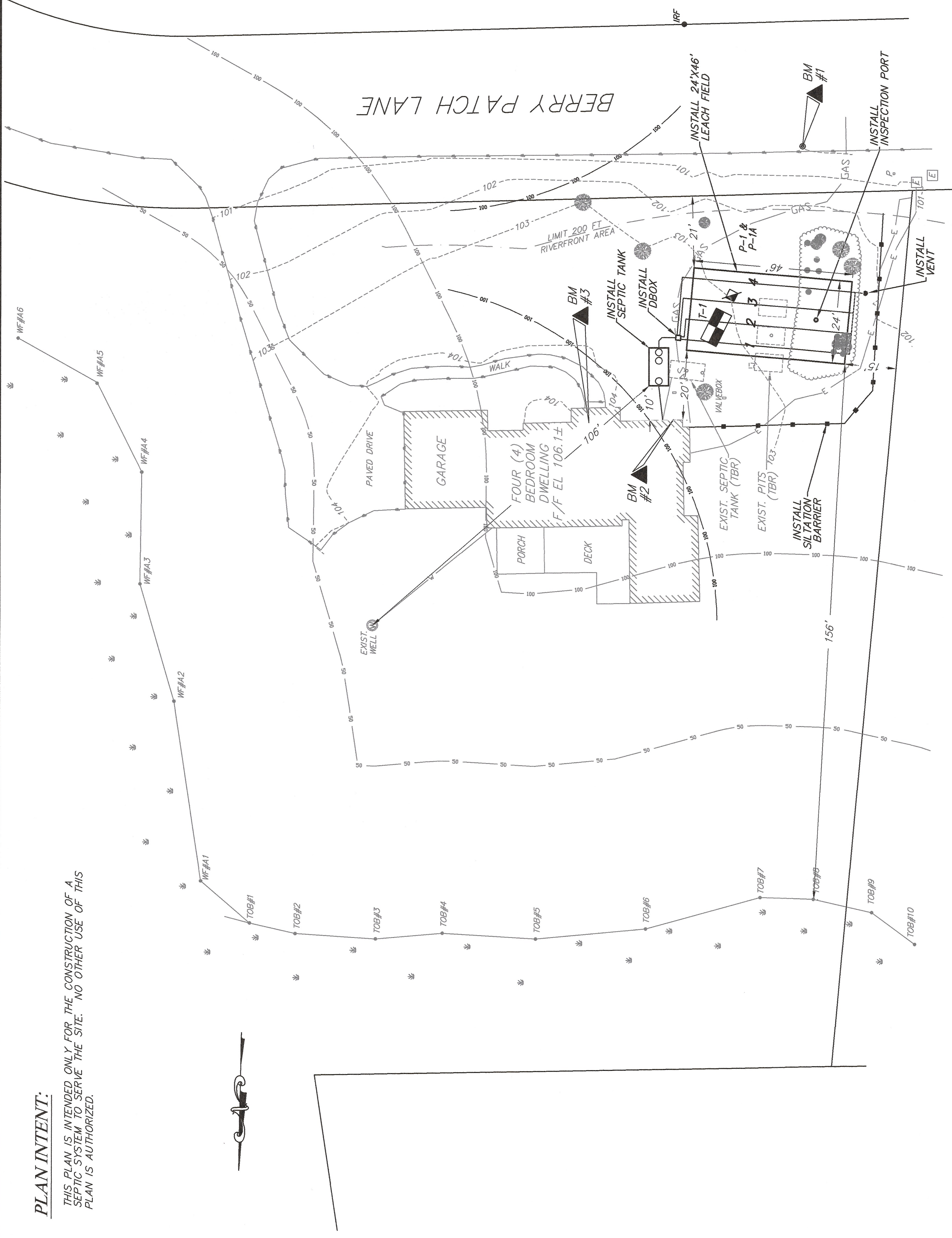
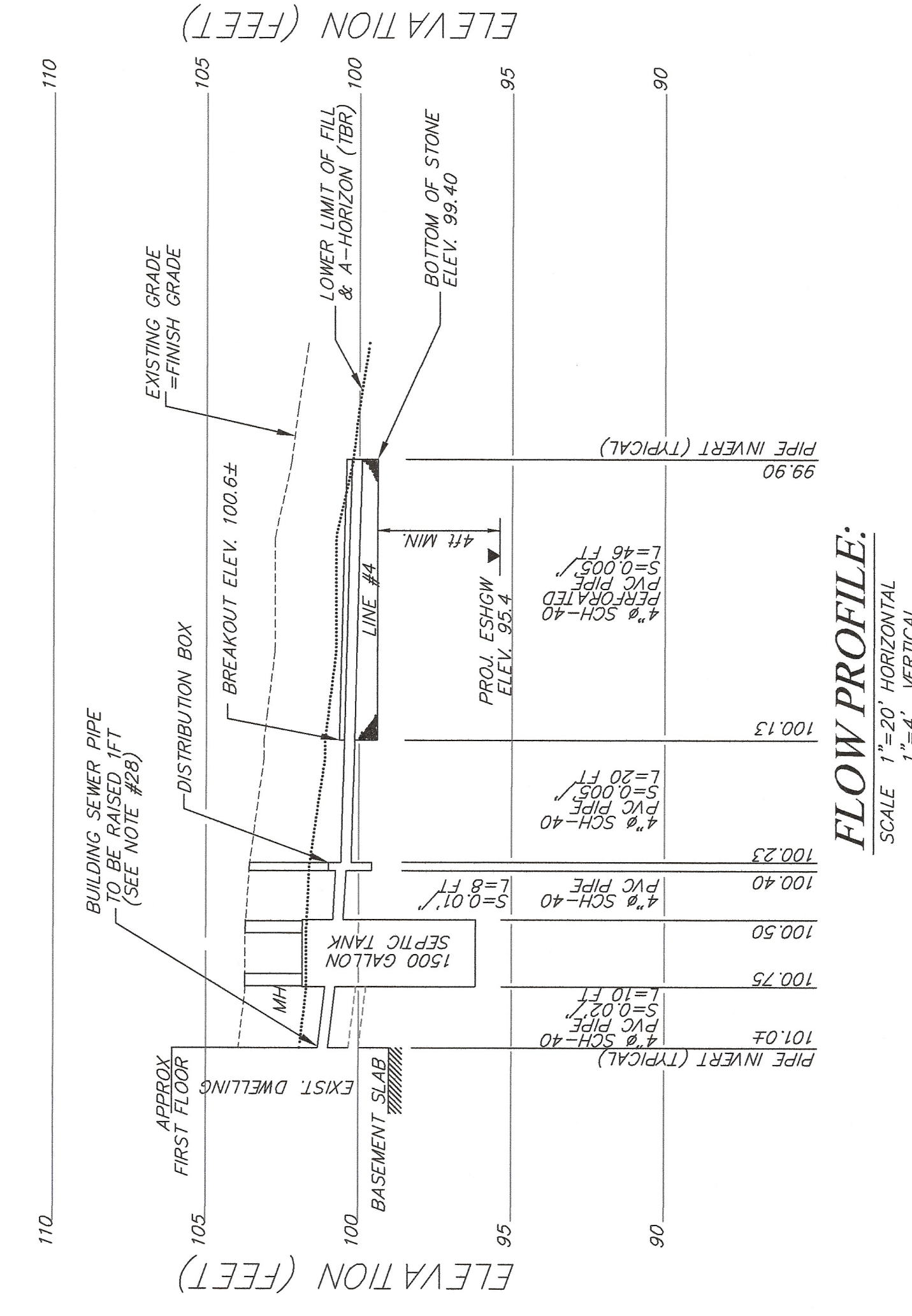


**PLAN INTENT:**

THIS PLAN IS INTENDED ONLY FOR THE CONSTRUCTION OF A SEPTIC SYSTEM TO SERVE THE SITE. NO OTHER USE OF THIS PLAN IS AUTHORIZED.



**SITE PLAN:**  
SCALE 1"=20'



**FLOW PROFILE:**  
SCALE 1"=20' HORIZONTAL  
1"=4' VERTICAL

BENCHMARKS: ASSUMED DATUM	ELEV.
#1 NAIL IN PAVEMENT	100.00
#2 TOP OF FOUNDATION	104.93
#3 FRONT DOOR THRESHOLD	106.10

**SOILS INFORMATION:**

SOIL EVALUATOR: JAMES SCANLAN, P.E.  
(SE#2159 - APRIL 1995)  
TOWN WITNESS: KENDELL LONGO  
DATE: 10/5/2022

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310CMR 15.017 TO CONDUCT SOIL EVALUATIONS AND THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EDUCATION, AND EXPERIENCE REQUIREMENTS. THE RESULTS OF MY SOIL EVALUATION, AS INDICATED IN THE ATTACHED SOIL EVALUATION FORM, ARE ACCURATE AND IN ACCORDANCE WITH 310CMR 15.100 THROUGH 15.102.

SIGNATURE: *James Scanlan* DATE: 10/30/22

**SOIL PERCOLATION RATE:**  
P-1: DEPTH TO 12" = 15" SOIL PERC RATE = 6 MIN/IN  
P-1A: DEPTH TO 12" = 35" SOIL PERC RATE = 9 MIN/IN

**SOIL ELEVATIONS:**

TEST PIT	T-1
GRADE	103.4
E.S.H.G.W.	95.4
OBS. G.W.	NONE
BOTTOM PIT	94.9

**SOIL PROFILES:**

T-1: 0-24" FILL & A FINE SANDY LOAM 10YR3/2 GRANULAR FRIABLE  
24-42" B GRAVELLY LOAMY SAND 10YR4/6 MASSIVE FRIABLE  
42-102" C1 GRAVELLY LOAMY SAND 2.5Y5/4 MASSIVE FRIABLE  
ESHW NOT OBSERVED TO 96"  
TOUGH DIGGING AT BOTTOM

**DESIGN CRITERIA:**

FACILITY TYPE: SINGLE FAMILY DWELLING  
SIZE: 4 BEDROOMS  
UNIT FLOW RATE: 110 GAL/BED/DAY  
DAILY FLOW: 440 GAL/DAY  
GARBAGE GRINDER: NO\*  
SYSTEM DESIGN: 660 GAL/DAY  
\* BOXFORD BOM REGULATIONS REQUIRE SYSTEM DESIGN TO BE SIZED FOR A GARBAGE GRINDER.

SOILS CLASS: CLASS II  
SOIL PERC. RATE: <10 MIN/INCH  
ACCEPTANCE RATE: 0.60 GAL/SF/DAY  
REQUIRED LEACH AREA: 1100 SF  
(TOWN) 734 SF  
(STATE)  
PROVIDED LEACH AREA: 1104 SF  
(LEACH AREA: 24' X 46' = 1104 SF)

**VARIANCES/WAIVERS:**

REGULATIONS: NONE REQUESTED  
REQUIRED: PROVIDED:

**SUBSURFACE SEWAGE DISPOSAL SYSTEM UPGRADE**

15 BERRY PATCH LANE  
BOXFORD, MA

**REGISTRY INFORMATION:**

DEED: BOOK NO.: 40996  
PAGE NO.: 536

**ASSESSORS INFORMATION:**

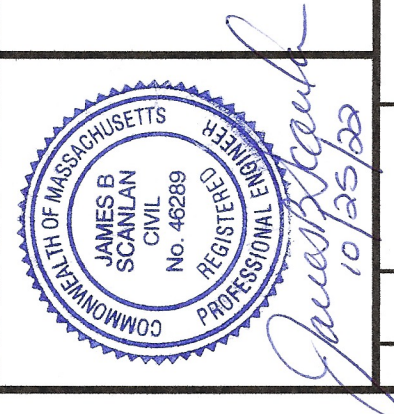
MAP: 27  
BLOCK: 1  
LOT: 15.5

**PREPARED FOR:**

ELLEN CRISCIONE  
15 BERRY PATCH LANE  
BOXFORD, MA



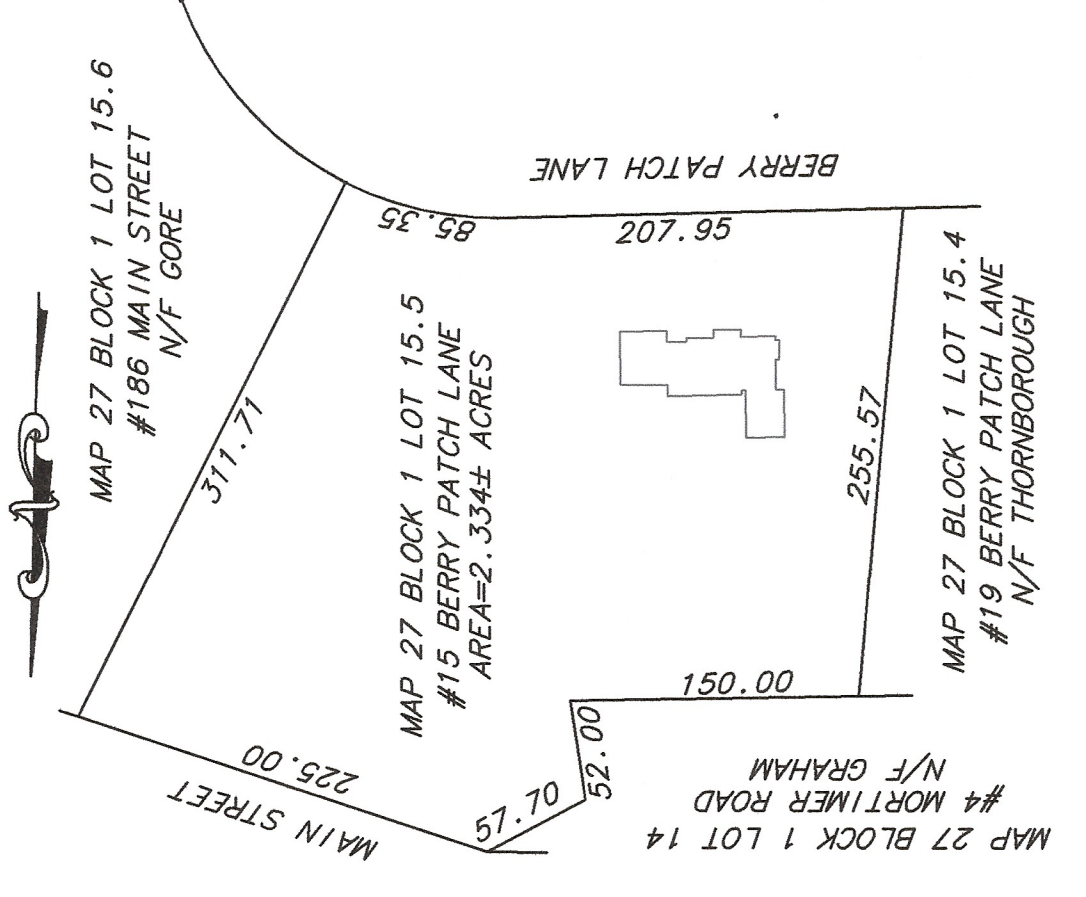
PHONE: (978) 372-3440  
EMAIL: jim@scanlanengineering.com



#	BY	DATE	REVISIONS TO PLANS

DATE: OCTOBER 8, 2022  
DESIGN BY: JBS  
DRAWN BY: JBS

**PLAN & FLOW PROFILE**



**LOCUS PLAN:**  
SCALE 1"=100'

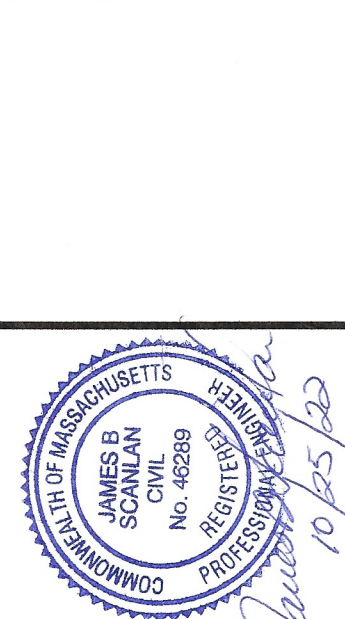
**SUBSURFACE SEWAGE DISPOSAL SYSTEM UPGRADE**  
**15 BERRY PATCH LANE**  
**BOXFORD, MA**

**REGISTRY INFORMATION:**  
 DEED: BOOK NO.: 40996  
 PAGE NO.: 536

**ASSESSORS INFORMATION:**  
 MAP: 27  
 BLOCK: 1  
 LOT: 15.5

**PREPARED FOR:**  
**ELLEN CRISCIONE**  
**15 BERRY PATCH LANE**  
**BOXFORD, MA**

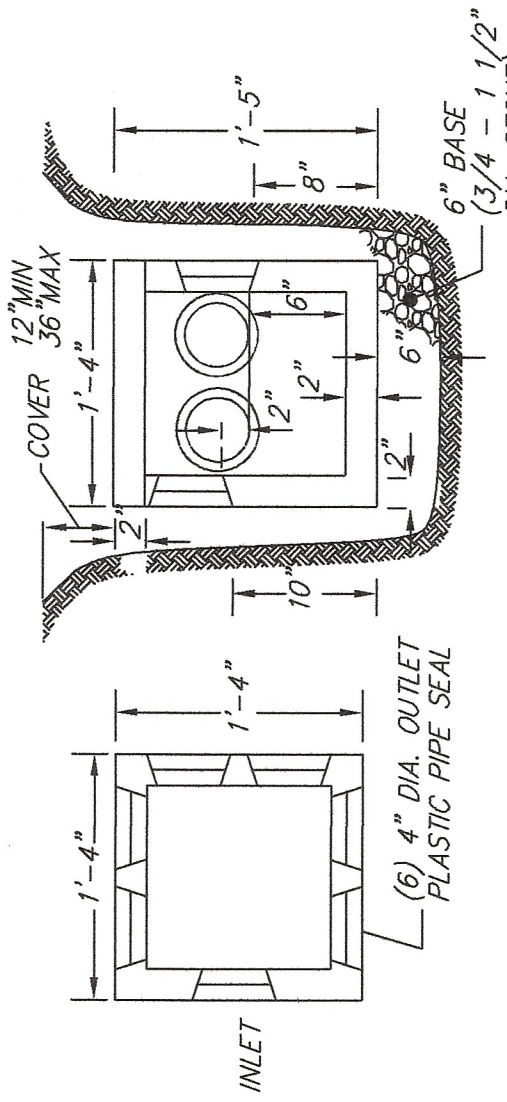
**SCANLAN ENGINEERING LLC**  
 PO BOX 886-GEORGETOWN, MA 01833  
 PHONE: (978) 372-3440  
 EMAIL: jim@scanlanengineering.com



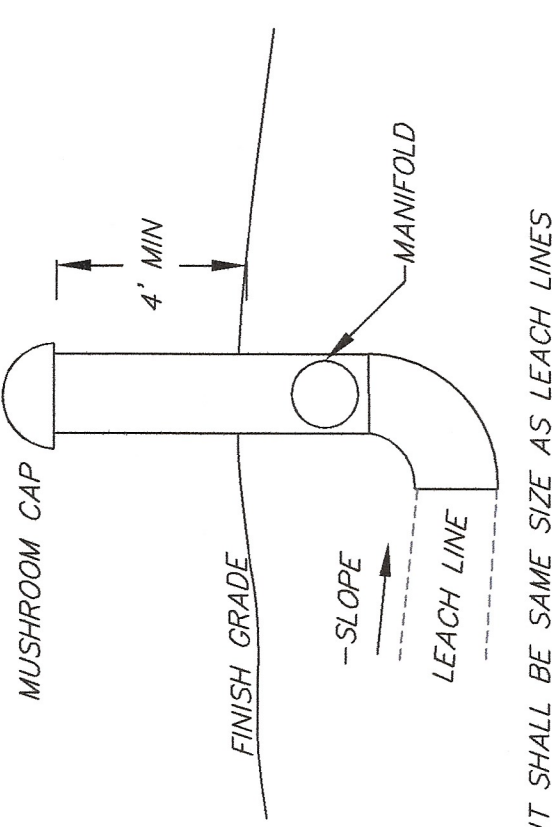
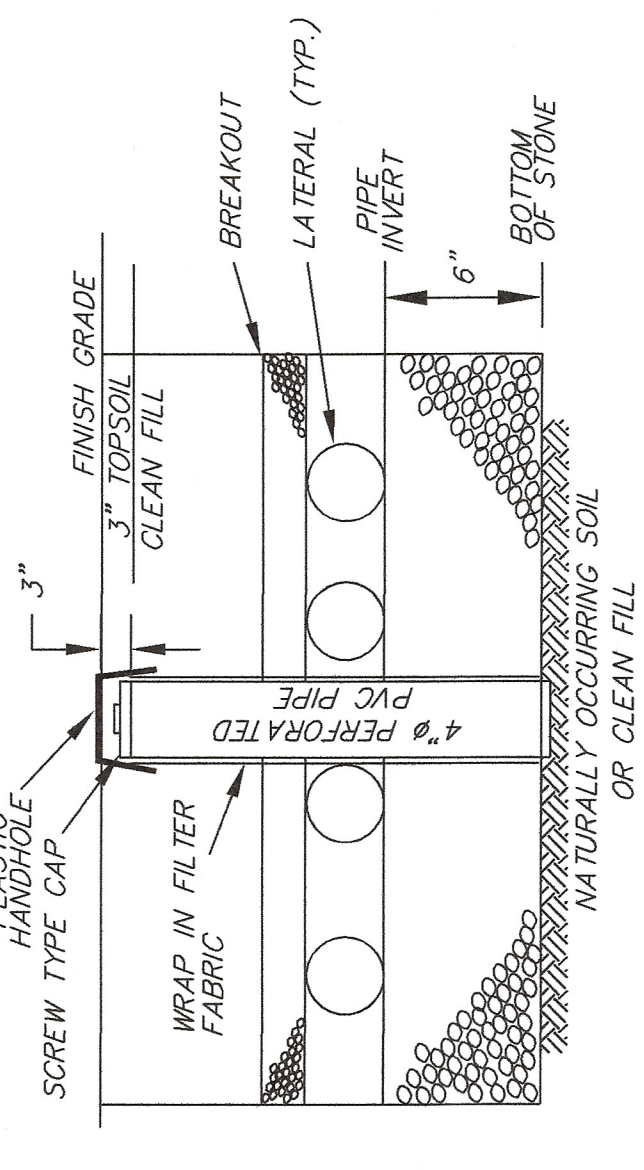
#	BY	DATE	REVISIONS TO PLANS

**DETAILS & NOTES**

- NOTES:**
- THIS PLAN IS INTENDED ONLY FOR THE CONSTRUCTION OF A SEPTIC SYSTEM TO SERVE THE SITE. NO OTHER USE OF THIS PLAN IS AUTHORIZED. PROPERTY LINES SHOWN HERE-ON ARE APPROXIMATE AND INFORMED ONLY TO SHOW THAT MINIMUM SETBACKS HAVE BEEN MET. NO BOUNDARY SURVEY WAS PERFORMED IN PREPARATION OF THIS PLAN.
  - PROPERTY DEEDSAFE AT 1-888-806-SAFE (888-233-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
  - THIS PLAN ONLY SHOWS SUBSURFACE UTILITIES AND FEATURES THAT WERE VISIBLE ON THE DATE OF THE TOPOGRAPHIC SURVEY. THERE MAY BE OTHER SUBSURFACE UTILITIES AND FEATURES PRESENT, NOT SHOWN ON THIS PLAN.
  - CONTRACTOR SHALL MAKE THEMSELVES AWARE OF ALL CONSTRUCTION REQUIREMENTS ASSOCIATED WITH THE JOB.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROJECT WITH RESPECT TO SAFETY METHODS.
  - CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR THE PROJECT AND SHALL BE A LICENSED SEPTIC INSTALLER IN THE TOWN IN WHICH THE SEPTIC SYSTEM IS BEING INSTALLED.
  - CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF BENCHMARKS, PRIOR TO CONSTRUCTION.
  - DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES IN THE BENCHMARK ELEVATIONS.
  - CONTRACTOR SHALL CONFIRM THAT THE DESIGN PLAN DETAILS ARE CONSISTENT WITH THE CURRENT MANUFACTURER'S SPECIFICATIONS.
  - ISSUANCE OF A DISPOSAL SYSTEM CONSTRUCTION PERMIT AND APPROPRIATE SPECIFICATIONS.
  - ISSUANCE OF THE CERTIFICATE OF COMPLIANCE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SEPTIC SYSTEM WILL FUNCTION SATISFACTORILY.
  - BACKWASH FROM A WATER SOFTENER SHALL NOT BE DISCHARGED INTO A SEPTIC SYSTEM.
  - WASHING MACHINE, IF CURRENTLY SEPARATE, SHALL BE CONNECTED TO THE PROPOSED SEPTIC SYSTEM.
  - ALL WORK SHALL COMPLY WITH 310CMR15.000 AND LOCAL BOARD OF HEALTH REGULATION, UNLESS OTHERWISE SPECIFIED.
  - ALL WORK SHALL BE APPROVED BY THE LOCAL BOARD OF HEALTH.
  - IF THE DISTANCE FROM THE SEPTIC SYSTEM TO ANY ADJACENT PROPERTY IS LESS THAN 10 FEET FROM THE OUTSIDE FACE OF THE BUILDING, SHALL CONFORM TO 240CMR2.00, THE STATE PLUMBING CODE.
  - ALL SEPTIC SYSTEM COMPONENTS ARE GREATER THAN 400 FEET FROM SURFACE WATER SUPPLIES AND GREATER THAN 200 FEET FROM ANY TRIBUTARY TO A SURFACE WATER SUPPLY.
  - TERRACE ARE NO KNOWN WELLS WITHIN 100 FEET OF THE SOIL ABSORPTION SYSTEM OR WITHIN 50 FEET OF ANY SEPTIC COMPONENTS.
  - NO SEPTIC COMPONENTS SHALL BE INSTALLED WITHIN 100 FEET OF THE SOIL ABSORPTION SYSTEM OR WITHIN 100 FEET OF ANY SEPTIC COMPONENTS.
  - THE SEPTIC SYSTEM IS WITHIN THE 200 FOOT RIVERFRONT AREA. THIS PLAN SHALL ACCOMPANY A NOTICE OF INTENT FILED WITH THE LOCAL CONSERVATION COMMISSION AND THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION.
  - WETLAND ON-SITE WERE DELINEATED BY JULIE VONDRAK, OCTOBER, 2022.
  - CONTRACTOR SHALL VERIFY THAT THE SEPTIC TANK CAN BE CONNECTED TO THE BUILDING SEWER AS SHOWN ON THIS PLAN. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
  - ALL SEPTIC COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
  - CONTRACTOR SHALL PROVIDE 24 HOUR NOTICE TO THE DESIGN ENGINEER TO INSPECT CONSTRUCTION AT THE FOLLOWING TIMES:
    - TO INSPECT THE SEPTIC TANK CYCLOTON PRIOR TO BACKFILLING
    - TO INSPECT THE FINAL INSTALLATION PRIOR TO BACKFILLING
  - SIF COMPLIES WITH 310CMR15.214: NITROGEN LOADING LIMITATIONS.
  - FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF SELECT ON-SITE OR IMPORTED SOIL MATERIAL AND SHALL CONFORM TO 310CMR15.255(3).
  - CONTRACTOR SHALL REMOVE FILL & A SOIL HORIZON(S) AND OTHER DELETERIOUS MATERIAL WITHIN 5 FT OF SOIL ABSORPTION SYSTEM AND REPLACE WITH FILL MATERIAL (CONFORMING TO 310CMR15.255(5)) UP TO BREAKOUT ELEVATION AND DOWN TO THE DEPTH OF NATURALLY OCCURRING PERVIOUS MATERIAL.
  - CONTRACTOR SHALL OBTAIN INSPECTION FROM EACH ENGINEER AND PERMISSION OBTAINED FROM EACH ENGINEER AND PERMISSION OBTAINED FROM EACH ENGINEER.
  - VEHICULAR TRAFFIC, PARKING OF VEHICLES, STOCKPILING OF MATERIALS AND STORAGE OF EQUIPMENT OVER TRAVELING AREA IS PROHIBITED.
  - THE EXISTING SEPTIC SYSTEM SHALL BE EITHER CRUSHED AND FILLED WITH CLEAN FILL OR REMOVED, AS PER 310CMR15.000.
  - ALL WORK SHALL BE DONE TO CONFIRM THAT THE BUILDING SEWER PIPE INVERT CAN BE RAISED 1 FT FROM FINISH GRADE TO THE PROPOSED SEPTIC SYSTEM INVERT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
  - ALL DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
  - ANY AND ALL REVISIONS TO THE APPROVED PLAN SHALL BE APPROVED BY THE DESIGN ENGINEER AND THE APPROPRIATE TOWN REPRESENTATIVE.



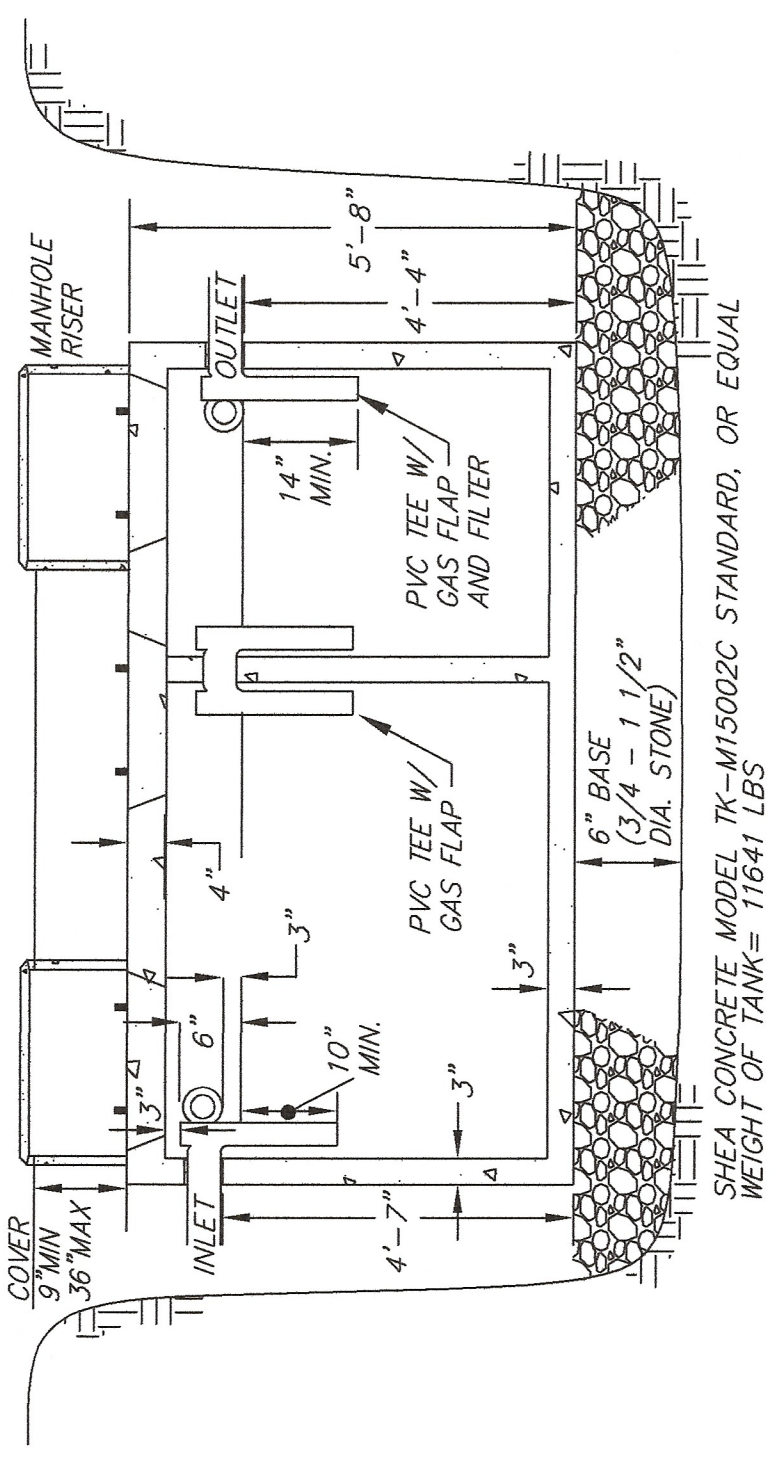
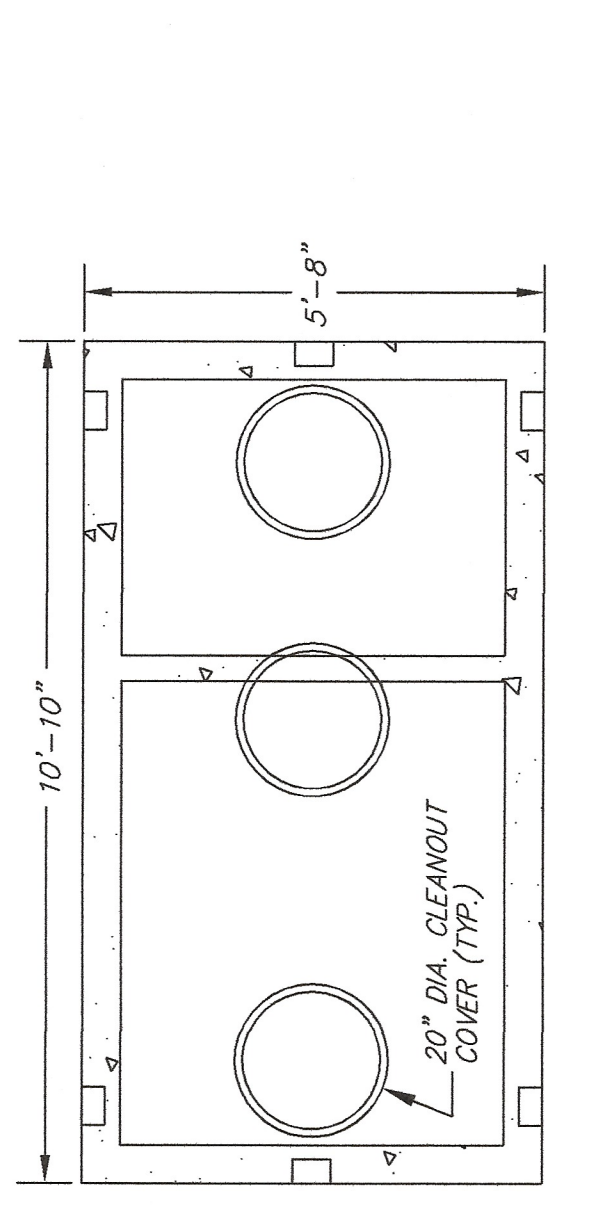
- DBOX SHALL BE WATERTIGHT THROUGH MANUFACTURER'S SPECIFICATIONS AND WARRANTY.
- SPEED-LEVELLERS SHALL BE INSTALLED IN OUTLET PIPES.
- OUTLET PIPES SHALL BE LEVEL FOR THE FIRST TWO FEET (MIN.).
- OUTLET PIPES SHALL BE CEMENTED TO DBOX USING HYDRAULIC CEMENT



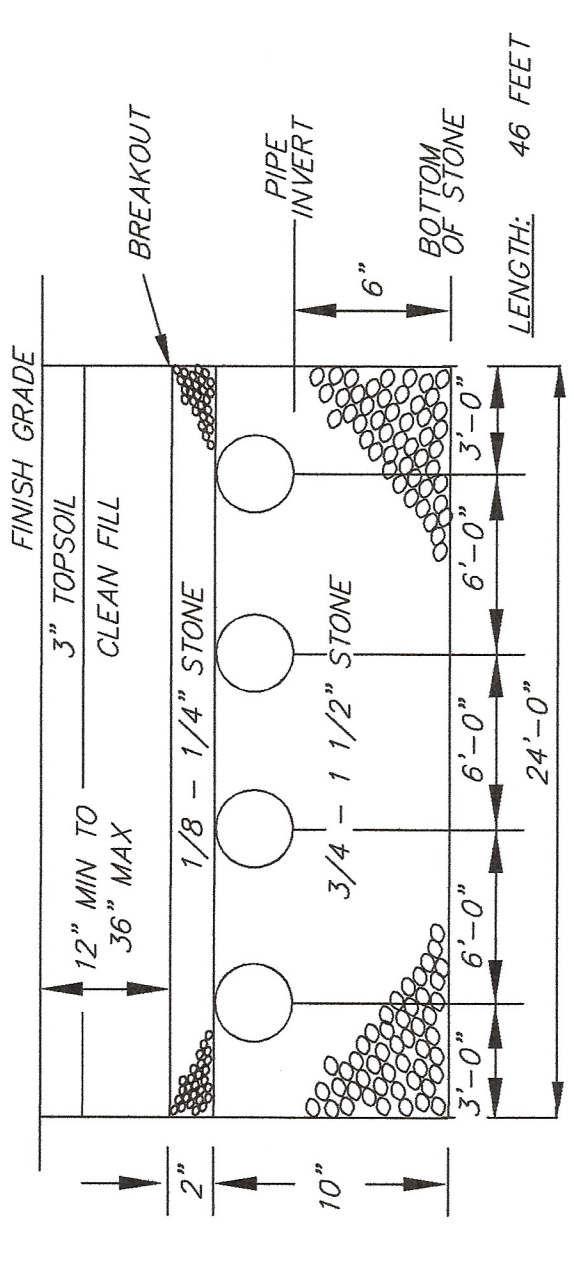
- VENT SHALL BE SAME SIZE AS LEACH LINES
- VENT PIPE SHALL HAVE A CHARCOAL FILTER
- VENT SHALL BE SCH-40 PVC PIPE
- OWNER SHALL BE CONSULTED REGARDING PLACEMENT OF VENT.

**SEPTIC TANK REQUIREMENTS**

- FIRST COMPARTMENT: 880 GALLONS
- SECOND COMPARTMENT: 440 GALLONS
- PROVIDED: 4 COMPTON/500 GALLON MONOLITHIC SEPTIC TANK



- NOTES:**
- TANK SHALL BE WATERTIGHT THROUGH MANUFACTURER'S SPECIFICATIONS AND WARRANTY.
  - TANK SHALL BE SET LEVEL AND TRUE TO GRADE ON A LEVEL BASE WHICH HAS BEEN MECHANICALLY COMPACTED.
  - TANK SHALL BE EMBOSSED WITH A SEAL STAYING THAT ASTM STANDARD D2272-93 HAS BEEN MET, WITH A GAS BAFFLE AND AN EFFLUENT FILTER (LABEL A-1800 OR EQUAL).
  - THE INLET & OUTLET COVERS SHALL HAVE A RISER TO FINISH GRADE.
  - SECURE COVERS TO PREVENT UNAUTHORIZED ACCESS.



- BOTTOM OF EXCAVATION SHALL BE LEVEL AND SCARIFIED PRIOR TO LAYING STONE.
- PIPE SHALL BE LAID WITH ORIFICES AT 5 AND 7 O'CLOCK
- DISTRIBUTION LINES SHALL BE LAID AT A SLOPE OF 0.005 FT/FT.
- ENDS SHALL BE CONNECTED TO A VENT.
- ALL STONE SHALL BE DOUBLE WASHED STONE.