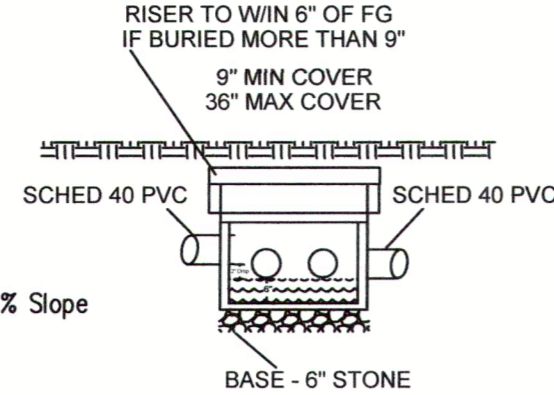
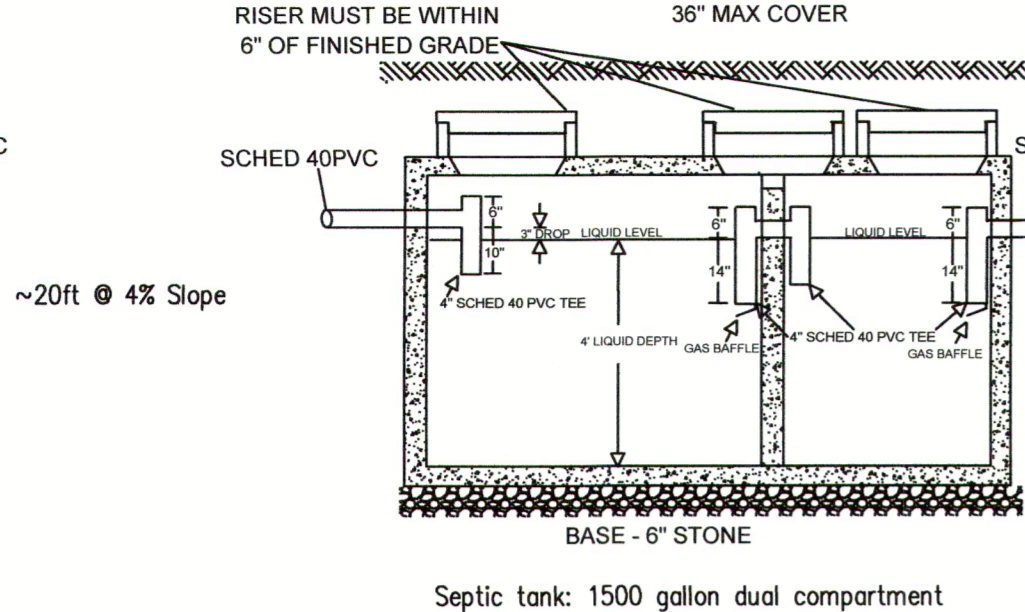
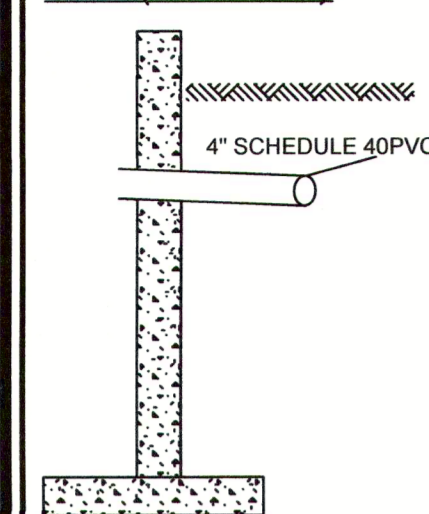
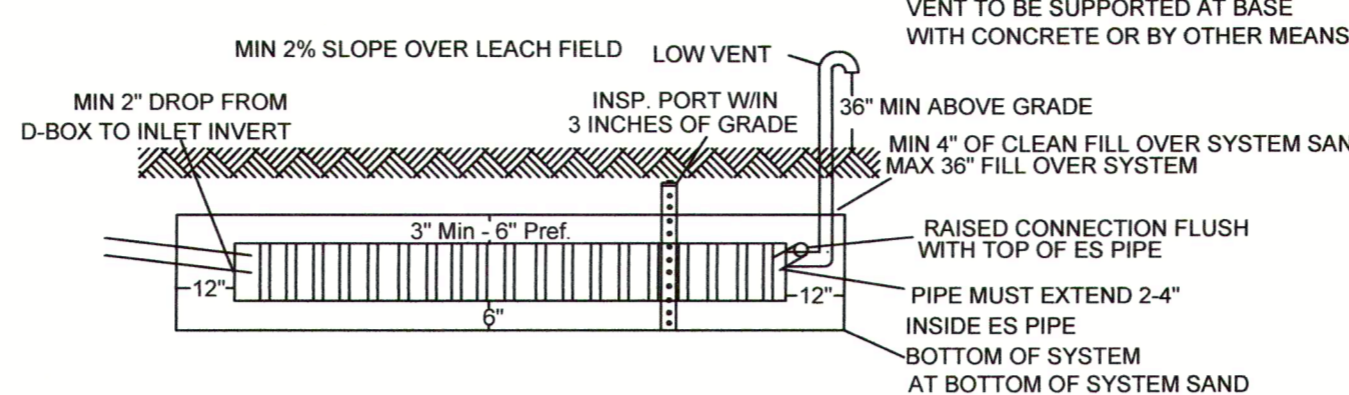


Profile (not to scale):



Distribution (Dbox) Box Notes:
1. Dbox must have a water tight cover.
2. Distribution box shall have a minimum sump of six inches as measured below the outlet invert elevation.



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.

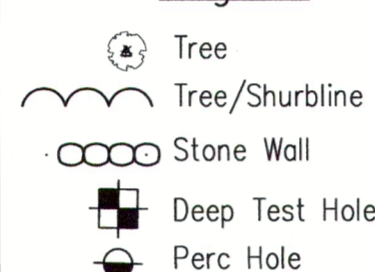
Building Sewer Notes:

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.

Legend

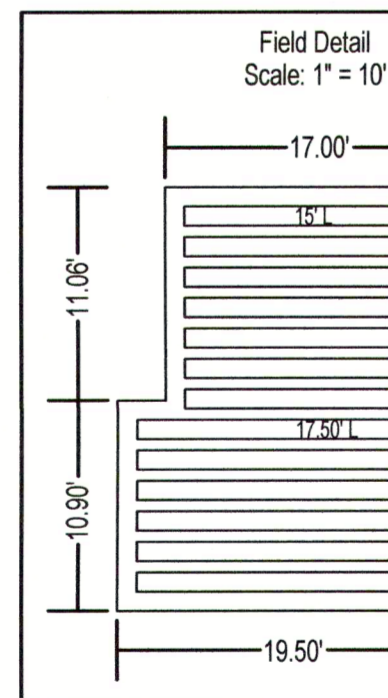


Plan View Notes

- Approx. existing tank and SAS
- *Existing systems to be abandoned per 310 CMR 15.354.
- Inspection ports
- Low vent - 3' high
- *Remote venting allowed
- Approx. pressure water line
- Extent of conventional SAS
- Impervious 40 mil poly barrier
- Top elevation: 268.90
- Bottom elevation: 1' into naturally occurring soil
- Swale or comparable to ensure runoff stays on property
- Erosion control/limit of work
- See detail



Schedule of Elevations		
Elevation	Proposed	As-Built
Invert @ Building:	-273	
Tank Inlet:	272.17	
Tank Outlet:	271.92	
D-Box Inlet:	270.32	
D-Box Outlet:	270.15	
Sched 40 PVC into Presby:	269.98	
Presby Tube Invert:	269.40	
Bottom of System Sand (breakout):	268.90	
Minimum Finished Grade over SAS:	270.98	



13 Lines - Length Varies - 1.58 OC Spacing

Serial Section 1:
7 Lines @ 15' L = 105 LF

Serial Section 2:
6 Lines @ 17.50' L = 105 LF

Total LF: 105 LF + 105 LF = 210 LF

Area:
17.00' x 11.00' = 188.02 sqft
19.50' x 10.90' = 212.55 sqft
Total sqft: 188.02 sqft + 212.55 sqft = 400.57 sqft

Design Criteria

SAS Sizing Design Data:

Existing 3 bedroom home @ 110 GPD/bedroom = 330 GPD
Perc Rate = <2 Minutes per inch
LTAR Title 5: 0.74 gpd/sqft
Conventional Size Required: 330 GPD/0.74 GPD/sqft = 446 sqft
Conventional Proof Shown: 40' L x 15' W leach bed = 600 sqft

LTAR Presby ES min size: 400 sqft
Linear Feet of Pipe Req'd: 210'
Presby Provided: 400 sqft & 210 LF of Presby Pipe - See field detail

Tank Calcs:

Required: 330 GPD x 2 = 660 Gallons
Provided: 1500 Gallon Dual Compartment

Plan Information:

- This plan was created for the purposes of showing a proposed sewage disposal system and is NOT intended to be used for the reproduction of property lines. If property lines are in question, a survey should be performed by a Professional Land Surveyor.
- This plan is for the design and construction of the sewage disposal facility only.
- 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.
- Water softener/roof runoff/sump pump discharge shall not be tied into proposed septic system.
- This plan may not be revised without the consent of the Designer and without Local Board of Health approval.
- All known wells within 150 feet of this system have been identified.
- System shall be pumped per 15.351.
- 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 garbage grinders must be removed.
Nitrogen Sensitive Areas: Zone II - no ; I/WPA - no
Flood Plain - Yes

I/A Info:

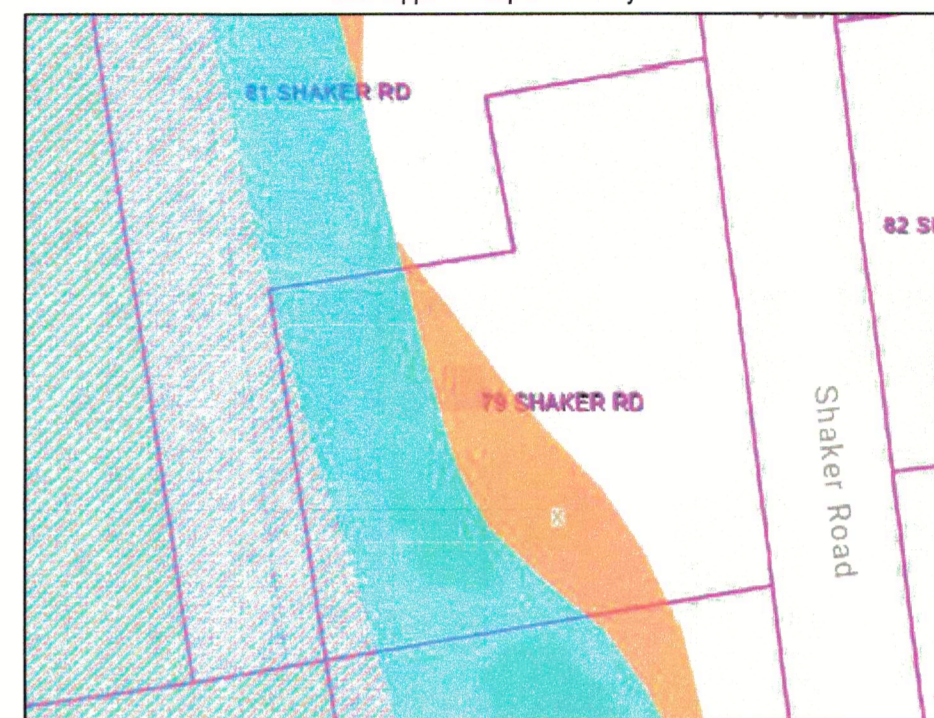
The Presby Enviro-Septic is proposed under remedial use approval. The remedial use approval allows for up to a 2 foot reduction to the estimated high groundwater table from the bottom of the system. This design utilizes an approximate 2 foot reduction from the bed bottom to the estimated high groundwater. 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".

Locus No Scale



MassMapper Floodplain Overlay



Soil Data

DTH-1		DTH-2		DTH-3	
0" (269.00)	A-SL-10YR3/2	0" (268.50)	A-SL-10YR3/2	0" (269.70)	A-SL-10YR3/2
8"	B-LS-10YR5/6	9"	B-LS-10YR5/6	8"	B-LS-10YR5/6
20"		20"		20"	
			C-Med Sand 2.5Y5/4		C1-Med Sand 2.5Y5/4
				68"	C2-LS-2.5Y6/4
				84"	EHGW @ 46" (265.87) Weep/Stand @ N/A
					EHGW @ 36" (265.50) Weep/Stand @ N/A
					EHGW @ 44" (265.33) Weep/Stand @ 50"

Date of soil evaluation: 12/11/2023

Soil Evaluator: Evan Carloni (#13784)

Approving Authority Witness: Jim Garreffi

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.07 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, experience and experience described in 310 CMR 15.07. 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

PT-A
Depth 41"
Rate <2 mpi

Local Upgrade Approval (LUA) Requested

Reg	Request
Local Regulation Waivers	
Reg	Request
Harvard BOH Regulations, Article I, Section 14.3 B.	Waiver from 100' setback requirement from SAS to BVW.

Deboalt
79 Shaker Road
Harvard, MA 01451
Existing 3 Bedroom

Updates	
Date	Update
12/27/2023	Proposed Plan
1/25/2024	Add offset to brook
2/13/2024	NABH Comment: Revise Imp. Bar.
3/15/2024	Add erosion control detail

Innovative Septic Design, Inc.

51 Carter Street
Berlin, MA 01503
978-621-8278
RS #1400

Deed Information:

County: Worcester Bk. 5305 Pg. 163

Lot Area: 0.58 Acres

Scale: 1"=20'

Lot & Map #:

Map: 5 Lot: 30

Plan #: 12112301

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 Harvard BOARD OF HEALTH.