

SOIL TEST PIT DATA

Perc. Test **Observed Groundwater**

Test Date: December 13, 2021 @ 9:10 am
 Weather: 33°-Sunny/Clear
 Test Pits: TP#1, TP#2, TP#3
 Testing: Eric Dickinson, RS - CIVILIZED SOLUTIONS
 Witness: Tom Ryder, PE - Ashland BOH Agent
 Rajit Gupta, RS - Ashland Director of Public Health

Test Date: October 19, 2022 @ 12:20 pm
 Weather: 52°-Sunny/Clear
 Test Pit: TP#4
 Testing: Eric Dickinson, RS - CIVILIZED SOLUTIONS
 Witness: Rajit Gupta, RS - Ashland Director of Public Health

Test Pit #1	Test Pit #2
EL. 111.8 2'-0"(111.8) 8"(111.1) 18"(110.3) 48"(107.8) 100"(103.5)	EL. 109.0 2'-0"(109.0) 6"(108.5) 24"(107.0) 48"(105.0) 100"(100.7)
Class II SCS Class Sandy Loam	Class II SCS Class Sandy Loam

Test Pit #3	Test Pit #4
EL. 110.2 2'-0"(110.2) 6"(109.7) 18"(108.7) 24"(108.2) 72"(104.2)	EL. 107.0 2'-0"(107.0) 8"(106.3) 16"(105.7) 20"(105.3) 120"(97.0)
Class II SCS Class Sandy Loam	Class II SCS Class Sandy Loam

PERCOLATION TEST DATA

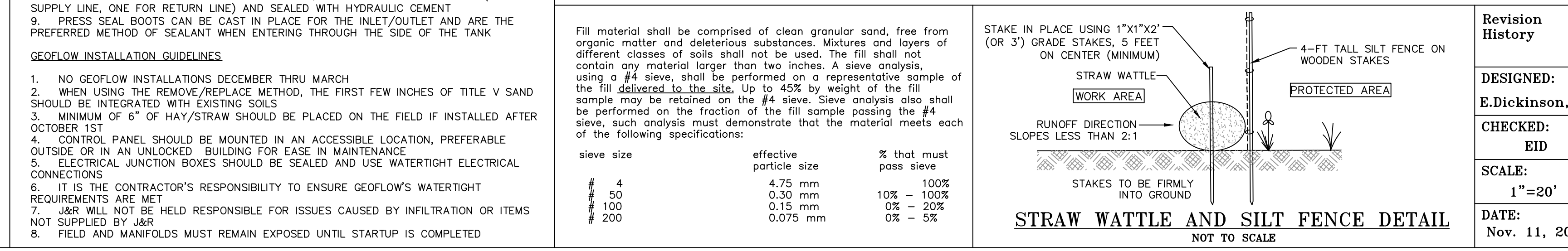
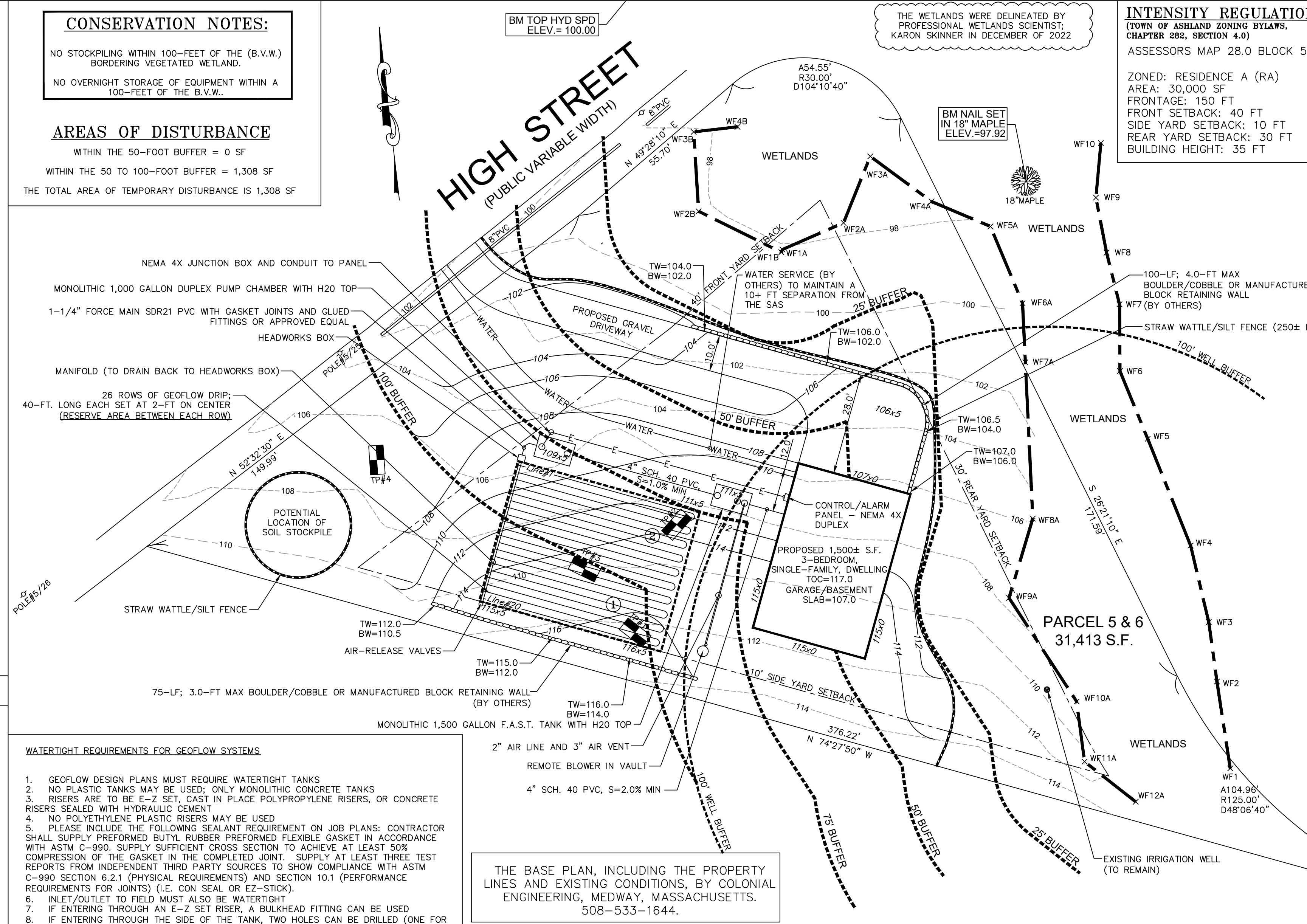
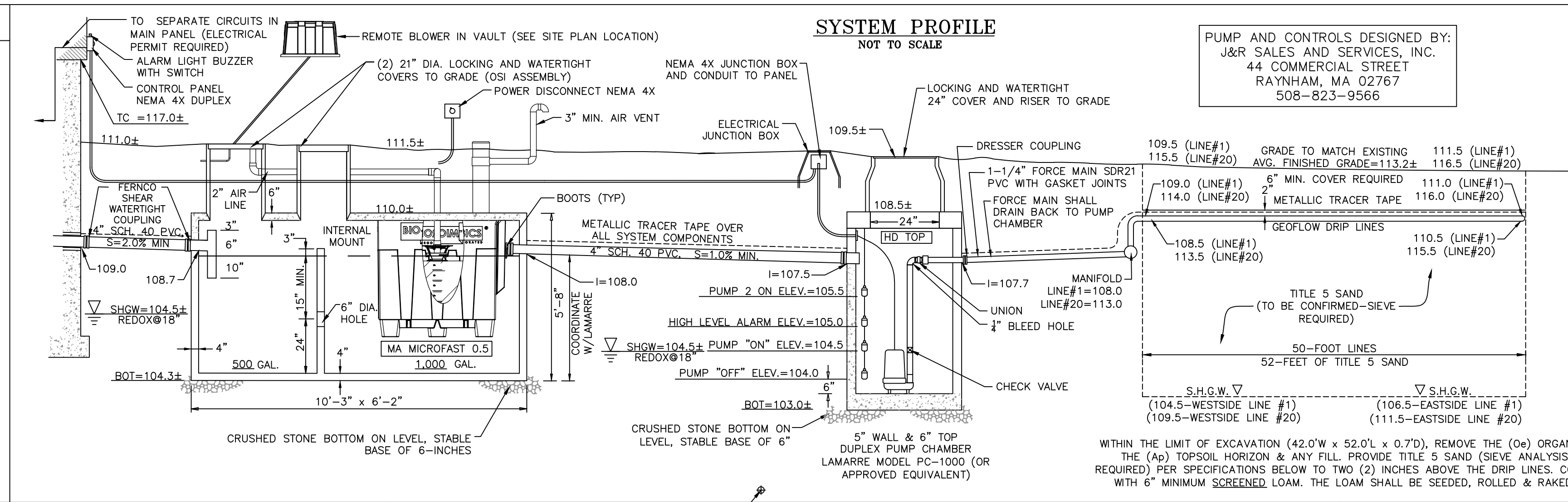
Percolation testing could not be performed during the original test date of December 13, 2021 due to groundwater intrusion. Percolation testing was performed on August 10, 2022.

Test Date: August 10, 2022 @ 8:30 am
 Weather: 70°-Cloudy/Overcast
 Test Pit: TP#1 & TP#2
 Testing: Eric Dickinson, RS - CIVILIZED SOLUTIONS
 Witness: Rajit Gupta, RS - Ashland Director of Public Health

Hole	P-1 (TP#1) (C2-Layer)	P-2 (TP#1) (Bw-Layer)
Depth (in.)	40"-58"	18"-36"
Time @ 12"	9:43 am	9:46 am
Time @ 6"	9:59 am	10:04 am
Time @ 9"	10:35 am	10:34 am
Time @ 6"	12:24 pm	11:02 am
Rate (Min/In)	40 mpi	10 mpi

I CERTIFY THAT I AM A LICENSED SOIL EVALUATOR (SE #13621), HAVING PASSED THE TRAINING AND TESTING REQUIREMENTS IN APRIL 2013.

ERIC I. DICKINSON DATE: _____



Septic Tank Notes (HD Top):

- Septic Tank to be Lamarre 1500 FAST with HD top.
- Septic Tank to withstand H-20 loading.
- All pipe connections and concrete construction to be watertight. C.I.P. boots
- Inlet and Outlet tees to be SCH 40 PVC. Tees to be centered under manhole cover.

Pump Chamber Notes (HD Top):

- Pump Chamber shall be steel reinforced concrete.
- Pump Chamber to withstand H-20 loading.
- All pipe connections and concrete construction to be watertight. C.I.P. boots
- Inlet and Outlet tees to be SCH 40 PVC. Tees to be centered under manhole cover.
- Recommended manufacturer-Lamarre or approved equivalent.

Buoyancy Check (HD Tops required on both):

Septic Tank (HD TOP Required):
 Wgt. of Tank+Soil= 12,000+(10.25x6.15)(1.5)(100)=21,456#
 Wgt. of Water Displaced= (10.25x6.15)(0.2)(62.4)=787#(OK)

Pump Chamber (HD TOP Required):
 Wgt. of Tank+Soil= 11,000+(8.6x5.0)(1.0)(100)=15,300#
 Wgt. of Water Displaced= (8.6x5.0)(1.5)(62.4)=4,025#(OK)

General Notes:

- This plan is for the construction of the sewage disposal facility ONLY.
- All pipes shall be SCH 40 PVC or equivalent, unless otherwise noted.
- Contractor shall call for inspections and approvals from the Board of Health and the Engineer after:
 - excavation
 - installation of system components
 - backfilling and final grading
- Engineer shall certify installation and final grades on "As-built" plan. Contractor shall certify that installation conforms to approved As-built plan.
- Prior to final backfill inspection, the contractor shall submit to B.O.H. a sketch with dimensions to system components from building corners and depth to access covers.
- Contractor shall keep vehicles and materials off of the S.A.S. at all times.
- Fill shall not be placed during rain or snow.
- Excavation to be dry and scarified. Dewatering is required if fill is to be placed below groundwater.
- No existing or proposed wells are within 200' of S.A.S., except as shown.
- There are no known public wells or surface water supplies within 400 feet; private wells within 200 feet; inland banks or wetlands within 150 feet; no surface or subsurface drains of any kind except as shown, and no foundation drains. The work area is within the regulatory floodway and the 100-year floodplain.
- Area is Nitrogen Sensitive.
- All system components shall be marked with magnetic marking tape.

Construction Notes:

- Within limit of excavation remove the (0e) Organics, (Ap) topsoil, and other impervious material.
- All construction materials and methods shall conform to D.E.P., Title 5 and the local Board of Health Regulations.
- Contractor shall be responsible for locating any and all underground utilities within the limits of construction. This includes securing and paying for the services of the local utility and private companies to mark all underground utilities on the property. The Engineer does not guarantee that ALL utilities and subsurface structures are shown.
- Sand shall be stockpiled at edge and pushed/cast inward over excavated area.
- Contractor shall install and maintain flagging around the system until the Certificate of Compliance is issued.

DEED RESTRICTION

DEED RECORDING - THE PROPOSED SYSTEM HAS BEEN SIZED TO ACCOMMODATE A GARBAGE GRINDER. HOWEVER, IT HAS BEEN SUGGESTED THAT THE USE OF GARBAGE GRINDER CAN HARM THE SYSTEM. THEREFORE, A DEED RESTRICTION PROHIBITING THE USE OF A GARBAGE GRINDER IS REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE.

SCHEDULE OF INVERT ELEVATIONS:

4" Foundation (Proposed)	109.0
4" F.A.S.T. Tank (IN)	108.7
4" F.A.S.T. Tank (OUT)	108.0
4" Pump Chamber (IN)	107.5
1-1/4" Pump Chamber (OUT)	107.7
5/8" Leaching Pipe (IN)	108.5
5/8" Leaching Pipe (OUT)	110.5
Elev. at Bottom of Excavation	6" B.G.
Observed Groundwater Elev.	36" B.G.
High Groundwater Elev.	18" B.G.
Determination Method	Soil Morphology
B.O.H. Correction Factor	See Note

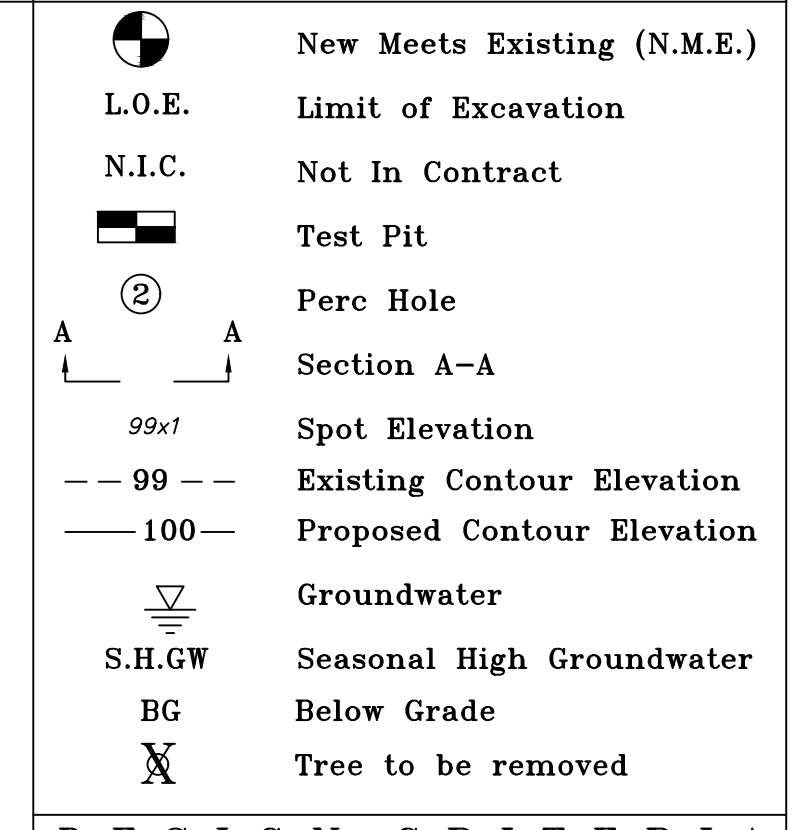
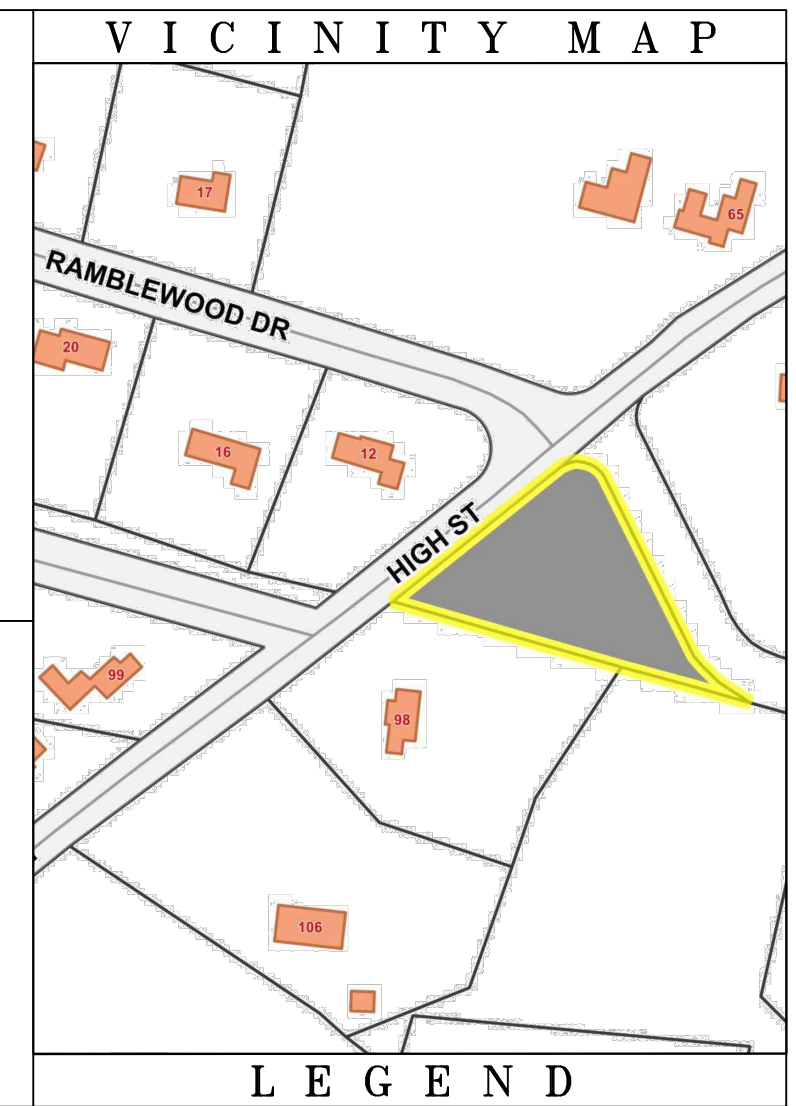
SEPTIC SYSTEM CONSTRUCTION

Lot 0 High Street
Ashland, Massachusetts

OWNER(S): Charna Daly 54 High Street Ashland, MA 01721	ASSESSOR(S): MAP 13.0 BLOCK 160.0 SHEET 1 OF 2
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Revision History

DESIGNED: E. Dickinson, RS	PREPARED BY: CIVILIZED SOLUTIONS 1102 Highland Street Holliston, MA 01746 P: 508.429.7192
CHECKED: EID	
SCALE: 1"=20'	
DATE: Nov. 11, 2022	



DESIGN CRITERIA

DESIGN FLOW: Single-Family Residence
 Proposed 3-bedrooms
 3 Bedrooms @ 110 GPD/Br = 330 GPD
 **GARBAGE GRINDER IS NOT PERMITTED

SEPTIC TANK:
 Required 330 x 3 = 990 Gal
 Provided: 1,500 Gal
 (Use a 2-Compartment, F.A.S.T. Tank)

LEACHING FACILITY:
 Design Perc Rate 40 Min./Inch
 Soil Class III
 Loading Rate 0.25 Gal/Day/SF
 Assume: Geoflow Drip @ 2 SF/LF

REQUIRED:
 330 GPD = 1,320 SF
 0.25 GPD/SF = 1,320 SF
 (includes 50% increase for garbage grinder)
 1,320 SF x 150% = 1,980 SF (495 GPD)

PROVIDED: 26 ROWS/40 FEET LONG EACH
 26 x 40.0' x 2' = 2,040 SF (510 GPD)(OK)

SCHEDULE OF INVERT ELEVATIONS:

4" Foundation (Proposed)	109.0
4" F.A.S.T. Tank (IN)	108.7
4" F.A.S.T. Tank (OUT)	108.0
4" Pump Chamber (IN)	107.5
1-1/4" Pump Chamber (OUT)	107.7
5/8" Leaching Pipe (IN)	108.5
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