

January 13, 2026

To: Planning Board Member  
c/o Alexandra Sykes, City Planner  
City of Belfast Code & Planning Office  
131 Church Street  
Belfast, ME 04915

Subject: Multi-Family Site Plan  
Josh Oxley, Ecologix Homes, LLC  
58 Swan Lake Avenue (Tax Map 20, Lot 10)  
Belfast, Maine

Dear Belfast Planning Board Member:

On behalf of Josh Oxley and Ecologix Homes, LLC, we are writing to submit a Site Plan Application for a new multi-family housing (a permissible use in this district) located at 58 Swan Lake Avenue (Tax Map 20, Lot 10). This project includes:

- A new, 6-unit, single story, multi-family building (Building A), with an attached single car garage for each unit, totaling 9,278 square feet.
- A new single story, residential duplex (Building B), with an attached single car garage for each unit, totaling 2,724 square feet.

Other elements off the site plan include an improved road coming off of Swan Lake Avenue, space for one parking spot in each garage (8 total), 8 exterior parking spaces, grading and drainage improvements, landscape improvements, limited lighting, and utilities to serve the new buildings. There will also be pathways from the parking spots to the front door for each unit. The project is located in the Swan Lake Ave Mixed Use zoning district (SLAMU). See the Site Plans enclosed in Attachment 1 for and the deed enclosed in Attachment 2 for details. An application form has been filed through the City of Belfast's Permit Portal.

**We have listed below the items from the City of Belfast ordinance Section 90-43(b) criteria for Site Plan review by the Planning Board and how we believe these criteria are met:**

*(1) Pollution. The proposed development will not result in undue water or air pollution.*

The intended use of the property represents no impact to floodplains and proposes no effluents. There will not be any change in the use of the site to result in undue risk of water or air pollution.

*(2) Sufficient Water...*

The project will utilize the existing municipal water supply, from the Belfast Water District (BWD). The buildings will be served by new water services, as shown on the Site Plan. Anticipated residential water usage at the site is 1,440 gallons per day (gpd), as described below.

**Table 1 – Estimated Water Demand**

| # Units           | Bedroom | Flow / Bedroom (gpd) | Total (gpd)  |
|-------------------|---------|----------------------|--------------|
| <b>Building A</b> |         |                      |              |
| 6                 | 2       | 90                   | 1,080        |
| <b>Building B</b> |         |                      |              |
| 2                 | 2       | 90                   | 360          |
| Grand Total       |         |                      | <b>1,440</b> |

Estimated water demand is based on the State of Maine Subsurface Wastewater Usage Guidelines for multi-family, which estimates 90 gpd for each bedroom. BWD confirmed they possess adequate supply to meet the project demand, as confirmed in Attachment 3.

*(3) Municipal Water Supply...*

See response to (2) above.

*(4) Soil Erosion and Sediment Control...*

New site work will consist of the new structures, new driveway and parking, new utilities, and new grading and drainage. Best management practices for erosion and sedimentation control will be followed. Temporary sediment control will be achieved using sediment control berms on the down gradient of existing impervious and proposed disturbance areas (see Site Plan in Attachment 1). This project also requires a Stormwater Management Permit By Rule from the Maine DEP, because it will have 25,360 SF of impervious area and 49,562 SF of disturbed area. The triggers for this permit are one or more acres of disturbed area and less than one acre of impervious and less than five acres of developed area in a watershed that is not a direct watershed of a lake most at risk, lake most at risk severely blooming, or urban impaired stream. This permit application requires a detailed Erosion and Sedimentation Control Plan. It was submitted on 12/23/2025 and approved on 1/6/2026. See attachment 7.

*(5) Highway or Public Road Congestion...*

The project will utilize the existing entry from Swan Lake Avenue, and new paved parking for off-street parking as well as a garage for each unit. The existing gravel driveway will be replaced by a new paved driveway and remain in the same location. Traffic at the site will consist of the daily entrance and egress of residents to and from the apartments. Using the ITE Trip Generation Manual, 11<sup>th</sup> Edition, for single family attached housing (Land Use Code 215), the estimated peak hour trip rate is 0.56 per dwelling unit, so with 8 dwelling units, the estimated peak hour trip rate is 4.5. It also estimates a daily average of 7.32 trips per unit, so 58.6 trips per day. The MaineDOT map (<https://www.maine.gov/mdot/mapviewer/>) shows a factored annual average daily traffic of 5,571 and an hourly capacity of 1,400. A peak hour of 4.5 is 0.32% of the hourly capacity of 1,400, and a daily average of 58.6 is 1.0% of the annual average daily traffic. With the proposed development, at no time during the typical day or week is this traffic expected to result in unreasonable congestion or unsafe conditions. The existing driveway is gravel, and it will be replaced with a paved driveway that is 18' of pavement, and has a 1' shoulder on either side. See section 98-1154 and 98-155 for more information about the driveway including, sight distance, grades, and separation distance.

*(6) Sewage Waste Disposal...*

The project will utilize municipal sewage waste disposal. There is an 8" PVC main in Swan Lake Avenue. The new 6" PVC sewer service will tie into that that as shown on the Site Plan in Attachment 1. As seen in Attachment 3, Olver Associates, Inc. confirmed that the Belfast Wastewater Treatment Plant will have the capacity for this project.

*(7) Municipal Solid Waste and Sewage Waste Disposal...*

Solid waste will be disposed of at a licensed facility by a private hauler, Casella, from the dumpster on of the property, which will be located as shown on the Site Plan in Attachment 1. This dumpster will be utilized by both buildings. See Item (6) above regarding municipal wastewater.

*(8) Aesthetic, Cultural and Natural Values...*

The property is in low density, mixed use residential and commercial area. The site is within a district designated for mixed use, which lists over 100 allowable uses. Additionally, this project will help fill a need for rental housing. The majority of this project will be set back from the road and the existing buffers will be maintained to ensure this will not have an undue adverse effect on the scenic or natural beauty of the area. Mowing, plowing, and sanding/salting will be outsourced to a private contractor.

*(9) Conformity with City ordinances and plans...*

Conformance with the Zoning Ordinance's Dimensional Standards is confirmed via a table on the lower left corner of the Site Plan. Based on our review of zoning and performance standards, the project as proposed is in compliance with the City's Floodplain regulations, Comprehensive plan, Zoning regulations, and the technical and performance standards to the extent the provisions of these various City codes and plans apply. On the north and west sides of the property, the buildings are currently 2' from the 25' setback. The roof overhangs will be 1' or less, remaining 1' away from the setback. The buildings are not close to the setbacks on the other sides of the property. The frontage of this property is 87.8', which is under the required 150', but a pre-existing condition.

Multi-family housing on public sewer requires a minimum area of 21,780 square feet + 2,500 square feet for each additional unit. The total lot area is 74,766 square feet. There are no easements, wetlands, and slopes over 20%, so there is no area that needs to be subtracted, leaving the net lot area for this calculation to be 74,766 square feet. The total allowable multi-family density on this property, as described in Table 2 below, is 25 units, with 8 units proposed on this project.

**Table 2: Multi Family Density Calculations**

| Area Description                     | Area   |
|--------------------------------------|--|
| Net Lot Area                         | 74,766 SF  |
| Multi-Family Minimum (up to 4 Units) | 21,780 SF  |
| Remaining Lot Area                   | 52,986 SF  |
| Additional Units @ 2,500 SF/Unit     | $52,986 \text{ SF} / 2,500 \text{ SF/Unit} = 21 \text{ Units}$ |
| Total Allowable Multi-Family Density | $4 \text{ Units} + 21 \text{ Units} = 25 \text{ Units}$        |
| Total Proposed                       | 8 Units  |

*(10) Financial and Technical Capacity...*

The parcel is currently owned by Ecologix Homes, LLC/Josh Oxley. Bangor Savings Bank has provided a letter regarding financial capacity and financing for the project, which is included in Attachment 4. Josh Oxley has also retained site engineering services from Terra Firma Professional Engineering, LLC, an experienced local civil engineering firm, and Good Deeds, an experienced surveying consultant. Based on this, we believe the applicant has demonstrated both the financial and technical ability to undertake and complete the currently proposed project.

*(11) Surface Waters; Outstanding River segments...*

The proposed project is not in proximity to and will not affect the quality of any body of water or unreasonably affect the shoreline of any body of water.

*(12) Groundwater...*

The proposed project will not adversely affect the quantity or quality of the groundwater. There are no existing or proposed septic systems.

*(13) Flood areas...*

No portion of the project is located within a FEMA flood zone, or a flood plain area.

*(14) Freshwater Wetlands...*

There are no wetlands on this site, so there will be no wetland impact. There are no wetlands shown on the National Wetland Inventory. Additionally, the soil type is not a hydric soil. The engineer reviewed the site and found no evidence of potential wetlands to require a visit by a wetland delineation consultant.

*(15) Rivers or Streams...*

No rivers or streams are within or abutting the project area.

*(16) Stormwater...*

See Attachment 5.

*(17) Access to direct sunlight for abutting property owners for solar energy system...*

Based on existing topography and orientation, the proposed development will not limit the solar exposure of neighboring properties. No restrictions are needed.

*(18) Solid Waste Management...*

Josh Oxley will contract with a private solid waste hauler, Casella, to remove solid waste from the property on a regular basis. The dumpster will be located as seen on the site plan. It is accessible and will be utilized for both buildings.

*(19) Exterior Lighting...*

Limited new exterior lighting is proposed around the new structure. This will consist of only building mounted lights. Although we do not have a specific light fixture selected at this time, the building mounted wall pack lights will be less than 3,000k, downward directed, and full cut off. We anticipate that these lighting fixtures will be adequate to light the new parking spaces in front of the garages, roadway, and structures on site.

*(20) Buffering of adjacent uses...*

The proposed multifamily development has two structures, Building A, 9,278 square feet, and Building B, 2,724 square feet. This zoning district does not have a prescriptive plant unit buffer requirement. The existing vegetation will remain along the borders of the property to buffer it from abutters. It includes a variety of trees and shrubs. As much of the existing buffer as possible will remain untouched. Where the existing buffer is smaller, new trees are proposed (8 in total), as can be seen on the Site Plan in Attachment 1.

*(21) Noise...*

Noise generated by the proposed development will entail periodic vehicle access to and egress from the site. Given the site is a residential structure in a mixed-use neighborhood, additional noise levels attributable to on-site traffic are not anticipated to exceed existing levels.

*(22) Storage of Materials...*

All solid waste will be disposed of into the dumpster that will be and serviced regularly. The dumpster will be screened by fencing and exceed zoning setbacks.

*(23) Landscaping...*

See buffer information described in Item 20 above.

*(24) Buffering of residential uses...*

Residential uses adjacent to the subject parcel are and will be adequately screened from the proposed use with buffers and landscaping as described above in Items 20.

*(25) Location of off-street parking. See chapter 98...*

The City of Belfast Code, Chapter 98 Technical Standards, Table 98-242 Schedule of Required Off-Street Parking, required 2 spaces per unit for a two-family structure, and 1.75 spaces per unit for a six-family structure. For the building with 6 units, 11 spaces are required, and for the building with 2 units, 4 spaces would be required. This results in a requirement of 15 spaces. There are 8 exterior spaces proposed, however, each unit has a garage, and including the parking space in each of those, there would be 16 spaces available. No joint or on street parking is proposed. Perimeter landscaping and lighting is proposed as discussed in Items 19 and 23.

*(26) Hazardous Waste...*

No hazardous waste is to be generated or stored on site.

*(27) Prevention or Control of Air Pollution...*

No uses creating a risk of air pollution by dust, chemicals, odor, or otherwise are proposed.

*Protection of Public Health and Safety...*

The project will not create a substantial risk to the public health or welfare. There is emergency vehicle access along the existing entrance off of Swan Lake Avenue. Emergency vehicles could continue and turn around at the end of the access road. There is a fire hydrant on the closest corner of Mill Lane, approximately 160' away from the site entrance. There are no existing easements or right of ways across the property. The plans have been sent to the City of Belfast Fire Chief to confirm he has no concerns about the proposed layout of the development.

*(28) Adequacy of Waste Disposal...*

See responses to items #18, #22, and #26 above.

*(29) Additional Standards for Development that may substantially affect the environment.*

There are no known additional standards that may substantially affect the environment.

**We have listed below the Section 90-132 Special Criteria for a multifamily housing project, and how we believe these standards are met:**

*The number of dwelling units that can be constructed on a property that includes the development of multi-family housing shall be based on net residential density. The following criteria shall not be included in the calculation of the lot area to determine net residential density and the maximum number of dwelling units that can be developed on the property.*

- (a) *Land that is situated below the high annual tide or normal high-water mark of any waterbody.*

There is no land below the high annual tide or normal high-water mark on this property.

- (b) *Land that is located within the 100-year flood plain as identified on the official Federal Emergency.*

There is no land within the 100-year flood plain on this property.

- (c) *Management Agency flood maps adopted by the City of Belfast, reference Chapter 78, Floods. The Board, however, can consider information submitted by a registered land surveyor that demonstrates that the property in question lies at least two feet above the 100-year flood level.*  
There is no land within the 100-year flood plain on this property.
- (d) *Land that is part of a publicly or privately owned street right-of-way or easement.*  
No area on this property is part of a publicly or privately owned street right-of-way or easement.
- (e) *Land that is part of a utility easement that benefits an off-site property or properties.*  
There are no utility easements on this property.
- (f) *Land meeting the definition of wetland or freshwater wetland as defined by the State Department of Environmental Protection or the U.S. Army Corps of Engineers.*  
There are no wetlands or freshwater wetlands on this property. There are no wetlands in this area marked on the National Wetland Inventory. Additionally, there has been no indication of wetlands on this property during any site visits by the engineer.
- (g) *Land that has been created by filling or draining a pond or wetland.*  
No land on this lot has been created by filling or draining a pond or wetland.
- (h) *Land that is located on steep slopes that exceed a grade of 20%.*  
There is no land exceeding a grade of 20% on this property.

**We have listed below the Section 102-1121 Division 2 Environmental Standards, and how we believe these standards are met:**

**Sec. 102-1122. Subsurface wastewater disposal. [Ord. No. 28-1997, § 701.1, 3-4-1997]**

No subsurface wastewater disposal is proposed, therefore this standard is not applicable.

**Sec. 102-1123. Erosion control. [Ord. No. 28-1997, § 701.2, 3-4-1997]**

Site grading, drainage, and development has been designed by a Maine Licensed Professional Engineer, to minimize erosion of soil and sedimentation of water-courses and water bodies in accordance with best management practices as set forth in Maine Erosion and Sediment Control Handbook for Construction Best Management Practices, prepared by the Cumberland County Soil and Water Conservation District and the state department of environmental protection, 1991. See the Site Plans for details.

**Sec. 102-1124. Control of stormwater run-off. [Ord. No. 28-1997, § 701.3, 3-4-1997]**

See Attachment 5.

**Sec. 102-1125. Wastewater pollution. [Ord. No. 28-1997, § 701.4, 3-4-1997]**

Wastewater shall consist of strictly domestic wastewater. We have confirmed the treatment plant's capacity with Olver Associates. See the letter in Attachment 3.

**Sec. 102-1126. Air pollution. [Ord. No. 28-1997, § 701.5, 3-4-1997]**

This modest residential use does not anticipate any emission of dust, fly ash, fumes, vapors or gases.

**Sec. 102-1127. Odors. [Ord. No. 28-1997, § 701.6, 3-4-1997]**

No unusual odors are anticipated via this residential use.

**Sec. 102-1128. Glare. [Ord. No. 28-1997, § 701.7, 3-4-1997]**

Glare from new lighting shall be minimized by downward facing full cutoff light fixtures, vegetative buffering, and sighting of the buildings near existing dense vegetation.

**Sec. 102-1129. Noise. [Ord. No. 28-1997, § 701.8, 3-4-1997]**

This residential use does not anticipate any noise exceeding the limits set forth in this section.

**Sec. 102-1130. Gravel extraction. [Ord. No. 28-1997, § 710.09, 3-4-1997]**

No gravel extraction is planned, therefore this section is not applicable.

**Sec. 102-1131. Heating systems and oil storage tanks. [Ord. No. 28-1997, § 701.10, 3-4-1997]**

Heating and cooling of these structures will be all electric, therefore this standard is not applicable.

**Sec. 102-1132. Burning of household trash, brush and stumps. [Ord. No. 28-1997, § 701.11, 3-4-1997]**

No burning of household trash shall be conducted as part of this project.

**Sec. 102-1133. Timber harvesting. [Ord. No. 28-1997, § 701.11, 3-4-1997]**

No timber harvesting is proposed in this project.

**Sec. 102-1134. Uses in wetlands. [Ord. No. 28-1997, § 701.13, 3-4-1997]**

There are no wetlands on this site, therefore no wetland disturbance will occur due to this project.

**Sec. 102-1135. Uses in floodplains. [Ord. No. 28-1997, § 701.14, 3-4-1997]**

There is no known floodplain on this site.

**Sec. 102-1136. Soils. [Ord. No. 28-1997, § 701.15, 3-4-1997]**

The on-site soil, Boothbay silt loam at 3 to 8 percent, is suitable for residential development and building siting.

**Sec. 102-1137. Significant groundwater well. [10-16-2018]**

There are no known significant groundwater wells in the vicinity of this project.

**Sec. 102-1138. Significant water intake or significant water discharge/outfall pipe. [10-16-2018]**

There are no known significant water intakes or discharges/outfalls in the vicinity of this project.

**We have listed below the Section 98-151 Article V Traffic Control, and how we believe these standards are met:**

**Sec. 98-154. Driveways and access control generally. [Ord. No. 39-1998, § 5.4, 12-1-1998]**

The proposed driveway will not have grades of more than 6%, up or down, from the edge of the shoulder, and is approximately 4%. The driveway will have a minimum of 18 inches of aggregate base course. See Exhibit 1 in Attachment 1. There are no proposed curb openings. The proposed driveway will have 18' of pavement with a 1' shoulder on both sides, totaling 20'. The peak hour for the proposed site is 4.1, so there is only a small number of vehicles leaving and entering the site per hour.

**Sec. 98-155. Sight distance. [Ord. No. 39-1998, § 5.5, 12-1-1998]**

The speed limit on Swan Lake Avenue at this location is 45 mph, so a sight distance of 450' is recommended and of 400' is required. The driveway has a sight distance of 545' to the north (left) and 702' to the south (right). There is a required minimum separation between driveways of 230' where the speed limit is 45 mph, or 115' for one-way driveways with the ingress drive separated from the egress drive. In its current location, the driveway is approximately 115' from the adjacent driveway on the north side, 90' from the adjacent driveway on the south side, and 75' from the driveway across the street. We are requesting a waiver for the driveway to remain where it is currently located.

We look forward to discussing this with you at your next scheduled Planning Board meeting.

Sincerely,

A rectangular box containing a handwritten signature in cursive script that reads "Elisabeth Parker".

Elisabeth Parker

**ATTACHMENT 1**

**PROJECT PLANS**

**C0 EXISTING CONDITIONS**

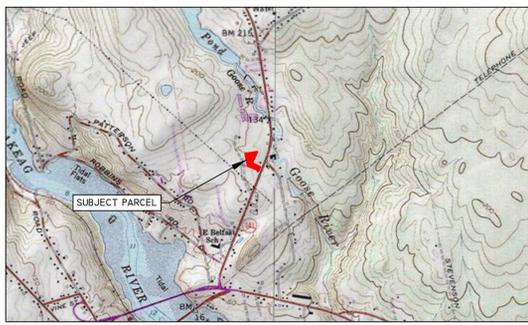
**C1.1 MULTI-FAMILY SITE PLAN**

**C2.1 NOTES AND DETAILS**

**C3.1 STORMWATER DRAINAGE AREAS**

**EXHIBIT 1 TYPICAL CROWNED ROAD SECTION**

**BUILDING PLANS FROM VIKING LUMBER**



SUBJECT PARCEL SHOWN ON USGS 7-1/2 MINUTE QUADRANGLES BELFAST, MAINE SCALE = 1" : 2,000"

| LEGEND |                               |
|--------|-------------------------------|
|        | APPROXIMATE PROPERTY LINE     |
|        | ZONING SETBACK LINE           |
|        | PaB SOIL TYPE                 |
|        | EXISTING CONTOUR              |
|        | PROPOSED MAJOR CONTOUR        |
|        | PROPOSED MINOR CONTOUR        |
|        | EDGE OF VEGETATION            |
|        | NEW PERIMETER DRAIN           |
|        | NEW CULVERT                   |
|        | EXISTING WATER LINE           |
|        | EXISTING SEWER                |
|        | EXISTING DRAIN                |
|        | EXISTING UNDERGROUND ELECTRIC |
|        | EXISTING OVERHEAD ELECTRIC    |
|        | NEW WATER LINE                |
|        | NEW SEWER                     |
|        | NEW UNDERGROUND ELECTRIC      |
|        | NEW OVERHEAD ELECTRIC         |
|        | NEW SILT FENCE                |
|        | NEW BUILDING                  |
|        | EXISTING BUILDING             |
|        | EXISTING PAVEMENT             |
|        | NEW PAVEMENT                  |
|        | EROSION CONTROL BLANKET       |
|        | NEW WATER VALVE               |
|        | EXISTING WATER VALVE          |
|        | OVERHEAD UTILITY POLE         |
|        | NEW CATCH BASIN               |
|        | EXISTING CATCH BASIN          |
|        | BOULDER                       |
|        | NEW SEWER MANHOLE             |
|        | EXISTING SEWER MANHOLE        |
|        | EXISTING FIRE HYDRANT         |
|        | NEW TREE                      |
|        | EXISTING TREE                 |

**PLAN AND SURVEY NOTES:**

- THIS IS A PRELIMINARY MULTIFAMILY SITE PLAN PREPARED FOR JOSH OXLEY, OWNER OF ECOLOGIX HOMES, LLC, ON SWAN LAKE AVENUE, TAX MAP 020 LOT 010 IN BELFAST.
- EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE BASED ON SEVERAL SOURCES INCLUDING:
  - TOPOGRAPHIC AND BOUNDARY SURVEY DATA PROVIDED BY GOOD DEEDS, DATED OCTOBER 9, 2025, PREPARED FOR ECOLOGIX, LLC, ON SWAN LAKE AVENUE IN BELFAST, ME.
  - BUILDING PLANS PREPARED FOR DAVID SPENCER BY VIKING LUMBER, 622 MAIN ROAD, HOLDEN.
  - UTILITIES IN SWAN LAKE AVENUE FROM SWAN LAKE AVENUE SEWER PLAN AND PROFILE FOR THE CITY OF BELFAST BY OLIVER ASSOCIATES INC., DATED AUGUST 2005.
  - PUBLIC DOMAIN DATA AVAILABLE THROUGH THE MAINE OFFICE OF GIS INCLUDING LIDAR ELEVATION CONTOURS, USGS TOPOGRAPHIC MAPPING AND ORTHOPHOTOGRAHY.
  - ADDITIONAL PARCEL AND ZONING INFORMATION IS DERIVED FROM THE CITY OF BELFAST, MAINE.
- ELEVATION CONTOUR LINES ON THIS PLAN REPRESENT 1' ELEVATION INTERVALS. ELEVATION DATUM IS NAVD 1988.
- THIS PLAN IS NOT A BOUNDARY SURVEY.
- ALL DATA IS IN U.S. STATE PLANE PROJECTION, MAINE EAST 1801 NAD83 (2011).
- VERTICAL DATUM IS MEAN SEA LEVEL (NAVD 1988). SEE TEMPORARY BENCH MARK ON THIS PLAN FOR REFERENCE.

**LOCAL ZONING & PERMIT NOTES:**  
THIS PROPERTY IS LOCATED IN THE CITY OF BELFAST SWAN LAKE AVENUE, MIXED USE (SLAMU) DISTRICT.

1. LOT SIZE, SETBACKS, LOT COVERAGE ARE AS REQUIRED BELOW:

| DESCRIPTION          | (RESIDENTIAL MULTIFAMILY)    |                    |
|----------------------|------------------------------|--------------------|
|                      | REQUIRED/PERMITTED           | PROVIDED           |
| MINIMUM NET LOT SIZE | 21,780 NET S.F. <sup>1</sup> | 74,766 S.F.        |
| MINIMUM FRONTAGE     | 150'                         | 87.8'              |
| FRONT SETBACK        | 50'                          | 23'                |
| SIDE SETBACK         | 25'                          | 25'                |
| REAR SETBACK         | 25'                          | 25'                |
| LOT COVERAGE         | 50%                          | 33.4% <sup>2</sup> |
| MAX STRUCTURE HEIGHT | 38'                          | 48.5'              |
| DENSITY              | NOTE 2                       | 8 UNITS            |

<sup>1</sup> 8 RESIDENTIAL UNITS TOTAL. 21,780 S.F. FOR FIRST 4 UNITS, THEN 2,500 S.F. EACH FOR ADDITIONAL 2 UNITS  
TOTALS 31,780 FOR THIS PROPOSAL.  
<sup>2</sup> TOTAL NET LOT AREA = 74,766 S.F., WHICH ALLOWS FOR A DENSITY OF 25 UNITS.  
<sup>3</sup> 24,939 S.F. IMPERVIOUS OUT OF 74,766 S.F. TOTAL LOT AREA.

- THIS PROJECT REQUIRES SITE PLAN APPROVAL FROM THE CITY OF BELFAST PLANNING BOARD.
- THIS PROJECT REQUIRES A LOCAL DRIVEWAY PERMIT FROM THE CITY OF BELFAST.
- TOTAL IMPERVIOUS AREA (SINCE 2005) FOR THIS PROJECT IS 25,626 S.F. TOTAL DISTURBED AREA IS 48,468 S.F. THESE ARE WITHIN THE MAINE DEP STORMWATER MANAGEMENT PERMIT-BY-RULE STANDARDS.

THIS IS TO CERTIFY THAT AFTER REVIEWING THIS SITE PLAN AMENDMENT AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN THE LAND USE CODE OF THE CITY OF BELFAST, MAINE, (CHAPTER 98, TECHNICAL STANDARDS, AND CHAPTER 102, ZONING), THE UNDERSIGNED HAVE MADE FINDINGS OF FACT ESTABLISHING THAT THIS PLAN AND ITS SUPPORTING INFORMATION HAVE MET THE CRITERIA SET FORTH AND IS THEREBY APPROVED.

UNDERSIGNED BY MEMBERS OF THE CITY OF BELFAST PLANNING BOARD.

1. \_\_\_\_\_ CHAIR

2. \_\_\_\_\_

3. \_\_\_\_\_

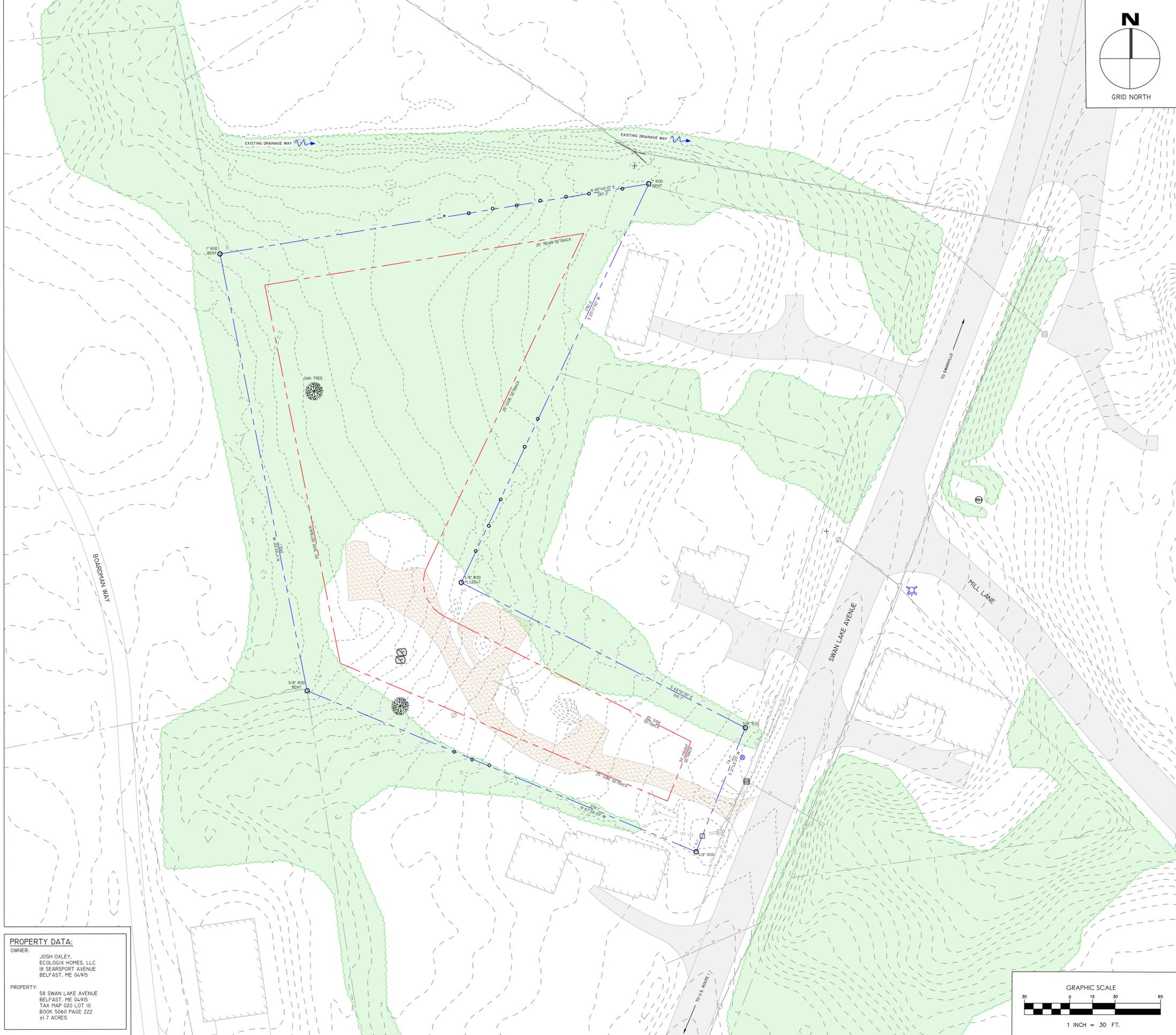
4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

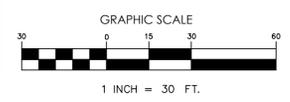
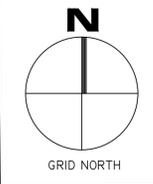
7. \_\_\_\_\_

DATE: \_\_\_\_\_



**PROPERTY DATA:**  
OWNER: JOSH OXLEY  
ECOLOGIX HOMES, LLC  
18 SEARSPORT AVENUE  
BELFAST, ME 04915

PROPERTY: 58 SWAN LAKE AVENUE  
BELFAST, ME 04915  
TAX MAP 020 LOT 10  
BOOK 5060 PAGE 222  
±1.7 ACRES



**TERRA FIRMA**  
PROFESSIONAL ENGINEERING, LLC

PO BOX 117  
48-41 MAIN ST WHARF  
BELFAST, MAINE 04915  
(207) 218-1212  
TERRAFIRMAENGINEERING.COM

FOR

NOT FOR CONSTRUCTION

1/13/26

| REV. | DESCRIPTION              | DATE     |
|------|--------------------------|----------|
| 1    | REVISIONS FOR CITY STAFF | 1-13-26  |
| 0    | ISSUED FOR PERMITTING    | 12-23-25 |

**EXISTING CONDITIONS**  
58 SWAN LAKE AVENUE  
TAX MAP 020 LOT 010  
JOSH OXLEY  
18 SEARSPORT AVENUE  
BELFAST, ME 04915

PLAN TITLE:  
PROJECT ADDRESS:  
PROJECT OWNER:

DRAWING SCALE:  
**1" = 30'**

PLAN DATE:  
**JANUARY 13, 2026**

PROJECT NUMBER:  
**24-035**

SHEET NUMBER:

**C0**

W:\Project\2024\Project\24-035 Multi-Family Residential, SWAN LAKE AVENUE, OXLEY



SUBJECT PARCEL SHOWN ON USGS 7-1/2 MINUTE QUADRANGLES BELFAST, MAINE SCALE = 1" : 2,000'

### LEGEND

|  |                               |  |                         |
|--|-------------------------------|--|-------------------------|
|  | APPROXIMATE PROPERTY LINE     |  | NEW BUILDING            |
|  | ZONING SETBACK LINE           |  | EXISTING BUILDING       |
|  | PaB SOIL TYPE                 |  | EXISTING PAVEMENT       |
|  | EXISTING CONTOUR              |  | NEW PAVEMENT            |
|  | PROPOSED MAJOR CONTOUR        |  | EROSION CONTROL BLANKET |
|  | PROPOSED MINOR CONTOUR        |  | NEW WATER VALVE         |
|  | EDGE OF VEGETATION            |  | EXISTING WATER VALVE    |
|  | NEW PERIMETER DRAIN           |  | OVERHEAD UTILITY POLE   |
|  | NEW CULVERT                   |  | NEW CATCH BASIN         |
|  | EXISTING WATER LINE           |  | EXISTING CATCH BASIN    |
|  | EXISTING SEWER                |  | BOULDER                 |
|  | EXISTING DRAIN                |  | NEW SEWER MANHOLE       |
|  | EXISTING UNDERGROUND ELECTRIC |  | EXISTING SEWER MANHOLE  |
|  | EXISTING OVERHEAD ELECTRIC    |  | EXISTING FIRE HYDRANT   |
|  | NEW WATER LINE                |  | NEW TREE                |
|  | NEW SEWER                     |  | EXISTING TREE           |
|  | NEW UNDERGROUND ELECTRIC      |  |                         |
|  | NEW OVERHEAD ELECTRIC         |  |                         |
|  | NEW SILT FENCE                |  |                         |

### PLAN AND SURVEY NOTES:

- THIS IS A PRELIMINARY MULTIFAMILY SITE PLAN PREPARED FOR JOSH OXLEY, OWNER OF ECOLOGIX HOMES, LLC, ON SWAN LAKE AVENUE, TAX MAP 020 LOT 010 IN BELFAST.
- EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE BASED ON SEVERAL SOURCES INCLUDING:
  - TOPOGRAPHIC AND BOUNDARY SURVEY DATA PROVIDED BY GOOD DEEDS, DATED OCTOBER 9, 2025, PREPARED FOR ECOLOGIX, LLC, ON SWAN LAKE AVENUE IN BELFAST, ME.
  - BUILDING PLANS PREPARED FOR DAVID SPENCER BY VIKING LUMBER, 622 MAIN ROAD, HOLDEN.
  - UTILITIES IN SWAN LAKE AVENUE FROM SWAN LAKE AVENUE SEWER PLAN AND PROFILE FOR THE CITY OF BELFAST BY OLIVER ASSOCIATES INC., DATED AUGUST 2005.
  - PUBLIC DOMAIN DATA AVAILABLE THROUGH THE MAINE OFFICE OF GIS INCLUDING LIDAR ELEVATION CONTOURS, USGS TOPOGRAPHIC MAPPING AND ORTHOPHOTOGRAPHY.
  - ADDITIONAL PARCEL AND ZONING INFORMATION IS DERIVED FROM THE CITY OF BELFAST, MAINE.
- ELEVATION CONTOUR LINES ON THIS PLAN REPRESENT 1' ELEVATION INTERVALS. ELEVATION DATUM IS NAVD 1988.
- THIS PLAN IS NOT A BOUNDARY SURVEY.
- ALL DATA IS IN U.S. STATE PLANE PROJECTION, MAINE EAST 1801 NAD83 (2011).
- VERTICAL DATUM IS MEAN SEA LEVEL (NAVD 1988). SEE TEMPORARY BENCH MARK ON THIS PLAN FOR REFERENCE.

### LOCAL ZONING & PERMIT NOTES:

THIS PROPERTY IS LOCATED IN THE CITY OF BELFAST SWAN LAKE AVENUE, MIXED USE (SLAMU) DISTRICT.

- LOT SIZE, SETBACKS, LOT COVERAGE ARE AS REQUIRED BELOW:

| DESCRIPTION          | (RESIDENTIAL MULTIFAMILY) REQUIRED/PERMITTED | PROVIDED           |
|----------------------|--|--------------------|
| MINIMUM NET LOT SIZE | 21,780 NET S.F. <sup>1</sup>                 | 74,766 S.F.        |
| MINIMUM FRONTAGE     | 150'   | 87.8'              |
| FRONT SETBACK        | 50'  | 231'               |
| SIDE SETBACK         | 25'  | 25'                |
| REAR SETBACK         | 25'  | 25'                |
| LOT COVERAGE         | 50%  | 33.4% <sup>2</sup> |
| MAX STRUCTURE HEIGHT | 35'  | 418.5'             |
| DENSITY              | NOTE 2                                       | 8 UNITS            |

<sup>1</sup> 8 RESIDENTIAL UNITS TOTAL, 21,780 S.F. FOR FIRST 4 UNITS, THEN 2,500 S.F. EACH FOR ADDITIONAL 2 UNITS  
<sup>2</sup> TOTALS 31,780 FOR THIS PROPOSAL  
<sup>3</sup> TOTAL NET LOT AREA = 74,766 S.F., WHICH ALLOWS FOR A DENSITY OF 25 UNITS.  
<sup>4</sup> 24,939 S.F. IMPERVIOUS OUT OF 74,766 S.F. TOTAL LOT AREA.

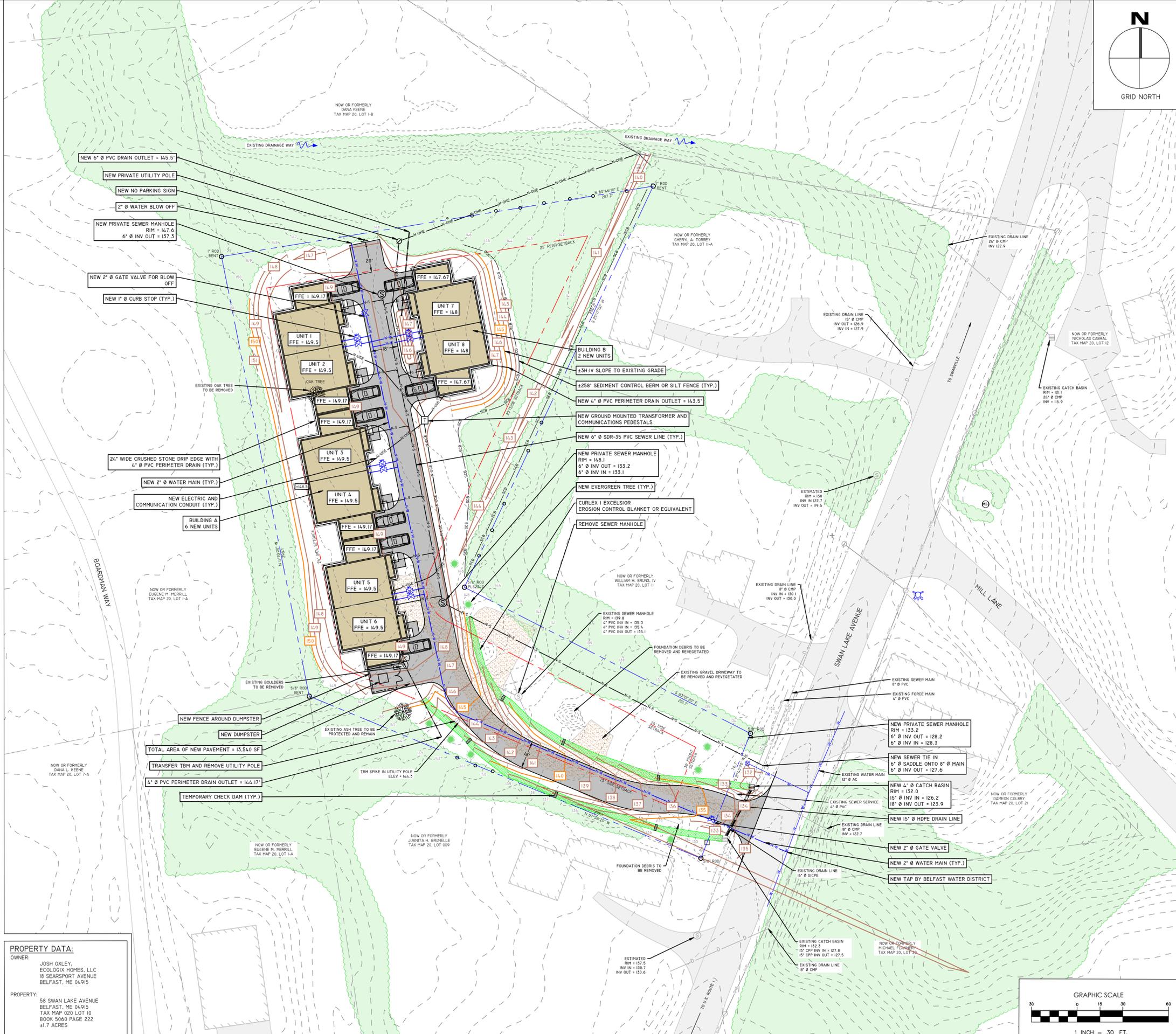
- THIS PROJECT REQUIRES SITE PLAN APPROVAL FROM THE CITY OF BELFAST PLANNING BOARD.
- THIS PROJECT REQUIRES A LOCAL DRIVEWAY PERMIT FROM THE CITY OF BELFAST.
- TOTAL IMPERVIOUS AREA (SINCE 2005) FOR THIS PROJECT IS 25,626 S.F. TOTAL DISTURBED AREA IS 48,468 S.F. THESE ARE WITHIN THE MAINE DEP STORMWATER MANAGEMENT PERMIT-BY-RULE STANDARDS.

THIS IS TO CERTIFY THAT AFTER REVIEWING THIS SITE PLAN AMENDMENT AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN THE LAND USE CODE OF THE CITY OF BELFAST, MAINE, (CHAPTER 98, TECHNICAL STANDARDS, AND CHAPTER 102, ZONING), THE UNDERSIGNED HAVE MADE FINDINGS OF FACT ESTABLISHING THAT THIS PLAN AND ITS SUPPORTING INFORMATION HAVE MET THE CRITERIA SET FORTH AND IS THEREBY APPROVED.

UNDERSIGNED BY MEMBERS OF THE CITY OF BELFAST PLANNING BOARD.

- \_\_\_\_\_ CHAIR
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

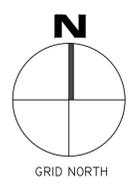
DATE: \_\_\_\_\_



### PROPERTY DATA:

OWNER:  
 JOSH OXLEY,  
 ECOLOGIX HOMES, LLC  
 18 SEARSPORT AVENUE  
 BELFAST, ME 04915

PROPERTY:  
 58 SWAN LAKE AVENUE  
 BELFAST, ME 04915  
 TAX MAP 020 LOT 10  
 BOOK 5060 PAGE 222  
 ±1.7 ACRES



**TERRA FIRMA**  
 PROFESSIONAL ENGINEERING, LLC  
 PO BOX 117  
 48-4 MARSHALL WHARF  
 BELFAST, MAINE 04915  
 (207) 218-1212  
 TERRAFIRMAENGINEERING.COM

NOT FOR CONSTRUCTION

| REV. | DESCRIPTION              | DATE     |
|------|--------------------------|----------|
| 1    | REVISIONS FOR CITY STAFF | 1-13-26  |
| 0    | ISSUED FOR PERMITTING    | 12-23-25 |

**MULTI-FAMILY SITE PLAN**  
 58 SWAN LAKE AVENUE  
 TAX MAP 020 LOT 010  
 JOSH OXLEY  
 18 SEARSPORT AVENUE  
 BELFAST, ME 04915

PLAN TITLE:  
 PROJECT ADDRESS:  
 PROJECT OWNER:

DRAWING SCALE:  
**1" = 30'**  
 PLAN DATE:  
**JANUARY 13, 2026**  
 PROJECT NUMBER:  
**24-035**  
 SHEET NUMBER:

**C1.1**

W:\Projects\2024\Project\24-035 Multi-Family Residential, SWAN LAKE AVENUE, OXLEY

**GENERAL NOTES:**

THIS IS A SITE PLAN FOR FOR THE PROPOSED MULTI FAMILY DEVELOPMENT AT 58 SWAN LAKE AVENUE IN BELFAST, MAINE.

THESE DETAIL SHEETS ARE PART OF THE FOLLOWING PLAN SET:

| SHEET # | TITLE                    | SHEET # | TITLE |
|---------|--------------------------|---------|-------|
| C0      | EXISTING CONDITIONS PLAN |         |       |
| C1.1    | OVERALL SITE PLAN        |         |       |
| C2.1    | NOTES AND DETAILS        |         |       |

- ALL WORK SHALL CONFORM TO APPLICABLE LOCAL, STATE, AND FEDERAL RULES, REGULATIONS, CODES, AND ORDINANCES.
- ALL CONSTRUCTION SHALL CONFORM TO AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS WHERE APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY DISSAFE WITH APPROPRIATE NOTICE PRIOR TO BEGINNING ANY EARTH MOVING WORK.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IN THE EVENT OF ANY DISCREPANCY BETWEEN PLANS AND SITE CONDITIONS.
- UTILITY WORK SHALL BE COORDINATED WITH THE FOLLOWING, AT A MINIMUM:
  - VERSANT POWER FOR ELECTRICAL SERVICE
  - CONSOLIDATED COMMUNICATIONS FOR TELEPHONE SERVICE (IF NECESSARY)
  - SPECTRUM CABLE FOR CABLE SERVICE (IF NECESSARY)
- UNLESS OTHERWISE PLANNED FOR, THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
- NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN AREAS ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
- ALL WORK SHALL BE PERFORMED IN A THOROUGH, WORKMANLIKE MANNER. THE CONTRACTOR AND ITS SUBCONTRACTORS ARE TO CONFORM TO ALL APPLICABLE OSHA STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TRAFFIC IN AND AROUND CONSTRUCTION SITE.
- TRAFFIC CONTROL MEASURES SHALL BE UTILIZED IN ACCORDANCE WITH THE LATEST REVISION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE CONTRACTOR SHALL PROVIDE, MAINTAIN, AND PROTECT TRAFFIC CONTROL DEVICES TO THE EXTENT REQUIRED BY LAW FOR THE PROTECTION OF THE PUBLIC CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, AND UNIFORMED TRAFFIC CONTROL PERSONNEL AS REQUIRED.

**EROSION & SEDIMENTATION CONTROL PLAN:**

- PROJECT DESCRIPTION: THIS PROJECT CONSISTS OF A NEW 6-UNIT MULTI-FAMILY BUILDING WITH AN ATTACHED SINGLE CAR GARAGE FOR EACH UNIT, TOTALING 9,278 SF AND A NEW 2-UNIT DUPLEX WITH AN ATTACHED SINGLE CAR GARAGE FOR EACH UNIT, TOTALING 2,724 SF, AND ASSOCIATED FACILITIES INCLUDING DRIVEWAY, PARKING, SEWER, WATER, AND UTILITIES. THE LAND SLOPES MODERATELY FROM THE NORTHWEST TO THE SOUTHEAST. THIS 1.7-ACRE PARCEL HAS NOT BEEN PREVIOUSLY DEVELOPED. THERE ARE NO KNOWN PROTECTED NATURAL RESOURCES ON OR ADJACENT TO THE SUBJECT PARCEL.
- PROJECT SCHEDULE: SITE WORK IS ANTICIPATED TO BEGIN IN 2026 AND CONTINUE THROUGH 2027. ANTICIPATED SITE WORK STEPS ARE ROUGHLY AS FOLLOWS:
  - DEPLOY SEDIMENTATION CONTROL BERM OR SILT FENCE DOWNGRADIENT OF PROPOSED DEVELOPED AREA
  - COMMENCE CLEARING & GRUBBING FOR DEVELOPMENT
  - INSTALL STABILIZED CONSTRUCTION ENTRANCE
  - EXCAVATE BUILDING FOUNDATIONS & INSTALL DRAINAGE OUTFALL
  - INSTALL DRAINAGE AROUND BUILDING
  - INSTALL UNDERGROUND UTILITIES TO AND FROM BUILDINGS
  - BACKFILL BUILDING FOUNDATIONS WHEN COMPLETE
  - INSTALL PARKING SUBBASE & BASE
  - COMPLETE BULK FILL AROUND BUILDING SITE
  - INSTALL FINAL LOAM & SEED AROUND PROJECT PERIMETER AS AREAS ARE BROUGHT TO FINAL GRADE
  - REMOVE STABILIZED CONSTRUCTION ENTRANCE
  - PAVE DRIVEWAYS AND PARKING
  - REMOVE OR LEVEL OUT SEDIMENTATION CONTROL MIX BERM WHEN UPGRADIENT AREAS STABILIZED.

**INTRODUCTION:** THIS PLAN HAS BEEN DEVELOPED TO ENSURE THAT CONSTRUCTION ACTIVITIES ON THIS PROJECT SITE UTILIZE SOUND EROSION AND SEDIMENTATION CONTROL MEASURES. THESE MEASURES WILL PREVENT OR REDUCE THE POTENTIAL FOR THE DEPOSITION OF SEDIMENTS DOWN STREAM OF SITE. THE METHODS OF CONTROL CONSIST OF PREVENTIVE MEASURES AND REMEDIAL MEASURES. PREVENTIVE MEASURES ARE AIMED AT KEEPING THE SOILS IN THEIR PRESENT LOCATION THROUGH MULCHING AND THROUGH THE RE-ESTABLISHMENT OF VEGETATION. REMEDIAL MEASURES DEAL WITH THE TRAPPING AND/OR FILTERING OF SEDIMENT LOADED STORMWATER RUN-OFF. BOTH TYPES OF MEASURES WILL BE UTILIZED ON THIS PROJECT. THE EROSION AND SEDIMENTATION CONTROL PLAN IS BEST BROKEN DOWN INTO TEMPORARY MEASURES, WINTER STABILIZATION, AND PERMANENT MEASURES.

**TEMPORARY EROSION CONTROL:** TEMPORARY CONTROL MEASURES MAY CONSIST OF SEDIMENT FILTER BERMS AND/OR SILT FENCING, TEMPORARY MULCHING, TOPSOIL STOCKPILING, AND WINTER STABILIZATION.

**1. SEDIMENT FILTER BERMS:** SEDIMENT FILTER BERMS ARE THE PREFERRED FILTERING DEVICE, BUT MAY NOT BE USED IN WETLAND AREAS. THE BERMS SHALL BE PLACED DOWN SLOPE OF ALL EARTH MOVING ACTIVITIES, WHERE WATER FROM THESE DISTURBED AREAS WILL RUN OFF. THESE BERMS WILL BE PLACED ALONG AN EVEN CONTOUR, BE AT LEAST 24 INCHES TALL, AND 3 FEET WIDE AT THE BASE. TURN THE ENDS OF THE BERM UP-GRADE TO AVOID RUNOFF. FLOWING AROUND THE BERM, IN AREAS OF HIGH EROSION POTENTIAL, SUCH AS AT THE BASE OF SLOPES GREATER THAN 8%, THE BERM WILL BE BACKED BY HAY BALES OR SILT FENCING, AS SHOWN ON THE DETAILS. SEDIMENT FILTER BERMS SHALL NOT BE USED WHERE THERE IS RUNNING WATER.

**2. SILT FENCING:** SILT FENCING MAY BE USED IN PLACE OF, OR TOGETHER WITH, THE SEDIMENT FILTER BARRIERS. THE SILT FENCING WILL ALSO BE ANCHORED AT LEAST FOUR INCHES INTO THE GROUND AND PLACED ALONG AN EVEN CONTOUR. TURN THE ENDS OF THE FENCE UP-GRADE TO AVOID RUNOFF. FLOWING AROUND THE FENCE, DURING FROZEN CONDITIONS, FURNISH AND INSTALL SEDIMENT FILTER BERMS IN LIEU OF SILT FENCING OR HAY BALES IF FROZEN SOIL TREATS THE PROPER INSTALLATION OF SILT FENCES AND HAY BALES. WORK WITHIN 50 FEET OF A NATURAL RESOURCE SHALL BE PROTECTED BY A DOUBLE BARRIER OF SILT FENCE.

**4. TEMPORARY MULCH:** TEMPORARY MULCH SHALL BE PLACED ON ALL DISTURBED AREAS WHERE SEEDING, CONSTRUCTION OR STABILIZATION ACTIVITIES WILL NOT TAKE PLACE FOR OVER 7 CONSECUTIVE DAYS, WHEN POSSIBLE DURING CONSTRUCTION, LIMIT DISTURBANCE TO ONE ACRE OR AN AREA NO LARGER THAN WHAT CAN BE MULCHED IN ONE DAY IN ORDER TO LIMIT THE AMOUNT OF DISTURBED AREA. TEMPORARY MULCH WILL ALSO BE PLACED ON AREAS WITHIN 75 FEET OF A NATURAL RESOURCE (WETLAND, STREAM, WATER BODY, ETC.) WHERE SEEDING WILL NOT TAKE PLACE WITHIN 48 HOURS OF THE INITIAL DISTURBANCE, AND ON ALL BARE SOILS OUTSIDE THE ROAD BASE WITHIN PRIOR TO ANY PREDICTED SIGNIFICANT RAIN EVENT. A SIGNIFICANT RAIN EVENT IS CONSIDERED TO BE AT LEAST 1/2 INCH OF RAIN OR MORE. TEMPORARY MULCH MAY BE HAY AND SHALL BE APPLIED AT A RATE OF TWO BALES PER 1,000 SQUARE FEET. SOIL MUST NOT BE VISIBLE UPON COMPLETION OF APPLICATION, REGARDLESS OF RATE OF APPLICATION.

**5. TOPSOIL STOCKPILES:** TOPSOIL, REMOVED AS PART OF THE CONSTRUCTION, WILL BE STOCKPILED ON SITE FOR USE IN AREAS TO BE RE-VEGETATED. THE LOCATION OF TOPSOIL STOCKPILES MUST NOT BE WITHIN 50 FEET OF A DESIGNATED NATURAL RESOURCE (WETLAND, STREAM, ETC.), OR WITHIN 75 FEET OF A SWALE OR DITCH. STORMWATER SHALL BE DIRECTED AWAY FROM AND AROUND SOIL STOCKPILES. STOCKPILES SHALL BE MULCHED WITH HAY AT TWO BALES PER 1,000 SQUARE FEET. THE AREA DOWN SLOPE FROM ANY STOCKPILE AREAS WILL BE PROTECTED BY A SEDIMENT FILTER BERM OR SILT FENCE PLACED DIRECTLY BELOW OR DOWN GRADIENT FROM THE STOCKPILE. IF THE STOCKPILE MUST BE LEFT FOR MORE THAN 30 DAYS, THE PILE WILL BE SEEDED WITH RYE GRASS AT A RATE OF TWO POUNDS PER 1,000 SQUARE FEET AND MULCHED IN ACCORDANCE WITH THIS PARAGRAPH.

**6. PROTECTION OF NATURAL RESOURCES:** WHENEVER PRACTICAL, NO DISTURBANCE SHALL TAKE PLACE WITHIN 50 FEET OF A PROTECTED NATURAL RESOURCE. IF DISTURBANCE TAKES PLACE WITHIN 50 FEET OF A NATURAL RESOURCE AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREA TOWARD THE PROTECTED NATURAL RESOURCE, DOUBLE THE PERIMETER EROSION CONTROL MEASURES. WHERE DISTURBANCE ACTIVITIES ARE LESS THAN 30 FEET FROM A PROTECTED NATURAL RESOURCE THE DISTURBED AREA SHALL ALSO BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

**7. TEMPORARY STONE CHECK DAMS:** SHALL BE PLACED BELOW CONCENTRATED AREAS OF FLOW IN DITCHES OR SWALES ON SITE. THESE SHALL REMAIN IN PLACE UNTIL ALL CONTRIBUTING UPGRADIENT AREAS ARE STABILIZED.

**8. EROSION CONTROL BLANKET:** EROSION CONTROL BLANKET (CURLEX I EXCELSDOR BLANKET OR EQUIVALENT) SHALL BE INSTALLED IN CONCENTRATED DITCH LINES AND ANY DISTURBED SLOPES GREATER THAN 3% WITH EROSION CONTROL BLANKET SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND MAINTAINED UNTIL FINAL UPGRADIENT SITE STABILIZATION BY EITHER PERMANENT VEGETATION, RIP RAP, COMPACTED GRAVEL, OR PAVEMENT.

**4. INSPECTION & MAINTENANCE OF TEMPORARY MEASURES:** ALL TEMPORARY MEASURES DESCRIBED ABOVE SHALL BE INSPECTED WEEKLY AND BEFORE AND AFTER EVERY SIGNIFICANT STORM EVENT (1/2 INCH OF RAIN OR GREATER) THROUGHOUT THE CONSTRUCTION OF THE PROJECT BY A PROFESSIONAL WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL. REPAIRS OR REPLACEMENTS OF TEMPORARY MEASURES SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM AND BE COMPLETED NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMPs OR SIGNIFICANT REPAIR IS NECESSARY, IMPLEMENTATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY SIGNIFICANT STORM EVENT. KEEP A LOG SUMMARIZING INSPECTION AND ANY ACTION TAKEN. THE LOG SHALL INCLUDE THE NAME AND QUALIFICATIONS OF THE INSPECTOR, THE DATE OF THE INSPECTION AND OBSERVATIONS REGARDING THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS AND ACCESS POINTS TO THE SITE. THE LOG MUST BE MADE ACCESSIBLE TO THE DEPARTMENT STAFF AND A COPY PROVIDED UPON REQUEST. ONCE THE SITE IS STABLE, ALL TEMPORARY DEVICES SUCH AS HAY BALE BARRIERS AND SILT FENCING WILL BE REMOVED.

**5. WINTER STABILIZATION:** THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH A COMBINATION OF PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION OR RIP RAP BY THE SITE NEEDS TO BE PROTECTED WITH WINTER STABILIZATION. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS DENUDATED AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 15 DAYS. EXPOSED AREA SHALL NOT BE SO LARGE THAT IT CANNOT BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.

AREAS SHALL BE CONSIDERED TO BE DENUDATED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOADED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 200 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BE UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

**1. SOIL STOCKPILES:** STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION. WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 200 LBS./1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY NEW SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET OF ANY NATURAL RESOURCES.

**2. NATURAL RESOURCE PROTECTION:** ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75 % MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS.

DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. SILT FENCING MAY NOT BE PLACED ON FROZEN GROUND.

**3. MULCHING:** AREAS SHALL BE CONSIDERED DENUDATED UNTIL LOADED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 200 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION.

**EROSION & SEDIMENTATION CONTROL PLAN (CON'T):**

AN AREA SHALL BE CONSIDERED STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 200 LB. PER 1,000 SQUARE FEET AND ADEQUATELY ANCHORED, SUCH THAT THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, OR WOOD CELLULOSE FIBER. THE GROUND SURFACE SHALL NOT BE VISIBLE THROUGH THE MULCH.

AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

**4. MULCHING ON SLOPES AND DITCHES:** SLOPES SHALL NOT BE LEFT EXPOSED FOR MORE THAN 7 DAYS UNLESS FULLY MULCHED AND ANCHORED. SLOPES WITHIN 75 FEET OF A NATURAL RESOURCE SHALL NOT BE LEFT EXPOSED FOR MORE THAN 48 HOURS. MULCHING SHALL BE APPLIED AT A RATE OF 300 LBS./1,000 SQ. FT. ON ALL SLOPES GREATER THAN 8%. EROSION CONTROL MESH SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS AND DITCHES, FOR SLOPES EXPOSED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 8% EROSION CONTROL, BLANKET AND CHECK DAMS (OR PERMANENT RIP-RAP) SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES OF 8% OR MORE.

A SIX INCH LAYER OF EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

**5. SEEDING:** BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED, DURING PERIODS OF ABOVE FREEZING TEMPERATURES.

FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED (SEE LANDSCAPE PLAN AND SPECIFICATIONS FOR SEED MIXTURES) AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED, IF AFTER NOVEMBER 1ST THE EXPOSED AREA HAS BEEN FINE GRADED AND LOAMED, THEN THE AREA MAY BE DORMANT SEEDDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 6" OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1000 S.F. ALL AREAS SEEDDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. AREAS NOT SUFFICIENTLY VEGETATED (LESS THAN 75 % CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH.

IF DORMANT SEEDING IS NOT USED, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

**6. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS:** ALL STONE-LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 1. ALL GRASS-LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. FAILURE TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, WILL REQUIRE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER:

**INSTALL A SOD LINING IN THE DITCH -** SOD LINING SHALL BE INSTALLED IN DITCHES BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.

**INSTALL A STONE LINING IN THE DITCH -** DITCHES SHALL BE LINED WITH STONE RIPRAP BY NOVEMBER 1, AS PRESENTED BELOW. IF NECESSARY, THE APPLICANT WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

**7. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS:** CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 1. THE APPLICANT WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 1. SLOPES WILL BE CONSIDERED ANY AREA HAVING A GRADE GREATER THAN 15% (6H:1V). IF THE APPLICANT FAILS TO STABILIZE ANY DISTURBED TO BE VEGETATED BY SEPTEMBER 1, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

**STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS --** SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE OCTOBER 1. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST OR WITH STONE RIPRAP AS DESCRIBED BELOW.

**STABILIZE THE SLOPE WITH SOD --** STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. SOD STABILIZATION SHALL NOT BE USED LATE-SEASON TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 35% (3H:1V).

**STABILIZE THE SLOPE WITH WOOD WASTE COMPOST (EROSION CONTROL MIX) --** PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 1, PRIOR TO PLACING THE WOOD WASTE COMPOST. REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. WOOD WASTE COMPOST WILL NOT BE USED TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

**STABILIZE THE SLOPE WITH RIPRAP --** PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 1, SIMILAR TO THE STONE LINED DITCH THE PERMANENT EROSION CONTROL SECTION.

**8. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS:** SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% BY SEPTEMBER 1. FAILURE TO STABILIZE THESE SOILS BY THIS DATE WILL REQUIRE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

**STABILIZE THE SOIL WITH TEMPORARY VEGETATION --** SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING BY OCTOBER 1. GROWTH OF THE RYE WILL REQUIRE MONITORING OVER THE FOLLOWING 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL, BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER WINTER PROTECTION AS DESCRIBED BELOW.

**STABILIZE THE SOIL WITH SOD --** STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

**STABILIZE THE SOIL WITH MULCH --** MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH BY NOVEMBER 1. PRIOR TO APPLYING THE MULCH, REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

**PERMANENT EROSION CONTROL -** PERMANENT MEASURES WILL CONSIST OF THE CONSTRUCTION OF GRASS/STONE LINED DITCHES; AND THE RE-VEGETATION OF ALL AREAS OUTSIDE THE TRAVELED WAY OF THE ROAD, AND THOSE AREAS DESIGNATED AS STONE LINED DITCHES.

**1. DITCHES:** DITCHES ON THE PROJECT HAVE BEEN DESIGNED BASED ON EXPECTED FLOW RATES AND VELOCITIES FOR THE 25-YEAR, 24-HOUR STORM EVENT AND THE SLOPE OF THE DITCH, WHERE WATER VELOCITIES ARE EXPECTED TO EXCEED 3.5 FEET PER SECOND, THE DITCH HAS BEEN DESIGNED TO BE STONE LINED. DITCHES WITH WATER VELOCITIES OF LESS THAN 3.5 FEET PER SECOND HAVE BEEN DESIGNED TO BE GRASS LINED.

**STONE LINED DITCHES:** STONE LINED DITCHES WILL FIRST BE LINED WITH A NON-WOVEN FILTER FABRIC, AND THEN LINED WITH RIPRAP POSSESSING A D50 OF APPROXIMATELY 6 INCHES IN DIAMETER. THIS MEANS THAT APPROXIMATELY HALF THE STONES BY WEIGHT WILL BE SMALLER THAN 6 INCHES AND HALF WILL BE LARGER. THE MINIMUM STONE SIZE SHOULD BE 1 INCH WITH THE LARGEST STONE BEING 9 INCHES IN DIAMETER. THE DEPTH OF STONE IN THE DITCH SHOULD AVERAGE 15 INCHES.

THE FINAL SHAPE OF THE DITCH WILL CONSIST OF THE FOLLOWING DIMENSIONS, A BOTTOM WIDTH OF TWO FEET; SIDE SLOPES POSSESSING A 2 : 1 HORIZONTAL TO VERTICAL; AND A TOTAL DEPTH OF 2 FEET.

IN LIEU OF STONE RIP-RAP, THE DITCH MAY BE LINED WITH A PERMANENT EROSION CONTROL BLANKET, SUCH AS NORTH AMERICAN GREEN P300 OR APPROVED EQUAL.

**GRASS LINED DITCHES:** GRASS LINED DITCHES WILL POSSESS THE SAME FINAL DIMENSIONS AS THE STONE LINED DITCHES. THE FLOW AREA OF THE DITCH WILL BE ARMORED BY PLACING A BIODEGRADABLE NETTING OR MATTING OVER THE MULCH AND SEED (IF THE NETTING HAS NO MULCH IN IT). IF STABILIZATION IS TO TAKE PLACE AFTER OCTOBER 1, SLOPES OVER 8% WILL BE TREATED WITH THE MATTING. SLOPES 2H:1V OR STEEPER SHALL BE STABILIZED WITH RIPRAP. SLOPES STEEPER THAN 1.5H:1V ARE PROHIBITED.

**2. RE-VEGETATION MEASURES:** ALL AREAS TO BE PERMANENTLY RE-VEGETATED WITH GRASS WILL FIRST BE COVERED WITH LOAM AND THEN FERTILIZED. LOAM WILL BE PLACED ON ALL AREAS TO BE RE-VEGETATED TO A MINIMUM DEPTH OF 4 INCHES OR AS SPECIFIED ON THE LANDSCAPE PLANS.

TEST THE LOAM SAMPLES FOR NUTRIENTS AT A PROFICIENT TESTING LABORATORY (THE UNIVERSITY OF MAINE PROVIDES THIS SERVICE). REQUEST THAT THE TESTING LABORATORY PROVIDE A RECOMMENDED FERTILIZER MIX. THE AREAS WITH LOAM WILL THEN BE FERTILIZED AT THE RECOMMENDED APPLICATION RATE. LIME WILL ALSO BE APPLIED AT A RATE OF 50 POUNDS PER 1,000 SQUARE FEET. BOTH THE LIME AND THE FERTILIZER WILL BE MIXED THOROUGHLY WITH THE SOIL.

ALL AREAS TO BE RE-VEGETATED WITH PERMANENT GRASS ARE TO BE SEEDDED WITH THE SEED MIX PROVIDED ON THE DETAILS, THOUGH NOT LESS THAN 2 POUNDS PER 1,000 SQUARE FEET. MULCH WILL THEN BE SPREAD ON ALL SEEDED AREAS AT A RATE OF TWO BALES PER 1,000 SQUARE FEET. REGARDLESS OF APPLICATION RATE THE SOIL SHALL NOT BE VISIBLE THROUGH THE MULCH. SEED AND MULCH WILL BE PLACED WITHIN FIVE DAYS OF FINAL GRADING OF TOPSOIL. SEEDED AREAS WILL BE INSPECTED AFTER 30 DAYS TO DETERMINE THE SUCCESS OF THE SEEDING. IF THE GROUND COVER IS LESS THAN 75%, THE AREA SHALL BE RE-SEEDDED BY THE CONTRACTOR.

**3. STEEP SLOPES:** SLOPES IN EXCESS OF 15% WILL REQUIRE THE PLACEMENT OF A BIODEGRADABLE NETTING OR MATTING OVER THE MULCH AND SEED (IF THE NETTING HAS NO MULCH IN IT). IF STABILIZATION IS TO TAKE PLACE AFTER OCTOBER 1, SLOPES OVER 8% WILL BE TREATED WITH THE MATTING. SLOPES 2H:1V OR STEEPER SHALL BE STABILIZED WITH RIPRAP. SLOPES STEEPER THAN 1.5H:1V ARE PROHIBITED.

**5. MAINTENANCE OF PERMANENT MEASURES:** ALL MEASURES WILL BE INSPECTED WEEKLY AND BEFORE AND AFTER EVERY SIGNIFICANT STORM EVENT DURING CONSTRUCTION, AND THEN AT LEAST ONCE ANNUALLY TO INSURE PROPER FUNCTION. ANY DAMAGED AREAS WILL BE REPAIRED OR REPLACED AS NECESSARY. ANY DITCHES OR CULVERTS NOT FUNCTIONING AS DESIGNED WILL BE REDESIGNED AND RECONSTRUCTED ACCORDING TO SPECIFICATIONS PREPARED BY A PROFESSIONAL ENGINEER.

IN ANY EVENT, SEEDING SHOULD TAKE PLACE EITHER BETWEEN MAY 1 AND JUNE 15, OR AUGUST 15 AND SEPTEMBER 1.

**NOTES:**

- SLOPE SURFACE SHALL BE FREE OF ROCKS, STICKS, SOIL CLODS, AND GRASS CLUMPS.
- EROSION CONTROL BLANKET SHALL HAVE GOOD SOIL CONTACT AND LAY FLAT ON SLOPE SURFACE.
- APPLY PERMANENT SEED MIX BEFORE INSTALLING BLANKET.
- LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN CONTACT WITH THE SOIL.
- EROSION CONTROL BLANKET SHALL NOT BE STRETCHED TO INCREASE COVERAGE.
- SLOPES OR DITCHES SHALL BE JUTE EROSION CONTROL BLANKET OR EQUIVALENT.
- EROSION CONTROL BLANKET SHALL BE INSTALLED WITH OVERLAPS AND STAPLES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

**SWALE/DRAINAGE WITH EROSION CONTROL BLANKET NOT TO SCALE**

**SECTION THROUGH CHECK DAM NOT TO SCALE**

**VIEW ALONG CHANNEL (UP OR DOWNSTREAM) NOT TO SCALE**

**TEMPORARY STONE CHECK DAM NOT TO SCALE**

**TYPICAL SEEDED LAWN/TURF SECTION NOT TO SCALE**

**SEDIMENTATION CONTROL MIX BERM NOT TO SCALE**

**TYPICAL SILT FENCE DETAIL NOT TO SCALE**

**SECTION SPLICE DETAIL**

**WITH TRENCHING WITHOUT TRENCHING**

**NOTES:**

- FENCE SHOULD BE ANCHORED TO RESIST PULL-OUT, AND BE STRETCHED TIGHTLY BETWEEN STAKES TO PREVENT SAGGING.
- A 6" WIDE BY 6" DEEP TRENCH SHOULD BE EXCAVATED UPGRADIENT OF THE FENCE LINE TO ANCHOR THE FLAP OF FABRIC. THE TRENCH SHOULD BE BACKFILLED AND COMPACTED.
- IF JOINTS ARE NECESSARY, FILTER CLOTH SHOULD BE OVERLAPPED BY WRAPPING ADJUTING END STAKES TOGETHER.
- IN AREAS WHERE FLAP CANNOT BE ANCHORED PROPERLY (SUCH AS ON FROZEN GROUND, BEDROCK, STONY SOIL, ROOTS, OR NEAR PROTECTED RESOURCE AREAS, ETC.) SILT FENCE SHOULD BE ANCHORED WITH AGGREGATE, EROSION CONTROL MIX, CRUSHED STONE, OR OTHER SUITABLE MATERIAL.
- IF PONDING BEHIND SILT FENCE IS ANTICIPATED, THE NUMBER OF STAKES USED SHALL BE DOUBLED.
- SILT FENCE SHOULD BE INSPECTED PERIODICALLY AND/OR AFTER EACH RAINFALL. SUITABLE REPAIRS SHALL BE MADE IMMEDIATELY AS NEEDED. FABRIC THAT EXCEEDS ITS FUNCTIONAL LIFE PRIOR TO THE END OF ITS NECESSARY USE SHALL BE REPLACED.
- ACCUMULATED SEDIMENT AT THE BASE OF SILT FENCE SHALL BE REMOVED WHEN DEPOSITS REACH ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMAINING AFTER SILT FENCE HAS BEEN REMOVED SHALL BE RE-GRADED TO CONFORM TO SURROUNDING CONDITIONS AND SEEDED.
- SILT FENCE SHALL REMAIN IN PLACE UNTIL ALL UPGRADIENT SURFACES HAVE BEEN PERMANENTLY STABILIZED.
- SILT FENCE MAY BE REPLACED BY SEDIMENTATION CONTROL MIX BERM.

**NOTES:**

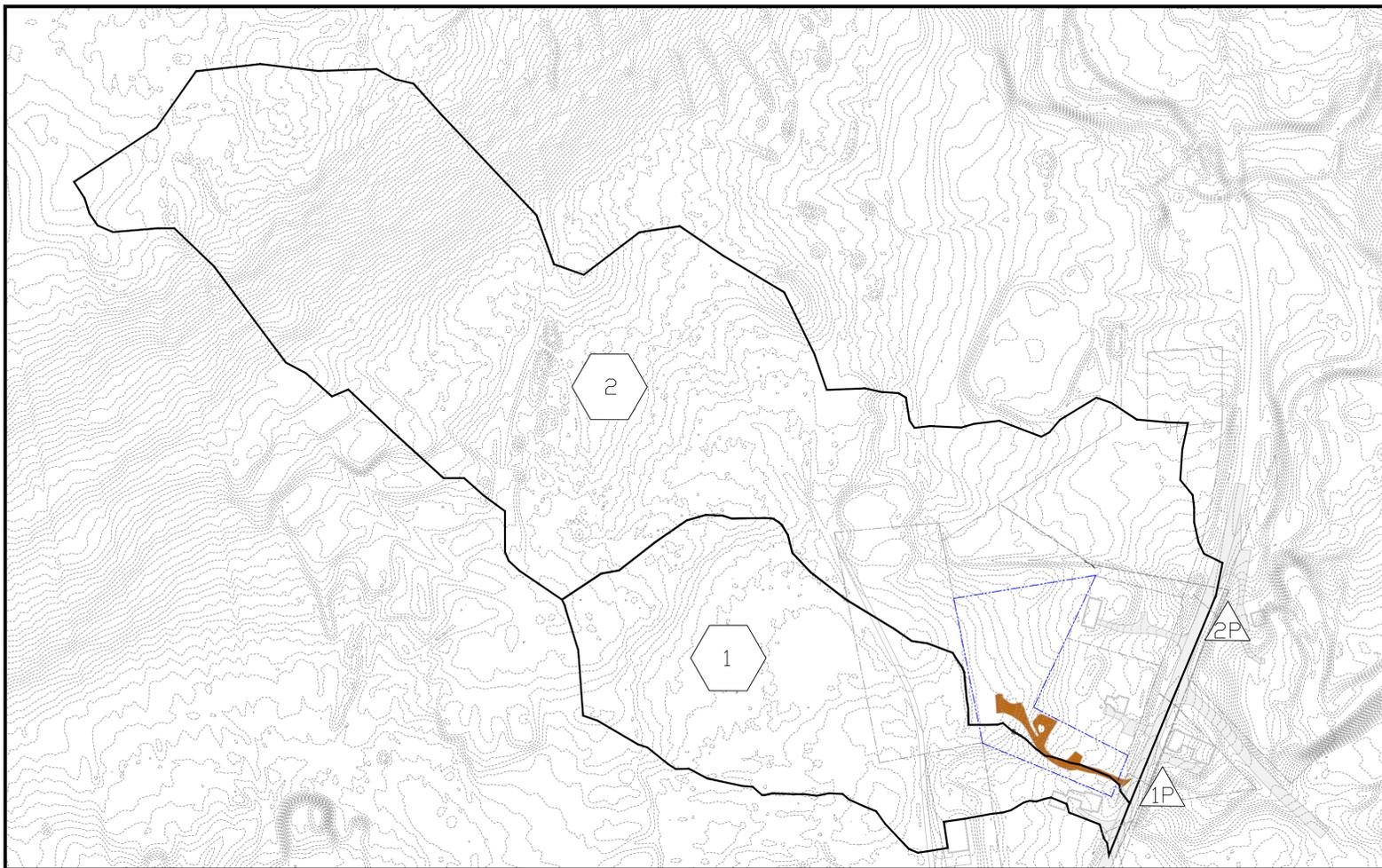
- SEDIMENTATION CONTROL MIX BERM SHALL CONSIST OF A WOOD WASTE COMPOST/BARK MULCH MIX OR RECYCLED COMPOSTED BARK, FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. IT MAY ALSO INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD CHIPS ARE NOT ACCEPTABLE. COMPARABLE COMPOSTED MIXES CAN BE USED UPON APPROVAL OF THE ENGINEER.
- THE BERM SHALL BE PLACED, UN-COMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
- ALL SEDIMENT BARRIERS INCLUDING SEDIMENTATION CONTROL MIX BERM MUST BE INSPECTED BEFORE, DURING, AND AFTER EACH RAINFALL, AND AT LEAST DAILY DURING EXTENDED PERIODS OF RAIN. SHOULD THE BARRIER BECOME INEFFECTIVE AS EVIDENCED BY OBSERVANCE OF FLOW ESCAPING UNDERNEATH OR THROUGH THE BERM, IMMEDIATE REPAIRS MUST BE MADE. RESHAPE BERMS AS NEEDED. SEDIMENT MUST BE REMOVED WHEN DEPOSITS REACH 1/2 THE HEIGHT OF THE BARRIER. SEDIMENTS REMOVED MUST BE PLACED IN AN APPROVE SITE AND STABILIZED.
- SEDIMENTATION CONTROL MIX BERM MAY BE REPLACED BY SILT FENCE INSTALLED IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS," PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DATED MARCH 2015.

**NOTES:**

- STONE SHALL CONSIST OF A 6" THICK LAYER OF 2"-3" CRUSHED STONE OVER A LAYER OF MIRAFI 500X WOVEN GEOTEXTILE, OR EQUIVALENT.
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ON THE PUBLIC ROAD.
- STABILIZED CONSTRUCTION ENTRANCE SHALL BE EMPLOYED FROM THE START OF CONSTRUCTION ACTIVITY UNTIL THE SITE IS PERMANENTLY STABILIZED WITH VEGETATION, RIP RAP, COMPACTED GRAVEL, OR PAVEMENT.
- THE PAD SHOULD BE INSPECTED WEEKLY, AND BEFORE AND AFTER STORM EVENTS. PAD MAY REQUIRE REPLACEMENT IF, THROUGH THE COURSE OF THE PROJECT, VOIDS BECOME FILLED WITH SEDIMENT.

**NOTES:**

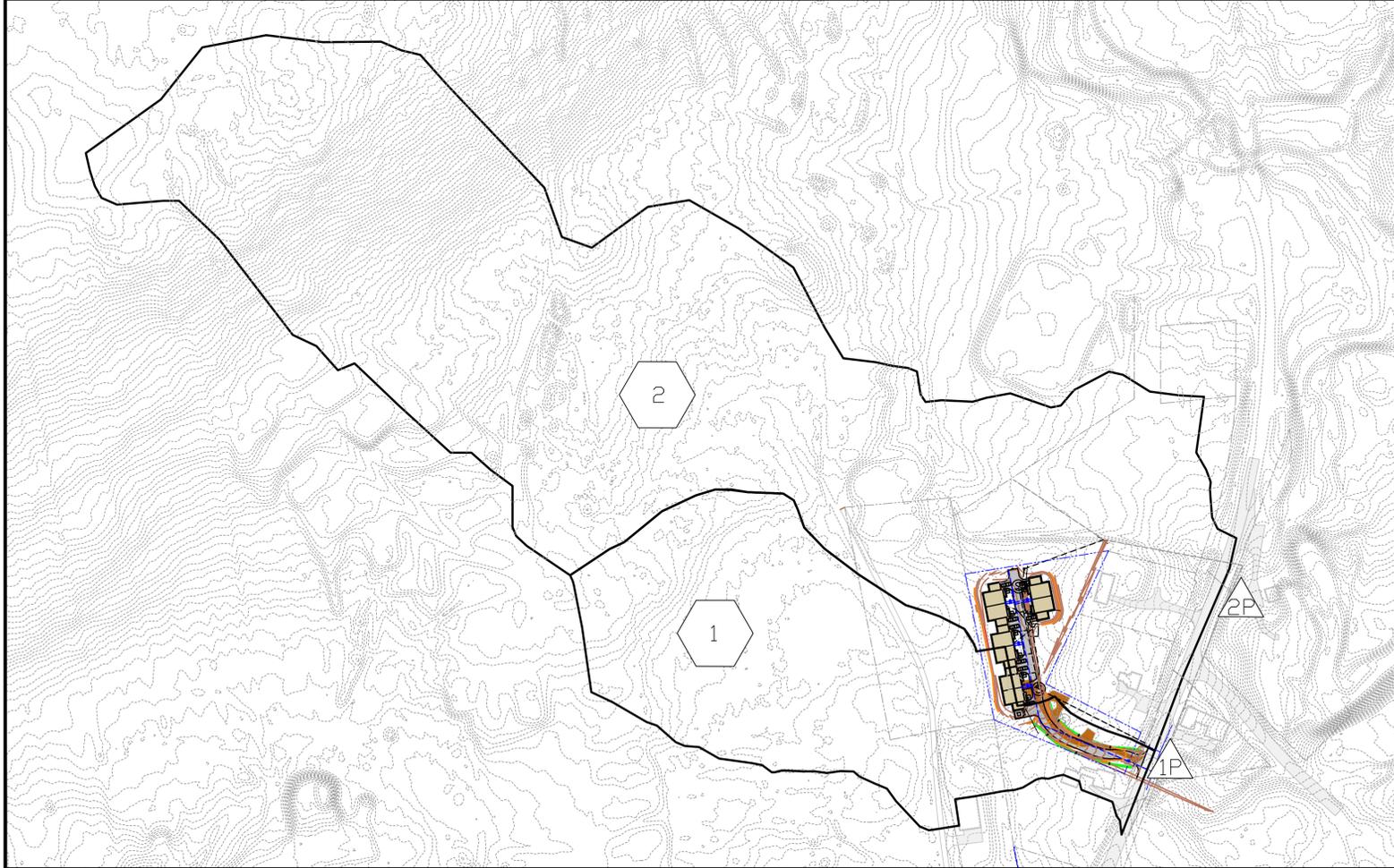
- SEDIMENTATION CONTROL MIX BERM SHALL CONSIST OF A WOOD WASTE COMPOST/BARK MULCH MIX OR RECYCLED COMPOSTED BARK, FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. IT MAY ALSO INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD CHIPS ARE NOT ACCEPTABLE. COMPARABLE COMPOSTED MIXES CAN BE USED UPON APPROVAL OF THE ENGINEER.
- THE BERM SHALL BE PLACED, UN-COMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
- ALL SEDIMENT BARRIERS INCLUDING SEDIMENTATION CONTROL MIX BERM MUST BE INSPECTED BEFORE, DURING, AND AFTER EACH RAINFALL, AND AT LEAST DAILY DURING EXTENDED PERIODS OF RAIN. SHOULD THE BARRIER BECOME INEFFECTIVE AS EVIDENCED BY OBSERVANCE OF FLOW ESCAPING UNDERNEATH OR THROUGH THE BERM, IMMEDIATE REPAIRS MUST BE MADE. RESHAPE BERMS AS NEEDED. SEDIMENT MUST BE REMOVED WHEN DEPOSITS REACH 1/2 THE HEIGHT OF THE BARRIER. SEDIMENTS REMOVED MUST BE PLACED IN AN APPROVE SITE AND STABILIZED.
- SEDIMENTATION CONTROL MIX BERM MAY BE REPLACED BY SILT FENCE INSTALLED IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS," PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DATED MARCH 2015.



**STORMWATER AREAS**

AREA 1:  
 IMPERVIOUS = 11,676 SF  
 TOTAL = 370,162 SF

AREA 2:  
 IMPERVIOUS = 43,418 SF  
 TOTAL = 1,211,305 SF



**STORMWATER AREAS**

AREA 1:  
 IMPERVIOUS = 22,173 SF  
 TOTAL = 392,050 SF

AREA 2:  
 IMPERVIOUS = 50,935 SF  
 TOTAL = 1,189,418 SF

**TERRA FIRMA**  
 PROFESSIONAL ENGINEERING, LLC  
 PO BOX 117  
 48-41 MRS. SHAWNEE  
 BELFAST, MAINE 04915  
 (207) 218-1212  
 TERRAFIRMAENGINEERING.COM



| REV. | DESCRIPTION              | DATE    |
|------|--------------------------|---------|
| 1    | REVISIONS FOR CITY STAFF | 1-13-26 |

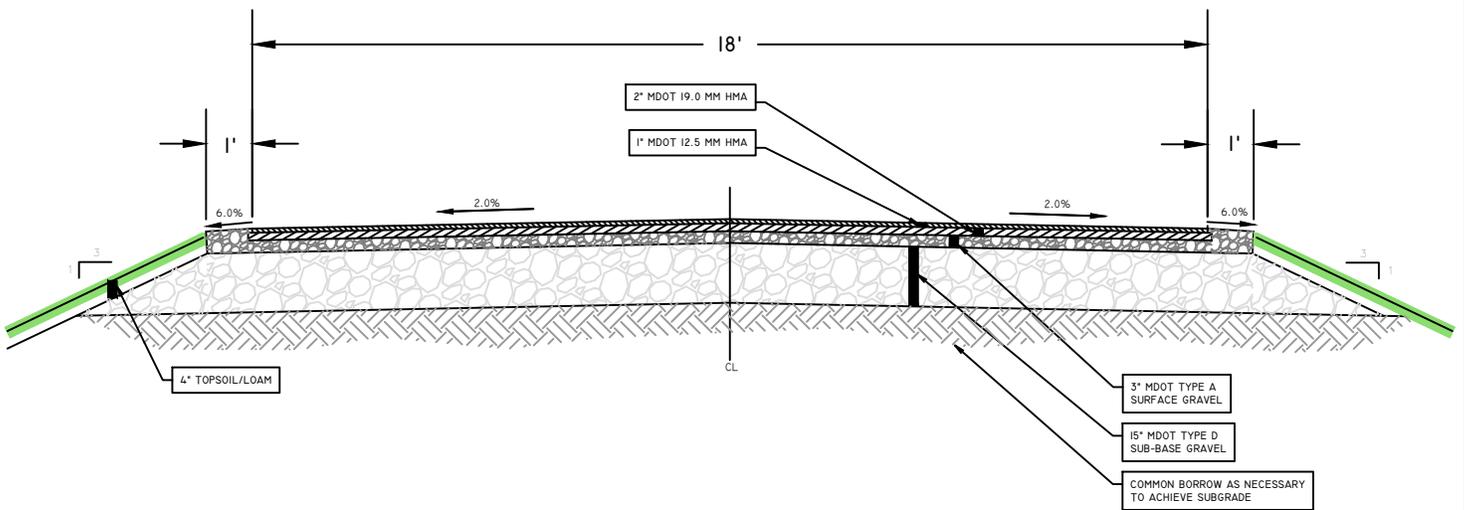
**STORMWATER DRAINAGE AREAS**  
 PLAN TITLE:  
 PROJECT ADDRESS: SWAN LAKE AVE  
 TAX MAP 020 LOT 010  
 PROJECT OWNER: JOSH OXLEY  
 18 SEARSPORT AVE  
 BELFAST, ME 04915

DRAWING SCALE:  
**1" = 30'**

PLAN DATE:  
**JANUARY 13, 2026**

PROJECT NUMBER:  
**25-023**

SHEET NUMBER:  
**C3.1**



TYPICAL 18' WIDE ROAD SECTION (CROWNED)  
SCALE: NOT TO SCALE



**TERRA FIRMA**  
PROFESSIONAL ENGINEERING, LLC

PO BOX 117  
48-4 MARSHALL WHARF  
BELFAST, MAINE 04915  
(207) 218-1212

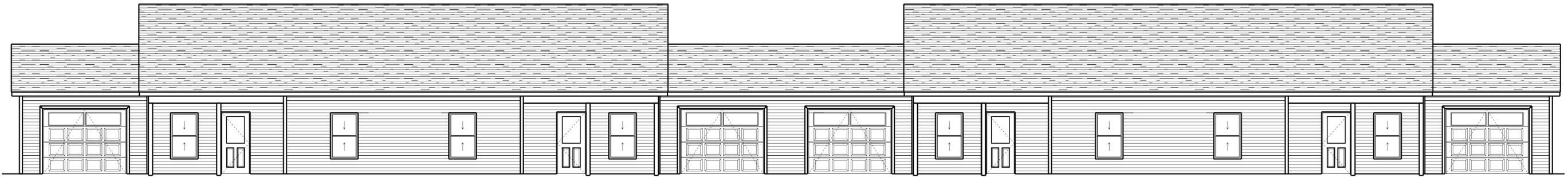
TERRAFIRMAENGINEERING.COM

TYPICAL CROWNED ROAD SECTION  
MAP 20, LOT 10  
BELFAST, ME 04915

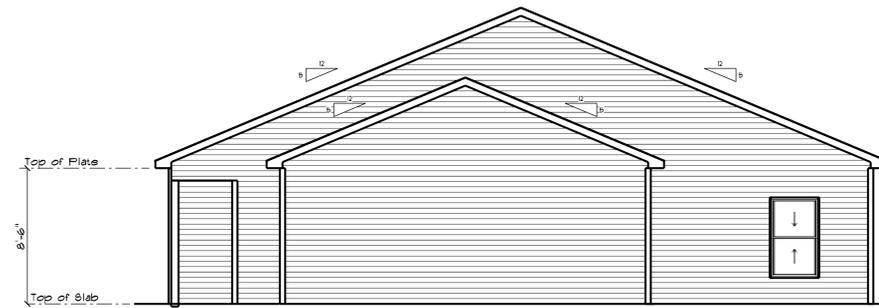
1/08/2026

SCALE: AS SHOWN

EX 1



**FRONT ELEVATION**  
SCALE: 3/16" = 1'-0"



**RIGHT ELEVATION**  
SCALE: 3/16" = 1'-0"



**REAR ELEVATION**  
SCALE: 3/16" = 1'-0"

DISCLAIMER:

THESE DRAWINGS ARE PROVIDED BY VIKING LUMBER COMPANY AS A SERVICE TO ITS CUSTOMERS AND ARE INTENDED FOR INFORMATIONAL AND ILLUSTRATIVE PURPOSE ONLY. THE INFORMATION PRESENTED IN THESE DRAWINGS HAS NOT BEEN PREPARED OR REVIEWED BY A REGISTERED ARCHITECT OR ENGINEER. VIKING LUMBER COMPANY SUGGESTS THAT ITS CUSTOMERS SEEK THE SERVICES OF A REGISTERED ARCHITECT TO OBTAIN TECHNICAL BLUEPRINTS FOR ACTUAL CONSTRUCTION. THESE DRAWINGS ARE NOT TO BE USED AS A BASIS FOR CONSTRUCTION AND VIKING LUMBER COMPANY WILL ASSUME NO RESPONSIBILITY IF THEY ARE SO USED.

SCALE: AS NOTED

DRAWN BY: PF

DATE: 6/9/2021

Viking Lumber

622 Main Rd

Holden, ME 04429

PHONE: 207-843-5183 FAX: 207-843-5020

EMAIL: pfrank@vikinglumber.com



Contractor/Owner: **DAVID SPENCER**

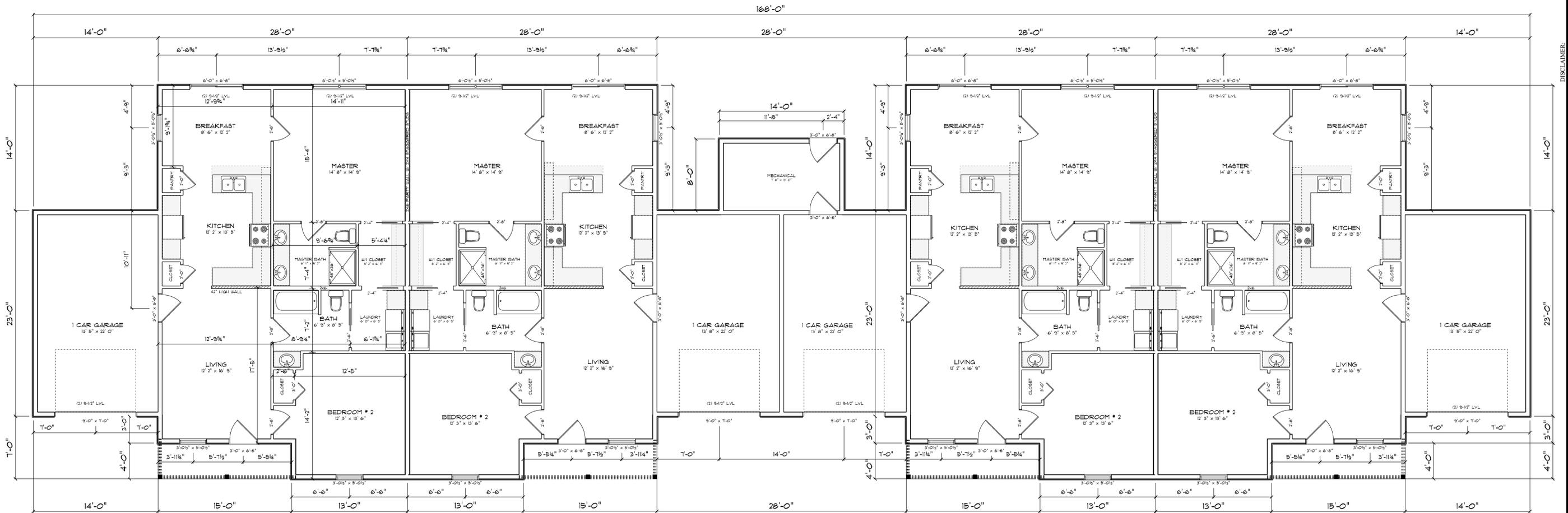
Job Name: **4 PLEX**

Location: **HAMPDEN, ME**

Project #: **E2969**

PAGE #

1



**MAIN3**  
SCALE: 3/16" = 1'-0"

Contractor/Owner: **DAVID SPENCER** Location: **HAMPDEN, ME**

Job Name: **4 PLEX**

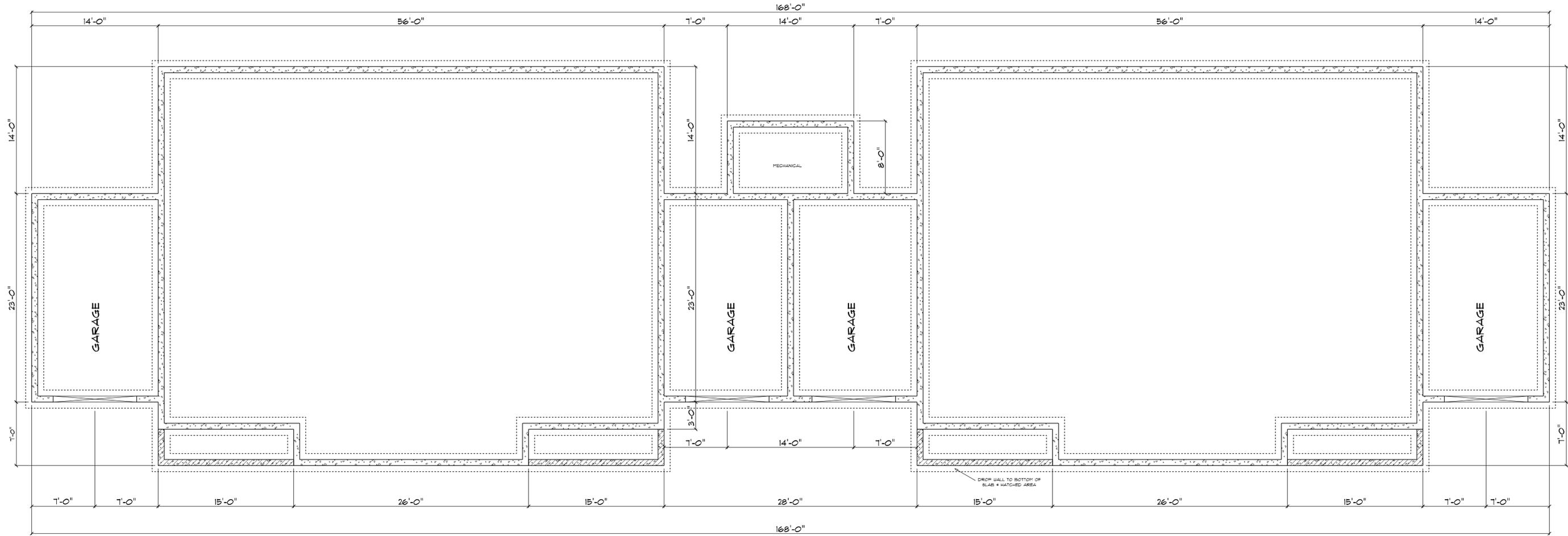
Project #: **E2969**

**Viking Lumber**  
622 Main Rd  
Holden, ME 04429  
PHONE: 207-843-5183 FAX: 207-843-5000  
EMAIL: pfrank@vikinglumber.com

Scale: AS NOTED  
Drawn By: PF  
Date: 6/9/2021

DISCLAIMER: THESE DRAWINGS ARE PROVIDED BY VIKING LUMBER COMPANY AS A SERVICE TO ITS CUSTOMERS AND ARE INTENDED FOR INFORMATIONAL AND ILLUSTRATIVE PURPOSE ONLY. THE INFORMATION PRESENTED IN THESE DRAWINGS HAS NOT BEEN PREPARED OR REVIEWED BY AN ARCHITECT OR ENGINEER. VIKING LUMBER COMPANY ASSUMES NO LIABILITY FOR CONSTRUCTION. VIKING LUMBER COMPANY SUGGESTS THAT ITS CUSTOMERS SEEK THE SERVICES OF A REGISTERED ARCHITECT TO OBTAIN TECHNICAL BLUEPRINTS FOR ACTUAL CONSTRUCTION. THESE DRAWINGS ARE NOT TO BE USED AS A BASIS FOR CONSTRUCTION AND VIKING LUMBER COMPANY WILL ASSUME NO RESPONSIBILITY IF THEY ARE SO USED.

PAGE # **2**



**BASEMENT**  
SCALE: 3/16" = 1'-0"

DISCLAIMER:

THESE DRAWINGS ARE PROVIDED BY VIKING LUMBER COMPANY AS A SERVICE TO ITS CUSTOMERS AND ARE INTENDED FOR INFORMATIONAL AND ILLUSTRATIVE PURPOSE ONLY. THE INFORMATION PRESENTED IN THESE DRAWINGS HAS NOT BEEN PREPARED OR REVIEWED BY VIKING LUMBER COMPANY AS AN ARCHITECTURAL OR ENGINEERING DESIGN. THIS IS FOR CONSTRUCTION PURPOSES ONLY. VIKING LUMBER COMPANY SUGGESTS THAT ITS CUSTOMERS SEEK THE SERVICES OF A REGISTERED ARCHITECT TO OBTAIN TECHNICAL BLUEPRINTS FOR ACTUAL CONSTRUCTION. THESE DRAWINGS ARE NOT TO BE USED AS A BASIS FOR CONSTRUCTION AND VIKING LUMBER COMPANY WILL ASSUME NO RESPONSIBILITY IF THEY ARE SO USED.

SCALE: AS NOTED  
DRAWN BY: PF  
DATE: 6/9/2021

**Viking Lumber**  
622 Main Rd  
Holden, ME 04429  
PHONE: 207-843-5183 FAX: 207-843-5020  
EMAIL: pfrank@vikinglumber.com



Contractor/Owner: **DAVID SPENCER** Location: **HAMPDEN, ME**  
Job Name: **4 PLEX**

Project #: **E2969**

**ATTACHMENT 2**

**DEED**

ERECORDED

**VOL 5060 PG 222**  
11/27/2024 12:15:24 PM  
2 Pages

Instr # 2024-9620

ATTEST: Stacy L Grant, Waldo Co Registry of Deeds

Return to:  
Ecologix Homes, LLC  
28 Loxley Lane  
Swanville, ME 04915

Real Estate Transfer Tax Paid

**WARRANTY DEED**

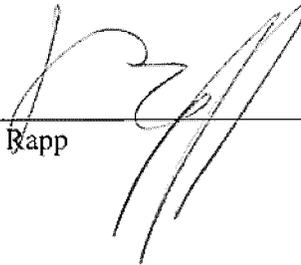
KNOW ALL PERSONS BY THESE PRESENTS: That Rose Rapp, of 72 Rowe Hill Road, Morrill, ME 04952, for consideration paid grants to Ecologix Homes, LLC, a Maine Limited Liability Company, of 28 Loxley Lane, Swanville, ME 04915, with WARRANTY COVENANTS:

See attached Exhibit A

Meaning and intending to describe and convey the same premises conveyed to Rose Rapp, by virtue of deed from Juanita L. Palmer, dated April 6, 2023 and recorded in the Waldo County Registry of Deeds in Book 4893, Page 344.

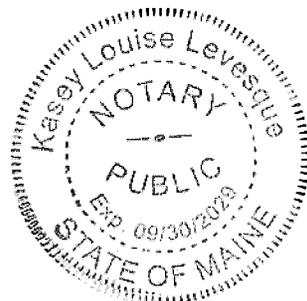
Executed this 26th day of November, 2024.

Rose Rapp



State of Maine  
County of Waldo

The foregoing instrument was acknowledged before me on this 26th day of November, 2024 by Rose Rapp.



*Kasey Louise Levesque*  
Notary Public/Attorney-at-Law  
Commission expiration: 09/30/29

## Exhibit A - Property Description

58 Swan Lake Avenue  
Belfast, Maine

A certain lot or parcel of land, together with any buildings thereon, situated in Belfast, County of Waldo and State of Maine, more particularly bounded and described as follows, to wit:

Beginning at an iron rod set in the assumed northwesterly bound of Swan Lake Avenue in the line to be agreed upon by said Nickerson and Melvin Ryder; thence North  $51^{\circ} 26' 45''$  W. along a line of found iron rods in said line of Ryder a distance of 278.00 feet to an iron rod set; thence North  $4^{\circ} 42' 54''$  East along the line to be agreed upon by said Nickerson and Hilton and Gloria Hanson a distance of 292.98 feet to a found iron rod; thence South  $83^{\circ} 10' 56''$  East along a line of found iron rods in the line to be agreed upon by said Nickerson and Virginia Clark a distance of 287.21 feet to a found iron rod; thence South  $41^{\circ} 21' 30''$  West along a line of found iron rods in the line to be agreed upon by said Nickerson and Robert Fenton and Eleanor Daniels a distance of 290.00 feet to an iron rod set; thence South  $46^{\circ} 54' 10''$  East along line of said Fenton and Daniels a distance of 210.22 feet to an iron rod set on the assumed northwesterly side of Swan Lake Avenue; thence South  $37^{\circ} 34' 11''$  West along the assumed line of Swan Lake Avenue and passing through a granite highway marker a distance of 88.18 feet to the point of beginning, containing 1.72 acres, more or less.

Bearings and distances are taken from a "Sketch of the Arlene Nickerson Property, Swan Lake Ave., Belfast, Maine," prepared by Good Deeds, Inc., Belfast, Maine, June, 1994, a copy of which sketch is attached to Boundary Lien Agreement by and between Hilton and Gloria Hanson, Robert Fenton and Eleanor Daniels, Virginia Clark, Melvin Ryder, Personal Representative of the Estate of Phoebe Mason and Arlene B. Nickerson, dated July 2, 1994 and recorded in Book 1469, Page 318.

**ATTACHMENT 3**

**BELFAST WATER AND SEWER CAPACITY LETTERS**



Elisabeth Parker <elisabeth@terrafirmaengineering.com>

---

## Swan Lake Ave capacity

---

Frank Short <frank@belfastwater.org>

Thu, Oct 23, 2025 at 7:08 AM

To: Elisabeth Parker <elisabeth@terrafirmaengineering.com>

Good morning, Elisabeth

Yes, there is plenty of water to serve your needs on Swan Lake Ave and we can hire a company to directional bore a line under Swan Lake Ave.

*Frank Short*

Frank D. Short, Superintendent

Belfast Water District

[41 Wight Street](#)

PO Box 506

Belfast, ME 04915

207-338-1200 Tel.

207-338-0444 Fax

[Quoted text hidden]



Elisabeth Parker &lt;elisabeth@terrafirmaengineering.com&gt;

---

## New Design and Capacity for Swan Lake Avenue

---

**Travis Jones** <travis@olverassociatesinc.com>  
To: Elisabeth Parker <elisabeth@terrafirmaengineering.com>  
Cc: Thomas Fowler <tom@thomasfowlerpe.com>

Mon, Oct 27, 2025 at 1:52 PM

Hi Elisabeth,

Thank you for your letter regarding the Swan Lake Avenue Apartments project.

I've reviewed the proposed development, including the new 9,278-square-foot building with six two-bedroom units and the smaller 2,724-square-foot building with two two-bedroom units. Based on the design provided and what is out lined in your request letter, the Belfast Wastewater Treatment Facility does have the capacity to accommodate the additional 1,440 gallons per day of wastewater flow associated with this project.

The proposed sewer design, including the replacement of the existing 4-inch PVC connection with a new 6-inch and private manhole on the property, appears appropriate for the proposed use.

I don't have any additional comments at this time. Please feel free to reach out if I can provide you with anything else.

-Travis

Travis Jones

ASSISTANT OPERATIONS MANAGER

OLVER ASSOCIATES INC.

[290 Main St](#)

PO Box 679

WINTERPORT, MAINE 04496

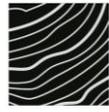
207-479-3330 – C

207-223-2232 – O

---

**From:** Elisabeth Parker <elisabeth@terrafirmaengineering.com>  
**Sent:** Friday, October 24, 2025 2:40 PM  
**To:** Travis Jones <travis@olverassociatesinc.com>  
**Cc:** Thomas Fowler <tom@thomasfowlerpe.com>  
**Subject:** New Design and Capacity for Swan Lake Avenue

You don't often get email from [elisabeth@terrafirmaengineering.com](mailto:elisabeth@terrafirmaengineering.com). [Learn why this is important](#)



# THOMAS FOWLER, P.E. LLC

CIVIL ENGINEER: DESIGN AND PERMITTING SERVICES

October 24, 2025

To: Travis Jones, Assistant Operations Manager  
City of Belfast Sewer Department  
Olver Associates, Inc.  
290 Main St  
PO Box 679  
Winterport, Maine 04496

Subject: Multi-Family Site Plan Amendment for Swan Lake Avenue Apartments  
Josh Oxley, Logix, LLC.  
58 Swan Lake Avenue (Tax Map 020, Lot 010)  
Belfast, Maine 04915

Dear Travis:

On behalf of Josh Oxley and Logix LLC., we are applying for a Site Plan for multi-family housing (a permissible use in this district) located at 58 Swan Lake Avenue (Tax Map 020, Lot 010). The project will be located in the Swan Lake Avenue Mixed Use zoning district (SLAMU) and will include:

- Building A: A new 9,278 square foot structure for six 2-bedroom residential apartments.
- Building B: A 2,724 square foot structure for two 2-bedroom residential apartments.

As part of its Site Plan review criteria, the City of Belfast Planning Board asks the applicant to demonstrate that there is sufficient capacity in the municipal water and sewer system to accommodate the anticipated new dwelling units. Anticipated domestic wastewater generation at the site is 1,440 gallons per day (gpd), see Table 1.

The project will utilize municipal sewage waste disposal. There is an existing 4" PVC connection to the existing 8" main in Swan Lake Avenue, which will be replaced with a new 6" saddle connection and a new private manhole on the subject property

**Table 1 – Estimated Domestic Wastewater Generation**

| # Units            | Bedroom | Flow / Bedroom (gpd) | Total (gpd)  |
|--------------------|---------|----------------------|--------------|
| <b>Building A</b>  |         |                      |              |
| 6                  | 2       | 90                   | 1,080        |
| <b>Building B</b>  |         |                      |              |
| 2                  | 2       | 90                   | 360          |
| <b>Grand Total</b> |         |                      | <b>1,440</b> |

*Estimated wastewater generation is based on the State of Maine Subsurface Wastewater Disposal Rules.*

We are writing to request written confirmation from the Belfast Wastewater Treatment Plant to present to the Planning Board that the sewer design as proposed meets both the capacity and design requirements for the City. Please feel free to contact me if you have any questions.

Thank you.

Sincerely,

A handwritten signature in black ink that reads "Elisabeth Parker". The signature is written in a cursive style and is contained within a light gray rectangular box.

Elisabeth Parker

Terra Firma Professional Engineering

P.O. Box 117

48-4 Marshall Wharf

Belfast, Maine 04915

209-322-5827

**ATTACHMENT 4**  
**FINANCIAL CAPACITY**



November 4, 2025

City of Belfast  
Planning Board Committee  
131 Church Street  
Belfast, ME 04915

RE: 58 Swan Lake Avenue, Belfast

To Whom it May Concern:

Bangor Savings Bank is providing this reference letter on behalf of Josh Oxley and his business entities in conjunction with his proposed project at the above referenced address. Bangor Savings Bank has had a long-term relationship with Mr. Oxley and his related companies and has financed several projects over the years. Mr. Oxley has the financial capacity to contemplate such a project.

Over the course of our long-term relationship, Mr. Oxley has established a comprehensive banking relationship with Bangor Savings Bank and all accounts have been handled as agreed. Given the Bank's history with Mr. Oxley, we would be happy to consider financing for the above-mentioned project, pending full underwriting.

If you have any questions, please feel free to contact me.

Sincerely,

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

Jacob Baker  
Vice President  
Bangor Savings Bank

**ATTACHMENT 5**  
**STORMWATER NARRATIVE**



## STORMWATER DRAINAGE MEMO

Project: Swan Lake Avenue Apartments  
Josh Oxley, Logix, LLC  
58 Swan Lake Avenue (Tax Map 020 Lot 010)  
Belfast, Maine 04915  
TFPE Project No. 24-035

### Project & Site Description

This project consists of construction of a new 9,274 square foot, 6-unit apartment building and a new 2,724 square foot, 2-unit apartment building on Swan Lake Avenue, an improved and extended road, 8 parking spaces in the attached garages, 8 exterior parking spaces, and associated utilities.

The parcel slated for development, Map 020 Lot 010, is 1.7 acres and has frontage on Swan Lake Avenue. These two structures will have parking and public utilities serving them and driveway connection to Swan Lake Avenue. The south portion of the property slopes from west to east and the north section of the property slopes southwest to northeast. There is a drainage way along the north side of the property to a culvert by Mill Lane and there will be a catch basin on either side of the driveway tying into the existing culvert going across the street.

### Impervious & Lot Coverage Area Summary

| Area Description                                      | Area (s.f.) |
|---|-------------|
| Existing Impervious                                   | 7,453       |
| Proposed Impervious                                   | 25,360      |
| Total Property Area                                   | 74,766      |
| Lot Coverage (Total Impervious / Total Property Area) | 33.9 %      |

### Drainage Areas

The project site consists of two drainage areas, one going to the 18" diameter CMP culvert (Culvert 1) on the south side of the driveway (Area 1) and one going to the 24" CMP culvert (Culvert 2) by Mill Lane (Area 2). For the existing conditions, area 1 is 370,162 square feet with 11,676 square feet of impervious area, and area 2 is 1,211,305 square feet with 43,418 square feet of impervious area. For the proposed conditions, area 1 increased to 392,050 square feet with 22,173 square feet of impervious area, and area 2 becomes 1,189,418 square feet with 50,935 square feet of impervious area. This is a change from 3.15% to 5.66% impervious area in Area 1, and a change from 3.58% to 4.21% in area 2 (noting that a section that was previously Area 2 would now drain to Area 1). This is an increase of 2.5% in Area 1 and 0.85% in Area 2.

### Drainage Summary

All runoff from this property and the surrounding area flows to Culvert 1 or Culvert 2. A significant drainage way north of the property and is collected by Culvert 2 (the existing 24" CMP drain line) going across Swan Lake Ave. Culvert 1 (the existing 18" CMP drain line) collects runoff where the driveway meets the road and then brings it across Swan Lake Ave. The existing area going to the 24" drain line (Area 2) is approximately 27.8 acres and the existing area (Area 1) going to the 18" drain line is approximately 8.5 acres. With the development Area 2 becomes 27.3 acres and Area 1 becomes 9.0 acres.

### Hydrology Modeling

We used HydroCAD modeling software to model the peak runoff from the 2, 10, 25, and 50-year storm events to the culverts each area is draining to for the pre and post-development conditions. In the Table below is also the total peak runoff pre and post development. This showed there is a maximum change of 0.90 cfs which is insignificant in the model. Based on our calculations, the 24" culvert has a capacity of 62.5 cfs and the 18" culvert has a capacity of 26.2 cfs. Therefore, for the largest modeled storm, a 50-year event, is only 38% of the 24" culvert's capacity, and 59% of the 18" culvert's capacity. Some of the runoff from the subject property will flow to the drainage way on the abutting lot owned by Dana Keene. A letter from Mr. Keene confirming that he is amendable to an easement for the drainage way is included with the application materials.

|                      | Area 1 Pre | Area 1 Post | % Change | Area 2 Pre | Area 2 Post | % Change |
|----------------------|------------|-------------|----------|------------|-------------|----------|
| <b>2-Year (cfs)</b>  | 3.22       | 3.41        | 5.6      | 12.39      | 12.84       | 3.5      |
| <b>10-Year (cfs)</b> | 6.09       | 6.45        | 5.6      | 23.71      | 24.12       | 1.7      |
| <b>25-Year (cfs)</b> | 7.89       | 8.45        | 6.6      | 31.12      | 31.46       | 1.1      |
| <b>50-Year (cfs)</b> | 9.41       | 9.97        | 5.6      | 36.60      | 36.87       | 0.7      |

### Flooding

This project is not in a mapped flood zone based on FEMA Flood Insurance Rate Map (FIRM) for Belfast.

### Summary

Based on the insignificant peak flow increase and the excess capacity in the existing public drainage system, we believe the runoff from this project is more than adequately managed by the drainage system in place.



Thomas A. Fowler, P.E.

**ATTACHMENT 6**

**EASEMENT LETTER**

November 22, 2025

Dana Keene  
27 Cindee Lane  
Belfast, ME 04915

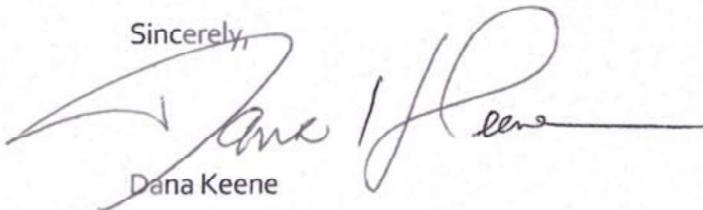
Project: Swan Lake Avenue Multi-Family Development  
58 Swan Lake Avenue  
Belfast, ME 04915  
TFPE Project No. 24-035

To Whom It May Concern:

I, Dana Keene, own the property on Tax Map 021 Lot 001-B, abutting the property on Tax Map 020 Lot 010, owned by Josh Oxley/Ecologix Homes, LLC. I understand Josh is planning to develop new multi-family residences on his property. This will include 8 apartments and an improved driveway. I have spoken to Josh and am amenable to allowing an easement for electric/communications utilities coming from the existing utility pole on my property. Additionally, I am amenable to allowing a drainage easement from the 58 Swan Lake Avenue property to the existing drainage way on my property, which ultimately leads to a culvert under Swan Lake Avenue/Route 141. I anticipate formalizing these easements with Josh during planning of this project.

Please do not hesitate to contact me with any questions at the above address.

Sincerely,



Dana Keene

**ATTACHMENT 7**

**MAINE DEP STORMWATER MANAGEMENT PERMIT BY RULE**



JANET T. MILLS  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MELANIE LOYZIM  
COMMISSIONER

**Permit-by-Rule & Notice of Intent Acceptance Notice**

**Applicant: ECOLOGIX HOMES, LLC**

**Town: Belfast**

**Project Address: 58 Swan Lake Avenue**

**Tax Map/Lot #: 020 - 010**

**Permit Number: PBR\_ID-0101423**

**Accepted Date: 1/6/2026**

**NRPA**

**Stormwater**

**MCGP**

**NRPA PBR Sections – Ch. 305**

Sec. 2 Act. Adj. to Prot. Natural Res.

Sec. 9 Utility Crossing

Sec. 16 Coastal Sand Dune Project

Sec. 3 Intake Pipes

Sec. 10 Stream Crossing

Sec. 16A Beach Nourishment and  
Restoration

Sec. 4 Replacement of Structures

Sec. 11 State Transport. Facilities

Sec. 18 Maintenance Dredging

Sec. 6 Movement of Rocks or Veg.

Sec. 12 Restoration Natural Areas

Sec. 19 Act. Near SVP Habitat

Sec. 7 Outfall Pipes

Sec. 13 F&W Create/Water Quality  
Habitat

Sec. 20 Act. Near Waterfowl/Bird  
Habitat

Sec. 8 Shoreline Stabilization

Sec. 15 Public Boat Ramps

**Project Description:**

Swan Lake Ave Multi Family Residential

This project includes a new 6-unit multi-family building totaling 9,278 Sf, and a new 2-unit residential duplex totaling 2,724 SF. It also includes an improved road coming off Swan Lake Avenue and parking spaces, grading and drainage improvements, landscape improvements, and utilities to serve the new buildings.

Sincerely,

Sara K. Johnson

Bureau of Land Resources

**AUGUSTA**

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

Website: [www.maine.gov/dep](http://www.maine.gov/dep)

**BANGOR**

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

**PORTLAND**

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

**PRESQUE ISLE**

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

# Land Permit Application (Including Permit By Rule)

version 2.16

(Submission #: HQG-VWWQ-MWD7A, version 1)

Digitally signed by:  
MELS  
Date: 2025.12.23 16:00:02 -05:00  
Reason: Submission Data  
Location: State of Maine

## Details

---

**Site:** 58 Swan Lake Ave

**Submission ID** HQG-VWWQ-MWD7A

## Form Input

---

### Stormwater Construction Activity Questions

**Will your project disturb one acre or more of area?**

Yes

**Will your project result in any of the following:**

None of these

Your project qualifies for a Stormwater Permit By Rule. A Maine Construction General Permit Notice of Intent is required.

### Project Scope

Please select all applicable application types below. If you intend to file under a Tier 1, 2, or 3, select NRPA Permit.

If you are unsure which application type to select, please contact the nearest regional office. Land Bureau staff are available by phone to answer your questions on Monday, Tuesday and Thursday. Staff in the Central Maine Office are also available on Wednesday. You can also email your questions to [LandOnCall@maine.gov](mailto:LandOnCall@maine.gov). Not sure which region your town is in? See our [Regional Office](#) locations.

[Central Maine Office](#)

207-287-7688

[Northern Maine Office](#)

207-764-0477

[Eastern Maine Office](#)

207-941-4570

[Southern Maine Office](#)

207-822-6300

### **Application Type**

Stormwater Permit by Rule

Please note: The type of application you selected requires you to provide public notice within 30 days prior to filling a license application. More information and templates can be found on [this page](#).

**Is this project funded by an awarded DEP grant?**

No

**Are you a federal agency? (e.g., U.S. Army Corps of Engineers)**

No

**Does your project require individual review for consistency with the federal Coastal Zone Management Act of 1972?**

No

The Coastal Zone Management Act of 1972 requires any activity taking place within the [coastal zone](#) that requires a federal permit and that would have reasonably foreseeable effects on coastal resources or uses to be consistent with the state's enforceable policies. Maine's [coastal zone](#) includes the entirety of municipalities, unorganized townships, or plantations that contain tidal waters.

NOTE: Activities that are eligible for a U.S. Army Corps Regional General Permit or Nationwide Permit, and that meet state conditions on those permits, do not require individual review for consistency.

**Is this an after-the-fact application?**

No

## Applicant (1 of 1)

**Ecologix Homes, LLC**

**Who is the applicant?**

Organization

### **Instructions for Organizations**

If applicant is a corporation, LLC, or other legal entity:

- The Applicant's Organization Name must match the articles of incorporation on file with the Secretary of States's office.
- They must provide a copy of Secretary of State's registration information (see link below).

[Secretary of State's registration information](#)

### **Applicant**

**Organization or Municipality Name**

Ecologix Homes, LLC

**Phone Type    Number            Extension**

Business        207-218-1411

**Email**

josh@solarlogixmaine.com

**Mailing Address**

18 Searsport Ave

Belfast, ME 04915

United States

### **Instructions for Responsible Party**

The Responsible Party is the person who is most knowledgeable about or responsible for environmental compliance.

## Responsible Official

**First Name**      **Last Name**

Josh                      Oxley

**Title**

President & Owner

**Phone Type**    **Number**                      **Extension**

Business              207-218-1411

**Email**

josh@solarlogixmaine.com

**Mailing Address**

18 Searsport Ave  
Belfast, ME 04195  
United States

## Attach Proof of Legal Name

[Good standing.png - 12/23/2025 12:24 PM](#)

**Comment**

NONE PROVIDED

## Agent

### Agent Information

Agents are individuals or consultants that serve as a point of contact for the submission.

### Will an agent be representing you for this project?

Yes

## Agent

**First Name**      **Last Name**

Elisabeth              Parker

**Organization Name**

Terra Firma Professional Engineering (TFPE)

**Phone Type**    **Number**                      **Extension**

Business              2072181212

**Email**

elisabeth@terrafirmaengineering.com

**Mailing Address**

P.O. Box 117 48-4 Marshall Wharf  
Belfast, ME 04915  
United States

### Does the agent have an ownership interest in the project?

No

## Agent Letter of Authorization

[Agent Authorization Signed.pdf - 12/03/2025 12:09 PM](#)

**Comment**

NONE PROVIDED

## Project Summary

### Project Name

Swan Lake Ave Multi Family Residential

### Project Summary

This project includes a new 6-unit multi-family building totaling 9,278 Sf, and a new 2-unit residential duplex totaling 2,724 SF. It also includes an improved road coming off Swan Lake Avenue and parking spaces, grading and drainage improvements, landscape improvements, and utilities to serve the new buildings.

## Detailed Project Description

[Detailed Project Description.pdf - 12/23/2025 01:42 PM](#)

### Comment

NONE PROVIDED

## Project Location

### Project Site Name

58 Swan Lake Ave

### Project Address

58 Swan Lake Avenue

Belfast, ME 04915

### Directions and Site Identifiers

Go East on Route 1 across the bridge over the Passagassawakeag River. Swan Lake Avenue is approximately 750' past the bridge on the left. The site is approximately 2,900' down Swan Lake Avenue on the left.

### Tax Map #

020

### Tax Lot #

010

Place pin on map at the location of the project activity.

Click [here](#) to access permit data geographically referenced via Google Earth. Existing Land Bureau permits, natural resource habitat layers and other related spatial layers can be accessed from this site.

### Project Location

44.44189350000001,-69.0010787

### Size of Lot or Parcel

1.7

### Size of Lot or Parcel

Acres

## Deed

### Deed Reference - Book #

5060

### Deed Reference - Page #

222

### Proof of Ownership

[Deed.pdf - 12/03/2025 11:45 AM](#)

### Comment

NONE PROVIDED

## Stormwater Permit By Rule

### When a project qualifies for a stormwater PBR.

A project qualifies for a stormwater PBR if it results in one or more acres of disturbed area and the following:

- (1) Less than 20,000 square feet of impervious area and less than 5 acres of developed area in the direct watershed of a lake most at risk, lake most at risk severely blooming, or urban impaired stream; and
- (2) Less than one acre of impervious and less than five acres of developed area in any other watershed.

### When a project does not qualify for a stormwater PBR.

A project does not qualify for a Stormwater PBR if it does not meet the criteria contained in (1) or (2) above, or when it takes place on a parcel subject to a Site Location of Development Act permit or an individual permit under the Stormwater Management Law.

**Type of Direct Watershed**

River, stream or brook

**Name of Waterbody(ies) Drained to**

Goose River

**Does the site drain to an Impaired Waterbody?**

No

**Project Area Information**

| Area       | Units       | Existing | New      | Total (Square Feet) |
|------------|-------------|----------|----------|---------------------|
| Impervious | Square Feet | 0.0      | 24.939   | 24.939              |
| Landscaped | Square Feet | 0.0      | 24,587.0 | 24,587.0            |
| Disturbed  | Square Feet | 0.0      | 49,526.0 | 49,526.0            |

**Existing Developed Area (Acres)**

0.00

**New Developed Area (Acres)**

0.57

**Total Developed Area (Acres)**

0.57

**Amount of Occupied Area (Acres)**

0

**Project involves work in an essential habitat?**

No

**Part of a Subdivision?**

No

**Construction Start Date**

04/01/2026

**Construction End Date**

03/31/2027

**Photographs**

[PHOTO EXHIBIT.pdf - 12/03/2025 12:39 PM](#)

**Comment**

NONE PROVIDED

**Erosion and Sedimentation Control Plan**

[58 Swan Lake Ave Drawing 12-23-25 2.1.pdf - 12/23/2025 03:53 PM](#)

**Comment**

NONE PROVIDED

**Site Plan**

[58 Swan Lake Ave Drawing 12-23-25-C1.1.pdf - 12/23/2025 03:38 PM](#)

**Comment**

NONE PROVIDED

**Instructions for Public Notice Filing and Certification**

Public Notice Filing and Certification is required by [Chapter 2](#). More information and the required document templates can be found on [this page](#). Notice must be filed within 30 days prior to filing the application. Notice must be given to abutters, all persons owning land within 1,000 feet of the proposed project and the municipal office.

**Copy of the notice and a list of persons to whom notice was provided**

[ABUTTERS.pdf - 12/23/2025 12:29 PM](#)

**Comment**

A voicemail from Cameron Dufour was received on 8/21/25 stating the previous rule of 1,000' has been changed and the current rule in place only requires the immediate abutters.

**I certify that:**

A 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.

**Certification**

I understand and agree with the terms listed below

**Applicant Statement:**

I am applying for a Stormwater PBR or permit renewal and have attached the required submissions. I have read the requirements and I affirm that my project satisfies the applicable stormwater management standards. I authorize staff of State and Federal agencies having jurisdiction over this activity to access the project site for the purpose of determining compliance with the rules.

**Section Processing Fee**

88.00

**Fee Total**

**Total Processing Fees**

88.00

**Total Licensing Fees**

0.00

**Service Fee (per transaction)**

2.00

**Processing Fee Details**

Stormwater Permit by Rule: \$88.00

**Licensing Fee Details**

No Licensing Fees

**Total Fees**

90.00

Online payment is required before submitting this application. Please pay online using the [DEP Payment Portal](#) for the list of products shown. Ensure that your total paid matches the total above. Enter your payment confirmation number below before submitting this application.

**Payment Portal Products**

Stormwater Management Law (Permit-by-Rule):\$88.00

| Receipt ID |
|------------|
| 16490      |

**Payment Confirmations**

[Success Page - DEP Payment.pdf - 12/23/2025 12:25 PM](#)

**Comment**

NONE PROVIDED

**Payment Portal Amount Paid**

93.00

The Payment Portal Amount Paid is greater than the Total Fees above.