

SEPTIC TANK NOTES:
SEPTIC TANK SHALL BE A PRECAST, REINFORCED CONCRETE TANK MADE WATER-TIGHT. CONSTRUCTION MATERIALS AND DIMENSIONS SHALL CONFORM TO TITLE 8 AND AASHTO HS 10 REQUIREMENTS AND PLACED ON A STABLE, MECHANICALLY COMPACTED LEVEL BASE.
TANK / SYSTEM TO BE VENTED THROUGH THE BUILDING PLUMBING SYSTEM AS REQUIRED BY BUILDING CODE.
TANK SHOULD BE INSPECTED, MAINTAINED AND BE PUMPED OUT WHEN SLUDGE DEPTH IN THE BOTTOM EXCEEDS ONE FOURTH OF THE TOTAL LIQUID DEPTH.
SEPTIC TANKS SHALL BE FITTED WITH CONCRETE COLLARS 24" MINIMUM INSIDE DIAMETER AS NECESSARY TO BRING AT LEAST ONE ACCESS COVER TO WITHIN NOT MORE THAN 12" BELOW FINISHED GRADE.
INVERT OUT OF SEPTIC TANK SHALL BE A MINIMUM OF 12" ABOVE GROUNDWATER.

"D" BOX NOTES:
"D" BOX TO BE MADE WATER-TIGHT. CONSTRUCTION MATERIALS AND DIMENSIONS SHALL CONFORM TO TITLE 8 AND AASHTO HS 10 REQUIREMENTS AND PLACED ON A STABLE, MECHANICALLY COMPACTED LEVEL BASE.
"D" BOX OUTLETS SHALL BE INSTALLED LEVEL ("BUILT UP" INVERTS, NOT PERMITTED).
FIRST 2' (MIN.) OF OUTLETS SHALL BE INSTALLED LEVEL TO EQUALIZE FLOW.
THE MINIMUM INSIDE DIMENSIONS OF THE "D" BOX TO BE 12" AND THE MINIMUM WALL THICKNESS TO BE 2".
WHEN INLET PIPE SLOPE EXCEEDS 8% PVC INLET TEE REQUIRED, CUT LOW END 1" ABOVE OUTLET INVERT.
"D" BOX COVER TO BE SEALED WITH BITUMEN.
DISTRIBUTION BOXES BURIED GREATER THAN 9 INCHES BELOW GRADE SHALL BE EQUIPPED WITH RISERS.

LEACH AREA NOTES:
ALL LOAM, LARGE BOULDERS OR FOREIGN MATERIAL ENCOUNTERED DURING EXCAVATION ARE TO BE REMOVED FROM THE LEACHING AREA.
GRAVEL FILL IS REQUIRED, ALL TOP (A) & SUBSOIL (B) AND ORGANIC MATERIAL SHALL BE REMOVED FROM AREA TO BE FILLED. FILL SHALL BE COMPACTED TO MINIMIZE SETTLEMENT AND SHALL BE CLEAN GRANULAR MATERIAL, FREE FROM FINES AND ORGANIC MATERIALS, AND SHALL BE IN ACCORDANCE WITH 310 CMR 15.255(3).
ALL DISTURBED AREAS ARE TO BE LOAMED, SEEDED AND MAINTAINED TO PREVENT EROSION.
AREAS ABOVE THE SOIL ABSORPTION SYSTEM SHALL REMAIN PEROUS UNLESS UNAVOIDABLE. IN SUCH CASES THE SYSTEM SHALL BE VENTED.
THE SOIL ABSORPTION SYSTEM SHALL BE COVER BY A MINIMUM OF 12" AND A MAXIMUM OF 36" OF CLEAN BACKFILL MATERIAL, FREE OF STONES AND BOULDERS GREATER THAN 6" IN SIZE.

GENERAL NOTES:
ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
SYSTEM IS DESIGNED TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH NORMAL DOMESTIC USE AND CONSISTING OF WATER CARRIED PUTRESIBLE WASTE ONLY.
ALL COMPONENTS OF THE SEWAGE DISPOSAL SYSTEM SHALL BE COVERED BY A MAXIMUM OF 36" OF CLEAN BACKFILL MATERIAL, FREE OF STONES AND BOULDERS GREATER THAN 6" IN SIZE. OWNER SHALL VERIFY EFFECTIVE ZONING REGULATIONS PRIOR TO CONSTRUCTION.
PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISIBLE APPARENT ON DATE OF TOPOGRAPHY, AND THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. IS NOT INTENDED OR IMPLIED.
ALL PIPING SHALL BE LAID TRUE TO LINE, GRADE AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
THE DESIGN ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY PLAN DEFICIENCIES FOUND DUE TO UNFORESEEN SUBSURFACE CONDITIONS OR OTHER REASONS THAT MIGHT AFFECT THE FUNCTION OF THIS DESIGNED SYSTEM.
CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY EXCAVATION. 1-888-DIG-SAFE (344-7233)
PRIOR TO ANY CONSTRUCTION A BENCHMARK SHALL BE SET WITHIN 50'-75' OF THE PROPOSED SEWAGE DISPOSAL SYSTEM.
HYDRAULIC CEMENT IS REQUIRED TO SEAL ALL CONNECTIONS AT THE SEPTIC TANK, "D" BOX AND WHEN REQUIRED, THE PUMP CHAMBER.
WATER SOFTENERS ARE NOT TO BE CONNECTED TO SEPTIC SYSTEM.
SUBSURFACE DRAINAGE, EXCLUDING FOOTING DRAINS, IS NOT TO BE LOCATED CLOSER THAN THE FOLLOWING DISTANCES:
IN AREAS NOT TRIBUTARY TO SURFACE WATER SUPPLIES OR ZONE OF PUBLIC WELLS
SEPTIC TANK 100 FEET
LEACHING FIELD 25 FEET
IN AREAS TRIBUTARY TO SURFACE WATER SUPPLIES OR ZONE OF PUBLIC WELLS
SEPTIC TANK 100 FEET
LEACHING FIELD 100 FEET

OBSERVATION TEST HOLE DATA
PERFORMED BY: SETH LAJOIE / SE#1304
WITNESSED BY: STEVEN DONATELLI (8/10/22)

822-1 (Elev. = 341.4)	0'-14"	Ap	FINE SANDY LOAM
	14'-36"	Bw	LOAMY SAND
	36'-120"	C	LOAMY SAND

MOTTLING OBSERVED @ 48" (Elev. 337.4)
NO GROUNDWATER OBSERVED
E.S.H.W.T. = 48"
NO REFUSAL

822-2 (Elev. = 341.5)	0'-14"	Ap	FINE SANDY LOAM
	14'-36"	Bw	LOAMY SAND
	36'-120"	C	LOAMY SAND

MOTTLING OBSERVED @ 48" (Elev. 337.5)
NO GROUNDWATER OBSERVED
E.S.H.W.T. = 48"
NO REFUSAL

822-3 (Elev. = 341.3)	0'-24"	Ap	FINE SANDY LOAM
	24'-48"	Bw	LOAMY SAND
	48'-120"	C	LOAMY SAND

MOTTLING OBSERVED @ 48" (Elev. 337.3)
NO GROUNDWATER OBSERVED
E.S.H.W.T. = 48"
NO REFUSAL

822-4 (Elev. = 341.7)	0'-24"	Ap	FINE SANDY LOAM
	24'-48"	Bw	LOAMY SAND
	48'-120"	C	LOAMY SAND

MOTTLING OBSERVED @ 48" (Elev. 337.7)
NO GROUNDWATER OBSERVED
E.S.H.W.T. = 48"
NO REFUSAL

DESIGN CRITERIA

PERC. TESTS: PERFORMED BY: SETH LAJOIE / SE#1304
WITNESSED BY: STEVE DONATELLI

PERC. #	RATE (M/I)	ELEVATION	DEPTH	DATE
822-A	3 MPI	341.3	62"-80"	8/10/22
822-B	5 MPI	341.1	61"-79"	8/10/22

LOADING RATE: 0.74 GPD/SQ.FT.
FLOWS: 4 BEDROOMS AT 110 GPD = 440 GPD (330 GPD MIN.)
SEPTIC TANK REQUIRED: (1,500 GAL. MIN.)
440 GPD x 3.0 = 1,320 GAL. TANK

LEACHING AREA PROVIDED:
A. BASIS 5 MIN./IN. PERCOLATION RATE

INFILTRATOR SIZING

UNIT DIMENSIONS 34"(W) x 48"(L) x 12"(H)	341.70
EFFECTIVE LEACHING AREA = 4.73 S.F./LF	
440 GPD/0.74 GPD/S.F. = 595 S.F.	
595 S.F./4.73 S.F./LF = 126 LF	
126 LF/4' PER UNIT = 31.5 UNITS - USE 32 UNITS	
USE 12' x 32' FIELD CONFIGURATION	

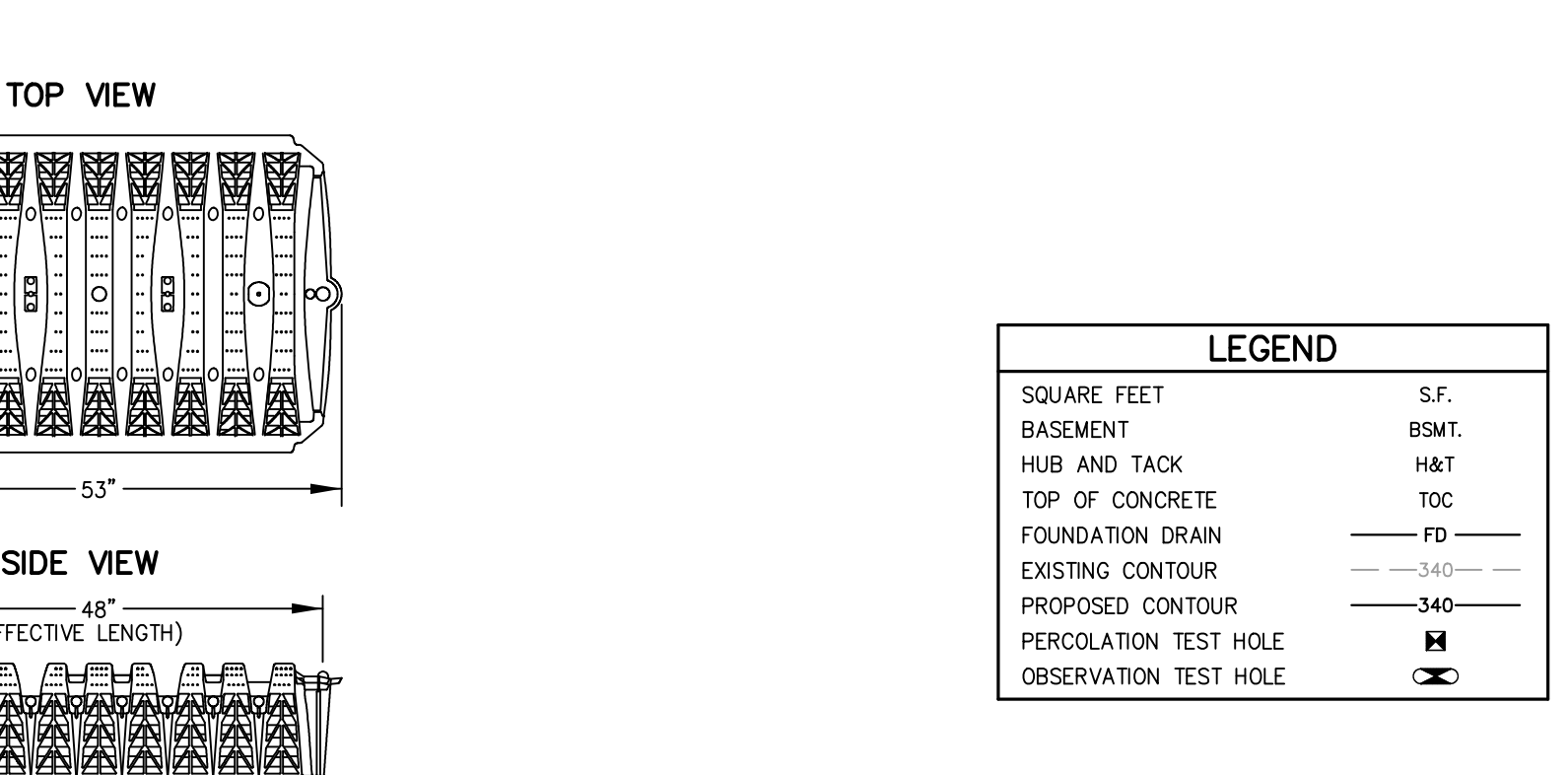
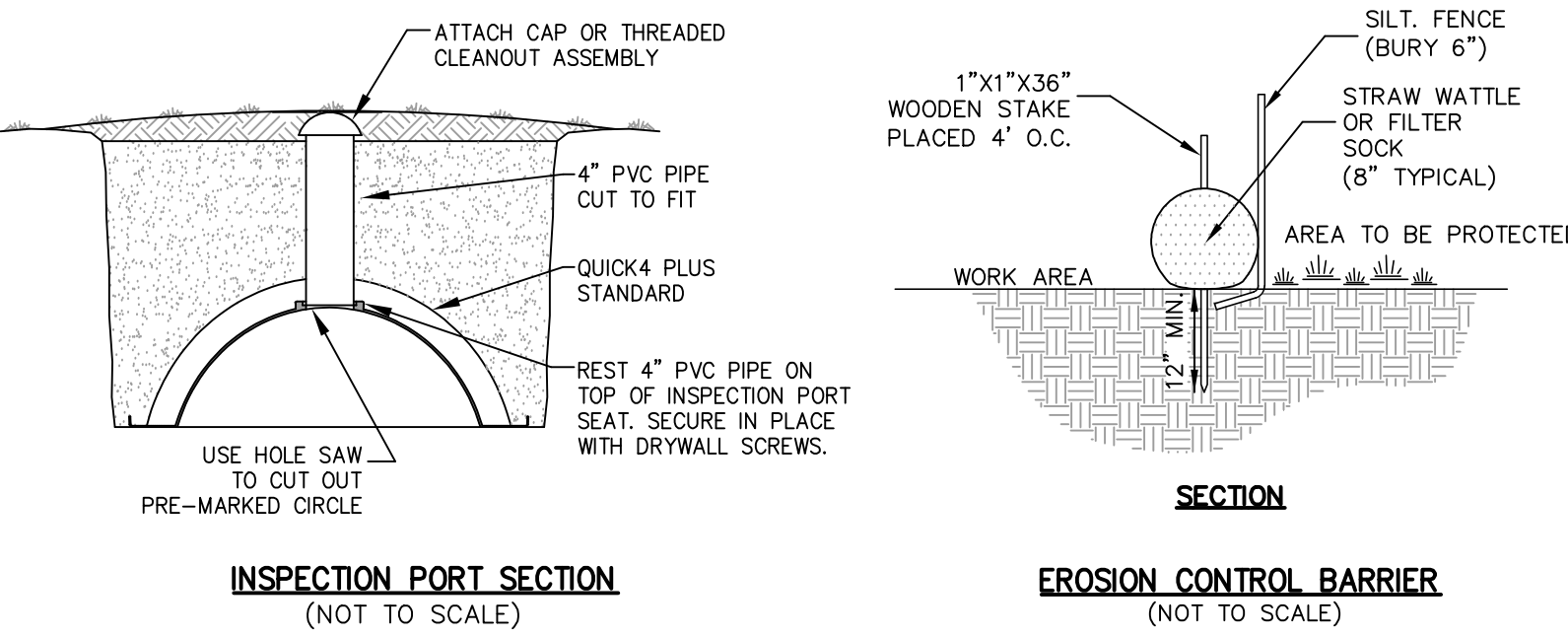
SCHEDULE OF ELEVATIONS

EXISTING GROUND ELEVATION	341.70
DEPTH TO GROUNDWATER	- 4.0'
GROUNDWATER ELEVATION	337.70
GROUNDWATER OFFSET	+ 4'
BOTTOM OF SYSTEM (MIN.)	341.70

SYSTEM IN FILL REQUIRED NOT REQUIRED
IF ANY PORTION OF THE PROPOSED LEACHING AREA IS LOCATED ABOVE EXISTING GRADE OR WITHIN TOPSOIL, PEAT OR OTHER UNSUITABLE OR IMPERVIOUS SOIL LAYER, THEN THE PLACEMENT OF FILL IS REQUIRED. PRIOR TO THE PLACEMENT OF FILL, ALL UNSUITABLE OR IMPERVIOUS SOILS SHALL BE EXCAVATED TO A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SOIL ABSORPTION SYSTEM TO THE DEPTH OF NATURALLY OCCURRING PEROUS MATERIAL. FILL MATERIAL SHALL BE SELECT, ON-SITE OR IMPORTED SOIL, CONSISTING OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES. MIXTURES AND LAYERS OF DIFFERENT SOIL CLASSES SHALL NOT BE USED. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 2 INCHES. A SEVE ANALYSIS USING A #4 SIEVE, SHALL BE PERFORMED ON A REPRESENTATIVE SAMPLE OF THE FILL UP TO 45% BY WEIGHT OF THE FILL SAMPLE MAY BE RETAINED IN THE #4 SIEVE. SEVE ANALYSES SHALL ALSO BE PERFORMED ON THE FRACTION OF FILL SAMPLE PASSING THE #4 SIEVE. SUCH ANALYSES MUST DEMONSTRATE THAT THE MATERIAL MEETS EACH OF THE FOLLOWING SPECIFICATIONS:

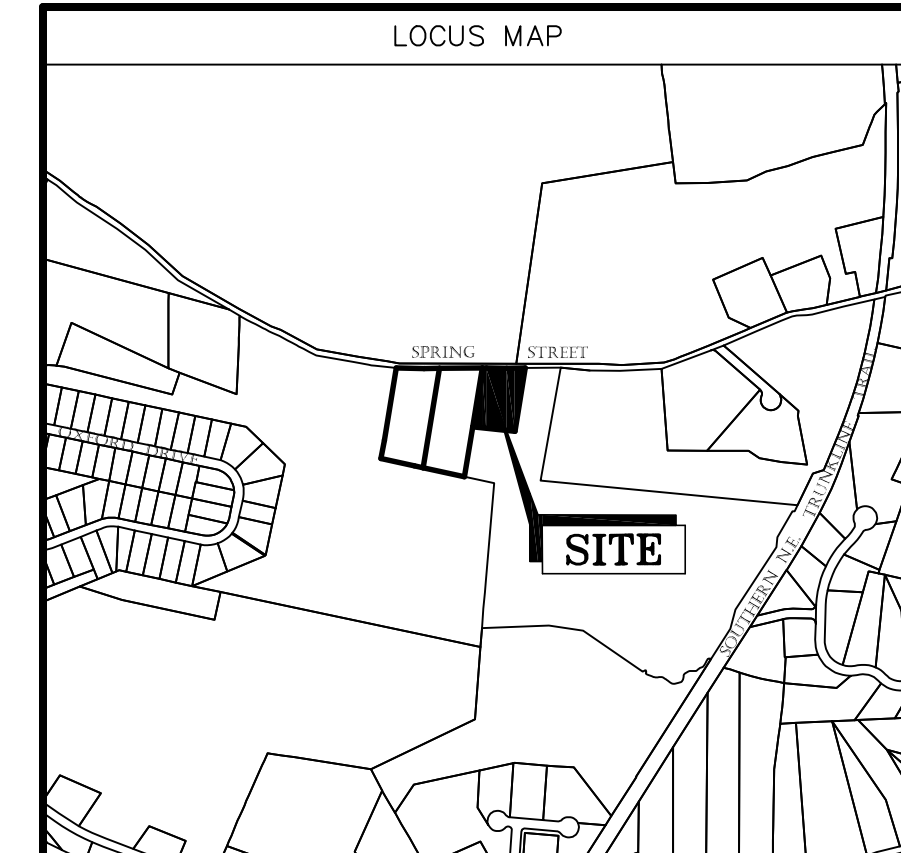
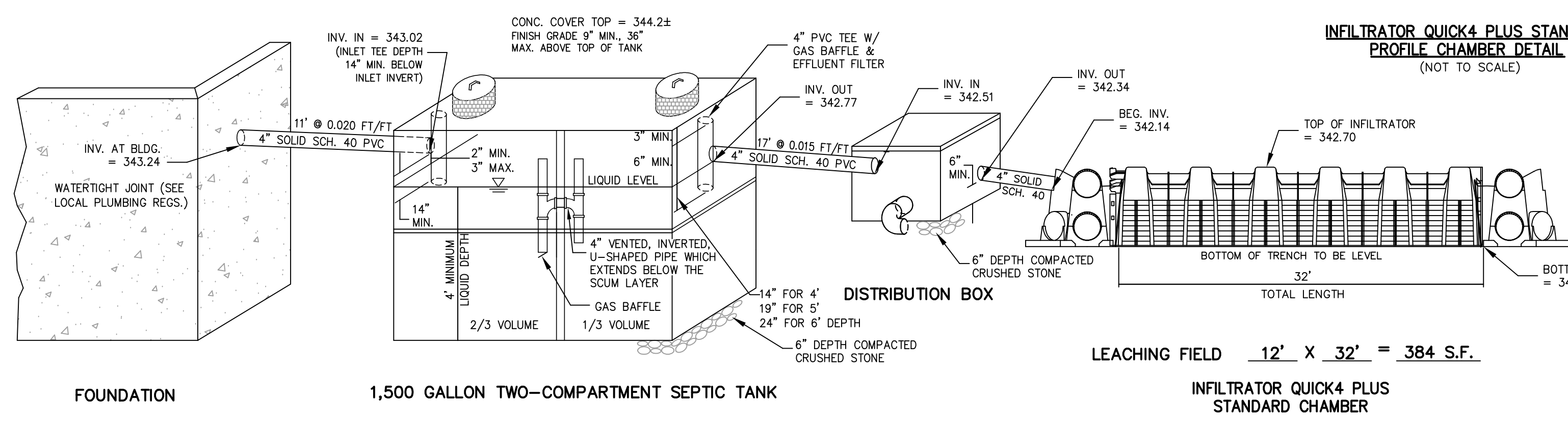
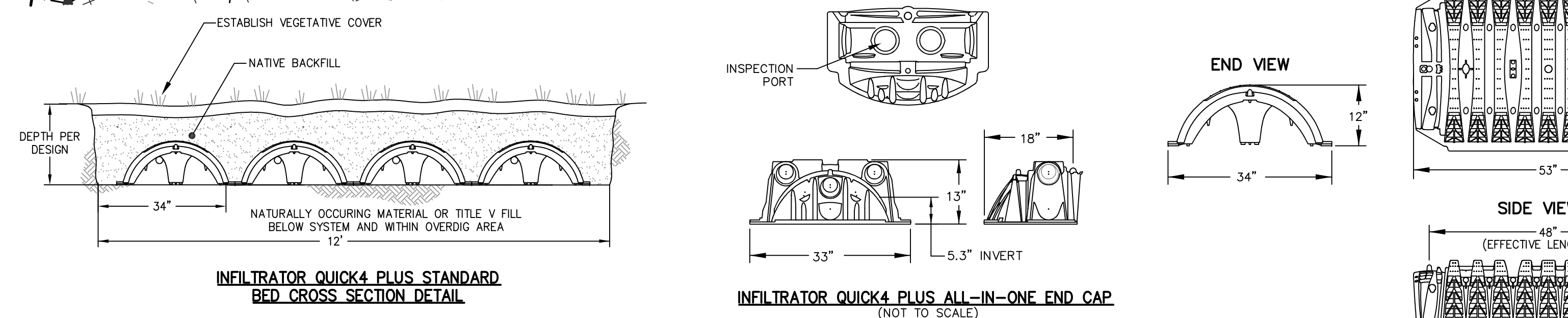
SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
# 4	4.75 MM	100%
# 50	0.85 MM	10%-100%
#100	0.15 MM	0%-20%
#200	0.075 MM	0%-5%

THERE ARE NO KNOWN WATER SUPPLIES OR TRIBUTARIES WITHIN 400' OF THE SEWAGE DISPOSAL SYSTEM. THE SITE IS DESIGNATED AS A NITROGEN SENSITIVE AREA AND THE NITROGEN LOADING LIMITATIONS HAVE BEEN MET AND DO NOT EXCEED 440 GALLONS OF DESIGN FLOW PER DAY PER ACRE.
THE SITE DOES NOT FALL WITHIN AN AQUIFER PROTECTION OVERLAY DISTRICT.
EXISTING PROPERTY LINE INFORMATION TAKEN FROM PLAN ENTITLED "PLAN OF LAND OF 60 SPRING STREET, FRANKLIN, MASSACHUSETTS OWNED BY LEWIS STREET REALTY TRUST" DATED JUNE 24, 2022, PREPARED BY GW SITE SOLUTIONS.
EXISTING TOPOGRAPHIC INFORMATION PREPARED BY SETH L. LAJOIE & ASSOCIATES AND VERIFIED BY TURNING POINT ENGINEERING.
WETLAND DELINEATION PERFORMED BY APPLIED ECOLOGICAL SCIENCES ON JUNE 28, 2023.
CONTRACTOR TO PROVIDE SAFETY BARRIERS/MEASURES AS NECESSARY TO ENSURE VEHICULAR AND PEDESTRIAN SAFETY.



LEGEND

SQUARE FEET	S.F.
BASEMENT	BSMT.
HUB AND TACK	H&T
TOP OF CONCRETE	TOC
FOUNDATION DRAIN	FD
EXISTING CONTOUR	-340-
PROPOSED CONTOUR	-340-
PERCOLATION TEST HOLE	⊗
OBSERVATION TEST HOLE	⊗



ZONING SUMMARY

ZONE: RURAL RESIDENTIAL-1
MIN. AREA: 40,000 S.F.
MIN. FRONTAGE: 200'
MIN. SETBACKS: FRONT - 40'
SIDE - 40'
REAR - 40'

GRAPHIC SCALE

20 0 10 20 40
(IN FEET)
1 inch = 20 feet

REVISIONS

NO.	DATE	DESCRIPTION

CAD FILE ...\\dwg\1136-SDS.dwg
DRAWN BY TRB, SJO
CHECKED BY JMM
DATE OCTOBER 18, 2023
PROJECT NO. TPE-1136
PLAN NO. L-406

SEWAGE DISPOSAL SYSTEM DESIGN
(LOT 3) #60 SPRING STREET
FRANKLIN, MA
A.P.O. MAP 310 PARCEL 2

OWNER/APPLICANT:
LEWIS STREET REALTY TRUST
28 TIA PLACE
FRANKLIN, MA 02038

TURNING POINT ENGINEERING
CIVIL SITE DESIGN

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