

City of Biddeford
Planning Board
October 05, 2022 6:00 PM City Hall
Council Chambers, & Zoom
Please click the link below to join the webinar:
<https://biddeford.zoom.us/j/96025494853?pwd=ZlM2SUxVVHRZeVlmUnJZV2ExU1dmZz09>
Passcode: 140225
Or One tap mobile :
US: +13126266799,,96025494853# or +16465588656,,96025494853#
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 312 626 6799 or +1 646 558 8656 or +1 646 931 3860 or +1 301 715 8592 or +1
309 205 3325 or +1 719 359 4580 or +1 253 215 8782 or +1 346 248 7799 or +1 386 347 5053
or +1 564 217 2000 or +1 669 444 9171 or +1 669 900 9128
Webinar ID: 960 2549 4853
International numbers available: [https://biddeford.zoom.us/u/acEKRSY1Di](https://biddeford.zoom.us/j/96025494853?pwd=ZlM2SUxVVHRZeVlmUnJZV2ExU1dmZz09)

STATUS: Planning Board Meeting-City Council Chambers October 5, 2022, 6:00PM

- 1. PLEDGE OF ALLEGIANCE**
- 2. DECLARATION OF QUORUM/VOTING MEMBERS**
- 3. ADJUSTMENTS TO THE AGENDA**
- 4. PLANNER’S BUSINESS**
- 5. CONSENT AGENDA**
 - 5.A. Approval of Meeting Minutes from September 14 & September 21, 2022
[PB Minutes 091422-DRAFT.pdf](#)
[PB Minutes 092122-DRAFT.pdf](#)
- 6. UNFINISHED BUSINESS**
- 7. NEW BUSINESS**
 - 7.A. 2022.37 Public Meeting and take comments to review a Conceptual Subdivision Plan for Plan East, LLC to create a 3 story apartment building with 13 affordable rental housing units in the MSRD 3 Zone at 69 Elm Street (Tax Map 40, Lot 57).

[2022.37 - 69 Elm Street Sketch Plan SR.pdf](#)
[_69 Elm Street-Sketch Plan \(9-12-22\).pdf](#)
[69 Elm Street-Sketch Plan.pdf](#)
 - 7.B. 2022.38 Public Meeting and take comments to review a Conceptual Subdivision Plan for Coastal Oaks, LLC to create a condominium development using existing duplex, construction of 4 duplex units and 1 single unit for a total of 11 units. Property is located in the Rural Farm Zone at 37 Newtown Road (Tax Map 4, Lot 22-6).

[2022.38 - 37 Newtown Road Sketch Plan SR.pdf](#)

[20023 Sketch Plan App 2022-09-12.pdf](#)

[20023 Updated Sub Plan 2022-09-09.pdf](#)

- 7.C. 2022.30 Public Hearing and take comments to review a Preliminary Subdivision Plan for Shawn Brown to create a 5 lot subdivision in the Residential 2 Zone at 355 Pool Street (Tax Map 44, Lot 21).

[2022.30 - 355 Pool Street - Preliminary Subdivision SR.pdf](#)

[Pool St Preliminary Major Subd app packet w plan 9-13-22.pdf](#)

[355 Pool St Wetland Report and Attachments.pdf](#)

[Fire Confirmation.pdf](#)

[Maine Dot Confirmation.pdf](#)

[Maine Water Confirmation.pdf](#)

- 7.D. 2022.24 Public Hearing and take public comments regarding Preliminary Subdivision approval for Devine Capital LLC. The project is to construct 216 residential units at 588 & 590 Alfred Street (Tax Map 2, Lots 6 & 12).

[2022.24 Devine Capital Prelim Review SR.pdf](#)

[Saucier's Comments.pdf](#)

[Biddeford Residential.Planning Board Application.written material.pdf](#)

[Biddeford Residential.Planning Board Application.Civil Plans.pdf](#)

[Biddeford Residential.Planning Board Application.Architectural plans.pdf](#)

8. OTHER BUSINESS

9. ADJOURN

The Board reserves the right to halt official business at 9:30 p.m. Items not heard at tonight's meeting shall be rescheduled to the next meeting of the Board. All materials pertaining to items on the agenda are available for public review at the Biddeford Planning Department, second floor, Biddeford City Hall during normal business hours.



CITY OF BIDDEFORD

Planning and Development Department

Greg Tansley, A.I.C.P.
City Planner
205 Main Street
P.O. Box 586
Biddeford, ME 04005
(207) 282-7119 or (207) 284-9115
Greg.Tansley@biddefordmaine.org

Planning Board Meeting Minutes **DRAFT**

Date: September 14, 2022
Time: 6:00 PM
Location: Council Chambers & Zoom

1. Pledge of Allegiance
2. Declaration of Quorum/Voting Members
Quorum Present: Bill Southwick (Chair), Roch Angers, Sean Tarpey, Michael Cantara, & Susan Deschambault
Staff Present: Matt Grooms (City Planner via zoom) & Nan Whitten
Chair Southwick opened the meeting at 6:02 PM
3. Adjustments to the Agenda
4. Planner's Business
5. Unfinished Business
6. New Business
7. A. 2021.42 Public Hearing to review a Preliminary Subdivision Application for South Street Village, LLC to create a 195 Unit, Manufactured Housing Park called Hidden Hills at 413 South Street, (Tax Map 7, Lot 8) in the SR1 & RF Zones with the MHP Overlay.
 - Matt Grooms introduced the project, reminding the Board that they tabled the project in May.
 - He said that the Board is still waiting on a legal opinion on the density of the project.
 - Mr. Grooms gave an overview of the project. The scope of the project has changed to an over 55 community which reduces traffic and alleviates the need for a bus turnaround.
 - Peer review determined that a site location permit is necessary and the traffic report indicates a high crash area.
 - The staff recommends approval with conditions.
 - Matthew Chamberlain of South Street Village, LLC & Jeff Amos of Terradyne Engineering, Inc. represented the applicants.
 - The applicants reminded the Board that they have been through 3 different planners since beginning this project.
 - This will be an over 55-resort style campus with no one under 44 living in any of the homes.
 - There will be recreation such as walking paths, bicycle paths, swimming pool, tennis courts and a clubhouse in a safe, comfortable age comparable area.

- Mr. Chamberlain talked about the average price to rent in Biddeford right now: 1 Bedroom \$1500, 2 Bedroom \$1800, Luxury 1 Bedroom \$1900, Luxury 2 bedroom \$2500; the average sale price of a home in Biddeford is \$537,950.
- He reminded the Board that you could not deduct rent on taxes.
- These units are all new and 1 floor living.
- The applicants are not worried about the density question as the State of Maine allows the density they are adhering to on this project.
- Most units are on a pad 800' from the road.
- The applicants have applied for a Site Location Permit, there is a meeting with DEP on the site on the 21st of September.
- The applicant will provide the Board with a Park Management Plan once they hear from the attorney.
- Chrystina Gastelum spoke on behalf of the Conservation Commission. They are concerned about Thatcher Brook and the septic systems. They would like to see a Wetland Delineation Report.
- One of the Board members asked if the Conservation Commission has met with the applicants yet. Chrystina said that Paul Vose had been to some Conservation meetings but they have not met with the applicants as a team. The Board requested that the two groups meet as previously suggested.
- Public Comments:
 - Linda Brown of 420 South Street-Question: What if there, is a septic failure damaging the aquifer, who responds? Answer: the owners of the property-South Street Village, LLC.
She also feels the infrastructure should be changed-updated.
 - Meaghan Daly of 16 Pinewood Circle-Is the Mobile Home Park overlay valid? Whose responsibility is it to maintain the Septic System?
 - Anthony Curro of May Street wanted to know if the Traffic Study included May Street. There is a 5 ton prohibition on May Street, how will the houses get to the site?
- Mr. Chamberlain said they will check the Traffic Report and if May Street is not included, it will be amended to include May Street. The trucks with the houses will avoid May Street.
- He also stated that if the intake pipes break it is unlikely to contaminate Thatcher Brook or Saco River due to the distance.
- The development is 500'-600' from Thatcher Brook and there can be no development in-between.
- The shared septic system going in are larger than the homes demand. These are 2 bedroom homes and the septic systems being used are for 3-5 bedroom houses.
- DEP is reviewing the nitrate study conducted on this land.
- Mark Hampton completed a vernal pools report, a wetland delineation and high intensity soil tests.
- Mr. Chamberlain confirmed that these units are doublewide manufactured homes with high quality features and two car garages. They will be heavily insulated with sheet rock walls and heat pumps.

- One of the Board members told Mr. Amos that the abutters across the street need to be identified and the plan should be in metric as well as English.
- Each lot will be pinned individually.
- South Street Village, LLC holds title to the property, the structures will be purchased. There will be no association; this will be a landlord, tenant relationship. The applicants will be giving \$195,000 to the City for sidewalks.
- The applicant is confident the snow storage will not affect Thatcher Brook.
- The applicant and Board discussed the enforcement of the over 55 component. The age of the buyer will be checked on two separate times of application to the community.
- The site walk of the property was discussed but the Board did not choose a date and time.
- All incoming documents for resubmittal will be by noon the Thursday before the day of Planning Board.
- Matt Grooms will draft a policy on this submission caveat.
- No motions were made or votes cast on this project this evening.

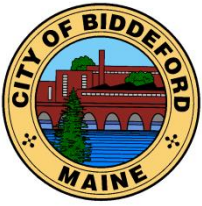
8. Adjourn

Meeting adjourned at 8:16 PM

Planning Board Chair/Vice Chair

Date

These minutes are summary and are not intended to be verbatim. Archived meetings are viewable on the City's website: www.biddefordmaine.org.



CITY OF BIDDEFORD

Planning and Development Department

Matt Grooms, AICP

City Planner

205 Main Street

P.O. Box 586

Biddeford, ME 04005

(207) 284-9115

Matthew.Grooms@biddefordmaine.org

Planning Board Meeting Minutes

DRAFT

Date: September 21, 2022
Time: 6:00 PM
Location: Council Chambers & Zoom

1. Pledge of Allegiance
2. Declaration of Quorum/Voting Members
Quorum Present: Bill Southwick (Chair), Roch Angers, Sean Tarpey, Alexa Plotkin, Michael Cantara, & Susan Deschambault
Staff Present: Greg Mitchell, Matt Grooms, Eric Freeman & Nan Whitten
Chair Southwick opened the meeting at 6:00 PM
3. Adjustments to the Agenda
4. Planner's Business
5. Consent Agenda
Approval of Meeting Minutes from 9-7-22
MOTIONS: 6:01PM
Cantara-Motion-To approve the Meeting Minutes from 9-7-22
Anger-Second
Chair Southwick-roll call for vote-Motion Passed 4-0 (Angers, Tarpey, Plotkin & Cantara)
6. Unfinished Business
6A. 2021.08 Public Meeting and take comments as a continuation from September 7, 2022 for a Final Subdivision Application for E & R Development Corp to establish a 19 Lot Cluster Subdivision (West Brook Subdivision) on an 8.31-acre lot off Winding Creek Lane (Tax Map 8, Lots 3-1 and a portion of lot 3) in the R1-A Zone.
 - Matt Grooms did a brief re-introduction, reminding the Board that this is a 19 lot Cluster Subdivision.
 - He mentioned that he did receive comments back from the reviewing engineer saying that all items had been addressed.
 - There are updates to the plan & deeds referencing the "Crittter Fence."
 - Mike Eon of E & R Development represented himself acknowledging that all requested changes had been made.
 - There is now Note #32 saying no oil-fired appliances, Natural & Propane Gas is to be used.
 - Mr. Eon introduced 2 other members of his team:
Tracy Tarr of GZA Environmental & Chris McDonald of BH2M.

- Chair Southwick opened the meeting to the public, limiting public comments to 3 minutes and no redundant information.
- Public Commenters:
 Bill Durkin-former Biddeford resident
 Miles Irving-Foss Street
 Chrystina Gastelum-58 Pike Street
 Nathanael Beisiegel-29 Winding Creek Lane
 Loren McCready-29 Winding Creek Lane
 Gregory Gall-124 Main Street
 Maya Atlas-5 Raymond Street
 Charlie Gould-22 Winding Creek Lane
 Samantha Wolfe-103 Granite Street
 Laura Sicliano-3 Winding Creek Lane
 Richard Rhames-10 West Loop Road
 Carrie Cote-32 Winding Creek Lane
 Bob Tatrack-Granite Street
- Chair closed public comment period
- Mr. Eon & Ms. Tarr addressed some of the comments and reiterated that IF&W was ok with the project.
- The Board asked Mr. Eon about a comment made by the public that these homes are now going to be two family structures. Mr. Eon said that they are single-family homes.
- Mr. Grooms told the Board that with the new State Law just passed, the lots are eligible for multi-family units. The Board is bound by existing ordinances as well as the comp plan. The new comp plan will amend ordinances incorporating new state laws for affordable housing.
- Mr. Grooms addressed the comments about Site Law and said this project is significantly under the threshold.

MOTIONS: 6:57PM

Cantara-Motion- To approve the Final Subdivision and Site Plan for Winding Creek Lane, a 19-lot single-family subdivision (Tax Map 8/Lot 3-1 & portion of Lot 3) in the R-1A Residential zone and approve the Findings of Fact.

Angers-Second

Chair Southwick-roll call for vote-Motion Passed 4-0 (Angers, Tarpey, Plotkin & Cantara)

Cantara-Motion- To grant the waiver to Article VI, Section 16 – to permit building separation of less than 30 feet within a cluster subdivision.

Angers-Second

Chair Southwick-roll call for vote-Motion Passed 4-0 (Angers, Tarpey, Plotkin & Cantara)

7. New Business

7. A. 2021.08 Public Meeting and take comments regarding the formal request, made to the City Council, requesting the Council put a Conservation Easement on all of the land acquired by the City in the land swap with E & R Development for the West Brook Subdivision.

- Mr. Grooms presented the letter to being written to the Council and reminded the Board why the letter is being written.
- Public Comments:
Chrystina Gastelum-58 Pike Street
Maya Atlas-5 Raymond Street
Richard Rhames-10 West Loop Road
Nathanael Biesiegel-29 Winding Creek Lane
Samantha Wolfe-103 Granite Street
- Chair closed public comment period.
- The Board discussed how the rest of the park is protected. They talked about wanting more time to think more about how to make and what the best recommendation to the Council.
- The Board would like to reinforce to the Council that the new land should be to protect wildlife and recreation, never to be sold.

MOTIONS: 7:24PM

Cantara-Motion-To accept the letter as written authorizing the Chair to sign saying there should be a conservation easement over the entirety of the land in Clifford Park.

Angers-Second

Chair Southwick-roll call for vote-Motion Passed 4-0 (Angers, Tarpey, Plotkin & Cantara)

7. B. Workshop to discuss progress on the City's Future Land Use Plan and Comprehensive Plan Chapter Template.

- Eric Freeman (Assistant Planner) & Matt Grooms (Planner) made a PowerPoint presentation on what has been accomplished so far.
- The plan so far is to strengthen the Rural Farm Zone, deemphasize sprawl, keep RF zone low density, discourage housing and encourage infill.
- Promote urban core and support transit.
- Joint Comp Plan Workshop with the City Council on 10-11-22
- Richard Rhames from 10 West Loop Road spoke from the public

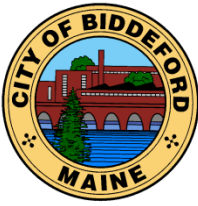
8. Adjourn

Meeting adjourned at 8:09 PM

Planning Board Chair/Vice Chair

Date

These minutes are summary and are not intended to be verbatim. Archived meetings are viewable on the City's website: www.biddefordmaine.org.



CITY OF BIDDEFORD

Planning and Development Department

Eric Freeman
Assistant City Planner
205 Main Street
P.O. Box 586
Biddeford, ME 04005
(207) 284-9115
Eric.Freeman@biddefordmaine.org

To: William Southwick, Chair & Members of the Biddeford Planning Board

From: Eric Freeman, Assistant Planner

Date: September 26th, 2022

Re: 2022.37 Sketch Plan Review for a proposed 13 Unit Multifamily residential building at 69 Elm St.

Meeting Date: October 5, 2022

1. PROPOSAL

This application contains materials for a Sketch Plan review for a proposed 13-Unit Multifamily housing complex at 69 Elm St. (Tax Map 40, Lot 57). The parcel is located in the MSRD-3 zone. The project consists of one, three-story residential building. Residential units will all be 1-bedroom.

2. PROJECT INFORMATION

	<u>SUBJECT</u>	<u>INFORMATION</u>
1.	Applicant	Plan East LLC c/o Peter Lavoie 74 WINNOCKS NECK RD. SCARBOROUGH, ME 04074
2.	Property Owner	Same as Applicant
3.	Engineer/Surveyor	St. Clair Associates – David St. Clair 34 Forest Ln. Cumberland, ME 04021 207-829-5558
4.	Agent	DM Roma Consulting Engineers P.O Box 1116 Windham, ME 04062
5.	Project Location	69 Elm St.
6.	Map/Lot	Map 40, Lot 57
7.	City Approvals Required	Site Plan, Subdivision
8.	Existing Zoning	MSRD-3

9.	Overlay Zoning	None
10.	Existing Use	Vacant
11.	Proposed Use	Multifamily Residential
12.	Uses in the Vicinity	Downtown Mixed Use
13.	Parcel Size	3,445 Sq. Ft
14.	Limits of Disturbance	3,445 Sq. Ft
15.	Drainage Watershed	Saco River
16.	Water Supply	Public Water
17.	Sewerage Disposal	Public Sewer
18.	Fire Protection	City of Biddeford
19.	Ownership of Road	Public
20.	Additional Approvals/Permits Needed	None
21.	Fees Paid (LDR Attachment A)	All Fees paid
22.	Planning Board Review History	October 5th, 2022

3. COMPLIANCE WITH CITY ORDINANCES

Per the City of Biddeford Code of Ordinances Chapter 66 *Subdivisions*, Section 30, the purpose of the Sketch Plan review is for the Board to review the overall layout plan and offer general feedback to the applicant, to inform the Preliminary submission.

The Board may also request additional studies to be made, at the applicant's expense, to inform the design and approval process. The Board must also make the determination that the proposed subdivision is a major or minor subdivision, based on the following criteria:

Major subdivisions:

Propose to develop any type of additional roadways, whether public or private; or extend public water or sewer lines; where five or more lots are proposed; or are considered planned unit developments.

This determination will dictate whether the application must proceed with a preliminary and final approval in two distinct steps, or if both may be granted simultaneously. If the application is deemed a major subdivision, the applicant must submit all information required in Section 66-35 to be considered

for preliminary approval. The Board may also request additional studies to be made, at the applicant's expense, to inform the design and approval process.

Since this project lies within 500 feet of the Saco River, it will be subject to review by the Saco River Corridor Commission. The City advises the applicant submit an application with the SRCC at their earliest convenience.

4. WAIVER REQUESTS

Biddeford Code of Ordinances Article 6, Section 49.C.3.K(2,3) The applicant is proposing to provide resident parking in the nearby city-owned parking garage on Pearl St. and as such will not provide any parking or vehicular access on-site.

5. RECOMMENDATIONS

At this time, the Board should review the application, listen to the applicant's presentation, and ask questions/make comments to better inform the project. The purpose of the Sketch Plan review is for the Board to review the overall concept of the proposal and gain a better understanding of the project as a whole. The Board must also determine if the application constitutes a major or minor subdivision. By definition, the project is a major subdivision.

6. SAMPLE MOTION

- A. *Motion to designate the application for a 13-unit multifamily building at 69 elm St. (Tax Map 40, Lot 57) as a Major Subdivision.*



September 13, 2022

Matthew Grooms, City Planner
City of Biddeford
205 Main Street
Biddeford, ME 04005

**Re: Sketch Plan Submission
69 Elm Street Apartments
Plan East, LLC - Applicant**

Dear Mr. Grooms:

On behalf of the applicant Plan East, LLC, we are pleased to provide the enclosed application and Sketch Plan of the proposed apartment development at 69 Elm Street. The 3,445 square foot lot is better identified as Lot 57 on the City of Biddeford Assessor's Map 40 and is located within the MSRD3 High Density/Mixed Use Zoning District. The project site is currently vacant land with a mix of pavement and gravel surfaces.

The proposed development will consist of a three-story apartment building containing 13 dwelling units. The intent is for the dwellings to be affordable housing rental units and will be owned and maintained by the applicant. The building will be served by public water, sewer and underground power services. Due to the relatively small site, each unit will have a reserved parking space in the new parking garage located on Pearl Street, an approximately 550-foot walk from the project site.

There is an existing driveway curb cut on the site which will be closed with the sidewalk installation along the frontage of the lot.

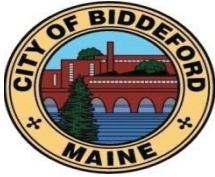
Upon your review of this information, please let us know if you have any questions or require any additional information. We look forward to working with City Staff and the Planning Board on the project.

Sincerely,

DM ROMA CONSULTING ENGINEERS

A handwritten signature in black ink, appearing to read "Jayson R. Haskell".

Jayson R. Haskell, P.E.
Senior Project Manager



City of Biddeford – Planning Department

Planning Board Application

P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115

Type of Application:

☐ Shoreland Zoning Permit ☐ Site Plan Review ☐ Extraction
☐ Conditional Use Permit ☒ Subdivision ☐ Private Way
☒ Other: Sketch Plan Submission

Applicant Information:

Name: Plan East, LLC- c/o Peter Lavoie
 Mailing Address: 74 Winnocks Neck Road, Scarborough, ME 04074
 Telephone: _____
 Email: lavoie.peters@gmail.com

What is your legal interest in the property?

☒ Owner ☐ Potential Buyer with Contract ☐ Lease/Rental Agreement

Owner's Information:

Name: Same as Applicant
 Mailing Address: _____
 Telephone: _____
 Email: _____

Agent's Information:

Name: DM Roma Consulting Engineers - Jayson Haskell
 Mailing Address: P.O. Box 1116, Windham, ME 04062
 Telephone: 207-591-5055
 Email: jayson@dmroma.com

Engineer/Surveyor's Information:

Name: St. Clair Associates - David St. Clair
 Mailing Address: 34 Forest Lane, Cumberland, ME 04021
 Telephone: 207-829-5558
 Email: david@stclairassociatesmaine.com

Project Location and Lot Information:

Street Address: 69 Elm Street Drainage Watershed: Saco River
Tax Map: 40 Lot: 57
Current Zoning: MSRD3 Shoreland Zoning: _____
 Size of Lot: 3,445 () acres (X)s.f. Lot Frontage: 60 FT
 Existing Use of Property: VACANT LOT WITH GRAVEL AND PAVEMENT GROUND SURFACES

Property currently serviced by:

☒ City Road ☐ Public Sewer ☐ Public Water ☐ Public Trash
☐ Private Road ☐ Septic System ☐ Private Well ☐ Private Hauler

Slope Conditions in Area of Construction (if applicable):

☒ Flat (0-3% slope) ☐ Rolling (3-8% slope) ☐ Hilly (8-15% slope) ☐ Steep (15%+ Slope)

Are there any wetlands or waterbodies on the site? ☐ (Yes) ☒ (No) if yes attach information

Is the project within the 100-year floodplain? ☐ (Yes) ☒ (No) if yes attach information

Do you plan to bring fill onto the lot? ☒ (Yes) ☐ (No) If yes attach information

Description of proposed use of property:

Project/Proposed Use:

Three story residential apartment building containing 13 dwelling units.

Property to be Serviced by:

☒ City Road ☒ Public Sewer ☒ Public Water ☐ Public Trash
☐ Private Road ☐ Septic System ☐ Private Well ☒ Private Hauler

Limits of Disturbance: 3,445 () acres (x)s.f.

Net change in impervious cover: 0 () acres () s.f. (currently gravel and paved)

Is this project part of a larger project? ☐ (Yes) ☒ (No)

Is the project proposing a new Private or Public Road? ☐ (Yes, Private) ☐ (Yes, Public) ☒ (No)

Is this project within the Urbanized Area/MS4 (see [City Drainage Map](#)) ☒ (Yes) ☐ (No)

Is the project proposing any Stormwater facilities/BMPs? ☐ (Yes) ☒ (No)

Will a Traffic Movement Permit (TMP) be required?: ☐ (Yes) ☒ (No)

If in a Shoreland Zone:

Percent of residential lot coverage (Max 20%): _____

Percent of structure expansion (Max 30%): _____

☒ **If Subdivision Review, number of lots proposed:** 13 Apartment Units

☐ **If a Private Way is proposed, number of lots served:** _____

If Site Plan Review, you must provide the following information:

Total new square feet footprint of structure: 2,687 sf

Total new square feet paving/parking: None

Waiver Requests (attach details):

1. _____
2. _____
3. _____
4. _____
5. _____

Required Submittal Attachments:

A. Letters of Approval

☐ Fire Department – Contact Chief or Deputy Chief – 282-9986

☐ Ability to Serve for Water Service – Maine Water – 282-1543

☐ Ability to Serve for Sewer Service – Engineering Department – Tom Milligan 284-9118

☐ Police Department – e-911 Road Name Designation – Contact Joanne Fisk 282-5127

B. Letter to Planning Board describing project, Waiver requests, proposed improvements, addressing permit requirements, etc.

C. Photographs of Site.

D. Architectural renderings/drawings of proposed buildings, as required.

E. Engineering Plans, as required.

F. Stormwater Management Report, as required.

Fees (Due at time of Submission):

- \$75 Nonrefundable Administration Fee is required for every application.
- Refer to “Attachment A Fees and Charges” of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and its attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of the review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting an application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

Will the proposed project cause 1 acre or more of site disturbance?: __ (Yes) x (No)

- **If Yes, applicant is responsible for any required Maine Construction General Permits and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.**

Signature of Applicant:

Date

Signature of Property Owner:

Date

DIGITAL SUBMITTAL REQUIREMENTS FOR ALL SUBMITTALS:

- A) PDF OF SIGNED APPLICATION
- B) PDFs OF ALL DRAWING SETS AND OTHER REQUIRED SUBMITTAL ATTACHMENTS NOTED ABOVE

HARD-COPY SUBMITTAL REQUIREMENTS FOR PLANNING BOARD APPLICATIONS:

- A) SEVEN (7) FULL-SIZE PAPER COPIES OF DRAWING SETS

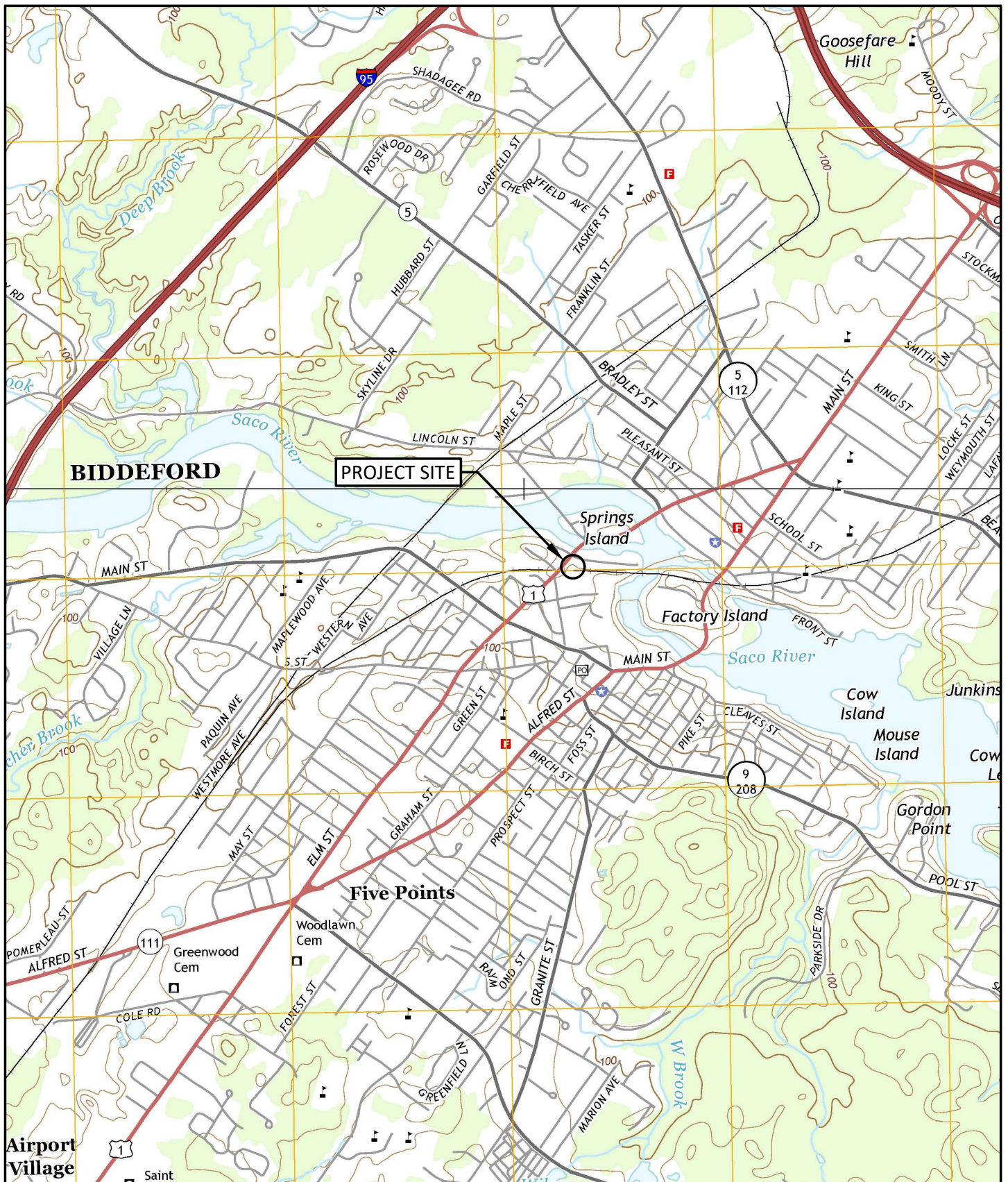
DIGITAL SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) INDIVIDUALLY NAMED PDFs OF EACH DRAWING (NOT A COMBINED PDF SET)
 - *Individual Drawing PDF Naming Format: 'PROJECT/SHEETSET NAME_INDIVIDUAL DRAWING NAME.pdf'*
- B) PDF COPIES OF ALL PERMIT APPROVALS, APPLICATIONS, REPORTS, NARRATIVES, LETTERS, ETC.
- C) FINAL CAD REFERENCE FILES IN DWG FORMAT (SURVEY & PROPOSED DESIGN LINEWORK)
 - *All drawings & CAD reference files must be to-scale and within the following coordinate systems:*
 - *MAINE STATE PLANE WEST NAD83 (Horizontal Datum) & NAVD88 (Vertical Datum)*

HARD-COPY SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) THREE (3) FULL-SIZE PAPER COPIES OF INDIVIDUAL DRAWINGS REQUIRING BOARD SIGNATURE
- B) ONE (1) FULL-SIZE PAPER COPY OF ENTIRE DRAWING SET FOR ENGINEERING RECORDS

PLEASE CONFIRM WITH PLANNING STAFF FOR CLARIFICATION



SITE LOCATION MAP

69 ELM STREET
BIDDEFORD, MAINE

FOR:
PLAN EAST, LLC
74 WINNOCKS NECK ROAD
SCARBOROUGH, MAINE 04074

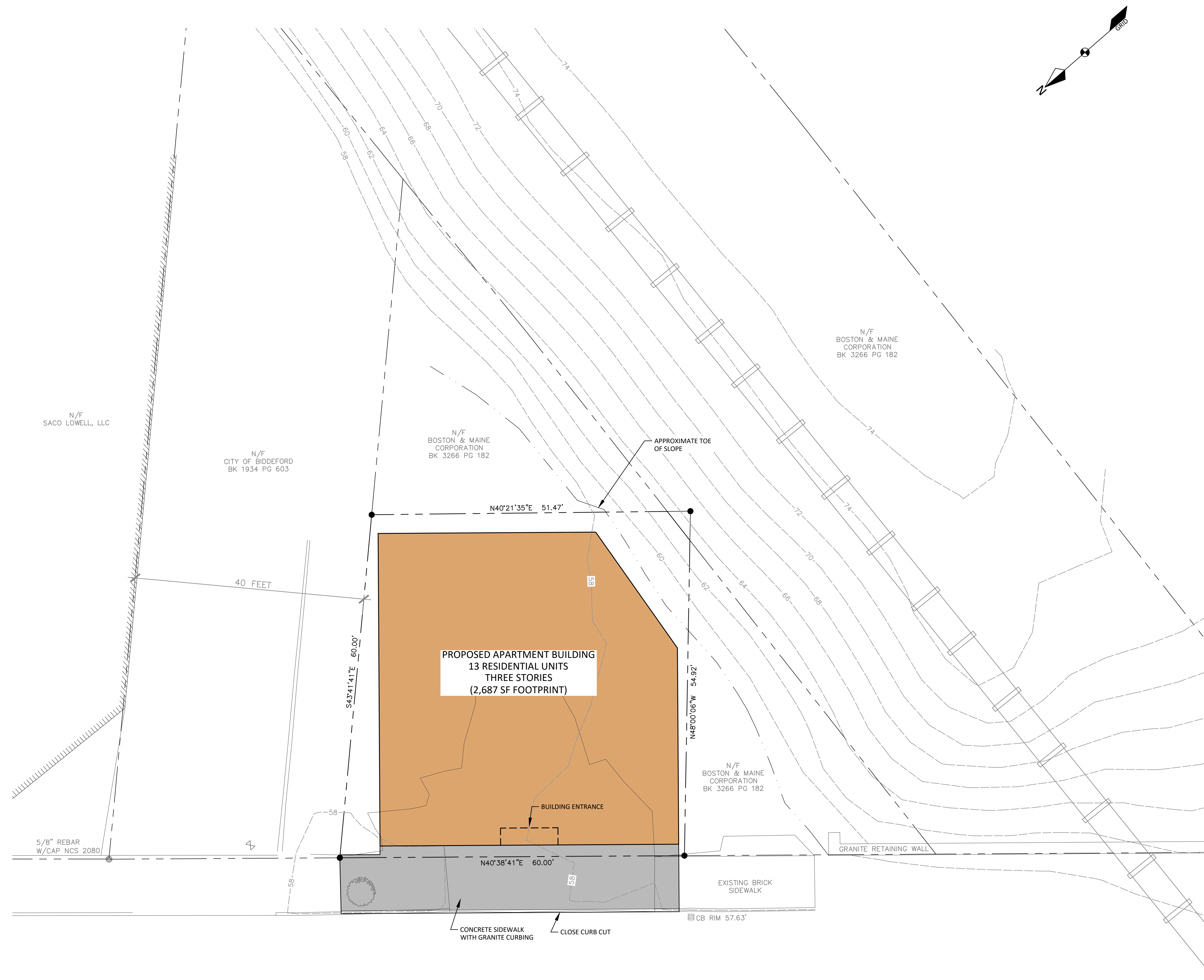
USGS QUADRANGLES:
BIDDEFORD
OLD ORCHARD BEACH

SCALE: 1"=2,000'
DATE: 9-12-2022
JOB NUMBER: 22004

DM ROMA

CONSULTING ENGINEERS

P.O. BOX 1116
WINDHAM, ME 04062
(207) 591-5055



GENERAL NOTES:

1. THE OWNERS OF RECORD OF THE PROPERTY ARE PETER S. LAVOIE AND JAMIE MARSH LAVOIE BY DEED RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS BOOK 18905 PAGE 749.
2. TOTAL AREA OF THE PARCEL IS APPROXIMATELY 3,445 SF.
3. PARCEL TAX MAP REFERENCE: CITY OF BIDEFORD ASSESSORS MAP 40, LOT 57.
4. PLAN REFERENCES:
 - A) BOUNDARY AND TOPOGRAPHIC SURVEY OF ELM STREET PROPERTY FOR PETER LAVOIE AS PREPARED BY ST. CLAIR ASSOCIATES DATED DECEMBER 3, 2021 AND REVISED THROUGH JANUARY 11, 2022.
5. HORIZONTAL DATUM: MAINE STATE PLANE, WEST ZONE, NAD83, U.S. FEET.
6. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
7. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON PLAN REFERENCE 4A.
8. THE PROPERTY IS LOCATED IN THE MSRD3 HIGH DENSITY/MIXED USE ZONING DISTRICT.
9. SPACE AND BULK REQUIREMENTS: MSRD3 DISTRICT

MIN LOT SIZE:	NONE
MIN STREET FRONTAGE:	NONE
MIN FRONT YARD:	NONE
MIN SIDE/REAR YARD:	NONE
MIN BUILDING HEIGHT:	2 STORIES (26 FEET)
MAX LOT COVERAGE:	100%

PRELIMINARY
PLAN

NOT FOR
CONSTRUCTION

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 591-5055

REV	DATE	BY	DESCRIPTION
A.	9-13-22	JRH	ISSUED TO CITY FOR SKETCH PLAN REVIEW

SKETCH PLAN

ELM STREET APARTMENTS

69 ELM STREET
BIDDEFORD, MAINE

FOR:
PLAN EAST LLC

PLAN EAST, LLC
74 WINNOCKS NECK ROAD
SCARBOROUGH, MAINE 04074

SCARBOROUGH, MAINE 04074

22004
JOB NUMBER:

1" = 10'

SCALE:

9-13-2022
DATE:

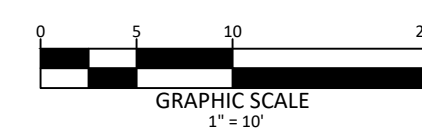
SHEET 1 OF 1

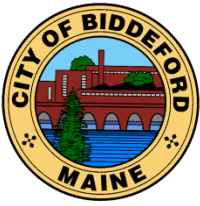
SK-1

LEGEND

EXISTING		PROPOSED
---	PROPERTY LINE/R.O.W.	-----
---	ABUTTER PROPERTY LINE	-----
---	SETBACK	-----
---	EASEMENT LINE	-----
□	GRANITE MONUMENT	■
○	IRON PIN/DRILL HOLE	●
- - -	CENTERLINE	-----
=====	BUILDING	=====
=====	EDGE OF PAVEMENT/CURB	=====
--200'-- --201'	CONTOUR LINE	-----
▣	CATCHBASIN	-----
⊕	DRAINAGE MANHOLE	-----
=====	CULVERT/STORMDRAIN	=====
⊗	SEWER MANHOLE	-----
Ⓢ	UTILITY POLE	-----
OHU	OVERHEAD UTILITIES	-----

ROUTE ONE ELM STREET





CITY OF BIDDEFORD

Planning and Development Department

Eric Freeman
Assistant City Planner
205 Main Street
P.O. Box 586
Biddeford, ME 04005
(207) 284-9115
Eric.Freeman@biddefordmaine.org

To: William Southwick, Chair & Members of the Biddeford Planning Board

From: Eric Freeman, Assistant Planner

Date: September 26th, 2022

Re: 2022.38 Sketch Plan Review for a proposed single family home and 8-unit duplex subdivision at 37 Newtown Rd.

Meeting Date: October 5, 2022

1. PROPOSAL

This application contains materials for a Sketch Plan review for a proposed duplex subdivision consisting of 5 buildings and 9 units. at 37 Newtown Rd. (Tax Map 4, Lot 22-6). The parcel is located in the RF zone. The property currently consists of a single duplex housing unit accessible from Newtown Rd. This plan calls for four (4) additional duplex structures and one new single-family structure. On-site parking for each unit is provided.

2. Project Information

	<u>SUBJECT</u>	<u>INFORMATION</u>
1.	Applicant	Coastal Oaks, LLC 198 Saco Avenue Old Orchard Beach, Maine 04064
2.	Property Owner	Same as Applicant
3.	Engineer/Surveyor	Sebago Technics, LLC 75 John Roberts Rd. Suite 4A South Portland, ME 04106 207-200-2081
4.	Agent	Same as Engineer / Surveyor
5.	Project Location	37 Newtown Rd.
6.	Map/Lot	Map 4, Lot 22-6

7.	City Approvals Required	Site Plan, Subdivision
8.	Existing Zoning	RF (Rural Farm)
9.	Overlay Zoning	None
10.	Existing Use	Duplex, forest cover
11.	Proposed Use	Duplex Residential, Single-Family Residential
12.	Uses in the Vicinity	Low density residential
13.	Parcel Size	43,560 Sq. Ft
14.	Limits of Disturbance	26,500 Sq. Ft
15.	Drainage Watershed	Saco River
16.	Water Supply	Private Well
17.	Sewerage Disposal	Private Septic
18.	Fire Protection	City of Biddeford
19.	Ownership of Road	Private
20.	Additional Approvals/Permits Needed	None
21.	Fees Paid (LDR Attachment A)	All Fees paid
22.	Planning Board Review History	October 5th, 2022

3. COMPLIANCE WITH CITY ORDINANCES

Per the City of Biddeford Code of Ordinances Chapter 66 *Subdivisions*, Section 30, the purpose of the Sketch Plan review is for the Board to review the overall layout plan and offer general feedback to the applicant, to inform the Preliminary submission.

The Board may also request additional studies to be made, at the applicant's expense, to inform the design and approval process. The Board must also make the determination that the proposed subdivision is a major or minor subdivision, based on the following criteria:

Major subdivisions:

Propose to develop any type of additional roadways, whether public or private; or extend public water or sewer lines; where five or more lots are proposed; or are considered planned unit developments.

This determination will dictate whether the application must proceed with a preliminary and final approval in two distinct steps, or if both may be granted simultaneously. If the application is deemed a major subdivision, the applicant must submit all information required in Section 66-35 to be considered for preliminary approval. The Board may also request additional studies to be made, at the applicant's expense, to inform the design and approval process.

This project was reviewed by the City's third party engineer who offered the following comments:

- Note 31 is the standard private way note from the code. Is a private way proposed or necessary?
- The application states that electric and communication will be underground, while note 11 suggests an above ground installation for these utilities.
- The purpose of note 32 is unclear.
- The application form has the box checked indicating it is a subdivision application. For a development of this nature, site plan and subdivision approvals may be required.
- Should any ADA accessible parking spaces be provided?

Staff recommend these comments be addressed by the applicant in future submissions.

4. WAIVER REQUESTS

None at this time. Upon review of the submission requirements, the applicant may wish to submit a request for a waiver.

5. RECOMMENDATIONS

At this time, the Board should review the application, listen to the applicant's presentation, and ask questions/make comments to better inform the project. The purpose of the Sketch Plan review is for the Board to review the overall concept of the proposal and gain a better understanding of the project as a whole. The Board must also determine if the application constitutes a major or minor subdivision. By definition, the project is a major subdivision.

6. SAMPLE MOTION

- A. Motion to designate the application for a 9-unit residential subdivision at 37 Newtown Rd. (Tax Map 4, Lot 22-6) as a Major Subdivision.

Sketch Plan Review Application

To:

City of Biddeford

For:

Newtown Road Condominium

Biddeford, Maine

Prepared for:

Coastal Oaks, LLC

198 Saco Avenue

Old Orchard Beach, Maine 04064

Prepared by:

Sebago Technics, Inc.

75 John Roberts Road, Suite 1A

South Portland, Maine 04106

September 2022

20023

September 12, 2022
20023

Matthew Grooms, City Planner
City of Biddeford
205 Main Street
Biddeford, ME 04005

Sketch Plan Submission, Newtown Road Condominium
Newtown Road, Tax Map 4/Lot 22-6
Coastal Oaks, LLC

Dear Matthew:

On behalf of Coastal Oaks, LLC, we are pleased to submit the enclosed Sketch Plan Application for a new condominium development to be located off of Newtown Road in Biddeford. The site includes an existing duplex unit and historically undeveloped land. The property is identified on Tax Map 4 as Lot 22-6, and is within the Rural Farm zoning district. The proposed development will include the construction of 4 duplex units and 1 single unit, a drive aisle, parking, and a dumpster enclosure. A total of 11 units are proposed with the inclusion of the existing duplex.

The project proposes to extend underground electric from Newtown Road. New structures will be served by common wastewater disposal systems and wells. Wastewater systems will be designed to handle less than 2,000 gallons per day (GPD). Approximately 26,500 square feet of total impervious area is anticipated for the development.

To assist the Planning Board, we have compiled a sketch plan showing the units and drive aisle layout for the proposed project. We are hopeful that we have provided sufficient information for the committee to review before the meeting. Upon your review of the submitted information, please do not hesitate to contact us if you have any questions, or need additional information. Thank you for your consideration.

Sincerely,

SEBAGO TECHNICS, INC.



Craig A. Burgess, P.E.
Senior Project Manager

Cc: Coastal Oaks, LLC

CITY OF BIDDEFORD, MAINE
PLANNING BOARD
P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115

APPLICATION FORM

Type of Application:

- | | | |
|---|---|--------------------------------------|
| ☐ Shoreland Zoning Permit | ☐ Site Plan Review | ☐ Extraction |
| ☐ Conditional Use Permit | ☒ Subdivision | ☐ Private Way |
| ☒ Other: <u>Sketch Plan</u> | | |

Applicant Information:

Applicant's Name: Coastal Oaks, LLC

Applicant's Mailing Address: 198 Saco Avenue Old Orchard Beach, Maine 04064

Applicant's Telephone: _____

What is Applicant's legal interest in the property?

- ☒ Owner ☐ Potential Buyer with Contract ☐ Lease/Rental Agreement

Owner's Name: Coastal Oaks, LLC

Owner's Address: 198 Saco Avenue Old Orchard Beach, Maine 04064

Owner's Telephone: _____

Agent's Name: Sebago Technics Inc.

Agent's Address: 75 John Roberts Road Suite 4A South Portland, Maine 04106

Telephone: 207-200-2081

Engineer/Surveyor: Sebago Technics Inc.

Engineer/Surveyor's Address: 75 John Roberts Road Suite 4A South Portland, Maine 04106

Telephone: 207-200-2081

Project Location and Lot Information:

Street Address: 37 Newtown Road Biddeford, Maine 04005

Tax Map: 4 Lot: 22-6

Current Zoning: RF (Rural Farm) Shoreland Zoning: No

Size of lot: 7.2 ☒ acres ☐ s.f. Lot Frontage: 201 ft.

Existing Use of Property: Existing duplex and undeveloped land

Property currently serviced by:

☐ City Road	☐ Private Road
☐ Public Sewer	☒ Septic System
☐ Public Water	☒ Private Well
☒ Public Trash	☐ Private Hauler

Slope Conditions in Area of Construction (if applicable):

☐ Flat (0-3 % slope) ☐ Rolling (3-8% slope) ☒ Hilly (8-15% slope) ☒ Steep (15% + slope)

Are there any wetlands or waterbodies on the site? ☒ Yes ☐ No If yes, attach information

Do you plan to bring fill onto the lot? ☐ Yes ☐ No If yes, attach information

Description of proposed use of property:

Project/Proposed Use Description: Includes the construction of 4 duplex units and 1 single unit, a drive aisle,
parking, and a dumpster enclosure.

Property to be serviced by:

☐ City Road	☐ Private Road
☐ Public Sewer	☒ Septic System
☐ Public Water	☒ Private Well
☒ Public Trash	☐ Private Hauler

Is this project part of a larger project? ☐ Yes ☒ No

☐ If in a Shoreland Zone:

Percent of residential lot coverage (Max. 20%): _____

Percent of structure expansion (Max. 30%): _____

☐ If Subdivision Review, number of lots proposed: _____

☐ If a Private Way is proposed, number of lots served: _____

☒ **If Site Plan Review, you must provide the following information:**

Total new square feet footprint of structures: ~6500 SF _____

Total new square feet paving/parking: ~20,300 SF _____

Waiver Requests (attach details):

1. _____
2. _____
3. _____
4. _____
5. _____

Attachments:

A. Letters of Approval

- ☐ Fire Department - Contact Chief or Deputy Chief - 282-9986
- ☐ Ability to Serve for Water Service – Maine Water - 282-1543
- ☐ Ability to Serve for Sewer Service- Engineering Dept (Sewer) - Tom Milligan 284-9118
- ☐ Police Department - E-911 Road Name Designation - Contact Joanne Fisk - 282-5127

B. Letter to Planning Board describing project, waiver requests, proposed improvements, addressing permit requirements, etc.

C. Photographs of site.

D. Architectural renderings/drawings of proposed buildings, as required.

E. Engineered Plans, as required.

Fees (due at time of application):

Refer to “Attachment A Fees and Charges” of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and it’s attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting this application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

☒ Project proposed to have 1 acre or more of site disturbance:

-Project may need to apply for a Maine Construction General Permit and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.

Signature of applicant: _____

Date: _____

Signature of owner of property: _____

Date: _____

**IF PLAN APPROVAL IS ANTICIPATED, PROVIDE 2 FULL SIZE MYLARS & 2 FULL SIZE PAPER COPIES FOR BOARD SIGNATURE (AS APPLICABLE).
CHECK WITH PLANNING STAFF FOR CLARIFICATION.**

CHECKLIST FOR ***SITE PLAN*** REQUIREMENTS

YES **NO**

- | | | |
|-------------------------------------|--------------------------|--|
| ☒ | ☐ | Be on sheet size of 24 by 36 inches. |
| ☒ | ☐ | The scale of said plan shall be not less than one inch equals 50 feet and shall be indicated on the plat by use of a bar scale. |
| ☒ | ☐ | The plan shall bear the date, title, north point. |
| ☒ | ☐ | The plan shall contain a location or vicinity sketch (suggested scale one inch equals 800 feet). |
| ☒ | ☐ | The plan shall contain the name and address of the developer and applicant. |
| ☒ | ☐ | All appropriate dimensional requirements. |
| ☒ | ☐ | Existing and proposed easements. |
| ☒ | ☐ | Plan of the site showing existing watercourses and water bodies, seasonal wet areas. |
| ☒ | ☐ | Plan of the site showing soil type and location of test borings. |
| ☒ | ☐ | Location of all existing and proposed utilities. |
| ☐ | ☐ | Topographic contours (every five percent for zero to three percent slope; or every two feet for steeper areas). |
| ☐ | ☐ | Plan should include preservation and supplementation of existing dominant vegetation. |
| ☒ | ☐ | Plan shall indicate which features are to be retained and which are to be removed or altered. |
| ☒ | ☐ | Location of stonewalls, graveyards, fences, stands of trees, and other important unique natural areas and site features, including but not limited to floodplains, deer wintering areas, significant wildlife habitats, fisheries, scenic areas, habitat for rare and endangered plants and animals, unique natural communities and natural areas, sand and gravel aquifers, and historic and/or archaeological resources, together with description of such features. |
| ☒ | ☐ | Plan view of all buildings with their use, size, location, and first-floor elevation in respect to grade. |
| ☐ | ☐ | Standard elevation view of existing and proposed buildings or structures on-site. |

YES NO

- | | | |
|-------------------------------------|--------------------------|---|
| ☐ | ☐ | Outline of any buildings located within 200 feet of such existing or proposed buildings or structures indicating their shape, size, location, heights and volume. |
| ☒ | ☐ | Existing use of abutting properties shall be identified with approximate location of any structures thereon including access roads. |
| ☒ | ☐ | Location, width, curbing, and paving of access ways, egress ways, and streets within the site for both pedestrian and vehicular use. |
| ☒ | ☐ | The location of off-street parking and loading spaces with a layout of the parking indicated. |
| ☒ | ☐ | The size and proposed location of water mains and sanitary sewerage facilities will all necessary engineering data. |
| ☒ | ☐ | The size and location of all other existing and proposed public service connections including, without limitation, gas lines, power lines, telephone lines, and fire alarm connections and locations, indicating whether above or below ground. |
| ☐ | ☐ | The type, nature, and composition of all solid, liquid, and gaseous waste, industrial or otherwise, and the location, type, and design criteria of the storage and disposal facilities dealing with such waste. |
| ☐ | ☐ | A landscape plan and open space areas indicating grade change, vegetation to be preserved, new plantings used to stabilize areas of cut and fill, screening; plus size, location, purpose and type of vegetation. |
| ☐ | ☐ | A drainage plan including location, elevation, layout of catch basins and other surface and subsurface drainage features. |
| ☐ | ☐ | Location, size and design of proposed signs and other advertising or instructional devices. |
| ☐ | ☐ | Existing and proposed contours and finished grade elevations as well as the type, extent, and location of existing and proposed landscaping and open space areas which will be retained. |
| ☐ | ☐ | Location and type of lighting for outdoor facilities. |
| ☐ | ☐ | Lines of existing and proposed abutting streets showing width. |
| ☐ | ☐ | Surveyed property lines showing their bearing and distances and monument locations. |
| ☒ | ☐ | If subdivision is involved, the lines and names of all proposed streets, lanes, ways, or easements intended to be dedicated for public or private use. |

YES **NO**

- | | | |
|-------------------------------------|--------------------------|---|
| ☐ | ☐ | Provide copies of any covenants or restrictions that are intended to cover all or part of the land area to be developed. |
| ☒ | ☐ | Indicate limits of the wetland areas on the property. |
| ☐ | ☐ | Delineate existing zoning boundaries within 1,000 feet of the site. |
| ☐ | ☐ | Stamp and signature of either a Maine licensed land surveyor, professional engineer, or architect responsible for said plan. |
| ☐ | ☐ | Any other exhibits or data deemed necessary by the Planning Board to evaluate the proposed development for site plan review purposes. |

Table of Contents

Cover Letter

Application Form

Exhibit 1 Right, Title, & Interest

Exhibit 2 Site Location Map

Exhibit 3 Sketch Plan

Exhibit 4 Wetland Location

Exhibit 1

Right, Title, & Interest



WARRANTY DEED
Maine Statutory Short Form

KNOW ALL MEN BY THESE PRESENTS,

THAT **DENIS R. LABBE and LINDA D. LABBE**, of the Town of Dayton, County of York, State of Maine,

For no consideration paid, interfamily gift

grant to **JEFFERY LABBE and LINDSEY LABBE** of Arundel, County of York, State of Maine, whose mailing address is 37 Greenbrook Lane, Arundel, ME 04046 with **warranty covenants**, as joint tenants, the land in the City of Biddeford, County of York, State of Maine, described as follows:

A certain lot or parcel of land together with any improvements thereon, situated on the norjthwesterly side of the Newtown Road in the City of Biddeford, County of York, State of Maine and being more particularly bounded and described as follows:

Beginning at a #5 rebar on the northwesterly sideline of the Newtown Road, said #5 being the southerly corner of the lot herein described and being the easterly corner of land now or formerly of Matthew W. Petermann and Teri L. Petermann as described in a deed dated December 4, 2006 and recorded in the York County Registry of Deeds in Book 15030, Page 491;

Thence N 63° 36' 05" W along said land now or formerly of Matthew W. Petermann and Teri L. Petermann, a distance of two hundred and no hundredths (200.00) feet to the northerly corner of said land now or formerly of Matthew W. Petermann and Teri L. Petermann marked by a #5 rebr and land now or formerly of Ronald T. Paul as described in a deed dated November 8, 2006 and recorded in the York County Registry of Deeds in Book 15007, Page 576;

Thence, N 37° 34' 45" W along said land now or formerly of Ronald T. Paul, a distance of one thousand one hundred ninety five and twenty four hundredths (1,195.24) feet to a #5 rebar set in a pile of stones and land now or formerly of the University of New England, as described in the following deeds recorded in the York County Registry of deeds in Book 7311, Page 113 and Book 7613, Page 282;

Thence N 40° 22' 15" E along said land now or formerly of the University of New England, a distance of two hundred eighteen and eighty three hundredths (218.83) feet to a point and remaining land of Denis R. Labbe and Linda D. Labbe to be conveyed to Tiffany Labbe to be recorded;

Thence S 43° 10' 15" E along said land to be conveyed to Tiffany Labbe, a distance of one thousand three hundred sixty two and twenty five hundredths (1,362.25) fet to a point on said Northwesterly sideline of the Newtown Road;

Thence S 49° 07' 20" W along said northwesterly sideline of the Newtown Road, a distance of one hundred forty three and twenty five hundredths (143.25) feet to an angle point in said northwesterly sideline of the Newtown Road;

Thence S 26° 23' 55" W along said northwesterly sideline of the Newtown Road, a distance of one hundred twenty nine and nine hundredths (129.09) feet to the point of beginning.

Said parcel contains 8.7 acres, more or less.

Said bearings refer to a 2005 Magnetic Observaton.

Being a portion of the premises conveyed to Denis R. Labbe and Linda D. Labbe by deed dated November 6, 2006 and recorded in the York County Registry of Deeds in Book 15007, Page 574.

No R.E. Transfer Tax Paid

2P

INGRAHAM TITLE COMPANY
338 Main Street
Saco, ME 04072

IN WITNESS WHEREOF, we, the said Denis R. Labbe and Linda D. Labbe, have hereunto set our hands and seals, this 3 day of March, 2016.

**SIGNED, SEALED AND DELIVERED
IN PRESENCE OF**

KOOLCR
For both

Denis R Labbe
Denis R. Labbe
Linda D Labbe
Linda D. Labbe

**STATE OF MAINE
YORK, ss.**

March 03, 2016

Then personally appeared the above named Denis R. Labbe and Linda D. Labbe and acknowledged the foregoing instrument to be their free act and deed.

Before me,

KOOLCR
Notary Public

Print Name Kimberly A Phinney

Commission Expires 11-09-22

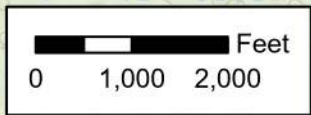
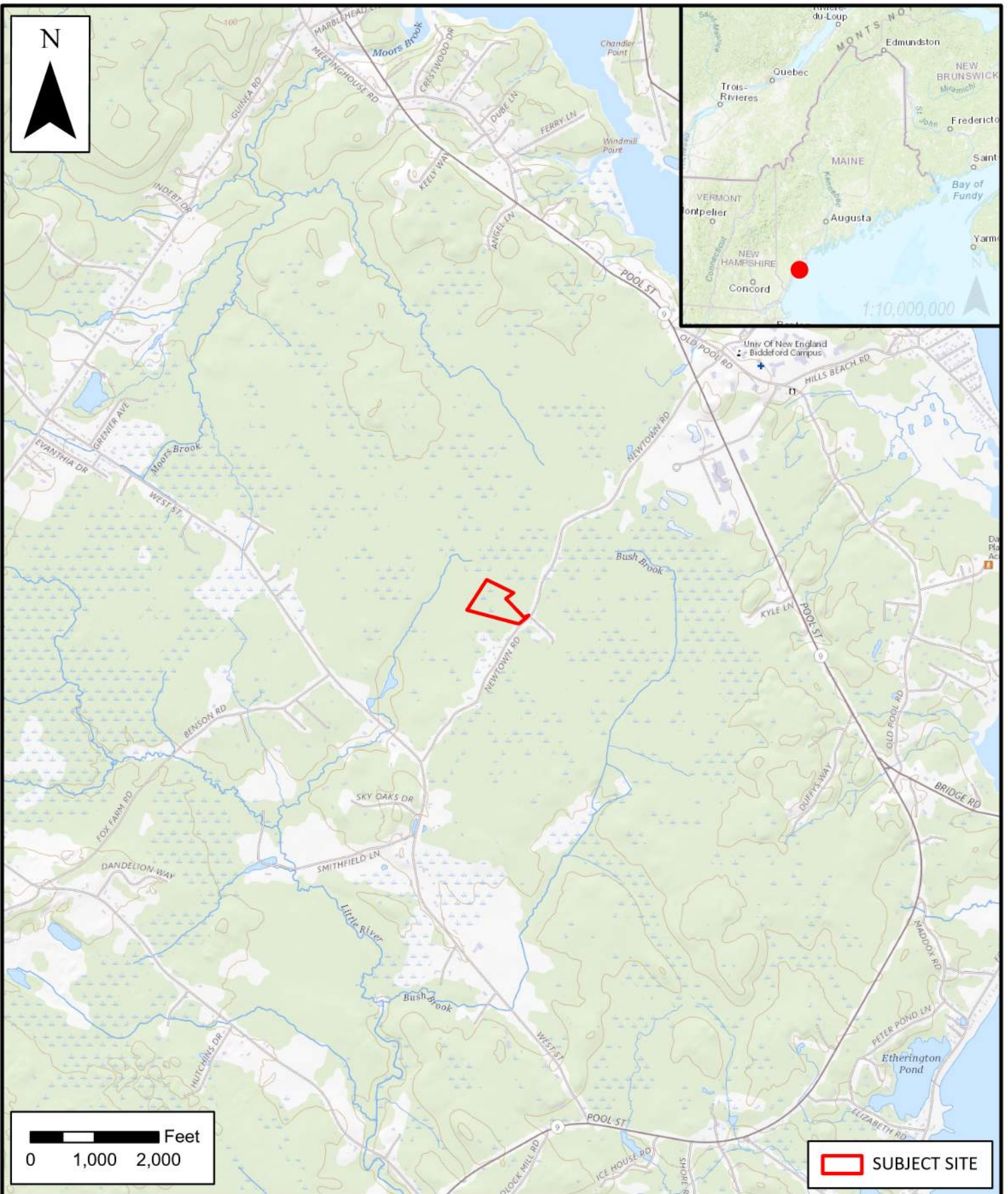
Seal

RETURN RECORDED DOCUMENT TO:

Judy deeds labbe, denis and linda to labbe, jeffery and lindsey, 2016

Exhibit 2

Site Location Map



 SUBJECT SITE

SEBAGO
TECHNICS

WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LOCATION MAP KING REAL ESTATE

LOCATION:

37 NEWTOWN ROAD
BIDDEFORD, ME

INFORMATION:

CITY OF BIDDEFORD, ME
USGS QUADRANGLE

SCALE: 1:24,000

DATE: 9/6/2022

Exhibit 3

Sketch Plan



NOT FOR CONSTRUCTION

[illegible]

SEBAGO
TECHNICS

WWW.SEBAGOTECHNICS.COM

75 John Roberts Rd.
Suite 4A
South Portland, ME 04106

SUBDIVISION PLAN
OF:
NEWTOWN ROAD SUBDIVISION
37 NEWTOWN ROAD
BIDDEFORD, MAINE
FOR:
COASTAL OAKS, LLC
198 SACO AVENUE

DESIGNED	BAM/TFG
DRAWN	MRS/TFG
CHECKED	CAB
DATE	07/25/2022
SCALE	1" = 40'
PROJECT	20023

SHEET 1 OF 1

GENERAL NOTES:

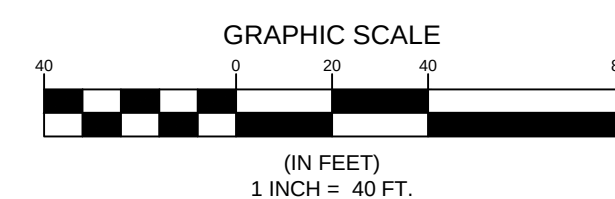
1. THE RECORD OWNER OF THE PARCEL IS BIDDEFORD HOUSING AUTHORITY BY DEED DATED SEPTEMBER 6, 2011 AND RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN BOOK 16183, PAGE 533.
2. THE PROPERTY IS SHOWN AS LOT 22-6 ON THE CITY OF BIDDEFORD TAX MAP 4 AND IS LOCATED IN RF (RURAL FARM) ZONE.
3. SPACE AND BULK CRITERIA FOR RURAL FARM (RF) ZONING DISTRICT:
 - * SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.
- MINIMUM PROPERTY LINE SETBACK 25 FT
4. PARCEL INFORMATION SHOWN HEREON IS BASED UPON CITY OF BIDDEFORD TAX MAP PARCELS DATED APRIL, 2020
5. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON LIDAR REMOTE SENSING, COLLECTED IN 2011 BY THE STATE OF MAINE AND DISTRIBUTED BY THE USGS AS A CLASSIFIED LAZ POINT CLOUD. GROUND CLASSIFICATION INTERPOLATED AT A 10 FOOT GRID, SHOWN AT 2 FOOT POINT COUNTS, GROUND TRUING NOT PERFORMED.
6. PLAN REFERENCES:
 - A. UNRECORDED SURVEY OF PROPERTY PERFORMED BY PAUL P. GADBOIS, PLS 2104.
7. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NAVD88, BASED ON DUAL FREQUENCY GPS OBSERVATIONS.
8. A WETLAND DELINEATION WAS CONDUCTED ON THIS PROJECT SITE ON MAY 11, 2022 BY MARK HAMPTON ASSOCIATES, INC. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OF THE 1987 WETLANDS DELINEATION MANUAL AND NORTHEAST REGIONAL SUPPLEMENT AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS. ALL WETLAND FLAPS WERE LOCATED USING GLOBAL POSITIONING SYSTEMS (GPS) TECHNOLOGY CAPABLE OF DECIMETER ACCURACY.
9. A VERNAL POOL STUDY WAS PERFORMED ON MAY 11, 2022 BY MARK HAMPTON ASSOCIATES, INC. NO SIGNIFICANT VERNAL POOLS WERE MAPPED.
10. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
11. THE PROPOSED DEVELOPMENT WILL BE SERVED BY PRIVATE SEPTIC SYSTEMS, PRIVATE WELLS AND/OR OVERHEAD ELECTRIC AND TELEPHONE. COORDINATED WITH CENTRAL MAINE POWER AND/OR OTHER LOCAL UTILITY COMPANIES.
12. ALL WORK SHALL CONFORM TO THE APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.
13. PROJECT SITE IS NOT LOCATED WITHIN A FEMA FLOOD ZONE.
14. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
15. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
16. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FOUNDATION AND ERECTION OF ANY WATERWORKS. IF ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
17. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
18. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
19. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OCTOBER 2016 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
20. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
21. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRS-A 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF ANY CONFLICT WITH EXISTING UTILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE

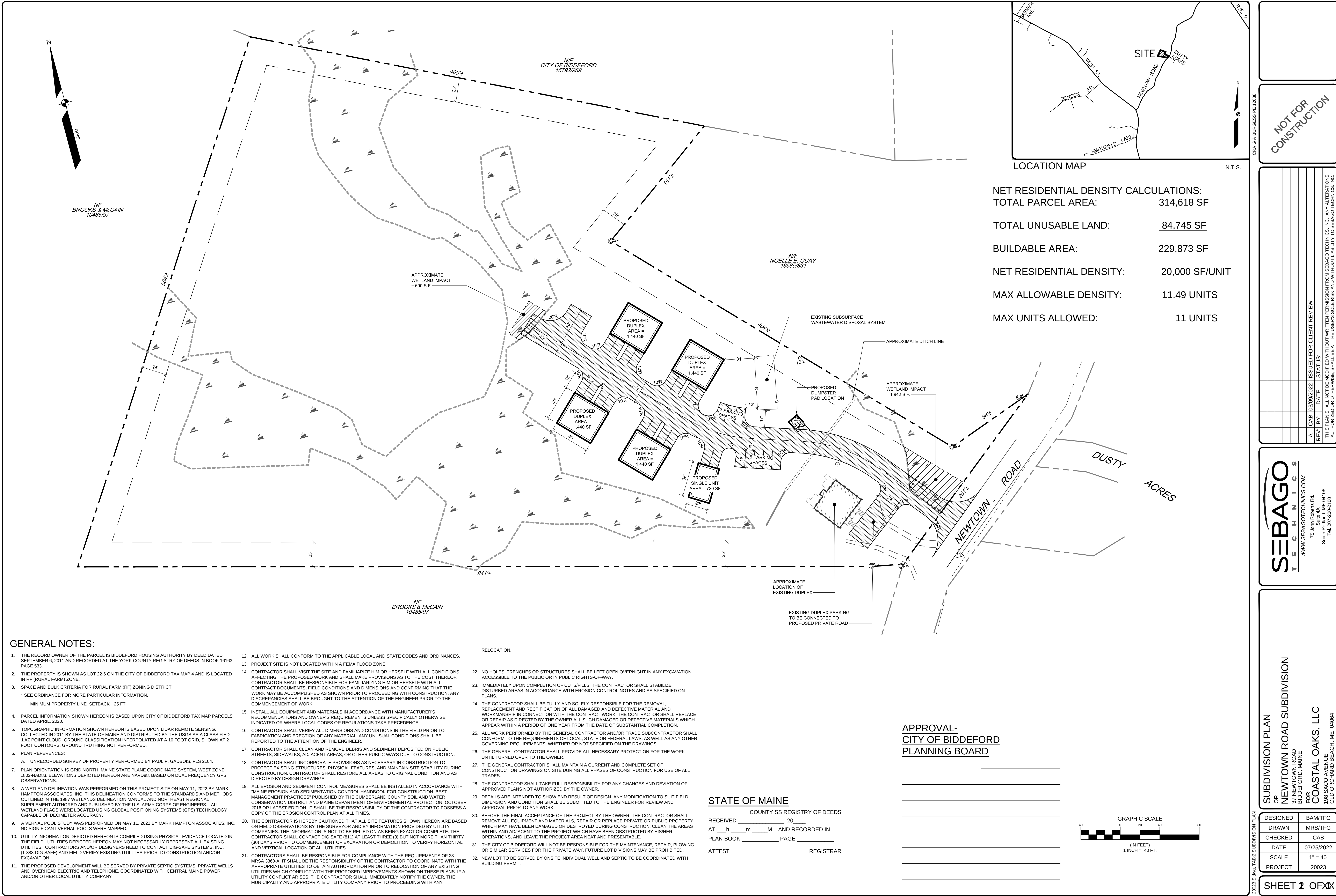
22. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
23. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
24. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
25. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER APPLICABLE REQUIREMENTS, SPECIFICATIONS OR NOT SPECIFIED ON THE DRAWINGS.
26. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
27. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
28. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE OWNER.
29. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN, ANY MODIFICATION TO SUIT FIELD, DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
30. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY THAT MAY HAVE BEEN DAMAGED OR DEGRADED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
31. THE CITY OF BIDEFORD WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR, PLOWING OR DE-ICEING OF THE SERVICES FOR THE PROJECT. THE CITY OF BIDEFORD MAY BE PROHIBITED.
32. NEW LOT TO BE SERVED BY ONSITE INDIVIDUAL WELL AND SEPTIC TO BE COORDINATED WITH BUILDING PERMIT.

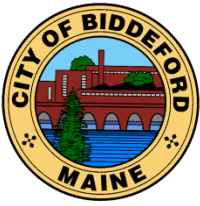
STATE OF MAINE

____ COUNTY SS REGISTRY OF DEEDS
RECEIVED _____, 20____
AT ____h ____m ____M. AND RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST _____ REGISTRAR

APPROVAL-
CITY OF BIDDEFORD
PLANNING BOARD







CITY OF BIDDEFORD

Planning and Development Department

Matthew Grooms, AICP
Deputy Director/City Planner
205 Main Street
P.O. Box 586
Biddeford, ME 04005
(207) 284-9115
Matthew.Grooms@biddefordmaine.org

PLANNING BOARD REPORT

TO: Chair Southwick and the Biddeford Planning Board

FROM: Matthew Grooms, AICP, City Planner

DATE: September 27, 2022

RE: 2022.30 Preliminary Plan Review for a proposed 5-lot residential subdivision at 355 Pool Street.

MEETING DATE: Wednesday, October 5, 2022 at 6:00 pm

1. INTRODUCTION

This application contains materials for Preliminary Plan review for a five-lot subdivision created from the parcel located at 355 Pool Street (Tax Map 44, Lot 21). The property is located in the SR-1 (Suburban Residential) and LR (Limited Residential Shoreland Overlay) Zones. The existing parcel is approximately 8.3 acres, and the five proposed lots may range from 50,000 square feet to 107,000 square feet. All lots are proposed to have adequate frontage along Pool Street, as required in the SR-1 zone. A Wetland study for the property has been prepared by Jones Associates, and is included in the application package.

This proposal does not involve the development of new roadways, or major extension of public utilities. Driveways and connections to available water service will be directly into Pool Street, and will occur as part of each individual lot development. The properties will utilize individual septic systems to service each property. Given the nature of this project, and the fact that it does not involve physical improvements as part of this proposal, the application has not undergone full engineering review.

2. PROJECT INFORMATION

	SUBJECT	DATA/INFORMATION
1.	Applicant	Shawn Brown 5 Buckthorn Circle Saco, ME 04072
2.	Property Owner	Shawn and Lee-Marie Brown 5 Buckthorn Circle Saco, ME 04072
3.	Agent	Walter Pelkey, BH2M 380B Main Street Gorham, ME 04038

4.	Engineer/Surveyor	Same as Agent
5.	Project Location	355 Pool Street
6.	Map/Lot	Map 44, Lot 21
7.	City Approvals Required	Residential Subdivision
8.	Existing Zoning	SR-1 (Suburban Residential)
9.	Overlay Zoning	Limited Residential (partial)
10.	Existing Use	Vacant
11.	Proposed Use	Residential Subdivision
12.	Uses in the Vicinity	Residential
13.	Parcel Size	8.2 acres
14.	Water Supply	Public Water
15.	Sewerage Disposal	Private Septic
16.	Fire Protection	City of Biddeford
17.	Ownership of Road	Public
18.	Additional Approvals/Permits Needed	None
19.	Fees Paid (LDR Attachment A)	All fees paid
20.	Planning Board Review History	August 3, 2022, October 5, 2022

3. COMPLIANCE WITH CITY ORDINANCES

Per the City of Biddeford Code of Ordinances Chapter 66 Subdivisions, Section 30, projects classified as a major subdivision, are required to go before the Planning Board for Sketch Plan, Preliminary Plan and Final Plan review. The Board determined the application to be a major subdivision at their August 3rd meeting, which resulted in the applicant having to submit all information required for a Preliminary Subdivision Review, as stipulated under Section 66-35. The Board may also request additional studies to be made, at the applicant's expense, to inform the design and approval process.

All proposed lots are in conformance with the City of Biddeford LDR Article V, Table B Dimensional Requirements with a minimum lot size of 20,000 square feet, and a minimum frontage of 100 feet. Staff are working to determine whether or not certain lots are in conflict with the Maine State Subdivision Statute for lots with shore frontage.

Other review comments are as follows:

- Applicant shall provide draft deeds and covenants for each of the newly created lots being proposed. This information is a requirement of the preliminary subdivision application.
- Proposed driveway locations should be identified on the preliminary plan and the applicant should reach out to Maine DOT to determine whether separate permits are required by the state as Pool Street is a state route.
- Applicant has provided a drafted letter to the water company requesting confirmation that there is adequate capacity to service this development. As of the writing of this report, the applicant has not received this confirmation, which will be required at time of final plan submission.
- The provided materials do not include a written narrative outlining compliance of the project with the City's preliminary subdivision requirements. In general, most required elements appear

to be provided, however staff would request that a brief narrative accompany any future submission.

4. PLANNING BOARD MEETING – AUGUST 3, 2022

The Planning Board reviewed the sketch plan application for the proposed 5-lot subdivision at their August 3rd meeting, and provided the following feedback:

- Clarify the applicability of Maine State Subdivision law (30-A M.R.S.A. §§ 4404) governing review criteria for subdivisions. Specifically, 30-A M.R.S.A. §§ 4404 – 17 specifies that lots with shore frontage on a river have a lot depth to shore frontage ratio greater than 5:1.
 - Update: The applicant, at the August 3rd meeting, stated that since this project was along the Saco River and under the jurisdiction of the Saco River Corridor Commission, that these particular subdivision rules were not applicable. In staff's review of the state subdivision statute, and the Saco River Corridor Act, staff has not identified a clear indication that the Saco River Corridor Act, and associated performance standards for shore frontage supercede the state's subdivision requirements, particularly as these are not inherently in conflict. Staff has requested a legal opinion from the City Attorney, that is expected prior to the October 5, 2022 Planning Board Hearing.
- Update the plans to depict the required 100-foot shoreland setback, as required per the City's local shoreland zoning requirements.
 - Update: This information has been added to the draft subdivision plat.
- Ongoing property dispute between applicant and abutter.
 - Update: The applicant's attorney has provided a letter outlining legal precedent in instances where a Planning Board is tasked with considering an application pending ongoing litigation around title issues. Staff agree with the legal opinion provided, and concur that the Board is within its rights to take action on the subdivision application before them.

5. STAFF RECOMMENDATION

In reviewing the preliminary subdivision application for 355 Pool Street, staff identified a number of preliminary plan requirements to have not been included in this submission. Staff are also seeking clarification on whether the lots as drawn, meet state subdivision requirements for lots with shore frontage, on account of their depth to shore frontage ratio being greater than 5:1.

Given the nature of the items that are outstanding, and the limited scope of this application, staff are comfortable having the applicant address these items as a condition of approval for the preliminary subdivision application, which is reflected in the draft motion.

6. SAMPLE MOTIONS

1. *Motion to determine the application is “complete” for review purposes.*
2. *Motion to grant Preliminary Subdivision Approval for the proposed 5-lot subdivision at 355 Pool Street (Tax Map 44, Lot 21) conditioned on the Final Application and Plan Set not being submitted to the Planning Board until:*
 - A. *Applicant provides all plan elements required for preliminary plan approval as identified in staff’s report, for review and approval by City Staff.*



September 14, 2022

Matthew Grooms, City Planner
City of Biddeford
205 Main Street
Biddeford, ME

RE: Preliminary Major Subdivision Application
Shawn Brown
355 Pool Street

Dear Matthew,

On behalf of the applicant, Shawn Brown, we are submitting the Preliminary Subdivision Application for an amended subdivision. The applicant is proposing 5 single family residential lots on the property located at 355 Pool Street, also known as Tax Map 44 Lot 21. The parcel is approximately 8.3 acres and located in the Suburban Residential zone, formerly approved as "Tarte Realty Subdivision". The lots will be served by public water from the existing watermain located along Pool Street, private individual sewer systems and underground power along a proposed easement.

Please find enclosed 10 copies of the following information in support of the Preliminary Major Subdivision Application for the above referenced project:

- Attachment 1 - Major Subdivision Application
- Attachment 2 – Parcel Deed
- Attachment 3 – Sewer Evaluation, Mark Hampton Associates, Inc.
- Attachment 4 – Project Figures and Photo
- Attachment 5 – Abutter's List & Map
- Attachment 6 – Departments notification
- Attachment 7 – Plan Set

Please contact me if you have any questions or if any additional information is needed.

Sincerely,

Walter Pelkey
Project Manager

ATTACHMENT 1
Major Subdivision Application

**CITY OF BIDDEFORD, MAINE
PLANNING BOARD
P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115**

APPLICATION FORM

Type of Application:

☐ Shoreland Zoning Permit ☐ Site Plan Review ☐ Extraction
☐ Conditional Use Permit ☒ Subdivision ☐ Private Way
☐ Other: _____

Applicant Information:

Applicant's Name: Shawn Brown
Applicant's Mailing Address: 5 Buckthorn Circle, Saco, ME
Applicant's Telephone: _____

What is Applicant's legal interest in the property?

☒ Owner ☐ Potential Buyer with Contract ☐ Lease/Rental Agreement

Owner's Name: Same
Owner's Address: _____
Owner's Telephone: _____

Agent's Name: Walter Pelkey - BH2M
Agent's Address: 380B Main Street, Gorham, ME 04038
Telephone: (207) 839-2771

Engineer/Surveyor: Robert Libby Jr. - BH2M
Engineer/Surveyor's Address: 380B Main Street, Gorham, ME 04038
Telephone: (207) 839-2771

Project Location and Lot Information:

Street Address: 355 Pool Street, Biddeford, ME
Tax Map: 44 Lot: 21
Current Zoning: Suburban Residential (SR1) Shoreland Zoning: _____

Size of lot: +/-8.21 ☒ acres ☐ s.f. Lot Frontage: 589.23'

Existing Use of Property: The parcel is currently undeveloped.

Property currently serviced by:

☒ City Road	☐ Private Road
☐ Public Sewer	☐ Septic System
☒ Public Water	☐ Private Well
☐ Public Trash	☐ Private Hauler

Slope Conditions in Area of Construction (if applicable):

☐ Flat (0-3 % slope) ☒ Rolling (3-8% slope) ☐ Hilly (8-15% slope) ☒ Steep (15% + slope)

Are there any wetlands or waterbodies on the site? ☒ Yes ☐ No If yes, attach information

Do you plan to bring fill onto the lot? ☐ Yes ☒ No If yes, attach information

Description of proposed use of property:

Project/Proposed Use Description: The applicant is proposing to create 5 New Family House Lots

Property to be serviced by:

☐ City Road	☐ Private Road
☐ Public Sewer	☒ Septic System
☒ Public Water	☐ Private Well
☐ Public Trash	☐ Private Hauler

Is this project part of a larger project? ☐ Yes ☒ No

☐ If in a Shoreland Zone:

Percent of residential lot coverage (Max. 20%): _____

Percent of structure expansion (Max. 30%): _____

☒ If Subdivision Review, number of lots proposed: 5 lots

☐ If a Private Way is proposed, number of lots served: _____

☐ If Site Plan Review, you must provide the following information:

Total new square feet footprint of structures: _____

Total new square feet paving/parking: _____

Waiver Requests (attach details):

1. _____
2. _____
3. _____
4. _____
5. _____

Attachments:

A. Letters of Approval

- ☐ Fire Department - Contact Chief or Deputy Chief - 282-9986
- ☐ Ability to Serve for Water Service – Maine Water - 282-1543
- ☐ Ability to Serve for Sewer Service- Engineering Dept (Sewer) - Tom Milligan 284-9118
- ☐ Police Department - E-911 Road Name Designation - Contact Joanne Fisk - 282-5127

B. Letter to Planning Board describing project, waiver requests, proposed improvements, addressing permit requirements, etc.

C. Photographs of site.

D. Architectural renderings/drawings of proposed buildings, as required.

E. Engineered Plans, as required.

Fees (due at time of application):

Refer to "Attachment A Fees and Charges" of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and it's attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting this application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

☐ Project proposed to have 1 acre or more of site disturbance:

-Project may need to apply for a Maine Construction General Permit and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.

Signature of applicant:

Shawn Brown

Date: 9-13-22

Signature of owner of property:

Shawn Brown

Date: 9-13-22

**IF PLAN APPROVAL IS ANTICIPATED, PROVIDE 2 FULL SIZE MYLARS & 2 FULL SIZE PAPER COPIES FOR BOARD SIGNATURE (AS APPLICABLE).
CHECK WITH PLANNING STAFF FOR CLARIFICATION.**

ATTACHMENT 2
Parcel Deed



TRUSTEE'S DEED

DLN: _____

CRAIG G. COFFIN, not individually but solely in his capacity as **Successor Trustee** of the **POOL STREET REALTY TRUST** under Declaration of Trust dated August 21, 1992, as amended, having a mailing address c/o First Atlantic Healthcare, 100 Waterman Drive, Suite 401, South Portland, Maine 04106, by the power conferred by law, and every other power, grants to **SHAWN BROWN** and **LEE-MARIE BROWN** with a mailing address of 5 Buckthorn Circle, Saco, Maine 04072 as joint tenants, the land, with any improvements thereon, located in Biddeford, York County, Maine more particularly described in Exhibit A attached hereto and made a part hereof.

I hereby covenant that I am the current Trustee of the Trust; that said Trust is still in full force and effect; that I have the power thereunder to convey as aforesaid; and that, in the making of this conveyance, I have, in all respects, acted pursuant to the authority vested in and granted to me therein.

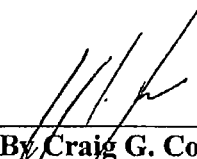
Signature Page Follows

Maine R.E. Transfer Tax Paid

→ Ingraham Title Company
 705 Portland Road
 Saco, ME 04072

WITNESS my hand and seal this ²⁹25th day of October 2021

WITNESS:


By **Craig G. Coffin, Successor**
Trustee of Pool Street Realty Trust
duly authorized

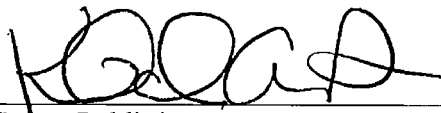
STATE OF MAINE

COUNTY OF YORK

Oct 29 2021

Personally appeared the above-named Craig G. Coffin, Successor Trustee of Pool Street Realty Trust and acknowledged before me the foregoing instrument to be his free act in his said capacity.

Before me,



Notary Public/Attorney-at-Law
Print Name: Kimbaly A. Phinney
Commission Expires: 11/09/22
(Affix Notarial Seal)

SEAL

EXHIBIT A

A certain lot or parcel of land situated in Biddeford, Maine and lying on the northeasterly side of Pool St: and being further bounded and described as follows:

BEGINNING at an iron pipe driven into the ground on the northeasterly side of Pool Street, a/k/a Pool Road, said pipe being in the center of a brook and at the land now or formerly of Robert Hunter; thence running S 40° 30' 12" E by and along the northeasterly side of Pool Street 590 feet, more or less, to a point and other land which Perspective Associates conveyed to Henry A. Tartre by deed dated November 6, 1987 recorded in the York County Registry of Deeds in Book 4521, Page 1; thence turning a running by and along the land now or formerly of said Henry Tartre by the following courses and distances: N 32° 36" E 396.65 feet to a point; N 01° 38' 56" E 109.49 feet to a point; N 22° 57' 28" E 41.95 feet to a point; N 68° 58' 31" E 109.04 feet a point; N 67° 24' 39" E 79.64 feet to a point; N 30° 37' 03" E 62.69 feet to a point; N 38° 20' 06" E 103.76 feet; N 04° 01' 03" W 48.64 feet to a point; N 85° 58' 57" E 10 feet to a point and the Saco River; thence running northerly and northwesterly by the Saco River to said brook; thence running southerly and southwesterly by said brook to the point of beginning.

The courses and distances are derived from a plan entitled "Tartre Realty Subdivision Plan of Land To-Be Conveyed by Perspective Associates, Pool Street, Biddeford, Maine," dated September 26, 1986 and recorded in the York County Registry of Deeds in Plan Book 156, Page 27.

The above-described premise is subject to a 50 foot right of way for the purpose of access by foot or motor vehicle and for utilities to and from the abutting parcel now or formerly of Henry Tartre and Pool Street. Said easement is bounded and described as follows:

BEGINNNING at the southerly most corner of the above-described property at the northeasterly sideline of Pool Street and the westerly corner of the land now or formerly of Henry Tartre; thence running northwesterly by and along the northeasterly sideline of Pool Street 51.47 feet to a point; thence running N 32° 36' 36" E 137.80 feet to a point; thence running S 57° 23' 24" E 50.00 feet to a point and the westerly sideline of the land now or formerly of said Tartre; thence running S 32° 36' 36" W 150.00 feet to the westerly sideline of Pool Street and the point of beginning.

The above-described premise is further subject to a water line easement 15 feet in width for the purpose of installation, repair and maintenance of a water line. Said easement is further bounded and described as follows:

BEGINNING at a point 97 feet, more or less, from the southerly most corner of the above described lot and approximately 97 feet, more or less, from the most westerly corner of said lot now or formerly of Henry Tartre; thence N 62° 44' 17" W, 218.25 feet to a point; thence N 27° 15' 43" E 15.00 feet to a point; thence S 62° 44' 17" E, 219.6 feet to the westerly line of land of Henry Tartre; thence S 32° 36' 36" W, 15.07 feet just to the point of beginning.

Also, right of access easement to and from the Saco River for purpose of accessing boat moorings for personal use said easement shall run with the land.

The above-described premise is further subject to a 25 foot wide access easement for foot or vehicle access, which easement is further bounded and described as follows:

BEGINNING at a point, said point being the most northerly corner of above described 50 foot right of way easement; thence N 32° 36' 36" E, 130.00 feet to a point; thence along a curve concaved to the west having a radius of 162.50 feet, a distance of 158.82 feet to a point; thence N 23° 23' 24" W 85.00 feet to a point; thence N 66° 36' 36" E, 25.00 feet to a point; thence S 23° 23' 24" E, 85.00 feet to a point; thence along a curve concave westerly having a radius of 187.50 feet, a distance of 183.26 feet to a point; thence S 32° 36' 36" W 130.00 feet to the northerly line of above described 50 foot right of way access easement; thence N 57° 23' 24" W, 25.00 feet to the point of beginning.

The above-described premise is conveyed together with a 25.00 wide easement to construct, maintain, operate, repair and replace a sanitary sewer discharge pipe and appurtenant structure over the property now of formerly of Henry Tartre. The centerline of said easement shall be located along the existing discharge pipe which is shown and delineated on the above noted plan.

This easement is conveyed together with the right to go upon the adjoining land now or formerly of Henry Tartre and the right to cut trees, brush, bushes, shrubs, remove roots and earth and to do any other work necessary to construct, maintain, operate, repair or replace the existing sewer line, discharge pipe and related structures.

For source of title, reference is made to a deed from Daniel D. Sowerby as Trustee of the Riverwood Realty Trust to Daniel W. Hourihan in his capacity as Trustee of Pool Street Realty Trust dated August 21, 1992 and recorded in the York County Registry of Deeds in Book 6222, Page 13. Additional reference is made to an amendment to Pool Street Realty Trust dated December 10, 1997 and recorded in said Registry in Book 8850, Page 224, wherein Daniel W. Hourihan was removed as Trustee of the Trust and Craig G. Coffin appointed as his Successor.

DEED

KNOW ALL BY THESE PRESENTS, THAT I, DANIEL D. SOWERBY as TRUSTEE of the RIVERWOOD REALTY TRUST dated December 7, 1987, of York, Maine, for consideration paid,

HEREBY GRANT to DANIEL W. HOURIHAN in his capacity as TRUSTEE of POOL STREET REALTY TRUST under Declaration of Trust dated August 21, 1992, 1992 with a mailing address of 151 Middle Street, P.O. Box 578, Portland, ME 04112,

The premises located on Pool Road in the Town of Biddeford, County of York and State of Maine, further described as follows:

See Schedule A attached hereto and made a part hereof.

Being the same premises described in a deed to Grantor dated December 7, 1987 and recorded in the York County Registry of Deeds in Book 4553, 41 and as depicted on a plan entitled "Tarte Realty Subdivision" dated September 26, 1986 as revised April 14, 1987 by Aliberti, LaRoche & Hodson as recorded in said Registry of Deeds in Plan Book 156, Page 27, subject to the matters set forth therein, and together with all and singular the rights and appurtenances pertaining thereto (the "Premises");

Together with all right title and interest of the Grantor in and to all buildings, improvements, machinery, furniture, fixtures and equipment now located on the Premises.

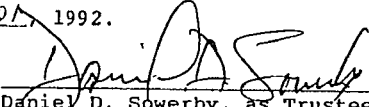
SUBJECT TO 1992-93 property taxes which the Grantee assumes and agrees to pay.

This deed is executed pursuant to an order of the York County Superior Court dated August 5, 1992 in the matter of Casco Northern Bank N.A. v. DDS, INC., Docket #91-745 concerning the grantor's authority to execute this instrument of conveyance and pursuant to every other power of the trustee.

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging, to the said DANIEL W. HOURIHAN, as TRUSTEE of POOL STREET REALTY TRUST, his successors or assigns forever.

WITNESS my hand and seal on August 21, 1992.

Witness


Daniel D. Sowerby, as Trustee
of the Riverwood Realty Trust

MAINE REAL ESTATE TRANSFER TAX PAID

23
10

State of Maine
County of Cumberland

August 21, 1992

Then personally appeared the above-named Daniel D. Sowerby
in his said capacity, and acknowledged the foregoing instrument
to be his free act and deed.

Before me,

Laurene W. Warner
Notary Public/Attorney At Law
Name: 7-19-92

Laurene W. Warner

7626H

SCHEDULE A
Page 1 of 2

Poor copy of map of recording

A certain lot or parcel of land with the buildings thereon situated in Biddeford, Maine and lying on the northeasterly side of Pool Street and being further bounded and described as follows:

BEGINNING at an iron pipe driven into the ground on the northeasterly side of Pool Street, a/k/a Pool Road, said pipe being in the center of a brook and at the land now or formerly of Robert Hunter; thence running S 40° 30' 12" E by and along the northeasterly side of Pool Street 590 feet, more or less, to a point and other land where the Grantor is this day conveying to Henry Tartre; thence turning and running by and along the land which the Grantor is this day conveying to Henry Tartre by the following courses and distances: N 32° 36' E 396.65 feet to a point; N 01° 38' 56" E 109.49 feet to a point; N 22° 57' 28" E 41.95 feet to a point; N 68° 58' 31" E 109.04 feet to a point; N 67° 24' 39" E 79.64 feet to a point; N 30° 37' 03" E 62. feet to a point; N 38° 20' 06" E 103.76 feet; N 04° 01' 03" W 48.64 feet to a point; N 85° 58' 57" E 10 feet to a point and the Saco River; thence running northerly and northwesterly by the Saco River to said brook; thence running southerly and southwesterly by said brook to the point of beginning.

The courses and distances are derived from a plan entitled "Tartre Realty Subdivision Plan of Land To Be Conveyed by Perspective Associates, Pool Street, Biddeford, Maine," dated September 26, 1986 and recorded in the York County Registry of Deeds.

The above-described premise is subject to a 50 foot right of way for the purpose of access by foot or motor vehicle and for utilities to and from the abutting parcel to be conveyed to Henry Tartre and Pool Street. Said easement is bounded and described as follows:

BEGINNING at the southerly most corner of the above-described property at the northeasterly sideline of Pool Street and the westerly corner of the land to be conveyed to Henry Tartre; thence running northwesterly by and along the northeasterly sideline of Pool Street 51.47 feet to a point; thence running N 32° 36' 36" E 137.80 feet to a point; thence running S 57° 23' 24" E 50.00 feet to a point and the westerly sideline of the land to be conveyed to Tartre; thence running S 32° 36' 36" W 150.00 feet to the westerly sideline of Pool Street and the point of beginning.

The above-described premise is further subject to a water line easement 15 feet in width for the purpose of installation, repair and maintenance of a water line. Said easement is further bounded and described as follows:

BEGINNING at a point 97 feet, more or less, from the southerly most corner of the above described lot and approximately 97 feet, more or less, from the most westerly corner of said lot to be conveyed to Henry Tartre; thence N 62° 44' 17" W, 218.25 feet to a point; thence N 27° 15' 43" E 15.00 feet to a point; thence S 62° 44' 17" E, 219.6 feet to the westerly line of land of Henry Tartre; thence S 32° 36' 36" W, 15.07 feet just to the point of beginning.

Also, right of access easement to and from the Saco River for purpose of accessing boat moorings for personal use said easement shall run with the land.

The above-described premise is further subject to a 25 foot wide access easement, which easement is further bounded and described as follows: for foot or vehicle access,

BEGINNING at a point, said point being the most northerly corner of above described 50 foot right of way easement; thence N 32° 36' 36" E, 130.00 feet to a point; thence along a curve concave to the west having a radius of 162.50 feet, a distance of 158.82 feet to a point; thence N 23° 23' 24" W 85.00 feet to a point; thence N 66° 36' 36" E, 25.00 feet to a point; thence S 23° 23' 24" E, 85.00 feet to a point; thence along a curve concave westerly having a radius of 187.50 feet, a distance of 183.26 feet to a point; thence S 32° 36' 36" W 130.00 feet to the northerly line of above described 50 foot right of way access easement; thence N 57° 23' 24" W, 25.00 feet to the point of beginning.

The above-described premise is conveyed together with a 25.00 wide easement to construct, maintain, operate, repair and replace a sanitary sewer discharge pipe and appurtenant structure over the property to be conveyed to Henry Tartre. The centerline of said easement shall be located along the existing discharge pipe which is shown and delineated on the above noted plan.

This easement is conveyed together with the right to go upon the adjoining land to be conveyed to Henry Tartre and the right to cut trees, brush, bushes, shrubs, remove roots and earth and to do any other work necessary to construct, maintain, operate, repair or replace the existing sewer line, discharge pipe and related structures.

RECEIVED YORK S.S.

92 AUG 25 PM 3:47

ATTEST: *Annex Stone*
REGISTER OF DEEDS



BK4553 PG041

58954 Know all Men by these Presents

That **DDS, INC.**

~~XXXXXX~~

a corporation organized and existing under the laws of the State of Maine
and located at Biddeford,

in the County of York and State of Maine

in consideration of One-Dollar and other valuable considerations,

paid by **DANIEL D. SOWERBY, TRUSTEE OF THE RIVERWOOD REALTY TRUST**

the receipt whereof it does hereby acknowledge, does hereby

give, grant, bargain, sell and convey unto the said **DANIEL D. SOWERBY, TRUSTEE OF THE RIVERWOOD REALTY TRUST,**

its successors ~~hereby~~ and assigns forever,

a certain lot or parcel of land with the buildings thereon situated in Biddeford, Maine and lying on the northeasterly side of Pool Street and being further bounded and described as follows:

BEGINNING at an iron pipe driven into the ground on the northeasterly side of Pool Street, a/k/a Pool Road, said pipe being in the center of a brook and at the land now or formerly of Robert Hunter; thence running S 40° 30' 12" E by and along the northeasterly sideline of Pool Street 590 feet, more or less, to a point and land of Henry Tartre; thence turning and running by and along the land of said Henry Tartre by the following courses and distances: N 32° 36' 36" E 396.65 feet to a point; N 01° 38' 56" E 109.49 feet to a point; N 22° 57' 28" E 41.95 feet to a point; N 68° 58' 31" E 109.04 feet to a point; N 67° 24' 39" E 79.64 feet to a point; N 30° 37' 03" E 62.69 feet to a point; N 38° 20' 06" E 103.76 feet; N 04° 01' 03" W 48.64 feet to a point; N 85° 58' 57" E 10 feet to a point and the Saco River; thence running northerly and northwesterly by the Saco River to said brook; thence running southerly and southwesterly by said brook to the point of beginning.

The courses and distances are derived from a plan entitled "Tartre Realty Subdivision Plan of Land To Be Conveyed by Perspective Associates, Pool Street, Biddeford, Maine," dated September 26, 1986 and recorded in the York County Registry of Deeds.

The above-described premise is subject to a 50 foot right of way for the purpose of access by foot or motor vehicle and for utilities to and from the abutting parcel of Henry Tartre and Pool Street. Said easement is bounded and described as follows:

BEGINNING at the southerly most corner of the above-described property at the northeasterly sideline of Pool Street and the westerly corner of the land of Henry Tartre; thence running northwesterly by and along the northeasterly sideline of Pool Street 51.47 feet to a point; thence running N 32° 36' 36" E 137.80 feet to a point; thence running S 57° 23' 24" E 50.00 feet to a point and the westerly sideline of the land of Henry Tartre; thence running S 32° 36' 36" W 150.00 feet to the westerly sideline of Pool Street and the point of beginning.

The above-described premise is further subject to a water line easement 15 feet in width for the purpose of installation, repair and maintenance of a water line. Said easement is further bounded and described as follows:

NO R.E. TRANSFER TAX PAID

BK 4553 PG 042

BEGINNING at a point 97 feet, more or less, from the southerly most corner of the above described lot and approximately 97 feet, more or less, from the most westerly corner of said lot of Henry Tartre; thence N 62° 44' 17" W, 218.25 feet to a point; thence N 27° 15' 43" E 15.00 feet to a point; thence S 62° 44' 17" E, 219.65 feet to the westerly line of land of Henry Tartre; thence S 32° 36' 36" W, 15.07 feet just to the point of beginning.

Also, right of access easement to and from the Saco River for purposes of accessing boat moorings for personal use. Said easement shall run with the land.

The above-described premise is further subject to a 25 foot wide access easement, for foot or vehicle access, which easement is further bounded and described as follows:

BEGINNING at a point, said point being the most northerly corner of above described 50 foot right of way easement; thence N 32° 36' 36" E, 130.00 feet to a point; thence along a curve concaved to the west having a radius of 162.50 feet, a distance of 158.82 feet to a point; thence N 23° 23' 24" W 85.00 feet to a point; thence N 66° 36' 36" E, 25.00 feet to a point; thence S 23° 23' 24" E, 85.00 feet to a point; thence along a curve concave westerly having a radius of 187.50 feet, a distance of 183.26 feet to a point; thence S 32° 36' 36" W 130.00 feet to the northerly line of above described 50 foot right of way access easement; thence N 57° 23' 24" W, 25.00 feet to the point of beginning.

The above-described premise is conveyed together with a 25.00 foot wide easement to construct, maintain, operate, repair and replace a sanitary sewer discharge pipe and appurtenant structure over the property owned by Henry Tartre. The centerline of said easement shall be located along the existing discharge pipe which is shown and delineated on the above noted plan.

This easement is conveyed together with the right to go upon the adjoining land of Henry Tartre and the right to cut trees, brush, bushes, shrubs, remove roots and earth and to do any other work necessary to construct, maintain, operate, repair or replace the existing sewer line, discharge pipe and related structures.

Meaning and intending to convey a portion only of the premises conveyed to Perspective Associates by Deed of The Webber Hospital Association, dated November 9, 1981 and recorded in the York County Registry of Deeds at Book 2865, Page 215, excepting and reserving only said premises and easements conveyed to Henry A. Tartre of even date to be recorded herewith. Subject to the Saco River Corridor Commission's order dated February 24, 1987 recorded with said deed.

Meaning and intending to convey and hereby conveying the same premises conveyed to the Grantor by Deed of Perspective Associates, dated November 6, 1987 and recorded in the York County Registry of Deeds.

BK 4553 PG 043

To Have and to Hold the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said RIVERWOOD REALTY TRUST, its successors

~~which~~ and assigns, to it and their use and behoof forever.

And does COVENANT with the said Grantee, its successors ~~which~~ and assigns, that it is lawfully seized in fee of the premises that they are free of all encumbrances:

that it has ~~which~~ good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors and assigns will WARRANT and DEFEND the same to the said Grantee, its heirs and assigns forever, against the lawful claims and demands of all persons.

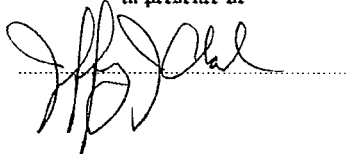
In Witness Whereof, the said DDS, INC.

has caused this instrument to be sealed with its corporate seal and signed in its corporate name by DANIEL D. SOWERBY

, its President

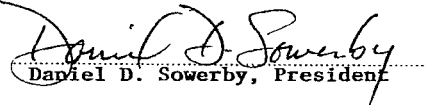
thereunto duly authorized, this seventh day of December in the year one thousand nine hundred and eighty-seven.

Signed, Sealed and Delivered in presence of



DDS, INC.

By


Daniel D. Sowerby, President

(Corporate Seal)

State of Maine, York

} ss.

December 7, 19 87

Then personally appeared the above named DANIEL D. SOWERBY,

President

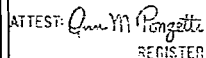
of said Grantor

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

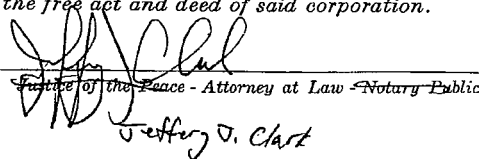
RECEIVED YORK, SS

1987 DEC -9 AM 9:15

RECORDED REGISTRY OF DEEDS

ATTEST: 
REGISTER

Before me,


Justice of the Peace - Attorney at Law - Notary Public
Jeffrey J. Clark

ATTACHMENT 3
Sewer Evaluation – Mark Hampton Associates



MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7203

September 1, 2022

Mr. Walter Pelkey
BH2M
380B Main Street
Gorham, ME 04038

Re: Preliminary soil evaluation, 5 lot subdivision, 355 Pool Street Biddeford, ME

Dear Walter,

I have completed a preliminary soil evaluation on the proposed five lot subdivision located at 355 Pool Street in Biddeford for Shawn Brown. The soil evaluation was conducted in accordance with the Maine Subsurface Wastewater Disposal Rules dated August 2015, as amended. I evaluated two machine excavated soil test pits on each lot. The lots contain a variety of soils, including stratified glacial drift, mixed origin soils, marine lacustrine deposits, and glacial till. All of the soils are moderately well drained to somewhat excessively drained, with a limiting factor ranging from approximately 15 to greater than 48 inches.

The soils as evaluated meet the minimum requirements of the state rules. In my opinion, there are suitable soils and area on each lot for a septic system. The size of a septic system for a 3-bedroom home will either be sized 20 feet wide by 35 feet long, or 20 feet by 45 feet for a stone and pipe bed. Septic designs can be completed at some time in the future.

If you have any questions or require additional information, please contact me.

Sincerely,

Hope Hampton L.S.E.
Licensed Site Evaluator #427

SOIL PROFILE / CLASSIFICATION INFORMATION

DETAILED DESCRIPTION OF SUBSURFACE CONDITIONS AT PROJECT SITES

Project Name: 355 Pool St Subdivision	Applicant Name: Shaw, Brown	Project Location (municipality): Biddeford
--	--------------------------------	---

Exploration Symbol # TP-1 ☒ Test Pit ☐ Boring ☐ Probe

 " Organic horizon thickness Ground surface elev.

48 " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10	Gravelly Loamy Sand	Friable	Yellow Brown	
20	Gravelly Loamy Sand	Firm Cemented	Olive Gray	Common and Distinct
30	Loamy Sand	Friable	Yellow Brown	
40				
50				
60				

Soil Classification Slope Limiting Factor

3 C 2 15 "

Profile Condition Percent Depth

Soil Series/Phase Name: _____

☐ Hydric ☒ Groundwater

☒ Non-hydric ☒ Restrictive Layer

☐ Bedrock

Hydrologic

Soil Group

Exploration Symbol # TP-2 ☒ Test Pit ☐ Boring ☐ Probe
 " Organic horizon thickness Ground surface elev.
 48 " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10	Gravelly Loamy Sand	Friable	Yellow Brown	
20	Gravelly Loamy Sand	Firm Cemented	Olive Gray	Common and Distinct
30	Loamy Sand	Friable	Yellow Brown	
40				
50				
60				

S.E. ▶▶	Soil Classification	Slope	Limiting Factor	☒ Groundwater
	<u> 3 </u> Profile	<u> 2 </u> Percent	<u> 15 </u> Depth	☒ Restrictive Layer
S.S. ▶▶	Soil Series/Phase Name:			☐ Bedrock
		☐ Hydric	Hydrologic	
		☒ Non-hydric	Soil Group:	

Exploration Symbol # TP-3 ☒ Test Pit ☐ Boring ☐ Probe

_____ " Organic horizon thickness Ground surface elev. _____

48 " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10	Gravelly Loamy Sand	Friable	Yellow Brown	
20	Gravelly Loamy Sand	Firm	Olive Brown	Common and Distinct
30				
40				
50				
60				

Soil Classification

3 C

Profile Condition

Slope

2

Percent

Limiting Factor

20 "

Depth

☒ Groundwater

☒ Restrictive Layer

☐ Bedrock

Soil Series/Phase Name: _____

☐ Hydric

☒ Non-hydric

Hydrologic

Soil Group

[illegible]

INVESTIGATOR INFORMATION AND SIGNATURE

Signature		Date	8/30/22
Name Printed	Hope Hampton	Cert/Lic/Reg. #	427
Title	☒ Licensed Site Evaluator ☐ Certified Soil Scientist ☐ Certified Geologist ☐ Professional Engineer		

affix professional seal

SOIL PROFILE / CLASSIFICATION INFORMATION

DETAILED DESCRIPTION OF
SUBSURFACE CONDITIONS AT PROJECT SITESProject Name:
355 Pool St SubdivisionApplicant Name:
Shawn BrownProject Location (municipality):
BiddefordExploration Symbol # TP-9 ☒ Test Pit ☐ Boring ☐ Probe
" Organic horizon thickness Ground surface elev. _____
48 " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10	Loamy Sand	Friable	Yellow Brown	
20	Sand	Friable	Tan	None Noted
30				
40				
50				
60				

Soil Classification		Slope	Limiting Factor	☐ Groundwater
5	B	2	>48 "	☐ Restrictive Layer
Profile	Condition	Percent	Depth	☐ Bedrock
Soil Series/Phase Name:			☐ Hydric	Hydrologic
			☒ Non-hydric	Soil Group

Exploration Symbol # TP-10 ☒ Test Pit ☐ Boring ☐ Probe
" Organic horizon thickness Ground surface elev. _____
48 " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10	Loamy Sand	Friable	Yellow Brown	
20	Sand	Friable	Tan	None Noted
30				
40				
50				
60				

Soil Classification		Slope	Limiting Factor	☐ Groundwater
5	B	2	>48 "	☐ Restrictive Layer
Profile	Condition	Percent	Depth	☐ Bedrock
Soil Series/Phase Name:			☐ Hydric	Hydrologic
			☒ Non-hydric	Soil Group

Exploration Symbol # TP-11 ☒ Test Pit ☐ Boring ☐ Probe
" Organic horizon thickness Ground surface elev. _____
48 " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10	Loamy Sand	Friable	Yellow Brown	
20	Sand	Friable	Tan	None Noted
30				
40				
50				
60				

Soil Classification		Slope	Limiting Factor	☐ Groundwater
5	B	2	>48 "	☐ Restrictive Layer
Profile	Condition	Percent	Depth	☐ Bedrock
Soil Series/Phase Name:			☐ Hydric	Hydrologic
			☒ Non-hydric	Soil Group

Exploration Symbol # _____ ☒ Test Pit ☐ Boring ☐ Probe
" Organic horizon thickness Ground surface elev. _____
" Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0				
10				
20				
30				
40				
50				
60				

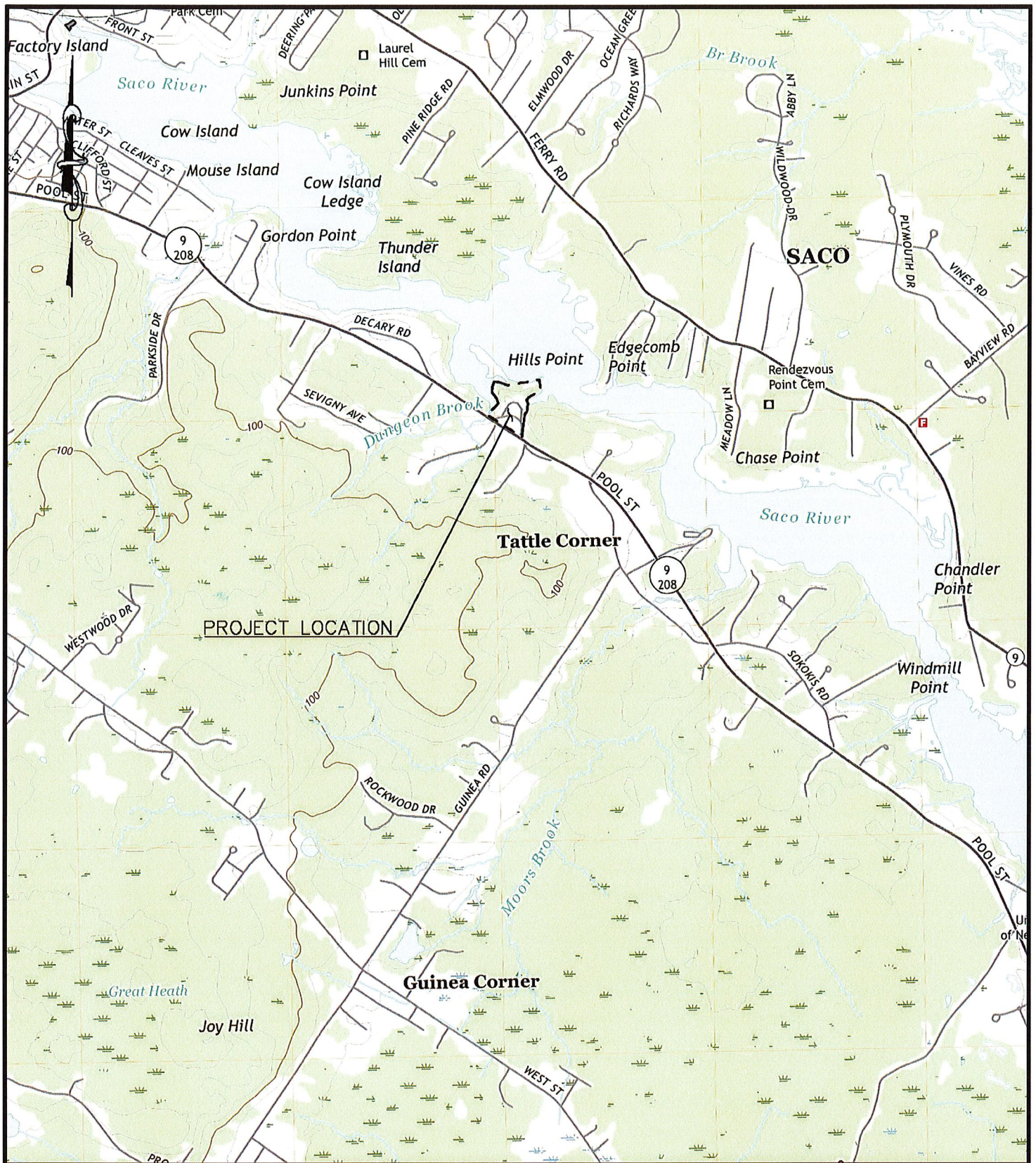
Soil Classification		Slope	Limiting Factor	☐ Groundwater
			"	☐ Restrictive Layer
Profile	Condition	Percent	Depth	☐ Bedrock
Soil Series/Phase Name:			☐ Hydric	Hydrologic
			☐ Non-hydric	Soil Group

INVESTIGATOR INFORMATION AND SIGNATURE

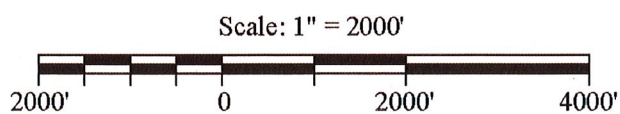
Signature	Date
<i>Hope Hampton</i>	8/30/22
Name Printed	Cert/Lic/Reg. #
Hope Hampton	427
Title	
☒ Licensed Site Evaluator ☐ Certified Soil Scientist ☐ Certified Geologist ☐ Professional Engineer	

affix professional seal

ATTACHMENT 4
Project Figures and Photo



REFERENCES:
 1. USGS QUADRANGLE BIDDEFORD, ME 2021



BH2M

Berry, Huff, McDonald, Milligan Inc.
 Engineers, Surveyors

380B Main Street
 Gorham, Maine 04038

Tel. (207) 839-2771
 Fax (207) 839-8250

Biddeford Online Tax Map

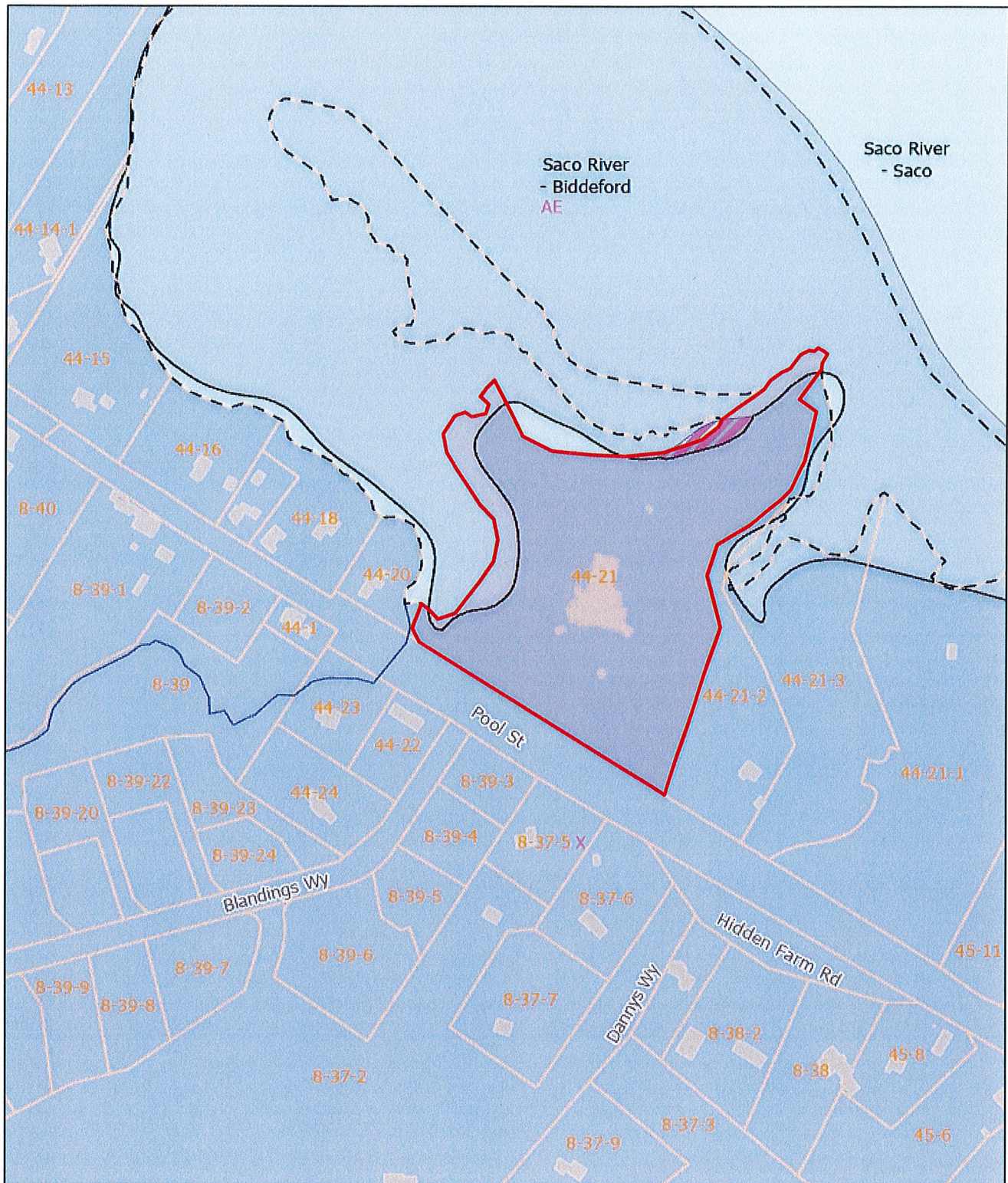


Online Tax Map

300ft

City of Biddeford, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA

Zoning Map



September 8, 2022

Zoning

Suburban Residential Zone

Rivers

Flood Zones

AE

X

X500

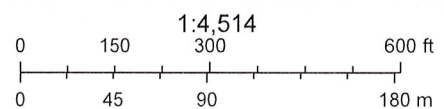
Parcels

Streams

Road Names

Surrounding Towns

Buildings



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Data and scale shown on this map are provided for planning and Powered by Esri Technology

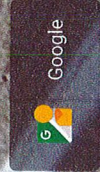
← 351 Pool St Biddeford, Maine



Pool Street

Pool St, Biddeford, ME ...

43.47°N, 70.41°W



Google Earth
© 2022 Google



Camera: 17 m

ATTACHMENT 5
Abutter's List & Map

Abutting Properties for
355 POOL ST
44/ 21/ / /
(200 Feet)

Location:
8/ 37/ 5/ /
356 POOL ST
Owner:
AL TAIE, HAIDER
356 POOL ST
BIDDEFORD, ME 04005

Location:
44/ 18/ / /
347 POOL ST
Owner:
BUTLER, VIRGINIA E &
BUTLER, CHARLES L JR
347 POOL ST
BIDDEFORD, ME 04005-9714

Location:
44/ 21/ 1/ /
8 EAGLE ROCK POINT
Owner:
LABBE, NORMAND R & DAVID P
174 GUINEA RD
BIDDEFORD, ME 04005

Location:
44/ 23/ / /
352 POOL ST
Owner:
SANBORN, HEIDI A
SANBORN, KEVIN S
312 WAYNE WOOD LN
LYNDONVILLE, VT 05851

Location:
44/ 21/ 3/ /
0 EAGLE ROCK POINT
Owner:
JOSLIN, CHRISTOPHER SCOTT
25 BRIXHAM RD
YORK, ME 03909

Location:
8/ 37/ 6/ /
358 POOL ST
Owner:
BOISSONNAULT, GERARD D & TINA S
LIVING TRUST
BOISSONNAULT, GERARD D & TINA S
TRUSTEES
358 POOL ST
BIDDEFORD, ME 04005

Location:
44/ 20/ / /
351 POOL ST
Owner:
DONALDSON, JUDITH M & NORMAN S
351 POOL ST
BIDDEFORD, ME 04005-9714

Location:
44/ 21/ 2/ /
365 POOL ST
Owner:
TARTRE II, JOSEPH ANDREW
SHEEHAN-TARTRE, KATHLEEN SUSAN
157 SIMPSON RD
SACO, ME 04072

Location:
8/ 37/ 2/ /
10 DANNYS WAY
Owner:
COTE, RICHARD A & LAURETTE
10 DANNYS WAY
BIDDEFORD, ME 04005-9317

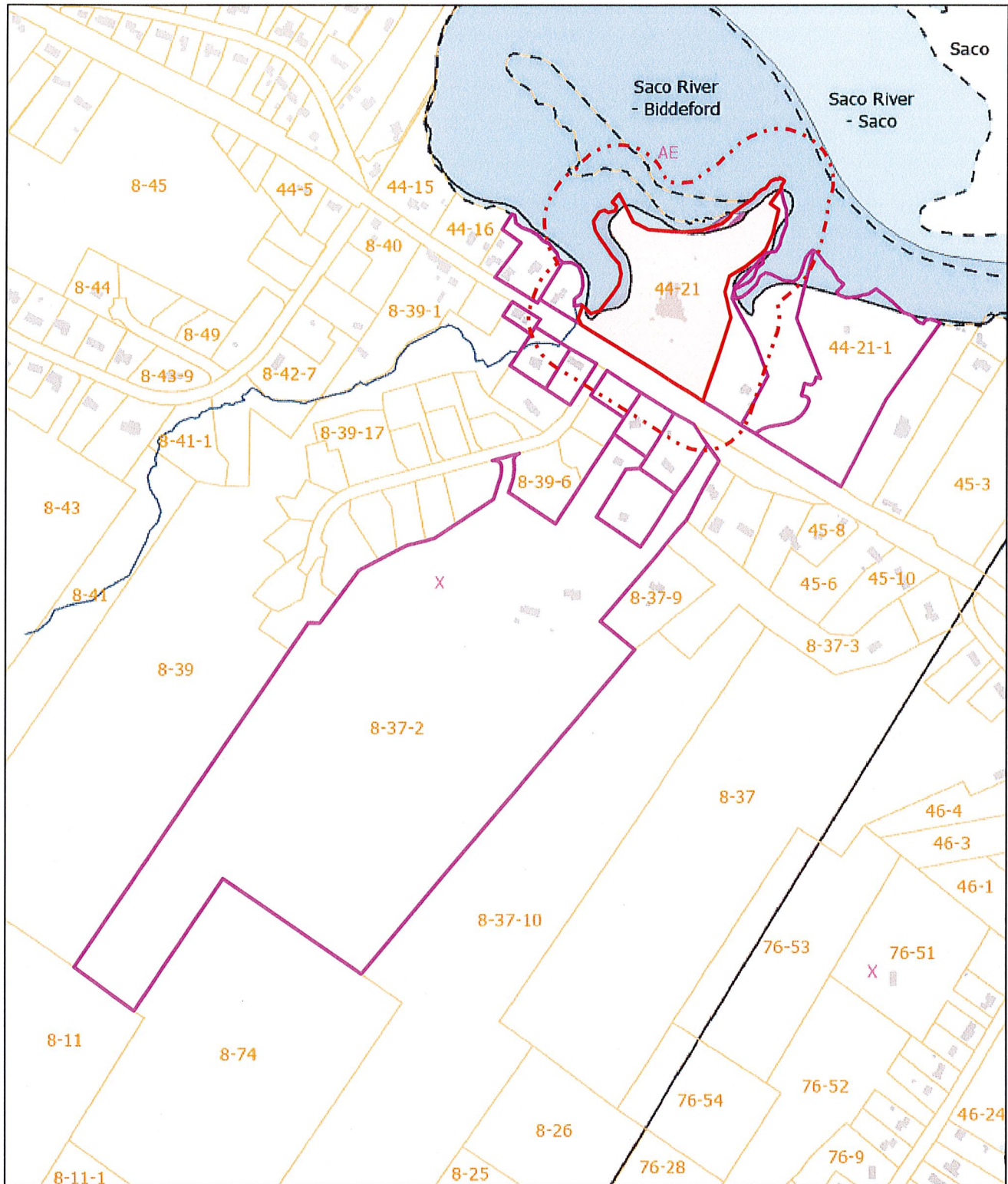
Location:
44/ 1/ / /
350 POOL ST
Owner:
PIKE, ERIN
350 POOL ST
BIDDEFORD, ME 04005

Location:
44/ 21/ / /
355 POOL ST
Owner:
POOL ST REALTY TRUST
C/O 1ST ATLANTIC HEALTHCARE
100 WATERMAN DR STE 401
SOUTH PORTLAND, ME 04106

Location:
44/ 22/ / /
354 POOL ST
Owner:
ROY, JOY-ANN T
354 POOL ST
BIDDEFORD, ME 04005

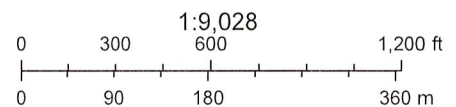
Location:
8/ 39/ 3/ /
3 BLANDINGS WAY
Owner:
VACATION PROPERTIES INC
150 GUINEA RD
BIDDEFORD, ME 04005

Abutter's Map



September 8, 2022

- Rivers
- Parcels
- Flood Zones
- Streams
- AE
- Road Names
- X
- Surrounding Towns
- X500
- Buildings



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Data and scale shown on this map are provided for planning and
Powered by Esri Technology

ATTACHMENT 6
Departments Notification

From: Walter Pelkey
Sent: Monday, September 12, 2022 10:37 AM
To: Marcus Knipp
Subject: 355 Pool Street

Hi Marcus,

Attached is a plan for a property located at 355 Pool Street in Biddeford. Our client is proposing a lot split for 5 lots to be served by public water and private individual sewer systems. First, could you confirm the watermain size and approximate location for the plan. Second, could you provide us with a letter or email with the ability to serve for the proposed lots.

Thanks.

Walter E. Pelkey
Vice President

BH2M
380 B Main Street
Gorham, ME 04038
www.bh2m.com
(207) 839-2771 Ext. 201



From: Walter Pelkey
Sent: Monday, September 12, 2022 10:57 AM
To: edward.dexter@biddefordmaine.org
Subject: 355 Pool Street

Hi Edward,

Per the City's approval process for Major Subdivisions, we are required to show a letter of approval from the Fire Department. I've attached the plan of the proposed subdivision showing lot division on the property. Also shown, is the existing watermain along the northerly side of Pool Street and 3 hydrants, 2 along the front of the property and one at the intersection of Blandings Way. If you could please provide us with a letter or email with the department's blessing we'd appreciate your time. If there are any issues please let me know and we can update our plan accordingly.

Thanks.

Walter E. Pelkey
Vice President

BH2M
380 B. Main Street
Gorham, ME 04038
www.bh2m.com
(207) 839-2771 Ext. 201



From: shawn brown
Sent: Monday, September 12, 2022 11:51 AM
To: Walter Pelkey
Subject: Fwd: Brown CMP Lat-Long REDUCED.pdf

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

From: SAMUELS, MELISSA <melissa.samuels@cmpco.com>
Date: Mon, Sep 12, 2022, 10:00 AM
Subject: RE: Brown CMP Lat-Long REDUCED.pdf
To: shawn brown <sbrown090803@gmail.com>

Thank you Shawn!

I forwarded your documents to the engineering team. Please feel free to check back in a couple of weeks to see where your project stands in the queue.

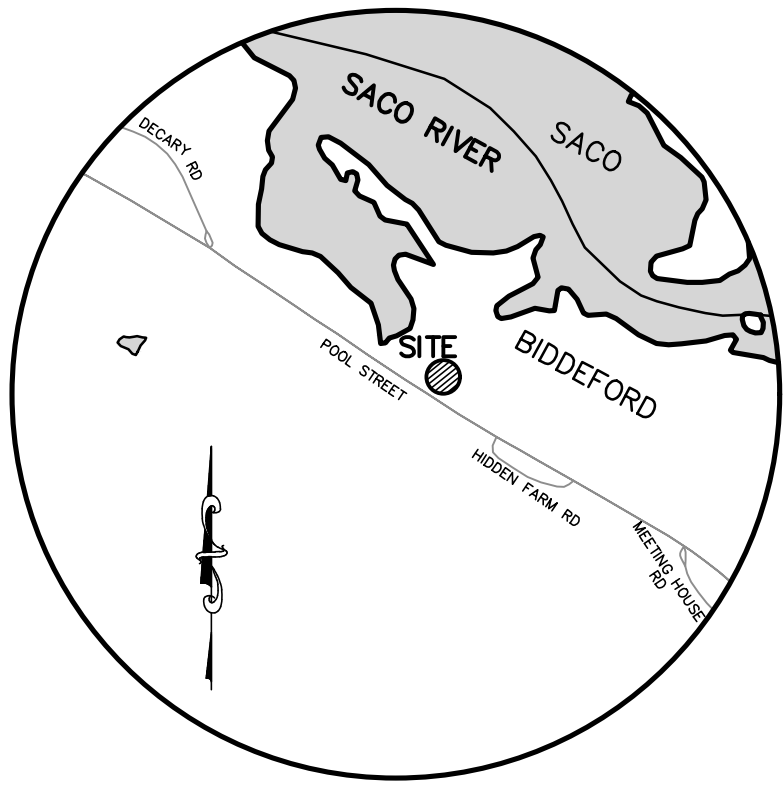
Regards,

Melissa Samuels

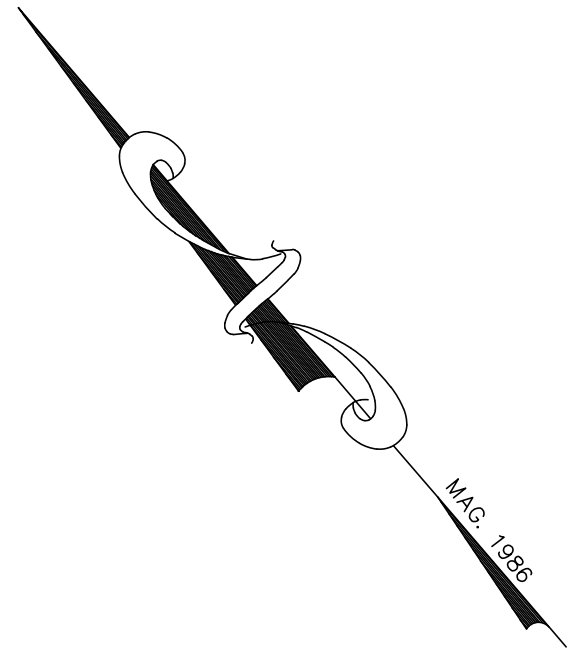
From: shawn brown <sbrown090803@gmail.com>
Sent: Friday, September 9, 2022 3:36 PM
To: SAMUELS, MELISSA <melissa.samuels@cmpco.com>
Subject: Brown CMP Lat-Long REDUCED.pdf

EXTERNAL SENDER: Be cautious, especially with links and attachments. Report phishing if suspicious.

ATTACHMENT 7
Plan Set



LOCATION MAP
SCALE: 1" = 1000'



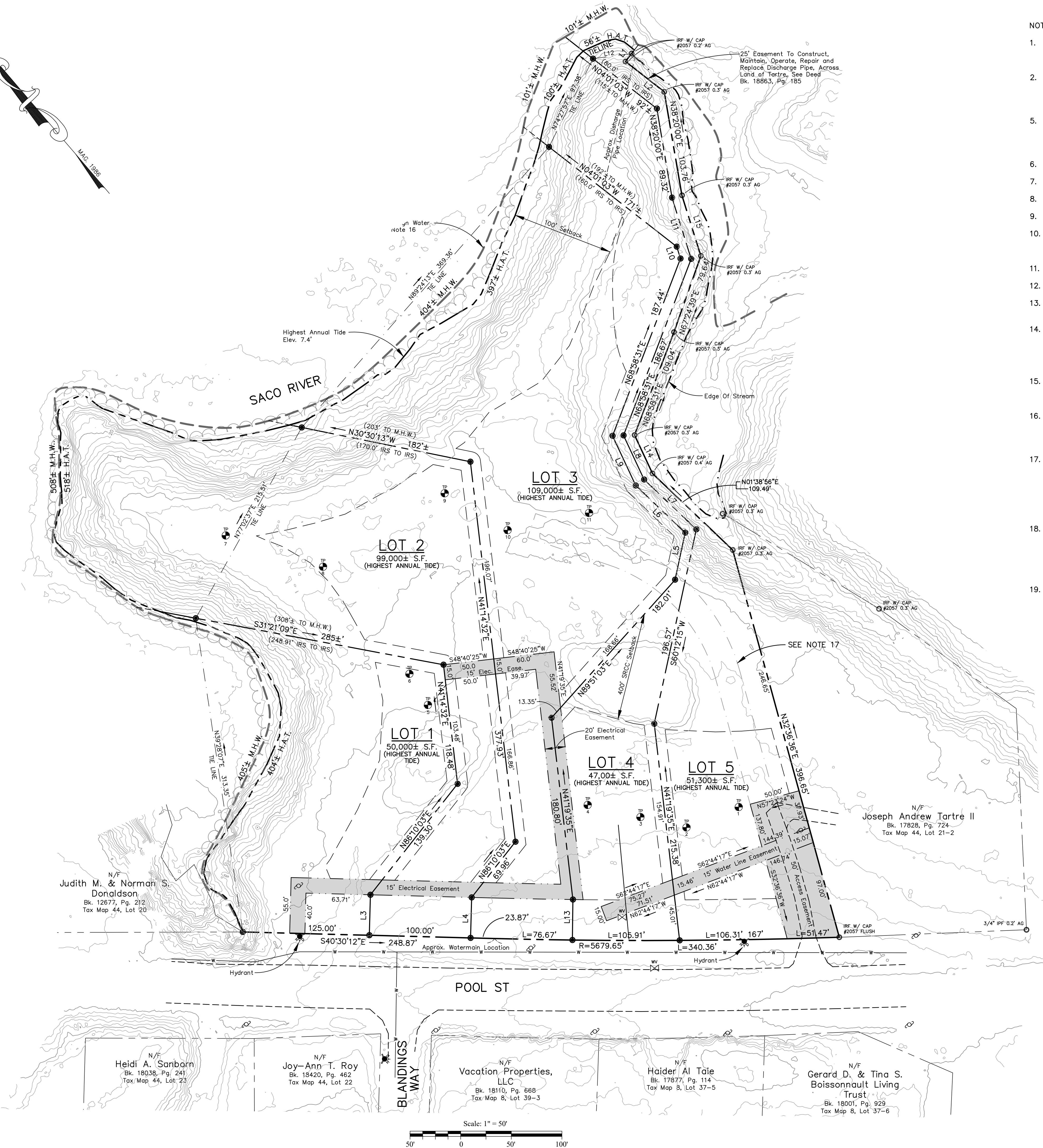
LINE DATA
L1 - S85°58'57"W 14'± TO H.A.T.
L2 - N04°01'03"W 48.64'
L3 - S49°29'48"W 40.00'
L4 - S49°29'48"W 40.00'
L5 - S60°12'15"W 47.45'
L6 - N01°38'56"E 67.50'
L7 - N01°38'56"E 71.22'
L8 - N22°57'28"E 48.08'
L9 - N22°57'28"E 54.21'
L10 - N30°37'03"E 12.38'
L11 - N30°37'03"E 63.39'
L12 - S49°37'30"E 38.52'
L13 - S48°43'24"W 40.00'
L14 - N22°57'28"E 41.95'
L15 - N30°37'03"E 62.69'

SYMBOL	DESCRIPTION
⊙	EXISTING SEWER MANHOLE
●	CAPPED IRON ROD TO BE SET
○	TEST PIT
○ IRF / IRF	IRON ROD/PIPE FOUND
□ GNF	GRANITE MONUMENT FOUND
⊙	UTILITY POLE
A.G.	ABOVE GRADE
N/F	NOW OR FORMERLY
---	MAJOR CONTOUR LINE
---	MINOR CONTOUR LINE
---	PROPERTY LINE
---	ABUTTER PROPERTY LINE
---	EXISTING RIGHT OF WAY
---	EASEMENT LINE
---	APPROXIMATE WATER MAIN LOCATION
⊙	WATER VALVE

THIS PLAN REVIEWED AND APPROVED BY
THE CITY OF BIDDEFORD PLANNING BOARD.

DATE

CHAIR



NOTES:

- OWNER/APPLICANT: SHAWN BROWN
5 BUCKTHORN CIRCLE
SACO, MAINE
- SURVEYOR: ROBERT C. LIBBY JR., PLS #2190
BH2M
380B MAIN STREET
GORHAM, MAINE
- DEED REFERENCE: BK. 18863, PGS. 185-188
BK. 6222, PGS. 13 THRU 16
BK. 4553, PGS. 41-43
BK. 4521, PGS. 10-12
- TAX MAP REFERENCE: MAP 44, LOT 21
- ZONING: SUBURBAN RESIDENTIAL (SR1)
- PROJECT AREA: 8.21± ACRES
- PROPOSED USE: 5 SINGLE FAMILY LOTS
- MINIMUM STANDARDS: LOT SIZE - 20,000 S.F. (PUBLIC WATER)
FRONTAGE - 100' (PUBLIC WATER)
SETBACKS - 40' FRONT, 10' SIDE & REAR
- SEWER SERVICE: INDIVIDUAL ON SITE SEPTIC SYSTEMS
- WATER SERVICE: PUBLIC
- ELECTRIC/TELEPHONE: UNDERGROUND FROM UTILITY POLES
ALONG POOL STREET
- ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN
ACCORDANCE WITH THE EROSION PREVENTION PROVISIONS
OUTLINED IN THE MAINE EROSION CONTROL AND SEDIMENTATION
HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES,
LATEST EDITION.
- SITE CONTOURS: ARE PER MAINE GIS CATALOG, BIDDEFORD,
MAINE, NAVD 88. MEAN HIGH WATER AND HIGHEST ANNUAL TIDE
PER ON SITE TOPOGRAPHIC SURVEY, NAVD 88.
- MEAN HIGH WATER IS AS LOCATED IN MARCH OF 2022 WITH ICE
CONDITIONS. MEAN HIGH WATER ELEVATION DATA IS PER NOAA,
BIDDEFORD, SACO RIVER STATION, ACCEPTED APRIL 17, 2003,
ELEVATION 3.98, NAVD 88.
- 25' ACCESS EASEMENT SHOWN PER DEED REFERENCED IN
BOOK 18863, PAGES 185 THRU 188. EASEMENT WAS NOT
REFERENCED IN PREVIOUSLY APPROVED PLAN ENTITLED
"TARTRE REALTY SUBDIVISION", DATED SEPTEMBER 26, 1986,
APPROVED BY THE CITY OF BIDDEFORD MAY 6, 1987 AND
RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS PLAN BOOK
156, PAGE 27.
- PLAN REFERENCE: "TARTRE REALTY SUBDIVISION: DATED
SEPT. 26, 1986 BY ALIBERTI, LAROCHELLE
& HODSON SURVEYORS AND ENGINEERS
MADE FOR PERSPECTIVE ASSOCIATES AND
RECORDED IN THE Y.C.R.D. PL. BK. 156,
PAGE 27.
- PROPERTY IS SUBJECT TO A RIGHT OF ACCESS EASEMENT TO AND
FROM THE SACO RIVER FOR PURPOSE OF ACCESSING BOAT
MOORINGS FOR PERSONAL USE, SAID EASEMENT SHALL RUN WITH
THE LAND, SEE DEED REFERENCES, NOTE 5.

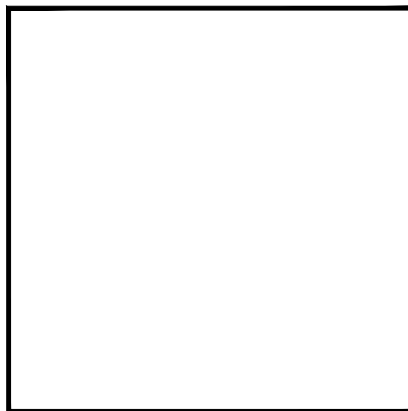
I CERTIFY THAT THIS SURVEY CONFORMS
TO THE MAINE BOARD OF LICENSURE
FOR PROFESSIONAL LAND SURVEYORS
TECHNICAL STANDARDS OF PRACTICE FOR
A STANDARD BOUNDARY SURVEY WITH
THE FOLLOWING EXCEPTIONS:

- NO SURVEYORS REPORT
- INTERIOR LOT LINES ONLY



ROBERT C. LIBBY JR. PLS #2190

REVISION	DESCRIPTION
NO.	DATE



FOR
Shawn Brown
5 Buckthorn Circle
Saco, Maine

AMENDED PLAN
TARTRE REALTY SUBDIVISION

DESIGNED W. Pelkey	DATE July 2021
DRAWN Dept.	SCALE 1" = 50'
CHECKED R. Libby, Jr.	JOB. NO. 21109

SHEET 1

REPRODUCTION OR REUSE OF THIS
DOCUMENT WITHOUT THE
EXPRESSED WRITTEN CONSENT
OF BH2M INC. IS PROHIBITED

JONES ASSOCIATES

Foresters, Surveyors and
Environmental Consultants



WETLAND REPORT

355 POOL STREET

BIDDEFORD, MAINE 04005

<u>Prepared for:</u> Shawn Brown 282 West Street Biddeford, Maine 04005	<u>Prepared by:</u> Jones Associates, Inc. 280 Poland Spring Road Auburn, Maine 04210
--	--

JA Job #21-115BD
February 2022

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INTRODUCTION

Jones Associates, Inc. was contracted to provide wetland delineation services for Shawn Brown on a +/- 8-acre property located at 355 Pool Street in Biddeford, Maine 04005. The delineation encompassed +/- 8-acres of the property. The following report summarizes site conditions observed during a site visit in January of 2022.

Wetland/upland boundaries were identified and delineated according to *U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual (Environmental Laboratory 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, January 2012*. Wetlands were identified based on the presence of hydric soil (inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water), hydrology (movement and distribution of water), and predominance of hydrophytic species (Hydrophytes: vegetation typically adapted for life in saturated soil conditions).

Wetland delineations consist of transecting the property, examining periodic soil samples, observing any evidence of hydrology, and assessing each stratum of vegetation for its percentage of hydrophytic species. If all three factors were evident, the study plot was considered wetland habitat. Transitions between upland and wetland were clearly marked with blue sub-zero flagging every 30-40 feet and labeled with alphanumeric codes to identify individual systems (A1, A2, A3....).

Wetland flags were located with using Leica Global Positioning System (GPS) technology with expected average accuracy of sub-meter. This method is recognized by both state and federal agencies. This being stated, Jones Associates, Inc. recommends that the wetland boundary be surveyed using a more precise method of location if any fill or regulated activities are to be performed within 20 feet of the GPS located wetland.

EXISTING CONDITIONS

The property is entirely bound by Pool Street (Route 208) to the south. To the north, northeast, and northwest, the property abuts the Saco River. To the east and west, the property abuts to privately-owned residential lots.

Existing development on the property consists of a looped road and graveled area that used to function as an access road to a building on-site. This building was demolished between 2016 and 2018 according the historical google earth imagery. There is also a small building on the property in the northwesterly corner of the lot that does not appear to currently be in use.

The National Wetlands Inventory (NWI) was used as a preliminary resource in order to identify potential wetlands on-site. NWI mapped several estuarine and marine wetland habitats on and abutting the property, along the Saco River. The modifiers of these wetlands vary but are estuarine wetlands (E) that are intertidal (2) with either emergent (EM) or unconsolidated shores (US) with either persistent vegetation (1) or a sand (2) bottom and are either regularly flood (N) or irregularly flooded (P). The wetlands NWI has mapped consist of E2EM1N; E2EM1P; and E2US2N. NWI also mapped a riverine (R) that is tidal (1) with an unconsolidated bottom (UB) that is permanently flooded-tidal (V) or (R1UBV).

WETLAND CHARACTERISTICS

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

--Corps of Engineers Wetlands Delineation Manual (U.S. Army Corps of Engineers 1987)

The property contains one wetland (Wetland A) which is shown on the attached Wetland Delineation Plan.

Wetland A is located along the northern and western boundaries of the property. This wetland is associated with the Saco River and the upland boundary is the bottom of the riverbank in most places. This wetland is described using the Wetlands and Deepwater Habitat Classifications (below) as an estuarine (E), intertidal wetland (2), with emergent vegetation (EM) that is persistent (1) and regularly flooded (N) or (E2EM1N). Hydrological indicators in this wetland consist of saturation (surface) and high water table (10"). Vegetation found in this wetland consists of Morrow's honeysuckle (*Lonicera morrowii*) and narrow-leaved cattail (*Typha angustifolia*) indicating the presence of hydrophytic vegetation. Soils in this wetland were colored at 10YR 2/1 from 0-15 inches and 10YR 5/1 from 15-20 inches allowing them to be classified with a hydric soil indicator of sandy mucky mineral.

WETLANDS OF SPECIAL SIGNIFICANCE (WOSS)

Wetland A is considered a wetland of special significance according to the criteria outlined in the attached Wetland Delineation Checklist. Wetland A contains consistent emergent vegetation for more than 20,000 square feet. Wetland A is approximately 23,798 square feet and emergent vegetation was observed throughout its entirety. Wetland A contains a 100-year flood plain according to preliminary FEMA flood map data. Preliminary data is the only available flood zone data for the site. The 100-year floodplain is shown as Preliminary Zone AE on the attached Flood Hazard Map obtained from the Maine Floodplain Management Program. Wetland A also contains tidal wading and waterfowl habitat according to data obtained from Maine Department of Inland Fish and Wildlife. This is considered significant wildlife habitat. Wetland A is also within 250 feet of coastal wetlands in the Saco River and within 25 feet of a river, stream, or brook. These characteristics require Wetland A to be classified as a wetland of special significance.

STREAMS

One small section of stream was located in the southwest corner of the property. The stream is named Dungeon Brook and crosses under Pool Street and continues into the Saco River. The stream meets at least four of the five criteria defined by the Natural Resource Protection Act to be considered a stream. It is depicted as a solid blue line on the most recent edition of the U.S. Geological Survey 7.5-minute series topographic map, it contains flowing water continuously for a period of at least 6 months of the year in most years, the channel bed is primarily composed of mineral material, and the channel contains aquatic vegetation and is essentially devoid of upland vegetation. It can be described using the Wetlands and Deepwater Habitats Classifications (below) as riverine (R) lower perennial (2) with an unconsolidated bottom (UB) consisting of cobble and gravel (1) or (R2UB1). Please refer to Addendum 4.B (Stream Channels) for more detailed information on stream criteria.

RARE OR UNUSUAL FEATURES AND VERNAL POOLS

Jones Associates Inc. did not identify any potential vernal pools during investigations. No unusual plant or animal species were observed within the property. Vegetation on this property was dominated by plant communities typical of this region of Maine.

NORTHERN LONG-EARED BAT

If impacts are proposed on-site, then the items found in Section 1 of the Addendum below will need to be addressed for Northern Long-Eared Bats (NLEB).



Job #:	21-115BD		
Client:	Shawn Brown		
Site Address:	355 Pool Street, Biddeford, Maine 04005		

Wetland Scientist:	Jason Tome
Date of Office Review:	01/2022
Date(s) of Field Delineation:	12/2021

Wetlands of Special Significance

Yes	No	
	X	Does the on-site or immediately adjacent wetland contain a mapped and numbered DWA?
	X	Does the on-site or immediately adjacent wetland contain an Inland Waterfowl Wading Bird Habitat?
	X	Does the on-site or immediately adjacent wetland contain a potential significant vernal pool?
X		Are there areas of open water or wetlands with emergent marsh vegetation greater than 20,000 sq. ft. on-site or immediately adjacent?
X		Does the on-site or immediately adjacent wetland contain a 100-year flood plain?
	X	Does the on-site or immediately adjacent wetland contain a S1 or S2 community?
X		Does the on-site or immediately adjacent wetland contain a significant wildlife habitat?
X		Is the on-site wetland within 250' of a coastal wetland?
	X	Is the on-site wetland within 250' of a great pond?
	X	Does the site contain peatlands?
X		Are there wetlands occurring within 25' of a river, stream, or brook?

Stormwater Qualifications

	X	Is the site in the watershed of a Great Pond or Impaired stream?
	X	Is the site in a lake watershed?
	X	Is the site in a watershed most at risk?

Additional Comments:

FEMA flood zone FIRM:

Biddeford 2301450004B, Effective May 15, 1984

Watershed:

HUC_8: 0106002

Saco

HUC_10: 010600211

Saco River-Frontal Saco Bay

HUC_12: 01060021105

Outlet Saco River

PHOTOS

Characteristic Wetlands



Characteristic Wetlands



Characteristic Uplands



Characteristic Uplands



ADDENDUM

1. NORTHERN LONG-EARED BAT

The United States Fish and Wildlife Service listed the Northern Long-Eared Bat (NLEB) (*Myotis septentrionalis*) as threatened with Interim 4(d) Rule. This listing affects development occurring within the range of the NLEB (www.fws.gov/midwest/endangered/mammals/nleb/nlebRangeMap.html) and within the White Nose Syndrome Buffer Zone (<http://www.fws.gov/midwest/nleb/WNSBuffer.pdf>) that could cause purposeful or incidental take (harm, kill or otherwise harass). This includes the clearing of trees where NLEB could be living, activity occurring within 0.25 miles of a known, occupied hibernacula, and activities occurring within a 150-foot radius from a maternity roosting tree during the pup rearing season from June 1 to July 31st. If your project requires such action a permit may be necessary.

2. SOILS

According to U.S. Department of Agriculture, Natural Resources Conservation Service, five soil types are located within the project area. Characteristics of each series are described in the soil report according to: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions, <https://soilseries.sc.egov.usda.gov/osdname.aspx>.

BUXTON SERIES

The Buxton series consists of very deep, moderately well drained soils that formed in glaciolacustrine or glaciomarine deposits on coastal lowlands and river valleys. Slope ranges from 3 to 50 percent. Permeability is moderate or moderately slow in the surface horizon, moderately slow or slow in the upper part of the subsoil, and slow or very slow in the lower part of the subsoil and in the substratum. Mean annual temperature is about 7 degrees C, and mean annual precipitation is about 1118 mm at the type location.

TYPICAL PEDON: Buxton silt loam, on a 13 percent slope in an abandoned hayfield. (Colors are for moist soil unless otherwise noted.)

GEOGRAPHIC SETTING: Buxton soils are on coastal lowlands and river valleys. Slope ranges from 3 to 50 percent. The soils formed in medium, moderately fine, and fine textured glaciolacustrine or glaciomarine deposits. The climate is humid and cool temperate. Mean annual precipitation ranges from 860 to 1220 mm, and mean annual temperature ranges from 6 to 8 degrees C. The frost-free season ranges from 90 to 160 days. Elevation ranges from 2 to 274 meters above mean sea level.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Moderately well drained. Surface runoff is medium or rapid depending on slope. Saturated Hydraulic Conductivity is moderately high in the surface horizon and the upper part of the subsoil, and low to moderately low in the lower part of the subsoil and in the substratum.

USE AND VEGETATION: Cleared areas are used mainly for hay, forage crops, or pasture. Some areas are used for silage corn or vegetables. The remaining areas are forested. Common tree species include eastern white pine, balsam fir, paper birch, white spruce, eastern hemlock, and northern red oak.

LYMAN SERIES

The Lyman series consists of shallow, somewhat excessively drained soils on glaciated uplands. They formed in loamy superglacial till. Estimated saturated hydraulic conductivity is moderately high or high throughout the mineral soil. Slope ranges from 0 to 80 percent. Mean annual temperature is about 5 degrees C.

TYPICAL PEDON: Lyman loam, on a northwest facing, 55 percent slope in a very rocky forested area. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Lyman soils are on nearly level to very steep glaciated uplands. They are on the tops and sides of hills and mountains. Slope ranges from 0 to 80 percent. The soils formed in loamy supraglacial till of Wisconsin age derived mainly from micaceous schist, gneiss, phyllite, and granite. The mean annual precipitation is 790 to 2420 mm, and the mean annual temperature is -3 to 9 degrees C. The frost-free period is from 60 to 160 days. Elevation ranges from about 2 to 800 meters above mean sea level.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Somewhat excessively drained. Potential runoff is very high. Estimated saturated hydraulic conductivity is moderately high or high in the mineral soil.

USE AND VEGETATION: Most areas are wooded. The common trees are American beech, white ash, yellow birch, paper birch, northern red oak, sugar maple, eastern white pine, eastern hemlock, red spruce, white spruce, and balsam fir. Some areas have been cleared and are primarily used for hay and pasture. A few cleared areas are used for cultivated crops.

PEMAQUID SERIES

The Pemaquid series consists of very deep, very poorly drained soils formed in herbaceous organic deposits over sandy mineral material. They are in tidal marshes subject to inundation by salt water twice daily. Slope ranges from 0 to 2 percent. Saturated hydraulic conductivity is moderately high or very high in the organic layers and very high in the underlying mineral sediments. Mean annual temperature is about 7 degrees C and mean annual precipitation is about 1900 mm.

TYPICAL PEDON: Pemaquid peat in a salt grass tidal marsh, undrained. (Colors are for moist soil unless noted otherwise.)

GEOGRAPHIC SETTING: Pemaquid soils are level and occur in tidal marshes along the coast of Maine. They are subject to tidal flooding twice daily except in areas protected by dikes and tide gates. Pemaquid soils developed in partially decomposed organic material from salt tolerant

herbaceous plants over sandy sediments. Mean annual temperature is 5 to 9 degrees C and mean annual precipitation is 1600 to 2200 mm.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Very poorly drained. Runoff is negligible or ponded. The soil is subject to very brief, very frequent tidal fluctuations. Saturated hydraulic conductivity is moderately high to very high in the organic layers and very high in the underlying mineral sediments.

USE AND VEGETATION: Most areas are in salt marsh and provide food and habitat for fish, shell fish and wildfowl. Small scattered areas are in saltgrass hay. The most common grasses are salt meadow grass, salt water grass and spike grass. Other vegetation includes blackgrass, sea lavender, saltwort, seaside goldenrod, aster, and purple gerardi. In areas where the 1:5 soil to water EC by volume is below 1.5 dS/m, vegetation consists principally of tall reeds and sedges.

TODDS POINT SERIES

The Todds Point series consists of very deep, very poorly drained soils formed in thick herbaceous organic deposits. They are on level tidal marshes subject to inundation by salt water twice daily. Saturated hydraulic conductivity is moderately high to very high. Mean annual temperature is about 7 degrees C, and the mean annual precipitation is about 1900 mm.

TYPICAL PEDON: Todds Point mucky peat in a salt grass tidal marsh, undrained. (Colors are for moist soil unless noted otherwise.)

GEOGRAPHIC SETTING: Todds Point soils are level and occur in tidal marshes along the coast of Maine. These soils are subject to tidal flooding twice daily except in areas protected by dikes and tide gates. These soils formed in partially decomposed organic material from salt tolerant herbaceous plants. The climate is cool temperate and humid. Mean annual temperature ranges from 5 to 9 degrees C and mean annual precipitation ranges from 1600 to 2200 mm.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Very poorly drained. Runoff is negligible or ponded. The soil is subject to very brief, very frequent tidal fluctuations. Saturated hydraulic conductivity is moderately high to very high.

USE AND VEGETATION: Most areas are in salt marsh and provide food or habitat for fish, shellfish, and wildfowl. Small scattered areas are used for growing saltgrass hay. The most common grasses are marsh hay cordgrass, smooth cordgrass, and seashore saltgrass. Other vegetation includes sea lavender, glasswort, seaside goldenrod, and sea-blite.

DAMARISCOTTA SERIES

The Damariscotta series consists of very deep, very poorly drained soils formed in sandy marine deposits. They are in tidal marshes subject to inundation by salt water twice daily. Slope ranges from 0 to 2 percent. Saturated hydraulic conductivity is moderately high or very high in the organic layers and very high in the underlying mineral sediments. Mean annual temperature is about 7 degrees C and mean annual precipitation is about 1900 mm.

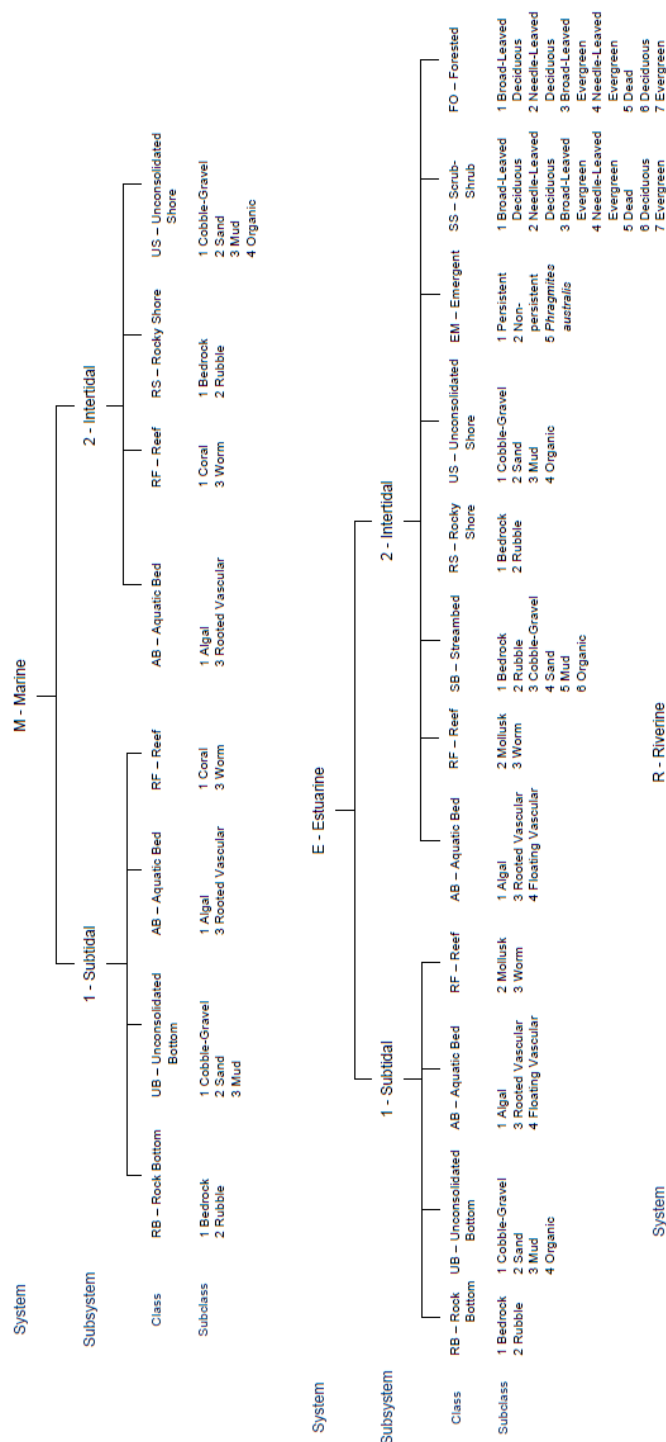
TYPICAL PEDON: Damariscotta sand in a salt grass tidal marsh, undrained. (Colors are for moist soil unless noted otherwise.)

GEOGRAPHIC SETTING: Damariscotta soils are level and occur in tidal marshes along the coast of Maine. They are often associated with small berms adjacent to tidal inlets, rivers, channels and creeks. They can also be found on nearly level to gently sloping back-barrier flats and back-barrier beaches near tidal marshes. They are subject to tidal flooding twice daily, except in areas protected by dikes and tide gates. These soils developed in thick sand deposits and have slowly accumulated thin caps of organic materials at the surface. The mean annual temperature ranges from 5 to 9 degrees C and mean annual precipitation ranges from 1600 to 2200 mm.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Very poorly drained. Runoff is very slow. Saturated hydraulic conductivity is moderately high to very high in the organic surface horizon and very high in the underlying sands.

USE AND VEGETATION: Most of these soils are used for wildlife habitat and recreation. Small scattered areas are used for saltgrass hay. The most common grasses are salt meadow grass, salt water grass, cord grass and spike grass. Other vegetation includes phragmites, blackgrass, sea lavender, saltwort, seaside goldenrod, aster, and purple gerardi. In areas where the 1:5 soil to water EC by volume is below 1.5 dS/m, the vegetation consists principally of tall reeds and sedges.

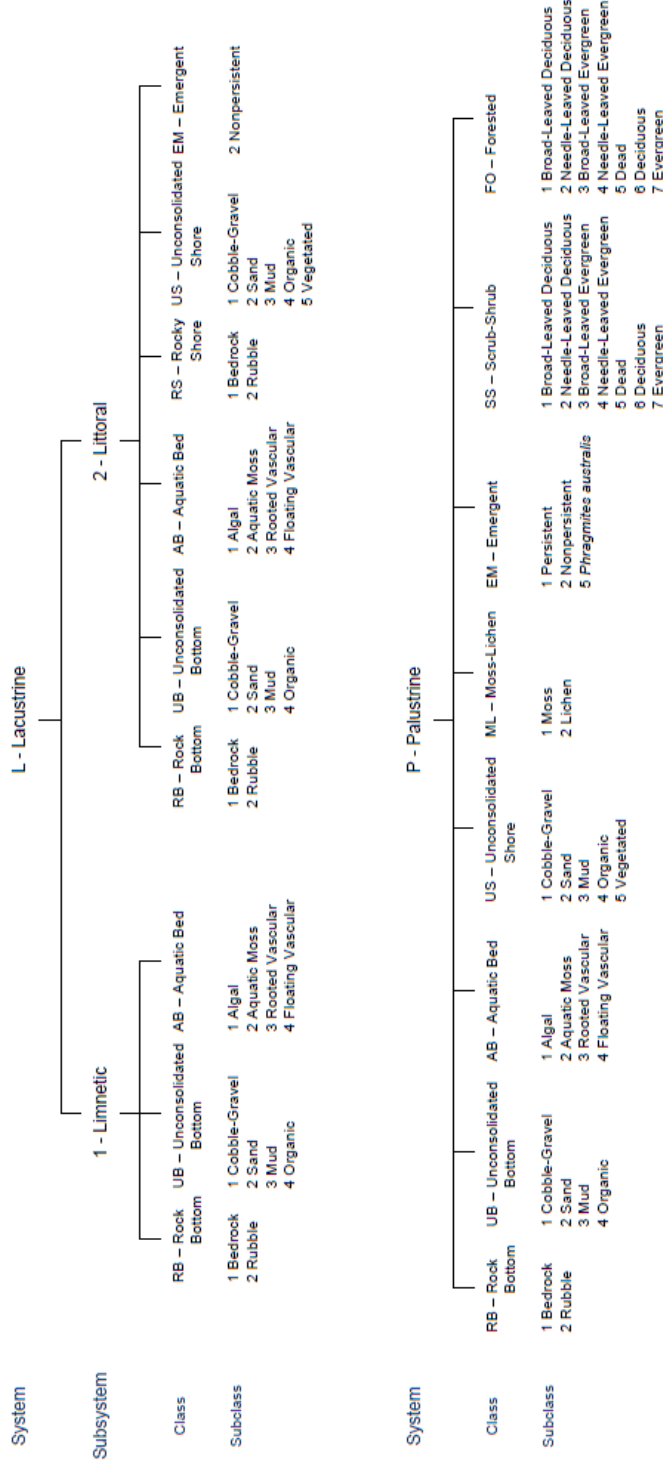
US Fish and Wildlife Service, <http://www.fws.gov/wetlands/Documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf>



Classification of Wetlands and Deepwater Habitats of the United States, Cowardin *et al.* 1979

Page 1 of 2

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION



MODIFIERS			
In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The named modifier may also be applied to the ecological system.			
Water Regime		Water Chemistry	
Nontidal	Freshwater Tidal	Coastal Halinity	Inland Salinity
A Temporarily Flooded	L Subtidal	1 Hyperhaline	7 Hypersaline
B Saturated	M Irregularly Exposed	2 Euhaline	8 Eusaline
C Seasonally Flooded	N Regularly Flooded	3 Mixohaline (Brackish)	9 Mixosaline
E Seasonally Flooded/ Saturated	P Irregularly Flooded	4 Polyhaline	0 Fresh
F Semipermanently Flooded		5 Mesohaline	
G Intermittently Exposed		6 Oligohaline	
H Permanently Flooded		0 Fresh	
J Intermittently Flooded			
K Artificially Flooded			
Special Modifiers		pH Modifiers for all Fresh Water	
b Beaver	d Partly Drained/Ditched	1 Hyperhaline	a Acid
f Farmed	h Diked/Impounded	2 Euhaline	t Circumneutral
r Artificial	s Spoil	3 Mixohaline (Brackish)	i Alkaline
x Excavated		4 Polyhaline	
		5 Mesohaline	
		6 Oligohaline	
		0 Fresh	
			g Organic
			n Mineral

4. WETLAND RULES AND INFORMATION

A. WETLANDS OF SPECIAL SIGNIFICANCE

All coastal wetlands and great ponds are considered wetlands of special significance. In addition, certain freshwater wetlands are considered wetlands of special significance.

A. Freshwater Wetlands of Special Significance. A freshwater wetland of special significance has one or more of the following characteristics.

- (1) Critically imperiled or imperiled community. The freshwater wetland contains a natural community that is critically imperiled (S1) or imperiled (S2) as defined by the Natural Areas Program.
- (2) Significant wildlife habitat. The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. § 480-B (10).
- (3) Location near coastal wetland. The freshwater wetland area is located within 250 feet of a coastal wetland.
- (4) Location near GPA great pond. The freshwater wetland area is located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. § 465-A.
- (5) Aquatic vegetation, emergent marsh vegetation or open water. The freshwater wetland contains, under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water.
- (6) Wetlands subject to flooding. The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information.
- (7) Peatlands. The freshwater wetland is or contains peatlands, except that the department may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance.
- (8) River, stream or brook. The freshwater wetland area is located within 25 feet of a river, stream or brook.

B. Permit Process. Alterations of wetlands of special significance usually require an individual permit. However, some alterations of freshwater wetlands of special significance may be eligible for Tier 1 or 2 review if the department determines, at the applicant's request, that the activity will not negatively affect the freshwater wetlands or other protected natural resources present. In making this determination, the department considers such factors as the size of the alteration, functions of the impacted area, existing development or character of the area in and around the alteration site, elevation differences and hydrological connection to surface water or other protected natural resources, among other things.

C. Seasonal Factors. When determining the significance of a resource or impact from an activity, seasonal factors and events that temporarily reduce the numbers or visibility of

plants or animals, or obscure the topography and characteristics of a wetland such as a period of high water, snow and ice cover, erosion event, or drought, are taken into account. Determinations may be deferred for an amount of time necessary to allow an assessment of the resource without such seasonal factors.

B. STREAM CHANNELS

According to Maine's Natural Resource Protection Act, Title 38, Article 5-A, Protection of Natural Resources, §480-B Definitions:

"River, stream or brook" means a channel between defined banks. A channel is created by the action of surface water and has two or more of the following characteristics:

- (1) It is depicted as a solid or broken blue line on the most recent edition of the U.S. Geological Survey 7.5-minute series topographic map or, if that is not available, a 15-minute series topographic map.
- (2) It contains or is known to contain flowing water continuously for a period of at least 6 months of the year in most years.
- (3) The channel bed is primarily composed of mineral material such as sand and gravel, parent material or bedrock that has been deposited or scoured by water.
- (4) The channel contains aquatic animals such as fish, aquatic insects or mollusks in the water or, if no surface water is present, within the stream bed.
- (5) The channel contains aquatic vegetation and is essentially devoid of upland vegetation.

"River, stream or brook" does not mean a ditch or other drainage way constructed, or constructed and maintained, solely for the purpose of draining storm water or a grassy swale.

C. VERNAL POOLS

As defined by Maine’s Department of Environmental Protection (MDEP): A vernal pool, also referred to as a seasonal forest pool, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus spp.*), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition.

As of September 1, 2007, “Significant Vernal Pools” are defined by MDEP as “Significant Wildlife Habitat.” As read in MDEP’s Chapter 335 -- Significant Wildlife Habitat Rules, “Whether a vernal pool is a significant vernal pool is determined by the number and type of pool-breeding amphibian egg masses in a pool, or the presence of fairy shrimp, or use by threatened or endangered species as specified in Section 9(B). Significant vernal pool habitat consists of a vernal pool depression and a portion of the critical terrestrial habitat within a 250-foot radius of the spring or fall high water mark of the depression. An activity that takes place in, on, over, or adjacent to a significant vernal pool habitat must meet the standards of this chapter.”

Species and abundance criteria required for Significant Vernal Pools.

Species	Abundance Criteria
Fairy shrimp	Presence in any life stage.
Blue spotted salamanders	Presence of 10 or more egg masses.
Spotted salamanders	Presence of 20 or more egg masses.
Wood frogs	Presence of 40 or more egg masses.

MDEP habitat management standards for significant vernal pools: To the greatest extent practicable, the following management practices must be followed within significant vernal pool habitat.

- (1) No disturbance within the vernal pool depression;
- (2) Maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris.
- (3) Maintain or restore forest corridors connecting wetlands and significant vernal pools;
- (4) Minimize forest floor disturbance; and
- (5) Maintain native understory vegetation and downed woody debris.

If more than 25% of the critical terrestrial habitat has been previously developed, restoring a portion of that area through supplemental planting or regrowth of native forest species may be considered toward meeting these standards, or towards standards for avoidance, minimization, or compensation. For purposes of Chapter 355, developed area includes disturbed areas excluding

areas that are returned to a condition with the same drainage patterns and the same or improved cover type that existed prior to the disturbance;

Currently, Army Corps of Engineers (ACOE) regulate vernal pools but do not have specific characteristics that define a vernal pool, or a definition of which vernal pools require protection or buffering. They review each site on a case by case basis. ACOE's jurisdiction does not begin until the waters of the United States are impacted.

D. MDEP NRPA - PERMIT BY RULE

A "permit by rule" or "PBR", when approved by MDEP, is an approval for an activity that requires a permit under the Natural Resources Protection Act (NRPA). Only those activities described in Chapter 305 may proceed under the PBR process. A PBR activity will not significantly affect the environment if carried out in accordance with this chapter, and generally has less of an impact on the environment than an activity requiring an individual permit. A PBR satisfies the NRPA permit requirement and Water Quality Certification requirement. The following projects may be eligible as PBR activities:

Section (2) Activity Adjacent to Protected Natural Resource

(An activity adjacent to (any land area within 75 feet, measured horizontally, of the normal high water line), but not in: a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland; or freshwater wetlands consisting of or containing: under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or peatlands dominated by shrubs, sedges and sphagnum moss.

Section (3) Placement of permanent intake pipes and water monitoring devices (including drilled wells)

Section (4) Replacement of Structures

Section (6) Movement of Rocks or Vegetation

Section (7) Placement of outfall pipes (including ditches and drain tiles)

Section (8) Shoreline stabilization using vegetation or riprap

Section (9) Construction of crossings (utility lines, pipes and cables)

Section (10) Construction of stream crossings (bridges, culverts and fords)

Section (11) State Transportation Facilities

Section (12) Restoration of natural areas (i.e., "undoing" human alteration)

Section (13) Fisheries & wildlife habitat creation or enhancement and water quality improvement projects

Section (15) Public Boat Ramps

Section (16) Selected activities in coastal sand dunes

Section (17) Transfers and Permit Extensions

Section (18) One-time renewals of maintenance dredging permits

Section (19) Activities in/on/over significant vernal pool habitat

Section (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding & roosting areas

E. MDEP NRPA - TIER REVIEW PROCESS

NRPA's Tier Review process constitutes an application to the Maine Department of Environmental Protection (MDEP) for a proposed alteration to a freshwater wetland that qualifies for Tier 1, 2 or 3 review. The square footage of impact is based on the alteration or impact of the whole activity in the wetland. If any part of the overall activity requires a higher tier review, then the whole activity will be reviewed under that higher tier.

The Tier Review process is required for impacts larger than 4,300 square feet, and for requesting a permit for activities in, on, or over a protected natural resource. It is also used for activities adjacent to certain protected natural resources (38 MRSA 480-C(1)). The Tier Review process is required when the activity is not eligible for a PBR.

According to 38 M.R.S.A. Section 480-X(2), an application for a permit to undertake activities altering freshwater wetlands must be reviewed in accordance with the following:

- (1) A Tier 1 review process applies to any activity that involves a freshwater wetland alteration up to 15,000 square feet and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X(4);
- (2) A Tier 2 review process applies to any activity that involves a freshwater wetland alteration of 15,000 square feet up to one acre and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X (4 or 5);
- (3) A Tier 3 review process applies to any activity that does involve a freshwater wetland alteration greater than one acre, or an alteration of a freshwater wetland listed in 38 M.R.S.A. Section 480-X (4 or 5).

According to 38 M.R.S.A. Section 480-X(4), the following activities are not eligible for Tier 1 or Tier 2 review unless MDEP determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

- (1) Activities located within 250 feet of a coastal wetland;
- (2) Activities located within 250 feet of the normal high-water line, and within the same watershed, of any lake or pond classified as GPA under section 465-A;
- (3) Activities occurring in freshwater wetlands, other than artificial ponds or impoundments, containing under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water;
- (4) Activities occurring in freshwater wetlands that are inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information;
- (5) Activities occurring in freshwater wetlands containing significant wildlife habitat that has been mapped, identified or defined, as required pursuant to section 480-B(10), at the time of the filing by the applicant;

- (6) Activities occurring in peatlands dominated by shrubs, sedges and sphagnum moss, except that applications proposing work in previously mined peatlands may be considered by the department for Tier 1 or Tier 2 review, as applicable;
- (7) Activities occurring within 25 feet of a river, stream or brook.

According to 38 M.R.S.A. Section 480-X(5), an activity in freshwater wetlands containing a natural community that is imperiled (S2) or critically imperiled (S1), as defined by the Natural Areas Program pursuant to Title 12, Section 544 is not eligible for Tier 2 review unless the department determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

NRPA General Requirements for both the Tier 1 and Tier 2 review process require that the proposed freshwater wetland alteration must be avoided, if feasible, after considering cost, logistics, technology and the overall purpose of the project. However, if unavoidable, the alteration must be limited to the minimum amount necessary to complete the project. The project must utilize both temporary and permanent erosion control measures to prevent sedimentation of any protected natural resource. In addition, the alteration site must maintain an undisturbed 25 foot buffer strip between the activity and any river, stream or brook and must not violate any state water quality law, including those governing the classification of the State's waters.

F. U.S. ARMY CORPS OF ENGINEERS REVIEW PROCESS

The New England District of the U.S. Army Corps of Engineers (ACOE) requires authorization regardless of the amount of proposed alterations to freshwater wetlands. The New England District of ACOE issues 23 General Permits (GPs), for activities subject to ACOE jurisdiction in waters of the United States within the boundaries of the State of Maine including tribal lands, and in adjacent ocean waters to the seaward limit of the outer continental shelf. These GPs are issued in accordance with ACOE regulations at 33 CFR 320 – 332 and specifically 33 CFR 325.2(e)(2).

Permits are required from the ACOE for the following work:

- A. The construction of any structure in, over, or under any navigable water of the U.S. (see 33 CFR 328), the excavating or dredging from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters. The ACOE regulates these activities under Section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR 322);
- B. The discharge of dredged or fill material and certain discharges associated with excavation into waters of the U.S. including wetlands. The ACOE regulates these activities under Section 404 of the Clean Water Act (see 33 CFR 323); and
- C. The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates these activities under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (see 33 CFR 324).

In order for activities to qualify for these General Permits (GPs), they shall meet the GPs terms and eligibility criteria within pages 1-4 of the Department of the Army General Permits for the State of Maine, all applicable general conditions (GCs) in Section IV of the Department of the Army General Permits for the State of Maine, and terms of the Maine General Permits in Section V of the Department of the Army General Permits for the State of Maine. Any activity not specifically listed may still be eligible for authorization under these GPs; prospective permittees are advised to contact the ACOE for specific eligibility determination.

Under these GPs, activities may qualify for the following:

- Self-Verification (SV): Prospective permittees shall confirm that the activity meets all the applicable terms and conditions of SV. Consultation with the ACOE and/or other relevant federal and state agencies may be necessary to ensure compliance with the applicable general conditions (GCs) and related federal laws such as the National Historic Preservation Act (GC 15), the Endangered Species Act (GC 16), the Magnuson-Stevens Fishery Conservation and Management Act (GC 17), and the Wild and Scenic Rivers Act (GC 13). Activities that are eligible for SV are authorized under these GPs provided the prospective permittee has:
 - i. Confirmed that the activity meets all applicable terms and conditions of SV.
 - ii. Provided notifications to the State Historic Preservation Officer (SHPO) (the SHPO in the State of Maine is the Maine Historic Preservation Commission, or MHPC) and all

- five federally-recognized tribes in the State of Maine (Tribal Historic Preservation Officers, or THPOs) listed in Section VIII before submitting the SV to the ACOE in order to be reviewed for the presence of historic, archeological, architectural, or tribal resources in the action area that the activity may affect (see GC 15). Prospective permittees are not required to wait for a response to their notifications before submitting the SV to the ACOE.
- iii. At least two weeks before work is to commence, submitted to the ACOE a Self-Verification Notification Form (SVNF, page 36) with all of the following attachments: location map, project plans, and an Official Species List of federally threatened and endangered species that may occur in the activity's action area and the email address of the person who generated the list (see GC 16).

NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF itself; however, the applicant shall not rely on the state permitting agency to provide the Corps a copy of their state permit application.

- **Pre-Construction Notification (PCN):** Notification to, and written verification from the ACOE is required. For activities that do not qualify for SV or where otherwise required by the terms and conditions of the GPs, the prospective permittee shall submit a PCN and obtain written verification from the ACOE before starting work in Corps jurisdiction. The ACOE will coordinate review of all PCN activities with other federal and state agencies, as appropriate. The ACOE will attempt to issue written verification of the PCN within 60 days of receiving a complete application.

All prospective permittees for PCN activities shall follow the instructions on found on pages 37 – 42, and in particular:

- Submit directly to the ACOE application form *ENG Form 4345* (pages 40 – 42), or the surrogate state permit application form as noted above.
- Provide project information outlined on pages 37 – 42 (Content of a Pre-Construction Notification).
- Submit an Official Species List of federally threatened and endangered species that may occur in the activity's action area and the email address of the person who generated the list (GC 16).
- Provide notifications to the SHPO (MHPC) and all five THPOs in the State of Maine listed in Section VIII before submitting the PCN to the ACOE in order to be reviewed for the presence of historic, archeological, architectural, or tribal resources in the action area that the activity may affect (see GC 15). The PCN shall include documentation that MHPC and all of the THPOs were notified (a copy of the prospective permittee's cover letter or emails to MHPC and the THPOs is acceptable). Prospective permittees are not required to wait for a response to their notifications before submitting a PCN to the ACOE.

Projects that are not eligible to GPs require an Individual Permit.

- Individual Permit (IP): Prospective permittees shall submit an application directly to the ACOE. These GPs do not affect the ACOE IP review process or activities exempt from ACOE regulation. For general information regarding IPs prospective permittees are encouraged to contact the ACOE.

In addition, the ACOE retains discretionary authority on a case-by-case basis to elevate GP-eligible activities to an IP based on concerns for the aquatic environment or for any other factor of the public interest (33 CFR 320.4(a)). Whenever the ACOE notifies a prospective permittee that an IP is required, no work in ACOE jurisdiction may be conducted until the ACOE issues the required authorization in writing indicating that the work may proceed

REFERENCES

- Britton, Nathaniel Lord and Hon. Addison Brown. 1970. *An illustrated flora of the northern United States and Canada*. 2nd ed. New York: Dover Publications, Inc.
- Cobb, Boughton. 1956. *The Person Field Guide Series: A field guide to the ferns*. Cambridge, Massachusetts: The Riverside Press.
- Environmental Laboratory. 1987. *Corps of Engineers wetlands delineation manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.
- Environmental Laboratory. 2012. *Regional Supplement to the Corps of Engineers wetland delineation manual: Northcentral and Northeast Region (Version 2.0)*. Report ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- Kenney, Leo P. and Matthew R. Burne. 2001. *A field guide to the animals of vernal pools*. Westborough, Massachusetts: Massachusetts Division of Fisheries & Wildlife Natural Heritage & Endangered Species Program.
- Lellinger, David B. 1985. *A field manual of the ferns & fern-allies of the United States & Canada*. Washington, D.C.: Smithsonian Institution Press.
- Lyon, John Grimson. 1993. *Practical handbook for wetland identification and delineation*. Boca Raton, Florida: Lewis Publishers.
- Magee, Dennis W. 1981. *Freshwater wetlands: a guide to common indicator plants of the northeast*. Amherst: The University of Massachusetts Press.
- Symonds, George W. 1958. *The tree identification book*. New York: Quill (William Morrow & Co.)
- Symonds, George W. 1963. *The shrub identification book*. New York: Morrow Quill Paperbacks (William Morrow & Co.)
- USDA Natural Resources Conservation Service. 2010. *Field indicators of hydric soils in the United States, Version 7.0*. ed. L. M. Vasilas, G.W. Hurt and C.V. Noble. Washington, DC: USDA NRCS in cooperation with the National Technical Committee for Hydric Soils.
- Websites:
- Maine Department of Environmental Protection: www.maine.gov/dep/land/nrpa/index.html
- United States Fish and Wildlife Service, National Wetlands inventory: www.fws.gov/wetlands/
- United States Army Corps of Engineers, New England District:
www.nae.usace.army.mil/Missions/Regulatory.aspx
- United States Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions: soils.usda.gov/technical/classification/osd/index.html.

ATTACHMENTS:

- **NRCS CUSTOM SOIL RESOURCE REPORT**
- **WETLAND DELINEATION DATASHEETS**
- **MAINE FLOOD HAZARD MAP**
- **WETLAND DELINEATION PLAN**



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
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participants

Custom Soil Resource Report for York County, Maine

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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

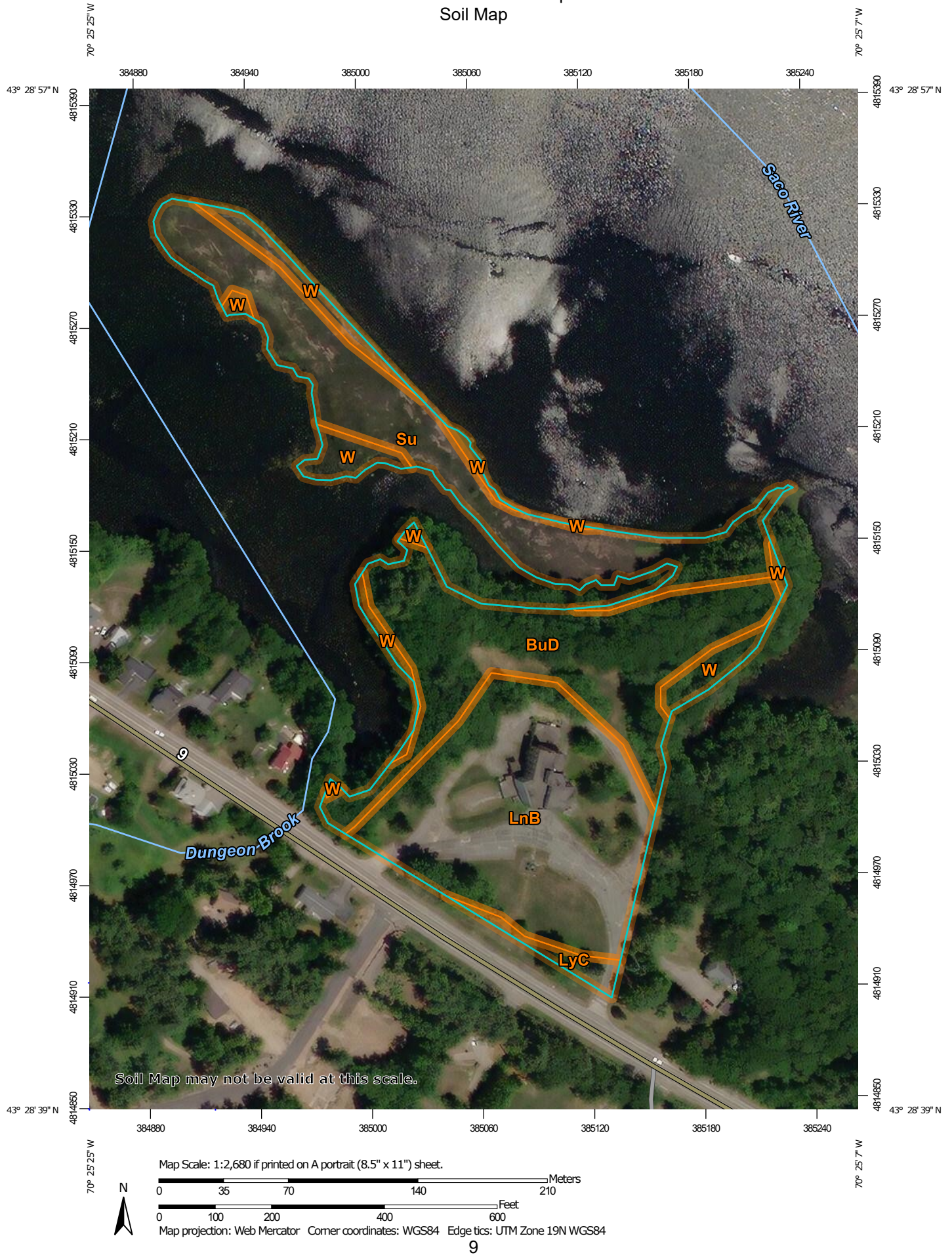
Custom Soil Resource Report

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 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 1:20,000.

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: York County, Maine

Survey Area Data: Version 20, Aug 31, 2021

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

Date(s) aerial images were photographed: Dec 31, 2009—Sep 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuD	Buxton silt loam, 15 to 25 percent slopes	3.1	28.4%
LnB	Lyman loam, 3 to 8 percent slopes, rocky	3.8	34.9%
LyC	Lyman-Rock outcrop complex, 8 to 15 percent slopes	0.2	1.7%
Su	Pemaquid, Todds point, and Damariscotta soils, 0 to 2 percent slopes	2.9	26.3%
W	Water bodies	1.0	8.8%
Totals for Area of Interest		11.0	100.0%

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

York County, Maine

BuD—Buxton silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9k56

Elevation: 10 to 900 feet

Mean annual precipitation: 34 to 48 inches

Mean annual air temperature: 43 to 46 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Buxton and similar soils: 88 percent

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

Description of Buxton

Setting

Landform: Coastal plains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Glaciolacustrine deposits derived from siltstone and/or fine-silty marine deposits

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 19 inches: silt loam

H3 - 19 to 37 inches: silty clay

H4 - 37 to 65 inches: silty clay

Properties and qualities

Slope: 15 to 25 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 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Hydric soil rating: No

LnB—Lyman loam, 3 to 8 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2trq7

Elevation: 0 to 520 feet

Mean annual precipitation: 36 to 65 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 60 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lyman, rocky, and similar soils: 86 percent

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

Description of Lyman, Rocky

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Mountaintop, mountainbase, side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

E - 3 to 5 inches: fine sandy loam

Bhs - 5 to 7 inches: loam

Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: D

Hydric soil rating: No

LyC—Lyman-Rock outcrop complex, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2trqj

Elevation: 0 to 790 feet

Mean annual precipitation: 36 to 65 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 60 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Lyman, very stony, and similar soils: 62 percent

Rock outcrop: 25 percent

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

Description of Lyman, Very Stony

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Mountaintop, mountainbase, side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

E - 3 to 5 inches: fine sandy loam

Bhs - 5 to 7 inches: loam

Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: F144BY701ME - Shallow Till

Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Mountaintop, mountainbase, side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Igneous and metamorphic rock

Typical profile

R - 0 to 10 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Capacity of the most limiting layer to transmit water (Ksat): Very low to very high (0.00 to 14.17 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: Unranked

Su—Pemaquid, Todds point, and Damariscotta soils, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2x1d9

Elevation: 0 to 10 feet

Mean annual precipitation: 63 to 87 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Pemaquid and similar soils: 40 percent

Todds point and similar soils: 30 percent

Damariscotta and similar soils: 15 percent

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

Description of Pemaquid

Setting

Landform: Tidal marshes
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oi - 0 to 16 inches: peat
Oe - 16 to 35 inches: mucky peat
Cseg - 35 to 65 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Very slightly saline to strongly saline (2.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Very high (about 14.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Description of Todds Point

Setting

Landform: Tidal marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Herbaceous organic material

Typical profile

Oe1 - 0 to 31 inches: mucky peat
Oe2 - 31 to 42 inches: mucky peat
Oa - 42 to 65 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Very slightly saline to strongly saline (2.0 to 16.0 mmhos/cm)

Custom Soil Resource Report

Sodium adsorption ratio, maximum: 20.0

Available water supply, 0 to 60 inches: Very high (about 16.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Description of Damariscotta

Setting

Landform: Tidal marshes

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy glaciomarine deposits

Typical profile

Ase1 - 0 to 10 inches: mucky loamy fine sand

Ase2 - 10 to 21 inches: mucky loamy fine sand

Cseg - 21 to 65 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

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 0 inches

Frequency of flooding: Very frequent

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 20.0

Available water supply, 0 to 60 inches: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: A/D

Hydric soil rating: Yes

W—Water bodies

Map Unit Composition

Water: 100 percent

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

Description of Water

Setting

Landform: Hills

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 355 Pool St. City/County: Biddeford / York Sampling Date: 12-23-2021
 Applicant/Owner: Shawn Brown State: ME Sampling Point: _____
 Investigator(s): JT Section, Township, Range: _____
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: ° _____ Long: ° _____ Datum: WGS 84
 Soil Map Unit Name: York County NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point:

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	=Total Cover			
Sapling/Shrub Stratum (Plot size: 15')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	=Total Cover			
Herb Stratum (Plot size: 5')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	=Total Cover			
Woody Vine Stratum (Plot size: 30')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	=Total Cover			

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	_____ (A)
Total Number of Dominant Species Across All Strata:	_____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	_____ (A/B)
Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
_____ 1 - Rapid Test for Hydrophytic Vegetation	
_____ 2 - Dominance Test is >50%	
_____ 3 - Prevalence Index is ≤3.0 ¹	
_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines – All woody vines greater than 3.28 ft in height.	
Hydrophytic Vegetation Present?	
Yes _____	No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point:

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8) (LRR R ,
☐ Histic Epipedon (A2)	☐ MLRA 149B)
☐ Black Histic (A3)	☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)
☐ Hydrogen Sulfide (A4)	☐ High Chroma Sands (S11) (LRR K, L)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1) (LRR K, L)
☐ Depleted Below Dark Surface (A11)	☐ Loamy Gleyed Matrix (F2)
☐ Thick Dark Surface (A12)	☐ Depleted Matrix (F3)
☐ Sandy Mucky Mineral (S1)	☐ Redox Dark Surface (F6)
☐ Sandy Gleyed Matrix (S4)	☐ Depleted Dark Surface (F7)
☐ Sandy Redox (S5)	☐ Redox Depressions (F8)
☐ Stripped Matrix (S6)	☐ Marl (F10) (LRR K, L)
☐ Dark Surface (S7)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

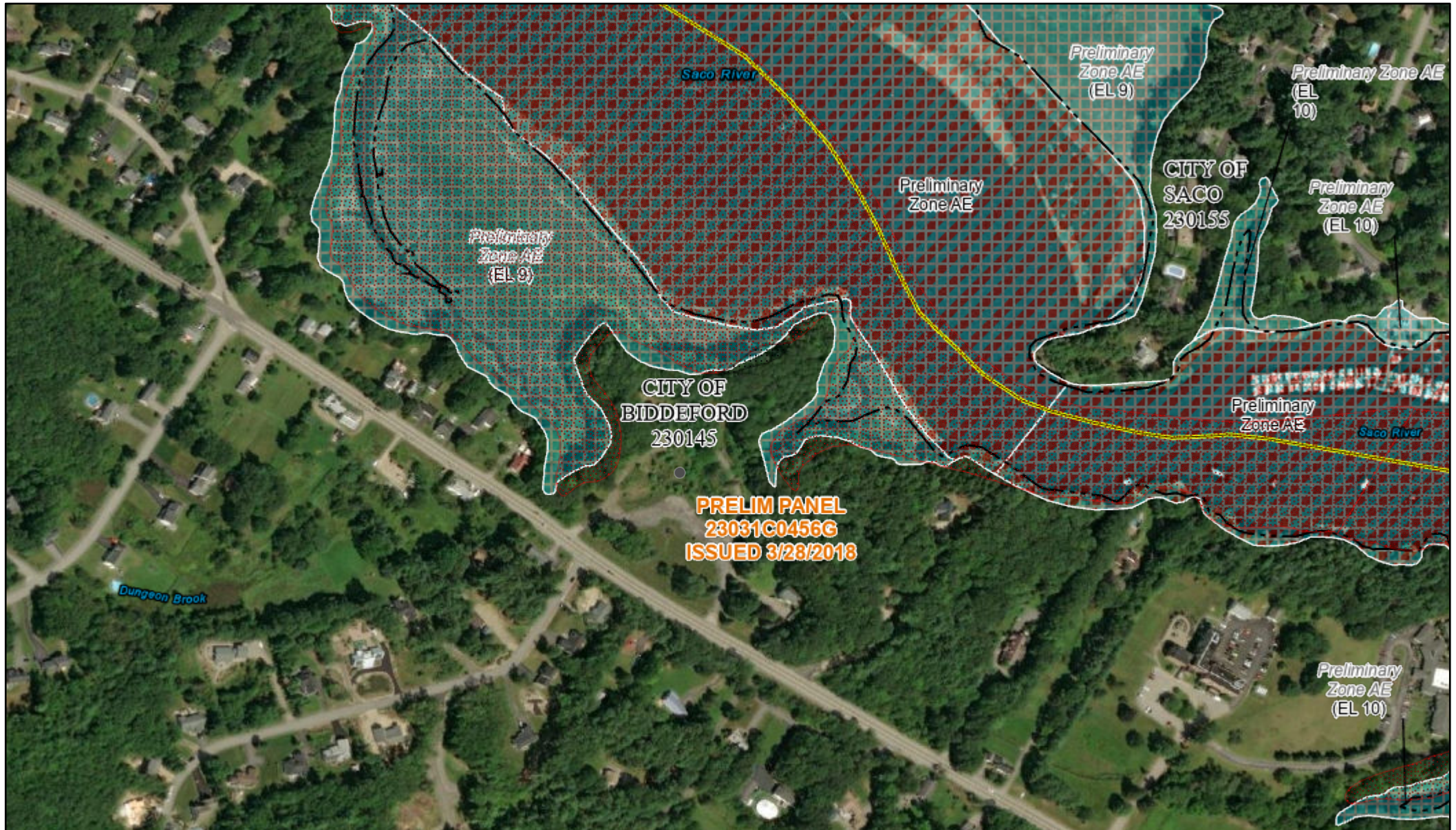
Type: _____

Depth (inches):

Hydric Soil Present?	Yes	No

Remarks:

Maine Flood Hazard Map



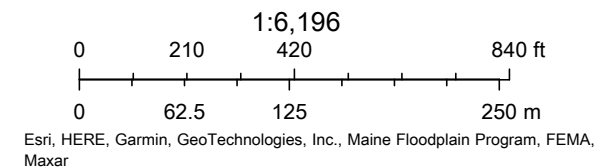
2/21/2022, 7:57:45 AM

Flood_Zones_Q3 Preliminary Flood Hazard Zones

- AE
- 1% Annual Chance Flood Hazard
- X500
- Regulatory Floodway

Preliminary Flood Hazard Boundaries

- SFHA / Flood Zone Boundary
- Preliminary Transect Baselines
- Preliminary Political Jurisdictions





Wetland A

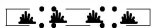


GRAPHIC SCALE



1 inch = 200 ft.

LEGEND



PROPERTY BOUNDARY (APPROX.)
DELINEATED WETLANDS
STREAMS
DITCH
2 FT NOAA LIDAR CONTOURS

NOTES:

1. PARCEL BOUNDARY INFORMATION WAS DIGITIZED AND ROTATED INTO THE DRAWING APPROXIMATELY BASED ON TAX MAP INFORMATION.
2. DATUM: NAD83 STATE PLANE MAINE WEST (FEET).
3. 2 FOOT CONTOURS OBTAINED FROM NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA).
4. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED BY JONES ASSOCIATES INC IN DECEMBER OF 2021 ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION.
5. WETLAND FLAGS WERE LOCATED USING LEICA GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB-METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND.

PLAN TITLE:

WETLAND SKETCH PLAN

355 POOL STREET
BIDDEFORD, MAINE 04005

PREPARED FOR:

SHAWN BROWN
282 WEST STREET
BIDDEFORD, MAINE 04005

PREPARED BY:

**JONES
ASSOCIATES INC.**

Foresters, Surveyors And
Environmental Consultants



280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PLAN DATE:

FEBRUARY 2022

FIELD WORK DATE:

DECEMBER 2021

SCALE: 1"=200'

PROJ. #: 21-115BD

From: Gagne, Scott
Sent: Monday, October 3, 2022 8:08 AM
To: Walter Pelkey
Subject: Pool street lots

The Biddeford Fire Department has the ability to serve the 5 lots as proposed located off Pool St. We would ask that all building location are no more than 1,000 feet from the nearest hydrant. Thank you.



[Biddeford Fire Department](#)

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From: Walter Pelkey
Sent: Wednesday, September 7, 2022 10:19 AM
To: Terrell, Van
Subject: RE: Pool Street

Thanks Van.

Walter E. Pelkey
Vice President

BH2M
380 B Main Street
Gorham, ME 04038
www.bh2m.com
(207) 839-2771 Ext. 201



From: [Terrell, Van](#)
Sent: Wednesday, September 7, 2022 9:45 AM
To: [Walter Pelkey](#)
Subject: RE: Pool Street

Good morning Walter,

The location you provided on Rte.9/Pool Street in Biddeford is in an Urban Compact area and outside MaineDOT jurisdiction. You would need to contact the municipality for driveway cuts.

Thank you,

Van Terrell
Permit Specialist
Southern Region
[Maine Department of Transportation](#)
[51 Pleasant Hill Rd](#)
[P.O. Box 358](#)
[Scarborough, ME 04070-0358](#)
Office [\(207\) 885-7040](#)

From: Walter Pelkey <wpelkey@bh2m.com>
Sent: Tuesday, September 6, 2022 3:53 PM

To: Terrell, Van <Van.Terrell@maine.gov>
Subject: Pool Street

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Van,

We are working on a 5 lot subdivision located along Route 9 (Pool Street) in Biddeford. I am wondering if you can give me some guidance on driveway cuts for the project? Plan and location map of the project is attached. I'd appreciate any direction you could give me on this, what we need, if anything for driveway cuts.

Thanks.

Walter E. Pelkey
Vice President

BH2M
380 B Main Street
Gorham, ME 04038
www.bh2m.com
(207) 839-2771 Ext. 201



From: Marcus Knipp
Sent: Monday, October 3, 2022 11:41 AM
To: Walter Pelkey
Subject: RE: 355 Pool Street

Hi Walter,

No issues with Capacity. Maine Water can confirm there is plenty of capacity from the existing 8-inch cast iron main on Pool Street to serve the domestic water needs of these 5 proposed lots from normal residential water usage as assumed single family dwellings on each lot. For additional capacity beyond single family homes, I'll want to see a demand schedule with specifics of what each lot is proposing individually.

(GIS image is approximate, for illustration purposes only, needs field verified and is not GPS or survey grade)



From Hydrant B-137 – water main is 7' away

From Hydrant B-138 – water main is 5' away Should be fairly straight between those two connections as shown on GIS image)

Reach out with any questions over this for now.

Thanks,
Marcus

Marcus Knipp, EI
Engineer



93 Industrial Park Road
Saco, ME 04072
Office: 207-294-6943
Cell: 207-468-2089

PS (working on getting you the final review for 58 Portland Ave at the moment – will send shortly)

From: Walter Pelkey <wpelkey@bh2m.com>
Sent: Monday, September 12, 2022 10:38 AM
To: Marcus Knipp <Marcus.Knipp@MaineWater.com>
Subject: 355 Pool Street

CAUTION: This email originated outside the SJWG organization.

Hi Marcus,

Attached is a plan for a property located at 355 Pool Street in Biddeford. Our client is proposing a lot split for 5 lots to be served by public water and private individual sewer systems. First, could you confirm the watermain size and approximate location for the plan. Second, could you provide us with a letter or email with the ability to serve for the proposed lots.

Thanks.

Walter E. Pelkey
Vice President

BH2M
380 B Main Street
Gorham, ME 04038
www.bh2m.com
(207) 839-2771 Ext. 201





CITY OF BIDDEFORD

PLANNING DEPARTMENT

Matthew Grooms, A.I.C.P.
Deputy Director/City Planner
205 Main Street
Biddeford, ME 04005
(207) 284-9115

Matthew.Grooms@Biddefordmaine.org

PLANNING BOARD REPORT

TO: William Southwick, Chair & Members of the Biddeford Planning Board

FROM: Matthew Grooms, AICP, City Planner

DATE: September 29, 2022

RE: 2022.24 – Preliminary Subdivision Approval for 216-unit multi-family development at 588 and 590 Alfred Street.

MEETING DATE: October 5, 2022

1. INTRODUCTION

This application contains materials for a Subdivision and Site Plan Preliminary Plan review for a proposed 216-unit multifamily housing development at 588 and 590 Alfred Street (Tax Map 2, Lots 6 and 12). The parcels are located in the B-2 zone, where residential uses are not permitted, so a Contract Zone is required for this project. The project consists of 9 residential buildings, 8 garage structures, a maintenance building, a clubhouse, a pool, a dog park. And community garden. Residential units will be a mixture of studio, 1, 2 and 3 bedrooms, as stipulated by the Joint Development Agreement (JDA), entered into by the applicant and City. When completed, the site would include 497 parking spaces (371 surface spaces and 126 garage spaces), and will also feature landscaped areas and on-site lighting.

The contract zone required for this project has been endorsed by the City Council through execution of the JDA. Additionally, Subdivision Approval, and Site Plan approval, are required from the Planning Board. The Planning Board, through its review, must also develop Contract Zone language to be forwarded back to the City Council for final action.

On August 18, 2022, the Planning Board conducted a Conceptual Review of the project. Overall, the project was well-received, with limited comment being provided by the Board, described in more detail below. At the meeting, the Planning Board determined the project to be a “major” subdivision.

2. PROJECT DATA/INFORMATION

	<i>SUBJECT</i>	<i>DATA/INFORMATION</i>
1.	Applicant:	Devine Capital, LLC 30 Milk Street, 3 rd Floor Portland, ME 04101
2.	Owner of Property:	New Life Christian Fellowship

		551 Alfred Street Biddeford, ME 04005
3.	Agent:	Roz Anton 40 main Street, Suite 13-404 Biddeford, ME 04005
4.	Engineer/Surveyor:	Richard Meek, P.E., Terradyn Consultants 41 Campus Drive, Suite 301 New Gloucester, ME 04260
5.	Project Location:	588 & 590 Alfred Street
6.	Project Tax Map #/Lot #:	Tax Map 2, Lots 6 & 12
7.	Existing Zoning:	B-2 – Contract Zone required
8.	Overlay Zoning:	None.
9.	Existing Use:	Vacant property
10.	Proposed Use:	216 Unit Multifamily Residential Subdivision
11.	Approvals Required:	Site Plan, Subdivision, Site Location (Local)
12.	Uses in the Vicinity:	Residential, Commercial, Retail
13.	Parcel Size:	44.53 acres
14.	Limits of Disturbance:	17.77 acres
15.	Drainage Watershed:	Thatcher Brook
16.	Water Supply:	Maine Water
17.	Sewerage Disposal:	City of Biddeford
18.	Solid Waste Disposal:	Private Hauler
19.	Fire Protection:	City of Biddeford
20.	Other Non-City Permits Required:	Maine Site Law, Maine Stormwater, DOT Traffic Movement Permit
21.	LDR Attachment A: Fess Paid:	All Required Fees Paid

3. PLANNING BOARD MEETING – AUGUST 18, 2022

The Planning Board considered the concept plan for proposed multifamily development at their August 18, 2022 meeting, and offered the following feedback:

- Applicant will need to coordinate with Maine DEP and DOT to proceed with other permits required for the project.
 - Update: The applicant has submitted applications to Maine DEP, the Army Corps of Engineers, and DOT for outside agency approvals required to move the project forward. The applicant has also submitted a Maine DEP Site Location of Development (SLOD) application, and is requesting that the City of Biddeford, designated as having ‘capacity’ to review certain SLOD applications by Maine DEP, review this application. This application is included as part of the submission materials. Staff are seeking clarification from Maine DEP as to whether the City has delegated review authority for this project.
- Work closely with the City to identify opportunities to extend pedestrian access to the existing extent of sidewalk along Route 111. (This may be addressed as part of the applicant’s Traffic Movement Permit.

- Update: Staff recommend that the applicant contribute a fee in lieu of building out sidewalk infrastructure, to enhance connections between the development site and Biddeford Crossing.
- Identify as part of the plans areas for conservation and outline specific uses for conservation areas.
 - Update: Conservation areas are now identified on the plans, though staff are requesting additional information regarding future use, and whether such conservation areas would be accessible for recreational use. Staff would also recommend that this application be referred to the Biddeford Conservation Commission, for formal input on the plan.
- Provide information on rental rates at other projects completed by the developer.
 - Update: This information is provided as part of the submission packet.
- Continue to coordinate with the Maine Turnpike Authority around the Exit 32 ramp extension project.

4. **STAFF REVIEW**

- a. **APPLICATION COMPLETENESS:** The applicant has submitted a complete application, featuring all required elements as specified under Section 66-35 (Required Information for Preliminary Plan Submissions). As part of the staff's review comments, we've identified aspects of the plan submission to be revised or clarified, which we suggest being made a condition of approval.
- b. **ZONING:** The proposed use (Multi-family) is not permitted within the B-2 Business Zone, and therefore, a contract zone is required to facilitate this development.
- c. **REVIEW STANDARDS:** Preliminary Plan Review Standards – The applicant has provided a detailed narrative describing project compliance with the City's applicable subdivision. While there is significant overlap between the City's subdivision and site plan standards, the applicant, as part of any future submission, should also detail compliance with the City's site plan standards.

In general, staff found the application to satisfy City subdivision and site plan requirements, though as mentioned above, the City's third party civil engineer, identified a number of technical plan elements to be addressed in a future submission. These are included as an attachment.

Staff would also highlight the following items for discussion at the October 5th meeting, which includes:

- Pedestrian Accessibility: The project proposes 5' foot bituminous sidewalks throughout the development, including out to Andrews Road, and to Alfred Street. Staff are looking for direction from the Planning Board on whether this sidewalk should extend to the current extent of sidewalk along Route 111/Alfred Street, to

connect this development with the Biddeford Crossing Development. Due to the uncertainty around the Exit 32 extension work, and the lack of pedestrian infrastructure currently in place at Biddeford Crossing, it may be more appropriate to collect a contribution fee and have the City coordinate among the various property holders to complete this work.

- Lighting: On the current plans, a sidewalk is shown connecting the development with Route 111/Alfred Street, that traverses a wooded area. For safety purposes, staff would recommend that the pathway be lit and monitored via pole mounted security cameras.
- Off-Street Parking: The development is proposing a total of 497 parking spaces, well in excess of the 432 spaces required by the City's off-street parking requirements. Staff would recommend reducing this number to an amount closer to what is required, as a strategy to reduce the amount of new impervious surface being introduced to the site. In particular, the area proximate to the clubhouse, pool and playground appears over parked. Residents should be encouraged to walk or bike to these facilities.
- Public Transit Access: Staff would encourage the applicant to coordinate with the Biddeford, Saco, Old Orchard Beach (BSOOB) transit agency, to identify whether there are opportunities to directly service this development and provide an alternative transportation option for future residents.
- Existing Features: The applicant should clarify the proposed future condition and use of both the gravel road and clearing area between proposed buildings 5000 and 7000, and the pathway between proposed Buildings 3000 and 5000.
- Conservation Areas: The plans depict significant areas of the site being reserved for future conservation use. Staff is supportive of this direction, however would request additional information on the nature of restrictions being imposed, and whether or not these areas will be accessible to members of the public, or whether the applicant is in discussions with surrounding property owners to provide enhanced access for members by the public.

d. **WAIVERS**: None

e. **OUTSTANDING ITEMS TO BE ADDRESSED PRIOR TO SUBMISSION OF A FINAL APPLICATION PACKAGE**: See recommended conditions of approval relating to the potential granting of a Preliminary Subdivision Approval by the Planning Board.

5. **STAFF RECOMMENDATION**

Consider this application a "complete" application and consider granting a Conditional Preliminary Subdivision Approval conditioned on the following:

- The applicant shall provide a written response to the staff and third party engineering comments provided in review of the preliminary application, and shall update the plans and materials accordingly as part of the Final Plan Submission.

6. **NEXT STEPS/SUGGESTED ACTIONS**

The applicant will need to submit a Final Subdivision/Site Plan Review Application in order to move the project forward. Accompanying this submittal needs to be an agreed upon DRAFT Contract Zone Agreement. Since this is a Contract Zone proposal, a Public Hearing must be held by the Planning Board.

7. **SAMPLE MOTIONS**

1. *Motion to determine the application is “complete” for review purposes.*
2. *Motion to refer Application 2022.24 – a request to develop a 216-multifamily development at 588 and 590 Alfred Street to the City of Biddeford Conservation Commission for advisory review to the Planning Board.*
3. *Motion to grant Preliminary Subdivision Approval for the proposal located at 588, 590 Alfred Street (Tax Map 2, Lots 6 and 12) conditioned on a Final Application and Plan Set shall not be submitted to the Planning Board until*
 - A. *The 3rd Party Engineer and City Staff have completed their reviews of the Preliminary Plan Submission package. This includes providing all comments to the Applicant and the applicant responding to Staff satisfactorily.*
 - B. *A DRAFT Contract Zone Agreement has been agreed to between the Applicant and Staff, including the completion of a legal review by the City Attorney.*

Site Design Associates

Consulting Engineering and Land Planning

September 28, 2022

Mr. Matthew Grooms
Via email

**RE: Biddeford Residential
Andrews Road**

Dear Matt;

Per your request Site Design Associates has undertaken a review of the plans submitted in support of a preliminary subdivision application for the referenced project.

Our review was based on preliminary civil engineering plans dated 09-13-22.

We are aware that the plans are preliminary, and may not contain the detail one would expect in the final documents. Our comments include some items that may be closer associated with final documentation, in order for the applicant to consider them prior to the final plan submission. Our review was limited to the plans, as no other documentation was provided.

Based on our review we offer the following comments for your, the planning board's, and the applicant's consideration:

A. General

1. The status box on the drawings indicates that an application for a stormwater permit was submitted to MDEP. It appears the proposed new devegetated area is over three acres which would require a Site Location of Development Act permit from MDEP. In either case, MDEP would be reviewing the stormwater management plans.
2. Has a trip generation analysis or traffic report been submitted?
3. Will an MDOT Traffic Movement Permit be required?
4. Will there be any issues at the Andrews Road/Route 111 intersection due to increased traffic?
5. The plans indicate that they have applied to the city for subdivision approval. It seems that a development of this nature would also require site plan approval.
6. Have photometric plans been provided?
7. Is one point of access into the site acceptable to the fire department?
8. It appears that none of the roads are intended to be developed as public or private ways.

B. Drawings

1. Existing Conditions Plan

23 Whitney Way Topsham, Maine 04086
Phone: (207) 449-4275 email: info@sitedesignassociates.biz

- a. The plan indicates some of the onsite wetlands are not survey located. How were they located?
- b. Is the standing water located in the southeast corner of the property a Wetland of Special Significance as defined by chapter 310 of the Natural Resources Protection Act?
- c. The existing overhead utilities in Andrews Road should be shown.

2. Site Plans

- a. Is an accessible handicap parking space necessary at the mail pick up?
- b. Is it the intent for all curbing to be vertical slip form?
- c. A sawcut and butt joint should be noted at Andrews Road, in sound pavement, and a detail provided.
- d. How will the “skewed” tipdown at the intersection of roads A and B be constructed?
- e. Should a sidewalk tipdown be provided at Andrews Road?
- f. Why are the clearing limits for the dog park noted as “to be determined”? Should they be determined as part of the review process? This would need to be considered in the stormwater management analysis as well.
- g. Are tipdowns required on the northerly side of the access drive to garage 1?
- h. What is the purpose of the large size of concrete trash enclosure at the maintenance building? Access for garbage trucks to the dumpsters would only be available at the front portion of the pad.
- i. The outside radii on the ends of the parking areas and maintenance building drives are less than 50 ft, and the inside radii are relatively short as well. Access for the larger fire apparatus may be difficult. Typically, 50 ft. outside radii are provided. The fire department should review and comment.

3. Grading and Drainage Plans

- a. More spot grades should be provided in some areas to better define the drainage intent, including at the accessible parking limits.
- b. There are areas where the pavement will be very flat, and slopes less than desirable for proper drainage.
- c. The grade of the drive at Andrews Road should be a maximum of 3% for a minimum of 75 feet to provide suitable access for winter conditions.
- d. There are going to be issues during construction with a grading design based on LIDAR contours with a 2 foot contour interval.
- e. There are undrained low areas shown westerly of building 1000.
- f. The gravel wetland cell easterly of building 7000 outlets onto a relatively steep slope. Further energy dissipation and slope protection may be warranted.

4. Utility Plans

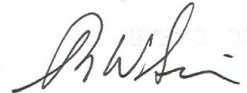
- a. Where will the pool backwash outlet?
- b. What are the utility piping materials?

5. Site Details

- a. Requirements for inspections during construction should be included on Drawing C5.1 and should be consistent with the requirements of the MDEP stormwater checklist.
- b. Sewer pump station details should be provided.
- c. The vertical curb detail shown will result in a curb with a 5.5" reveal, and should be revised.
- d. Will there be sloped curbing adjacent to non-sidewalk paved areas?
- e. Typical sections for the 10 ft wide access drive and the site drive should be provided.
- f. The handicap ramp detail is not applicable at most locations on the plan. The appropriate detail should be provided.
- g. The gravel wetland details are incomplete.

We do not believe that these comments, which are generally technical in nature, will significantly impact the overall design concept, and that they could be satisfactorily addressed at the time of the final plan submission, if the planning board and you concur. If you have any questions, or require additional information, please do not hesitate to contact me.

Sincerely,
Site Design Associates



Tom Saucier, P.E.
President

**Pineland**

Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

Portland

565 Congress Street, Suite 201
Portland, ME 04101

September 13, 2022

21-49

Mr. Matthew Grooms, City Planner
P.O. Box 586
Biddeford, ME 04005

**Planning Board Application, Major Subdivision - Devine Capital, LLC
216 Unit Multi-Family Apartment Complex (Biddeford Residential)
588 & 590 Alfred Street (Tax Map 2, Lots 6 & 12)**

Dear Matthew,

On behalf of Devine Capital, LLC, we are pleased to submit the required copies of the Planning Board Application and related attachments for consideration and placement on the October 5, 2022 Planning Board meeting agenda. As you will recall, the applicant attended the August 17, 2022 Planning Board meeting and presented the proposed project as a Sketch Plan Application. The Board provided great feedback regarding the project and ultimately voted to review the project as a Major Subdivision.

In summary, the applicant intends to construct a multi-family residential development on a combined 44.5 acre parcel (Tax Map 2, Lots 6 & 12) located off of Andrews Road and Alfred St. (Rt.111). The development will consist of nine 24-unit apartment buildings (216-units), a clubhouse, mail kiosk, maintenance building, eight detached garages, surface parking, dog park, community garden and interconnected sidewalks. When completed, the site will include 497 parking spaces (371 surface spaces and 126 garage spaces). Appropriate landscaping and site lighting have been incorporated into the development.

The development will connect to existing utilities within Andrews Road including electrical power, telephone, internet and cable television. Connection to public water and sanitary sewer will occur at Alfred St. These connections will require coordination with Maine Water Company and Public Works, respectively, to extend the existing infrastructure to the site. Additionally, the site will require installation of a private water booster station to provide adequate domestic water pressure and fire service flows to the development. On-site propane tanks or natural gas lines (extended to the site) will supplement the cooking and heating demands of the development. Stormwater management will be accomplished by constructing a network of catch basins and storm drainage pipe to route stormwater runoff to two proposed on-site gravel wetlands.

Based upon the scope of the development, a Site Location of Development Act (SLODA) permit application is required. The City of Biddeford maintains "Capacity" to review SLODA applications in lieu of the Maine Department of Environmental Protection (MDEP). A Chapter 500 - Stormwater Management Law permit application and Natural Resources Protection Act Permit (NRPA) applications (Tier-1 and Permit by Rule) have been filed with MDEP, however, as these permits cannot be delegated to the municipality. Due to

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207.926.5111 | info@terradynconsultants.com | terradynconsultants.com

proposed impacts to freshwater forested wetlands, the Tier-1 NRPA permit will also be filed with the U.S. Army Corps of Engineers. The anticipated trip generation for the project will exceed 100 trips. As such, a Traffic Movement Permit has been filed with the Maine Department of Transportation (MDOT). No other state or federal permits are anticipated.

The following information addresses Part III, Article VI, Section 47 – Performance Standards for Multifamily developments:

- A. Applications. The written material and design plans include the information as listed in A.1.
- B. Design Requirements.
 - a. Connection to public water is proposed. Maine Water Company has been contacted to confirm that an adequate water supply can be provided to the development. Maine Water Company's response will be provided once received.
 - b. Fire hydrants are located less than 500 feet from all buildings. The Fire Department has been contacted to verify/approve of the layout.
 - c. Buildings will be constructed in accordance with the applicable State and City building standards.
 - d. Buildings will be equipped with an approved fire alarm system in accordance with the applicable State and City building standards.
 - e. Connection to public sewer system is proposed. Public Works has been contacted to confirm that service is available and adequate treatment capacity is available. Public Works' response will be provided once received.
 - f. A common collection dumpster and recycling bins will be provided for the residents. The developer will contract with a private solid waste disposal company to manage solid waste.
 - g. The development will include an on-site mail kiosk to accommodate mail delivery and pick-up. The local postmaster will be contacted to verify the kiosk is acceptable to the postal service.
- C. Stormwater and Drainage. A stormwater management report is provided in Attachment 5.
- D. Access, circulation and parking.
 - 1. The proposed access is designed to meet the City's intersection standards.
 - 2. Based upon the estimated trip generation for the project, a Traffic Movement Permit has been submitted to MDOT. A copy of the submission is provided in Attachment 6.
 - 3. Access to the site is provided directly from Andrews Road.

The following information addresses Part III, Article XI, Part II, Section 5 Site Design and Development Criteria:

- A. Site Development plan.
 - 1-6. These items are included on the design plans.
 - 7a.-7u. These items are included on the design plans.
 - 7v. The following studies/reports are provided for reference: Traffic Study, Drainage study/calculations, and High-intensity soils study.

B. Site Design Criteria

1. Drainage. A stormwater management report has been prepared to address the majority of these requirements. Additional coordination with Public Works and City Engineer are necessary to understand the bonding requirements of 7.g.
2. Utilities. The design plans address the utility requirements of this section.
3. Parking. The design plans address the parking requirements of this section.
4. Structural layout and design.
 - a. Copies of the architectural elevations and floor plans are provided for reference.
 - b. All proposed buildings have been sited to adhere to setback requirements.
 - c. The site has been designed to address fire protection requirements.
 - d. The design plans include adequate landscaping to address landscape requirements.
 - e. Trash dumpster and recycling location is identified on the design plans. No outdoor storage is proposed.
 - f. Pavement is not proposed within specified setbacks.
 - g. Walkways and designated parking has been designed to meet ADA standards.
 - h. No loading facilities are proposed.
 - i. The site has been designed to adhere to the parking, loading and protective buffer requirements.
 - j. Adequate green space is incorporated within the development to meet the open space requirement.
 - k. External lighting with photometric analysis is provided as part of the design plan set.
 - l. Monument signs for the development will be designed to meet the requirements of Article VI.
 - m. A copy of the Maine Historic Preservation Commissions response letter is provided in Attachment 4.

Additionally, the project has been designed to comply with the City of Biddeford's Code of Ordinances Subdivision Review criteria. A narrative describing how these requirements are met is provided as Attachment 3.

Lastly, the following information is provided in response to the questions asked by the Board at last month's sketch plan review:

Proposed Apartment Mix: At last month's meeting a Board member asked what apartment mix the applicant originally proposed for the project. For reference, at the February 2022 City Council workshop, the applicant originally proposed an equal number of units, i.e., 54 studio units, 54 one-bedroom units, 54 two-bedroom units, and 54 three-bedroom units (totaling 216 units). In response to the City Council's desire to have a less studio apartments, the applicant agreed to the following unit mix under the terms of the Joint Development Agreement with the City:

• studio apartments	27
• 1-bedroom apartments	54
• 2-bedroom apartments	108
• 3-bedroom apartments	<u>27</u>
Total	216

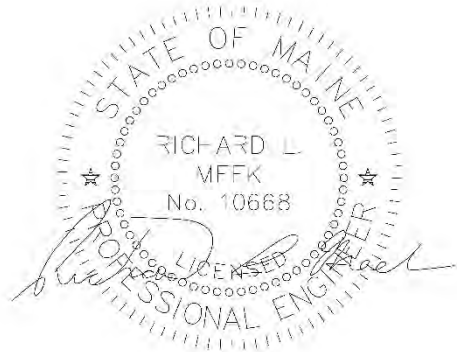
Scarborough Rental Rates: At last month's meeting a Board member asked the applicant to provide the current rental rates at applicant's project in Scarborough (known as The Beacon at Gateway). The following are the average in-place rental rates for the Scarborough project:

- Studio \$1,679
- One-bedroom \$1,870
- Two-bedroom \$2,304
- Three-bedroom \$2,715

Please let me know if you have any questions or require additional information regarding the proposed Planning Board application. Thank you for your consideration.

Sincerely,

TERRADYN CONSULTANTS, LLC



Richard Meek, P.E.
Sr. Project Engineer

Enc.

cc: Devine Capital, LLC

Attachment 1	Application Form and Review Check Lists
Attachment 2	Right, Title, or Interest
Attachment 3	Compliance with Code of Ordinances
Attachment 4	Site Location of Development Act Permit Application
Attachment 5	Stormwater Management Report
Attachment 6	Traffic Study

Attachment 1

Application Forms and Review Check Lists

**City of Biddeford – Planning Department****Planning Board Application**

P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115

Type of Application:

☐ Shoreland Zoning Permit ☒ Site Plan Review ☐ Extraction
☐ Conditional Use Permit ☒ Subdivision ☐ Private Way
☐ Other: _____

Applicant Information:

Name: Devine Capital, LLC
Mailing Address: 30 Milk Street, 3rd Floor
Telephone: 207-536-4664
Email: bmd300@gmail.com

What is your legal interest in the property?

☐ Owner ☒ Potential Buyer with Contract ☐ Lease/Rental Agreement

Owner's Information:

Name: New Life Christian Fellowship
Mailing Address: 551 Alfred Road, Biddeford, Maine 04005-944
Telephone: 207-284-4840
Email: justin.sweeney@newlifemaine.org

Agent's Information:

Name: Roz Anton
Mailing Address: 40 Main Street, Suite #13-404, Biddeford, Maine 04005
Telephone: 207-450-3230
Email: roz@rozanton.com

Engineer/Surveyor's Information:

Name: Richard Meek, P.E., Terradyn Consultants, LLC
Mailing Address: 41 Campus Drive, Suite 301, New Gloucester, Maine 04260
Telephone: 207-459-9036
Email: rick@terradynconsultants.com

Project Location and Lot Information:

Street Address: 588 & 590 Alfred Street Drainage Watershed: Thatcher Brook
Tax Map: Tax Map 2 Lot: Lots 6 & 12
Current Zoning: B-2 Shoreland Zoning: _____
Size of Lot: 44.53 (X)acres ()s.f. Lot Frontage: 327 ft. (Alfred St.), 721 ft. (Andrews Rd)
Existing Use of Property: Vacant land

Property currently serviced by:

☒ City Road ☐ Public Sewer ☐ Public Water ☐ Public Trash
☐ Private Road ☐ Septic System ☐ Private Well ☐ Private Hauler

Slope Conditions in Area of Construction (if applicable):

☒ Flat (0-3% slope) ☒ Rolling (3-8% slope) ☒ Hilly (8-15% slope) ☐ Steep (15%+ Slope)

Are there any wetlands or waterbodies on the site? ☒ (Yes) ☐ (No) if yes attach information

Is the project within the 100-year floodplain? ☐ (Yes) ☒ (No) if yes attach information

Do you plan to bring fill onto the lot? ☐ (Yes) ☒ (No) If yes attach information [Not Anticipated]

Description of proposed use of property:

Project/Proposed Use:

216 unit multi-family apartment development

Property to be Serviced by:

☒ City Road ☒ Public Sewer ☒ Public Water ☐ Public Trash
☐ Private Road ☐ Septic System ☐ Private Well ☐ Private Hauler

Limits of Disturbance: 18.133 (X)acres ()s.f.

Net change in impervious cover: +8.063 (X)acres ()s.f.

Is this project part of a larger project? ☐ (Yes) ☒ (No)

Is the project proposing a new Private or Public Road? ☒ (Yes, Private) ☐ (Yes, Public) ☐ (No)

Is this project within the Urbanized Area/MS4 (see [City Drainage Map](#)) ☐ (Yes) ☒ (No)

Is the project proposing any Stormwater facilities/BMPs? ☒ (Yes) ☐ (No)

Will a Traffic Movement Permit (TMP) be required?: ☒ (Yes) ☐ (No)

If in a Shoreland Zone:

Percent of residential lot coverage (Max 20%): N/A

Percent of structure expansion (Max 30%): N/A

If Subdivision Review, number of lots proposed: 216 apartment units

If a Private Way is proposed, number of lots served: 216 apartment units

If Site Plan Review, you must provide the following information:

Total new square feet footprint of structure: 127,290 sq. ft.

Total new square feet paving/parking: 223,950 sq. ft. (includes all non-structure impervious)

Waiver Requests (attach details):

1. _____
2. _____
3. _____
4. _____
5. _____

Required Submittal Attachments:

A. Letters of Approval

☐ Fire Department – Contact Chief or Deputy Chief – 282-9986

☐ Ability to Serve for Water Service – Maine Water – 282-1543

☐ Ability to Serve for Sewer Service – Engineering Department – Tom Milligan 284-9118

☐ Police Department – e-911 Road Name Designation – Contact Joanne Fisk 282-5127

B. Letter to Planning Board describing project, Waiver requests, proposed improvements, addressing permit requirements, etc.

C. Photographs of Site.

D. Architectural renderings/drawings of proposed buildings, as required.

E. Engineering Plans, as required.

F. Stormwater Management Report, as required.

Fees (Due at time of Submission):

- \$75 Nonrefundable Administration Fee is required for every application.
- Refer to “Attachment A Fees and Charges” of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and its attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of the review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting an application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

Will the proposed project cause 1 acre or more of site disturbance?: ☒ (Yes) ☐ (No)

- If Yes, applicant is responsible for any required Maine Construction General Permits and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.

Signature of Applicant:

DocuSigned by:

Date

9/7/22

Signature of Property Owner:

Justin Sweeney

Date

9/7/2022

2507456A9B85421...

DIGITAL SUBMITTAL REQUIREMENTS FOR ALL SUBMITTALS:

- A) PDF OF SIGNED APPLICATION
- B) PDFs OF ALL DRAWING SETS AND OTHER REQUIRED SUBMITTAL ATTACHMENTS NOTED ABOVE

HARD-COPY SUBMITTAL REQUIREMENTS FOR PLANNING BOARD APPLICATIONS:

- A) SEVEN (7) FULL-SIZE PAPER COPIES OF DRAWING SETS

DIGITAL SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) INDIVIDUALLY NAMED PDFs OF EACH DRAWING (NOT A COMBINED PDF SET)
 - Individual Drawing PDF Naming Format: 'PROJECT/SHEETSET NAME_INDIVIDUAL DRAWING NAME.pdf'
- B) PDF COPIES OF ALL PERMIT APPROVALS, APPLICATIONS, REPORTS, NARRATIVES, LETTERS, ETC.
- C) FINAL CAD REFERENCE FILES IN DWG FORMAT (SURVEY & PROPOSED DESIGN LINEWORK)
 - All drawings & CAD reference files must be to-scale and within the following coordinate systems:
 - MAINE STATE PLANE WEST NAD83 (Horizontal Datum) & NAVD88 (Vertical Datum)

HARD-COPY SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) THREE (3) FULL-SIZE PAPER COPIES OF INDIVIDUAL DRAWINGS REQUIRING BOARD SIGNATURE
- B) ONE (1) FULL-SIZE PAPER COPY OF ENTIRE DRAWING SET FOR ENGINEERING RECORDS

PLEASE CONFIRM WITH PLANNING STAFF FOR CLARIFICATION

SITE PLAN REVIEW

XI Attachment 1

City of Biddeford

Site Review Checklist

PROJECT NAME: Biddeford Residential

LOCATION: Andrews Rd. and Alfred St. (Rt. 111) ZONE: B-2

DATE REVIEWED: _____

WAIVERS REQUESTED:

GRANTED BY BOARD:

Section 5 – Site Design and Development Criteria

	Complete	Incomplete	N/A
A. SITE DEVELOPMENT PLAN.			
Sheet size of 24 by 36 inches.	X		
Scale not less than one inch equals 50 feet.	X		
Bar or graphic scale.	X		
Original plan or Mylar.	X		
Submitted ten paper prints.	X		
Plan shall bear the drawing/revision date.	X		
Title.	X		
North point.	X		

BIDDEFORD CODE

	Complete	Incomplete	N/A
Name and address of developer and applicant.	X		
Location/vicinity sketch (one inch equals 80 feet).	X		
A sketch showing existing natural features including:	X		
Watercourses and water bodies, seasonal wet areas.	X		
Soil type/location and test borings.	X		
Topographic contours (every five feet for 0% to 3% slope; or every two feet for steeper areas).	X		
The preservation/supplementation of existing dominant vegetation.	X		
Plan view of all buildings.	X		
First floor elevation.	X		
Outline of buildings within 200 feet.	X		
Existing use of abutting property.	X		
The location, width, curbing, and paving of accessways, egress ways and streets within the site for both pedestrian and vehicular use.	X		
Location of off-street parking and loading.	X		
Size and proposed location of water mains and sanitary sewerage facilities with all necessary engineering data.	X		
Size and location of all other existing and proposed public service connections including, without limitations, gas lines, power lines, telephone lines, and fire alarm connections and locations, indicating whether above or below ground.	X		
Type, nature, and composition of all solid, liquid, and gaseous waste, industrial or otherwise, and the location, type, and design criteria of the storage and disposal facilities dealing with such waste.	X		
Location, elevation, and layout of existing and proposed catchbasins and other surface drainage features.	X		
Existing and proposed contours and finished grade elevations as well as the type, extent, and location of existing and proposed landscaping and open space areas which will be retained.	X		

SITE PLAN REVIEW

	Complete	Incomplete	N/A
Location, size, and design of proposed signs and other advertising or instructional devices.	X		
Location and type of lighting for outdoor facilities.	X		
Lines of existing and proposed abutting streets showing width.	X		
Surveyed property lines showing their bearing and distances and monument locations	X		
Lines and names of all proposed streets, lanes, ways, or easements intended to be dedicated for public or private use.			X
Copy of any covenants or restrictions that are intended to cover all or a part of the land areas to be developed.			X
Limits of wetland areas on the property.	X		
Delineate existing zoning boundaries within 1,000 feet of the site on location map.	X		
Stamp and signature of licensed land surveyor.	X		
Stamp and signature of professional engineer.	X		
Stamp and signature of architect.	X		
Other exhibits or data that the Planning Board may require in order to adequately evaluate proposed development or project; this would include:			
Traffic study.	X		
Community fiscal impact study.			X
Drainage study/calculations.	X		
High-intensity soils study.	X		
Photographs.			X

SUBDIVISIONS

66 Attachment 2

City of Biddeford

Appendix B Required Information Checklist [Ord. of 6-20-1995]

In order for any application to be considered complete the following information must be provided at least two weeks prior to the Planning Board meeting. All plans for subdivisions shall contain the following information:

	Yes	No	N/A	Remarks
(1) Name of subdivision, owner and engineer or surveyor	X			
(2) Graphic scale, date, drawn, North point and its date, and whether it is true or magnetic	X			
(3) Boundaries of the tract	X			
(4) Existing zoning	X			
(5) Ownership and location of abutting properties	X			
(6) Name, location, width, profile, cross-section, radius of curves, angles of change in direction and center line length of all angles of change in direction and center line length of all proposed streets; other public ways, building lines and easements in the subdivision; intersection of existing streets	X			
(7) Type, location, profile and cross-section of all existing and/or proposed surface water drainage	X			
(8) Location of all existing and/or proposed utilities	X			
(9) Location of all existing and/or proposed sanitary sewers showing size, profile, and cross-section, or description, plan, location of other means of sewage disposal with evidence of successful soil evaluation	X			
(10) Topography at two-foot contour intervals, unless otherwise prescribed by the Board. In addition the location of existing natural or man-made features influencing the layout of the proposed subdivision shall be shown.	X			

BIDDEFORD CODE

	Yes	No	N/A	Remarks
(11) Lot lines and approximate dimensions	X			
(12) Proposed uses of property	X			
(13) Proposed public areas, if any			X	
(14) Copy of deed, or option for purchase, for land being subdivided	X			
(15) Reserved fire lane areas			X	
(16) Location of soil evaluation test pits for each lot on plan			X	
(17) Location of well or water supply for each lot			X	
(18) Aesthetics; trees, berms, shrubs, green strips, parks, etc.	X			
(19) Location and details for sedimentation and erosion control measures	X			
The preliminary of a subdivision shall be drawn at a scale no smaller than 100 feet (1 cm = 12 m) to the inch	X			
A preliminary plan shall include a location map insert, showing the relationship of the proposed subdivision to adjacent properties and public access, and drawn at no smaller scale than 2,000 feet (1 cm = 240 m) to the inch. It is suggested that reduced sections of City maps be used for this purpose.	X			

In addition to the above plat information, the Subdivider shall provide the following documents:

	Yes	No	N/A	Remarks
Valid deed or option indicating an interest held by the subdivider in the parcel of land	X			
Completed application form	X			
Narrative of the proposed project briefly describing the general nature of the project i.e., type of project; residential or commercial; number of lots intended to create	X			
Draft covenants and deeds for each lot proposed			X	
Easement documents for proposed rights-of-way for utilities, drainage ways, roadways and other			X	

SUBDIVISIONS

	Yes	No	N/A	Remarks
travelways or public amenities				
Statement of financial capability of subdivider to undertake the proposed project	X			
Statement identifying principals involved in the project	X			
Statement demonstrating that the subdividers have the technical capability to complete the proposed project as presented	X			
Copies of such covenants or deed restrictions as are intended to all or part of the tracts			X	
Review by water company, power company and City Engineering, Police and Fire Departments	X			Coordination is in progress

SUBDIVISIONS

66 Attachment 3

City of Biddeford

Appendix C Subdivision Review Criteria [Ord. of 6-20-1995]

The Board shall base its decision on the plans meeting the conditions and requirements outlined in this chapter; and that the plan meets in a positive fashion, the following:

	Yes	No	N/A	Remarks
1. The project will not result in undue water or air pollution. In making this determination the Board shall consider:	X			
(a) The elevation land, and its relation to the floodplains;	X			
(b) The nature of the soils and the subsoils;	X			
(c) The ability to adequately support waste disposal;	X			
(d) The slope of the land and its affects on effluents;	X			
(e) The availability of streams for the disposal of effluents; and	X			
(f) The applicable state and local health and water resources regulations	X			
2. The project has sufficient water available for the reasonably foreseeable needs of the subdivision	X			
3. The project will not cause an unreasonable burden on an existing water supply, if one is utilized	X			
4. The project 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	X			
5. The project will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highways or public roads existing or proposed	X			
6. The project will provide for adequate sewage/waste disposal	X			

BIDDEFORD CODE

	Yes	No	N/A	Remarks
7. The project will not cause unreasonable burden on the ability of the municipality to dispose of solid waste and sewage if municipal services are to be utilized	X			
8. The project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas or public rights for physical or visual access to the shoreline	X			
9. The project is in conformance with a duly adopted subdivision regulation or ordinance, Comprehensive Plan, development plan, or land use plan. In making this determination the Board is authorized to interpret these ordinances and plans.	X			
10. The subdivider has adequate financial and technical capacity to meet the above-stated standards	X			
11. Whenever situated, in whole or in part, within 250 feet of any lake, pond, river, or tidal waters, the project will not adversely affect the quality of that body of water, or unreasonably affect the shoreline of that body of water; as indicated on the City of Biddeford's Official Zoning Map and referenced in the City's Comprehensive Plan	X			
12. The project will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater	X			
13. The subdivider will provide information, based on FEMA flood boundary, floodway, and flood insurance maps, whether or not the project is in a flood-prone area	X			
14. The project will not unreasonably obstruct abutting properties or structures access to direct sunlight	X			

Attachment 2

Right, Title, or Interest

BK11111PG070

WARRANTY DEED

062428

KNOW ALL MEN BY THESE PRESENTS

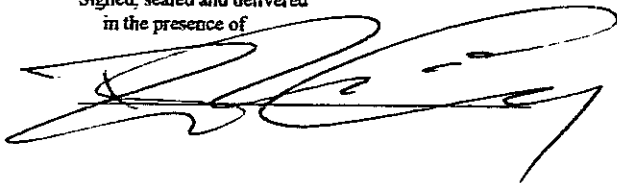
THAT I, JAMES A. MININNI, SR., of Biddeford, York County, Maine, for consideration paid, grant to NEW LIFE CHRISTIAN FELLOWSHIP, a Maine religious corporation with a mailing address of 551 Alfred Road, Biddeford, Maine 04005, with warranty covenants, a certain parcel of land situated on the Northerly side of the Alfred Road, near the top of Chick's Hill, so-called, in Biddeford, York County, Maine, bounded and described as follows:

Beginning on said road at the corner of land formerly of one Daniel Cyr at an iron hub set in the ground; thence northeasterly by said Cyr's land and land of others to a spotted tree at a brook; thence northwesterly by the brook to land of Ben Lunt, marked by a spotted tree; thence southwesterly by said Lunt land and land of others to an oak tree and land of one Coffey; thence by said Coffey's land southerly to the road at an iron hub set in the ground; thence southeasterly by said road to said Cyr land and point of beginning.

Being the same premises conveyed to the Grantor herein by warranty deed of Lucia Mininni dated October 3, 1996, and recorded October 10, 1996, in the York County Registry of Deeds in Book 8027, Page 103.

IN WITNESS WHEREOF, I, JAMES A. MININNI, SR. have hereunto set my hand and seal this 13th day of November, 2001.

Signed, sealed and delivered
in the presence of

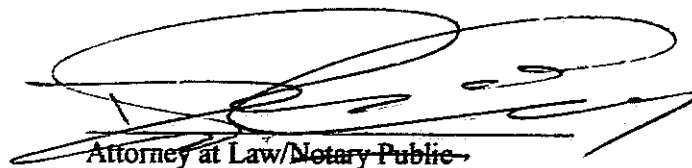


James A. Mininni SR.
JAMES A. MININNI, SR.

STATE OF MAINE
YORK, ss.

November 13, 2001

Personally appeared the above named James A. Mininni, Sr. and acknowledged the foregoing instrument to be his free act and deed.



Attorney at Law/Notary Public

David R. Ordway
(print name)

RECEIVED YORK S.S

Return to: 2001 NOV 13 PM 4: 15

ATTEST: Lisa M. Muse
REGISTER OF DEEDS

MAINE R.E. TRANSFER TAX PAID

1709 - PLAN NELSON ESO 37 BEACH ST. SACO ME 04072

WARRANTY DEED
Maine Statutory Short Form

KNOW ALL MEN BY THESE PRESENTS,

THAT **ENERGY HOMES, INC.**, a Maine corporation, with a place of business in Limerick, County of York, State of Maine,

for consideration paid,

grant to **NEW LIFE CHRISTIAN FELLOWSHIP, f/k/a NEW LIFE ADVENT CHRISTIAN CHURCH OF BIDDEFORD, MAINE**, a religious non-profit corporation, without corporate stock, organized under the laws of the State of Maine, with its principal place of business in Biddeford, County of York, State of Maine, whose mailing address is 547 Alfred Road, Biddeford, ME 04005, with **warranty covenants**, the land in the City of Biddeford, County of York, State of Maine, described as follows:

A certain lot or parcel of land, with the buildings and improvements thereon, situated in the City of Biddeford, County of York and State of Maine, on the northerly side of the Alfred Road, so-called, bounded and described as follows:

BEGINNING on said Alfred Road at the intersection of the same with the Andrews Road, also known as Andrew Road, so-called; thence running northwesterly by said Andrews Road, to land formerly of Daniel S. Hooper; thence northeasterly by said Hooper land and land formerly of Daniel Smith and one Stimpson to land now or formerly of K. S. Gilpatrick; thence southerly by said Gilpatrick land to said Alfred Road; thence westerly by said Alfred Road to said Andrews Road and point of beginning.

EXCEPTING that portion of the above described premises which was previously conveyed to Central Maine Power Company by undated instrument recorded in the York Registry of Deeds on November 14, 1988 in Book 4901, Page 286 (erroneously referred to being recorded in Book 4901, Page 287 in deed to Energy Homes, Inc. referenced below).

ALSO EXCEPTING that portion which was conveyed to the State of Maine by deed dated January 30, 1950 and recorded in said Registry of Deeds in Book 1150, Page 211.

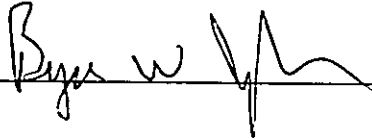
Being the same premises conveyed to Energy Homes, Inc. by deed of Normand R. Verville, Personal Representative of the Estate of Lillian M. Verville, dated August 4, 1999 and recorded in the York Registry of Deeds in Book 9618, Page 290.

FURTHER EXCEPTING AND RESERVING from the above described premises that portion thereof which was conveyed by Energy Homes, Inc. to David R. Pelletier and Joyce A. Pelletier by deed duly recorded in the York Registry of Deeds in Book 10872, Page 44, reference to which is hereby made for a more particular description.

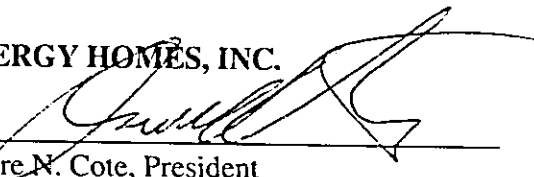
MAINE R.E. TRANSFER TAX PAID

IN WITNESS WHEREOF, It, the said **ENERGY HOMES, INC.**, has caused this instrument to be signed in its corporate name and behalf by **ANDRE N. COTE**, its President thereunto duly authorized, this 5th day of March, 2002.

**SIGNED, SEALED AND DELIVERED
IN PRESENCE OF**



ENERGY HOMES, INC.

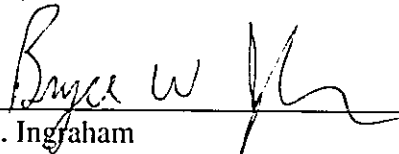
BY: 
Andre N. Cote, President

**STATE OF MAINE
YORK, ss.**

March 5th, 2002

Then personally appeared the above named **ANDRE N. COTE**, President of **ENERGY HOMES, INC.** and acknowledged the foregoing instrument to be his free act and deed, in his said capacity and the free act and deed of said **ENERGY HOMES, INC.**

Before me,


Bryce W. Ingraham
Attorney at Law

chi-newlife-ehi-T4830-deed-del2002.wpd

RETURN RECORDED DOCUMENT TO:
New Life Christian Fellowship
547 Alfred Road
Biddeford, ME 04005

RECEIVED YORK S.S

2002 MAR 11 AM 11:31

ATTEST: 
REGISTER OF DEEDS

*Prescote Kenmore
PO Box 1190
Saco ME 04072
2/29/02*

OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT

OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT ("**Agreement**") made as of the date ("**Effective Date**") of last execution appearing below, by and between **New Life Christian Fellowship**, a Maine religious nonprofit corporation ("**Seller**"), with a mailing address of 551 Alfred Road, Biddeford, Maine 04005-9474 and **Devine Capital LLC**, a Massachusetts limited liability company, or its nominee ("**Buyer**"), with a mailing address of P.O. Box 17795, Portland, Maine 04112.

WHEREAS, Seller owns fee simple interest in that certain real property consisting of approximately 44.7 acres more or less located generally at 588 and 590 Alfred Street, in the City of Biddeford, County of York, Maine, also known as Tax Map 2, Lots 6 and 12, and more particularly described in the source deeds referenced in **Exhibit A** attached hereto (the "**Property**"); Excepting and reserving a 2.1 acre parcel conveyed to Old Dogs of Biddeford, LLC as referenced as Tax Map 2, Lot 6-3 and in the York County Registry of Deeds Book 17933 Page 197 also referenced here in Exhibit B.

WHEREAS, Seller has agreed to grant to Buyer an option to purchase the Property in the future for a set price reflected below, and does thus commit and obligate itself to sell and convey the Property to Buyer on the terms and conditions as set forth below;

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt whereof is hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows, incorporating the foregoing recitals by reference as if fully restated hereinbelow:

Article I – Grant, Timing, Diligence, Permitting

- 1.1 *Option, Purchase Price.* For the consideration recited above, and in consideration for Buyer investing substantial time and money to review, evaluate, inspect, and explore development opportunities with respect to the Property, subject to the terms and conditions hereof, Seller hereby irrevocably grants to Buyer the exclusive right and option (the "**Option**") to purchase the Property for the sum of [REDACTED] (the "**Purchase Price**").
- 1.2 *Preliminary Diligence Deadline.* The initial term of the Option shall commence on the Effective Date and, unless otherwise extended in accordance with the terms hereof, shall expire at **6:00 p.m.** (Eastern Time), [REDACTED] days thereafter, during which period Buyer shall conduct its due diligence inspections (addressed in Article II below), the results of which shall be acceptable to Buyer in its sole and absolute discretion (the "**Preliminary Diligence Deadline**").
- 1.3 *Rezone/Permitting Deadline; Rezone/Permitting Approval Date.*
 - A. Upon the Preliminary Diligence Deadline, unless Buyer has terminated this Option due to the results of its due diligence being unsatisfactory to Buyer in its sole and absolute discretion, Buyer shall pay and deliver to Seller monthly payments in the amount of [REDACTED] in order to extend the Option term for up to [REDACTED] consecutive periods of [REDACTED] days each (all such monthly payments hereinafter referred to as the "**Option Payments**"). The Option Payments shall be nonrefundable but shall be applied to the Purchase Price at closing. Seller hereby grants to Buyer full authority to seek from any federal, state, or local governmental authority any zoning change(s) and/or permits and/or approvals whatsoever that Buyer, in its sole and absolute discretion, deems advisable for Buyer's intended development of the Property for a multi-family residential development (the "**Project**") during such extended period ("**Rezone/Permitting Deadline**"). Seller hereby agrees to fully support and cooperate with Buyer's efforts to rezone and permit the Project, and specifically agrees to appear and testify in favor of, and promptly execute any document reasonably requested by Buyer in connection with, any such efforts of Buyer, all at no cost or charge to Buyer.
 - B. In the event Buyer does not obtain final unappealable zoning change(s)/approvals, including conditional use and/or permits for the Project acceptable to Buyer in its sole and absolute discretion, or otherwise affirmatively elect by written notice to Seller to close notwithstanding the lack of such permits and/or approvals, by the Rezone/Permitting Deadline, then unless Buyer

elects to extend the Rezone/Permitting Deadline as provided in Section 1.4, below, this Agreement shall automatically terminate as of the Rezone/Permitting Deadline, and, promptly upon Buyer's delivery to Seller of (1) an instrument (the "**Release**") signed by Buyer and suitable to release and discharge the Record Notice, and (2) digital copies of and an assignment of all right in the all materials developed by Buyer and its contractors as part of Buyer's efforts to rezone and permit the Project (the "**Rezone Permitting Materials**"), this Agreement shall be null, void, of no further force and effect, and each party hereto shall have no further obligation one to the other.

C. If Buyer obtains zoning change(s) and permits for the Project acceptable to Buyer in its sole and absolute discretion, then promptly upon the date ("**Rezone/Permitting Approval Date**") that the last of such zoning change(s) and/or permit(s) become final and non-appealable, Buyer shall serve notice upon Seller confirming same, and Buyer shall close on the purchase by the date ("**Closing Deadline**") that is [REDACTED] days after the Rezone/Permitting Approval Date, and the notice described in the first sentence of this subsection shall also constitute the Exercise Notice referenced in Section 3.1, below, and shall contain the additional information specified in Section 3.2, below.

- 1.4 *Additional Option Extension Payments.* Notwithstanding any contrary provision herein, if Buyer has not obtained all necessary unappealable permits and/or approvals for the Project, Buyer may elect to further extend the Option and Rezone/Permitting Deadline for up to [REDACTED] additional, successive periods of [REDACTED] days each, provided Buyer shall pay and deliver to Seller monthly payments, in the amount of [REDACTED] (all such monthly payments hereinafter referred to as the "**Extension Payments**"). The Extension Payments shall be nonrefundable but shall be applied to the Purchase Price at closing.
- 1.5 *Termination.* Notwithstanding any contrary provision herein, at any time before the Rezone/Permitting Approval Date, Buyer may elect to terminate this Agreement by delivering to Seller notice thereof ("**Termination Notice**"). If a Termination Notice is given, Buyer shall promptly deliver to Seller the Release signed by Buyer and the Rezone/Permitting Materials, as described in Section 1.3 above, and upon such delivery, this Agreement shall be null and void, of no further force and effect, and each party hereto shall have no further obligation one to the other, except that Buyer's indemnification obligations under Section 2.2 shall survive any termination.

Article II – Due Diligence

- 2.1 To facilitate Buyer's inspections and evaluation of the Property, Seller agrees to deliver to Buyer as soon as possible, but in any event within [REDACTED] days from the date hereof, copies of the materials specified on the list attached hereto as **Exhibit B** (the "**Due Diligence Materials**"). In addition, Seller agrees to permit Buyer to inspect and make copies of any books and records in Seller's possession or control concerning the Property.
- 2.2 So long as this Agreement remains in effect, Buyer may conduct such investigations, inspections, interviews, tests, assessments and audits pertaining to the Property as Buyer elects, in Buyer's sole discretion and at Buyer's sole cost, *including but not limited to:* (i) title search; (ii) survey; (iii) environmental site assessment; (iv) review of zoning and building code requirements; and/or (v) physical/geotechnical inspection of the Property (collectively, the "**Inspections**"). Buyer shall promptly repair any physical damage to the Property caused by any such Inspections, and Buyer further agrees to indemnify and hold Seller harmless from and against any and all loss, cost, damage, or expense incurred by Seller as a result of said physical damage.
- 2.3 Seller agrees, in general, to cooperate in good faith with Buyer and Buyer's representatives, and, in particular:
- 2.3.1 so as to secure the rights granted to Buyer hereunder and to ensure that the Property shall be in substantially the same condition at the time of conveyance as exists as of the date of this Agreement, Seller agrees that for so long as this Agreement remains in

effect, then unless and until Buyer in writing consents otherwise, Seller shall maintain the Property substantially in condition as currently exists, timely paying all taxes and other impositions related to ownership thereof, and shall not: (a) transfer, encumber, mortgage, lease, alienate, impose any restriction or condition upon, or otherwise grant to any other person, firm or entity any permission, license, right or rights whatsoever in, pertaining to, or affecting any part or all of the Property; nor (b) make any change to or alter in any way whatsoever the physical or other characteristics of any part or all of the Property, including cutting of trees/timber, or contamination of any kind; and,

- 2.3.2 so as to ensure that there is no change in the status of the title to the Property prior to termination of this Agreement, Seller agrees to contemporaneously with its execution hereof execute and deliver to Buyer for recording in the appropriate Land Evidence Records an instrument (the "**Record Notice**") suitable under applicable law to evidence the grant of the Option and the aforesaid restrictions on the grant of any rights inconsistent with this Agreement, in form and substance as attached hereto as **Exhibit C**, or, if no such exhibit is attached, in form and substance as Buyer may reasonably request.
- 2.4 During the effective term of this Agreement, Buyer contemplates expending substantial sums and incurring substantial expenses to inspect, test, and analyze the Property, to conduct title research, undertake survey and site plans, and to otherwise conduct a due diligence review of the Property and all related matters, and to pursue obtaining permits for Buyer's contemplated development of the Property. To induce Buyer to make such efforts and expend such sums, Seller hereby agrees that during the effective term of this Agreement Seller shall not solicit, encourage, negotiate or entertain any offer with any other party concerning or with respect to the Property whatsoever, including offers to purchase or lease the Property, regarding any sale, financing, partnership, or other disposition of all or any part of, or interest in, the Property; Seller agrees to immediately communicate to Buyer for response any written inquiries received by Seller during the effective term of this Agreement. Seller further agrees to keep the monetary terms of this Agreement confidential, except only as may be approved by Buyer in writing, in advance.
- 2.5 Notwithstanding anything contained herein to the contrary, however, in the event Buyer delivers to Seller prior to expiration of the Preliminary Diligence Deadline written notice specifying with reasonable particularity matters related to the title to the Property to which Buyer objects ("**Title Objection Notice**"), then and in such event the Preliminary Diligence Deadline shall be deemed extended for an additional period beyond its then-scheduled expiration to allow Seller to, and Seller does hereby agree that Seller shall during such period, use good faith efforts to promptly and reasonably resolve such title objections. In the event Seller fails to use reasonable good faith efforts to so resolve Buyer's objections, then and in such event Seller shall be in default hereunder, and Buyer shall be entitled to its remedies for same as provided below. In addition, Buyer shall have the right to extend the Preliminary Diligence Deadline for a reasonable period of time to permit Buyer itself, at its own expense, to resolve such title objections.

Article III – Exercise, Purchase Price

- 3.1 In the event that Buyer elects to exercise the Option and purchase the Property, Buyer shall deliver notice ("**Exercise Notice**") to Seller pursuant to Section 1.3.C stating that Buyer elects to exercise the Option to purchase the Property.
- 3.2 Buyer shall specify in the Exercise Notice (but failure to so specify shall not invalidate the effectiveness of the Exercise Notice) the name of the entity, if different from Buyer, that is to take title to the Property, Seller hereby acknowledging and agreeing that Buyer may take title in the name of any entity Buyer chooses as nominee, and that for this purpose references in this Agreement to "Buyer" shall mean "Buyer or its nominee."
- 3.3 The Purchase Price shall be adjusted to reflect the Option Payments and Extension Payments paid to Seller by Buyer pursuant to Section 1.3, as well as the equitable apportionment as of date

of closing of unpaid real estate taxes, assessments, liens, utility bills, if any, recording charges, transfer tax, and similar items as is customary in standard conveyancing practice in the State of Maine (the Purchase Price as so adjusted may hereinafter be referred to as the "**Adjusted Purchase Price**").

Article IV – Closing Procedure

- 4.1 On the Closing Deadline, Seller shall sell and convey the Property to Buyer and Buyer shall purchase the Property from Seller (the "**Closing**"). At Closing, Seller shall deliver to Buyer:
- 4.1.1 an original deed (the "**Deed**") properly executed by or on behalf of Seller, in form and substance as attached hereto as **Exhibit D**, conveying all of Seller's interest in the Property to Buyer by good, marketable, insurable title, free and clear of all liens, encumbrances, and deficiencies, except utility easements of record, and, except easements and encumbrances of record prior to the date of this Agreement and,
 - 4.1.2 such other documents as may be reasonably requested by Buyer, including without limitation customary title insurance affidavits, such instruments of assignment as Buyer reasonably requests, such as an Assignment of Permits, documents to evidence the existence, good standing, and authority of Seller, a settlement statement, or any other customary or reasonable documentation as may be requested (such other documents, together with the Deed, may hereinafter be referred to collectively as the "**Conveyance Documents**").
 - 4.1.3 At Closing Buyer shall deliver to Seller the Adjusted Purchase Price in immediately available funds.

Article V - Representations

- 5.1 Seller hereby represents and warrants to Buyer, which representations and warranties shall be deemed restated as of closing, that:
- 5.1.1 Seller has good, insurable, and marketable title in fee simple to the Property, subject only to the encumbrances of record.
 - 5.1.2 Seller is a Maine nonprofit corporation, is not a foreign person or foreign entity as defined in the Foreign Investment in Real Property Tax Act ("**FIRPTA**"), has full right, power and authority to enter into and consummate this transaction, the person executing this Agreement on behalf of Seller is an officer of Seller and is duly authorized to execute this Agreement on behalf of Seller, Seller has the power and authority without necessity of further act or consent to execute this Agreement and all other instruments and documents contemplated hereby and to perform any and all acts necessary or desirable to consummate the transactions contemplated (including a conveyance of the Property).
 - 5.1.3 To Seller's knowledge without additional investigation, the Property is free of violations of law, is in full compliance with Federal, State, City and County ordinances and environmental laws, and there are not any current or contemplated special tax assessments known to Seller.
 - 5.1.4 Other than to the extent granted in this Agreement, previously disclosed to Buyer in writing, or reflected as exceptions to coverage on a title commitment acceptable to Buyer, no person, firm, or entity has any rights in, pertaining to, or affecting the Property, and Seller has not granted any rights in, pertaining to, or affecting the Property to any person, firm, or entity in any unrecorded instrument or writing, nor does any person, firm, or entity have an option to purchase or right of first refusal to purchase the Property.
 - 5.1.5 Seller is not involved as a debtor in any bankruptcy, reorganization or insolvency proceeding, and Seller has not received any notice of and has no knowledge of any

pending or threatened lawsuits, including condemnation suits, that could affect the Property or Seller's ownership of the Property.

- 5.1.6 To Seller's knowledge without additional investigation there have not been and there are not now any underground storage tanks located on or under the Property or if there have been or are any such tanks located on the Property, their location has been identified to Buyer in writing, they have been properly registered with all appropriate authorities, they are in full compliance with all applicable statutes, ordinances and regulations, and they have not resulted in the release of any hazardous or toxic substance, material, or waste into the environment.
- 5.1.7 To Seller's knowledge without additional investigation there are no past or present uses of the Property that did not comply in all material respects with all Environmental Protection Agency, Occupational Safety and Health Administration, and all other federal, state and local laws, administrative rules and regulations governing the soil, water, air and environment in and around the Property.

Article VI – Default

- 6.1 If Buyer fails to fulfill the Buyer's agreement herein, Seller shall retain the Option Payment(s) as liquidated damages, being Seller's sole remedy. If Seller shall fail to fulfill its obligations herein, Buyer shall have all available remedies at law and in equity, including specific performance. Notwithstanding the foregoing, the non-defaulting party agrees to provide the defaulting party with written notice providing a description of a default and provide such defaulting party with a [REDACTED] day cure period.

Article VII – Notice

- 7.1 All notices or other communications required or permitted hereunder shall be in writing, and shall be effective upon receipt or refusal when sent to the intended recipient by one of the methods set forth below:
- 7.1.1 regular and certified U.S. mail, postage prepaid, return receipt requested;
- 7.1.2 reputable national delivery service (i.e. FedEx, DHL); or,
- 7.1.3 otherwise hand delivered with an acknowledgment of receipt.
- 7.1.4 electronic transmission
- 7.2 Each party, by written notice given to the other party in accordance herewith, may change the address to which notices or other communications hereunder shall be deemed to have been duly given; provided, however, no party may designate more than **three** notice addresses, and notice of a change of address shall be effective only upon actual delivery. Until changed as aforesaid, a notice shall be addressed to the intended recipient at their address set forth in the first paragraph on page 1 of this Agreement.

Article VIII – Miscellaneous

- 8.1 **Broker.** Seller and Buyer each hereby represent and warrant to the other that neither Seller nor Buyer has dealt with or employed any real estate agent, broker, or any person entitled to a commission in connection with the transaction contemplated other than [REDACTED] in Maine. Seller and Buyer hereby agree to indemnify, defend, and hold harmless the other from any claim or claims, action or actions, losses, payments, judgments, commission or commissions, paid or payable to any real estate agent, broker, person or entity in connection with this transaction that was not called to the attention of the other as a result of any services or facilities of any such real estate agent, broker, person or entity provided to the other. The provisions of this paragraph shall survive conveyance of the Property to Buyer.

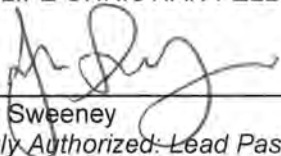
- 8.2 *Governing Law, Venue, Jury Waiver.* This Agreement shall be construed in accordance with the laws of the State of Maine. Both Buyer and Seller hereby consent to the jurisdiction of the courts of said state and of the federal government, as well as to the jurisdiction of all courts from which an appeal may be taken from the aforesaid courts, for the purpose of any suit, action or other proceeding arising out of, under or with respect to this agreement, and expressly waive any and all objection each may now or hereafter have as to the venue in any of such courts, and EACH OF BUYER AND SELLER DO HEREBY EXPRESSLY WAIVE ANY RIGHT EACH MAY HAVE TO ELECT A TRIAL BY JURY AS TO ANY DISPUTE ARISING HEREUNDER. Any disputes between Buyer and Seller (which are not otherwise resolved by the parties) shall be submitted to binding arbitration in Portland, Maine administered by JAMS in accordance with its Streamlined Arbitration rules. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction. This clause shall survive the closing of this transaction.
- 8.3 *Headings; Entire Agreement; Amendments.* The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. This Agreement (including all exhibits annexed hereto) contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior understandings, written or oral, if any, with respect thereto. This Agreement may not be modified, changed, supplemented, or terminated, nor may any obligations hereunder be waived, except by written instrument signed by the party to be charged or by its agent duly authorized in writing or as otherwise expressly permitted herein. The Agreement shall not be binding on any party until signed by every party.
- 8.4 *Waiver.* No waiver of any breach of any agreement or provision herein contained shall be deemed a waiver of any preceding or succeeding breach thereof or of any other agreement or provision herein contained. No extension of time for performance of any obligations or acts shall be deemed an extension of the time for performance of any other obligations or acts.
- 8.5 *Binding Effect; Assigns; Benefits.* This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns; provided, however, Seller may not assign its rights or obligations under this Agreement absent Buyer's consent in Buyer's sole discretion.
- 8.6 *Exhibits, Counterparts.* All exhibits attached hereto are by this reference incorporated fully herein. This Agreement may be executed by the parties hereto in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.
- 8.7 *Severability.* The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.
- 8.8 *Days, Interpretation.* References in this Agreement to a specified number of "days," shall mean and refer to calendar days; provided, however if any specified period would otherwise end on a day that is a Saturday, Sunday or day which is recognized by the State of Maine ("Jurisdiction") as a legal holiday, then and only in such event, the specified period shall be deemed to extend to the next following day that is not a Saturday, Sunday or legal holiday. "Business Day" means any day other than Saturday, Sunday and/or any weekday or weekend day that is a legal holiday observed by the federal government of the United States of America or the Jurisdiction. The terms of this Agreement were fully negotiated by the parties and shall not be construed for or against any party hereto.
- 8.9 *Prevailing Party.* In the event the parties litigate in any court or arbitration forum any dispute hereunder, then and in such event, the prevailing party shall be entitled to an award from the other of the reasonable attorney's fees and costs incurred therein by said prevailing party.

- 8.10 *Time of the Essence.* The parties hereto hereby agree that TIME IS OF THE ESSENCE as to each and every provision of this Agreement.

[Signature Page Follows; Remainder Intentionally Blank]

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal by their proper officers hereunto duly authorized as of the date of last execution hereof as set forth below.

Seller:
NEW LIFE CHRISTIAN FELLOWSHIP

By: 
Justin Sweeney
Its Duly Authorized: Lead Pastor

Date: January 25, 2021

Buyer:
DEVINE CAPITAL LLC

By: 
Bernard M. Devine
Its Duly Authorized: President

Date: January 25, 2021

Exhibit A

Two parcels of land, excepting the third parcel conveyed to Old Dogs of Biddeford, LLC with any improvements thereon, in the City of Biddeford, York County, Maine described in the following deeds:

588 Alfred Street, Biddeford, Maine

- Warranty Deed dated November 13, 2001 from James A. Mininni, Sr. to New Life Christian Fellowship, recorded at Book 11111, Page 70 in the York County Registry of Deeds

590 Alfred Street, Biddeford, Maine

- Warranty Deed dated March 5, 2002 from Energy Homes, Inc. to New Life Christian Fellowship, recorded at Book 11449, Page 147 in the York County Registry of Deeds

Excepting the property located at Alfred Street, Biddeford, Maine, conveyed to Old Dogs of Biddeford LLC

- Warranty Deed dated April 19, 2019 from New Life Christian Fellowship to Old Dogs of Biddeford, LLC recorded at Book 17933, Page 197 in the York County Registry of Deeds

Exhibit B

Survey - Titcomb Associates 2002
588 Alfred St Deed 11111 070
590 Alfred St Deed 11449 147
588 Alfred St Disclosure
590 Alfred St Disclosure
Old Dogs 2018 Conveyance Survey
Old Dogs Deed 17933 197
Alfred St Sewer Map
Andrews Geometrics Plan Profile 2004
ARC New Building sketch
Packard Development sketch
BI3074-Va Table A Zoning Uses
Parcel 1 and 2 Tax Map copy
2003 Biddeford & Saco Water Co Letter
2003 Gorrill-Palmer Consulting Engineers re: Ability to Serve
2005 Post development AM Peak Hour
Andrews Geometrics Plan Profile 2004
Attachment B TR-20 Calculations
Attachment C Water Quality Computations
Calculations Based Upon Maine Subsurface Wastewater Rules
Capacity and Queuing Analysis Results
City of Biddeford Wastewater Dept 2003 Ability to Serve Letter
Erosion Sedimentation North C-8B
Erosion Sedimentation South C-8A
First American Gap Indemnity Agreement 5.25.2017
First American Alta 3 parcels-3.5-2002
Gorrill-Palmer Consulting Engineers 2.9.2004 Maine DOT Letter
Gorrill-Palmer Consulting Engineers 4.8.2004 Maine DOT Letter
Gorrill-Palmer Consulting Engineers 2004 Plans
Gorrill-Palmer Consulting Engineers Row Volumes, Peak Adjusted Volumes
Grading & Drainage C-3
Grading Drainage South C-4A
Grading Draining North C-4B
Lighting plan WLS Lighting Systems
Offsite Utility Profile C-17B
Offsite Utility Profile C-17A
Overall Site Layout C-1A
PreDevelopment Watershed Maps
Proposed Off-Site Improvements - Gorrill Palmer
Route 111 & Exit 4- traffic study
Route 111 & Home Depot
Route 111 at Andrews Rd
Route 111 at Exit 4 Precourt St
Route 111 at Route 35
Route 111 at Shaws Irving
Route 111 at Walmart Park n ride
RW Gillespie June 2004 geotechnical evaluation
Section 7 Wildlife and Fisheries
Section 14 Erosion and Sedimentation Control Plan
Site Layout C-1B
Site Layout North C-2C

Exhibit B (continued)

Site Layout Phase2. C-2A

Site Layout Plans C2A C1B

Site Layout South C-2B

Stormwater Management

Traffic Impact Study 2003

Trip Generation Calculations

Turning Movement Diagrams

Utility Plan C- 6

Utility Plan Phase 1 C5

Vernal Pool Application and Determination NLC

Vernal Pool Location Plan LongView Partners - 588-590 Alfred St

Wetland Reconnaissance 4-21-18- 588-590 Alfred St

Wetland Reconnaissance 6-3-20- 590 Alfred St.6-3-20

Zoning Map

Exhibit C

NOTICE OF OPTION

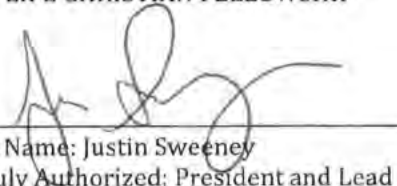
Notice is hereby given of the following Option to Purchase and Purchase and Sale Agreement (the "Option") vesting in Buyer an option to purchase certain real property owned by Seller:

SELLER: New Life Christian Fellowship
BUYER: Devine Capital LLC
DATE OF AGREEMENT: January 25, 2021
PREMISES: See Exhibit A attached hereto
TERM OF OPTION: Beginning January 25, 2021 and continuing for up to [REDACTED] days, subject at all times to the terms and conditions of the Option Agreement.

The undersigned further expressly acknowledges that this Notice of Option is being executed pursuant to the provisions of the Option and is not intended to vary the terms or conditions of the Option.

IN WITNESS WHEREOF, the undersigned has caused this Notice of Option to be signed by its duly authorized representative.

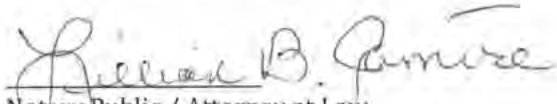
NEW LIFE CHRISTIAN FELLOWSHIP

By: 
Print Name: Justin Sweeney
Its Duly Authorized: President and Lead Pastor
Dated: January 25, 2021

STATE OF MAINE
COUNTY OF YORK, SS

January 25, 2021

Then personally appeared the above-named Justin Sweeney, President and Lead Pastor of NEW LIFE CHRISTIAN FELLOWSHIP and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of NEW LIFE CHRISTIAN FELLOWSHIP.


Notary Public / Attorney at Law
Print name:
My commission expires:

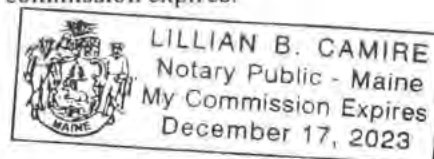


Exhibit D

**QUITCLAIM DEED
WITH COVENANT
STATUTORY SHORT FORM
TITLE 33, §775**

New Life Christian Fellowship, a Maine religious nonprofit corporation, with a mailing address of 551 Alfred Street, Biddeford, Maine 04005-9474, for consideration paid, grants to _____, a _____, with a mailing address of _____, **with Quitclaim Covenant**, a certain lot or parcel of land situated in the City of Biddeford, County of York, and State of Maine, as described in **Exhibit A** attached hereto and made a part hereof.

DATED: _____, 202__

New Life Christian Fellowship

By: _____

Print Name: Justin Sweeney

Its Duly Authorized: President and Lead Pastor

STATE OF MAINE
COUNTY OF YORK, SS

_____, ___, 202__

Then personally appeared the above-named Justin Sweeney, President and Lead Pastor of NEW LIFE CHRISTIAN FELLOWSHIP and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of NEW LIFE CHRISTIAN FELLOWSHIP.

Notary Public / Attorney at Law

Print name:

My commission expires:

Exhibit A

Two parcels of land, excepting the third parcel conveyed to Old Dogs of Biddeford, LLC with any improvements thereon, in the City of Biddeford, York County, Maine described in the following deeds:

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Excepting the property located at Alfred Street, Biddeford, Maine, conveyed to Old Dogs of Biddeford, LLC

- Warranty Deed dated April 19, 2019, from New Life Christian Fellowship to Old Dogs of Biddeford, LLC recorded at Book 17933, Page 197 in the York County Registry of Deeds

SECOND AMENDMENT TO OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT

THIS SECOND AMENDMENT TO OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT (this Amendment”) is made and entered into as of the 14 day of January, 2022, by and between **New Life Christian Fellowship** (“Seller”) and **Devine Capital LLC** (“Buyer”) with respect to that certain Option To Purchase and Purchase and Sale Agreement between Seller and Buyer, with an effective date of January 25, 2021, as amended by that certain Amendment to Option to Purchase and Purchase and Sale Agreement dated May “___”, 2021 (together, the “Agreement”), relating to property of the Seller located generally at 588 and 590 Alfred Street in Biddeford, Maine.

WHEREAS, Seller and Buyer wish to amend the Agreement as set forth below.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Seller and Buyer hereby agree that the Agreement shall be amended as hereinafter set forth.

A. Section 1.4 of the Agreement is hereby amended to change the monthly amount of the Extension Payments from [REDACTED] to [REDACTED] for the first [REDACTED] monthly Extension Payments (i.e., the monthly Extension Payments in January 2022 through June 2022 shall be [REDACTED] but thereafter shall revert to [REDACTED]).

B. Seller and Buyer hereby ratify and confirm all terms and provisions of the Agreement and agree that, except as amended by this Amendment, all terms and provisions of the Agreement shall remain in full force and effect including.

C. This Second Amendment may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall constitute one and the same instrument. This Second Amendment may be transmitted between the parties by facsimile machine or by email attachment and signatures appearing on faxed or emailed instruments shall be treated as original signatures. Both a faxed or emailed version containing either original, faxed or emailed signatures of all parties, and multiple counterparts of the same version each containing separate original, faxed or emailed signatures of the parties, shall be binding on them.

[Signature Page Follows]

IN WITNESS WHEREOF, Seller and Buyer have executed this Second Amendment as of the date first above written.

SELLER

NEW LIFE CHRISTIAN FELLOWSHIP

DocuSigned by:
B: Justin Sweeney
2507458A9BB5421...
Name: Justin Sweeney
Its Duly Authorized: Lead Pastor

BUYER

DEVINE CAPITAL LLC

By: Bernard M. Devine, Jr.
Bernard M. Devine, Jr., Manager

Attachment 3

Compliance with Code of Ordinances



Pineland

Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

Portland

565 Congress Street, Suite 201
Portland, ME 04101

September 2022

Project# 21-49

COMPLIANCE WITH THE CITY OF BIDDEFORD CODE OF ORDINANCES

Biddeford Residential, Biddeford, Maine

The following information describes how the proposed project, located at 588 & 590 Alfred Street in Biddeford, Maine, complies with the Subdivision Review Criteria of the City of Biddeford Code of Ordinances.

Subdivision Review Criteria

1. *The project will not result in undue water or air pollution. In making this determination, the board shall consider:*
 - a. *The elevation of land, and its relation to floodplains;*
 - b. *The nature of the soils and subsoils;*
 - c. *The ability to adequately support waste disposal;*
 - d. *The slope of the land and its affects on effluents;*
 - e. *The ability of streams for the disposal of effluents;*
 - f. *The applicable state and local health and water resources regulations*

As a residential development, with proposed connection to the City's sanitary sewer infrastructure, the project will not result in any undue water or air pollution.

The existing soils on site have been evaluated through a Class B High-Intensity Soil Survey prepared by Mark Hampton Associates, Inc. A copy of soils report is located in Attachment 4.

2. *The project has sufficient water available for the reasonably foreseeable needs of the subdivision.*

Maine Water Company has been contacted to confirm that an adequate water supply can be provided to the development. Maine Water Company's response will be provided once received.

3. *Will not cause an unreasonable burden on the existing water supply, if one is to be utilized;*

Maine Water Company has been contacted to confirm that an adequate water supply can be provided to the development. Maine Water Company's response will be provided once received.

4. Will not cause unreasonable soil erosion or reduction in capacity of the land to hold water so that a dangerous or unhealthy condition may result;

The proposed project will not cause unreasonable soil erosion or a reduction in the capacity of the land to hold water. Erosion and sediment controls are shown on the attached plans and a stormwater management report has been prepared demonstrating that post-development runoff will not exceed predevelopment conditions.

5. Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to the use of the highways or public roads existing or proposed;

The project will not cause unreasonable highway or public congestion or unsafe conditions; Based upon the estimated trip generation for the project, a Traffic Movement Permit has been submitted to MDOT. A copy of the submission is provided in Attachment 6.

6. Will provide for adequate sewage waste disposal;

Connection to public sewer system is proposed. Public Works has been contacted to confirm that service is available and adequate treatment capacity is available. Public Works' response will be provided once received.

7. Will not cause an unreasonable burden on the ability of a municipality to dispose of solid waste and sewage if municipal services are to be utilized

A common collection dumpster and recycling bins will be provided for the residents. The developer will contract with a private solid waste disposal company to manage solid waste.

8. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas, or public rights for physical or visual access to the shoreline;

The proposed development will not have an adverse effect on the scenic or natural beauty of the area. The proposed development is located within a designated growth area. There

are no historic sites or irreplaceable natural areas in the location of the proposed development. A landscape plan has additionally been prepared for the proposed project.

9. In conformance with a duly adopted subdivision regulation or ordinance, comprehensive plan, development plan, or land use plan, In making this determination the board is authorized to interpret these ordinances and plans;

The proposed development has been designed in conformance with all applicable regulations.

10. The subdivider has adequate financial and technical capacity to meet the above state standards;

A letter from the applicant's financial partner, Rockland Trust, demonstrating a commitment to provide financing for the project is provided, herein.

The Applicant has assembled the following team of professionals to plan, permit and develop construction documents for the project:

<i>Architect</i>	Tim Wentz, AIA, CGP, CAPS Gate 17 Architecture, LLC 2045 Route 35 Wall, NJ 07719 (856) 429-2001
<i>Civil Engineer</i>	Richard Meek, P.E. Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04260 (207) 926-5111
<i>Surveyor</i>	Tara Mullen, P.L.S. Colliers Engineering 41 Church Road Brunswick, ME 04011 (207) 481-7080
<i>Landscape Architect</i>	Barry J. Hosmer P.L.A., A.S.L.A. 196 Whitney Avenue Portland, ME 04102 (207) 874-0248

<i>Wetland Scientist</i>	Mark Cenci Mark Cenci Geologic, Inc. 93 Mill Road North Yarmouth, ME 04097
<i>Soil Scientist</i>	Mark Hampton C.S.S., L.S.E. Mark Hampton Associates, Inc P.O. Box 1931 Portland, ME 04104
<i>Traffic Engineer</i>	William Bray, P.E. Barton & Loguidice, LLC 383 US Route 1, Suite 2A Scarborough, ME 04074

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

11. Whenever situated, in whole or in part, within 250 feet of any lake, pond, river, or tidal waters, the project will not adversely affect the quality of that body of water, or unreasonably affect the shoreline of that body of water; as indicated on the City of Biddeford's Official Zoning Map and referenced in the City's Comprehensive Plan;

The proposed development is not located within 250 feet of a lake, pond, river or tidal waters.

12. The project will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater;

The proposed project will not adversely affect the quality or quantity of groundwater. The proposed lots will be serviced by public water and public sanitary sewer infrastructure. Erosion and sediment controls are shown on the attached plans, and a stormwater management report has been prepared to demonstrate that post-development runoff will not exceed predevelopment conditions

13. The subdivider will provide information, based on FEMA flood boundary, floodway, and flood insurance maps, whether or not the project is in a flood-prone area :

The proposed development is not located within a FEMA flood area.

14. The project will not unreasonably obstruct abutting properties or structures access to direct sunlight;

The proposed project will not unreasonably obstruct abutting properties or structures access to direct sunlight. The proposed development is surrounded by a vegetated buffer which helps to separate the project from abutting properties.

July 29, 2022

Bureau of Land and Water Quality
312 Canco Road
Portland, ME 04103

Re: A 216 Unit Multifamily Project to be constructed in Biddeford, ME

To whom it may concern,

Rockland Trust Company will be providing the construction financing for the referenced multifamily project. Provided below is a summary of the proposed budget for this project:

Building Construction	\$ 29,865,000
Site Improvement Work	\$ 7,625,000
Soft Costs	\$ 2,425,000
	\$ 39,915,000

Our relationship with KGI Properties, LLC and their investment partners, Devine Capital, LLC and The Simon Konover Company back many years and we have most recently provided financing for The Beacon Expansion, a 48 unit expansion to The Beacon in Scarborough, ME, Mast Landing, a 144 unit multifamily project in Freeport, ME; The Cove, a 120 unit multifamily project in East Lyme, CT; The Beacon, a 288 unit multifamily project in Scarborough, ME; The Shoppes at Hanfield Village, a grocery anchored center in Indian Trail, NC; and The Sound, a 280 unit multifamily project in East Lyme, CT.

Should you have any questions concerning the proposed financing for this multifamily project, please do not hesitate to contact me directly.

Sincerely,



James J. O'Connor, Jr.
Senior Vice President

Attachment 4

Site Location of Development Act Permit Application



Pineland
Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

BIDDEFORD RESIDENTIAL
ALFRED ST. AND ANDREWS RD., BIDDEFORD, MAINE

SITE LOCATION OF DEVELOPMENT ACT PERMIT APPLICATION

PREPARED FOR:

DEVINE CAPITAL, LLC
30 MILK ST., THIRD FLOOR
PORTLAND, ME 04101

PREPARED BY:

TERRADYN CONSULTANTS LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260

September 2022

Section 0 – Application Form and Checklist

The application form and checklist are attached, herein.

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.S.A. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)		☐ 20 acre development	☐ Marine Oil Terminal	☐ Major Amendment
		☐ Planning Permit	☒ Structure	☐ Minor Amendment
		☐ Metallic Mining	☐ Subdivision	
1. Name of Applicant:	Devine Capital, LLC		6. Name of Agent (if applicable):	Richard Meek c/o Terradyn Consultants, LLC
2. Applicant's Mailing Address:	30 Milk St., Third Floor Portland, ME 04101		7. Agent's Mailing Address:	41 Campus Drive, Suite 301 New Gloucester, ME 04260
3. Applicant's Daytime Phone #:	207-536-4664		8. Agent's Daytime Phone #:	207-926-5111
4. Applicant's Fax # (if available):			9. Agent's Fax # (if available):	
5. Applicant's e-mail address (REQUIRED -license will be sent via: e-mail):	bmd300@gmail.com		10. Agent's e-mail address (REQUIRED - license will be sent via e-mail):	rick@terradyconsultants.com

PROJECT INFORMATION

11. Name of Development:	Biddeford Residential			
12. Map and Lot #'s:	Map #: 2	Lot #: 6 & 12	13. Deed Reference #'s:	Book #: 11111 & 11449
			Page #: 70 & 147	
14. Location of Project City/Town:	Biddeford	15. County:	York	16. UTM Northing
				17. UTM Easting
18. Brief Description of Project including total parcel size:	Construct a multi-family residential development consisting of nine 24-unit apartment buildings, a clubhouse, mail kiosk, maintenance building, eight detached garage structures, surface parking, dog park, community garden and interconnected sidewalks on a 44.5 acre parcel.			
19. Type of Direct Watershed: (Check all that apply)	☐ Lake not most at risk ☒ River, stream or brook ☐ Coastal wetland ☐ Lake most at risk ☒ Urban impaired stream ☐ Wellhead or public water ☐ Lake most at risk, severely blooming ☒ Freshwater wetland			
20. Name of Waterbody Project Site drains to:	Unnamed tributary to Thatcher Brook			
21. Amount of Developed Area:	Total acres: 18.133	Existing Developed area: 0.00 acres		New Developed area: 18.133 acres
22. Amount of Impervious Area:	Total acres: 8.06	Existing Impervious areas 0.00 acres		New Impervious area: 8.06 acres
23. Development started prior to obtaining a license?:	☐ Yes ☒ No			
24. Development or any portion of the site subject to enforcement action?	☐ Yes ☒ No		If yes, name of enforcement staff involved?	
25. Common scheme of development?:	☐ Yes ☒ No	26. Title, Right or Interest:	☐ own ☐ lease	☒ purchase option ☐ written agreement
27. Natural Resources Protection Act permit required?:	☒ Yes ☐ No	If yes:	☒ PBR ☐ Tier 1 ☐ Full Permit ☐ Tier 2	
28. Existing DEP Permit number (if applicable):				
29. Names of DEP staff person(s) present at the pre-application meeting:	Jennifer McGill			
30. Does agent have an interest in project? If yes, what is the interest?	☐ Yes ☒ No			

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

FORM A PAGE 2

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

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

CERTIFICATIONS / SIGNATURES

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

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the electronic address located on the front page of this application (see #5 for the applicant and #10 for the agent)".

Signed: [Signature] Title Vice President Date: 9/7/22

Notice of Intent to Comply with Maine Construction General Permit

With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.

If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.

Signed: [Signature] Date: 9/7/22

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: [Signature]

Name (print): Richard Meek

Date: 9/7/22

Re/Cert/Lic No.: _____
 Engineer P.E. 10668 ME _____
 Geologist _____
 Soil Scientist _____
 Land Surveyor _____
 Site Evaluator _____
 Active Member of the Maine Bar _____
 Professional Landscape Architect _____
 Other _____

SUBMISSIONS CHECKLIST

If a provision is not applicable, put "NA"

Section 1. Development description

- | | |
|------------|--|
| <u>X</u> | A. Narrative |
| <u>N/A</u> | 1. Objectives and details |
| | 2. Existing facilities (with dates of construction) |
| <u>X</u> | B. Topographic map |
| <u>X</u> | 1. Location of development boundaries |
| <u>X</u> | 2. Quadrangle name |
| <u>X</u> | C. Construction plan |
| | 1. Outline of construction sequence (major aspects) |
| | 2. Dates |
| <u>X</u> | D. Drawings |
| <u>X</u> | 1. Development facilities |
| <u>X</u> | a. Location, function and ground area |
| <u>N/A</u> | b. Length/cross-sections for roads |
| <u>X</u> | 2. Site work (nature and extent) |
| <u>N/A</u> | 3. Existing facilities (location, function ground area and floor area) |
| <u>X</u> | 4. Topography |
| <u>X</u> | a. Pre- and post-development (contours 2 ft or less) |
| <u>N/A</u> | b. Previous construction, facilities and lot lines |

<u>X</u>	Section 2. Title, right or interest (copy of document)
----------	---

Section 3. Financial capacity

- | | |
|------------|-----------------------------------|
| <u>X</u> | A. Estimated costs |
| <u>X</u> | B. Financing |
| | 1. Letter of commitment to fund |
| | 2. Self-financing |
| <u>N/A</u> | a. Annual report |
| <u>N/A</u> | b. Bank statement |
| | 3. Other |
| <u>N/A</u> | a. Cash equity commitment |
| <u>N/A</u> | b. Financial plan |
| <u>N/A</u> | c. Letter |
| <u>N/A</u> | 4. Affordable housing information |

Section 4. Technical ability (description)

- | | |
|----------|---------------------------------|
| <u>X</u> | A. Prior experience (statement) |
| <u>X</u> | B. Personnel (documents) |

Section 5. Noise

- | | |
|------------|--|
| <u>X</u> | A. Developments producing a minor noise impact (statement) |
| <u>X</u> | 1. Residential developments |
| <u>N/A</u> | 2. Certain non-residential subdivisions |
| <u>N/A</u> | 3. Schools and hospitals |
| <u>N/A</u> | 4. Other developments |
| <u>N/A</u> | a. Type, source and location of noise |
| <u>N/A</u> | b. Uses, zoning and plans |
| <u>N/A</u> | c. Protected locations |
| <u>N/A</u> | d. Minor nature of impact |

N/A	e. Demonstration
N/A	B. Developments producing a major noise impact (full noise study)
N/A	1. Baseline
N/A	a. Uses, zoning and plans
N/A	b. Protected locations
N/A	c. Quiet area
N/A	2. Noise generated by the development
N/A	a. Type, source and location of noise
N/A	b. Sound levels
N/A	c. Control measures
N/A	d. Comparison with regulatory limits
N/A	e. Comparison with local limits
X	Section 6. Visual quality and scenic character (narrative, description, visual impact analysis)
X	Section 7. Wildlife and fisheries (narrative)
X	Section 8. Historic sites (narrative)
X	Section 9. Unusual natural areas (narrative)
	Section 10. Buffers
X	A. Site plan and narrative
	Section 11. Soils
X	A. Soil survey map and report
X	1. Soil investigation narrative
X	2. Soil survey map
X	B. Soil survey intensity level by development type
	1. Class A (High Intensity) Soil Survey
	2. Class B (High Intensity) Soil Survey
	3. Class C (Medium High-Intensity) Soil Survey
	4. Class D (Medium Intensity) Soil Survey
	C. Geotechnical Investigation
N/A	D. Hydric soils mapping
	Section 12. Stormwater management
	A. Narrative
X	1. Development location
X	2. Surface water on or abutting the site
X	3. Downstream ponds and lakes
X	4. General topography
X	5. Flooding
X	6. Alterations to natural drainage ways
X	7. Alterations to land cover
X	8. Modeling assumptions
X	9. Basic standard
X	10. Flooding standard
X	11. General standard
X	12. Parcel size
X	13. Developed area
X	14. Disturbed area
X	15. Impervious area
	B. Maps
X	1. U.S.G.S. map with site boundaries
X	2. S.C.S. soils map with site boundaries
X	C. Drainage Plans (a pre-development plan and a post-development plan)

X	1. Contours
X	2. Plan elements
X	3. Land cover types and boundaries
X	4. Soil group boundaries
X	5. Stormwater quantity subwatershed boundaries
X	6. Stormwater quality subwatershed boundaries
X	7. Watershed analysis points
X	8. Hydrologic flow lines (w/flow types and flow lengths labeled)
X	9. Runoff storage areas
X	10. Roads and drives
X	11. Buildings, parking lots, and other facilities
X	12. Drainage system layout for storm drains, catch basins, and culverts
X	13. Natural and man-made open drainage channels
X	14. Wetlands
X	15. Flooded areas
X	16. Benchmark
X	17. Stormwater detention, retention, and infiltration facilities
X	18. Stormwater treatment facilities
N/A	19. Drainage easements
X	20. Identify reaches, ponds, and subwatersheds matching stormwater model
N/A	21. Buffers
X	D. Runoff analysis (pre-development and post development)
X	1. Curve number computations
X	2. Time of concentration calculations
X	3. Travel time calculations
X	4. Peak discharge calculations
X	5. Reservoir routing calculations
X	E. Flooding Standard
N/A	1. Variance submissions (if applicable)
N/A	a. Submissions for discharge to the ocean, great pond, or major river
N/A	i. Map
N/A	ii. Drainage plan
N/A	iii. Drainage system design
N/A	iv. Outfall design
N/A	v. Easements
N/A	b. Insignificant increase
N/A	i. Downstream impacts
N/A	c. Submissions for discharge to a public stormwater system
N/A	i. Letter of permission
N/A	ii. Proof of capacity
N/A	ii. Outfall analysis and design (pictures)
X	2. Sizing of storm drains and culverts
X	3. Stormwater ponds and basins
X	a. Impoundment sizing calculations
X	b. Inlet calculations
X	c. Outlet calculations
X	d. Emergency spillway calculations
X	e. Subsurface investigation report
X	f. Embankment specifications
X	g. Embankment seepage controls
X	h. Outlet seepage controls
X	i. Detail sheet
X	j. Basin cross sections
X	k. Basin plan sheet
N/A	4. Infiltration systems
N/A	a. Well locations map
N/A	b. Sand and gravel aquifer map
N/A	c. Subsurface investigation report with test pit or boring logs

N/A	d. Permeability analysis
N/A	e. Infiltration structure design
N/A	f. Pollutant generation and transport analysis
N/A	g. Monitoring and operations plan
N/A	i. Locations of storage points of potential contaminants
N/A	ii. Locations of observation wells and infiltration monitoring plan
N/A	iii. Groundwater quality monitoring plan
N/A	5. Drainage easement declarations.
X	F. Stormwater quality treatment plan peak discharge calculations
X	1. Basic stabilization plan
X	a. Ditches, swales, and other open channel stabilization
X	b. Culvert and storm-drain outfall stabilization
X	c. Earthen slope and embankment stabilization
X	d. Disturbed area stabilization
N/A	e. Gravel roads and drives stabilization
X	2. General Standard
X	a. Calculations for sizing BMP
X	b. Impervious area calculation
X	c. Developed area calculation
X	d. Summary spreadsheet of calculations
N/A	3. Phosphorus control plan
N/A	a. Calculations for the site's allowable phosphorus export
N/A	b. Calculations for determining the developed site's phosphorus export
N/A	c. Calculations for determining any phosphorus compensation fees
X	4. Offset Credits
X	a. Urban impaired stream
N/A	Offset credit calculation
N/A	b. Phosphorus credit determination
N/A	i. Location map
N/A	ii. Scaled plan
N/A	iii. Title and right
N/A	iv. Demolition plan
N/A	v. Vegetation plan
N/A	vi. Offset credit calculation
N/A	vii. Calculation for the new allowable export
X	5. Runoff treatment measures
X	a. structural measures
X	i. Design drawings and specifications
X	ii. Design calculations
X	iii. Maintenance plan
N/A	iv. TSS removal or phosphorus treatment factor determinations
X	v. Stabilization plan
N/A	b. Vegetated buffers
N/A	i. Soil survey
N/A	ii. Buffer plan
N/A	iii. Turnout and level spreader designs
N/A	iv. Deed restrictions
X	6. Control plan for thermal impacts to coldwater fisheries
N/A	7. Control plan for other pollutants
X	8. Engineering inspection of stormwater management facilities
X	G. Maintenance of common facilities or property
X	1. Components of the maintenance plan
X	A. Maintenance of facilities by owner or operator
X	1. Site owner or operator (name legally responsible party)
TBD	2. Contact person responsible for maintenance
TBD	3. Transfer mechanism

X	4. List of facilities to be maintained
X	5. List of inspection and maintenance tasks for each facility
N/A	6. Identifications of any deed covenants, easements, or restrictions
X	7. Sample maintenance log
TBD	8. Copies of any third-party maintenance contracts
N/A	B. Maintenance of facilities by homeowner's association
N/A	1. Incorporation documents for the association
N/A	2. Membership criteria
N/A	3. Association officer responsible for maintenance
N/A	4. Establishment of fee assessment for maintenance work
N/A	5. Establishment of lien system
N/A	6. Reference to department order(s) in association charter
N/A	7. Transfer mechanism from developer to association
N/A	8. List of facilities to be maintained
N/A	9. Identification of any deed covenants, easements, or restrictions
N/A	10. Renewal of covenants and leases
N/A	11. List of inspection and maintenance tasks for each facility
N/A	12. Sample maintenance log
N/A	13. Copies of any third-party maintenance contracts
N/A	C. Maintenance of facilities by municipality or municipal district
N/A	1. Identification of the municipal department or utility district
N/A	2. Contact person responsible for maintenance
N/A	3. Evidence of acceptance of maintenance responsibility
N/A	4. Transfer mechanism from developer
N/A	5. List of facilities to be maintained
N/A	6. List of inspection and maintenance tasks for each facility
N/A	7. Identifications of any deed covenants, easements, or restrictions
N/A	8. Sample maintenance log
X	2. General inspection and maintenance requirements
N/A	a. Drainage easements
X	b. Ditches, culverts, and catch-basin systems
X	c. Roadways and parking surfaces
X	d. Stormwater detention and retention facilities
X	1. Embankment inspection and maintenance
X	2. Outlet inspection and clean-out
X	3. Spillway maintenance
X	4. Sediment removal and disposal
N/A	e. Stormwater infiltration facilities
N/A	1. Sediment protection plan
N/A	2. Infiltration rehabilitation plan
N/A	3. Sediment removal and disposal
N/A	4. Groundwater monitoring plan
N/A	f. Proprietary treatment devices
N/A	g. Buffers
X	h. Other practices and measures

Section 13. Urban Impaired Stream Submissions

N/A	1. Off-site credits
X	2. Compensation fees (Urban Impaired Stream/Phosphorus)
X	3. Development impacts

Section 14. Basic Standards

X	A. Narrative
X	1. Soil types
X	2. Existing erosion problems
X	3. Critical areas
X	4. Protected natural resources
X	5. Erosion control measures

X	6. Site stabilization
X	B. Implementation schedule
X	C. Erosion and sediment control plan
X	1. Pre-development and post-development contours
X	2. Plan scale and elements
X	3. Land cover types and boundaries
X	4. Existing erosion problems
X	5. Critical areas
X	6. Protected natural resources
X	7. Locations (general)
X	8. Locations of controls
X	9. Disturbed areas
	10. Stabilized construction entrance
X	D. Details and specifications (for both temporary and permanent measures)
X	E. Design calculations
X	F. Stabilization plan
X	1. Temporary seeding
X	2. Permanent seeding
X	3. Sodding
X	4. Temporary mulching
X	5. Permanent mulching
X	G. Winter construction plan
X	1. Dormant seeding
X	2. Winter mulching
TBD	H. Third-party inspections
TBD	1. Inspector's name, address, and telephone number
TBD	2. Inspector's qualifications
TBD	3. Inspection schedule
TBD	4. Contractor contact
TBD	5. Reporting protocol

Section 15. Groundwater

X	A. Narrative
X	1. Location and maps
N/A	2. Quantity
N/A	3. Sources
N/A	4. Measures to prevent degradation
N/A	B. Groundwater protection plan
N/A	C. Monitoring plan
N/A	1. Monitoring points
N/A	2. Monitoring frequency
N/A	3. Background conditions
N/A	4. Monitoring parameters
N/A	5. Personnel qualifications
N/A	6. Proof of training
N/A	7. Equipment and methods
N/A	8. Quality assurance/quality control
N/A	9. Reporting requirements
N/A	10. Remedial action plan
N/A	D. Monitoring well installation report
N/A	1. Well location map
N/A	2. Elevation data
N/A	3. Well installation data
N/A	4. Well construction details
N/A	5. Borehole logs
N/A	6. Summary of depth measurements
N/A	7. Characteristics of subsurface strata
N/A	8. Well installation contract

N/A	9. Schematic cross-sections
N/A	10. Monitoring point summary table
N/A	11. Protective casing
N/A	12. On-site well identification

Section 16. Water supply

X	A. Water supply method
N/A	1. Individual wells (evidence of sufficient/healthful supply)
N/A	a. Support of findings by well drillers
N/A	b. Support of findings by geologist
N/A	2. Common well(s) (reports)
N/A	a. Hydrogeology report
N/A	b. Engineering report
N/A	c. Well installation report
N/A	d. Long-term safe yield and zone of influence determination
N/A	e. Public water supply
N/A	i. Proposed well or wells
N/A	ii. Existing well or wells
N/A	iii. Water quality analysis
N/A	3. Well construction in shallow-to-bedrock areas
N/A	4. Additional information
X	5. Off-site utility company or public agency
N/A	6. Other sources
N/A	B. Subsurface wastewater disposal systems (locations of systems and wells)
X	C. Total usage (statement re: total anticipated water usage)

Section 17. Wastewater disposal

N/A	A. On-site subsurface wastewater disposal systems (investigation results)
N/A	1. Site plan
N/A	2. Soil conditions summary table
N/A	3. Logs of subsurface explorations
N/A	4. Additional test pits, borings or probes
N/A	a. Soil conditions A
N/A	b. Soils with Profiles 8 and 9 parent material
N/A	c. Soil conditions D
N/A	d. Disposal field length 60 feet or greater
N/A	5. 3-bedroom design
N/A	6. Larger disposal systems
N/A	a. System design details
N/A	b. Plan view
N/A	c. Cross sections
N/A	d. Test pit data
N/A	e. Mounding analysis
N/A	B. Nitrate-nitrogen impact assessment
N/A	1. When required
N/A	a. Exempted_____
N/A	i. Conventional systems meeting certain setbacks
N/A	ii. Denitrification systems
N/A	b. Special conditions and other exemptions
N/A	2. Assumptions
N/A	a. Initial concentration
N/A	b. Background concentration
N/A	c. Contribution from development
N/A	d. Mixing and dilution
N/A	e. Severe-drought scenario
N/A	f. Wastewater flow to subsurface wastewater disposal fields

N/A	3. Assessment report minimum requirements
N/A	a. Narrative and calculations
N/A	b. Site plan
N/A	i. Well locations
N/A	ii. 10 mg/l and 8 mg/l isocons
N/A	iii. Groundwater contours and groundwater flow divides
N/A	c. References
N/A	4. Denitrification systems
N/A	a. Design plans and specifications
N/A	b. Installation information
N/A	c. Monitoring plan
N/A	d. Maintenance
N/A	e. Backup system
X	D. Municipal facility or utility company letter
N/A	E. Storage or treatment lagoons
X	Section 18. Solid waste (list: type, quantity, method of collection and location)
X	A. Commercial solid waste facility (final disposal location)
X	B. Off-site disposal of construction/demolition debris (final disposal location)
N/A	C. On-site disposal of woodwaste/land clearing debris
N/A	1. Applicability of rules (evidence re: applicability of rules)
N/A	2. Burning of wood wastes
N/A	a. Delineation on site plan
N/A	b. Plans for handling unburned woodwaste and woodash
N/A	c. Evidence of capacity to accept waste (approved facility)
N/A	d. Usage of materials
N/A	e. Data on mixing ratios and application rates
N/A	D. Special or Hazardous Waste
N/A	Section 19. Flooding
N/A	A. Explanation of flooding impact
N/A	B. Site plan showing 100-year flood elevation
N/A	C. Hydrology analysis
X	D. FEMA flood zone map with site boundaries
N/A	Section 20. Blasting
N/A	A. Site Plan or map
N/A	B. Report
	1. Assessment
	2. Blasting plan
N/A	Section 21. Air emissions (narrative and summary)
N/A	A. Point and non-point sources identified
N/A	B. Emission components (point sources)
N/A	Section 22. Odors
N/A	A. Identification of nature/source
N/A	B. Estimate of areas affected
N/A	C. Methods of control)
N/A	Section 23. Water vapor (narrative)
N/A	Section 24. Sunlight (statement and drawing, if required)
N/A	Section 25. Notices
X	A. Evidence that notice sent
X	B. List of abutters for purposes of notice

Supplemental requirements for Wind Energy Developments only:

Section 26. Shadow flicker

N/A A. A copy of the Windpro Analysis and associated narrative

Section 27. Public Safety

N/A A. Design safety certifications or other documents attesting to the safety of the wind turbine equipment.

N/A B. Evidence pertaining to overspeed controls

N/A C. Site plan documenting safety setbacks zones for each wind turbine

N/A D. Other documents as necessary to demonstrate safety considerations

Section 28. Tangible Benefits

N/A A. Narrative demonstration of tangible benefits

Section 29. Decommissioning

N/A A. Description of implementation trigger for decommissioning

N/A B. Description of extent of decommissioning

N/A C. Itemization of total cost to complete decommissioning

N/A D. Demonstration of financial assurance for completeness of decommissioning plan

Section 30. Generating Facility-visual Quality and Scenic Character

N/A A. (narrative, description, visual impact analysis)

Section 1 – Development Description

A. Narrative

The applicant intends to construct a multi-family residential development consisting of nine 24-unit apartment buildings, a clubhouse, mail kiosk, maintenance building, eight detached garages, surface parking, dog park, community garden and interconnected sidewalks. The development parcel includes approximately 44.5 acres and is located off Andrews Road and Alfred Street (Route 111) in Biddeford, Maine.

When completed the project will include approximately eighteen (18) acres of developed area, including approximately eight (8) acres of impervious surfaces.

The parcel is currently undeveloped. However, there is evidence of gravel extraction activities on the site. Historical aerial photographs, attached for reference, suggest that the gravel extraction started sometime in the late 1940's or early 1950's.

B. Topographic Map

A portion of the U.S. Geological Survey's Kennebunk Quadrangle, 7.5-Minute Series with the project site depicted is attached.

C. Construction Plan

The project is anticipated to begin construction in the Autumn of 2022. Site work is anticipated to take approximately 18 months to complete and will generally correspond to the following table:

	Start	Finish
1. Estimated construction time: 18 months	November 1, 2022	April 30, 2024
2 Erosion control measures placed	November 1, 2022	November 7, 2022
3. Site clearing, grubbing, excavation, and filling	November 7, 2022	December 7, 2022
4. Excavation & construction of drives, parking lots and underground utilities.	November 7, 2022	May 31, 2023
5. Mulch spread for winter erosion control	November 15, of construction year	May 1 the following year
6. Start progressive final seeding on prepared areas.	Within 24 hours of loam placement	September 15 of construction year
7. Bi-weekly monitoring of vegetative growth.	April 15, 2023	April 30, 2024

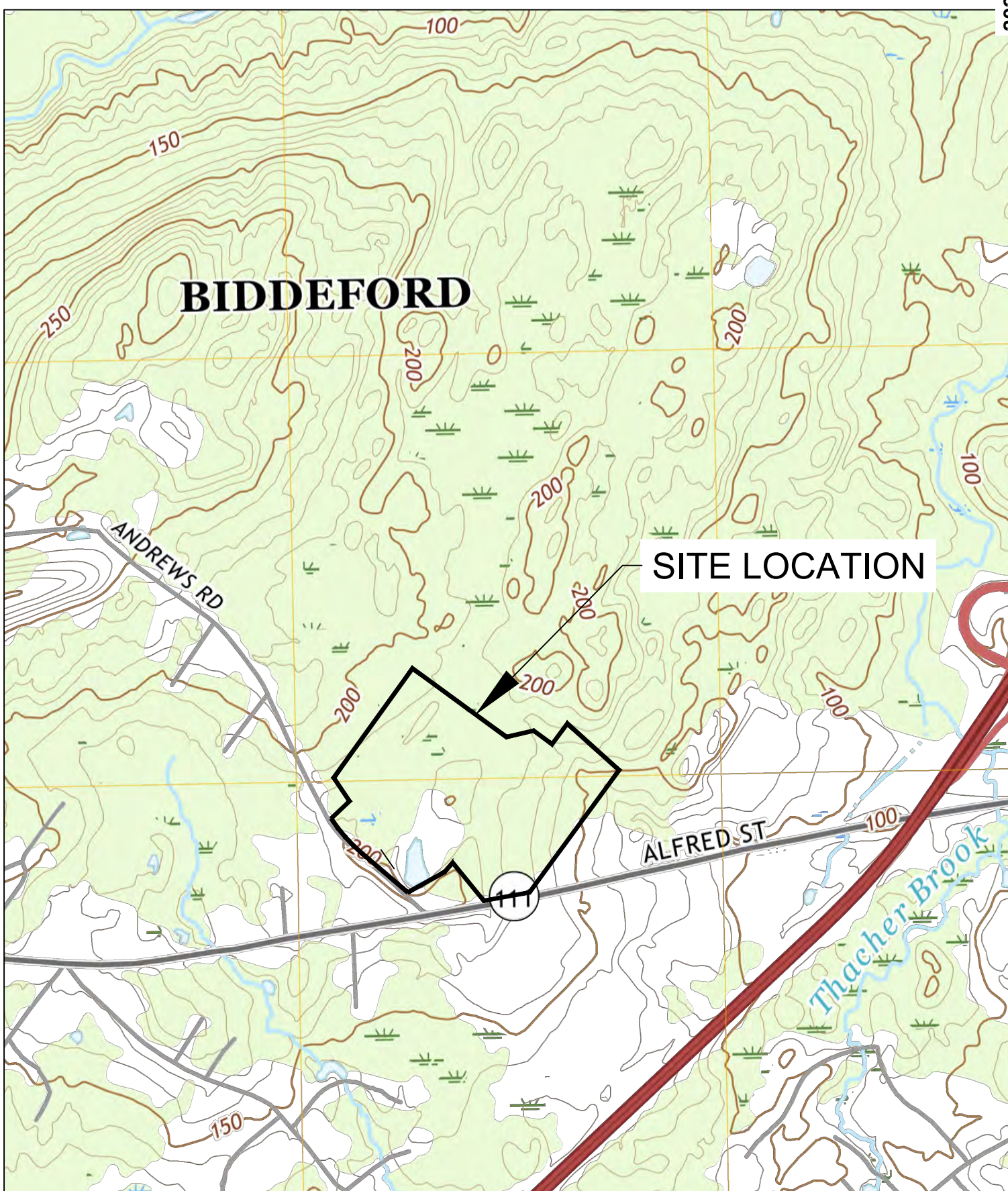
8. Re-seed, if necessary, and continue monitoring of growth until established.	May 15, 2023	April 30, 2024
9. Progressive removal of erosion control devices, based on field inspection.	June 15, 2023	April 30, 2024

Dates are subject to change at the discretion of the engineer and depending on construction progress.

D. Drawings

A complete set of the design plans is attached and includes the following:

- Cover Sheet and Location Map
- Boundary & Existing Conditions Survey
- Class 'B' High Intensity Soil Survey
- Site Plans
- Grading & Drainage Plans
- Utility Plans
- Landscape Plans
- Site Details



USGS KENNEBUNK QUADRANGLE MAP

PROJECT:
BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

PREPARED FOR:
KGI PROPERTIES, LLC
10 Memorial Boulevard, Suite 901
Providence RI 02903



207.926.5111 • info@terradyndynconsultants.com • www.terradyndynconsultants.com

PINELAND
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

PROJECT NO. 21-49	SHEET 1 OF 1
DATE 03/21/2022	
SCALE 1"=1,000'	

Section 2 – Title, Right or Interest

A copy of the property deeds, as recorded at the York County Registry of Deeds are attached.

- Book 11111, page 70
- Book 11449, pages 147-148

A copy of the purchase and sale agreement between the applicant and property owner is attached.

WARRANTY DEED

062428

KNOW ALL MEN BY THESE PRESENTS

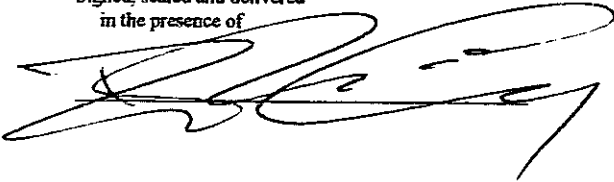
THAT I, JAMES A. MININNI, SR., of Biddeford, York County, Maine, for consideration paid, grant to NEW LIFE CHRISTIAN FELLOWSHIP, a Maine religious corporation with a mailing address of 551 Alfred Road, Biddeford, Maine 04005, with warranty covenants, a certain parcel of land situated on the Northerly side of the Alfred Road, near the top of Chick's Hill, so-called, in Biddeford, York County, Maine, bounded and described as follows:

Beginning on said road at the corner of land formerly of one Daniel Cyr at an iron hub set in the ground; thence northeasterly by said Cyr's land and land of others to a spotted tree at a brook; thence northwesterly by the brook to land of Ben Lunt, marked by a spotted tree; thence southwesterly by said Lunt land and land of others to an oak tree and land of one Coffey; thence by said Coffey's land southerly to the road at an iron hub set in the ground; thence southeasterly by said road to said Cyr land and point of beginning.

Being the same premises conveyed to the Grantor herein by warranty deed of Lucia Mininni dated October 3, 1996, and recorded October 10, 1996, in the York County Registry of Deeds in Book 8027, Page 103.

IN WITNESS WHEREOF, I, JAMES A. MININNI, SR. have hereunto set my hand and seal this 13th day of November, 2001.

Signed, sealed and delivered
in the presence of

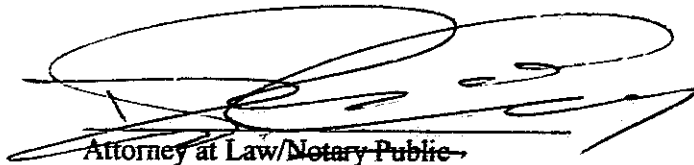


James A. Mininni SR.
JAMES A. MININNI, SR.

STATE OF MAINE
YORK, ss.

November 13, 2001

Personally appeared the above named James A. Mininni, Sr. and acknowledged the foregoing instrument to be his free act and deed.



Attorney at Law/Notary Public

David R. Ordway
(print name)

RECEIVED YORK S.S

Return to: 2001 NOV 13 PM 4: 15

ATTEST: Lisa M. Muse
REGISTER OF DEEDS

MAINE R.E. TRANSFER TAX PAID

1709 - PLAN NELSON ESO 37 BEACH ST. SACO ME 04072

WARRANTY DEED
Maine Statutory Short Form

KNOW ALL MEN BY THESE PRESENTS,

THAT **ENERGY HOMES, INC.**, a Maine corporation, with a place of business in Limerick, County of York, State of Maine,

for consideration paid,

grant to **NEW LIFE CHRISTIAN FELLOWSHIP, f/k/a NEW LIFE ADVENT CHRISTIAN CHURCH OF BIDDEFORD, MAINE**, a religious non-profit corporation, without corporate stock, organized under the laws of the State of Maine, with its principal place of business in Biddeford, County of York, State of Maine, whose mailing address is 547 Alfred Road, Biddeford, ME 04005, with **warranty covenants**, the land in the City of Biddeford, County of York, State of Maine, described as follows:

A certain lot or parcel of land, with the buildings and improvements thereon, situated in the City of Biddeford, County of York and State of Maine, on the northerly side of the Alfred Road, so-called, bounded and described as follows:

BEGINNING on said Alfred Road at the intersection of the same with the Andrews Road, also known as Andrew Road, so-called; thence running northwesterly by said Andrews Road, to land formerly of Daniel S. Hooper; thence northeasterly by said Hooper land and land formerly of Daniel Smith and one Stimpson to land now or formerly of K. S. Gilpatrick; thence southerly by said Gilpatrick land to said Alfred Road; thence westerly by said Alfred Road to said Andrews Road and point of beginning.

EXCEPTING that portion of the above described premises which was previously conveyed to Central Maine Power Company by undated instrument recorded in the York Registry of Deeds on November 14, 1988 in Book 4901, Page 286 (erroneously referred to being recorded in Book 4901, Page 287 in deed to Energy Homes, Inc. referenced below).

ALSO EXCEPTING that portion which was conveyed to the State of Maine by deed dated January 30, 1950 and recorded in said Registry of Deeds in Book 1150, Page 211.

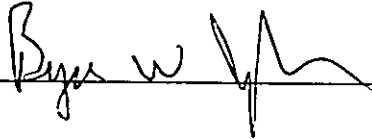
Being the same premises conveyed to Energy Homes, Inc. by deed of Normand R. Verville, Personal Representative of the Estate of Lillian M. Verville, dated August 4, 1999 and recorded in the York Registry of Deeds in Book 9618, Page 290.

FURTHER EXCEPTING AND RESERVING from the above described premises that portion thereof which was conveyed by Energy Homes, Inc. to David R. Pelletier and Joyce A. Pelletier by deed duly recorded in the York Registry of Deeds in Book 10872, Page 44, reference to which is hereby made for a more particular description.

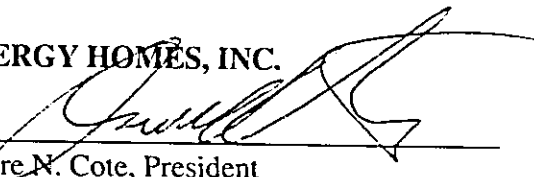
MAINE R.E. TRANSFER TAX PAID

IN WITNESS WHEREOF, It, the said **ENERGY HOMES, INC.**, has caused this instrument to be signed in its corporate name and behalf by **ANDRE N. COTE**, its President thereunto duly authorized, this 5th day of March, 2002.

**SIGNED, SEALED AND DELIVERED
IN PRESENCE OF**



ENERGY HOMES, INC.

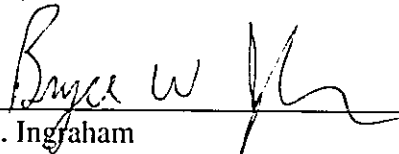
BY: 
Andre N. Cote, President

**STATE OF MAINE
YORK, ss.**

March 5th, 2002

Then personally appeared the above named **ANDRE N. COTE**, President of **ENERGY HOMES, INC.** and acknowledged the foregoing instrument to be his free act and deed, in his said capacity and the free act and deed of said **ENERGY HOMES, INC.**

Before me,

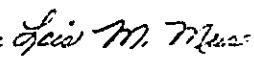

Bryce W. Ingraham
Attorney at Law

chi-newlife-ehi-T4830-deed-del2002.wpd

RETURN RECORDED DOCUMENT TO:
New Life Christian Fellowship
547 Alfred Road
Biddeford, ME 04005

RECEIVED YORK S.S

2002 MAR 11 AM 11:31

ATTEST: 
REGISTER OF DEEDS

*Prescott Kenmore
PO Box 1190
Saco ME 04072
2/29/02*

OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT

OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT ("**Agreement**") made as of the date ("**Effective Date**") of last execution appearing below, by and between **New Life Christian Fellowship**, a Maine religious nonprofit corporation ("**Seller**"), with a mailing address of 551 Alfred Road, Biddeford, Maine 04005-9474 and **Devine Capital LLC**, a Massachusetts limited liability company, or its nominee ("**Buyer**"), with a mailing address of P.O. Box 17795, Portland, Maine 04112.

WHEREAS, Seller owns fee simple interest in that certain real property consisting of approximately 44.7 acres more or less located generally at 588 and 590 Alfred Street, in the City of Biddeford, County of York, Maine, also known as Tax Map 2, Lots 6 and 12, and more particularly described in the source deeds referenced in **Exhibit A** attached hereto (the "**Property**"); Excepting and reserving a 2.1 acre parcel conveyed to Old Dogs of Biddeford, LLC as referenced as Tax Map 2, Lot 6-3 and in the York County Registry of Deeds Book 17933 Page 197 also referenced here in Exhibit B.

WHEREAS, Seller has agreed to grant to Buyer an option to purchase the Property in the future for a set price reflected below, and does thus commit and obligate itself to sell and convey the Property to Buyer on the terms and conditions as set forth below;

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt whereof is hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows, incorporating the foregoing recitals by reference as if fully restated hereinbelow:

Article I – Grant, Timing, Diligence, Permitting

- 1.1 *Option, Purchase Price.* For the consideration recited above, and in consideration for Buyer investing substantial time and money to review, evaluate, inspect, and explore development opportunities with respect to the Property, subject to the terms and conditions hereof, Seller hereby irrevocably grants to Buyer the exclusive right and option (the "**Option**") to purchase the Property for the sum of [REDACTED] (the "**Purchase Price**").
- 1.2 *Preliminary Diligence Deadline.* The initial term of the Option shall commence on the Effective Date and, unless otherwise extended in accordance with the terms hereof, shall expire at **6:00 p.m.** (Eastern Time), [REDACTED] days thereafter, during which period Buyer shall conduct its due diligence inspections (addressed in Article II below), the results of which shall be acceptable to Buyer in its sole and absolute discretion (the "**Preliminary Diligence Deadline**").
- 1.3 *Rezone/Permitting Deadline; Rezone/Permitting Approval Date.*
 - A. Upon the Preliminary Diligence Deadline, unless Buyer has terminated this Option due to the results of its due diligence being unsatisfactory to Buyer in its sole and absolute discretion, Buyer shall pay and deliver to Seller monthly payments in the amount of [REDACTED] in order to extend the Option term for up to [REDACTED] consecutive periods of [REDACTED] days each (all such monthly payments hereinafter referred to as the "**Option Payments**"). The Option Payments shall be nonrefundable but shall be applied to the Purchase Price at closing. Seller hereby grants to Buyer full authority to seek from any federal, state, or local governmental authority any zoning change(s) and/or permits and/or approvals whatsoever that Buyer, in its sole and absolute discretion, deems advisable for Buyer's intended development of the Property for a multi-family residential development (the "**Project**") during such extended period ("**Rezone/Permitting Deadline**"). Seller hereby agrees to fully support and cooperate with Buyer's efforts to rezone and permit the Project, and specifically agrees to appear and testify in favor of, and promptly execute any document reasonably requested by Buyer in connection with, any such efforts of Buyer, all at no cost or charge to Buyer.
 - B. In the event Buyer does not obtain final unappealable zoning change(s)/approvals, including conditional use and/or permits for the Project acceptable to Buyer in its sole and absolute discretion, or otherwise affirmatively elect by written notice to Seller to close notwithstanding the lack of such permits and/or approvals, by the Rezone/Permitting Deadline, then unless Buyer

elects to extend the Rezone/Permitting Deadline as provided in Section 1.4, below, this Agreement shall automatically terminate as of the Rezone/Permitting Deadline, and, promptly upon Buyer's delivery to Seller of (1) an instrument (the "**Release**") signed by Buyer and suitable to release and discharge the Record Notice, and (2) digital copies of and an assignment of all right in the all materials developed by Buyer and its contractors as part of Buyer's efforts to rezone and permit the Project (the "**Rezone Permitting Materials**"), this Agreement shall be null, void, of no further force and effect, and each party hereto shall have no further obligation one to the other.

C. If Buyer obtains zoning change(s) and permits for the Project acceptable to Buyer in its sole and absolute discretion, then promptly upon the date ("**Rezone/Permitting Approval Date**") that the last of such zoning change(s) and/or permit(s) become final and non-appealable, Buyer shall serve notice upon Seller confirming same, and Buyer shall close on the purchase by the date ("**Closing Deadline**") that is [REDACTED] days after the Rezone/Permitting Approval Date, and the notice described in the first sentence of this subsection shall also constitute the Exercise Notice referenced in Section 3.1, below, and shall contain the additional information specified in Section 3.2, below.

- 1.4 *Additional Option Extension Payments.* Notwithstanding any contrary provision herein, if Buyer has not obtained all necessary unappealable permits and/or approvals for the Project, Buyer may elect to further extend the Option and Rezone/Permitting Deadline for up to [REDACTED] additional, successive periods of [REDACTED] days each, provided Buyer shall pay and deliver to Seller monthly payments, in the amount of [REDACTED] (all such monthly payments hereinafter referred to as the "**Extension Payments**"). The Extension Payments shall be nonrefundable but shall be applied to the Purchase Price at closing.
- 1.5 *Termination.* Notwithstanding any contrary provision herein, at any time before the Rezone/Permitting Approval Date, Buyer may elect to terminate this Agreement by delivering to Seller notice thereof ("**Termination Notice**"). If a Termination Notice is given, Buyer shall promptly deliver to Seller the Release signed by Buyer and the Rezone/Permitting Materials, as described in Section 1.3 above, and upon such delivery, this Agreement shall be null and void, of no further force and effect, and each party hereto shall have no further obligation one to the other, except that Buyer's indemnification obligations under Section 2.2 shall survive any termination.

Article II – Due Diligence

- 2.1 To facilitate Buyer's inspections and evaluation of the Property, Seller agrees to deliver to Buyer as soon as possible, but in any event within [REDACTED] days from the date hereof, copies of the materials specified on the list attached hereto as **Exhibit B** (the "**Due Diligence Materials**"). In addition, Seller agrees to permit Buyer to inspect and make copies of any books and records in Seller's possession or control concerning the Property.
- 2.2 So long as this Agreement remains in effect, Buyer may conduct such investigations, inspections, interviews, tests, assessments and audits pertaining to the Property as Buyer elects, in Buyer's sole discretion and at Buyer's sole cost, *including but not limited to:* (i) title search; (ii) survey; (iii) environmental site assessment; (iv) review of zoning and building code requirements; and/or (v) physical/geotechnical inspection of the Property (collectively, the "**Inspections**"). Buyer shall promptly repair any physical damage to the Property caused by any such Inspections, and Buyer further agrees to indemnify and hold Seller harmless from and against any and all loss, cost, damage, or expense incurred by Seller as a result of said physical damage.
- 2.3 Seller agrees, in general, to cooperate in good faith with Buyer and Buyer's representatives, and, in particular:
 - 2.3.1 so as to secure the rights granted to Buyer hereunder and to ensure that the Property shall be in substantially the same condition at the time of conveyance as exists as of the date of this Agreement, Seller agrees that for so long as this Agreement remains in

effect, then unless and until Buyer in writing consents otherwise, Seller shall maintain the Property substantially in condition as currently exists, timely paying all taxes and other impositions related to ownership thereof, and shall not: (a) transfer, encumber, mortgage, lease, alienate, impose any restriction or condition upon, or otherwise grant to any other person, firm or entity any permission, license, right or rights whatsoever in, pertaining to, or affecting any part or all of the Property; nor (b) make any change to or alter in any way whatsoever the physical or other characteristics of any part or all of the Property, including cutting of trees/timber, or contamination of any kind; and,

- 2.3.2 so as to ensure that there is no change in the status of the title to the Property prior to termination of this Agreement, Seller agrees to contemporaneously with its execution hereof execute and deliver to Buyer for recording in the appropriate Land Evidence Records an instrument (the "**Record Notice**") suitable under applicable law to evidence the grant of the Option and the aforesaid restrictions on the grant of any rights inconsistent with this Agreement, in form and substance as attached hereto as **Exhibit C**, or, if no such exhibit is attached, in form and substance as Buyer may reasonably request.
- 2.4 During the effective term of this Agreement, Buyer contemplates expending substantial sums and incurring substantial expenses to inspect, test, and analyze the Property, to conduct title research, undertake survey and site plans, and to otherwise conduct a due diligence review of the Property and all related matters, and to pursue obtaining permits for Buyer's contemplated development of the Property. To induce Buyer to make such efforts and expend such sums, Seller hereby agrees that during the effective term of this Agreement Seller shall not solicit, encourage, negotiate or entertain any offer with any other party concerning or with respect to the Property whatsoever, including offers to purchase or lease the Property, regarding any sale, financing, partnership, or other disposition of all or any part of, or interest in, the Property; Seller agrees to immediately communicate to Buyer for response any written inquiries received by Seller during the effective term of this Agreement. Seller further agrees to keep the monetary terms of this Agreement confidential, except only as may be approved by Buyer in writing, in advance.
- 2.5 Notwithstanding anything contained herein to the contrary, however, in the event Buyer delivers to Seller prior to expiration of the Preliminary Diligence Deadline written notice specifying with reasonable particularity matters related to the title to the Property to which Buyer objects ("**Title Objection Notice**"), then and in such event the Preliminary Diligence Deadline shall be deemed extended for an additional period beyond its then-scheduled expiration to allow Seller to, and Seller does hereby agree that Seller shall during such period, use good faith efforts to promptly and reasonably resolve such title objections. In the event Seller fails to use reasonable good faith efforts to so resolve Buyer's objections, then and in such event Seller shall be in default hereunder, and Buyer shall be entitled to its remedies for same as provided below. In addition, Buyer shall have the right to extend the Preliminary Diligence Deadline for a reasonable period of time to permit Buyer itself, at its own expense, to resolve such title objections.

Article III – Exercise, Purchase Price

- 3.1 In the event that Buyer elects to exercise the Option and purchase the Property, Buyer shall deliver notice ("**Exercise Notice**") to Seller pursuant to Section 1.3.C stating that Buyer elects to exercise the Option to purchase the Property.
- 3.2 Buyer shall specify in the Exercise Notice (but failure to so specify shall not invalidate the effectiveness of the Exercise Notice) the name of the entity, if different from Buyer, that is to take title to the Property, Seller hereby acknowledging and agreeing that Buyer may take title in the name of any entity Buyer chooses as nominee, and that for this purpose references in this Agreement to "Buyer" shall mean "Buyer or its nominee."
- 3.3 The Purchase Price shall be adjusted to reflect the Option Payments and Extension Payments paid to Seller by Buyer pursuant to Section 1.3, as well as the equitable apportionment as of date

of closing of unpaid real estate taxes, assessments, liens, utility bills, if any, recording charges, transfer tax, and similar items as is customary in standard conveyancing practice in the State of Maine (the Purchase Price as so adjusted may hereinafter be referred to as the "**Adjusted Purchase Price**").

Article IV – Closing Procedure

- 4.1 On the Closing Deadline, Seller shall sell and convey the Property to Buyer and Buyer shall purchase the Property from Seller (the "**Closing**"). At Closing, Seller shall deliver to Buyer:
- 4.1.1 an original deed (the "**Deed**") properly executed by or on behalf of Seller, in form and substance as attached hereto as **Exhibit D**, conveying all of Seller's interest in the Property to Buyer by good, marketable, insurable title, free and clear of all liens, encumbrances, and deficiencies, except utility easements of record, and, except easements and encumbrances of record prior to the date of this Agreement and,
 - 4.1.2 such other documents as may be reasonably requested by Buyer, including without limitation customary title insurance affidavits, such instruments of assignment as Buyer reasonably requests, such as an Assignment of Permits, documents to evidence the existence, good standing, and authority of Seller, a settlement statement, or any other customary or reasonable documentation as may be requested (such other documents, together with the Deed, may hereinafter be referred to collectively as the "**Conveyance Documents**").
 - 4.1.3 At Closing Buyer shall deliver to Seller the Adjusted Purchase Price in immediately available funds.

Article V - Representations

- 5.1 Seller hereby represents and warrants to Buyer, which representations and warranties shall be deemed restated as of closing, that:
- 5.1.1 Seller has good, insurable, and marketable title in fee simple to the Property, subject only to the encumbrances of record.
 - 5.1.2 Seller is a Maine nonprofit corporation, is not a foreign person or foreign entity as defined in the Foreign Investment in Real Property Tax Act ("**FIRPTA**"), has full right, power and authority to enter into and consummate this transaction, the person executing this Agreement on behalf of Seller is an officer of Seller and is duly authorized to execute this Agreement on behalf of Seller, Seller has the power and authority without necessity of further act or consent to execute this Agreement and all other instruments and documents contemplated hereby and to perform any and all acts necessary or desirable to consummate the transactions contemplated (including a conveyance of the Property).
 - 5.1.3 To Seller's knowledge without additional investigation, the Property is free of violations of law, is in full compliance with Federal, State, City and County ordinances and environmental laws, and there are not any current or contemplated special tax assessments known to Seller.
 - 5.1.4 Other than to the extent granted in this Agreement, previously disclosed to Buyer in writing, or reflected as exceptions to coverage on a title commitment acceptable to Buyer, no person, firm, or entity has any rights in, pertaining to, or affecting the Property, and Seller has not granted any rights in, pertaining to, or affecting the Property to any person, firm, or entity in any unrecorded instrument or writing, nor does any person, firm, or entity have an option to purchase or right of first refusal to purchase the Property.
 - 5.1.5 Seller is not involved as a debtor in any bankruptcy, reorganization or insolvency proceeding, and Seller has not received any notice of and has no knowledge of any

pending or threatened lawsuits, including condemnation suits, that could affect the Property or Seller's ownership of the Property.

- 5.1.6 To Seller's knowledge without additional investigation there have not been and there are not now any underground storage tanks located on or under the Property or if there have been or are any such tanks located on the Property, their location has been identified to Buyer in writing, they have been properly registered with all appropriate authorities, they are in full compliance with all applicable statutes, ordinances and regulations, and they have not resulted in the release of any hazardous or toxic substance, material, or waste into the environment.
- 5.1.7 To Seller's knowledge without additional investigation there are no past or present uses of the Property that did not comply in all material respects with all Environmental Protection Agency, Occupational Safety and Health Administration, and all other federal, state and local laws, administrative rules and regulations governing the soil, water, air and environment in and around the Property.

Article VI – Default

- 6.1 If Buyer fails to fulfill the Buyer's agreement herein, Seller shall retain the Option Payment(s) as liquidated damages, being Seller's sole remedy. If Seller shall fail to fulfill its obligations herein, Buyer shall have all available remedies at law and in equity, including specific performance. Notwithstanding the foregoing, the non-defaulting party agrees to provide the defaulting party with written notice providing a description of a default and provide such defaulting party with a [REDACTED] day cure period.

Article VII – Notice

- 7.1 All notices or other communications required or permitted hereunder shall be in writing, and shall be effective upon receipt or refusal when sent to the intended recipient by one of the methods set forth below:
- 7.1.1 regular and certified U.S. mail, postage prepaid, return receipt requested;
- 7.1.2 reputable national delivery service (i.e. FedEx, DHL); or,
- 7.1.3 otherwise hand delivered with an acknowledgment of receipt.
- 7.1.4 electronic transmission
- 7.2 Each party, by written notice given to the other party in accordance herewith, may change the address to which notices or other communications hereunder shall be deemed to have been duly given; provided, however, no party may designate more than **three** notice addresses, and notice of a change of address shall be effective only upon actual delivery. Until changed as aforesaid, a notice shall be addressed to the intended recipient at their address set forth in the first paragraph on page 1 of this Agreement.

Article VIII – Miscellaneous

- 8.1 **Broker.** Seller and Buyer each hereby represent and warrant to the other that neither Seller nor Buyer has dealt with or employed any real estate agent, broker, or any person entitled to a commission in connection with the transaction contemplated other than [REDACTED] in Maine. Seller and Buyer hereby agree to indemnify, defend, and hold harmless the other from any claim or claims, action or actions, losses, payments, judgments, commission or commissions, paid or payable to any real estate agent, broker, person or entity in connection with this transaction that was not called to the attention of the other as a result of any services or facilities of any such real estate agent, broker, person or entity provided to the other. The provisions of this paragraph shall survive conveyance of the Property to Buyer.

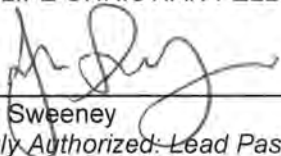
- 8.2 *Governing Law, Venue, Jury Waiver.* This Agreement shall be construed in accordance with the laws of the State of Maine. Both Buyer and Seller hereby consent to the jurisdiction of the courts of said state and of the federal government, as well as to the jurisdiction of all courts from which an appeal may be taken from the aforesaid courts, for the purpose of any suit, action or other proceeding arising out of, under or with respect to this agreement, and expressly waive any and all objection each may now or hereafter have as to the venue in any of such courts, and EACH OF BUYER AND SELLER DO HEREBY EXPRESSLY WAIVE ANY RIGHT EACH MAY HAVE TO ELECT A TRIAL BY JURY AS TO ANY DISPUTE ARISING HEREUNDER. Any disputes between Buyer and Seller (which are not otherwise resolved by the parties) shall be submitted to binding arbitration in Portland, Maine administered by JAMS in accordance with its Streamlined Arbitration rules. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction. This clause shall survive the closing of this transaction.
- 8.3 *Headings; Entire Agreement; Amendments.* The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. This Agreement (including all exhibits annexed hereto) contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior understandings, written or oral, if any, with respect thereto. This Agreement may not be modified, changed, supplemented, or terminated, nor may any obligations hereunder be waived, except by written instrument signed by the party to be charged or by its agent duly authorized in writing or as otherwise expressly permitted herein. The Agreement shall not be binding on any party until signed by every party.
- 8.4 *Waiver.* No waiver of any breach of any agreement or provision herein contained shall be deemed a waiver of any preceding or succeeding breach thereof or of any other agreement or provision herein contained. No extension of time for performance of any obligations or acts shall be deemed an extension of the time for performance of any other obligations or acts.
- 8.5 *Binding Effect; Assigns; Benefits.* This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns; provided, however, Seller may not assign its rights or obligations under this Agreement absent Buyer's consent in Buyer's sole discretion.
- 8.6 *Exhibits, Counterparts.* All exhibits attached hereto are by this reference incorporated fully herein. This Agreement may be executed by the parties hereto in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.
- 8.7 *Severability.* The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.
- 8.8 *Days, Interpretation.* References in this Agreement to a specified number of "days," shall mean and refer to calendar days; provided, however if any specified period would otherwise end on a day that is a Saturday, Sunday or day which is recognized by the State of Maine ("Jurisdiction") as a legal holiday, then and only in such event, the specified period shall be deemed to extend to the next following day that is not a Saturday, Sunday or legal holiday. "Business Day" means any day other than Saturday, Sunday and/or any weekday or weekend day that is a legal holiday observed by the federal government of the United States of America or the Jurisdiction. The terms of this Agreement were fully negotiated by the parties and shall not be construed for or against any party hereto.
- 8.9 *Prevailing Party.* In the event the parties litigate in any court or arbitration forum any dispute hereunder, then and in such event, the prevailing party shall be entitled to an award from the other of the reasonable attorney's fees and costs incurred therein by said prevailing party.

- 8.10 *Time of the Essence.* The parties hereto hereby agree that TIME IS OF THE ESSENCE as to each and every provision of this Agreement.

[Signature Page Follows; Remainder Intentionally Blank]

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal by their proper officers hereunto duly authorized as of the date of last execution hereof as set forth below.

Seller:
NEW LIFE CHRISTIAN FELLOWSHIP

By: 
Justin Sweeney
Its Duly Authorized: Lead Pastor

Date: January 25, 2021

Buyer:
DEVINE CAPITAL LLC

By: 
Bernard M. Devine
Its Duly Authorized: President

Date: January 25, 2021

Exhibit A

Two parcels of land, excepting the third parcel conveyed to Old Dogs of Biddeford, LLC with any improvements thereon, in the City of Biddeford, York County, Maine described in the following deeds:

588 Alfred Street, Biddeford, Maine

- Warranty Deed dated November 13, 2001 from James A. Mininni, Sr. to New Life Christian Fellowship, recorded at Book 11111, Page 70 in the York County Registry of Deeds

590 Alfred Street, Biddeford, Maine

- Warranty Deed dated March 5, 2002 from Energy Homes, Inc. to New Life Christian Fellowship, recorded at Book 11449, Page 147 in the York County Registry of Deeds

Excepting the property located at Alfred Street, Biddeford, Maine, conveyed to Old Dogs of Biddeford LLC

- Warranty Deed dated April 19, 2019 from New Life Christian Fellowship to Old Dogs of Biddeford, LLC recorded at Book 17933, Page 197 in the York County Registry of Deeds

Exhibit B

Survey - Titcomb Associates 2002
588 Alfred St Deed 11111 070
590 Alfred St Deed 11449 147
588 Alfred St Disclosure
590 Alfred St Disclosure
Old Dogs 2018 Conveyance Survey
Old Dogs Deed 17933 197
Alfred St Sewer Map
Andrews Geometrics Plan Profile 2004
ARC New Building sketch
Packard Development sketch
BI3074-Va Table A Zoning Uses
Parcel 1 and 2 Tax Map copy
2003 Biddeford & Saco Water Co Letter
2003 Gorrill-Palmer Consulting Engineers re: Ability to Serve
2005 Post development AM Peak Hour
Andrews Geometrics Plan Profile 2004
Attachment B TR-20 Calculations
Attachment C Water Quality Computations
Calculations Based Upon Maine Subsurface Wastewater Rules
Capacity and Queuing Analysis Results
City of Biddeford Wastewater Dept 2003 Ability to Serve Letter
Erosion Sedimentation North C-8B
Erosion Sedimentation South C-8A
First American Gap Indemnity Agreement 5.25.2017
First American Alta 3 parcels-3.5-2002
Gorrill-Palmer Consulting Engineers 2.9.2004 Maine DOT Letter
Gorrill-Palmer Consulting Engineers 4.8.2004 Maine DOT Letter
Gorrill-Palmer Consulting Engineers 2004 Plans
Gorrill-Palmer Consulting Engineers Row Volumes, Peak Adjusted Volumes
Grading & Drainage C-3
Grading Drainage South C-4A
Grading Draining North C-4B
Lighting plan WLS Lighting Systems
Offsite Utility Profile C-17B
Offsite Utility Profile C-17A
Overall Site Layout C-1A
PreDevelopment Watershed Maps
Proposed Off-Site Improvements - Gorrill Palmer
Route 111 & Exit 4- traffic study
Route 111 & Home Depot
Route 111 at Andrews Rd
Route 111 at Exit 4 Precourt St
Route 111 at Route 35
Route 111 at Shaws Irving
Route 111 at Walmart Park n ride
RW Gillespie June 2004 geotechnical evaluation
Section 7 Wildlife and Fisheries
Section 14 Erosion and Sedimentation Control Plan
Site Layout C-1B
Site Layout North C-2C

Exhibit B (continued)

Site Layout Phase2. C-2A

Site Layout Plans C2A C1B

Site Layout South C-2B

Stormwater Management

Traffic Impact Study 2003

Trip Generation Calculations

Turning Movement Diagrams

Utility Plan C- 6

Utility Plan Phase 1 C5

Vernal Pool Application and Determination NLC

Vernal Pool Location Plan LongView Partners - 588-590 Alfred St

Wetland Reconnaissance 4-21-18- 588-590 Alfred St

Wetland Reconnaissance 6-3-20- 590 Alfred St.6-3-20

Zoning Map

Exhibit C

NOTICE OF OPTION

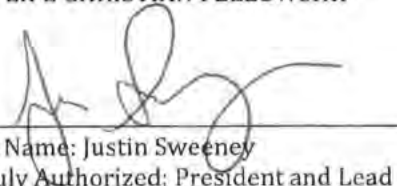
Notice is hereby given of the following Option to Purchase and Purchase and Sale Agreement (the "Option") vesting in Buyer an option to purchase certain real property owned by Seller:

SELLER: New Life Christian Fellowship
BUYER: Devine Capital LLC
DATE OF AGREEMENT: January 25, 2021
PREMISES: See Exhibit A attached hereto
TERM OF OPTION: Beginning January 25, 2021 and continuing for up to [REDACTED] days, subject at all times to the terms and conditions of the Option Agreement.

The undersigned further expressly acknowledges that this Notice of Option is being executed pursuant to the provisions of the Option and is not intended to vary the terms or conditions of the Option.

IN WITNESS WHEREOF, the undersigned has caused this Notice of Option to be signed by its duly authorized representative.

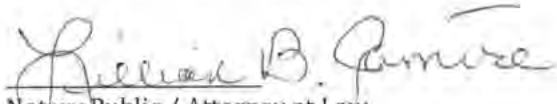
NEW LIFE CHRISTIAN FELLOWSHIP

By: 
Print Name: Justin Sweeney
Its Duly Authorized: President and Lead Pastor
Dated: January 25, 2021

STATE OF MAINE
COUNTY OF YORK, SS

January 25, 2021

Then personally appeared the above-named Justin Sweeney, President and Lead Pastor of NEW LIFE CHRISTIAN FELLOWSHIP and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of NEW LIFE CHRISTIAN FELLOWSHIP.


Notary Public / Attorney at Law
Print name:
My commission expires:

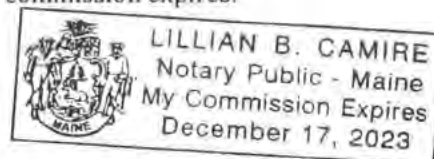


Exhibit D

QUITCLAIM DEED
WITH COVENANT
STATUTORY SHORT FORM
TITLE 33, §775

New Life Christian Fellowship, a Maine religious nonprofit corporation, with a mailing address of 551 Alfred Street, Biddeford, Maine 04005-9474, for consideration paid, grants to _____, a _____, with a mailing address of _____, **with Quitclaim Covenant**, a certain lot or parcel of land situated in the City of Biddeford, County of York, and State of Maine, as described in **Exhibit A** attached hereto and made a part hereof.

DATED: _____, 202__

New Life Christian Fellowship

By: _____

Print Name: Justin Sweeney

Its Duly Authorized: President and Lead Pastor

STATE OF MAINE
COUNTY OF YORK, SS

_____, ___, 202__

Then personally appeared the above-named Justin Sweeney, President and Lead Pastor of NEW LIFE CHRISTIAN FELLOWSHIP and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of NEW LIFE CHRISTIAN FELLOWSHIP.

Notary Public / Attorney at Law

Print name:

My commission expires:

Exhibit A

Two parcels of land, excepting the third parcel conveyed to Old Dogs of Biddeford, LLC with any improvements thereon, in the City of Biddeford, York County, Maine described in the following deeds:

588 Alfred Street, Biddeford, Maine

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Excepting the property located at Alfred Street, Biddeford, Maine, conveyed to Old Dogs of Biddeford, LLC

- Warranty Deed dated April 19, 2019, from New Life Christian Fellowship to Old Dogs of Biddeford, LLC recorded at Book 17933, Page 197 in the York County Registry of Deeds

SECOND AMENDMENT TO OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT

THIS SECOND AMENDMENT TO OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT (this Amendment”) is made and entered into as of the 14 day of January, 2022, by and between **New Life Christian Fellowship** (“Seller”) and **Devine Capital LLC** (“Buyer”) with respect to that certain Option To Purchase and Purchase and Sale Agreement between Seller and Buyer, with an effective date of January 25, 2021, as amended by that certain Amendment to Option to Purchase and Purchase and Sale Agreement dated May “ ”, 2021 (together, the “Agreement”), relating to property of the Seller located generally at 588 and 590 Alfred Street in Biddeford, Maine.

WHEREAS, Seller and Buyer wish to amend the Agreement as set forth below.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Seller and Buyer hereby agree that the Agreement shall be amended as hereinafter set forth.

A. Section 1.4 of the Agreement is hereby amended to change the monthly amount of the Extension Payments from [REDACTED] to [REDACTED] for the first [REDACTED] monthly Extension Payments (i.e., the monthly Extension Payments in January 2022 through June 2022 shall be [REDACTED] but thereafter shall revert to [REDACTED]).

B. Seller and Buyer hereby ratify and confirm all terms and provisions of the Agreement and agree that, except as amended by this Amendment, all terms and provisions of the Agreement shall remain in full force and effect including.

C. This Second Amendment may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall constitute one and the same instrument. This Second Amendment may be transmitted between the parties by facsimile machine or by email attachment and signatures appearing on faxed or emailed instruments shall be treated as original signatures. Both a faxed or emailed version containing either original, faxed or emailed signatures of all parties, and multiple counterparts of the same version each containing separate original, faxed or emailed signatures of the parties, shall be binding on them.

[Signature Page Follows]

IN WITNESS WHEREOF, Seller and Buyer have executed this Second Amendment as of the date first above written.

SELLER

NEW LIFE CHRISTIAN FELLOWSHIP

DocuSigned by:
B: Justin Sweeney
2507458A9BB5421...
Name: Justin Sweeney
Its Duly Authorized: Lead Pastor

BUYER

DEVINE CAPITAL LLC

By: B. M. Devine, Jr.
Bernard M. Devine, Jr., Manager

Section 3 – Financial Capacity

A. Estimated Costs

The anticipated project costs include the following:

Property purchase price:	\$1,500,000
Soft Costs (Design, Permitting, etc.):	\$2,425,000
Site Construction Costs:	\$7,625,000

B. Financing

A letter from the applicant's financial partner, Rockland Trust, demonstrating a commitment to provide financing for the project is attached.

The applicant does not intend to provide affordable housing units within the development.

C. Certificate of Good Standing

A copy of the applicant's status with the Secretary of State is attached.

July 29, 2022

Bureau of Land and Water Quality
312 Canco Road
Portland, ME 04103

Re: A 216 Unit Multifamily Project to be constructed in Biddeford, ME

To whom it may concern,

Rockland Trust Company will be providing the construction financing for the referenced multifamily project. Provided below is a summary of the proposed budget for this project:

Building Construction	\$ 29,865,000
Site Improvement Work	\$ 7,625,000
Soft Costs	\$ 2,425,000
	\$ 39,915,000

Our relationship with KGI Properties, LLC and their investment partners, Devine Capital, LLC and The Simon Konover Company back many years and we have most recently provided financing for The Beacon Expansion, a 48 unit expansion to The Beacon in Scarborough, ME, Mast Landing, a 144 unit multifamily project in Freeport, ME; The Cove, a 120 unit multifamily project in East Lyme, CT; The Beacon, a 288 unit multifamily project in Scarborough, ME; The Shoppes at Hanfield Village, a grocery anchored center in Indian Trail, NC; and The Sound, a 280 unit multifamily project in East Lyme, CT.

Should you have any questions concerning the proposed financing for this multifamily project, please do not hesitate to contact me directly.

Sincerely,



James J. O'Connor, Jr.
Senior Vice President



MAINE

Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

[Subscriber activity report](#)

This record contains information from the CEC database and is accurate as of: **Mon Aug 01 2022 08:34:59**. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
DEVINE CAPITAL LLC	20170837FC	LIMITED LIABILITY COMPANY (FOREIGN)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/11/2017	N/A	MASSACHUSETTS

Other Names (A=Assumed ; F=Former)

NONE

Clerk/Registered Agent

JOHN D. DEVINE, ESQ.
P.O. BOX 17795
PORTLAND, ME 04112

[Back to previous screen](#)

[New Search](#)

Click on a link to obtain additional information.

List of Filings

[View list of filings](#)

Obtain additional information:

Additional Addresses

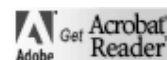
[Plain Copy](#)

[Certified
copy](#)

Certificate of Existence ([more info](#))

[Short Form without
amendments \(\\$30.00\)](#)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the [troubleshooting page](#).



If you encounter technical difficulties while using these services, please contact the [Webmaster](#). If you are unable to find the information you need through the resources provided on this web site, please contact the Bureau's Reporting and Information Section at 207-624-7752 or [e-mail](#) or visit our [Feedback](#) page.

Section 4 - Technical Ability

The applicant, KDK Biddeford, LLC, has extensive development and permitting experience within the State of Maine, including two similar projects successfully permitted within the past five years. The Beacon, a 288-unit project in Scarborough, was permitted in 2017 with construction completed in 2020. 259 Mast Landing, a 144-unit project in Freeport, was permitted in 2020 and is nearing the completion of construction.

The design phase of the project includes the preparation of detailed site plans, site grading, stormwater management, site utility layout, erosion & sediment control plans and site detail plans. The permitting phase of this project consists of the preparation of all required state and local permit applications, including the MDEP Site Location of Development Act Permit, a Tier 1 Natural Resources Protection Act Permit, and Site & Subdivision applications with the City of Biddeford.

The applicant has retained Fairbanks Engineering Corp. to evaluate the geotechnical characteristics of the project site. The principal, Robert Fairbanks, P.E., has over 35 years of geotechnical experience and has been involved with numerous successful construction projects in Maine.

The applicant has retained Terradyn Consultants, LLC (Terradyn) to lead the design and permitting effort for this project. Terradyn was established in 2005 and currently has six professional engineers on staff. Terradyn provides land planning, stormwater management design, environmental permitting, and technical assistance to developers, contractors, and municipalities for commercial, residential and industrial developments. Project manager, Richard Meek, P.E. has been involved in the successful design and permitting of numerous projects of similar size and scope. Terradyn has subcontracted with the following professionals to supplement the design:

Colliers Engineering & Design, formerly Northern Survey Engineering, has prepared the boundary and partial topographic survey for the property. The professional Land Surveyors of Northern Survey Engineering have provided high-quality, client-oriented services since 2017.

Mark Hampton Associates, Inc. prepared the Class B High Intensity Soil Survey. Mark Hampton, CSS #216, LSE #263 is a recognized expert in his field.

Mark Cenci Geologic, Inc prepared report of delineation of the onsite wetlands. Mark Cenci is a Maine certified Geologist and Licensed Site Evaluator with over 25 years' experience solving problems in innovative and cost-effective ways for hundreds of satisfied clients.

Section 5 - Noise

Sine the development is solely residential, the anticipated noise generated by the project will be minor in nature. Short-term noise impacts may occur during construction with the use of typical site construction equipment. Construction activities will be limited to the daylight hours as specified in the City of Biddeford ordinances.

Section 6 - Visual Quality and Scenic Character

Impacts to the visual quality and scenic character of the surrounding area will be minimized in the following manner:

- To the extent practical, the existing forested areas along Alfred St. (Rte. 111) and Andrews Rd. will be maintained.
- Except for two proposed stormwater outfall pipes, a minimum 100-foot buffer will be maintained for an unnamed stream, which forms a portion the development's northeast property boundary.
- The development anticipates that approximately 7,000 square feet (0.16 acre) of the property's approximate 323,000 square feet (7.41 acres) of wetland will be permitted for impacts. This represents proposed impacts to approximately 2.1% of the property's wetlands.
- Pursuant to the terms of the Joint Development Agreement dated May 19, 2022 between the City and the developer, at the time of the initial building permit issuance, the developer will grant to the City, or its designated nonprofit conservation organization, a conservation easement over certain wetland areas as then agreed upon by the parties and upon terms and conditions satisfactory to the City, in good faith in order to preserve such wetland areas in their natural and undeveloped state.

Section 7 - Wildlife and Fisheries

The Maine Department of Inland Fisheries and Wildlife (MEIF&W) was contacted as part of the applicant's due diligence investigation of the property. A copy of MEIF&W's response letter regarding fisheries and wildlife resources is attached for reference.



STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041



April 21, 2021

Samantha Hartery
Flycatcher LLC
463 Blackstrap Road
Falmouth, ME 04105

RE: Information Request – KGI Properties Project, Biddeford

Dear Samantha:

Per your request received on March 31, 2021, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *KGI Properties* project in Biddeford. Note that as project details are lacking, our comments are non-specific and should be considered preliminary.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bats - Of the eight species of bats that occur in Maine, the three *Myotis* species are afforded special protection under Maine's Endangered Species Act (MESA, 12 M.R.S §12801 et. seq.): little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are designated as Species of Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Significant Vernal Pools - At this time MDIFW Significant Wildlife Habitat (SWH) maps indicate no known presence of SWHs subject to protection under the Natural Resources Protection Act (NRPA) within the project area, which include Waterfowl and Wading Bird Habitats, Seabird Nesting Islands, Shorebird Areas, and Significant Vernal Pools. However, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Fisheries Habitat

We recommend that 100-foot undisturbed vegetated buffers be maintained along streams and waterbodies. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Maintaining and enhancing buffers along streams that support coldwater fisheries is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support conditions required by many fish species. Stream crossings should be avoided, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide full fish passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis and undersized crossings may inhibit these functions. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in not only providing habitat connectivity for fish but also for other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,



Becca Settele
Wildlife Biologist

376000

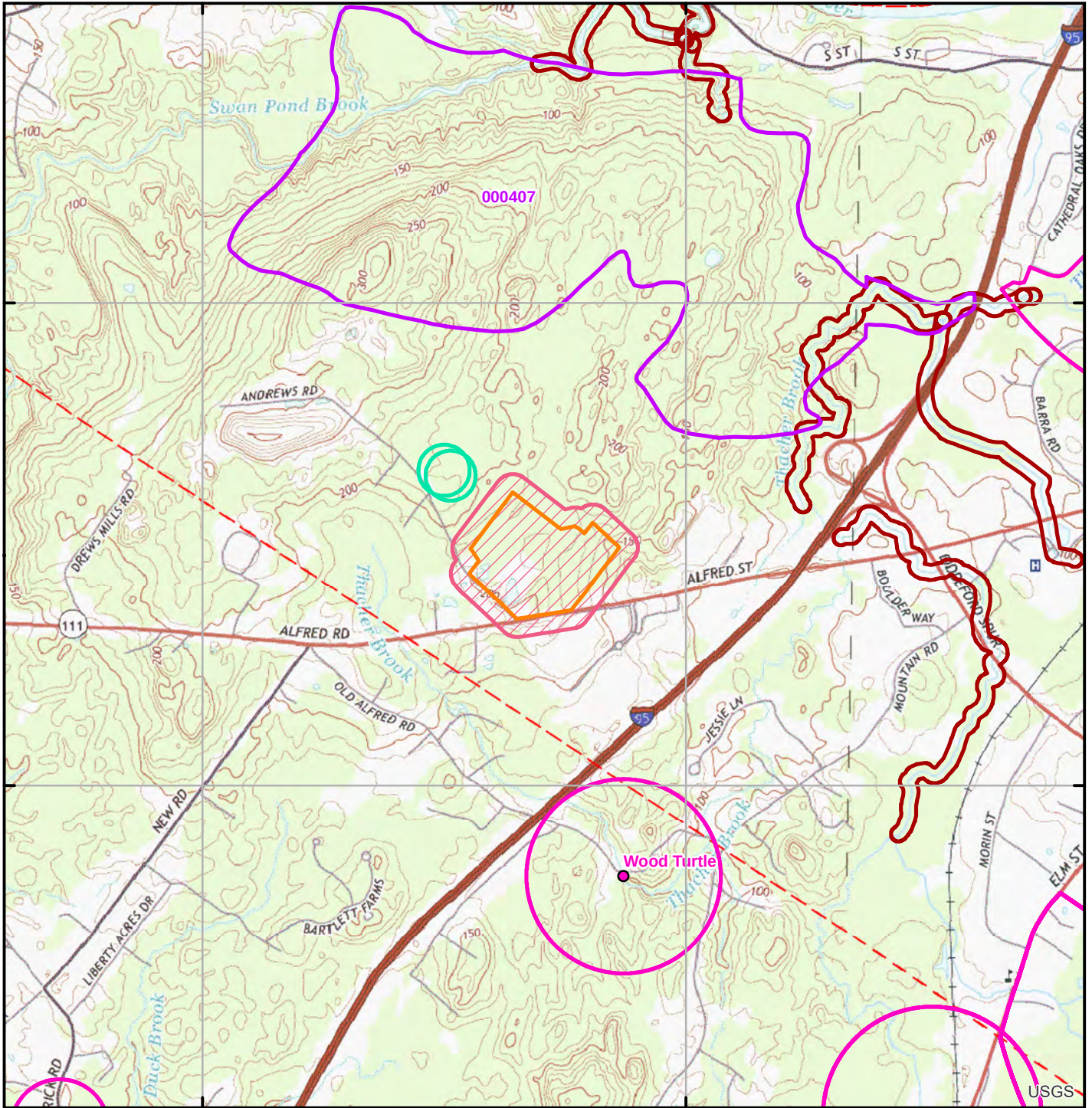
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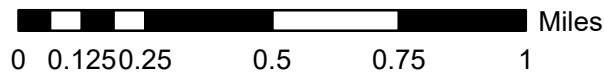
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Environmental Review of Fish and Wildlife Observations and Priority Habitats

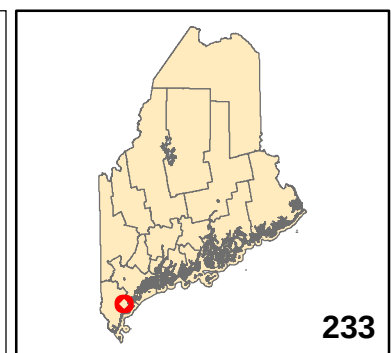
Project Name:

KGI Properties, Biddeford
(Version 1)Maine Department of
Inland Fisheries and Wildlife

Projection: UTM, NAD83, Zone 19N

Date: 3/31/2021

- | | | |
|-----------------------------------|----------------------------------|---|
| ProjectPoints | Deer Winter Area | Roseate Tern |
| ProjectLines | LUPC p-fw | Piping Plover and Least Tern |
| ProjectPolys | Cooperative DWAs | Aquatic ETSc - 2.5 mi review |
| ProjectSearchAreas - All Versions | Seabird Nesting Islands | Rare Mussels - 5 mi review |
| Maine Cliff and Talus Areas | Shorebird Areas | Maine Heritage Fish Waters |
| | Inland Waterfowl and Wading Bird | Arctic Charr Habitat |
| | 2008 lwwh - Shoreland Zoning | Redfin Pickerel and Swamp Darter Habitats - buffer100ft |
| | Tidal Waterfowl and Wading Bird | Special Concern occupied habitats - 100ft buffer |
| | Significant Vernal Pools | Wild Lake Trout Habitats |
| | Environmental Review Polygons | |



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Section 8 - Historic Sites

The Maine Historic Preservation Commission (MHPC) was contacted as part of the applicant's due diligence investigation of the property. A copy of MHPC's response letter regarding the presence of historically significant structures is attached for reference.

The applicant has contracted with Nearview, LLC to perform the recommended Phase 1 Archaeological Survey of the site. The results of the survey will be provided when available.



JANET T. MILLS
GOVERNOR

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

KIRK F. MOHNEY
DIRECTOR

April 14, 2021

Ms. Samantha Hartery
Flycatcher
Lower Falls Landing
106 Lafayette St.
Suite 1C
Yarmouth, ME 04096

Project: MHPC #0592-21

KGI Properties; Alfred Street
Potential Residential Development

Town: Biddeford, ME

Dear Ms. Hartery:

In response to your recent request, I have reviewed the information received March 31, 2021 to initiate consultation on the above referenced project in accordance with the requirements of the Maine Department of Environmental Protection.

This project is located in part on landscape that meets our predictive model for likely presence of prehistoric archaeological sites because sandy/gravelly soil and nearness to water (marsh, former lake). (The project land has not previously been surveyed for archaeological sites, but there is a prehistoric site on the similar terrain 2 km away, the nearest surveyed area. A Phase I prehistoric archaeological survey is necessary for the proposed project except for the deeper portions of previously developed gravel pits.

A list of qualified prehistoric archaeologists has been enclosed and can be found on our website:
<https://www.maine.gov/mhpc/programs/survey/approved-consultants/prehistoric>

No architectural or historic archaeological resources will be affected by this undertaking.

If you have any questions regarding archaeology, please contact Dr. Arthur Spiess of this office at Arthur.Spiess@maine.gov

If you have any questions regarding above ground properties, please contact Megan Rideout of this office at megan.m.rideout@maine.gov.

Sincerely,

Kirk F. Mohney
State Historic Preservation Officer



MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

Archaeological Survey Guidelines

Updated: June 10, 2002

This document is provided as background information to agencies, corporations, professional consultants or individuals needing contract archaeological services (also known as Cultural Resources Management archaeology) in Maine. These guidelines are based on state rules (94-089 Chapter 812).

Project Types

The vast majority of contract archaeology survey work falls into one of three categories.

Phase I surveys are designed to determine whether or not archaeological sites exist on a particular piece of land. Such work involves checking records of previous archaeology in the area, walking over the landscape to inspect land forms and look for surface exposures of soil and possible archaeological material, and the excavation of shovel test pits in areas of high probability.

Phase II surveys are designed to focus on one or more sites that are already known to exist, find site limits by digging test pits, and determine site content and preservation. Information from Phase II survey work is used by the Maine Historic Preservation Commission (MHPC) to determine site significance (eligibility for listing in the National Register of Historic Places). Phase III archaeological work, often called data recovery, is careful excavation of a significant archaeological site to recover the artifacts and information it contains in advance of construction or other disturbance.

Archaeological sites are further divided into two broad categories of culture, prehistoric (or Native American), and historic (or European-American). Different archaeological specialists are usually needed for prehistoric or historic sites because the nature of content and preservation and site locations are quite different.

Scope of Work

In responding to a project submission, the MHPC may issue a letter specifying which type of archaeological survey is needed (prehistoric, historic or both) and at what level (Phase I, II, or III). Often the response letter contains further information, such as the suspected presence of an historic site of a certain age, or a statement that only a portion of the project parcel in question is sensitive for prehistoric sites and only that portion needs archaeological survey.

Once the project applicant has one or more scopes of work (proposals) from appropriate archaeologists (see below), the applicant should submit their preferred proposal (without attached financial information or bid total) to the MHPC for approval. MHPC will not comment upon cost, but will comment on the appropriateness of the scale and scope of the work. An approval from MHPC of the scope of work is the applicant's guarantee that, if the field and laboratory work are done according to the scope, and appropriately described in writing, the results will be accepted by MHPC.

The final written report on the project must also be submitted to MHPC for review and comment.

Finding an Archaeologist

At the time that MHPC issues a letter requiring archaeological survey work, MHPC will also supply one (or more) lists of archaeologists (Levels 1 and/or 2, historic or prehistoric) appropriate to the type of work (Phase I, II, III, historic or prehistoric). Archaeologists on the Level 2 Approved Lists can do projects of any level, including Phase I archaeological survey projects. Level 1 archaeologists are restricted to doing Phase I surveys, and certain planning projects for municipal governments.

MHPC maintains lists of archaeologists interested in working in different geographic areas of Maine, and those who are qualified in different types of work. The archaeologists themselves indicate their availability (except for short-term absence) to MHPC on a periodic basis, so archaeologists on the list can be expected to respond to inquiries. The applicant should solicit proposals or bids for work from archaeologists whose names appear on the list supplied by MHPC.

These archaeologists' names are taken from lists of archaeologists approved for work in Maine by MHPC under a set of rules establishing minimal qualifications, such as previous supervisory experience in northern New England, and an appropriate graduate degree. However, the inclusion of an archaeologist on one of these lists should not be interpreted as an endorsement by the MHPC beyond these limited qualification criteria. Moreover, the MHPC cannot recommend the services of an individual archaeologist.

Project Final Report

Whatever the archaeological survey result, a final report on the project should be submitted by the applicant to the MHPC. The MHPC will review the report, and issue further guidance or issue a "clearance" letter for the project.



JANET T. MILLS
GOVERNOR

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

KIRK F. MOHNEY
DIRECTOR

**Prehistoric Archaeologists Approved List:
Review and Compliance Consulting/Contracting (Active)
LEVEL 2 (Phase I, II, III, date recovery, all phases of survey)
LEVEL 2**

Stefan Claesson, Ph.D.*
Nearview, LLC
36 Maplewood Ave
Portsmouth, NH 03801
P-207-200-7879
stefan@nearview.net

Karen Mack
TRC/Northeast Cultural Resources
1356 Washington St, Suite A
Bath, ME 04530
P-207-215-2872
kemack@treecompanies.com

Dr. Stuart Eldridge
Power Engineers, Inc.
303 US Rte 1
Freeport, ME 04032
P-207-869-1261
Stuart.Eldridge@powereng.com

Mr. Jacob A. Freedman
SEARCH, INC.
247 Sullivan Street, Suite C
Claremont, NH 03743
P-207-266-7709
Jacob@searchinc.com

Robert N. Bartone
Northeast Archaeology Research Center
382 Fairbanks Road
Farmington, ME 04938
P-207-860-4032
bartone@nearchaeology.com

Dr. Victoria Bunker
P.O. Box 16
New Durham, NH 03809-0016
P-603-776-4306
vbi@worldpath.net

Dr. Nathan Hamilton
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University of Southern Maine
Gorham, ME 04038
P-207-780-5324
casco@usm.maine.edu

David Putnam
47 Hilltop Road
Chapman, ME 04757
P-207-762-6078
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Dr. Robert Goodby
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Dublin, NH 04333
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Public Archaeology Laboratory
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Gabriel Hrynick
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PO Box 4400
Fredericton, NB Canada E3B 5A3
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Dr. Chris Clement
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Mr. Jacob Tumelaire
Independent Archaeological Consulting
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Dover, NH 03820
jtumelaire@iac-llc.net

Nathan C. Scholl
Gray & Pape
60 Valley Street, Suite 103
Providence, RI 02857
P-401-273-9900
C-717-515-5349
nscholl@graypape.com

Dr. Arthur Spiess, Ex officio
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, ME 04333
P-20-287-2789
Arthur.spiess@maine.gov
(Not available for contract work)

Dr. Christopher Donta
SWCA Environmental Consultants
15 Research Drive
Amherst, MA 01002
P-413-256-0202
Christopher.donta@swca.com

LEVEL 1 (Phase I and reconnaissance survey only)

LEVEL 1

Ms. Sarah Haugh
Tetra Tech
451 Presumpscot Street
Portland, ME 04103
P-207-358-2395
sarah.haugh@tetrattech.com

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P.O. Box 815
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clarkia@gmail.com

Ora Elquist
Public Archaeology Laboratory
26 Main Street
Pawtucket, RI 02860
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Mark Penney
The Louis Berger Group Inc.
20 Corporate Woods Blvd.
Albany, NY 12211-2370
P-518-432-9545
mpenney@louisberger.com

Mary Lynne Rainey
RGA Cultural Resource Consultants
1376 Kingstown Road
Wakefield, RI 02789
Maryllynne.rainey@verizon.net

Bertrand Pelletier
Backwoods Archaeological Resource
Consulting
40 Field Ave.
Auburn, ME 04210
Bertpelletier47@gmail.com

Inactive, Retired, No longer doing fieldwork, no longer at address given

Mr. Brian Valimont
New England Archaeology Co. LLC
128R Main Street
Plaistow, NH 03865
Newarch1@comcast.net

Ms. Edna Feighner
5 Thomas Street, Apt. 3
Concord, NH 03301
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Edward Moore
TRC/Northeast Cultural Resources
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P-207-667-4055
rwill@trcsolutions.com

Section 9 - Unusual Natural Areas

The Maine Department of Agriculture, Conservation & Forestry (MEACF) was contacted as part of the applicant's due diligence investigation of the property. A copy of MEACF's response letter regarding their review of the Maine Natural Areas Program's data system files is attached for reference.



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

April 7, 2021

Samantha Hartery
Flycatcher, LLC
Lower Falls Landing
106 Lafayette Street, Suite 1C
Yarmouth, ME 04096

Via email: sammy@flycatcherllc.com

Re: Rare and exemplary botanical features in proximity to: #21Q, Residential Subdivision, Biddeford, Maine

Dear Ms. Hartery:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received March 31, 2021 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Biddeford, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-804490
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: #21Q, Residential Subdivision, Biddeford, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Beach Plum	E	S1	G4	1933-06-21	9	Rocky coastal (non-forested, upland)
Button Sedge						
	SC	S2	G5	1880-09-06	2	<null>
	SC	S2	G5	2000-08-15	3	<null>
Creeping Spike-moss						
	E	S2	G5	1920-07-30	6	Open wetland, not coastal nor rivershore (non-forested, wetland), Old field/roadside (non-forested, wetland or upland)
Estuary Bur-marigold						
	SC	S3	G4	2009-07-30	35	Tidal wetland (non-forested, wetland)
Freshwater Tidal Marsh						
	<null>	S2	G4?	2009-07-30	1	Tidal wetland (non-forested, wetland)
Georgia bulrush						
	SC	SU	G5	2007-08-22	4	<null>
Horned Pondweed						
	SC	S2	G5	1907-08-18	10	Tidal wetland (non-forested, wetland)
Lilaeopsis						
	SC	S2	G5	2012-10-21	10	Tidal wetland (non-forested, wetland)
Mountain-laurel						
	SC	S2	G5	1991-09-28	11	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
Northern Blazing Star						
	T	S1	G5?T3	1916-08-10	3	Dry barrens (partly forested, upland)
Pale Green Orchis						
	SC	S2	G4?T4Q	2008-06-27	52	Non-tidal rivershore (non-forested, seasonally wet), Open wetland, not

Rare and Exemplary Botanical Features within 4 miles of
Project: #21Q, Residential Subdivision, Biddeford, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Parker's Pipewort						coastal nor rivershore (non-forested, wetland)
Pendulous Bulrush	SC	S3	G3	2017-08-31	33	Tidal wetland (non-forested, wetland)
Pitch Pine Bog	SC	S2	G5	2008-06-28	8	Open wetland, not coastal nor rivershore (non-forested, wetland), Old field/roadside (non-forested, wetland or upland)
Pitch Pine Woodland	<null>	S2	G3G5	2015-09-29	20	Forested wetland,Coastal non-tidal wetland (non-forested, wetland)
Pocket Swamp	<null>	S3	G2	2016-08-09	30	Rocky summits and outcrops (non-forested, upland)
Pygmyweed	<null>	S2	G5	2004	18	Forested wetland,Hardwood to mixed forest (forest, upland)
Red Maple Swamp	SC	S2S3	G5	2009-07-29	25	Open water (non-forested, wetland)
Saltmarsh False-foxglove	<null>	S5	G3G5	2007-06-05	17	Forested wetland
Scarlet Oak	SC	S3	G5	1982	8	Tidal wetland (non-forested, wetland)
Schreber's Wood-aster	SC	S3	G5	1982	9	Tidal wetland (non-forested, wetland)
Slender Blue Flag	E	S1	G5	1916-08	4	Hardwood to mixed forest (forest, upland)
	PE	SX	G4	1894-09	1	Rocky coastal (non-forested, upland)

Rare and Exemplary Botanical Features within 4 miles of
Project: #21Q, Residential Subdivision, Biddeford, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Small Reed Grass	T	S2	G4G5	1879-08	4	Tidal wetland (non-forested, wetland)
	SC	S3	G5	1998-01-01	9	Old field/roadside (non-forested, wetland or upland)
Smooth Winterberry Holly	SC	S3	G5	2000-08-15	12	Old field/roadside (non-forested, wetland or upland)
Southern Slender Ladies'-tresses	SC	S3	G5	1916-08-10	10	Forested wetland
	SC	S3	G5	2004	36	Forested wetland
Spongy-leaved Arrowhead	PE	SH	G5T4T5	1918-08-27	1	Dry barrens (partly forested, upland)
	SC	S3	G5T4	2012-10-21	42	Tidal wetland (non-forested, wetland)
Sweet Pepper-bush	SC	S2	G5	1917-09	9	Hardwood to mixed forest (forest, upland),Forested wetland
Water Pimpernel	SC	S3	G5T5	2012-10-21	26	Tidal wetland (non-forested, wetland)
White-topped Aster	E	S1	G5	1916-08-10	4	Dry barrens (partly forested, upland)
Yellow Wild Indigo	PE	SH	G5	1960-06-21	2	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)

STATE RARITY RANKS

- S1** Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- S2** Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3** Rare in Maine (20-100 occurrences).
- S4** Apparently secure in Maine.
- S5** Demonstrably secure in Maine.
- SU** Under consideration for assigning rarity status; more information needed on threats or distribution.
- SNR** Not yet ranked.
- SNA** Rank not applicable.
- S#?** Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

- G1** Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
- G2** Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3** Globally rare (20-100 occurrences).
- G4** Apparently secure globally.
- G5** Demonstrably secure globally.
- GNR** Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

- E** ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
- T** THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

- SC** SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
- PE** Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

Visit our website for more information on rare, threatened, and endangered species!
<http://www.maine.gov/dacf/mnap>

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
<http://www.maine.gov/dacf/mnap>

Section 10 - Buffers

The development proposes to utilize a forested buffer as a component of the project's stormwater management plan. In addition, a minimum 100-foot natural buffer (except for two proposed stormwater outfall pipes) will be maintained upgradient of an unnamed stream, which forms a portion the development's northeast property boundary.

Section 11 - Soils

Mark Hampton, CSS of Mark Hampton Associates, Inc completed a Class "B" High Intensity Soils Survey for the project site. A copy of the report is attached, herein. The related soil map is included within the design plan set.



MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

6835

Andrews Road
Biddeford
New Life Christian Fellowship

Soil Narrative Report

DATE: Soil Profiles observed on September 24, 2021

BASE MAP: Base plan provided by Terradyne Consultants LLC scale 1 inch equals 100 feet and two foot contours.

GROUND CONTROL: Soil survey boundaries located by Mark Hampton Associates, Inc. for Class B Soil Survey

Class B-High Intensity Soil Survey (Minimum Standards)

Mapping units of 1 acre or less.
Scale of 1"= 200 feet or larger.
Up to 25% inclusions in mapping units of which no more than 15% may be dissimilar soils.
Ground Control – test pits located by means of compass by chaining, pacing or taping from known control points
Base Map –2 foot contour intervals

Provided:

Mapping units of 1 acre or less
Base map scale of 1"= 100 feet.
Up to 25 percent inclusions in mapping units of which no more than 15 percent is dissimilar soils.
Baseline information and test pits located by gps equipment with accuracy to less than 3 feet.
Ground topographic survey with one foot contours and ground control provided.

The accompanying soil profile descriptions, soil map, and this soil narrative report were done in accordance with the standards adopted by the Maine Association of Professional Soil Scientists, and the Maine Board of Certification of Geologists and Soil Scientists.

 C.S.S. #216, L.S.E. #263 9/24/21
Mark J. Hampton Date





MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

6835

Andrews Road
Biddeford ME
New Life Christian Fellowship

Adams
(Typic Haplorthods)

SETTING

PARENT MATERIAL:	Derived from glacial-fluvial, glacio-lacustrine sand.
LANDFORM:	Outwash plains, deltas, and terraces
POSITION IN LANDSCAPE:	Sidehill, shoulders and plains
SLOPE GRADIENT RANGES:	(A) 0-3%, (B) 3-8%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS:	Well drained. Depth to seasonal high watertable greater than 4 feet throughout the year.
-----------------	--

TYPICAL PROFILE:	<u>Surface Layer:</u> Dark Brown loamy sand, 0-8"
	<u>Subsurface Layer:</u> Red Brown loamy sand, 8-20"
	<u>Subsoil Layer:</u> Yellow-brown loamy sand, 20-30"
	<u>Substratum:</u> Gray-brown sand, 30-72"

HYDROLOGIC GROUP:	Group A
SURFACE RUNOFF:	Very slow to medium
PERMEABILITY:	Rapid or very rapid
DEPTH TO BEDROCK:	Greater than 65 inches
HAZARD TO FLOODING:	None

INCLUSIONS

(Within Mapping Unit)

CONTRASTING:	Croghan, Made Land, Skerry, Naumburg
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USE AND MANAGEMENT

DEVELOPEMENT:	There are no limiting factors for building site development.
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MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

6835

Andrews Road
Biddeford ME
New Life Christian Fellowship

Hermon
(Typic Haplorthods)

SETTING

PARENT MATERIAL:	Derived from loose loamy glacial till.
LANDFORM:	Till plains, hills and ridges.
POSITION IN LANDSCAPE:	Plains and middle levels.
SLOPE GRADIENT RANGES:	(A) 0-3%, (B) 3-8%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS:	Well drained	
TYPICAL PROFILE:	<u>Surface Layer:</u>	Brown, fine sandy loam, 0-9"
	<u>Subsurface Layer:</u>	Dark reddish brown, stony, fine sandy loam, 9-16"
	<u>Subsoil Layer:</u>	Yellow brown, gravelly loamy sand 16-32"
	<u>Substratum:</u>	Olive brown, Gravelly fine sand, 32-65"
HYDROLOGIC GROUP:	Group A	
SURFACE RUNOFF:	Moderately Rapid	
PERMEABILITY:	Moderate in solum, slow in substratum	
DEPTH TO BEDROCK:	Greater than 65 inches	
HAZARD TO FLOODING:	None	

INCLUSIONS
(Within Mapping Unit)

CONTRASTING: Brayton, Adams, MadeLand

USE AND MANAGEMENT

Development: There are few limiting factors for building site development





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6835

Andrews Road
Biddeford
New Life Christian Fellowship

Man Made Land

SETTING

PARENT MATERIAL:	Derived from various materials found onsite and offsite.
LANDFORM:	N/A
POSITION IN LANDSCAPE:	N/A
SLOPE GRADIENT RANGES:	(A) 0-3%, (D) 15-25%

COMPOSITION AND SOIL CHARACTERISTICS

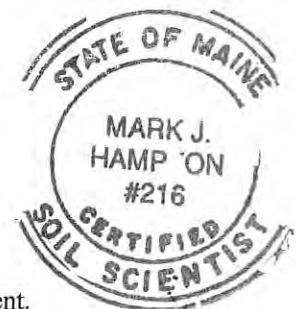
DRAINAGE CLASS:	Generally poorly to moderately well drained but varies.
TYPICAL PROFILE:	Varies in profile and onsite from fine loamy sand to gravelly loamy sand
HYDROLOGIC GROUP:	Group C
SURFACE RUNOFF:	Usually very slow due to compaction
PERMEABILITY:	Slow to very slow
DEPTH TO BEDROCK:	Greater than 65 inches
HAZARD TO FLOODING:	None

INCLUSIONS (Within Mapping Unit)

CONTRASTING:

USE AND MANAGEMENT

Development: There may be limiting factors for building site development.





MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

6835

Andrews Road
Biddeford ME
New Life Christian Fellowship

Skerry
(Aquic Haplorthods)

SETTING

PARENT MATERIAL: Derived from compact loamy glacial till.
LANDFORM: Till plains, hills and ridges.
POSITION IN LANDSCAPE: Plains and middle levels.
SLOPE GRADIENT RANGES: (B) 3-8%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS: Moderately well drained

TYPICAL PROFILE: Surface Layer: Gray (10YR 6/1), fine sandy loam, 0-7
Subsurface Layer: Dark reddish brown (5YR 3/3), fine sandy loam, 7-20"
Subsoil Layer: Yellow brown (10YR 5/4), stony fine sandy loam 20-28"
Substratum: Olive brown (2.5Y5/4), stony fine sandy loam, 28-65"

HYDROLOGIC GROUP: Group C
SURFACE RUNOFF: Moderately Rapid
PERMEABILITY: Moderate in solum, slow in substratum
DEPTH TO BEDROCK: Greater than 65 inches
HAZARD TO FLOODING: None

INCLUSIONS
(Within Mapping Unit)

CONTRASTING: Lyman-Tunbridge, Adams, Madeland



USE AND MANAGEMENT

Development: The limiting factor for building development is wetness due to the presence of a seasonally high watertable on top of dense glacial basal till for a portion of the year. Proper foundation drainage or site modifications are recommended.



MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

6835

Andrews Road
Biddeford
New Life Christian Fellowship

Brayton
(Aeric Epiaquepts)

SETTING

PARENT MATERIAL: Derived from dense glacial till
LANDFORM: Toeslopes and depressions in glaciated uplands
POSITION IN LANDSCAPE: Lower positions on landform
SLOPE GRADIENT RANGES: (A) 0-3%,

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS: Poorly drained with a perched watertable from 0.0 to 1.0 feet below the surface at some time from October to May or during periods of heavy precipitation.

TYPICAL PROFILE: Surface Layer: Dk gray, fine sandy loam 0-5",
Subsurface Layer: Gray fine sandy loam, 5-15",
Subsoil Layer: Grayish brown fine sandy loam, 15-24"
Substratum: Olive fine sandy loam, 24-65",

HYDROLOGIC GROUP: Group C
SURFACE RUNOFF: Moderate to moderately slow
PERMEABILITY: Moderate and moderately slow
DEPTH TO BEDROCK: Greater than 65 inches
HAZARD TO FLOODING: None

INCLUSIONS (Within Mapping Unit)

CONTRASTING: Colonel, Dixfield, Lyman-Tunbridge

USE AND MANAGEMENT

Development: The limiting factor for building site development is wetness due to the presence of an extremely high watertable for a portion of the year. This soil is not suitable for development without alteration, which may require additional permitting.

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SOIL PROFILE / CLASSIFICATION INFORMATION**DETAILED DESCRIPTION OF
SUBSURFACE CONDITIONS AT PROJECT SITES**

Project Name: Andrews Road Applicant Name: New Life Christian Fellowship Project Location (municipality): Biddeford

Exploration Symbol # SS-1 ☐ Test Pit ☒ Boring ☐ Probe
 " Organic horizon thickness Ground surface elev. _____
 " Depth of exploration or to refusal _____

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Black	
10		Firm	Gray	
20	Sandy Loam			Common and Distinct
30				
40				
50				
60				

Soil Details by S.E. Soil Classification: 3 E Slope: 2 Limiting Factor: 6 " ☒ Groundwater
 Profile Condition Percent Depth ☒ Restrictive Layer
 S.S. Soil Series/Phase Name: Brayton PD ☒ Hydric Hydrologic
☐ Non-hydric Soil Group

Exploration Symbol # SS-2 ☐ Test Pit ☒ Boring ☐ Probe
 " Organic horizon thickness Ground surface elev. _____
 " Depth of exploration or to refusal _____

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Black	
10		Firm	Gray	
20	Sandy Loam			Common and Distinct
30				
40				
50				
60				

Soil Details by S.E. Soil Classification: 3 E Slope: 2 Limiting Factor: 6 " ☒ Groundwater
 Profile Condition Percent Depth ☒ Restrictive Layer
 S.S. Soil Series/Phase Name: Brayton PD ☒ Hydric Hydrologic
☐ Non-hydric Soil Group

Exploration Symbol # SS-3 ☐ Test Pit ☒ Boring ☐ Probe
 " Organic horizon thickness Ground surface elev. _____
 " Depth of exploration or to refusal _____

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Dark Brown	
10		Friable	Red Brown	
20	Coarse Sandy Loam			None Noted
30				
40	Stony Sandy Loam	Friable	Tan	
50				
60				

Soil Details by S.E. Soil Classification: 4 B Slope: 2 Limiting Factor: >48 " ☐ Groundwater
 Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: Hermon WD ☐ Hydric Hydrologic
☒ Non-hydric Soil Group

Exploration Symbol # SS-4 ☐ Test Pit ☒ Boring ☐ Probe
 " Organic horizon thickness Ground surface elev. _____
 " Depth of exploration or to refusal _____

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Dark Brown	
10		Friable	Red Brown	
20	Coarse Sandy Loam			None Noted
30				
40	Stony Sandy Loam	Friable	Tan	
50				
60				

Soil Details by S.E. Soil Classification: 4 B Slope: 6 Limiting Factor: >48 " ☐ Groundwater
 Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: Hermon WD ☐ Hydric Hydrologic
☒ Non-hydric Soil Group

INVESTIGATOR INFORMATION AND SIGNATURE

Signature: [Signature] Date: 9/24/2021
 Name Printed: Mark J. Hampton Cert/Lic/Reg. #: 263/216
 Title: ☒ Licensed Site Evaluator ☒ Certified Soil Scientist ☐ Certified Geologist ☐ Professional Engineer



SOIL PROFILE / CLASSIFICATION INFORMATION**DETAILED DESCRIPTION OF
SUBSURFACE CONDITIONS AT PROJECT SITES**

Project Name: Andrews Road Applicant Name: New Life Christian Fellowship Project Location (municipality): Biddeford

Exploration Symbol # SS-5 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Black	
10		Firm	Gray	
20	Sandy Loam			Common and Distinct
30				
40				
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☒ Groundwater
 >> Profile Condition Percent Depth ☒ Restrictive Layer
 S.S. Soil Series/Phase Name: ☒ Hydric Hydrologic
 >> Brayton PD ☐ Non-hydric Soil Group

Exploration Symbol # SS-6 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Varies	Friable	Varies	
10	Varies	Friable	Varies	
20				
30	Varies	Varies	Varies	Common and Distinct
40				
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☐ Groundwater
 >> Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: ☐ Hydric Hydrologic
 >> Made Land ☐ Non-hydric Soil Group

Exploration Symbol # SS-7 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Varies	Varies	Mixed	
10	Varies	Varies	Mixed	
20				Common and Distinct
30	Varies	Varies	Varies	
40				
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☐ Groundwater
 >> Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: ☒ Hydric Hydrologic
 >> Made Land ☒ Non-hydric Soil Group

Exploration Symbol # SS-8 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Varies	Varies	Mixed	
10	Varies	Varies	Mixed	
20				Common and Distinct
30	Varies	Varies	Varies	
40				
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☐ Groundwater
 >> Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: ☐ Hydric Hydrologic
 >> Made Land ☐ Non-hydric Soil Group

INVESTIGATOR INFORMATION AND SIGNATURE

Signature: Mark J. Hampton Date: 9/24/2021
 Name Printed: Mark J. Hampton Cert/Lic/Reg. #: 263/216
 Title: ☒ Licensed Site Evaluator ☒ Certified Soil Scientist ☐ Certified Geologist ☐ Professional Engineer



SOIL PROFILE / CLASSIFICATION INFORMATION**DETAILED DESCRIPTION OF
SUBSURFACE CONDITIONS AT PROJECT SITES**

Project Name: Andrews Road Applicant Name: New Life Christian Fellowship Project Location (municipality): Biddeford

Exploration Symbol # SS-9 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Black	
10		Firm	Gray	
20	Sandy Loam			Common and Distinct
30				
40				
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☒ Groundwater
 >> 3 E 2 6 " ☒ Restrictive Layer
 Profile Condition Percent Depth ☐ Bedrock
 S.S. Soil Series/Phase Name: ☒ Hydric Hydrologic
 >> Brayton PD ☐ Non-hydric Soil Group

Exploration Symbol # SS-10 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Varies	Friable	Varies	
10				
20	Varies	Friable	Varies	
30				
40	Varies	Varies	Varies	Common and Distinct
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☐ Groundwater
 >> 2 " ☐ Restrictive Layer
 Profile Condition Percent Depth ☐ Bedrock
 S.S. Soil Series/Phase Name: ☐ Hydric Hydrologic
 >> Made Land ☐ Non-hydric Soil Group

Exploration Symbol # SS-11 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10		Friable	Brown	
20	Loamy Sand			None Noted
30				
40	Sand	Friable	Tan	
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☐ Groundwater
 >> 5 B 6 >48 " ☐ Restrictive Layer
 Profile Condition Percent Depth ☐ Bedrock
 S.S. Soil Series/Phase Name: ☐ Hydric Hydrologic
 >> Adams WD ☒ Non-hydric Soil Group

Exploration Symbol # SS-12 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Loamy Sand	Friable	Dark Brown	
10		Friable	Brown	
20	Loamy Sand			None Noted
30				
40	Sand	Friable	Tan	
50				
60				

Soil Details by S.E. Soil Classification Slope Limiting Factor ☐ Groundwater
 >> 5 B 3 >48 " ☐ Restrictive Layer
 Profile Condition Percent Depth ☐ Bedrock
 S.S. Soil Series/Phase Name: ☐ Hydric Hydrologic
 >> Adams WD ☒ Non-hydric Soil Group

INVESTIGATOR INFORMATION AND SIGNATURE

Signature: Mark J. Hampton Date: 9/24/2021
 Name Printed: Mark J. Hampton Cert/Lic/Reg. #: 263/216
 Title: ☒ Licensed Site Evaluator ☒ Certified Soil Scientist ☐ Certified Geologist ☐ Professional Engineer



SOIL PROFILE / CLASSIFICATION INFORMATION**DETAILED DESCRIPTION OF
SUBSURFACE CONDITIONS AT PROJECT SITES**

Project Name: Andrews Road	Applicant Name: New Life Christian Fellowship	Project Location (municipality): Biddeford
--------------------------------------	---	--

Exploration Symbol # SS-13 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Black	
10		Firm	Gray	
20	Sandy Loam			Common and Distinct
30				
40				
50				
60				

Soil Details by S.E. **3** **E** **2** **6** " ☒ Groundwater
 Profile Condition Percent Depth ☒ Restrictive Layer
 S.S. Soil Series/Phase Name: **Brayton PD** ☒ Hydric ☐ Non-hydric Hydrologic
 Soil Group

Exploration Symbol # SS-14 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Dark Brown	
10				
20	Coarse Sandy Loam	Friable	Brown	
30			Tan	None Noted
40	Stony Sandy Loam	Friable		
50				
60				

Soil Details by S.E. **4** **B** **10** **>48** " ☐ Groundwater
 Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: **Hermon WD** ☐ Hydric ☐ Non-hydric Hydrologic
 Soil Group

Exploration Symbol # SS-15 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Dark Brown	
10	Sandy Loam	Friable	Brown	
20		Firm	Olive	Common and Distinct
30	Sandy Loam			
40				
50				
60				

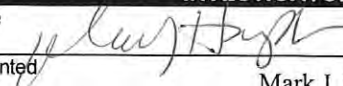
Soil Details by S.E. **3** **C** **6** **18** " ☒ Groundwater
 Profile Condition Percent Depth ☒ Restrictive Layer
 S.S. Soil Series/Phase Name: **Skerry MWD** ☐ Hydric ☒ Non-hydric Hydrologic
 Soil Group

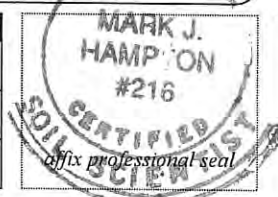
Exploration Symbol # SS-16 ☐ Test Pit ☒ Boring ☐ Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Redox Features
0	Sandy Loam	Friable	Black	
10		Firm	Gray	
20	Sandy Loam			Common and Distinct
30				
40				
50				
60				

Soil Details by S.E. **3** **E** **3** **6** " ☐ Groundwater
 Profile Condition Percent Depth ☐ Restrictive Layer
 S.S. Soil Series/Phase Name: **Brayton PD** ☐ Hydric ☐ Non-hydric Hydrologic
 Soil Group

INVESTIGATOR INFORMATION AND SIGNATURE

Signature 	Date 9/24/2021
Name Printed Mark J. Hampton	Cert/Lic/Reg. # 263/216
Title ☒ Licensed Site Evaluator ☒ Certified Soil Scientist ☐ Certified Geologist ☐ Professional Engineer	





Wetland Identification and Mapping Report Andrews Road and Alfred Street, Biddeford

Date: October 26, 2021

To: Richard Meek, P.E.
Terradyn Consultants, LLC
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Summary:

Wetlands were found, flagged, delineated and located. The wetlands are formed in excavated and disturbed soils and undisturbed forested areas. The only Wetlands of Special Significance are associated with a perennial stream drainage in the northeast corner of the property. All other wetlands have no buffers of no-disturbance, but are regulated with regard to further filling and/or disturbance, regardless of origin. There are no Significant Vernal Pool Habitats on the property.

Date(s) of the Investigation: August 11, 17 and 18, 2021

Location of the Investigation:

The area investigated is located on the northeasterly corner of the intersection of Alfred Street and Andrews Road, Biddeford. The parcel is identified as Lot 6 on Biddeford Tax Map 2, and is approximately 50 acres in size.

Purposes of Investigation:

The purposes of the wetland investigation are to identify and describe wetlands according to definitions in the *Natural Resources Protection Act* (the *NRPA*); to determine if specific alteration and filling permits are required and if there are any setbacks required

under the *NRPA*; to determine the Maine DEP jurisdictional status of any streams, and to identify any potential significant vernal pools.

Method of Investigation:

A literature search and on-site investigations were made. The *Land Use Permitting Feasibility & Planning Report for Biddeford Apartments, Biddeford, Maine* by Flycatcher, LLC, dated May 2021 was reviewed. Erik Lema, botanist, of Basswood Environmental LLC, assisted in the field determination of wetland/upland boundaries.

The investigations were performed following the guidelines described in the 1987 Corps of Engineers Delineation Manual and the 2009 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. This procedure uses a multiple parameter approach that requires the presence of three primary components for an area to be identified as a wetland: 1) hydric soils; 2) predominance of hydrophytic vegetation; and 3) wetland hydrology.

A reconnaissance-level site map with LIDAR topography and approximate wetland locations was used in the field during the investigation.

Boundary positions were flagged on the site and locations were made with a Trimble Geo-XH 6000 GPS device, capable of sub-meter accuracy. The results were post-processed for accuracy and an AutoCAD drawing file of the results was sent to Terradyn Consultants.

Results of the Investigation:

The property is located on a dissected terrace southerly and southeasterly of low ridges (See Figure 1). Drainage is generally southerly to Thatcher Brook. Portions of the property were mined for sand and gravel in the past and there are significant site disturbances, including removal of top soils and subsoils, man-made hydric soil conditions, excavation below the water table resulting in ponding of water, piles of soil and the trenching of drainage ways. Large portions of the property have seen no such disturbance and remain forested.

The area is depicted as an association of Lyman Rock Outcrop, Chocorua peat, Hermon sandy loam and Brayton/Westbury very stony fine sandy loam on the *National Cooperative Soil Survey* (see Figure 2). These are soils formed in glacial till. The Hermon deposit would have been the mined material. The Chocorua is a hydric soil and the Brayton/Westbury can be hydric in low lying areas.

There is a drainage flowing across the northeasterly corner of the property that is regulated as a DEP jurisdictional stream. It is an incised drainage feature with minor forested wetlands along the stream channel. According to the *NRPA*, these wetlands are

Wetlands of Special Significance (WOSS). A buffer of no-disturbance needs to be maintained from the stream channel. Unless a reduction is allowed by Permit, the buffer must be 75 feet wide.

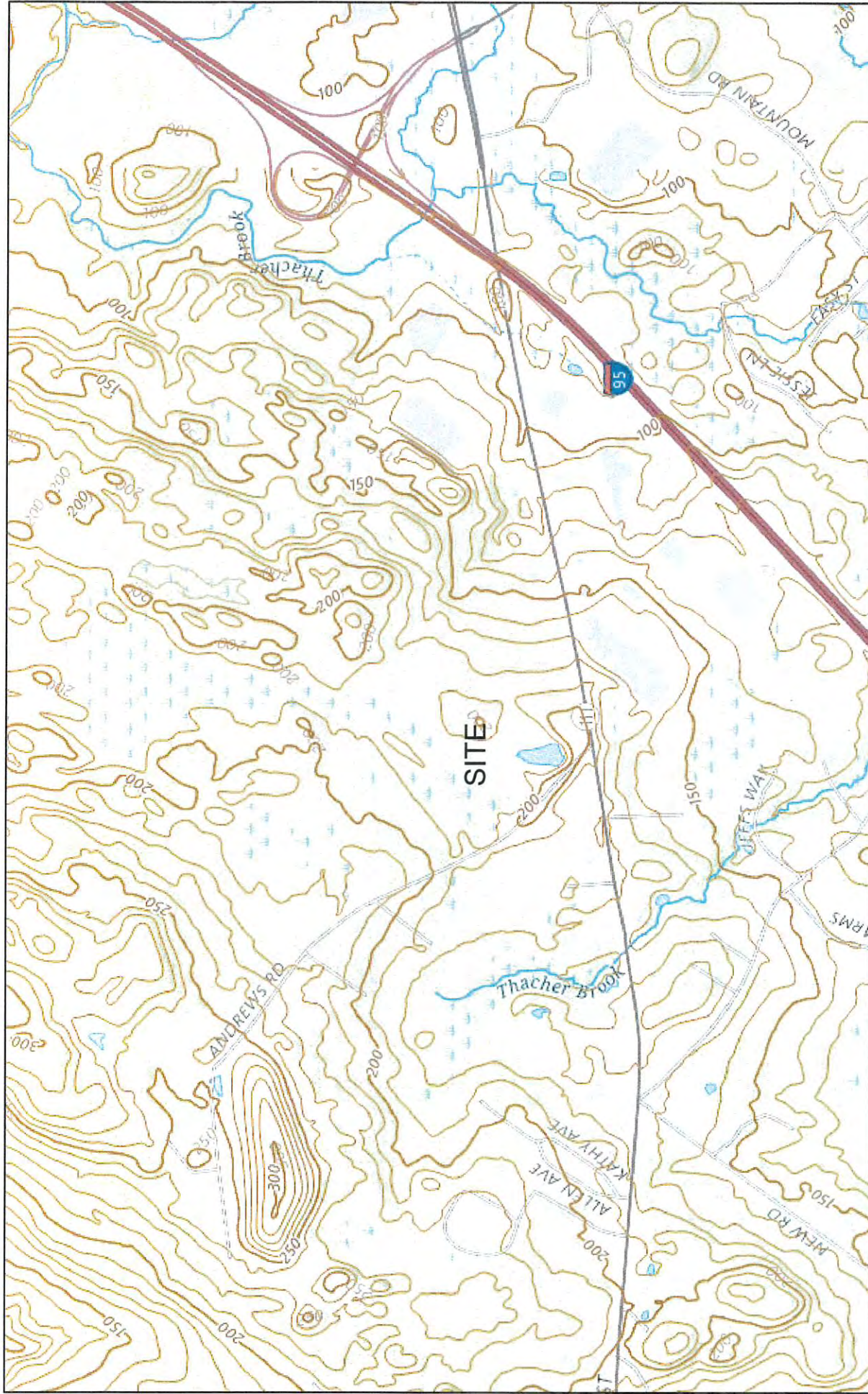
No other wetlands on the site are WOSS, according to the NRPA. Wetlands in the forest are palustrine, forested wetlands. The wetlands around the perimeter of the excavated pond and in the areas of low gradient that were stripped of soils are palustrine, wet meadow, forested and scrub-shrub wetlands. These host a variety of hydrophytic and disturbed area vegetation, and in no location are emergent species in excess of 20,000 square feet. There are no buffers of no-disturbance associated with these wetlands. Filling and/or disturbance of any wetlands on the property is regulated by the NRPA.

As detailed in the *Report* by Flycatcher, LLC, there are no Significant Vernal Pool Habitats on the property.



Mark Cenci
Maine Certified Geologist #467

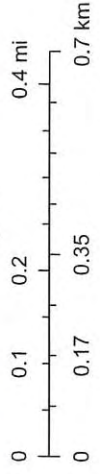
Figure 1.



10/26/2021 4:08:56 PM

- Normal Intermediate Contours
- Normal Index Contours

1:18,056



USGS The National Map: National Boundaries Dataset, 3DEP Elevation

USGS
2021 USGS

Soil Map—York County, Maine
(Figure 2.)



MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Area of Interest (AOI)	 Stony Spot
 Soils	 Very Stony Spot
 Soil Map Unit Polygons	 Wet Spot
 Soil Map Unit Lines	 Other
 Soil Map Unit Points	 Special Line Features
 Special Point Features	
 Blowout	Water Features
 Borrow Pit	 Streams and Canals
 Clay Spot	Transportation
 Closed Depression	 Ralls
 Gravel Pit	 Interstate Highways
 Gravelly Spot	 US Routes
 Landfill	 Major Roads
 Lava Flow	 Local Roads
 Marsh or swamp	Background
 Mine or Quarry	 Aerial Photography
 Miscellaneous Water	
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: York County, Maine
Survey Area Data: Version 20, Aug 31, 2021

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

Date(s) aerial images were photographed: Dec 31, 2009—Sep 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AdB	Adams loamy sand, 0 to 8 percent slopes	4.7	1.5%
BsB	Brayton and Westbury very stony fine sandy loams, 0 to 8 percent slopes	37.4	12.0%
BuB	Buxton silt loam, 3 to 8 percent slopes	8.2	2.6%
BuC	Buxton silt loam, 8 to 15 percent slopes	7.9	2.5%
Ch	Chocorua peat	11.0	3.5%
CrB	Croghan loamy fine sand, 0 to 8 percent slopes, wooded	9.3	3.0%
HmB	Hermon sandy loam, 0 to 8 percent slopes, very stony	73.8	23.6%
HmC	Hermon sandy loam, 8 to 15 percent slopes, very stony	7.4	2.4%
LnB	Lyman loam, 3 to 8 percent slopes, rocky	4.4	1.4%
LyB	Lyman-Rock outcrop complex, 3 to 8 percent slopes	6.6	2.1%
LyC	Lyman-Rock outcrop complex, 8 to 15 percent slopes	60.5	19.4%
LyE	Lyman-Rock outcrop complex, 15 to 80 percent slopes	4.4	1.4%
Pg	Pits, gravel	27.9	8.9%
Ra	Raynham silt loam	2.2	0.7%
Sc	Scantic silt loam, 0 to 3 percent slopes	9.6	3.1%
SkB	Skerry fine sandy loam, 0 to 8 percent slopes	2.7	0.9%
SrB	Skerry fine sandy loam, 0 to 8 percent slopes, very stony	34.6	11.1%
Totals for Area of Interest		312.3	100.0%

Section 12 – Stormwater Management

The stormwater management report and calculations are provided under separate cover.



Pineland

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New Gloucester, ME 04260

Portland

565 Congress Street, Suite 201
Portland, ME 04101

BIDDEFORD RESIDENTIAL
ANDREWS RD, BIDDEFORD, MAINE

STORMWATER MANAGEMENT REPORT

PREPARED FOR:

DEVINE CAPITAL, LLC
30 MILK ST., THIRD FLOOR
PORTLAND, ME 04101

PREPARED BY:

TERRADYN CONSULTANTS LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260

AUGUST 2022

Introduction

The following Stormwater Management Report has been prepared for Devine Capital, LLC to address the potential impacts associated with this project due to the proposed modification in stormwater runoff characteristics. The stormwater management controls that are outlined in this plan were designed to suit the proposed development and comply with applicable regulatory requirements.

Existing Conditions

The project site consists of approximately 44.53 acres of undeveloped land located in Biddeford near the intersection of Andrews Road and Alfred Street (Route 111). The parcel is bounded by residential uses, commercial uses, a utility corridor and other undeveloped land. Portions of the site were utilized for gravel extraction.

Slopes on the site generally range between 0 and 15% with portions of the site draining to internal depressions created as part of the gravel extraction. The remainder of the site generally drains from west (Andrews Rd.) to east towards an unnamed stream which forms the northeastern property boundary.

The unnamed stream is tributary of Thatcher Brook. Thatcher Brook is listed in Chapter 502 as an Urban Impaired Stream. The proposed development area is not located in an identified flood zone per the FEMA Flood Insurance Rate Map for the City of Biddeford, Community Panel 2301450008B.

Soils

Soil characteristics were obtained from the Class B High Intensity Soil Survey completed by Mark Hampton Associates, Inc. The Hydrologic Soil Groups (HSG), as classified by USDA – Natural Resources Conservation Service, are as follows:

Soil Name	Slope (%)	HSG
Adams (A)	0-3	A
Adams (B)	3-8	A
Brayton (A)	0-3	D
Hermon (C)	8-15	A
Skerry (B)	3-8	C/D

Proposed Site Improvements

The applicant intends to construct a multi-family residential development consisting of nine 24-unit apartment buildings, a clubhouse, mail kiosk, maintenance building, eight detached garages, surface parking, dog park, community garden and interconnected sidewalks.

When completed the proposed development will consist of approximately 18.13 acres of disturbance area including approximately 8.06 acres of new impervious area.

Pre-Development Conditions

The pre-development watershed plan consists of seven (7) subcatchments, labeled 1A, 1B, 2, 3, 4A, 4B and 4C. Runoff from the seven subcatchments is routed via overland flow to four (4) Study Points identified for comparing peak runoff rates from the site.

Subcatchment 1A consists of approximately 11.8 acres of mostly forested land which will not drain to the proposed BMP in the post-development condition. Subcatchment 1B consists of approximately 10.2 acres of mostly forested land which will drain to the proposed BMP in the post-development condition. Subcatchments 1A and 1B drain to Study Point 1. Study Point 1 is in the southeast portion of the property and eventually discharges to an unnamed stream.

Subcatchment 2 consists of approximately 7.6 acres of the property which drains to Study Point 2, an internally drained depression created as part of the gravel extraction process.

Subcatchment 3 consists of approximately 6.0 acres of the property which drains to Study Point 3, an internally drained depression, which consists of wetlands and upland areas.

Subcatchment 4A consists of approximately 7.8 acres of mostly forested wetland which will not include disturbance as part of this project. Subcatchment 4B consists of approximately 0.2 acre of forested wetland which will not include disturbance as part of this project. Subcatchment 4C consists of approximately 3.7 acres of mostly forested land which will include disturbance as part of this project. Subcatchments 4A, 4B and 4C drain to Study Point 4. Study Point 4 is located on the northwestern property boundary.

Post-Development Conditions

The overall-post-development watershed area is consistent with the pre-development watershed area. However, the pre-development subcatchments have been divided into smaller subcatchment areas to reflect the changes in stormwater runoff due to the proposed development.

Study Point 1: Post-development subcatchment 11 represents the mostly undeveloped portion of land matching pre-development subcatchment 1A. Subcatchment 12 depicts the land area contributing overland stormwater runoff to proposed gravel wetland 12P. Subcatchment 13 includes the portion of development contributing stormwater runoff to proposed gravel wetland 12P via storm drainage pipe. Subcatchment 14 includes the portion of development contributing stormwater runoff to proposed gravel wetland 14P.

Study Point 2: Post-development subcatchment 21 represents the remainder of land within pre-development subcatchment 2.

Study Point 3: Post-development subcatchments 31 and 32 represent the remainder of land within pre-development subcatchment 3.

Study Point 4: Subcatchments 4A and 4B are unchanged from the pre-development condition. Post-development subcatchment 41 represents the developed condition of pre-development subcatchment 4C.

Regulatory Requirements

Basic Standard - Chapter 500, Section 4(B)

Since the project will disturb more than one (1) acre of land area, MDEP Basic Standards apply. The Basic Standard requires that the MDEP erosion & sedimentation control, inspection & maintenance, and housekeeping standards are met. Additionally, the site grading or other construction activity shall not

impede or otherwise alter drainageways so as to have an unreasonable adverse impact on a wetland or waterbody, or an adjacent downslope parcel.

A site-specific Erosion & Sedimentation Control Plan has been developed for the project. Means and methods to control erosion and sedimentation during and after construction are detailed in the erosion control plan narrative and construction details, which are included directly on the project drawings for ease of reference during construction.

General Standard - Chapter 500, Section 4(C)

Since the project will create more than one (1) acre of impervious surface, MDEP General Standards apply. The General Standard requires that a project's stormwater management system include treatment measures that will mitigate for 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. Treatment of no less than 95% of the impervious area and no less than 80% of the developed area is required to meet the standard.

Two proposed gravel wetlands and a forested buffer will be utilized to meet the treatment requirements of the general standard. The sizing and treatment calculations for the gravel wetlands are located in Appendix 4.

- The project includes 8.060 acres of impervious area. To meet the general standard, 7.657 acres (95%) is required to be treated. The site's proposed BMPs provide treatment for 7.956 acres (98.71%) of impervious area.
- The project includes 18.133 acres of developed area. To meet the general standard, 14.506 acres (80%) is required to be treated. The site's proposed BMPs provide treatment for 14.558 acres (80.28%) of developed area.

Flooding Standard - Chapter 500, Section 4(F)

Since the project will create more than three (3) acres of impervious surface, MDEP Flooding Standards apply. The Flooding Standard requires that a project's stormwater management system detain, retain or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.

As such, a runoff evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software (Version 10.0) was utilized to perform the calculations.

Runoff curve numbers were determined for each subcatchment by measuring the area of each hydrologic soil group within each type of land cover. Weighted curve numbers were then calculated using curve numbers for various cover types and hydrologic soil groups, assuming "good" conditions as defined in U.S. Soil Conservation Service (SCS) publications. Times of concentration and travel times were determined from site topographic maps in accordance with SCS procedures. A maximum length of 150 feet was used for sheet flow. A minimum time of concentration of six minutes (0.1 hr.) was used for each subcatchment.

The 24-hour rainfall values utilized in the hydrologic model were obtained from Appendix H of MDEP's Chapter 500 rules. The rainfall values for York County are as follows:

Storm Frequency Precipitation (in./24 hr)	
2-year	3.3
10-year	4.9
25-year	6.2

The following table summarizes the results of stormwater calculations for the design storm events for the project areas:

Stormwater Runoff Summary Pre-Development vs. Post-Development						
Study Point #	2-Year/24Hr (cfs)		10-Year/24Hr (cfs)		25-Year/24Hr (cfs)	
	Pre	Post	Pre	Post	Pre	Post
SP-1	0.3	0.3	3.0	3.0	7.7	7.1
SP-2	0.0	0.0	0.0	0.0	0.0	0.0
SP-3	0.0	0.0	0.0	0.0	0.0	0.0
SP-4	4.0	4.0	8.1	8.1	11.7	11.7

Urban Impaired Stream Standard – Chapter 500, Section 4(E)

As the proposed development is tributary to Thatcher Brook which is listed by the Maine Department of Environmental Protection as an Urban Impaired Stream within Chapter 502, the project will be required to meet or exceed the requirements of the Urban Impaired Stream Standard as listed in Section 4(E) of Chapter 500. The Urban Impaired Stream Standard requires a project to either pay a compensation fee or mitigate project impacts by reducing or eliminating an off-site or on-site pre-development impervious stormwater source.

The applicant will meet the Urban Impaired Stream standard by paying the compensation fee pursuant to Chapter 501.3.A.1.

Preliminary Urban Impaired Stream Compensation Fee			
	Compensation Fee per Acre	Acr18es	Compensation Fee Total
Non-roof Impervious	\$12,500	5.25	\$65,625
Roof Impervious	\$5,000	2.81	\$14,050
Landscaped	\$2,500	10.073	\$25,182.50
TOTAL			\$104,875.50

Summary

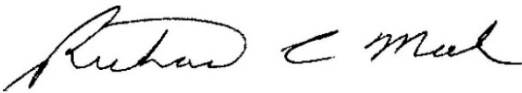
Erosion and sedimentation control, inspection and maintenance procedures and general housekeeping requirements have been outlined to prevent unreasonable impacts on the project site or the surrounding environment.

By utilizing Best Management practices (two proposed gravel wetlands and a forested buffer) stormwater quality treatment has been provided for a minimum of 95% of the site's impervious area and a minimum of 80% of the site's total developed area. Based upon the modeling data, the post-development peak rates of runoff for the project site will be less than or equal to the pre-development runoff rates during the design storm events (2-year, 10-year and 25-year).

With the incorporation of the referenced erosion control, treatment, and detention measures, the project is in conformance with the Maine Department of Environmental Protection Chapter 500 Stormwater Law. Accordingly, it is anticipated that stormwater runoff from the proposed development will not result in significant adverse effects to off-site receiving channels or downstream properties.

Prepared by:

Terradyn Consultants, LLC

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

Richard Meek, P.E.
Sr. Project Engineer

Appendices

- 1 – Stormwater Infrastructure Inspection & Maintenance Manual
- 2 – Erosion and Sediment Control Inspection & Maintenance Plan
- 3 – Watershed Maps
- 4 – BMP and HydroCAD Calculations

APPENDIX 1

STORMWATER INFRASTRUCTURE INSPECTION & MAINTENANCE MANUAL

BIDDEFORD RESIDENTIAL BIDDEFORD, MAINE

STORMWATER MANAGEMENT SYSTEM INSPECTION, MAINTENANCE & HOUSEKEEPING PLAN

Project Owner/Developer: Devine Capital, LLC
30 Milk St., 3rd Floor
Portland, Maine 04101
(401) 413-1590

Responsible Party: To be Determined

Prepared By: Richard Meek, P.E.
Terradyn Consultants, LLC
41 Campus Drive, Suite 301
New Gloucester, ME 04260
(207) 926-5111

INTRODUCTION:

Regular inspection and maintenance of the entire stormwater management system is crucial to the long-term effectiveness of the system. The responsible party must provide regular inspection and maintenance of all permanent erosion control measures and stormwater management structures, establish any contract services required to implement the program, and keep records and a maintenance log book of inspection and maintenance activities. At a minimum, the inspection and maintenance activities outlined herein should be performed at the recommended intervals. All inspection and maintenance documentation shall be maintained for at least 5 years. This project is subject to the Maine Department of Environmental Protection's 5-year Recertification Process.

All measures must be maintained in effective operating condition. A person with knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected.

INSPECTION TASKS

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed 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 the Inspection, Maintenance, and Housekeeping 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 details 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 MDEP.

During Construction

1. **Inspection:** For the duration of construction activity, it is the Site 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 seven (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 (3) 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.
- Annually inspect riprap and remove woody vegetation when discovered.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. 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.
- The permanent storm drainage system shall be flushed and cleaned once the site is stabilized and prior to demobilization from the site.

E. 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).

F. 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.

G. Stabilized 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.

H. Concrete Washout Area

- The site contractor shall establish a concrete washout area on-site which shall include sediment barrier to mitigate the transport of the washout material to the environment.
- The washout area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The washout area shall be inspected daily when concrete work is active and prior to any storm event.
- Accumulated concrete sediments shall be removed weekly, when concrete work is active, or when visibly encroaching on sediment barrier.

I. Dewatering

- The site contractor shall establish an on-site containment area which shall include sediment barrier to mitigate the transport of the sediment to the environment from dewatering activity.
- The containment area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The containment area shall include a dirt bag or similar sediment trap for treatment of the collected water.
- The containment area shall be inspected after each use to ensure that no downgradient erosion or sedimentation offsite is occurring.

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 insure 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, the agent shall hire a qualified post-construction stormwater inspector to, at least annually, inspect the BMPs in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
2. **Maintenance, and repair:** If a BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator shall take corrective actions to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective actions to the Town Engineer. The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping 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. Winter Sanding:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

C. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

D. 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.
- Inspect embankment for erosion, settling, and structural failure.

E. Gravel Wetlands

1ST YEAR POST-CONSTRUCTION: Inspection frequency should be after every major storm in the first year following construction.

1. Inspect to be certain system drains within 24-48 hours.
2. Watering plants as necessary during the first growing season
3. Re-vegetating poorly established areas as necessary
4. Quarterly inspection of soil and repairing eroded areas, especially on slopes & make timely repairs.
5. Checking inlets, outlets, and overflow spillway for blockage, structural integrity, and evidence of erosion. Risers may need to be cleaned.

POST-CONSTRUCTION: Inspection frequency should be at least every 6 months and after every major storm. Activities are expected to include:

1. Check the basin for a dense root mat establishment of wetland vegetation.
2. Check and clean the risers if there is evidence of standing water, discolored water or accumulated sediments in the cells.
3. Check and clean the forebay for sediments, trash and debris. When sediments have accumulated to a depth of 12 inches, standing water is persistent or wetland vegetation become established, the forebay will need to be excavated and reformed.
4. Verify that the cells drain within 24-48 hours. Sediment will need to be removed when an accumulation of 4 inches is evident over the wetland surface.
5. Check and clean all outlets and overflow spillway if blocked or there is evidence of structural damage or erosion.
6. Remove decaying vegetation, litter and debris.
7. Check for foreign species. Particular care must be used to avoid the unintended introduction of invasive species such as purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*). It is recommended that a qualified wetland biologist be consulted when these are found in the area of the gravel wetland.

F. Forested Buffer

- Buffers should be inspected annually for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched.
- Access and Use: Buffers should not be traversed by all-terrain vehicles or other vehicles. Activities within buffers should be conducted so as not to damage vegetation, disturb any organic duff layer, or expose soil.
- Inspections: Conduct periodic "buffer walks" to inspect the condition of the buffer network.
- **Restrictions on Vegetated Stormwater Buffer Areas.**
Unless the owner of the Restricted Buffer Area, or any successors or assigns, obtains the prior written approval of the MDEP, the Restricted Buffer Area must remain undeveloped in perpetuity. To maintain the ability of the Restricted Buffer Area to filter and absorb stormwater, and to maintain compliance with the Stormwater Management Law and the permit issued thereunder to the Declarant, the use of the Restricted Buffer Area is hereinafter limited as follows:

- a. No soil, loam, peat, sand, gravel, concrete, rock or other mineral substance, refuse, trash, vehicle bodies or parts, rubbish, debris, junk waste, pollutants or other fill material may be placed, stored or

dumped on the Restricted Buffer Area, nor may the topography of the area be altered or manipulated in any way.

b. Any removal of trees or other vegetation within the Restricted Buffer Area must be limited to the following:

(i) No purposefully cleared openings may be created and an evenly distributed stand of trees and other vegetation must be maintained. An “evenly distributed stand of trees” is defined as maintaining a minimum rating score of 24 points in any 25 foot by 50 foot square (2500 square feet) area, as determined by the following rating scheme:

Diameter of tree at 4 ½ feet above ground level	Points
2-4 inches	1
4-8 inches	2
8-12 inches	4
>12 inches	8

Where existing trees and other vegetation result in a rating score less than 24 points, no trees may be cut or sprayed with biocides except for the normal maintenance of dead, windblown or damaged trees and for pruning of tree branches below a height of 12 feet provided two thirds of the tree’s canopy is maintained.

(ii) No undergrowth, ground cover vegetation, leaf litter, organic duff layer or mineral soil may be disturbed except that one winding path, that is no wider than six feet and that does not provide a downhill channel for runoff, is allowed through the area;

c. No building or other temporary or permanent structure may be constructed, placed or permitted to remain on the Restricted Buffer Area, except for a sign, utility pole (whether constructed of wood, steel or other materials) and appurtenant equipment such as guys and guy anchors, or fence;

d. No trucks, cars, dirt bikes, ATVs, bulldozers, backhoes, or other motorized vehicles or mechanical equipment may be permitted on the Restricted Buffer Area;

Attachments

Attachment 1 – Sample Stormwater Inspection and Maintenance Log

ATTACHMENT 1

Stormwater Management Facilities Inspection & Maintenance Log Residences at Gateway Commons		
General Information:		
Inspected by:	Date:	Weather:
Reason for Inspection: (Regular Inspection) (Major Rain Event)		
BMP	Conditions Observed	Repairs Needed?
1. Vegetated Areas		
2. Ditches, Swales, Open Channels		
3. Culverts		
4. Catch Basins		
5. Gravel Wetlands		
6. Forested Buffer		
Detailed Repair Notes:		
BMP Type	Date	Description of Repairs & Sediment Disposal

Notes:

If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. A copy of this log shall be retained for a period of at least five years from the completion of permanent stabilization. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request.

APPENDIX 2

EROSION AND SEDIMENT CONTROL INSPECTION & MAINTENANCE PLAN

BIDDEFORD RESIDENTIAL BIDDEFORD, MAINE

EROSION & SEDIMENTATION CONTROL INSPECTION & MAINTENANCE PLAN CONSTRUCTION PHASE

Project Owner/Developer: Devine Capital, LLC
30 Milk St., 3rd Floor
Portland, Maine 04009
(401) 413-1590

Responsible Party: Site Contractor
TBD

Prepared By: Richard Meek, P.E.
Terradyn Consultants, LLC
41 campus Drive, Suite 301
New Gloucester, ME 04260
(207) 926-5111

INTRODUCTION:

Anyone who conducts or directs an activity that involves exposing, filling or displacing soil or other earthen materials must take appropriate measures to prevent erosion and the loss of sediment beyond the project site or into a sensitive resource.

Erosion and sediment control measures should be in place before the activity begins and should remain functional until the site is permanently stabilized. All measures should remain effective until all areas are permanently stabilized. Any disturbed area should be regularly inspected until the site is fully stabilized with either 90% grass cover or a permanent impervious surface such as pavement.

The following information describes the Inspection, Maintenance and Documentation necessary during construction to comply with the State of Maine Stormwater Management Law.

INSPECTION

Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. For the purposes of this plan, a storm event is rainfall greater than 0.5 inches in a 24 hour period.

The person conducting inspections shall have knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project.

MAINTENANCE AND CORRECTIVE ACTION

If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

DOCUMENTATION

Keep a log (report) summarizing the inspections and any corrective actions taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log attached at the end of this plan is from the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016)*. The log may be used or adapted for this project.

Documentation must be retained for a minimum of three years after permanent stabilization has been achieved on the site and must be made accessible to the Maine Department of Environmental Protection upon request.

INSPECTION DURING CONSTRUCTION

1. **Inspection:** For the duration of construction activity, it is the Site 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 seven (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 (3) 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.
- Annually inspect riprap and remove woody vegetation when discovered.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. 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.
- The permanent storm drainage system shall be flushed and cleaned once the site is stabilized and prior to demobilization from the site.

E. 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).

F. 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.

G. Stabilized 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 recurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone checkdams may be needed to further reduce channel velocity.

H. Concrete Washout Area

- The site contractor shall establish a concrete washout area on-site which shall include sediment barrier to mitigate the transport of the washout material to the environment.
- The washout area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The washout area shall be inspected daily when concrete work is active and prior to any storm event.
- Accumulated concrete sediments shall be removed weekly, when concrete work is

active, or when visibly encroaching on sediment barrier.

I. Dewatering

- The site contractor shall establish an on-site containment area which shall include sediment barrier to mitigate the transport of the sediment to the environment from dewatering activity.
- The containment area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The containment area shall include a dirt bag or similar sediment trap for treatment of the collected water.
- The containment area shall be inspected after each use to ensure that no downgradient erosion or sedimentation offsite is occurring.

REFERENCES

Design Drawings:

C-2.0 thru C-2.7 Grading and Drainage Plans

C-5.1 Site Details (Erosion Control Notes and Details)

Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016), Maine Department of Environmental Protection

Maine Erosion and Sediment Control Practices Field Guide for Contractors, Maine Department of Environmental Protection

CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL						
General Information:						
Site Name:		Date:		Inspected by:		
Owner:						
Retained 3PI:		Last Rain Date:			Amount:	
Reason for Inspection:		Weekly	Winter	Final	Rain Event	Complaint
Description of disturbed area:						
Photos:						
	YES/NO/NA	COMMENTS				
1. Is an Erosion and Sediment Control Plan available?						
ESC plan on-site and followed						
Other:						
2. Are all erosion control practices installed properly, maintained and functioning?						
Disturbed areas stable						
Concentrated flow inlet/outlet protection						
All areas at final grade						
Disturbed dormant areas stabilized						
Access roads and parking						
Hillsides and stockpiles						
Other:						
3. Are all sedimentation control practices installed properly, maintained and functioning?						
Construction entrance						
Sedimentation basins/traps/diversions						
Perimeter controls						
Check dams						
Other:						
4. Is maintenance of ESC measures, construction activities and housekeeping kept-up?						
Sedimentation/erosion in ditches						
Tracked Sediment or dust at exits						
Hazardous material storage and spill control practices						
Waste management (concrete, hazardous material, etc.)						
Other:						
5. Violation, Corrective Actions, Recommendations						
Sediment discharged from site?						
Corrective action required?						
Site compliant with all permits?						
Notice of violation or stop work order issued?						
Comments/Corrective Actions (complete corrective actions before the next rain event and within 7 day)						

APPENDIX 3

WATERSHED MAPS

APPENDIX 4

BMP & HYDROCAD CALCULATIONS

GENERAL STANDARD CALCULATIONS

Project # 21-49 Biddeford Residential

SUBCATCHMENT ID	DESCRIPTION	SUBCATCHMENT AREA	Areas Requiring Treatment				RECEIVES TREATMENT (YES/NO)	IMPERVIOUS AREA TREATED (acre)	LANDSCAPED AREA TREATED (acre)	DEVELOPED AREA TREATED (acre)	TREATMENT BMP
			IMPERVIOUS AREA (acre)	LANDSCAPED AREA (acre)	TOTAL DEVELOPED AREAS (acre)						
11	Undeveloped area tributary to SP1	11.462	0.056	1.312	1.368	YES	0.025	0.873	0.898	Buffer	
12	Undeveloped area tributary to Gravel wetland #2	3.575	0.092	1.836	1.928	YES	0.092	1.836	1.928	GW 2	
13	Developed area tributary to Gravel wetland #2	8.057	5.503	2.115	7.618	YES	5.503	2.115	7.618	GW 2	
14	Developed area tributary to Gravel wetland #1	4.348	2.336	1.778	4.114	YES	2.336	1.778	4.114	GW 1	
21	Undeveloped area tributary to SP2	4.170	0.000	0.841	0.841	NO	0.000	0.000	0.000		
31	Undeveloped area tributary to SP3 (west of access rd.)	2.885	0.073	1.065	1.138	NO	0.000	0.000	0.000		
32	Undeveloped area tributary to SP3 (east of access rd.)	2.498	0.000	0.373	0.373	NO	0.000	0.000	0.000		
4A	Undeveloped area tributary to SP4 (large wetlands HSG D)	7.826	0.000	0.000	0.000	NO	0.000	0.000	0.000		
4B	Undeveloped area tributary to SP4 (small wetlands HSG D)	0.210	0.000	0.000	0.000	NO	0.000	0.000	0.000		
41	Developed area tributary to SP4 (HSG A)	2.381	0.000	0.753	0.753	NO	0.000	0.000	0.000		
TOTAL (ACRE)		47.412	8.060	10.073	18.133		7.956	6.602	14.558		

TOTAL IMPERVIOUS AREA (ACRE) (requiring treatment)	8.060	TOTAL DEVELOPED AREA (ACRE) (requiring treatment)	18.133
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (ACRE)	7.956	TOTAL DEVELOPED AREA RECEIVING TREATMENT (ACRE)	14.558
% OF IMPERVIOUS AREA RECEIVING TREATMENT	98.71%	% OF DEVELOPED AREA RECEIVING TREATMENT	80.28%

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JOB

Biddeford Residential

SHEET NO.

1

OF

1

CALCULATED BY

RLM

DATE

8/17/2022

FILE NAME

PRINT DATE

8/17/2022

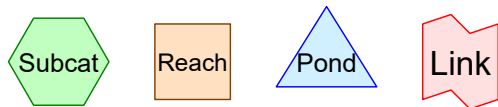
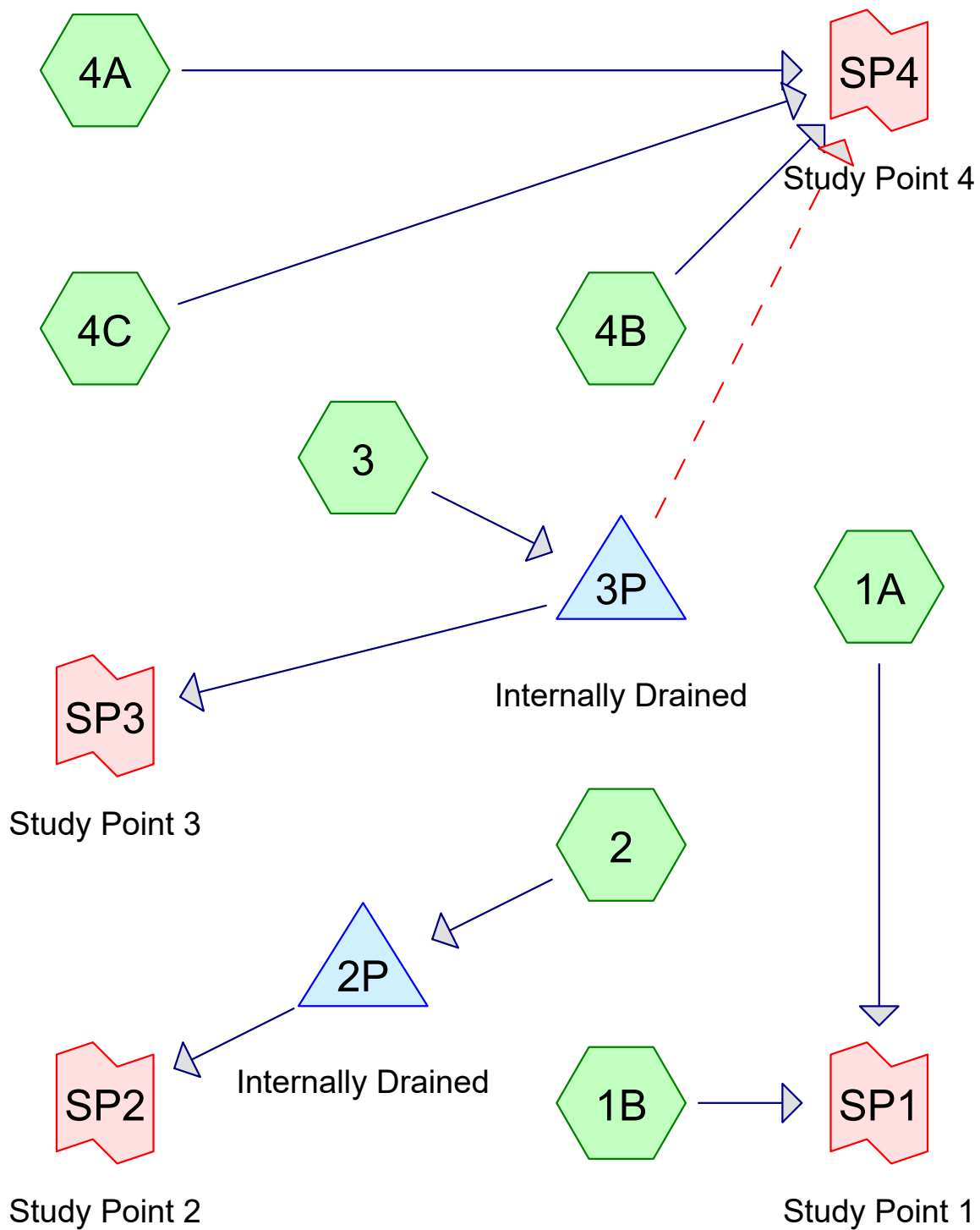
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CALCULATED BY RLM DATE 8/17/2022
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Routing Diagram for Biddeford Residential Pre-Development
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Biddeford Residential Pre-Development

Type III 24-hr 2-YR Rainfall=3.30"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1A:	Runoff Area=11.787 ac 0.51% Impervious Runoff Depth=0.15" Flow Length=925' Tc=40.4 min CN=50 Runoff=0.3 cfs 0.147 af
Subcatchment1B:	Runoff Area=10.221 ac 0.19% Impervious Runoff Depth=0.00" Flow Length=1,115' Tc=36.9 min CN=37 Runoff=0.0 cfs 0.000 af
Subcatchment2:	Runoff Area=7.633 ac 16.72% Impervious Runoff Depth=0.15" Flow Length=430' Tc=13.0 min CN=50 Runoff=0.2 cfs 0.095 af
Subcatchment3:	Runoff Area=6.052 ac 4.28% Impervious Runoff Depth=0.02" Flow Length=470' Tc=41.5 min CN=42 Runoff=0.0 cfs 0.010 af
Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=800' Tc=75.1 min CN=77 Runoff=3.9 cfs 0.837 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.2 cfs 0.022 af
Subcatchment4C:	Runoff Area=3.683 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=575' Tc=36.0 min CN=30 Runoff=0.0 cfs 0.000 af
Pond 2P: Internally Drained	Peak Elev=178.13' Storage=4,138 cf Inflow=0.2 cfs 0.095 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.10' Storage=430 cf Inflow=0.0 cfs 0.010 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Link SP1: Study Point 1	Inflow=0.3 cfs 0.147 af Primary=0.3 cfs 0.147 af
Link SP2: Study Point 2	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP3: Study Point 3	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP4: Study Point 4	Inflow=4.0 cfs 0.860 af Primary=4.0 cfs 0.860 af

Biddeford Residential Pre-Development

Type III 24-hr 10-YR Rainfall=4.90"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1A:	Runoff Area=11.787 ac 0.51% Impervious Runoff Depth=0.65" Flow Length=925' Tc=40.4 min CN=50 Runoff=2.9 cfs 0.640 af
Subcatchment1B:	Runoff Area=10.221 ac 0.19% Impervious Runoff Depth=0.12" Flow Length=1,115' Tc=36.9 min CN=37 Runoff=0.2 cfs 0.103 af
Subcatchment2:	Runoff Area=7.633 ac 16.72% Impervious Runoff Depth=0.65" Flow Length=430' Tc=13.0 min CN=50 Runoff=2.8 cfs 0.415 af
Subcatchment3:	Runoff Area=6.052 ac 4.28% Impervious Runoff Depth=0.29" Flow Length=470' Tc=41.5 min CN=42 Runoff=0.3 cfs 0.145 af
Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=2.54" Flow Length=800' Tc=75.1 min CN=77 Runoff=7.9 cfs 1.656 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=2.54" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.3 cfs 0.044 af
Subcatchment4C:	Runoff Area=3.683 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=575' Tc=36.0 min CN=30 Runoff=0.0 cfs 0.001 af
Pond 2P: Internally Drained	Peak Elev=178.55' Storage=18,057 cf Inflow=2.8 cfs 0.415 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.41' Storage=6,288 cf Inflow=0.3 cfs 0.145 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Link SP1: Study Point 1	Inflow=3.0 cfs 0.743 af Primary=3.0 cfs 0.743 af
Link SP2: Study Point 2	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP3: Study Point 3	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP4: Study Point 4	Inflow=8.1 cfs 1.701 af Primary=8.1 cfs 1.701 af

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1A:	Runoff Area=11.787 ac 0.51% Impervious Runoff Depth=1.24" Flow Length=925' Tc=40.4 min CN=50 Runoff=6.9 cfs 1.220 af
Subcatchment1B:	Runoff Area=10.221 ac 0.19% Impervious Runoff Depth=0.39" Flow Length=1,115' Tc=36.9 min CN=37 Runoff=0.9 cfs 0.336 af
Subcatchment2:	Runoff Area=7.633 ac 16.72% Impervious Runoff Depth=1.24" Flow Length=430' Tc=13.0 min CN=50 Runoff=7.1 cfs 0.790 af
Subcatchment3:	Runoff Area=6.052 ac 4.28% Impervious Runoff Depth=0.69" Flow Length=470' Tc=41.5 min CN=42 Runoff=1.4 cfs 0.346 af
Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=800' Tc=75.1 min CN=77 Runoff=11.4 cfs 2.383 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.5 cfs 0.064 af
Subcatchment4C:	Runoff Area=3.683 ac 0.00% Impervious Runoff Depth=0.09" Flow Length=575' Tc=36.0 min CN=30 Runoff=0.0 cfs 0.029 af
Pond 2P: Internally Drained	Peak Elev=179.00' Storage=34,420 cf Inflow=7.1 cfs 0.790 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.64' Storage=15,055 cf Inflow=1.4 cfs 0.346 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Link SP1: Study Point 1	Inflow=7.7 cfs 1.556 af Primary=7.7 cfs 1.556 af
Link SP2: Study Point 2	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP3: Study Point 3	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP4: Study Point 4	Inflow=11.7 cfs 2.476 af Primary=11.7 cfs 2.476 af

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Summary for Subcatchment 1A:

Runoff = 6.9 cfs @ 12.66 hrs, Volume= 1.220 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
6.056	30	Woods, Good, HSG A
4.392	70	Woods, Good, HSG C
1.156	77	Woods, Good, HSG D
0.123	39	>75% Grass cover, Good, HSG A
* 0.060	98	Existing impervious
11.787	50	Weighted Average
11.727		99.49% Pervious Area
0.060		0.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.2	150	0.0220	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
9.2	615	0.0500	1.12		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.2	25	0.2400	2.45		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
2.8	135	0.0260	0.81		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
40.4	925	Total			

Summary for Subcatchment 1B:

Runoff = 0.9 cfs @ 12.86 hrs, Volume= 0.336 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
8.339	30	Woods, Good, HSG A
1.683	70	Woods, Good, HSG C
0.180	30	Meadow, non-grazed, HSG A
* 0.019	98	Existing impervious
10.221	37	Weighted Average
10.202		99.81% Pervious Area
0.019		0.19% Impervious Area

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0460	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
4.2	260	0.0420	1.02		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
5.8	300	0.0300	0.87		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
5.9	405	0.0520	1.14		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
36.9	1,115	Total			

Summary for Subcatchment 2:

Runoff = 7.1 cfs @ 12.22 hrs, Volume= 0.790 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
2.057	30	Woods, Good, HSG A
1.344	77	Woods, Good, HSG D
2.365	30	Meadow, non-grazed, HSG A
0.591	39	>75% Grass cover, Good, HSG A
* 0.553	98	Existing impervious
* 0.723	98	Water
7.633	50	Weighted Average
6.357		83.28% Pervious Area
1.276		16.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0400	0.28		Sheet Flow, A to B Range n= 0.130 P2= 3.30"
4.0	280	0.0280	1.17		Shallow Concentrated Flow, B to C Short Grass Pasture Kv= 7.0 fps
13.0	430	Total			

Summary for Subcatchment 3:

Runoff = 1.4 cfs @ 12.78 hrs, Volume= 0.346 af, Depth= 0.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
4.349	30	Woods, Good, HSG A
0.773	77	Woods, Good, HSG D
0.221	30	Meadow, non-grazed, HSG A
0.450	78	Meadow, non-grazed, HSG D
* 0.259	98	Existing impervious
6.052	42	Weighted Average
5.793		95.72% Pervious Area
0.259		4.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
8.6	200	0.0060	0.39		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
3.7	120	0.0060	0.54		Shallow Concentrated Flow, C to D Short Grass Pasture Kv= 7.0 fps
41.5	470	Total			

Summary for Subcatchment 4A:

Runoff = 11.4 cfs @ 13.00 hrs, Volume= 2.383 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
7.826	77	Woods, Good, HSG D
7.826		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.5	150	0.0070	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
30.6	650	0.0050	0.35		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
75.1	800	Total			

Summary for Subcatchment 4B:

Runoff = 0.5 cfs @ 12.52 hrs, Volume= 0.064 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
0.210	77	Woods, Good, HSG D
0.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.6	130	0.0080	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"

Summary for Subcatchment 4C:

Runoff = 0.0 cfs @ 15.70 hrs, Volume= 0.029 af, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
3.683	30	Woods, Good, HSG A
3.683		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
22.4	475	0.0050	0.35		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
36.0	575	Total			

Summary for Pond 2P: Internally Drained

Inflow Area = 7.633 ac, 16.72% Impervious, Inflow Depth = 1.24" for 25-YR event
 Inflow = 7.1 cfs @ 12.22 hrs, Volume= 0.790 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 179.00' @ 24.80 hrs Surf.Area= 37,257 sf Storage= 34,420 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	178.00'	1,036,250 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
178.00	31,500	0	0
180.00	43,000	74,500	74,500
182.00	72,000	115,000	189,500
184.00	116,500	188,500	378,000
185.50	174,000	217,875	595,875
186.00	162,500	84,125	680,000
187.00	178,000	170,250	850,250
188.00	194,000	186,000	1,036,250

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=178.00' (Free Discharge)

1=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond 3P: Internally Drained

Inflow Area = 6.052 ac, 4.28% Impervious, Inflow Depth = 0.69" for 25-YR event
 Inflow = 1.4 cfs @ 12.78 hrs, Volume= 0.346 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 184.64' @ 26.45 hrs Surf.Area= 45,900 sf Storage= 15,055 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	184.00'	476,033 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
184.00	1,110	0	0
185.50	106,000	80,333	80,333
186.00	118,600	56,150	136,483
187.00	170,000	144,300	280,783
188.00	220,500	195,250	476,033

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	187.00'	50.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Link SP1: Study Point 1

Inflow Area = 22.008 ac, 0.36% Impervious, Inflow Depth = 0.85" for 25-YR event
Inflow = 7.7 cfs @ 12.69 hrs, Volume= 1.556 af
Primary = 7.7 cfs @ 12.69 hrs, Volume= 1.556 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP2: Study Point 2

Inflow Area = 7.633 ac, 16.72% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP3: Study Point 3

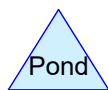
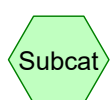
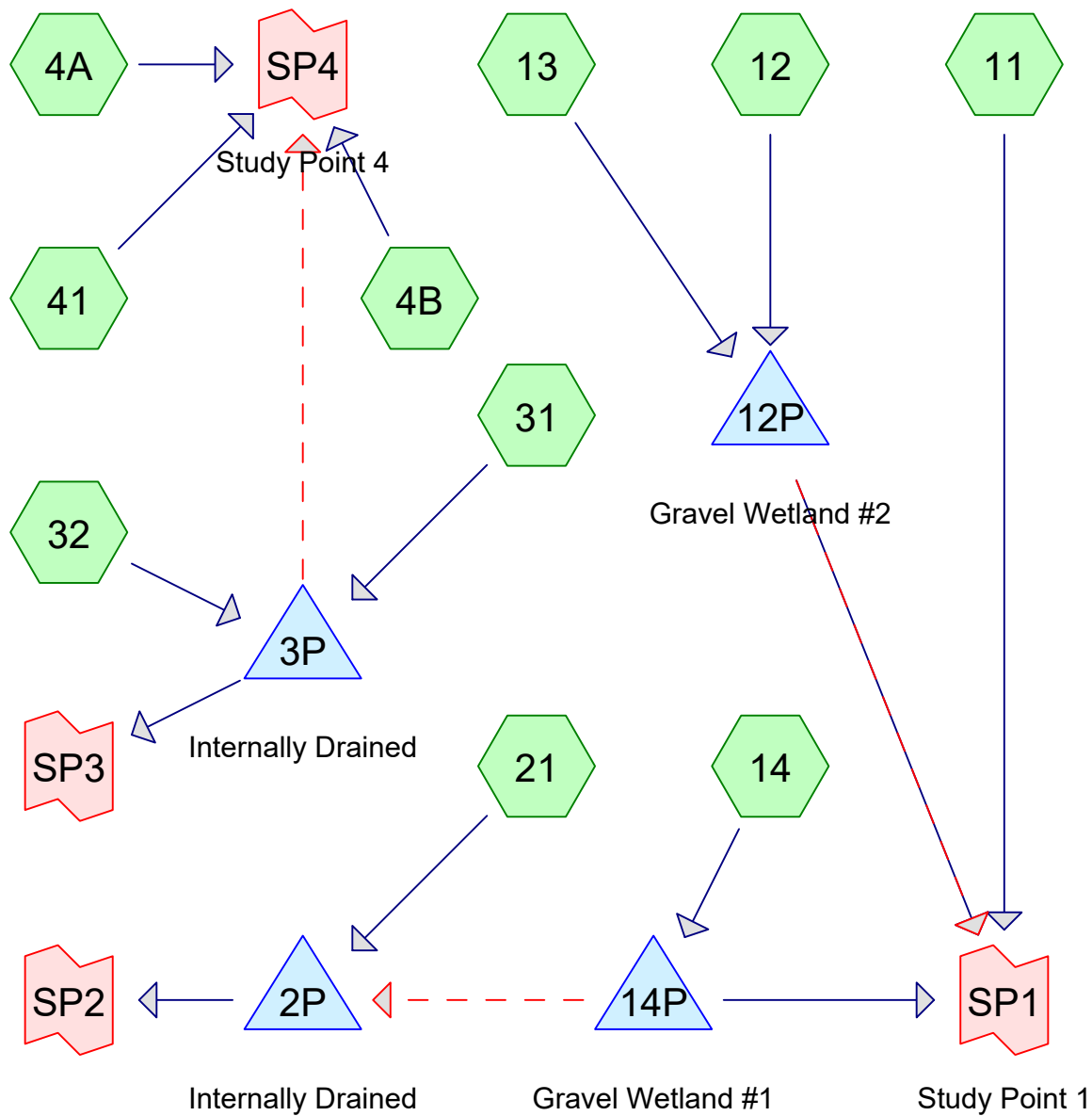
Inflow Area = 6.052 ac, 4.28% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP4: Study Point 4

Inflow Area = 11.719 ac, 0.00% Impervious, Inflow Depth = 2.54" for 25-YR event
Inflow = 11.7 cfs @ 12.98 hrs, Volume= 2.476 af
Primary = 11.7 cfs @ 12.98 hrs, Volume= 2.476 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs



Routing Diagram for Biddeford Residential Post-Development
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Biddeford Residential Post-Development

Type III 24-hr 2-YR Rainfall=3.30"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=800' Tc=75.1 min CN=77 Runoff=3.9 cfs 0.837 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.2 cfs 0.022 af
Subcatchment11:	Runoff Area=11.462 ac 1.01% Impervious Runoff Depth=0.15" Flow Length=925' Tc=40.4 min CN=50 Runoff=0.3 cfs 0.143 af
Subcatchment12:	Runoff Area=3.575 ac 2.57% Impervious Runoff Depth=0.28" Flow Length=540' Tc=27.8 min CN=55 Runoff=0.3 cfs 0.084 af
Subcatchment13:	Runoff Area=8.057 ac 68.30% Impervious Runoff Depth=1.41" Flow Length=1,290' Tc=12.8 min CN=79 Runoff=10.4 cfs 0.948 af
Subcatchment14:	Runoff Area=4.348 ac 53.73% Impervious Runoff Depth=0.79" Flow Length=765' Tc=9.7 min CN=68 Runoff=3.0 cfs 0.285 af
Subcatchment21:	Runoff Area=4.170 ac 19.66% Impervious Runoff Depth=0.07" Flow Length=210' Tc=9.2 min CN=46 Runoff=0.0 cfs 0.025 af
Subcatchment31:	Runoff Area=2.885 ac 2.53% Impervious Runoff Depth=0.25" Flow Length=320' Tc=36.5 min CN=54 Runoff=0.2 cfs 0.061 af
Subcatchment32:	Runoff Area=2.498 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=250' Tc=28.4 min CN=39 Runoff=0.0 cfs 0.000 af
Subcatchment41:	Runoff Area=2.381 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=575' Tc=36.0 min CN=33 Runoff=0.0 cfs 0.000 af
Pond 2P: Internally Drained	Peak Elev=178.03' Storage=1,075 cf Inflow=0.0 cfs 0.025 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.26' Storage=2,641 cf Inflow=0.2 cfs 0.061 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Pond 12P: Gravel Wetland #2	Peak Elev=154.57' Storage=43,279 cf Inflow=10.5 cfs 1.032 af Primary=0.0 cfs 0.079 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.079 af
Pond 14P: Gravel Wetland #1	Peak Elev=178.73' Storage=11,318 cf Inflow=3.0 cfs 0.285 af Primary=0.0 cfs 0.051 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.051 af
Link SP1: Study Point 1	Inflow=0.3 cfs 0.273 af Primary=0.3 cfs 0.273 af
Link SP2:	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af

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Type III 24-hr 2-YR Rainfall=3.30"

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Link SP3:

Inflow=0.0 cfs 0.000 af

Primary=0.0 cfs 0.000 af

Link SP4: Study Point 4

Inflow=4.0 cfs 0.860 af

Primary=4.0 cfs 0.860 af

Biddeford Residential Post-Development

Type III 24-hr 10-YR Rainfall=4.90"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment4A: Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=2.54"
Flow Length=800' Tc=75.1 min CN=77 Runoff=7.9 cfs 1.656 af

Subcatchment4B: Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=2.54"
Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.3 cfs 0.044 af

Subcatchment11: Runoff Area=11.462 ac 1.01% Impervious Runoff Depth=0.65"
Flow Length=925' Tc=40.4 min CN=50 Runoff=2.9 cfs 0.623 af

Subcatchment12: Runoff Area=3.575 ac 2.57% Impervious Runoff Depth=0.93"
Flow Length=540' Tc=27.8 min CN=55 Runoff=1.8 cfs 0.277 af

Subcatchment13: Runoff Area=8.057 ac 68.30% Impervious Runoff Depth=2.72"
Flow Length=1,290' Tc=12.8 min CN=79 Runoff=20.4 cfs 1.823 af

Subcatchment14: Runoff Area=4.348 ac 53.73% Impervious Runoff Depth=1.81"
Flow Length=765' Tc=9.7 min CN=68 Runoff=7.8 cfs 0.655 af

Subcatchment21: Runoff Area=4.170 ac 19.66% Impervious Runoff Depth=0.46"
Flow Length=210' Tc=9.2 min CN=46 Runoff=0.9 cfs 0.158 af

Subcatchment31: Runoff Area=2.885 ac 2.53% Impervious Runoff Depth=0.87"
Flow Length=320' Tc=36.5 min CN=54 Runoff=1.2 cfs 0.210 af

Subcatchment32: Runoff Area=2.498 ac 0.00% Impervious Runoff Depth=0.18"
Flow Length=250' Tc=28.4 min CN=39 Runoff=0.1 cfs 0.038 af

Subcatchment41: Runoff Area=2.381 ac 0.00% Impervious Runoff Depth=0.03"
Flow Length=575' Tc=36.0 min CN=33 Runoff=0.0 cfs 0.007 af

Pond 2P: Internally Drained Peak Elev=178.21' Storage=6,895 cf Inflow=0.9 cfs 0.158 af
Outflow=0.0 cfs 0.000 af

Pond 3P: Internally Drained Peak Elev=184.54' Storage=10,754 cf Inflow=1.2 cfs 0.247 af
Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af

Pond 12P: Gravel Wetland #2 Peak Elev=155.48' Storage=75,414 cf Inflow=21.0 cfs 2.101 af
Primary=0.4 cfs 0.725 af Secondary=0.0 cfs 0.000 af Outflow=0.4 cfs 0.725 af

Pond 14P: Gravel Wetland #1 Peak Elev=179.52' Storage=26,837 cf Inflow=7.8 cfs 0.655 af
Primary=0.1 cfs 0.078 af Secondary=0.0 cfs 0.000 af Outflow=0.1 cfs 0.078 af

Link SP1: Study Point 1 Inflow=3.0 cfs 1.426 af
Primary=3.0 cfs 1.426 af

Link SP2: Inflow=0.0 cfs 0.000 af
Primary=0.0 cfs 0.000 af

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Type III 24-hr 10-YR Rainfall=4.90"

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Link SP3:

Inflow=0.0 cfs 0.000 af

Primary=0.0 cfs 0.000 af

Link SP4: Study Point 4

Inflow=8.1 cfs 1.707 af

Primary=8.1 cfs 1.707 af

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=800' Tc=75.1 min CN=77 Runoff=11.4 cfs 2.383 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.5 cfs 0.064 af
Subcatchment11:	Runoff Area=11.462 ac 1.01% Impervious Runoff Depth=1.24" Flow Length=925' Tc=40.4 min CN=50 Runoff=6.7 cfs 1.187 af
Subcatchment12:	Runoff Area=3.575 ac 2.57% Impervious Runoff Depth=1.63" Flow Length=540' Tc=27.8 min CN=55 Runoff=3.6 cfs 0.487 af
Subcatchment13:	Runoff Area=8.057 ac 68.30% Impervious Runoff Depth=3.86" Flow Length=1,290' Tc=12.8 min CN=79 Runoff=28.9 cfs 2.591 af
Subcatchment14:	Runoff Area=4.348 ac 53.73% Impervious Runoff Depth=2.78" Flow Length=765' Tc=9.7 min CN=68 Runoff=12.2 cfs 1.006 af
Subcatchment21:	Runoff Area=4.170 ac 19.66% Impervious Runoff Depth=0.95" Flow Length=210' Tc=9.2 min CN=46 Runoff=2.8 cfs 0.331 af
Subcatchment31:	Runoff Area=2.885 ac 2.53% Impervious Runoff Depth=1.55" Flow Length=320' Tc=36.5 min CN=54 Runoff=2.4 cfs 0.373 af
Subcatchment32:	Runoff Area=2.498 ac 0.00% Impervious Runoff Depth=0.50" Flow Length=250' Tc=28.4 min CN=39 Runoff=0.4 cfs 0.105 af
Subcatchment41:	Runoff Area=2.381 ac 0.00% Impervious Runoff Depth=0.20" Flow Length=575' Tc=36.0 min CN=33 Runoff=0.1 cfs 0.040 af
Pond 2P: Internally Drained	Peak Elev=178.44' Storage=14,400 cf Inflow=2.8 cfs 0.331 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.76' Storage=20,835 cf Inflow=2.8 cfs 0.478 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Pond 12P: Gravel Wetland #2	Peak Elev=155.73' Storage=84,790 cf Inflow=30.7 cfs 3.078 af Primary=2.7 cfs 1.668 af Secondary=0.0 cfs 0.000 af Outflow=2.7 cfs 1.668 af
Pond 14P: Gravel Wetland #1	Peak Elev=179.62' Storage=28,989 cf Inflow=12.2 cfs 1.006 af Primary=0.8 cfs 0.425 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.425 af
Link SP1: Study Point 1	Inflow=7.1 cfs 3.280 af Primary=7.1 cfs 3.280 af
Link SP2:	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af

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Type III 24-hr 25-YR Rainfall=6.20"

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Link SP3:

Inflow=0.0 cfs 0.000 af

Primary=0.0 cfs 0.000 af

Link SP4: Study Point 4

Inflow=11.7 cfs 2.488 af

Primary=11.7 cfs 2.488 af

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Summary for Subcatchment 4A:

Runoff = 11.4 cfs @ 13.00 hrs, Volume= 2.383 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
7.826	77	Woods, Good, HSG D
7.826		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.5	150	0.0070	0.06		Sheet Flow, A to B
					Woods: Light underbrush n= 0.400 P2= 3.30"
30.6	650	0.0050	0.35		Shallow Concentrated Flow, B to C
					Woodland Kv= 5.0 fps
75.1	800	Total			

Summary for Subcatchment 4B:

Runoff = 0.5 cfs @ 12.52 hrs, Volume= 0.064 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
0.210	77	Woods, Good, HSG D
0.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.6	130	0.0080	0.06		Sheet Flow, A to B
					Woods: Light underbrush n= 0.400 P2= 3.30"

Summary for Subcatchment 11:

Runoff = 6.7 cfs @ 12.66 hrs, Volume= 1.187 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
5.661	30	Woods, Good, HSG A
3.720	70	Woods, Good, HSG C
1.153	77	Woods, Good, HSG D
0.113	30	Meadow, non-grazed, HSG A
0.260	71	Meadow, non-grazed, HSG C
0.003	78	Meadow, non-grazed, HSG D
0.349	39	>75% Grass cover, Good, HSG A
0.087	74	>75% Grass cover, Good, HSG C
* 0.060	98	Existing impervious
* 0.056	98	Proposed Impervious
11.462	50	Weighted Average
11.346		98.99% Pervious Area
0.116		1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.2	150	0.0220	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
9.2	615	0.0500	1.12		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.2	25	0.2400	2.45		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
2.8	135	0.0260	0.81		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
40.4	925	Total			

Summary for Subcatchment 12:

Runoff = 3.6 cfs @ 12.44 hrs, Volume= 0.487 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
0.971	30	Woods, Good, HSG A
0.676	70	Woods, Good, HSG C
1.233	71	Meadow, non-grazed, HSG C
0.603	39	>75% Grass cover, Good, HSG A
* 0.092	98	Proposed Impervious
3.575	55	Weighted Average
3.483		97.43% Pervious Area
0.092		2.57% Impervious Area

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	150	0.0400	0.11		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
5.5	360	0.0470	1.08		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.1	30	0.3000	3.83		Shallow Concentrated Flow, C to D Short Grass Pasture Kv= 7.0 fps
27.8	540	Total			

Summary for Subcatchment 13:

Runoff = 28.9 cfs @ 12.18 hrs, Volume= 2.591 af, Depth= 3.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
2.115	39	>75% Grass cover, Good, HSG A
* 5.503	98	Proposed Impervious
0.439	30	Woods, Good, HSG A
8.057	79	Weighted Average
2.554		31.70% Pervious Area
5.503		68.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	60	0.0170	0.10		Sheet Flow, A to B Grass: Dense n= 0.240 P2= 3.30"
0.6	40	0.0200	1.16		Sheet Flow, B to C Smooth surfaces n= 0.011 P2= 3.30"
2.2	1,190	0.0200	9.11	16.09	Pipe Channel, C to D 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
12.8	1,290	Total			

Summary for Subcatchment 14:

Runoff = 12.2 cfs @ 12.14 hrs, Volume= 1.006 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
0.946	30	Meadow, non-grazed, HSG A
0.832	39	>75% Grass cover, Good, HSG A
* 2.336	98	Proposed Impervious
0.234	30	Woods, Good, HSG A
4.348	68	Weighted Average
2.012		46.27% Pervious Area
2.336		53.73% Impervious Area

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	25	0.0100	0.07		Sheet Flow, A to B Grass: Dense n= 0.240 P2= 3.30"
1.4	110	0.0150	1.27		Sheet Flow, B to C Smooth surfaces n= 0.011 P2= 3.30"
2.2	630	0.0070	4.77	5.86	Pipe Channel, C to D 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
9.7	765	Total			

Summary for Subcatchment 21:

Runoff = 2.8 cfs @ 12.17 hrs, Volume= 0.331 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
1.328	30	Woods, Good, HSG A
0.976	30	Meadow, non-grazed, HSG A
1.046	39	>75% Grass cover, Good, HSG A
* 0.097	98	Existing impervious
* 0.723	98	Water
4.170	46	Weighted Average
3.350		80.34% Pervious Area
0.820		19.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0400	0.28		Sheet Flow, A to B Range n= 0.130 P2= 3.30"
0.2	60	0.4000	4.43		Shallow Concentrated Flow, B to C Short Grass Pasture Kv= 7.0 fps
9.2	210	Total			

Summary for Subcatchment 31:

Runoff = 2.4 cfs @ 12.57 hrs, Volume= 0.373 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

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Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
0.340	30	Woods, Good, HSG A
0.637	77	Woods, Good, HSG D
0.125	30	Meadow, non-grazed, HSG A
0.450	78	Meadow, non-grazed, HSG D
1.260	39	>75% Grass cover, Good, HSG A
* 0.073	98	Proposed impervious
2.885	54	Weighted Average
2.812		97.47% Pervious Area
0.073		2.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
7.3	170	0.0060	0.39		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
36.5	320	Total			

Summary for Subcatchment 32:

Runoff = 0.4 cfs @ 12.66 hrs, Volume= 0.105 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
1.728	30	Woods, Good, HSG A
0.397	77	Woods, Good, HSG D
0.373	39	>75% Grass cover, Good, HSG A
2.498	39	Weighted Average
2.498		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.8	150	0.0250	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.6	100	0.0420	1.02		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
28.4	250	Total			

Summary for Subcatchment 41:

Runoff = 0.1 cfs @ 14.18 hrs, Volume= 0.040 af, Depth= 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

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Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
1.528	30	Woods, Good, HSG A
0.853	39	>75% Grass cover, Good, HSG A
2.381	33	Weighted Average
2.381		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
22.4	475	0.0050	0.35		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
36.0	575	Total			

Summary for Pond 2P: Internally Drained

Inflow Area = 4.170 ac, 19.66% Impervious, Inflow Depth = 0.95" for 25-YR event
 Inflow = 2.8 cfs @ 12.17 hrs, Volume= 0.331 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 178.44' @ 24.55 hrs Surf.Area= 34,027 sf Storage= 14,400 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	178.00'	1,036,250 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
178.00	31,500	0	0
180.00	43,000	74,500	74,500
182.00	72,000	115,000	189,500
184.00	116,500	188,500	378,000
185.50	174,000	217,875	595,875
186.00	162,500	84,125	680,000
187.00	178,000	170,250	850,250
188.00	194,000	186,000	1,036,250

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=178.00' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Summary for Pond 3P: Internally Drained

Inflow Area = 5.383 ac, 1.36% Impervious, Inflow Depth = 1.07" for 25-YR event
 Inflow = 2.8 cfs @ 12.59 hrs, Volume= 0.478 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 184.76' @ 26.10 hrs Surf.Area= 53,992 sf Storage= 20,835 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	184.00'	476,033 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
184.00	1,110	0	0
185.50	106,000	80,333	80,333
186.00	118,600	56,150	136,483
187.00	170,000	144,300	280,783
188.00	220,500	195,250	476,033

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	187.00'	50.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond 12P: Gravel Wetland #2

Inflow Area = 11.632 ac, 48.10% Impervious, Inflow Depth = 3.18" for 25-YR event
 Inflow = 30.7 cfs @ 12.18 hrs, Volume= 3.078 af
 Outflow = 2.7 cfs @ 14.24 hrs, Volume= 1.668 af, Atten= 91%, Lag= 123.6 min
 Primary = 2.7 cfs @ 14.24 hrs, Volume= 1.668 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 155.73' @ 14.24 hrs Surf.Area= 37,550 sf Storage= 84,790 cf

Plug-Flow detention time= 475.3 min calculated for 1.668 af (54% of inflow)
 Center-of-Mass det. time= 359.2 min (1,192.4 - 833.2)

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Type III 24-hr 25-YR Rainfall=6.20"

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Volume	Invert	Avail.Storage	Storage Description
#1	153.00'	134,485 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
153.00	16,700	0	0
154.00	32,070	24,385	24,385
154.50	33,700	16,443	40,828
156.00	38,380	54,060	94,888
157.00	40,815	39,598	134,485

Device	Routing	Invert	Outlet Devices
#1	Primary	152.67'	18.0" Round Culvert L= 83.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 152.67' / 151.50' S= 0.0141 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	154.50'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	155.50'	6.0' long x 0.70' rise Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)
#4	Device 1	150.00'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 4	150.00'	6.0" Round Culvert L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 150.00' / 150.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Device 5	153.00'	2.410 in/hr Exfiltration over Surface area above 153.00' Conductivity to Groundwater Elevation = 152.67' Excluded Surface area = 16,700 sf
#7	Secondary	156.00'	12.0' long x 9.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.46 2.55 2.70 2.69 2.68 2.68 2.67 2.64 2.64 2.64 2.65 2.64 2.65 2.65 2.66 2.67 2.69

Primary OutFlow Max=2.7 cfs @ 14.24 hrs HW=155.73' (Free Discharge)

- ↑ 1=Culvert (Passes 2.7 cfs of 12.9 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.4 cfs @ 4.97 fps)
- ↑ 3=Sharp-Crested Vee/Trap Weir (Weir Controls 2.2 cfs @ 1.58 fps)
- ↑ 4=Orifice/Grate (Orifice Controls 0.0 cfs @ 8.43 fps)
- ↑ 5=Culvert (Passes 0.0 cfs of 1.6 cfs potential flow)
- ↑ 6=Exfiltration (Passes 0.0 cfs of 4.0 cfs potential flow)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=153.00' (Free Discharge)

- ↑ 7=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond 14P: Gravel Wetland #1

Inflow Area =	4.348 ac, 53.73% Impervious, Inflow Depth = 2.78" for 25-YR event
Inflow =	12.2 cfs @ 12.14 hrs, Volume= 1.006 af
Outflow =	0.8 cfs @ 14.99 hrs, Volume= 0.425 af, Atten= 94%, Lag= 170.8 min
Primary =	0.8 cfs @ 14.99 hrs, Volume= 0.425 af
Secondary =	0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Biddeford Residential Post-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 179.62' @ 14.99 hrs Surf.Area= 21,962 sf Storage= 28,989 cf

Plug-Flow detention time= 406.4 min calculated for 0.425 af (42% of inflow)
 Center-of-Mass det. time= 280.5 min (1,125.2 - 844.7)

Volume	Invert	Avail.Storage	Storage Description
#1	178.00'	89,610 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
178.00	13,570	0	0
179.50	21,650	26,415	26,415
180.00	22,970	11,155	37,570
181.00	26,130	24,550	62,120
182.00	28,850	27,490	89,610

Device	Routing	Invert	Outlet Devices
#1	Primary	177.67'	18.0" Round Culvert L= 265.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 177.67' / 175.43' S= 0.0085 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	179.50'	6.0' long x 2.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)
#3	Device 2	179.00'	15.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 179.00' / 179.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#4	Device 1	175.00'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 4	175.00'	6.0" Round Culvert L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 175.00' / 175.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Device 5	178.00'	2.410 in/hr Exfiltration over Surface area above 178.00' Conductivity to Groundwater Elevation = 177.67' Excluded Surface area = 13,570 sf
#7	Secondary	181.00'	12.0' long x 9.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.46 2.55 2.70 2.69 2.68 2.68 2.67 2.64 2.64 2.64 2.65 2.64 2.65 2.65 2.66 2.67 2.69

Primary OutFlow Max=0.8 cfs @ 14.99 hrs HW=179.62' (Free Discharge)

- 1=Culvert (Passes 0.8 cfs of 9.3 cfs potential flow)
- 2=Sharp-Crested Vee/Trap Weir (Passes 0.8 cfs of 0.8 cfs potential flow)
- 3=Culvert (Outlet Controls 0.8 cfs @ 1.87 fps)
- 4=Orifice/Grate (Orifice Controls 0.0 cfs @ 6.72 fps)
- 5=Culvert (Passes 0.0 cfs of 1.3 cfs potential flow)
- 6=Exfiltration (Passes 0.0 cfs of 1.0 cfs potential flow)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=178.00' (Free Discharge)

- 7=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Link SP1: Study Point 1

Inflow Area = 27.442 ac, 29.32% Impervious, Inflow Depth > 1.43" for 25-YR event
Inflow = 7.1 cfs @ 12.67 hrs, Volume= 3.280 af
Primary = 7.1 cfs @ 12.67 hrs, Volume= 3.280 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP2:

Inflow Area = 4.170 ac, 19.66% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP3:

Inflow Area = 5.383 ac, 1.36% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP4: Study Point 4

Inflow Area = 10.417 ac, 0.00% Impervious, Inflow Depth = 2.87" for 25-YR event
Inflow = 11.7 cfs @ 12.98 hrs, Volume= 2.488 af
Primary = 11.7 cfs @ 12.98 hrs, Volume= 2.488 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Section 13 - Urban Impaired Stream

The development will result in more than three acres of impervious area and is located within the Thacher Brook watershed, which is an Urban Impaired Stream as identified in Appendix B of Chapter 502: Direct Watersheds of Lakes Most at Risk from New Development, and Urban Impaired Streams.

Thacher Brook is eligible for mitigation, of the projects Urban Impaired Stream impacts, via payment of a compensation fee as outlined in Chapter 501: Stormwater Management Compensation Fees and Mitigation Credit. A copy of the Compensation Fee Utilization Plan for Thacher Brook is attached for reference. The compensation fee is calculated as follows:

Table 1: Compensation Fee Calculation			
Type of surface	Compensation fee (per acre)	Development area (acres)	Calculated fee
Non-roof impervious area	\$12,500	5.25	\$65,625
Roof	\$5,000	2.81	\$14,050
Landscape Area	\$2,500	10.073	\$25,182.50
Total Fee:			\$104,875.50

Section 14 - Basic Standards

A. INTRODUCTION:

Anyone who conducts or directs an activity that involves exposing, filling or displacing soil or other earthen materials must take appropriate measures to prevent erosion and the loss of sediment beyond the project site or into a sensitive resource.

Erosion and sediment control measures should be in place before the activity begins and should remain functional until the site is permanently stabilized. All measures should remain effective until all areas are permanently stabilized. Any disturbed area should be regularly inspected until the site is fully stabilized with either 90% grass cover or a permanent impervious surface such as pavement.

The following information describes the Inspection, Maintenance and Documentation necessary during construction to comply with the State of Maine Stormwater Management Law.

B. INSPECTION

Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. For the purposes of this plan, a storm event is rainfall greater than 0.5 inches in a 24-hour period.

The person conducting inspections shall have knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project.

C. MAINTENANCE AND CORRECTIVE ACTION

If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

D. DOCUMENTATION

Keep a log (report) summarizing the inspections and any corrective actions taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log attached at the end of this plan is from the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016). The log may be used or adapted for this project.

Documentation must be retained for a minimum of three years after permanent stabilization has been achieved on the site and must be made accessible to the Maine Department of Environmental Protection upon request

E. INSPECTION DURING CONSTRUCTION:

1. **Inspection:** For the duration of construction activity, it is the Site 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 seven (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 (3) 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.
- Annually inspect riprap and remove woody vegetation when discovered.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. 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.
- The permanent storm drainage system shall be flushed and cleaned once the site is stabilized and prior to demobilization from the site.

E. 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).

F. 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.

G. Stabilized 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 recurrence 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.

H. Concrete Washout Area

- The site contractor shall establish a concrete washout area on-site which shall include sediment barrier to mitigate the transport of the washout material to the environment.
- The washout area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The washout area shall be inspected daily when concrete work is active and prior to any storm event.
- Accumulated concrete sediments shall be removed weekly, when concrete work is active, or when visibly encroaching on sediment barrier.

I. Dewatering

- The site contractor shall establish an on-site containment area which shall include sediment barrier to mitigate the transport of the sediment to the environment from

dewatering activity.

- The containment area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The containment area shall include a dirt bag or similar sediment trap for treatment of the collected water.
- The containment area shall be inspected after each use to ensure that no downgradient erosion or sedimentation offsite is occurring.

REFERENCES

Design Drawings:

C-2.1 Grading & Drainage Plan-1

C-2.2 Grading & Drainage Plan-2

C-2.3 Grading & Drainage Plan-3

C-2.4 Grading & Drainage Plan-4

C-2.5 Grading & Drainage Plan-5

C-2.6 Grading & Drainage Plan-6

C-2.7 Grading & Drainage Plan-7

C-5.1 Site Details

Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016), Maine Department of Environmental Protection

Maine Erosion and Sediment Control Practices Field Guide for Contractors, Maine Department of Environmental Protection

CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL					
General Information:					
Site Name:		Date:		Inspected by:	
Owner:					
Retained 3PI:		Last Rain Date:		Amount:	
Reason for Inspection:		Weekly	Winter	Final	Rain Event Complaint
Description of disturbed area:					
Photos:					
		YES/NO/NA	COMMENTS		
1. Is an Erosion and Sediment Control Plan available?					
ESC plan on-site and followed					
Other:					
2. Are all erosion control practices installed properly, maintained and functioning?					
Disturbed areas stable					
Concentrated flow inlet/outlet protection					
All areas at final grade					
Disturbed dormant areas stabilized					
Access roads and parking					
Hillsides and stockpiles					
Other:					
3. Are all sedimentation control practices installed properly, maintained and functioning?					
Construction entrance					
Sedimentation basins/traps/diversions					
Perimeter controls					
Check dams					
Other:					
4. Is maintenance of ESC measures, construction activities and housekeeping kept-up?					
Sedimentation/erosion in ditches					
Tracked Sediment or dust at exits					
Hazardous material storage and spillcontrol practices					
Waste management (concrete, hazardousmaterial, etc.)					
Other:					
5. Violation, Corrective Actions, Recommendations					
Sediment discharged from site?					
Corrective action required?					
Site compliant with all permits?					
Notice of violation or stop work orderissued?					
Comments/Corrective Actions (complete corrective actions before the next rain event and within 7 day)					

Section 15 - Groundwater

A. Narrative and Report

Not applicable. The development intends to connect to public water infrastructure for domestic water demands and connect to public sanitary sewer infrastructure for wastewater collection and treatment.

B. Groundwater Protection Plan

Not applicable. No storage of petroleum products, pesticides, herbicides, fertilizer, road salt, solvents, acids or other materials with the potential to contaminate groundwater is proposed for this development.

C. Monitoring Plan

Not applicable. No known requirement to monitor surface water or groundwater applies to this property.

D. Monitoring Well Installation Report

Not applicable. No monitoring wells are proposed for this project.

Section 16 - Water Supply

E. Water Supply Method

Maine Water Company has been contacted to confirm that there is sufficient healthful water supply to serve the project. A copy of the Maine Water Company's response will be forwarded upon receipt.

F. Subsurface Wastewater Disposal

Not applicable. This project intends to connect to the City's existing wastewater infrastructure.

G. Total Usage

As indicated in the letter to Maine Water Company, the anticipated domestic water demand will be approximately 43,121 gallons per day (GPD).



Pineland
Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

August 9, 2022

2149

Marcus Knipp
Maine Water Company
93 Industrial Park Road
Saco, ME 04072

**CONFIRMATION OF ABILITY TO SERVE; DEVINE CAPITAL, LLC
BIDDEFORD RESIDENTIAL PROJECT; BIDDEFORD MAINE**

Dear Marcus:

On behalf of the applicant, Devine Capital, LLC, we request confirmation that Maine Water Company has sufficient healthful water supply to serve their proposed development. The proposed apartment complex, to be located on a vacant parcel with frontage on Alfred Street (Rt. 111) and Andrews Road in Biddeford, will include 216 apartment units in nine buildings, a clubhouse and maintenance building.

The Maine Subsurface Wastewater Disposal Rules (MSWDR) were utilized to estimate anticipated wastewater discharges from the development, which will approximate the anticipated domestic water demand for the site. Based upon the MSWDR, dwelling units with two or less bedrooms are expected to generate 180 gallons per day (GPD) and 3-bedroom dwelling units are expected to generate 270 GPD. Since the clubhouse will provide many functions to the residents, the anticipated flow was estimated utilizing the "public restroom" design flows, which includes 325 GPD per toilet and 162 GPD per urinal. The maintenance building was estimated as "a place of employment with no showers", which includes 12 GPD per employee.

The proposed mix of apartment sizes will include: (27) studio units, (54) 1-bedroom units, (108) 2-bedroom units, and (27) 3-bedroom units. The clubhouse will include five (5) toilets and one (1) urinal. Two employees will have access to the maintenance building. Based upon these assumptions, the anticipated water demand for the project site will be approximately 43,121 GPD.

Based upon the available water pressure in the project's vicinity, the developer anticipates the need for a private water booster station to serve the site. As the design progresses, the estimated demand will be refined by calculating usage by the total number proposed fixtures for each meter required. In the interim, let me know if you have any questions or require additional information to determine that there is sufficient supply to serve this development.

Sincerely,
TERRADYN CONSULTANTS LLC

Richard Meek, P.E.
Sr. Project Engineer

Cc: Devine Capital, LLC

Section 17 - Wastewater Disposal

A. On-Site Subsurface Wastewater Disposal Systems

Not applicable. This project intends to connect to the City's existing wastewater infrastructure.

B. Nitrate-Nitrogen Impact Analysis

Not applicable. This project intends to connect to the City's existing wastewater infrastructure.

C. Municipal Facility or Utility Company Letter

The City of Biddeford's Public Works Department – Wastewater Division has been contacted to confirm that there is sufficient collection and treatment capacity to serve the project. A copy of the Wastewater Division's response will be forwarded upon receipt.

D. Municipal Facility or Utility Company Letter

Not applicable. No discharge of wastewater into any stream, river, pond, lake or other water bodies is anticipated.

E. Storage or Treatment Lagoons

Not applicable. No storage of wastewater in lagoons, impoundments or similar storage structures is proposed.

Section 18 - Solid Waste

The development will generate solid waste during land clearing, construction of the infrastructure & buildings and after occupation. The specific types, quantities, haulers and disposal sites are described below.

Woodwaste, Stumps & Grubbings

The majority of the waste will be generated by the harvesting of trees and the removal of stumps. Marketable timber will be removed from the project site and sold. Smaller woody debris will be mulched and used as a soil amendment or as an erosion control measure. Stump grindings will be used to make erosion control mix berm whenever possible, which will be used to augment or substitute for silt fence. An estimate of the amount of stumps/grinding waste can be calculated by assuming that 400 CY of material produced per acre of disturbance of mature forest. This approximation yields 5,720 CY for the estimated 14.3 acres of clearing required.

Construction & Demolition Debris

The construction waste generation rate for both residential & commercial construction is approximately 4.4 lb/ft². This value is from Estimating 2003 Building-Related Construction and Demolition Materials Amounts, published by the US EPA. The project site includes the following:

(1) Clubhouse @ 7,750 SF	7,750 SF
(1) Mail Kiosk @ 410 SF	410 SF
(1) Maintenance building @ 910 SF	910 SF
(9) 3-story apartment buildings @ 9,155 SF per floor	247,185 SF
(2) garage buildings @ 2,630 SF ea	5,260 SF
(6) garage buildings @ 4,370 SF ea	26,220 SF
Total	287,735 SF

This equates to approximately 633 tons of expected construction debris.

General construction waste material from roadway, utility, and infrastructure construction as well as building construction will be disposed of at appropriately licensed disposal facilities. It is anticipated that construction and demolition debris will be transported by Casella Waste and disposed of at the Juniper Ridge Landfill in West Old Town, ME or by Waste Management of Maine, Inc and disposed of at the Crossroads Landfill in Norridgewock, Maine or the Turnkey Landfill in Rochester, NH.

Once the construction phase is completed, any general construction debris will be disposed of at appropriately licensed disposal facilities.

No site demolition is anticipated as part of this project.

Household Solid Waste

It is estimated by the US EPA (<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>) that as of 2017, the average person generates 4.51 lbs per day.

Each of the nine proposed apartment buildings will include three (3) studio apartments, six (6) one-bedroom apartments, twelve (12) two-bedroom apartments, and three (3) three-bedroom apartments. The studio & one-bedroom units would likely average no more than two people per unit. The two and three-bedroom units would likely be closer to the average household. According to the Pew Research Center (<https://www.pewresearch.org/fact-tank/2019/10/01/the-number-of-people-in-the-average-u-s-household-is-going-up-for-the-first-time-in-over-160-years>), the average person lives in a household consisting of 3.4 people. Based upon this data, the development average is $(2 \times 81 + 3.4 \times 135)/216 = 2.88$ people per apartment. Therefore, the assumed amount of household waste is approximately $(4.51 \text{ lbs/person/day} \times 2.88 \text{ people per apartment} \times 216 \text{ apartments}) 2,806 \text{ lbs/day}$ (512 tons/year).

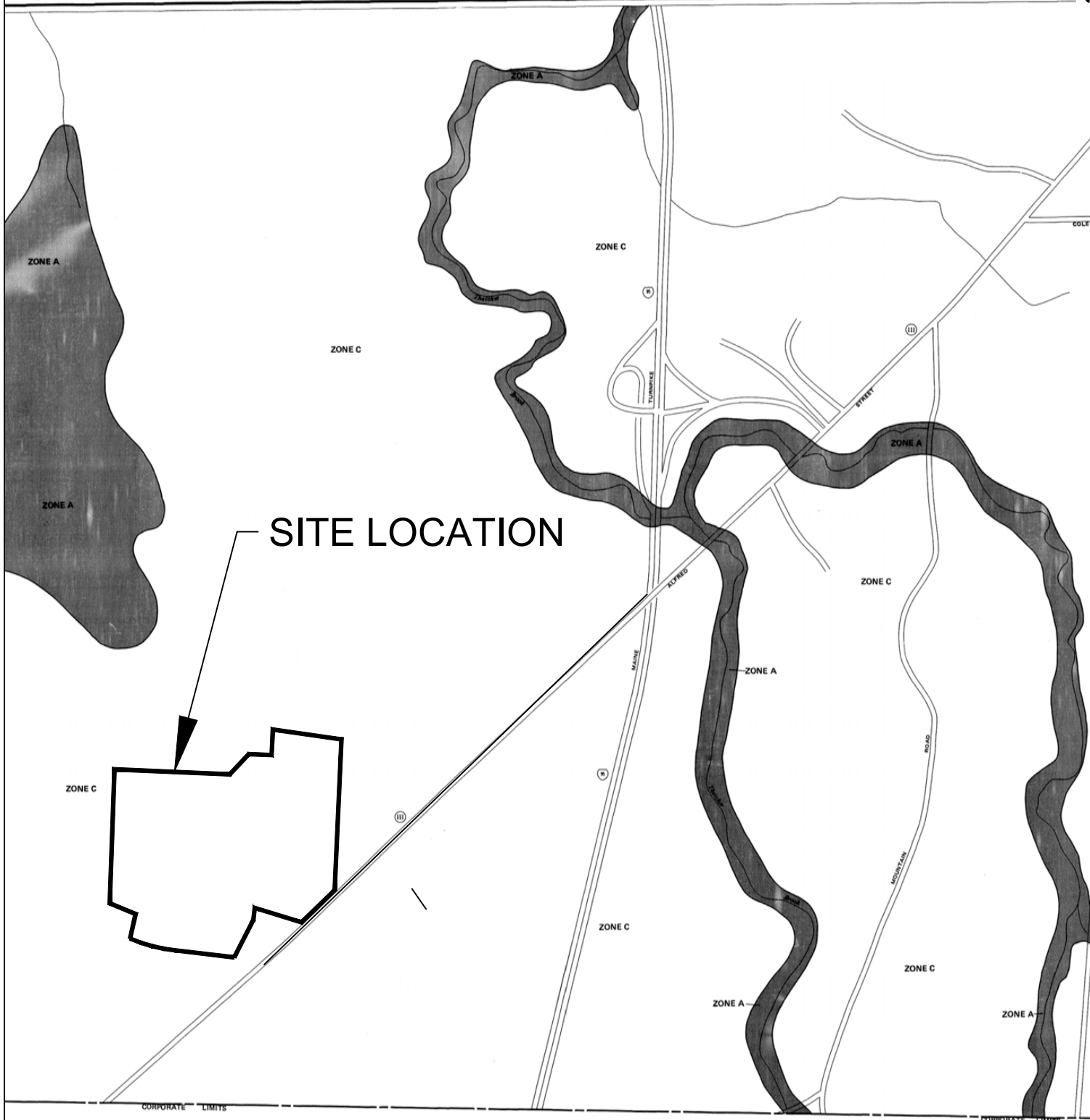
All waste from the apartments will be stored on-site in proposed dumpsters and recycling receptacles that will be located adjacent to the proposed maintenance building. It is anticipated that the waste will be collected by Troiano Waste Services and transported to one of ecomaine's incineration facilities.

Industrial Solid Wastes – Not applicable

Special & Hazardous Wastes – Not applicable

Section 19 - Flooding

A portion of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Community Panel: 2301450008B), with the project site location identified, is attached.



FEMA MAP (COMMUNITY PANEL: 2301450008B)

PROJECT:
BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

PREPARED FOR:
KGI PROPERTIES, LLC
10 Memorial Boulevard, Suite 901
Providence RI 02903



207.926.5111 • info@terradyconsultants.com • www.terradyconsultants.com

PINELAND
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

PROJECT NO. 21-49	SHEET 1 OF 1
DATE 03/21/2021	
SCALE 1"=1,000'	

Section 20 - Blasting

Based upon subsurface investigations, no blasting is anticipated for road construction, foundations, utility trenching or stormwater management construction.

Section 21 - Air Emissions

Not applicable. Since the project is solely residential, no significant adverse air emissions are anticipated.

Section 22 - Odors

Not applicable. Since the project is solely residential no significant sources of odor are anticipated.

Section 23 - Water Vapor

Not applicable. Since the project is solely residential, no large-scale water vapor emissions are anticipated.

Section 24 - Sunlight

Not applicable. Based upon the required building setbacks, proposed structure heights and proposed structure locations within the site, access to direct sunlight will not be blocked for any abutting structures utilizing solar energy through active or passive systems.

Section 25 – Notices

A copy of the notice of intent to file (Form B), which was sent to the abutting property owners and published in the Portland Press Herald, is attached. Additionally, the completed Public Notice Filing and Certification (Form C) is attached.

A list of names and addresses of the abutting property owners is attached.

Public Notice: Notice of Intent to File

Please take notice that Devine Capital, LLC, 3 Milk St., Third Floor, Portland, ME 04101, (207) 536-4664 is intending to file a Site Location of Development Act permit application with the City of Biddeford in accordance with their Capacity status and pursuant to the provisions of 38 M.R.S.A. §§ 481 thru 490 on or about August 9, 2022. In addition, a public informational meeting will be held on August 8, 2022 at 6:00 p.m. and will be located at Biddeford City Hall, 205 Main Street, Biddeford, Maine.

This application is for construction of nine 24-unit apartment buildings, a clubhouse, mail kiosk, maintenance building, eight detached garages and surface parking. The project is to be located on Andrews Road in Biddeford, ME.

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department of Environmental Protection in writing, no later than 20 days after the application is found by the City of Biddeford to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

Written public comments may be sent to Biddeford City Hall, 205 Main Street, Biddeford, Maine 04005, where the application is filed for public inspection.

FORM C

PUBLIC NOTICE FILING AND CERTIFICATION

The DEP Rules, Chapter 2, require an applicant to provide public notice for all Site Location projects with the exception of minor revisions and condition compliance applications. In the notice, the applicant must describe the proposed activity and where it is located. "Abutter" for the purposes of the notice provision means any person who owns property that is BOTH (1) adjoining and (2) within one mile of the delineated project boundary, including owners of property directly across a public or private right of way.

1. **Newspaper:** You must publish the Notice of Intent to File in a newspaper circulated in the area where the activity is located. The notice must appear in the newspaper within 30 days prior to the filing of the application with the Department. You may use the attached Notice of Intent to File form, or one containing identical information, for newspaper publication and certified mailing.
2. **Abutting Property Owners:** You must send a copy of the Notice of Intent to File by certified mail to the owners of the property abutting the activity. Their names and addresses can be obtained from the town tax maps or local officials. They must receive notice within 30 days prior to the filing of the application with the Department.
3. **Municipal Office:** You must send a copy of the Notice of Intent to File and a **duplicate of the entire application** to the Municipal Office.

ATTACH a list of the names and addresses of the owners of abutting property.

CERTIFICATION

By signing below, the applicant or authorized agent certifies that:

1. A Notice of Intent to File was published in a newspaper circulated in the area where the project site is located within 30 days prior to filing the application;
2. A certified mailing of the Notice of Intent to File was sent to all abutters within 30 days of the filing of the application;
3. A certified mailing of the Notice of Intent to File, and a duplicate copy of the application was sent to the town office of the municipality in which the project is located; and
4. Provided notice of, if required, and held a public informational meeting in accordance with Chapter 2, Rules Concerning the Processing of Applications, Section 14, prior to filing the application. Notice of the meeting was sent by certified mail to abutters and to the town office of the municipality in which the project is located at least ten days prior to the meeting. Notice of the meeting was also published once in a newspaper circulated in the area where the project site is located at least seven days prior to the meeting.

The Public Informational Meeting was held on August 8, 2022.
Date

Approximately 0 members of the public attended the Public Informational Meeting.

[Signature]
Signature of Applicant or Authorized Agent

8/9/2022
Date

Abutter's List

Map/Lot	Name	Address
2/5-2	Gary & Jeanine Thebarger	9 Andrews Rd. Biddeford, ME 04005
2/5-5	Gary & Chad Thebarger	9 Andrews Rd. Biddeford, ME 04005
2/6-2	David R. & Joyce Pelletier	23 School St., Unit 6 Old Orchard Beach, ME 04064
2/6-3	Old Dogs of Biddeford, LLC	47 Waites Landing Rd. Falmouth, ME 04105
2/10 2/10-1	Michael & Linda Beaulieu	594 Alfred St. Biddeford, ME 04005
2/11	Robert R. Letellier	5 Letellier Ln. Biddeford, ME 04005
2/15-1	Central Maine Power Co. C/o Avangrid Management Co.	One City Center, 5th Floor Portland, ME 04101
2/23	Michael J. Thibault	477 Mouse Ln. Alfred, ME 04002
2/23-1	Winchendon, LLC	355 Main St., Suite 25 Woburn, MA 01801
2/23-3	Gartland Assets, LLC	4 Dusty Acres Biddeford, ME 04005
2/26	DSM MB II, LLC C/O Demoulas Super Markets, Inc.	875 East St. Tewksbury, MA 01876
2/37	HD Development of Maryland, Inc. C/O Home Depot USA Prop Tax Dept 2405	P.O. Box 105842 Atlanta, GA 30348

Attachment 5

Stormwater Management Report



Pineland

Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

Portland

565 Congress Street, Suite 201
Portland, ME 04101

BIDDEFORD RESIDENTIAL
ANDREWS RD, BIDDEFORD, MAINE

STORMWATER MANAGEMENT REPORT

PREPARED FOR:

DEVINE CAPITAL, LLC
30 MILK ST., THIRD FLOOR
PORTLAND, ME 04101

PREPARED BY:

TERRADYN CONSULTANTS LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260

AUGUST 2022

Introduction

The following Stormwater Management Report has been prepared for Devine Capital, LLC to address the potential impacts associated with this project due to the proposed modification in stormwater runoff characteristics. The stormwater management controls that are outlined in this plan were designed to suit the proposed development and comply with applicable regulatory requirements.

Existing Conditions

The project site consists of approximately 44.53 acres of undeveloped land located in Biddeford near the intersection of Andrews Road and Alfred Street (Route 111). The parcel is bounded by residential uses, commercial uses, a utility corridor and other undeveloped land. Portions of the site were utilized for gravel extraction.

Slopes on the site generally range between 0 and 15% with portions of the site draining to internal depressions created as part of the gravel extraction. The remainder of the site generally drains from west (Andrews Rd.) to east towards an unnamed stream which forms the northeastern property boundary.

The unnamed stream is tributary of Thatcher Brook. Thatcher Brook is listed in Chapter 502 as an Urban Impaired Stream. The proposed development area is not located in an identified flood zone per the FEMA Flood Insurance Rate Map for the City of Biddeford, Community Panel 2301450008B.

Soils

Soil characteristics were obtained from the Class B High Intensity Soil Survey completed by Mark Hampton Associates, Inc. The Hydrologic Soil Groups (HSG), as classified by USDA – Natural Resources Conservation Service, are as follows:

Soil Name	Slope (%)	HSG
Adams (A)	0-3	A
Adams (B)	3-8	A
Brayton (A)	0-3	D
Hermon (C)	8-15	A
Skerry (B)	3-8	C/D

Proposed Site Improvements

The applicant intends to construct a multi-family residential development consisting of nine 24-unit apartment buildings, a clubhouse, mail kiosk, maintenance building, eight detached garages, surface parking, dog park, community garden and interconnected sidewalks.

When completed the proposed development will consist of approximately 18.13 acres of disturbance area including approximately 8.06 acres of new impervious area.

Pre-Development Conditions

The pre-development watershed plan consists of seven (7) subcatchments, labeled 1A, 1B, 2, 3, 4A, 4B and 4C. Runoff from the seven subcatchments is routed via overland flow to four (4) Study Points identified for comparing peak runoff rates from the site.

Subcatchment 1A consists of approximately 11.8 acres of mostly forested land which will not drain to the proposed BMP in the post-development condition. Subcatchment 1B consists of approximately 10.2 acres of mostly forested land which will drain to the proposed BMP in the post-development condition. Subcatchments 1A and 1B drain to Study Point 1. Study Point 1 is in the southeast portion of the property and eventually discharges to an unnamed stream.

Subcatchment 2 consists of approximately 7.6 acres of the property which drains to Study Point 2, an internally drained depression created as part of the gravel extraction process.

Subcatchment 3 consists of approximately 6.0 acres of the property which drains to Study Point 3, an internally drained depression, which consists of wetlands and upland areas.

Subcatchment 4A consists of approximately 7.8 acres of mostly forested wetland which will not include disturbance as part of this project. Subcatchment 4B consists of approximately 0.2 acre of forested wetland which will not include disturbance as part of this project. Subcatchment 4C consists of approximately 3.7 acres of mostly forested land which will include disturbance as part of this project. Subcatchments 4A, 4B and 4C drain to Study Point 4. Study Point 4 is located on the northwestern property boundary.

Post-Development Conditions

The overall-post-development watershed area is consistent with the pre-development watershed area. However, the pre-development subcatchments have been divided into smaller subcatchment areas to reflect the changes in stormwater runoff due to the proposed development.

Study Point 1: Post-development subcatchment 11 represents the mostly undeveloped portion of land matching pre-development subcatchment 1A. Subcatchment 12 depicts the land area contributing overland stormwater runoff to proposed gravel wetland 12P. Subcatchment 13 includes the portion of development contributing stormwater runoff to proposed gravel wetland 12P via storm drainage pipe. Subcatchment 14 includes the portion of development contributing stormwater runoff to proposed gravel wetland 14P.

Study Point 2: Post-development subcatchment 21 represents the remainder of land within pre-development subcatchment 2.

Study Point 3: Post-development subcatchments 31 and 32 represent the remainder of land within pre-development subcatchment 3.

Study Point 4: Subcatchments 4A and 4B are unchanged from the pre-development condition. Post-development subcatchment 41 represents the developed condition of pre-development subcatchment 4C.

Regulatory Requirements

Basic Standard - Chapter 500, Section 4(B)

Since the project will disturb more than one (1) acre of land area, MDEP Basic Standards apply. The Basic Standard requires that the MDEP erosion & sedimentation control, inspection & maintenance, and housekeeping standards are met. Additionally, the site grading or other construction activity shall not

impede or otherwise alter drainageways so as to have an unreasonable adverse impact on a wetland or waterbody, or an adjacent downslope parcel.

A site-specific Erosion & Sedimentation Control Plan has been developed for the project. Means and methods to control erosion and sedimentation during and after construction are detailed in the erosion control plan narrative and construction details, which are included directly on the project drawings for ease of reference during construction.

General Standard - Chapter 500, Section 4(C)

Since the project will create more than one (1) acre of impervious surface, MDEP General Standards apply. The General Standard requires that a project's stormwater management system include treatment measures that will mitigate for 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. Treatment of no less than 95% of the impervious area and no less than 80% of the developed area is required to meet the standard.

Two proposed gravel wetlands and a forested buffer will be utilized to meet the treatment requirements of the general standard. The sizing and treatment calculations for the gravel wetlands are located in Appendix 4.

- The project includes 8.060 acres of impervious area. To meet the general standard, 7.657 acres (95%) is required to be treated. The site's proposed BMPs provide treatment for 7.956 acres (98.71%) of impervious area.
- The project includes 18.133 acres of developed area. To meet the general standard, 14.506 acres (80%) is required to be treated. The site's proposed BMPs provide treatment for 14.558 acres (80.28%) of developed area.

Flooding Standard - Chapter 500, Section 4(F)

Since the project will create more than three (3) acres of impervious surface, MDEP Flooding Standards apply. The Flooding Standard requires that a project's stormwater management system detain, retain or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.

As such, a runoff evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software (Version 10.0) was utilized to perform the calculations.

Runoff curve numbers were determined for each subcatchment by measuring the area of each hydrologic soil group within each type of land cover. Weighted curve numbers were then calculated using curve numbers for various cover types and hydrologic soil groups, assuming "good" conditions as defined in U.S. Soil Conservation Service (SCS) publications. Times of concentration and travel times were determined from site topographic maps in accordance with SCS procedures. A maximum length of 150 feet was used for sheet flow. A minimum time of concentration of six minutes (0.1 hr.) was used for each subcatchment.

The 24-hour rainfall values utilized in the hydrologic model were obtained from Appendix H of MDEP's Chapter 500 rules. The rainfall values for York County are as follows:

Storm Frequency Precipitation (in./24 hr)	
2-year	3.3
10-year	4.9
25-year	6.2

The following table summarizes the results of stormwater calculations for the design storm events for the project areas:

Stormwater Runoff Summary Pre-Development vs. Post-Development						
Study Point #	2-Year/24Hr (cfs)		10-Year/24Hr (cfs)		25-Year/24Hr (cfs)	
	Pre	Post	Pre	Post	Pre	Post
SP-1	0.3	0.3	3.0	3.0	7.7	7.1
SP-2	0.0	0.0	0.0	0.0	0.0	0.0
SP-3	0.0	0.0	0.0	0.0	0.0	0.0
SP-4	4.0	4.0	8.1	8.1	11.7	11.7

Urban Impaired Stream Standard – Chapter 500, Section 4(E)

As the proposed development is tributary to Thacher Brook which is listed by the Maine Department of Environmental Protection as an Urban Impaired Stream within Chapter 502, the project will be required to meet or exceed the requirements of the Urban Impaired Stream Standard as listed in Section 4(E) of Chapter 500. The Urban Impaired Stream Standard requires a project to either pay a compensation fee or mitigate project impacts by reducing or eliminating an off-site or on-site pre-development impervious stormwater source.

The applicant will meet the Urban Impaired Stream standard by paying the compensation fee pursuant to Chapter 501.3.A.1.

Preliminary Urban Impaired Stream Compensation Fee			
	Compensation Fee per Acre	Acr18es	Compensation Fee Total
Non-roof Impervious	\$12,500	5.25	\$65,625
Roof Impervious	\$5,000	2.81	\$14,050
Landscaped	\$2,500	10.073	\$25,182.50
TOTAL			\$104,875.50

Summary

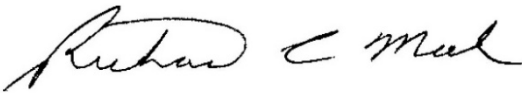
Erosion and sedimentation control, inspection and maintenance procedures and general housekeeping requirements have been outlined to prevent unreasonable impacts on the project site or the surrounding environment.

By utilizing Best Management practices (two proposed gravel wetlands and a forested buffer) stormwater quality treatment has been provided for a minimum of 95% of the site's impervious area and a minimum of 80% of the site's total developed area. Based upon the modeling data, the post-development peak rates of runoff for the project site will be less than or equal to the pre-development runoff rates during the design storm events (2-year, 10-year and 25-year).

With the incorporation of the referenced erosion control, treatment, and detention measures, the project is in conformance with the Maine Department of Environmental Protection Chapter 500 Stormwater Law. Accordingly, it is anticipated that stormwater runoff from the proposed development will not result in significant adverse effects to off-site receiving channels or downstream properties.

Prepared by:

Terradyn Consultants, LLC

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

Richard Meek, P.E.
Sr. Project Engineer

Appendices

- 1 – Stormwater Infrastructure Inspection & Maintenance Manual
- 2 – Erosion and Sediment Control Inspection & Maintenance Plan
- 3 – Watershed Maps
- 4 – BMP and HydroCAD Calculations

APPENDIX 1

STORMWATER INFRASTRUCTURE INSPECTION & MAINTENANCE MANUAL

BIDDEFORD RESIDENTIAL BIDDEFORD, MAINE

STORMWATER MANAGEMENT SYSTEM INSPECTION, MAINTENANCE & HOUSEKEEPING PLAN

Project Owner/Developer: Devine Capital, LLC
30 Milk St., 3rd Floor
Portland, Maine 04101
(401) 413-1590

Responsible Party: To be Determined

Prepared By: Richard Meek, P.E.
Terradyn Consultants, LLC
41 Campus Drive, Suite 301
New Gloucester, ME 04260
(207) 926-5111

INTRODUCTION:

Regular inspection and maintenance of the entire stormwater management system is crucial to the long-term effectiveness of the system. The responsible party must provide regular inspection and maintenance of all permanent erosion control measures and stormwater management structures, establish any contract services required to implement the program, and keep records and a maintenance log book of inspection and maintenance activities. At a minimum, the inspection and maintenance activities outlined herein should be performed at the recommended intervals. All inspection and maintenance documentation shall be maintained for at least 5 years. This project is subject to the Maine Department of Environmental Protection's 5-year Recertification Process.

All measures must be maintained in effective operating condition. A person with knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected.

INSPECTION TASKS

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed 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 the Inspection, Maintenance, and Housekeeping 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 details 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 MDEP.

During Construction

1. **Inspection:** For the duration of construction activity, it is the Site 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 seven (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 (3) 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.
- Annually inspect riprap and remove woody vegetation when discovered.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. 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.
- The permanent storm drainage system shall be flushed and cleaned once the site is stabilized and prior to demobilization from the site.

E. 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).

F. 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.

G. Stabilized 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.

H. Concrete Washout Area

- The site contractor shall establish a concrete washout area on-site which shall include sediment barrier to mitigate the transport of the washout material to the environment.
- The washout area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The washout area shall be inspected daily when concrete work is active and prior to any storm event.
- Accumulated concrete sediments shall be removed weekly, when concrete work is active, or when visibly encroaching on sediment barrier.

I. Dewatering

- The site contractor shall establish an on-site containment area which shall include sediment barrier to mitigate the transport of the sediment to the environment from dewatering activity.
- The containment area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The containment area shall include a dirt bag or similar sediment trap for treatment of the collected water.
- The containment area shall be inspected after each use to ensure that no downgradient erosion or sedimentation offsite is occurring.

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 insure 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, the agent shall hire a qualified post-construction stormwater inspector to, at least annually, inspect the BMPs in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
2. **Maintenance, and repair:** If a BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator shall take corrective actions to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective actions to the Town Engineer. The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping 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. Winter Sanding:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

C. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

D. 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.
- Inspect embankment for erosion, settling, and structural failure.

E. Gravel Wetlands

1ST YEAR POST-CONSTRUCTION: Inspection frequency should be after every major storm in the first year following construction.

1. Inspect to be certain system drains within 24-48 hours.
2. Watering plants as necessary during the first growing season
3. Re-vegetating poorly established areas as necessary
4. Quarterly inspection of soil and repairing eroded areas, especially on slopes & make timely repairs.
5. Checking inlets, outlets, and overflow spillway for blockage, structural integrity, and evidence of erosion. Risers may need to be cleaned.

POST-CONSTRUCTION: Inspection frequency should be at least every 6 months and after every major storm. Activities are expected to include:

1. Check the basin for a dense root mat establishment of wetland vegetation.
2. Check and clean the risers if there is evidence of standing water, discolored water or accumulated sediments in the cells.
3. Check and clean the forebay for sediments, trash and debris. When sediments have accumulated to a depth of 12 inches, standing water is persistent or wetland vegetation become established, the forebay will need to be excavated and reformed.
4. Verify that the cells drain within 24-48 hours. Sediment will need to be removed when an accumulation of 4 inches is evident over the wetland surface.
5. Check and clean all outlets and overflow spillway if blocked or there is evidence of structural damage or erosion.
6. Remove decaying vegetation, litter and debris.
7. Check for foreign species. Particular care must be used to avoid the unintended introduction of invasive species such as purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*). It is recommended that a qualified wetland biologist be consulted when these are found in the area of the gravel wetland.

F. Forested Buffer

- Buffers should be inspected annually for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched.
- Access and Use: Buffers should not be traversed by all-terrain vehicles or other vehicles. Activities within buffers should be conducted so as not to damage vegetation, disturb any organic duff layer, or expose soil.
- Inspections: Conduct periodic "buffer walks" to inspect the condition of the buffer network.
- **Restrictions on Vegetated Stormwater Buffer Areas.**
Unless the owner of the Restricted Buffer Area, or any successors or assigns, obtains the prior written approval of the MDEP, the Restricted Buffer Area must remain undeveloped in perpetuity. To maintain the ability of the Restricted Buffer Area to filter and absorb stormwater, and to maintain compliance with the Stormwater Management Law and the permit issued thereunder to the Declarant, the use of the Restricted Buffer Area is hereinafter limited as follows:

- a. No soil, loam, peat, sand, gravel, concrete, rock or other mineral substance, refuse, trash, vehicle bodies or parts, rubbish, debris, junk waste, pollutants or other fill material may be placed, stored or

dumped on the Restricted Buffer Area, nor may the topography of the area be altered or manipulated in any way.

b. Any removal of trees or other vegetation within the Restricted Buffer Area must be limited to the following:

(i) No purposefully cleared openings may be created and an evenly distributed stand of trees and other vegetation must be maintained. An “evenly distributed stand of trees” is defined as maintaining a minimum rating score of 24 points in any 25 foot by 50 foot square (2500 square feet) area, as determined by the following rating scheme:

Diameter of tree at 4 ½ feet above ground level	Points
2-4 inches	1
4-8 inches	2
8-12 inches	4
>12 inches	8

Where existing trees and other vegetation result in a rating score less than 24 points, no trees may be cut or sprayed with biocides except for the normal maintenance of dead, windblown or damaged trees and for pruning of tree branches below a height of 12 feet provided two thirds of the tree’s canopy is maintained.

(ii) No undergrowth, ground cover vegetation, leaf litter, organic duff layer or mineral soil may be disturbed except that one winding path, that is no wider than six feet and that does not provide a downhill channel for runoff, is allowed through the area;

c. No building or other temporary or permanent structure may be constructed, placed or permitted to remain on the Restricted Buffer Area, except for a sign, utility pole (whether constructed of wood, steel or other materials) and appurtenant equipment such as guys and guy anchors, or fence;

d. No trucks, cars, dirt bikes, ATVs, bulldozers, backhoes, or other motorized vehicles or mechanical equipment may be permitted on the Restricted Buffer Area;

Attachments

Attachment 1 – Sample Stormwater Inspection and Maintenance Log

ATTACHMENT 1

Stormwater Management Facilities Inspection & Maintenance Log Residences at Gateway Commons		
General Information:		
Inspected by:	Date:	Weather:
Reason for Inspection: (Regular Inspection) (Major Rain Event)		
BMP	Conditions Observed	Repairs Needed?
1. Vegetated Areas		
2. Ditches, Swales, Open Channels		
3. Culverts		
4. Catch Basins		
5. Gravel Wetlands		
6. Forested Buffer		
Detailed Repair Notes:		
BMP Type	Date	Description of Repairs & Sediment Disposal

Notes:

If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. A copy of this log shall be retained for a period of at least five years from the completion of permanent stabilization. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request.

APPENDIX 2

EROSION AND SEDIMENT CONTROL INSPECTION & MAINTENANCE PLAN

BIDDEFORD RESIDENTIAL BIDDEFORD, MAINE

EROSION & SEDIMENTATION CONTROL INSPECTION & MAINTENANCE PLAN CONSTRUCTION PHASE

Project Owner/Developer: Devine Capital, LLC
30 Milk St., 3rd Floor
Portland, Maine 04009
(401) 413-1590

Responsible Party: Site Contractor
TBD

Prepared By: Richard Meek, P.E.
Terradyn Consultants, LLC
41 campus Drive, Suite 301
New Gloucester, ME 04260
(207) 926-5111

INTRODUCTION:

Anyone who conducts or directs an activity that involves exposing, filling or displacing soil or other earthen materials must take appropriate measures to prevent erosion and the loss of sediment beyond the project site or into a sensitive resource.

Erosion and sediment control measures should be in place before the activity begins and should remain functional until the site is permanently stabilized. All measures should remain effective until all areas are permanently stabilized. Any disturbed area should be regularly inspected until the site is fully stabilized with either 90% grass cover or a permanent impervious surface such as pavement.

The following information describes the Inspection, Maintenance and Documentation necessary during construction to comply with the State of Maine Stormwater Management Law.

INSPECTION

Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. For the purposes of this plan, a storm event is rainfall greater than 0.5 inches in a 24 hour period.

The person conducting inspections shall have knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project.

MAINTENANCE AND CORRECTIVE ACTION

If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

DOCUMENTATION

Keep a log (report) summarizing the inspections and any corrective actions taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log attached at the end of this plan is from the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016)*. The log may be used or adapted for this project.

Documentation must be retained for a minimum of three years after permanent stabilization has been achieved on the site and must be made accessible to the Maine Department of Environmental Protection upon request.

INSPECTION DURING CONSTRUCTION

1. **Inspection:** For the duration of construction activity, it is the Site 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 seven (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 (3) 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.
- Annually inspect riprap and remove woody vegetation when discovered.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. 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.
- The permanent storm drainage system shall be flushed and cleaned once the site is stabilized and prior to demobilization from the site.

E. 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).

F. 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.

G. Stabilized 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 recurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone checkdams may be needed to further reduce channel velocity.

H. Concrete Washout Area

- The site contractor shall establish a concrete washout area on-site which shall include sediment barrier to mitigate the transport of the washout material to the environment.
- The washout area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The washout area shall be inspected daily when concrete work is active and prior to any storm event.
- Accumulated concrete sediments shall be removed weekly, when concrete work is

active, or when visibly encroaching on sediment barrier.

I. Dewatering

- The site contractor shall establish an on-site containment area which shall include sediment barrier to mitigate the transport of the sediment to the environment from dewatering activity.
- The containment area shall be located a minimum of 25 feet from any storm drain structure or culvert and a minimum of 25 feet from any slope greater than 4:1.
- The containment area shall include a dirt bag or similar sediment trap for treatment of the collected water.
- The containment area shall be inspected after each use to ensure that no downgradient erosion or sedimentation offsite is occurring.

REFERENCES

Design Drawings:

C-2.0 thru C-2.7 Grading and Drainage Plans

C-5.1 Site Details (Erosion Control Notes and Details)

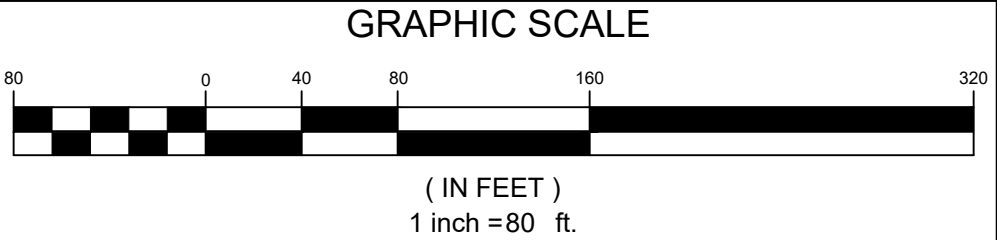
Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016), Maine Department of Environmental Protection

Maine Erosion and Sediment Control Practices Field Guide for Contractors, Maine Department of Environmental Protection

CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL						
General Information:						
Site Name:		Date:		Inspected by:		
Owner:						
Retained 3PI:		Last Rain Date:			Amount:	
Reason for Inspection:		Weekly	Winter	Final	Rain Event	Complaint
Description of disturbed area:						
Photos:						
	YES/NO/NA	COMMENTS				
1. Is an Erosion and Sediment Control Plan available?						
ESC plan on-site and followed						
Other:						
2. Are all erosion control practices installed properly, maintained and functioning?						
Disturbed areas stable						
Concentrated flow inlet/outlet protection						
All areas at final grade						
Disturbed dormant areas stabilized						
Access roads and parking						
Hillsides and stockpiles						
Other:						
3. Are all sedimentation control practices installed properly, maintained and functioning?						
Construction entrance						
Sedimentation basins/traps/diversions						
Perimeter controls						
Check dams						
Other:						
4. Is maintenance of ESC measures, construction activities and housekeeping kept-up?						
Sedimentation/erosion in ditches						
Tracked Sediment or dust at exits						
Hazardous material storage and spill control practices						
Waste management (concrete, hazardous material, etc.)						
Other:						
5. Violation, Corrective Actions, Recommendations						
Sediment discharged from site?						
Corrective action required?						
Site compliant with all permits?						
Notice of violation or stop work order issued?						
Comments/Corrective Actions (complete corrective actions before the next rain event and within 7 day)						

APPENDIX 3

WATERSHED MAPS



 WATERSHED BOUNDARY
 TIME OF CONCENTRATION


WATERSHED LABEL

1	REACH
---	-------

 CB CATCH BASIN

SP1 STUDY POINT

DyB SOIL NAME

— — — — — MEDIUM INTENSITY SOIL BOUNDARY

— — — — — EXISTING PROPERTY LINE

PROPOSED PROPERTY LINE
EXISTING MINOR CONTOUR

-----124----- EXISTING MINOR CONTOURS

-----124----- EXISTING MAJOR CONTOURS

EXISTING BUILDING

WETLAND AREA

DATE:	08-17-2022
P.E.: RICHARD L. MEEK, P.E. 10668	

[illegible]

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

Stormwater Design | Environmental Permitting



PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: **BIDDEFORD RESIDENTIAL**
ANDREWS ROAD, BIDDEFORD, MAINE

POST-DEVELOPMENT WATERSHED MAP

CLIENT: **DEVINE CAPITAL, LLC**
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

DATE:	07-29-2022
SCALE:	
DESIGNED:	RLM
JOB NO:	2149
FILE:	
SHEET	SWP-2

APPENDIX 4

BMP & HYDROCAD CALCULATIONS

GENERAL STANDARD CALCULATIONS

Project # 21-49 Biddeford Residential

SUBCATCHMENT ID	DESCRIPTION	SUBCATCHMENT AREA	Areas Requiring Treatment					RECEIVES TREATMENT (YES/NO)	IMPERVIOUS AREA TREATED (acre)	LANDSCAPED AREA TREATED (acre)	DEVELOPED AREA TREATED (acre)	TREATMENT BMP
			IMPERVIOUS AREA (acre)	LANDSCAPED AREA (acre)	TOTAL DEVELOPED AREAS (acre)							
11	Undeveloped area tributary to SP1	11.462	0.056	1.312	1.368		YES	0.025	0.873	0.898		Buffer
12	Undeveloped area tributary to Gravel wetland #2	3.575	0.092	1.836	1.928		YES	0.092	1.836	1.928		GW 2
13	Developed area tributary to Gravel wetland #2	8.057	5.503	2.115	7.618		YES	5.503	2.115	7.618		GW 2
14	Developed area tributary to Gravel wetland #1	4.348	2.336	1.778	4.114		YES	2.336	1.778	4.114		GW 1
21	Undeveloped area tributary to SP2	4.170	0.000	0.841	0.841		NO	0.000	0.000	0.000		
31	Undeveloped area tributary to SP3 (west of access rd.)	2.885	0.073	1.065	1.138		NO	0.000	0.000	0.000		
32	Undeveloped area tributary to SP3 (east of access rd.)	2.498	0.000	0.373	0.373		NO	0.000	0.000	0.000		
4A	Undeveloped area tributary to SP4 (large wetlands HSG D)	7.826	0.000	0.000	0.000		NO	0.000	0.000	0.000		
4B	Undeveloped area tributary to SP4 (small wetlands HSG D)	0.210	0.000	0.000	0.000		NO	0.000	0.000	0.000		
41	Developed area tributary to SP4 (HSG A)	2.381	0.000	0.753	0.753		NO	0.000	0.000	0.000		
TOTAL (ACRE)		47.412	8.060	10.073	18.133			7.956	6.602	14.558		

TOTAL IMPERVIOUS AREA (ACRE) (requiring treatment)	8.060	TOTAL DEVELOPED AREA (ACRE) (requiring treatment)	18.133
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (ACRE)	7.956	TOTAL DEVELOPED AREA RECEIVING TREATMENT (ACRE)	14.558
% OF IMPERVIOUS AREA RECEIVING TREATMENT	98.71%	% OF DEVELOPED AREA RECEIVING TREATMENT	80.28%

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FILE NAME

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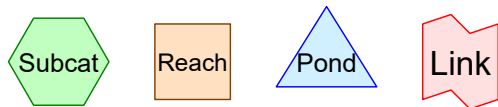
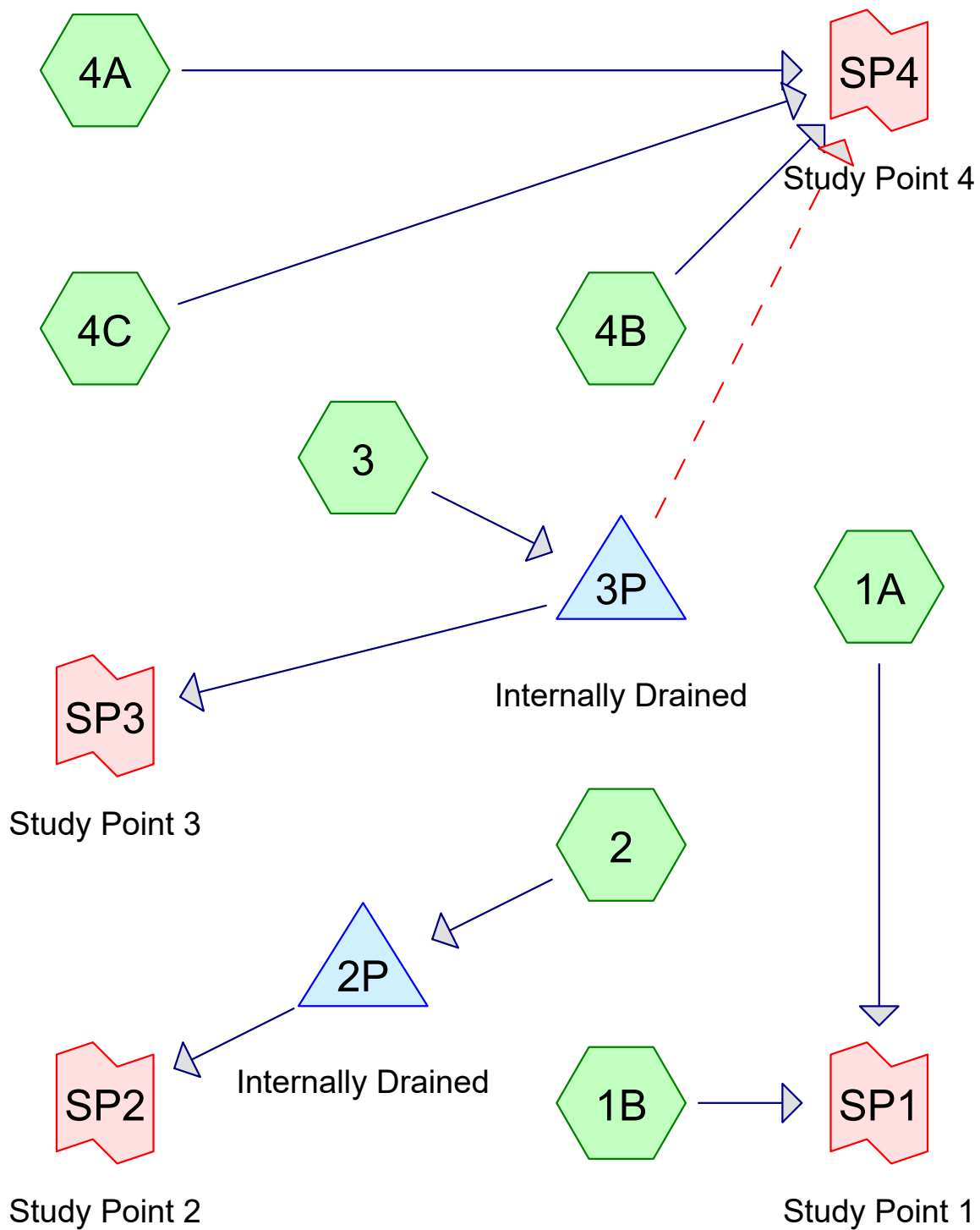
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Routing Diagram for Biddeford Residential Pre-Development
 Prepared by Terradyn Consultants, LLC, Printed 8/17/2022
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Biddeford Residential Pre-Development

Type III 24-hr 2-YR Rainfall=3.30"

Prepared by Terradyn Consultants, LLC

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Page 2

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1A:	Runoff Area=11.787 ac 0.51% Impervious Runoff Depth=0.15" Flow Length=925' Tc=40.4 min CN=50 Runoff=0.3 cfs 0.147 af
Subcatchment1B:	Runoff Area=10.221 ac 0.19% Impervious Runoff Depth=0.00" Flow Length=1,115' Tc=36.9 min CN=37 Runoff=0.0 cfs 0.000 af
Subcatchment2:	Runoff Area=7.633 ac 16.72% Impervious Runoff Depth=0.15" Flow Length=430' Tc=13.0 min CN=50 Runoff=0.2 cfs 0.095 af
Subcatchment3:	Runoff Area=6.052 ac 4.28% Impervious Runoff Depth=0.02" Flow Length=470' Tc=41.5 min CN=42 Runoff=0.0 cfs 0.010 af
Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=800' Tc=75.1 min CN=77 Runoff=3.9 cfs 0.837 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.2 cfs 0.022 af
Subcatchment4C:	Runoff Area=3.683 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=575' Tc=36.0 min CN=30 Runoff=0.0 cfs 0.000 af
Pond 2P: Internally Drained	Peak Elev=178.13' Storage=4,138 cf Inflow=0.2 cfs 0.095 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.10' Storage=430 cf Inflow=0.0 cfs 0.010 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Link SP1: Study Point 1	Inflow=0.3 cfs 0.147 af Primary=0.3 cfs 0.147 af
Link SP2: Study Point 2	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP3: Study Point 3	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP4: Study Point 4	Inflow=4.0 cfs 0.860 af Primary=4.0 cfs 0.860 af

Biddeford Residential Pre-Development

Type III 24-hr 10-YR Rainfall=4.90"

Prepared by Terradyn Consultants, LLC

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Page 3

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1A:	Runoff Area=11.787 ac 0.51% Impervious Runoff Depth=0.65" Flow Length=925' Tc=40.4 min CN=50 Runoff=2.9 cfs 0.640 af
Subcatchment1B:	Runoff Area=10.221 ac 0.19% Impervious Runoff Depth=0.12" Flow Length=1,115' Tc=36.9 min CN=37 Runoff=0.2 cfs 0.103 af
Subcatchment2:	Runoff Area=7.633 ac 16.72% Impervious Runoff Depth=0.65" Flow Length=430' Tc=13.0 min CN=50 Runoff=2.8 cfs 0.415 af
Subcatchment3:	Runoff Area=6.052 ac 4.28% Impervious Runoff Depth=0.29" Flow Length=470' Tc=41.5 min CN=42 Runoff=0.3 cfs 0.145 af
Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=2.54" Flow Length=800' Tc=75.1 min CN=77 Runoff=7.9 cfs 1.656 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=2.54" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.3 cfs 0.044 af
Subcatchment4C:	Runoff Area=3.683 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=575' Tc=36.0 min CN=30 Runoff=0.0 cfs 0.001 af
Pond 2P: Internally Drained	Peak Elev=178.55' Storage=18,057 cf Inflow=2.8 cfs 0.415 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.41' Storage=6,288 cf Inflow=0.3 cfs 0.145 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Link SP1: Study Point 1	Inflow=3.0 cfs 0.743 af Primary=3.0 cfs 0.743 af
Link SP2: Study Point 2	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP3: Study Point 3	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP4: Study Point 4	Inflow=8.1 cfs 1.701 af Primary=8.1 cfs 1.701 af

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1A:	Runoff Area=11.787 ac 0.51% Impervious Runoff Depth=1.24" Flow Length=925' Tc=40.4 min CN=50 Runoff=6.9 cfs 1.220 af
Subcatchment1B:	Runoff Area=10.221 ac 0.19% Impervious Runoff Depth=0.39" Flow Length=1,115' Tc=36.9 min CN=37 Runoff=0.9 cfs 0.336 af
Subcatchment2:	Runoff Area=7.633 ac 16.72% Impervious Runoff Depth=1.24" Flow Length=430' Tc=13.0 min CN=50 Runoff=7.1 cfs 0.790 af
Subcatchment3:	Runoff Area=6.052 ac 4.28% Impervious Runoff Depth=0.69" Flow Length=470' Tc=41.5 min CN=42 Runoff=1.4 cfs 0.346 af
Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=800' Tc=75.1 min CN=77 Runoff=11.4 cfs 2.383 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.5 cfs 0.064 af
Subcatchment4C:	Runoff Area=3.683 ac 0.00% Impervious Runoff Depth=0.09" Flow Length=575' Tc=36.0 min CN=30 Runoff=0.0 cfs 0.029 af
Pond 2P: Internally Drained	Peak Elev=179.00' Storage=34,420 cf Inflow=7.1 cfs 0.790 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.64' Storage=15,055 cf Inflow=1.4 cfs 0.346 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Link SP1: Study Point 1	Inflow=7.7 cfs 1.556 af Primary=7.7 cfs 1.556 af
Link SP2: Study Point 2	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP3: Study Point 3	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af
Link SP4: Study Point 4	Inflow=11.7 cfs 2.476 af Primary=11.7 cfs 2.476 af

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Summary for Subcatchment 1A:

Runoff = 6.9 cfs @ 12.66 hrs, Volume= 1.220 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
6.056	30	Woods, Good, HSG A
4.392	70	Woods, Good, HSG C
1.156	77	Woods, Good, HSG D
0.123	39	>75% Grass cover, Good, HSG A
* 0.060	98	Existing impervious
11.787	50	Weighted Average
11.727		99.49% Pervious Area
0.060		0.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.2	150	0.0220	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
9.2	615	0.0500	1.12		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.2	25	0.2400	2.45		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
2.8	135	0.0260	0.81		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
40.4	925	Total			

Summary for Subcatchment 1B:

Runoff = 0.9 cfs @ 12.86 hrs, Volume= 0.336 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
8.339	30	Woods, Good, HSG A
1.683	70	Woods, Good, HSG C
0.180	30	Meadow, non-grazed, HSG A
* 0.019	98	Existing impervious
10.221	37	Weighted Average
10.202		99.81% Pervious Area
0.019		0.19% Impervious Area

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0460	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
4.2	260	0.0420	1.02		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
5.8	300	0.0300	0.87		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
5.9	405	0.0520	1.14		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
36.9	1,115	Total			

Summary for Subcatchment 2:

Runoff = 7.1 cfs @ 12.22 hrs, Volume= 0.790 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
2.057	30	Woods, Good, HSG A
1.344	77	Woods, Good, HSG D
2.365	30	Meadow, non-grazed, HSG A
0.591	39	>75% Grass cover, Good, HSG A
* 0.553	98	Existing impervious
* 0.723	98	Water
7.633	50	Weighted Average
6.357		83.28% Pervious Area
1.276		16.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0400	0.28		Sheet Flow, A to B Range n= 0.130 P2= 3.30"
4.0	280	0.0280	1.17		Shallow Concentrated Flow, B to C Short Grass Pasture Kv= 7.0 fps
13.0	430	Total			

Summary for Subcatchment 3:

Runoff = 1.4 cfs @ 12.78 hrs, Volume= 0.346 af, Depth= 0.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
4.349	30	Woods, Good, HSG A
0.773	77	Woods, Good, HSG D
0.221	30	Meadow, non-grazed, HSG A
0.450	78	Meadow, non-grazed, HSG D
* 0.259	98	Existing impervious
6.052	42	Weighted Average
5.793		95.72% Pervious Area
0.259		4.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
8.6	200	0.0060	0.39		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
3.7	120	0.0060	0.54		Shallow Concentrated Flow, C to D Short Grass Pasture Kv= 7.0 fps
41.5	470	Total			

Summary for Subcatchment 4A:

Runoff = 11.4 cfs @ 13.00 hrs, Volume= 2.383 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
7.826	77	Woods, Good, HSG D
7.826		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.5	150	0.0070	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
30.6	650	0.0050	0.35		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
75.1	800	Total			

Summary for Subcatchment 4B:

Runoff = 0.5 cfs @ 12.52 hrs, Volume= 0.064 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
0.210	77	Woods, Good, HSG D
0.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.6	130	0.0080	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"

Summary for Subcatchment 4C:

Runoff = 0.0 cfs @ 15.70 hrs, Volume= 0.029 af, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
3.683	30	Woods, Good, HSG A
3.683		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
22.4	475	0.0050	0.35		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
36.0	575	Total			

Summary for Pond 2P: Internally Drained

Inflow Area = 7.633 ac, 16.72% Impervious, Inflow Depth = 1.24" for 25-YR event
 Inflow = 7.1 cfs @ 12.22 hrs, Volume= 0.790 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 179.00' @ 24.80 hrs Surf.Area= 37,257 sf Storage= 34,420 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	178.00'	1,036,250 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Biddeford Residential Pre-Development

Type III 24-hr 25-YR Rainfall=6.20"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
178.00	31,500	0	0
180.00	43,000	74,500	74,500
182.00	72,000	115,000	189,500
184.00	116,500	188,500	378,000
185.50	174,000	217,875	595,875
186.00	162,500	84,125	680,000
187.00	178,000	170,250	850,250
188.00	194,000	186,000	1,036,250

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=178.00' (Free Discharge)

1=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond 3P: Internally Drained

Inflow Area = 6.052 ac, 4.28% Impervious, Inflow Depth = 0.69" for 25-YR event
 Inflow = 1.4 cfs @ 12.78 hrs, Volume= 0.346 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 184.64' @ 26.45 hrs Surf.Area= 45,900 sf Storage= 15,055 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	184.00'	476,033 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
184.00	1,110	0	0
185.50	106,000	80,333	80,333
186.00	118,600	56,150	136,483
187.00	170,000	144,300	280,783
188.00	220,500	195,250	476,033

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	187.00'	50.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Link SP1: Study Point 1

Inflow Area = 22.008 ac, 0.36% Impervious, Inflow Depth = 0.85" for 25-YR event
Inflow = 7.7 cfs @ 12.69 hrs, Volume= 1.556 af
Primary = 7.7 cfs @ 12.69 hrs, Volume= 1.556 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP2: Study Point 2

Inflow Area = 7.633 ac, 16.72% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP3: Study Point 3

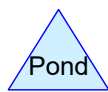
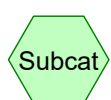
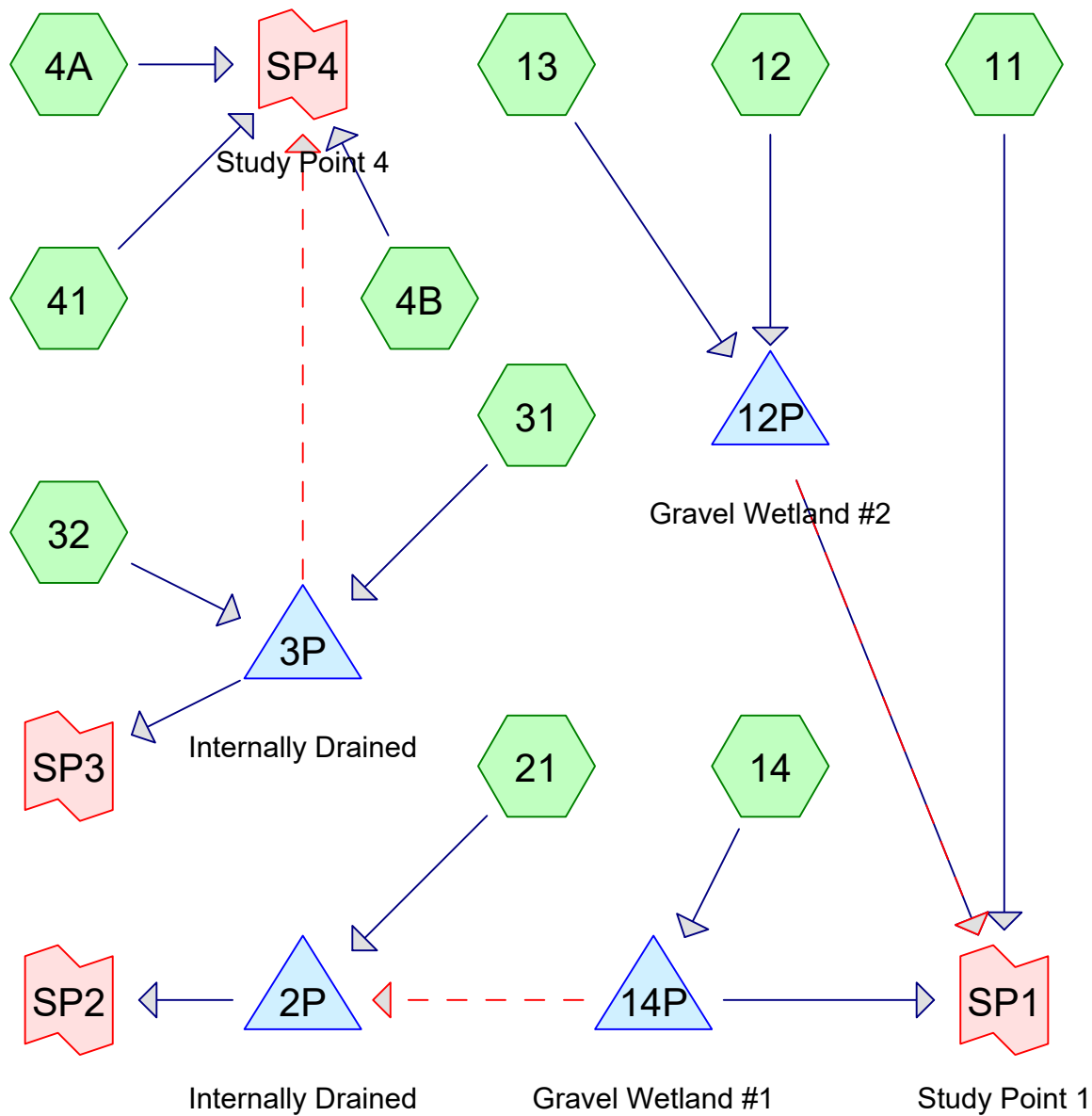
Inflow Area = 6.052 ac, 4.28% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP4: Study Point 4

Inflow Area = 11.719 ac, 0.00% Impervious, Inflow Depth = 2.54" for 25-YR event
Inflow = 11.7 cfs @ 12.98 hrs, Volume= 2.476 af
Primary = 11.7 cfs @ 12.98 hrs, Volume= 2.476 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs



Routing Diagram for Biddeford Residential Post-Development
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Biddeford Residential Post-Development

Type III 24-hr 2-YR Rainfall=3.30"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=800' Tc=75.1 min CN=77 Runoff=3.9 cfs 0.837 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.2 cfs 0.022 af
Subcatchment11:	Runoff Area=11.462 ac 1.01% Impervious Runoff Depth=0.15" Flow Length=925' Tc=40.4 min CN=50 Runoff=0.3 cfs 0.143 af
Subcatchment12:	Runoff Area=3.575 ac 2.57% Impervious Runoff Depth=0.28" Flow Length=540' Tc=27.8 min CN=55 Runoff=0.3 cfs 0.084 af
Subcatchment13:	Runoff Area=8.057 ac 68.30% Impervious Runoff Depth=1.41" Flow Length=1,290' Tc=12.8 min CN=79 Runoff=10.4 cfs 0.948 af
Subcatchment14:	Runoff Area=4.348 ac 53.73% Impervious Runoff Depth=0.79" Flow Length=765' Tc=9.7 min CN=68 Runoff=3.0 cfs 0.285 af
Subcatchment21:	Runoff Area=4.170 ac 19.66% Impervious Runoff Depth=0.07" Flow Length=210' Tc=9.2 min CN=46 Runoff=0.0 cfs 0.025 af
Subcatchment31:	Runoff Area=2.885 ac 2.53% Impervious Runoff Depth=0.25" Flow Length=320' Tc=36.5 min CN=54 Runoff=0.2 cfs 0.061 af
Subcatchment32:	Runoff Area=2.498 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=250' Tc=28.4 min CN=39 Runoff=0.0 cfs 0.000 af
Subcatchment41:	Runoff Area=2.381 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=575' Tc=36.0 min CN=33 Runoff=0.0 cfs 0.000 af
Pond 2P: Internally Drained	Peak Elev=178.03' Storage=1,075 cf Inflow=0.0 cfs 0.025 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.26' Storage=2,641 cf Inflow=0.2 cfs 0.061 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Pond 12P: Gravel Wetland #2	Peak Elev=154.57' Storage=43,279 cf Inflow=10.5 cfs 1.032 af Primary=0.0 cfs 0.079 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.079 af
Pond 14P: Gravel Wetland #1	Peak Elev=178.73' Storage=11,318 cf Inflow=3.0 cfs 0.285 af Primary=0.0 cfs 0.051 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.051 af
Link SP1: Study Point 1	Inflow=0.3 cfs 0.273 af Primary=0.3 cfs 0.273 af
Link SP2:	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af

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Type III 24-hr 2-YR Rainfall=3.30"

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Link SP3:

Inflow=0.0 cfs 0.000 af

Primary=0.0 cfs 0.000 af

Link SP4: Study Point 4

Inflow=4.0 cfs 0.860 af

Primary=4.0 cfs 0.860 af

Biddeford Residential Post-Development

Type III 24-hr 10-YR Rainfall=4.90"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=2.54" Flow Length=800' Tc=75.1 min CN=77 Runoff=7.9 cfs 1.656 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=2.54" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.3 cfs 0.044 af
Subcatchment11:	Runoff Area=11.462 ac 1.01% Impervious Runoff Depth=0.65" Flow Length=925' Tc=40.4 min CN=50 Runoff=2.9 cfs 0.623 af
Subcatchment12:	Runoff Area=3.575 ac 2.57% Impervious Runoff Depth=0.93" Flow Length=540' Tc=27.8 min CN=55 Runoff=1.8 cfs 0.277 af
Subcatchment13:	Runoff Area=8.057 ac 68.30% Impervious Runoff Depth=2.72" Flow Length=1,290' Tc=12.8 min CN=79 Runoff=20.4 cfs 1.823 af
Subcatchment14:	Runoff Area=4.348 ac 53.73% Impervious Runoff Depth=1.81" Flow Length=765' Tc=9.7 min CN=68 Runoff=7.8 cfs 0.655 af
Subcatchment21:	Runoff Area=4.170 ac 19.66% Impervious Runoff Depth=0.46" Flow Length=210' Tc=9.2 min CN=46 Runoff=0.9 cfs 0.158 af
Subcatchment31:	Runoff Area=2.885 ac 2.53% Impervious Runoff Depth=0.87" Flow Length=320' Tc=36.5 min CN=54 Runoff=1.2 cfs 0.210 af
Subcatchment32:	Runoff Area=2.498 ac 0.00% Impervious Runoff Depth=0.18" Flow Length=250' Tc=28.4 min CN=39 Runoff=0.1 cfs 0.038 af
Subcatchment41:	Runoff Area=2.381 ac 0.00% Impervious Runoff Depth=0.03" Flow Length=575' Tc=36.0 min CN=33 Runoff=0.0 cfs 0.007 af
Pond 2P: Internally Drained	Peak Elev=178.21' Storage=6,895 cf Inflow=0.9 cfs 0.158 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.54' Storage=10,754 cf Inflow=1.2 cfs 0.247 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Pond 12P: Gravel Wetland #2	Peak Elev=155.48' Storage=75,414 cf Inflow=21.0 cfs 2.101 af Primary=0.4 cfs 0.725 af Secondary=0.0 cfs 0.000 af Outflow=0.4 cfs 0.725 af
Pond 14P: Gravel Wetland #1	Peak Elev=179.52' Storage=26,837 cf Inflow=7.8 cfs 0.655 af Primary=0.1 cfs 0.078 af Secondary=0.0 cfs 0.000 af Outflow=0.1 cfs 0.078 af
Link SP1: Study Point 1	Inflow=3.0 cfs 1.426 af Primary=3.0 cfs 1.426 af
Link SP2:	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af

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Type III 24-hr 10-YR Rainfall=4.90"

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Link SP3:

Inflow=0.0 cfs 0.000 af

Primary=0.0 cfs 0.000 af

Link SP4: Study Point 4

Inflow=8.1 cfs 1.707 af

Primary=8.1 cfs 1.707 af

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Type III 24-hr 25-YR Rainfall=6.20"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment4A:	Runoff Area=7.826 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=800' Tc=75.1 min CN=77 Runoff=11.4 cfs 2.383 af
Subcatchment4B:	Runoff Area=0.210 ac 0.00% Impervious Runoff Depth=3.65" Flow Length=130' Slope=0.0080 '/' Tc=37.6 min CN=77 Runoff=0.5 cfs 0.064 af
Subcatchment11:	Runoff Area=11.462 ac 1.01% Impervious Runoff Depth=1.24" Flow Length=925' Tc=40.4 min CN=50 Runoff=6.7 cfs 1.187 af
Subcatchment12:	Runoff Area=3.575 ac 2.57% Impervious Runoff Depth=1.63" Flow Length=540' Tc=27.8 min CN=55 Runoff=3.6 cfs 0.487 af
Subcatchment13:	Runoff Area=8.057 ac 68.30% Impervious Runoff Depth=3.86" Flow Length=1,290' Tc=12.8 min CN=79 Runoff=28.9 cfs 2.591 af
Subcatchment14:	Runoff Area=4.348 ac 53.73% Impervious Runoff Depth=2.78" Flow Length=765' Tc=9.7 min CN=68 Runoff=12.2 cfs 1.006 af
Subcatchment21:	Runoff Area=4.170 ac 19.66% Impervious Runoff Depth=0.95" Flow Length=210' Tc=9.2 min CN=46 Runoff=2.8 cfs 0.331 af
Subcatchment31:	Runoff Area=2.885 ac 2.53% Impervious Runoff Depth=1.55" Flow Length=320' Tc=36.5 min CN=54 Runoff=2.4 cfs 0.373 af
Subcatchment32:	Runoff Area=2.498 ac 0.00% Impervious Runoff Depth=0.50" Flow Length=250' Tc=28.4 min CN=39 Runoff=0.4 cfs 0.105 af
Subcatchment41:	Runoff Area=2.381 ac 0.00% Impervious Runoff Depth=0.20" Flow Length=575' Tc=36.0 min CN=33 Runoff=0.1 cfs 0.040 af
Pond 2P: Internally Drained	Peak Elev=178.44' Storage=14,400 cf Inflow=2.8 cfs 0.331 af Outflow=0.0 cfs 0.000 af
Pond 3P: Internally Drained	Peak Elev=184.76' Storage=20,835 cf Inflow=2.8 cfs 0.478 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af
Pond 12P: Gravel Wetland #2	Peak Elev=155.73' Storage=84,790 cf Inflow=30.7 cfs 3.078 af Primary=2.7 cfs 1.668 af Secondary=0.0 cfs 0.000 af Outflow=2.7 cfs 1.668 af
Pond 14P: Gravel Wetland #1	Peak Elev=179.62' Storage=28,989 cf Inflow=12.2 cfs 1.006 af Primary=0.8 cfs 0.425 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.425 af
Link SP1: Study Point 1	Inflow=7.1 cfs 3.280 af Primary=7.1 cfs 3.280 af
Link SP2:	Inflow=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af

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Link SP3:

Inflow=0.0 cfs 0.000 af

Primary=0.0 cfs 0.000 af

Link SP4: Study Point 4

Inflow=11.7 cfs 2.488 af

Primary=11.7 cfs 2.488 af

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Summary for Subcatchment 4A:

Runoff = 11.4 cfs @ 13.00 hrs, Volume= 2.383 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
7.826	77	Woods, Good, HSG D
7.826		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.5	150	0.0070	0.06		Sheet Flow, A to B
					Woods: Light underbrush n= 0.400 P2= 3.30"
30.6	650	0.0050	0.35		Shallow Concentrated Flow, B to C
					Woodland Kv= 5.0 fps
75.1	800	Total			

Summary for Subcatchment 4B:

Runoff = 0.5 cfs @ 12.52 hrs, Volume= 0.064 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
0.210	77	Woods, Good, HSG D
0.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.6	130	0.0080	0.06		Sheet Flow, A to B
					Woods: Light underbrush n= 0.400 P2= 3.30"

Summary for Subcatchment 11:

Runoff = 6.7 cfs @ 12.66 hrs, Volume= 1.187 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
5.661	30	Woods, Good, HSG A
3.720	70	Woods, Good, HSG C
1.153	77	Woods, Good, HSG D
0.113	30	Meadow, non-grazed, HSG A
0.260	71	Meadow, non-grazed, HSG C
0.003	78	Meadow, non-grazed, HSG D
0.349	39	>75% Grass cover, Good, HSG A
0.087	74	>75% Grass cover, Good, HSG C
* 0.060	98	Existing impervious
* 0.056	98	Proposed Impervious
11.462	50	Weighted Average
11.346		98.99% Pervious Area
0.116		1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.2	150	0.0220	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
9.2	615	0.0500	1.12		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.2	25	0.2400	2.45		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
2.8	135	0.0260	0.81		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
40.4	925	Total			

Summary for Subcatchment 12:

Runoff = 3.6 cfs @ 12.44 hrs, Volume= 0.487 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
0.971	30	Woods, Good, HSG A
0.676	70	Woods, Good, HSG C
1.233	71	Meadow, non-grazed, HSG C
0.603	39	>75% Grass cover, Good, HSG A
* 0.092	98	Proposed Impervious
3.575	55	Weighted Average
3.483		97.43% Pervious Area
0.092		2.57% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	150	0.0400	0.11		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
5.5	360	0.0470	1.08		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.1	30	0.3000	3.83		Shallow Concentrated Flow, C to D Short Grass Pasture Kv= 7.0 fps
27.8	540	Total			

Summary for Subcatchment 13:

Runoff = 28.9 cfs @ 12.18 hrs, Volume= 2.591 af, Depth= 3.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
2.115	39	>75% Grass cover, Good, HSG A
* 5.503	98	Proposed Impervious
0.439	30	Woods, Good, HSG A
8.057	79	Weighted Average
2.554		31.70% Pervious Area
5.503		68.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	60	0.0170	0.10		Sheet Flow, A to B Grass: Dense n= 0.240 P2= 3.30"
0.6	40	0.0200	1.16		Sheet Flow, B to C Smooth surfaces n= 0.011 P2= 3.30"
2.2	1,190	0.0200	9.11	16.09	Pipe Channel, C to D 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
12.8	1,290	Total			

Summary for Subcatchment 14:

Runoff = 12.2 cfs @ 12.14 hrs, Volume= 1.006 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
0.946	30	Meadow, non-grazed, HSG A
0.832	39	>75% Grass cover, Good, HSG A
* 2.336	98	Proposed Impervious
0.234	30	Woods, Good, HSG A
4.348	68	Weighted Average
2.012		46.27% Pervious Area
2.336		53.73% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	25	0.0100	0.07		Sheet Flow, A to B Grass: Dense n= 0.240 P2= 3.30"
1.4	110	0.0150	1.27		Sheet Flow, B to C Smooth surfaces n= 0.011 P2= 3.30"
2.2	630	0.0070	4.77	5.86	Pipe Channel, C to D 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
9.7	765	Total			

Summary for Subcatchment 21:

Runoff = 2.8 cfs @ 12.17 hrs, Volume= 0.331 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
1.328	30	Woods, Good, HSG A
0.976	30	Meadow, non-grazed, HSG A
1.046	39	>75% Grass cover, Good, HSG A
* 0.097	98	Existing impervious
* 0.723	98	Water
4.170	46	Weighted Average
3.350		80.34% Pervious Area
0.820		19.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0400	0.28		Sheet Flow, A to B Range n= 0.130 P2= 3.30"
0.2	60	0.4000	4.43		Shallow Concentrated Flow, B to C Short Grass Pasture Kv= 7.0 fps
9.2	210	Total			

Summary for Subcatchment 31:

Runoff = 2.4 cfs @ 12.57 hrs, Volume= 0.373 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
0.340	30	Woods, Good, HSG A
0.637	77	Woods, Good, HSG D
0.125	30	Meadow, non-grazed, HSG A
0.450	78	Meadow, non-grazed, HSG D
1.260	39	>75% Grass cover, Good, HSG A
* 0.073	98	Proposed impervious
2.885	54	Weighted Average
2.812		97.47% Pervious Area
0.073		2.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
7.3	170	0.0060	0.39		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
36.5	320	Total			

Summary for Subcatchment 32:

Runoff = 0.4 cfs @ 12.66 hrs, Volume= 0.105 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

Area (ac)	CN	Description
1.728	30	Woods, Good, HSG A
0.397	77	Woods, Good, HSG D
0.373	39	>75% Grass cover, Good, HSG A
2.498	39	Weighted Average
2.498		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.8	150	0.0250	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.6	100	0.0420	1.02		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
28.4	250	Total			

Summary for Subcatchment 41:

Runoff = 0.1 cfs @ 14.18 hrs, Volume= 0.040 af, Depth= 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=6.20"

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Area (ac)	CN	Description
1.528	30	Woods, Good, HSG A
0.853	39	>75% Grass cover, Good, HSG A
2.381	33	Weighted Average
2.381		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
22.4	475	0.0050	0.35		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
36.0	575	Total			

Summary for Pond 2P: Internally Drained

Inflow Area = 4.170 ac, 19.66% Impervious, Inflow Depth = 0.95" for 25-YR event
 Inflow = 2.8 cfs @ 12.17 hrs, Volume= 0.331 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 178.44' @ 24.55 hrs Surf.Area= 34,027 sf Storage= 14,400 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	178.00'	1,036,250 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
178.00	31,500	0	0
180.00	43,000	74,500	74,500
182.00	72,000	115,000	189,500
184.00	116,500	188,500	378,000
185.50	174,000	217,875	595,875
186.00	162,500	84,125	680,000
187.00	178,000	170,250	850,250
188.00	194,000	186,000	1,036,250

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=178.00' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

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Summary for Pond 3P: Internally Drained

Inflow Area = 5.383 ac, 1.36% Impervious, Inflow Depth = 1.07" for 25-YR event
 Inflow = 2.8 cfs @ 12.59 hrs, Volume= 0.478 af
 Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 184.76' @ 26.10 hrs Surf.Area= 53,992 sf Storage= 20,835 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	184.00'	476,033 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
184.00	1,110	0	0
185.50	106,000	80,333	80,333
186.00	118,600	56,150	136,483
187.00	170,000	144,300	280,783
188.00	220,500	195,250	476,033

Device	Routing	Invert	Outlet Devices
#1	Primary	185.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	187.00'	50.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=184.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond 12P: Gravel Wetland #2

Inflow Area = 11.632 ac, 48.10% Impervious, Inflow Depth = 3.18" for 25-YR event
 Inflow = 30.7 cfs @ 12.18 hrs, Volume= 3.078 af
 Outflow = 2.7 cfs @ 14.24 hrs, Volume= 1.668 af, Atten= 91%, Lag= 123.6 min
 Primary = 2.7 cfs @ 14.24 hrs, Volume= 1.668 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 155.73' @ 14.24 hrs Surf.Area= 37,550 sf Storage= 84,790 cf

Plug-Flow detention time= 475.3 min calculated for 1.668 af (54% of inflow)
 Center-of-Mass det. time= 359.2 min (1,192.4 - 833.2)

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Volume	Invert	Avail.Storage	Storage Description
#1	153.00'	134,485 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
153.00	16,700	0	0
154.00	32,070	24,385	24,385
154.50	33,700	16,443	40,828
156.00	38,380	54,060	94,888
157.00	40,815	39,598	134,485

Device	Routing	Invert	Outlet Devices
#1	Primary	152.67'	18.0" Round Culvert L= 83.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 152.67' / 151.50' S= 0.0141 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	154.50'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	155.50'	6.0' long x 0.70' rise Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)
#4	Device 1	150.00'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 4	150.00'	6.0" Round Culvert L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 150.00' / 150.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Device 5	153.00'	2.410 in/hr Exfiltration over Surface area above 153.00' Conductivity to Groundwater Elevation = 152.67' Excluded Surface area = 16,700 sf
#7	Secondary	156.00'	12.0' long x 9.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.46 2.55 2.70 2.69 2.68 2.68 2.67 2.64 2.64 2.64 2.65 2.64 2.65 2.65 2.66 2.67 2.69

Primary OutFlow Max=2.7 cfs @ 14.24 hrs HW=155.73' (Free Discharge)

- ↑ **1=Culvert** (Passes 2.7 cfs of 12.9 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.4 cfs @ 4.97 fps)
- ↑ **3=Sharp-Crested Vee/Trap Weir** (Weir Controls 2.2 cfs @ 1.58 fps)
- ↑ **4=Orifice/Grate** (Orifice Controls 0.0 cfs @ 8.43 fps)
- ↑ **5=Culvert** (Passes 0.0 cfs of 1.6 cfs potential flow)
- ↑ **6=Exfiltration** (Passes 0.0 cfs of 4.0 cfs potential flow)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=153.00' (Free Discharge)

- ↑ **7=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond 14P: Gravel Wetland #1

Inflow Area =	4.348 ac, 53.73% Impervious, Inflow Depth = 2.78" for 25-YR event		
Inflow =	12.2 cfs @ 12.14 hrs,	Volume=	1.006 af
Outflow =	0.8 cfs @ 14.99 hrs,	Volume=	0.425 af, Atten= 94%, Lag= 170.8 min
Primary =	0.8 cfs @ 14.99 hrs,	Volume=	0.425 af
Secondary =	0.0 cfs @ 0.00 hrs,	Volume=	0.000 af

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Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 179.62' @ 14.99 hrs Surf.Area= 21,962 sf Storage= 28,989 cf

Plug-Flow detention time= 406.4 min calculated for 0.425 af (42% of inflow)
 Center-of-Mass det. time= 280.5 min (1,125.2 - 844.7)

Volume	Invert	Avail.Storage	Storage Description
#1	178.00'	89,610 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
178.00	13,570	0	0
179.50	21,650	26,415	26,415
180.00	22,970	11,155	37,570
181.00	26,130	24,550	62,120
182.00	28,850	27,490	89,610

Device	Routing	Invert	Outlet Devices
#1	Primary	177.67'	18.0" Round Culvert L= 265.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 177.67' / 175.43' S= 0.0085 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	179.50'	6.0' long x 2.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)
#3	Device 2	179.00'	15.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 179.00' / 179.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#4	Device 1	175.00'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 4	175.00'	6.0" Round Culvert L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 175.00' / 175.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Device 5	178.00'	2.410 in/hr Exfiltration over Surface area above 178.00' Conductivity to Groundwater Elevation = 177.67' Excluded Surface area = 13,570 sf
#7	Secondary	181.00'	12.0' long x 9.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.46 2.55 2.70 2.69 2.68 2.68 2.67 2.64 2.64 2.64 2.65 2.64 2.65 2.65 2.66 2.67 2.69

Primary OutFlow Max=0.8 cfs @ 14.99 hrs HW=179.62' (Free Discharge)

- 1=Culvert (Passes 0.8 cfs of 9.3 cfs potential flow)
- 2=Sharp-Crested Vee/Trap Weir (Passes 0.8 cfs of 0.8 cfs potential flow)
- 3=Culvert (Outlet Controls 0.8 cfs @ 1.87 fps)
- 4=Orifice/Grate (Orifice Controls 0.0 cfs @ 6.72 fps)
- 5=Culvert (Passes 0.0 cfs of 1.3 cfs potential flow)
- 6=Exfiltration (Passes 0.0 cfs of 1.0 cfs potential flow)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=178.00' (Free Discharge)

- 7=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Link SP1: Study Point 1

Inflow Area = 27.442 ac, 29.32% Impervious, Inflow Depth > 1.43" for 25-YR event
Inflow = 7.1 cfs @ 12.67 hrs, Volume= 3.280 af
Primary = 7.1 cfs @ 12.67 hrs, Volume= 3.280 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP2:

Inflow Area = 4.170 ac, 19.66% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP3:

Inflow Area = 5.383 ac, 1.36% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Summary for Link SP4: Study Point 4

Inflow Area = 10.417 ac, 0.00% Impervious, Inflow Depth = 2.87" for 25-YR event
Inflow = 11.7 cfs @ 12.98 hrs, Volume= 2.488 af
Primary = 11.7 cfs @ 12.98 hrs, Volume= 2.488 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Attachment 6

Traffic Study

TRAFFIC MOVEMENT PERMIT APPLICATION

FOR PROPOSED

“Biddeford Residential”

Andrews Road, Biddeford

PREPARED FOR: KDK Biddeford, LLC

PREPARED BY: William J. Bray, PE

April 11, 2022

Department of Transportation
Traffic Engineering Division
16 State House Station
Augusta, Maine 04333
Telephone: 207-287-3775

1/2000

Total Fees:
Date: Received

Please type or print:

This application is for:

Traffic 100-200 PCE's	<u> X </u>
Traffic 200 + PC-E's	<u> </u>

Name of Applicant: **KDK Biddeford, LLC.**

Address: 10 Memorial Boulevard, Suite 901, Providence, Rhode Island, 02903 Telephone: 401-273-8600

Name of local contact or agent: John Q. Adams, P.E., PTOE, Barton & Loguidice, LLC.

Address: 383 U.S. Route 1, Suite 2A, Box 4, Scarborough, Maine 04074

Telephone: (207) 331-6694

Name and type of development: **Biddeford Residential Development**

Location of development including road, street, or nearest route number: **Andrews Road, Biddeford, ME 04005**

City/Town/Plantation: Biddeford, County: York, Tax Map 2 Lot # 6 & 12

Do you want a consolidated review with DEP pursuant to 23 M.R.S.A. § 704-A (7)? Yes _____ No X

Was this development started prior to obtaining a traffic permit? No

Is the project located in an area designated as a growth area (as defined in M.R.S.A. title 30 – A, chapter 187)?
Yes, _____ No **X**

Is this project located within a compact area of an urban compact municipality? Yes _____ No **X**

Is this development or any portion of the site currently subject to state or municipal enforcement action? No

Existing DEP or MDOT permit number (if applicable): N/A

Name(s) of DOT staff person(s) contacted concerning this application: N/A

Name(s) of DOT staff person(s) present at the scoping meeting for 200+ applications: _____

NOTICE OF INTENT TO FILE

Please take notice that:

**KDK Biddeford, LLC
10 Memorial Boulevard, Suite 901
Providence, RI 02903**

Is intending to file a Traffic Movement Permit application with the Maine Department of Transportation pursuant to the provisions of 23 M.R.S.A. § 704 – A on or about

April 11, 2022

This application is for:

A proposed 216-unit residential apartment complex located in the northeast quadrant of the Alfred Road (Route 111) and Andrews Road intersection.

The proposed project generates a total of 102 trips during the weekday AM peak hour of the site and 124 trips during the weekday PM peak hour of the site.

At the following location: **Northeast quadrant of the Alfred Road (Route 111) and Andrews Road intersection, Biddeford, Maine.**

A request for a public hearing must be received by the Department, in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Transportation Division office, during normal working hours. A copy of the application may also be seen at the municipal offices in:

City of Biddeford Planning Office

Written public comments may be sent to the Department of Transportation, Traffic Engineering Division, 16 State House Station, Augusta, Maine 04333.

1/2000

CERTIFICATION

The traffic engineer responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the application for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: William Bray Re/Cert/Lic No.: 4907

Name (print): William Bray

Date: 3-25-2022



If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

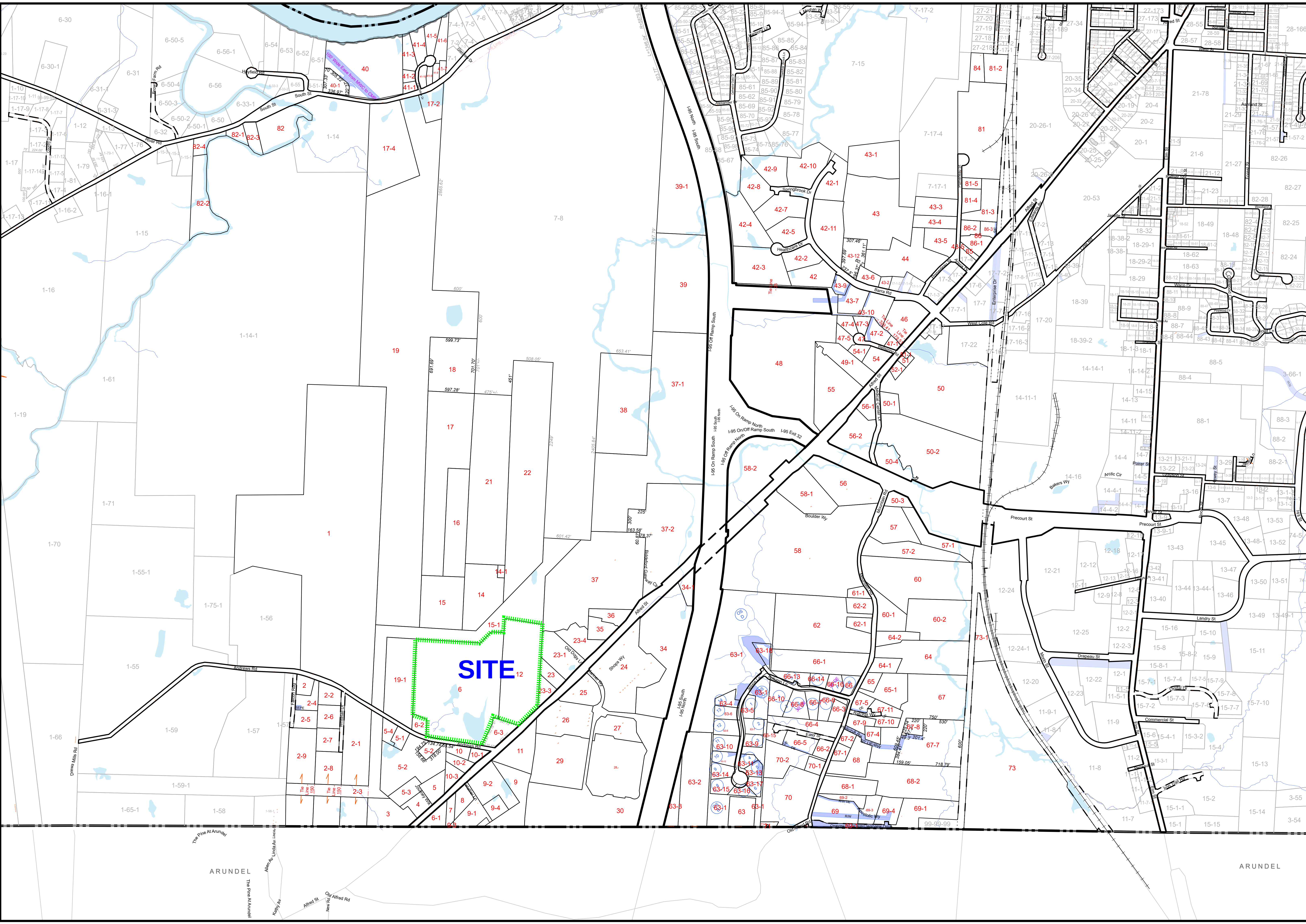
"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I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

Francis X. Daugherty

Signature of applicant

4/7/22

Date



North is based on the
Maine State
Coordinate System
NAD 1983

North Rotation is -33°

UPDATED THROUGH APRIL 1, 2021

FOR ASSESSMENT PURPOSES ONLY

NOT TO BE USED FOR CONVEYANCES

The City of Biddeford, Maine

OFFICIAL TAX MAP

Office of The Tax Assessor
Nicholas D. Desjardins, CMA
Assessor

This Map is Prepared By

The City of Biddeford, Maine

Technology Department

GIS Division

205 Main Street - P.O. Box 386 - Biddeford, Maine 04005
207-571-0660 - gis@biddefordmaine.org

2

Tax Map

ABUTTERS LIST

Map	Lot	Owner	Co-Owner	Mailing Address	City	State	Zip Code
2	15-1	CENTRAL MAINE POWER CO	AVANGRID MANAGEMENT CO – LOCAL TAX	ONE CITY CENTER, 5TH FLOOR	PORTLAND	ME	4101
2	37	HD DEVELOPMENT OF MARYLAND INC	HOME DEPOT USA PROP TAX DEPT 2405	PO BOX 105842	ATLANTA	GA	30348-5842
2	23-3	GARTLAND ASSETS, LLC		4 DUSTY ACRES	BIDDEFORD	ME	4005
2	23	MICHAEL J THIBAUT		477 MOUSE LN	ALFRED	ME	4002
2	23-1	WINCHENDON, LLC		355 MAIN ST, SUITE 25	WOBURN	MA	1801
2	26	DSM MB II LLC	DEMOULAS SUPER MARKETS, INC	875 EAST ST	TEWKSBURY	MA	1876
2	11	ROBERT R. LETELLIER		5 LETELLIER LN	BIDDEFORD	ME	4005
2	6-3	OLD DOGS OF BIDDEFORD, LLC		47 WAITES LANDING RD	FALMOUTH	ME	4105
2	10-1	MICHAEL & LINDA N. BEAULIEU		594 ALFRED ST	BIDDEFORD	ME	04005-9483
2	10	MICHAEL & LINDA N. BEAULIEU		594 ALFRED ST	BIDDEFORD	ME	04005-9483
2	5-2	GARY & JEANINE THEBARGE		9 ANDREWS RD	BIDDEFORD	ME	4005
2	5-5	GARY & CHAD THEBARGE		9 ANDREWS RD	BIDDEFORD	ME	4005
2	6-2	DAVID R. & JOYCE PELLEYIER		23 SCHOOL ST, UNIT 6	OLD ORCHARD BEACH	ME	4064
2	19-1	THE MAINE WATER COMPANY		93 INDUSTRIAL PARK RD	SACO	ME	4072

SECTION 1

A. SITE PLAN

KDK Biddeford, LLC, is proposing a residential development on Andrews Road in Biddeford. The site totals 44.53 acres and is located in the northeast quadrant of the intersection of Andrews Road and Route 111. The site has frontage on both Andrews Road and Route 111. The site will provide 216 low-rise multi-family residential units with 491 total parking spaces (365 surface, 126 garage). The site will be served by a single 24-foot wide entrance on the east side of Andrews Road, located approximately 450-feet north of Route 111. Access to the site will be provided by Route 111 via Andrews Road.

The site features nine (9) multi-unit buildings, numbered Building 1000 – Building 9000, with internal access roads, adjacent parking areas, garages, and sidewalks provided for each. The eight (8) parking garages provided on-site are identified as Garages 1 – 8. In addition there is a clubhouse provided with a pool and dog park for residents. The internal access roads are identified as Road A, Road B and Road C, and they are 24-feet wide and bi-directional throughout the site. A sidewalk is provided from the site to Andrews Road.

Traffic control at the site's intersection with Andrews Road is provided with a stop sign and stop bar on the site entrance while Andrew's Road is free-flowing without traffic control.

A copy of the site plan is enclosed, herein, at the end of this document.

SECTION 1

B. EXISTING AND PROPOSED SITE USES

Proposed

KDK Biddeford, LLC, is proposing a residential development on Andrews Road in Biddeford. The site totals 44.53 acres and is located in the northeast quadrant of the intersection of Andrews Road and Route 111. The site will provide 216 low-rise multi-family residential units with 491 total parking spaces (365 surface, 126 garage). The site will be served by a single 24-foot wide entrance on the east side of Andrews Road, located approximately 450- feet north of Route 111. Access to the site will be provided by Route 111 via Andrews Road.

The site features nine (9) multi-unit buildings, numbered Building 1000 – Building 9000, with internal access roads, adjacent parking areas, garages, and sidewalks provided for each. The eight (8) parking garages provided on-site are identified as Garages 1 – 8. In addition, there is a clubhouse provided with a pool and dog park for residents. The internal access roads are identified as Road A, Road B and Road C. A sidewalk is provided from the site to Andrews Road.

A copy of the site plan is enclosed, herein, at the end of this document.

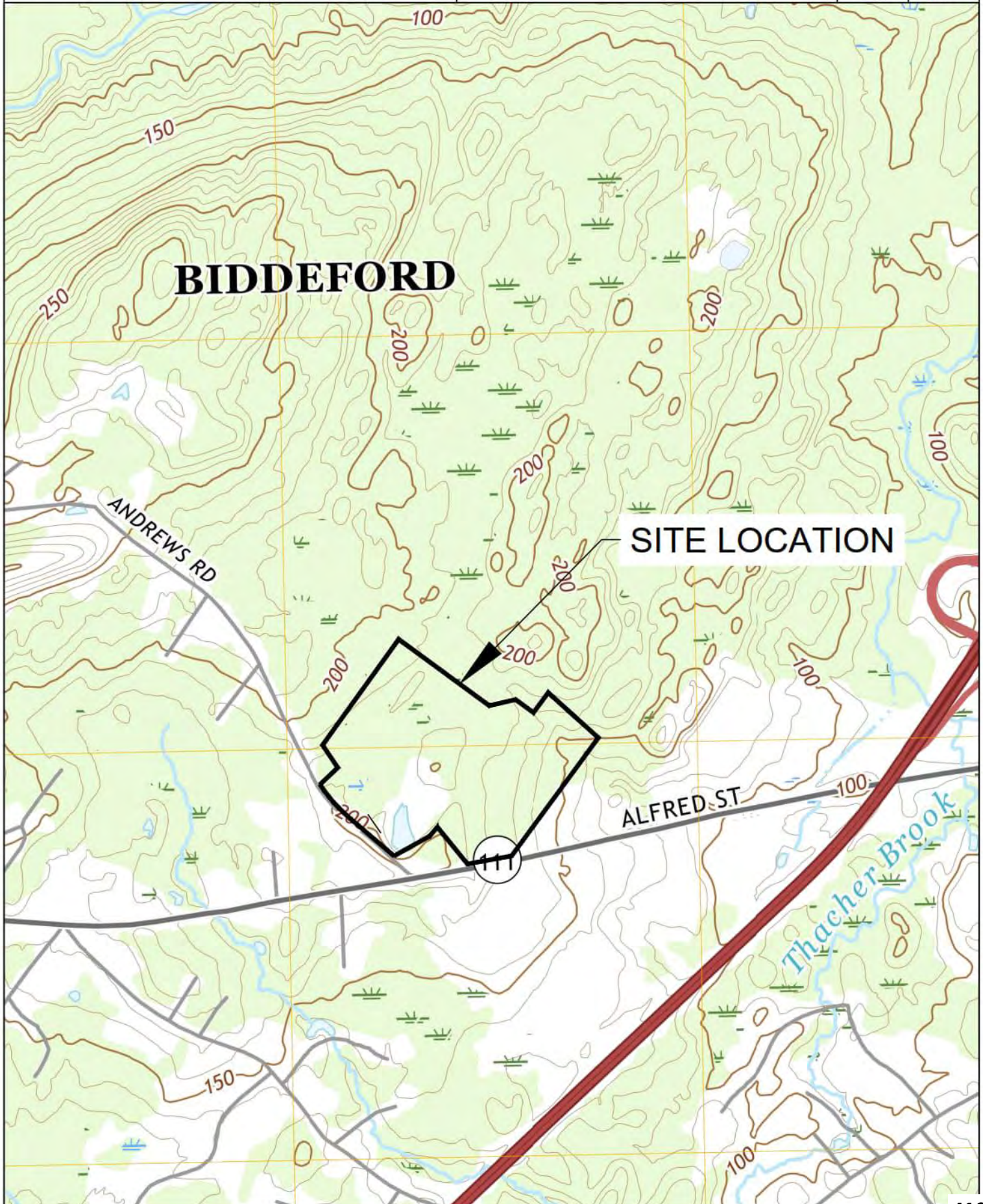
Existing

The existing site is currently vacant and is provided with a single entrance on Andrews Road.

SECTION 1

C. SITE AND VICINITY BOUNDARIES

The attached map depicts the proposed Biddeford Apartments site. The site is located in the northeast quadrant of the Andrews Road/Alfred Road (Route 111) intersection.



SECTION 1

D. PROPOSED USES IN THE GENERAL VICINITY OF THE PROPOSED DEVELOPMENT

Traffic generated by projects that have been approved by the planning board and/or the Maine Department of Transportation, yet are not opened, must be included in the estimate of pre-development traffic. The City of Biddeford was consulted to identify any and all development projects whose peak hour trips potentially impact the study area. Based on discussions with the City Planners office there are no other projects being reviewed or approved that will impact this intersection.

SECTION 1

E. TRIP GENERATION

Site Trip Generation: Trip generation for the proposed Biddeford Apartment development was estimated based upon the latest edition (11th) of the Institute of Transportation Engineer's (ITE) Trip Generation Manual (TGM). The expected trip generation for the proposed development was estimated using the relevant land use code from the TGM, **LUC #220 – Multi-family Housing (Low-Rise) Not Close to Rail Transit**. Table 1.1 summarizes the calculations.

Table 1.1 ITE Trip Generation Calculations						
Land Use	Multi-family Housing (Low-Rise) Not Close to Rail Transit - LUC #220					
Time Period	Dwelling Units	Trip Generation Rate Trips/Dwelling Units	Trips Generated	Distribution Entering / Exiting	Enter	Exit
AM Weekday Peak Hour (Street)	216	0.40	87	24% / 76%	21	66
PM Weekday Peak Hour (Street)	216	0.51	111	63% / 37%	70	41
AM Weekday Peak Hour (Generator)	216	0.47	102	24% / 76%	24	78
PM Weekday Peak Hour (Generator)	216	0.57	124	62% / 38%	77	47
Saturday Peak Hour*						
Sunday Peak Hour *						

*Trip generation is unavailable for the Saturday and Sunday Peak Hours

The proposed project is projected to generate 87 trips during the AM peak hour of the (street) and 111 trips in the evening peak hour of the street. Peak hour trip generation values forecast for the peak hour of the site (generator) are slightly higher at 102 trips in the AM peak hour and 124 trips in the PM peak hour.

SECTION 1

F. SITE TRIP DISTRIBUTION

Vehicle trips generated during the noted weekday AM peak hour and PM peak hour were assigned to/from the proposed site based upon the following directional splits presented in the Institute of Transportation Engineer's Trip Generation Manual for **LUC #220 – Multi-family Housing (Low-Rise)**. The enter/exit percentages are shown below in Table 1.2.

Table 1.2 Trip Enter/Exit Distribution Percent Values

<u>LUC 220 Multifamily Housing (Low-Rise)</u>	
<u>Time Period</u>	<u>Enter/Exit</u>
AM Peak Hour Street	24% / 76%
PM Peak Hour Street	63% / 37%
AM Peak Hour - Generator	24% / 76%
PM Peak Hour - Generator	62% / 38%

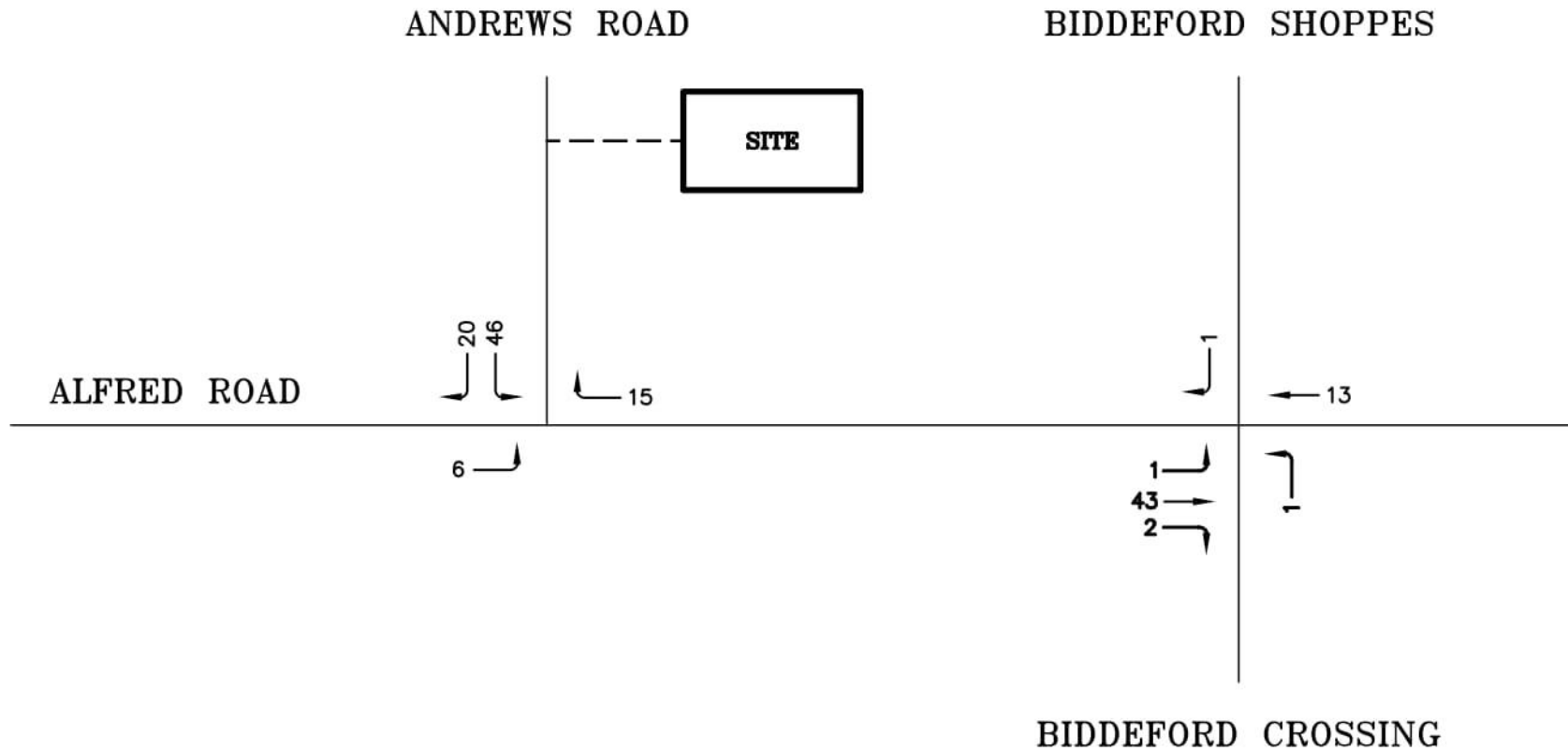
***Note that trip generation data is unavailable for the Saturday and Sunday peak**

SECTION 1

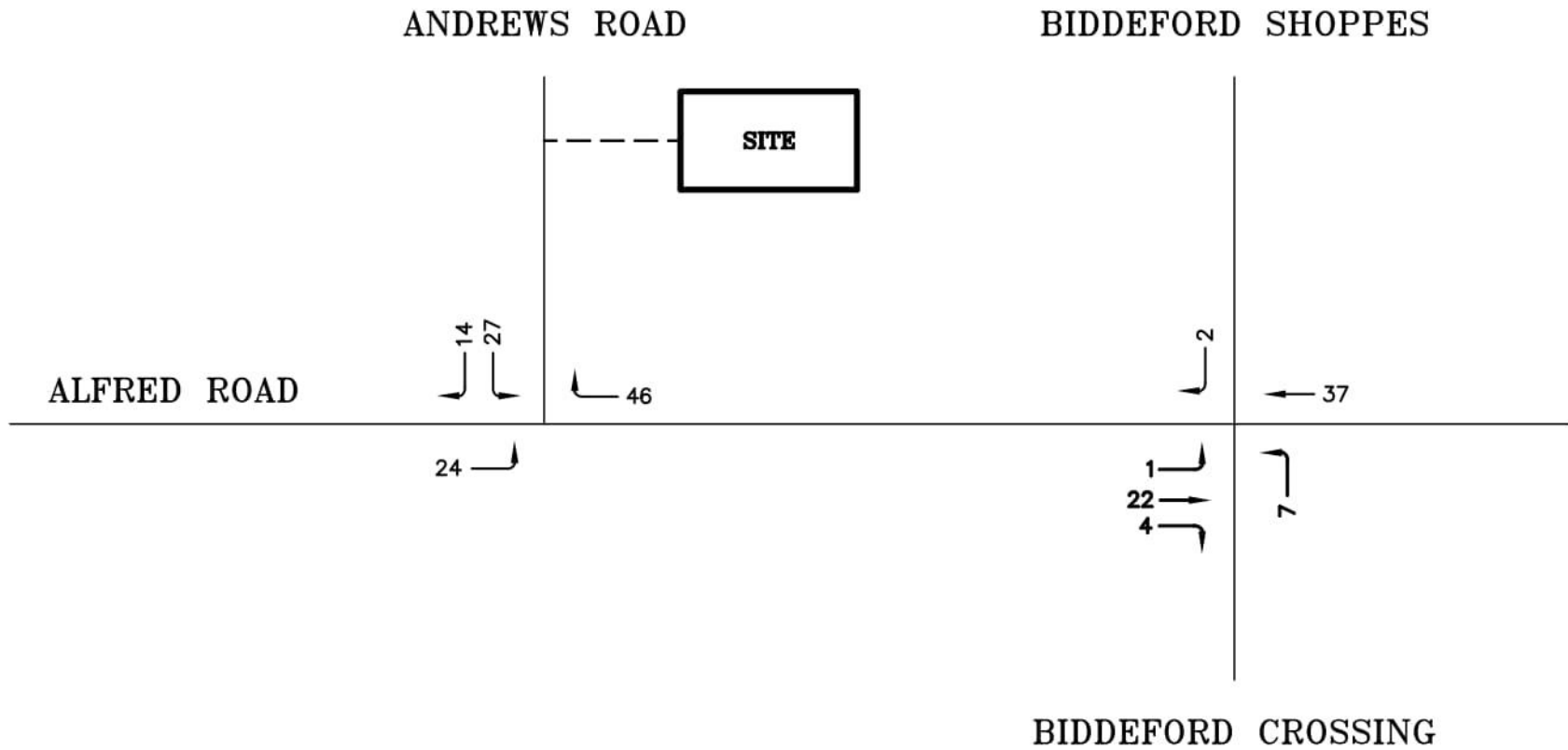
G. TRIP ASSIGNMENT

Peak hour site trips generated by the proposed Andrews Road residential apartment project during both the morning and evening peak hours were assigned to the study intersections at Andrews Road/Alfred Road and Alfred Road/Biddeford Crossing and Biddeford Shoppes based upon existing traffic data collected at both locations in September, 2021. Copies of the peak hour summary sheets are attached for reference.

The following Figures, 1 and 2 illustratively present the trip assignment for the AM and PM peak hours at both study intersections.



**SITE TRIP ASSIGNMENT
WEEKDAY AM PEAK HOUR
FIGURE 1**



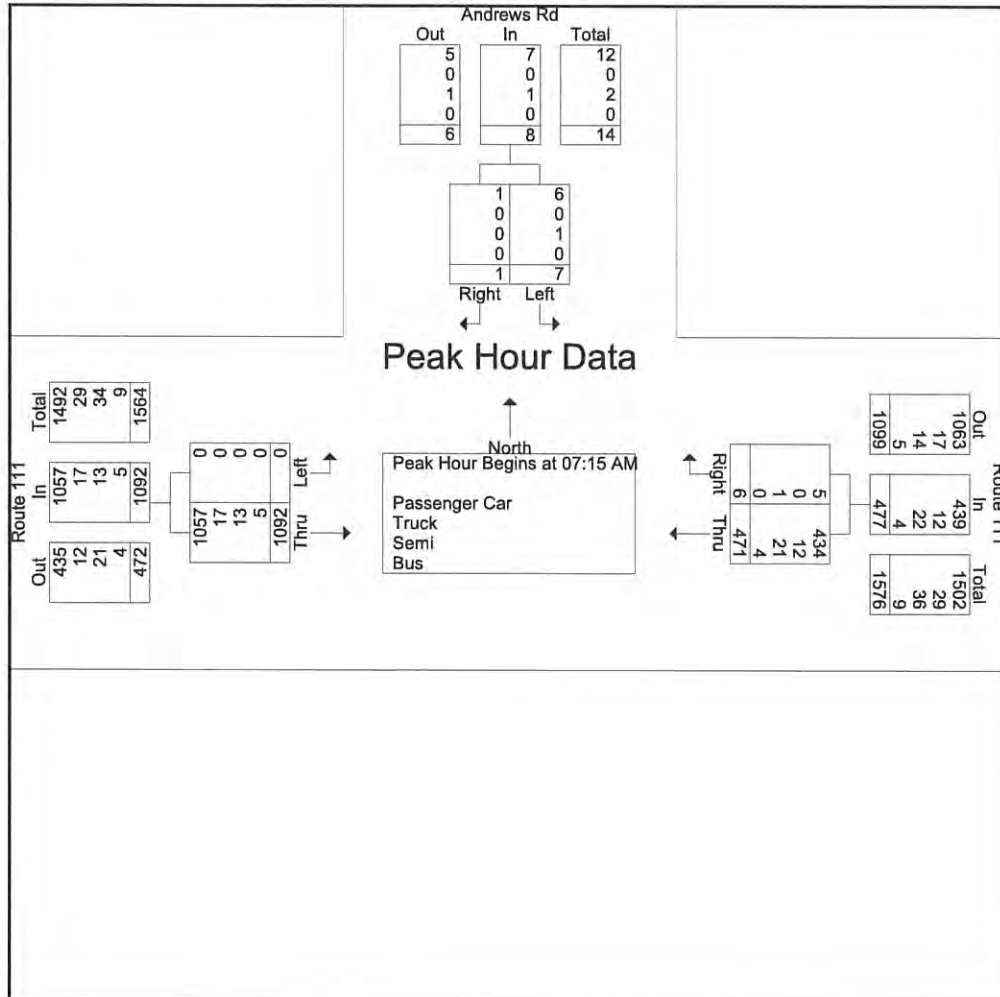
**SITE TRIP ASSIGNMENT
WEEKDAY PM PEAK HOUR
FIGURE 2**

Traffic Solutions

17 Mount View Dr
Gorham, ME 04038

File Name : Biddeford Route 111 & Andrews Rd 9-28-21 AM
Site Code : 00928211
Start Date : 9/28/2021
Page No : 4

	Andrews Rd From North			Route 111 From East			Route 111 From West			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	1	123	124	281	0	281	405
07:30 AM	0	3	3	3	127	130	269	0	269	402
07:45 AM	0	1	1	1	94	95	297	0	297	393
08:00 AM	1	3	4	1	127	128	245	0	245	377
Total Volume	1	7	8	6	471	477	1092	0	1092	1577
% App. Total	12.5	87.5		1.3	98.7		100	0		
PHF	.250	.583	.500	.500	.927	.917	.919	.000	.919	.973
Passenger Car	1	6	7	5	434	439	1057	0	1057	1503
% Passenger Car	100	85.7	87.5	83.3	92.1	92.0	96.8	0	96.8	95.3
Truck	0	0	0	0	12	12	17	0	17	29
% Truck	0	0	0	0	2.5	2.5	1.6	0	1.6	1.8
Semi	0	1	1	1	21	22	13	0	13	36
% Semi	0	14.3	12.5	16.7	4.5	4.6	1.2	0	1.2	2.3
Bus	0	0	0	0	4	4	5	0	5	9
% Bus	0	0	0	0	0.8	0.8	0.5	0	0.5	0.6



Traffic Solutions

17 Mount View Dr
Gorham, ME 04038

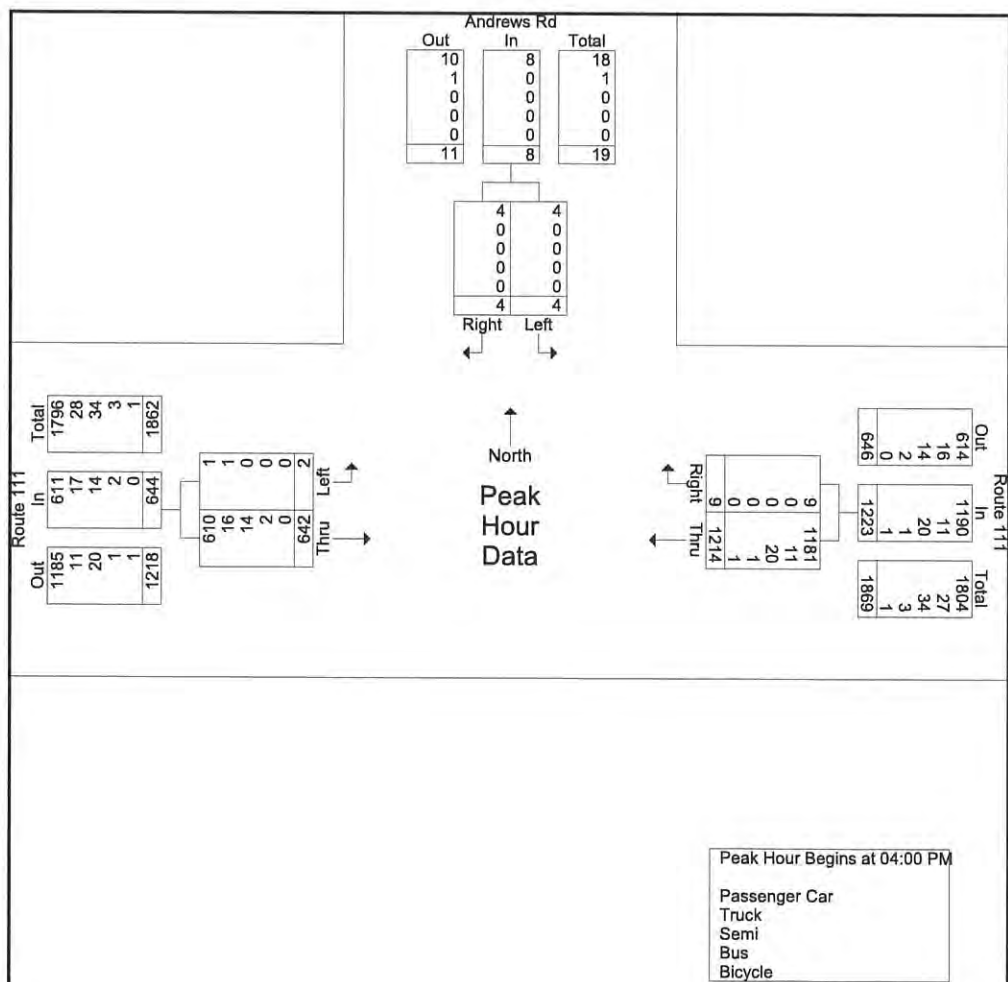
File Name : Biddeford Route 111 & Andrews Rd 9-28-21 PM

Site Code : 00928212

Start Date : 9/28/2021

Page No : 4

	Andrews Rd From North			Route 111 From East			Route 111 From West			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	1	1	3	299	302	156	1	157	460
04:15 PM	0	1	1	2	302	304	151	0	151	456
04:30 PM	0	1	1	2	315	317	173	0	173	491
04:45 PM	4	1	5	2	298	300	162	1	163	468
Total Volume	4	4	8	9	1214	1223	642	2	644	1875
% App. Total	50	50		0.7	99.3		99.7	0.3		
PHF	.250	1.00	.400	.750	.963	.965	.928	.500	.931	.955
Passenger Car	4	4	8	9	1181	1190	610	1	611	1809
% Passenger Car	100	100	100	100	97.3	97.3	95.0	50.0	94.9	96.5
Truck	0	0	0	0	11	11	16	1	17	28
% Truck	0	0	0	0	0.9	0.9	2.5	50.0	2.6	1.5
Semi	0	0	0	0	20	20	14	0	14	34
% Semi	0	0	0	0	1.6	1.6	2.2	0	2.2	1.8
Bus	0	0	0	0	1	1	2	0	2	3
% Bus	0	0	0	0	0.1	0.1	0.3	0	0.3	0.2
Bicycle	0	0	0	0	1	1	0	0	0	1
% Bicycle	0	0	0	0	0.1	0.1	0	0	0	0.1

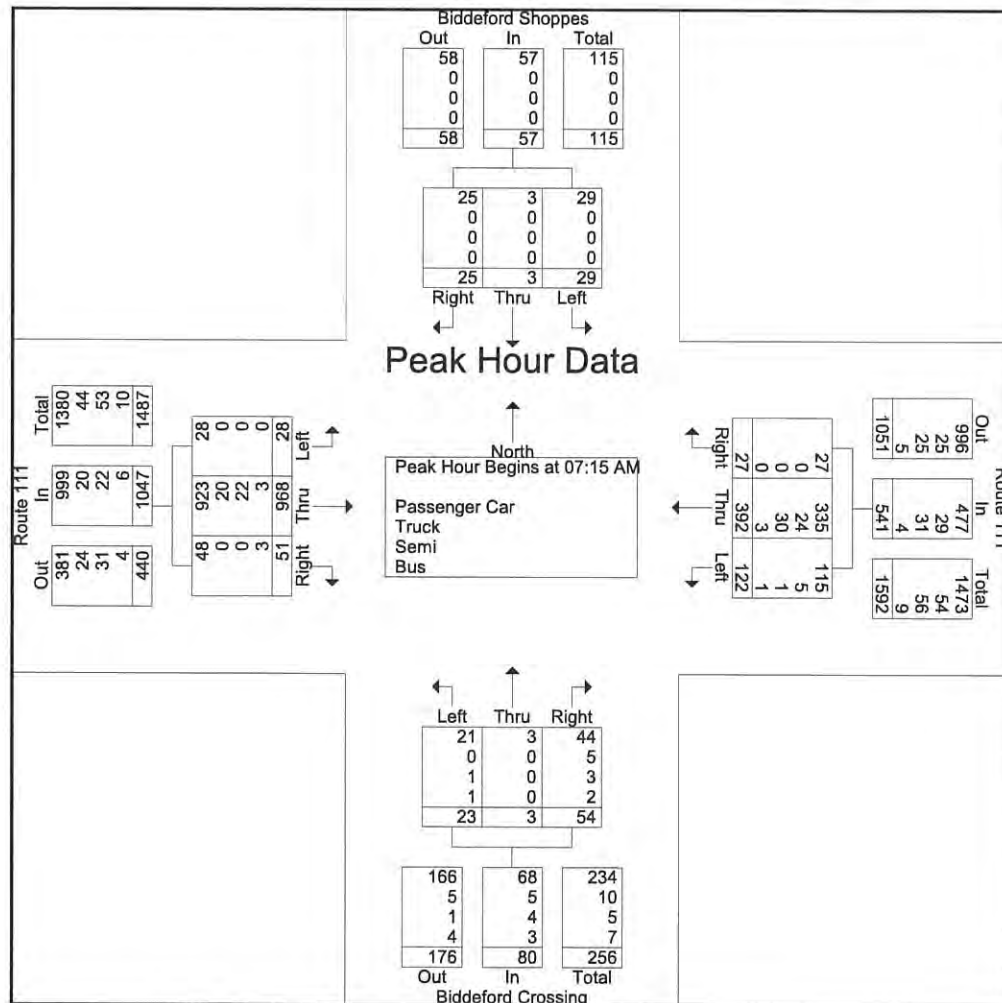


Traffic Solutions

17 Mount View Dr
Gorham, ME 04038

File Name : Biddeford Route 111 & Shopping Plazas 9-29-21 AM
Site Code : 00929211
Start Date : 9/29/2021
Page No : 4

	Biddeford Shoppes From North				Route 111 From East				Biddeford Crossing From South				Route 111 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	0	6	11	7	86	21	114	9	1	5	15	12	236	5	253	393
07:30 AM	9	1	8	18	8	90	24	122	18	0	7	25	11	254	4	269	434
07:45 AM	4	0	8	12	5	114	36	155	10	0	5	15	11	262	13	286	468
08:00 AM	7	2	7	16	7	102	41	150	17	2	6	25	17	216	6	239	430
Total Volume	25	3	29	57	27	392	122	541	54	3	23	80	51	968	28	1047	1725
% App. Total	43.9	5.3	50.9		5	72.5	22.6		67.5	3.8	28.8		4.9	92.5	2.7		
PHF	.694	.375	.906	.792	.844	.860	.744	.873	.750	.375	.821	.800	.750	.924	.538	.915	.921
Passenger Car	25	3	29	57	27	335	115	477	44	3	21	68	48	923	28	999	1601
% Passenger Car	100	100	100	100	100	85.5	94.3	88.2	81.5	100	91.3	85.0	94.1	95.4	100	95.4	92.8
Truck	0	0	0	0	0	24	5	29	5	0	0	5	0	20	0	20	54
% Truck	0	0	0	0	0	6.1	4.1	5.4	9.3	0	0	6.3	0	2.1	0	1.9	3.1
Semi	0	0	0	0	0	30	1	31	3	0	1	4	0	22	0	22	57
% Semi	0	0	0	0	0	7.7	0.8	5.7	5.6	0	4.3	5.0	0	2.3	0	2.1	3.3
Bus	0	0	0	0	0	3	1	4	2	0	1	3	3	3	0	6	13
% Bus	0	0	0	0	0	0.8	0.8	0.7	3.7	0	4.3	3.8	5.9	0.3	0	0.6	0.8

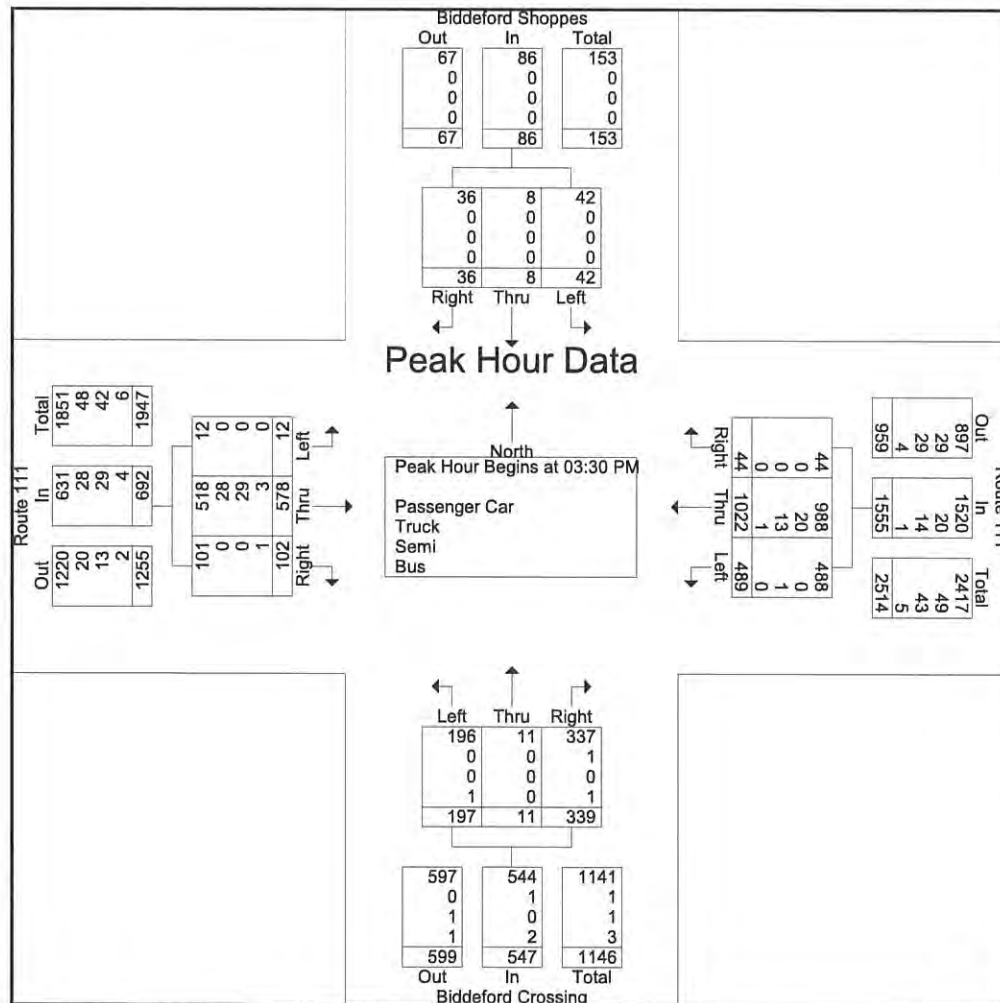


Traffic Solutions

17 Mount View Dr
Gorham, ME 04038

File Name : Biddeford Route 111 & Shopping Plazas 9-29-21 PM
Site Code : 00929212
Start Date : 9/29/2021
Page No : 4

	Biddeford Shoppes From North				Route 111 From East				Biddeford Crossing From South				Route 111 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	8	4	9	21	8	269	143	420	93	5	40	138	32	160	2	194	773
03:45 PM	12	1	11	24	10	227	97	334	80	1	53	134	30	156	3	189	681
04:00 PM	7	2	13	22	16	284	123	423	99	3	42	144	25	109	6	140	729
04:15 PM	9	1	9	19	10	242	126	378	67	2	62	131	15	153	1	169	697
Total Volume	36	8	42	86	44	1022	489	1555	339	11	197	547	102	578	12	692	2880
% App. Total	41.9	9.3	48.8		2.8	65.7	31.4		62	2	36		14.7	83.5	1.7		
PHF	.750	.500	.808	.896	.688	.900	.855	.919	.856	.550	.794	.950	.797	.903	.500	.892	.931
Passenger Car	36	8	42	86	44	988	488	1520	337	11	196	544	101	518	12	631	2781
% Passenger Car	100	100	100	100	100	96.7	99.8	97.7	99.4	100	99.5	99.5	99.0	89.6	100	91.2	96.6
Truck	0	0	0	0	0	20	0	20	1	0	0	1	0	28	0	28	49
% Truck	0	0	0	0	0	2.0	0	1.3	0.3	0	0	0.2	0	4.8	0	4.0	1.7
Semi	0	0	0	0	0	13	1	14	0	0	0	0	0	29	0	29	43
% Semi	0	0	0	0	0	1.3	0.2	0.9	0	0	0	0	0	5.0	0	4.2	1.5
Bus	0	0	0	0	0	1	0	1	1	0	1	2	1	3	0	4	7
% Bus	0	0	0	0	0	0.1	0	0.1	0.3	0	0.5	0.4	1.0	0.5	0	0.6	0.2



SECTION 2

TRAFFIC ACCIDENTS

2018 - 2020 Accident Summary Alfred Road (a.k.a. ME Route 111)

<u>Location</u>	<u>Number of Accidents</u>	<u>Critical Rate Factor</u>
1. Alfred Road/Biddeford Shoppes/Biddeford Crossing Intersection	24	0.78
2. Alfred Road & Andrews Road	2	0.31
3. Alfred Road & New Road/Old Alfred Road intersection (Town of Arundel) (2019-2021, after intersection improvements)	4	N/A
4. Alfred Road/Biddeford Shoppes/Biddeford Crossing intersection west to the end of raised traffic island	1	0.14
5. Alfred Road btw. Andrews Road and end of traffic island east of Andrews Road intersection	6	0.54
6. Alfred Road btw. Andrews Road and Arundel Town Line	5	0.43
7. Alfred Road btw. Arundel Town Line and New Road	5	0.68

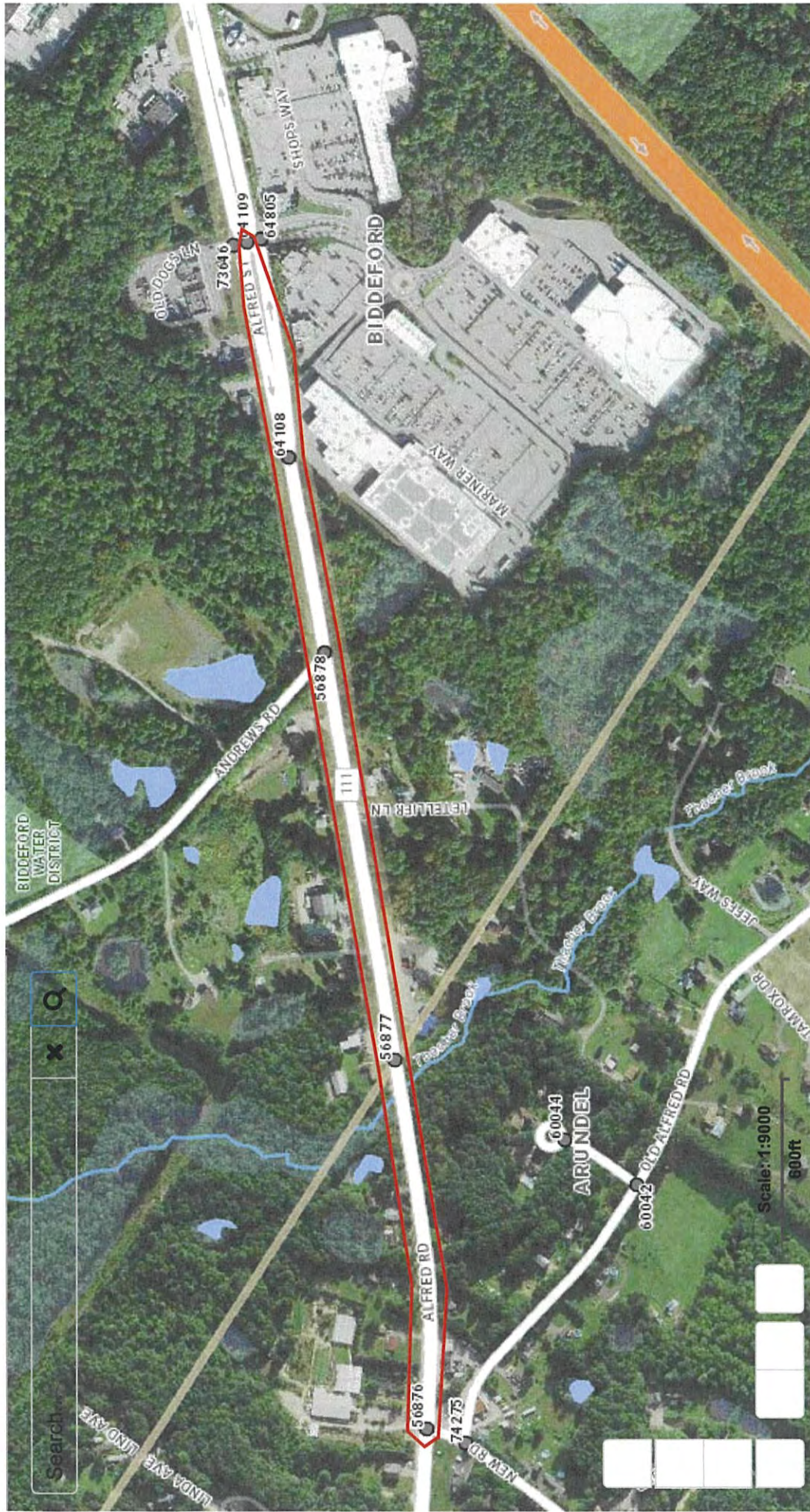
The MDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents and,***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the chart shows, there are no identified high crash locations.

MaineDOT completed a safety improvement project at the Old Alfred Road/New Road intersection, a former high crash location, in the Town of Arundel in 2020 that tied the Old Alfred Road approach into New Road further back from Alfred Road creating a simple and basic “tee” intersection. A dedicated left-turn lane was added on the west bound approach of Alfred Road accommodating left-turn movements to the re-aligned New Road approach. MaineDOT’s preliminary safety report for the years 2019 through 2021 (see attachment) shows that a total of four crashes were reported for the three-year study period with three of the crashes occurring in 2019, one crash in 2020 and zero crashes in 2021.

Item # 3



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

Biddeford/Arundel
Rte. 111/Alfred Rd./St. from Shopping Mall Ent. to New Rd.

REPORT PARAMETERS

Year 2018, Start Month 1 through Year 2020 End Month: 12

Route: 0111X	Start Node: 64109 End Node: 56876	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☐ Exclude Last Node
Route: 0111E	Start Node: 64108 End Node: 64109	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node

Crash Summary I

Nodes														
Node	Route - MP	Node Description	U/R	Total Crashes	K	Injury Crashes			Percent Annual M		Crash Rate	Critical Rate	CRF	
					A	B	C	PD	Injury	Ent-Veh				
64109	0111X - 3.29	Int of ALFRED ST OLD DOGS LN RD INV 3201693	9	24	0	0	0	9	15	37.5	8.613	0.93	1.20	0.78
64108	0111X - 3.44	Non Int ALFRED ST	2	1	0	0	0	0	1	0.0	6.361	0.05	0.35	0.00
56878	0111X - 3.58	Int of ALFRED ST ANDREWS RD	2	2	0	0	1	0	1	50.0	6.116	0.11	0.36	0.00
56877	0111X - 3.87	TL Arundel Biddeford	2	0	0	0	0	0	0	0.0	2.975	0.00	0.43	0.00
56876	0111X - 4.13	Int of ALFRED RD NEW RD	1	9	0	0	0	2	7	22.2	5.971	0.50	0.32	1.56
Study Years: 3.00		NODE TOTALS: 36 0 0 0 1 11 24 33.3 30.036 0.40 0.47 0.85												

Crash Summary I

Sections															
Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	K	Injury Crashes			Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
						A	B	C	PD						
64108	64109	3139654	0 - 0.15	0111X - 3.29 ST RTE 111	0.15	2	1	0	0	0	0.0	0.00488	68.30	489.10	0.00
Non Int ALFRED ST															
56878	64108	3123089	0 - 0.14	0111X - 3.44	0.14	2	6	0	0	1	16.7	0.00870	229.85	426.14	0.00
Int of ALFRED ST ANDREWS RD															
56877	56878	3114384	0 - 0.29	0111X - 3.58 ST RTE 111	0.29	2	8	0	0	2	75.0	0.01726	154.53	368.21	0.42
TL Arundel Biddeford															
56876	56877	5205276	0 - 0.26	0111X - 3.87 ST RTE 111	0.26	1	5	0	0	0	20.0	0.01547	107.72	253.21	0.00
Int of ALFRED RD NEW RD															
64108	64109	3119895	0 - 0.16	0111E - 0.29 ST RTE 111E	0.16	2	5	0	0	0	20.0	0.00509	327.20	483.96	0.00
Non Int ALFRED ST															

Study Years:	3.00	Section Totals:	1.00	25	0	0	3	6	16	36.0	0.05140	162.12	273.92	0.59
		Grand Totals:	1.00	61	0	0	4	17	40	34.4	0.05140	395.56	375.86	1.05

Item #3

H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: YORK

TOWN: ARUNDEL

LOW NODE: 56876 HIGH NODE: 0000

REGION: 1

U/R: RURAL

DESCRIPTION: Jct of Alfred Rd & New Rd/Old Alfred Rd

RTE # / RD #: 0111X

DATE DRAWN: 4/13/2021 DRAWN BY: Michelle

STUDY FROM: 1/1/2018

STUDY TO: 12/31/2020

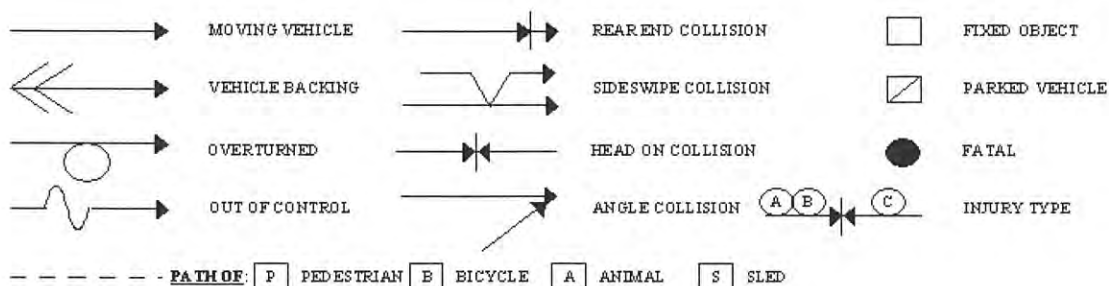
CRASH RATE: 0.49

CRF: 1.54

% INJURY: 22.2

TOTAL CRASHES: 9

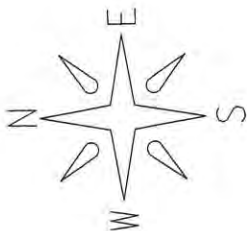
LEGEND



PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SNOW, CL - CLOUDY

TIME: A - AM, P - PM



Arundel

Node: 56876

Study Period: 2018-2020

of Crashes: 9 / CRF: 1.54

Prepared by Office of Safety (MP 4/13/21)

Agway
Green Mtn Transplant

Alfred Road

56681 5-20-19 9:08A D/CL Follow Too Close

19499 7-10-18 4:04P D/C Fail To Yield

65809 9-20-19 10:21A D/C Fail To Yield

16767 6-12-18 1:33P D/C Fail To Yield

1798 1-17-19 6:53A D/C Follow Too Close

16909 6-18-18 9:18A D/C Fail To Yield

16766 6-12-18 6:42A D/C Fail To Yield

Alfred Road



Old Alfred Road



26408 9-18-18 12:07P D/CL Fail To Yield
21609 7-30-18 2:51P D/C Follow Too Close

New Rd.

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☒ Crash Summary I -
☒ Single Node

☐ Section Detail

☒ Crash Summary II

☐ 1320 Public

☐ 1320 Private

☐ 1320 Summary

REPORT DESCRIPTION

Arundel
Intersection of Rte. 111/Alfred Rd. & New Rd.

REPORT PARAMETERS

Year 2019, Start Month 1 through Year 2021 End Month: 12

Route: 0111X

Start Node: 56876

End Node: 56876

Start Offset: 0

End Offset: 0

☐ Exclude First Node

☐ Exclude Last Node

Crash Summary I

Nodes													
Node	Route - MP	Node Description	U/R	Total Crashes	K	Injury Crashes			PD	Percent Annual M Ent-Veh Injury	Crash Rate	Critical Rate	CRF
56876	0111X - 4.13	Int of ALFRED RD NEW RD	1	4	0	0	0	0	2	50.0	5.971	0.22	0.32
												0.13	0.00
												Statewide Crash Rate:	
Study Years:	3.00			4	0	0	0	0	2	50.0	5.971	0.22	0.32
NODE TOTALS:												0.22	0.69

****None of these Rates (Crash, Critical, CRF) are accurate as they are based off 2020 AADT's, not 2021 AADT's).

SECTION 3

A. ENTRANCE/EXIT LOCATON

The existing site, located in the northeast quadrant of the Andrews Road/Alfred Road (Route 111) intersection, is provided access with a gravel driveway located on the east side of Andrews Road. Access to the property will continue to be provided at the existing driveway location. As part of the development of the site, the existing driveway will be improved and widened to 24-feet.

SECTION 3

B. ENTRANCE AND EXIT PLAN VIEW

Vehicle sight distance measurements were field determined for the Andrews Road approach at the Alfred Road (Route 111), and the site driveway entrance located on Andrews Road. The measured distances are listed as follows:

Andrews Road @ Route 111

Left = 450'+

Right = 500'+

Site Entrance @ Andrews Road

Left = To Alfred Road

Right = 325'

The posted speed limit on Alfred Road at Andrews Road is 35mph; the posted speed limit increases to 40mph just west of the Andrews Road intersection.

SECTION 3

C. ENTRANCE/EXIT DESIGN

The proposed development, including any required off-site improvements, will be designed and constructed as directed by the City of Biddeford and/or the Maine DOT.

SECTION 4

OPTION AGREEMENT, RIGHT OR INTEREST

A OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT signed and dated January 25, 2021 along with a SECOND AMENDMENT to the OPTION AGREEMENT provides documentation of Devine Capital, LLC's ownership in the property located in the northeast quadrant of the Andrews Road and Alfred Road intersection.

OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT

OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT ("**Agreement**") made as of the date ("**Effective Date**") of last execution appearing below, by and between **New Life Christian Fellowship**, a Maine religious nonprofit corporation ("**Seller**"), with a mailing address of 551 Alfred Road, Biddeford, Maine 04005-9474 and **Devine Capital LLC**, a Massachusetts limited liability company, or its nominee ("**Buyer**"), with a mailing address of P.O. Box 17795, Portland, Maine 04112.

WHEREAS, Seller owns fee simple interest in that certain real property consisting of approximately 44.7 acres more or less located generally at 588 and 590 Alfred Street, in the City of Biddeford, County of York, Maine, also known as Tax Map 2, Lots 6 and 12, and more particularly described in the source deeds referenced in **Exhibit A** attached hereto (the "**Property**"); Excepting and reserving a 2.1 acre parcel conveyed to Old Dogs of Biddeford, LLC as referenced as Tax Map 2, Lot 6-3 and in the York County Registry of Deeds Book 17933 Page 197 also referenced here in Exhibit B.

WHEREAS, Seller has agreed to grant to Buyer an option to purchase the Property in the future for a set price reflected below, and does thus commit and obligate itself to sell and convey the Property to Buyer on the terms and conditions as set forth below;

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt whereof is hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows, incorporating the foregoing recitals by reference as if fully restated hereinbelow:

Article I – Grant, Timing, Diligence, Permitting

- 1.1 *Option, Purchase Price.* For the consideration recited above, and in consideration for Buyer investing substantial time and money to review, evaluate, inspect, and explore development opportunities with respect to the Property, subject to the terms and conditions hereof, Seller hereby irrevocably grants to Buyer the exclusive right and option (the "**Option**") to purchase the Property for the sum of [REDACTED] (the "**Purchase Price**").
- 1.2 *Preliminary Diligence Deadline.* The initial term of the Option shall commence on the Effective Date and, unless otherwise extended in accordance with the terms hereof, shall expire at **6:00 p.m.** (Eastern Time), [REDACTED] days thereafter, during which period Buyer shall conduct its due diligence inspections (addressed in Article II below), the results of which shall be acceptable to Buyer in its sole and absolute discretion (the "**Preliminary Diligence Deadline**").
- 1.3 *Rezone/Permitting Deadline; Rezone/Permitting Approval Date.*
 - A. Upon the Preliminary Diligence Deadline, unless Buyer has terminated this Option due to the results of its due diligence being unsatisfactory to Buyer in its sole and absolute discretion, Buyer shall pay and deliver to Seller monthly payments in the amount of [REDACTED] in order to extend the Option term for up to [REDACTED] consecutive periods of [REDACTED] days each (all such monthly payments hereinafter referred to as the "**Option Payments**"). The Option Payments shall be nonrefundable but shall be applied to the Purchase Price at closing. Seller hereby grants to Buyer full authority to seek from any federal, state, or local governmental authority any zoning change(s) and/or permits and/or approvals whatsoever that Buyer, in its sole and absolute discretion, deems advisable for Buyer's intended development of the Property for a multi-family residential development (the "**Project**") during such extended period ("**Rezone/Permitting Deadline**"). Seller hereby agrees to fully support and cooperate with Buyer's efforts to rezone and permit the Project, and specifically agrees to appear and testify in favor of, and promptly execute any document reasonably requested by Buyer in connection with, any such efforts of Buyer, all at no cost or charge to Buyer.
 - B. In the event Buyer does not obtain final unappealable zoning change(s)/approvals, including conditional use and/or permits for the Project acceptable to Buyer in its sole and absolute discretion, or otherwise affirmatively elect by written notice to Seller to close notwithstanding the lack of such permits and/or approvals, by the Rezone/Permitting Deadline, then unless Buyer

elects to extend the Rezone/Permitting Deadline as provided in Section 1.4, below, this Agreement shall automatically terminate as of the Rezone/Permitting Deadline, and, promptly upon Buyer's delivery to Seller of (1) an instrument (the "**Release**") signed by Buyer and suitable to release and discharge the Record Notice, and (2) digital copies of and an assignment of all right in the all materials developed by Buyer and its contractors as part of Buyer's efforts to rezone and permit the Project (the "**Rezone Permitting Materials**"), this Agreement shall be null, void, of no further force and effect, and each party hereto shall have no further obligation one to the other.

C. If Buyer obtains zoning change(s) and permits for the Project acceptable to Buyer in its sole and absolute discretion, then promptly upon the date ("**Rezone/Permitting Approval Date**") that the last of such zoning change(s) and/or permit(s) become final and non-appealable, Buyer shall serve notice upon Seller confirming same, and Buyer shall close on the purchase by the date ("**Closing Deadline**") that is [] days after the Rezone/Permitting Approval Date, and the notice described in the first sentence of this subsection shall also constitute the Exercise Notice referenced in Section 3.1, below, and shall contain the additional information specified in Section 3.2, below.

- 1.4 *Additional Option Extension Payments.* Notwithstanding any contrary provision herein, if Buyer has not obtained all necessary unappealable permits and/or approvals for the Project, Buyer may elect to further extend the Option and Rezone/Permitting Deadline for up to [] additional, successive periods of [] days each, provided Buyer shall pay and deliver to Seller monthly payments, in the amount of [] (all such monthly payments hereinafter referred to as the "**Extension Payments**"). The Extension Payments shall be nonrefundable but shall be applied to the Purchase Price at closing.
- 1.5 *Termination.* Notwithstanding any contrary provision herein, at any time before the Rezone/Permitting Approval Date, Buyer may elect to terminate this Agreement by delivering to Seller notice thereof ("**Termination Notice**"). If a Termination Notice is given, Buyer shall promptly deliver to Seller the Release signed by Buyer and the Rezone/Permitting Materials, as described in Section 1.3 above, and upon such delivery, this Agreement shall be null and void, of no further force and effect, and each party hereto shall have no further obligation one to the other, except that Buyer's indemnification obligations under Section 2.2 shall survive any termination.

Article II – Due Diligence

- 2.1 To facilitate Buyer's inspections and evaluation of the Property, Seller agrees to deliver to Buyer as soon as possible, but in any event within [] days from the date hereof, copies of the materials specified on the list attached hereto as **Exhibit B** (the "**Due Diligence Materials**"). In addition, Seller agrees to permit Buyer to inspect and make copies of any books and records in Seller's possession or control concerning the Property.
- 2.2 So long as this Agreement remains in effect, Buyer may conduct such investigations, inspections, interviews, tests, assessments and audits pertaining to the Property as Buyer elects, in Buyer's sole discretion and at Buyer's sole cost, *including but not limited to:* (i) title search; (ii) survey; (iii) environmental site assessment; (iv) review of zoning and building code requirements; and/or (v) physical/geotechnical inspection of the Property (collectively, the "**Inspections**"). Buyer shall promptly repair any physical damage to the Property caused by any such Inspections, and Buyer further agrees to indemnify and hold Seller harmless from and against any and all loss, cost, damage, or expense incurred by Seller as a result of said physical damage.
- 2.3 Seller agrees, in general, to cooperate in good faith with Buyer and Buyer's representatives, and, in particular:
- 2.3.1 so as to secure the rights granted to Buyer hereunder and to ensure that the Property shall be in substantially the same condition at the time of conveyance as exists as of the date of this Agreement, Seller agrees that for so long as this Agreement remains in

effect, then unless and until Buyer in writing consents otherwise, Seller shall maintain the Property substantially in condition as currently exists, timely paying all taxes and other impositions related to ownership thereof, and shall not: (a) transfer, encumber, mortgage, lease, alienate, impose any restriction or condition upon, or otherwise grant to any other person, firm or entity any permission, license, right or rights whatsoever in, pertaining to, or affecting any part or all of the Property; nor (b) make any change to or alter in any way whatsoever the physical or other characteristics of any part or all of the Property, including cutting of trees/timber, or contamination of any kind; and,

- 2.3.2 so as to ensure that there is no change in the status of the title to the Property prior to termination of this Agreement, Seller agrees to contemporaneously with its execution hereof execute and deliver to Buyer for recording in the appropriate Land Evidence Records an instrument (the "**Record Notice**") suitable under applicable law to evidence the grant of the Option and the aforesaid restrictions on the grant of any rights inconsistent with this Agreement, in form and substance as attached hereto as **Exhibit C**, or, if no such exhibit is attached, in form and substance as Buyer may reasonably request.
- 2.4 During the effective term of this Agreement, Buyer contemplates expending substantial sums and incurring substantial expenses to inspect, test, and analyze the Property, to conduct title research, undertake survey and site plans, and to otherwise conduct a due diligence review of the Property and all related matters, and to pursue obtaining permits for Buyer's contemplated development of the Property. To induce Buyer to make such efforts and expend such sums, Seller hereby agrees that during the effective term of this Agreement Seller shall not solicit, encourage, negotiate or entertain any offer with any other party concerning or with respect to the Property whatsoever, including offers to purchase or lease the Property, regarding any sale, financing, partnership, or other disposition of all or any part of, or interest in, the Property; Seller agrees to immediately communicate to Buyer for response any written inquiries received by Seller during the effective term of this Agreement. Seller further agrees to keep the monetary terms of this Agreement confidential, except only as may be approved by Buyer in writing, in advance.
- 2.5 Notwithstanding anything contained herein to the contrary, however, in the event Buyer delivers to Seller prior to expiration of the Preliminary Diligence Deadline written notice specifying with reasonable particularity matters related to the title to the Property to which Buyer objects ("**Title Objection Notice**"), then and in such event the Preliminary Diligence Deadline shall be deemed extended for an additional period beyond its then-scheduled expiration to allow Seller to, and Seller does hereby agree that Seller shall during such period, use good faith efforts to promptly and reasonably resolve such title objections. In the event Seller fails to use reasonable good faith efforts to so resolve Buyer's objections, then and in such event Seller shall be in default hereunder, and Buyer shall be entitled to its remedies for same as provided below. In addition, Buyer shall have the right to extend the Preliminary Diligence Deadline for a reasonable period of time to permit Buyer itself, at its own expense, to resolve such title objections.

Article III – Exercise, Purchase Price

- 3.1 In the event that Buyer elects to exercise the Option and purchase the Property, Buyer shall deliver notice ("**Exercise Notice**") to Seller pursuant to Section 1.3.C stating that Buyer elects to exercise the Option to purchase the Property.
- 3.2 Buyer shall specify in the Exercise Notice (but failure to so specify shall not invalidate the effectiveness of the Exercise Notice) the name of the entity, if different from Buyer, that is to take title to the Property, Seller hereby acknowledging and agreeing that Buyer may take title in the name of any entity Buyer chooses as nominee, and that for this purpose references in this Agreement to "Buyer" shall mean "Buyer or its nominee."
- 3.3 The Purchase Price shall be adjusted to reflect the Option Payments and Extension Payments paid to Seller by Buyer pursuant to Section 1.3, as well as the equitable apportionment as of date

of closing of unpaid real estate taxes, assessments, liens, utility bills, if any, recording charges, transfer tax, and similar items as is customary in standard conveyancing practice in the State of Maine (the Purchase Price as so adjusted may hereinafter be referred to as the "**Adjusted Purchase Price**").

Article IV – Closing Procedure

- 4.1 On the Closing Deadline, Seller shall sell and convey the Property to Buyer and Buyer shall purchase the Property from Seller (the "**Closing**"). At Closing, Seller shall deliver to Buyer:
- 4.1.1 an original deed (the "**Deed**") properly executed by or on behalf of Seller, in form and substance as attached hereto as **Exhibit D**, conveying all of Seller's interest in the Property to Buyer by good, marketable, insurable title, free and clear of all liens, encumbrances, and deficiencies, except utility easements of record, and, except easements and encumbrances of record prior to the date of this Agreement and,
 - 4.1.2 such other documents as may be reasonably requested by Buyer, including without limitation customary title insurance affidavits, such instruments of assignment as Buyer reasonably requests, such as an Assignment of Permits, documents to evidence the existence, good standing, and authority of Seller, a settlement statement, or any other customary or reasonable documentation as may be requested (such other documents, together with the Deed, may hereinafter be referred to collectively as the "**Conveyance Documents**").
 - 4.1.3 At Closing Buyer shall deliver to Seller the Adjusted Purchase Price in immediately available funds.

Article V - Representations

- 5.1 Seller hereby represents and warrants to Buyer, which representations and warranties shall be deemed restated as of closing, that:
- 5.1.1 Seller has good, insurable, and marketable title in fee simple to the Property, subject only to the encumbrances of record.
 - 5.1.2 Seller is a Maine nonprofit corporation, is not a foreign person or foreign entity as defined in the Foreign Investment in Real Property Tax Act ("**FIRPTA**"), has full right, power and authority to enter into and consummate this transaction, the person executing this Agreement on behalf of Seller is an officer of Seller and is duly authorized to execute this Agreement on behalf of Seller, Seller has the power and authority without necessity of further act or consent to execute this Agreement and all other instruments and documents contemplated hereby and to perform any and all acts necessary or desirable to consummate the transactions contemplated (including a conveyance of the Property).
 - 5.1.3 To Seller's knowledge without additional investigation, the Property is free of violations of law, is in full compliance with Federal, State, City and County ordinances and environmental laws, and there are not any current or contemplated special tax assessments known to Seller.
 - 5.1.4 Other than to the extent granted in this Agreement, previously disclosed to Buyer in writing, or reflected as exceptions to coverage on a title commitment acceptable to Buyer, no person, firm, or entity has any rights in, pertaining to, or affecting the Property, and Seller has not granted any rights in, pertaining to, or affecting the Property to any person, firm, or entity in any unrecorded instrument or writing, nor does any person, firm, or entity have an option to purchase or right of first refusal to purchase the Property.
 - 5.1.5 Seller is not involved as a debtor in any bankruptcy, reorganization or insolvency proceeding, and Seller has not received any notice of and has no knowledge of any

pending or threatened lawsuits, including condemnation suits, that could affect the Property or Seller's ownership of the Property.

- 5.1.6 To Seller's knowledge without additional investigation there have not been and there are not now any underground storage tanks located on or under the Property or if there have been or are any such tanks located on the Property, their location has been identified to Buyer in writing, they have been properly registered with all appropriate authorities, they are in full compliance with all applicable statutes, ordinances and regulations, and they have not resulted in the release of any hazardous or toxic substance, material, or waste into the environment.
- 5.1.7 To Seller's knowledge without additional investigation there are no past or present uses of the Property that did not comply in all material respects with all Environmental Protection Agency, Occupational Safety and Health Administration, and all other federal, state and local laws, administrative rules and regulations governing the soil, water, air and environment in and around the Property.

Article VI – Default

- 6.1 If Buyer fails to fulfill the Buyer's agreement herein, Seller shall retain the Option Payment(s) as liquidated damages, being Seller's sole remedy. If Seller shall fail to fulfill its obligations herein, Buyer shall have all available remedies at law and in equity, including specific performance. Notwithstanding the foregoing, the non-defaulting party agrees to provide the defaulting party with written notice providing a description of a default and provide such defaulting party with a [REDACTED] day cure period.

Article VII – Notice

- 7.1 All notices or other communications required or permitted hereunder shall be in writing, and shall be effective upon receipt or refusal when sent to the intended recipient by one of the methods set forth below:
- 7.1.1 regular and certified U.S. mail, postage prepaid, return receipt requested;
- 7.1.2 reputable national delivery service (i.e. FedEx, DHL); or,
- 7.1.3 otherwise hand delivered with an acknowledgment of receipt.
- 7.1.4 electronic transmission
- 7.2 Each party, by written notice given to the other party in accordance herewith, may change the address to which notices or other communications hereunder shall be deemed to have been duly given; provided, however, no party may designate more than **three** notice addresses, and notice of a change of address shall be effective only upon actual delivery. Until changed as aforesaid, a notice shall be addressed to the intended recipient at their address set forth in the first paragraph on page 1 of this Agreement.

Article VIII – Miscellaneous

- 8.1 **Broker.** Seller and Buyer each hereby represent and warrant to the other that neither Seller nor Buyer has dealt with or employed any real estate agent, broker, or any person entitled to a commission in connection with the transaction contemplated other than [REDACTED] in Maine. Seller and Buyer hereby agree to indemnify, defend, and hold harmless the other from any claim or claims, action or actions, losses, payments, judgments, commission or commissions, paid or payable to any real estate agent, broker, person or entity in connection with this transaction that was not called to the attention of the other as a result of any services or facilities of any such real estate agent, broker, person or entity provided to the other. The provisions of this paragraph shall survive conveyance of the Property to Buyer.

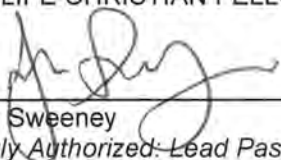
- 8.2 *Governing Law, Venue, Jury Waiver.* This Agreement shall be construed in accordance with the laws of the State of Maine. Both Buyer and Seller hereby consent to the jurisdiction of the courts of said state and of the federal government, as well as to the jurisdiction of all courts from which an appeal may be taken from the aforesaid courts, for the purpose of any suit, action or other proceeding arising out of, under or with respect to this agreement, and expressly waive any and all objection each may now or hereafter have as to the venue in any of such courts, and EACH OF BUYER AND SELLER DO HEREBY EXPRESSLY WAIVE ANY RIGHT EACH MAY HAVE TO ELECT A TRIAL BY JURY AS TO ANY DISPUTE ARISING HEREUNDER. Any disputes between Buyer and Seller (which are not otherwise resolved by the parties) shall be submitted to binding arbitration in Portland, Maine administered by JAMS in accordance with its Streamlined Arbitration rules. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction. This clause shall survive the closing of this transaction.
- 8.3 *Headings; Entire Agreement; Amendments.* The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. This Agreement (including all exhibits annexed hereto) contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior understandings, written or oral, if any, with respect thereto. This Agreement may not be modified, changed, supplemented, or terminated, nor may any obligations hereunder be waived, except by written instrument signed by the party to be charged or by its agent duly authorized in writing or as otherwise expressly permitted herein. The Agreement shall not be binding on any party until signed by every party.
- 8.4 *Waiver.* No waiver of any breach of any agreement or provision herein contained shall be deemed a waiver of any preceding or succeeding breach thereof or of any other agreement or provision herein contained. No extension of time for performance of any obligations or acts shall be deemed an extension of the time for performance of any other obligations or acts.
- 8.5 *Binding Effect; Assigns; Benefits.* This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns; provided, however, Seller may not assign its rights or obligations under this Agreement absent Buyer's consent in Buyer's sole discretion.
- 8.6 *Exhibits, Counterparts.* All exhibits attached hereto are by this reference incorporated fully herein. This Agreement may be executed by the parties hereto in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.
- 8.7 *Severability.* The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.
- 8.8 *Days, Interpretation.* References in this Agreement to a specified number of "days," shall mean and refer to calendar days; provided, however if any specified period would otherwise end on a day that is a Saturday, Sunday or day which is recognized by the State of Maine ("Jurisdiction") as a legal holiday, then and only in such event, the specified period shall be deemed to extend to the next following day that is not a Saturday, Sunday or legal holiday. "Business Day" means any day other than Saturday, Sunday and/or any weekday or weekend day that is a legal holiday observed by the federal government of the United States of America or the Jurisdiction. The terms of this Agreement were fully negotiated by the parties and shall not be construed for or against any party hereto.
- 8.9 *Prevailing Party.* In the event the parties litigate in any court or arbitration forum any dispute hereunder, then and in such event, the prevailing party shall be entitled to an award from the other of the reasonable attorney's fees and costs incurred therein by said prevailing party.

- 8.10 *Time of the Essence.* The parties hereto hereby agree that TIME IS OF THE ESSENCE as to each and every provision of this Agreement.

[Signature Page Follows; Remainder Intentionally Blank]

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal by their proper officers hereunto duly authorized as of the date of last execution hereof as set forth below.

Seller:
NEW LIFE CHRISTIAN FELLOWSHIP

By: 
Justin Sweeney
Its Duly Authorized: Lead Pastor

Date: January 25, 2021

Buyer:
DEVINE CAPITAL LLC

By: 
Bernard M. Devine
Its Duly Authorized: President

Date: January 25, 2021

Exhibit A

Two parcels of land, excepting the third parcel conveyed to Old Dogs of Biddeford, LLC with any improvements thereon, in the City of Biddeford, York County, Maine described in the following deeds:

588 Alfred Street, Biddeford, Maine

- Warranty Deed dated November 13, 2001 from James A. Mininni, Sr. to New Life Christian Fellowship, recorded at Book 11111, Page 70 in the York County Registry of Deeds

590 Alfred Street, Biddeford, Maine

- Warranty Deed dated March 5, 2002 from Energy Homes, Inc. to New Life Christian Fellowship, recorded at Book 11449, Page 147 in the York County Registry of Deeds

Excepting the property located at Alfred Street, Biddeford, Maine, conveyed to Old Dogs of Biddeford LLC

- Warranty Deed dated April 19, 2019 from New Life Christian Fellowship to Old Dogs of Biddeford, LLC recorded at Book 17933, Page 197 in the York County Registry of Deeds

Exhibit B

Survey - Titcomb Associates 2002
588 Alfred St Deed 11111 070
590 Alfred St Deed 11449 147
588 Alfred St Disclosure
590 Alfred St Disclosure
Old Dogs 2018 Conveyance Survey
Old Dogs Deed 17933 197
Alfred St Sewer Map
Andrews Geometrics Plan Profile 2004
ARC New Building sketch
Packard Development sketch
BI3074-Va Table A Zoning Uses
Parcel 1 and 2 Tax Map copy
2003 Biddeford & Saco Water Co Letter
2003 Gorrill-Palmer Consulting Engineers re: Ability to Serve
2005 Post development AM Peak Hour
Andrews Geometrics Plan Profile 2004
Attachment B TR-20 Calculations
Attachment C Water Quality Computations
Calculations Based Upon Maine Subsurface Wastewater Rules
Capacity and Queuing Analysis Results
City of Biddeford Wastewater Dept 2003 Ability to Serve Letter
Erosion Sedimentation North C-8B
Erosion Sedimentation South C-8A
First American Gap Indemnity Agreement 5.25.2017
First American Alta 3 parcels-3.5-2002
Gorrill-Palmer Consulting Engineers 2.9.2004 Maine DOT Letter
Gorrill-Palmer Consulting Engineers 4.8.2004 Maine DOT Letter
Gorrill-Palmer Consulting Engineers 2004 Plans
Gorrill-Palmer Consulting Engineers Row Volumes, Peak Adjusted Volumes
Grading & Drainage C-3
Grading Drainage South C-4A
Grading Draining North C-4B
Lighting plan WLS Lighting Systems
Offsite Utility Profile C-17B
Offsite Utility Profile C-17A
Overall Site Layout C-1A
PreDevelopment Watershed Maps
Proposed Off-Site Improvements - Gorrill Palmer
Route 111 & Exit 4- traffic study
Route 111 & Home Depot
Route 111 at Andrews Rd
Route 111 at Exit 4 Precourt St
Route 111 at Route 35
Route 111 at Shaws Irving
Route 111 at Walmart Park n ride
RW Gillespie June 2004 geotechnical evaluation
Section 7 Wildlife and Fisheries
Section 14 Erosion and Sedimentation Control Plan
Site Layout C-1B
Site Layout North C-2C

Exhibit B (continued)

Site Layout Phase2. C-2A

Site Layout Plans C2A C1B

Site Layout South C-2B

Stormwater Management

Traffic Impact Study 2003

Trip Generation Calculations

Turning Movement Diagrams

Utility Plan C- 6

Utility Plan Phase 1 C5

Vernal Pool Application and Determination NLC

Vernal Pool Location Plan LongView Partners - 588-590 Alfred St

Wetland Reconnaissance 4-21-18- 588-590 Alfred St

Wetland Reconnaissance 6-3-20- 590 Alfred St.6-3-20

Zoning Map

Exhibit C

NOTICE OF OPTION

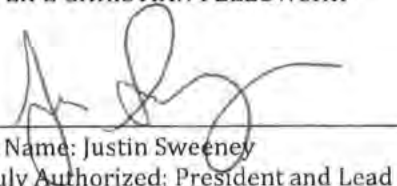
Notice is hereby given of the following Option to Purchase and Purchase and Sale Agreement (the "Option") vesting in Buyer an option to purchase certain real property owned by Seller:

SELLER: New Life Christian Fellowship
BUYER: Devine Capital LLC
DATE OF AGREEMENT: January 25, 2021
PREMISES: See Exhibit A attached hereto
TERM OF OPTION: Beginning January 25, 2021 and continuing for up to [REDACTED] days, subject at all times to the terms and conditions of the Option Agreement.

The undersigned further expressly acknowledges that this Notice of Option is being executed pursuant to the provisions of the Option and is not intended to vary the terms or conditions of the Option.

IN WITNESS WHEREOF, the undersigned has caused this Notice of Option to be signed by its duly authorized representative.

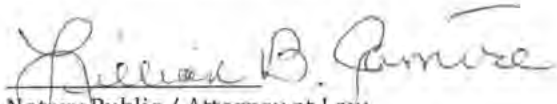
NEW LIFE CHRISTIAN FELLOWSHIP

By: 
Print Name: Justin Sweeney
Its Duly Authorized: President and Lead Pastor
Dated: January 25, 2021

STATE OF MAINE
COUNTY OF YORK, SS

January 25, 2021

Then personally appeared the above-named Justin Sweeney, President and Lead Pastor of NEW LIFE CHRISTIAN FELLOWSHIP and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of NEW LIFE CHRISTIAN FELLOWSHIP.


Notary Public / Attorney at Law
Print name:
My commission expires:

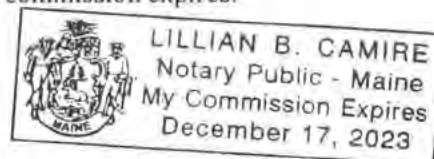


Exhibit D

QUITCLAIM DEED
WITH COVENANT
STATUTORY SHORT FORM
TITLE 33, §775

New Life Christian Fellowship, a Maine religious nonprofit corporation, with a mailing address of 551 Alfred Street, Biddeford, Maine 04005-9474, for consideration paid, grants to _____, a _____, with a mailing address of _____, **with Quitclaim Covenant**, a certain lot or parcel of land situated in the City of Biddeford, County of York, and State of Maine, as described in **Exhibit A** attached hereto and made a part hereof.

DATED: _____, 202__

New Life Christian Fellowship

By: _____

Print Name: Justin Sweeney

Its Duly Authorized: President and Lead Pastor

STATE OF MAINE
COUNTY OF YORK, SS

_____, ___, 202__

Then personally appeared the above-named Justin Sweeney, President and Lead Pastor of NEW LIFE CHRISTIAN FELLOWSHIP and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of NEW LIFE CHRISTIAN FELLOWSHIP.

Notary Public / Attorney at Law

Print name:

My commission expires:

Exhibit A

Two parcels of land, excepting the third parcel conveyed to Old Dogs of Biddeford, LLC with any improvements thereon, in the City of Biddeford, York County, Maine described in the following deeds:

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Excepting the property located at Alfred Street, Biddeford, Maine, conveyed to Old Dogs of Biddeford, LLC

- Warranty Deed dated April 19, 2019, from New Life Christian Fellowship to Old Dogs of Biddeford, LLC recorded at Book 17933, Page 197 in the York County Registry of Deeds

SECOND AMENDMENT TO OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT

THIS SECOND AMENDMENT TO OPTION TO PURCHASE AND PURCHASE AND SALE AGREEMENT (this Amendment”) is made and entered into as of the 14 day of January, 2022, by and between **New Life Christian Fellowship** (“Seller”) and **Devine Capital LLC** (“Buyer”) with respect to that certain Option To Purchase and Purchase and Sale Agreement between Seller and Buyer, with an effective date of January 25, 2021, as amended by that certain Amendment to Option to Purchase and Purchase and Sale Agreement dated May “ ”, 2021 (together, the “Agreement”), relating to property of the Seller located generally at 588 and 590 Alfred Street in Biddeford, Maine.

WHEREAS, Seller and Buyer wish to amend the Agreement as set forth below.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Seller and Buyer hereby agree that the Agreement shall be amended as hereinafter set forth.

A. Section 1.4 of the Agreement is hereby amended to change the monthly amount of the Extension Payments from [REDACTED] to [REDACTED] for the first [REDACTED] monthly Extension Payments (i.e., the monthly Extension Payments in January 2022 through June 2022 shall be [REDACTED] but thereafter shall revert to [REDACTED]).

B. Seller and Buyer hereby ratify and confirm all terms and provisions of the Agreement and agree that, except as amended by this Amendment, all terms and provisions of the Agreement shall remain in full force and effect including.

C. This Second Amendment may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall constitute one and the same instrument. This Second Amendment may be transmitted between the parties by facsimile machine or by email attachment and signatures appearing on faxed or emailed instruments shall be treated as original signatures. Both a faxed or emailed version containing either original, faxed or emailed signatures of all parties, and multiple counterparts of the same version each containing separate original, faxed or emailed signatures of the parties, shall be binding on them.

[Signature Page Follows]

IN WITNESS WHEREOF, Seller and Buyer have executed this Second Amendment as of the date first above written.

SELLER

NEW LIFE CHRISTIAN FELLOWSHIP

DocuSigned by:
B: Justin Sweeney
2507458A9BB5421...
Name: Justin Sweeney
Its Duly Authorized: Lead Pastor

BUYER

DEVINE CAPITAL LLC

By: B. M. Devine, Jr.
Bernard M. Devine, Jr., Manager

SECTION 5

PUBLIC OR PRIVATE RIGHTS-OF-WAY

On the south side of the proposed site, along Alfred Road (Route 111), exists a 10-foot right-of-way (R.O.W.) easement. The Boundary & Existing Conditions Survey plan describes said easement as follows:

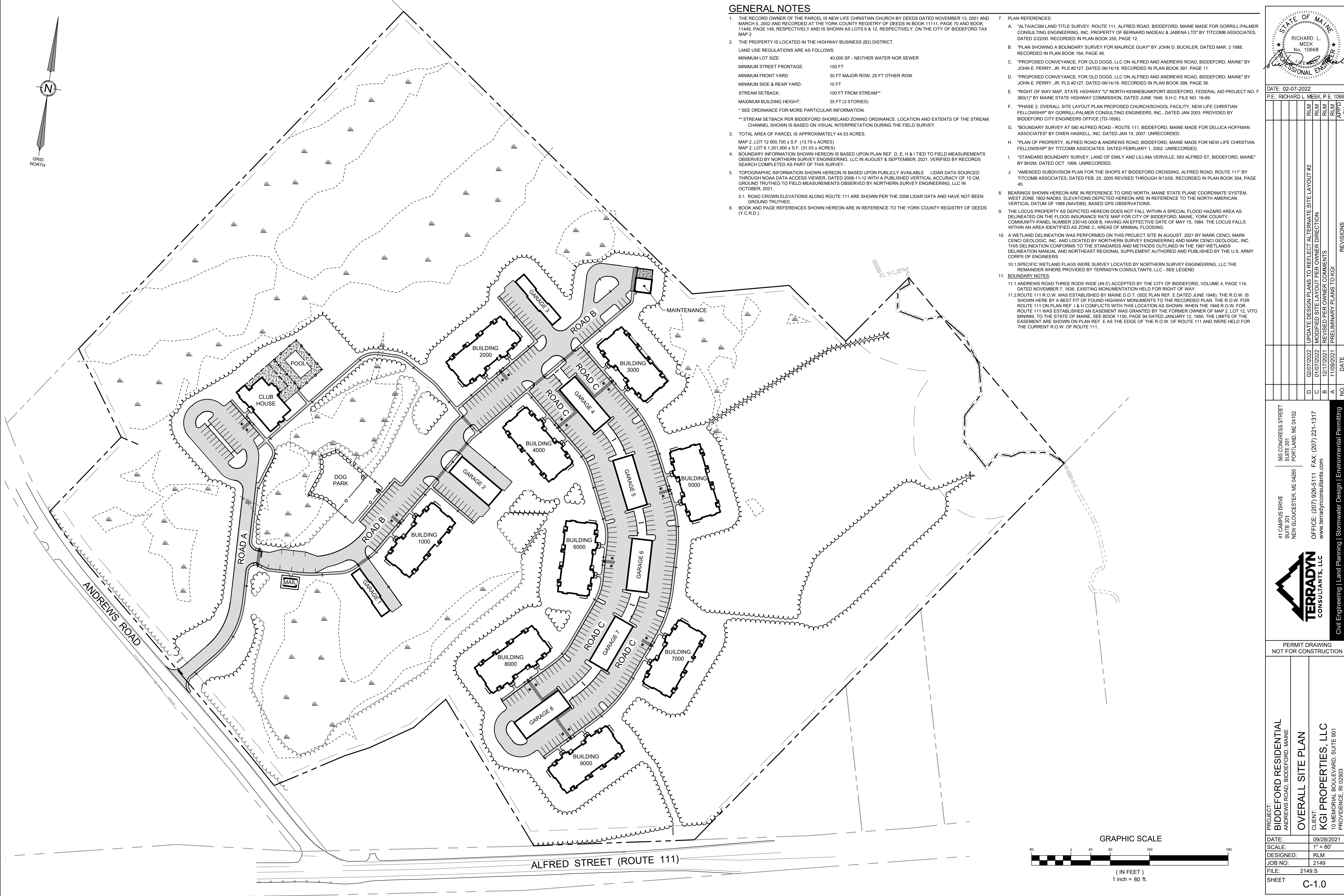
“When the 1948 R.O.W. for Route 111 was established, an easement was granted by the former owner of Map 2, Lot 12, Vito Mininni, to the State of Maine, see Book 1150, page 94 dated January 12, 1950. The limits of the easement are shown on plan Ref. E as the edge of the R.O.W. of Route 111 and were held for the current R.O.W. of Route 111.”

SECTION 6

SCHEDULE

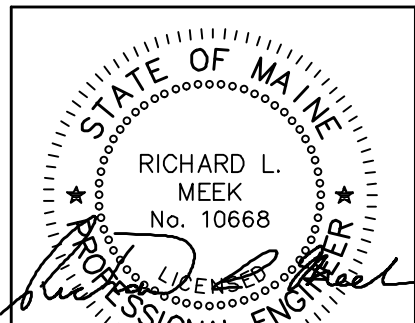
KDK Biddeford, LLC, is anticipating start of construction during the fall of 2022 with a fall 2023 completion.





GENERAL NOTES

- THE RECORD OWNER OF THE PARCEL IS NEW LIFE CHRISTIAN CHURCH BY DEEDS DATED NOVEMBER 13, 2001 AND MARCH 5, 2002 AND RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN BOOK 11111, PAGE 70 AND BOOK 11449, PAGE 148, RESPECTIVELY AND IS SHOWN AS LOTS 6 & 12, RESPECTIVELY, ON THE CITY OF BIDDEFORD TAX MAP 2.
- THE PROPERTY IS LOCATED IN THE HIGHWAY BUSINESS (B2) DISTRICT.
LAND USE REGULATIONS ARE AS FOLLOWS:
MINIMUM LOT SIZE: 40,000 SF - NEITHER WATER NOR SEWER
MINIMUM STREET FRONTAGE: 150 FT
MINIMUM FRONT YARD: 30 FT MAJOR ROW. 25 FT OTHER ROW
MINIMUM SIDE & REAR YARD: 10 FT
STREAM SETBACK: 100 FT FROM STREAM**
MAXIMUM BUILDING HEIGHT: 35 FT (3 STORIES)
* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.
** STREAM SETBACK PER BIDDEFORD SHORELAND ZONING ORDINANCE. LOCATION AND EXTENTS OF THE STREAM CHANNEL SHOWN IS BASED ON VISUAL INTERPRETATION DURING THE FIELD SURVEY.
- TOTAL AREA OF PARCEL IS APPROXIMATELY 44.53 ACRES.
MAP 2, LOT 12 600,700 ± S.F. (13.79 ± ACRES)
MAP 2, LOT 6 1,351,500 ± S.F. (31.03 ± ACRES)
- BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON PLAN REF. D, E, H & I TIED TO FIELD MEASUREMENTS OBSERVED BY NORTHERN SURVEY ENGINEERING, LLC IN AUGUST & SEPTEMBER, 2021. VERIFIED BY RECORDS SEARCH COMPLETED AS PART OF THIS SURVEY.
- TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON PUBLICLY AVAILABLE LIDAR DATA SOURCED THROUGH NOAA DATA ACCESS VIEWER, DATED 2008-11-12 WITH A PUBLISHED VERTICAL ACCURACY OF 15 CM, GROUND TRUTHED TO FIELD MEASUREMENTS OBSERVED BY NORTHERN SURVEY ENGINEERING, LLC IN OCTOBER, 2021.
5.1. ROAD CROWN ELEVATIONS ALONG ROUTE 111 ARE SHOWN PER THE 2008 LIDAR DATA AND HAVE NOT BEEN GROUND TRUTHED.
- BOOK AND PAGE REFERENCES SHOWN HEREON ARE IN REFERENCE TO THE YORK COUNTY REGISTRY OF DEEDS (Y.C.R.D.).
- PLAN REFERENCES:
A. "ALTA/ACSM LAND TITLE SURVEY, ROUTE 111, ALFRED ROAD, BIDDEFORD, MAINE MADE FOR GORRILL-PALMER CONSULTING ENGINEERING, INC. PROPERTY OF BERNARD NADEAU & JABENA LTD" BY TITCOMB ASSOCIATES, DATED 2/22/00. RECORDED IN PLAN BOOK 255, PAGE 12.
B. "PLAN SHOWING A BOUNDARY SURVEY FOR MAURICE GUAY" BY JOHN D. BUCKLER, DATED MAR. 2 1988. RECORDED IN PLAN BOOK 164, PAGE 46.
C. "PROPOSED CONVEYANCE, FOR OLD DOGS, LLC ON ALFRED AND ANDREWS ROAD, BIDDEFORD, MAINE" BY JOHN E. PERRY, JR. PL'S #2127, DATED 06/14/18. RECORDED IN PLAN BOOK 397, PAGE 11.
D. "PROPOSED CONVEYANCE, FOR OLD DOGS, LLC ON ALFRED AND ANDREWS ROAD, BIDDEFORD, MAINE" BY JOHN E. PERRY, JR. PL'S #2127, DATED 06/14/18. RECORDED IN PLAN BOOK 398, PAGE 36.
E. "RIGHT OF WAY MAP, STATE HIGHWAY "U" NORTH KENNEBUNKPORT-BIDDEFORD, FEDERAL AID PROJECT NO. F 360(1)" BY MAINE STATE HIGHWAY COMMISSION, DATED JUNE 1948. S.H.C. FILE NO. 16-69.
F. "PHASE 2, OVERALL SITE LAYOUT PLAN PROPOSED CHURCH/SCHOOL FACILITY, NEW LIFE CHRISTIAN FELLOWSHIP" BY GORRILL-PALMER CONSULTING ENGINEERS, INC., DATED JAN 2003. PROVIDED BY BIDDEFORD CITY ENGINEERS OFFICE (TD-1656).
G. "BOUNDARY SURVEY AT 580 ALFRED ROAD - ROUTE 111, BIDDEFORD, MAINE MADE FOR DELUCA HOFFMAN ASSOCIATES" BY OWEN HASKELL, INC. DATED JAN 15, 2007. UNRECORDED.
H. "PLAN OF PROPERTY, ALFRED ROAD & ANDREWS ROAD, BIDDEFORD, MAINE MADE FOR NEW LIFE CHRISTIAN FELLOWSHIP" BY TITCOMB ASSOCIATES. DATED FEBRUARY 1, 2002. UNRECORDED.
I. "STANDARD BOUNDARY SURVEY, LAND OF EMILY AND LILLINA VERVILLE, 583 ALFRED ST, BIDDEFORD, MAINE" BY BH2M, DATED OCT. 1999. UNRECORDED.
J. "AMENDED SUBDIVISION PLAN FOR THE SHOPS AT BIDDEFORD CROSSING, ALFRED ROAD, ROUTE 111" BY TITCOMB ASSOCIATES, DATED FEB. 25, 2005 REVISED THROUGH 9/13/05. RECORDED IN PLAN BOOK 304, PAGE 45.
8. BEARINGS SHOWN HEREON ARE IN REFERENCE TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83. ELEVATIONS DEPICTED HEREON ARE IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED GPS OBSERVATIONS.
9. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR CITY OF BIDDEFORD, MAINE, YORK COUNTY, COMMUNITY-PANEL NUMBER 230145 0008 B, HAVING AN EFFECTIVE DATE OF MAY 15, 1984. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF MINIMAL FLOODING.
10. A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE IN AUGUST, 2021 BY MARK CENCI, MARK CENCI GEOLOGIC, INC. AND LOCATED BY NORTHERN SURVEY ENGINEERING AND MARK CENCI GEOLOGIC, INC. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 WETLANDS DELINEATION MANUAL AND NORTHEAST REGIONAL SUPPLEMENT AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS.
10.1 SPECIFIC WETLAND FLAGS WERE SURVEY LOCATED BY NORTHERN SURVEY ENGINEERING, LLC THE REMAINDER WHERE PROVIDED BY TERRADYN CONSULTANTS, LLC - SEE LEGEND.
11. BOUNDARY NOTES:
11.1 ANDREWS ROAD-THREE RODS WIDE (49.5') ACCEPTED BY THE CITY OF BIDDEFORD, VOLUME 4, PAGE 114, DATED NOVEMBER 7, 1836. EXISTING MONUMENTATION HELD FOR RIGHT OF WAY.
11.2 ROUTE 111 R.O.W. WAS ESTABLISHED BY MAINE D.O.T. (SEE PLAN REF. E DATED JUNE 1948). THE R.O.W. IS SHOWN HERE BY A BEST FIT OF FOUND HIGHWAY MONUMENTS TO THE RECORDED PLAN. THE R.O.W. FOR ROUTE 111 ON PLAN REF. J & H CONFLICTS WITH THIS LOCATION AS SHOWN. WHEN THE 1948 R.O.W. FOR ROUTE 111 WAS ESTABLISHED AN EASEMENT WAS GRANTED BY THE FORMER OWNER OF MAP 2, LOT 12, VITO MININNI, TO THE STATE OF MAINE. SEE BOOK 1150, PAGE 94 DATED JANUARY 12, 1950. THE LIMITS OF THE EASEMENT ARE SHOWN ON PLAN REF. E AS THE EDGE OF THE R.O.W. OF ROUTE 111 AND WERE HELD FOR THE CURRENT R.O.W. OF ROUTE 111.



DATE: 02-07-2022

P.E.: RICHARD L. MEEK, P.E. 10668

REVISED PER OWNER COMMENTS	REVISIONS	DATE	NO.
11/09/2021	PRELIMINARY PLANS TO KGI		A
12/17/2021	REVISED PER OWNER COMMENTS		B
01/07/2022	MODIFIED SITE LAYOUT PER OWNER DIRECTION		C
02/07/2022	UPDATE DESIGN PLANS TO REFLECT ALTERNATE SITE LAYOUT #2		D

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradync consultants.com



PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: BIDDEFORD RESIDENTIAL ANDREWS ROAD, BIDDEFORD, MAINE	OVERALL SITE PLAN
CLIENT: KGI PROPERTIES, LLC 10 MEMORIAL BOULEVARD, SUITE 901 PROVIDENCE, RI 02903	
DATE:	09/28/2021
SCALE:	1" = 80'
DESIGNED:	RLM
JOB NO.:	2149
FILE:	2149.S
SHEET	C-1.0

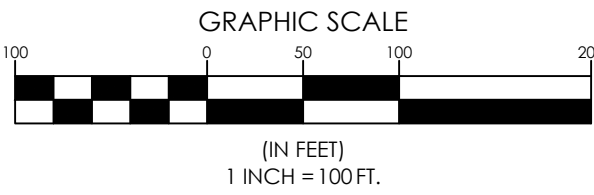
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

SURVEYORS CERTIFICATION:

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

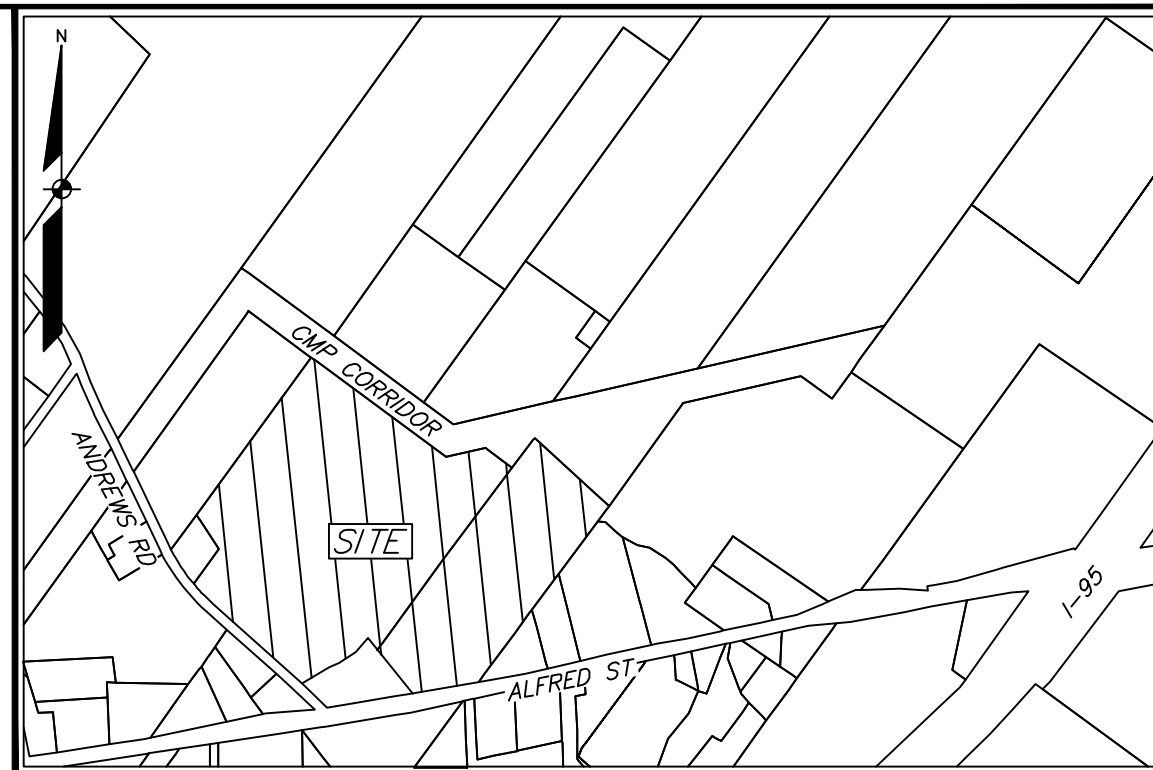
Tara Mullen
TARA M. MULLEN, MAINE PLS 2575

10/29/21
DATE



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- RECORD DEED LINE
- RECORD PLAN LINE
- TIE LINE
- EDGE PAVEMENT
- EDGE GRAVEL
- GUARD RAIL
- OHU OVERHEAD UTILITY
- CURB LINE
- SETBACK
- STREAM
- EDGE WETLAND SURVEY LOCATED
- EDGE WETLAND PER TERRADYN CONSULTANTS
- CONTOURS
- SPOT GRADE
- RIPRAP
- CATCH BASIN
- A.G. ABOVE GRADE
- B.G. BELOW GRADE
- MONUMENT FOUND
- IRON PIPE/ROD FOUND
- UTILITY POLE
- GUY WIRE



LOCATION MAP

N.T.S.

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 - MINIMUM FRONT YARD: 30 FT MAJOR ROW, 25 FT OTHER ROW
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- ROAD CROWN ELEVATIONS ALONG ROUTE 111 ARE SHOWN PER THE 2008 LIDAR DATA AND HAVE NOT BEEN GROUND TRUTHED.
- BOOK AND PAGE REFERENCES SHOWN HEREON ARE IN REFERENCE TO THE YORK COUNTY REGISTRY OF DEEDS (Y.C.R.D.).
- PLAN REFERENCES:
 - "ALTA/ACSM LAND TITLE SURVEY, ROUTE 111, ALFRED ROAD, BIDDEFORD, MAINE MADE FOR GORRILL-PALMER CONSULTING ENGINEERING, INC. PROPERTY OF BERNARD NADEAU & JABENA LTD" BY TITCOMB ASSOCIATES, DATED 2/22/00. RECORDED IN PLAN BOOK 255, PAGE 12.
 - "PLAN SHOWING A BOUNDARY SURVEY FOR MAURICE GUAY" BY JOHN D. BUCKLER, DATED MAR. 2 1988. RECORDED IN PLAN BOOK 164, PAGE 46.
 - "PROPOSED CONVEYANCE, FOR OLD DOGS, LLC ON ALFRED AND ANDREWS ROAD, BIDDEFORD, MAINE" BY JOHN E. PERRY, JR. PLS #2127, DATED 06/14/18. RECORDED IN PLAN BOOK 397, PAGE 11.
 - "PROPOSED CONVEYANCE, FOR OLD DOGS, LLC ON ALFRED AND ANDREWS ROAD, BIDDEFORD, MAINE" BY JOHN E. PERRY, JR. PLS #2127, DATED 06/14/18. RECORDED IN PLAN BOOK 398, PAGE 36.
 - "RIGHT OF WAY MAP, STATE HIGHWAY "U" NORTH KENNEBUNKPORT-BIDDEFORD, FEDERAL AID PROJECT NO. F 360(1)" BY MAINE STATE HIGHWAY COMMISSION, DATED JUNE 1948. S.H.C. FILE NO. 16-69.
 - "PHASE 2, OVERALL SITE LAYOUT PLAN PROPOSED CHURCH/SCHOOL FACILITY, NEW LIFE CHRISTIAN FELLOWSHIP" BY GORRILL-PALMER CONSULTING ENGINEERS, INC., DATED JAN 2003. PROVIDED BY BIDDEFORD CITY ENGINEERS OFFICE (TD-1656).
 - "BOUNDARY SURVEY AT 580 ALFRED ROAD - ROUTE 111, BIDDEFORD, MAINE MADE FOR DELUCA HOFFMAN ASSOCIATES" BY OWEN HASKELL, INC. DATED JAN 15, 2007. UNRECORDED.
 - "PLAN OF PROPERTY, ALFRED ROAD & ANDREWS ROAD, BIDDEFORD, MAINE MADE FOR NEW LIFE CHRISTIAN FELLOWSHIP" BY TITCOMB ASSOCIATES, DATED FEBRUARY 1, 2002. UNRECORDED.
 - "STANDARD BOUNDARY SURVEY, LAND OF EMILY AND LILLIAN VERVILLE, 583 ALFRED ST, BIDDEFORD, MAINE" BY BH2M, DATED OCT. 1999. UNRECORDED.
 - "AMENDED SUBDIVISION PLAN FOR THE SHOPS AT BIDDEFORD CROSSING, ALFRED ROAD, ROUTE 111" BY TITCOMB ASSOCIATES, DATED FEB. 25, 2005 REVISED THROUGH 9/13/05. RECORDED IN PLAN BOOK 304, PAGE 45.
- BEARINGS SHOWN HEREON ARE IN REFERENCE TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83. ELEVATIONS DEPICTED HEREON ARE IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED GPS OBSERVATIONS.
- THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR CITY OF BIDDEFORD, MAINE, YORK COUNTY, COMMUNITY-PANEL NUMBER 230145 0008 B, HAVING AN EFFECTIVE DATE OF MAY 15, 1984. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF MINIMAL FLOODING.
- A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE IN AUGUST, 2021 BY MARK CENCI, MARK CENCI GEOLOGIC, INC. AND LOCATED BY NORTHERN SURVEY ENGINEERING AND MARK CENCI GEOLOGIC, INC. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 WETLANDS DELINEATION MANUAL AND NORTHEAST REGIONAL SUPPLEMENT AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS.
- SPECIFIC WETLAND FLAGS WERE SURVEY LOCATED BY NORTHERN SURVEY ENGINEERING, LLC THE REMAINDER WHERE PROVIDED BY TERRADYN CONSULTANTS, LLC - SEE LEGEND.
- BOUNDARY NOTES:
 - ANDREWS ROAD-THREE RODS WIDE (49.5') ACCEPTED BY THE CITY OF BIDDEFORD, VOLUME 4, PAGE 114, DATED NOVEMBER 7, 1836. EXISTING MONUMENTATION HELD FOR RIGHT OF WAY.
 - ROUTE 111 R.O.W. WAS ESTABLISHED BY MAINE D.O.T. (SEE PLAN REF. E DATED JUNE 1948). THE R.O.W. IS SHOWN HERE BY A BEST FIT OF FOUND HIGHWAY MONUMENTS TO THE RECORDED PLAN. THE R.O.W. FOR ROUTE 111 ON PLAN REF. I & H CONFLICTS WITH THIS LOCATION AS SHOWN. WHEN THE 1948 R.O.W. FOR ROUTE 111 WAS ESTABLISHED AN EASEMENT WAS GRANTED BY THE FORMER OWNER OF MAP 2, LOT 12, VITO MINNINI, TO THE STATE OF MAINE. SEE BOOK 1150, PAGE 94 DATED JANUARY 12, 1950. THE LIMITS OF THE EASEMENT ARE SHOWN ON PLAN REF. E AS THE EDGE OF THE R.O.W. OF ROUTE 111 AND WERE HELD FOR THE CURRENT R.O.W. OF ROUTE 111.

BOUNDARY & EXISTING CONDITIONS SURVEY
OF:
LAND OF NEW LIFE CHRISTIAN FELLOWSHIP
588 ALFRED ST & 590 ALFRED ST
BIDDEFORD, MAINE 04005

FOR:
TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 101
NEW GLOSTER, ME 04260

DRAWN	CHECKED
TMM	DJH
PROJECT NO.	DATE
21107	10/29/21
SHEET SIZE	SCALE
24" X 36"	1" = 100'

SHEET 1 OF 1



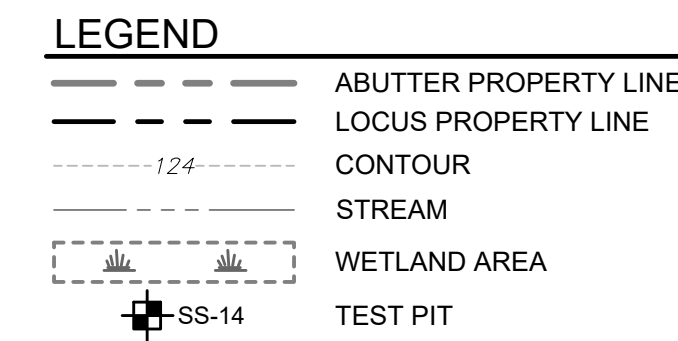
207.440.3487
41 CHURCH ROAD, BIDDEFORD, MAINE 04001
www.northernsurveyengineering.com

RECORD OWNER:
NEW LIFE CHRISTIAN FELLOWSHIP
551 ALFRED ST, BIDDEFORD, ME 04005
Bk 111110, Pg 70 & Bk 11449, Pg 148

FOR:
TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 101
NEW GLOSTER, ME 04260

DRAWN	CHECKED
TMM	DJH
PROJECT NO.	DATE
21107	10/29/21
SHEET SIZE	SCALE
24" X 36"	1" = 100'

SHEET 1 OF 1



1. DRAINAGE CLASS:

EWD	EXCESSIVELY WELL DRAINED
WD	WELL DRAINED
MWD	MODERATELY WELL DRAINED
SPD	SOMEWHAT POORLY DRAINED
PD	POORLY DRAINED
VPD	VERY POORLY DRAINED

2. SLOPE DESIGNATION:
- | | |
|---|--------|
| A | 0-3% |
| B | 3-8% |
| C | 8-15% |
| D | 15-25% |
| E | > 25% |

3. THIS HIGH INTENSITY SOIL SURVEY HAS BEEN PREPARED BY MARK HAMPTON ASSOCIATES, INC., IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS AND THE MAINE BOARD OF CERTIFICATION OF GEOLOGISTS AND SOIL SCIENTISTS.



The accompanying soil profile descriptions, soil map, and this soil narrative report were done in accordance with the standards adopted by the Maine Association of Professional Soil Scientists, and the Maine Board of Certification of Geologists and Soil Scientists.


C.S.S. #216, L.S.E. #263
9/24/21
 Mark J. Hampton Date

[illegible]

1. THE RECORD OWNER OF THE PARCEL IS NEW LIFE CHRISTIAN CHURCH BY DEEDS DATED NOVEMBER 13, 2001 AND MARCH 5, 2002 AND RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN BOOK 11111, PAGE 70 AND BOOK 11443, PAGE 148, RESPECTIVELY AND IS SHOWN AS LOTS 8 & 12, RESPECTIVELY, ON THE CITY OF BIDEFORD TAX MAP 2.
2. THE PROPERTY IS LOCATED IN THE HIGHWAY BUSINESS (B2) DISTRICT.
LAND USE REGULATIONS ARE AS FOLLOWS:

MINIMUM LOT SIZE:	40,000 SF - NEITHER WATER NOR SEWER
MINIMUM STREET FRONTAGE:	150 FT
MINIMUM FRONT YARD:	30 FT MAJOR ROW. 25 FT OTHER ROW
MINIMUM SIDE & REAR YARD:	10 FT
STREAM SETBACK:	100 FT FROM STREAM**
MAXIMUM BUILDING HEIGHT:	35 FT (3 STORIES)

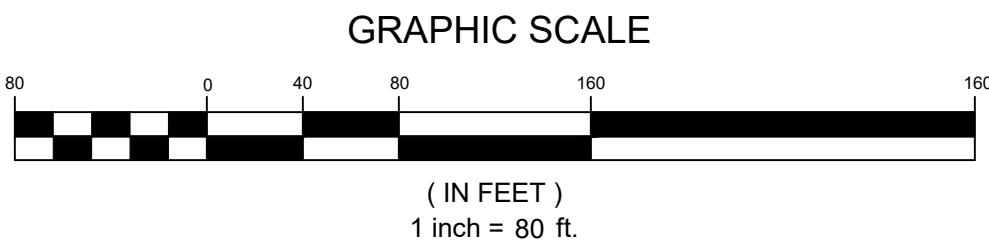
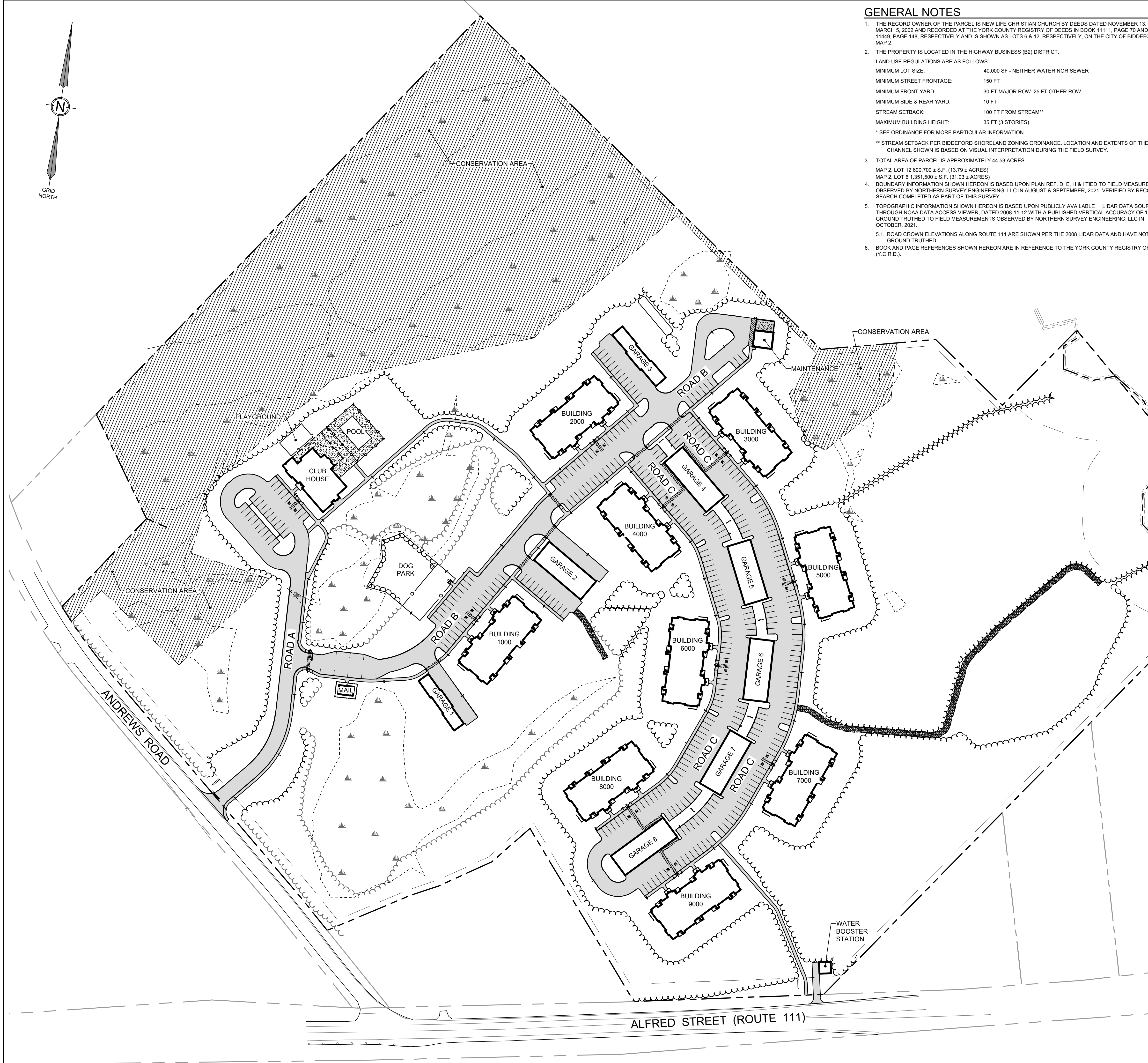
* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

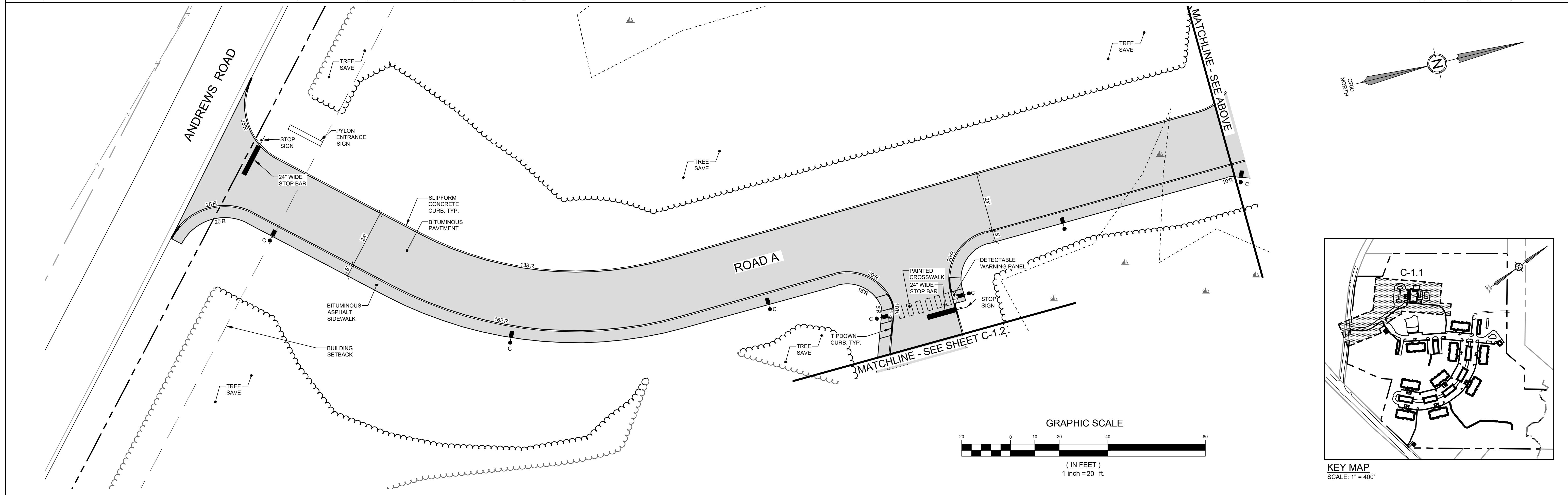
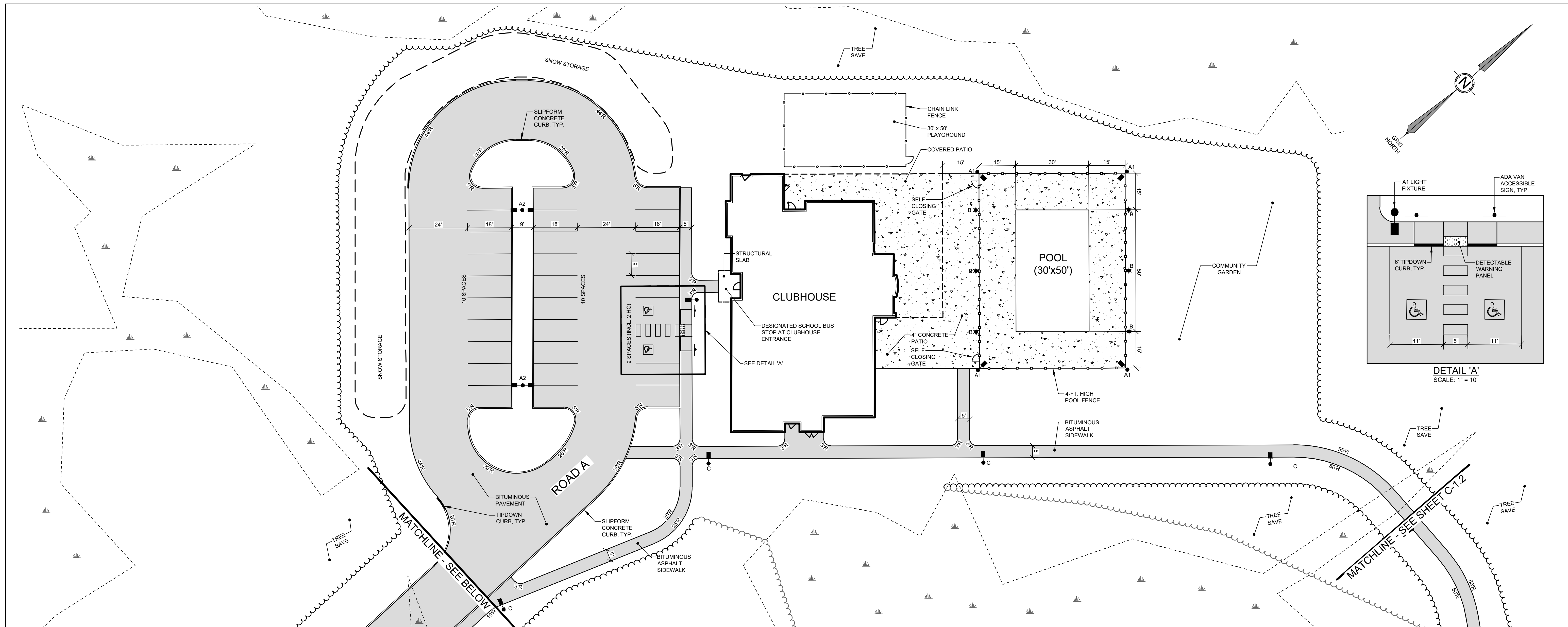
** STREAM SETBACK PER BIDEFORD SHORELAND ZONING ORDINANCE. LOCATION AND EXTENTS OF THE STREAM CHANNEL SHOWN IS BASED ON VISUAL INTERPRETATION DURING THE FIELD SURVEY.
3. TOTAL AREA OF PARCEL IS APPROXIMATELY 44.53 ACRES.

MAP 2, LOT 12 600,700 ± S.F. (13.79 ± ACRES)
MAP 2, LOT 6 1,351,500 ± S.F. (31.03 ± ACRES)
4. BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON PLAN REF. D, E, H & I TIED TO FIELD MEASUREMENTS OBTAINED BY NORTHERN SURVEYING ENGINEERING, LLC IN AUGUST & SEPTEMBER, 2021. VERIFIED BY RECORDS SEARCH COMPLETED AS PART OF THIS SURVEY.
5. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON PUBLICLY AVAILABLE LIDAR DATA SOURCED THROUGH NOAA DATA ACCESS VIEWER, DATED 2008-11-12 WITH A PUBLISHED VERTICAL ACCURACY OF 15 CM. GROUND TRUTHED TO FIELD MEASUREMENTS OBSERVED BY NORTHERN SURVEYING ENGINEERING, LLC IN OCTOBER, 2021.
 - 5.1. ROAD CROWN ELEVATIONS ALONG ROUTE 111 ARE SHOWN PER THE 2008 LIDAR DATA AND HAVE NOT BEEN GROUND TRUTHED.
6. BOOK AND PAGE REFERENCES SHOWN HEREON ARE IN REFERENCE TO THE YORK COUNTY REGISTRY OF DEEDS (Y.C.R.D.).

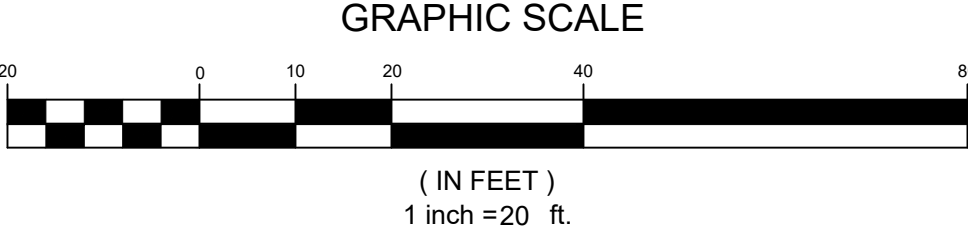
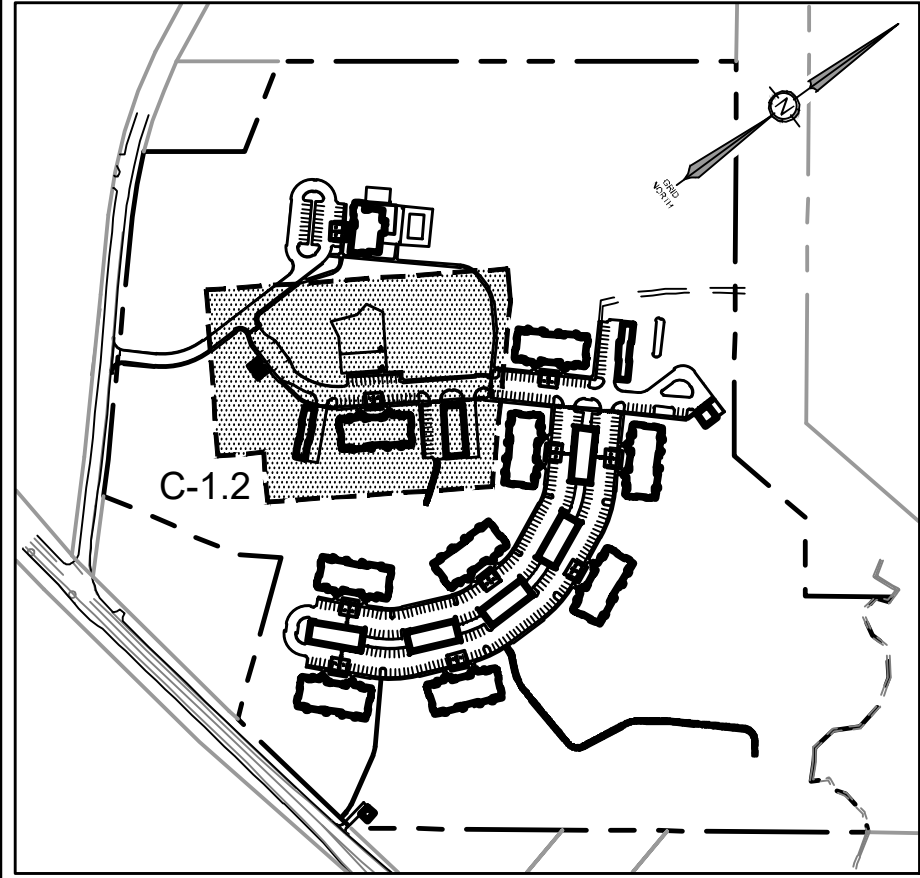
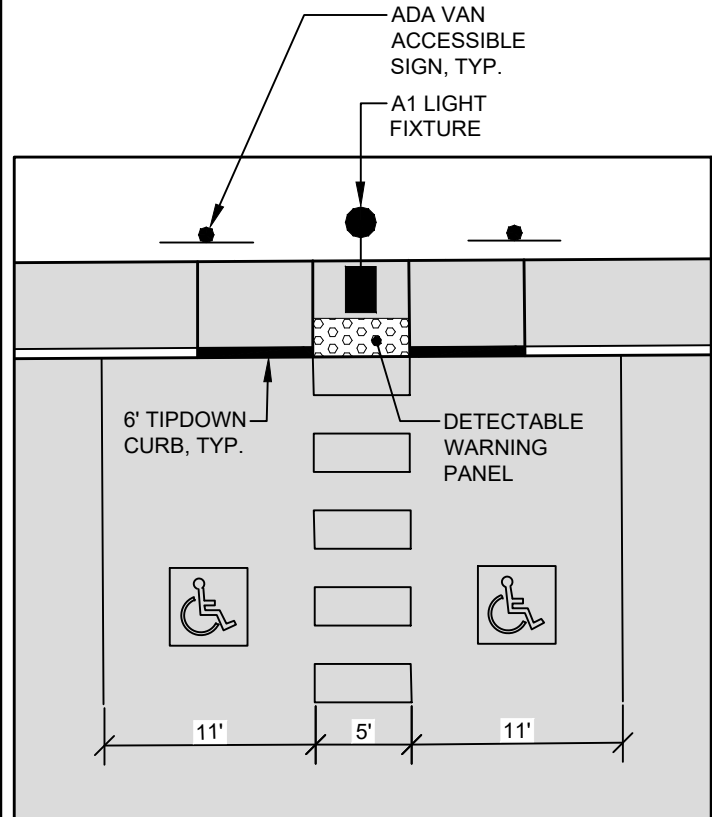
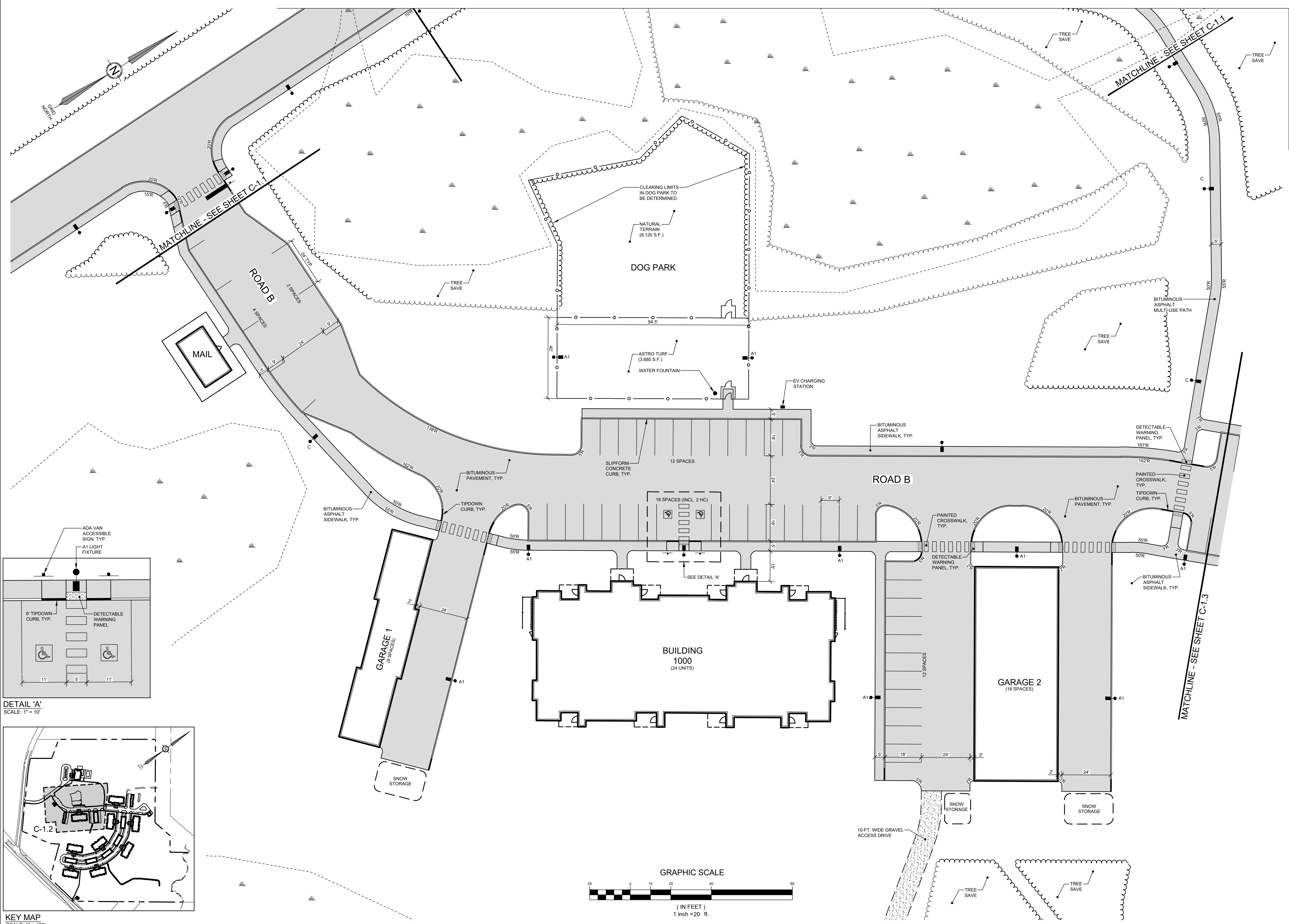
- A. "ALTA/CASM LAND TITLE SURVEY, ROUTE 111, ALFRED ROAD, BIDEFORD, MAINE MADE FOR GORRILL-PALMER CONSULTING ENGINEERING, INC. PROPERTY OF BERNARD NADEAU & JABENA LIT" BY TITCOMB ASSOCIATES, DATED 2/22/00. RECORDED IN PLAN BOOK 255, PAGE 12.
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- E. "RIGHT OF WAY MAP, STATE HIGHWAY "N" NORTH KENNEBUNKPORT-BIDEFORD, FEDERAL AID PROJECT NO. 360(1)" BY MAINE STATE HIGHWAY COMMISSION, DATED JUNE 1948. S.H.C. FILE NO. 16-69.
- F. "PHASE 2. OVERALL SITE LAYOUT PLAN PROPOSED CHURCHSCHOOL FACILITY, NEW LIFE CHRISTIAN FELLOWSHIP" BY GORRILL-PALMER CONSULTING ENGINEERS, INC., DATED JAN 2003. PROVIDED BY BIDEFORD CITY ENGINEERS OFFICE (TD-1656).
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- H. "PLAN OF PROPERTY, ALFRED ROAD & ANDREWS ROAD, BIDEFORD, MAINE MADE FOR NEW LIFE CHRISTIAN FELLOWSHIP" BY TITCOMB ASSOCIATES, DATED FEBRUARY 1, 2002. UNRECORDED.
- I. "STANDARD BOUNDARY SURVEY, LAND OF EMILY AND LILLIAN VERVILLE, 583 ALFRED ST., BIDEFORD, MAINE" BY BHMZ, DATED OCT. 1999. UNRECORDED.
- J. "AMENDED SUBDIVISION PLAN FOR THE SHOPS AT BIDEFORD CROSSING, ALFRED ROAD, ROUTE 111" BY TITCOMB ASSOCIATES, DATED FEB. 25, 2005 REVISID THROUGH 9/13/05. RECORDED IN PLAN BOOK 304, PAGE 45.
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10. A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE IN AUGUST, 2021 BY MARK CENCI, MARK CENCI GEOLOGIC, INC. AND LOCATED BY NORTHERN SURVEY ENGINEERING AND MARK CENCI GEOLOGIC, INC. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 WETLANDS DELINEATION MANUAL, AND NORTHEAST REGIONAL SUPPLEMENT AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS.
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11. BOUNDARY NOTES:
 - 11.1. ANDREWS ROAD-THREE RODS WIDE (49.5') ACCEPTED BY THE CITY OF BIDEFORD, VOLUME 4, PAGE 114, DATED NOVEMBER 1, 1836. EXISTING MONUMENTATION HELD FOR RIGHT OF WAY.
 - 11.2. ROUTE 111 R.O.W. WAS ESTABLISHED BY MAINE D.O.T. (SEE PLAN REF. E DATED JUNE 1948). THE R.O.W. IS SHOWN HERE BY A DOTTED LINE. THERE ARE SEVERAL FLOODING MONUMENTS TO THE RECORDED PLAN, THE R.O.W. FOR ROUTE 111 ON PLAN REF. 1 & H CONFLICTS WITH THIS LOCATION AS SHOWN. WHEN THE 1948 R.O.W. FOR ROUTE 111 WAS ESTABLISHED AN EASEMENT WAS GRANTED BY THE FORMER OWNER OF MAP 2, LOT 12, VIT MINNITL. TO THE STATE OF MAINE. (SEE BOOK 1150, PAGE 94 DATED JANUARY 12, 1950. THE LIMITS OF THE EASEMENT ARE SHOWN ON PLAN REF. G AS THE EDGE OF THE R.O.W. OF ROUTE 111 AND WERE HELD FOR THE CURRENT R.O.W. OF ROUTE 111.

MINIMUM REQUIRED:	
[216] DWELLING UNITS x 2 SPACES PER DWELLING UNIT	= 432 SPACES
PROPOSED:	
STANDARD SURFACE SPACES NEAR RESIDENTIAL BUILDINGS	= 315 SPACES
A.D.A. SURFACE SPACES NEAR RESIDENTIAL BUILDINGS	= 18 SPACES
GARAGE SPACES	= 121 SPACES
A.D.A. GARAGE SPACES	= 5 SPACES
STANDARD SURFACE SPACES NEAR CLUBHOUSE	= 27 SPACES
A.D.A. SURFACE SPACES NEAR CLUBHOUSE	= 2 SPACES
STANDARD SURFACE SPACES NEAR MAINTENANCE BUILDING	= 3 SPACES
PARALLEL SURFACE SPACES NEAR MAIL KIOSK	= 5 SPACES
TOTAL PROPOSED PARKING	= 491 SPACES





PROJECT: BIDDEFORD RESIDENTIAL SHEET: SITE PLAN - 1 CLIENT: DEVINE CAPITAL, LLC		41 CAMPUS DRIVE SUITE 301 NEW GLOUCESTER, ME 04260 565 CONGRESS STREET SUITE 201 PORTLAND, ME 04102 OFFICE: (207) 926-5111 FAX: (207) 221-1317 www.terradynconsultants.com		 Civil Engineering Land Planning Stormwater Design Environmental Permitting	
DATE: 09-13-2022		DATE: 09-13-2022		DATE: 09-13-2022	
SCALE: 1" = 20'		SCALE: 1" = 20'		SCALE: 1" = 20'	
DESIGNED: RLM		DESIGNED: RLM		DESIGNED: RLM	
JOB NO: 2149		JOB NO: 2149		JOB NO: 2149	
FILE: 2149.S		FILE: 2149.S		FILE: 2149.S	
SHEET		SHEET		SHEET	



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102
OFFICE: (207) 928-5111 FAX: (207) 221-1317
www.terradynconsultants.com

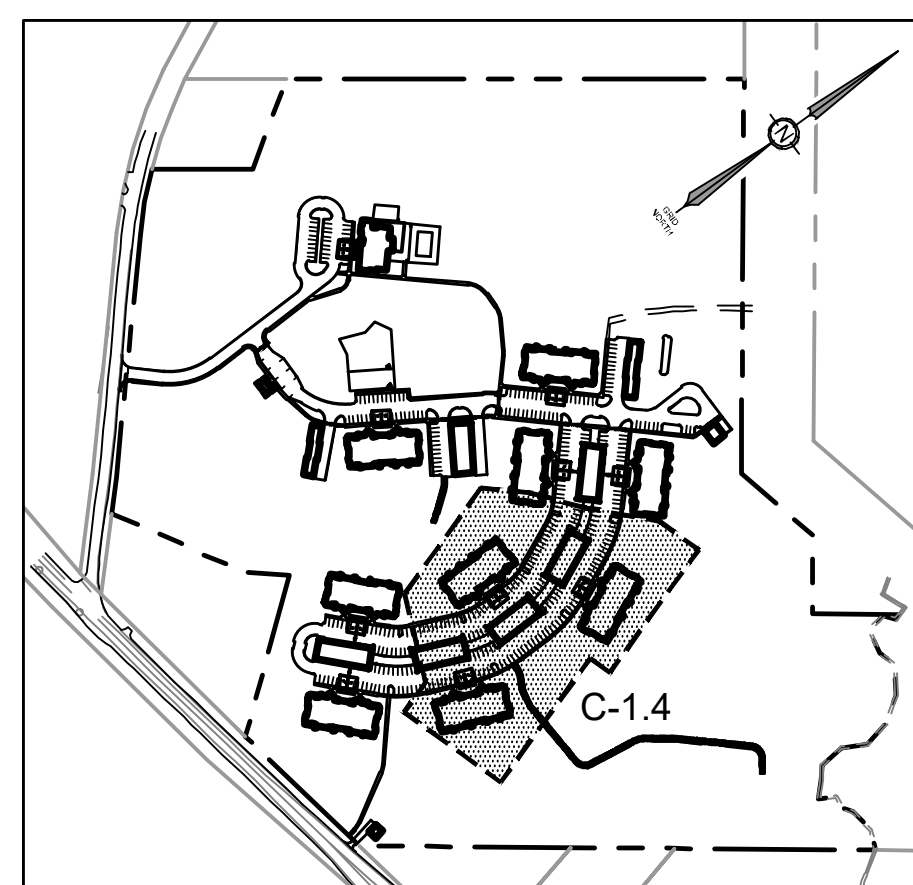


PERMIT DRAWING
NOT FOR CONSTRUCTION

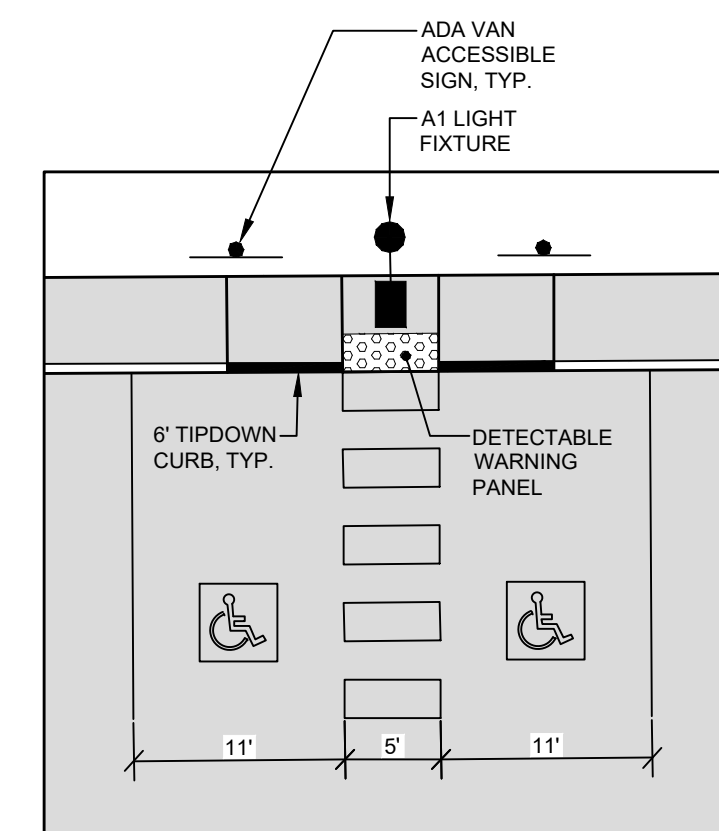
PROJECT: BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE
SHEET: SITE PLAN - 2
CLIENT: DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

DATE: 09-13-2022
SCALE: 1" = 20'
DESIGNED: RLM
JOB NO: 2149
FILE: 2149.S
SHEET: C-1.2

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

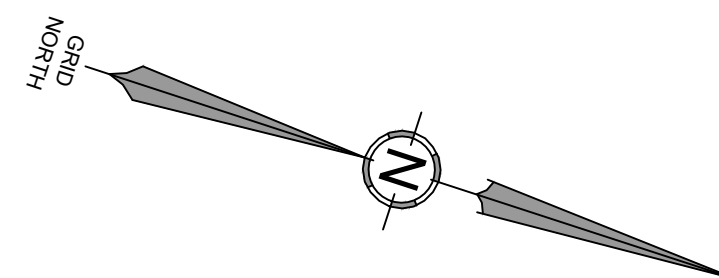


KEY MAP
SCALE: 1" = 400'



DETAIL 'A'

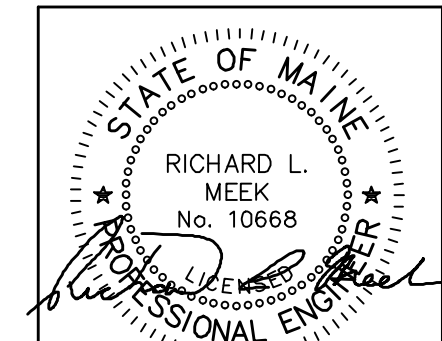
SCALE: 1" = 10'



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



DATE:	09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668	

[illegible]

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyvnconsultants.com

OFFICE: (207) 926-5111 FAX: (207) 926-5112
www.terraenv.com
www.terraenvconsultants.com



Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

SHEET:
SITE PLAN - 4

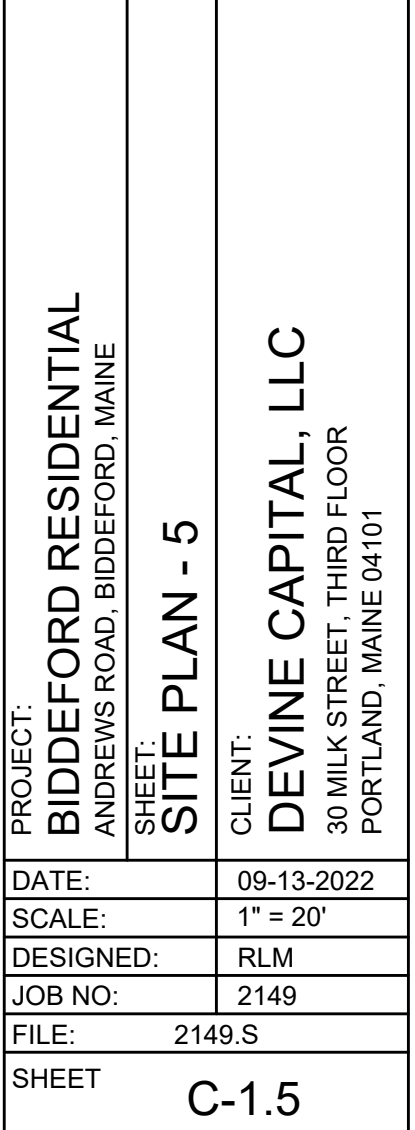
CLIENT:
DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

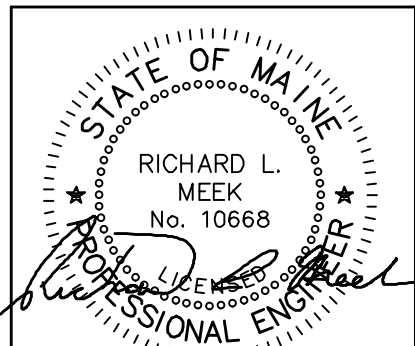
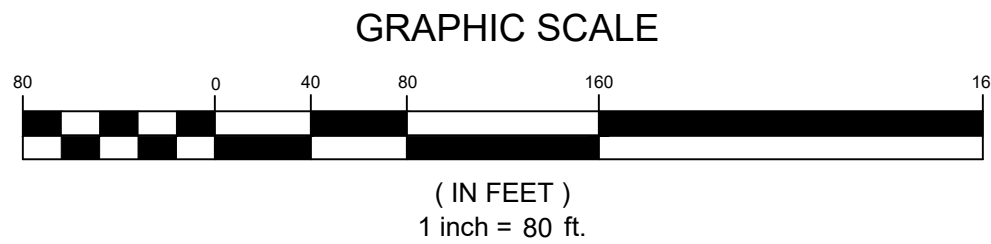
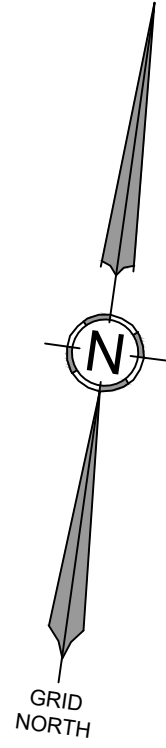
DATE:	09-13-2022
SCALE:	1" = 20'

SCALE:	1 = 20
DESIGNED:	RLM
DATE:	3-15

JOB NO:	2149
FILE:	2149.S

SHEET C-1.4





DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

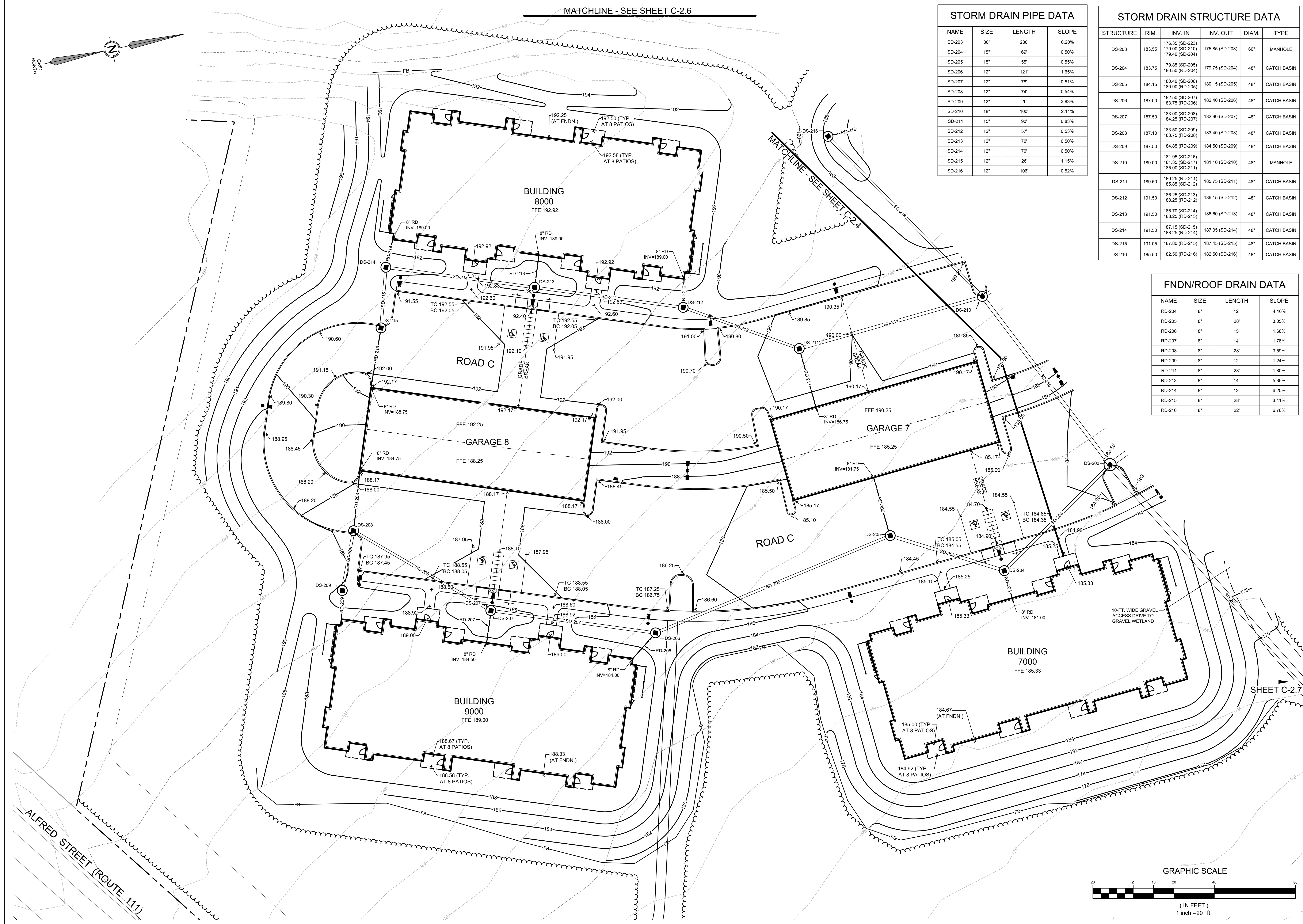
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com



Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: BIDDEFORD RESIDENTIAL ANDREWS ROAD, BIDDEFORD, MAINE	CLIENT: DEVINE CAPITAL, LLC 30 MILK STREET, THIRD FLOOR PORTLAND, MAINE 04101
SHEET: OVERALL GRADING AND DRAINAGE PLAN	
DATE: 09-13-2022	DESIGNED: RLM
SCALE: 1" = 80'	JOB NO.: 2149
FILE: 2148.GD	SHEET C-2.0

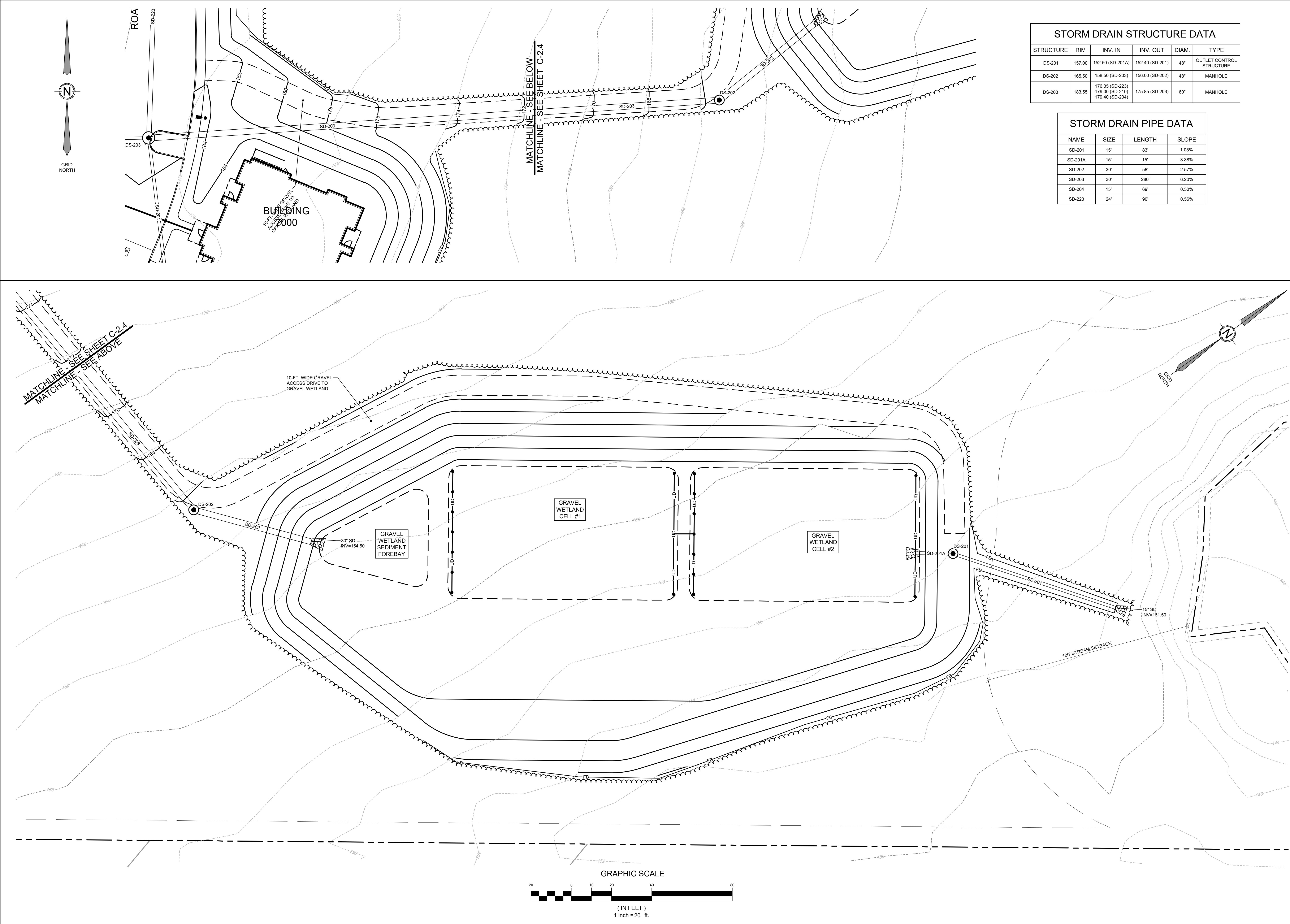


NAME	SIZE	LENGTH	SLOPE
SD-203	30"	280'	6.20%
SD-204	15"	69'	0.50%
SD-205	15"	55'	0.55%
SD-206	12"	121'	1.65%
SD-207	12"	78'	0.51%
SD-208	12"	74'	0.54%
SD-209	12"	26'	3.83%
SD-210	18"	100'	2.11%
SD-211	15"	90'	0.83%
SD-212	12"	57'	0.53%
SD-213	12"	70'	0.50%
SD-214	12"	70'	0.50%
SD-215	12"	26'	1.15%
SD-216	12"	106'	0.52%

STORM DRAIN STRUCTURE DATA						
STRUCTURE	RIM	INV. IN	INV. OUT	DIAM.	TYPE	
DS-203	183.55	176.35 (SD-223) 179.00 (SD-210) 179.40 (SD-204)	175.85 (SD-203)	60"	MANHOLE	
DS-204	183.75	179.85 (SD-205) 180.50 (RD-204)	179.75 (SD-204)	48"	CATCH BASIN	
DS-205	184.15	180.40 (SD-206) 180.90 (RD-205)	180.15 (SD-205)	48"	CATCH BASIN	
DS-206	187.00	182.50 (SD-207) 183.75 (RD-206)	182.40 (SD-206)	48"	CATCH BASIN	
DS-207	187.50	183.00 (SD-208) 184.25 (RD-207)	182.90 (SD-207)	48"	CATCH BASIN	
DS-208	187.10	183.50 (SD-209) 183.75 (RD-208)	183.40 (SD-208)	48"	CATCH BASIN	
DS-209	187.50	184.85 (RD-209)	184.50 (SD-209)	48"	CATCH BASIN	
DS-210	189.00	181.95 (SD-216) 181.35 (SD-217) 185.00 (SD-211)	181.10 (SD-210)	48"	MANHOLE	
DS-211	189.50	186.25 (RD-211) 185.85 (SD-212)	185.75 (SD-211)	48"	CATCH BASIN	
DS-212	191.50	186.25 (SD-213) 188.25 (RD-212)	186.15 (SD-212)	48"	CATCH BASIN	
DS-213	191.50	186.70 (SD-214) 188.25 (RD-213)	186.60 (SD-213)	48"	CATCH BASIN	
DS-214	191.50	187.15 (SD-215) 188.25 (RD-214)	187.05 (SD-214)	48"	CATCH BASIN	
DS-215	191.05	187.85 (RD-215)	187.45 (SD-215)	48"	CATCH BASIN	
DS-216	185.50	182.50 (RD-216)	182.50 (SD-216)	48"	CATCH BASIN	

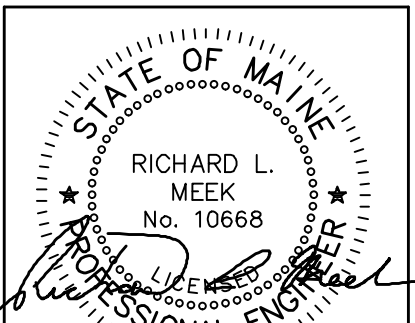
FNDN/ROOF DRAIN DATA			
NAME	SIZE	LENGTH	SLOPE
RD-204	8"	12"	4.16%
RD-205	8"	28"	3.05%
RD-206	8"	15'	1.68%
RD-207	8"	14'	1.78%
RD-208	8"	28"	3.59%
RD-209	8"	12"	1.24%
RD-211	8"	28"	1.80%
RD-213	8"	14'	5.35%
RD-214	8"	12"	6.20%
RD-215	8"	28"	3.41%
RD-216	8"	22"	6.76%

[illegible]



STORM DRAIN STRUCTURE DATA					
STRUCTURE	RIM	INV. IN	INV. OUT	DIAM.	TYPE
DS-201	157.00	152.50 (SD-201A)	152.40 (SD-201)	48"	OUTLET CONTROL STRUCTURE
DS-202	165.50	158.50 (SD-203)	156.00 (SD-202)	48"	MANHOLE
DS-203	183.55	176.35 (SD-223) 175.00 (SD-210) 179.40 (SD-204)	175.85 (SD-203)	60"	MANHOLE

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-201	15"	83'	1.08%
SD-201A	15"	15'	3.38%
SD-202	30"	58'	2.57%
SD-203	30"	280'	6.20%
SD-204	15"	69'	0.50%
SD-223	24"	90'	0.56%

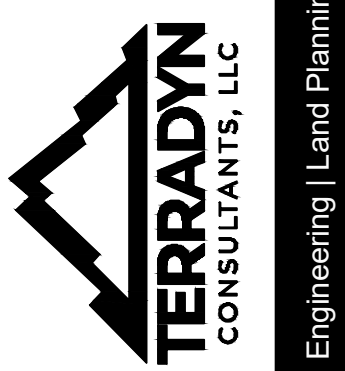


DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS	BY	APP'D	RLM
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY			
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.			

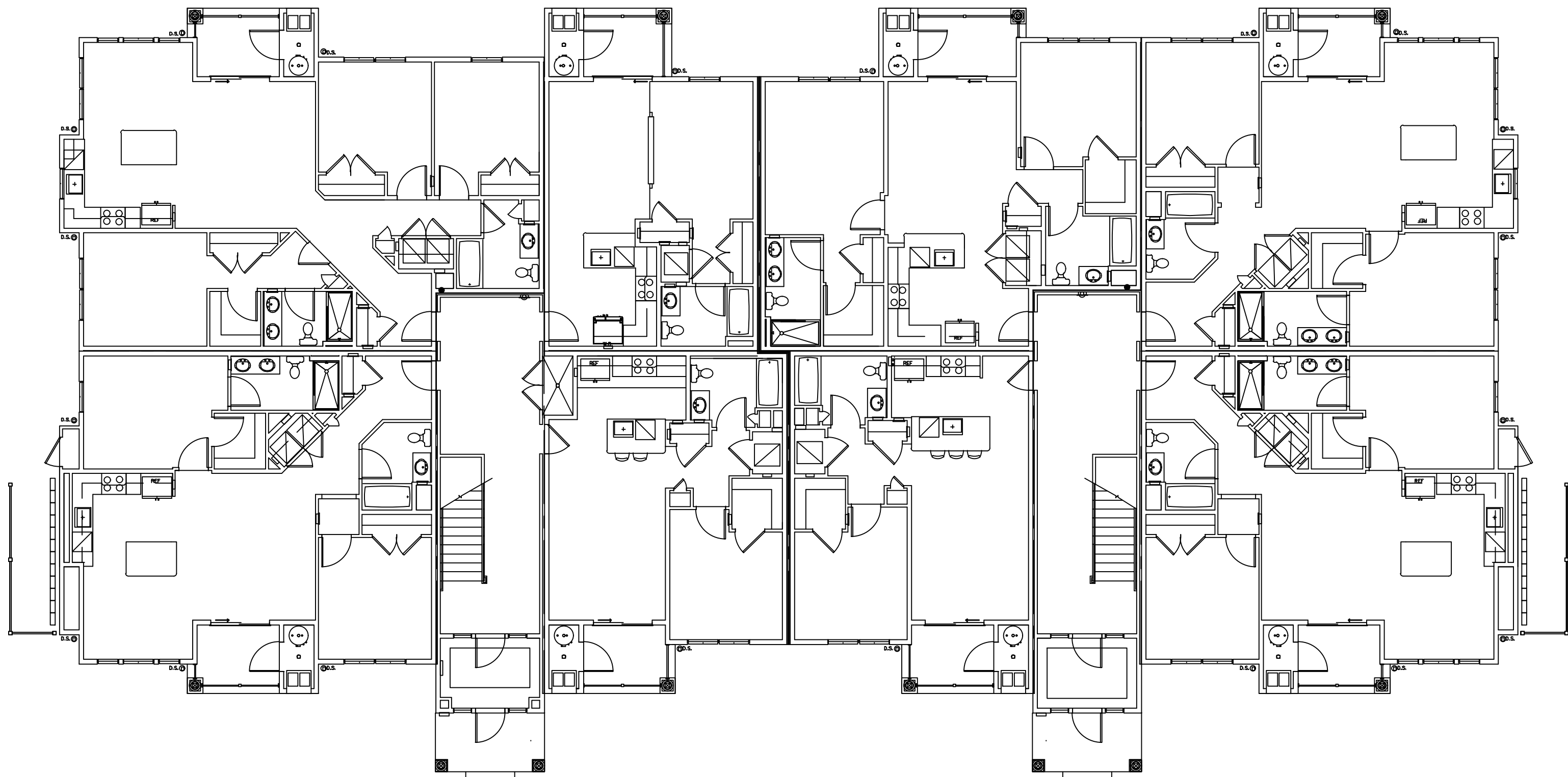
41 CAMPUS DRIVE
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565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102



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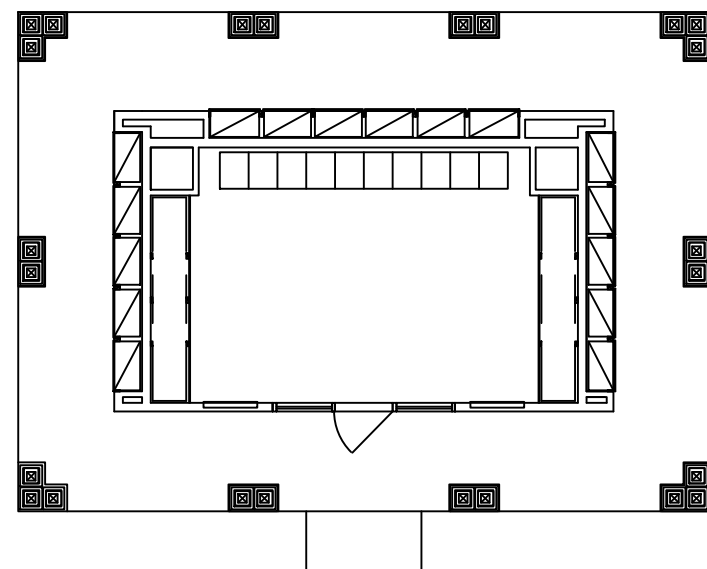
PROJECT: BIDDEFORD RESIDENTIAL ANDREWS ROAD, BIDDEFORD, MAINE		SHEET: GRADING AND DRAINAGE PLAN - 7		CLIENT: DEVINE CAPITAL, LLC 30 MILK STREET, THIRD FLOOR PORTLAND, MAINE 04101	
DATE:	09-13-2022	SCALE:	1" = 20'	DESIGNED:	RLM
JOB NO.:	2149	FILE:	2148.GD	SHEET	C-2.7



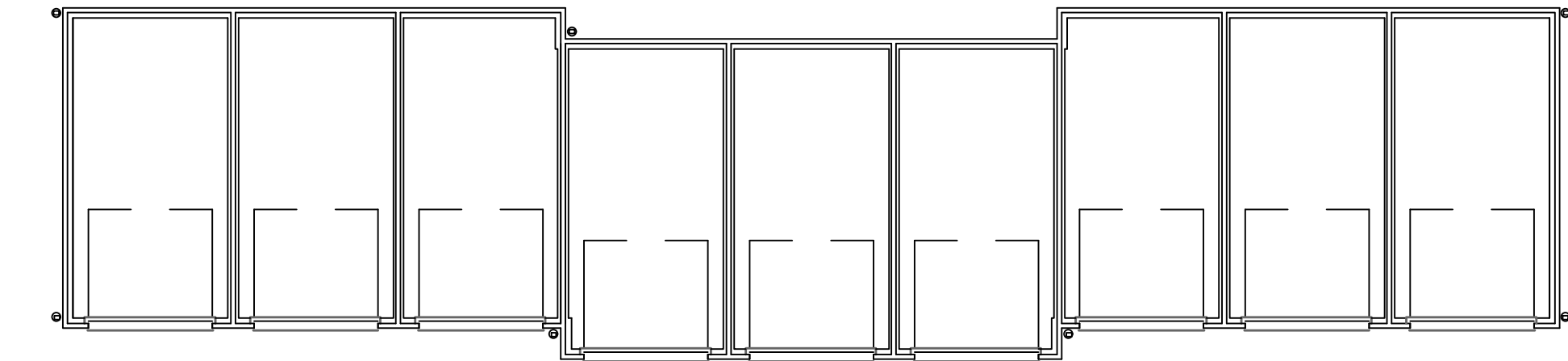
BUILDINGS 1000 - 9000
SCALE: 1" = 10'



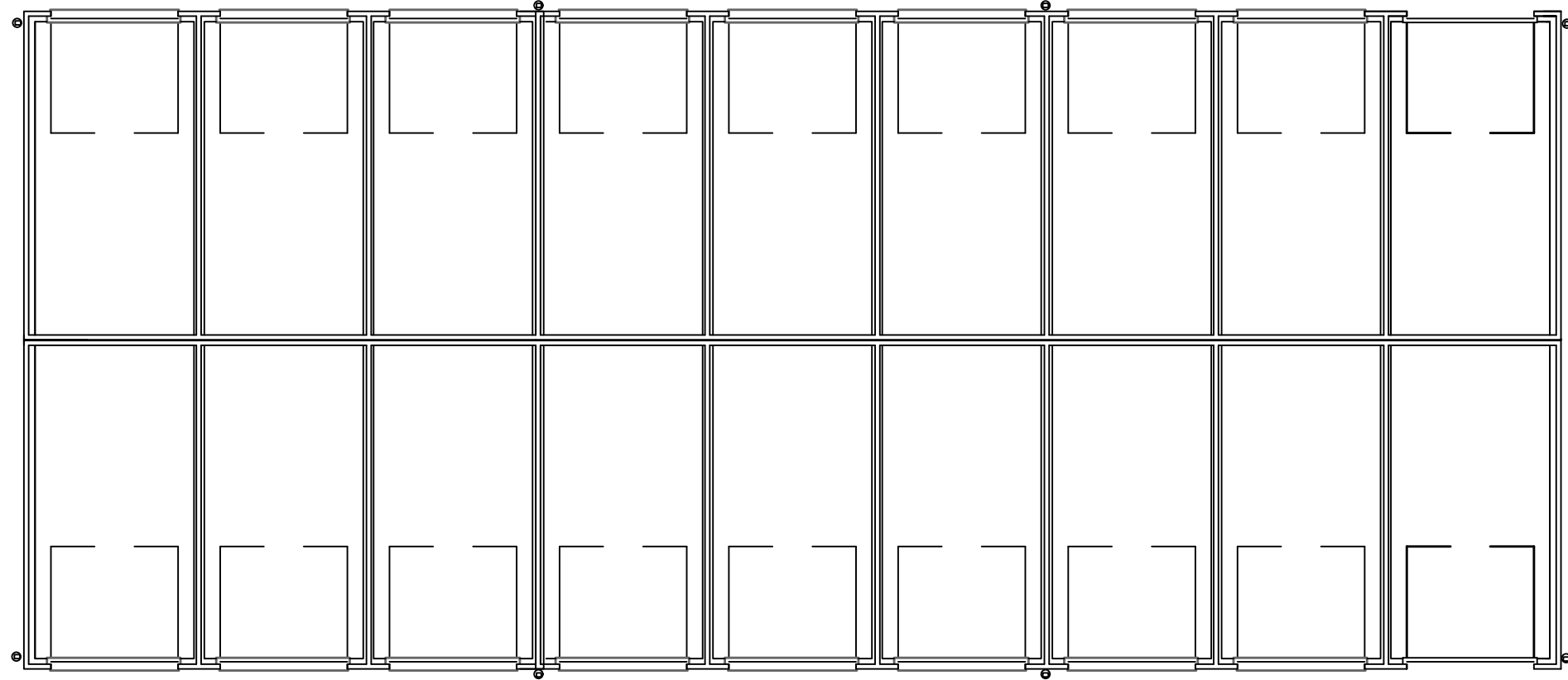
CLUBHOUSE
SCALE: 1" = 10'



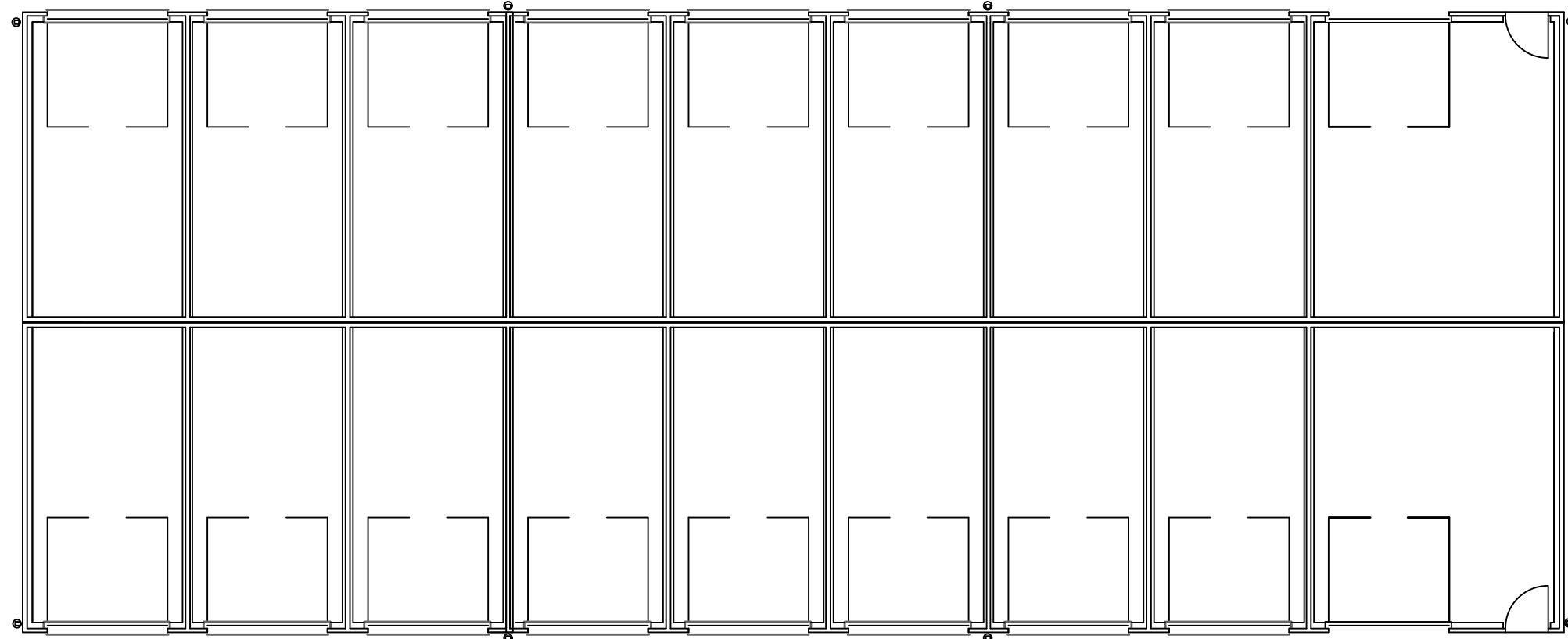
MAIL BUILDING
SCALE: 1" = 10'



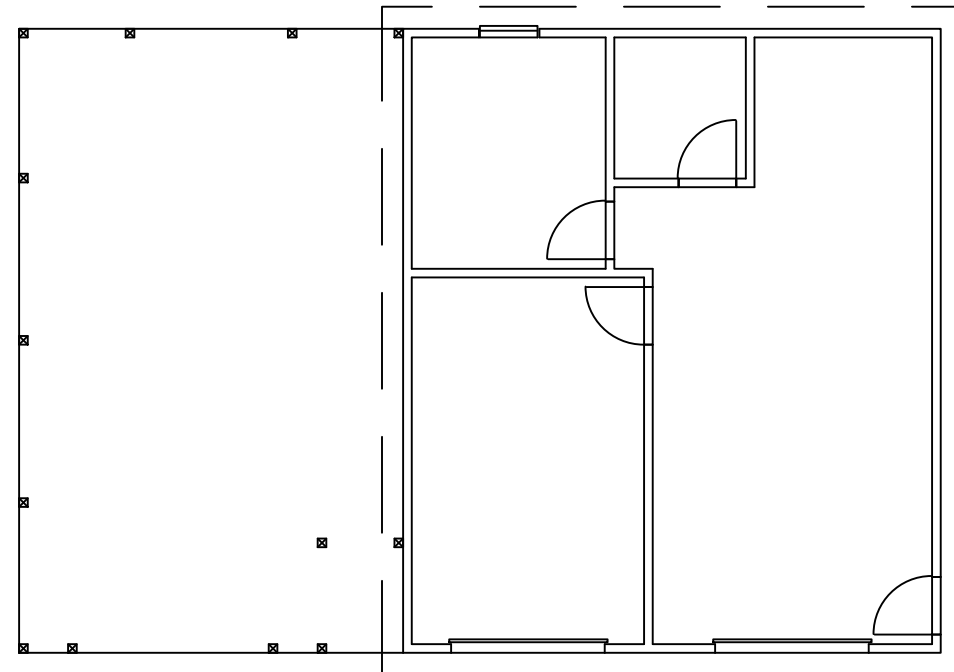
GARAGES 1 & 3
SCALE: 1" = 10'



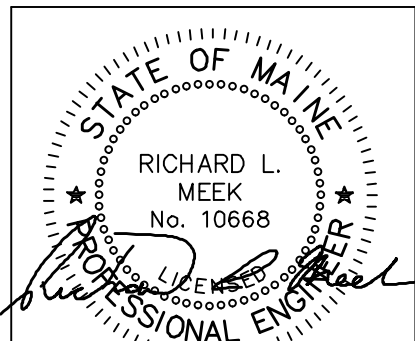
GARAGES 2 & 5 - 7
SCALE: 1" = 10'



GARAGES 4 & 8
SCALE: 1" = 10'



MAINTENANCE BUILDING
SCALE: 1" = 10'



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

OFFICE: (207) 926-5111 FAX: (207) 221-1317
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PROJECT: BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

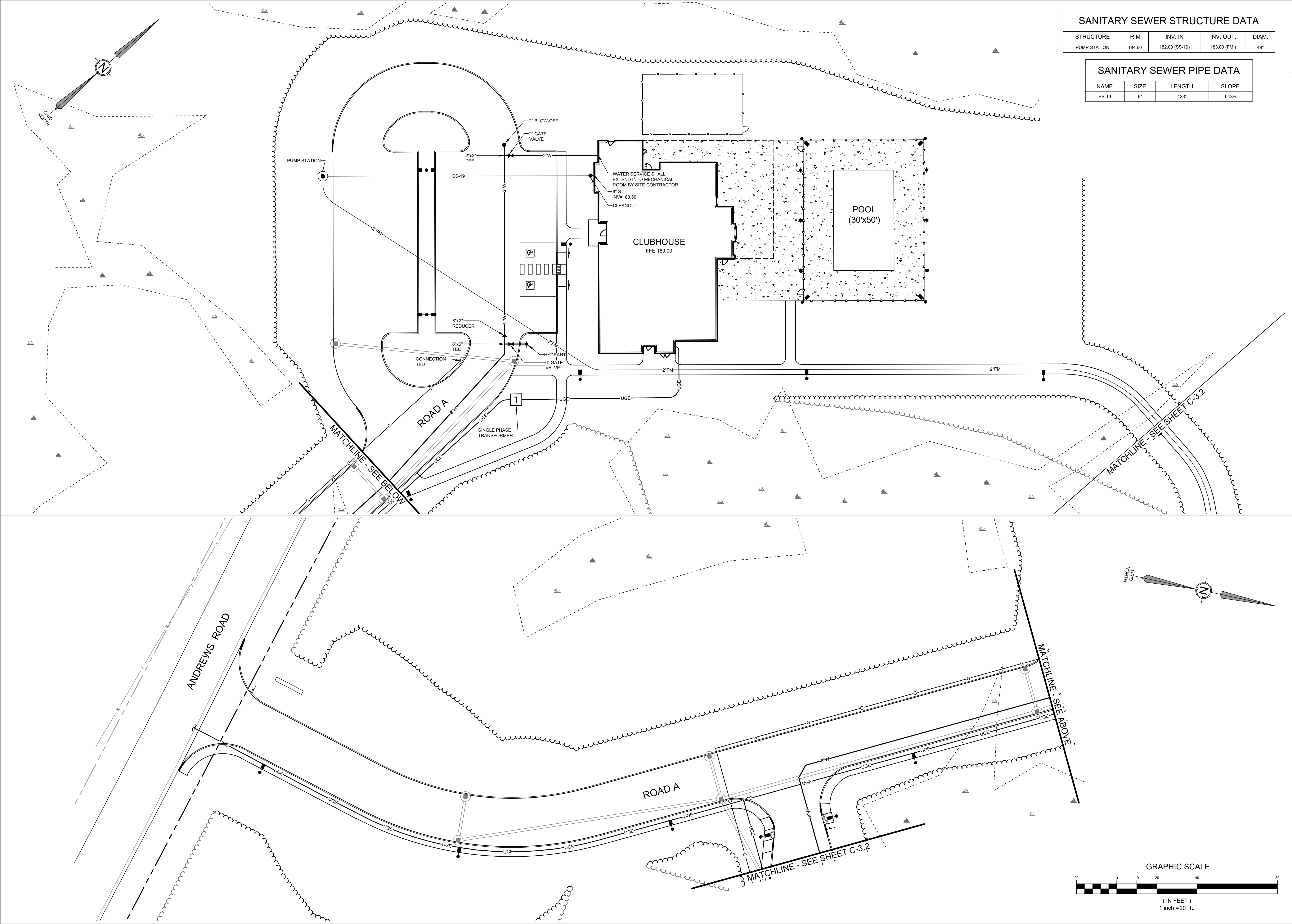
SHEET: ROOF DRAIN LAYOUT PLAN

CLIENT: DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

DATE: 09-13-2022
SCALE: 1" = 10'
DESIGNED: RLM
JOB NO: 2149
FILE: 2149.RD
SHEET

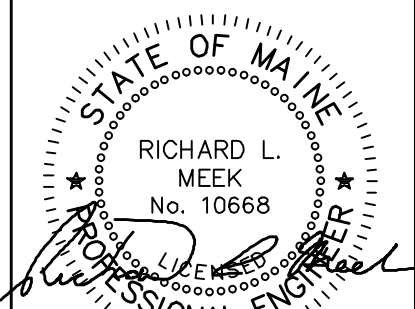
C-2.8





SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT	DIAM.
PUMP STATION	184.60	182.00 (SS-19)	183.00 (FM)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SS-19	6"	133'	1.13%



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS	BY	APP'D
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY	RLM	
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.	H	
3			NO	

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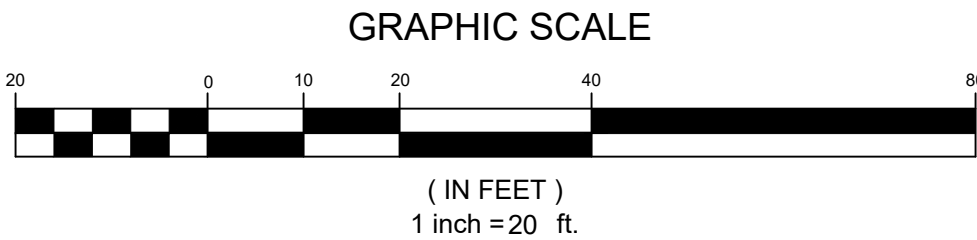


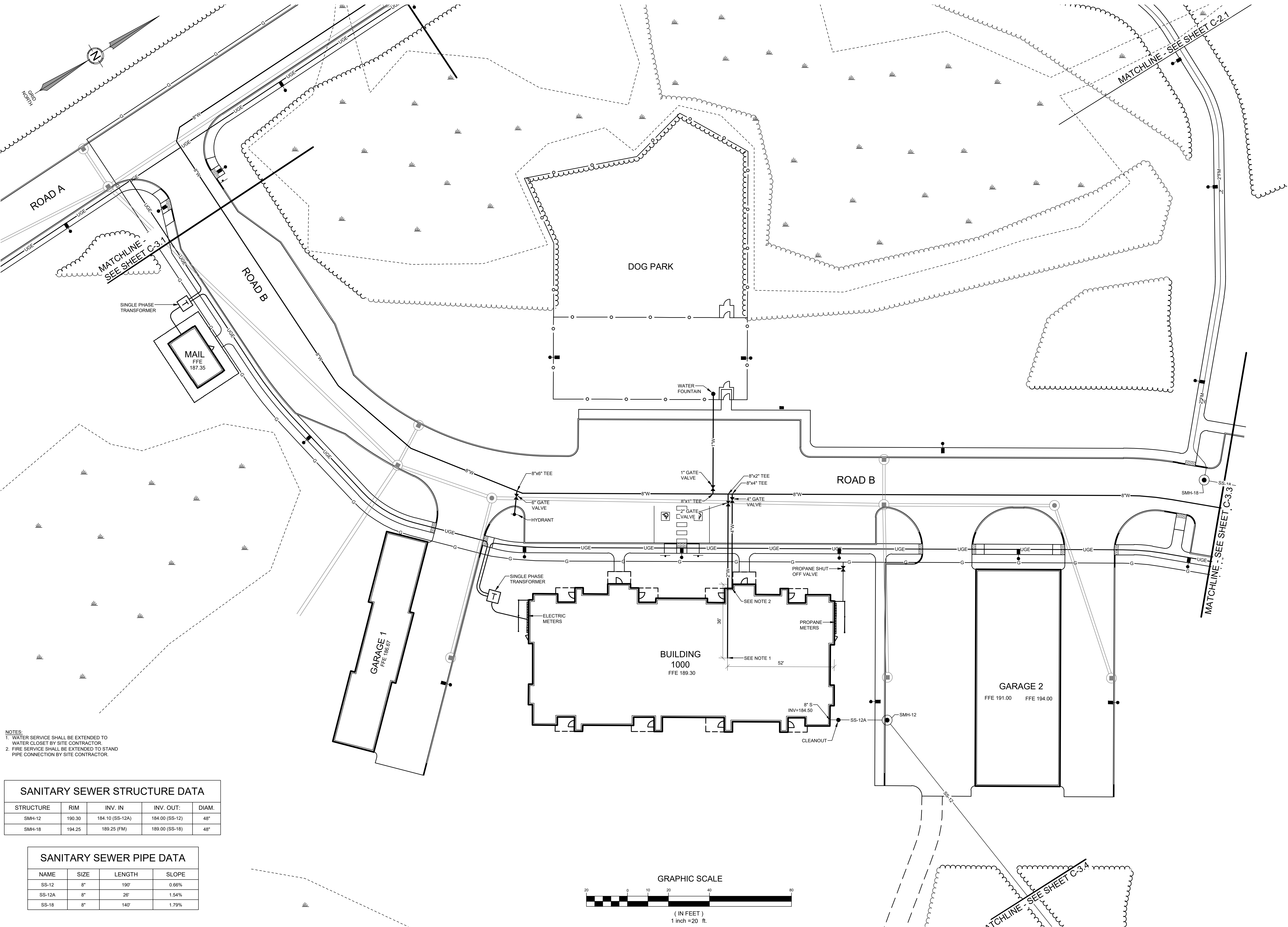
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NOT FOR CONSTRUCTION

PROJECT: BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE
SHEET: UTILITY PLAN - 1
CLIENT: DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

DATE: 09-13-2022
SCALE: 1" = 20'
DESIGNED: RLM
JOB NO: 2149
FILE: 2149.U
SHEET: C-3.1

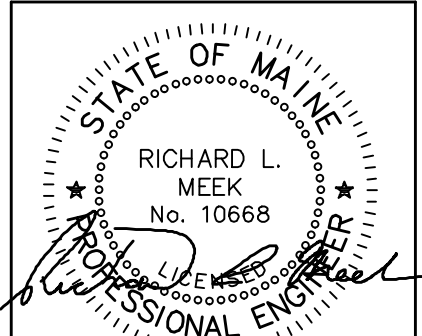
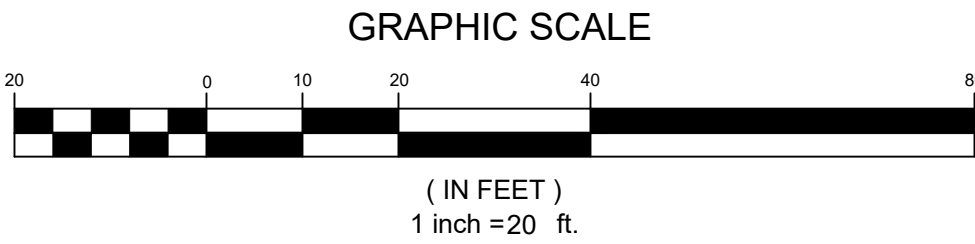




- NOTES:
1. WATER SERVICE SHALL BE EXTENDED TO WATER CLOSET BY SITE CONTRACTOR.
 2. FIRE SERVICE SHALL BE EXTENDED TO STAND PIPE CONNECTION BY SITE CONTRACTOR.

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-12	190.30	184.10 (SS-12A)	184.00 (SS-12)	48"
SMH-18	194.25	189.25 (FM)	189.00 (SS-18)	48"

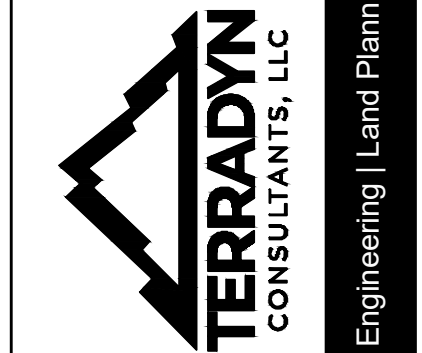
SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SS-12	8"	190'	0.66%
SS-12A	8"	26'	1.54%
SS-18	8"	140'	1.79%



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS	BY	APP'D	R/LM
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY			
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.			

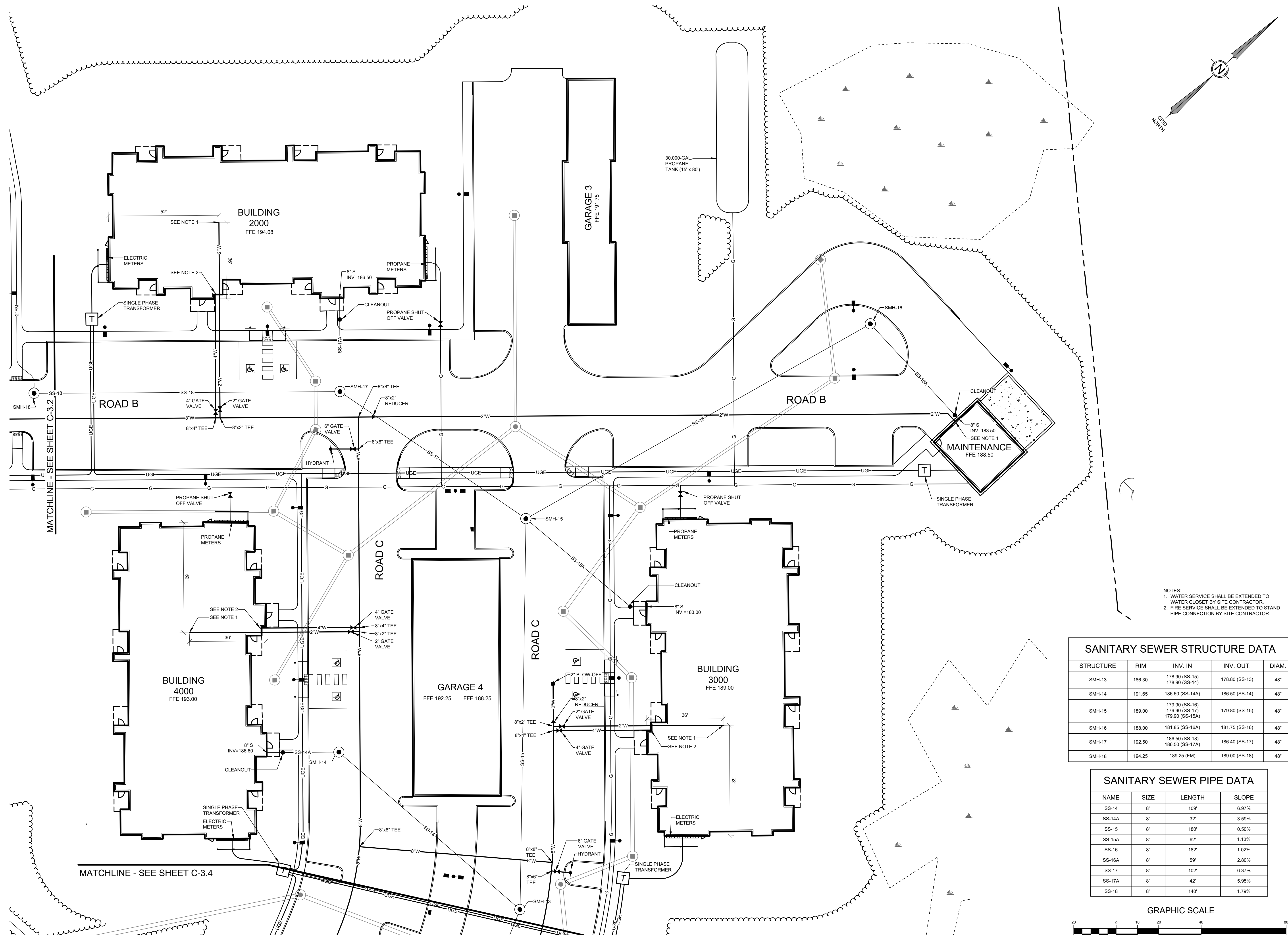
565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102
41 CAMPUS DRIVE
SUITE 301
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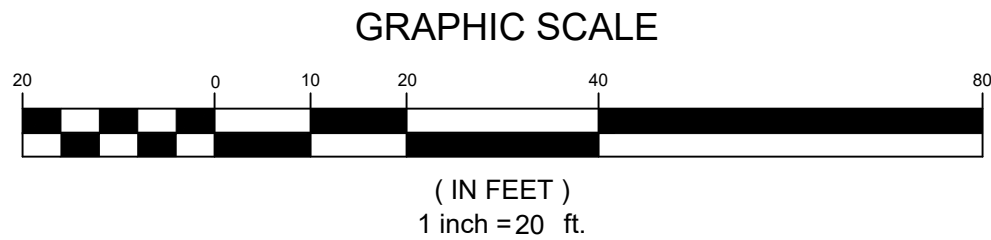
PROJECT: BIDDEFORD RESIDENTIAL ANDREWS ROAD, BIDDEFORD, MAINE		CLIENT: DEVINE CAPITAL, LLC 30 MILK STREET, THIRD FLOOR PORTLAND, MAINE 04101	
SHEET: UTILITY PLAN - 2		DATE: 09-13-2022	
		SCALE: 1" = 20'	
		DESIGNED: RLM	
		JOB NO: 2149	
		FILE: 2149.U	
		SHEET C-3.2	

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SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-13	186.30	178.90 (SS-15) 178.90 (SS-14)	178.80 (SS-13)	48"
SMH-14	191.65	186.60 (SS-14A)	186.50 (SS-14)	48"
SMH-15	189.00	179.90 (SS-16) 179.90 (SS-17) 179.90 (SS-15A)	179.80 (SS-15)	48"
SMH-16	188.00	181.85 (SS-16A)	181.75 (SS-16)	48"
SMH-17	192.50	186.50 (SS-18) 186.50 (SS-17A)	186.40 (SS-17)	48"
SMH-18	194.25	189.25 (FM)	189.00 (SS-18)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SS-14	8"	109'	6.97%
SS-14A	8"	32'	3.59%
SS-15	8"	180'	0.50%
SS-15A	8"	62'	1.13%
SS-16	8"	182'	1.02%
SS-16A	8"	59'	2.80%
SS-17	8"	102'	6.37%
SS-17A	8"	42'	5.95%
SS-18	8"	140'	1.79%

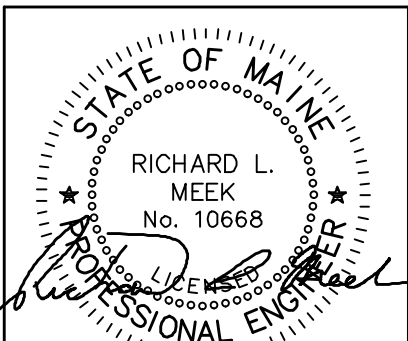


SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-6	184.50	175.50 (SS-7) 175.50 (SS-6A)	175.40 (SS-6)	48"
SMH-7	182.45	176.10 (SS-8)	176.00 (SS-7)	48"
SMH-8	184.40	176.85 (SS-13) 176.85 (SS-8A) 176.85 (SS-9)	176.75 (SS-8)	48"
SMH-9	189.20	180.05 (SS-11) 180.05 (SS-10)	179.95 (SS-9)	48"
SMH-10	187.40	180.40 (SS-10A)	180.30 (SS-10)	48"
SMH-11	186.50	182.75 (SS-12)	181.55 (SS-11)	48"
SMH-13	186.30	178.90 (SS-15) 178.90 (SS-14)	178.80 (SS-13)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SS-6	8"	162'	0.52%
SS-6A	8"	59'	4.39%
SS-7	8"	96'	0.52%
SS-8	8"	120'	0.54%
SS-8A	8"	54'	1.01%
SS-9	8"	63'	4.95%
SS-10	8"	47'	0.53%
SS-10A	8"	54'	5.28%
SS-11	8"	132'	1.14%
SS-12	8"	190'	0.66%
SS-13	8"	159'	1.23%

NOTES:
1. WATER SERVICE SHALL BE EXTENDED TO WATER CLOSET BY SITE CONTRACTOR.
2. FIRE SERVICE SHALL BE EXTENDED TO STAND PIPE CONNECTION BY SITE CONTRACTOR.



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

NO.	DATE	REVISIONS
1	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY
2	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.

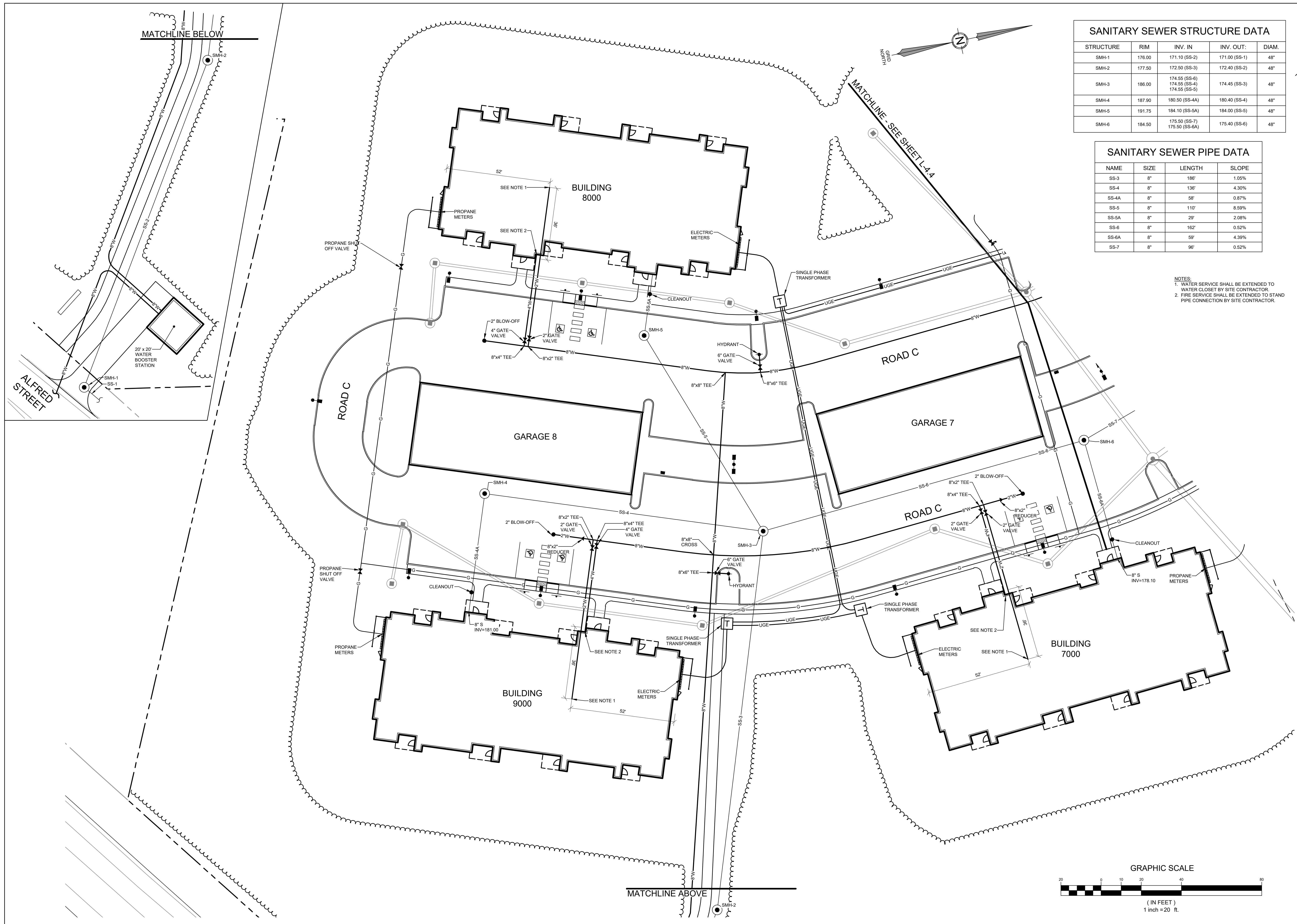
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PROJECT: BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE
SHEET: UTILITY PLAN - 4
CLIENT: DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

DATE: 09-13-2022
SCALE: 1" = 20'
DESIGNED: RLM
JOB NO.: 2149
FILE: 2149.U
SHEET: C-3.4

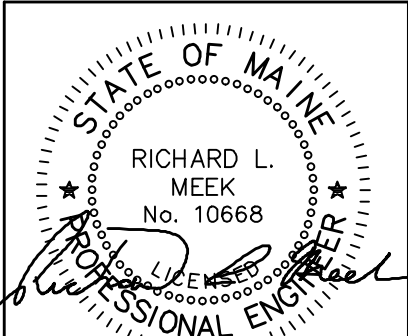


SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-1	176.00	171.10 (SS-2)	171.00 (SS-1)	48"
SMH-2	177.50	172.50 (SS-3)	172.40 (SS-2)	48"
SMH-3	186.00	174.55 (SS-6)	174.45 (SS-3)	48"
		174.55 (SS-4)		
		174.55 (SS-5)		
SMH-4	187.90	180.50 (SS-4A)	180.40 (SS-4)	48"
SMH-5	191.75	184.10 (SS-5A)	184.00 (SS-5)	48"
SMH-6	184.50	175.50 (SS-7) 175.50 (SS-6A)	175.40 (SS-6)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SS-3	8"	186'	1.05%
SS-4	8"	136'	4.30%
SS-4A	8"	58'	0.87%
SS-5	8"	110'	8.59%
SS-5A	8"	29'	2.08%
SS-6	8"	162'	0.52%
SS-6A	8"	59'	4.39%
SS-7	8"	96'	0.52%

NOTES:

1. WATER SERVICE SHALL BE EXTENDED TO WATER CLOSET BY SITE CONTRACTOR.
2. FIRE SERVICE SHALL BE EXTENDED TO STAND PIPE CONNECTION BY SITE CONTRACTOR.



DATE:	09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668	

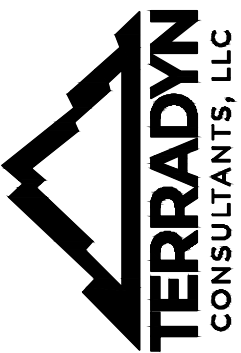
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565 CONGRESS STREET
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PORTLAND, ME 04102

41 CAMPUS DRIVE
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NEW GLOUCESTER, ME 04260

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PROJECT:
BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

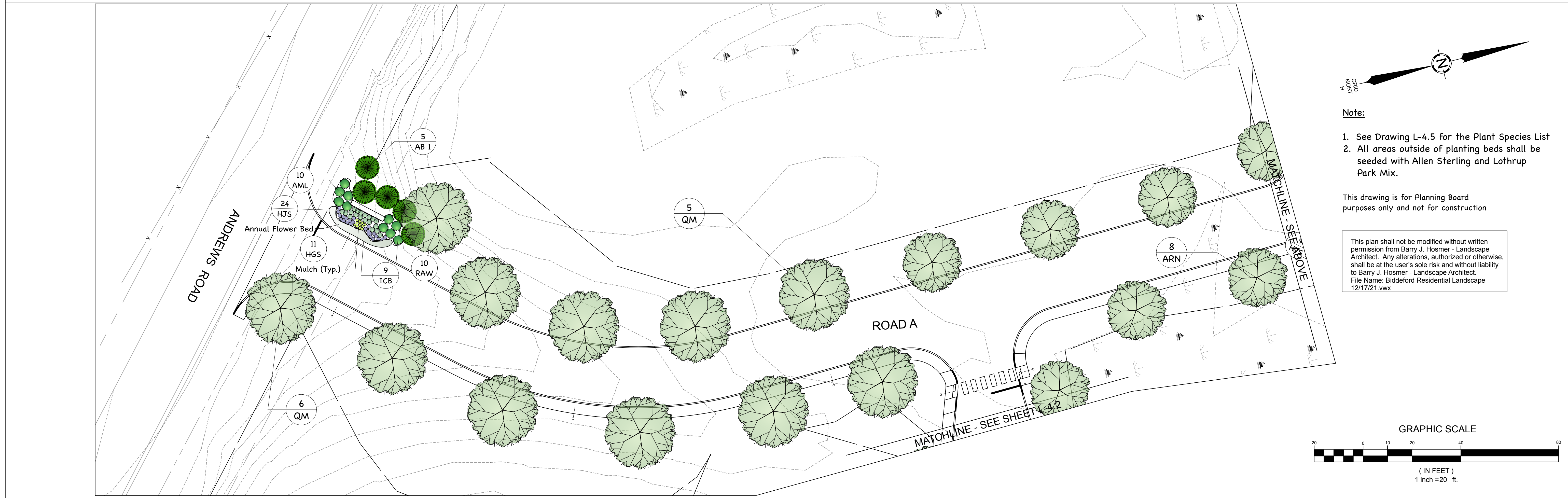
SHEET:
UTILITY PLAN - 5

CLIENT: DEVINE CAPITAL, LLC

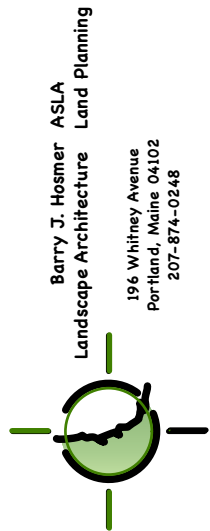
30 MILK STREET, THIRD F
PORTLAND, MAINE 04101

DATE:	09-13-2022
SCALE:	1" = 20'
DESIGNED:	RLM
JOB NO:	2149
FILE:	2149.U
SHEET	C-3.5

C-3.5



PROJECT: BIDDEFORD RESIDENTIAL ANDREWS ROAD, BIDDEFORD, MAINE		SHEET: LANDSCAPE PLAN - 1		CLIENT: DEVINE CAPITAL, LLC 30 MILK STREET, THIRD FLOOR PORTLAND, MAINE 04101	
DATE: 09/13/2022		SCALE: 1" = 20'		DESIGNED: RLM	
JOB NO: 2149		FILE: 2149.S		SHEET	
41 CAMPUS DRIVE SUITE 301 NEW GLOUCESTER, ME 04260		555 CONGRESS STREET SUITE 201 PORTLAND, ME 04102		OFFICE: (207) 926-5111 FAX: (207) 221-1317 www.terradyndesign.com	
					
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DATE: 09-13-2022					
P.E.: RICHARD L. MEEK, P.E. 10668					
				RLM	BY
				RLM	
				APPD	
				REVISIONS	
				DATE	
				NO.	
				IT	
				08-17-2022	
				09-13-2022	
				SUBMIT SITE/SUBDIVISION APPLICATION TO CITY	
				SUBMIT STORMWATER APPLICATION TO D.E.P.	



Note:

1. See Drawing L-4.5 for the Plant Species List
2. All areas outside of planting beds shall be seeded with Allen Sterling and Lothrop Park Mix.

This drawing is for Planning Board purposes only and not for construction

This plan shall not be modified without written permission from Barry J. Hosmer - Landscape Architect. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Barry J. Hosmer - Landscape Architect.
File Name: Biddeford Residential Landscape 12/17/21.vwx

DATE: 09-13-2022		P.E.: RICHARD L. MEEK, P.E. 10668	
PROJECT:	BIDDEFORD RESIDENTIAL	DATE:	09-13-2022
SHEET:	LANDSCAPE PLAN - 3	SCALE:	1" = 20'
CLIENT:	DEVINE CAPITAL, LLC	DESIGNED:	RLM
30 MILK STREET, THIRD FLOOR	PORTLAND, MAINE 04101	JOB NO:	2149
FILE:	2149.S	BY:	
REVISIONS		DATE	NO.
09-13-2022 SUBMIT SITE/SUBDIVISION APPLICATION TO CITY			
08-17-2022 SUBMIT STORMWATER APPLICATION TO D.E.P.			

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

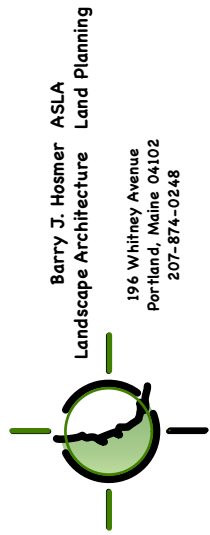
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CONSULTANTS, LLC

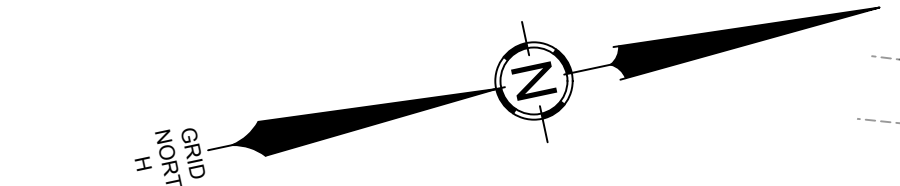
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1. See Drawing L-4.5 for the Plant Species List
2. All areas outside of planting beds shall be seeded with Allen Sterling and Lothrop Park Mix.

This plan shall not be modified without written permission from Barry J. Hosmer - Landscape Architect. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Barry J. Hosmer - Landscape Architect.
File Name: Biddeford Residential Landscape 12/17/21.vwx



PROJECT: BIDDEFORD RESIDENTIAL ANDREWS ROAD, BIDDEFORD, MAINE		SHEET: LANDSCAPE PLAN - 4		CLIENT: DEVINE CAPITAL, LLC 30 MILK STREET, THIRD FLOOR PORTLAND, MAINE 04101	
DATE:		09/13/2022			
SCALE:		1" = 20'			
DESIGNED:		RLM			
JOB NO:		2149			
FILE:		2149.S			
SHEET		L-4.4			



Note:

1. See Drawing L-4.5 for the Plant Species List
2. All areas outside of planting beds shall be seeded with Allen Sterling and Lothrop Park Mix.

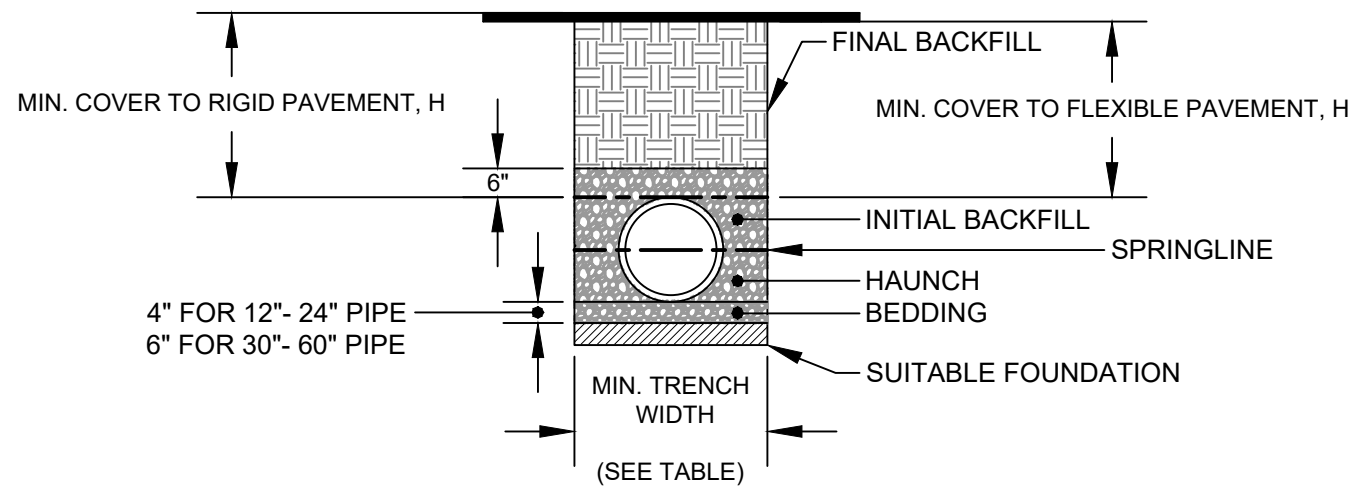
This drawing is for Planning Board purposes only and not for construction

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File Name: Biddeford Residential Landscape 12/17/21.vwx

Plant List - Simple

ID	Qty	Botanical Name	Common Name	Scheduled Size	Remarks
AB 1	36	Abies balsamea	Balsam Fir	5' - 6'	B&B, 10' o.c.
AMR	9	Acer miyabei 'Rugged Ridge'	Rugged Ridge Miyabe Maple	2.5" - 3"	B&B
ARN	11	Acer rubrum 'Northwood'	Northwood Red Maple	2.5" - 3" cal.	B&B
ARR	2	Acer rubrum 'Redpointe'	Redpointe Red Maple	2" - 2.5" cal.	B&B
AFA	22	Acer x freemanii 'Armstrong'	Armstrong Maple	2.5" - 3" cal.	B&B
ALS	12	Amelanchier x laevis 'Spring Flurry'	Spring Flurry Serviceberry	2.5" - 3" cal.	B&B
AMU	99	Aronia melanocarpa 'UConnAM012'	Ground Hug Chokeberry	15" - 18"	cont. 30" o.c.
AML	10	Aruncus x 'Misty Lace'	Misty Lace Goatsbeard	1 gal.	24" o.c.
AJD	234	Astilbe Japonica 'Deutschland'	Deutschland False Spirea	1 gal.	18" o.c.
AAR	360	Astilbe x arendsii 'Red Sentinel'	Red Sentinel Astilbe	1 gal.	18" o.c.
CCR	16	Carpinus caroliniana 'Rising Fire'	Rising Fire American Hornbeam	2" - 2.5" cal.	B&B
CK	3	Cladrasia kentukea	American Yellowwood	2" - 2.5" cal.	B&B
CAS	144	Clethra alnifolia 'Sixteen Candles'	Sixteen Candles Summersweet	24" - 30"	cont., 3' o.c.
CKN	13	Cornus kousa 'National'	National Japanese Dogwood	2" - 2.5" cal.	B&B
CYW	3	Crataegus viridis 'Winter King'	Winter King Hawthorn	2" - 2.5" cal.	B&B
DYC	31	Deutzia x 'Yuki Cherry Blossom'	Yuki Cherry Blossom Deutzia	15" - 18"	cont. 30" o.c.
EC	6	Enkianthus campanulatus	Red Veined Enkianthus	30" - 36"	cont.
FIB	75	Fothergilla x intermedia 'Blue Shadow'	Blue Shadow Fothergilla	24" - 30"	cont.
GSS	221	Geranium sanguineum var. striatum	Stratum Cranesbill	1 gal.	18" o.c.
GCB	306	Geranium x cantabrigiense 'Biokovo'	Biokovo Cranesbill	1 gal.	15" o.c.
HJS	107	Hemerocallis x 'Joan Senior'	Joan Senior Daylily	1 gal.	18" o.c.
HRS	50	Hemerocallis x 'Ruby Stella'	Ruby Stella Daylily	1 gal.	18" o.c.
HGS	11	Heuchera americana 'Green Spice'	Green Spice Coral Bells	1 qt	15" o.c.
HMB	13	Hydrangea macrophylla 'Bloomstruck'	Bloomstruck Lacecap Hydrangea	24" - 30"	cont. 4' o.c.
IGB	184	Ilex glabra 'Gem Box'	Gem Box Holly	18" - 24"	4' o.c., 3 gal.
ICB	9	Iris sibirica 'Caesar's Brother'	Caesar's Brother Siberian Iris	1 gal.	24" o.c.
LL	4	Larix laricina	American Larch	7" - 8"	B&B
MST	5	Malus x 'Sutyazam'	Sugar Tyme Crabapple	2.5" - 3" cal.	B&B
NS	19	Nyssa sylvatica	Black Gum	2.5" - 3" cal.	B&B, 6' off of pavement
PAN	90	Picea abies 'Nidiformis'	Bird's Nest Spruce	18" - 24"	cont. 4' o.c.
PG 1	25	Picea glauca	White Spruce	5" - 6'	B&B
PA	18	Platanus x acerifolia 'Morton Circle'	Exclamation London Plane Tree	2.5" - 3" cal.	B&B
PSP	17	Prunus sargentii 'Pink Flair'	Pink Flair Cherry	2" - 2.5" cal.	B&B
PCJ	20	Pyrus calleryana 'Jazzam'	Jack Flowering Pear	2" - 2.5" cal.	B&B
QT	11	Quercus imbricaria	Shingle Oak	2" - 2.5" cal.	B&B
QM	5	Quercus macrocarpa	Burr Oak	2" - 2.5" cal.	B&B, 6' off pavement, unless shown otherwise
QR	1	Quercus rubra	Red Oak	2" - 2.5" cal.	B&B
RAW	10	Rhododendron 'April White'	April White Rhododendron	2' - 2.5'	cont., 4' o.c.
SBT	216	Spiraea betulifolia 'Tor'	Tor Birchleaf Spirea	18" - 24"	30" o.c.
SMB	108	Spiraea x media 'Blue Kazoo'	Blue Kazoo Spirea	18" - 24"	30" o.c.
TCH	19	Thuja occidentalis 'Holmstrup'	Holmstrup Eastern Arborvitae	5" - 6'	B&B, 4' o.c.
TAA	5	Tilia americana 'American Sentry'	American Sentry American Linden	2.5" - 3" cal.	B&B
WFB	64	Weigela florida 'Bramwell'	Fine Wine Weigela	18" - 24"	cont. 4' o.c.





NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

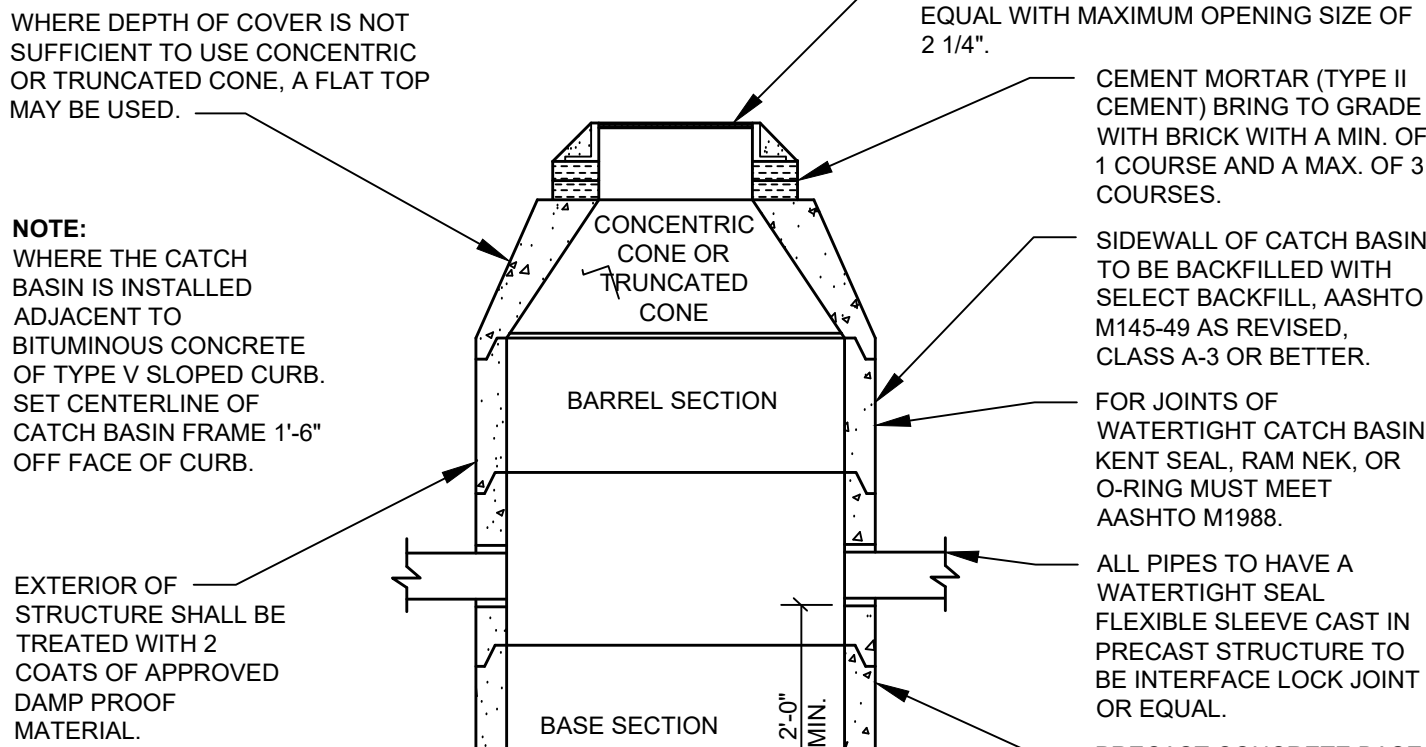
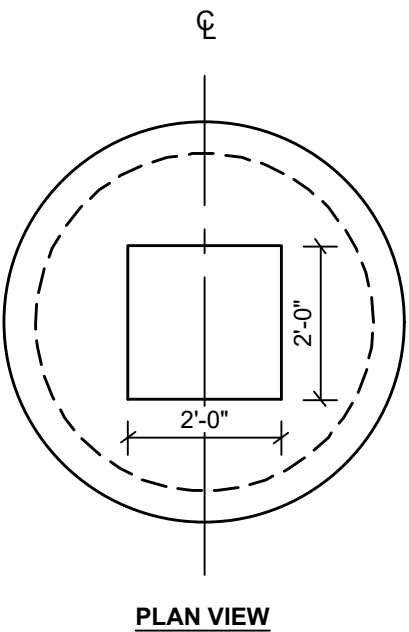
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TYPICAL TRENCH DETAIL
NOT TO SCALE

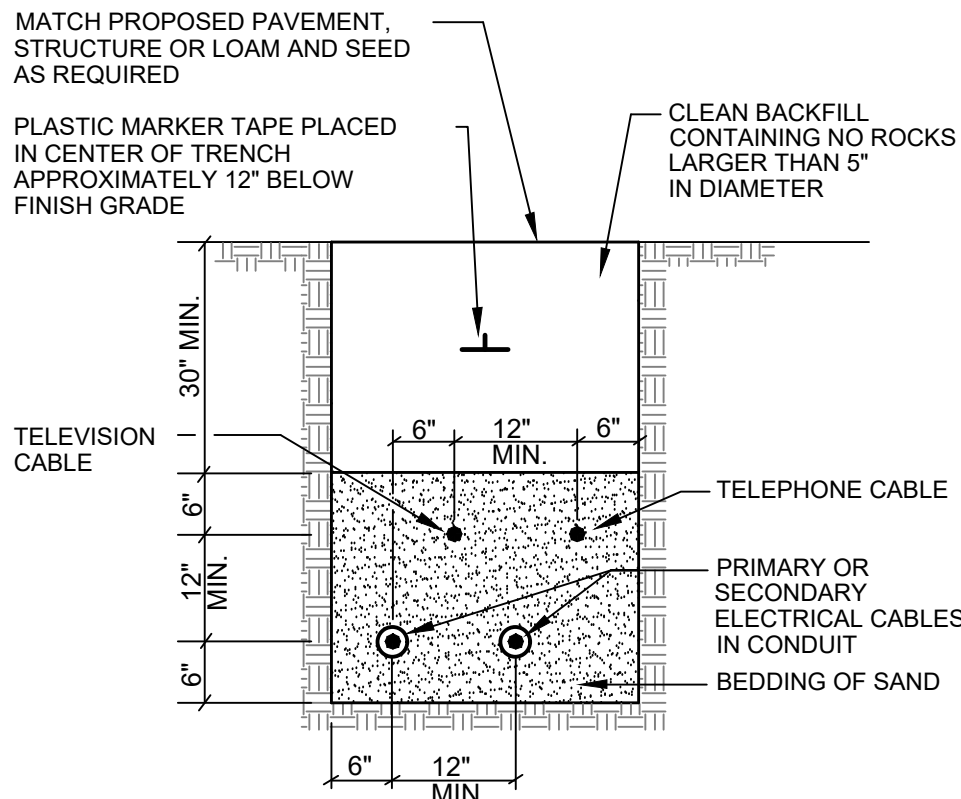


DESIGN NOTES:

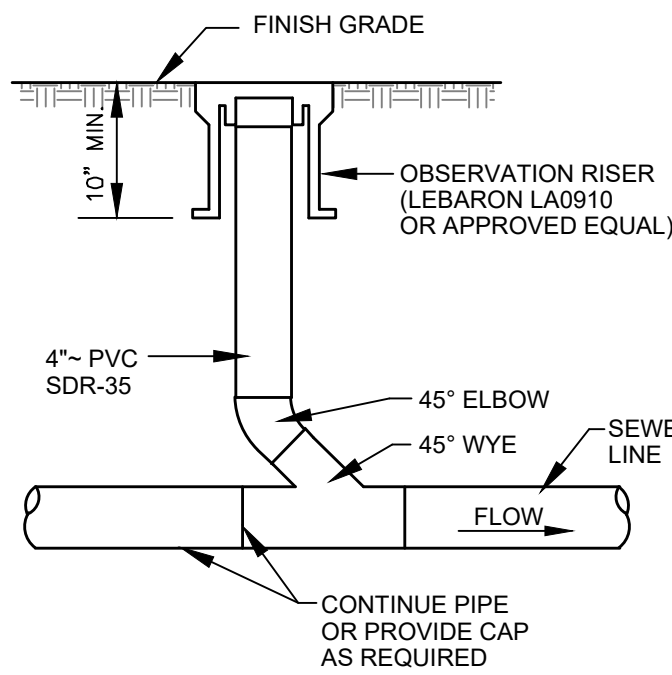
- ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- DESIGN LOAD FOR H-20 WHEEL LOAD.
- CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
- REINFORCE TO 0.12 IN SQ./LF..

NOTE: CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF GUTTER IF PROFILE GRADE EXCEEDS 5% GRATES SHALL BE DERESSED 2" BELOW NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT.

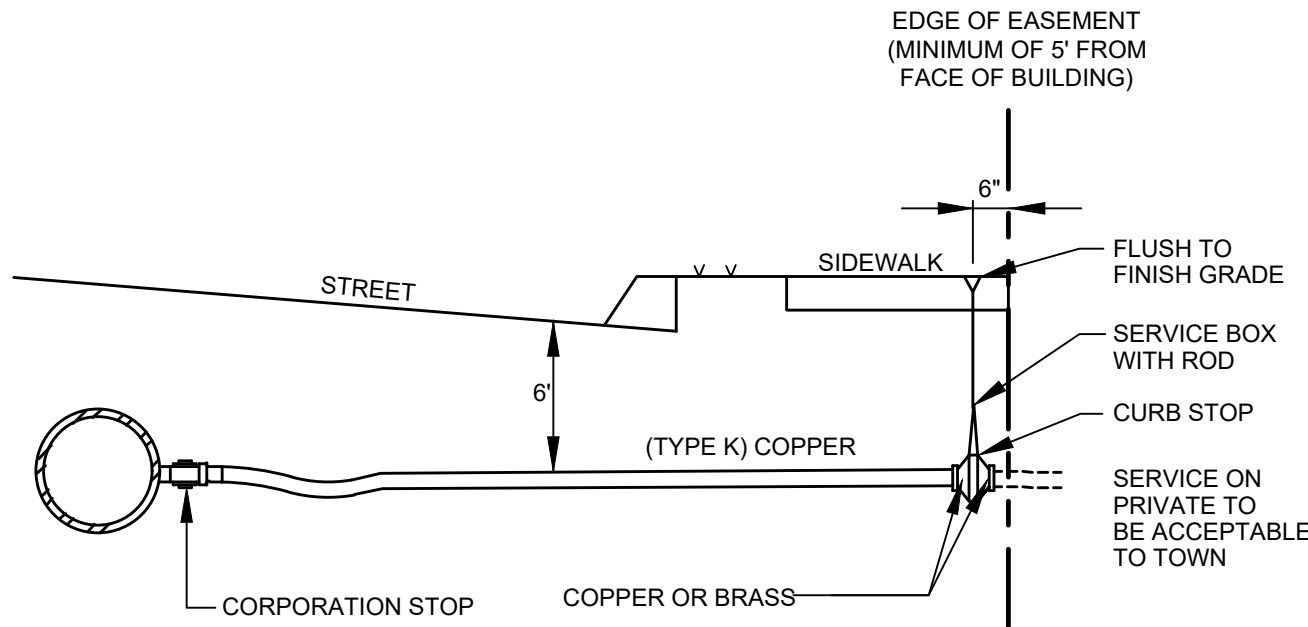
TYPICAL CATCH BASIN
NOT TO SCALE



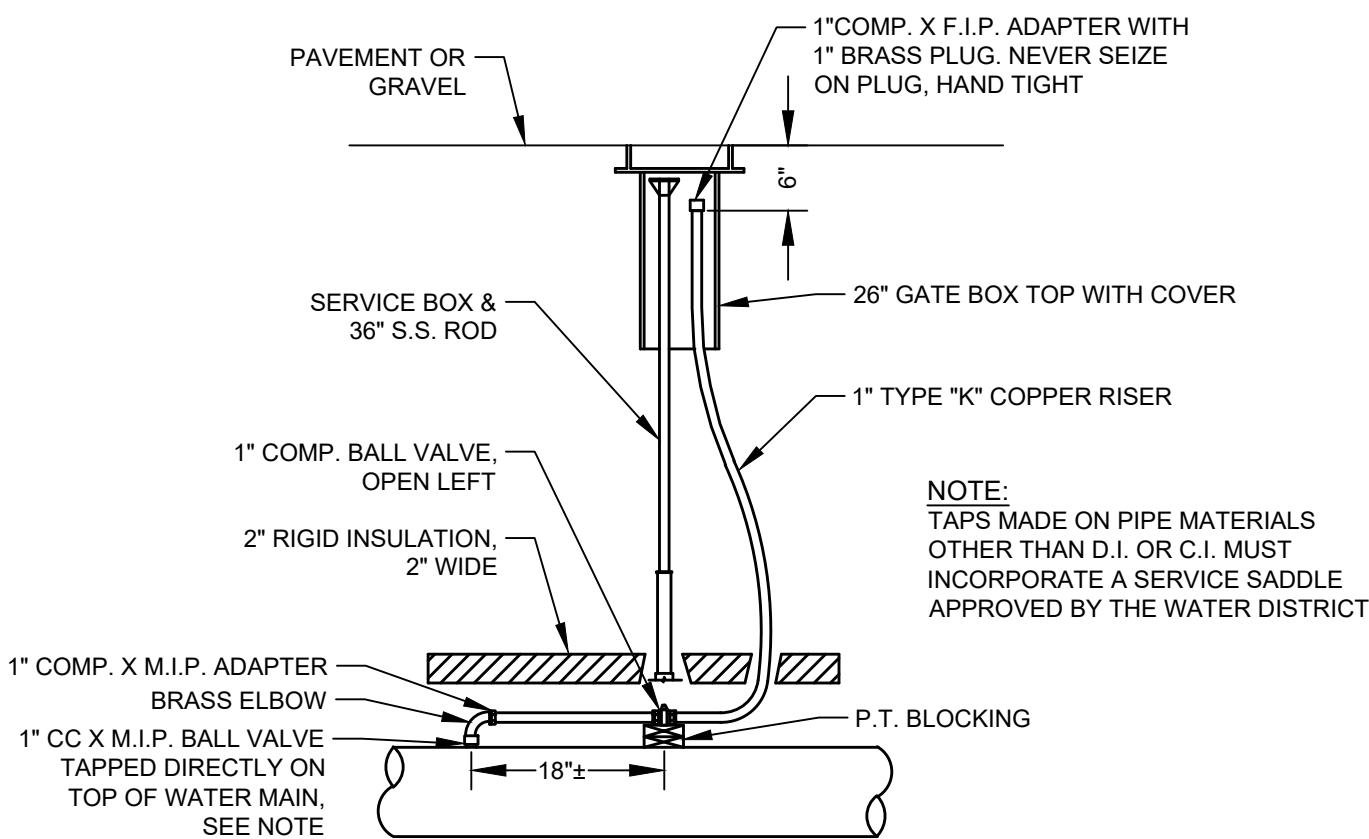
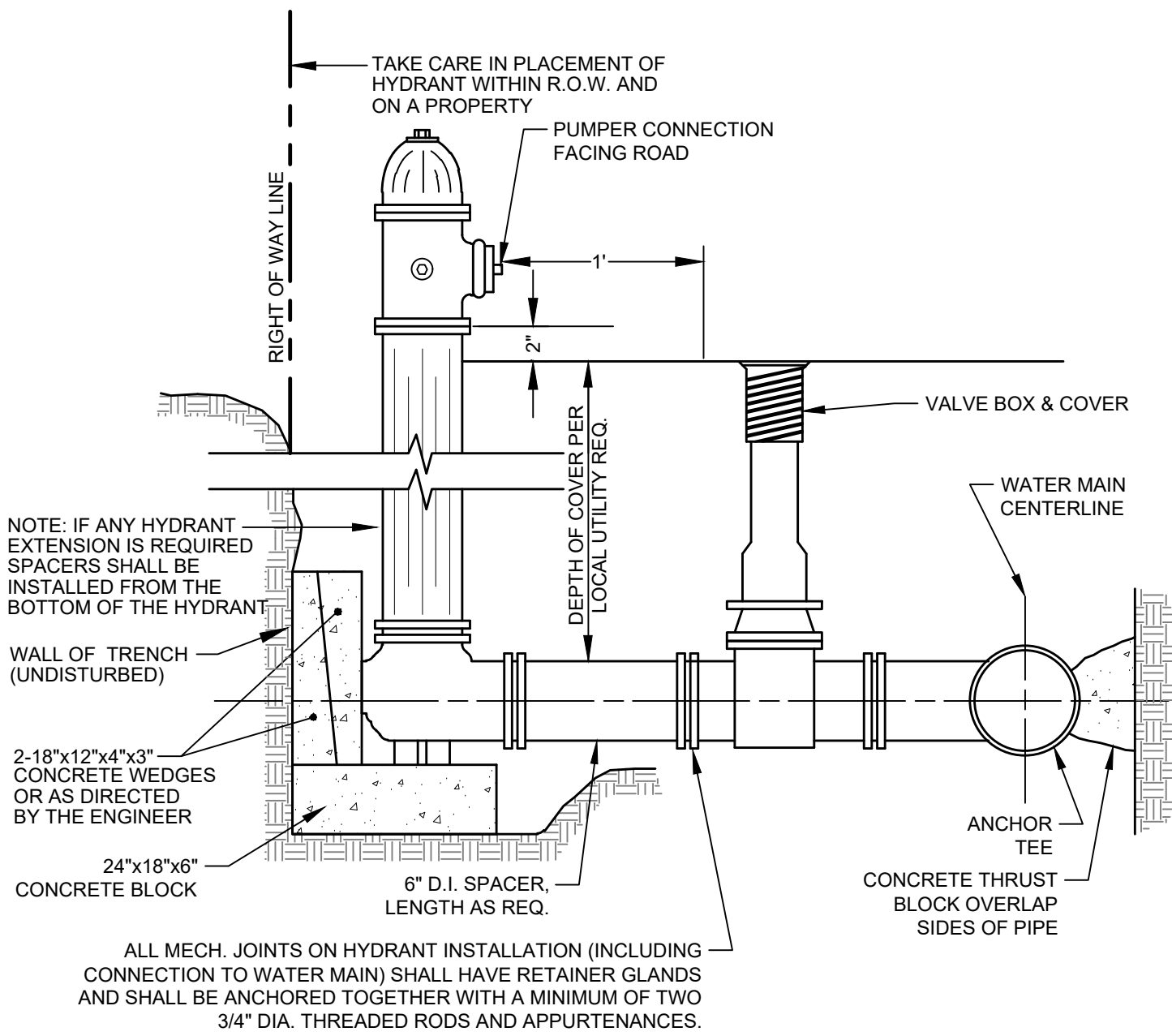
TYPICAL UNDERGROUND CABLE INSTALLATION
NOT TO SCALE



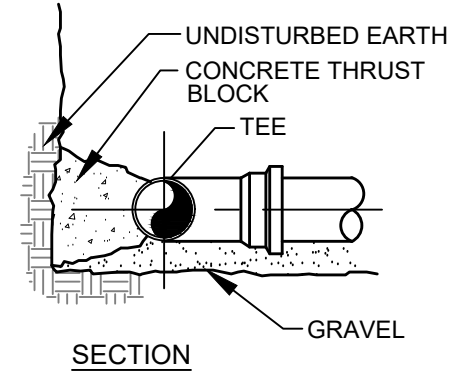
SEWER CLEANOUT
NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



AIR RELEASE DETAIL
NOT TO SCALE



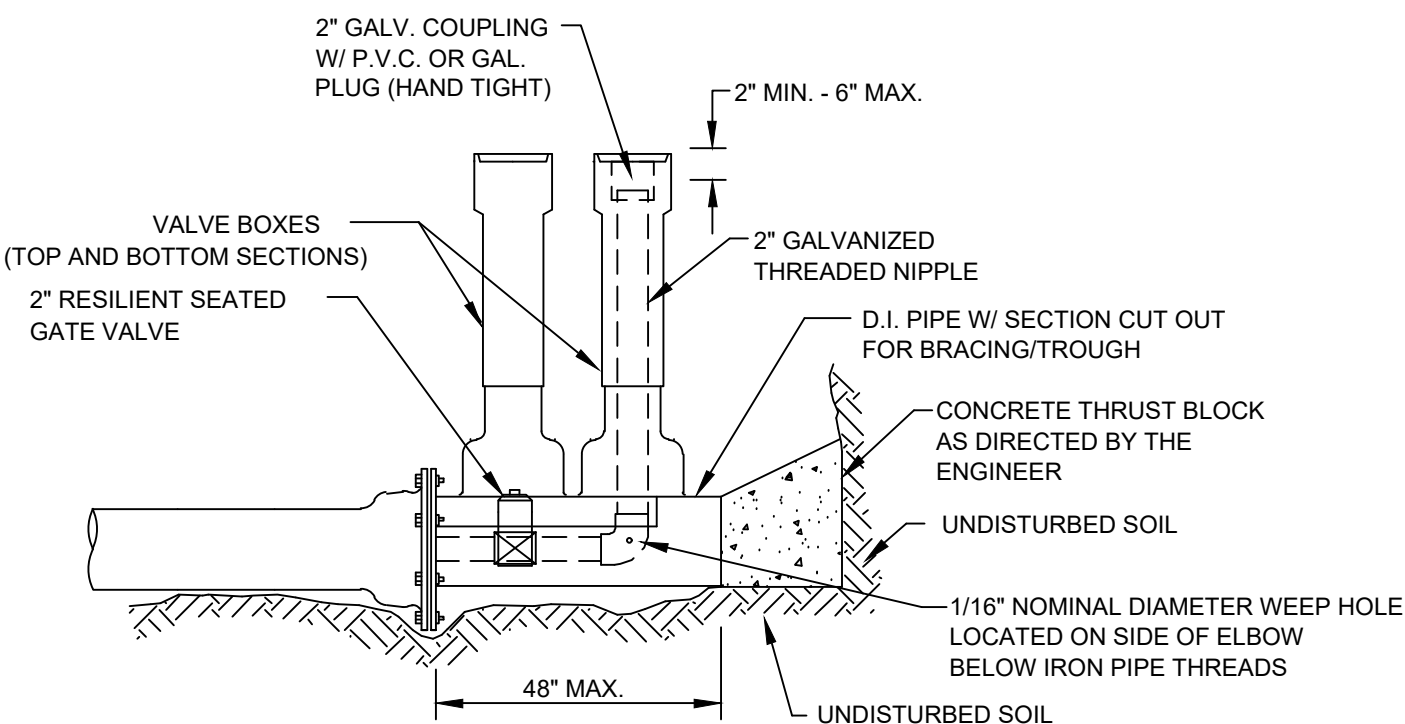
FITTINGS	SQ. FT. OF BEARING ON UNDISTURBED SOIL		
	90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE			
6"	4.0	2.0	3.0
8"	8.0	4.0	6.0
12"	15	10	10

NOTES:

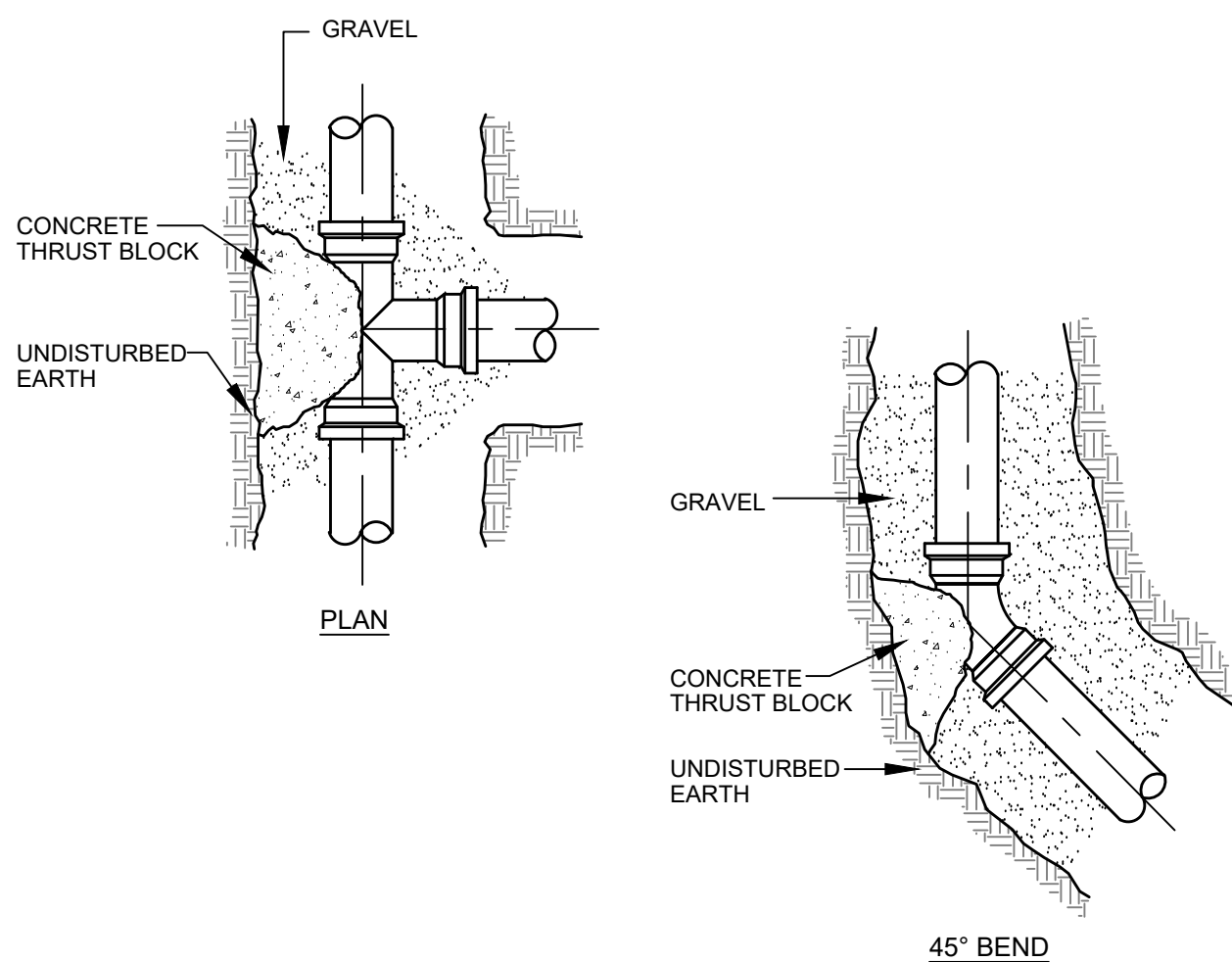
- ALL MATERIALS SHALL CONFORM TO THE KENNEBUNK, KENNEBUNKPORT & WELLS WATER DISTRICT REQUIREMENTS
- HYDRANT SHALL BE OPEN RIGHT
- ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE

TYP. HYDRANT INSTALLATION

NOT TO SCALE



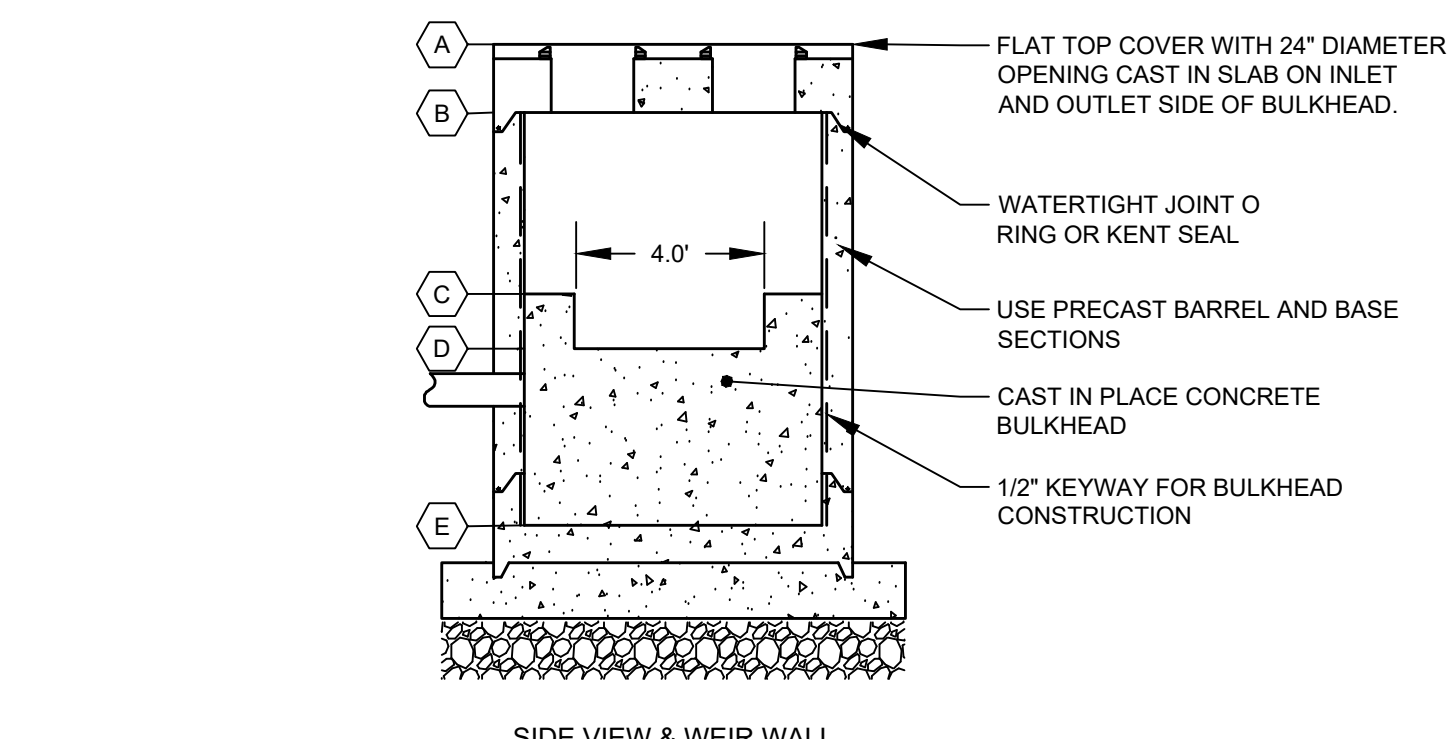
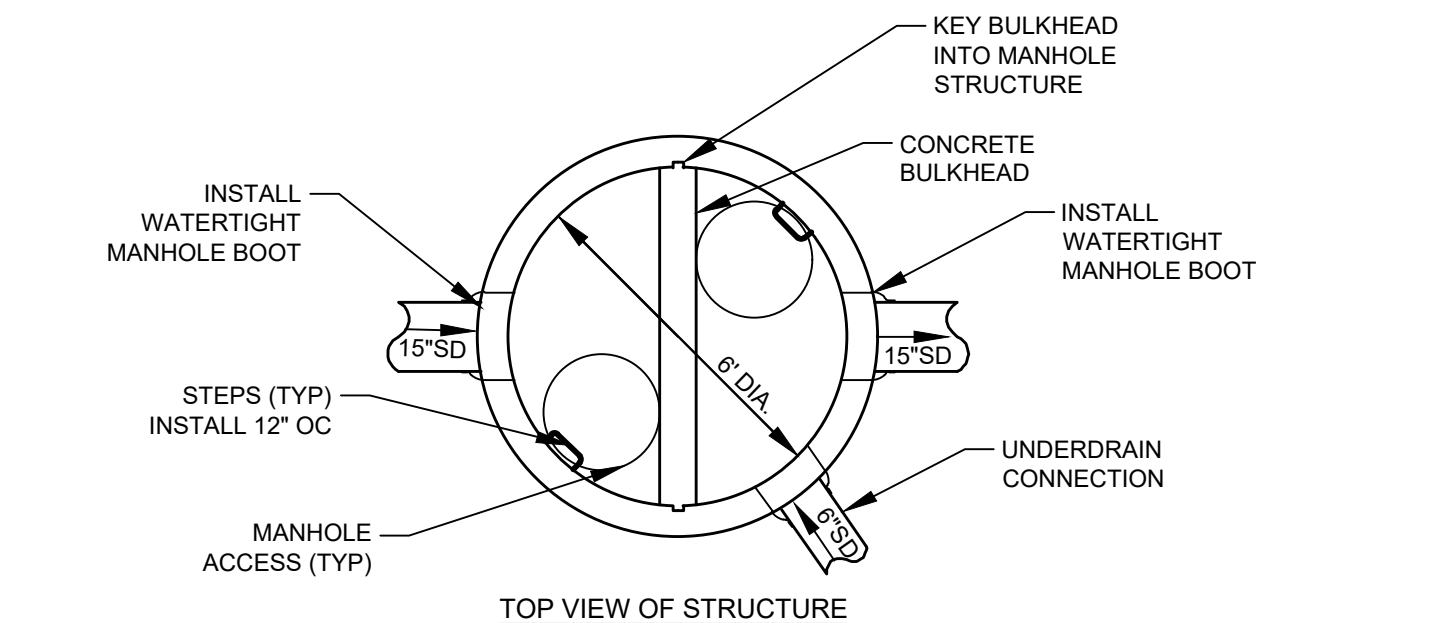
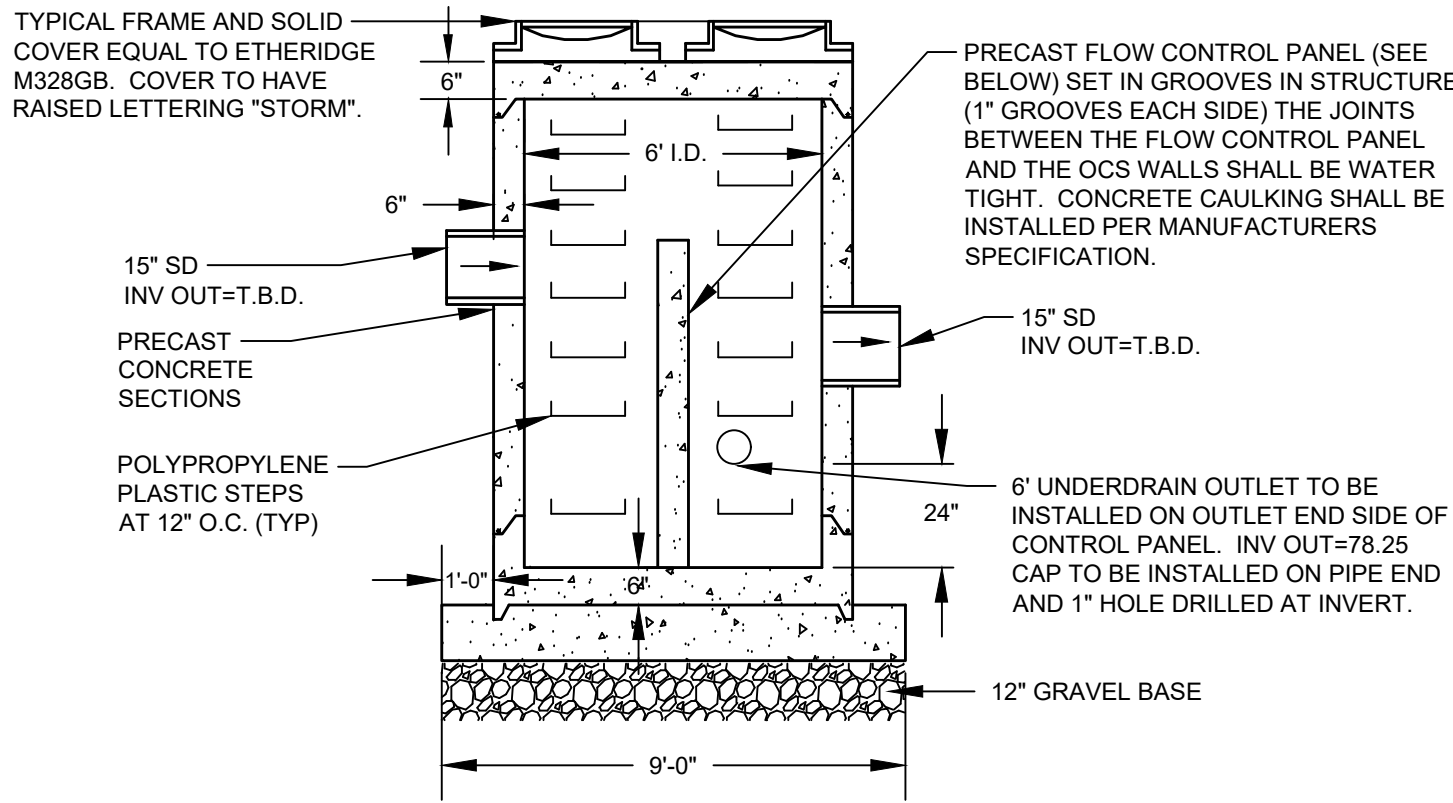
STANDARD 2" BLOW OFF
NOT TO SCALE



TEE & BEND DETAIL
NOT TO SCALE

4' DIAMETER PRECAST STORM DRAIN MANHOLE
NOT TO SCALE

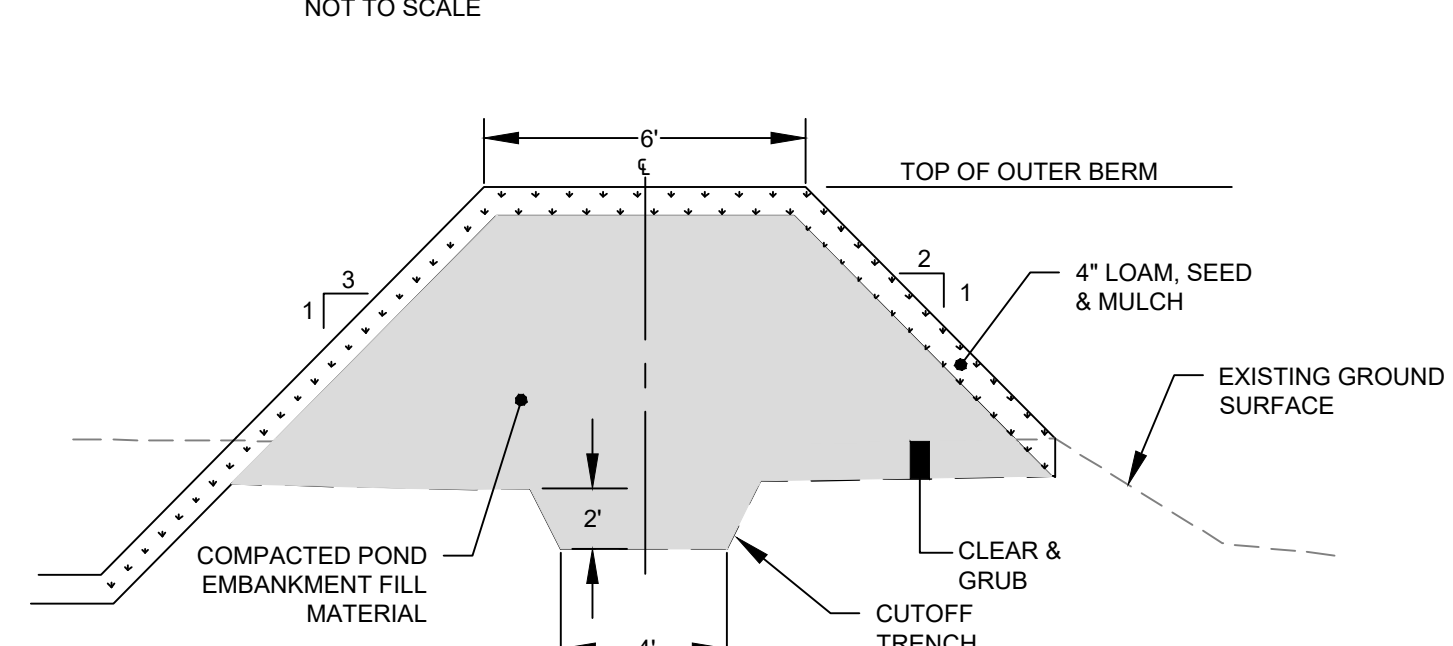
DATE:	09-13-2022
P.E.: RICHARD L. MECK, P.E. 10668	
PROJECT:	BIDDEFORD RESIDENTIAL
SHEET:	SITE DETAILS
CLIENT:	DEVINE CAPITAL, LLC
ADDRESS:	ANDREWS ROAD, BIDDEFORD, MAINE
LOCATION:	30 MILK STREET, THIRD FLOOR, PORTLAND, MAINE 04101
DATE:	09-13-2022
SCALE:	N.T.S.
DESIGNED:	RLM
JOB NO.:	2149
FILE:	2149.D
SHEET:	C-5.3



- NOTES:
- SUBMIT SHOP DRAWINGS FOR OWNER/ENGINEER APPROVAL.
 - STRUCTURE SHALL BE DESIGNED FOR H-20 LOADING.
 - CASTINGS SHALL PROVIDE FOR A 24\"/>

SCHEDULE A OUTLET CONTROL STRUCTURE	
ITEM DESCRIPTION	DIMENSION / ELEVATION
A. TOP OF STRUCTURE	T.B.D.
B. UNDERSIDE OF SLAB	T.B.D.
C. TOP OF CONCRETE BULKHEAD	T.B.D.
D. BOTTOM OF WEIR SLOT	T.B.D.
E. BOTTOM OF STRUCTURE	T.B.D.

OUTLET CONTROL STRUCTURE (OCS)



- EMBANKMENT FILL MATERIAL:**
FILL MUST BE FREE OF FROZEN SOIL, ROCKS OVER SIX INCHES, AND SOD, BRUSH, STUMPS, TREE ROOTS, WOOD, OR OTHER PERISHABLE MATERIALS. EMBANKMENT FILLS LESS THAN 10 FEET IN FILL HEIGHT MUST BE COMPACTED USING COMPACTION METHODS THAT WOULD GUARANTEE A FILL DENSITY OF 90% OF THE MAXIMUM DENSITY AS DETERMINED BY STANDARD PROCTOR (ASTM-698). ALL EMBANKMENT FILLS MORE THAN 10 FEET IN FILL HEIGHT MUST BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AND MUST HAVE THEIR DENSITY VERIFIED BY FIELD DENSITY TESTING.
- EMBANKMENT CONSTRUCTION NOTES:**
- CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ORGANIC MATERIAL FROM EMBANKMENT AND POND CONSTRUCTION AREA.
 - SCARIFY SUBGRADE TO ESTABLISH INTERFACE FOR ALL FILLS.
 - COMPACT IN 12\"/>
 - INSTALL RIPRAP AND EROSION CONTROL MESH WHERE SPECIFIED.
 - LOAM, SEED & STABILIZE IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL PLAN & NOTES.

POND EMBANKMENT DETAIL

NOT TO SCALE

CONSTRUCTION INSPECTION NOTES:

- THE DESIGN ENGINEER SHALL INSPECT THE CONSTRUCTION AND STABILIZATION OF THE GRAVEL WETLAND. INSPECTIONS SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE CONSTRUCTION (FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND) OF THE POND'S EMBANKMENT, STORMWATER INLET, GRAVEL AND FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, LINER INSTALLATION, AND EMERGENCY SPILLWAY. IF NECESSARY, THE INSPECTING ENGINEER SHALL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE THE POND IS CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE CITY WITHIN 14 DAYS TO STATE THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION SHALL BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF THE MATERIALS USED. AN INSPECTION OF THE UNDERDRAINED GRAVEL OUTLET SHALL ALSO BE PERFORMED BY A PROFESSIONAL ENGINEER ONE YEAR AFTER THE FINAL STABILIZATION OF THE POND. THE ENGINEER SHALL NOTIFY THE CITY AS TO THE OUTLET'S EFFECTIVENESS AND DETERMINE ANY MAINTENANCE ITEMS THAT ARE NEEDED.
- UNTIL SUCH TIME THAT THE STORMWATER FACILITIES ARE OFFERED AND ACCEPTED BY THE CITY, THE APPLICANT SHALL BE REQUIRED TO PERFORM ROUTINE INSPECTION AND MAINTENANCE OF THE STORMWATER FACILITIES AS OUTLINED IN THE OPERATIONS AND MAINTENANCE MANUAL. DEVELOPMENT SPECIFICALLY FOR THE SITE. A COPY OF THE ANNUAL INSPECTION AND MAINTENANCE REPORT INCLUDING INSPECTION LOG(S) SHALL BE SUBMITTED ANNUALLY (BY JULY 15TH OF EACH YEAR) TO THE CITY PUBLIC WORKS DEPARTMENT.

GRAVEL WETLAND INSTALLATION NOTES:

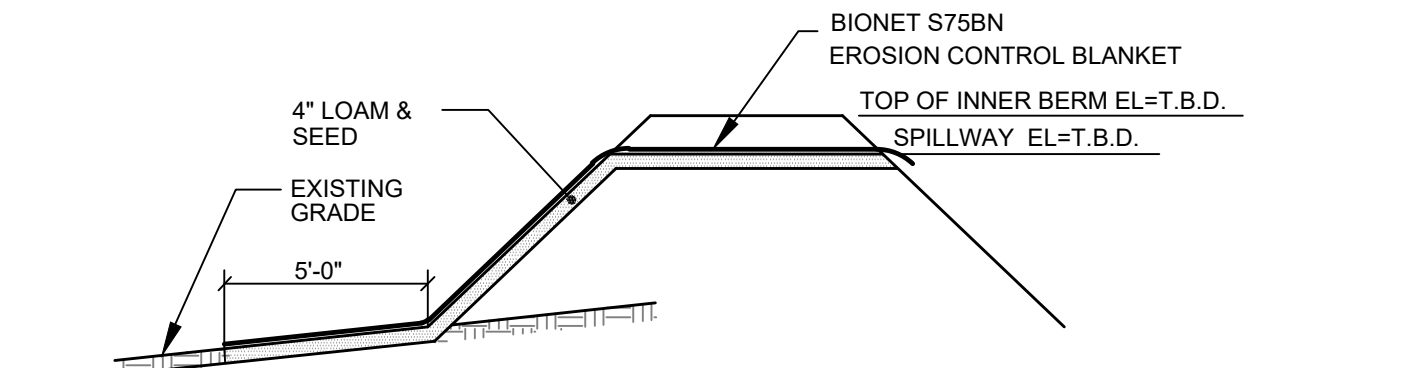
- THE MINIMUM SPACING BETWEEN THE SUBSURFACE PERFORATED DISTRIBUTION LINE AND THE SUBSURFACE PERFORATED COLLECTION DRAIN AT EITHER END OF THE GRAVEL IN EACH TREATMENT CELL IS 15 FT.
- THERE SHOULD BE A MINIMUM HORIZONTAL TRAVEL DISTANCE OF 15 FT WITHIN THE GRAVEL LAYER IN EACH CELL.
- VERTICAL PERFORATED OR SLOTTED RISER PIPES DELIVER WATER FROM THE SURFACE DOWN TO THE SUBSURFACE. PERFORATED OR SLOTTED DISTRIBUTION LINES. THESE RISERS SHALL HAVE A MAXIMUM SPACING OF 10 FEET.
- SLOTTED VERTICAL RISERS SHALL HAVE A MINIMUM DIAMETER OF 12\"/>
- VERTICAL CLEANOUTS CONNECTED TO THE DISTRIBUTION AND COLLECTION SUBDRAINS, AT EACH END, SHALL BE PERFORATED OR SLOTTED ONLY WITHIN THE GRAVEL LAYER, AND SOLID WITHIN THE WETLAND SOIL AND STORAGE AREA ABOVE.
- TREATMENT CELL FLOOR TO BE GRADED FLAT.
- BERMS AND WEIRS SEPARATING THE FOREBAY AND TREATMENT CELLS SHOULD BE CONSTRUCTED WITH CLAY, OR NON-CONDUCTIVE SOILS, AND/OR A FINE GEOTEXTILE, OR SOME COMBINATION THEREOF, TO AVOID WATER SEEPAGE AND SOIL PIPING THROUGH THESE EARTHEN DIVIDERS.
- THE SYSTEM SHOULD BE PLANTED TO ACHIEVE A RIGOROUS ROOT MAT WITH GRASSES, FORBS, AND SHRUBS WITH OBLIGATE AND FACULTATIVE WETLAND SPECIES.
- THE SUBAREA DRAINING TO A CREATED WETLAND MUST BE COMPLETELY STABLE BEFORE RUNOFF IS DIRECTED TO THE BASIN TO PREVENT SEDIMENTATION OF THE DRAINAGE LAYER; OR ALL RUNOFF SHOULD BE RE-DIRECTED UNTIL CONSTRUCTION IS FINALIZED. THE VEGETATION WITHIN THE STRUCTURE IS EQUALLY IMPORTANT AND MUST BE WELL ESTABLISHED BEFORE IT CAN ACCEPT ANY RUNOFF.
- GRAVEL WETLAND STORMWATER AREA TO BE SEEDED WITH "NEW ENGLAND WETMIX" AS DISTRIBUTED BY NEW ENGLAND WETLAND PLANTS, INC., 820 WEST STREET, AMHERST, MA 01002, PHONE 413-648-8000, EMAIL INFO@NEWP.COM, OR APPROVED EQUIVALENT. APPLY AT A RATE OF 1 LB/2,500 SF.
- THE SEEDS WILL NOT GERMINATE UNDER INUNDATED CONDITIONS. IF PLANTED DURING THE FALL MONTHS THE SEED MIX WILL GERMINATE THE FOLLOWING SPRING. DURING THE FIRST SEASON OF GROWTH SEVERAL SPECIES WILL PRODUCE SEEDS WHILE OTHER SPECIES WILL PRODUCE SEEDS AFTER THE SECOND GROWING SEASON. NOT ALL SPECIES WILL GROW IN ALL WETLAND SITUATIONS. THIS MIX IS COMPRISED OF THE WETLAND SPECIES MOST LIKELY TO GROW IN CREATED/RESTORED WETLANDS AND SHOULD PRODUCE MORE THAN 75% GROUND COVER IN TWO FULL GROWING SEASONS.
- THE WETLAND SEEDS IN THIS MIX CAN BE SOWN BY HAND, WITH A HAND-HELD SPREADER, OR HYDRO-SEEDED ON LARGE OR HARD TO REACH SITES. LIGHTLY RAKE TO ENSURE GOOD SEED-TO-SOIL CONTACT. SEEDING CAN TAKE PLACE ON FROZEN SOIL, AS THE FREEZING AND THAWING WEATHER OF LATE FALL AND LATE WINTER WILL WORK THE SEED INTO THE SOIL. IF SPRING CONDITIONS ARE DRIER THAN USUAL, WATERING MAY BE REQUIRED. IF SOWING DURING THE SUMMER MONTHS, SUPPLEMENTAL WATERING WILL LIKELY BE REQUIRED UNTIL GERMINATION. A LIGHT MULCH OF CLEAN, WEED FREE STRAW IS RECOMMENDED.
- THE POND CONSTRUCTION SHOULD BE ONLY CONSTRUCTED UNDER THE SUPERVISION OF THE DESIGN ENGINEER.

ORGANIC WETLAND SOIL MIXTURE:

- THE WETLAND SOIL SHOULD HAVE A LOW HYDRAULIC CONDUCTIVITY (0.1-0.01 FT/DAY). THIS SOIL CAN BE MANUFACTURED USING COMPOST, SAND AND FINE SOILS, INTO A BLEND WITH MORE THAN 15% ORGANIC MATTER. IT SHOULD CONTAIN MORE THAN 15% SILT (PASSING THE #200 SIEVE) BUT WITH A CLAY SIZE PORTION THAT IS LESS THAN 2%. DO NOT USE GEOTEXTILES BETWEEN THE HORIZONTAL LAYERS OF THIS SYSTEM AS THEY WILL CLOG DUE TO FINES AND MAY RESTRICT ROOT GROWTH.

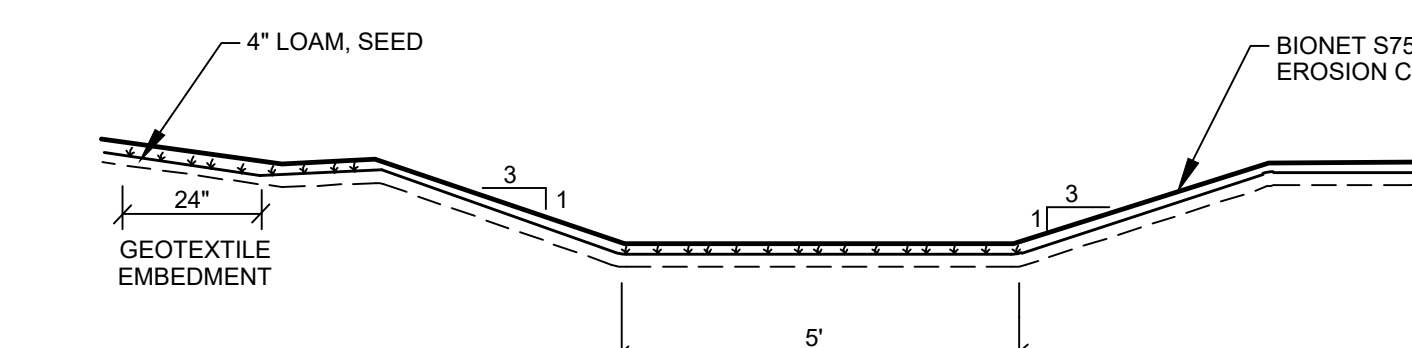
POND DEWATERING NOTES:

- DEWATERING OF THE FOREBAY AND TREATMENT CELLS OF THE POND SHALL BE CONDUCTED SUCH THAT THE POND WILL NOT FILL WITH WATER UNTIL THE FOREBAY & TREATMENT CELL FLOORS ARE COMPLETED.
- DEWATERING PROCEDURES SHALL BE CONDUCTED USING MDEP APPROVED TECHNIQUES AND SHALL INCLUDE THE USE OF A DIRT BAG SYSTEM. THE DIRT BAG SHALL BE USED ACCORDING TO MANUFACTURER INSTRUCTIONS.



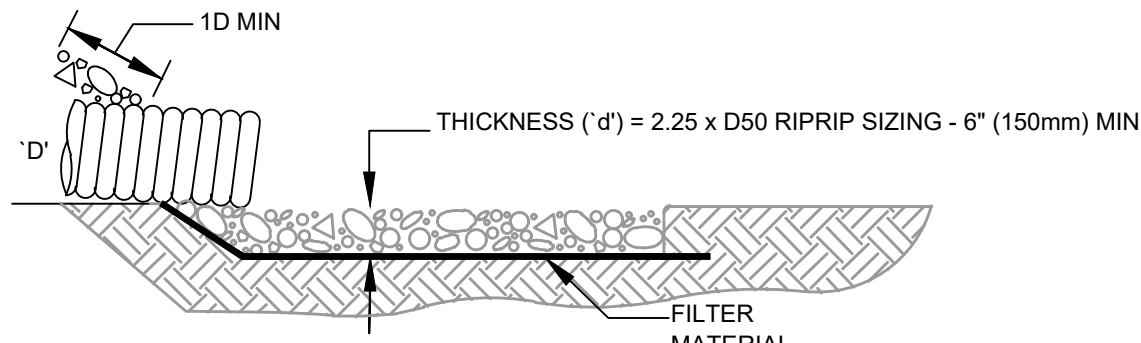
SPILLWAY EMBANKMENT SECTION

NOT TO SCALE

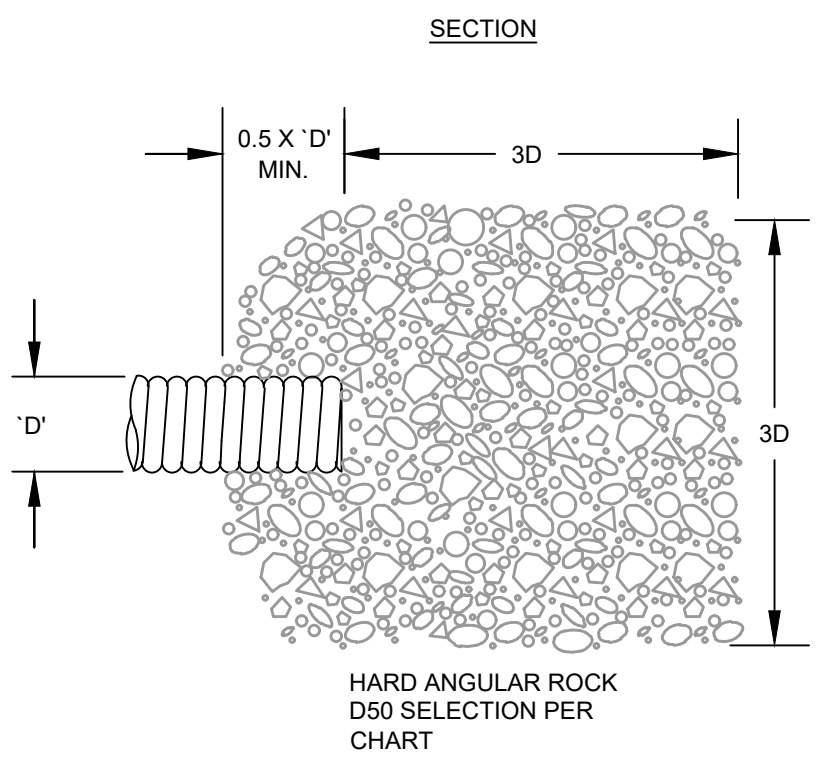


INTERNAL BERM SPILLWAY CROSS-SECTIONS

NOT TO SCALE



- NOTE:
- GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON UNDISTURBED SOILS, OR 6\"/>
 - GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL.



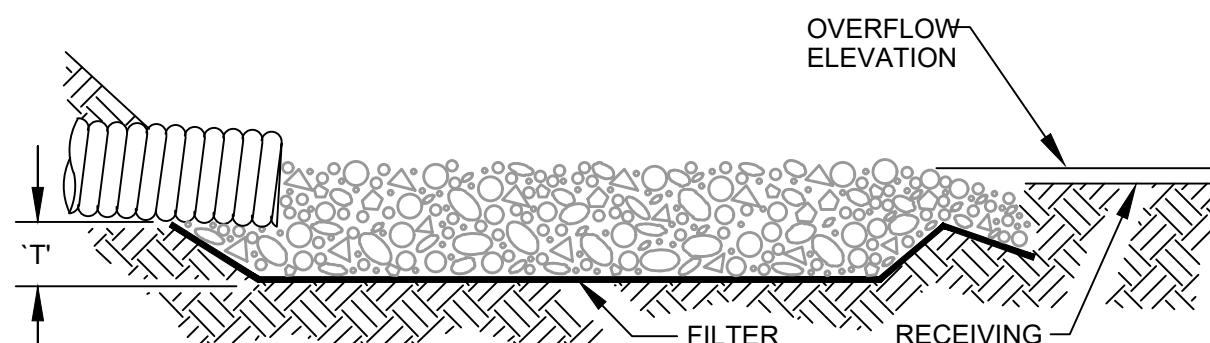
HARD ANGULAR ROCK D50 SELECTION PER CHART

PIPE INLET PROTECTION SIZING TABLE			
PIPE SIZE (IN)	RIP RAP SIZING (D50)	LENGTH (FT)	WIDTH (FT)
6	3	2.0	1.5
12	5	3.5	3.0
15	6	4.5	3.75
18	8	5.25	4.5
24	10	7.0	6.0
30	12	8.75	7.5
36	14	10.5	9.0

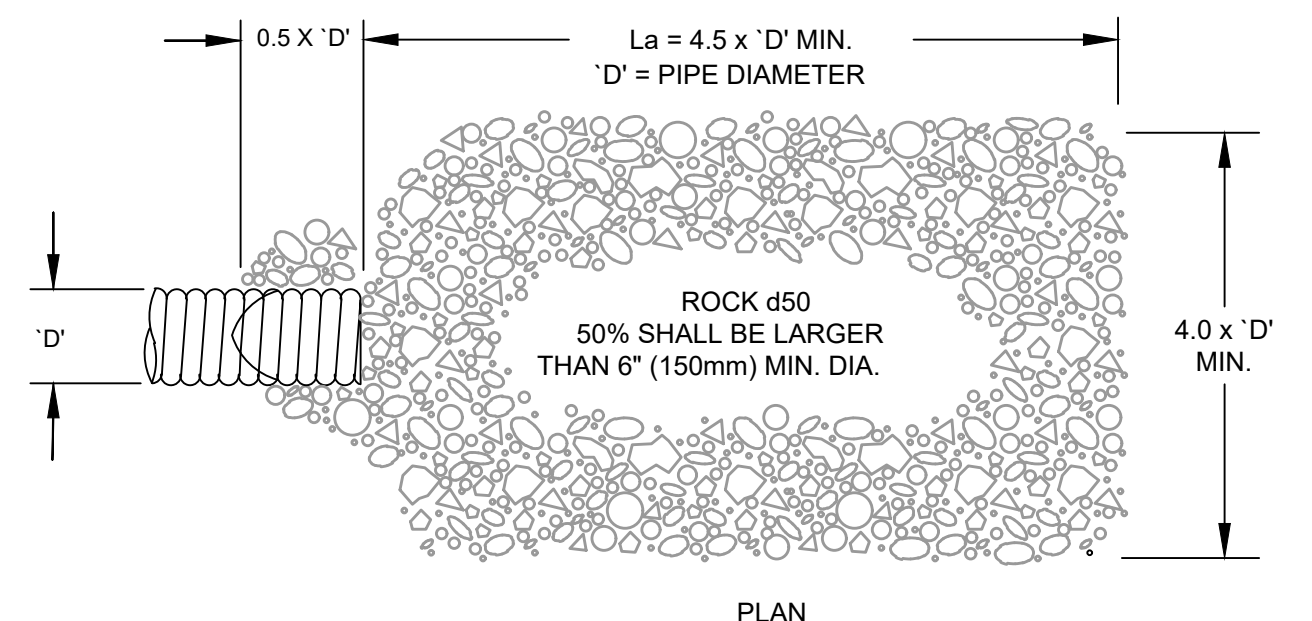
- NOTES:
- IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE FOOT ABOVE MAX. HEADWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

PIPE INLET PROTECTION

NOT TO SCALE



- NOTE:
- GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON UNDISTURBED SOILS, OR 6\"/>
 - GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL.



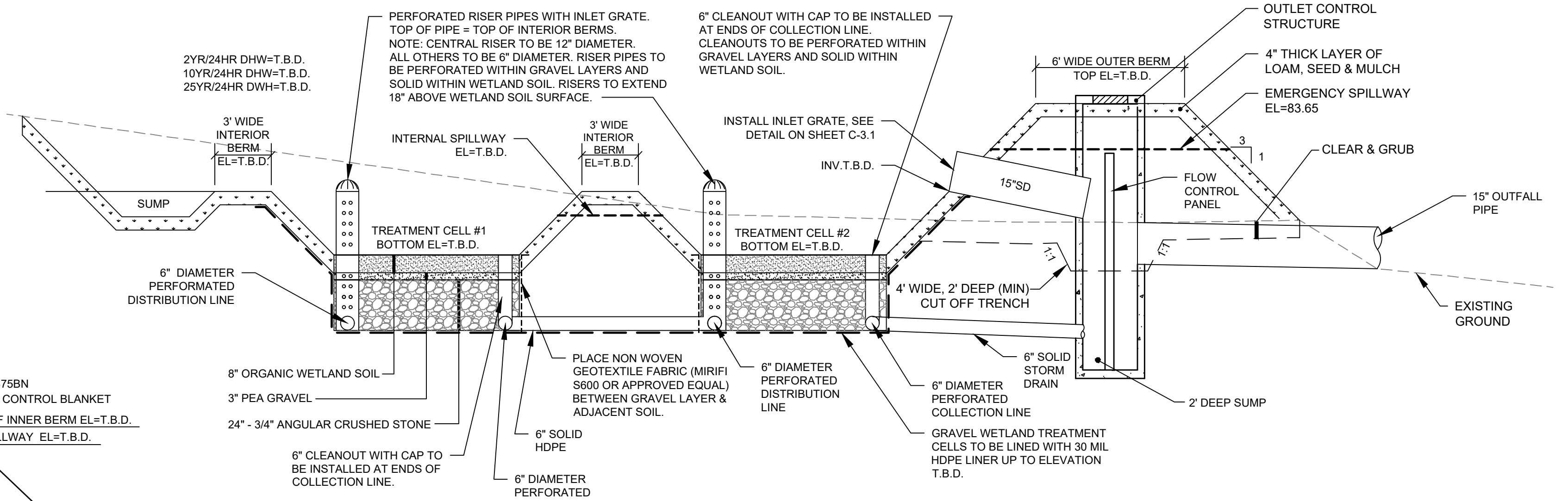
PIPE OUTLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	RIP RAP SIZING (D50)	LENGTH (FT)	WIDTH (FT)
6	3	2.5	2.0
12	5	5.0	4.0
15	6	6.25	5.0
18	8	7.5	6.0
24	10	10.0	8.0
30	12	13.0	10.0
36	14	15.0	12.0

- NOTES:
- 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
 - APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
 - FILTER MATERIAL SHALL BE FILTER FABRIC (MIRAFI 600X OR APPROVED EQUAL) OR 6\"/>

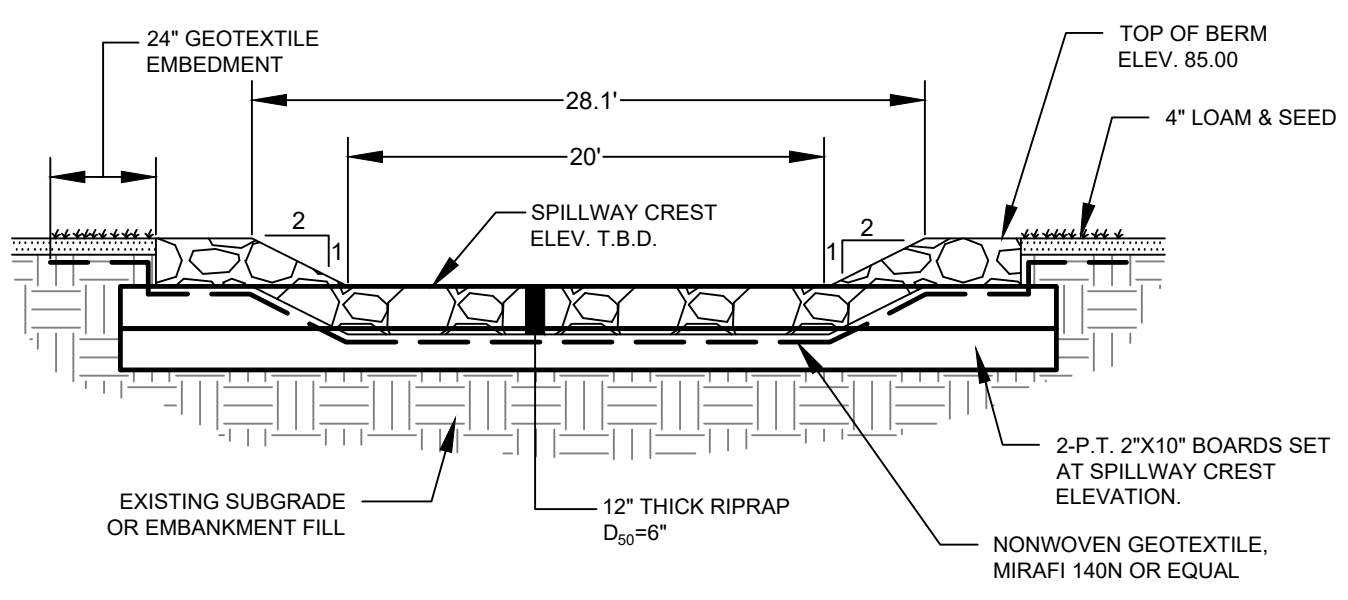
PIPE OUTLET PROTECTION

NOT TO SCALE



CROSS SECTION VIEW - GRAVEL WETLAND

NOT TO SCALE



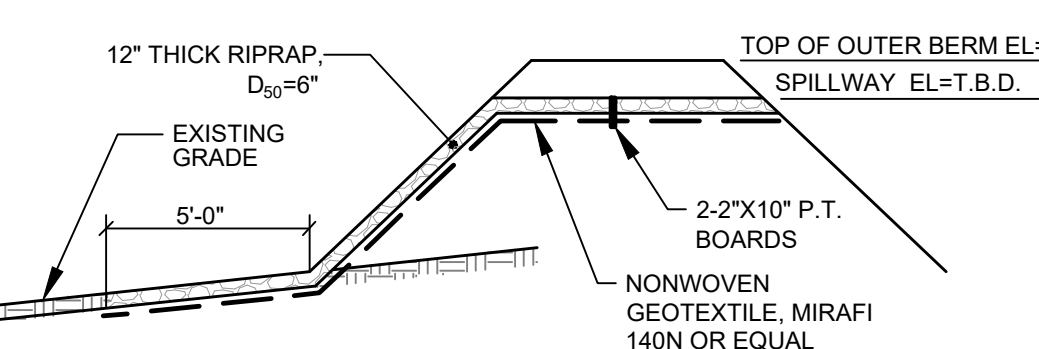
SPILLWAY CROSS SECTION

NOT TO SCALE

GRAVEL WETLAND DETAILS

NOT TO SCALE

- CONSTRUCTION SEQUENCE:**
- THE GRAVEL WETLAND SHALL BE EXCAVATED TO FINISHED GRADE ELEVATIONS AND USED AS A TEMPORARY SEDIMENT SUMP DURING CONSTRUCTION OF THE ROAD.
 - THE RIPRAP SWALE, RIPRAP FOREBAY, INTERNAL BERM AND SPILLWAY, AND OUTER BERM AND EMERGENCY SPILLWAY SHALL BE CONSTRUCTED PRIOR TO GRUBBING FOR ROAD CONSTRUCTION.
 - RUNOFF FROM DISTURBED AREAS SHALL BE DIRECTED TO THE SEDIMENT BASIN DURING ROAD CONSTRUCTION.
 - THE CRUSHED STONE, PEA GRAVEL, WETLAND SOIL, AND PIPES SHALL NOT BE INSTALLED UNTIL THE ROAD IS STABILIZED AND SWALES ARE VEGETATED WITH GRASS (AT LEAST 90% CATCH).



SPILLWAY EMBANKMENT SECTION

NOT TO SCALE

STATE OF MAINE

RICHARD L. MEEK

No. 10668

PROFESSIONAL ENGINEER

DATE: 09-13-2022

P.E.: RICHARD L. MEEK, P.E. 10668

DATE: 09-13-2022

SCALE: N.T.S.

DESIGNED: RLM

JOB NO: 2149

FILE: 2149.D

SHEET: C-5.4

PROJECT: BIDDEFORD RESIDENTIAL

ANDREWS ROAD, BIDDEFORD, MAINE

SHEET: SITE DETAILS

CLIENT: DEVINE CAPITAL, LLC

30 MILK STREET, THIRD FLOOR

PORTLAND, MAINE 04101

565 CONGRESS STREET

SUITE 201

PORTLAND, ME 04102

41 CAMPUS DRIVE

SUITE 301

NEW GLoucester, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317

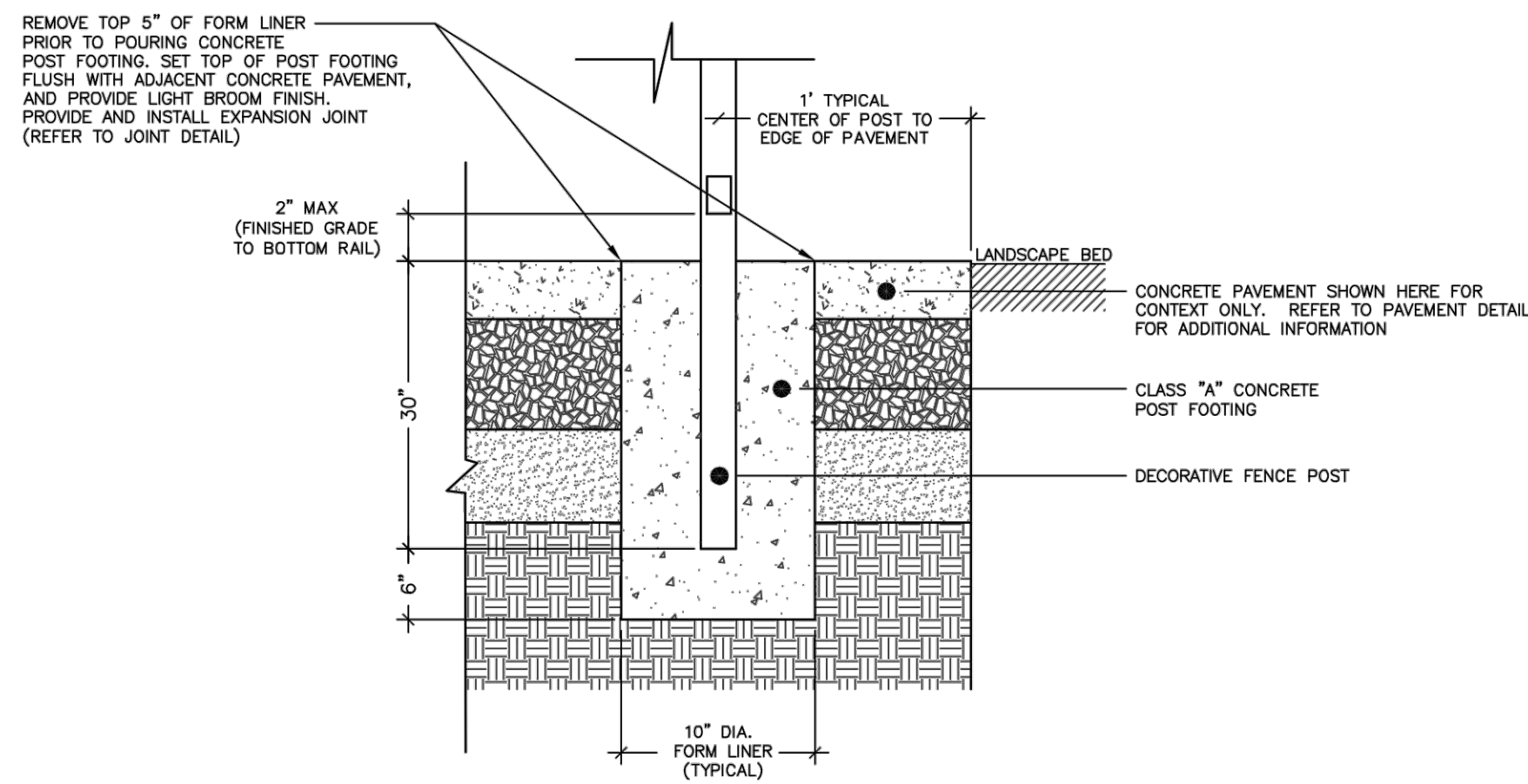
www.terradynconsultants.com

PERMIT DRAWING

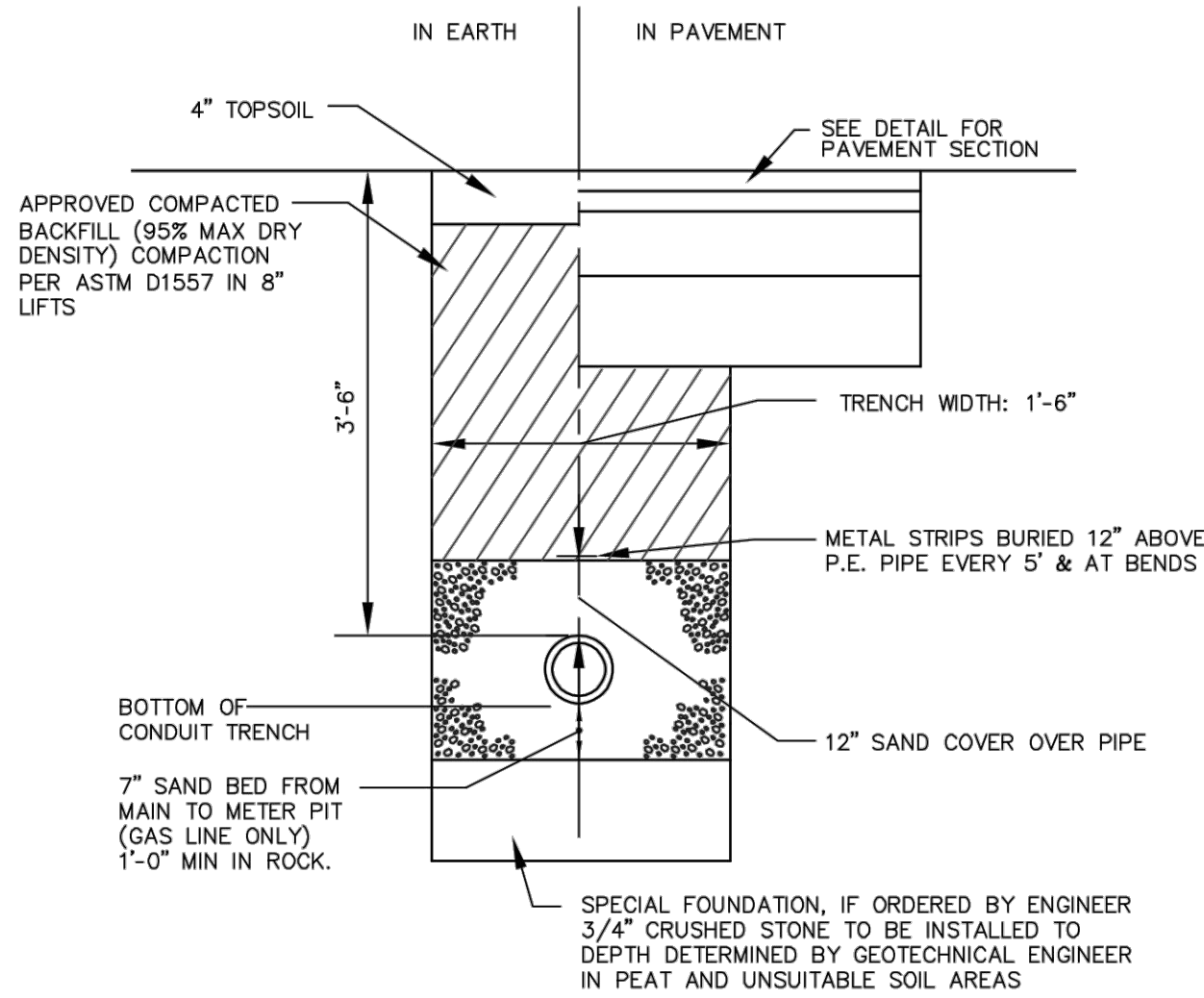
NOT FOR CONSTRUCTION

Environmental Permitting

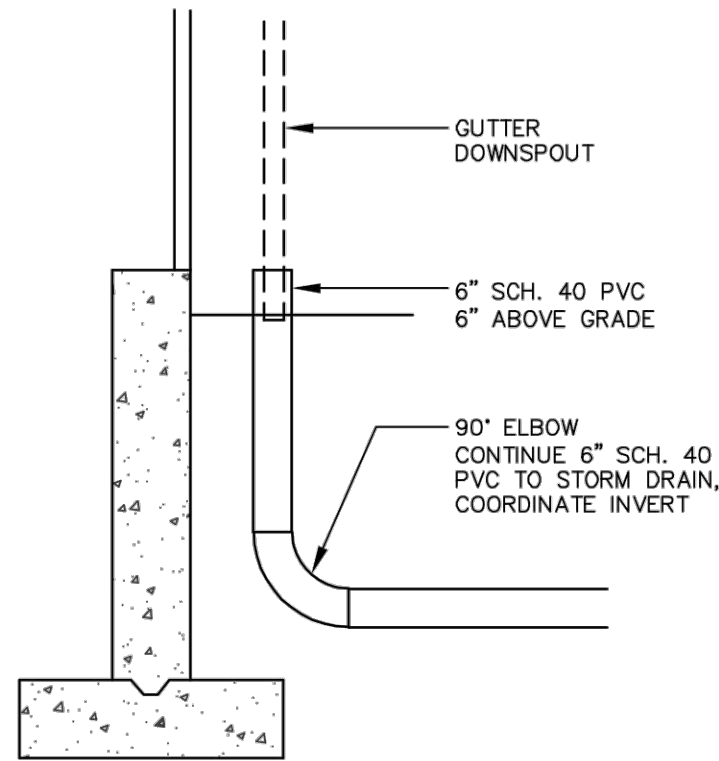
Land Planning | Stormwater Design |



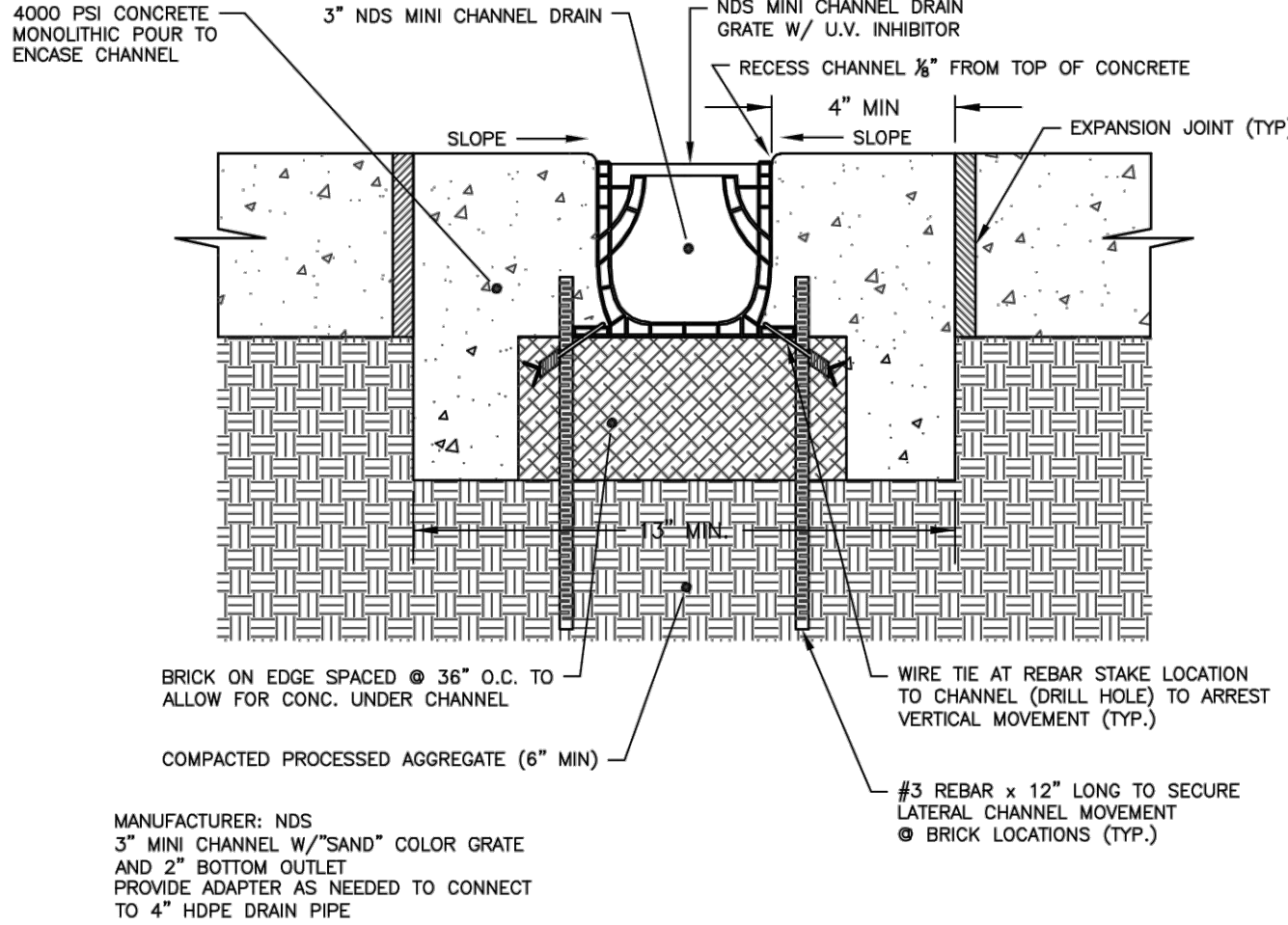
DECORATIVE FENCE POST FOOTING
NOT TO SCALE



GAS LINE TRENCH DETAIL
NOT TO SCALE



GUTTER DOWNSPOUT TRANSITION
NOT TO SCALE



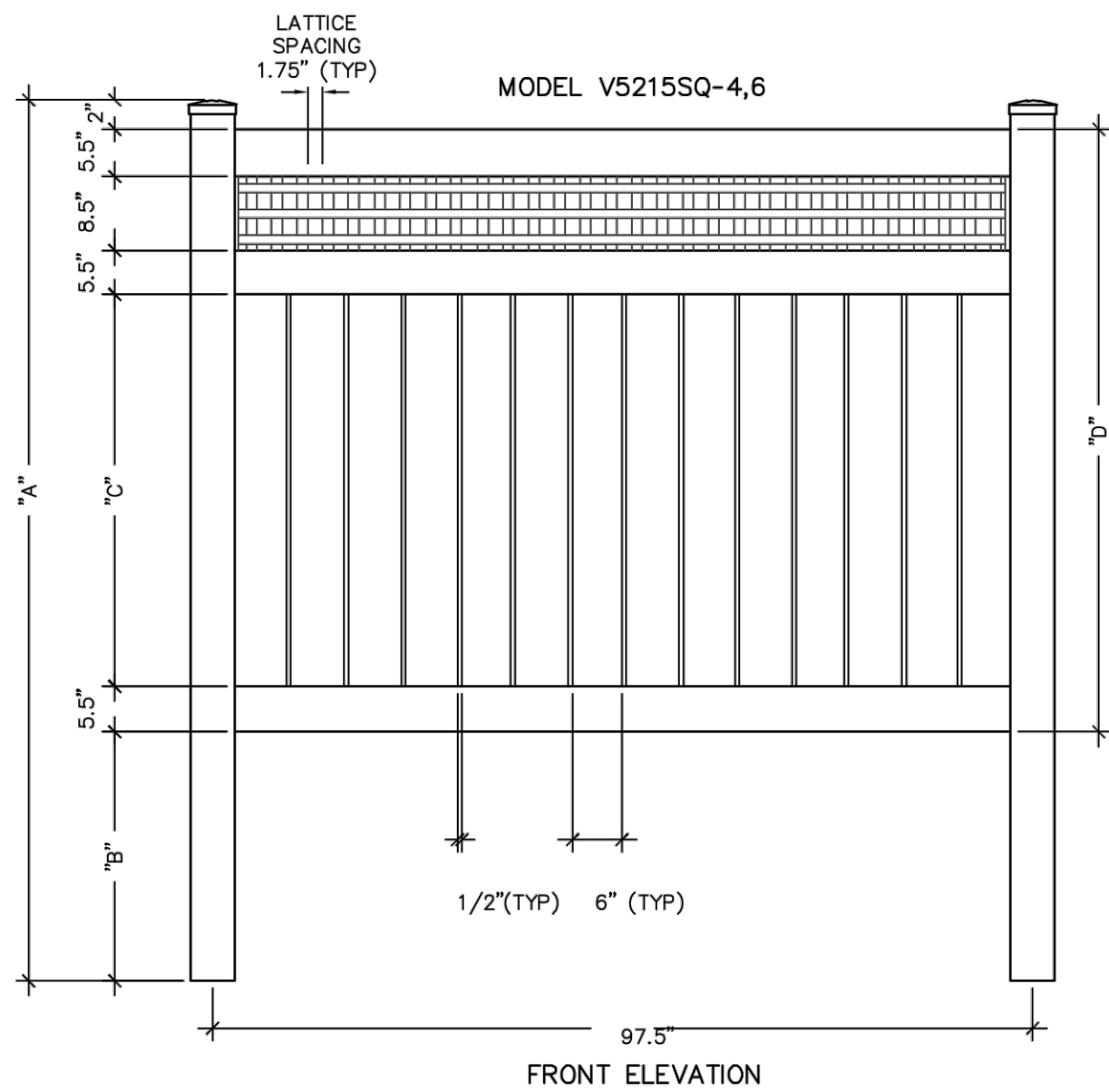
TRENCH DRAIN DETAIL
NOT TO SCALE

SELECT DESIRED POST CAP MODEL

- ☐ FRENCH GOTHIC - V55FG
- ☐ TEARDROP - V55TD
- ☐ COACHMAN - V55CM
- ☐ BALL - V55BC
- ☐ SOLAR - V55P
- ☐ SOLAR V55O
- ☐ NEW ENGLAND - V55NE
- ☒ FLAT - V55FO

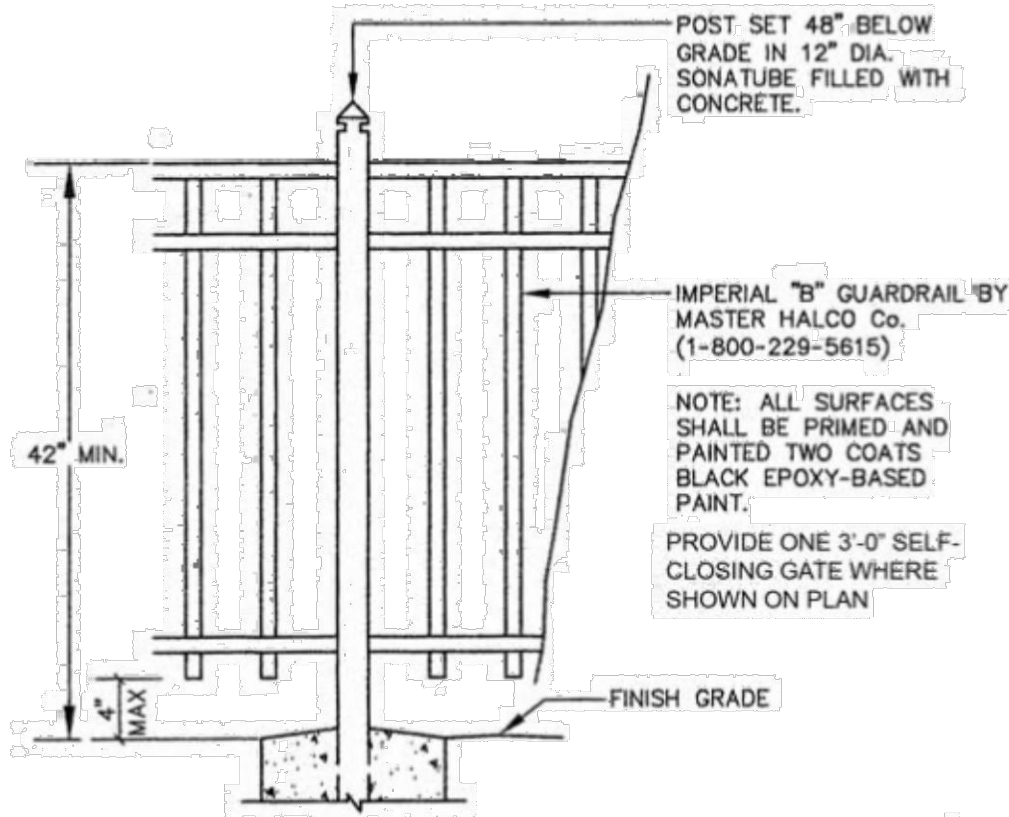
SELECT DESIRED POST OPTIONS

- ☐ 5\"X5\" - .140 WALL
- ☒ 5\"X5\" H.D. - .250 WALL
- ☐ MAJESTIC - 8\"X8\" - .250 WALL



POOL DECORATIVE FENCE - SEMI-PRIVACY
NOT TO SCALE

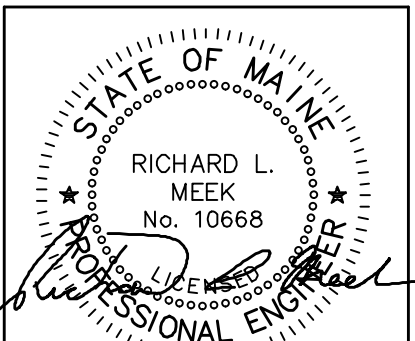
	A		B		C		D	
	H(FT)	INCHES	H(FT)	INCHES	H(FT)	INCHES	H(FT)	INCHES
3	60	3	22	3	11	3	36	
4	84	4	34	4	23	4	48	
5	96	5	34	5	35	5	60	
6	108	6	34	6	47	6	72	
8	144	8	46	8	71	8	96	
10	168	10	46	10	95	10	120	



FENCING AT DOG PARK
NOT TO SCALE

WAY FINDING SIGNS (T.B.D.)
NOT TO SCALE

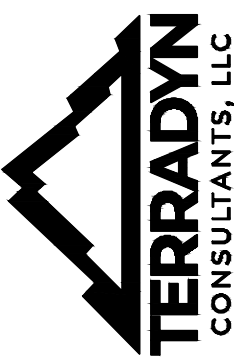
PYLON ENTRANCE SIGN (T.B.D.)
NOT TO SCALE



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

REV	BY	DATE	DESCRIPTION
1	RLM	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY
2	RLM	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260



PERMIT DRAWING
NOT FOR CONSTRUCTION

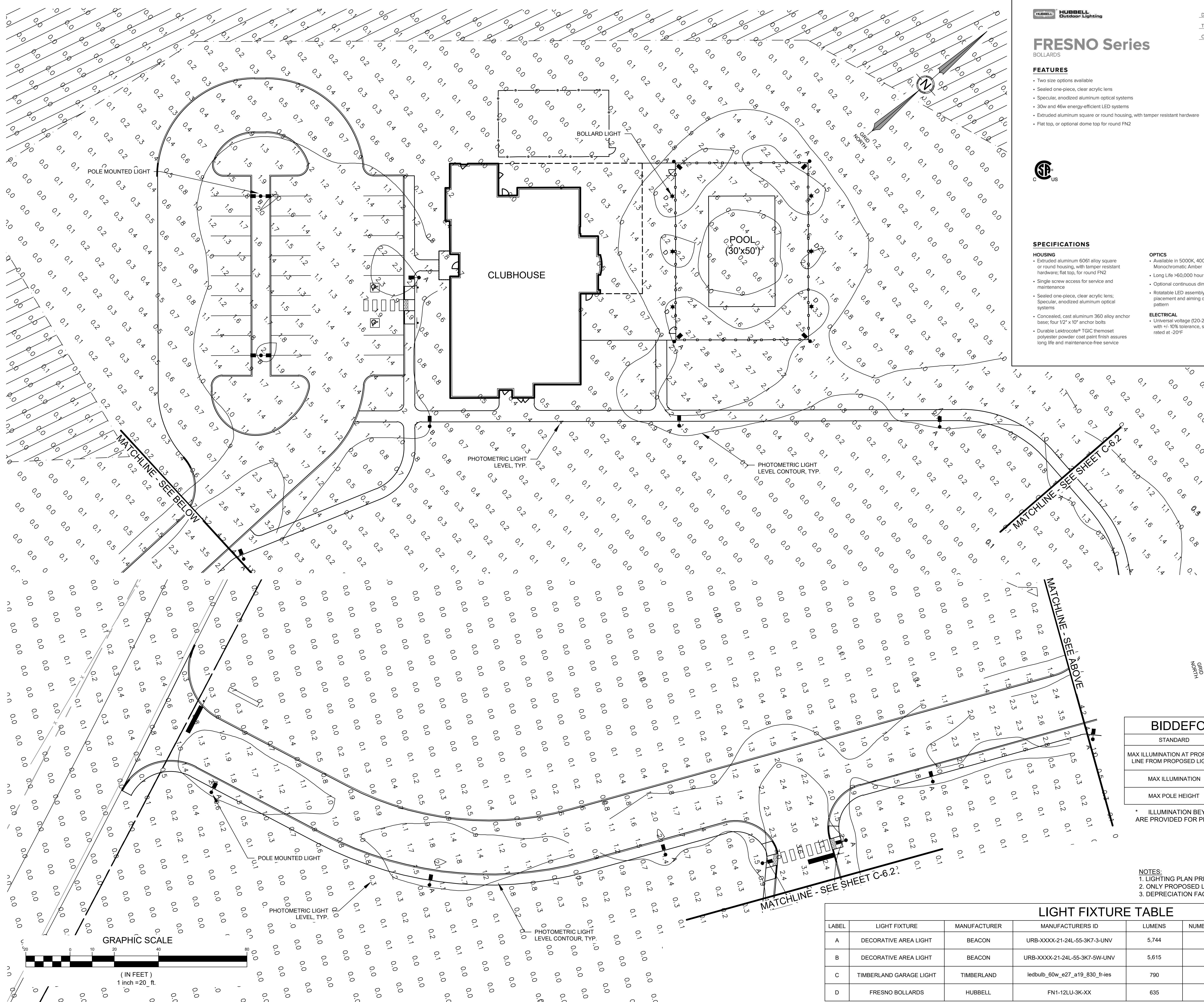
PROJECT: BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

SHEET: SITE DETAILS

CLIENT: DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101

DATE: 09-13-2022
SCALE: N.T.S.
DESIGNED: RLM
JOB NO.: 2149
FILE: 2149.D
SHEET: C-5.5

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting



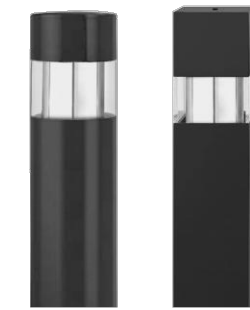
HUBBELL Outdoor Lighting

FRESNO Series

BOLLARDS

FEATURES

- Two size options available
- Sealed one-piece, clear acrylic lens
- Specular, anodized aluminum optical systems
- 30w and 46w energy-efficient LED systems
- Extruded aluminum square or round housing, with tamper resistant hardware
- Flat top, or optional dome top for round FN2



RELATED PRODUCTS
Bristol Park # Pavilion Family

SPECIFICATIONS

- HOUSING**
- Extruded aluminum 6061 alloy square or round housing, with tamper resistant hardware, flat top, for round FN2
 - Single screw access for service and maintenance
 - Sealed one-piece, clear acrylic lens; Specular, anodized aluminum optical systems
 - Concealed, cast aluminum 360 alloy anchor base; four 1/2" x 10" anchor bolts
 - Durable Lekrocoat® TGIC thermoset polyester powder coat paint finish assures long life and maintenance-free service

- OPTICS**
- Available in 5000K, 4000K, 3000K CCT and Monochromatic Amber
 - Long Life >60,000 hour L90 rated at 25°C
 - Optional continuous dimming to 10%
 - Rotatable LED assembly adjustment for ideal placement and aiming of asymmetric light pattern
- ELECTRICAL**
- Universal voltage (20-277, 50/60Hz) drivers with +/- 10% tolerance, starting temperature rated at -20°F

- CERTIFICATIONS**
- Listed to UL1598 for use in wet locations
- WARRANTY**
- 5 year limited warranty
 - See [HLI Standard Warranty](#) for additional information

LIGHTING LEGEND

- A** ● NEW LED LAMP (MATCH EXISTING), TYPE 3 20-FT. MOUNTING HEIGHT, COLOR BLACK
- B** ● NEW LED LAMP (MATCH EXISTING), TYPE 5 20-FT. MOUNTING HEIGHT, COLOR BLACK
- C** ■ BUILDING MOUNTED LIGHT FIXTURE. REFER TO ARCHITECTURAL PLANS FOR FIXTURE SPECS.
- D** ★ BOLLARD LIGHT, SPAULDING FRESNO BOLLARD, LED LAMP, COLOR BLACK

BIDDEFORD LIGHTING STANDARDS

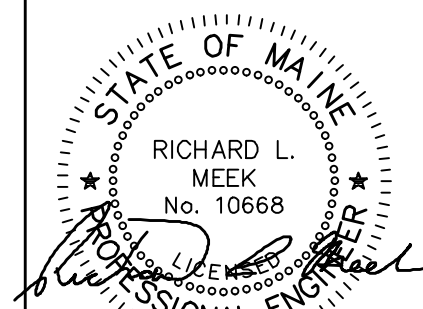
STANDARD	REQUIRED VALUE	PROVIDED VALUE
MAX ILLUMINATION AT PROPERTY LINE FROM PROPOSED LIGHTS	0.5 FC	0.0 FC
MAX ILLUMINATION	N/A	4.4 FC
MAX POLE HEIGHT	N/A	20'

* ILLUMINATION BEYOND PROPERTY LINES AT SITE ENTRANCE ARE PROVIDED FOR PEDESTRIAN AND VEHICLE SAFETY.

- NOTES:
- LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
 - ONLY PROPOSED LIGHTING FIXTURES ARE MODELED
 - DEPRECIATION FACTOR FOR LED IS 0.90

LIGHT FIXTURE TABLE

LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	LUMENS	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
A	DECORATIVE AREA LIGHT	BEACON	URB-XXXX-21-24L-55-3K7-3-UNV	5,744	61	20'	POLE
B	DECORATIVE AREA LIGHT	BEACON	URB-XXXX-21-24L-55-3K7-5W-UNV	5,615	17	20'	POLE
C	TIMBERLAND GARAGE LIGHT	TIMBERLAND	ledbulb_60w_e27_a19_830_fr-ies	790	126	3.5'	WALL
D	FRESNO BOLLARDS	HUBBELL	FN1-12LU-3K-XX	635	6	10'	BOLLARD



DATE: 09-13-2022
P.E.: RICHARD L. MECK, P.E. 10668

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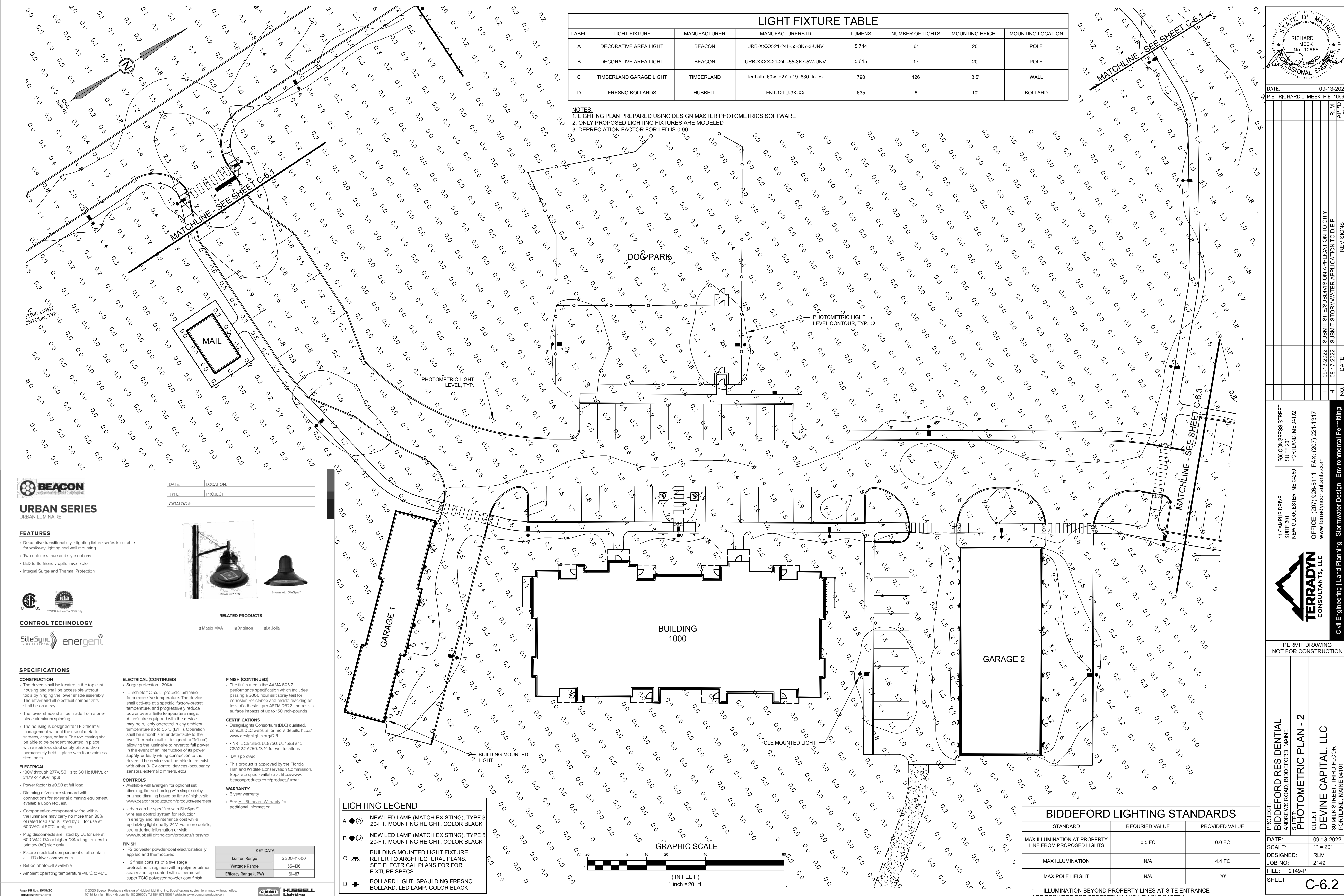
DATE: 09-13-2022
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LIGHT FIXTURE TABLE							
LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	LUMENS	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
A	DECORATIVE AREA LIGHT	BEACON	URB-XXXX-21-24L-55-3K7-3-UNV	5,744	61	20'	POLE
B	DECORATIVE AREA LIGHT	BEACON	URB-XXXX-21-24L-55-3K7-5W-UNV	5,615	17	20'	POLE
C	TIMBERLAND GARAGE LIGHT	TIMBERLAND	ledbulb_60w_e27_a19_830_fr-ies	790	126	3.5'	WALL
D	FRESNO BOLLARDS	HUBBELL	FN1-12LU-3K-XX	635	6	10'	BOLLARD

NOTES:
1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
2. ONLY PROPOSED LIGHTING FIXTURES ARE MODELED
3. DEPRECIATION FACTOR FOR LED IS 0.90

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

- FEATURES**
- Decorative transitional style lighting fixture series is suitable for walkway lighting and wall mounting
 - Two unique shade and style options
 - The driver and all electrical components shall be on a tray
 - LED turtle-friendly option available
 - Integral Surge and Thermal Protection



RELATED PRODUCTS

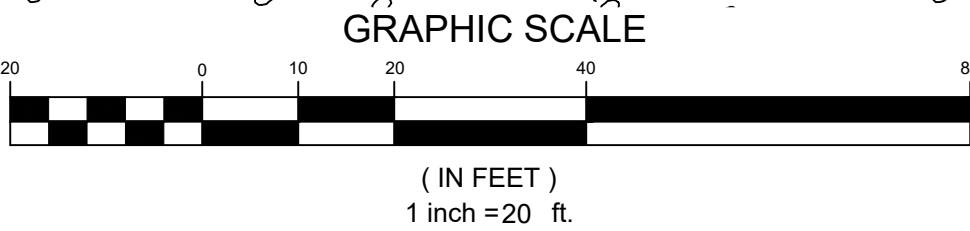
■ Matrix MAA ■ Brighton ■ Lila Jolla

CONTROL TECHNOLOGY

site sync energent

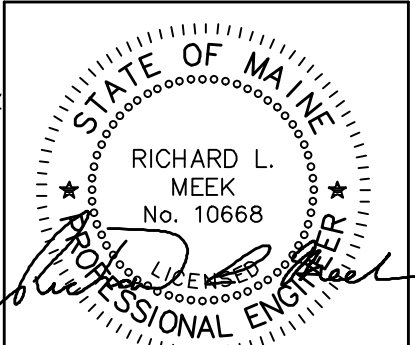
- SPECIFICATIONS**
- CONSTRUCTION**
- The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray
 - The lower shade shall be made from a one-piece aluminum spinning
 - The housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts
- ELECTRICAL**
- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input
 - Power factor is >0.90 at full load
 - Dimming drivers are standard with connections for external dimming equipment available upon request
 - Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher
 - Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. 15A rating applies to primary (AC) side only
 - Fixture electrical compartment shall contain all LED driver components
 - Button photocell available
 - Ambient operating temperature -40°C to 40°C
- ELECTRICAL (CONTINUED)**
- Surge protection - 20KA
 - LifesShield® Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fall on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.)
- CONTROLS**
- Available with Energent for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night visit: www.beaconproducts.com/products/energent
 - Urban can be specified with SileSync® wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. For more details, see ordering information or visit: www.hubbellingighting.com/products/silesync/
- FINISH**
- IPS polyester powder-coat electrostatically applied and thermocured
 - IPS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermostat super TGIC polyester powder coat finish
- FINISH (CONTINUED)**
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- CERTIFICATIONS**
- DesignLights Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/DLC>
 - VRTL Certified, UL8750, UL 1598 and CSA22.2 #250, 13-14 for wet locations
 - IDA approved
 - This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at <http://www.beaconproducts.com/products/urban>
- WARRANTY**
- 5 year warranty
 - See L&L Standard Warranty for additional information
- KEY DATA**
- | | |
|----------------------|--------------|
| Lumen Range | 3,300-11,600 |
| Wattage Range | 55-136 |
| Efficacy Range (LPW) | 61-87 |

- LIGHTING LEGEND**
- A ● NEW LED LAMP (MATCH EXISTING), TYPE 3 20-FT. MOUNTING HEIGHT, COLOR BLACK
 - B ● NEW LED LAMP (MATCH EXISTING), TYPE 5 20-FT. MOUNTING HEIGHT, COLOR BLACK
 - C ■ BUILDING MOUNTED LIGHT FIXTURE. REFER TO ARCHITECTURAL PLANS. SEE ELECTRICAL PLANS FOR FIXTURE SPECS.
 - D ★ BOLLARD LIGHT, SPAULDING FRESNO BOLLARD, LED LAMP, COLOR BLACK



BIDDEFORD LIGHTING STANDARDS		
STANDARD	REQUIRED VALUE	PROVIDED VALUE
MAX ILLUMINATION AT PROPERTY LINE FROM PROPOSED LIGHTS	0.5 FC	0.0 FC
MAX ILLUMINATION	N/A	4.4 FC
MAX POLE HEIGHT	N/A	20'

* ILLUMINATION BEYOND PROPERTY LINES AT SITE ENTRANCE ARE PROVIDED FOR PEDESTRIAN AND VEHICLE SAFETY.



DATE: 09-13-2022
P.E.: RICHARD L. MECK, P.E. 10668

REVISIONS	DATE	BY
1	09-13-2022	RLM
2	08-17-2022	APPD
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565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyndesign.com



PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:	BIDDEFORD RESIDENTIAL
SHEET:	ANDREWS ROAD, BIDDEFORD, MAINE
CLIENT:	DEVINE CAPITAL, LLC
FILE:	2149-P
SHEET:	2149
DATE:	09-13-2022
DESIGNED:	RLM
JOB NO.:	2149
FILE:	2149-P
SHEET:	C-6.2

LIGHT FIXTURE TABLE							
LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	LUMENS	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
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D	FRESNO BOLLARDS	HUBBELL	FN1-12LU-3K-XX	635	6	10'	BOLLARD

NOTES:
1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
2. ONLY PROPOSED LIGHTING FIXTURES ARE MODELED
3. DEPRECIATION FACTOR FOR LED IS 0.90

BIDDEFORD LIGHTING STANDARDS		
STANDARD	REQUIRED VALUE	PROVIDED VALUE
MAX ILLUMINATION AT PROPERTY LINE FROM PROPOSED LIGHTS	0.5 FC	0.0 FC
MAX ILLUMINATION	N/A	4.4 FC
MAX POLE HEIGHT	N/A	20'

* ILLUMINATION BEYOND PROPERTY LINES AT SITE ENTRANCE ARE PROVIDED FOR PEDESTRIAN AND VEHICLE SAFETY.



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

[illegible]

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SUITE 201
PORTLAND, ME 04102

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NEW GLOUCESTER, ME 04260

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OFFICE: (207) 926-5111 FAX:
www.terradyconsultants.com



Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE

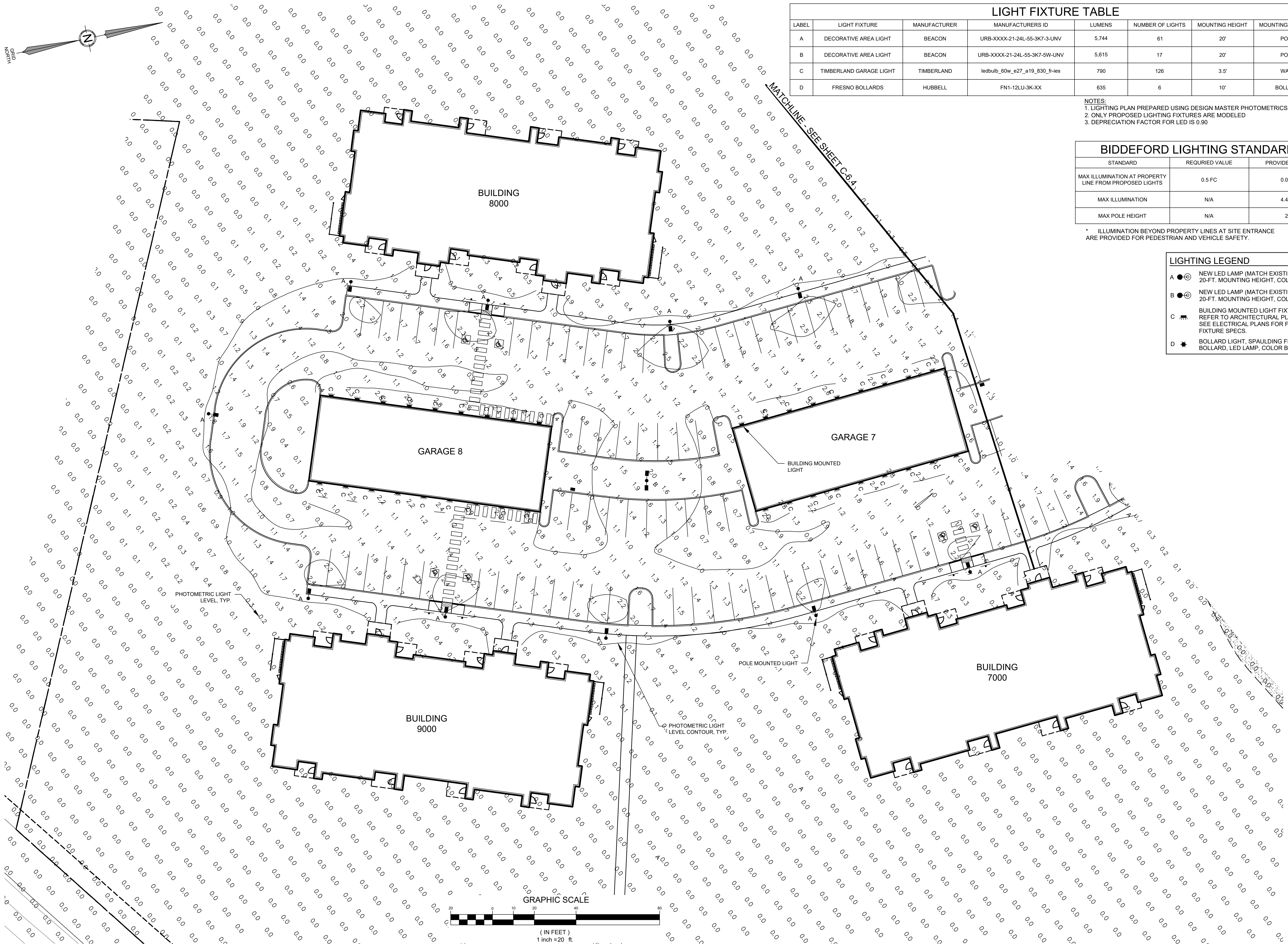
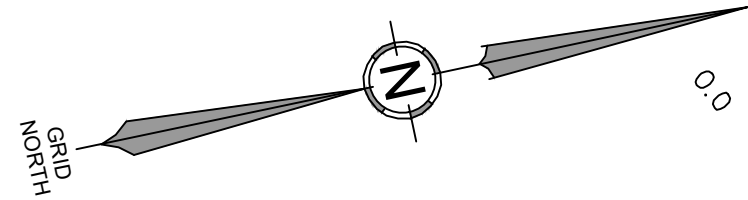
SHEET: PHOTOMETRIC PLAN - 4

CLIENT: DEVINE CAPITAL, LLC

PORTLAND, MAINE 04101

DATE:	09-13-2022
SCALE:	1" = 20'
DESIGNED:	RLM
JOB NO:	2149
FILE:	2149-P
SHEET	C 64

C-6.4



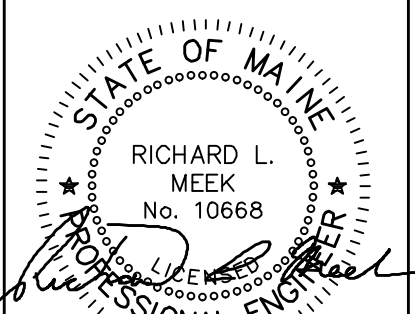
LIGHT FIXTURE TABLE							
LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	LUMENS	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
A	DECORATIVE AREA LIGHT	BEACON	URB-XXXX-21-24L-55-3K7-3-UNV	5,744	61	20'	POLE
B	DECORATIVE AREA LIGHT	BEACON	URB-XXXX-21-24L-55-3K7-5W-UNV	5,615	17	20'	POLE
C	TIMBERLAND GARAGE LIGHT	TIMBERLAND	ledbulb_60w_e27_a19_830_fr-ies	790	126	3.5'	WALL
D	FRESNO BOLLARDS	HUBBELL	FN1-12LU-3K-XX	635	6	10'	BOLLARD

NOTES:
1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
2. ONLY PROPOSED LIGHTING FIXTURES ARE MODELED
3. DEPRECIATION FACTOR FOR LED IS 0.90

BIDDEFORD LIGHTING STANDARDS		
STANDARD	REQUIRED VALUE	PROVIDED VALUE
MAX ILLUMINATION AT PROPERTY LINE FROM PROPOSED LIGHTS	0.5 FC	0.0 FC
MAX ILLUMINATION	N/A	4.4 FC
MAX POLE HEIGHT	N/A	20'

* ILLUMINATION BEYOND PROPERTY LINES AT SITE ENTRANCE ARE PROVIDED FOR PEDESTRIAN AND VEHICLE SAFETY.

LIGHTING LEGEND	
A	NEW LED LAMP (MATCH EXISTING), TYPE 3 20-FT. MOUNTING HEIGHT, COLOR BLACK
B	NEW LED LAMP (MATCH EXISTING), TYPE 6 20-FT. MOUNTING HEIGHT, COLOR BLACK
C	BUILDING MOUNTED LIGHT FIXTURE. REFER TO ARCHITECTURAL PLANS. SEE ELECTRICAL PLANS FOR FOR FIXTURE SPECS.
D	BOLLARD LIGHT, SPAULDING FRESNO BOLLARD, LED LAMP, COLOR BLACK



DATE: 09-13-2022
P.E.: RICHARD L. MEEK, P.E. 10668

REV	BY	DATE	REVISIONS
1	RLM	09-13-2022	SUBMIT SITE/SUBDIVISION APPLICATION TO CITY
2	APPD	08-17-2022	SUBMIT STORMWATER APPLICATION TO D.E.P.

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com



PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: BIDDEFORD RESIDENTIAL
ANDREWS ROAD, BIDDEFORD, MAINE
SHEET: PHOTOMETRIC PLAN - 5
CLIENT: DEVINE CAPITAL, LLC
30 MILK STREET, THIRD FLOOR
PORTLAND, MAINE 04101
DATE: 09-13-2022
SCALE: 1" = 20'
DESIGNED: RLM
JOB NO: 2149
FILE: 2149-P
SHEET C-6.5



FRONT ELEVATION

RESIDENTIAL BUILDINGS

BIDDEFORD RESIDENTIAL

BIDDEFORD, MAINE

3/16" = 1'-0"
AUGUST 8, 2022
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ARCHITECTURE

2045 ROUTE 35
WALL, NEW JERSEY 07719
(856) 429-2001



REAR ELEVATION



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION

RESIDENTIAL BUILDINGS

BIDDEFORD RESIDENTIAL

BIDDEFORD, MAINE

1/8" = 1'-0"
AUGUST 8, 2022
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FRONT ELEVATION

CLUBHOUSE

BIDDEFORD RESIDENTIAL

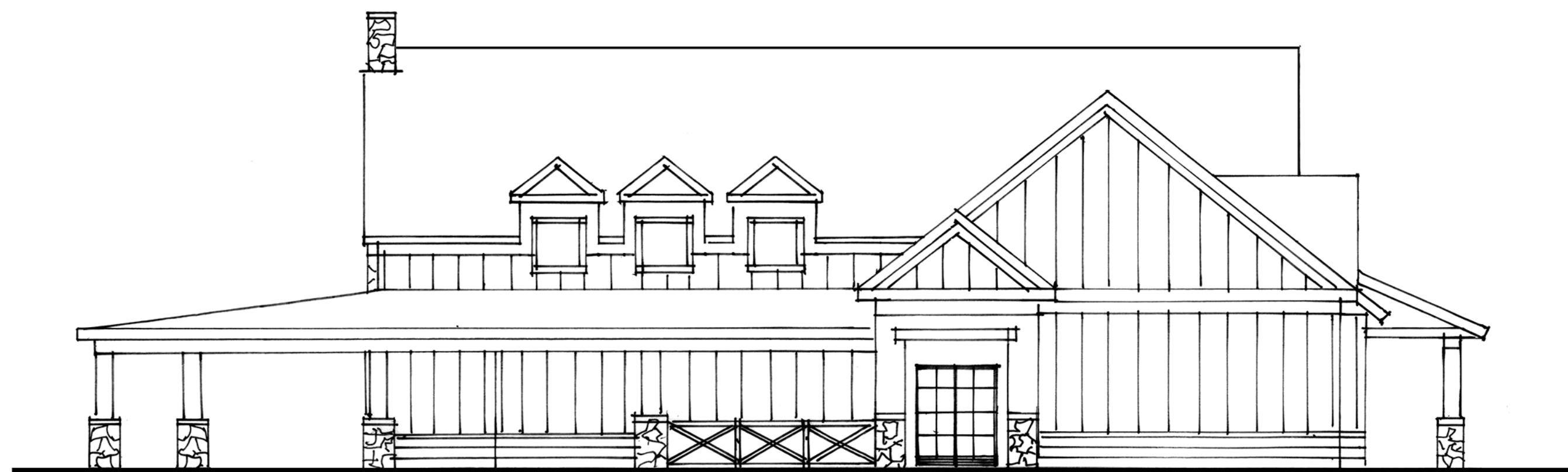
BIDDEFORD, MAINE

3/16" = 1'-0"
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REAR ELEVATION



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION

CLUBHOUSE

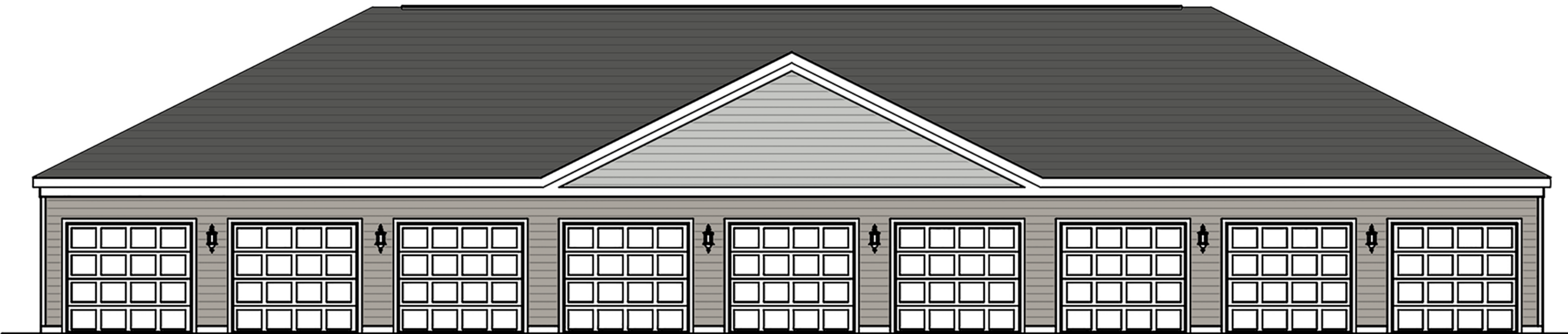
BIDDEFORD RESIDENTIAL

BIDDEFORD, MAINE

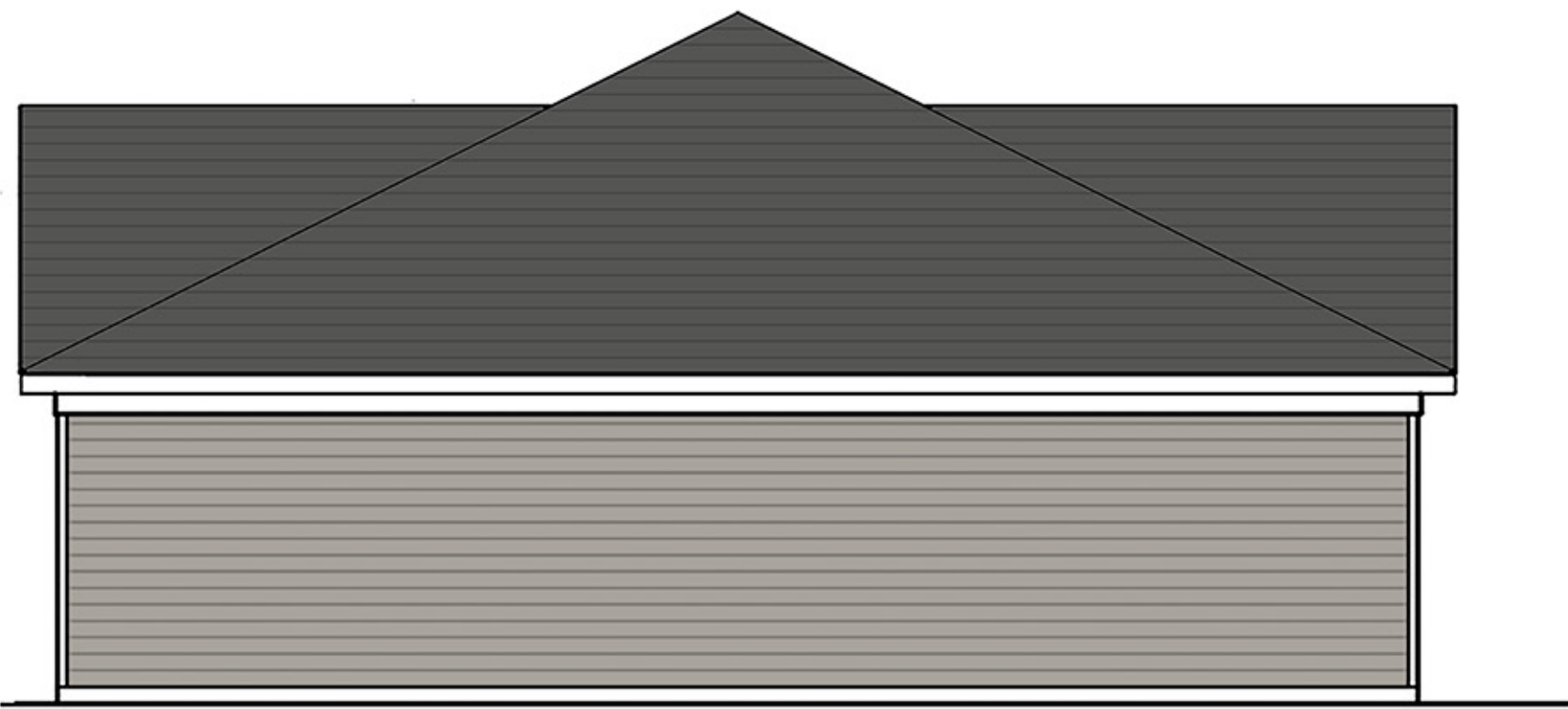
1/8" = 1'-0"
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FRONT & REAR ELEVATIONS



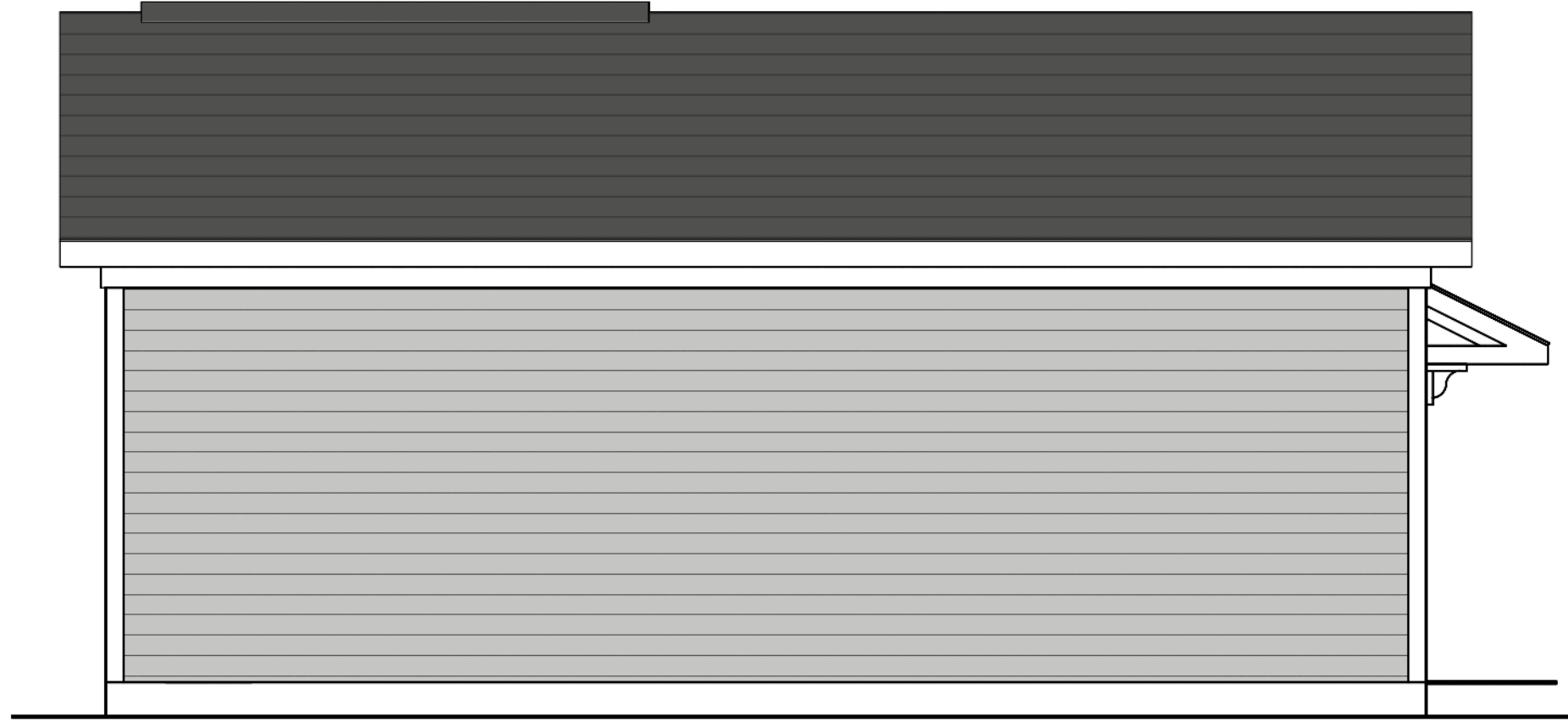
SIDE ELEVATIONS

GARAGES

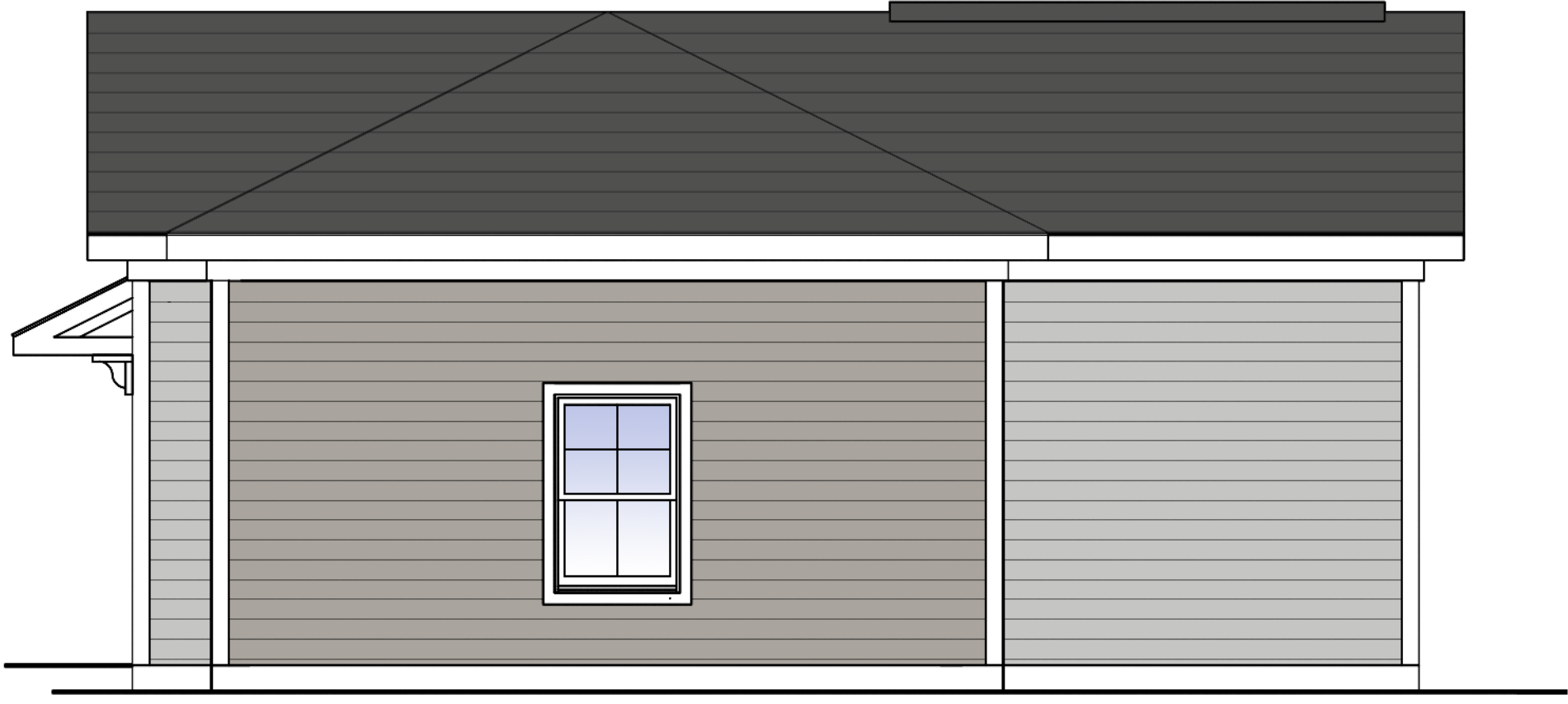
BIDDEFORD RESIDENTIAL
BIDDEFORD, MAINE

3/16" = 1'-0"
AUGUST 8, 2022
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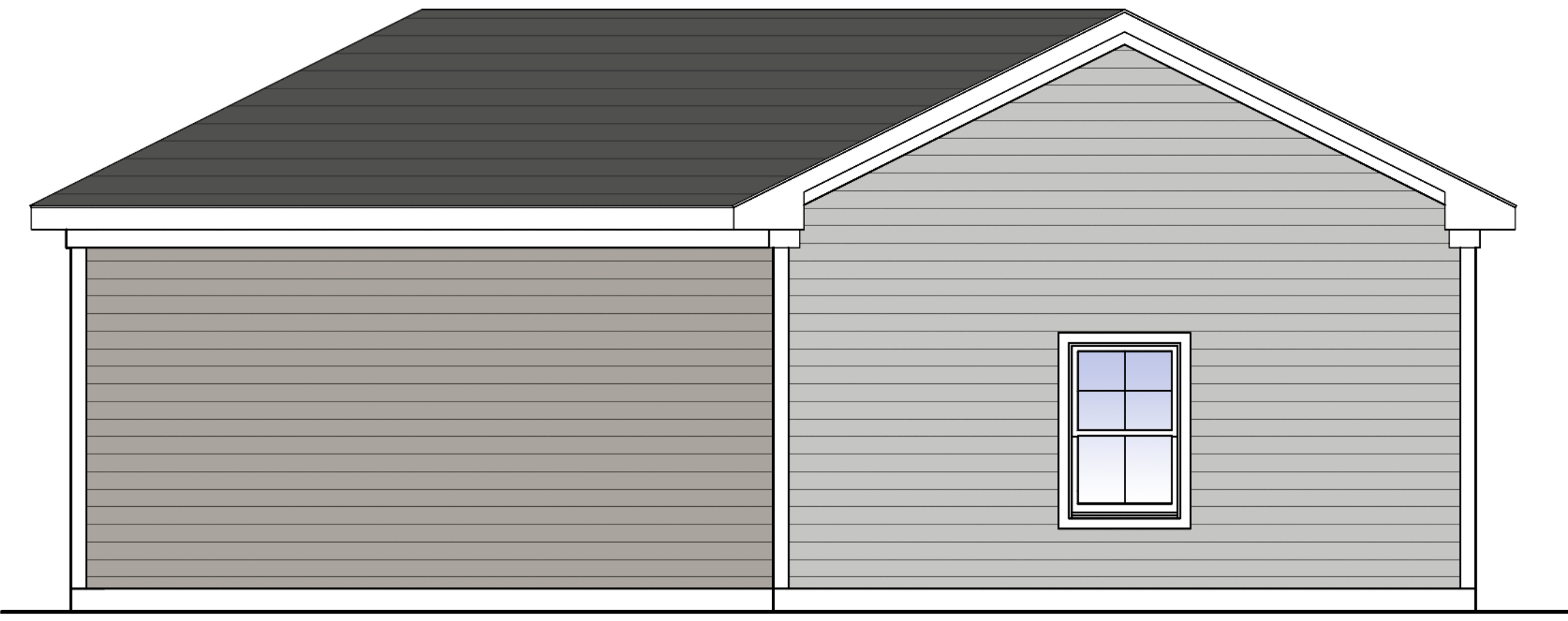
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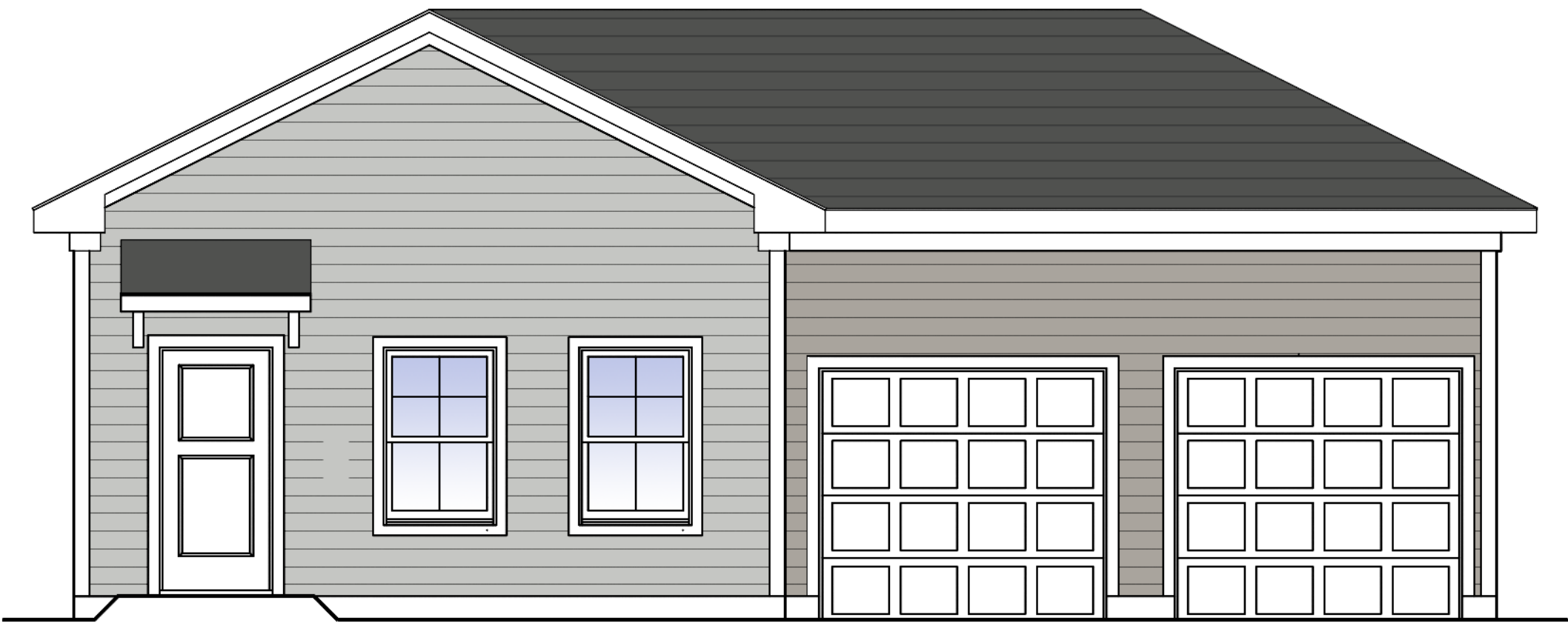
LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION



FRONT ELEVATION

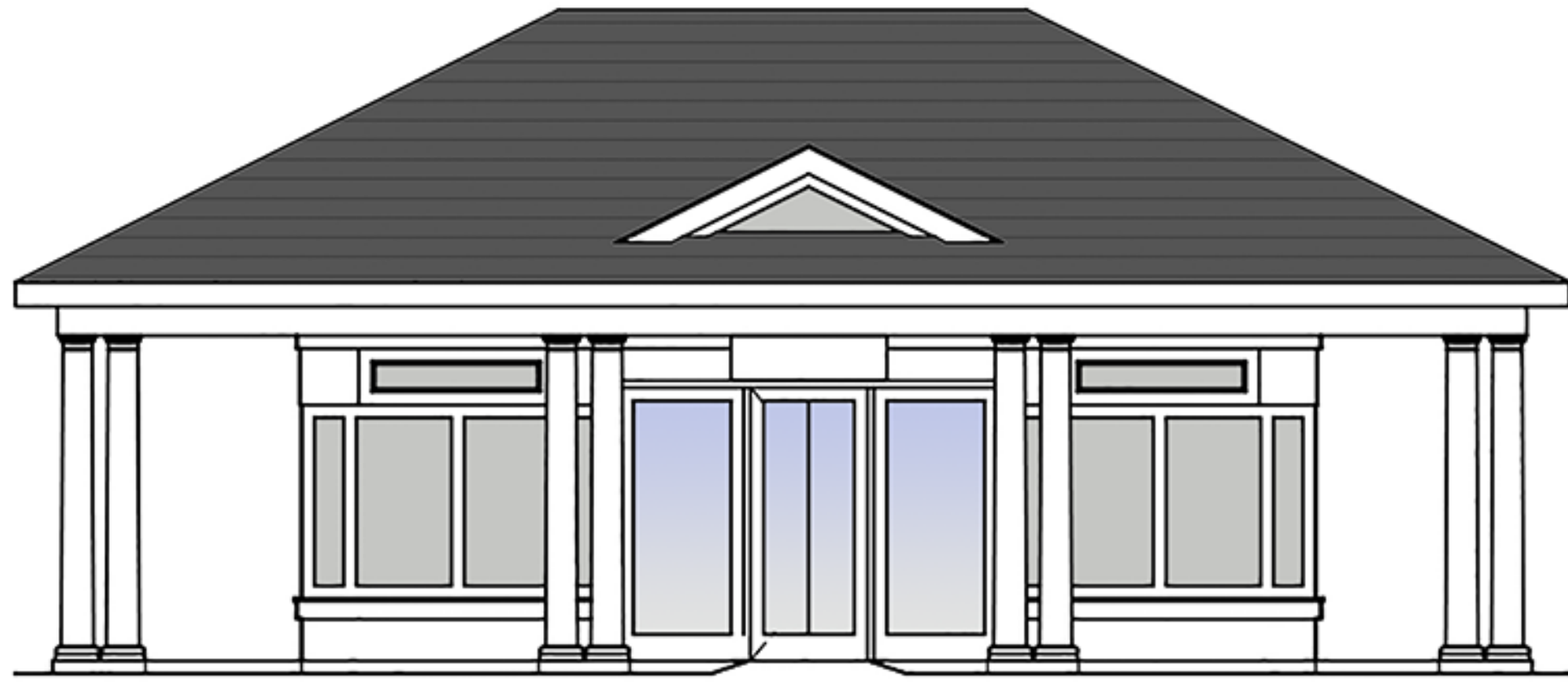
MAINTENANCE BUILDING

BIDDEFORD RESIDENTIAL

BIDDEFORD, MAINE

1/4" = 1'-0"
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FRONT ELEVATION



REAR ELEVATION



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION

MAIL & PACKAGE BUILDING

BIDDEFORD RESIDENTIAL

BIDDEFORD, MAINE

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