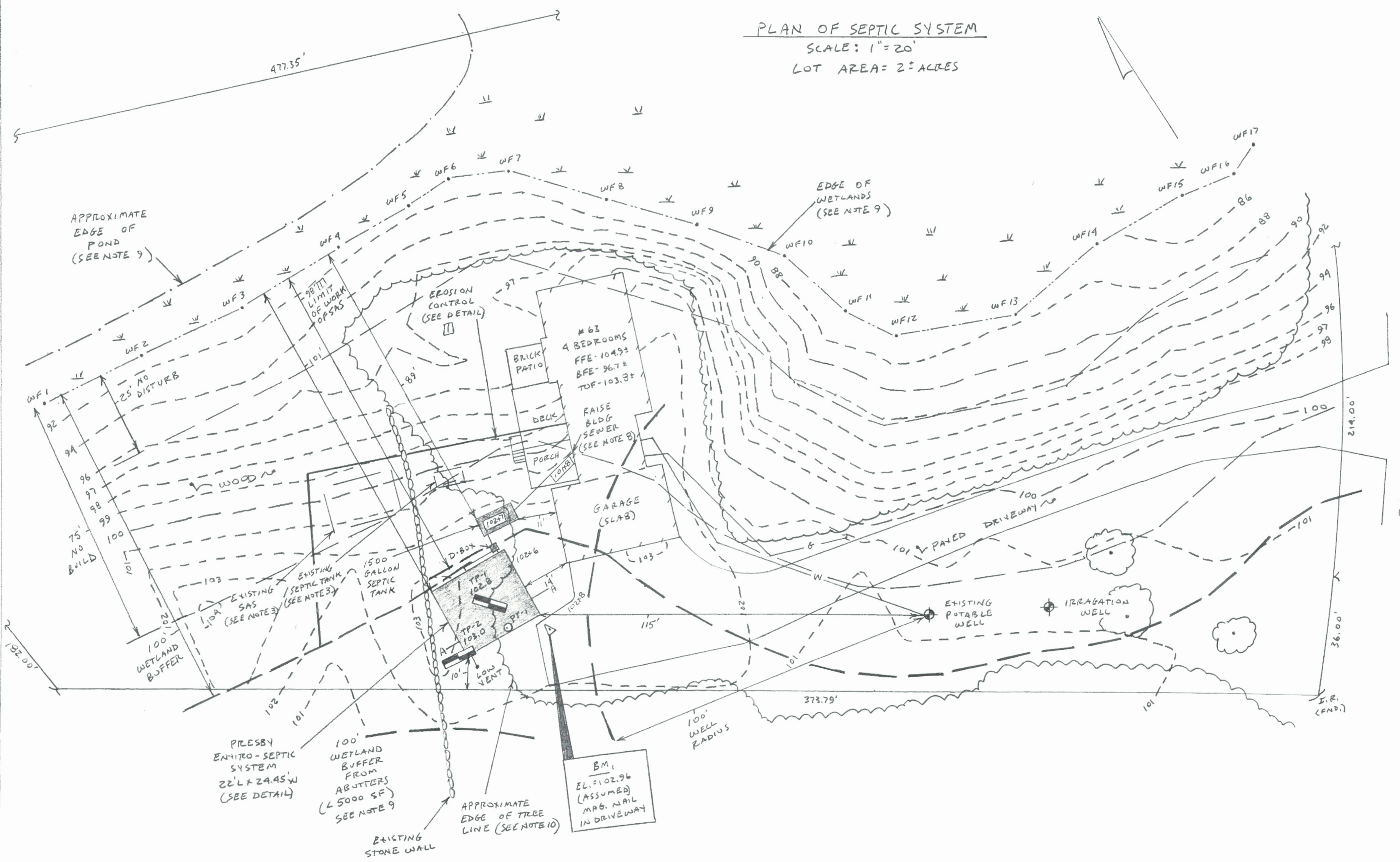


PLAN OF SEPTIC SYSTEM
SCALE: 1"=20'
LOT AREA= 2 ACRES



NOTES

- All construction methods shall conform to the Title V (310 CMR 15.000) and the Boxford Board of Health Regulations.
- There are no known private or public wells within 100 feet/400 feet of the proposed leaching area, nor is there any known surface water supplies within 400 feet of the proposed leaching area. The proposed leaching field is not within 100 feet of a wetland, nor is it within 200 feet of a river front or known tributaries to surface water supplies.
There are no abutter wells within 150 feet of the proposed leaching area.
The septic tank is located 89' from the edge of a wetland.
The leaching area is located 101' from the edge of a wetland.
- The existing septic tank and leaching pits shall be pumped and backfilled with clean fill after installing the new septic tank.
- No changes are to be made in the field without the approval of the Board of Health and the design engineer.
- The proposed leaching area is not designed for use with a garbage disposal. Remove any existing garbage disposal.
- Contractor to notify Dig Safe 72 hours prior to construction (800) 344-7233. All system components to be covered by magnetic tape.
- Property line information taken from Deed, Book 13128, Page 472, also reference Plan Book 129, Plan 58 (Lot 53). All wetland flags, wells, existing structures and topography were taken from a ground survey. The septic plan is not to be used as a property line survey.
- Prior to construction, the contractor shall verify all plumbing exiting the existing structure, as shown on this plan, can be connected to the new septic system. If any existing and/or proposed plumbing exiting the structure is found to be different than that shown on the approved septic system plan, the contractor shall notify the designer and corrections to the septic design will be made if applicable and approved by the Boxford Board of Health.

All internal plumbing changes proposed for this septic system design shall be performed by a licensed MA plumber. Internal measurements performed by the design engineer indicate that the existing sewer invert elevation exiting the foundation (EL. = 99.3) can be raised 3'. Prior to construction of the septic system, the proposed invert exiting the foundation (EL. = 101.25) shall be confirmed by a licensed MA plumber.

The delineation of the wetland and wetland flags shown on this septic plan were performed by William Manuall (Soil Scientist) of Wetlands & Land Management, Inc. on April 23, 2021. The 100 foot wetland buffer on abutters property (65 Pye Brook Lane) is from an isolated wetland less the 5000 SF.

The approximate edge of the pond shown on this plan was extrapolated from MA GIS (Oliver).

In order to install the proposed septic system (septic tank and Presby Enviro-Septic System) a minimum of 9, maximum of 11 trees will need to be removed. All trees are located within 10 feet of the proposed septic tank and Presby Enviro-Septic System as shown on the plan view of this septic system

The closest proposed tree to be removed for the septic system installation is approximately 80 feet from the edge of wetland.

Contractor to install an inspection port using a 4" SCH 40 PVC pipe (perforation holes within the C-33 system sand of the leaching area) and removable PVC cover at grade. See Detail.

The contractor shall be responsible for obtaining a trench permit from the local municipality in which the work is being performed.

I certify that on 11/95 I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

The "Best Feasible Replacement System" consists of a field that is 37'L x 24.45'W, with the additional length of the leaching area to the north.

The "Conventional Leaching Field" consists of a field that is 37'L x 24.45'W, with the additional length of the leaching area to the north.

TEST PIT DATA

Performed By: Daniel B. Johnson
Witnessed By: Kendall Longo
Date: May 13, 2021

TP-1 (EL. = 102.8)

(102.0) A,	0" - 10"	10YR3/2	Fine sandy loam
(101.1) Bw,	10" - 20"	10YR5/8	Gravelly loamy sand
(96.1) C1,	20" - 80"	10YR4/4	Gravelly M-C sand
(92.8) C2,	80" - 120"	10YR5/4	Gravelly loamy sand
(92.8)	120"	Assumed ESHWT	(No Obs. Mottling)

No Observed Groundwater

TP-2 (EL. = 103.0)

(102.2) A,	0" - 10"	10YR3/2	Fine sandy loam
(101.3) Bw,	10" - 20"	10YR5/8	Gravelly loamy sand
(96.3) C1,	20" - 80"	10YR4/4	Gravelly M-C sand
(94.0) C2,	80" - 108"	10YR5/4	Gravelly loamy sand
(94.0) R,	108"	Refusal (Boulder/Ledge)	
(94.0)		Assumed ESHWT	(No Obs. Mottling)

No Observed Groundwater

PERCOLATION TEST DATA

Date: May 13, 2021
Soil Class: Class I (0.74 G/SF)
Perc Rate: < 2 MPI (24"-42", TP-1)

SCHEDULE OF ELEVATIONS

Inv. Out Foundation	101.25
Inv. In Septic Tank	100.75
Inv. Out Septic Tank	100.50
Inv. In Distribution Box	100.42
Inv. Out Distribution Box	100.25
Inv. In Enviro-Septic Pipe (4" PVC)	100.08
Inv. Bottom Enviro-Septic Pipe	99.50
Bottom of C-33 System Sand	99.00
Assumed ESHWT (TP-2)	94.0
Assumed ESHWT (TP-1)	92.8

SIZING OF ENVIRO-SEPTIC LEACHING SYSTEM

4 Bedrooms x 165 GPD/Bedroom = 660 GPD (Boxford BOH)
660 GPD / 0.74 G/SF = 891.89 SF

Using the Presby system allowance for up to 40% reduction in area, thus 891.89 SF x 0.60 (40% reduction) = 535.2 SF (400 SF min.)

Percolation Rate: < 2 MPI (Class I, 0.74 G/SF)
Slope of Proposed Leaching Bed: Level = 0%

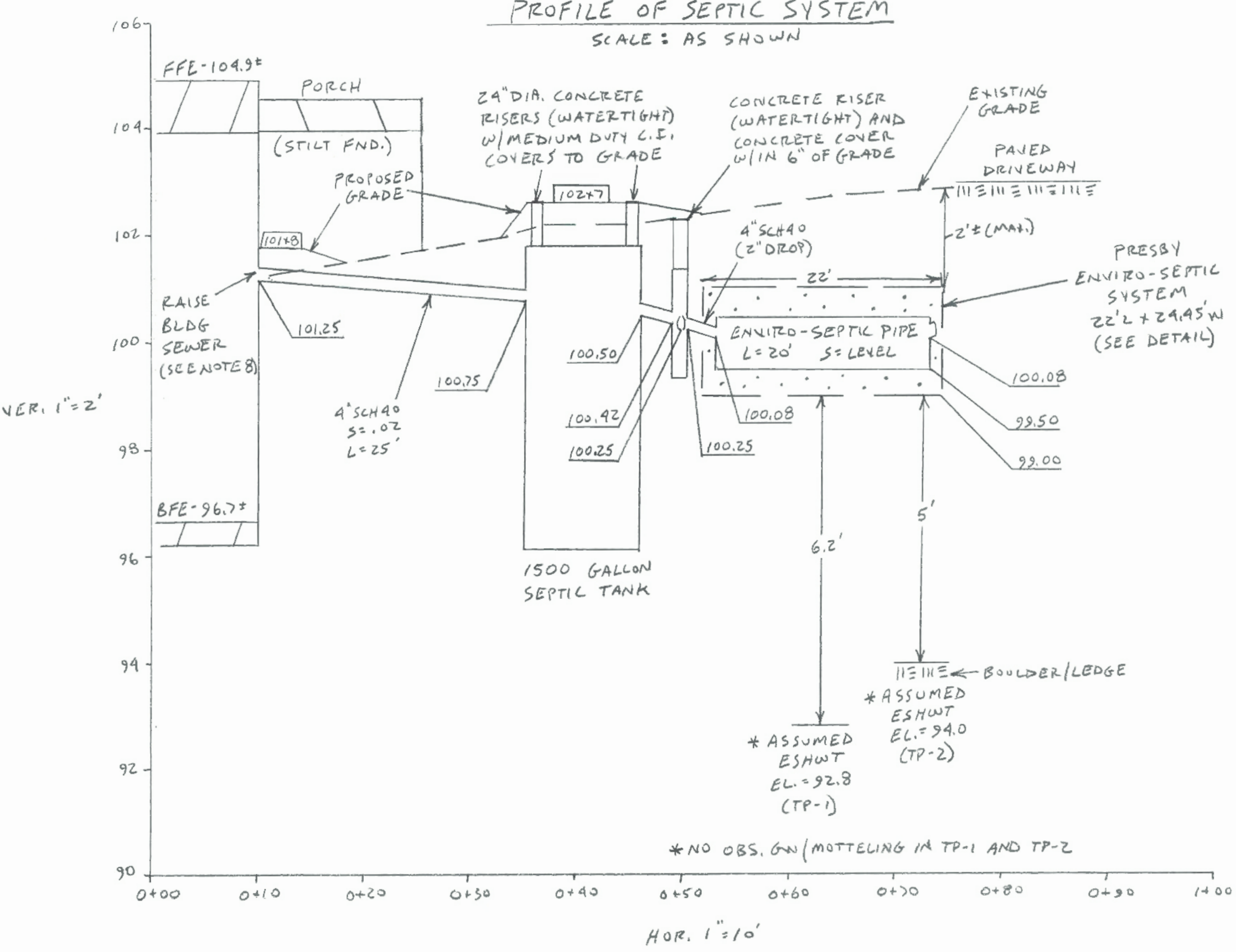
* The following size requirements were taken from "Enviro-Septic Wastewater Treatment System Massachusetts Design and Installation Manual."

Table A: <2 MPI with 4 Bedrooms = 280 LF (min.)
Table B: System Slope at 0% with < 2 MPI = 1.5' (min.) spacing,
Table C: Use 20' long pipe at 280 LF with 1.5' (min.) spacing = 20.5' W (min.) and 14 lines,
Table D: 4 Bedrooms at < 2 MPI with Soil Class I = 400 SF (min.)
Proposed Leaching Bed: 22'L x 24.45'W with 14 lines at 20'L each with 1.65'W (actual) spacing (center to center), with 1.5 center to outside edge of sand bed = 537.9 SF
Proposed sand bed size: 22'L x 24.45'W = 537.9 SF (provided) > 400 SF (Presby min. required) and 535.2 SF (Boxford BOH).

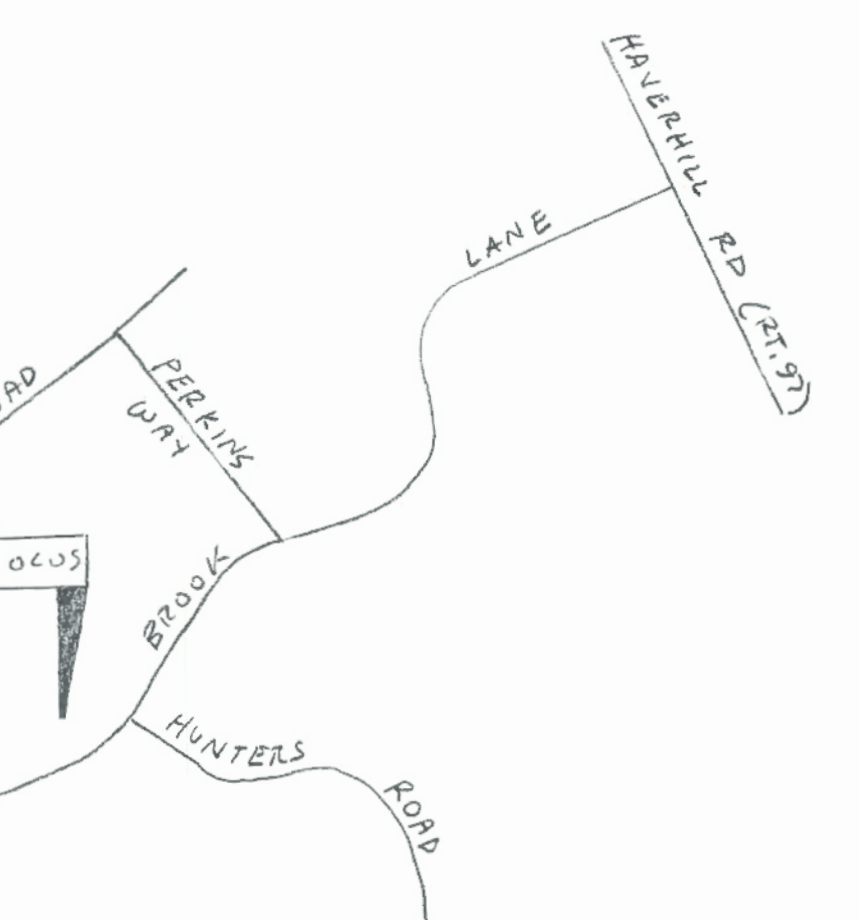
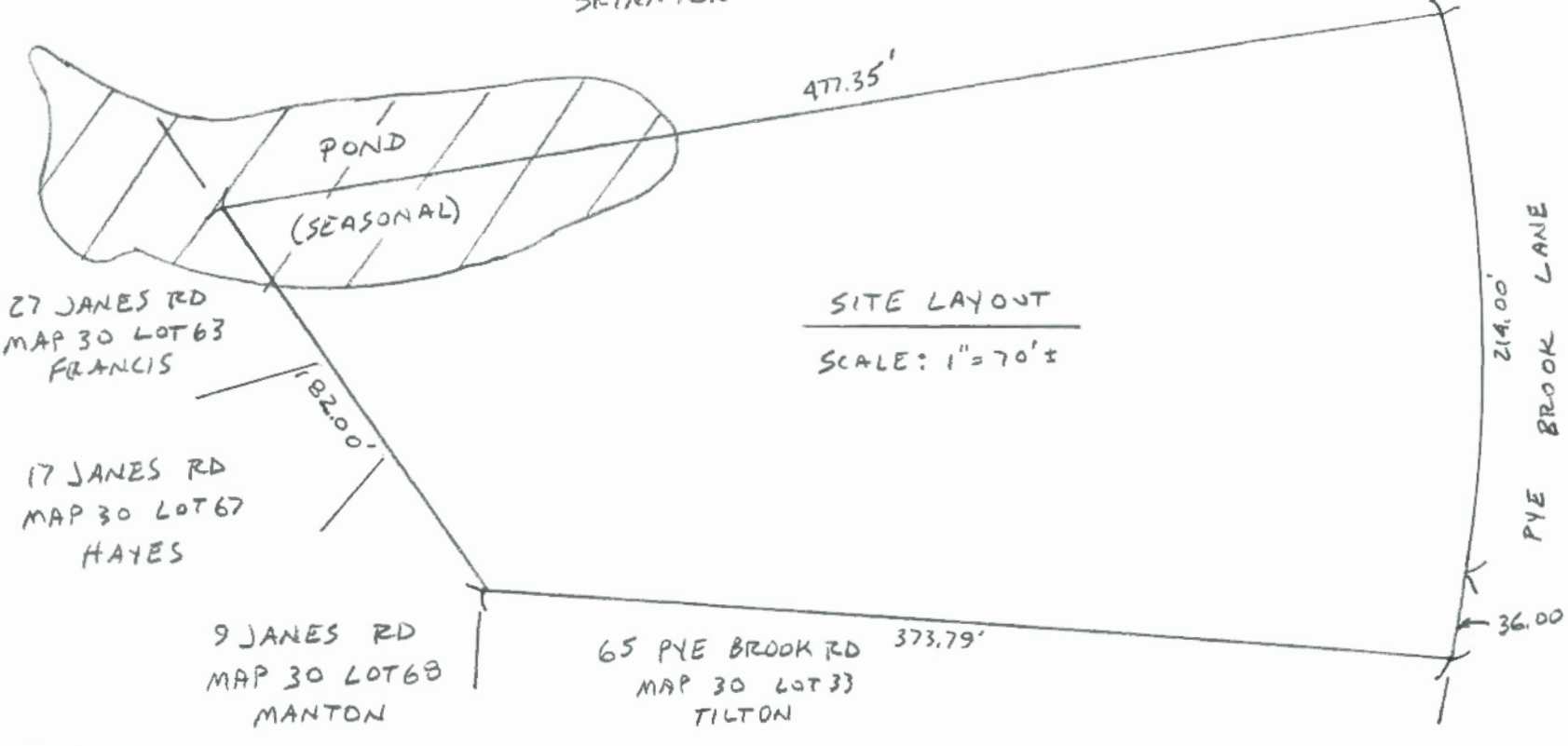
VARIANCE: Local BOH Regulations

- Request variance to reduce the offset from the edge of the proposed leaching area to the wetland, with a < 5 MPI perc rate from 150 feet to 101 feet, 201-9(E).
- Request variance to reduce the offset from the edge of the proposed leaching area to the well servicing the property, with a < 5 MPI perc rate from 150 feet to 115 feet, 201-9(D).

PROFILE OF SEPTIC SYSTEM
SCALE: AS SHOWN



55 PYE BROOK RD
MAP 30 LOT 35
SKINN ION



LEGEND

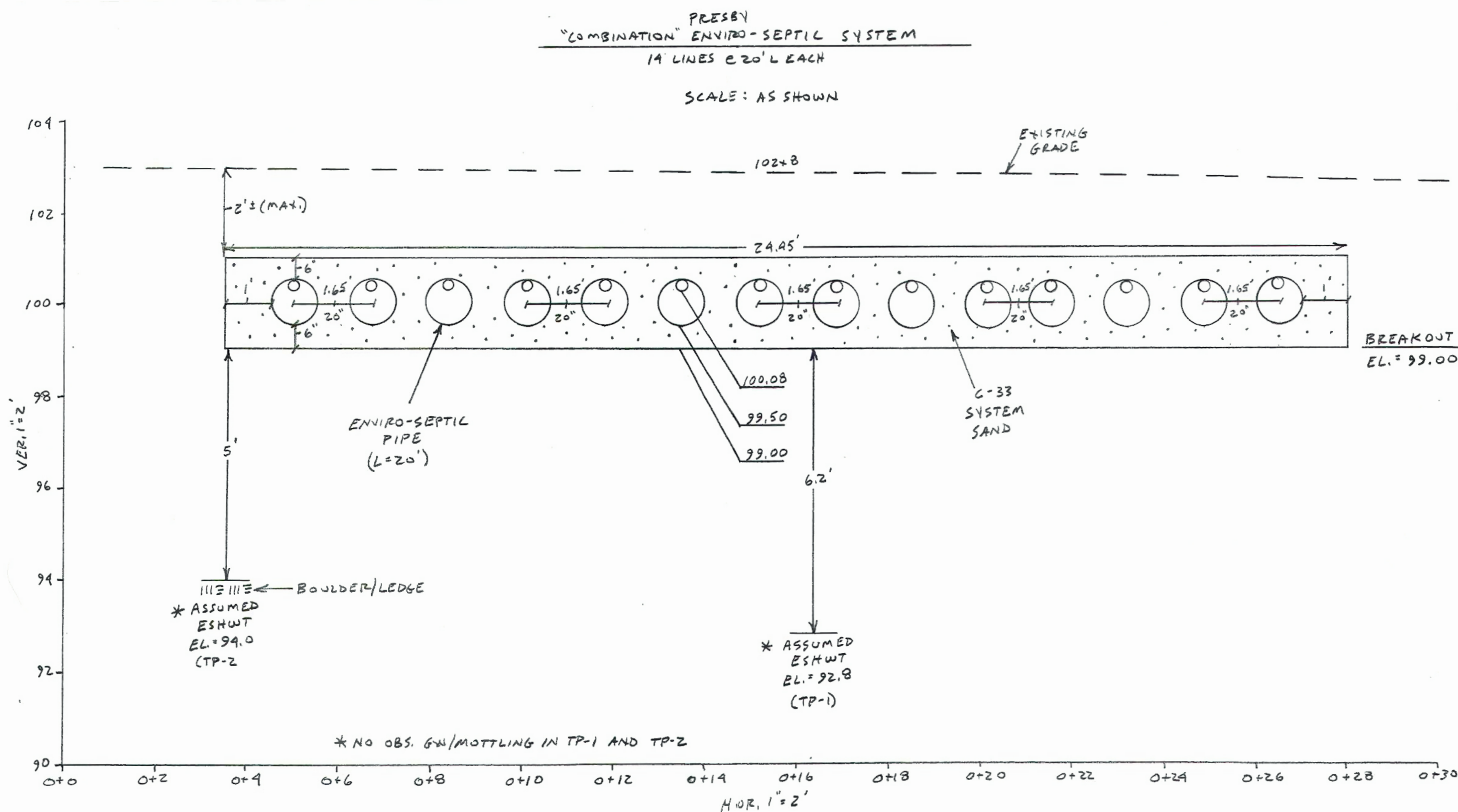
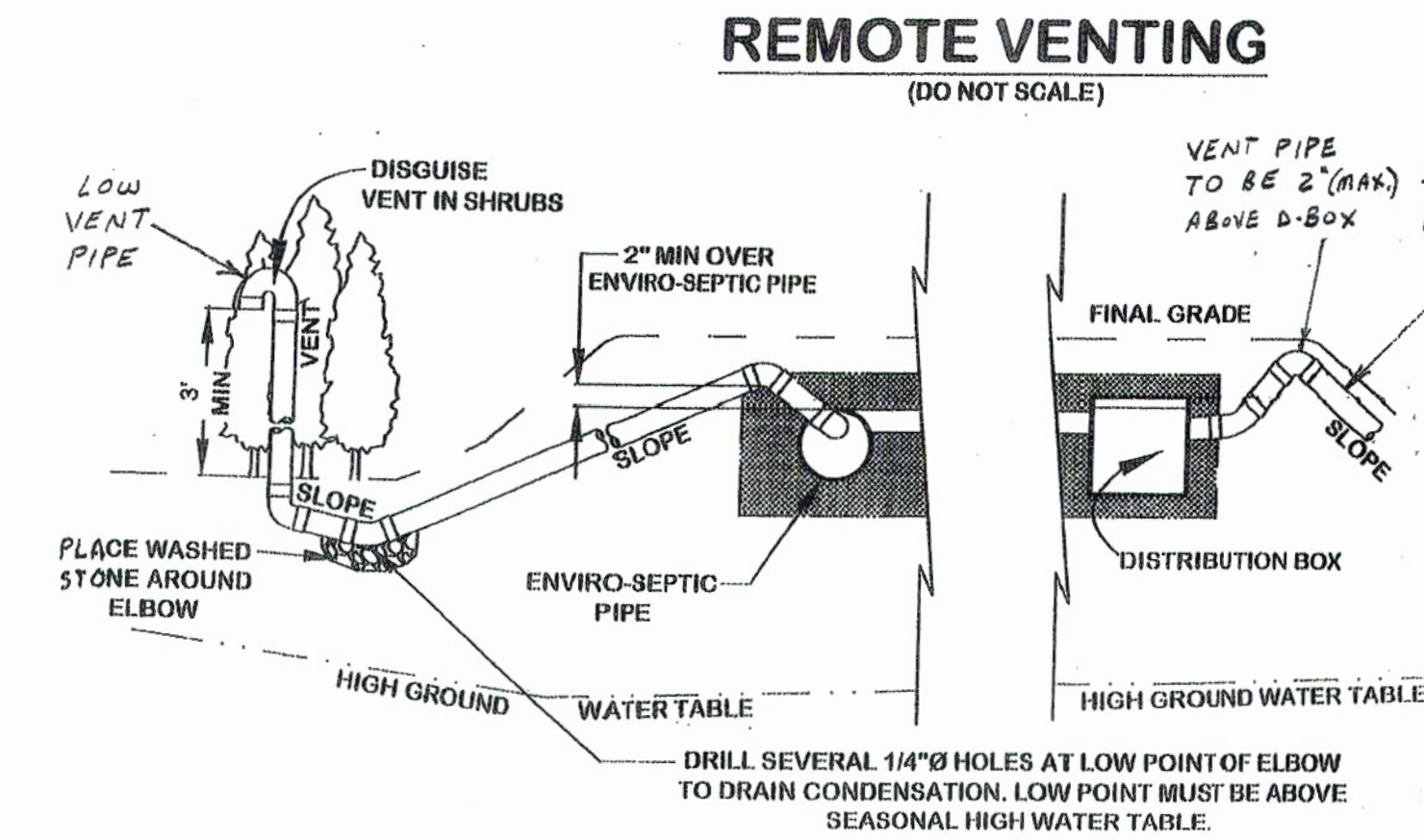
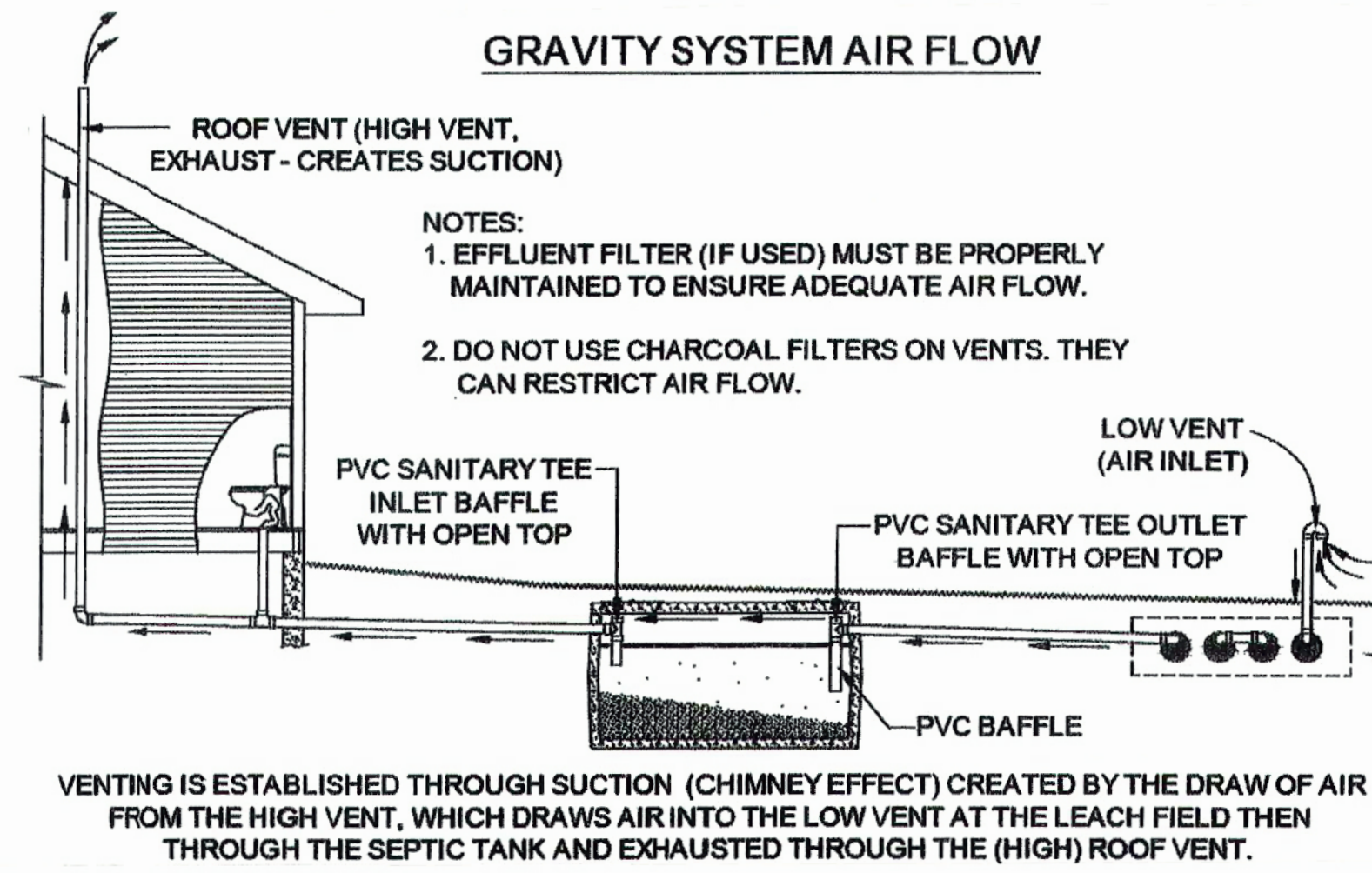
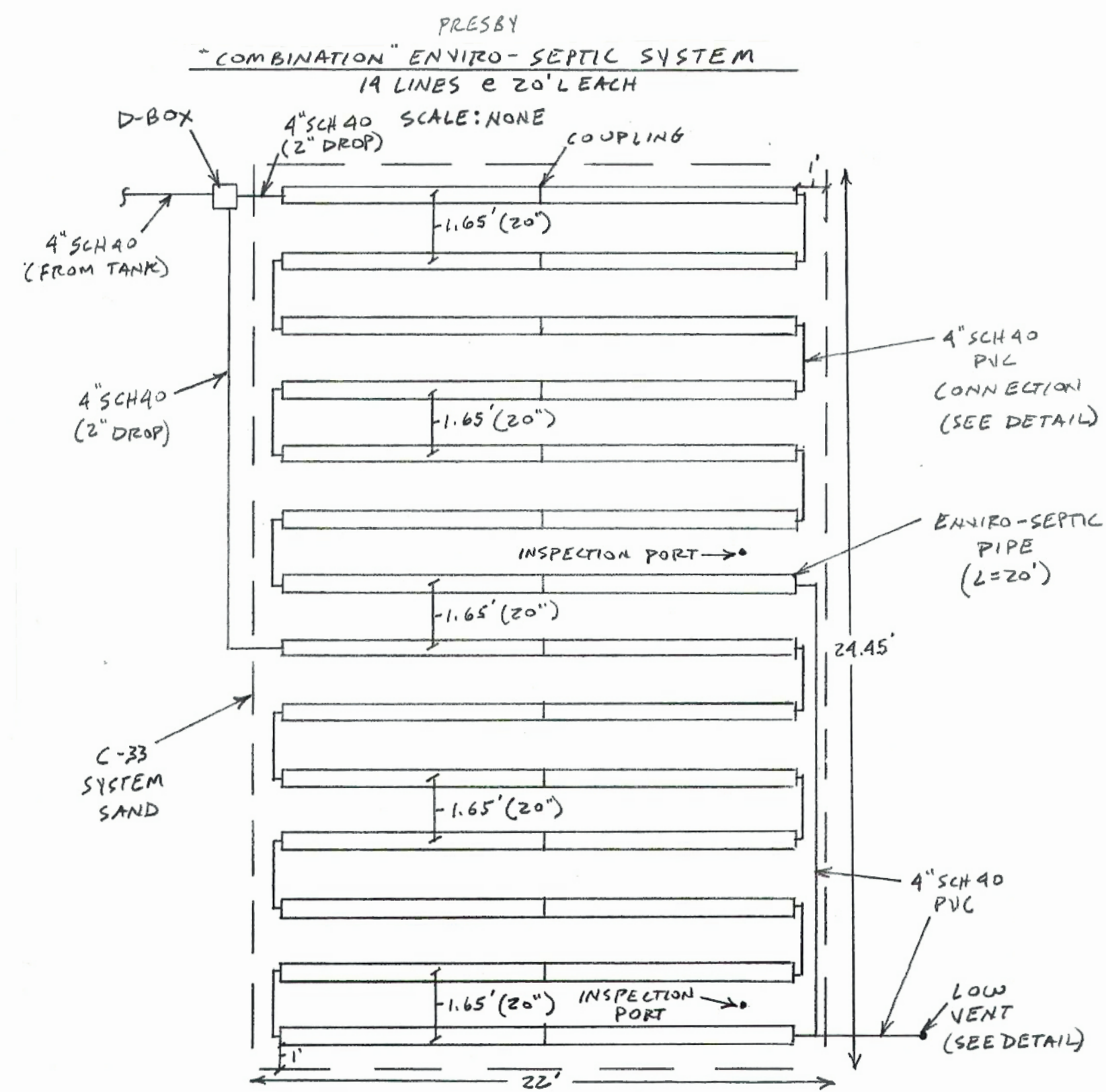
Existing Contour	- - - 98 - - -
Proposed Contour	— 98 —
Test Pit	■
Finished Floor Elev.	FFE
Basement Floor Elev.	BFE
Water Line	— W —
Gas Line	— G —

REVISION 7/7/21 MODIFIED EROSION CONTROL AND ADDED LIMIT OF WORK FOR SAS PER CON. COMM. JG

SUBSURFACE SEWAGE DISPOSAL SYSTEM
63 Pye Brook Lane, Boxford (Map 30, Lot 34)

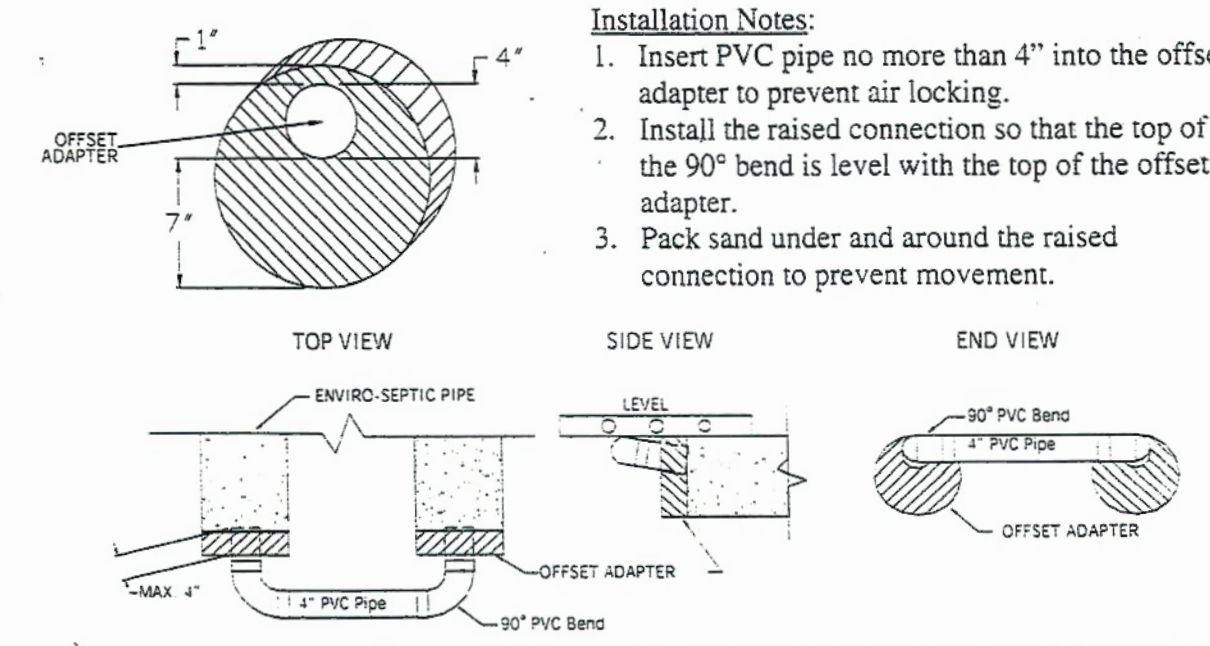
Date: 5/18/21	Drawn By: Daniel B. Johnson
Prepared Robert Miller	For: 63 Pye Brook Lane, Boxford, MA 01921
Prepared DOMESTIC SEPTIC DESIGN, INC.	By: P.O. Box 2406, S. Hamilton MA 01982

Dwg: J-2699

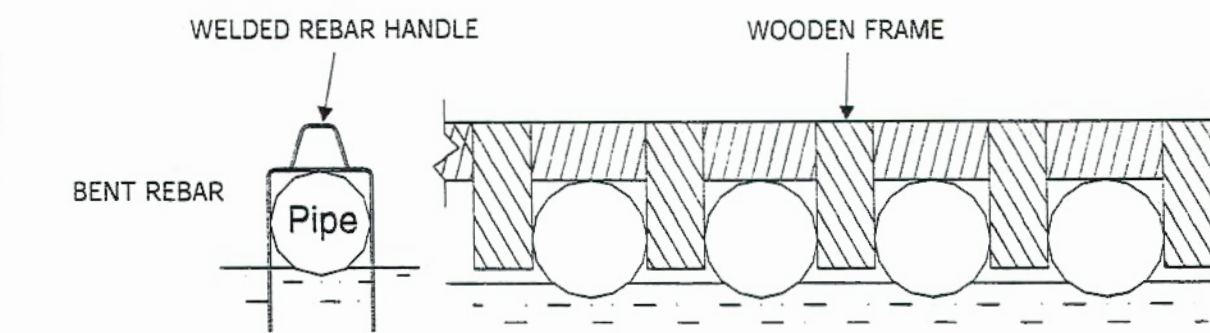


Erosion control Protect the site from erosion by proper grading, mulching, seeding, and control of runoff.

Use raised connections Raised connections consist of offset adapters, 4" PVC sewer and drain pipe, and 90° elbows. Use raised connections to connect lines of Enviro-Septic® pipe. They enable greater liquid storage capacity and increase the bacterial surfaces being developed. Here are some diagrams along with installation notes.



Line spacers Sand may be used to keep pipe in place while covering, but simple tools may also be constructed for this purpose. Here are two examples. One is made from rebar, the other from wood.



Caution: Remove all tools used as line spacers before final covering.

Sand Requirements

Introduction This page describes the sand requirements for the Enviro-Septic® wastewater treatment system.

System sand All configurations of Enviro-Septic® require a minimum of 6" of system sand surrounding the circumference of the pipe.

Percentage Restrictions

35% or less of the total sand may be gravel.
40%-90% of the total sand is to be coarse and very coarse sand.

Gravel Quality Restrictions

No gravel is to exceed 3/4" in diameter.
No gravel is smaller than 2mm/.0787" in diameter. (It must not pass through a #10 sieve.)

Coarse Sand Quality Restrictions

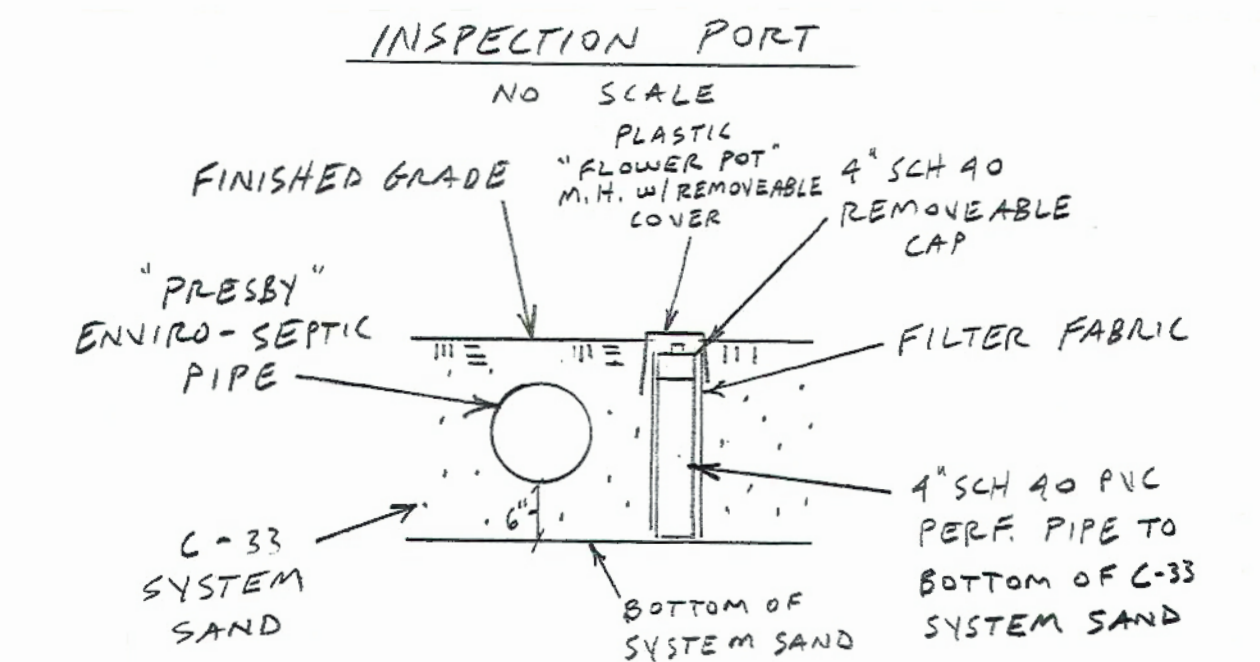
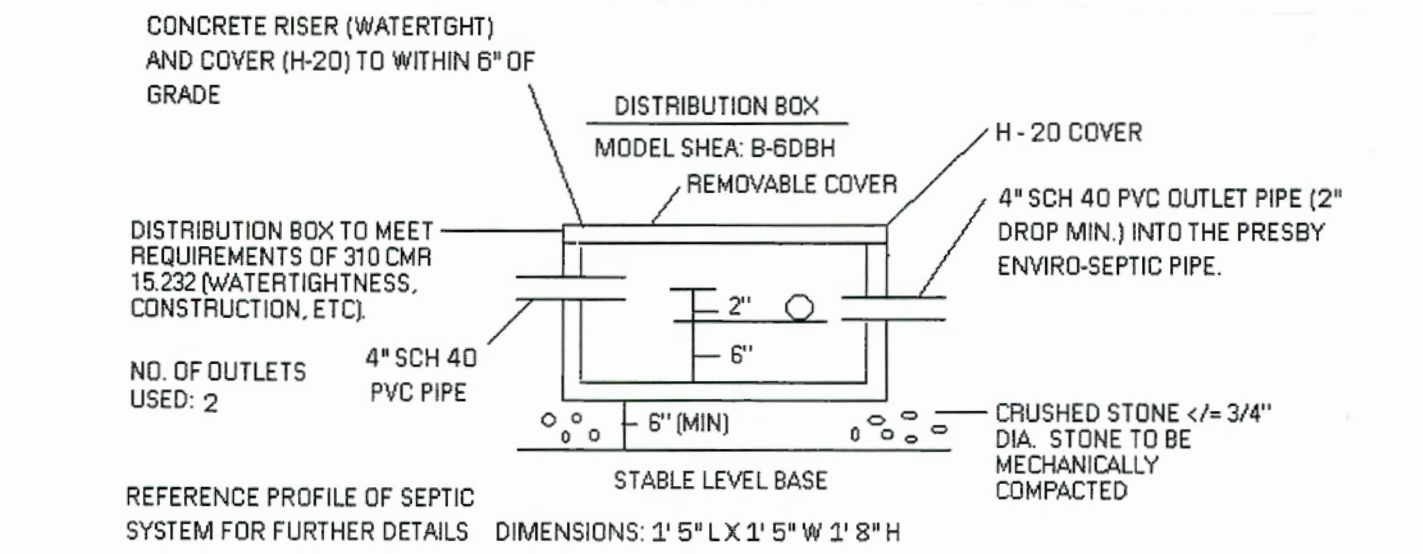
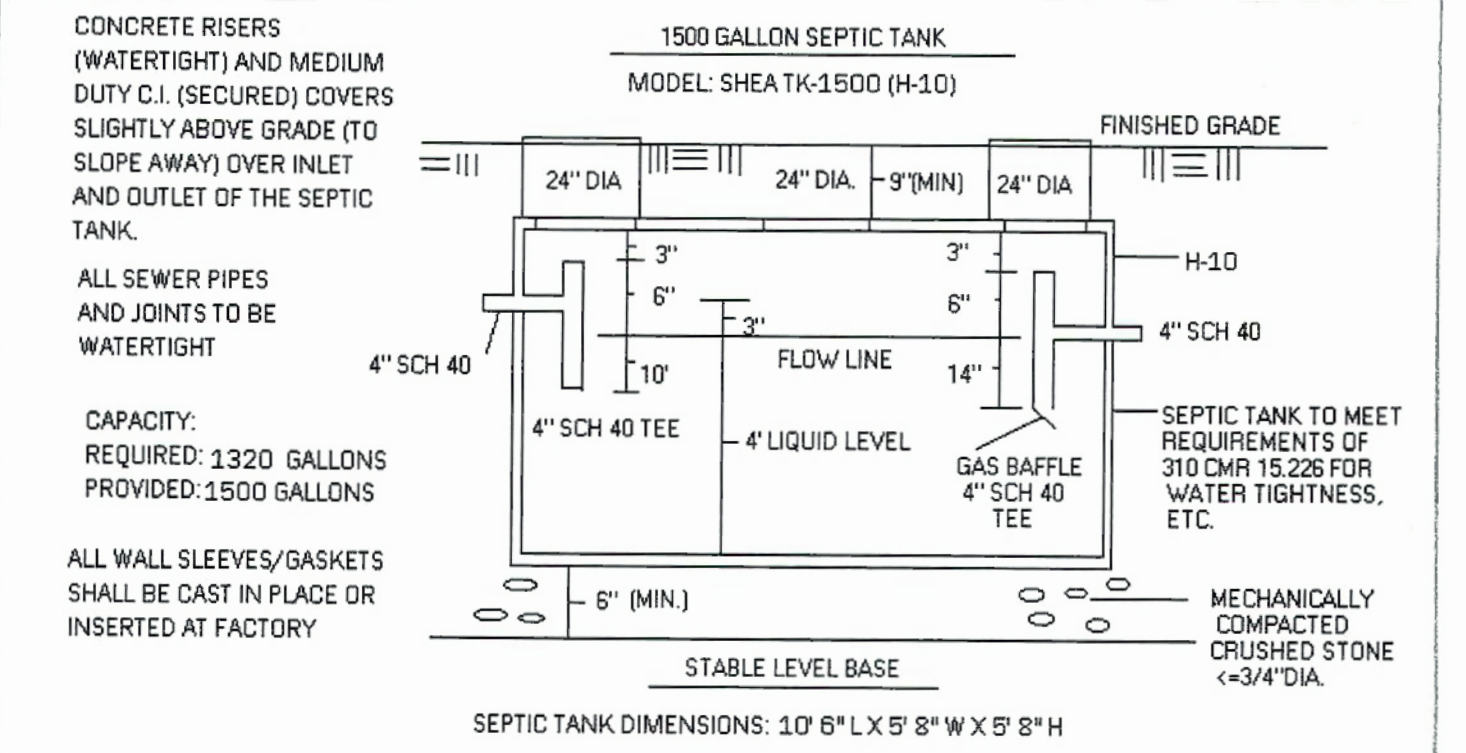
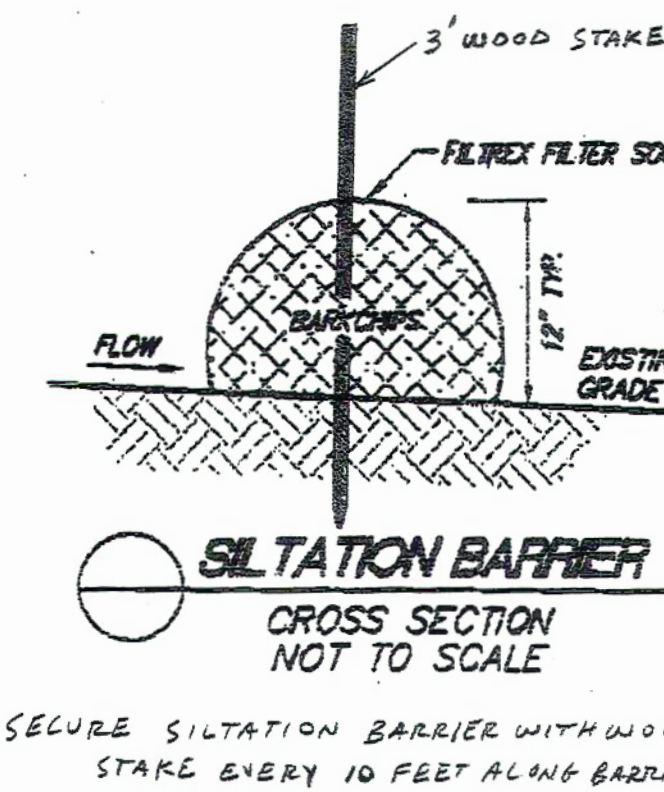
No coarse sand is smaller than 0.5mm/.0196" in diameter. (It must not pass through a #35 sieve.)

Fines Quality Restrictions

No more than 3% of the total sand may pass through a #200 sieve.

ASTM Standard: C-33 (concrete sand) meets the above requirements.

Surrounding sand Surrounding sand should be either system sand or Title 5 fill. 310 CMR 15.255 (3). Only surrounding sand may be placed under raised systems or where top soil and soil horizons with organic matter have been removed.



REVISION 7/7/21 MODIFIED EROSION CONTROL AND ADDED LIMIT OF WORK FOR SAS PER CON. COM. D

SUBSURFACE SEWAGE DISPOSAL SYSTEM
63 Pye Brook Lane, Boxford (Map 30, Lot 34)

Date: 5/18/21
Prepared: Robert Miller
For: 63 Pye Brook Lane, Boxford, MA 01921
Prepared: DOMESTIC SEPTIC DESIGN, INC.
By: P.O. Box 2406, S. Hamilton MA 01982
Dwg: J-2699