

Section 17. WASTEWATER DISPOSAL

17.1. OPERATIONS

The proposed Project will not require wastewater disposal for the operation of the turbines or electrical infrastructure. The Operations and Maintenance (O&M) building will be offsite on a property with existing water and septic. Based on surveys of the 4.8-acre O&M parcel at 191 US Hwy 1 in Columbia and the permitting design of the building, driveways, and parking areas it is unclear if the existing septic system, which supported a restaurant, will be sufficient as currently situated. Therefore, the Project has initiated a new septic system design to be compatible with the intended layout of the lot. Rodney Kelshaw of Flycatcher, a soil scientist and Licensed Site Evaluator, conducted field work at the site and completed form HHE-200, included as Exhibit 17-1, by way of application for a replacement system should further site evaluation conclude that the existing wastewater infrastructure is insufficient or incompatible with the intended development of the site.

17.2. CONSTRUCTION

Temporary toilet facilities will be used and serviced by a licensed wastewater transporter during the construction phase.

Washwater from concrete deliveries during construction of turbine foundations will be disposed of on the turbine pad or in disturbed upland areas.



EXHIBIT 17-1: OPERATIONS AND MAINTENANCE BUILDING SITE EVALUATION

MEMO

Date: February 26, 2021
To: Brett Hart (Sewall Company)
From: Rodney Kelshaw, LSE (Flycatcher LLC)
Subject: Apex Clean Energy, Inc. – Proposed Downeast Wind Energy Project Operations and Maintenance (O&M) Building Site Evaluation (Septic System Design) HHE 200 Application: Route 1 in Columbia, Maine

Hi Brett,

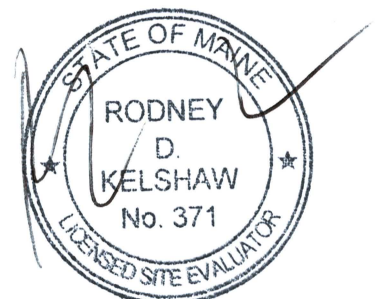
Attached is the HHE-200 form, application for a subsurface wastewater disposal (septic) system to service the proposed Downeast Wind Energy O&M building on Route 1 in Columbia, Maine. The site is an approximately 4.8-acre parcel that is currently developed with a restaurant (closed) and associated infrastructure that includes the building(s), septic system, well, paved driveway, and associated fill for grading and additional parking. My understanding is that the proposed plan is to demolish the existing building and construct a new O&M building. The building will be designed to be the office for up to 10 employees per day, does not include a shower facility and includes a kitchenette.

Due to the amount and extent of development, setbacks from site features, and minimum standards for replacement systems I was unable to locate an area to design a system that meets the requirements in native soil. The proposed system design in the attached HHE-200 form is a replacement system to install the proposed disposal field within the footprint of the existing disposal field. Since I was unable to personally perform soil explorations in this location under the existing disposal field I was able to review the test pit logs dug in 2001 by the LSE that designed the existing system; and that information is what is depicted on the attached HHE-200 form. The base elevation of the concrete chambers is designed to maintain an 18" separation between the limiting factor (watertable and firm layer) based on those pits and the bottom of the concrete chambers, which will require a minimum of 5" of fill above natural grade.

Thank you for the opportunity to work with you on this project and please contact me with questions.



Rodney Kelshaw (LSE, LSS, CPSS, CWB, PWS, CPESC)
Managing Partner/Senior Scientist
C: 207.944.6776



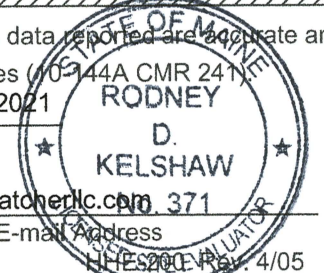
SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
 Division of Health Engineering, 10 SHS
 (207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION		>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<
City, Town, or Plantation	Columbia	The Subsurface Wastewater Disposal System <i>shall not</i> be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.
Street or Road	U.S. Route 1	
Subdivision, Lot #	N/A	
OWNER/APPLICANT INFORMATION		
Name (last, first, MI) <input type="checkbox"/> Owner		
Apex Clean Energy, Inc. <input checked="" type="checkbox"/> Applicant		
Mailing Address of Owner/Applicant		
c/o Robert Gee 366 U.S. Route 1 Columbia, ME 04623		
Daytime Tel. #	(207) 631-1502	Municipal Tax Map # <u>29120</u> Lot # <u>003-018-00A</u>
OWNER OR APPLICANT STATEMENT		CAUTION: INSPECTION REQUIRED
I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.		I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.
_____ Signature of Owner or Applicant		_____ Local Plumbing Inspector Signature
_____ Date		_____ (1st) date approved
_____ Date		_____ (2nd) date approved

PERMIT INFORMATION		
TYPE OF APPLICATION 1. First Time System 2. Replacement System <input checked="" type="checkbox"/> Type replaced: <u>Enviroseptic</u> Year installed: <u>2003</u> 3. Expanded System (a. Minor Expansion (b. Major Expansion 4. Experimental System 5. Seasonal Conversion	THIS APPLICATION REQUIRES <input checked="" type="checkbox"/> 1. No Rule Variance 2. First Time System Variance a. Local Plumbing Inspector Approval b. State & Local Plumbing Inspector Approval 3. Replacement System Variance a. Local Plumbing Inspector Approval b. State & Local Plumbing Inspector Approval 4. Minimum Lot Size Variance 5. Seasonal Conversion Permit	DISPOSAL SYSTEM COMPONENTS <input checked="" type="checkbox"/> 1. Complete Non-engineered System <input type="checkbox"/> 2. Primitive System (graywater & alt. toilet) <input type="checkbox"/> 3. Alternative Toilet, specify: _____ <input type="checkbox"/> 4. Non-engineered Treatment Tank (only) <input type="checkbox"/> 5. Holding Tank, _____ gallons <input type="checkbox"/> 6. Non-engineered Disposal Field (only) <input type="checkbox"/> 7. Separated Laundry System <input type="checkbox"/> 8. Complete Engineered System (2000 gpd or more) <input type="checkbox"/> 9. Engineered Treatment Tank (only) <input type="checkbox"/> 10. Engineered Disposal Field (only) <input type="checkbox"/> 11. Pre-treatment, specify: _____ <input type="checkbox"/> 12. Miscellaneous Components
SIZE OF PROPERTY 4.8 SQ. FT. / ACRES <input checked="" type="checkbox"/>	DISPOSAL SYSTEM TO SERVE <input type="checkbox"/> 1. Single Family Dwelling Unit, No. of Bedrooms: _____ <input type="checkbox"/> 2. Multiple Family Dwelling, No. of Units: _____ <input type="checkbox"/> 3. Other: <u>O&M Buidling</u> (specify) Current Use Seasonal <input checked="" type="checkbox"/> Year Round Undeveloped	TYPE OF WATER SUPPLY <input checked="" type="checkbox"/> 1. Drilled Well <input type="checkbox"/> 2. Dug Well <input type="checkbox"/> 3. Private <input type="checkbox"/> 4. Public <input type="checkbox"/> 5. Other
SHORELAND ZONING Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)			
TREATMENT TANK <input type="checkbox"/> 1. Concrete (a. Regular <input checked="" type="checkbox"/> (b. Low Profile 2. Plastic 3. Other: _____ CAPACITY: <u>1,000</u> GAL.	DISPOSAL FIELD TYPE & SIZE <input type="checkbox"/> 1. Stone Bed <input type="checkbox"/> 2. Stone Trench <input type="checkbox"/> 3. Proprietary Device concrete chamber a. cluster array (c. Linear chamber b. regular load (d. H-20 load <input checked="" type="checkbox"/> 4. Other: _____ SIZE: <u>900</u> sq. ft. (lin. ft.	GARBAGE DISPOSAL UNIT <input checked="" type="checkbox"/> 1. No <input type="checkbox"/> 2. Yes <input type="checkbox"/> 3. Maybe If Yes or Maybe, specify one below: a. multi-compartment tank b. _____ tanks in series c. increase in tank capacity d. Filter on Tank Outlet	DESIGN FLOW <u>180</u> gallons per day BASED ON: 1. Table 501.1 (dwelling unit(s)) 2. Table 501.2 (other facilities) SHOW CALCULATIONS for other facilities 10 employees/day (no shower) @ 12gdp w/ add. = 180gpd 3. Section 503.0 (meter readings) ATTACH WATER METER DATA LATITUDE AND LONGITUDE at center of disposal area Lat. <u>44</u> d <u>38</u> m <u>03.53</u> s Lon. <u>67</u> d <u>46</u> m <u>25.13</u> s if g.p.s, state margin of error: _____
SOIL DATA & DESIGN CLASS PROFILE <u>9</u> / <u>D</u> / _____ at Observation Hole # <u>see</u> Depth <u>13</u> " attached of Most Limiting Soil Factor	DISPOSAL FIELD SIZING 1. Small---2.0 sq. ft. / gpd 2. Medium---2.6 sq. ft. / gpd 3. Medium---Large 3.3 sq. ft. / gpd 4. Large---4.1 sq. ft. / gpd <input checked="" type="checkbox"/> 5. Extra Large---5.0 sq. ft. / gpd	EFFLUENT/EJECTOR PUMP <input type="checkbox"/> 1. Not Required <input type="checkbox"/> 2. May Be Required <input checked="" type="checkbox"/> 3. Required Specify only for engineered systems: DOSE: _____ gallons	

SITE EVALUATOR STATEMENT			
I certify that on <u>January 27, 2021</u> (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (003-144A CMR 24 N.S.)			
_____ Site Evaluator Signature	<u>371</u> SE #	<u>January 27, 2021</u> Date	
Rodney Kelshaw Site Evaluator Name Printed	(207) 944-6776 Telephone Number	rodney@flycatcherllc.com E-mail Address	_____ Date
Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.			

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Town, City, Plantation

Street, Road, Subdivision

Owner's Name

Columbia

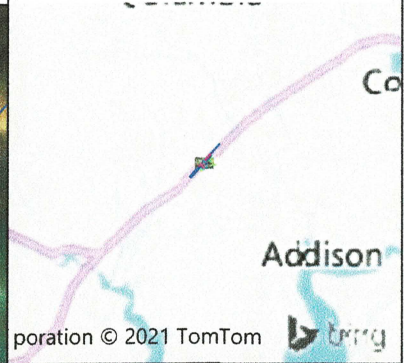
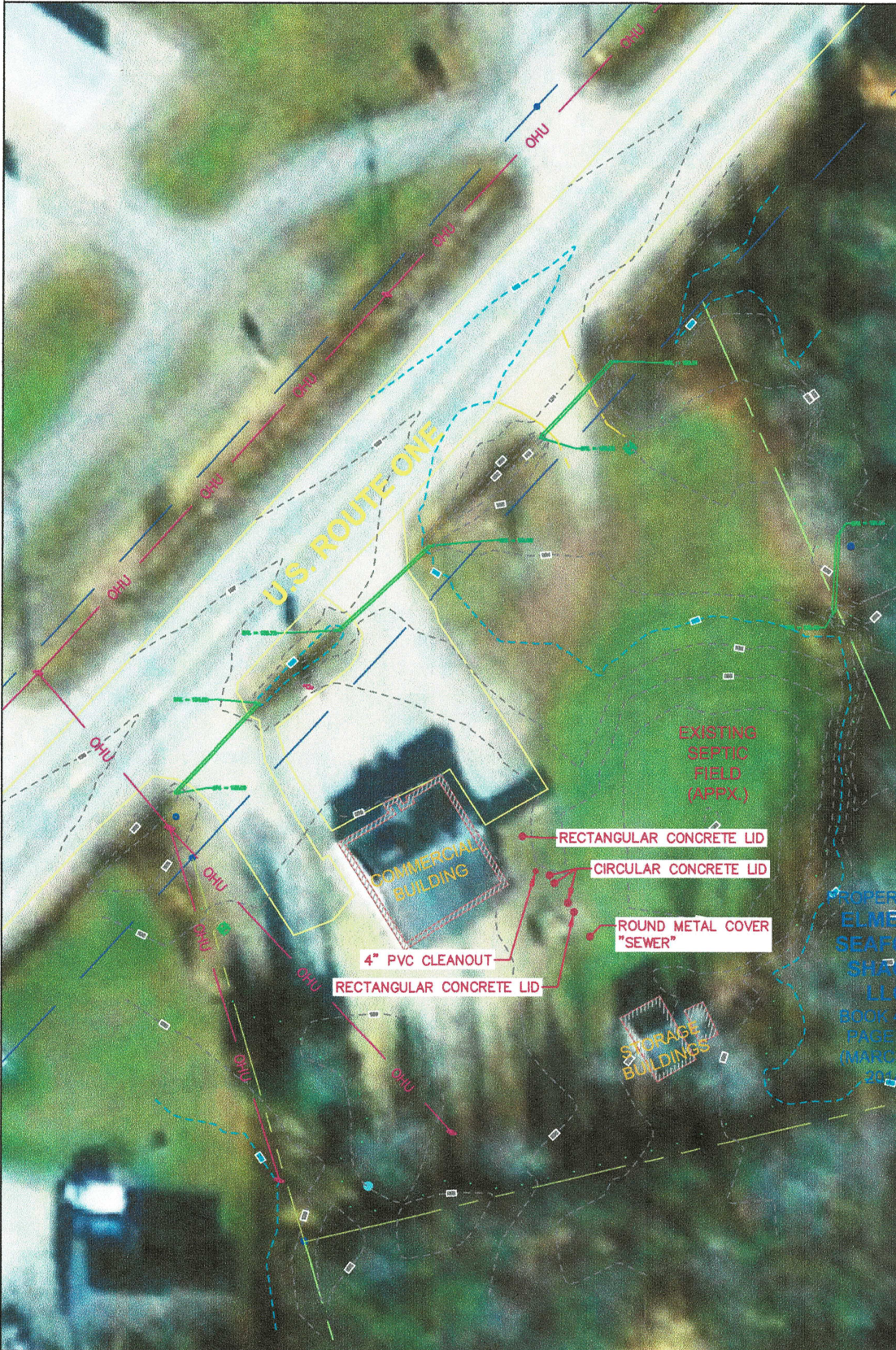
U.S. Route 1

Apex Clean Energy, Inc.

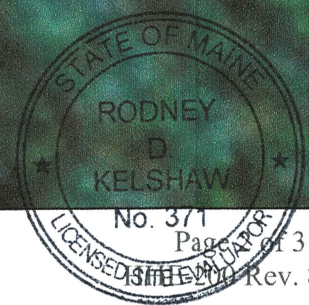
EXISTING CONDITIONS SITE PLAN

Scale 1" = 60 ft.

SITE LOCATION PLAN



PROPERTY OF
**ELMER'S
SEAFOOD
SHACK,
LLC**
BOOK 4041
PAGE 187
(MARCH 10,
2018)



[Signature]
Site Evaluator Signature

371
SE #

January 27, 2021
Date

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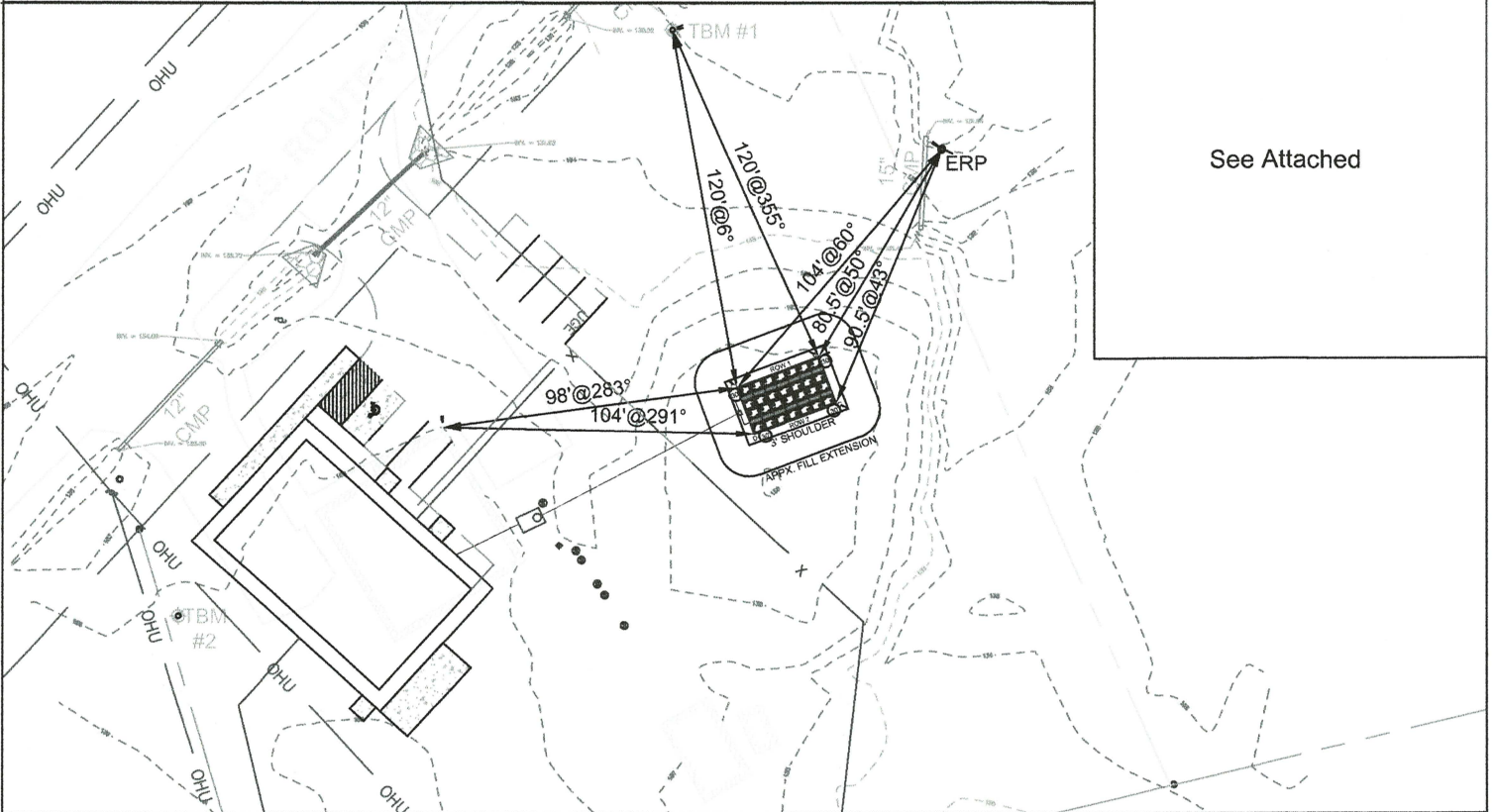
Apex Clean Energy, Inc.

SITE PLAN

Scale 1" = 100 ft. or as shown

SITE LOCATION PLAN

See Attached



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 & 2 Test Pit Boring
 0 " Depth of Organic Horizon Above Mineral Soil

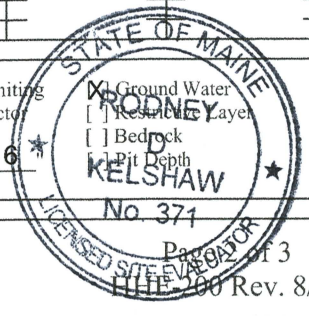
Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0	sandy fill	friable	brown	none observed
10				
20	silt to clay silt	somewhat firm	olive to light olive	observed
30				
40				
50				

Soil Classification	Slope	Limiting Factor	<input checked="" type="checkbox"/> Ground Water
<u>9</u> <u>D</u>	<u>0</u> %	<u>13-14"</u>	<input type="checkbox"/> Restrictive Layer
Profile Condition			<input type="checkbox"/> Bedrock
			<input type="checkbox"/> Pit Depth

Observation Hole 3, 4 & 5 Test Pit Boring
 0 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0	sandy fill	friable	brown	none observed
10				
20	loam			observed
30	silty loam	somewhat firm	olive brown	
40				
50				

Soil Classification	Slope	Limiting Factor	<input checked="" type="checkbox"/> Ground Water
<u>9</u> <u>C</u>	<u>2</u> %	<u>16"</u>	<input type="checkbox"/> Restrictive Layer
Profile Condition			<input type="checkbox"/> Bedrock
			<input type="checkbox"/> Pit Depth



[Signature]
 Site Evaluator Signature

371
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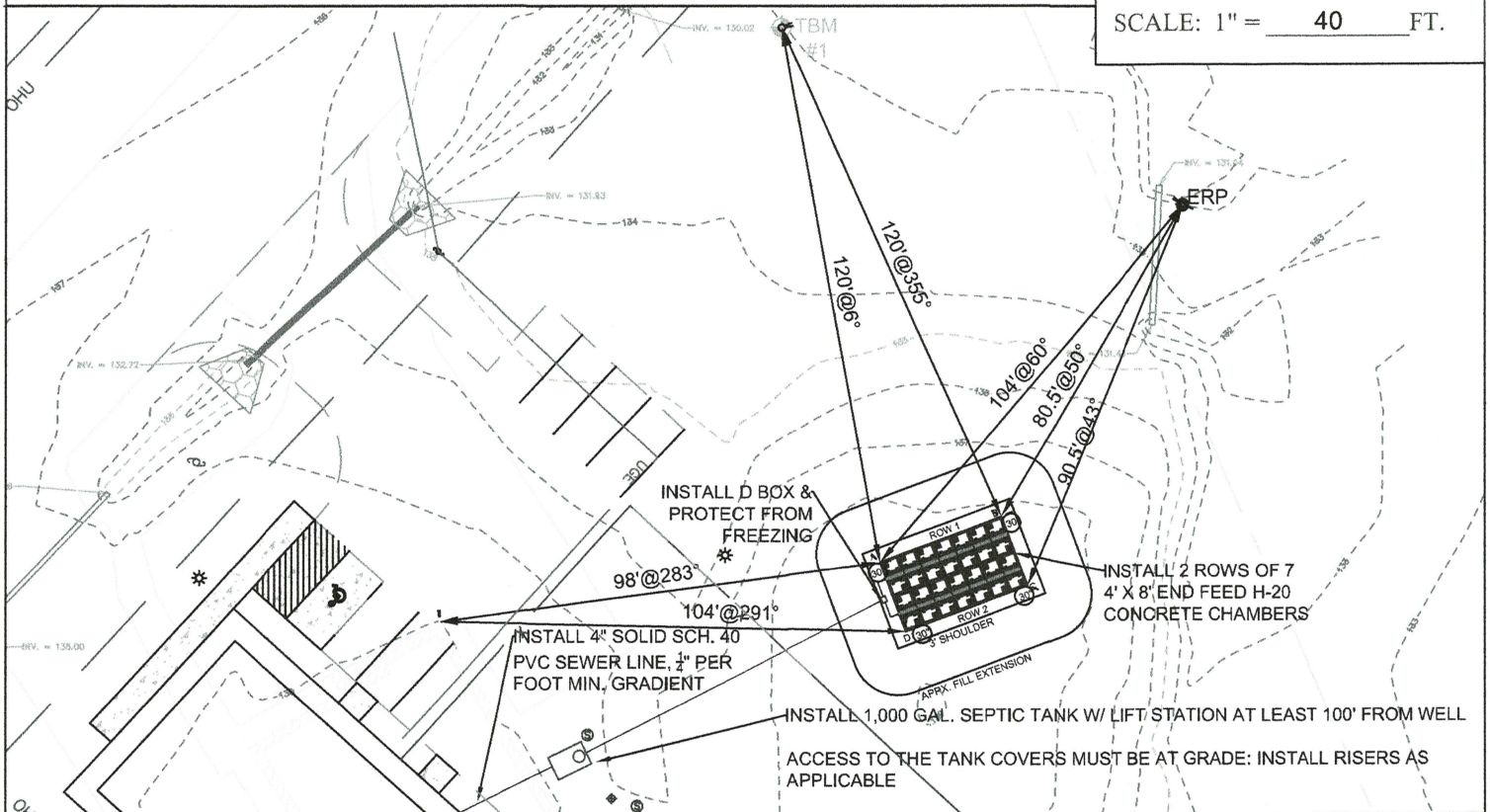
Columbia

U.S. Route 1

Apex Clean Energy, Inc.

SUBSURFACE WASTEWATER DISPOSAL PLAN

SCALE: 1" = 40 FT.



FILL REQUIREMENTS

CONSTRUCTION ELEVATIONS

ELEVATION REFERENCE POINT

Depth of Fill (Upslope) 29

Depth of Fill (Downslope) 29

Finished Grade Elevation -21.4" (98.2)

Top of Distribution Pipe or Proprietary Device -33.4" (97.2)

Bottom of Disposal Area -46.4" (96.1)

Location & Description: screw w/ blue flag 8.6' high on red maple

Reference Elevation: 0.00'

TMB #1 -7.49'

DISPOSAL AREA CROSS SECTION

Scale

Horizontal 1" = 5 ft.

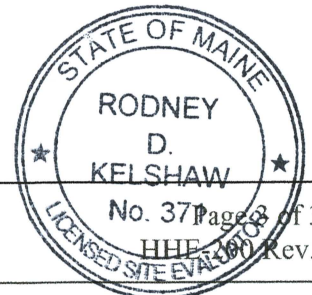
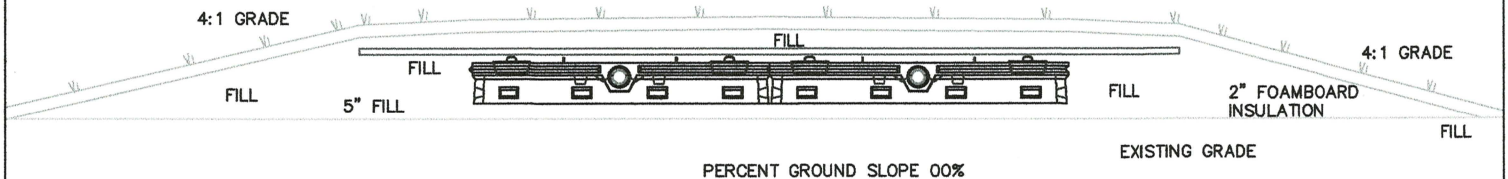
Vertical 1" = 5 ft.

FILL MATERIAL SPEC. BY VOLUME
 <5% CAN BE GREATER THAN 3" DIA.
 15-30% GRAVEL (2MM - 3" DIA.)
 4-8% PASSING A #200 SIEVE (ASTM) 0-2% CLAY

DENSE, HEALTHY GRASS COVER MUST BE ESTABLISHED AS SOON AS POSSIBLE (AND MAINTAINED) WHERE THE GRAVEL DRIVEWAY WILL NOT COVER

4" SCREENED LOAM REQUIRED, SEED & MULCH

EDGE OF 3' BERM



[Signature]
 Site Evaluator Signature

371
 SE #

January 27, 2021
 Date