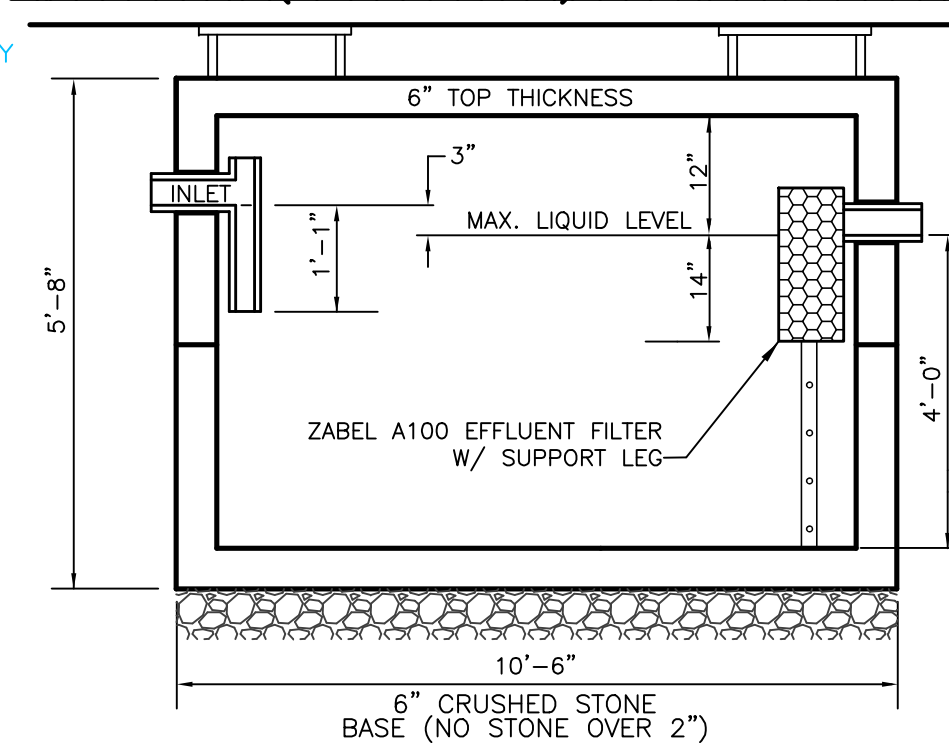


### SOIL TEST DATA

SOIL TESTING AND EVALUATION BY: JAMES GARFIELD, S.E.#14162  
SOIL TESTING WITNESSED BY: RALPH H. COLE, P.L.S.  
DATE: OCTOBER 28, 2022

TP-1	APPROX. GRADE EL. 30.1	TP-2	APPROX. GRADE EL. 29.7	TP-3	APPROX. GRADE EL. 30.5	TP-4	APPROX. GRADE EL. 30.5	TP-5	APPROX. GRADE EL. 30.2
ABANDONED									
		EL. 28.9	A HORIZON SANDY LOAM 10YR 3/2	9"	EL. 29.7	A HORIZON SANDY LOAM 10YR 3/2	10"	EL. 29.5	A HORIZON SANDY LOAM 10YR 3/2
		EL. 28.4	B HORIZON SANDY LOAM 10YR 5/6	16"	EL. 28.5	B HORIZON SANDY LOAM 10YR 5/6	24"	EL. 28.6	B HORIZON SANDY LOAM 10YR 5/6
		EL. 19.7	C HORIZON SANDY LOAM 2.5Y 5/4	120"	EL. 18.5	C HORIZON SANDY LOAM 2.5Y 5/4	120"	EL. 20.2	C HORIZON SANDY LOAM 2.5Y 5/4
			WEeping OBSERVED: 40" MOTTling OBSERVED: 25" PERC. RATE: 14 MPI @ 32-50" ESHGW: 25" (EL. 27.6)			WEeping OBSERVED: 42" MOTTling OBSERVED: 26" PERC. RATE: 16 MPI @ 22-40" ESHGW: 25" (EL. 28.4)			WEeping OBSERVED: 45" MOTTling OBSERVED: 24" PERC. RATE: NONE ESHGW: 24" (EL. 28.2)

### 1,500 GAL. (H-20 RATED) SEPTIC TANK DETAIL



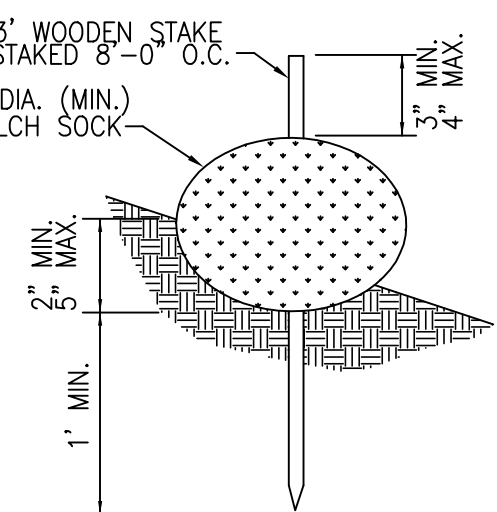
- NOTES:
1. THE SEPTIC TANK INLET AND OUTLET COVERS SHALL BE EXTENDED TO FINISHED GRADE AND EQUIPPED WITH 20" DIA. CAST IRON FRAME & COVER.
  2. ALL PIPE CONNECTION AND CONSTRUCTION JOINTS SHALL BE SEALED WITH HYDRAULIC CEMENT.
  3. SEPTIC TANK SHALL BE INSTALLED ON A LEVEL 6" CRUSHED STONE BASE.
  4. OUTLET SHALL BE EQUIPPED WITH A ZABEL A100 EFFLUENT FILTER (OR APPROVED EQUAL).

### PUMP DESIGN NOTES

1. THE PUMP CONTROLS SHALL BE DESIGNED TO ALLOW THE FIELD TO BE DOSED WITH 125 GAL. PER DOSE (APPROX. 1.8 TIMES IN A 24-HOUR PERIOD UNDER NORMAL OPERATION CONDITIONS).
2. USE GOULDS SUBMERSIBLE SEWAGE PUMP WS03B, 1/3 HP, 2" DISCHARGE, 2" SOLIDS CAPACITY, T.D.H. = 11.0± FT. @ 14.4 GPM OR APPROVED EQUAL.
3. INSTALL HIGH WATER MERCURY FLOAT LEVEL CONTROL IN PUMP CHAMBER WITH VISIBLE FLASHING AND AUDIBLE ALARMS. CONTRACTOR TO COORDINATE LOCATIONS WITH HOMEOWNER. PUMP POWER SHALL BE LOCATED ON SEPARATE CIRCUIT FROM THE ALARM CIRCUIT. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN UNDER A VALID PERMIT AND INSPECTED BY THE TOWN WIRING INSPECTOR.
4. ELECTRICAL CONDUIT TO CONTROL PANEL (SIMPLEX OR EQUAL) MOUNTED INSIDE BUILDING. PUMP POWER CABLE AND FLOAT CONTROL TO BE PLACED IN CONDUIT IN ACCORDANCE WITH LOCAL BUILDING AND ELECTRICAL CODES.

### 24 HOUR EMERGENCY STORAGE (220 GAL. MIN.)

EL. = 31.95 INVERT IN  
EL. = 29.70 ALARM ON  
2.25" GAL. AVAILABLE STORAGE  
x 250 GAL./VERT. FOOT = 562.50 GALLONS



### STAKED MULCH SOCK DETAIL

NOT TO SCALE

DESCRIPTION	EXISTING	PROPOSED
DRIVEWAY	0 S.F.	1,600 S.F.
ROOF	0 S.F.	470 S.F.
RETAINING WALL	0 S.F.	216 S.F.
TOTAL	0 S.F.	2,286 S.F.
LOT PERCENTAGE	0%	5.6% OF UPLAND AREA

AREA OF DISTURBANCE (NATURAL SLOPES >25%) = 0 S.F.  
TOTAL AREA OF DISTURBANCE = 7,720± S.F.

### DEGRADED AREA CALCULATIONS

DESCRIPTION	EXISTING	PROPOSED
INNER RIPARIAN	0 S.F.	0 S.F.
OUTER RIPARIAN	1,052 S.F.	300 S.F.
TOTAL	1,052 S.F.	300 S.F.

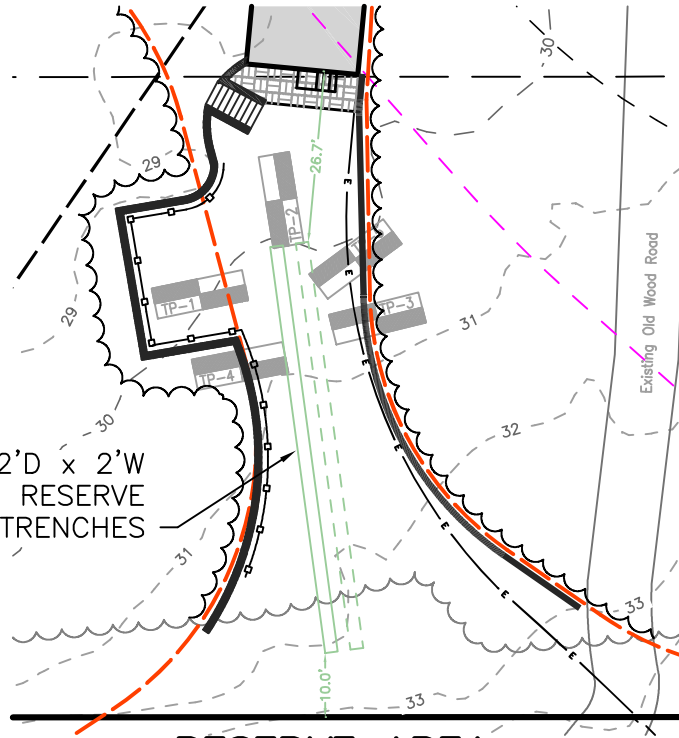
RIVERFRONT AREA ON-SITE = 45,844 S.F.  
TOTAL RFA DISTURBANCE = 3,043 S.F. < 4,584 S.F.\*

\*PER 310 CMR 10.58, ANY LOT CREATED AFTER 10/6/1997 MAY ALTER UP TO 10% OF THE RIVERFRONT AREA ON THE PROPERTY (LAWN & DWELLING)

### REMOVE & REPLACE NOTE

CONTRACTOR TO EXCAVATE ALL UNSUITABLE MATERIAL TO A DEPTH OF C HORIZON (EL. = 28.4) DIRECTLY UNDER & WITHIN 5' OF PROPOSED LEACHING AREA AND REPLACE CLEAN TITLE 5 PERC SAND TO TOP OF PEASTONE ELEVATION.

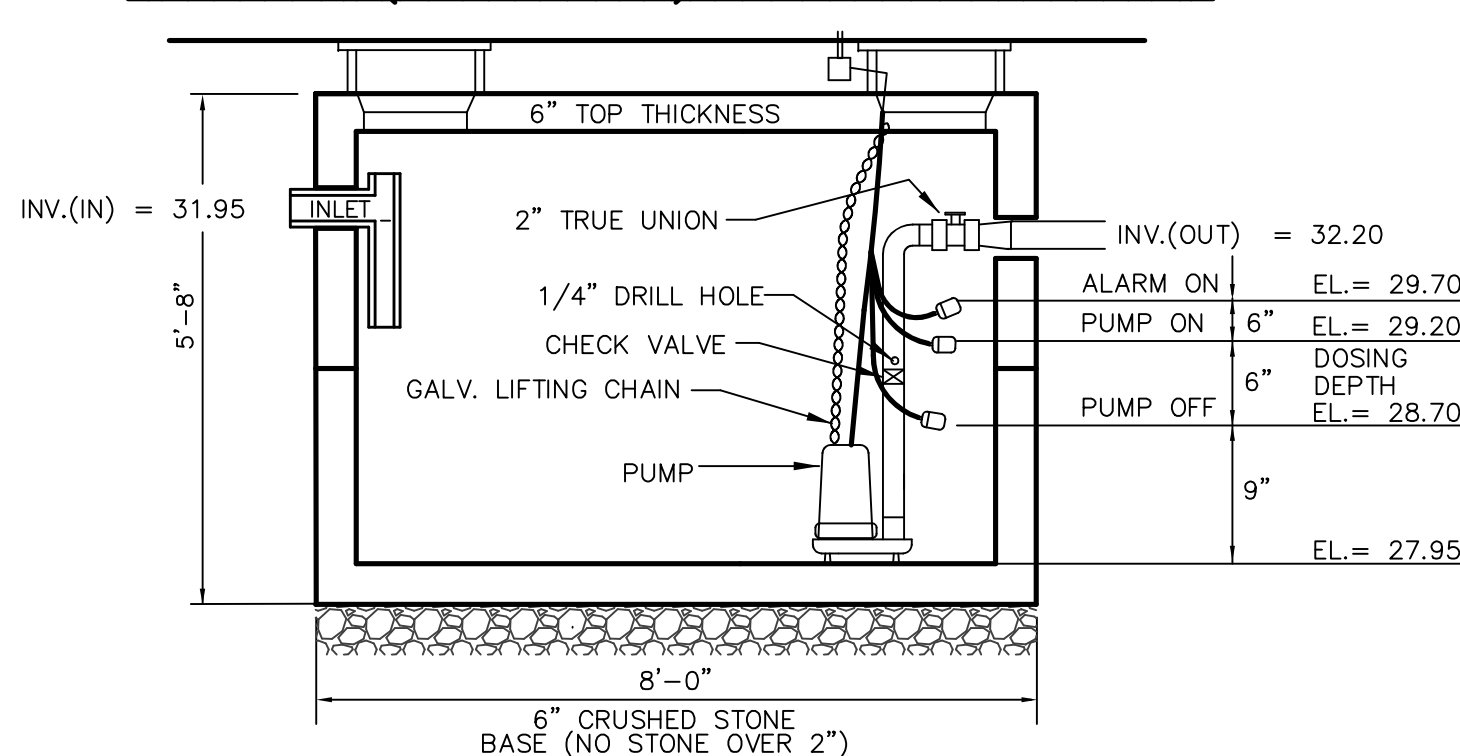
VOL. OF SAND = (18.0'W x 60.0'L x (33.69-28.4)D x 1.2) / 27 = 254± C.Y.



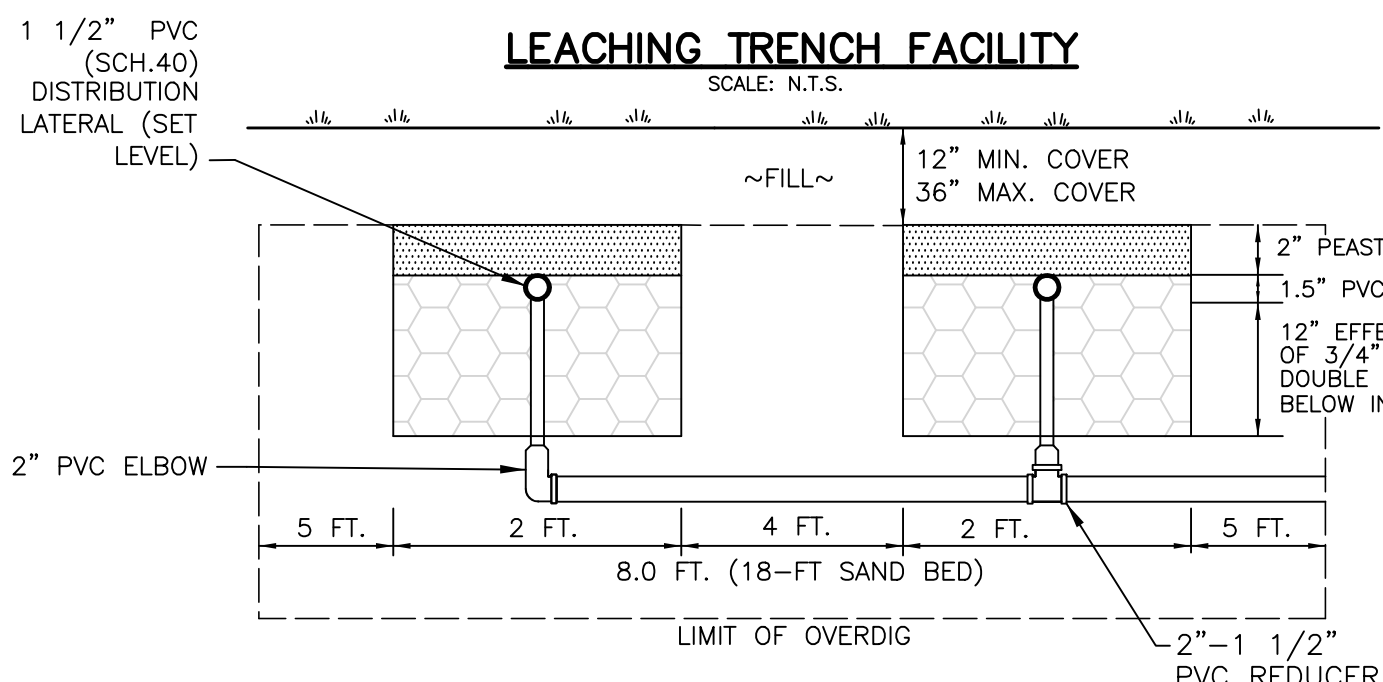
### RESERVE AREA

1" = 30'

### 1,000 GAL. (H-20 RATED) PUMP CHAMBER DETAIL



1. THE PUMP CHAMBER INLET AND OUTLET COVERS SHALL BE EXTENDED TO FINISHED GRADE & EQUIPPED WITH 20" DIA. CAST IRON FRAME & COVERS.
2. ALL PIPE CONNECTION AND CONSTRUCTION JOINTS SHALL BE SEALED WITH HYDRAULIC CEMENT.
3. SEPTIC TANK SHALL BE INSTALLED ON A LEVEL 6" CRUSHED STONE BASE.

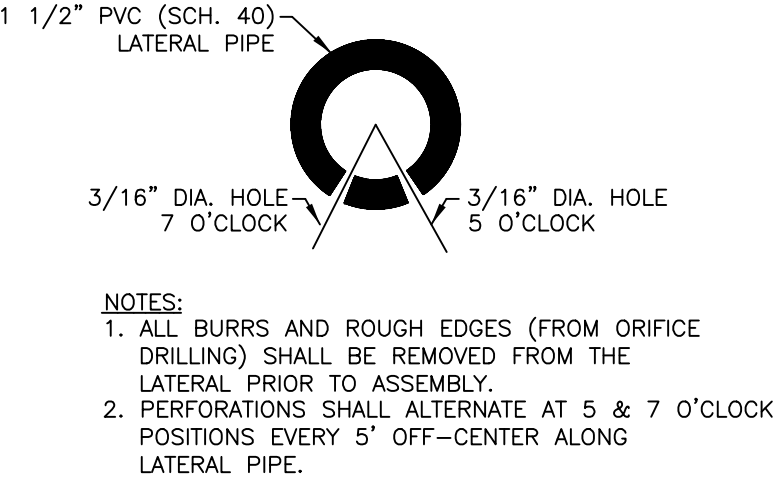


### LEACHING TRENCH FACILITY

SCALE: N.T.S.

### PERFORATION DETAIL

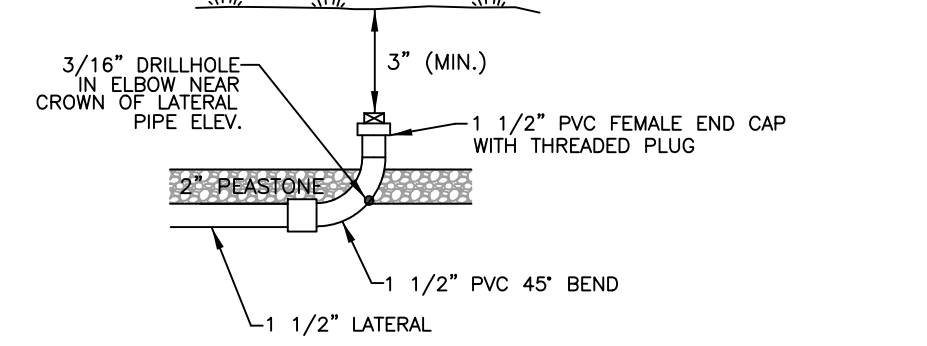
SCALE: N.T.S.



- NOTES:
1. ALL BURRS AND ROUGH EDGES (FROM ORIFICE DRILLING) SHALL BE REMOVED FROM THE LATERAL PRIOR TO ASSEMBLY.
  2. PERFORATIONS SHALL ALTERNATE AT 5 & 7 O'CLOCK POSITIONS EVERY 5' OFF-CENTER ALONG LATERAL PIPE.

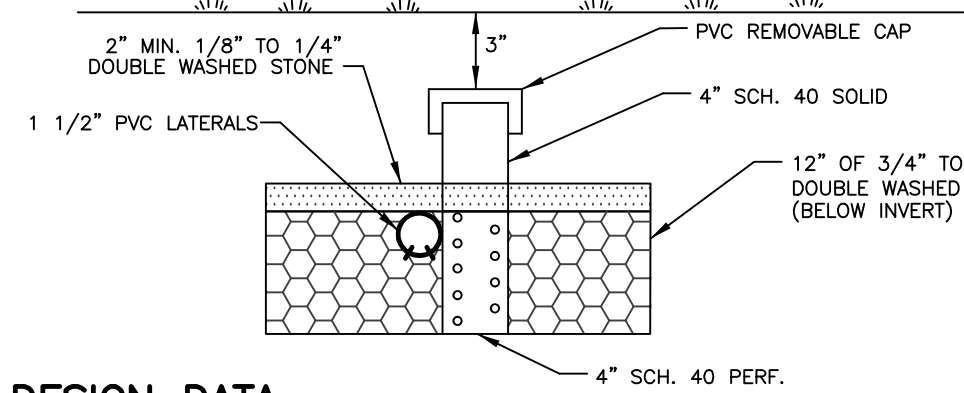
### PRESSURE LATERAL CLEANOUT

SCALE: N.T.S.



### INSPECTION PORT

SCALE: N.T.S.



### DESIGN DATA

1. BUILDING TYPE: SINGLE FAMILY DWELLING
2. NUMBER OF BEDROOMS: 2 (DEED RESTRICTION REQUIRED)
3. DESIGN FLOW: 2 x 110 GPD/BEDROOM = 220 GPD (GALLONS PER DAY)
4. DESIGN PERCOLATION RATE: 16 MPI (TP-3, CLASS II)
5. GARBAGE DISPOSAL: NO
6. SEPTIC TANK DESIGN REQUIREMENT: 200% DESIGN FLOW  
220 x 2 = 440 GAL. (PROVIDE NEW 1,500 GALLON SEPTIC TANK)
7. LEACH AREA REQUIREMENTS (GALLONS PER DAY / SQUARE FOOT)  
BOTTOM: 0.58 GPD/S.F. SIDE: 0.58 GPD/S.F.
8. PRIMARY TOTAL LEACH AREA REQUIRED:  
TITLE 5: 220 GPD / (0.58 GPD/S.F.) = 379.3 S.F.  
PROVIDED: (2) 50.0 L.F. CRUSHED STONE PRESSURE DOSED TRENCHES  
EFFECTIVE AREA: (100 L.F. x 4 S.F./L.F.) = 400 S.F.  
CAPACITY = 400 S.F. x 0.58 GPD/S.F. = 232 GPD
9. RESERVE LEACH AREA REQUIRED:  
TITLE 5 REQUIRED AREA: 379.3 S.F.  
PROVIDED: 64'L x 2'D x 2'W PRIMARY & RESERVE LEACHING TRENCHES  
CAPACITY: 64'L x 6 S.F./L.F. = 384 S.F.

### GENERAL NOTES

1. SEPTIC SYSTEM INSTALLATION CONTRACTORS SHALL BE LICENSED BY THE BOARD OF HEALTH AND MUST COMPLY WITH ALL REQUIREMENTS OF THE BOARD OF HEALTH DISPOSAL WORKS CONSTRUCTION PERMIT AND ANY CONDITIONS, IF ISSUED BY THE CONSERVATION COMMISSION.
2. ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
3. THERE SHALL BE NO CHANGES MADE IN THIS PLAN WITHOUT THE WRITTEN PERMISSION OF THE BOARD OF HEALTH AND DESIGN ENGINEER.
4. ANY CHANGES IN SITE CONDITIONS, DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING PRIOR TO THE COMMENCEMENT OF WORK.
5. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH TITLE 5 (310 CMR 15) AND THE LOCAL BOARD OF HEALTH REQUIREMENTS TO THE FULLEST EXTENT PRACTICABLE. NO GUARANTEE TO THE SYSTEMS PERFORMANCE IS EXPRESSED OR IMPLIED.
6. SOIL TEST DATA SHOWN IS LIMITED TO THE CONDITIONS EXISTING AT THE SUBJECT TEST PIT LOCATION ONLY. IF DIFFERENT SOIL CONDITIONS ARE FOUND IN THE AREA OF THE PROPOSED SOIL ABSORPTION SYSTEM THEY SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING IMMEDIATELY.
7. THE CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO ANY EXCAVATION AT THE SUBJECT PROPERTY. IT IS SPECIFICALLY CAUTIONED THAT THE SUBSURFACE UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE BEEN COMPILED FROM AVAILABLE RECORDS AND OBSERVABLE SITE FEATURES. UTILITIES OTHER THAN THOSE SHOWN MAY BE PRESENT AT THIS LOCATION.
8. THIS PLAN HAS BEEN PREPARED SPECIFICALLY AS A SEPTIC SYSTEM DESIGN AND IS NOT TO BE USED TO ESTABLISH PROPERTY LINES OR BUILDING SETBACKS. PROPERTY LINES AND BUILDING LOCATIONS ARE GRAPHIC ONLY, PROPERTY LINES NOT HAVING BEEN VERIFIED. NO REPRESENTATION OR CERTIFICATION AS TO THE ACCURACY OF THOSE SHOWN IS IMPLIED.
9. CONTRACTOR TO VERIFY AND ENSURE THAT ALL INTERIOR PLUMBING IS DIRECTED INTO PROPOSED SEPTIC SYSTEM. ANY VARIATIONS FROM THE DESIGN AS SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.

### CONSTRUCTION NOTES

1. CONTRACTOR SHALL COORDINATE INSPECTION TIMES WITH THE LOCAL BOARD OF HEALTH AND DESIGN ENGINEER 24-HOURS IN ADVANCE OF THE FOLLOWING INSPECTIONS:
  1. AFTER EXCAVATION OF ALL UNSUITABLE MATERIAL FROM SOIL ABSORPTION AREA.
  2. PRIOR TO COVERING THE CONSTRUCTED SYSTEM.
  3. AFTER SYSTEM BACKFILL AND FINAL GRADING.
2. ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
3. ALL TIGHT-JOINT PLUMBING SHALL BE CONSTRUCTED OF SCH. 40 PVC PIPE WITH CLEANED AND CEMENTED FITTINGS, UNLESS OTHERWISE NOTED.
4. ALL PRECAST/PIPE CONSTRUCTION JOINTS AND FITTINGS SHALL BE MADE WATERTIGHT BY PARING WITH HYDRAULIC CEMENT.
5. THE CONTRACTOR SHALL PROVIDE A SIEVE ANALYSIS OF THE TITLE 5 PERC SAND UTILIZED FOR FILL TO VERIFY THAT IT MEETS THE REQUIREMENTS OF 310 CMR 15.255(3). TITLE 5 SAND FILL SHALL COMPLY WITH THE FOLLOWING:

SIEVE SIZE	PARTICLE SIZE
#4	4.75 mm
#50	0.30 mm
#100	0.15 mm
#200	0.075 mm
6. THE CONTRACTOR SHALL PREVENT ANY HEAVY CONSTRUCTION MACHINERY AND/OR TRUCKS FROM DRIVING OVER THE PROPOSED SOIL ABSORPTION SYSTEM LOCATION UNTIL FINISHED GRADE IS ESTABLISHED.
7. THE CONTRACTOR SHALL INSTALL MAGNETIC TAPE OVER SYSTEM PIPING & COMPONENTS
8. THE DESIGN ENGINEER SHALL CERTIFY AND PREPARE AN "AS-BUILT" PLAN FOR SUBMITTAL TO THE BOARD OF HEALTH UPON SEPTIC SYSTEM COMPLETION.
9. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" LOAM & SEED POST CONSTRUCTION.
10. ALL SEPTIC SYSTEM COMPONENTS TO BE STAKED OUT BY PROFESSIONAL LAND SURVEYOR PRIOR TO SYSTEM INSTALLATION.
11. CONTRACTOR SHALL ABANDON EXISTING SEPTIC COMPONENTS IN ACCORDANCE WITH 310 CMR SEC. 15.354 OF TITLE 5 AND LOCAL REGULATIONS BY PUMPING DRY, CRUSHING AND ABANDONING.

### SITE NOTES

1. LOCUS DOES NOT LIE WITHIN A DEP DESIGNATED ZONE A OR II RESOURCE AREA.
2. ALL KNOWN WETLANDS WITHIN 100 FEET OF THE PROPOSED SEWAGE SYSTEM ARE SHOWN.
3. PROPERTY LINE DATA WAS OBTAINED FROM RECORDED DEED (5321-409), AN APPROVAL NOT REQUIRED PLAN PREPARED BY MORSE ENGINEERING COMPANY, AND RECORDED PLANS ON FILE AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS.
4. ALL ACTIVE/POTABLE WELLS THAT EXIST OR ARE PROPOSED WITHIN 100-FT OF THE SEPTIC ARE SHOWN.
5. LOT A LIES IN FEMA ZONE "X" AS SHOWN ON FEMA COMMUNITY MAP PANEL 25023C 0108L DATED JULY 6, 2021. ZONE "X" IS NOT A SPECIAL FLOOD HAZARD AREA.

### \*DEED RESTRICTION FOR TWO BEDROOMS REQUIRED\*

PREPARED BY:		DESIGN: PGG
PROJECT: LOT A BOOTH HILL ROAD (PORTION OF ASSESSOR'S PARCEL: 12-1-1R) SCITUATE, MASSACHUSETTS		CHECK: GJM
APPLICANT: PETER FRYLING		JOB NO: 21-155
PLAN TITLE: SEPTIC & SITE PLAN		DATE: 2/5/2024
		REV:
		SHEET:

