



PLANNING BOARD MEETING AGENDA

Thursday August 20, 2020

Burgess Meeting Room, Berwick Town Hall

6:30 p.m.

Call to Order

Pledge of Allegiance

Introduction of Board Members

Public Comment

Approval of Minutes

- August 6, 2020

Public Hearing

- Site Plan Review. Adult Use Marijuana Cultivation Facility. 11 Pond Road (R70-16) RC/I Zone. CAF Realty of Maine.
- Site Plan Amendment & Expansion. Medical Marijuana Storefront & Adult Use Marijuana Production Facility. 357 Portland Street (R70 12-1 & 12-2). Paper Birch Property.

Old Business

- Site Plan Review. Adult Use Marijuana Cultivation Facility. 11 Pond Road (R70-16) RC/I Zone. CAF Realty of Maine.
- Site Plan Amendment & Expansion. Medical Marijuana Storefront & Adult Use Marijuana Production Facility. 357 & 359 Portland Street (R70 12-1 & 12-2). Paper Birch Property.
- Land Use Ordinance Amendments

Public Comment

Informational Items

Adjournment



PLANNING BOARD MEETING MINUTES

Thursday August 6, 2020

Burgess Meeting Room, Berwick Town Hall

6:30 p.m.

Call to Order

Pledge of Allegiance

Introduction of Board Members

Dave Andreesen; Frank Underwood; Michael LaRue; Nichole Fecteau

Regular Member Absent: Sean Winston

Alternate Member Present: David Ross-Lyons

Staff Members Present: James Bellissimo, Planner; Jenifer McCabe, Code Enforcement Officer

Public Comment

Approval of Minutes

- June 18, 2020
No action taken.
- July 16, 2020

Motion: Michael LaRue motioned to approve the minutes as presented.

Second: Frank Underwood

VOTED – 4-0 in favor

Motion Passed

In favor: Dave Andreesen; Frank Underwood; David Ross-Lyons; Michael LaRue

Opposed: None

Abstain: None

Public Hearing

- Land Use Ordinance Amendments
- Conditional Use Application. Adult Use Marijuana Storefront and Adult Use Cultivation Facility. 468 Portland Street (R71-7) RC/I Zone. Herbal Pathways

Old Business

- Conditional Use Application. Adult Use Marijuana Storefront and Adult Use Cultivation Facility. 468 Portland Street (R71-7) RC/I Zone. Herbal Pathways

James Bellissimo said a site walk was held earlier in the evening. The storefront is proposed to be ADA accessible and identification cards will be required at the door. The outstanding items from the last meeting included the septic, which was in the file and additional information on the wastewater from cultivation. The applicant uses an aeroponic cultivation process, which requires less water and any extra water will go through a reverse osmosis system.

Frank Underwood asked what would happen if the water is not reusable and if the water goes into the leech field, that the water is analyzed. The following condition was proposed:

A sample shall be taken before any cultivation wastewater is discharged into the septic or to a holding tank, and that it tested for priority pollutants and nutrients.

Motion: Frank Underwood motioned to approve the Findings of Fact.

Second: David Ross-Lyons

**VOTED – 5-0 in favor
Motion Passed**

In favor: Dave Andreesen; Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

Motion: Frank Underwood motioned to approve the Condition of Approval.

Second: David Ross-Lyons

**VOTED – 5-0 in favor
Motion Passed**

In favor: Dave Andreesen; Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

Motion: Frank Underwood motioned to approve the application.

Second: David Ross-Lyons

**VOTED – 5-0 in favor
Motion Passed**

In favor: Dave Andreesen; Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

New Business

- Site Plan Amendment (lot line adjustment on Site Plan). Solar Array. 193 Route 236 (R66-6A). R3 Zone. LRB Leasing & Berwick Solar, LLC.

The Site Plan was previously approved showing three lots, the amendment proposed the Site Plan as two lots. Frank Underwood said this amendment is what the Board previously discussed.

Motion: Frank Underwood motioned to approve the Site Plan amendment.

Second: Nichole Fecteau

**VOTED – 5-0 in favor
Motion Passed**

In favor: Dave Andreesen; Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

- Site Plan Amendment & Expansion. Medical Marijuana Storefront & Medical Marijuana Production Facility. 357 Portland Street (R70 12-1 & 12-2). Paper Birch Property.

Dave Andreesen recused himself.

The applicant requested to a 20,000 ft² Adult Use Cultivation Facility with a Phase II expansion of 5,200 ft² on lot 12-2. A detailed odor control plan has been submitted for the cultivation facility. There will be a maximum of 20 employees for the cultivation building and the parking area will have 22 spaces. The building will be sprinkled.

Geoff Aleva said the applicant received a revised DOT permit. Mr. Aleva explained the justification for the two waivers requested: Landscaping (9.8.2.I.1.b) & Off-Street Parking (7.8.5). Mr. Aleva explained the Phase II expansion would be for added demand for cultivation. Mr. Aleva said the cultivation should result in very little wastewater and that the wastewater will be captured in a holding tank.

Nichole Fecteau said the landscaping waiver was granted during prior applications.

Motion: Frank Underwood motioned to approve the waiver for landscaping.

Second: Michael LaRue

VOTED – 4-0 in favor

Motion Passed

In favor: Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

Motion: Frank Underwood motioned to approve the waiver for 7.8 (off-street parking landscaping requirements).

Second: David Ross-Lyons

VOTED – 4-0 in favor

Motion Passed

In favor: Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

Motion: Frank Underwood motioned to find the application complete.

Second: Michael LaRue

VOTED – 4-0 in favor

Motion Passed

In favor: Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

A Public Hearing was set for August 20th. A site walk was not scheduled.

- Site Plan Review. Adult Use Cultivation Facility. Off Portland Street (R72-17) RC/I Zone. 3G's Realty.

Dave Andreesen re-joined the Board.

3G's Realty proposed to construct 12 industrial buildings: 10 for Adult Use Marijuana Cultivation and 2 for general industrial buildings with specific uses to be determined. Each building will be 6,600 ft² for a total of 79,200 ft². The project overall will result in 7.6 acres of developed area, with 3 acres of pavement and 1.8 acres of building area. The 12 industrial buildings are expected to have 57 employees and the parking area has 57 parking stalls. The project requires a DEP permit.

Neil Rapoza said a DOT permit was obtained and recorded at the Registry of Deeds. Holding tanks are included for each building. Plantings and landscaping may change depending on the DEP requirements. The septic will be a gravity system. Frank Underwood asked what a dewatering area is. Mr. Rapoza said during excavation, the area holds water and traps sediment and the purpose of it is to protect silt fences from being overwhelmed by the water volume and sediment.

The Board and Staff discussed licensing and whether the landlord or tenants should hold the license.

Motion: Frank Underwood motioned to waive 9.8.F.2.b.i

Second: David Ross-Lyons

**VOTED – 5-0 in favor
Motion Passed**

In favor: Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

Motion: Nichole Fecteau motioned to find the application complete.

Second: Michael LaRue

VOTED – 5-0 in favor

Motion Passed

In favor: Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None

Site Walk scheduled for August 20th.

Land Use Ordinance Amendments

- Village Overlay District Amendments

James Bellissimo said a special Town Meeting can be held January 5th at a relatively low cost to the Town and that would put the deadline for changes to September 18th.

Public Comment

Informational Items

Frank Underwood pointed out in the Comprehensive Plan it establishes vistas to protect (Page 117).

Adjournment

Motion: David Ross-Lyons motioned to adjourn.

Second: Michael LaRue

VOTED – 5-0 in favor

Motion Passed

In favor: Nichole Fecteau; David Ross-Lyons; Michael LaRue; Frank Underwood

Opposed: None

Abstain: None



PLANNING BOARD MEMORANDUM TOWN OF BERWICK, PLANNING DEPARTMENT

TO: BERWICK PLANNING BOARD
FROM: JAMES BELLISSIMO, DIRECTOR OF COMMUNITY DEVELOPMENT & PLANNING
SUBJECT: CAF REALTY – ADULT USE MARIJUANA PRODUCTION FACILITY CONDITIONAL USE
DATE: AUGUST 18, 2020
CC: JENIFER MCCABE; PHIL SAUCIER

A DEP Stormwater Permit by Rule was approved August 13th, 2020 with no further conditions. This Permit by Rule reviewed the drainage on the site plan and all associated stormwater features.

A future expansion building is now shown where an existing septic pipe easement is, this will have to be resolved before the Phase II building can be permitted. The access to the proposed Phase I building goes over the actual septic pipe. The plans for pipe protection are included in sheet D3.

Wellhead Protection

Staff spoke with Denise Douin of the DHHS Drinking Water Program. Ms. Douin said the primary risk of contamination comes from a buildup of nitrates. The proposed holding tank would mitigate that risk.

1,000-foot setback

MJS took their setback from the property line. Kind Farms proposed building is beyond the 1,000-foot requirement.



Third Party Review

Tidewater Engineer was our third-party review. Their scope included: review of protection measures for the construction of a road over the existing sewer force main; technical review of the drainage report; and other comments identified while reviewing the drainage report and plan set. MJS Engineering sent in a response sheet indicating they addressed all issues identified on the third-party review.

Summary of Issues

Issue	Staff Comments	Status/ Recommendation
Septic easement	A septic easement is deeded in an incorrect location. The easement is currently where a proposed building is.	The easement will need to be resolved before a permit is granted for the Phase II building.
Driveway & Basin within buffer zone	The basin was reviewed by DEP and 3 rd party review	DEP permit by rule was approved.
Driving over the septic pipe	The plan was reviewed by a 3 rd party engineer.	Protections for the septic pipe have been reviewed by a 3rd party review and found no issues.
Public Safety	Both Fire & Police for both Towns have been notified. South Berwick has been aware of this project since Feb. 19 th	This concern is resolved.
Wetland Buffer Zone	The buildings have been moved out of the buffer zone and project scaled back from 4 buildings to 2 to fit in all the setbacks and buffers.	This concern is resolved.
Wellhead protection	The primary risk is nitrate concentration. The water will be tested annually for nutrient levels and pollutants.	This concern has been addressed.
Odor Control	Conditions of Approval were amended to include negative pressure.	This concern has been addressed.
1,000-foot setback	The setback from Kind Farms is not surveyed but is taken from the property line. This is a conservative estimate, the Ordinance standard is building to building.	This concern is resolved.

The following Conditions of Approval are proposed:

1. A water sample shall be tested for priority pollutants and nutrients before any cultivation wastewater is discharged into the septic, or to a holding tank, and then tested annually thereafter. Results shall be provided to the Town.
2. The South Berwick Water District shall be furnished with a detailed well drillers log for the new well.
3. A five-day pump test be performed on the well with well drawdown readings taken hourly until the well stabilizes. The Pump Test will be coordinated with the South Berwick Water District so the well drawdowns at Junction Road can be monitored to check for interference. The Facility may not irrigate their plants if the new well has an adverse effect on the Junction Road water source or abutter's water source.
4. The applicant shall submit proof of purchase of carbon filtration and the equipment required to produce a negative pressure environment.
5. If an odor violation is determined by the Code Enforcement Officer, the applicant shall resolve the issue within five business days. The Code Enforcement Officer may revoke the Certificate of Occupancy if the odor issues are not resolved within five business days.
6. If well water is contaminated with nitrates or other byproducts as a result of production beyond safe concentrations, the cost to remediate the nitrates or other contamination levels shall be at the applicant's (property owner) expense.
7. The building height shall be restricted to one story.
8. The septic pipe easement shall be moved before the future expansion will be granted a building permit.

Remaining:

1. The following Planning Board determination:

Conformance with the Comprehensive Plan: All proposed conditional uses and site plans shall conform to the Comprehensive Plan of the Town of Berwick and with the provisions of all pertinent federal, state and local codes, ordinances, and regulations.

2. Review of the rest of the findings

3. Planning Board determination on the application

July 24, 2020

Town of Berwick
Planning Board
11 Sullivan Street
Berwick, ME 03901

Re: 11 Pond Road Marijuana Production Proposal

Planning Board Members and James Bellissimo:

We would like to thank the Town for its continued due diligence on the proposed marijuana cultivation project at 11 Pond Road in Berwick, Maine. We appreciate that a PEER review was conducted and that the Board enhanced its original conditions of approval. We were pleased to hear a DEP review was going to occur. We have a few comments and requests regarding the PEER review and the Conditions of Approval for your consideration.

Peer Review

While the PEER review did address the requirements of storm water management, shoreland protection area and site drainage, it did not mention **Chapter 700, Wellhead Protection**. Will the DEP be reviewing this regulation?

The building design for the mitigation of the smell was not addressed. Whether this was not requested or was not done due to a lack of information, we ask that the Board consider having the design undergo an engineering review.

Conditions of Approval

In reviewing the document, **Town of Berwick Planning Board Conditional Use Findings of Fact**, that was included in the Public Hearing packet of July 16, 2020, we request that the Board consider including additional conditions if this application is approved. We have listed the Town's conditions and marked our requests as **Resident Request**.

1. All wastewater from marijuana production shall be captured in a holding tank.

Resident Request: Tank shall have an alarm system which will sound at ¾ full to give adequate time to call a service to pump the tank before it would overflow. Alarm system shall be inspected by the Town prior to issuance or renewal of permit.

2. The South Berwick Water District shall be furnished with a detailed well drillers log for the new well.
3. A five-day pump test be performed on the well with well drawdown readings taken hourly until the well stabilizes. The Pump Test will be coordinated with the South Berwick Water District so the well drawdowns at Junction Road can be monitored to check for interference. The Facility may not irrigate their plants if the new well has an adverse effect on the Junction Road water source.

Resident Request: We are requesting that the surrounding residential wells be added to this testing. If any issues were to arise from the applicant's use of his well, it would not only affect the South Berwick well but also the residents'

wells. When South Berwick Water District put in its well on Junction Road and performed its initial test, all the residential wells were monitored to evaluate the impact on the surrounding wells.

4. The applicant shall submit proof of purchase of carbon filtration and the equipment required to produce a negative pressure environment.

Resident Request: Applicant shall submit the systems design for engineering review and approval prior to being issued a permit.

5. If an odor violation is determined by the Code Enforcement Officer, the applicant shall resolve the issue within five business days. The Code Enforcement Officer may revoke the Certificate of Occupancy if the odor issues are not resolved within five business days.

Resident Request: We appreciate the Town implementing a time period to resolve the odor issue. Our concern is the stated five business days could turn into a week, depending on the day the violation was reported. In the meantime, the residents would have to deal with the odor issue. We are requesting that the five business days requirement be reduced to 1 calendar day to a maximum of 2 calendar days.

6. If well water is contaminated as a result of production, the cost to remediate the issue shall be at the applicant's expense.

Resident Request: We request that the items which constitute contamination and remediation be provided in more detail.

7. The building height shall be restricted to one story.

Resident Request: We appreciate the Town's condition to limit the building height to one story. We request that the definition of One-Story be provided as in height from ground to eave such that height is no taller than 8 feet. The roof line should also be described such that a gambrel style roof would not be allowed which would afford a second story in the building. In reviewing the building plans, we noticed that the height from the ground to eaves ranges from 8' on one side to 14' on the other side.

8. **Resident Request:** South Berwick Water District asked in their letter dated May 26, 2020 that a water meter be installed to monitor the water usage and allow the South Berwick Water District to periodically read to verify usage. The installation of a water meter was not included in the Conditions of Approval. We feel this condition should be added because the cultivation of marijuana under certain conditions, per our research, requires a lot of water for growth of healthy plants. The meter installed shall also have no means of being bypassed to allow non-metered water usage.

9. **Resident Request:** South Berwick Water District asked in their letter dated May 26, 2020 that a Secondary Containment be provided for all pesticides or chemicals to be stored on site. The Facility would also supply Material Safety Data Sheets (MSDS) to the South Berwick Water District for all chemicals and pesticides used or stored in the building on a yearly basis. We request that this condition be included in the Conditions of Approval to ensure that proper remediation can occur in the event contamination of the ground water.

10. **Resident Request:** We request that the recommendations of the PEER review by Tidewater Engineering & Surveying, Inc. be implemented by the applicant.

Thank you for your time in reviewing our requests and for conducting a thoroughly review of this project. As you are aware, we are in opposition of this proposal for a number of reasons. We appreciate your due diligence to ensure the project is in compliance with all aspects of the approval process.

Respectfully,

Jerry and Alyson Graybill

cc. James Theobald, Attorney
David Silk, Attorney
John Leach, Superintendent, South Berwick Water District

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RESOURCES

FOR DEP USE
L- _____
ATS# _____
FEES PAID _____
DATE RECEIVED _____

Stormwater Application Form

PLEASE TYPE OR PRINT IN INK

This application is for (Check the one that applies):		<input checked="" type="checkbox"/> New application		<input type="checkbox"/> Amendment	
1. Name of Applicant:	CAF Realty of Maine, LLC		5. Name of Agent:	MJS Engineering, P.C.	
2. Applicant's Mailing Address:	279 Merry Hill Road Barrington, NH 03825		6. Agent's Mailing Address:	PO Box 359 Newmarket, NH 03857	
3. Applicant's Phone #:	(603) 235-2882		7. Agent's Phone #:	(603) 659-4979	
4. Email address (REQUIRED-license will be sent via email):	davidayer@gmail.com		(REQUIRED-license will be sent via email)	mjs@mjs-engineering.com	
9. Location of Project: (Road, Street, Rt.#)	11 Pond Road		10. Town:	Berwick	
			11. County:	York	
12. Type of Direct Watershed: (Check all that apply)	<input type="checkbox"/> Lake not most at risk <input type="checkbox"/> Lake most at risk <input type="checkbox"/> Lake most at risk, severely blooming <input checked="" type="checkbox"/> River, stream or brook <input type="checkbox"/> Urban impaired stream <input type="checkbox"/> Freshwater wetland <input type="checkbox"/> Coastal wetland <input checked="" type="checkbox"/> Wellhead of public water supply		13. Amount of Disturbed Area:	Total Amt.= 1.5 acres	
			14. Amount of Developed Area:	<input checked="" type="checkbox"/> 1 or more acres, but less than 5 acres <input type="checkbox"/> 5 acres or more Total Amt.= 1.35 acres	
			15. Amount of Impervious Area:	<input type="checkbox"/> less than 20,000 sq. ft. <input checked="" type="checkbox"/> 20,000 sq. ft. to 1 acre <input type="checkbox"/> 1 to 3 acres <input type="checkbox"/> 3 or more acres Total Amount of Impervious Acres =	
16. Applicable Standards: (Check all that apply)	<input checked="" type="checkbox"/> Stormwater PBR <input type="checkbox"/> Basic standards <input type="checkbox"/> General standards: BMP <input type="checkbox"/> General standards: phosphorus <input type="checkbox"/> Flooding standard <input type="checkbox"/> Urban impaired stream standards <input type="checkbox"/> Other: _____		17. Type of Stormwater Control:	<input checked="" type="checkbox"/> Vegetative (e.g. buffers) <input checked="" type="checkbox"/> Structural (e.g. underdrained filters, ponds, infiltration structures)	
18. Exceptions &/or Waivers Requested:	BMP Standards ▼		Urban impaired stream standard ▼		Flooding Standard ▼
	<input type="checkbox"/> Pretreatment measures <input type="checkbox"/> Discharge to ocean/major river segment <input type="checkbox"/> Linear portion of project <input type="checkbox"/> Utility corridor <input type="checkbox"/> Redevelopment		<input type="checkbox"/> Developed area not landscaped or impervious <input type="checkbox"/> Redevelopment		<input type="checkbox"/> Discharge to ocean/major river segment <input type="checkbox"/> Insignificant increase in peak flow
19. Proposed Start Date and Brief Project Description:	proposed construction of 2 agricultural barns (~2500 sq.ft. each), driveway access, and associated utilities,				
20. Size of Lot or Parcel:	<input type="checkbox"/> _____ sq. ft., or	<input checked="" type="checkbox"/> 18.0 acres	UTM Easting:	4790365	UTM Northing: 354699
21. Title, Right or Interest:	<input checked="" type="checkbox"/> own <input type="checkbox"/> lease <input type="checkbox"/> purchase option <input type="checkbox"/> written agreement				
22. Deed Reference Numbers:	Book#: 18108	Page: 837	24. Map and Lot Numbers:		Map #: R-70 Lot #: 16
23. DEP Staff Previously Contacted:	n/a		25. Project started prior to application?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Completed?		<input type="checkbox"/> Yes <input type="checkbox"/> No			
SIGNATURES / CERTIFICATIONS ON PAGE 2					

Wed 8/19/2020 11:31 AM



Richardson, Marybeth <Marybeth.Richardson@maine.gov>

RE: 11 Pond Road Project

To Jerry Graybill

Cc Langlois, Lucien; James Bellissimo

 You forwarded this message on 8/19/2020 11:38 AM.

Action Items

+ Get more actions

I first want to clarify that the project as proposed qualified for a Stormwater Permit by Rule. Because it does not require a full stormwater review, the issues covered by Chapter 700 are not required to be addressed by the applicant. However, I shared your concerns with our stormwater engineer, who had some thoughts relative to stormwater treatment from this type of facility. These points could be considered by the Berwick Planning Board. Her thoughts are below:

1. Most of these facilities have young plants in a nutrient solution rather than soil. Exhausted nutrient solution is dumped periodically to reduce the potential for mold and also to replace the nutrients. The local planning board should review a plan for spent nutrient solution. If the nutrient solution is going to a sanitary sewer, the sewer utility will likely do an Industrial Wastewater Survey to determine the loading they'll receive from the facility and how often, and whether that flow needs to be bled into the system slowly (i.e an equalization tank) or if the treatment plant can handle the "slug" of nutrients all at once. (Nutrients= increased oxygen demand from the microorganisms at the treatment plant= can the system provide that oxygen or will the plant crash?) If the nutrient solution is going to a septic system, the system will likely need pretreatment and a Waste Discharge License. That nutrient solution cannot be dumped outside (in a swale or field).
2. Floor drains - If the building is equipped with floor drains, they shouldn't be discharging to the detention pond. What other chemicals (pesticides, fertilizers) could get dumped in the floor drains? A holding tank may be necessary.
3. Material storage - If they have pallets of fertilizer outside and there's a broken bag (during delivery or while it's being moved) or it's a nutrient solution tank that ruptures, where will that go? A stormwater "detention pond" is for storage only (or for treatment of typical runoff, not runoff with a high nutrient load). Discharge directly to the environment should be avoided. Any material storage outside should be covered.
4. Drinking water: This is the jurisdiction of the Water District which should raise its concerns to the Planning Board.



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Permit-by-Rule & Notice of Intent Review Form

Natural Resources Protection Act
Stormwater Management Law
Maine Construction General Permit

PBR #
PBR # 70562
NOI # 70563

Applicant: CAF Realty of Maine

Town: Berwick

NRPA PBR Sections – Ch. 305

- | | | |
|---|--|---|
| <input type="checkbox"/> Sec. 2 Act. Adj. to Prot. Natural Res. | <input type="checkbox"/> Sec. 9 Utility Crossing | <input type="checkbox"/> Sec. 16 Coastal Sand Dune Project |
| <input type="checkbox"/> Sec. 3 Intake Pipes | <input type="checkbox"/> Sec. 10 Stream Crossing | <input type="checkbox"/> Sec. 17 Transfer/Permit Extension |
| <input type="checkbox"/> Sec. 4 Replacement of Structures | <input type="checkbox"/> Sec. 11 State Transport. Facilities | <input type="checkbox"/> Sec. 18 Maintenance Dredging |
| <input type="checkbox"/> Sec. 6 Movement of Rocks or Veg. | <input type="checkbox"/> Sec. 12 Restoration Natural Areas | <input type="checkbox"/> Sec. 19 Act. Near SVP Habitat |
| <input type="checkbox"/> Sec. 7 Outfall Pipes | <input type="checkbox"/> Sec. 13 F&W Creat./Water Quality | <input type="checkbox"/> Sec. 20 Act. Near Waterfowl/Bird Habitat |
| <input type="checkbox"/> Sec. 8 Shoreline Stabilization | <input type="checkbox"/> Sec. 15 Public Boat Ramps | |

Notes:

Construction of two agricultural buildings, driveway access and associated utilities
 Development will be under 1 acre of impervious area which qualifies for a Stormwater Permit By Rule

Reviewer:
Reviewer: Lucien Langlois

Deficient Date:
Accepted Date: 8/13/2020

NRPA SW NOI
 NRPA SW NOI



ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL

5 Railroad Street • P.O. Box 359
Newmarket, NH 03857
Phone: (603) 659-4979
Email: mjs@mjs-engineering.com

8/3
April 9, 2020

Mr. James Bellissimo Planner
Town of Berwick
11 Sullivan Street
Berwick, ME

Re: Response and resubmission for CAF Realty Maine, Pond Hill Road

Dear James,

This letter is in response to the comments from the engineering review by Tidewater Engineering dated July 15, 2020. Changes have been made to the site and grading plans dated 5/27/2020 which address the comments made by Ryan McCarthy.

Existing Force Main Protection

1. A test pit will be performed where the proposed road crosses the force main prior to construction.
2. The thickness of insulation required has been added to the detail on sheet D3
3. Note 6 has been modified to refer to the sewer force main trench detail.
4. Encasement detail has been included in most recent plan set.

Stormwater Management & Drainage Report

Modifications have been made to the grading plan to show sediment controls as required by Section 7.15. An application for a Stormwater permit -by-rule has been sent to the DEP and is pending a response. The area disturbed is greater than 1 acre, but the project results in less than 1 acre of new impervious, making the PBR applicable. Modification have been made to the basin, with the use underdrains to comply with Chapter 500.

Drainage Report

1. Section 5 was not updated from a previous drainage design. This section has been updated to reflect the most recent design changes.
2. Grading and subcatchment areas have been modified. The northern area of the proposed building will not be routed to the bioretention basin and is part of subcatchment 1C. The area north of the future building will be routed by swales and an 8" culvert to the large culvert on the south side of the building, where it will be routed to the bioretention basin.
3. The drainage plan has changed, however the HydroCAD analysis of all the proposed culverts has been included.

Stormwater Management Comments

1. Modified plans and detail sheets to indicate proposed berm elevation for bioretention basin is to be 109.1.
2. The basin has been modified with an underdrained grass soil filter. The bmp does not rely on infiltration to the soils and the pond will be lined.
3. Area draining to the basin has been modified. The peak elevation of the water surface in a 25-year storm is now 108, which is 1-ft below the top of berm (109.1).

4. Level spreaders have not been used as the flow from the underdrains is low due and does not present a risk of channelization. The basin spillway outlets to a stable and flat field.
5. Outlet inverts have been added to C2.
6. Riprap has been added as outlet protection for proposed culvert.

General Site Design Comments

1. Finish floor elevation has been corrected.
2. ADA sign has been added to the site plan.
3. Specified gravel has been changed from Type B to Type A.
4. Entrance has been widened to 20' to allow for two-way traffic.
5. Proposed leach field and septic tank locations have been added to the plans.
6. Note has been added to C1. Wetlands were delineated by Mike Coumo, CSS#211

If you require additional information or have any questions or comments, please call (603) 659-4979 x302.

Sincerely,

A handwritten signature in black ink that reads "Michael J. Sievert". The signature is written in a cursive, flowing style.

Michael J. Sievert PE
President

SITE PLAN

prepared for:
CAF REALTY OF MAINE, LLC
POND ROAD
BERWICK, MAINE

SUBMITTED: FEBRUARY 5, 2020
REVISED: JULY 31, 2020

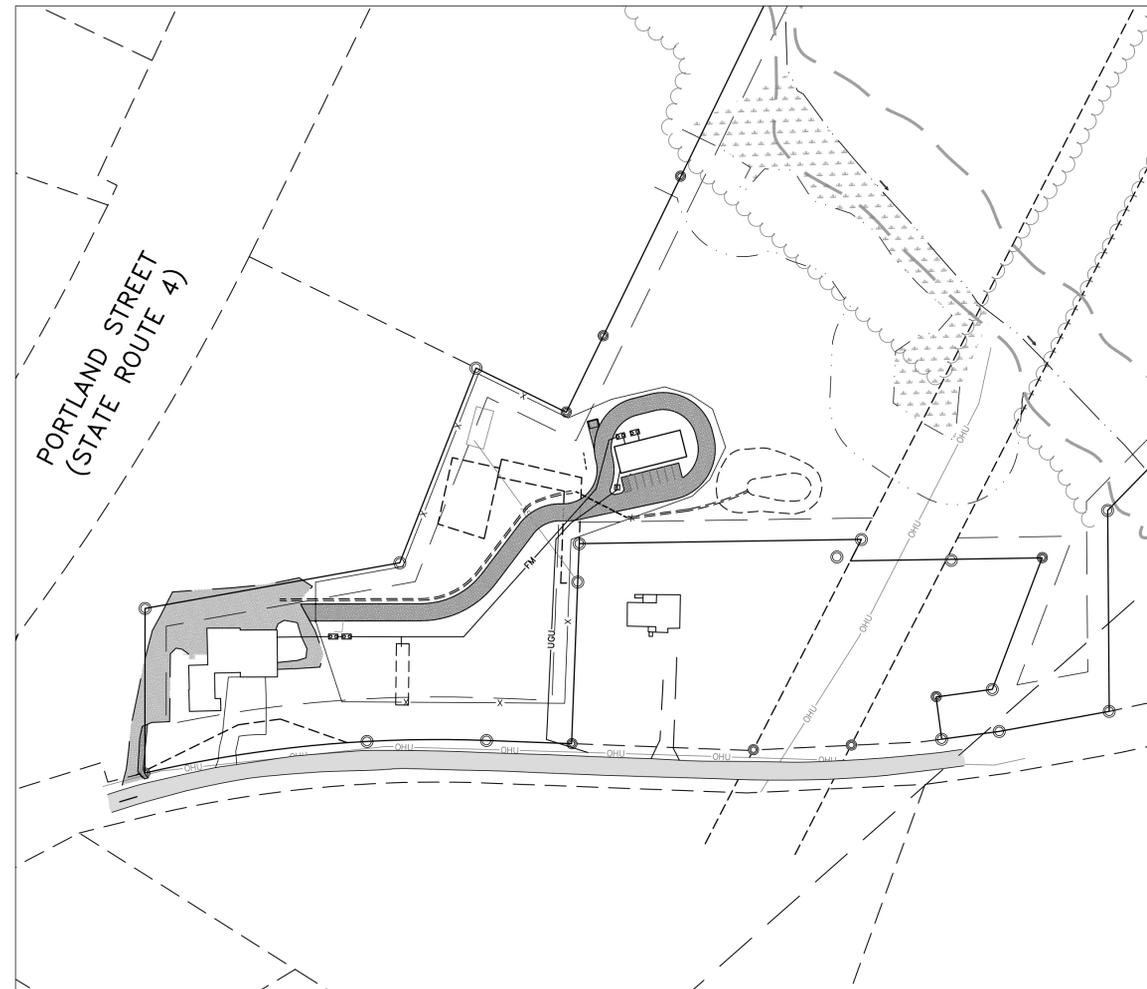


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GRADING, DRAINAGE, & UTILITIES PLAN

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CONSTRUCTION DETAILS

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LANDSCAPE PLAN

L1-L2

ENGINEER:



SURVEYOR:



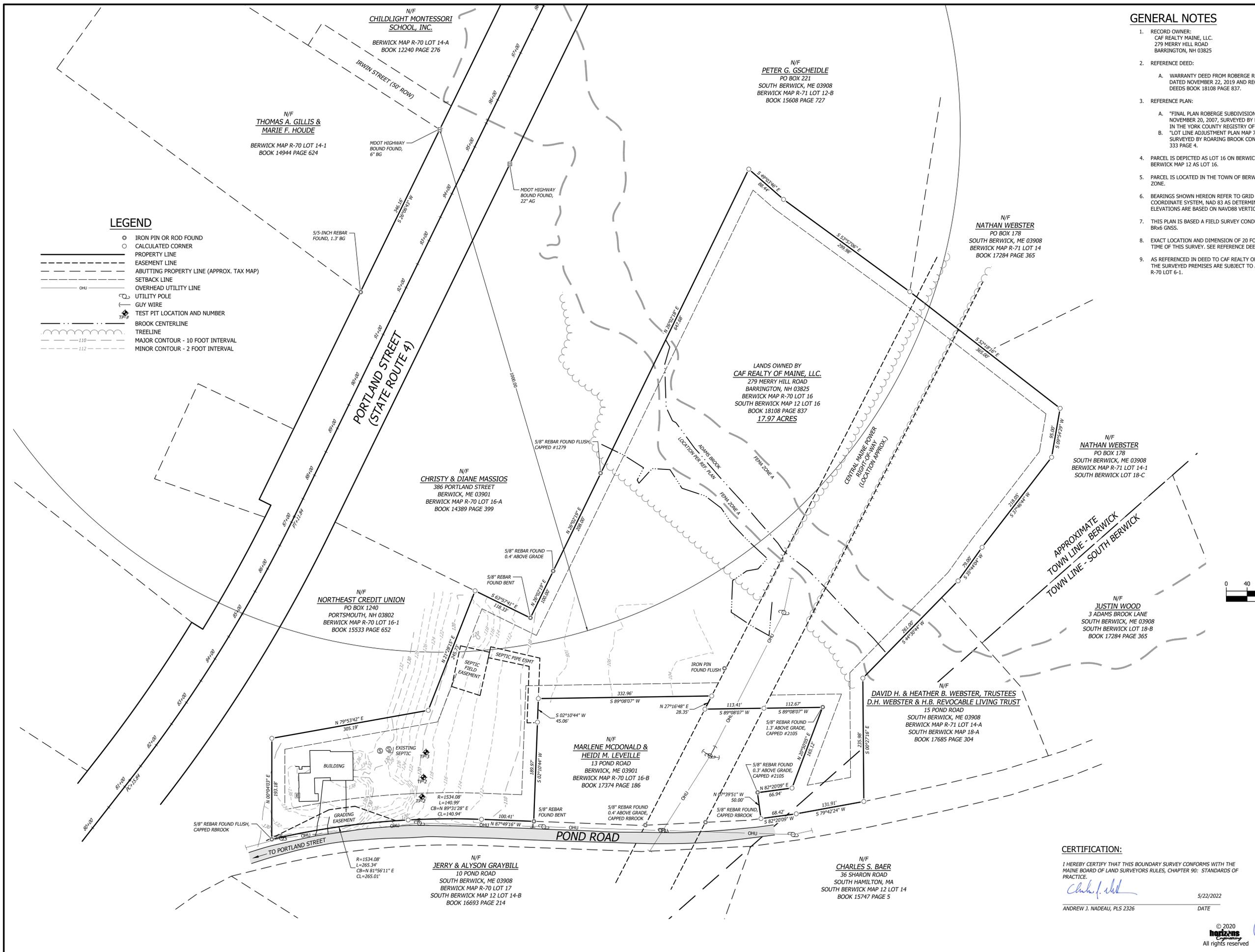
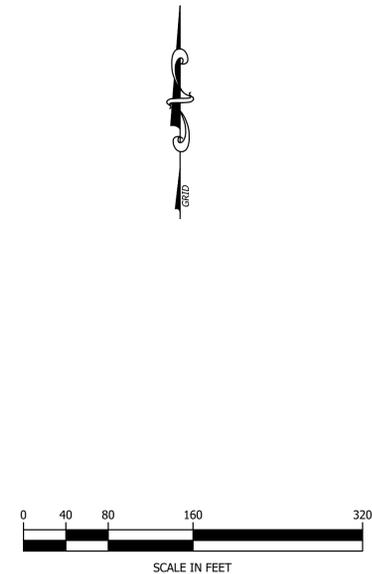
NO.	REVISIONS	DATE	INT.
1.	REVISED DRAINAGE AND GRADING	7/31/20	MCS
0.	INITIAL SUBMISSION TO THE BERWICK PLANNING BOARD	2/5/20	MCS

GENERAL NOTES

- RECORD OWNER:
CAF REALTY MAINE, LLC.
279 MERRY HILL ROAD
BARRINGTON, NH 03825
- REFERENCE DEED:
A. WARRANTY DEED FROM ROBERGE RENTALS, LLC. TO CAF REALTY OF MAINE, LLC., DATED NOVEMBER 22, 2019 AND RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS BOOK 18108 PAGE 837.
- REFERENCE PLAN:
A. "FINAL PLAN ROBERGE SUBDIVISION" DATED MAY 4, 2006, LAST REVISED NOVEMBER 20, 2007, SURVEYED BY ROARING BROOK CONSULTANTS AND RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS PLAN BOOK 330 PAGE 11.
B. "LOT LINE ADJUSTMENT PLAN MAP 70, LOT 16C" DATED OCTOBER 17, 2008, SURVEYED BY ROARING BROOK CONSULTANTS AND RECORDED IN YCRD PLAN BOOK 333 PAGE 4.
- PARCEL IS DEPICTED AS LOT 16 ON BERWICK MAP R-70 AND PARTIALLY ON SOUTH BERWICK MAP 12 AS LOT 16.
- PARCEL IS LOCATED IN THE TOWN OF BERWICK RURAL COMMERCIAL/INDUSTRIAL (RC/I) ZONE.
- BEARINGS SHOWN HEREON REFER TO GRID NORTH AND ARE BASED ON THE MAINE COORDINATE SYSTEM, NAD 83 AS DETERMINED BY GPS SURVEY OBSERVATIONS. ELEVATIONS ARE BASED ON NAVD88 VERTICAL DATUM.
- THIS PLAN IS BASED A FIELD SURVEY CONDUCTED IN DECEMBER 2019 USING CARLSON BRV6 GNSS.
- EXACT LOCATION AND DIMENSION OF 20 FOOT WIDE RIGHT-OF-WAY IS UNKNOWN AT THE TIME OF THIS SURVEY. SEE REFERENCE DEED FOR DESCRIPTION.
- AS REFERENCED IN DEED TO CAF REALTY OF MAINE, LLC IN DEED BOOK 18108 PAGE 838, THE SURVEYED PREMISES ARE SUBJECT TO A 20-FOOT ACCESS EASEMENT SERVING MAP R-70 LOT 6-1.

LEGEND

- IRON PIN OR ROD FOUND
- CALCULATED CORNER
- PROPERTY LINE
- - - EASEMENT LINE
- - - ABUTTING PROPERTY LINE (APPROX. TAX MAP)
- - - SETBACK LINE
- - - OVERHEAD UTILITY LINE
- UTILITY POLE
- GUY WIRE
- ⊕ TEST PIT LOCATION AND NUMBER
- BROOK CENTERLINE
- TREELINE
- - - MAJOR CONTOUR - 10 FOOT INTERVAL
- - - MINOR CONTOUR - 2 FOOT INTERVAL



CERTIFICATION:

I HEREBY CERTIFY THAT THIS BOUNDARY SURVEY CONFORMS WITH THE MAINE BOARD OF LAND SURVEYORS RULES, CHAPTER 90: STANDARDS OF PRACTICE.

Andrew J. Nadeau
ANDREW J. NADEAU, PLS 2326 DATE 5/22/2022

horizons Engineering
LITTLETON NH • NEWPORT VT
NEW LONDON NH • POMFRET VT • KENNEBUNK ME

PLAN SHOWING A BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR
MJS ENGINEERING, P.C.
OF LAND OWNED BY
CAF REALTY OF MAINE, LLC.
LOCATED ON
POND ROAD, BERWICK, YORK COUNTY, MAINE 03901
BERWICK ASSESSORS MAP R-70 LOT 16
SOUTH BERWICK ASSESSORS MAP 12 LOT 16
BOOK 18108 PAGE 837

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
1.	5/20	MONTESSORI SCHOOL BOUND	AJN	AJN

DATE:	DEC 2019	PROJECT #:	S-19138
SURV'D BY:	JDN	DRAWN BY:	JDN/SJB
CHECK'D BY:	AJN	ARCHIVE #:	H-5594

STATE OF MAINE
ANDREW J. NADEAU
PROFESSIONAL SURVEYOR

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SHEET 1 OF 1

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2020-07-31 12:05 pm

- GENERAL NOTES:**
- OWNER OF RECORD:
CAF REALTY OF MAINE, LLC
279 MERRY HILL ROAD
BARRINGTON, NH 03625
Y.C.R.D. BK 18108, PG 837
 - LOT AREA: 17.9 ACRES
 - REFERENCE PLANS:
A. "FINAL PLAN ROBERGE SUBDIVISION" DATED MAY 4, 2006, LAST REVISED NOVEMBER 20, 2007, SURVEYED BY ROARING BROOK CONSULTANTS AND RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS PLAN BOOK 330 PAGE 11.
B. "LOT LINE ADJUSTMENT PLAN MAP 70, LOT 16C" DATED OCTOBER 17, 2008, SURVEYED BY ROARING BROOK CONSULTANTS AND RECORDED IN YCRD PLAN BOOK 333 PAGE 4.
 - IMPERVIOUS SURFACE RATIO FOR SUBJECT LOT:
EXISTING = 2.9% (22,501 S.F.)
PROPOSED = 5.0% (39,033 S.F.)
 - ALL OUTSIDE CONSTRUCTION RELATED ACTIVITY FOR THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 5:00 P.M. MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 3:00 P.M. SATURDAY.
 - ALL EXTERIOR LIGHTING MUST BE FULLY SHIELDED AND NOT PROJECT GLARE TOWARD ANY ABUTTING PROPERTIES.
 - ACCESS INTO THE SITE FOR FIRE APPARATUS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS.
 - BEARINGS SHOWN HEREON REFER TO GRID NORTH AND ARE BASED ON THE MAINE COORDINATE SYSTEM, NAD 83 AS DETERMINED BY GPS SURVEY OBSERVATIONS. ELEVATIONS ARE BASED ON NAVD83 VERTICAL DATUM.
 - SNOW SHALL BE CLEARED FROM ALL ACCESS AND PARKING AREAS TO MAINTAIN SAFE ACCESS.
 - THE GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. THIS INCLUDES DISCREPANCIES BETWEEN THESE PLANS AND ANY OTHER PLANS OR CONTRACT DOCUMENTS.
 - WETLANDS DELINEATED BY MIKE COUMO, CSS#211

SITE DATA BLOCK
PLAN INTENT: THE PROPOSAL IS TO CONSTRUCT A NEW MARIJUANA GROWING FACILITY.
ZONE: RC-1
USE: COMMERCIAL

DIMENSIONAL REQUIREMENTS	REQUIRED IN RC-1 DISTRICT
MINIMUM LOT SIZE (SQUARE FEET)	50,000
MINIMUM FRONTAGE (FEET)	200
MINIMUM LOT SETBACKS	
FRONT (FEET)	50
SIDE (FEET)	25
REAR (FEET)	25
MAXIMUM ROAD SETBACK (FEET)	NA
MAXIMUM HEIGHT (FEET)	45'
MAX. IMPERVIOUS SURFACES RATIO	80%

PARKING REQUIREMENTS	EMPLOYEE	REQUIRED	PROPOSED
LOT 4-55			
INDUSTRIAL USE	5	1 SPACE/EMPLOYEE = 5 SPACES	5 SPACES
	3 (TEMP)	1 SPACE/EMPLOYEE = 3 SPACES	*3 SPACES

*PARKING ON GRAVEL AREA IN FRONT OF PROP. DUMPSTER OR AT EXISTING BUILDING

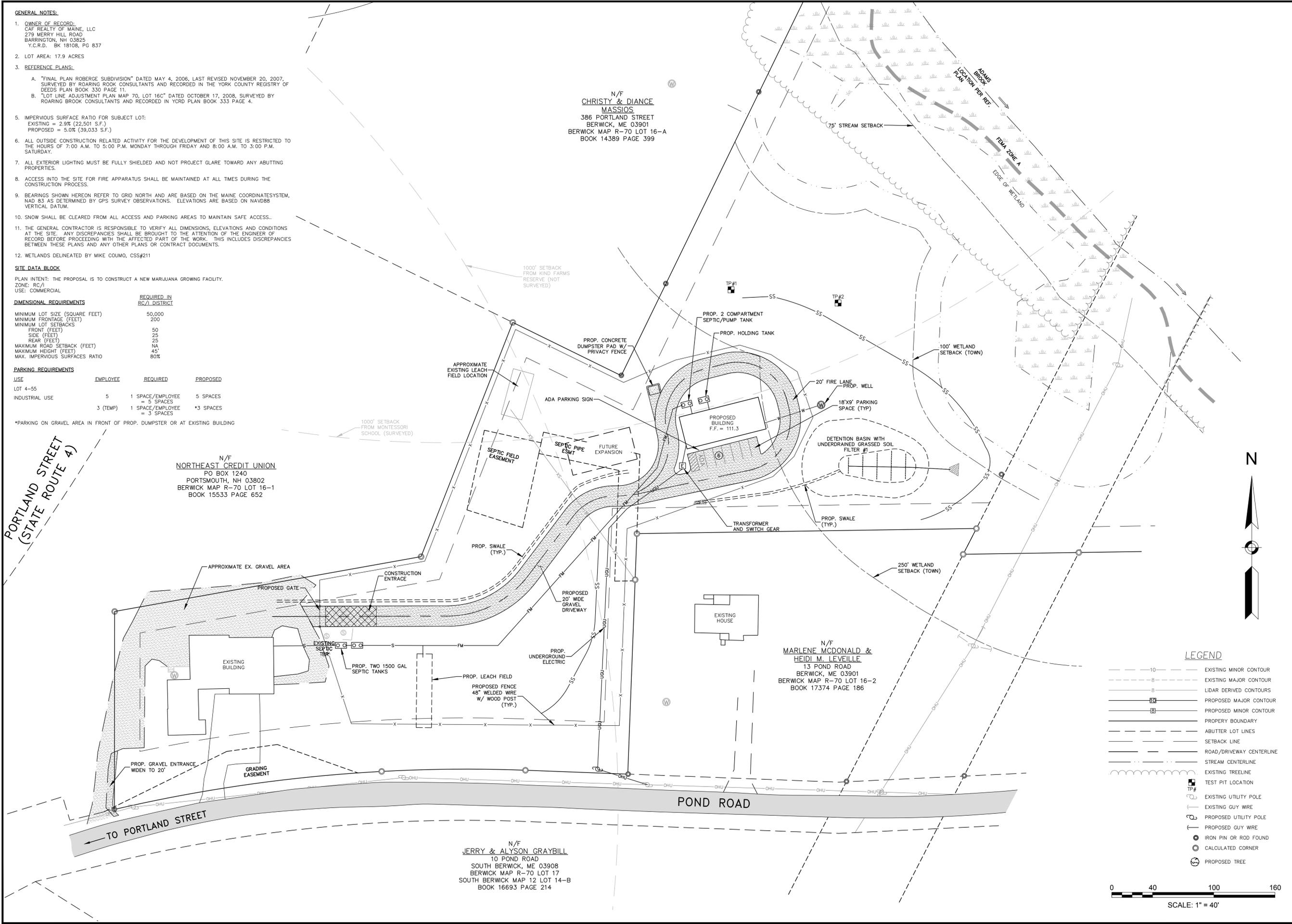
PORTLAND STREET
(STATE ROUTE 4)

N/F
NORTHEAST CREDIT UNION
PO BOX 1240
PORTSMOUTH, NH 03802
BERWICK MAP R-70 LOT 16-1
BOOK 15533 PAGE 652

N/F
CHRISTY & DIANCE MASSIOS
386 PORTLAND STREET
BERWICK, ME 03901
BERWICK MAP R-70 LOT 16-A
BOOK 14389 PAGE 399

N/F
MARLENE McDONALD & HEIDI M. LEVEILLE
13 POND ROAD
BERWICK, ME 03901
BERWICK MAP R-70 LOT 16-2
BOOK 17374 PAGE 186

N/F
JERRY & ALYSON GRAYBILL
10 POND ROAD
SOUTH BERWICK, ME 03908
BERWICK MAP R-70 LOT 17
SOUTH BERWICK MAP 12 LOT 14-B
BOOK 16693 PAGE 214



- LEGEND**
- 10--- EXISTING MINOR CONTOUR
 - 8--- EXISTING MAJOR CONTOUR
 - 8--- LIDAR DERIVED CONTOURS
 - 10--- PROPOSED MAJOR CONTOUR
 - 8--- PROPOSED MINOR CONTOUR
 - 8--- PROPERTY BOUNDARY
 - 8--- ABUTTER LOT LINES
 - 8--- SETBACK LINE
 - 8--- ROAD/DRIVEWAY CENTERLINE
 - 8--- STREAM CENTERLINE
 - 8--- EXISTING TREELINE
 - TP# TEST PIT LOCATION
 - EXISTING UTILITY POLE
 - EXISTING GUY WIRE
 - PROPOSED UTILITY POLE
 - PROPOSED GUY WIRE
 - IRON PIN OR ROD FOUND
 - CALCULATED CORNER
 - PROPOSED TREE

0 40 100 160
SCALE: 1" = 40'

NO.	REVISIONS	DATE	INT.
1.	INITIAL SUBMISSION TO THE TOWN OF BERWICK	2/5/20	MCS
2.	UPDATED WETLAND AND SCHOOL SETBACKS	5/27/20	MCS
3.	REVISED GRADING AND DRAINAGE	7/31/20	MCS

DATE: 1/16/20
SCALE: 1" = 40'
DESIGNED BY: MCS
DRAWN BY: MCS
APPROVED BY: MJS
FILE: 19066_civilm.dwg

STATE OF MAINE
MICHAEL SHEPHERD
8181
PROFESSIONAL ENGINEER

SITE PLAN
prepared for
CAF REALTY MAINE
TAX MAP R-70, LOT 16
11 POND ROAD BERWICK, ME

MJS ENGINEERING, P.C.
CIVIL - STRUCTURAL - ENVIRONMENTAL
5 RAILROAD ST., SUITE 309
SOUTH BERWICK, ME 03908
PHONE: (603) 659-4979, FAX: (603) 659-4627
E-MAIL: MJS@MJE-ENGINEERING.COM

JOB: 19-066
C1

GRADING, DRAINAGE UTILITY & EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE VEGETATION IS ESTABLISHED AND THE GROUND SURFACE IS STABILIZED. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MONITORED BY THE APPLICANT ON A PERIODIC BASIS DURING CONSTRUCTION AND ANY DEFICIENCIES SHALL BE CORRECTED AS SOON AS POSSIBLE. REFER TO CONSTRUCTION AND SEQUENCING AND EROSION CONTROL NOTES ON SHEET D1.
- ALL DRIVEWAY AND PARKING AREA WORK SHALL BE IN ACCORDANCE WITH MEDOT FOR SELECT MATERIALS.
- ALL DISTURBED AREAS NOT PAVED OR OTHERWISE TREATED SHALL RECEIVE 4" OF LOAM, SEED AND MULCH AS SPECIFIED IN THE NOTES ON SHEET D1.
- COMPACTION REQUIREMENTS:

LOCATION:	MINIMUM COMPACTION*
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%
- *ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM PROCTOR DENSITY. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAIN STORM OF 0.25 INCHES OR GREATER. DAMAGED EROSION CONTROL DEVICES SHALL BE REPAIRED/MODIFIED AS NECESSARY.
- ALL TEMPORARY LOAM STOCKPILES SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES.
- CARE SHALL BE TAKEN WHEN CONSTRUCTING THE DRIVEWAY OVER THE EXISTING FORCE MAIN. THE FORCE MAIN SHALL HAVE ADEQUATE PROTECTION FROM FROST. MINIMUM 4" OF COVER TO SURFACE OR PROPERLY PROTECTED WITH INSULATION AS SHOWN IN THE SEWER FORCE MAIN DETAIL ON SHEET D3.
- WETLANDS DELINEATED BY MIKE COUMO, MAINE CSS #211

UTILITIES NOTE:
 ALL ELECTRIC, GAS, TELEPHONE, WATER, SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION. THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATION FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE: 1-888-DIG-SAFE (1-888-344-7233)

N/F
CHRISTY & DIANCE MASSIOS
 386 PORTLAND STREET
 BERWICK, ME 03901
 BERWICK MAP R-70 LOT 16-A
 BOOK 14389 PAGE 399

N/F
NORTHEAST CREDIT UNION
 PO BOX 1240
 PORTSMOUTH, NH 03802
 BERWICK MAP R-70 LOT 16-1
 BOOK 15533 PAGE 652

N/F
MARLENE McDONALD & HEIDI M. LEVEILLE
 13 POND ROAD
 BERWICK, ME 03901
 BERWICK MAP R-70 LOT 16-2
 BOOK 17374 PAGE 186

N/F
JERRY & ALYSON GRAYBILL
 10 POND ROAD
 SOUTH BERWICK, ME 03908
 BERWICK MAP R-70 LOT 17
 SOUTH BERWICK MAP 12 LOT 14-B
 BOOK 16693 PAGE 214

TEST PIT DATA

TEST PITS WERE CONDUCTED BY MICHAEL SIEVERT ON JANUARY 30, 2020

TP #1
 0-11" FINE SANDY LOAM, GRANULAR, LOOSE
 11-24" LOAMY FINE SAND, MASSIVE FRIABLE
 24-55" SILTY CLAY LOAM, BLOCKY FIRM

ESHW = 16"
 SEEPAGE AT 24"

TP #2
 0-9" TOP SOIL FINE SANDY LOAM
 9-21" FINE SANDY LOAM, GRANULAR LOOSE
 21-36" VERY FINE SILT SAND WITH MOTTLING
 36-45" SILTY CLAY LOAM

ESHW = 24"

NO.	REVISIONS	DATE	INT.
1	INITIAL SUBMISSION TO THE TOWN OF BERWICK	2/5/20	MCS
2	REVISED BERM FOR BARN SCREENING	4/16/20	MCS
3	REVISED SITE LAYOUT	5/27/20	MCS
4	REVISED FORD OUTLET STRUCTURE	6/10/20	MCS
5	REVISED GRADING AND DRAINAGE	7/31/20	MCS

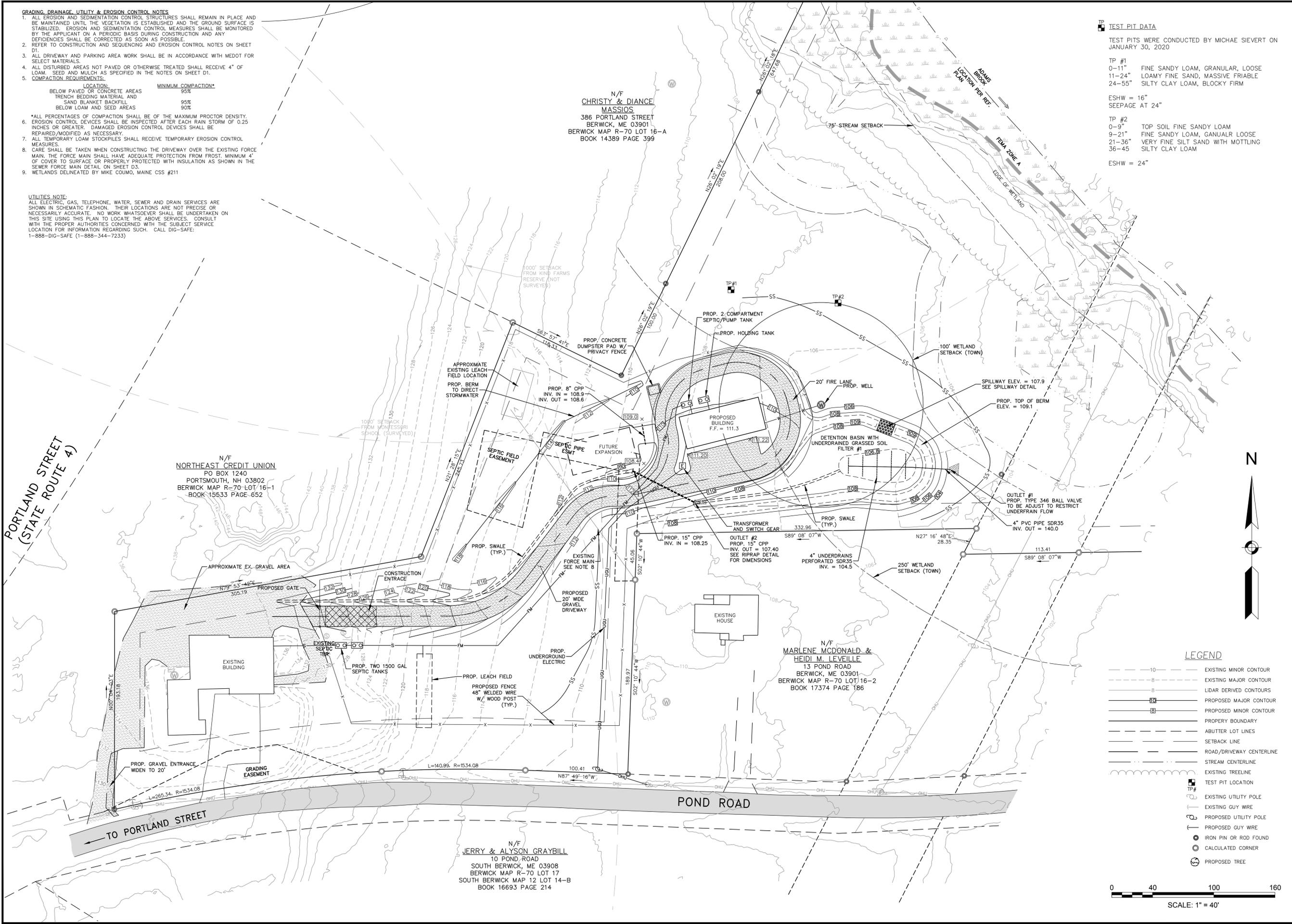
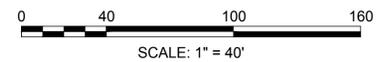
DATE: 1/16/20
 SCALE: 1" = 40'
 DESIGNED BY: MCS
 DRAWN BY: MCS
 APPROVED BY: MJS
 FILE: 19066_civilim.dwg

STATE OF MAINE
 MICHAEL SIEVERT
 8181
 PROFESSIONAL ENGINEER

GRADING, DRAINAGE, AND UTILITIES PLAN
 prepared for
CAF REALTY MAINE
 TAX MAP R-70, LOT 16
 11 POND ROAD, BERWICK, ME

LEGEND

- 10 --- EXISTING MINOR CONTOUR
- 8 --- EXISTING MAJOR CONTOUR
- 8 --- LIDAR DERIVED CONTOURS
- 10 --- PROPOSED MAJOR CONTOUR
- 8 --- PROPOSED MINOR CONTOUR
- --- PROPERTY BOUNDARY
- --- ABUTTER LOT LINES
- --- SETBACK LINE
- --- ROAD/DRIVEWAY CENTERLINE
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- --- EXISTING TREELINE
- TP# TEST PIT LOCATION
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE
- IRON PIN OR ROD FOUND
- CALCULATED CORNER
- PROPOSED TREE



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 BERWICK, ME 03901
 PHONE: (603) 659-4979, FAX: (603) 659-4627
 E-MAIL: mjs@me-engineering.com

CONSTRUCTION SEQUENCING AND EROSION CONTROL NOTES:

AREA OF DISTURBANCE/STABILIZATION

- A. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL THE AREA OF UNSTABILIZED SOIL EXCEED 5 ACRES AT ANY ONE TIME BEFORE THE AREA IS STABILIZED.
- B. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - 1. IN AREAS TO BE PAVED, BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF HDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2006, ITEM NO. 304.1 OR 304.2 HAVE BEEN INSTALLED;
 - 2. IN AREAS NOT TO BE PAVED
 - 2.A. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - 2.B. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
 - 2.C. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.05.
- C. DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED WITHIN 45 DAYS AND PERMANENTLY STABILIZED NO LATER THAN 3 DAYS AFTER FINAL GRADING.

EROSION CONTROL PRACTICES:

- A. INSTALLATION:
 - 1. INSTALL ALL EROSION CONTROLS AS SHOWN ON THE GRADING PLAN, TYPICAL DETAILS, AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE. MANUFACTURER'S SPECIFICATIONS SHALL BE FOLLOWED.
- B. INSPECTION:
 - 1. INSPECT ALL EROSION CONTROLS WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5 INCHES OR GREATER UNLESS OTHERWISE NOTED.
 - 2. TEMPORARY STABILIZATION PRACTICES SHALL BE INSPECTED ONCE PER WEEK DURING CONSTRUCTION UNTIL EXPOSED SURFACES ARE STABILIZED.
 - 3. ANY SIGNS OF RILL OR GULLY EROSION SHALL BE IMMEDIATELY REPAIRED.
- C. MAINTENANCE:
 - 1. MAINTAIN EROSION CONTROLS PER THE TYPICAL DETAILS AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE.
- D. REMOVAL:
 - 1. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 85% VEGETATIVE COVER HAS BEEN ESTABLISHED.
 - 2. AFTER REMOVAL, ALL DISTURBED AREAS SHALL BE REGRADED, FERTILIZED, AND RESEEDED. MONITOR TO ENSURE VEGETATIVE GROWTH IS ESTABLISHED AND REPAIR AS NEEDED UNTIL MINIMUM OF 85% VEGETATIVE COVER IS ESTABLISHED.

COLD WEATHER SITE STABILIZATION

- A. TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE ADDITIONAL STABILIZATION SPECIFIED IN THIS SECTION SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1.
- B. SUBJECT TO (C), BELOW, THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE:
 - 1. LIMITED TO ONE ACRE; AND
 - 2. PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT.
- C. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN IS DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST AND SUBMITTED TO THE DEPARTMENT FOR APPROVAL AS A REQUEST TO WAIVE THE ONE-ACRE LIMIT.
- D. SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING OR TACKIFIER OR WITH AT LEAST 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(B).
- E. SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF 15% OR GREATER THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH AT LEAST 4 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(B).
- F. ANCHORED HAY MULCH OR EROSION CONTROL MIX THAT MEETS THE CRITERIA OF ENV-WQ 1506.05(B) SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE INCH IN DEPTH. EROSION CONTROL BLANKETS SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE INCH IN DEPTH ON FROZEN GROUND.
- G. ALL PROPOSED STABILIZATION IN ACCORDANCE WITH (D) OR (E), ABOVE, SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
- H. ALL DITCHES OR SWALES THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
- J. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3-INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF HDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, TABLE 304-1, ITEM NO. 304.1, 304.2, OR 304.3, AVAILABLE AS NOTED IN APPENDIX B.

TEMPORARY VEGETATION

- A. SITE PREPARATION
 - 1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED ABOVE.
 - 2. ENSURE RUNOFF IS DIVERTED FROM SEEDED AREA.
 - 3. ON SLOPES OF 4:1 OR STEEPER, CREATE HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
- B. SEED BED PREPARATION
 - 1. REMOVE STONES AND TRASH FROM AREA TO BE SEED.
 - 2. COMPACTED SOIL SHALL BE LOOSENEED TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED.
 - 3. APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.
- C. SEEDING
 - 1. SEED PER THE FOLLOWING RECOMMENDATIONS

SEASON	APPLICATION DATE	MIXTURE TYPE	QUANTITY (lb./Ac.)
EARLY SPRING	NO LATER THAN 5/15	OATS	30
LATE SPRING/ FALL	4/1 TO 6/1 & 8/15 TO 9/15	PERENNIAL RYE	80
EARLY SPRING/ FALL	4/1 TO 5/15 & 8/15 TO 9/15	ANNUAL RYE	40
FALL	8/15 TO 9/15	WINTER RYE	112

- 2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
- 3. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDING WAS DISTURBED.
- 4. AREAS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:
 - 4.A. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
 - 4.B. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
 - 4.C. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
 - 4.D. IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.
- D. MAINTENANCE
 - 1. TEMPORARY SEEDING SHOULD BE INSPECTED WEEKLY AND AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHOULD ALSO BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD. BASED ON INSPECTION, AREAS SHOULD BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHOULD BE IMPLEMENTED.
 - 2. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.
 - 3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEED, WITH OTHER TEMPORARY MEASURES (E.G., MULCH) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION

- A. SITE PREPARATION
 - 1. REFER TO SITE PREPARATION FOR TEMPORARY SEEDING.
- B. SEED BED PREPARATION
 - 1. REFER TO SEED BED PREPARATION FOR TEMPORARY SEEDING IN CONJUNCTION WITH THESE NOTES.
 - 2. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC SPRING TROWEL OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
 - 3. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
 - 4. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
 - 5. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
 - 6. APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.
- C. SEEDING
 - 1. UNLESS OTHERWISE NOTED, GRASS SEED MIXTURE 'C' SHALL BE APPLIED AT THE SPECIFIED RATE AS NOTED IN THE "SEED MIXTURES FOR PERMANENT VEGETATION" TABLE.
 - 2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR.
 - 3. WHERE FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
 - 4. WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND TO REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
 - 5. SLOPES MUST BE NO STEEPER THAN 2 TO 1.
 - 6. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
 - 7. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
 - 8. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDING WAS DISTURBED.
 - 9. AREAS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:
 - 9.A. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
 - 9.A. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
 - 9.B. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
 - 9.C. IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.
- D. MAINTENANCE
 - 1. PERMANENTLY SEEDING AREAS SHOULD BE INSPECTED MONTHLY.
 - 2. MOW SEEDING AREAS AS NECESSARY.
 - 3. BASED ON INSPECTION, AREAS SHOULD BE REPAIRED AND/OR RESEED TO ENSURE 85% OF THE SOIL SURFACE IS COVERED BY VEGETATION.

MULCHING & EROSION CONTROL MATING

- A. GENERAL
 - 1. APPLY PRIOR TO A STORM EVENT. CLOSELY MONITOR THE WEATHER TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
 - 2. MULCHING WITHIN A SPECIFIED TIME PERIOD FROM ORIGINAL SOIL EXPOSURE
 - 2.A. WITHIN 100 FEET OF WETLANDS THE TIME PERIOD SHOULD BE NO GREATER THAN 7 DAYS.
 - 2.B. OTHER AREAS IT SHALL BE NO GREATER THAN 14 DAYS.
 - 3. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, FLOW CONDITIONS, AND TIME OF YEAR.
 - B. TEMPORARY MULCHING
 - 1. HAY OR STRAW MULCHES
 - 1.A. ORGANIC MULCHES INCLUDING HAY AND STRAW SHALL BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS.
 - 1.B. APPLICATION RATE SHALL BE 2 BALES/1,000 SF (70-90 POUNDS) OR 1.5-2.0 TONS/ACRE TO COVER 75-90% OF THE GROUND.
 - 1.C. ANCHORING SHALL BE ONE OF THE FOLLOWING
 - 1.C.1. NETTING SHALL BE JUTE, WOOD FIBER, OR BIODEGRADABLE PLASTIC NETTING INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 - 1.C.2. TACKIFIER: APPLY POLYMER OR ORGANIC TACKIFIER TO ANCHOR HAY OR STRAW MULCH. APPLY PER MANUFACTURER'S SPECIFICATIONS. TYPICAL APPLICATION RATES ARE 40-60 LBS/ACRE FOR POLYMER MATERIAL AND 80-120 LBS/ACRE FOR ORGANIC LIQUID.
 - 1.D. WINTER APPLICATION: APPLY TO A DEPTH OF 4 INCHES OR DOUBLE THE ABOVE LISTED APPLICATION RATE. NOTE THAT IF SEEDING IS NECESSARY, MULCH WILL NEED TO BE REMOVED AND THE AREA SEEDING AND MULCHED IN THE SPRING.
 - 1.E. MAINTENANCE
 - 1.E.1. INSPECT PERIODICALLY AND AFTER RAIN STORMS FOR RILLS OR DISPLACEMENT OF MULCH. REPAIR AS NECESSARY. CONTINUE INSPECTIONS UNTIL 85% VEGETATIVE COVER IS ESTABLISHED.
 - 2. EROSION CONTROL BLANKET OR MATING
 - 2.A. REFER TO PLANS FOR TYPICAL EROSION CONTROL MATING DETAIL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 - 2.B. APPLICATION AND TIMING
 - 2.B.1. DURING THE GROWING SEASON (APRIL 15 - SEPTEMBER 15) USE ON THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER), ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS, AND WETLANDS.
 - 2.B.2. DURING THE LATE FALL AND WINTER (SEPTEMBER 15 - APRIL 15) IN ADDITION TO THOSE LISTED ABOVE USE ON SIDE SLOPES OF GRASSED WATERWAYS AND MODERATE SLOPES (GREATER THAN 8%).
3. MAINTENANCE
 - 3.A. INSPECT PERIODICALLY AND BEFORE AND AFTER STORM EVENTS TO ENSURE CONTACT WITH THE SOIL UNTIL 85% VEGETATIVE COVER IS ESTABLISHED. REPAIR AND RESTAPLE AS NECESSARY.
- C. PERMANENT MULCHING
 - 1. WOOD CHIPS OR GROUND BARK
 - 1.A. APPLY TO A THICKNESS OF 2 TO 6 INCHES. APPLICATION RATES ARE 10-20 TONS/ACRE OR 460-920 POUNDS/1,000 SF.
 - 1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE IN A 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.
 - 2. EROSION CONTROL MIX
 - 2.A. SHALL BE PLACED AT A THICKNESS OF 2 INCHES OR MORE FOR MULCHING.
 - 2.B. COMPOSITION OF THE MIX SHALL BE AS FOLLOWS:
 - 2.B.1. ORGANIC MATTER CONTENT SHALL BE BETWEEN 25-65% DRY WEIGHT BASIS.
 - 2.B.2. PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING THE 3" SCREEN, 90-100% PASSING THE 1" SCREEN, 70-100% PASSING THE 0.75 INCH SCREEN, AND 30-75% PASSING THE 0.25 INCH SCREEN.
 - 2.B.3. THE ORGANIC PORTION SHALL BE ELONGATED AND FIBROUS SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. IT SHALL NOT CONTAIN WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS.
 - 2.B.4. THE MIX SHALL NOT CONTAIN SILTS, CLAYS, OR FINE SANDS.
 - 2.B.5. SOLUBLE SALTS CONTENT SHALL BE < 4.0MMHOS/OM AND A pH OF 5.0-8.0.
 - 2.C. PLACEMENT OF BERM
 - 2.C.1. PLACE BERM ALONG A LEVEL CONTOUR. BERM MUST BE A MINIMUM OF 12" HIGH ON THE UPSHILL SIDE AND 2 FEET WIDE. UPSLOPE AREA MUST HAVE A SLOPE LESS THAN 5%.
 - 2.C.2. MAINTENANCE: INSPECT PERIODICALLY AND AUGMENT AS NEEDED TO MAINTAIN INITIAL THICKNESS. REPLACE IF NO LONGER FUNCTIONING AS INTENDED.

SOIL STOCKPILES

- A. GENERAL
 - 1. STOCKPILES MUST BE LOCATED 50 FEET FROM DITCHES AND CULVERT INLETS.
 - 2. PROTECTION OF STOCKPILES
 - 1. PROTECT SOIL AND AGGREGATE STOCKPILES WITH TEMPORARY PERIMETER SEDIMENT BARRIER SUCH AS SILT FENCE OR SILT SOCK.
 - 2. COVER ACTIVE STOCKPILES WITH ANCHORED PROTECTIVE COVERING PRIOR TO EXPECTED STORM EVENTS.
 - 3. INACTIVE STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR TEMPORARILY SEEDED AND MULCHED PER THE TEMPORARY VEGETATION AND MULCHING NOTES ON THIS PAGE.
 - 4. STOCKPILES THAT ARE A SOURCE OF DUST SHALL BE COVERED.

DUST CONTROL

- A. DUST SHALL BE CONTROLLED ON SITE DURING CONSTRUCTION BY IMPLEMENTING THE FOLLOWING DUST CONTROL MEASURES:
 - 1. MULCHING AND VEGETATIVE COVER TO REDUCE DUST.
 - 2. MECHANICAL SWEEPERS AND FINE WATER SPRAYS.
 - 3. COVER SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.

SEED MIXTURE SELECTION BASED ON SOIL TYPE

USE	SEEDING MIXTURE	SOIL DRAINAGE			
		DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	GOOD
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	GOOD
	B	POOR	GOOD	GOOD	GOOD
	C	POOR	GOOD	EXCELLENT	EXCELLENT
	D	FAIR	GOOD	EXCELLENT	EXCELLENT
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	GOOD
	C	GOOD	GOOD	EXCELLENT	EXCELLENT
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	GOOD
	B	GOOD	GOOD	EXCELLENT	EXCELLENT
	C	GOOD	GOOD	EXCELLENT	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	EXCELLENT
	F	FAIR	EXCELLENT	EXCELLENT	EXCELLENT

NOTE: POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREAS AND ATHLETIC FIELDS.

SEED MIXTURES FOR PERMANENT VEGETATION

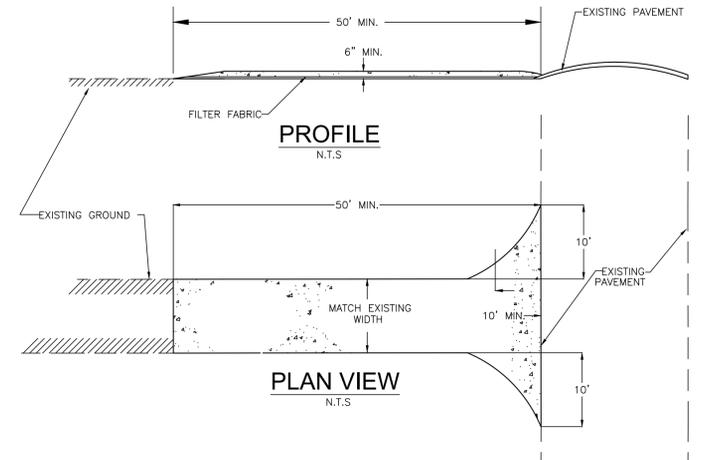
MIXTURE	SPECIES	POUNDS PER ACRE	POUNDS PER 1,000 SF
A	TALL FESCUE	20	0.45
	CREeping RED FESCUE	20	0.45
	BIRDFOOT TREFLOIL	2	0.05
	TOTAL	42	0.95
B	TALL FESCUE	15	0.35
	CREeping RED FESCUE	10	0.25
	CROWN VETCH OR ELATIPA	15	0.35
	TOTAL	40 OR 55	0.95 OR 1.35
C	TALL FESCUE	20	0.45
	CREeping RED FESCUE	20	0.45
	BIRDFOOT TREFLOIL	8	0.20
	TOTAL	48	1.10
D	TALL FESCUE	20	0.45
	ELATIPA	30	0.75
	TOTAL	50	1.20
	E	CREeping RED FESCUE	50
KENTUCKY BLUEGRASS		50	1.15
TOTAL		100	2.30
F		TALL FESCUE	150

CONSTRUCTION SEQUENCING:

- 1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH TOWN OFFICIALS, OWNER, AND CONTRACTORS IF REQUIRED BY THE CONDITIONS OF APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
- 2. CONTACT DIG-SAFE, INDIVIDUAL UTILITIES, AND CITY DEPARTMENTS TO GET ALL UTILITIES MARKED PRIOR TO START OF CONSTRUCTION.
- 3. INSTALL AND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROLS.
- 4. A. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
- 4. B. CLEAR/GRUB ONLY WITHIN THE LIMITS OF GRADING AS SHOWN ON THE PLANS. REMOVE ORGANICS ONLY FROM THOSE AREAS THAT CAN BE WORKED AND STABILIZED WITHIN 45 DAYS OF REMOVAL.
- 5. TOTAL SITE DISTURBANCE DEPICTED ON THESE PLANS IS 13,600 S.F.
- 6. REFER TO VEGETATION AND EROSION CONTROL NOTES ON THIS PLAN DURING CONSTRUCTION.
- 7. STOCKPILES
 - A. STOCKPILE LOAM FOR RE-USE AS NEEDED.
 - B. TEMPORARILY STABILIZE LOAM STOCKPILES WITH:
 - 1. WINTER RYE GRASS- PRIOR TO SEPTEMBER 15TH
 - 2. MULCH- FROM SEPTEMBER 15TH TO MAY 1ST
- 8. CONSTRUCT AND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROLS. CONSTRUCT SWALES AND STABILIZE. ADD A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION.
 - A. THESE SHALL BE INSTALLED BEFORE ANY MAJOR EARTH MOVING OPERATIONS.
 - B. THE BIORETENTION SYSTEM ALLOWS INFILTRATION OF RUNOFF. DO NOT CONSTRUCT THE BIORETENTION SYSTEM UNTIL ALL UPSLOPE AREAS ARE STABILIZED. UNSTABILIZED AREAS THAT DRAIN TO THE BIORETENTION SYSTEM WILL DECREASE THE INFILTRATION CAPACITY OF THE UNDERLYING SOILS.
- 9. DRIVEWAY AND PARKING CONSTRUCTION
 - A. CUTS AND FILLS:
 - 1. CONSTRUCT IN LOCATIONS AND TO GRADES AS SHOWN ON THE PLANS.
 - 2. FILLS:
 - A. PLACE MAXIMUM 12" LIFTS AND COMPACT TO 95% MAXIMUM DRY DENSITY.
 - B. ALL MATERIAL BASED ON PROCTOR TEST SHALL BE FREE OF DELETERIOUS MATERIALS SUCH AS LOAM, STUMPS, BRUSH, AND ROCKS LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING PLACED.
 - 3. LOAM AND SEED SLOPES WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
 - C. BASE MATERIALS: BANK RUN AND CRUSHED GRAVEL SHALL BE PLACED IN 4" LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY TO THE DEPTHS SPECIFIED IN THE PARKING LOTS CROSS-SECTION DETAILS.
 - D. STABILIZE ALL PAVED GRAVEL AREAS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 11. CONSTRUCT BIORETENTION SYSTEM AFTER UP SLOPE AREAS ARE STABILIZED.
- 12. INSPECT, MAINTAIN, AND IF NECESSARY, REPAIR ALL EROSION AND SEDIMENT CONTROL MEASURES AS STATED IN EROSION CONTROL NOTES ON THIS SHEET.
- 13. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES ONCE INITIAL GROWTH IS ESTABLISHED.

ADDITIONAL NOTES:

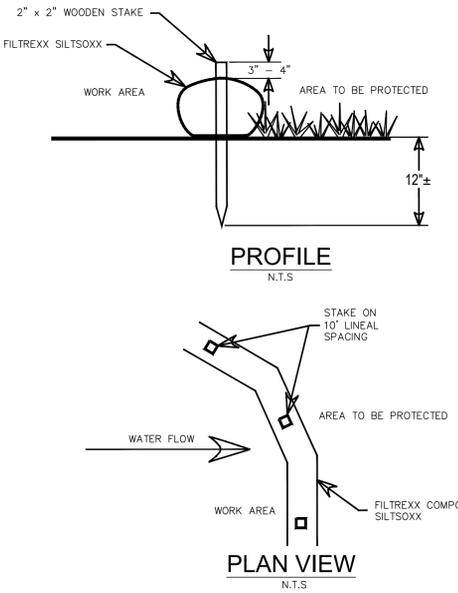
- 1. NO FUEL SHALL BE STORED ON SITE DURING CONSTRUCTION.
- 2. DURING CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
- 3. ALL CONSTRUCTION MATERIALS THAT ARE SPILLED OR DEPOSITED ON THE PUBLIC ROADWAYS SHALL BE REMOVED BY THE CONTRACTOR.
- 4. DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- 5. THE GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- 6. NO CONSTRUCTION VEHICLES SHALL USE MAIN ST. ENTRANCE.



STABILIZED CONSTRUCTION ENTRANCE NOTES:

- 1. GRADE AND COMPACT ACCESS ROAD ENTRANCE AS NECESSARY. PLACE FILTER FABRIC (MIRAFI 140M OR EQUAL) AND PLACE 6" OF 3" STONE TO MATCH SLOPE OF EXISTING ROAD.
- 2. PROVIDE NECESSARY SWALES OR DIVERSIONS TO MINIMIZE DIRECT FLOW OF WATER ONTO STONE AREA.
- 3. CONSTRUCTION ENTRANCE SHALL BE MAINTAINED AS NECESSARY TO REMOVE SILT FROM TIRES PRIOR TO ENTERING PUBLIC ROADS. SMALL SWALE SHALL BE CONSTRUCTED ON THE DOWN GRADIENT SIDE TO TRAP ANY SILT WASHED FROM THE STONE ENTRANCE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL



NOTES:

- 1. ALL MATERIAL TO MEET FILTERXX SPECIFICATIONS.
- 2. USE CERTIFIED FILTERXX FILTERMEDIA.
- 3. COMPOST MATERIAL TO BE DISPERSED ON SITE UPSLOPE FROM PROTECTED AREA.

SILTSOXX DETAIL

DATE: 2/14/20
 SCALE: AS SHOWN
 DESIGNED BY: MJS
 DRAWN BY: MJS
 APPROVED BY: MJS
 FILE: 19066_deta1.dwg

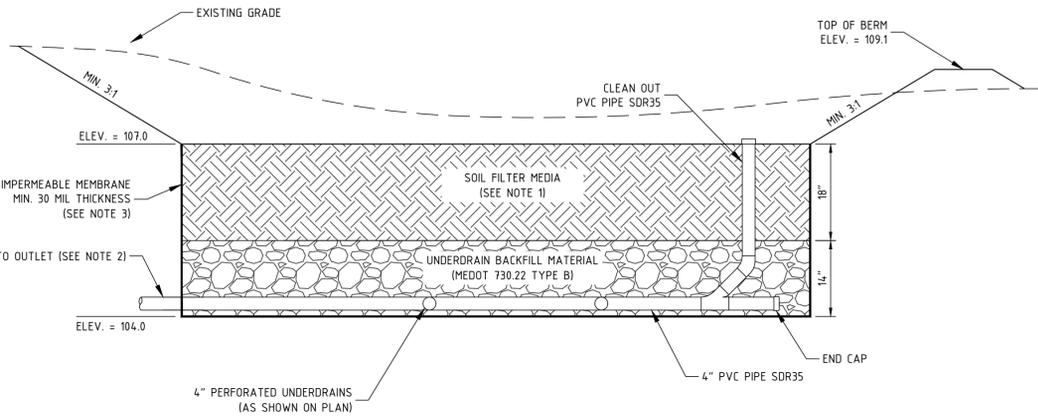
STATE OF MAINE
 MICHAEL SHEFFERT
 8181
 PROFESSIONAL ENGINEER

CONSTRUCTION DETAILS
 prepared for
 CAF REALTY MAINE
 POND ROAD
 BERWICK, ME

REVISIONS
 DATE INT.
 2/5/20 MJS
 INITIAL SUBMISSION TO THE TOWN OF BERWICK

MJS ENGINEERING, P.C.
 CIVIL - STRUCTURAL - ENVIRONMENTAL
 5 RAILROAD ST., N. BERWICK, ME 04915
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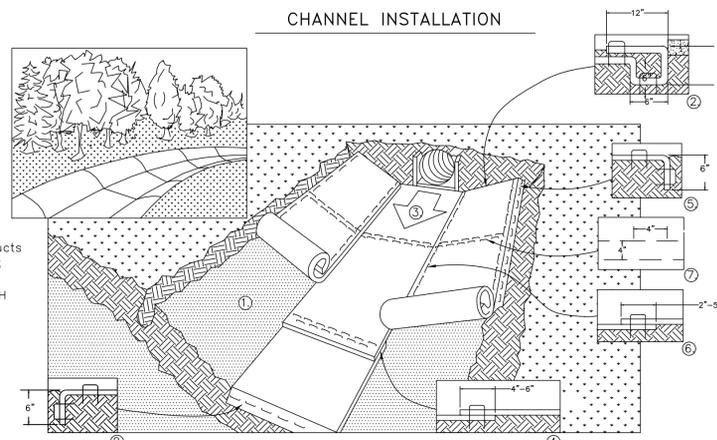
GRASSED UNDERDRAINED SOIL FILTER

N.T.S.

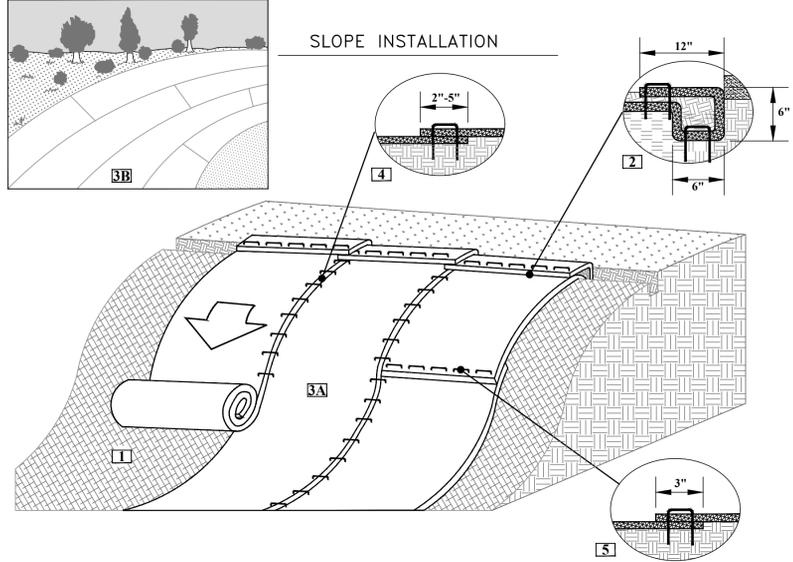
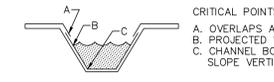
- NOTES:
- SOIL FILTER MEDIA MUST MEET REQUIREMENTS SET IN MEDEP BMP TECHNICAL DESIGN MANUAL FOR SOIL FILTER MEDIA (OPTION 1).
 - TYPE 346 BALL VALVE IS TO BE INSTALLED ON THE OUTLET OF THE UNDERDRAIN. VALVE IS TO BE ADJUSTED IN FIELD TO ENSURE THAT THE FILTER CAN DRAIN THE BASIN IN NO LESS THAN 24 HOURS AND NO GREATER THAN 48 HOURS.
 - IMPERMEABLE MEMBRANE IS TO BE INSTALLED TO PREVENT INFILTRATION TO SUBSOILS AND PREVENT MIGRATION OF NATIVE SOILS INTO THE SOIL FILTER AND UNDERDRAIN MATERIALS. INSTALLATION SHOULD FOLLOW THE MANUFACTURER'S INSTRUCTIONS. CARE SHOULD BE TAKEN TO PREVENT TEARING OR PUNCTURE OF THE MEMBRANE.
- MAINTENANCE:
- THE FILTER SHOULD WITHIN 24 TO 48 HOURS FOLLOWING A ONE-INCH STORM OR GREATER, IF THE SYSTEM DRAINS TOO FAST, BALL VALVE MUST BE ADJUSTED.
 - SEDIMENT AND PLANT DEBRIS SHOULD BE REMOVED FROM THE PRETREATMENT STRUCTURE AT LEAST ANNUALLY.
 - IF MOWING IS DESIRED, ONLY HAND-HELD STRING TRIMMERS OR PUSH-MOWERS ARE ALLOWED ON THE FILTER (NO TRACTOR) AND THE GRASS BED SHOULD BE MOWED NO MORE THAN 2 TIMES PER GROWING SEASON TO MAINTAIN GRASS HEIGHTS OF NO LESS THAN 6 INCHES.
 - FERTILIZATION/FERTILIZATION OF THE UNDERDRAINED FILTER AREA SHOULD BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.
 - HARVESTING AND PRUNING OF EXCESSIVE GROWTH SHOULD BE DONE OCCASIONALLY. WEEDING TO CONTROL UNWANTED OR INVASIVE PLANTS MAY ALSO BE NECESSARY.
 - MAINTAINING A HEALTHY COVER OF GRASS WILL MINIMIZE CLOGGING WITH FINE SEDIMENTS. IF PONDING EXCEEDS 48 HOURS, THE TOP OF THE FILTER BED SHOULD BE ROTOTILLED TO REESTABLISH THE SOIL'S FILTRATION CAPACITY.
 - THE TOP SEVERAL INCHES OF THE FILTER CAN BE REPLACED WITH FRESH MATERIAL IF WATER IS PONDING FOR MORE THAN 72 HOURS, OR THE BASIN CAN BE ROTOTILLED, SEEDED AND MULCHED. ONCE THE FILTER IS MATURE, ADDING NEW MATERIAL (A 1-INCH TO 2-INCH COVER OF MATURE COMPOST) CAN COMPENSATE FOR SUBSIDENCE.

- CONSTRUCTION NOTES:
- CONSTRUCTION COMPONENTS: UNDERDRAINED FILTERS CONSIST OF (FROM BOTTOM UP):
 - A GEOTEXTILE FABRIC TO SEPARATE THE FILTER BASIN FROM THE NATURAL SOILS. AN IMPERMEABLE MEMBRANE MAY BE REQUIRED IF GROUNDWATER IMPACT OR CONTAMINATION IS A CONCERN, OR IF IT MAY INFLUENCE THE EFFECTIVENESS OF THE BASIN.
 - A 12-INCH BASE OF COARSE CLEAN STONE OR COARSE GRAVEL IN WHICH A 4-INCH PERFORATED UNDERDRAIN PIPE SYSTEM IS BEDDED.
 - A GRAVEL TRANSITION LAYER, IF NECESSARY.
 - AN 18-INCH LAYER OF UNCOMPACTED SOIL FILTER MEDIA.
 - A SURFACE COVER OF GRASS AND MULCH.
 - BASIN EXCAVATION: THE BASIN AREA MAY BE EXCAVATED FOR UNDERDRAIN INSTALLATION AND CAN BE USED AS A SEDIMENT TRAP DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MAY BE INSTALLED IF PROTECTED WITH A SEDIMENT BARRIER.
 - SACRIFICIAL MULCH COVER: IF THE BASIN WILL BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE STABILIZED AND MAINTAINED TO PREVENT EROSION. THE BASIN WILL NEED TO BE RESTORED FOR ITS PLANNED PURPOSE AFTER CONSTRUCTION. BEFORE FINAL STABILIZATION OF THE DRAINAGE AREA TO THE BASIN, A 2-INCH TO 3-INCH LAYER OF SANDY LOAM (WITH LESS THAN 2% CLAY CONTENT) MAY BE SPREAD ON THE SURFACE OF THE SOIL FILTER MEDIA AS A SACRIFICIAL PROTECTION LAYER. THE SACRIFICIAL LAYER WILL NEED TO BE REMOVED AT THE END OF CONSTRUCTION, AND THE SOIL FILTER MEDIA WILL NEED TO BE SEEDED AND MULCHED.
 - COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL SHOULD BE APPLIED TO REACH A BULK DENSITY OF BETWEEN 90% AND 92% STANDARD PROCTOR. THE SOIL FILTER MEDIA SHOULD BE INSTALLED IN AT LEAST TWO LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.
 - REMEDIAL LOAM COVER: IF VEGETATION IS NOT ESTABLISHED WITHIN THE FIRST YEAR, THE BASIN MAY BE ROTOTILLED, RESEEDED AND PROTECTED WITH A WELL-ANCHORED EROSION CONTROL BLANKET, OR, A 2-INCH TO 3-INCH LAYER OF FINE SANDY LOAM MAY BE APPLIED BEFORE SEEDING AND MULCHING.
 - CONSTRUCTION OVERSIGHT: INSPECTION OF THE FILTER BASIN MUST BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. ALL MATERIAL INTENDED FOR THE FILTER BASIN MUST BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THE MATERIAL CONFORMS TO ALL DEP SPECIFICATIONS. AT A MINIMUM, INSPECTIONS WILL OCCUR:
 - AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED (NOT BACKFILLED);
 - AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE SOIL FILTER MEDIA;
 - AFTER THE SOIL FILTER MEDIA HAS BEEN INSTALLED, SEEDED AND MULCHED; AND
 - AFTER ONE YEAR, TO INSPECT VEGETATION AND MAKE CORRECTIONS.

SOIL FILTER MIX SPECIFICATIONS			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	SIEVE NO.	% BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15



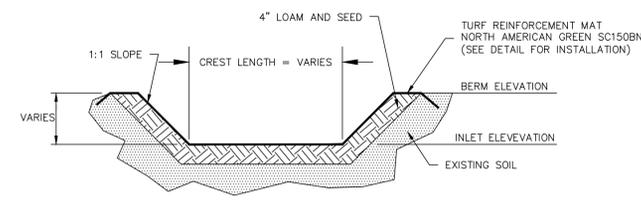
- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 - BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP'S.
 - ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM - 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP'S.
 - FULL LENGTH EDGE OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 - ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) (DEPENDING ON RECP'S TYPE) AND STAPLED.
 - IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
 - THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- NOTE:
* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.



- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
 - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"(15CM) DEEP X 6"(15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12"(30CM) PORTION OF RECP'S BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12"(30CM) APART ACROSS THE WIDTH OF THE RECP'S.
 - ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
 - THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5-12.5CM) OVERLAP DEPENDING ON THE RECP'S TYPE.
 - CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3"(7.5CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12"(30CM) APART ACROSS ENTIRE RECP'S WIDTH.
- NOTES:
1. BIORETENTION SYSTEM SPILLWAYS TO BE LINED WITH NORTH AMERICAN GREEN SC150BN EROSION CONTROL BLANKET OR APPROVED EQUAL.
2. FOR SALES CONTACT: EJ PRESSCOTT, INC. 210 SHEEP DAVIS RD. CONCORD, NH 603-224-9545

TYPICAL TURF REINFORCEMENT MATTING DETAIL

N.T.S.



NOTES: CREST BREADTH IS WIDTH OF BERM AT SPILLWAY.
NOTE: SPILLWAY TO BE CONSTRUCTED TO THE DIMENSIONS AND SPECIFICATIONS SHOWN.

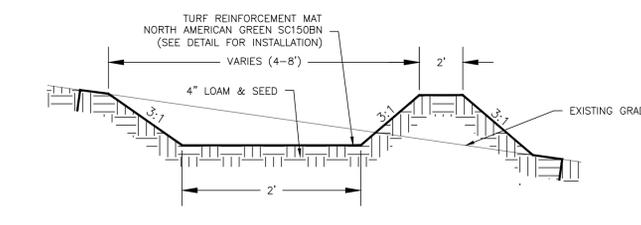
SPILLWAY DIMENSION TABLE

LOCATION	CREST ELEV.	BERM ELEV.	LENGTH*	WIDTH*
SPILLWAY #1 - BIORETENTION BASIN	107.9	109.1	15'	12.6'

*REFER TO DETAIL ABOVE FOR LOCATION OF WIDTH AND LENGTH

BIORETENTION SYSTEM SPILLWAY CROSS SECTION

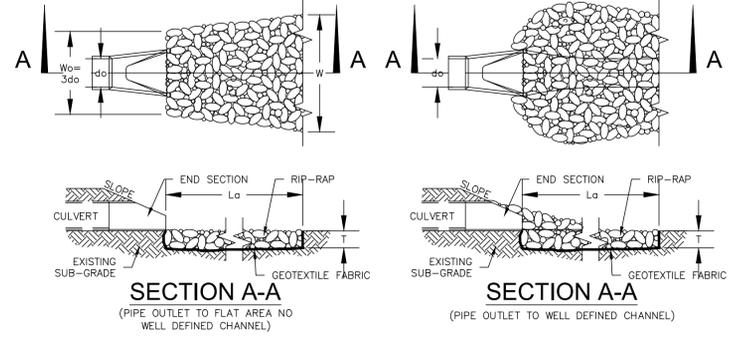
N.T.S.



VEGETATED SWALE DETAIL

N.T.S.

- NOTES:
1. REFER TO BERM CONSTRUCTION NOTES IN BIORETENTION SYSTEM DETAIL FOR BERM CONSTRUCTION REQUIREMENTS.
- MAINTENANCE NOTES:
- THE BUFFER STRIP MAY REQUIRE PERIODIC MECHANICAL AERATION (BY ROTOTILLING OR OTHER) TO RESTORE INFILTRATION CAPACITY. THIS AERATION MUST BE DONE DURING A TIME WHEN THE AREA CAN BE RESEEDED AND MULCHED PRIOR TO ANY SIGNIFICANT RAINFALL.
 - GRASS SHOULD NOT BE TRIMMED EXTREMELY SHORT, AS THIS WILL REDUCE THE FILTERING EFFECT OF THE SWALE (MPCA, 1989). THE CUT VEGETATION SHOULD BE REMOVED TO PREVENT THE DECAYING ORGANIC LITTER FROM ADDING POLLUTANTS TO THE DISCHARGE FROM THE SWALE. MOWED HEIGHT OF THE GRASS SHOULD BE 2-4 INCHES TALLER THAN THE MAXIMUM FLOW DEPTH OF THE DESIGN WATER QUALITY STORM. A MINIMUM MOW HEIGHT OF 6 INCHES IS GENERALLY RECOMMENDED (GALLI, 1993).
 - IT IS IMPORTANT TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES TO STABILIZE THIS AREA AS SOON AS POSSIBLE AND RETAIN ANY ORGANIC MATTER IN THE BOTTOM OF THE TRENCH.
 - ROUTINE FERTILIZATION AND/OR PESTICIDE USE IS STRONGLY DISCOURAGED. IF COMPLETE RE-SEEDING IS NECESSARY, HALF THE ORIGINAL RECOMMENDED RATE OF FERTILIZER SHOULD BE APPLIED WITH A FULL RATE OF SEED.
 - LEVEL OF SEDIMENT DEPOSITION IN THE CHANNEL SHOULD BE MONITORED REGULARLY, AND REMOVED FROM GRASSED CHANNELS BEFORE PERMANENT DAMAGE IS DONE TO THE GRASSED VEGETATION, OR IF INFILTRATION TIMES ARE LONGER THAN 12 HOURS. SEDIMENT SHOULD BE REMOVED FROM A CHANNEL WHEN IT REDUCES THE CAPACITY OF THE CHANNEL.



RIP-RAP GRADATION

6" RIP-RAP	% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
	100	9 TO 12
	85 TO 95	7.8 TO 10.8
	50 TO 60	6 TO 9
	15 TO 25	1.8 TO 3

APRON DIMENSION TABLE

PIPE OUTLET	W0	W	La	T	d50
# 1 ROAD CULVERT	24"	-	13'	18"	6"
# 2 ROAD CULVERT	45"	-	13'	18"	6"
# 3 UNDERDRAIN	12"	36"	6'	18"	6"

- CONSTRUCTION SPECIFICATIONS:
- PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
 - MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
 - THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
 - GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
 - STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
- MAINTENANCE NOTES:
- OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP-RAP SHALL BE REPAIRED IMMEDIATELY.
 - THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
 - THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

PIPE OUTLET PROTECTION DETAIL

NOT TO SCALE

DATE: 2/4/20
SCALE: AS SHOWN
DESIGNED BY: MJS
DRAWN BY: MJS
APPROVED BY: MJS
FILE: 19066_detailed.dwg

CONSTRUCTION DETAILS prepared for CAF REALTY MAINE POND ROAD, BERWICK, ME

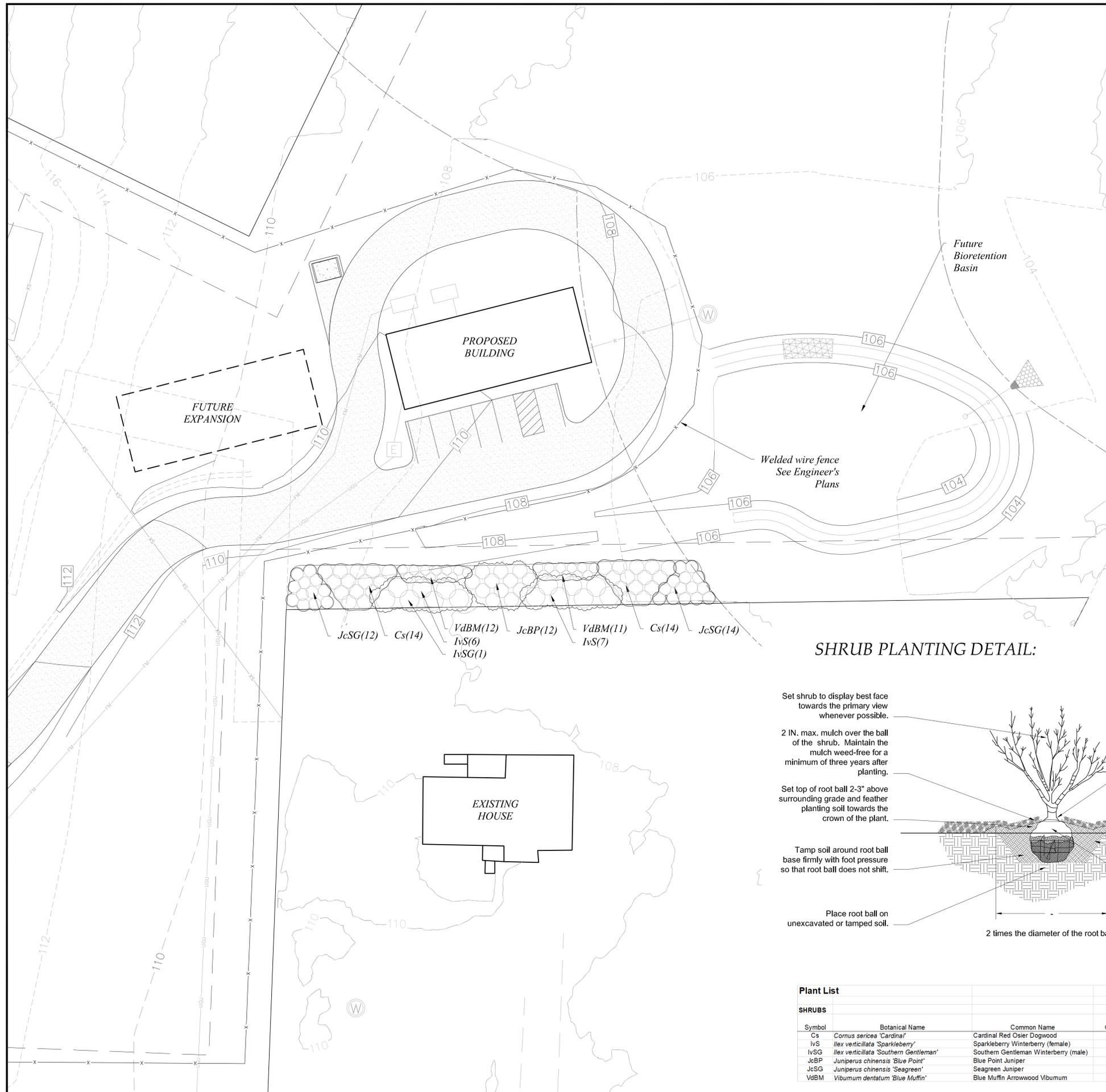
MJS ENGINEERING, P.C. CIVIL - STRUCTURAL - ENVIRONMENTAL 5 HALLAMSBY ST., N. BERWICK, ME 04015-3509 PHONE: (603) 659-4979, FAX: (603) 659-4627 E-MAIL: mjs@mjs-engineering.com

REVISIONS

NO.	DATE	DESCRIPTION
1	2/5/20	INITIAL SUBMISSION TO THE TOWN OF BERWICK
2	6/10/20	REVISED SPILLWAY DETAIL
3	7/29/20	REVISED DETAILS PER TOWN REVIEW

JOB: 19-066

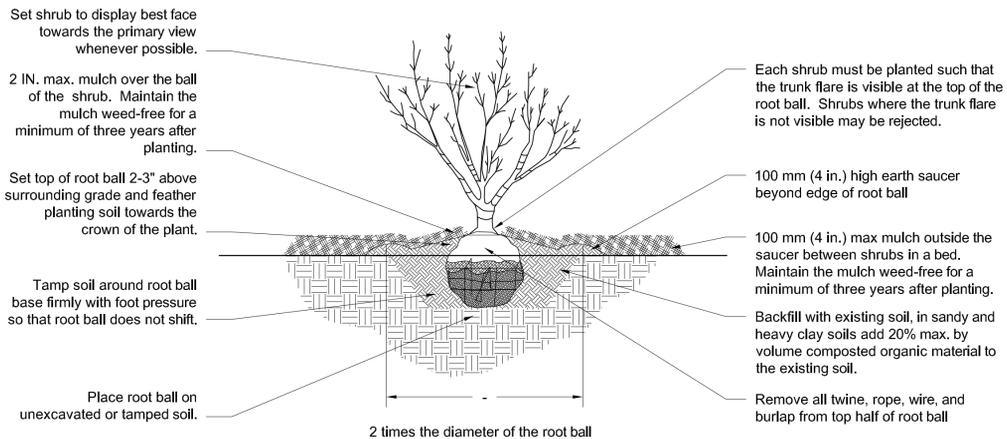
D2



LANDSCAPE NOTES:

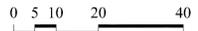
- Design is based on drawings by MJS Engineering, P.C. dated May 27, 2020, and may require adjustment due to actual field conditions.
- The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
- Erosion Control shall be in place prior to construction.
- Erosion Control shall consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
- The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
- It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
- Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
- This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
- Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
- The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
- The Contractor shall procure any required permits prior to construction.
- Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
- Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
- The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in ANSI Z60.1 of the American Standard of Nursery Stock. American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
- A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
- All plants shall be legibly tagged with proper botanical name.
- The Contractor shall guarantee all plants for not less than one year from time of acceptance.
- Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
- No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
- All landscaping shall be provided with either of the following:
 - An underground sprinkling system
 - An outside hose attachment within 150 feet
- If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
- The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide water from off site, should it not be available on site.
- All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
- Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and 3/8" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
- Drip strip shall extend to 6" beyond root overhang and shall be edged with 3/16" thick metal edger.
- In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
- Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy.
- Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
- Landscape Architect is not responsible for the means and methods of the contractor.

SHRUB PLANTING DETAIL:



Plant List

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cs	<i>Cornus sericea</i> 'Cardinal'	Cardinal Red Osier Dogwood	28	5 gal.	
IvS	<i>Ilex verticillata</i> 'Sparkleberry'	Sparkleberry Winterberry (female)	13	3-4'	B&B
IvSG	<i>Ilex verticillata</i> 'Southern Gentleman'	Southern Gentleman Winterberry (male)	1	3-4'	B&B
JcBP	<i>Juniperus chinensis</i> 'Blue Point'	Blue Point Juniper	12	6-7'	B&B
JcSG	<i>Juniperus chinensis</i> 'Seagreen'	Seagreen Juniper	26	2-2.5'	B&B
VdBm	<i>Viburnum dentatum</i> 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	23	5 gal.	



woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Neumarket, New Hampshire Phone: 603.659.5949

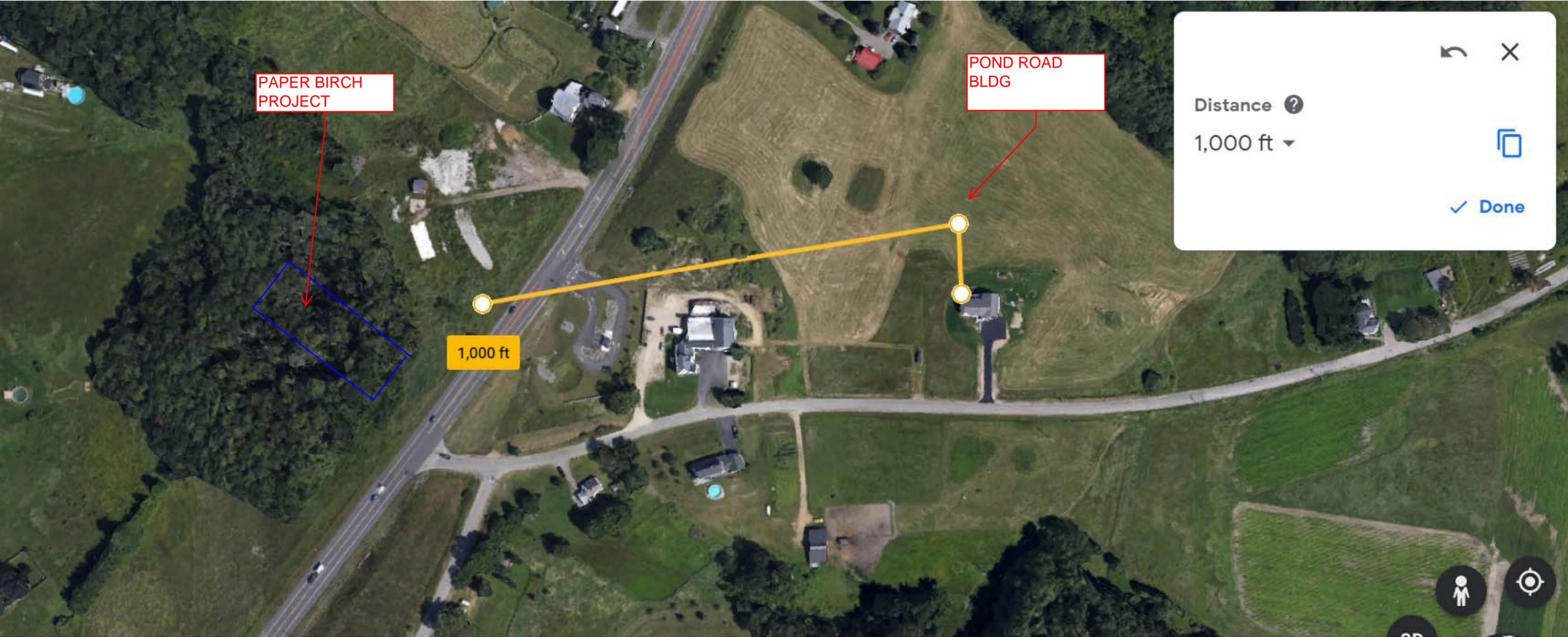
LANDSCAPE PLAN

prepared for
CAF REALTY MAINE
TAX MAP R-70, LOT 16
11 POND ROAD BERWICK, ME

MJS ENGINEERING P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL
5 FALLBROOK ST., SUITE 100, BERWICK, ME 04915
PHONE: (603) 659-4979, FAX: (603) 659-4627
E-MAIL: MJS@MJS-ENGINEERING.COM

REVISIONS

NO.	REVISIONS	DATE	INT.
1.	PER REVISED SITE PLAN - BERWICK	4/19/20	LF
2.	PER REVISED SITE PLAN	5/27/20	LF
0.	INITIAL SUBMISSION TO THE TOWN OF BERWICK	3/13/20	LF



PAPER BIRCH PROJECT

POND ROAD BLDG

1,000 ft

Distance ?
1,000 ft ▾

✓ Done

**Town of Berwick Planning Board
Conditional Use Findings of Fact**

Applicant: CAF Realty
11 Pond Road (Tax Map R-070, Lot 16)
August 20, 2020

CAF Realty applied for a Site Plan & Conditional Use for an Adult Use Marijuana Productions Facility. A piece of the lot is in South Berwick, the Town was notified of the project on February 19, 2020 via e-mail. An odor control and security plan were submitted. The applicant does have standing to apply according to Section 8.25 the property is in the RC/I Zone and first appeared on the Planning Board agenda for March 5th, 2020. The Planning Board requested additional screening. The application was found complete by vote of 5-0.

The applicant initially indicated they would complete the project in multiple phases with four buildings at completion. Upon further review it was determined part of the proposal was in the Limited Residential District where the use is not allowed. As a result, the applicant submitted a new plan showing two buildings.

A landscape plan was submitted with a plant list as follows:

Plant List				
SHRUBS				
Symbol	Botanical Name	Common Name	Quantity	Size
Cs	<i>Cornus sericea</i> 'Cardinal'	Cardinal Red Osier Dogwood	28	5 gal.
IvS	<i>Ilex verticillata</i> 'Sparkleberry'	Sparkleberry Winterberry (female)	13	3-4'
IvSG	<i>Ilex verticillata</i> 'Southern Gentleman'	Southern Gentleman Winterberry (male)	1	3-4'
JcBP	<i>Juniperus chinensis</i> 'Blue Point'	Blue Point Juniper	12	6-7'
JcSG	<i>Juniperus chinensis</i> 'Seagreen'	Seagreen Juniper	26	2-2.5'
VdBM	<i>Viburnum dentatum</i> 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	23	5 gal.

The South Berwick Water District Superintendent requested several conditions (See Conditions of Approval)

The follow concerns have been raised by the neighborhood:

- Residency requirements for the use, frontage (8.25.3), property values, legal access, subdivision review, wetland buffer zone, easement restrictions, odor control, setbacks, septic easement issues, infrastructure within the wetland buffer zone, driving over a septic pipe and issues with public safety.

At the June 4th Public Hearing, abutters additionally raised concerns about security, health and welfare of the neighborhood, fire safety issues, communication with the applicant and issues with setbacks from wells. The Board requested a third-party review Based on the third-party review, the applicant revised their application to include detail on the force main protection, modifications to the Stormwater Management & Drainage Report and several General Site Design modifications.

A DEP Stormwater Permit by Rule was approved on August 13, 2020.

Findings of Fact

1. Conformance with the Comprehensive Plan: *All proposed conditional uses and site plans shall conform to the Comprehensive Plan of the Town of Berwick and with the provisions of all pertinent federal, state and local codes, ordinances, and regulations.*

Planning Board Finding

2. Preserve and enhance the landscape: *The landscape shall be preserved in its natural state insofar as practicable by minimizing tree removal, disturbance of soil, retaining existing vegetation during construction. After construction is complete, landscape shall be designed and planted that will define, soften or screen the appearance of off street parking areas from the right of way and abutting properties and/or structures in order to enhance the physical design of the building(s) or site, and to minimize the encroachment of the proposed use on the neighboring land uses.*

No trees are proposed to be removed during construction. The applicant has proposed a landscape buffer to screen the buildings from the neighboring property.

3. Relationship of the proposed buildings to the environment: *Proposed structures shall be related harmoniously to the terrain and to the existing buildings in the vicinity which have a visual relationship to the proposed buildings. Special attention shall be paid to the bulk, location and height of the building(s) and such natural features such as slope, soil type and drainage ways.*

The proposed buildings are one story with pitched roofs and are designed to resemble a barn.

4. Vehicular access: *The proposed site layout shall provide for safe access and egress from public and private roads by providing adequate location, numbers and controls of access points including site distances, turning lanes, traffic signalization when required by existing and projected traffic flow on municipal road systems.*

The site layout provides for safe access and egress to pond Road. Trucks will pick up products approximately two to four times per month. There will be five full time employees and eight during harvesting. This will be the extent of the traffic during operations.

5. Parking and circulation: *The layout and design of all vehicular and pedestrian circulation, including walkways, interior drives, and parking areas shall provide for safe general interior circulation, separation of pedestrian and vehicular traffic, service traffic, loading areas, and arrangements and use of parking areas.*

Two-way traffic is proposed for the interior of the site. Parking is proposed to go in front of the first building. Access is provided around the proposed building and access to the front and right side of the proposed expansion comes from the interior road.

6. Surface water drainage: *Adequate provision shall be made for surface drainage so that removal of surface waters will not adversely affect neighboring properties, downstream conditions, soil erosion or the public storm drainage system. Whenever possible, on-site absorption of unpolluted run-off waters shall be utilized to permit groundwater recharge on the site.*

A bioretention basin with a swale heading to the basin is proposed for surface water. A swale is proposed along the proposed new interior road.

7. Existing utilities: *The development shall not impose an unreasonable burden on sewers, sanitary and storm drains, water lines or other public utilities.*

Concerns with South Berwick's water quality and water availability were raised by the District Superintendent. Conditions of Approval have been added to ensure this standard will be met.

8. Advertising features: *The size, location, design, lighting and materials of all exterior signs and outdoor advertising structures or features shall not detract from the design of proposed buildings and structures and the surrounding properties.*

No signage has been proposed for the project.

9. Special features of the development: *Exposed storage areas, exposed machinery installation, service areas, truck loading areas, utility buildings and similar structures shall have sufficient setback and screening to provide an audio/visual buffer to minimize their adverse impact on other land uses within the development area and surrounding properties.*

Not Applicable

10. Exterior lighting: *All exterior lighting shall be designed to minimize adverse impact on neighboring properties.*

Lighting is proposed to be mounted to the building and have a shield to direct the light downward.

11. Emergency vehicle access: *Provisions shall be made for providing and maintaining convenient and safe emergency vehicle access to all buildings and structures.*

The driveway will be widened to 20' as requested by the Berwick Fire Department. The interior access road is also 20' wide.

12. Municipal services: *The development will not have an unreasonable adverse impact on the municipal services including municipal road systems, fire department, police department, solid waste program, sewer treatment plant, school, open spaces, recreational programs and facilities, and other municipal service and facilities.*

Concerns with South Berwick's water quality and water availability have been raised by the District Superintendent. Conditions of Approval have been added to ensure this standard will be met.

13. Will not result in water or air pollution: *In making this determination, it shall at a minimum consider: The elevation of the land above sea level and its relationship to the floodplains, the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its attest on effluents; and the applicable state and local health and water resources regulations*

The primary contamination risk of cultivation is a concentration of nitrates in the water. A holding tank is proposed to capture wastewater from cultivation. The water is required be tested annually.

14. Has sufficient water available for the reasonable foreseeable needs of the development (*this is usually considered to be ten years approximately*).

This standard has been met.

Will not cause an unreasonable burden on an existing water supply, *if a municipal or community water supply is to be utilized.*

This standard is not applicable, the water supply comes from a well.

15. Will not cause soil erosion or reduction in the capacity of the land to hold water *so that dangerous or unhealthy conditions may result.*

No soil erosion issues have been identified.

16. Will provide for adequate sewerage waste disposal.

A new septic system has been designed and included with the application.

17. Will not have adverse effects on the scenic or natural beauty of the area, aesthetics, or rare and irreplaceable natural areas.

The building is in a location not identified as a rare or irreplaceable area. The area has a large garage, barn and houses.

18. Whenever situated in whole or in part within 250 feet of any pond, lake or river, will not adversely affect the quality of such body of water or affect the shoreline of such body of water, based on the standards outlined in Section 9.8.I.1.j.

The bioretention basin is proposed to be constructed within the 250' wetland buffer. Part of the interior driveway is also within the 250' buffer. The stormwater system has received a Stormwater Permit by Rule.

19. Low Impact Design: *Each applicant is required to submit a statement to the Planning Board documenting proposed Low Impact Design (LID) for the site, which will help to reduce storm water volumes and help to enhance storm water quality. LID includes, but is not limited to, green roofs, rain gardens, tree wells, infiltration basins and permeable pavement.*

A bioretention basin and swales are proposed as part of the LID improvements on the project.

I, David Andreesen, certify that I am Chair of the Planning Board of the Town of Berwick, Maine, a Planning Board established pursuant to Maine State Statute (30-A § 4401) and I further certify that this decision was _____ by the Planning Board at its meeting of _____

No waivers were requested

Findings of Fact _____

Conditions of Approval

1. A water sample shall be tested for priority pollutants and nutrients before any cultivation wastewater is discharged to a holding tank, and then tested annually thereafter. Results shall be provided to the Town and South Berwick Water District.
2. The South Berwick Water District shall be furnished with a detailed well drillers log for the new well.
3. A five-day pump test be performed on the well with well drawdown readings taken hourly until the well stabilizes. The Pump Test will be coordinated with the South Berwick Water District and 386 Portland Street, and 2, 10, 13 Pond Road so the well drawdowns at Junction Road and the abutters wells can be monitored to check for interference.
4. The Facility may not irrigate their plants if the new well has an adverse effect on the Junction Road water source or abutter's water source.
5. A water meter shall be installed to monitor the water usage from the well and permission shall be granted to the South Berwick Water District to periodically read the water meter to verify usage.
6. The applicant shall submit proof of purchase of carbon filtration and the equipment required to produce a negative pressure environment.
7. If an odor violation is determined by the Code Enforcement Officer, the applicant shall resolve the issue within five business days. The Code Enforcement Officer may revoke the Certificate of Occupancy if the odor issues are not resolved within five business days.
8. If well water is contaminated with nitrates or other byproducts as a result of production beyond safe concentrations, the cost to remediate the nitrates or other contamination levels shall be at the applicant's (property owner) expense.
9. The building height shall be restricted to one story.
10. The septic pipe easement shall be moved before the future expansion will be granted a building permit.

Application _____

David Andreesen, Planning Board Chair

Date



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
REGION 1
P.O. BOX 358
SCARBOROUGH, MAINE 04070-0358

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

RECEIVED

JUN 15 2020

CIVIL CONSULTANTS

June 11, 2020

Geoff Aleva, PE
Civil Consultants
293 Main Street
South Berwick, ME 03908

Re: Entrance Permit # 28140

Dear Mr. Aleva:

Enclosed, please find a Memorandum of Highway Entrance Permit Waiver in regards to property owned by Paper Birch Property, LLC located on Route 4 in Berwick, Maine (tax map R70, lot 12-1). This waiver must be recorded at the York County Registry of Deeds within 90 days from the date of issue. Once it has been recorded, a copy of the recorded waiver must then be returned to the MaineDOT Regional Office in Scarborough.

The entrance permit is valid upon delivery; however, **failure to record the waiver within 90 days will render the permit invalid.**

If you have any questions, feel free to contact me at (207) 885-7040.

Sincerely,

Anthony Fontaine
MaineDOT Permit Field Specialist

Enclosures

cc: Paper Birch Property, LLC

**MEMORANDUM OF
HIGHWAY ENTRANCE PERMIT WAIVER**

Pursuant to 23 M.R.S.A. § 704 and the Driveway and Entrance Rules promulgated hereunder, 17-229 CMR Chapter 299, the **Maine Department of Transportation** has granted a waiver that allows the access to the highway from the parcel of land, all as described below.

Owner(s) of Parcel: **Paper Birch Property, LLC**
62 Portland Road, Suite 25
Kennebunk, ME 04043

Applicant(s): **Civil Consultants**
293 Main Street
South Berwick, ME
03908

Permit number: 28140

Parcel Description:

Location: **Berwick**, York County, on the northwesterly side of **Route 4 / Portland Street**
Deed Reference: York County, Book # 17566, Page # 284
York County, Book # 17566, Page # 286
Street Address: Route 4
Tax Map Reference: Map R70, Lot 12-1

Entrance Description:

Location: **In the Town of Berwick on the northwesterly side of Route 4 / Portland Street, the centerline being approximately opposite the centerline of Pond Road and approximately 37 feet northeasterly of utility pole 545.**

Type: Entrance 24 feet in width plus radii.

Use: To serve as a shared access to a commercial / industrial / retail facility.

Special Waiver Conditions:

W-1) The Mobility Arterial sight distance standard has been reduced from 990 feet to 802 feet to the left (northerly direction).

Special Condition:

S-1) This permit supersedes Permit #26694 issued April 8, 2019.

Maine Department of Transportation

Date: 6-11-2020


By: Robert Betz, P.E.
Southern Maine, Region Engineer

STATE OF MAINE
County of Cumberland

Date: 6/11/2020

Personally appeared the above named Robert Betz and acknowledged the foregoing instrument to be his free act and deed in his said capacity.


Notary Public

Print Name: Anthony S. Fontaine

My Commission Expires: 1-12-2026



Maine Department of Transportation

Janet T. Mills
Governor

Driveway/Entrance Permit

Bruce A. Van Note
Commissioner

Permit Number: 28140 - Entrance ID: 1

OWNER

Name: **Paper Birch Property, LLC**
Address: **P.O. Box 426**
Portland, ME 04112
Telephone: **(415)515-3500**

Date Printed: **June 10, 2020**

LOCATION

Route: **0004X, Portland Street**
Municipality: **Berwick**
County: **York**
Tax Map: **R70 Lot Number: 12-1**
Culvert Size: **18 inches**
Culvert Type: **plastic**
Culvert Length: **60 feet**
Date of Permit: **June 10, 2020**
Approved Entrance Width: **24 feet**

In accordance with rules promulgated under 23 M.R.S.A., Chapter 13, Subchapter I, Section 704, the Maine Department of Transportation (MaineDOT) approves a permit and grants permission to perform the necessary grading to construct, in accordance with sketch or attached plan, **an Entrance to Commercial / industrial / retail** at a point **0** feet **N/A** from **Pond Road**, subject to the Chapter 299 Highway Driveway and Entrance Rules, standard conditions and special conditions (if any) listed below.

Conditions of Approval:

This Permittee acknowledges and agrees to comply with the Standard Conditions and Approval attached hereto and to any Specific Conditions of Approval shown here.

(G = GPS Location; W = Waiver; S = Special Condition)

G - THE ENTRANCE SHALL BE LOCATED AT GPS COORDINATES: 43.251940N, -70.793620W.

W - The Mobility Arterial sight distance standard has been reduced from 990 feet to 802 feet to the left (northeasterly direction).

S - In the town of Berwick on the northwesterly side of Route 4 / Portland Street, the centerline being approximately opposite the centerline of Pond Road and approximately 37 feet northeasterly of utility pole 545.

S - The culvert shall be HDPE smoothbore plastic pipe. The Property Owner must contact MaineDOT at (207) 676-9981 prior to entrance and culvert installation to arrange for an inspection.

S - This permit supersedes Permit #26694 issued April 8, 2019.

The MaineDOT has determined that:

1. The waiver will not significantly detract from public safety,
2. The proposed driveway/entrance meets the standards to the maximum extent practicable, and
3. There is no feasible alternative.

A notarized, written waiver determination has been sent to the owner. The owner shall record the waiver determination in the Registry of Deeds in the County in which the property is located within 90 days of the date of the waiver, or the waiver will be null and void and the permit will expire.

Approved by: Anthony Fontaine Date: 6-10-2020

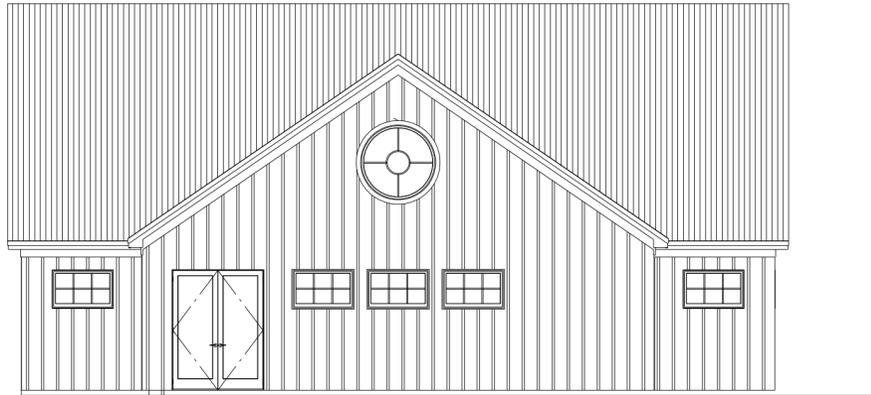
STANDARD CONDITIONS AND APPROVAL

1. Provide, erect and maintain all necessary barricades, lights, warning signs and other devices as directed by MaineDOT to properly safeguard traffic while the construction is in progress.
2. At no time cause the highway to be closed to traffic
3. Where the driveway is located within a curb, curb and gutter, and/or sidewalk section, completely remove the existing curb, curb and gutter, and/or sidewalk as may be required to create the driveway and restore drainage. All driveways abutting sidewalk sections shall meet the requirements set forth in the Americans with Disabilities Act of 1990, 42 U.S.C. Sec. 12131 et seq.
4. Obtain, have delivered to the site, and install any culverts and/or drainage structures which may be necessary for drainage, the size, type and length as called for in the permit pursuant to 23 M.R.S.A. Sec. 705. All culverts and/or drainage structures shall be new.
5. Start construction of the proposed driveway within twenty-four (24) months of the date of permit issuance and substantially complete construction of the proposed driveway within twelve months of commencement of construction.
6. Comply with all applicable federal, state and municipal regulations and ordinances.
7. Do not alter, without the express written consent of the MaineDOT, any culverts or drainage swales within the MaineDOT right of way.
8. File a copy of the approved driveway permit with the affected municipality or LURC, as appropriate within 5 business days of receiving the MaineDOT approval.
9. Construct and maintain the driveway side slopes to be no steeper than the adjacent roadway side slopes, but in no case to be steeper than 3 horizontal to 1 vertical, unless the side slope is behind existing roadway guardrail, in which case it shall be no steeper than 2 horizontal to 1 vertical.
10. Notify the MaineDOT of a proposed change of use served by the driveway when increase in traffic flow is expected to occur. This does not exempt the need for obtaining a Traffic Movement Permit (TMP) if trip generation meets or exceeds 100 passenger car equivalents (PCE) during the peak hour of the day.
11. Construct or implement and maintain erosion and sedimentation measures sufficient to protect MaineDOT facilities.
12. Driveways shall be designed such that all maneuvering and parking of any vehicles will take place outside the highway right-of-way and where vehicles will exit the premises without backing onto the highway traveled way or shoulders. All driveways will have a turnaround area to accommodate vehicles using the premises.
13. Closing any portion of a highway or roadway including lanes, shoulders, sidewalks, bike lanes, or ATV access routes is not permitted without MaineDOT approval.

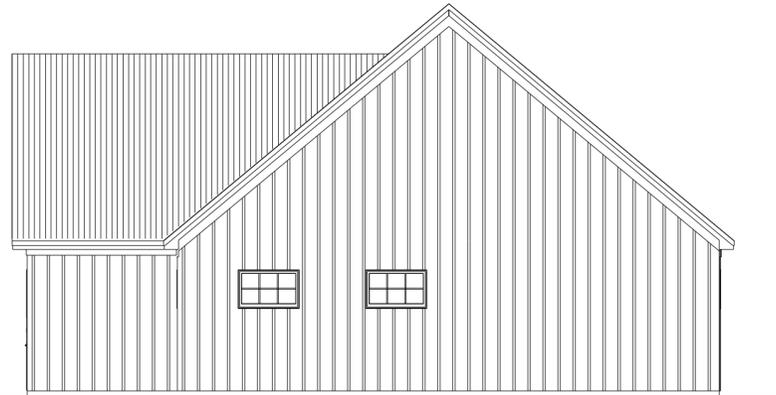
FURTHER CONDITION OF THE PERMIT

The owner shall assume, the defense of, and pay all damages, fines, and penalties for which he/she shall become liable, and shall indemnify and safe harmless said Department, its representatives, agents and employees from liability, actions against all suits, claims, damages for wrongful death, personal injuries or property damage suffered by any person or association which results from the willful or negligent action or inaction of the owner/applicant (agent) and in proceedings of every kind arising out of the construction and maintenance of said entrance(s), including snow removal.

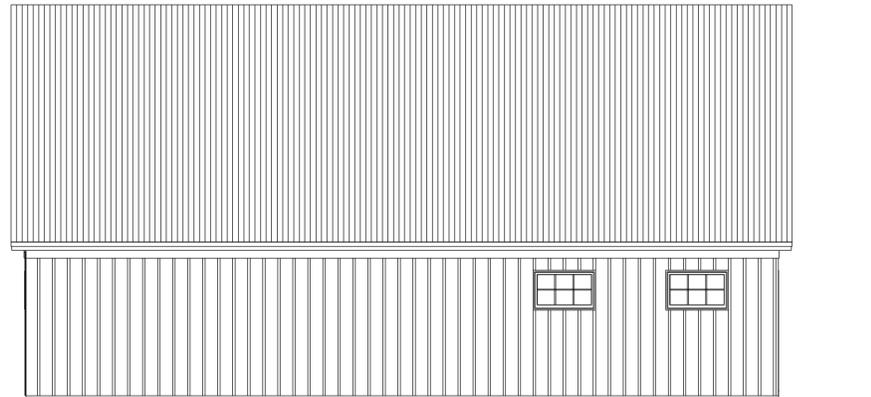
Nothing herein shall, nor is intended to, waive any defense, immunity or limitation of liability which may be available to the MaineDOT, their officers, agents or employees under the Maine Tort Claims Act or any other privileges and/or immunities provided by law. It is a further condition that the owner will agree to keep the right of way inviolate for public highway purposes and no signs (other than traffic signs and signals), posters, billboards, roadside stands, culvert end walls or private installations shall be permitted within Right of Way limits.



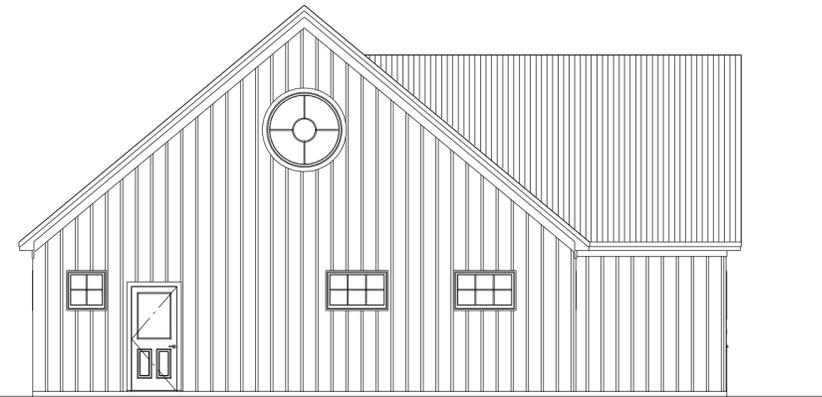
FRONT ELEVATION "A"
SCALE: 1/8"=1'-0"



RIGHT SIDE ELEVATION "B"
SCALE: 1/8"=1'-0"



REAR ELEVATION "C"
SCALE: 1/8"=1'-0"



FRONT ELEVATION "D"
SCALE: 1/8"=1'-0"

TO THE BEST OF MY KNOWLEDGE THESE PLANS HAVE BEEN DRAWN TO COMPLY WITH OWNERS AND/ OR BUILDERS SPECIFICATIONS. ANY CHANGES MADE AFTER PLANS HAVE BEEN ISSUED WILL BE AT THE EXPENSE AND RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR ADHERING TO ALL LOCAL AND STATE BUILDING CODES. CONTRACTOR SHALL VERIFY ALL FRAMING AND STRUCTURAL MEMBERS WITH MANUFACTURER OR LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO HAVE ALL PLANS REVIEWED BY LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

RESIDENTIAL DESIGN SOLUTIONS
BY LISA MELVIN, LLC
PO BOX 548 MONT VERNON, NH 03057
603-235-4246
LMELVIN548@GMAIL.COM

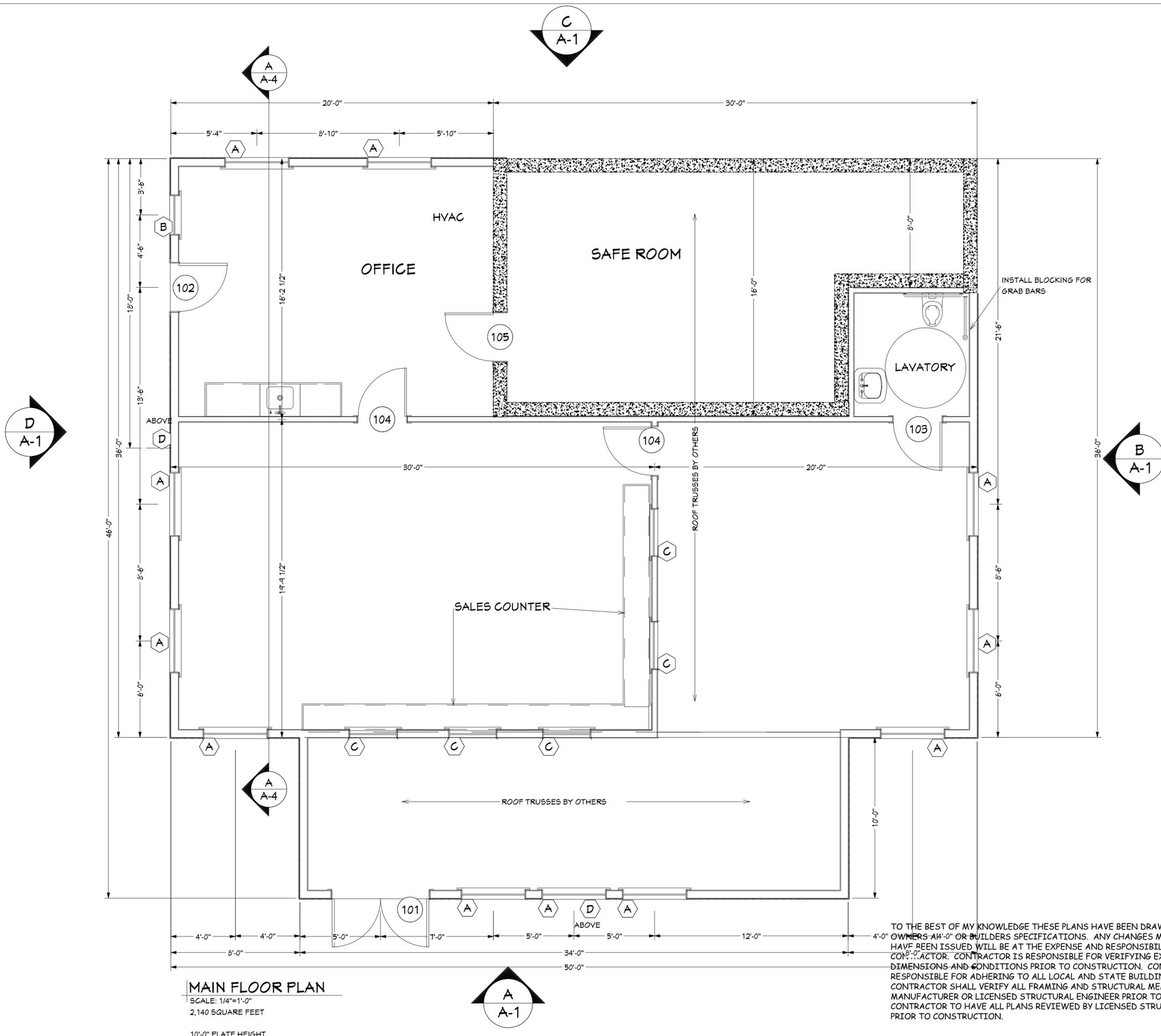
PREPARED FOR:
RETAIL SPACE
SO. BERNICK, MAINE
ELEVATIONS

REVISIONS

DATE: AUGUST 14, 2020
SCALE: AS NOTED
DESIGN BY: L. MELVIN
JOB NO.: JON-1094

A-1

© COPYRIGHT 2020
RESIDENTIAL DESIGN
SOLUTIONS BY L.L.A.



MAIN FLOOR PLAN
 SCALE: 1/4"=1'-0"
 2,140 SQUARE FEET
 10'-0" PLATE HEIGHT

TO THE BEST OF MY KNOWLEDGE THESE PLANS HAVE BEEN DRAWN TO COMPLY WITH OWNERS AND BUILDERS SPECIFICATIONS. ANY CHANGES MADE AFTER PLANS HAVE BEEN ISSUED WILL BE AT THE EXPENSE AND RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR ADHERING TO ALL LOCAL AND STATE BUILDING CODES. CONTRACTOR SHALL VERIFY ALL FRAMING AND STRUCTURAL MEMBERS WITH MANUFACTURER OR LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO HAVE ALL PLANS REVIEWED BY LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

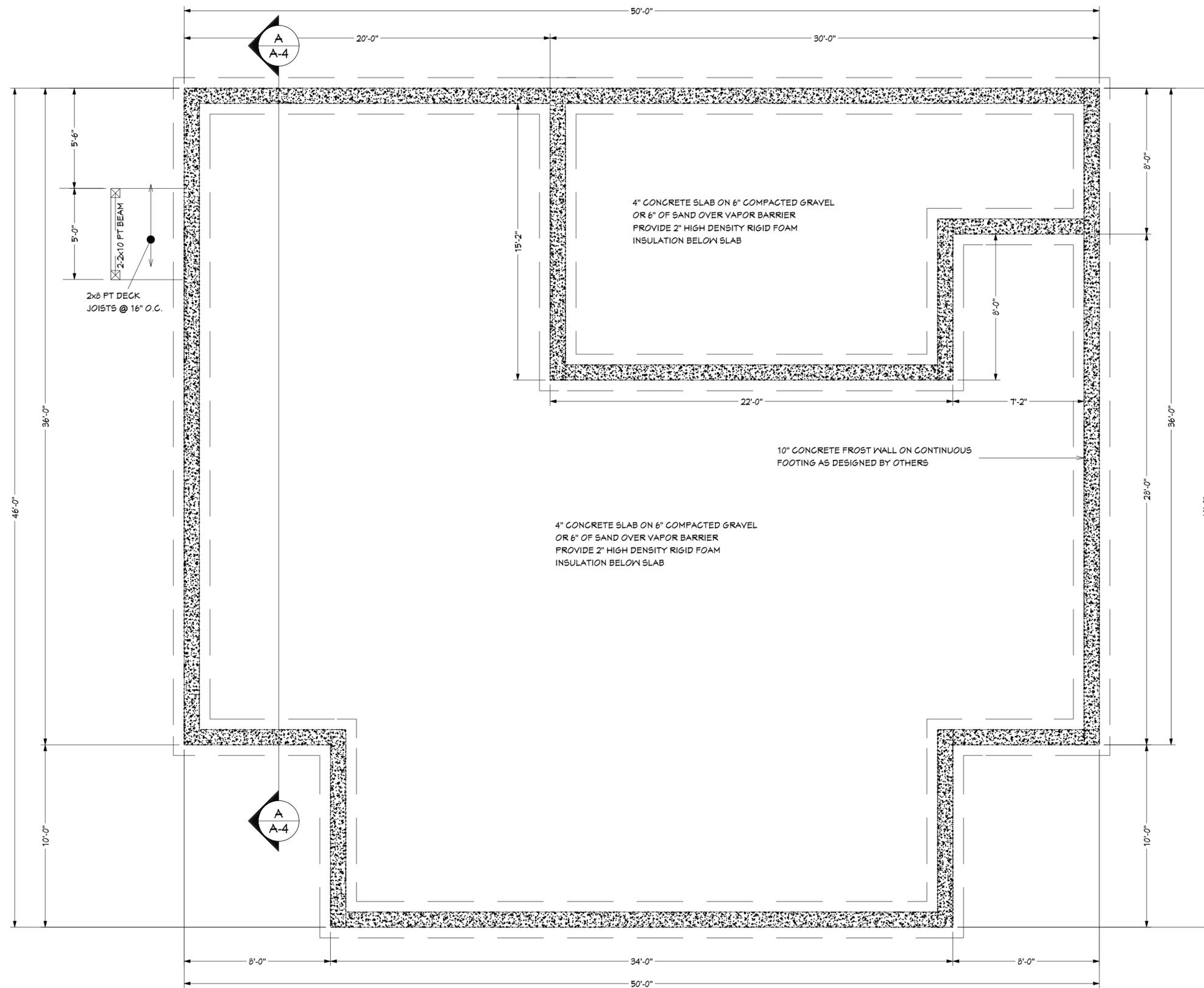
RESIDENTIAL DESIGN SOLUTIONS
 BY LISA MELVIN, LLC
 PO BOX 548 MONT VERNON, NH 03057
 603-235-4246
 LMELVIN548@GMAIL.COM

PREPARED FOR:
 RETAIL SPACE
 SO. BERNICK, MAINE
 MAIN FLOOR PLAN

REVISIONS

DATE: AUGUST 14, 2020
 SCALE: AS NOTED
 DESIGN BY: L. MELVIN
 JOB NO.: JON-1094

A-2
 RESIDENTIAL DESIGN SOLUTIONS BY L.L.A.



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

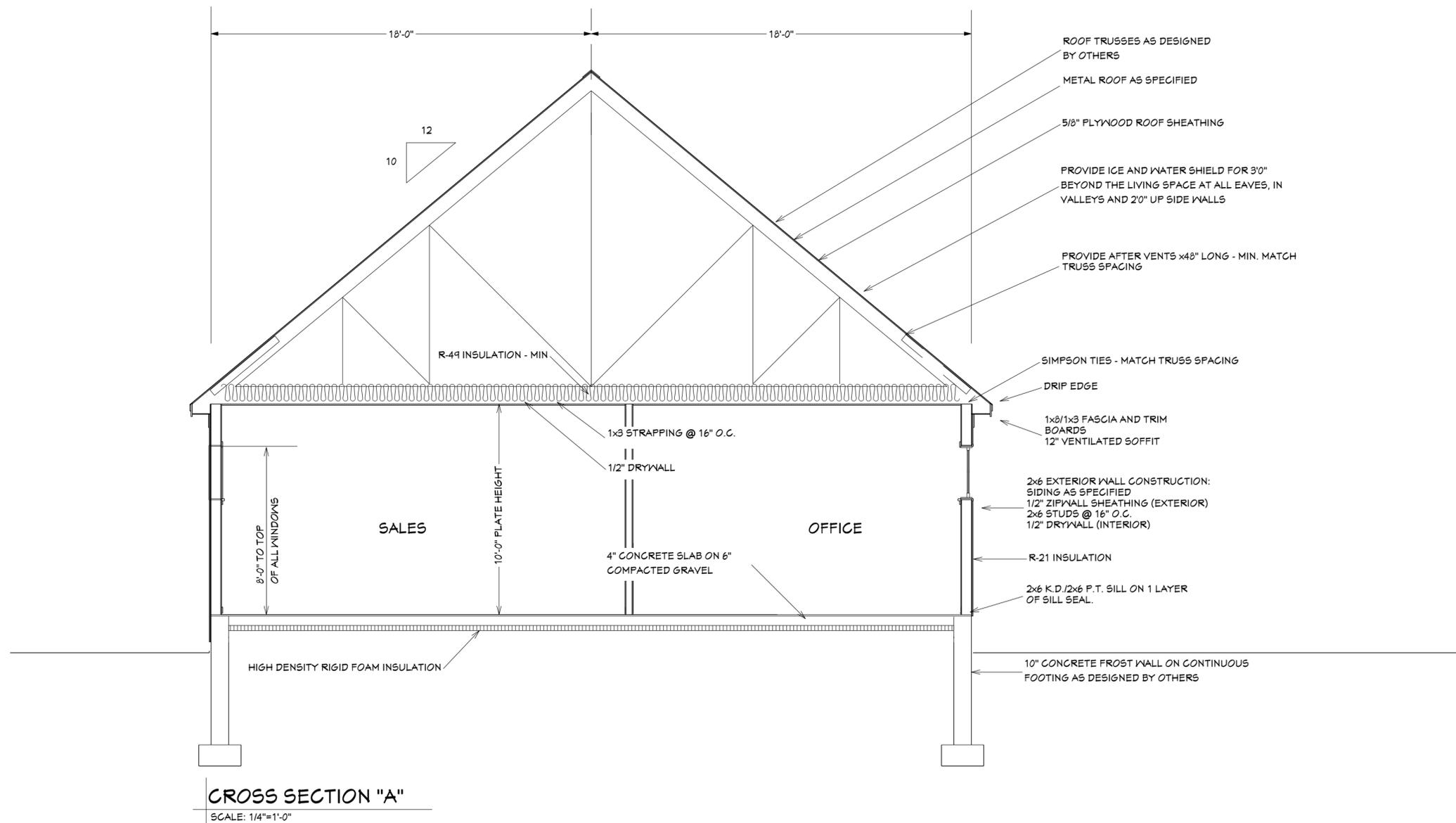
TO THE BEST OF MY KNOWLEDGE THESE PLANS HAVE BEEN DRAWN TO COMPLY WITH OWNERS AND/ OR BUILDERS SPECIFICATIONS. ANY CHANGES MADE AFTER PLANS HAVE BEEN ISSUED WILL BE AT THE EXPENSE AND RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR ADHERING TO ALL LOCAL AND STATE BUILDING CODES. CONTRACTOR SHALL VERIFY ALL FRAMING AND STRUCTURAL MEMBERS WITH MANUFACTURER OR LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO HAVE ALL PLANS REVIEWED BY LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

RESIDENTIAL DESIGN SOLUTIONS
BY LISA MELVIN, LLC
PO BOX 548 MONT VERNON, NH 03057
603-235-4246
LMELVIN548@GMAIL.COM

PREPARED FOR:
RETAIL SPACE
SO. BERNICK, MAINE
FOUNDATION PLAN

REVISIONS

DATE:	AUGUST 14, 2020
SCALE:	AS NOTED
DESIGN BY:	L. MELVIN
JOB NO.:	JON-1094



- ROOF TRUSSES AS DESIGNED BY OTHERS
- METAL ROOF AS SPECIFIED
- 5/8" PLYWOOD ROOF SHEATHING
- PROVIDE ICE AND WATER SHIELD FOR 3'-0" BEYOND THE LIVING SPACE AT ALL EAVES, IN VALLEYS AND 2'-0" UP SIDE WALLS
- PROVIDE AFTER VENTS x48" LONG - MIN. MATCH TRUSS SPACING
- SIMPSON TIES - MATCH TRUSS SPACING
- DRIP EDGE
- 1x6/1x3 FASCIA AND TRIM BOARDS
- 12" VENTILATED SOFFIT
- 2x6 EXTERIOR WALL CONSTRUCTION: SIDING AS SPECIFIED
- 1/2" ZIP WALL SHEATHING (EXTERIOR)
- 2x6 STUDS @ 16" O.C.
- 1/2" DRYWALL (INTERIOR)
- R-21 INSULATION
- 2x6 K.D./2x6 P.T. SILL ON 1 LAYER OF SILL SEAL.
- 10" CONCRETE FROST WALL ON CONTINUOUS FOOTING AS DESIGNED BY OTHERS

CROSS SECTION "A"
SCALE: 1/4"=1'-0"

TO THE BEST OF MY KNOWLEDGE THESE PLANS HAVE BEEN DRAWN TO COMPLY WITH OWNERS AND/ OR BUILDERS SPECIFICATIONS. ANY CHANGES MADE AFTER PLANS HAVE BEEN ISSUED WILL BE AT THE EXPENSE AND RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR ADHERING TO ALL LOCAL AND STATE BUILDING CODES. CONTRACTOR SHALL VERIFY ALL FRAMING AND STRUCTURAL MEMBERS WITH MANUFACTURER OR LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO HAVE ALL PLANS REVIEWED BY LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

RESIDENTIAL DESIGN SOLUTIONS
BY LISA MELVIN, LLC
PO BOX 548 MONT VERNON, NH 03057
603-235-4246
LMELVIN548@GMAIL.COM

PREPARED FOR:
RETAIL SPACE
SO. BERNICK, MAINE
CROSS SECTION A

REVISIONS

DATE:	AUGUST 14, 2020
SCALE:	AS NOTED
DESIGN BY:	L. MELVIN
JOB NO.:	JON-1094

Town of Berwick
Planning Board
11 Sullivan Street
Berwick, ME 03901

Re: Paper Birch Property, LLC Marijuana Storefront & Production Facility

Planning Board Members and James Bellissimo:

In reviewing the application submitted by Paper Birch Property, LLC, we have some concerns regarding this project due to its close proximity to our neighborhood.

1. We are questioning how a large production facility can be located within a 1,000 feet of a retail store. Per the land use ordinance 8.25.3 Location: ***Marijuana Establishments cannot be within 1,000 feet from Other Marijuana Establishments—as measured from the nearest portion of the existing or pending center or store’s building to the nearest portion of the proposed business’s building, via straight line measurement.*** In reading this ordinance, it does not state that this does not apply if the same business owns all the marijuana facilities. It is clear the ordinance was adopted to limit the concentration of marijuana facilities in one area. We do not see how a business that owns a retail store and production facility is excluded from adhering to this ordinance. If that is the case, then any large marijuana conglomerate could come to Berwick and purchase large parcels of land and build an unlimited amount of buildings. We do not see the ordinance in this manner and request it be reviewed.
2. Odor Control: We request that a negative pressure system as well as carbon filter system be installed. A cultivation facility of this size will produce a strong odor. As evidenced by other growth facilities in the Berwicks, a strong “skunk” odor is emitted. We are concerned that our quality of life will be impaired by the emission of the strong odor from this facility. While carbon filtration prevents some of the smell, we ask the board to consider a negative pressure system considering the facility’s close proximity to residential homes.
3. Similar to the 11 Pond Road proposal, this facility is located on the South Berwick aquifer. We respectfully request that the South Berwick Water District be contacted to review the project. Due to the size of this production facility, we are concerned about the amount of water usage and the impact to the water supply and surrounding wells.
4. Security: It does not appear that a security fence will be constructed around the large production facility. We have concerns about increased crime in the neighborhood. We are wondering why a fence is not being built where similar facilities have a secure parameter to deter crime. Will there be an alarm system? Will the lighting be adequate?

We appreciate the applicant’s proactiveness in contacting the DOT and DEP to address the obvious traffic and environmental issues.

Thank you for opportunity to express our concerns. We are in opposition of the location of this production facility.

Respectfully,

Alyson and Jerry Graybill
10 Pond Rd
Berwick, Maine

Town of Berwick Planning Board
Conditional Use Findings of Fact
Applicant: Paper Birch Property, LLC
357 Portland Street (Tax Map R-070, Lot 12-1 & 12-2)
August 20, 2020

Paper Birch Property, LLC requested a Site Plan expansion and a Conditional Use Application on May 29, 2020 for a Marijuana Caregiver Retail Store & An Adult Use Cultivation Facility & Adult Use Manufacturing Facility (commercial kitchen) at 357 Portland Street.

The applicant proposed to construct a 20,000 ft² Adult Use Cultivation Facility with a Phase II expansion of 5,200 ft² on lot 12-2. A detailed odor control plan has been submitted for the cultivation facility. There will be a maximum of 20 employees for the cultivation building and the parking area will have 22 spaces. The building will be sprinkled. A new septic system is proposed to the west of the building, a design will be submitted during final site plan review.

On lot 12-1, Mr. Venuti has proposed to construct a 2,140 ft² Marijuana Storefront. The new storefront will match the style of the existing building. 29 parking spaces are provided for the two stores which meets the Land Use Ordinance minimum of 23. A new DOT entrance permit is required. According to Mr. Aleva an expected total of 137 daily trips is expected with 22 during the peak hour.

5,458 ft² of wetland will be impacted and as a result a NRPA Tier 1 Wetlands Permit is required. A Class A Soil Survey Report has been included with the application. The Low Impact Design features on site include: roof dripline filters, a grassed under drained soil filter and a vegetated forest buffer.

Both Police & Fire Departments have been contacted. The applicant's correspondence with the Fire Department is included in the packet.

The applicant requested two waivers: Landscaping (9.8.2.I.1.b) & Off-Street Parking (7.8.5). and they were granted by vote of 4-0. The application was found complete on August 6th, 2020.

Findings of Fact

1. **Conformance with the Comprehensive Plan:** *All proposed conditional uses and site plans shall conform to the Comprehensive Plan of the Town of Berwick and with the provisions of all pertinent federal, state and local codes, ordinances, and regulations.*

The application conforms to the Comprehensive Plan because it is permitting an appropriate commercial use within the RC/I zone.

2. **Preserve and enhance the landscape:** *The landscape shall be preserved in its natural state insofar as practicable by minimizing tree removal, disturbance of soil, retaining existing vegetation during construction. After construction is complete, landscape shall be designed and planted that will define, soften or screen the appearance of off street parking areas from the right of way and abutting properties and/or structures in order to enhance the physical design of the building(s) or site, and to minimize the encroachment of the proposed use on the neighboring land uses.*

Site Plan Amendment - 357 Portland Road. Marijuana Caregiver Retail Store & An Adult Use Cultivation Facility & Adult Use Manufacturing Facility. Paper Birch Properties, LLC.

No change is proposed to the physical site since the previous amendments.

3. **Relationship of the proposed buildings to the environment:** *Proposed structures shall be related harmoniously to the terrain and to the existing buildings in the vicinity which have a visual relationship to the proposed buildings. Special attention shall be paid to the bulk, location and height of the building(s) and such natural features such as slope, soil type and drainage ways.*

The storefront will match the style of the existing storefront. The cultivation building is on Route 4 adjacent to existing industrial areas.

4. **Vehicular access:** *The proposed site layout shall provide for safe access and egress from public and private roads by providing adequate location, numbers and controls of access points including site distances, turning lanes, traffic signalization when required by existing and projected traffic flow on municipal road systems.*

The parking areas are accessed directly from the street and provide adequate sight distance onto the public way. The Maine DOT has provided a revised permit for the access opening to Portland Street.

5. **Parking and circulation:** *The layout and design of all vehicular and pedestrian circulation, including walkways, interior drives, and parking areas shall provide for safe general interior circulation, separation of pedestrian and vehicular traffic, service traffic, loading areas, and arrangements and use of parking areas.*

Parking as shown on the plan is adequate to allow for vehicles to circulate on site. Access will also accommodate the abutting parcel to the east through a common drive easement.

6. **Surface water drainage:** *Adequate provision shall be made for surface drainage so that removal of surface waters will not adversely affect neighboring properties, downstream conditions, soil erosion or the public storm drainage system. Whenever possible, on-site absorption of unpolluted run-off waters shall be utilized to permit groundwater recharge on the site.*

This standard has been met and complies

7. **Existing utilities:** *The development shall not impose an unreasonable burden on sewers, sanitary and storm drains, water lines or other public utilities.*

This standard is not applicable. The water will be services via onsite well and the sewer will be onsite septic system.

8. **Advertising features:** *The size, location, design, lighting and materials of all exterior signs and outdoor advertising structures or features shall not detract from the design of proposed buildings and structures and the surrounding properties.*

The Applicant must apply and receive a permit from the Town for any proposed new signs.

9. **Special features of the development:** *Exposed storage areas, exposed machinery installation, service areas, truck loading areas, utility buildings and similar structures shall have sufficient setback and screening to provide an audio/visual buffer to minimize their adverse impact on other land uses within the development area and surrounding properties.*

The applicant has received a letter from the Police Chief indicating that the less screening proposed is better for security purposes. The applicant has provided an extensive Odor control

plan which is made part of this approval and will be required to be adhered to throughout the life of the project.

10. **Exterior lighting:** *All exterior lighting shall be designed to minimize adverse impact on neighboring properties.*

All lighting on the building shall be cut-off types. See note 13 of the plan set.

11. **Emergency vehicle access:** *Provisions shall be made for providing and maintaining convenient and safe emergency vehicle access to all buildings and structures.*

Emergency vehicles may access the building from the parking area.

12. **Municipal services:** *The development will not have an unreasonable adverse impact on the municipal services including municipal road systems, fire department, police department, solid waste program, sewer treatment plant, school, open spaces, recreational programs and facilities, and other municipal service and facilities.*

The proposed uses will not have adverse impacts on municipal services.

13. **Will not result in water or air pollution:** *In making this determination, it shall at a minimum consider: The elevation of the land above sea level and its relationship to the floodplains, the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its attest on effluents; and the applicable state and local health and water resources regulations.*

This standard has been met as the Applicant will be disposing wastewater from the operation by placing the irrigation wastewater in 1,000 gallon holding tanks on site and loading pumper trucks to be taken to the Treatment plant for proper disposal. The dumpster will be emptied on a regular basis.

14. **Has sufficient water available for the reasonably foreseeable needs of the development** *(this is usually considered to be ten years approximately).*

This standard has been met. The use is not residential and the Applicant will be using a well.

15. **Will not cause an unreasonable burden on an existing water supply, if a municipal or community water supply is to be utilized.**

A Condition of Approval has been added to ensure an unreasonable burden will be caused by the operation.

16. **Will not cause soil erosion or reduction in the capacity of the land to hold water so that dangerous or unhealthy conditions may result.**

This standard has been met since the site has been designed to accommodate stormwater and the Maine Dep has reviewed and permitted this project.

17. **Will provide for adequate sewerage waste disposal.**

This standard has been met as a septic system is proposed.

18. **Will not have adverse effects on the scenic or natural beauty of the area, aesthetics, or rare and irreplaceable natural areas.**

This standard does not apply since the site is zoned for Industrial/Commercial uses.

19. The developer has adequate financial and technical capacity to meet the above stated standards.

This standard has been met and complies.

20. Whenever situated in whole or in part within 250 feet of any pond, lake or river, will not adversely affect the quality of such body of water or affect the shoreline of such body of water, based on the standards outlined in Section 9.8.I.1.j.

This standard does not apply because the site is not located near any type of water body.

21. Low Impact Design: *Each applicant is required to submit a statement to the Planning Board documenting proposed Low Impact Design (LID) for the site, which will help to reduce storm water volumes and help to enhance storm water quality. LID includes, but is not limited to, green roofs, rain gardens, tree wells, infiltration basins and permeable pavement.*

This standard has been met as several LID features are included as part of existing and proposed site plan.

Conditions

1. The applicant shall provide a copy of their State of Maine license.
2. A water sample shall be tested for priority pollutants and nutrients before any cultivation wastewater is discharged to a holding tank, and then tested annually thereafter. Results shall be provided to the Town and South Berwick Water District.
3. If an odor violation is determined by the Code Enforcement Officer, the applicant shall resolve the issue within five business days. The Code Enforcement Officer may revoke the Certificate of Occupancy if the odor issues are not resolved within five business days.

I, David Andreesen, certify that I am Chair of the Planning Board of the Town of Berwick, Maine, a Planning Board established pursuant to Maine State Statute (30 MRSA § 1917 and Title 30-A § 4401) and I further certify that this decision was approved by the Planning Board at its meeting of August 20, 2020

Findings of Fact _____

Application _____

David Andreesen, Chair, Berwick Planning Board