

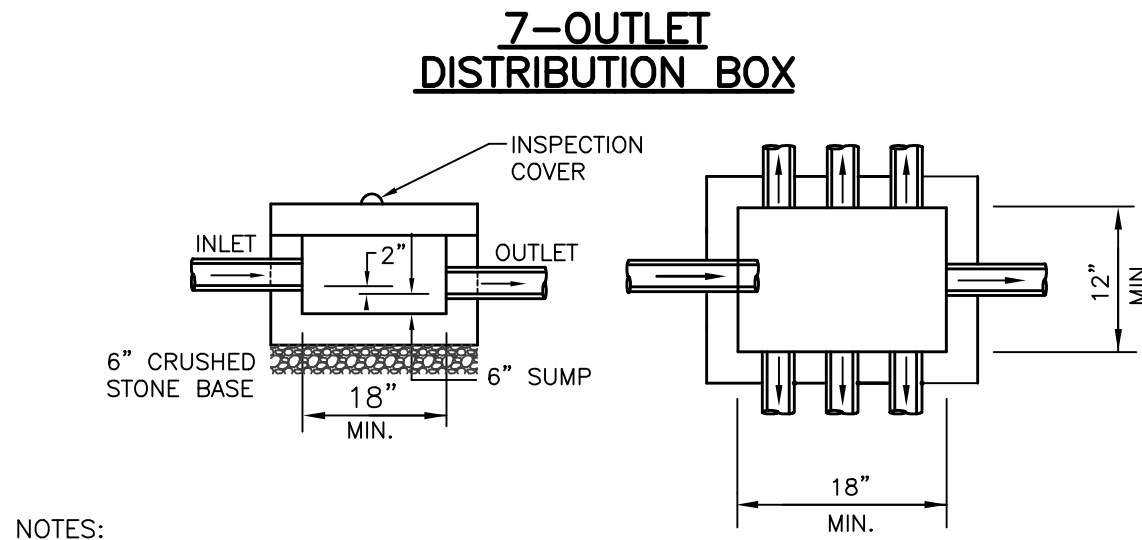
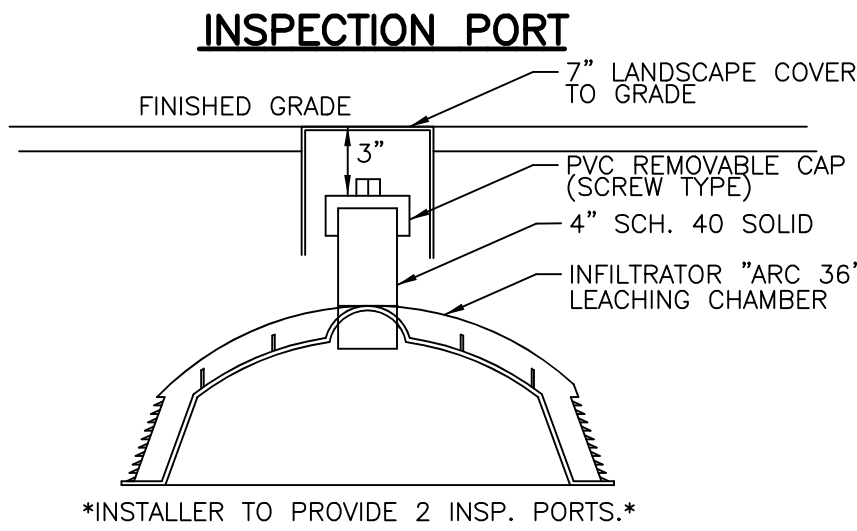
VICINITY MAP
NO SCALE



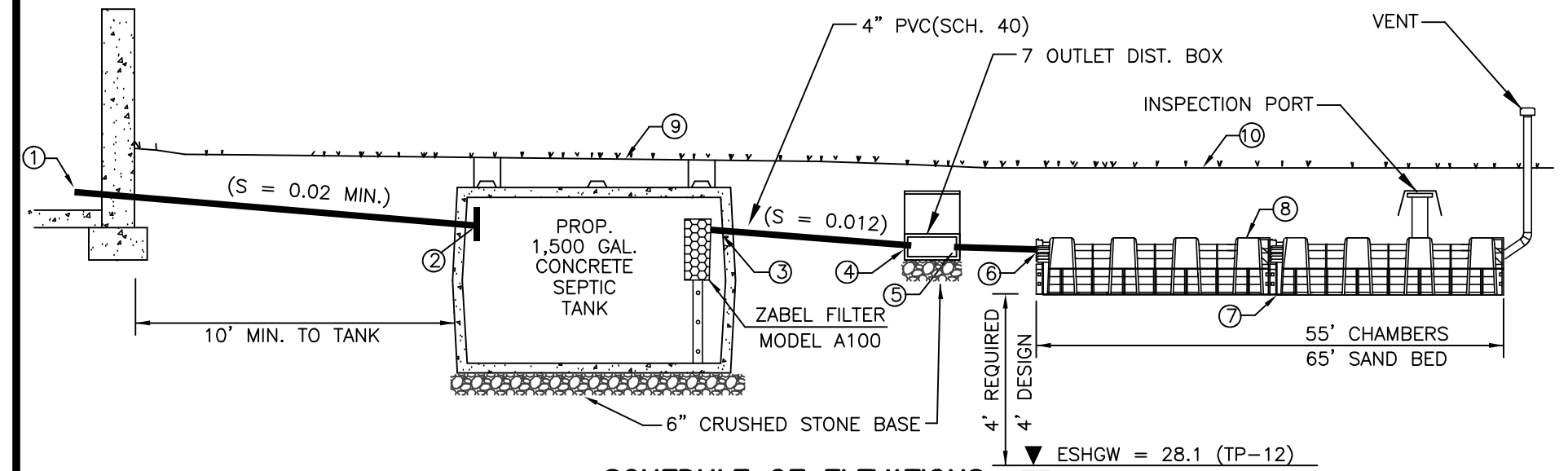
ZONING SUMMARY

TOWN OF SCITUATE "RESIDENCE 2" ZONING DISTRICT

CRITERIA	REQUIRED
LOT AREA	20,000 S.F.
FRONTAGE	100'
LOT WIDTH	125'
FRONT YARD	30'
SIDE YARD	15'
REAR YARD	30'

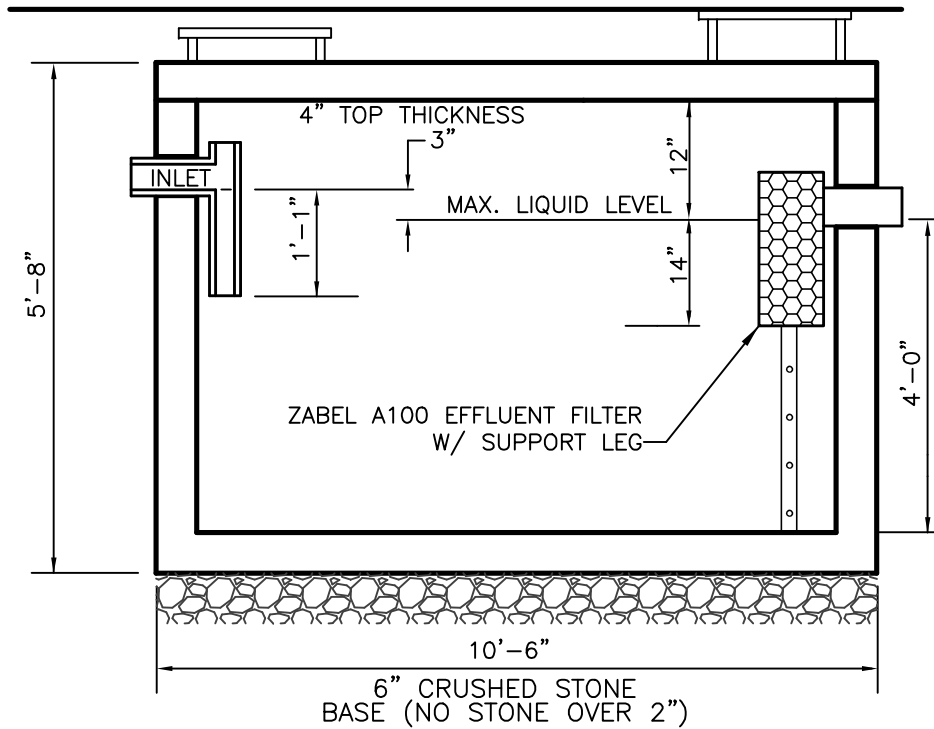


- NOTES:
- DISTRIBUTION BOX COVER SHALL BE EQUIPPED WITH RISERS AS NECESSARY TO BRING THE COVER TO WITHIN 6" OF FINISHED GRADE.
 - ALL PIPE CONNECTION AND CONSTRUCTION JOINTS SHALL BE SEALED WITH HYDRAULIC CEMENT.
 - DISTRIBUTION BOX TO BE INSTALLED ON A LEVEL 6" CRUSHED STONE BASE.
 - OUTLET DISTRIBUTION LINES SHALL BE LEVEL FOR A MINIMUM OF THE FIRST 2 FT. OF THEIR LENGTH.



1. PIPE INV. AT SLAB = 33.85 (MINIMUM)	6. INV. OF PIPE AT INFILTRATION CHAMBER = 32.69
2. INV. OF PIPE AT SEPTIC TANK INLET = 33.64	7. BOTTOM OF INFILTRATION CHAMBER = 32.10
3. INV. OF PIPE AT SEPTIC TANK OUTLET = 33.39	8. TOP OF CHAMBER (BREAKOUT) = 33.18
4. INV. OF PIPE AT DIST. BOX INLET = 32.92	9. FINISHED GRADE OVER SEPTIC TANK = 35.2 (MIN.) - 37.2 (MAX.)
5. INV. OF PIPE AT DIST. BOX OUTLET = 32.75	10. FINISHED GRADE OVER LEACHING FACILITY = 34.2 (MIN.) - 36.2 (MAX.)

1,500 GAL. SEPTIC TANK DETAIL



- THE SEPTIC TANK INLET COVER (20" DIA.) SHALL BE EXTENDED TO WITHIN 6" OF FINISHED GRADE & OUTLET COVER (20" DIA.) SHALL BE EXTENDED TO FINISHED GRADE.
- ALL PIPE CONNECTION AND CONSTRUCTION JOINTS SHALL BE SEALED WITH HYDRAULIC CEMENT.
- SEPTIC TANK SHALL BE INSTALLED ON A LEVEL 6" CRUSHED STONE BASE.
- OUTLET SHALL BE EQUIPPED WITH A ZABEL A100 EFFLUENT FILTER (OR APPROVED EQUAL).

GENERAL NOTES

- 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.
- ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
- THERE SHALL BE NO CHANGES MADE IN THIS PLAN WITHOUT THE WRITTEN PERMISSION OF THE BOARD OF HEALTH AND DESIGN ENGINEER.
- ANY CHANGE IN SITE CONDITIONS, DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING PRIOR TO THE COMMENCEMENT OF WORK.
- 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.
- 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.
- 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.
- 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.

CONSTRUCTION NOTES

- CONTRACTOR SHALL COORDINATE INSPECTION TIMES WITH THE LOCAL BOARD OF HEALTH AND DESIGN ENGINEER 24-HOURS IN ADVANCE OF THE FOLLOWING INSPECTIONS:
 - AFTER EXCAVATION OF ALL UNSUITABLE MATERIAL FROM SOIL ABSORPTION AREA.
 - PRIOR TO COVERING THE CONSTRUCTED SYSTEM.
 - AFTER SYSTEM BACKFILL AND FINAL GRADING.
- ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
- ALL TIGHT-JOINT PLUMBING SHALL BE CONSTRUCTED OF SCH. 40 PVC PIPE WITH CLEANED AND CEMENTED FITTINGS, UNLESS OTHERWISE NOTED.
- ALL PRECAST/PIPE CONSTRUCTION JOINTS AND FITTINGS SHALL BE MADE WATERTIGHT BY PARGING WITH HYDRAULIC CEMENT.
- 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:

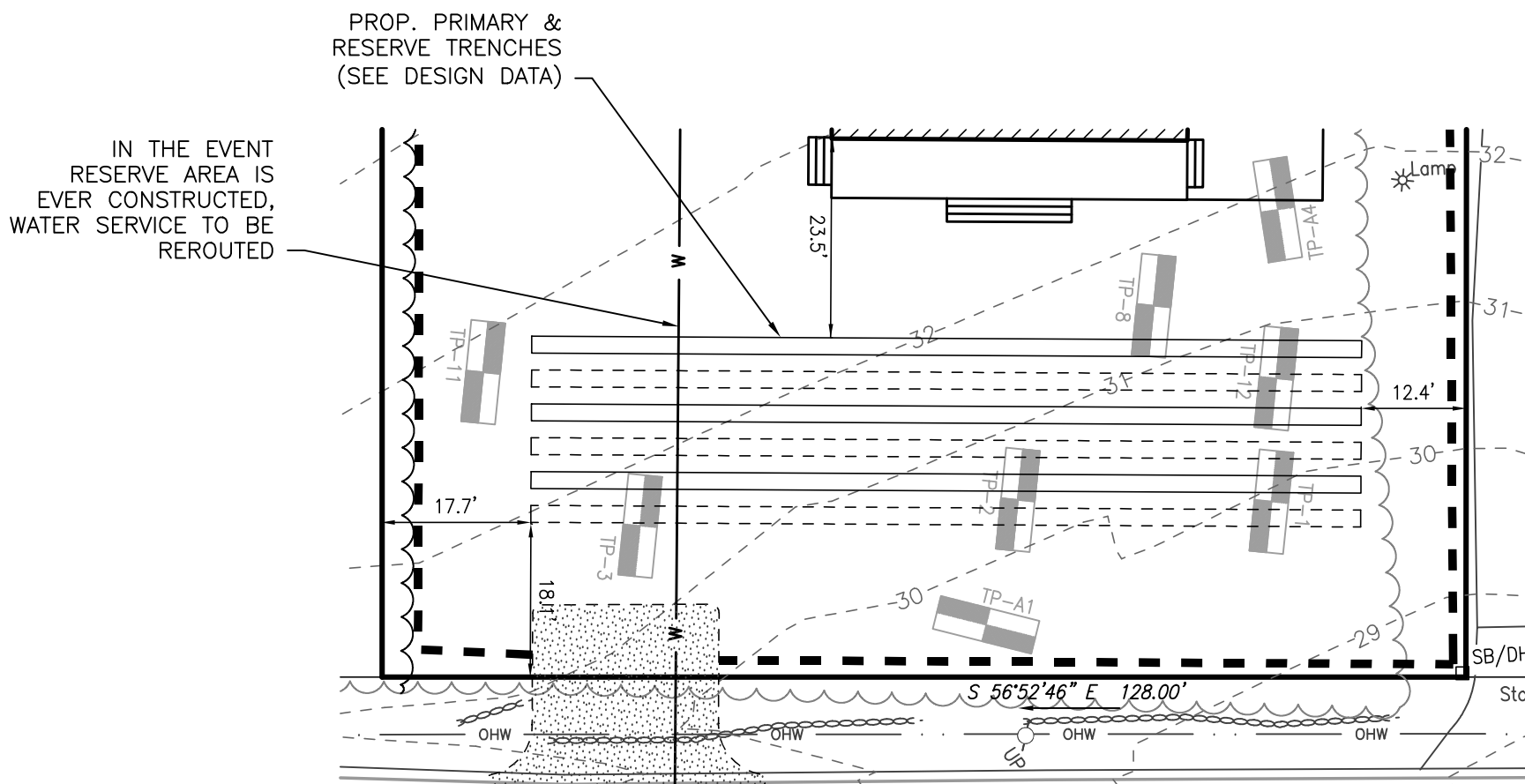
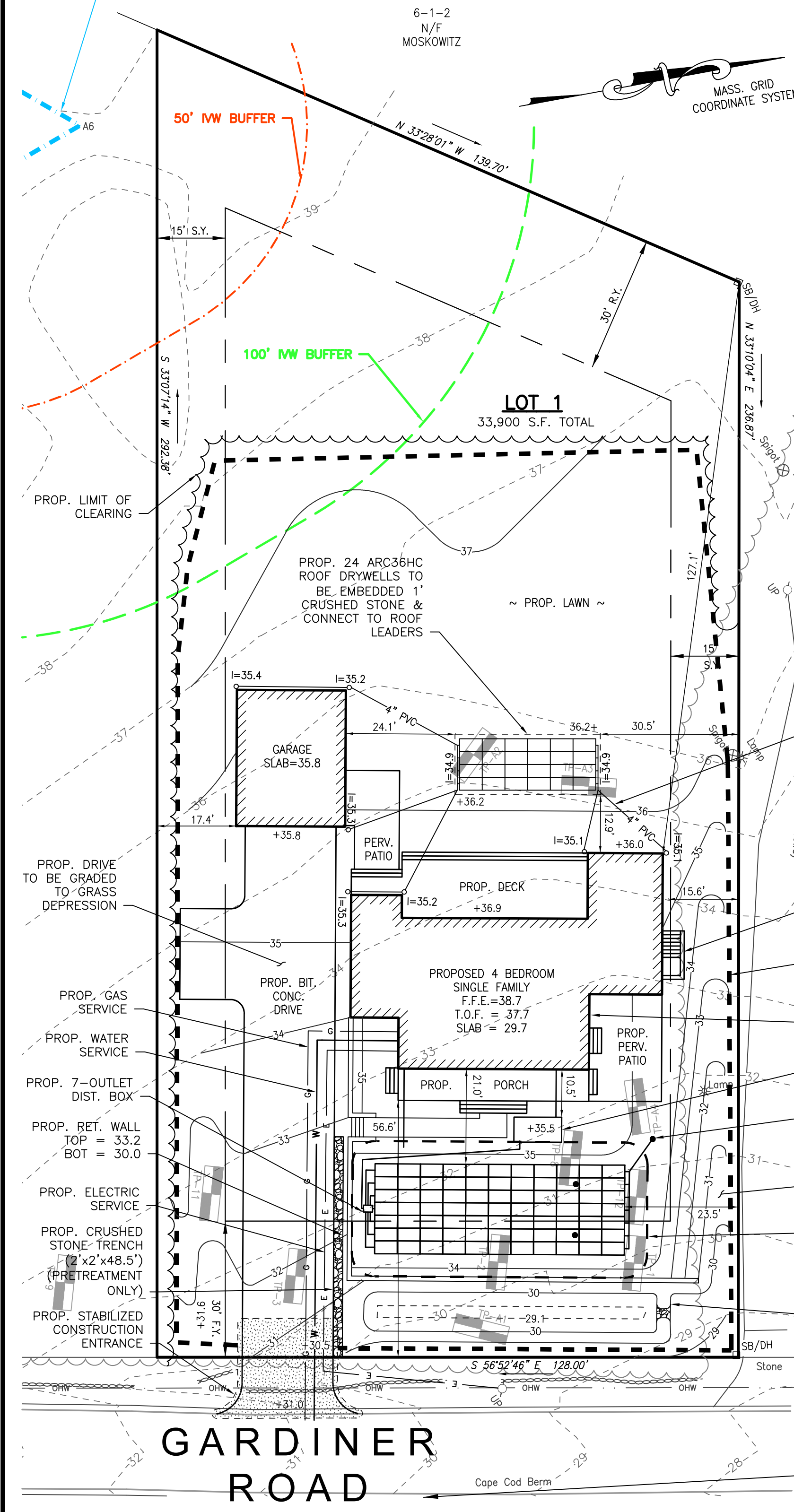
SIEVE SIZE	PARTICLE SIZE
#4	4.75 mm
#50	0.30 mm
#100	0.15 mm
#200	0.075 mm
- THE CONTRACTOR SHALL PREVENT ANY HEAVY CONSTRUCTION MACHINERY AND/OR TRUCKS FROM DRIVING OVER THE PROPOSED SOIL ABSORPTION SYSTEM LOCATION UNTIL FINISHED GRADE IS ESTABLISHED.
- THE CONTRACTOR SHALL INSTALL MAGNETIC TAPE OVER SYSTEM PIPING & COMPONENTS
- THE DESIGN ENGINEER SHALL CERTIFY AND PREPARE AN "AS-BUILT" PLAN FOR SUBMITTAL TO THE BOARD OF HEALTH UPON SEPTIC SYSTEM COMPLETION.
- ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" LOAM & SEED POST CONSTRUCTION.
- ALL SEPTIC SYSTEM COMPONENTS TO BE STAKED OUT BY PROFESSIONAL LAND SURVEYOR PRIOR TO SYSTEM INSTALLATION.

SITE NOTES

- LOCUS DOES NOT LIE WITHIN A DEP DESIGNATED ZONE II RESOURCE AREA.
- ALL KNOWN WETLANDS WITHIN 100 FEET OF THE PROPOSED SEWAGE SYSTEM ARE SHOWN.
- PROPERTY LINE DATA WAS OBTAINED FROM RECORDED DEED (52488-74) AND RECORDED IN PLAN (64-790) ON FILE AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS.
- THERE WERE NO ACTIVE/POTABLE WELLS OBSERVED WITHIN 100' OF THE PROPOSED SYSTEM.
- LOCUS LIES IN FEMA ZONE "X" AS SHOWN ON FEMA COMMUNITY MAP PANEL 25021C 0106K DATED 11/4/2016. ZONE "X" IS NOT A SPECIAL FLOOD HAZARD AREA.

CONTRACTOR TO BE INFILTRATOR CERTIFIED

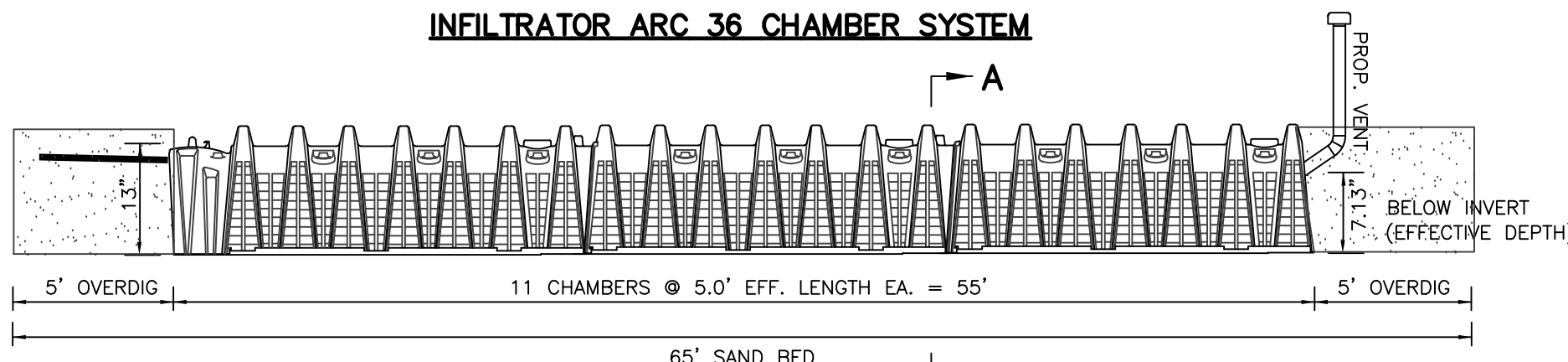
	PREPARED BY:
PROJECT: 15 GARDINER ROAD (ASSESSOR'S PARCEL: 3-1-3A) SCITUATE, MASSACHUSETTS	
DESIGN: PGG	CHECK: GJM
APPLICANT: STEVE & DIANE DUTTON	
DATE: 3/25/21	REV:
PLAN TITLE: SEPTIC & SITE PLAN	SHEET: 1



PRIMARY & RESERVE TRENCHES FIGURE

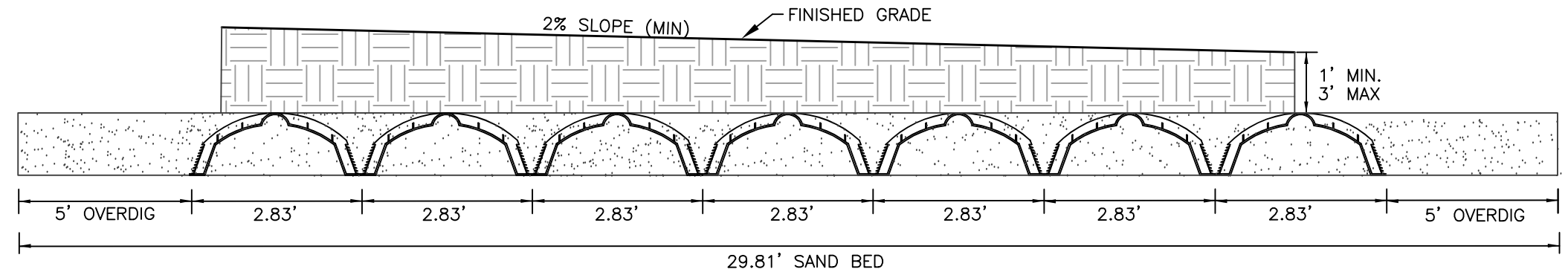
1" = 20'
(NOT TO BE CONSTRUCTED)

INFILTRATOR ARC 36 CHAMBER SYSTEM



- NOTES:
- NO STONE BELOW OR AROUND CHAMBERS IS REQUIRED.
 - BACKFILL CHAMBERS WITH CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255 (3) TO THE TOP OF THE CHAMBER.
 - DO NOT BACKFILL WITH ANY STONES 3" OR LARGER AGAINST CHAMBERS.
 - CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

INFILTRATOR ARC 36 CHAMBERS SECTION A-A



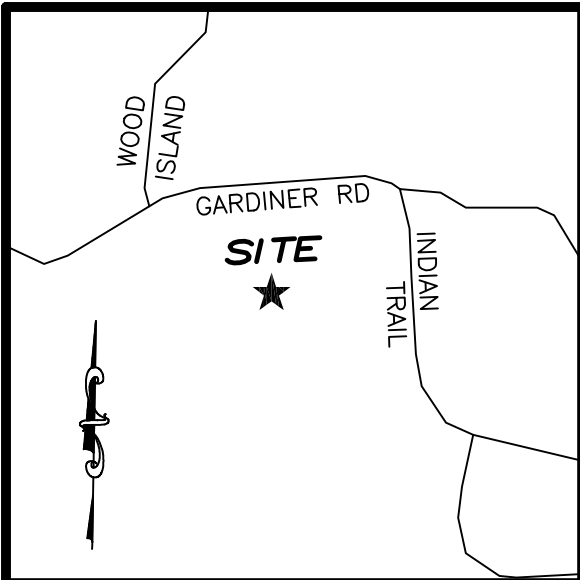
DESIGN DATA

- BUILDING TYPE: SINGLE FAMILY DWELLING
- NO. OF BEDROOMS: 4
- DESIGN FLOW: 4 x 110 GPD/BEDROOM = 440 GPD (GALLONS PER DAY)
- DESIGN PERCOLATION RATE: 32 MPI (TP-1, CLASS II)
- GARBAGE DISPOSAL: NO
- SEPTIC TANK DESIGN REQUIREMENT: 200% DESIGN FLOW 440 X 2 = 880 GAL. (PROVIDE NEW 1500 GAL. SEPTIC TANK)
- LEACH AREA REQUIREMENTS GALLONS/SQ. FT. BOTTOM: 0.25 GAL./S.F. SIDE: 0.25 GAL./S.F.
- TOTAL LEACH AREA REQUIRED: TITLE 5: 440 GPD / (0.25 GPD/S.F.) = 1,760 S.F. PROVIDED: 7 ROWS OF 11 INFILTRATOR ARC 36 CHAMBERS EFFECTIVE AREA: (77 CHAMBERS x 5.00'L x 4.80 S.F./L.F.*) = 1,848 S.F. CAPACITY = 1,848 S.F. x 0.25 GPD/S.F. = 462 GPD *EFFECTIVE AREA PER GENERAL USE CERTIFICATION ISSUED BY DEP
- PRIMARY CONVENTIONAL & RESERVE CALCULATION PROVIDE 2'W X 2'D GRAVITY LEACHING TRENCHES 440 GPD / (0.25 GPD/S.F.) = 1,760 S.F. * (1 L.F./6 S.F.) = 293.3 L.F. LINEAR FOOTAGE REQUIRED = 294 L.F. PER SYSTEM TOTAL LINEAR FOOTAGE PROVIDED= 294 L.F. PER SYSTEM

REMOVE & REPLACE NOTE

CONTRACTOR TO EXCAVATE ALL UNSUITABLE MATERIAL TO A DEPTH OF C HORIZON (27"±) DIRECTLY UNDER & WITHIN 5' OF PROPOSED LEACHING AREA AND REPLACE CLEAN TITLE 5 PERC SAND TO TOP OF CHAMBER ELEVATION.
(VOL. OF SAND = (29.81'W x 65'L x (33.18-27.6)D x 1.2) / 27 = 480± C.Y.

BENCHMARK
MAG NAIL
EL. = 29.71 (NAV88)



VICINITY MAP
NO SCALE

SOIL TEST DATA

SOIL TESTING AND EVALUATION BY: PAUL GRAEME GUNN, SE#14392
SOIL TESTING WITNESSED BY: RALPH H. COLE, P.L.S.
DATE: JULY 15, 2020

TP-1	APPROX. GRADE EL. 29.8	
EL. 28.7	A HORIZON SANDY LOAM 10YR 2/2	13"
EL. 27.6	B HORIZON SANDY LOAM 10YR 5/4	27"
EL. 21.8	C HORIZON LOAMY SAND 2.5Y 5/4	96"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 29"
PERC. RATE: 32 MPI @ 27-45"
ESHGW: 29" (EL. 27.4)

TP-2	APPROX. GRADE EL. 30.3	
EL. 29.2	A HORIZON SANDY LOAM 10YR 2/2	13"
EL. 28.2	B HORIZON SANDY LOAM 10YR 5/4	25"
EL. 20.3	C HORIZON LOAMY SAND 2.5Y 5/4	120"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 30"
PERC. RATE: NONE
ESHGW: 30" (EL. 27.8)

TP-3	APPROX. GRADE EL. 31.4	
EL. 30.2	A HORIZON SANDY LOAM 10YR 2/2	15"
EL. 28.7	B HORIZON SANDY LOAM 10YR 6/3	32"
EL. 21.4	C HORIZON LOAMY SAND 2.5Y 5/4	120"

WEeping OBSERVED: 88"
MOTTling OBSERVED: 28"
PERC. RATE: 38 MPI @ 36-54"
ESHGW: 28" (EL. 29.1)

TP-8	APPROX. GRADE EL. 31.5	
EL. 30.6	A HORIZON SANDY LOAM 10YR 2/2	11"
EL. 29.5	B HORIZON SANDY LOAM 10YR 6/3	24"
EL. 21.5	C HORIZON LOAMY SAND 2.5Y 5/4	120"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 41"
PERC. RATE: NONE
ESHGW: 41" (EL. 28.1)

SOIL TEST DATA

SOIL TESTING AND EVALUATION BY: JAMES GARFIELD, SE#14162
SOIL TESTING WITNESSED BY: RALPH H. COLE, P.L.S.
DATE: AUGUST 5, 2020

TP-11	APPROX. GRADE EL. 32.8	
EL. 32.2	A HORIZON SANDY LOAM 10YR 3/2	7"
EL. 31.5	B HORIZON SANDY LOAM 10YR 5/6	16"
EL. 22.8	C HORIZON LOAMY SAND 2.5Y 5/4	120"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 28"
PERC. RATE: NONE
ESHGW: 28" (EL. 30.5)

TP-12	APPROX. GRADE EL. 30.4	
EL. 26.4	A HORIZON SANDY LOAM 10YR 3/2	8"
EL. 28.9	B HORIZON SANDY LOAM 10YR 5/6	18"
EL. 24.3	C HORIZON LOAMY SAND 2.5Y 5/4	72"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 26"
PERC. RATE: 29 MPI @ 25-43"
ESHGW: 26" (EL. 28.1)

TP-A1	APPROX. GRADE EL. 29.8	
EL. 29.0	A HORIZON SANDY LOAM 10YR 3/2	10"
EL. 28.2	B HORIZON SANDY LOAM 10YR 5/6	20"
EL. 25.1	C HORIZON LOAMY SAND 2.5Y 5/6	56"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 32"
PERC. RATE: NONE
ESHGW: 32" (EL. 27.1)

TP-A2	APPROX. GRADE EL. 35.4	
EL. 34.6	A HORIZON SANDY LOAM 10YR 3/2	10"
EL. 33.0	B HORIZON SANDY LOAM 10YR 5/6	29"
EL. 31.4	C HORIZON LOAMY SAND 2.5Y 5/6	48"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 40"
PERC. RATE: NONE
ESHGW: 40" (EL. 32.1)

TP-A3	APPROX. GRADE EL. 35.2	
EL. 34.5	A HORIZON SANDY LOAM 10YR 3/2	9"
EL. 32.6	B HORIZON SANDY LOAM 10YR 5/6	31"
EL. 29.5	C HORIZON LOAMY SAND 2.5Y 5/6	68"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 38"
PERC. RATE: NONE
ESHGW: 38" (EL. 32.0)

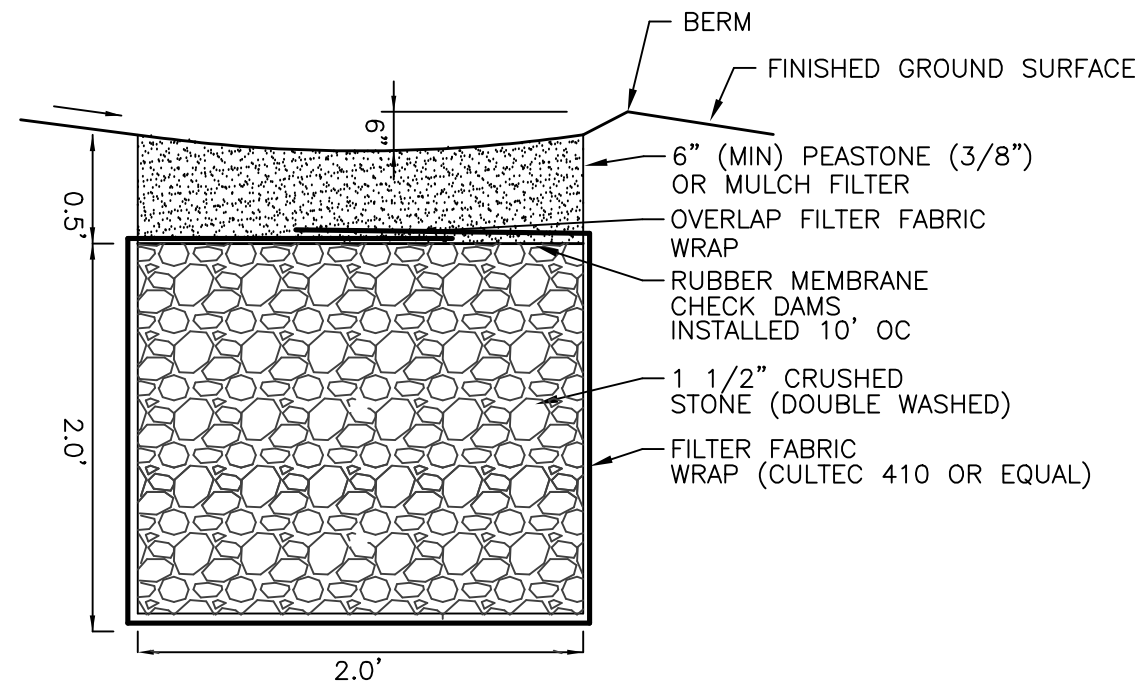
TP-A4	APPROX. GRADE EL. 31.8	
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EL. 30.8	A HORIZON SANDY LOAM 10YR 2/2	12"
EL. 29.6	B HORIZON SANDY LOAM 10YR 6/3	26"
EL. 27.1	C HORIZON LOAMY SAND 2.5Y 5/4	57"

WEeping OBSERVED: NONE
MOTTling OBSERVED: 39"
PERC. RATE: NONE
ESHGW: 39" (EL. 28.6)

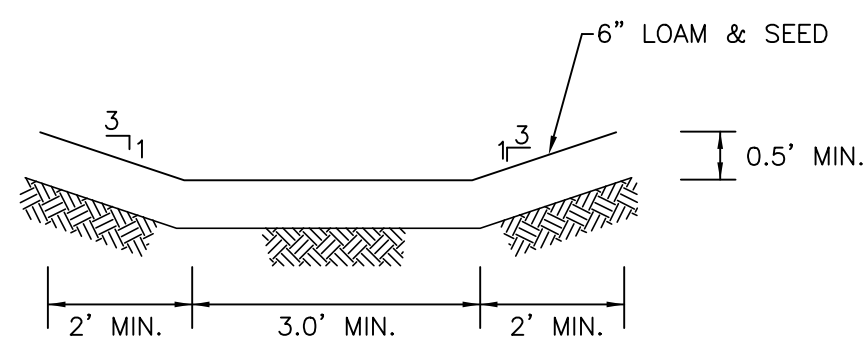
CRUSHED STONE TRENCH (PRETREATMENT)

SCALE: N.T.S.



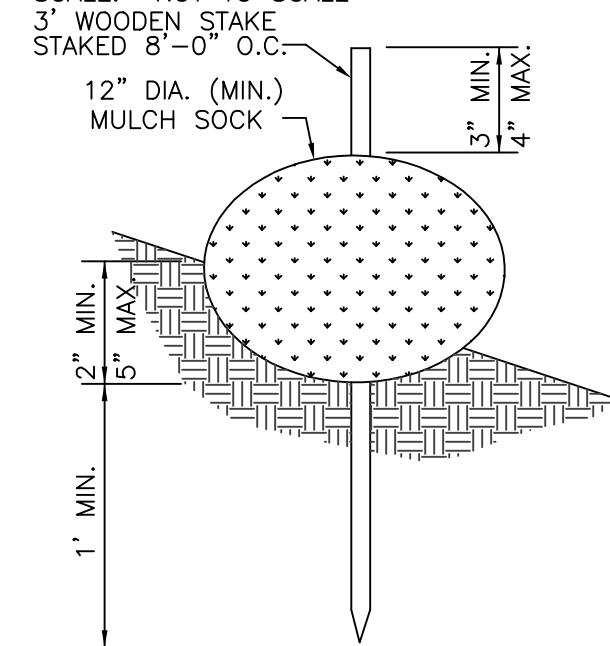
SWALE DETAIL

SCALE: N.T.S.



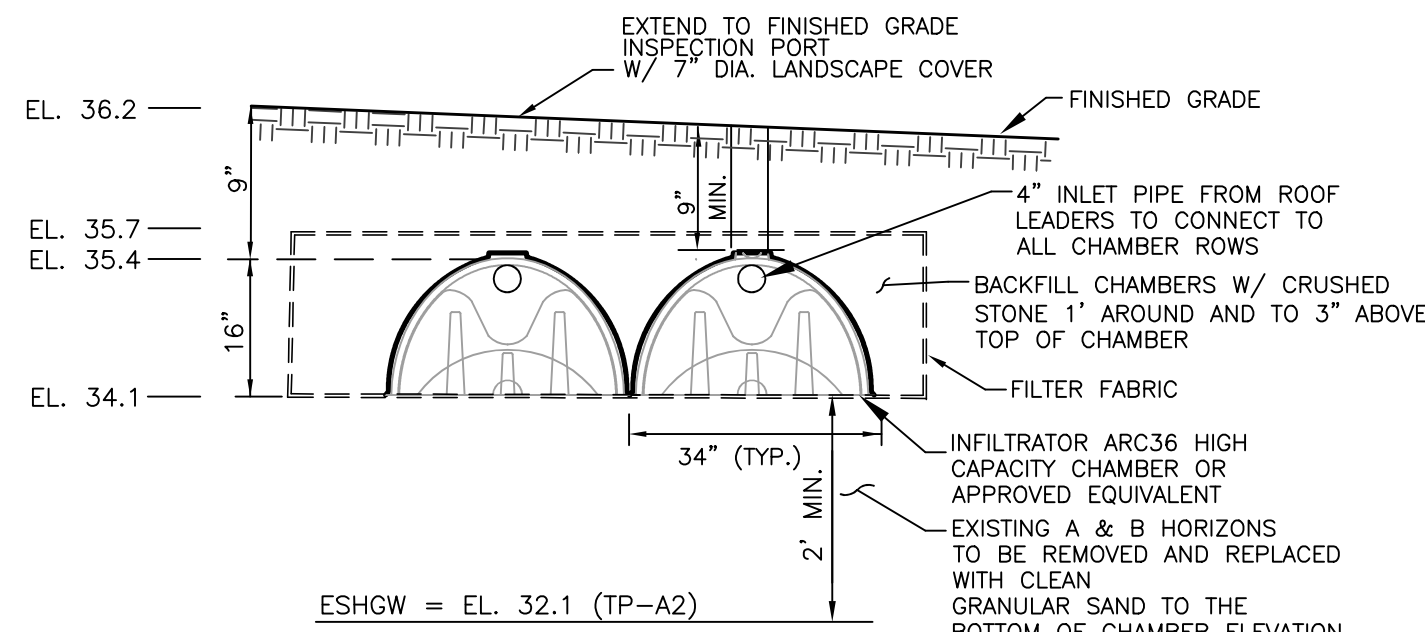
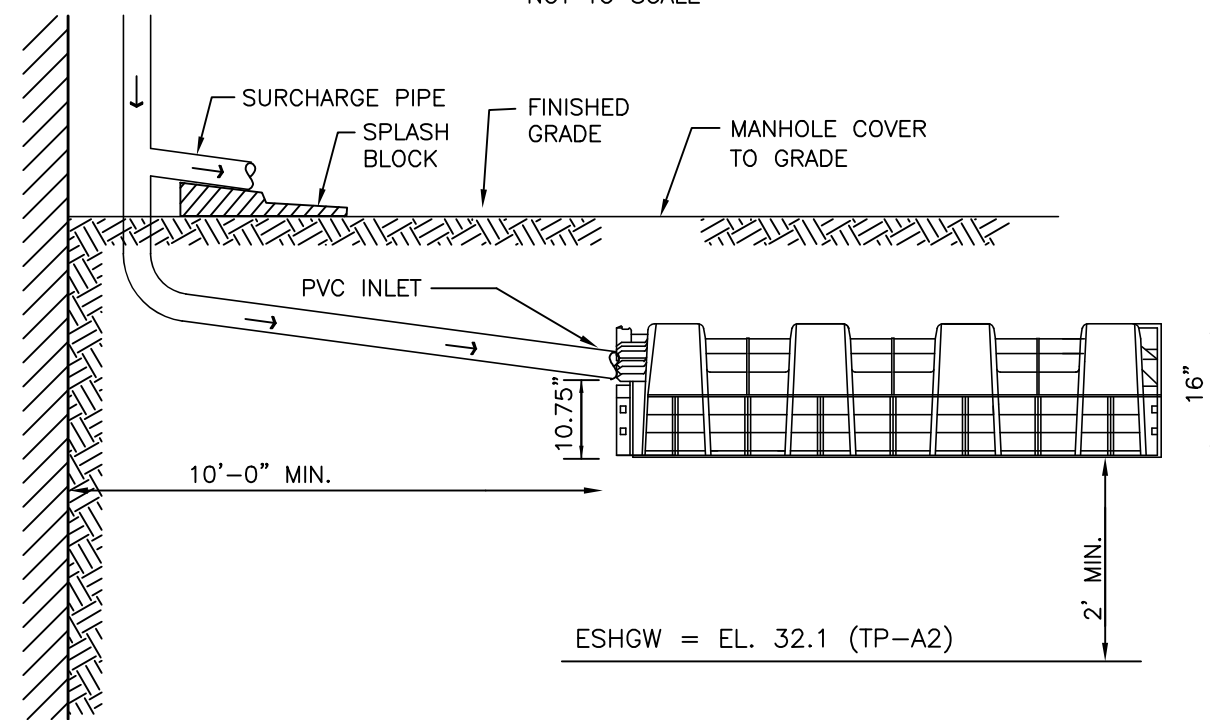
STAKED MULCH SOCK DETAIL

SCALE: NOT TO SCALE



SUBSURFACE LEACHING DRYWELL

NOT TO SCALE

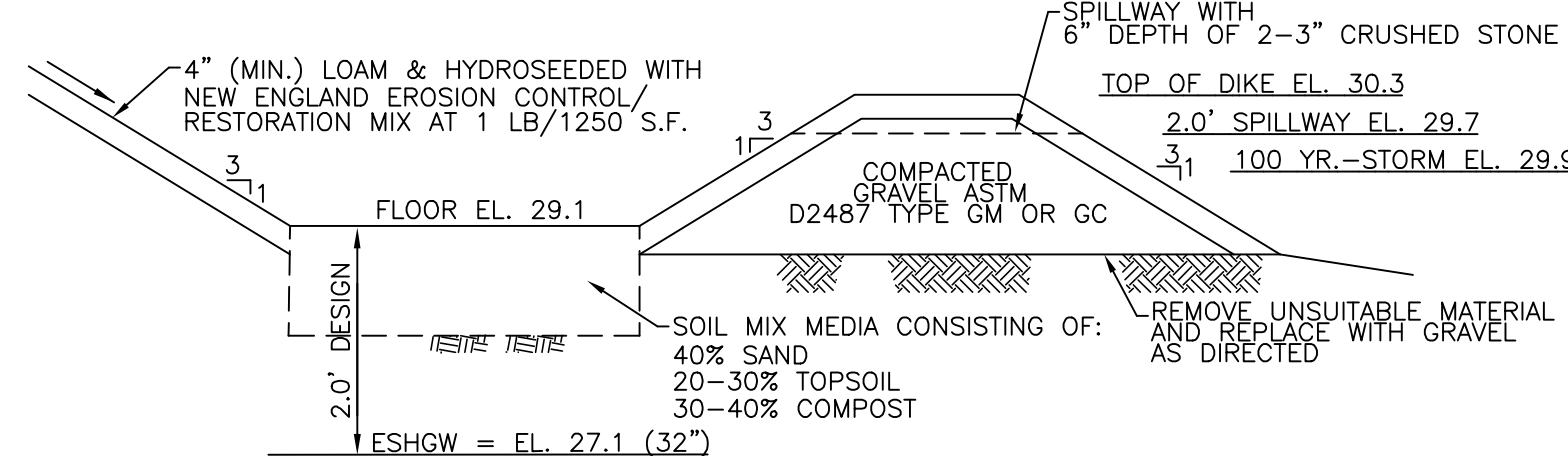


NOTE:

1. ALL ROOF LEADERS SHALL BE EQUIPPED WITH DOWNSPOUT STRAINERS.
2. NO CONSTRUCTION ACTIVITY (TRAFFIC) SHALL BE ALLOWED OVER THE LEACHING DRY WELL AREAS.
3. NO CONSTRUCTION SURFACE WATER OR DEWATERING DISCHARGES SHALL BE DISCHARGED INTO THE DRYWELL STRUCTURES OR DRYWELL SITE LOCATIONS.
4. DRYWELLS SHALL BE LOCATED A MINIMUM OF 10' FROM FOUNDATIONS, 10' FROM PROPERTY LINES, AND 25' FROM THE EDGE OF THE SOIL ABSORPTION FIELD.

SHALLOW GRASSED DEPRESSION DETAIL

SCALE: N.T.S.



CONTRACTOR TO BE INFILTRATOR CERTIFIED

		PREPARED BY: 	
PROJECT: 15 GARDINER ROAD (ASSESSOR'S PARCEL: 3-1-3A) SCITUATE, MASSACHUSETTS		DESIGN: PGG CHECK: GJM JOB NO: 20-376	
APPLICANT: STEVE & DIANE DUTTON		DATE: 3/25/21 REV:	
PLAN TITLE: SEPTIC & SITE PLAN		SHEET: 5/25/21 2	