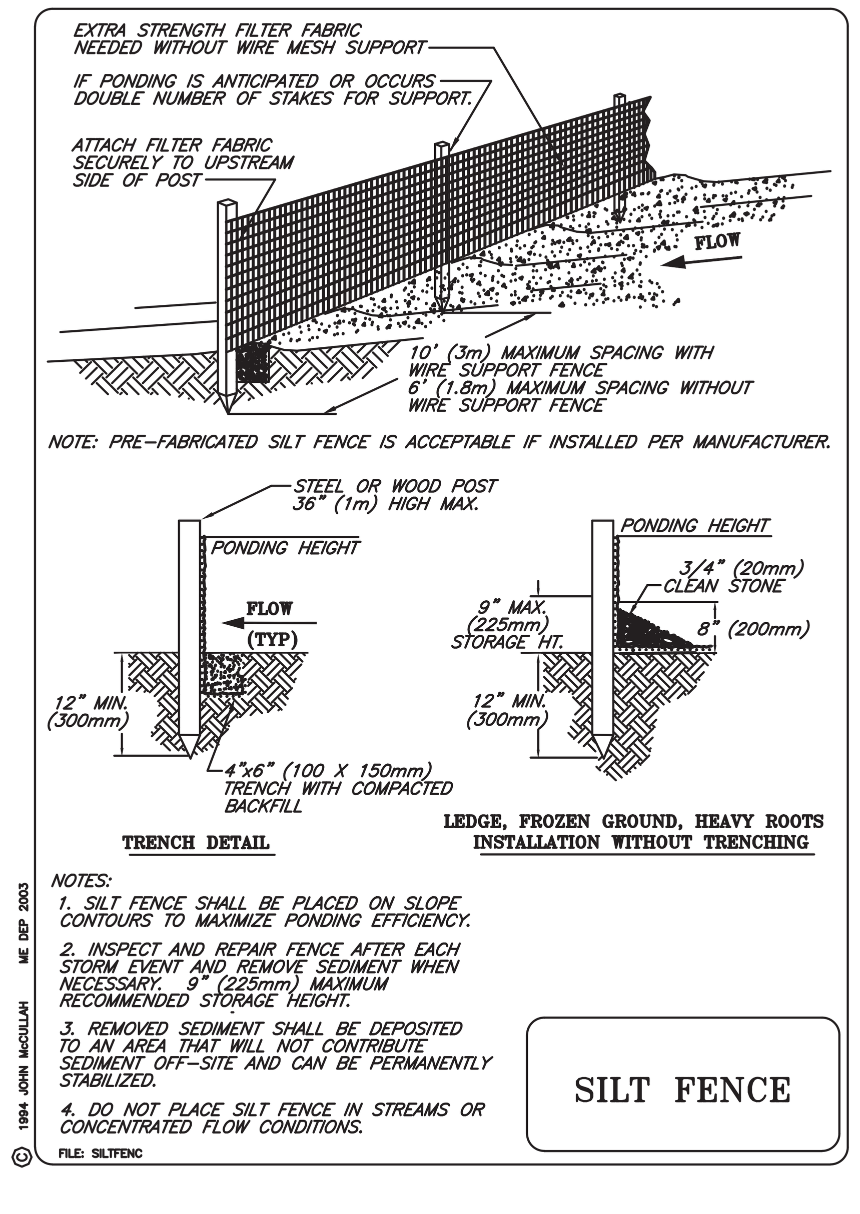
11.8 ADDITIONAL REQUIREMENTS: ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.

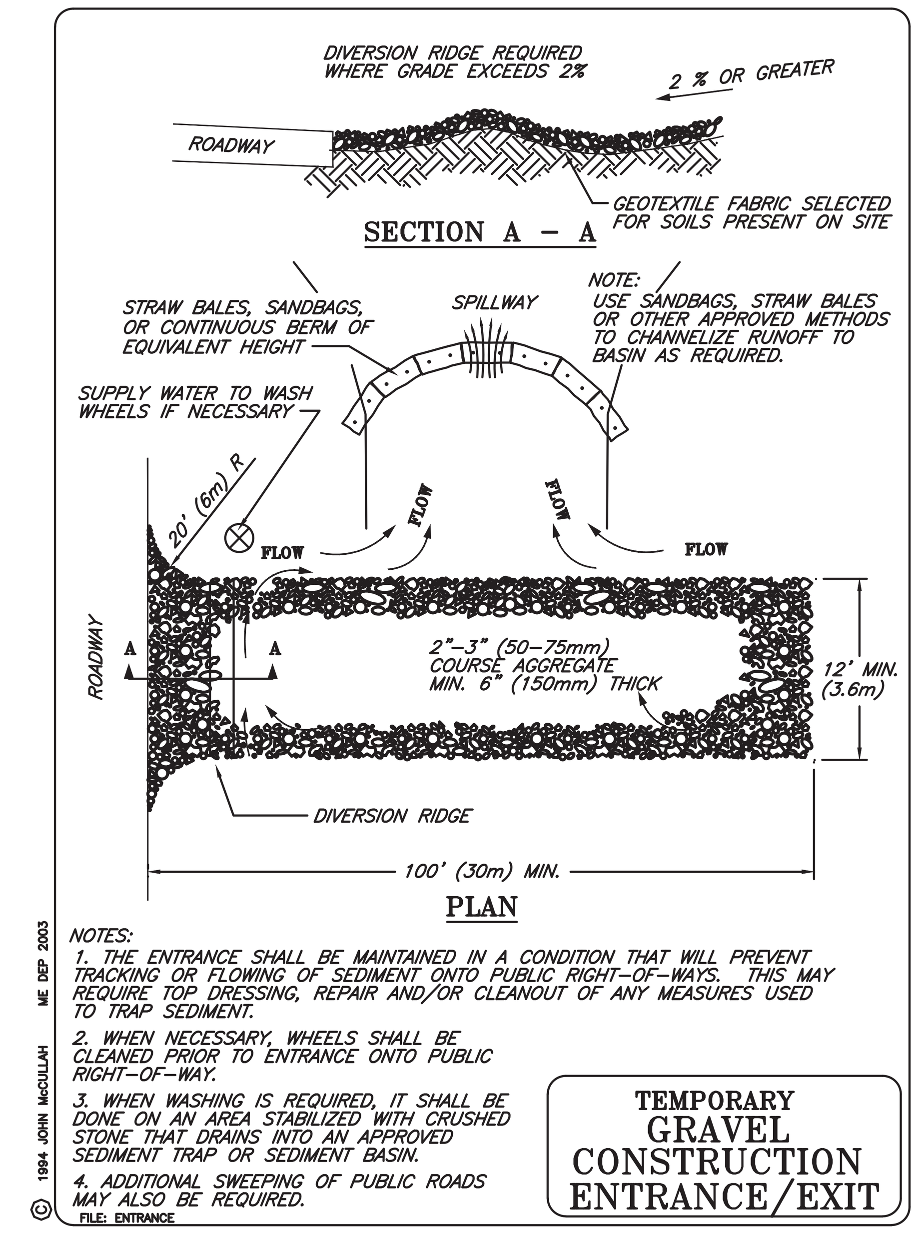
BASIC STANDARDS – EROSION CONTROL MEASURES:

MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE.

GENERAL NOTE:

ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET MDOT ITEM 656.



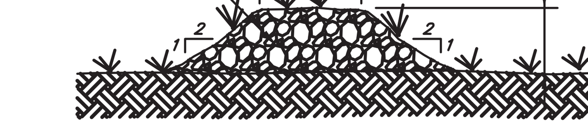


EROSION CONTROL MIX BERMS
EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

COMPOSITION
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:

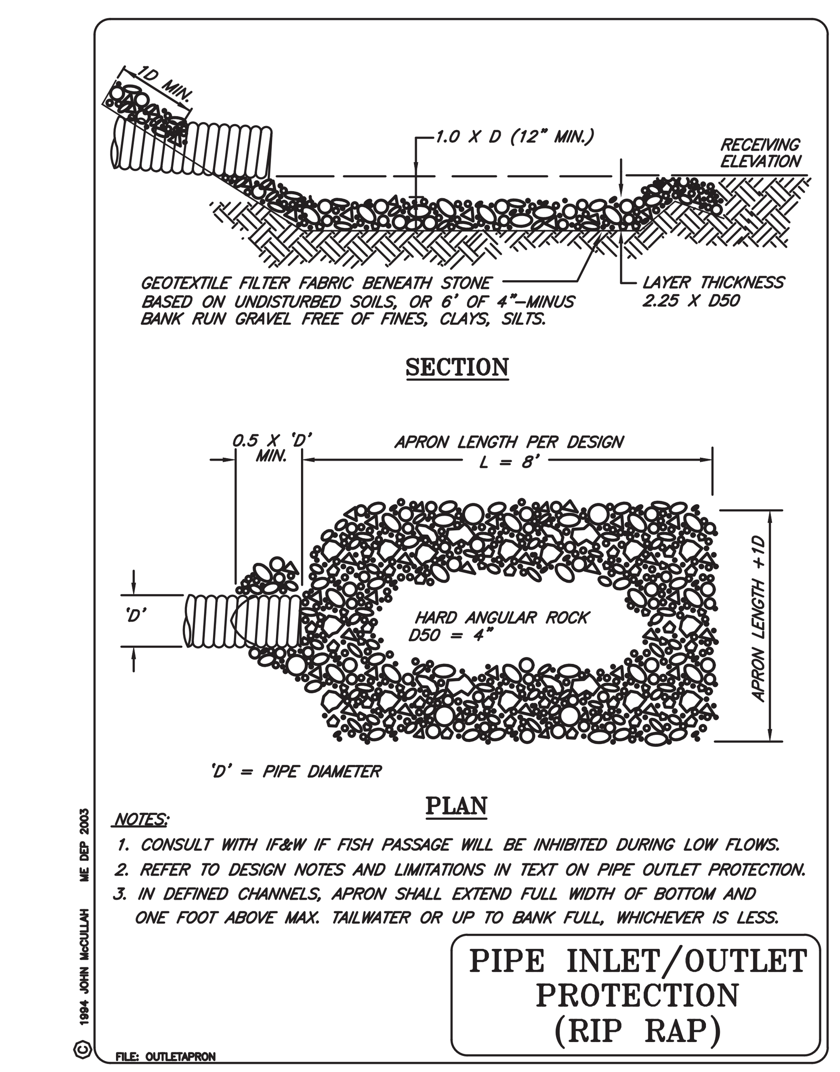
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHALL BE 100 % PASSING A 6" SCREEN AND A MINIMUM OF 70 %, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
- THE PH SHOULD FALL BETWEEN 5.0 AND 8.0.

INSTALLATION
- THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
- ON SLOPES LESS THAN 5 % *OR* AT THE BOTTOM OF STEEPER SLOPES (<2:1) UP TO 20 FEET LONG, THE BARRIER MUST BE *A MINIMUM OF* 12" HIGH, AS MEASURED ON THE UPHILL SIDE OF THE BARRIER, *AND A MINIMUM* OF TWO FEET WIDE. *ON LONGER OR STEEPER SLOPES,* THE BARRIER SHOULD BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.
- FROZEN GROUND, OUTCROPS OF BEDROCK AND VERY ROOTED FORESTED AREAS ARE LOCATIONS WHERE BERMS OF EROSION CONTROL MIX ARE MOST PRACTICAL AND EFFECTIVE.
- OTHER BMPS SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM (I.E., A LARGE UP GRADIENT CONTRIBUTING WATERSHED).



*** FOR USE AS REINFORCED MULCH BERM 2 ROWS OF EROSION MIX MUST BE INSTALLED SUPPORTED BY A MINIMUM OF 1 ROW OF HAY BALES UPSTREAM.**

MULCH BERM



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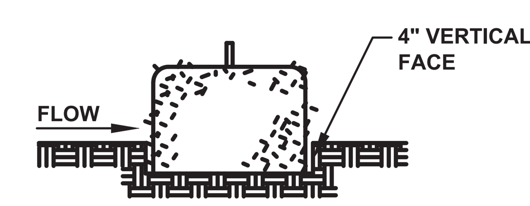
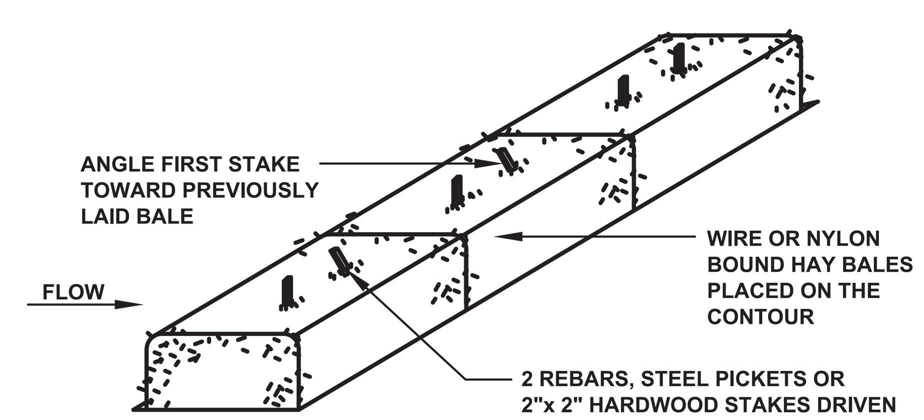
NOTES:

1. **BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.**
2. **EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".**
3. **BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.**
4. **INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS DIRECTED BY PROJECT ENGINEER.**
5. **BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.**



EMBEDDING DETAIL



ANCHORING DETAIL

HAY BALE SEDIMENT BARRIER

NOT TO SCALE

Revision:	By:	Date:	Change:

PROJECT NUMBER: 43152 | ACAD FILE: 43152-PR.DWG | SCALE: 1" = 20' | DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name: EROSION CONTROL NOTES & DETAILS

Project Name: LAND OF LANE SUBDIVISION

Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE – WILLIAM A. GERRISH – No. 8830 – LICENSED – PROFESSIONAL ENGINEER – 04-11-25

SHEET 9 OF 14

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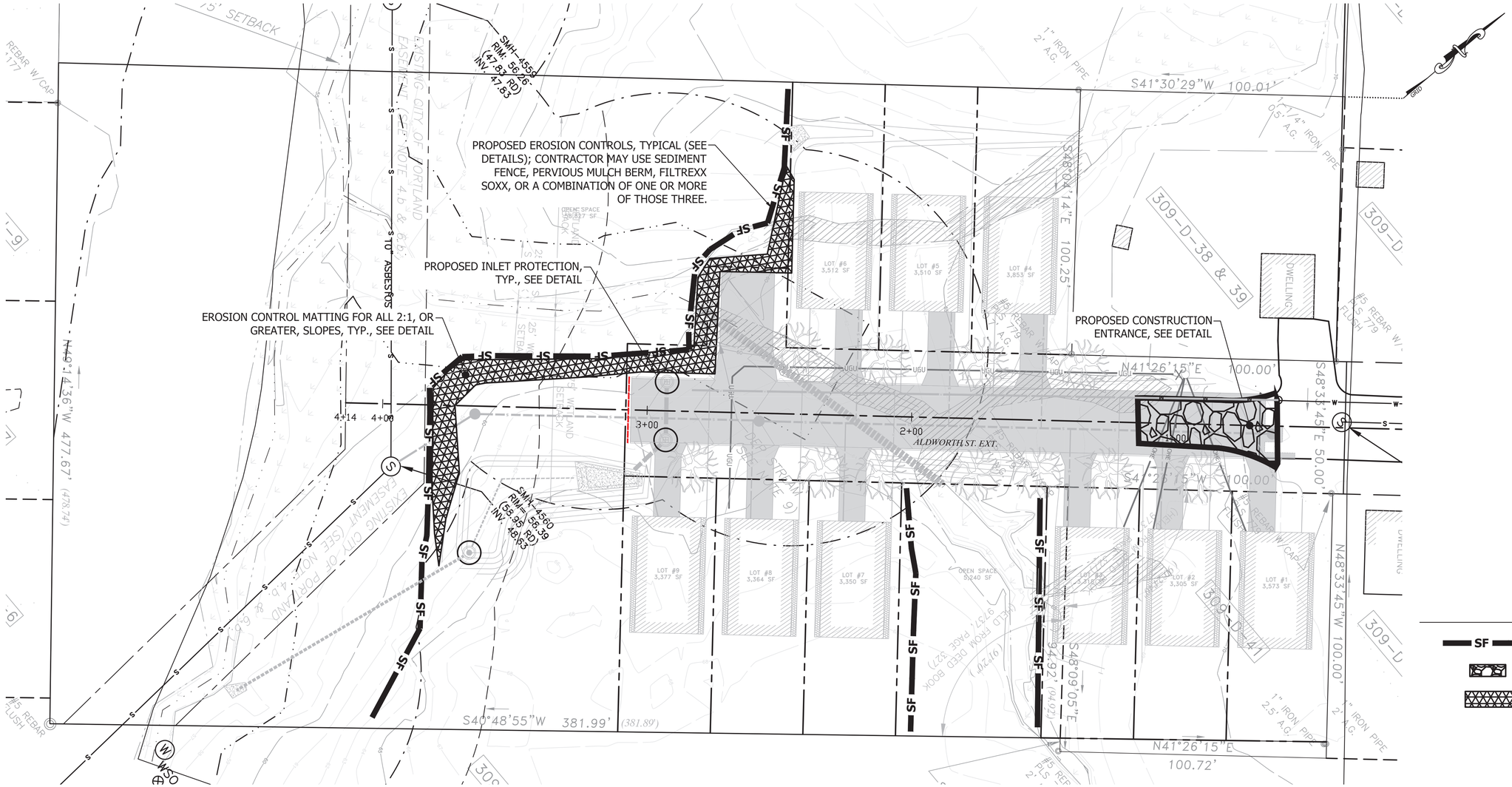

LEGEND

SF	MULCH BERM/EROSION CONTROL MIX OR SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE
	EROSION CONTROL MATTING

THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING

GENERAL EROSION CONTROL NOTES

A. KEEP SITE MODIFICATION TO A MINIMUM

1. CONSIDER FITTING THE BUILDING AND DRIVEWAY TO THE NATURAL TOPOGRAPHY. THIS REDUCES THE NEED FOR CUTS AND FILLS. AVOID EXTENSIVE GRADING THAT WOULD ALTER DRAINAGE PATTERNS OR CREATE VERY STEEP SLOPES.
2. EXPOSE AREAS OF BARE SOIL TO EROSIVE ELEMENTS FOR THE SHORTEST TIME POSSIBLE.
3. SAVE AND PROTECT DESIRABLE EXISTING VEGETATION WHERE POSSIBLE. ERECT BARRIERS TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
4. LIMIT THE GRADES OF SLOPES SO VEGETATION CAN BE EASILY ESTABLISHED AND MAINTAINED.
5. AVOID SUBSTANTIAL INCREASE IN RUNOFF LEAVING THE SITE.

B. MINIMIZE POLLUTION OF WATER DURING CONSTRUCTION ACTIVITIES

1. STOCKPILE TOPSOIL REMOVED FROM CONSTRUCTION AREA AND SPREAD OVER ANY DISTURBED AREAS PRIOR TO REVEGETATION. TOPSOIL STOCKPILES MUST BE PROTECTED FROM EROSION.
2. PROTECT BARE SOIL AREAS EXPOSED BY GRADING ACTIVITIES WITH TEMPORARY VEGETATION OR MULCHES.
3. USE SEDIMENT BASINS TO TRAP DEBRIS AND SEDIMENT WHICH WILL PREVENT THESE MATERIALS FROM MOVING OFF SITE.
4. USE DIVERSIONS TO DIRECT WATER AROUND THE CONSTRUCTION AREA AND AWAY FROM EROSION PRONE AREAS TO POINTS OF SAFE DISPOSAL.
5. USE TEMPORARY CULVERTS OR BRIDGES WHEN CROSSING STREAMS WITH EQUIPMENT.
6. PLACE CONSTRUCTION FACILITIES, MATERIALS, AND EQUIPMENT STORAGE AND MAINTENANCE AREAS AWAY FROM DRAINAGE WAYS.

C. PROTECT AREA AFTER CONSTRUCTION.

1. ESTABLISH GRASS OR OTHER SUITABLE VEGETATION ON ALL DISTURBED AREAS. SELECT SPECIES ADAPTED TO THE SITE CONDITIONS AND THE FUTURE USE OF THE AREA. FINAL GRADES SHALL BE SEEDED WITHIN 72 HOURS. STABILIZATION SHALL BE DEFINED AS 85% VEGETATIVE COVER.
2. MAINTAIN VEGETATED AREAS USING PROPER VEGETATIVE 'BEST MANAGEMENT PRACTICES' DURING THE CONSTRUCTION PERIOD.
3. MAINTAIN NEEDED STRUCTURAL 'BEST MANAGEMENT PRACTICES' AND REMOVE SEDIMENT FROM DETENTION PONDS AND SEDIMENT BASINS AS NEEDED.
4. DETERMINE RESPONSIBILITY FOR LONG TERM MAINTENANCE OF PERMANENT 'BEST MANAGEMENT PRACTICES'.
5. IF CONSTRUCTION IS ANTICIPATED DURING WINTER MONTHS, REFER TO 'COLD WEATHER SITE STABILIZATION REQUIREMENTS'.

D. INVASIVE SPECIES AND FUGITIVE DUST

1. THE PROJECT SHALL NOT CONTRIBUTE TO THE SPREAD OF INVASIVE SPECIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EVALUATE WORK AREAS FOR THE PRESENCE OF INVASIVE SPECIES, AND IF FOUND SHALL TAKE NECESSARY MEASURES TO PREVENT THEIR SPREAD IN ACCORDANCE WITH RSA 430:51-57 AND AGR 3800. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE INTRODUCTION OF INVASIVE SPECIES BY INSPECTING AND CLEANING ALL EQUIPMENT ARRIVING ON SITE.
2. FUGITIVE DUST SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

COLD WEATHER SITE STABILIZATION REQUIREMENTS

TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING ADDITIONAL STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1:

1. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1 ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST.
2. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE, SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX.
3. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH PROPERLY INSTALLED AND ANCHORED EROSION CONTROL MATTING OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX.
4. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
5. INSTALLATION OF EROSION CONTROL MATTING SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
6. ALL PROPOSED STABILIZATION IN ACCORDANCE WITH NOTES 2 OR 3 ABOVE, SHALL BE COMPLETED WITHIN 1 DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
7. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
8. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS.

Revisions:	By:	Date:	Changes:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name:
EROSION CONTROL PLAN

Project Name:
LAND OF LANE SUBDIVISION

Owner/Applicant:
HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE
WILLIAM A. GERRISH
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LICENSED
PROFESSIONAL ENGINEER
04-11-25

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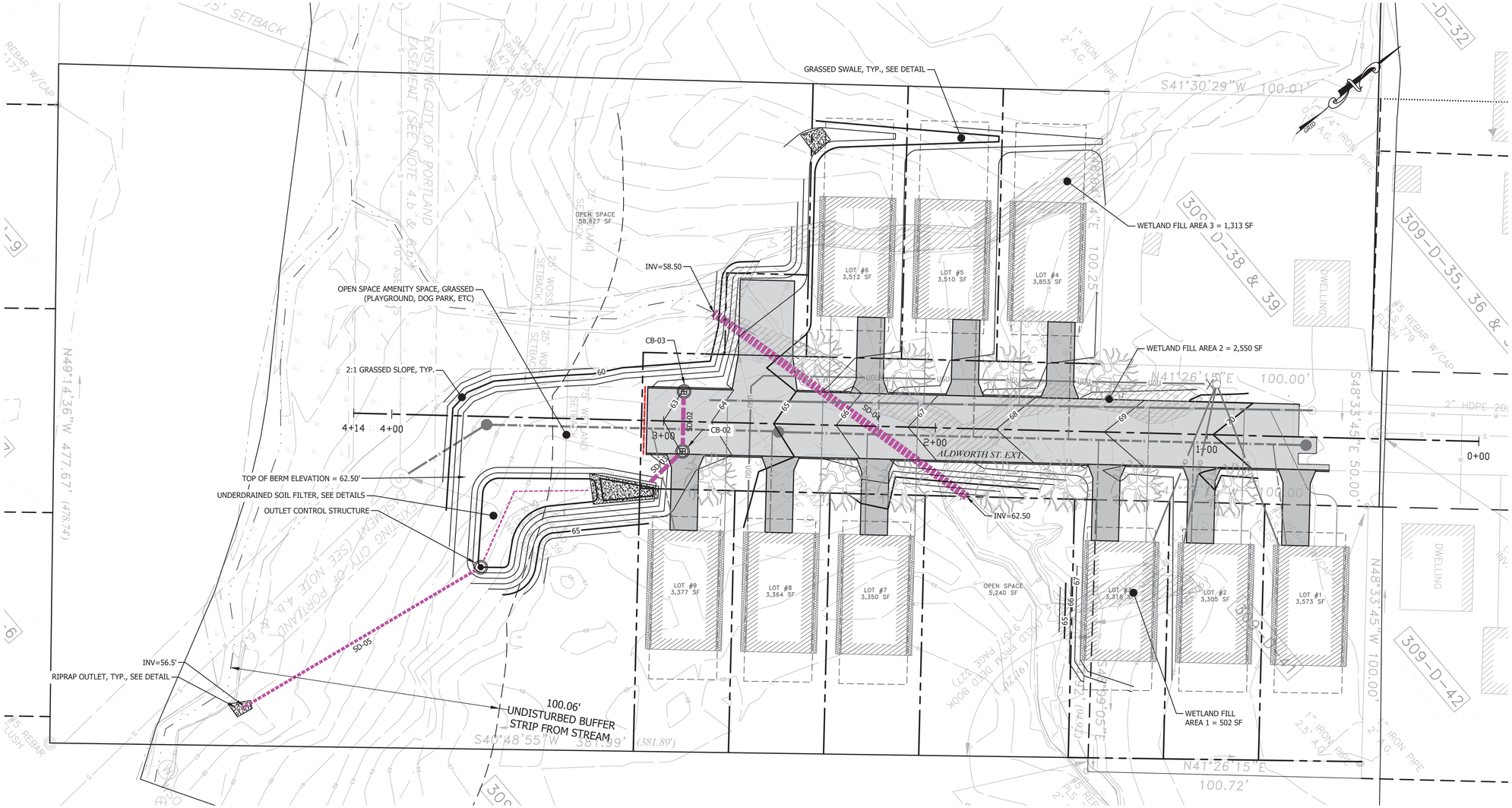

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CONSTRUCTION SEQUENCE

1. INSTALL CONSTRUCTION ENTRANCE, SEE DETAIL.
2. CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
3. INSTALL SEDIMENT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
4. GRUB SITE WITHIN GRADING LIMITS.
5. STRIP AND STOCKPILE TOPSOIL AND INSTALL EROSION CONTROL MEASURES.
6. INSTALL/ADJUST SEDIMENT FENCE, CHECK DAMS, AND HAYBALES, AS REQUIRED.
7. PROCEED WITH WORK, LIMITING THE DURATION 0F DISTURBANCE. THE MAXIMUM OF UNCOVERED DISTURBED EARTH AT ANY ONE TIME IS FIVE ACRES. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
8. BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

   AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
   D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
9. INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SEDIMENT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
10. PAVE DRIVEWAY AND PARKING AREAS.
11. PLACE TOPSOIL, SEED AND MULCH.
12. COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.

STRUCTURE SCHEDULE

STRUCTURE	RIM	INVERT IN	INVERT OUT	SUMP
CB-02	63.0	60.0 (SD-01 & 02)	60.0 (SD-03)	57.0
CB-03	63.0		60.0 (SD-02)	57.0
OCS-2	SEE DETAIL			

PIPE SCHEDULE

PIPE	PIPE DIAMETER	PIPE LENGTH (FT)	PIPE SLOPE (FT/FT)	TYPE
SD-02	12"	17.0'	FLAT	ADS HP STORM PIPE
SD-03	12"	13.0'	FLAT	ADS HP STORM PIPE
SD-04	36"	117.0'	0.0341	ADS HP STORM PIPE
SD-05	12"	100.0'	0.0100	ADS HP STORM PIPE

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NOT FOR CONSTRUCTION

0 10 20 40 80
SCALE IN FEET

Revision:	By:	Date:	Change:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name:
GRADING AND DRAINAGE PLAN

Project Name:
LAND OF LANE SUBDIVISION

Owner/Applicant:
HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE
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SHEET 5 OF 14

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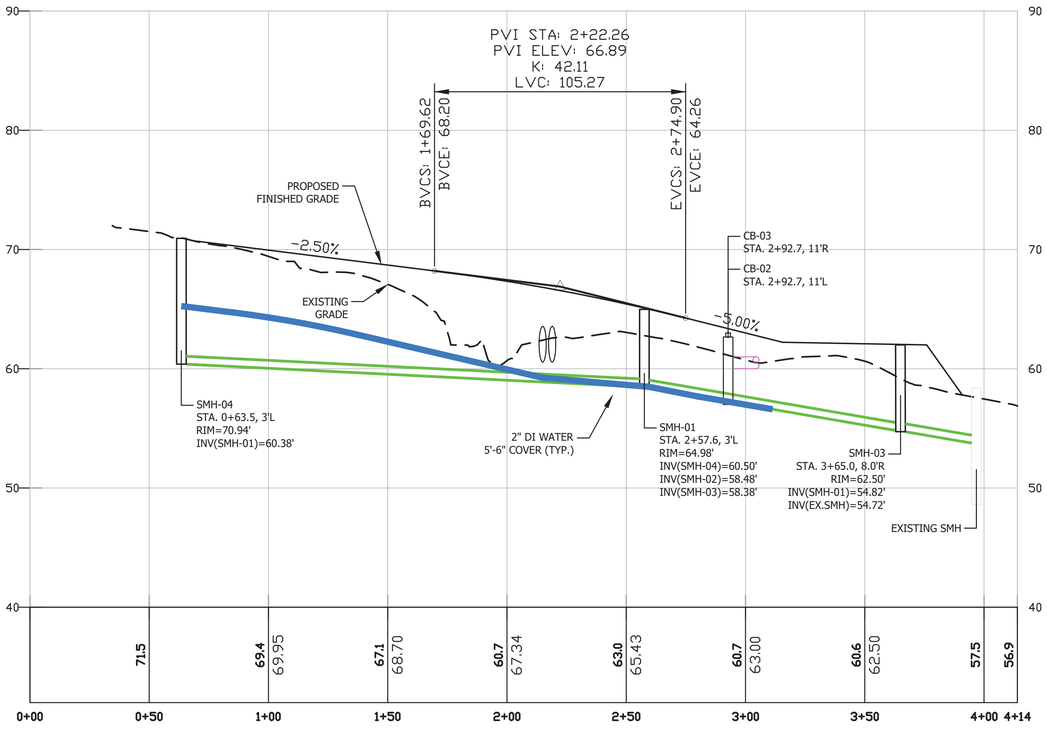
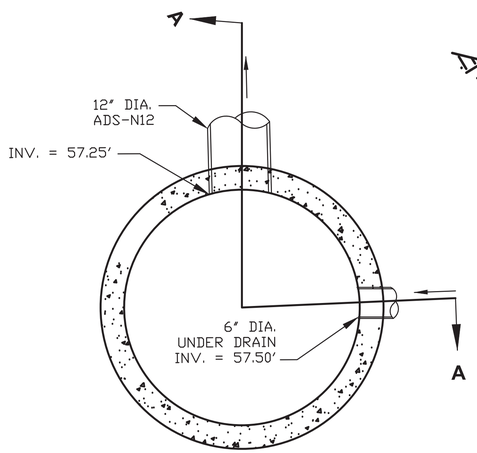


ALDWORTH STREET EXT. ROAD PROFILE

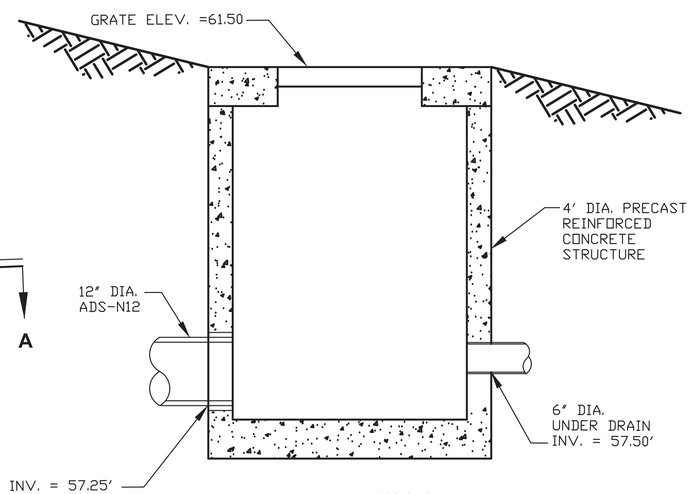
VERT: 1"=6'

HORZ: 1"=30'



PLAN VIEW

NTS



CROSS SECTION A-A

NTS

OUTLET CONTROL STRUCTURE

(OCS-1)

NTS

CONSTRUCTION NOTES

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND HAVE BEEN DETERMINED BY SURFACE EVIDENCE AND/OR PREVIOUSLY GENERATED PLANS. NO GUARANTEE IS MADE THAT ALL UTILITIES ARE SHOWN OR WILL BE FOUND IN LOCATIONS INDICATED. THIS INFORMATION IS PROVIDED FOR REFERENCE AND THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES AND POINTS OF CONNECTION IN THE FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND RESTORATION OF ALL UTILITIES DISTURBED DURING CONSTRUCTION AT NO EXTRA EXPENSE TO THE OWNER.
2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFORMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
4. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND/OR DEVIATIONS OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
5. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSIONS AND CONDITIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
6. ALL SUBSURFACE UTILITY LINES, SHOWN HEREON, ARE BASED SOLELY ON THE FIELD LOCATION OF VISIBLE STRUCTURES, SMH'S, CB'S, HYDRANTS, ETC. IN CONJUNCTION WITH DESIGN AND OR AS-BUILT PLANS SUPPLIED TO GREENMARS BY OTHERS. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, DRILLING ETC. DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER, ALONG WITH A SAFE TO DIG DATE OBTAINED. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH AND MATERIAL OF ALL SUBSURFACE UTILITY LINES SHOWN HEREON, AND ON ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA. CONTACT DIG-SAFE (888) DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
7. COORDINATE ALL ELECTRICAL WORK WITH CENTRAL MAINE POWER PRIOR TO CONSTRUCTION.
8. ALL PAVEMENT MARKINGS AND PAINT STRIPING TO MEET THE STANDARDS OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
9. ALL WATER LINE WORK SHALL MEET PORTLAND WATER DISTRICT STANDARDS (PWD). COORDINATE ALL WORK WITH THE DISTRICT PRIOR TO CONSTRUCTION.

THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING

Revisions:	By:	Date:	Change:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025
DRAWING STATUS	Drawing Name: ROAD PROFILE		
	Project Name: LAND OF LANE SUBDIVISION		
	Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND 659 WARREN AVENUE PORTLAND, MAINE 04103		

STATE OF MAINE — WILLIAM A. GERRISH No. 8830 — LICENSED PROFESSIONAL ENGINEER — 04-11-25

SHEET 6 OF 14

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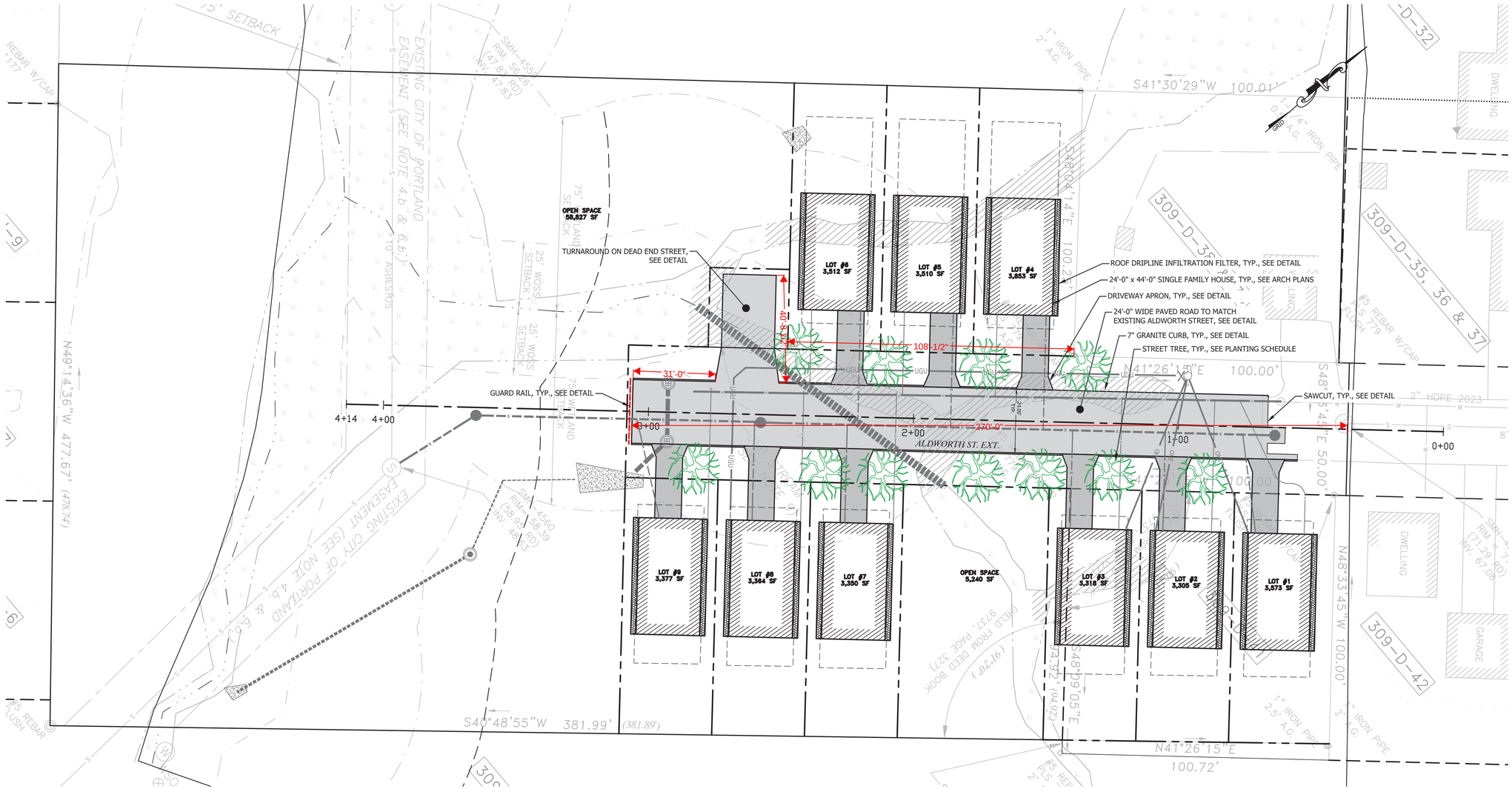

THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING

GENERAL NOTES

1. THE SITE, MAP 309, BLOCK D, LOTS 22, 23, 24, 40 & 41, IS OWNED BY NASON, WAYNE H & DEBORAH J JTS AS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 9737 PAGE 327.

2. AREA OF EXISTING LOT (D022001) = 5.36 ACRES (233,573 S.F.)
AREA OF EXISTING LOT (D041001) = 0.23 ACRES (10,000 S.F.)

2. ZONING REQUIREMENTS: ZONE: RESIDENTIAL 1 (RN-1)

- MIN. LOT AREA 6,500 SF
- STREET FRONTAGE 40 FT.
- MIN. FRONT YARD 20 FT.
- MIN. REAR YARD 25 FT.
- MIN. SIDE YARD 8 FT.
- MAX. IMPERVIOUS AREA 70%
- MAX. BUILDING HEIGHT 35 FT.
- BASE DENSITY 4 UNITS PER LOT

4. PRIOR TO CLEARING, LIMITS SHALL BE FLAGGED.

5. PRIOR TO CONSTRUCTION THE TOWN ENGINEER/DIRECTOR OF PUBLIC WORKS SHALL APPROVE THE CONSTRUCTION DRAWINGS.

6. THE CONTRACTOR SHALL CONFIRM HORIZONTAL AND VERTICAL CONTROL BEFORE BEGINNING WORK.

7. ALL DISTURBED SURFACES NOT COVERED WITH OTHER MATERIALS SHALL RECEIVE 4" TOPSOIL, LOAM, & SEED.

8. CLEARING DEBRIS AND GRUBBINGS SHALL BE REMOVED, OR GROUND UP AND USED IN EROSION CONTROL. WHAT CANNOT BE RE-USED WILL BE SUBJECT TO BURNING, WITH COORDINATION FROM PORTLAND FIRE DEPARTMENT

9. THE LIMITS OF CLEARING SHALL BE LOCATED AND MARKED PRIOR TO CUTTING OF TREES.

10. TREES, SHRUBS, AND GROUNDCOVER IN AREAS NOT TO BE DISTURBED SHALL BE PROTECTED.

11. REMOVE DEAD WOOD, PRUNE AND CLEAN UP TRIMMED VEGETATION TO THE CLEARING LIMIT IN WOODED AREAS.

12. INSTALL TEMPORARY EROSION CONTROL BEFORE BEGINNING EARTHWORK. REMOVE WHEN UPSLOPE AREAS ARE STABILIZED

13. SEE PLUMBING AND ELECTRICAL PLANS FOR LOCATION AND INVERTS OF SLEEVES IN FOUNDATIONS.

14. ELECTRIC SERVICE SHALL BE INSTALLED IN CONDUIT UNDER PAVEMENT/CONC.

15. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL SEWER, WATER, ELECTRICAL, AND SANITARY CONDUIT, MANHOLES, TRANSFORMERS, AND FITTINGS FOR APPROVAL.

16. ALL UNDERGROUND UTILITIES LOCATED ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

17. ALL SIGNAGE AND PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE MUTCD STANDARDS.

18. ALL ACCESS ROUTES TO BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS.

19. ALL WATER SERVICE WORK TO BE COORDINATED WITH PORTLAND WATER DISTRICT STANDARDS.

20. DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF AWWA C150 AND C151, CLASS 52, AND HAVE PUSH ON OR FLANGED JOINTS AS REQUIRED. FITTINGS SHALL HAVE MECHANICAL JOINTS WITH RETAINER GLANDS.

21. SANITARY SEWER PIPE AND FITTINGS TO BE SDR-35 PVC.

22. INSTALL 2" RIGID STYROFOAM INSULATION OVER SANITARY SEWER IN AREAS WHERE THERE IS LESS THAN 4' OF COVER.

23. CONNECTIONS AT MANHOLES/CATCH BASINS SHALL HAVE A FLEXIBLE BOOT CAST ONTO THE BARREL AND SECURED WITH STAINLESS STEEL BANDS.

24. SEE SHEET C105 FOR GRADING, DRAINAGE, STORM DRAIN DATA & SHEET C108 FOR EROSION CONTROL MEASURES.

DIMENSIONAL REQUIREMENT FOR CONSERVATION RESIDENTIAL DEVELOPMENT

- MIN. LOT AREA 3,250 SF
- STREET/OPEN SPACE FRONTAGE 20 FT.
- MIN. FRONT YARD 10 FT.
- MIN. REAR YARD 12.5 FT.
- MIN. SIDE YARD 5 FT.
- MAX. IMPERVIOUS AREA N/A FOR LOTS UNDER 5,000 SF
- MAX. BUILDING HEIGHT 35 FT.

** WHERE A LOT WITHIN THE CONSERVATION RESIDENTIAL DEVELOPMENT ABUTS ADJACENT PROPERTY, MINIMUM SIDE AND REAR SETBACKS ARE REQUIRED IN ACCORDANCE WITH THE STANDARDS OF THE UNDERLYING ZONE

** WHERE A LOT WITHIN THE CONSERVATION RESIDENTIAL DEVELOPMENT ABUTS A STREET AT THE PERIMETER OF THE DEVELOPMENT, MINIMUM FRONT SETBACK AND MINIMUM STREET FRONTAGE IS REQUIRED IN ACCORDANCE WITH THE STANDARDS OF THE UNDERLYING ZONE

PLANTING SCHEDULE

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
13 *	ACER RUBRUM 'RED SUNSET' *	RED SUNSET MAPLE *	6'-7'

* VARY SPECIES FROM CITY OF PORTLAND APPROVED TREE LIST

LANDSCAPING NOTES

1. ALL PLANT MATERIAL SHALL BE NURSERY-GROWN, TRUE TO NAME, AND FREE OF PESTS/DISEASE, MEETING ANSI Z60.1 SPECIFICATIONS. (TECH. MANUAL § 4.1.1 A.1-5)

2. ALL PROPOSED TREES AND SHRUBS SHALL BE SPECIES NATIVE TO THE NORTHEASTERN U.S.; NATIVE SELECTIONS ARE FLAGGED "N" IN THE SCHEDULE. (TECH. MANUAL § 4.1.1 A.9)

3. NO SPECIES LISTED BY THE CITY AS INVASIVE—OR ANY ARTIFICIAL/INORGANIC "PLANTS"—SHALL BE INSTALLED. (TECH. MANUAL § 4.1.1 A.3)

4. ALL STREET TREES TO BE SET IN 5 FT × 10 FT GRANITE-CURBED WELLS WITH WELDED-STEEL GRATES PER CITY FIGURE IV-4A. (TECH. STANDARDS MANUAL § IV)

5. THE DESIGNATED SNOW-STORAGE POCKET IS PLANTED WITH SALT-TOLERANT RED-OSIER DOGWOOD AND SWITCHGRASS OR APPROVED EQUAL; GRADING DIRECTS MELTWATER TO THE ADJACENT STORMWATER COLLECTION SYSTEM. (TECH. MANUAL § 4.1.5 C.4)

6. PLANT INSTALLATION SHALL OCCUR APRIL 1 – JULY 1 OR SEPTEMBER 1 – NOVEMBER 1; FALL BACK-UP DATES ARE NOTED IN THE CONSTRUCTION SCHEDULE. (TECH. MANUAL § 4.1.5 D.1)

7. ALL EXPOSED SOILS TO BE HYDRO-SEEDED IMMEDIATELY AFTER FINAL GRADING; SLOPES STEEPER THAN 5 % RECEIVE COIR MATTING AND MEADOW MIX. (TECH. MANUAL § 4.1.5 D.3)

8. CONTRACTOR SHALL REPLACE ANY DEAD, DISEASED, OR DAMAGED PLANT MATERIAL WITHIN ONE YEAR OF INSTALLATION. (TECH. MANUAL § 4.1.5 D.4)

9. A LANDSCAPE PERFORMANCE BOND EQUAL TO 125 % OF REMAINING PLANT-MATERIAL COST SHALL BE POSTED IF LANDSCAPING IS NOT COMPLETE AT ISSUANCE OF THE CERTIFICATE OF CONCUPANCY. (LUC § 13.10.2; TECH. MANUAL § 4.1.5 D.2)

Revisions:	By:	Date:	Change:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name:
SITE/LANDSCAPE PLAN

Project Name:
LAND OF LANE SUBDIVISION

Owner/Applicant:
HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE WILLIAM A. GERRISH No. 8830 LICENSED PROFESSIONAL ENGINEER 04-11-25

SHEET 4 OF 14

SURVEYING • ENGINEERING • LAND PLANNING
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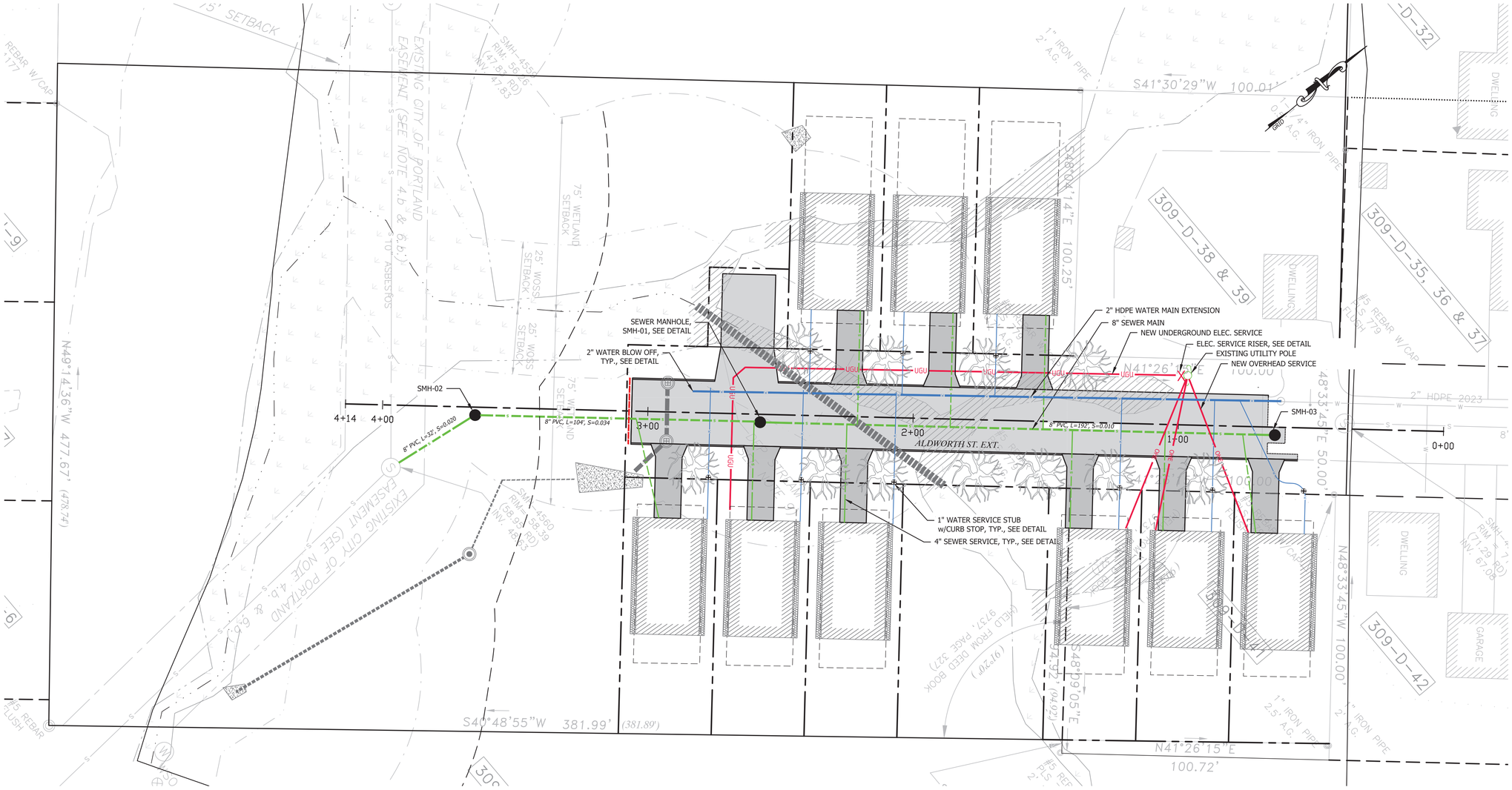

THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING

STANDARD TRENCH NOTES - SEWER

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE SHALL BE REPLACED WITH BEDDING MATERIAL. SEE ALSO NOTE 4.
2. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90-100% PASSING	¾ INCH SCREEN
20-55% PASSING	⅜ INCH SCREEN
0-10% PASSING	#4 SIEVE
0-5% PASSING	#8 SIEVE

3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 100% PASSES A ½ INCH SIEVE AND NOT MORE THAN 15% PASSES A #200 SIEVE.
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED FROM THE TRENCH DURING THE COURSE OF CONSTRUCTION, AFTER EXCLUDING DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL NOT APPROVED BY THE ENGINEER.

   TRENCH BACKFILL IN CROSS-COUNTRY LOCATIONS SHALL BE SUITABLE MATERIAL AS DESCRIBED ABOVE, EXCEPT THAT TOP SOIL, LOAM, MUCK, OR PEAT MAY BE USED PROVIDED THAT THE COMPLETED CONSTRUCTION WILL BE STABLE AND ACCESS TO THE PIPE FOR MAINTENANCE AND RECONSTRUCTION IS PRESERVED. BACKFILL SHALL BE MOUNDED TO A HEIGHT OF SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE
5. SHEETING: ALL TRENCH SUPPORTS SHALL CONFORM TO OSHA STANDARDS. CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE AND WORKER SAFETY THROUGHOUT CONSTRUCTION.
6. TRENCH DIMENSIONS: W = MAXIMUM ALLOWABLE TRENCH WIDTH MEASURED 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER (D) OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS THE PIPE OUTSIDE DIAMETER. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. THE MAXIMUM ALLOWABLE TRENCH PAVEMENT PAYMENT WIDTH SHALL BE 8 FEET CENTERED OVER PIPE.
7. PIPE INSULATION AT STORM DRAIN CROSSING: INSTALL 2" THICK RIGID FOAM INSULATION OVER SEWER AT STORM DRAIN CROSSINGS, EXTEND INSULATION 4 FEET EITHER SIDE OF STORM DRAIN ALONG SEWER.

STANDARD TRENCH NOTES - WATER

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE SHALL BE REPLACED WITH BEDDING MATERIAL. SEE ALSO NOTE 4.
2. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90-100% PASSING	¾ INCH SCREEN
20-55% PASSING	⅜ INCH SCREEN
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0-5% PASSING	#8 SIEVE

3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 100% PASSES A ½ INCH SIEVE AND NOT MORE THAN 15% PASSES A #200 SIEVE.
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED FROM THE TRENCH DURING THE COURSE OF CONSTRUCTION, AFTER EXCLUDING DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL NOT APPROVED BY THE ENGINEER.

   TRENCH BACKFILL IN CROSS-COUNTRY LOCATIONS SHALL BE SUITABLE MATERIAL AS DESCRIBED ABOVE, EXCEPT THAT TOP SOIL, LOAM, MUCK, OR PEAT MAY BE USED PROVIDED THAT THE COMPLETED CONSTRUCTION WILL BE STABLE AND ACCESS TO THE PIPE FOR MAINTENANCE AND RECONSTRUCTION IS PRESERVED. BACKFILL SHALL BE MOUNDED TO A HEIGHT OF SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE
5. SHEETING: ALL TRENCH SUPPORTS SHALL CONFORM TO OSHA STANDARDS. CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE AND WORKER SAFETY THROUGHOUT CONSTRUCTION.
6. TRENCH DIMENSIONS: W = MAXIMUM ALLOWABLE TRENCH WIDTH MEASURED 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER (D) OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS THE PIPE OUTSIDE DIAMETER. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. THE MAXIMUM ALLOWABLE TRENCH PAVEMENT PAYMENT WIDTH SHALL BE 8 FEET CENTERED OVER PIPE.
7. WATER/SEWER SEPARATION: WATER MAINS SHALL BE SEPARATED FROM SANITARY SEWER BY A MINIMUM OF 10 FEET HORIZONTALLY AND A MINIMUM OF 18 INCHES VERTICALLY, WITH THE WATER MAIN ABOVE THE SEWER.
8. PIPE COVER:
   COVER OVER WATER SHALL BE 5.0 FEET MINIMUM IN ALL LOCATIONS.

WATER SUPPLY GENERAL NOTES

1. GENERAL
   BUILD THE WATER SUPPLY SYSTEM IN CONFORMANCE WITH THE *WATER USE RULES, REGULATIONS AND CONSTRUCTION SPECIFICATIONS,* AND THE PORTLAND WATER DISTRICT..
2. PIPE AND FITTING MATERIALS:
   PIPES WITH DIAMETERS GREATER THAN 2 INCHES MUST BE DUCTILE IRON. ALL PIPES MUST HAVE A PRESSURE RATING OF 200 PSI OR GREATER.
3. JOINT RESTRAINT: USE MECHANICALLY RESTRAINED JOINTS FOR THE ENTIRE LENGTH OF THE NEW 6" DI FIRE SERVICE LINE.
4. PRESSURE TESTING: PRESSURE TEST IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT REQUIREMENTS OR ANSI/AWWA C600 IF AHJ DOES NOT HAVE A PREFERRED METHOD OF TESTING. MINIMUM TEST PRESSURE IS 1.5 × MAXIMUM SYSTEM PRESSURE OR 100 PSI, WHICHEVER IS GREATER.
5. DISINFECTION: DISINFECT WATER MAIN AND DOMESTIC SERVICES IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT REQUIREMENTS AND ANSI/AWWA C651.

Revisions:	By:	Date:	Changes:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name: UTILITY PLAN

Project Name: LAND OF LANE SUBDIVISION

Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE WILLIAM A. GERRISH No. 8830 LICENSED PROFESSIONAL ENGINEER 04-11-25

SHEET 7 OF 14

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0 20 40 80

Right Elevation

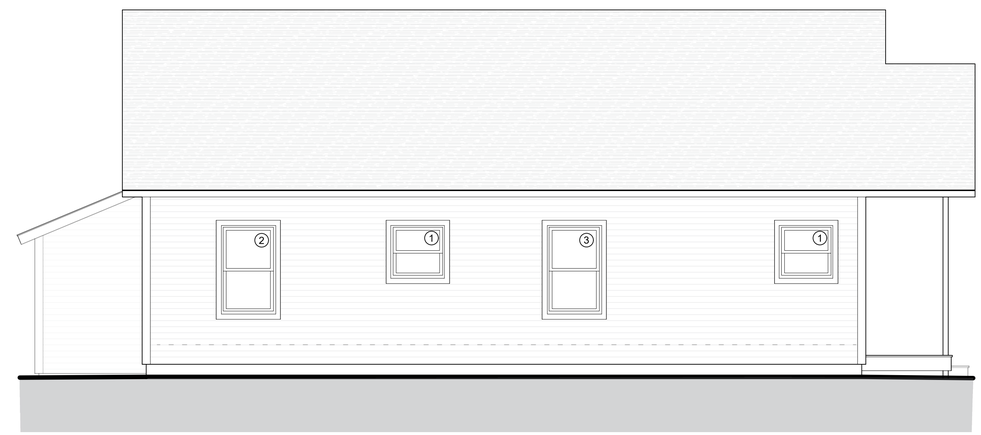
1/4" = 1'-0"

Front Elevation

1/4" = 1'-0"

Rear Elevation

1/4" = 1'-0"



Left Elevation

1/4" = 1'-0"

ALL CONSTRUCTION TO MEET OR EXCEED MUBEC AND ALL PERTINENT CODE REQUIREMENTS

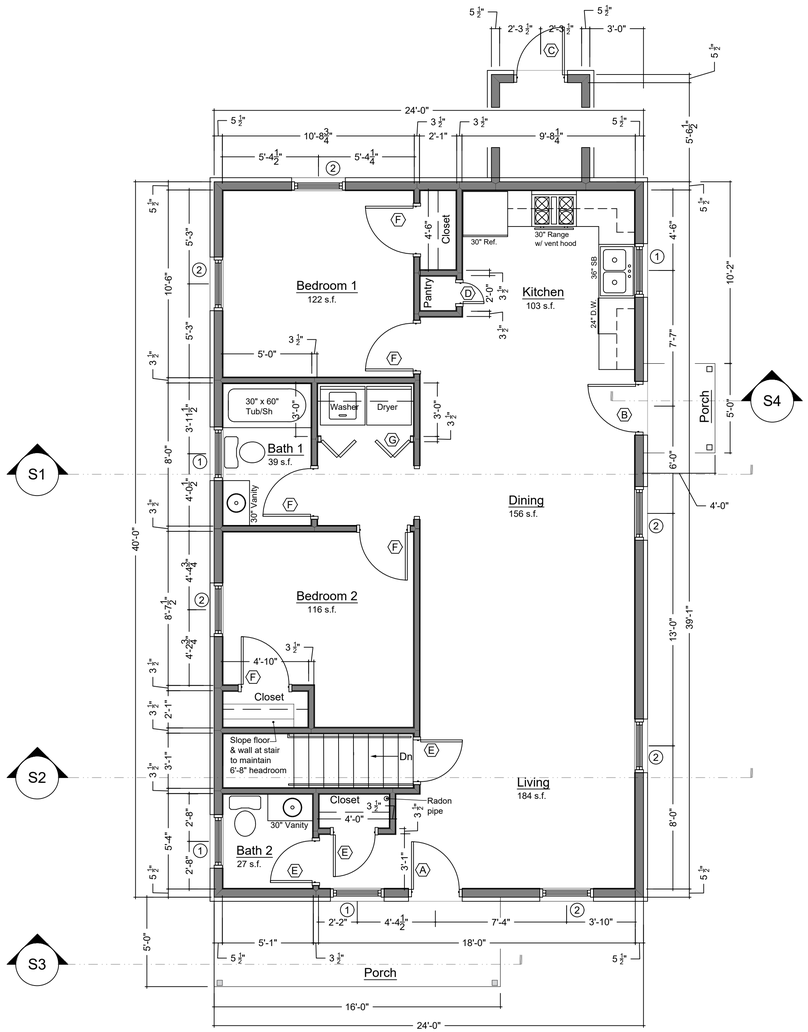
GENERAL ARCHITECTURAL NOTES:

1. ALL WORK IS TO MEET OR EXCEED ALL PERTINENT FEDERAL,
2. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD, AND ANY DISCREPANCIES TO THE DESIGNER FOR RESOLUTION PRIOR TO CONSTRUCTION.
3. UNLESS OTHERWISE NOTED, DETAILS SHOWN ARE TO BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.
4. ANY CHANGES OR MODIFICATIONS TO THESE PLANS MUST BE APPROVED IN WRITING BY THE OWNERS & CONTRACTOR PRIOR TO CONSTRUCTION.

Customer Name: House # 2			
Scale: 1/4" = 1'-0"	Approved As Noted:	Drawn By: Diane Bibber-Oden	
Date: 08/15/19	Revision:		
Elevations			
Habitat for Humanity		Drawing Number: A2.1	

NOTE:
All drawings, plans, sketches, Etc... are provided to my Clients based upon information provided by the clients in accordance with common building practices and local codes. No One who has worked on this plan is a registered Architect, Engineer or Surveyor. If all dimensions, and/or specifications are not verified by the owner and Contractor before actual construction begins, We cannot be held responsible. We assume no liability for changes and/or revisions made to the plans by Client and/or Contractor.All local & national building codes must be adhered to and take precedence. A structural Engineer should be consulted prior to construction. These are prelim plans only.

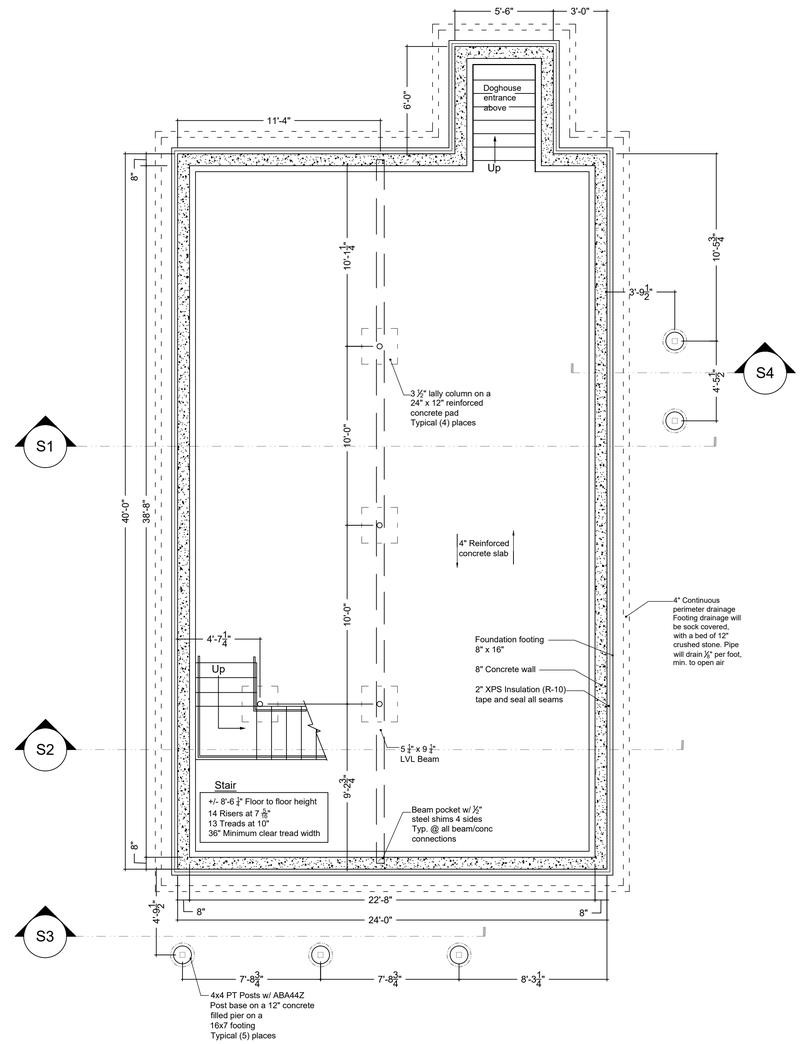
IBD
INSPIRATION BY DESIGN



First Floor Plan

960 s.f. - Living space
100 s.f. - Porch

1/4" = 1'-0"



Foundation Plan

1/4" = 1'-0"

ALL CONSTRUCTION TO MEET OR EXCEED MUBEC AND ALL PERTINENT CODE REQUIREMENTS

GENERAL ARCHITECTURAL NOTES:

1. ALL WORK IS TO MEET OR EXCEED ALL PERTINENT FEDERAL,
2. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD, AND ANY DISCREPANCIES TO THE DESIGNER FOR RESOLUTION PRIOR TO CONSTRUCTION.
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4. ANY CHANGES OR MODIFICATIONS TO THESE PLANS MUST BE APPROVED IN WRITING BY THE OWNERS & CONTRACTOR PRIOR TO CONSTRUCTION.

Customer Name: House # 2			
Scale: 1/4" = 1'-0"	Approved As Noted:	Drawn By: Diane Bibber-Oden	
Date: 08/15/19	Revision:		
Floor Plans			
Habitat for Humanity		Drawing Number: A1.1	

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IBD
INSPIRATION BY DESIGN

Left Elevation

1/4" = 1'-0"

Front Elevation

1/4" = 1'-0"

Rear Elevation

1/4" = 1'-0"

Right Elevation

1/4" = 1'-0"

ALL CONSTRUCTION TO MEET OR EXCEED MUBEC AND ALL PERTINENT CODE REQUIREMENTS

GENERAL ARCHITECTURAL NOTES:

1. ALL WORK IS TO MEET OR EXCEED ALL PERTINENT FEDERAL, STATE & LOCAL CODES.
2. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD, AND ANY DISCREPANCIES ARE TO BE REPORTED TO THE DESIGNER FOR RESOLUTION PRIOR TO CONSTRUCTION.
3. UNLESS OTHERWISE NOTED, DETAILS SHOWN ARE TO BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.
4. ANY CHANGES OR MODIFICATIONS TO THESE PLANS MUST BE APPROVED IN WRITING BY THE OWNERS & CONTRACTOR PRIOR TO CONSTRUCTION.

Customer Name: House # 3		
Scale: 1/4" = 1'-0"	Approved As Noted:	Drawn By: Diane Bibber-Oden
Date: 07/22/19	Revision: 08/18/19	
Elevations - ICF Foundation		
Habitat for Humanity		Drawing Number: A2.1

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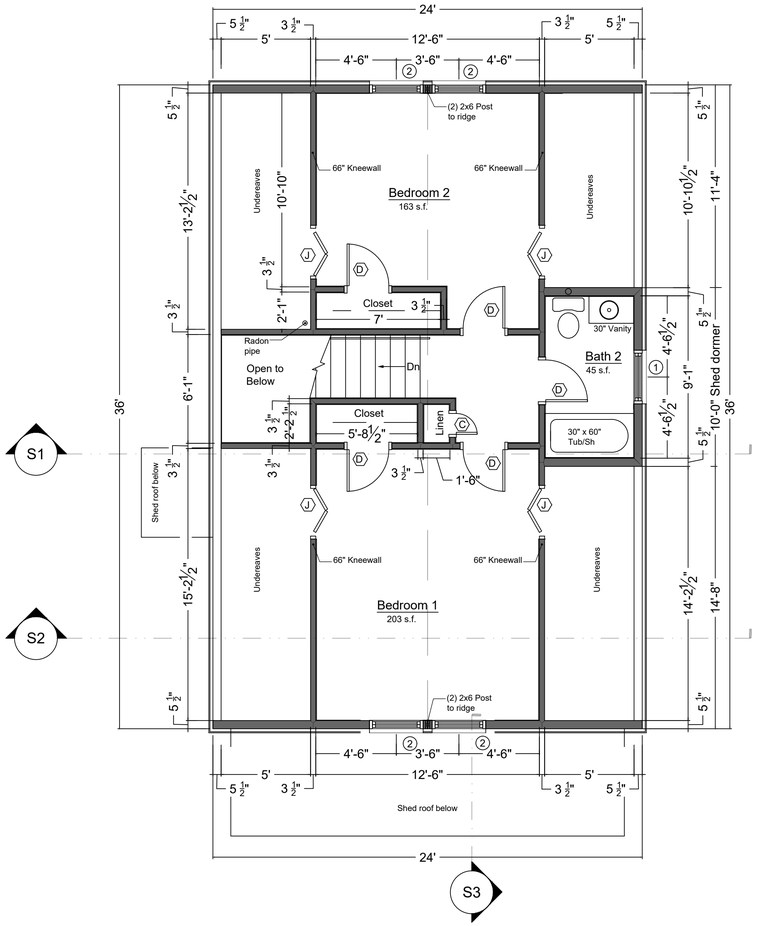
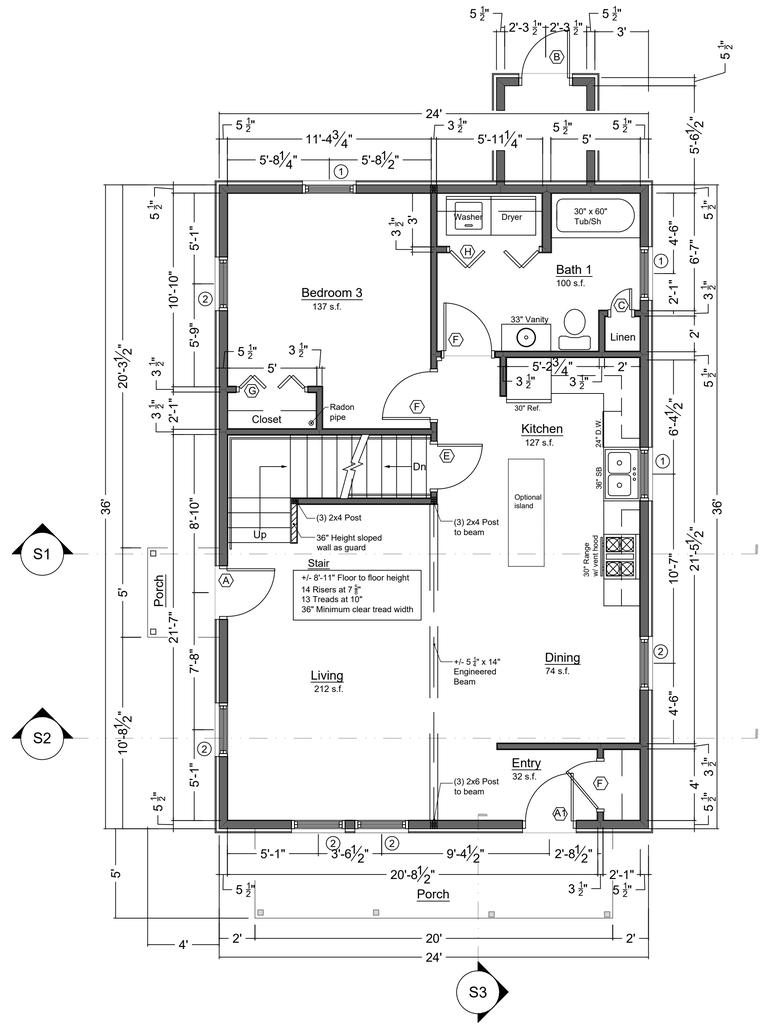
INSPIRATION BY DESIGN



Second Floor Plan

546 s.f. - Living space

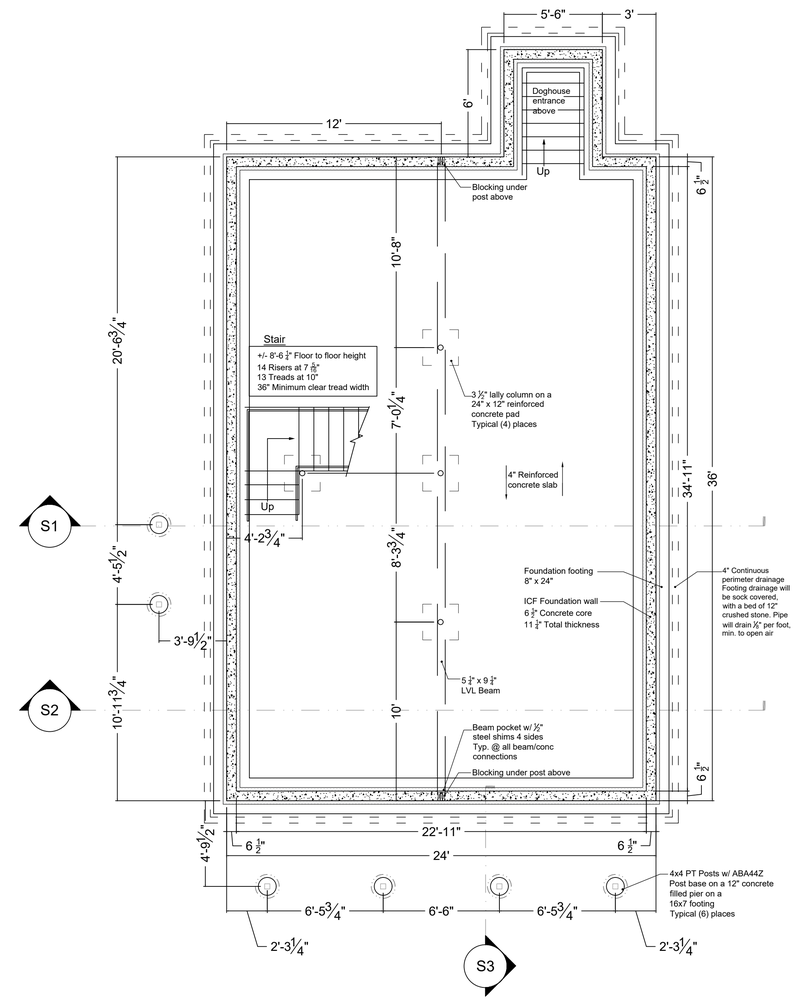
1/4" = 1'-0"



First Floor Plan

864 s.f. - Living space
120 s.f. - Porch

1/4" = 1'-0"



Foundation Plan

1/4" = 1'-0"

ALL CONSTRUCTION TO MEET OR EXCEED MUBEC AND ALL PERTINENT CODE REQUIREMENTS

GENERAL ARCHITECTURAL NOTES:

1. ALL WORK IS TO MEET OR EXCEED ALL PERTINENT FEDERAL, STATE & LOCAL CODES.
2. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD, AND ANY DISCREPANCIES ARE TO BE REPORTED TO THE DESIGNER FOR RESOLUTION PRIOR TO CONSTRUCTION.
3. UNLESS OTHERWISE NOTED, DETAILS SHOWN ARE TO BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.
4. ANY CHANGES OR MODIFICATIONS TO THESE PLANS MUST BE APPROVED IN WRITING BY THE OWNERS & CONTRACTOR PRIOR TO CONSTRUCTION.

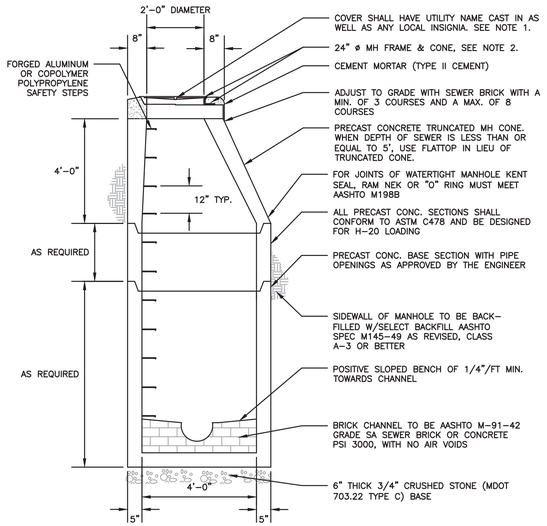
Customer Name: House # 3			
Scale: 1/4" = 1'-0"	Approved As Noted:	Drawn By: Diane Bibber-Oden	
Date: 07/22/19	Revision: 08/18/19		
Floor Plans - ICF Foundation			
Habitat for Humanity		Drawing Number: A1.1	

NOTE:
All drawings, plans, sketches, Etc... are provided to my Clients based upon information provided by the clients in accordance with common building practices and local codes. No One who has worked on this plan is a registered Architect, Engineer or Surveyor. If all dimensions, and/or specifications are not verified by the owner and Contractor before actual construction begins, We cannot be held responsible. We assume no liability for changes and/or revisions made to the plans by Client and/or Contractor.All local & national building codes must be adhered to and take precedence. A structural Engineer should be consulted prior to construction. These are prelim plans only.

INSPIRATION BY DESIGN

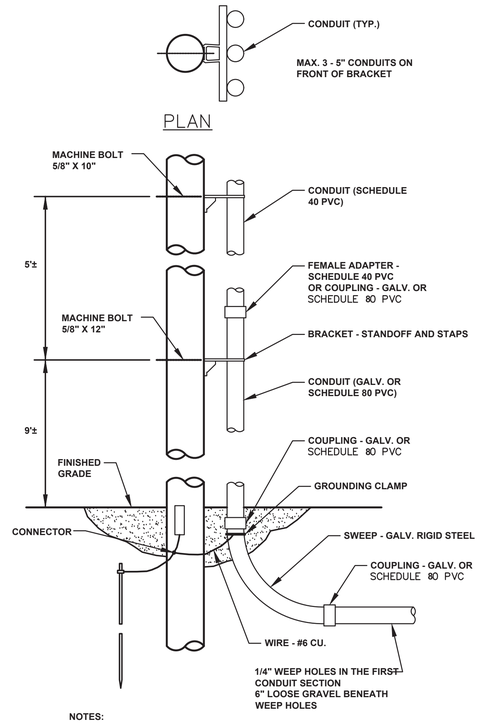
NOTES:

1. MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.
2. MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1960Z, AS MANUFACTURED BY EAST JORDAN CO.
3. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II–1
4. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS



STANDARD PRECAST SEWER MANHOLE

NOT TO SCALE



NOTES:

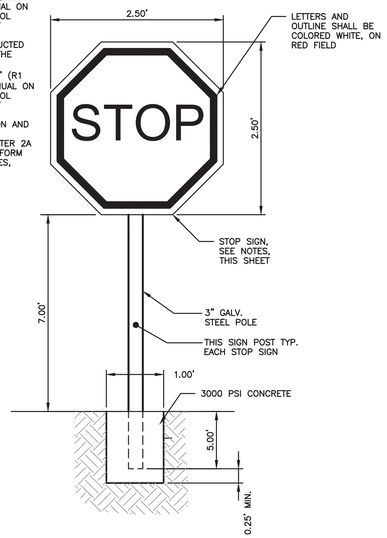
1. LOCATE RISER ON POLE AWAY FROM TRAFFIC.
2. BOND GALVANIZED CONDUIT TO GROUND.
3. LEAVE TOP OF CONDUIT OPEN.
4. FIRST SECTION OF RISER SHALL BE GALVANIZED RIGID STEEL OR SCHEDULE 80 PVC.
5. SWEEP SHALL BE GALVANIZED RIGID STEEL.

TYPICAL RISER DETAIL

NOT TO SCALE

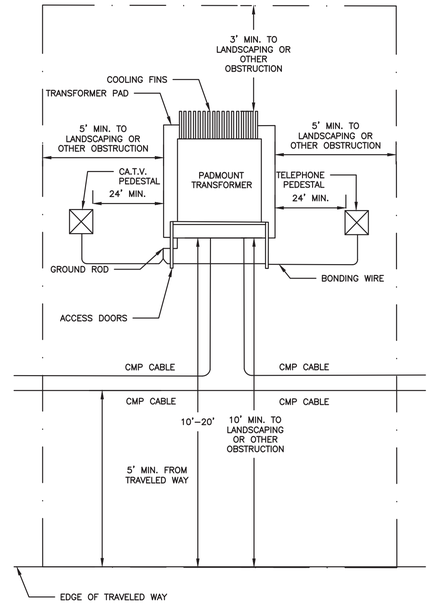
NOTES:

1. ALL ASPECTS OF STOP SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
2. SIGN SHALL BE CONSTRUCTED AS SIGN R1–1 UNDER THE "REGULATORY SIGNS, BARRICADES, AND GATES" (R1 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



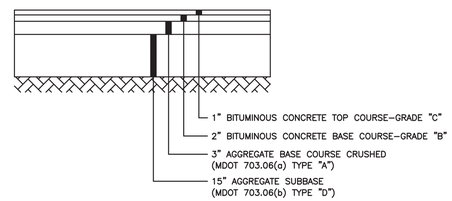
TRAFFIC SIGN DETAIL

NOT TO SCALE



PAD MOUNTED TRANSFORMER

NOT TO SCALE

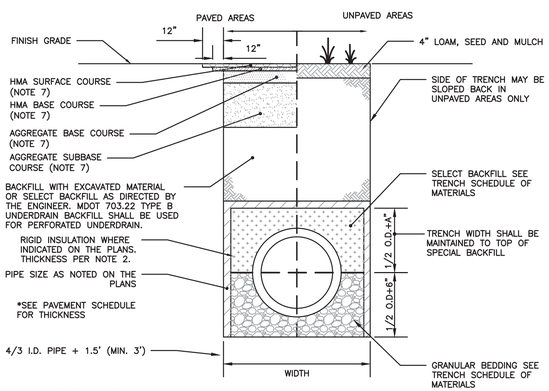


NOTE:

1. COMPACT GRAVEL SUB–BASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUB–BASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

TYPICAL PAVEMENT SECTION

NOT TO SCALE



ALLOWABLE PIPE MATERIALS:

- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS–46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N–12 HP TRIPLE–WALL MIN PS–46 RATING
- ADS SANITITE HP MIN. PS–46

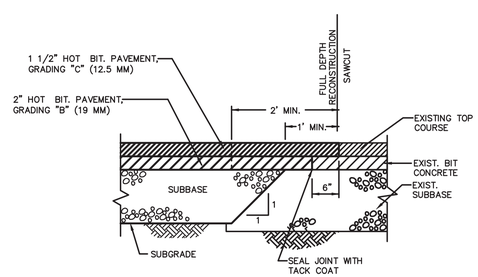
SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'–0" – STORM DRAIN
   4.2. 5'–0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS

INTERNAL STORM DRAIN TYPICAL TRENCH SECTION

NOT TO SCALE



SAWCUT & PAVEMENT MATCH DETAIL

N.T.S.

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Revisions:	By:	Date:	Changes:

PROJECT NUMBER: 43152	ACAD FILE: 43152–PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name: CONSTRUCTION DETAILS

Project Name: LAND OF LANE SUBDIVISION

Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE WILLIAM A. GERRISH No. 8830 PROFESSIONAL ENGINEER 04–11–25

SHEET 10 OF 14

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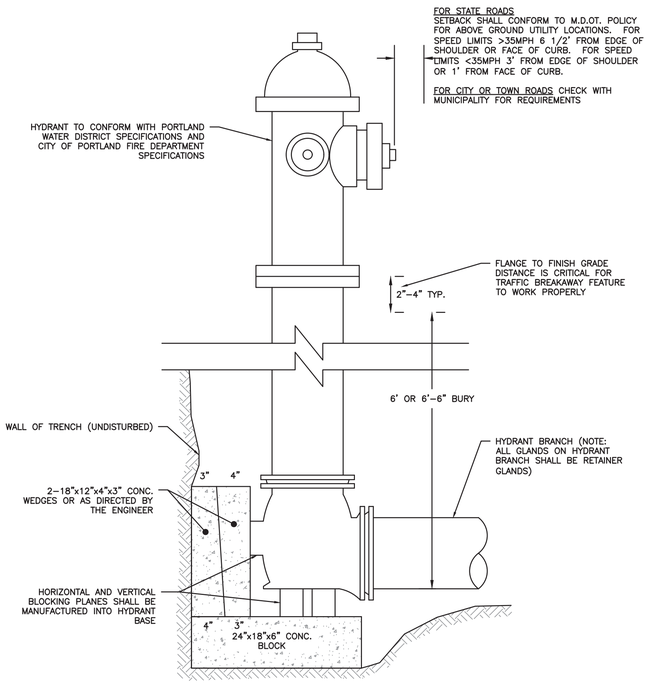
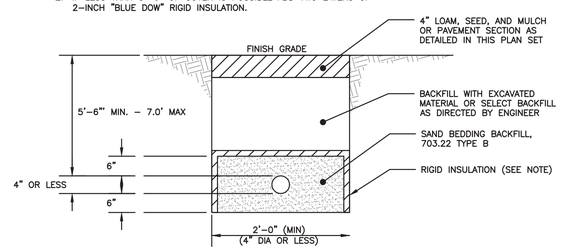


TYPICAL HYDRANT INSTALLATION DETAIL

NOT TO SCALE

NOTES:

1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'–6" OF COVER IS POSSIBLE ADD TWO LAYERS OF 2–INCH "BLUE DOW" RIGID INSULATION.

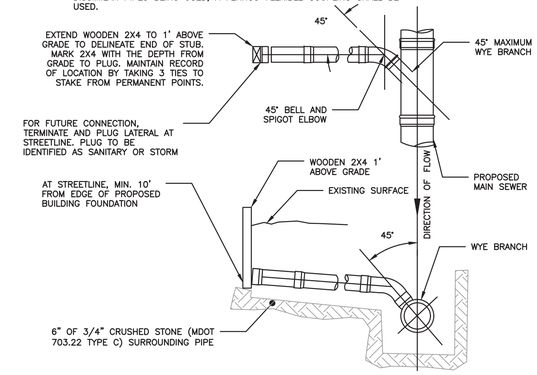


WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE

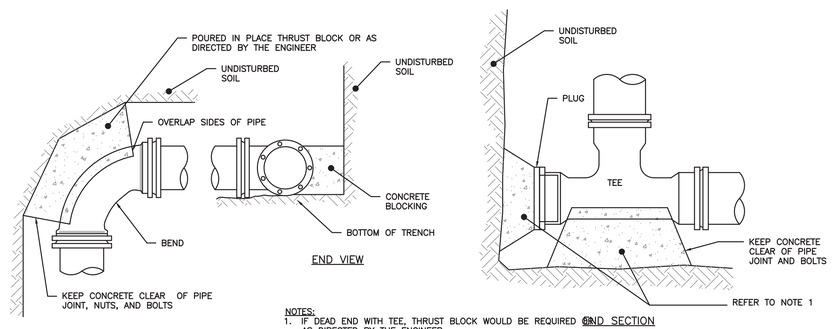
NOTES:

1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE



NOTES:

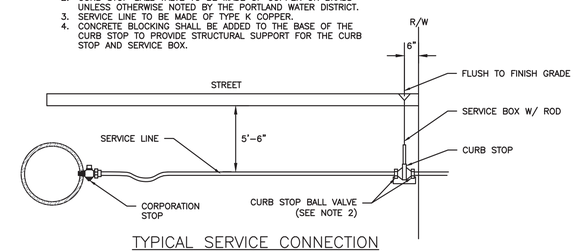
1. IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED AS DIRECTED BY THE ENGINEER
2. SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

THRUST BLOCKING: REGULAR BEND

NOT TO SCALE

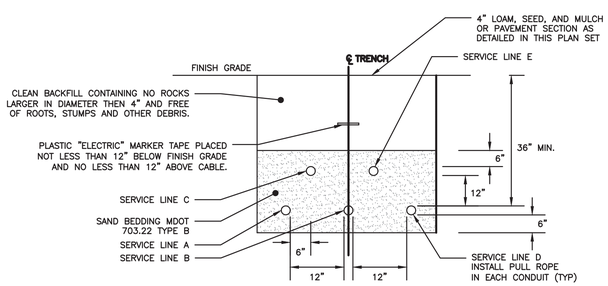
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE WATER DISTRICT SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



TYPICAL SERVICE CONNECTION

NOT TO SCALE



CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
C	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
D	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	SEE NOTE 1
E	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

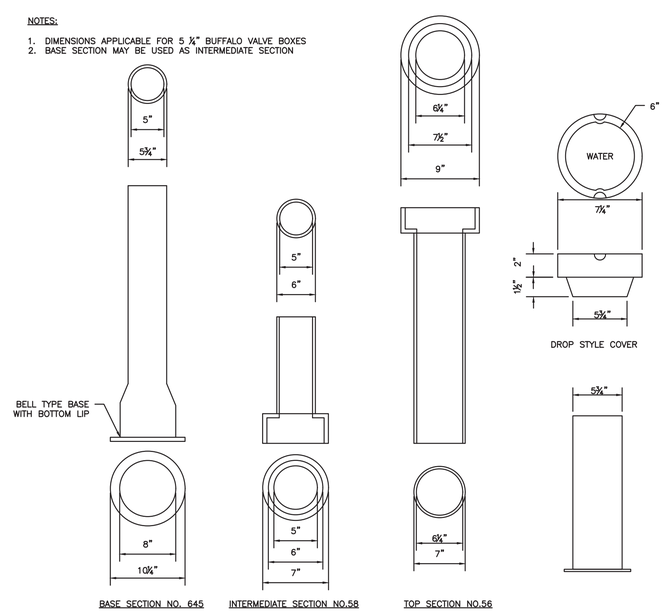
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND–OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
3. CONDUITS WITHIN THE TOWN RIGHT–OF–WAY SHALL BE ENCASED IN CONCRETE.
4. FINAL SIZE OF CONDUITS TO BE SPECIFIED BY MEP, ELECTRICIAN, OR DESIGN/BUILD ELECTRICAL CONTRACTOR.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

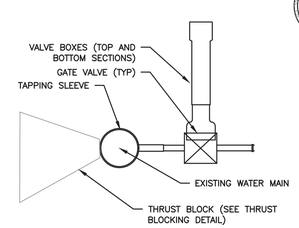
NOTES:

1. DIMENSIONS APPLICABLE FOR 5 ¼" BUFFALO VALVE BOXES
2. BASE SECTION MAY BE USED AS INTERMEDIATE SECTION



VALVE BOX & COVER

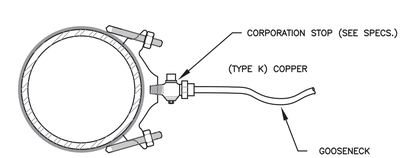
NOT TO SCALE



SIDE VIEW

TAPPING SLEEVE AND VALVE

NOT TO SCALE



SERVICE SADDLE: 4" C.C. THREAD

NOT TO SCALE

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Revisions:	By:	Date:	Change:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name:
CONSTRUCTION DETAILS

Project Name:
LAND OF LANE SUBDIVISION

Owner/Applicant:
HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE WILLIAM A. GERRISH No. 8830 LICENSED PROFESSIONAL ENGINEER 04-11-25

SHEET 11 OF 14

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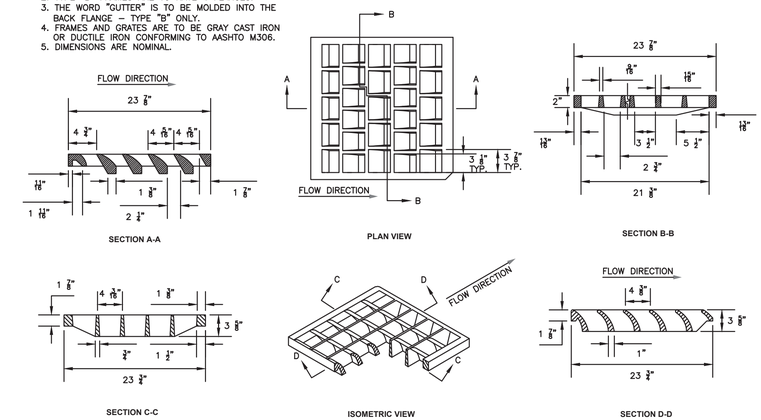
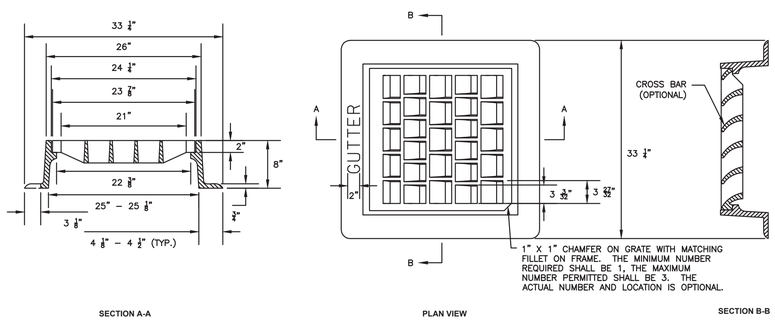
NOTES:
1. TYPE "A" FRAMES ARE TO HAVE 3 FLANGES.
2. TYPE "B" FRAMES ARE TO HAVE 4 FLANGES.
3. THE WORD "GUTTER" IS TO BE MOLDED INTO THE BACK FLANGE – TYPE "B" ONLY.
4. FRAMES AND GRATES ARE TO BE GRAY CAST IRON OR DUCTILE IRON CONFORMING TO AASHTO M306.
5. DIMENSIONS ARE NOMINAL.



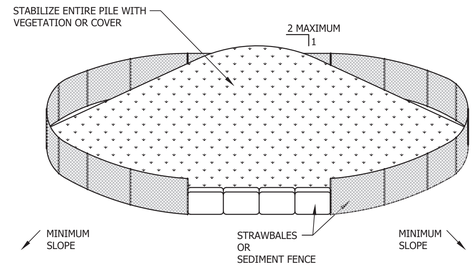
GRATE DETAIL



FRAME DETAIL

CATCH BASIN FRAME & GRATE – SQUARE

NOT TO SCALE



SOIL STOCKPILING IS TO BE USED WHERE TOPSOIL IS NECESSARY FOR REGRADING AND VEGETATING DISTURBED AREAS.

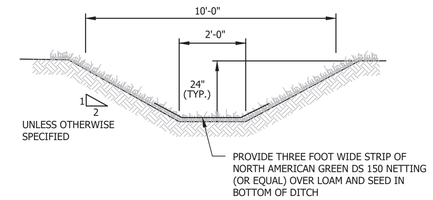
TEMPORARY STOCKPILE STABILIZATION MEASURES INCLUDE VEGETATIVE COVERS, MULCH, NON-VEGETATIVE COVERS, AND PERIPHERAL SEDIMENT TRAPPING BARRIERS. THE STABILIZATION MEASURE(S) SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND REQUIRED PERIOD OF USE.

INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES AND THEN STABILIZED WITH VEGETATION OR COVERED.

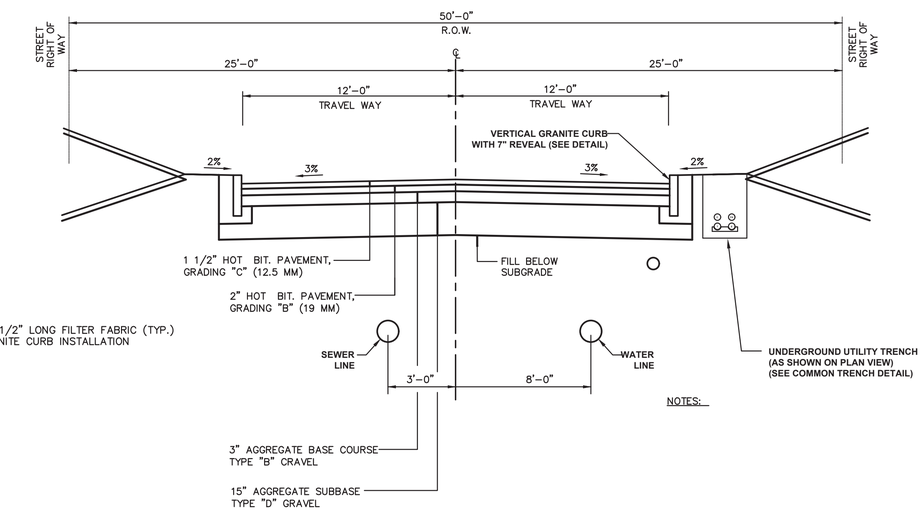
SOIL STOCKPILING DETAIL

NOT TO SCALE



GRASS LINED DITCH DETAIL

NOT TO SCALE



TYPICAL ROAD CROSS SECTION

NOT TO SCALE

NOTES:

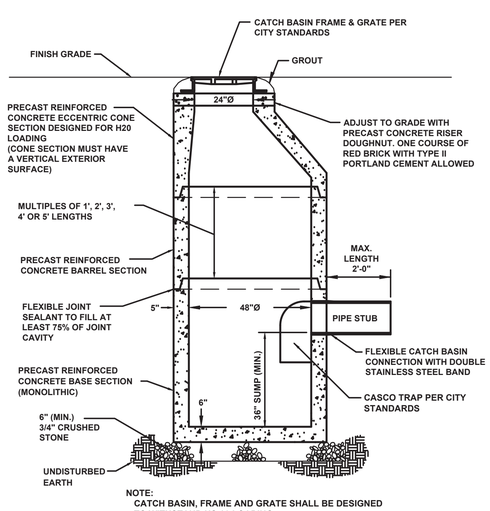
1) LOAM AND SEED SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS 615 AND 618, METHOD #1.

2) AGGREGATE SUBBASE SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS, SECTION 403 AND SHALL NOT CONTAIN PARTICLES OF ROCK EXCEEDING 6" IN ANY DIMENSION. MATERIAL FOR ROAD EMBANKMENT SHALL BE SUITABLE EXCAVATED MATERIAL APPROVED BY TOWN INSPECTOR AND MUST MEET MDOT SPECIFICATION 703.19 GRANULAR BORROW. SUITABLE GRANULAR FILL MATERIAL SHALL CONSIST OF HARD DURABLE MINERALS LESS VERY FINE SANDS, SILT, CLAY OR ORGANIC MATERIALS. MATERIAL IS TO BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES. COMPACTION SHALL BE ACHIEVED BY MECHANICAL MEANS OF A "DYNAPAC", RIDING ROLLER, OR TRACKING WITH HEAVY EQUIPMENT.

3) ENTIRE WIDTH OF ROAD AND SHOULDERS IS TO BE STRIPPED AND GRUBBED OF TOP SOIL, ORGANICS AND ALL DELETERIOUS MATERIAL. ALL STUMPS AND UNSUITABLE MATERIAL (IF ANY) SHALL BE REMOVED IF WITHIN 5 FEET OF FINISHED GRADE UNDER PAVED AREAS.

4) SEE GRADING PLAN & PROFILE FOR GRADING INTENT.

5) ALL PROPOSED INFRASTRUCTURE LOCATED WITHIN THE ROAD RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.

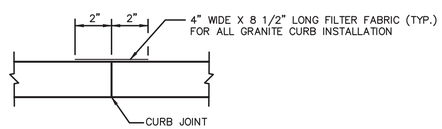


NOTE:
CATCH BASIN, FRAME AND GRATE SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING.

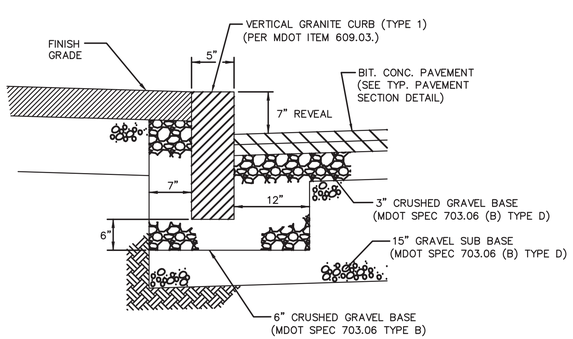
PER MDOT ITEM 604.

PRECAST CONCRETE CATCH BASIN DETAIL

N.T.S.



PLAN VIEW



NOTE: PER MDOT ITEM 703.06 (B) TYPE D

VERTICAL GRANITE CURB DETAIL

N.T.S.

THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING

Revisions:	By:	Date:	Changes:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025

DRAWING STATUS

Drawing Name: CONSTRUCTION DETAILS

Project Name: LAND OF LANE SUBDIVISION

Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND
659 WARREN AVENUE PORTLAND, MAINE 04103

STATE OF MAINE WILLIAM A. GERRISH No. 8830 PROFESSIONAL ENGINEER 04-11-25

SHEET 12 OF 14

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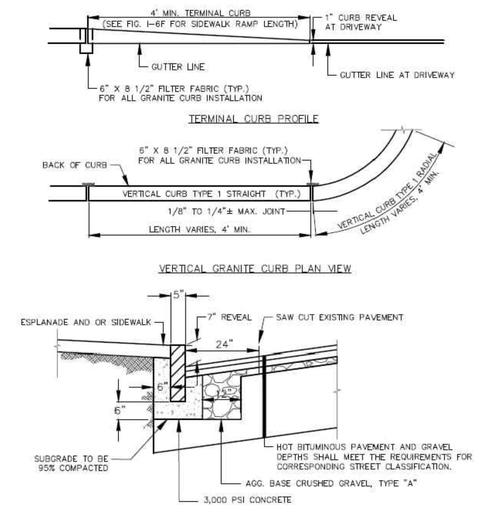
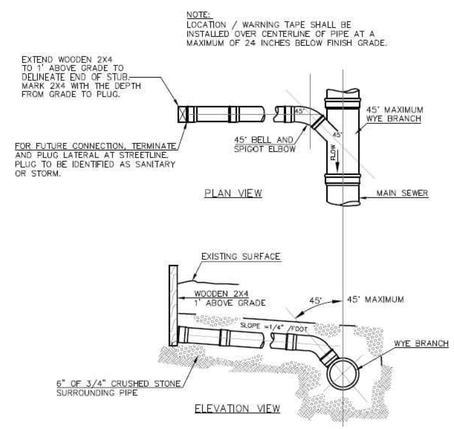


NOTES:
1. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
2. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10-INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF CURB.
3. CURBING SHALL BE SET IN A 6-INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
4. WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB

NOT TO SCALE

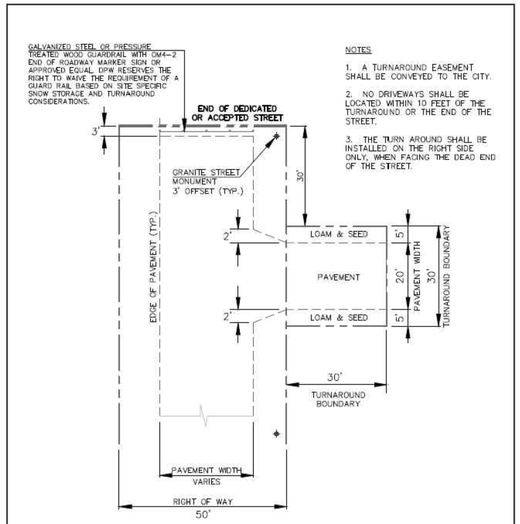
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	TRANSPORTATION DESIGN STANDARDS SECTION I	FIGURE:
	VERTICAL GRANITE CURB		I-12



TYPICAL HOUSE LATERAL TEE/WYE CONNECTION

NOT TO SCALE

DATE: AUGUST 2009 REVISED: DECEMBER 2024	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS SECTION VI	FIGURE:
	TYPICAL HOUSE LATERAL TEE/WYE CONNECTION		VI-17

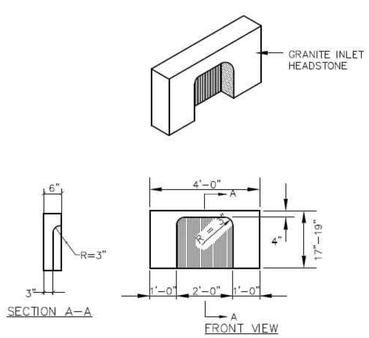


NOTES:
1. A TURNAROUND EASEMENT SHALL BE CONVEYED TO THE CITY.
2. NO DRIVEWAYS SHALL BE LOCATED WITHIN 10 FEET OF THE TURNAROUND OR THE END OF THE STREET.
3. THE TURN AROUND SHALL BE INSTALLED ON THE RIGHT SIDE ONLY, WHEN FACING THE DEAD END OF THE STREET.

TURNAROUND ON DEAD END STREET

NOT TO SCALE

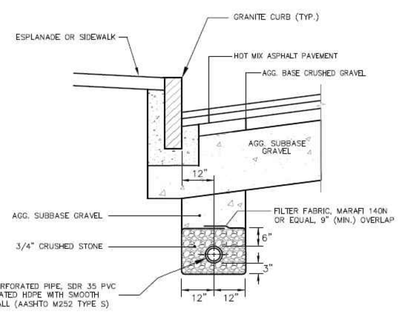
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	TRANSPORTATION DESIGN STANDARDS SECTION I	FIGURE:
	TURNAROUND ON DEAD END STREET		I-5



4' GRANITE HEADSTONE FOR CATCH BASIN INLET

NOT TO SCALE

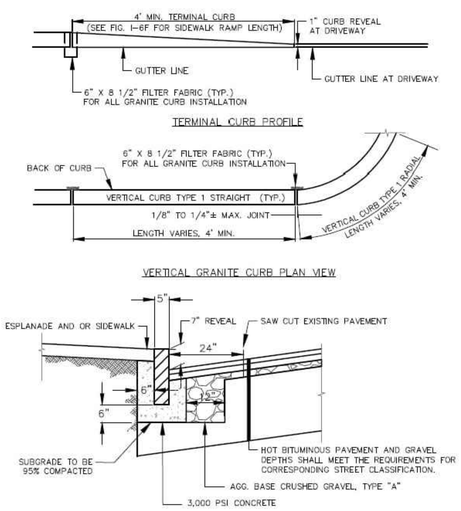
DATE: AUG 2009 REVISED: DEC 2024	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS SECTION VI	FIGURE:
	4' GRANITE HEADSTONE FOR CATCH BASIN INLET		VI-11



NOT TO SCALE

NOTES
1. UNDERDRAIN PIPE INVERT ELEVATIONS SHALL BE AT LEAST 42 INCHES BELOW GUTTER GRADES.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

DATE: AUGUST 2009 REVISED: DECEMBER 2024	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS SECTION VI	FIGURE:
	TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE A		VI-22



NOTES:
1. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
2. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10-INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF CURB.
3. CURBING SHALL BE SET IN A 6-INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
4. WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	TRANSPORTATION DESIGN STANDARDS SECTION I	FIGURE:
	VERTICAL GRANITE CURB		I-12

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Revisions:	By:	Date:	Change:

PROJECT NUMBER: 43152	ACAD FILE: 43152-PR.DWG	SCALE: 1" = 20'	DATE: MARCH 12, 2025
DRAWING STATUS	Drawing Name: CONSTRUCTION DETAILS		
	Project Name: LAND OF LANE SUBDIVISION PID: 309 D022001 & 309 D041001		
	Owner/Applicant: HABITAT FOR HUMANITY of GREATER PORTLAND 659 WARREN AVENUE PORTLAND, MAINE 04103		

STATE OF MAINE WILLIAM A. GERRISH No. 8830 LICENSED PROFESSIONAL ENGINEER 24-11-25

SHEET 13 OF 14

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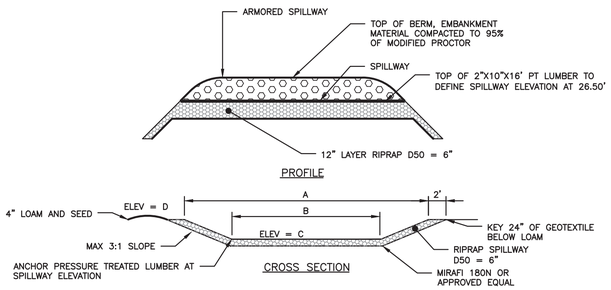
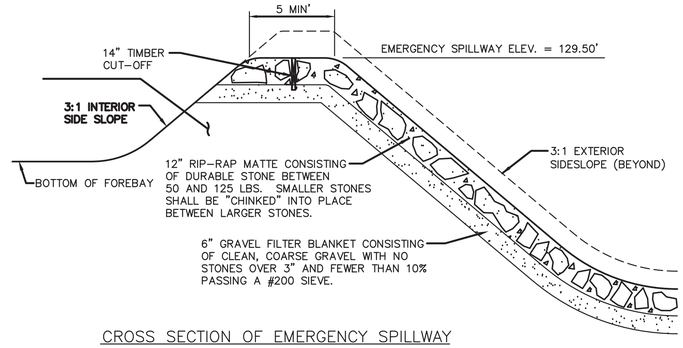


SCHEDULE	
ITEM	DIMENSION/ELEVATION
A SPILLWAY WIDTH (TOP)	26'
B SPILLWAY WIDTH (BOT)	20'
C SPILLWAY INVERT ELEV.	129.50'
D TOP OF BERM ELEV.	130.50'

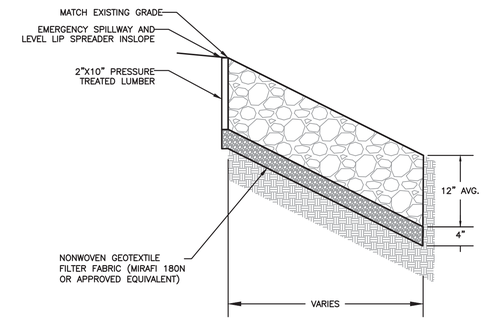
OVERFLOW SPILLWAY DETAIL

NOT TO SCALE



CROSS SECTION OF EMERGENCY SPILLWAY

NOT TO SCALE



RIPRAP CROSS-SECTION

NOT TO SCALE

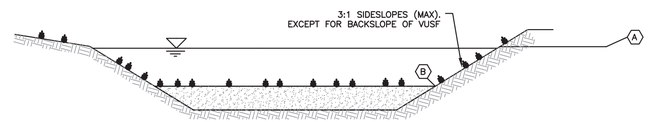
6" SOIL FILTER BED – LOAM TOPSOIL SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75–95
#10	60–90
#40	35–85
#200	20–70
1. CLAY FRACTION <2% PASSING THE #200 SIEVE. 2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.	

SOIL FILTER BED – SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0–5
MINIMAL CLAY CONTENT, NO MORE THAN 3–5% PASSING #200 SIEVE	

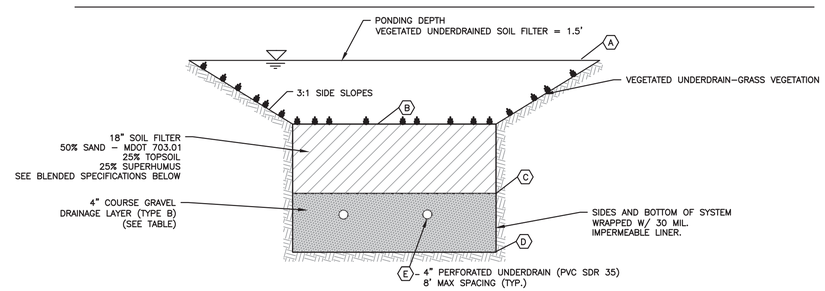
12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85–100
#20	70–100
#60	15–40
#200	8–15
1. CLAY FRACTION <2% PASSING THE #200 SIEVE. 2. SUPERHUMUS OR EQUIVALENT	

SOIL FILTER BED – TRANSISTION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90–100
3/8"	0–75
#4	0–25
#10	0–5



CROSS SECTION



SIDE VIEW

SCHEDULE	
ITEM	ELEV.
A OVERFLOW INVERT	61.50'
B TOP OF SOIL FILTER	60.00'
C TOP OF GRAVEL	58.50'
D BOT OF GRAVEL	57.00'
E UNDERDRAIN INVERT	57.50'

NOTES:

1. THE SIDESLOPES SHALL BE STABILIZED WITH A MIN. OF 4" LOAM, EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX. THE BOTTOM OF THE VEGETATED UNDERDRAIN SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX.
2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.
3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.
4. THE SEDIMENT FOREBAY SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE SOIL FILTER AND INSPECTED AND MAINTAINED DURING CONSTRUCTION. MAINTENANCE SHALL INCLUDE REMOVAL OF ANY ACCUMULATED SEDIMENT.
5. A LANDSCAPE DESIGNER OR ARCHITECT SHOULD BE INVOLVED TO TO SELECT THE APPROPRIATE PLANTS FOR THE BIORETENTION CELL AND FOR THE SITE CONDITIONS. PLANTING PLAN BY OTHERS.
6. MINIMUM UNDERDRAIN SLOPE 0.0025 FT/FT TOWARDS THE OUTLET.
7. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

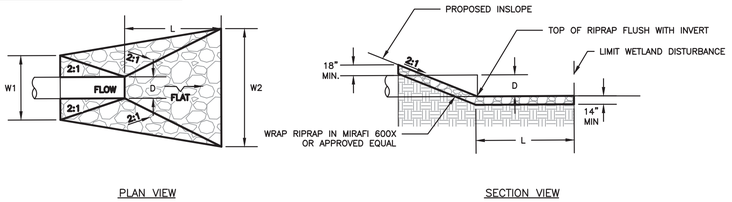
VEGETATED UNDERDRAINED SOIL FILTER DETAIL

NOT TO SCALE

SCHEDULE – SINGLE CULVERT			
CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W1)	WIDTH (W2)
D	4.5D	3D	D+L
12"	4.5'	3'	7.5'
15"	5.6'	3.7'	9.3'

NOTES:

1. RIPRAP SHALL BE DESCRIBED BY M.D.O.T. 703.26 EXCEPT SIZE SHALL BE AS SHOWN.
2. REFERENCE FOR ADDITIONAL INFORMATION: BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL – CULVERT INLET/OUTLET PROTECTION.



PLAN VIEW

SECTION VIEW

RIPRAP OUTLET APRON DETAIL

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