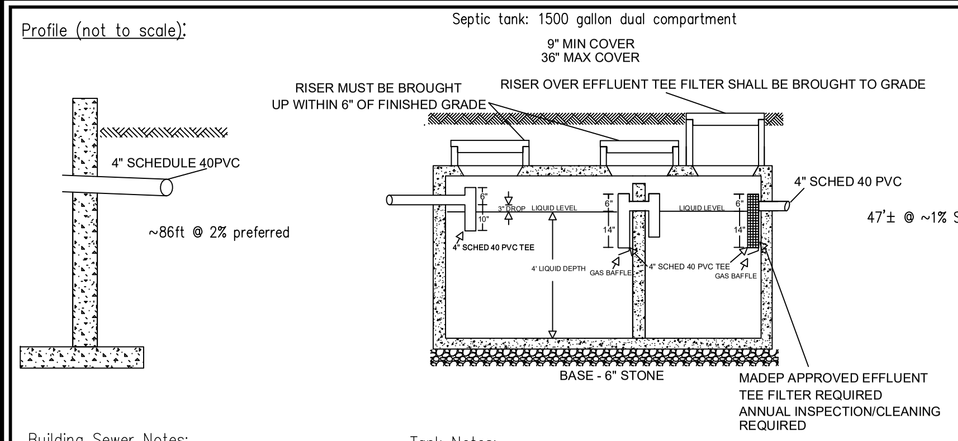
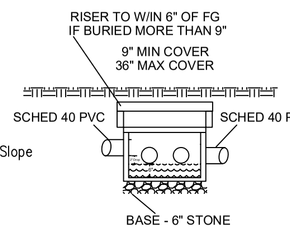
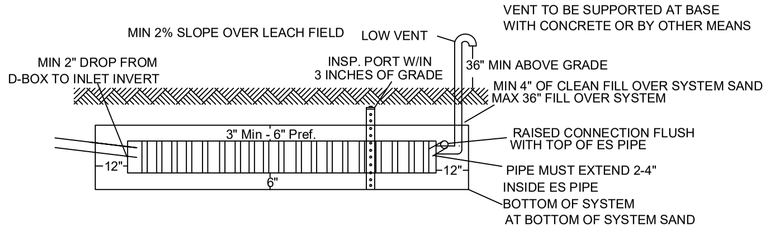
Profile (not to scale):



Septic tank: 1500 gallon dual compartment





Building Sewer Notes:
1. Where portions of the existing building sewer are to remain, building sewer shall be inspected for slope, bellies, turns and anything which may prevent it from functioning as required by Title 5. Existing building sewer to remain must be of adequate materials per Title 5.

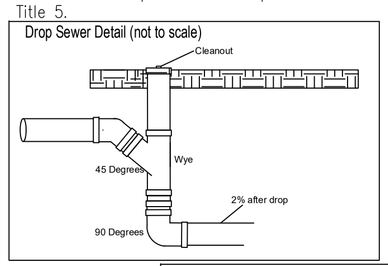
Tank Notes:
1. Manholes shall be minimum 24" diameter, medium duty or cast iron frame and cover, and any manholes brought to finished grade shall be secured to prevent unauthorized access.
2. Inlet and outlet tees to rectangular tanks shall be set in the end walls or into a side wall within 12 inches of the end wall.

Distribution (Dbox) Box Notes:
1. Dbox must have a water tight cover.

Leach Field Notes:
1. Fill shall be free of clay, tailings or stones larger than 6"
2. Trees should be removed if the roots could reach the leach field, or an impervious barrier should be placed in between field and tree.

Legend
- Tree
- Tree/Shurbline
- Stone Wall
- Deep Test Hole
- Perc Hole

Drop Sewer Detail (not to scale)



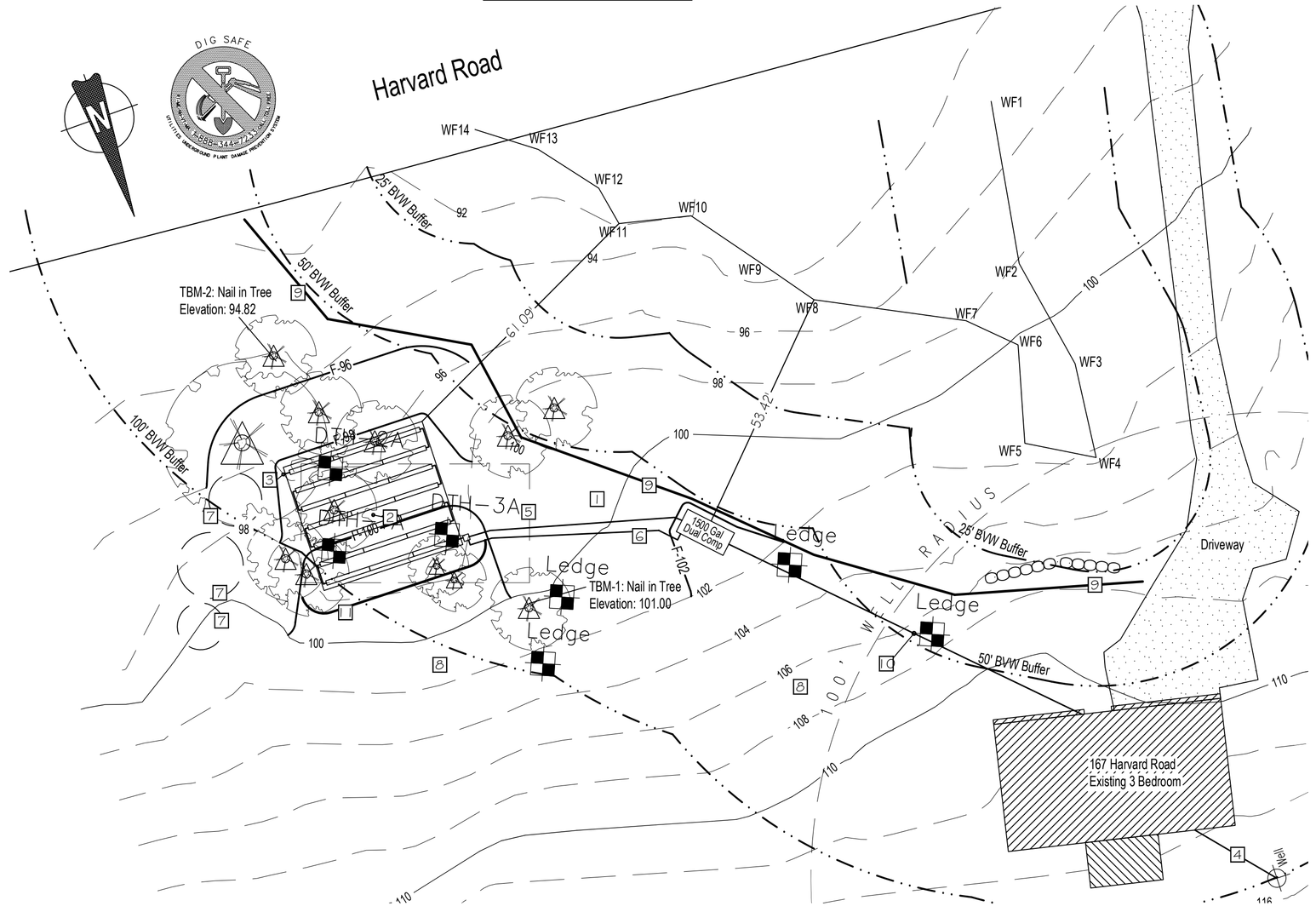
Plan View Notes
1. Approx. existing septic tank and leach field (unknown size) *Existing system to be abandoned per 310 CMR 15.354.
2. Inspection port
3. Low vent - 3' high
4. Approx. water line - verify upon const.
5. Extent of conventional trench proof #188
6. Bypass vent
7. Boulders/ledge
A. Consistent ledge outcrops uphill
B. Erosion control/limit of work
C. Drop sewer/cleanout - see detail
D. Impervious 40 mil poly barrier uphill of field. Top elevation: 100.00 Bottom elevation: 94.00

Schedule of Elevations		
Elevation	Proposed	As-Built
Invert @ Building:	~108 (existing below foundation)	
Tank Inlet:	100.65	
Tank Outlet:	100.44	
D-Box Inlet:	99.90	
D-Box Outlet:	99.73	

Proposed Presby Elevations

	4" Inlet	Presby Invert	Bottom Sys Sand	Min FG
Line 1	99.56	98.98	98.48	100.56
Line 2	99.23	98.65	98.15	100.23
Line 3	98.9	98.32	97.82	99.9
Line 4	98.57	97.99	97.49	99.57
Line 5	98.24	97.66	97.16	99.24
Line 6	97.91	97.33	96.83	98.91
Line 7	97.58	97	96.5	98.58

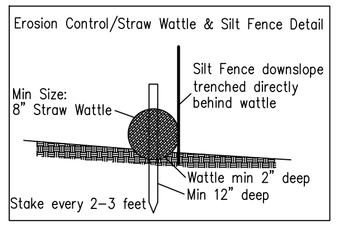
Slope 7.8% = 3' System Sand Extension NOT Required

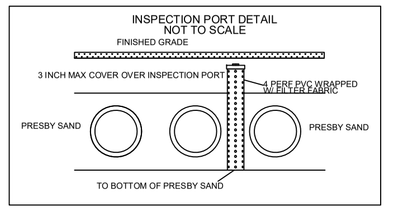


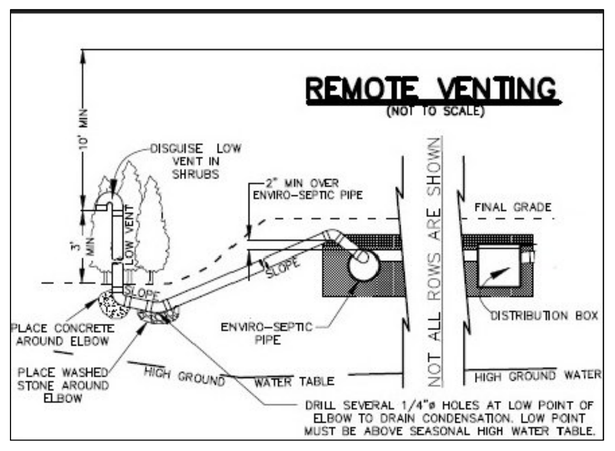
I HEREBY CERTIFY THAT THIS PLAN MEETS ALL REQUIREMENTS OF 310 CMR 15.000, TITLE 5 OF THE STATE ENVIRONMENTAL CODE AND ALL APPLICABLE REGULATIONS OF THE TOWN OF Stow BOARD OF HEALTH.

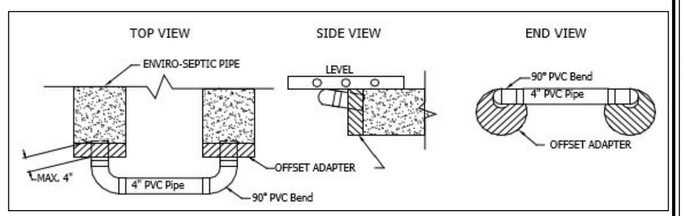
1. System sand – 35% or less of the total sand may be gravel. 40% to 90% of the total sand is to be coarse to very coarse sand. No gravel shall exceed ¾" in diameter. No gravel shall pass a #10 sieve. No coarse sand shall pass a #35 sieve. No more than 2% of the total sand may pass through a #200 sieve. ASTM C–33 (Concrete sand) is an alternate acceptable materials for use as system sand.
2. Title 5 surrounding sand – Shall meet requirements of 310 CMR 15.255(3). Sand shall be comprised of clean granular sand, free from organic matter and deleterious substances and shall not contain Remediation Waste. Fill shall not contain any material larger than 2 inches. Up to 45% by weight of fill material may be retained on the #4 sieve. Sieve analysis must comply with the following chart:

SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
# 4	4.75 mm	100%
# 50	0.30 mm	10% - 100%
#100	0.15 mm	0% - 20%
#200	0.075 mm	0% - 5%



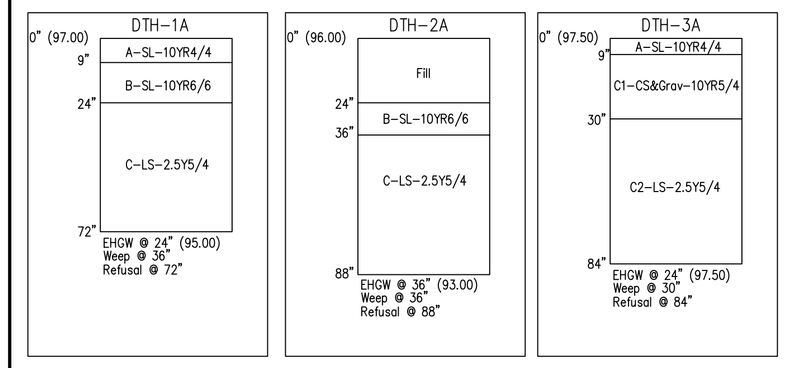






Locus No Scale

Soil Data



Date of soil evaluation: 10/6/2023
Soil Evaluator: Evan Carloni (#13784)
Approving Authority Witness: Kalene Gendron

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation are accurate and in accordance with 310 CMR 15.100 through 15.107.

Percolation Tests	
Depth	
Rate	

Soil to wet to run percolation test

Soil sample taken to lab for sieve analysis.

Local Variances Requested	
Reg	Request
Stow BOH Reg.	Reduction from 100' setback from SAS to BVW to ~61' & reduction from 100' setback from septic tank to BVW to ~53'.
Stow BOH Reg. Siting & Design Requirements	Waiver from finished grading over a leaching field not to be modified more than mean level of two feet average. Three feet average proposed.
T5 - Local Upgrade Approval (LUA) Requested	
Reg	Request
310 CMR 15.405 (1) (i)	Approval of use of a sieve analysis.
T5 - Variances Requested	
Reg	Request

I/A Info:
The Presby Enviro–Septic is proposed under remedial use approval. The remedial use approval allows for up to a 1 foot reduction to the estimated high groundwater table from the bottom of the system. This design utilizes an approximate 3 foot reduction from the bed bottom to the estimated high groundwater. This design conforms to the approval and company design guidance.
Transmittal number: 21–CLM–000073–APP
Date of Issuance: Revised September 26, 2013, Modified October 30, 2019, Modified March 15, 2022

System must be installed and maintained as per the "Standard Conditions for Alternative Soil Absorption Systems with General Use Certification and/or Remedial Use" dated "Revised: March 5, 2018".

Construction Notes:
1. Contractor shall notify Dig Safe (888) 344–7233 at least 72 hours prior to construction or abandonment of existing system. It shall be the responsibility of the contractor to locate any utilities not delineated by Dig Safe.
2. Prior to the commencement of construction, the System Installer must certify in writing to the Designer, the LAA, and the System Owner that (s)he is a locally approved System Installer and, if required by the Company, is certified by or has received appropriate training by the Company.
3. All disturbed surfaces shall be restored with 4" of loam and seed.
4. All connections shall be glued.
5. Contractor shall notify designer and Approving Authority when conditions are found during construction which would alter the approved septic design plan.
6. Where portions of the existing building sewer are to remain, building sewer shall be inspected for slope, bellies, turns and anything which may prevent it from functioning as required by Title 5.
7. All components of this system shall be marked with magnetic tape or comparable in order to locate components once buried.

Design Criteria:
SAS Sizing Design Data:
Proposed 3 bedroom home @ 110 GPD/bedrom = 330 GPD
Perc Rate = Sieve – SL
LTAR Title 5: 0.33 gpd/sqft
Conventional Size Required: 330 GPD/0.33 GPD/sqft = 1,000 sqft x 1.5 Stow reg = 1,500 sqft
Conventional Shown: 5 Trenches @ 50' L x 2' W x 2' D = 1,500 sqft

Presby ES min size: 600 sqft x 1.5 Stow reg = 900 sqft
Linear Feet of Pipe Req'd: 210'
Presby Provided: 4.25 (51") OC Spacing – 7 lines @ 30 ft (210 lf) – 32 ft x 28.50 ft = 912 sqft

Tank Calcs:
Required: 440 GPD x 2 = 880 Gallons
Provided: 1500 Gallon Dual Compartment Tank

Plan Information:
1. This plan was created for the purposes of showing a proposed sewage disposal system only and is NOT intended to be used for any other use. If legal boundaries are in question, a survey should be performed by a Professional Land Surveyor.
2. This plan is for the design and construction of the sewage disposal facility only.
3. The underground utilities denoted on this plan are based off of markings from proper entities and available records. The Designer is not responsible for any subsurface structures not accurately depicted on this plan.
4. Water softener/roof runoff/sump pump discharge shall not be tied into proposed septic system.
5. This plan may not be revised without the consent of the Designer and without Local Board of Health approval.
6. All known wells within 150 feet of this system have been identified.
7. System shall be pumped per 15.351.
8. The designers only warranty is that the system was designed in accordance with Title 5 and the local BOH regulations.

Lot Information:
Water Source: Private well
Garbage Grinder: This septic system has NOT been designed for a garbage grinder. Any existing grinders shall be removed.
Nitrogen Sensitive Areas: Zone II – no ; IWPA – no
Flood Plain: This property is not located in a flood plain.

Sewage Disposal System Plan

167 Harvard Road
Stow, MA 01775
Existing 3 bedroom

Innovative Septic Design, Inc.
51 Carter Street,Berlin, MA 01503
Phone: (978) 621-8278
Email: isdinc15@gmail.com

COMMONWEALTH OF MASSACHUSETTS
EVAN J CARLONI
No.1400
REGISTERED SANITARIAN

Assessors Map: R-4 Lot: 45 Lot Area: 3.08 acres SAS Plan #: 10062301 Plan View Scale: 1" = 20'

Note: This plan and certification are for the design and construction of the sewage disposal system ONLY. This plan shall not be used for determination of property lines, locating of structures or any other use that would require a Professional Land Surveyors certification.

Updates	
Date	Update
2/2/2024	Proposed Plan
3/12/2024	NABH Comments
3/14/2024	Add DTH & barrier