

LOCUS MAP
SCALE 1" = 500'

LEGEND

- PARCEL PROPERTY LINE
- - - ADJACENT PROPERTY LINE
- - - - - EXISTING FENCE LINE
- - - - - EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- W — EXISTING WATER LINE
- S — PROPOSED SEWER LINE
- UP-297 UTILITY POLE AND NUMBER
- PROPOSED CONTOUR
- X39.50 PROPOSED SPOT GRADE
- EDGE OF WETLAND
- 75' WETLAND BUFFER
- 20' NO BUILD BUFFER
- 100' WETLAND JURISDICTIONAL AREA
- WETLAND FLAG

LEACHFIELD SIZING CALCULATIONS:
 FLOW TO LEACHFIELD = 115 GAL/BEDROOM/DAY X 4 BEDROOMS = 460 GAL/DAY
 LOADING RATE = 0.61 GAL/SF/DAY (CAT. 6 SOILS)
 SQUARE FEET REQ'D. = 460 / 0.61 = 754 S.F.
 USE GST LEACHING SYSTEM GST6218 = 24.8 S.F. PER L.F.
 PROVIDED = 32 L.F. * 24.8 S.F./L.F. = 793 S.F. > 754 S.F., OK

DOSING DATA TO GST 6218:
 GST 6218 SYSTEM TO BE DOSED 4 TO 8 TIMES PER DAY
 SYSTEM TO BE DOSED 7 TIMES PER DAY
 = (460 GAL/DAY) / (7 DOSES/DAY) = 65.7 GAL/DOSE
 DRAIN BACK TO PUMP = 14.5 FT. X 0.0918 GAL/FT. = 1.33 GAL
 MAX. DOSE TO GST 6218 = 65.7 GAL + 1.33 GAL = 67.03 GAL

PUMP SETTING: PUMP SYSTEM SHALL DOSE NO MORE THAN 67.0 GALLONS PER DOSE TO THE GST-6218 SYSTEM.
 67 GAL / 23.5 GAL/VERTICAL FOOT IN PUMP BASIN = 2.85 FEET BETWEEN PUMP ON AND PUMP OFF

PROJECTED PUMP CYCLES:
 DAILY FLOW = 460 GPD
 FLOW TO LEACHFIELD PER CYCLE = 65.7 GAL. GAL/DOSE (67.0 GAL. INCLUDING DRAIN BACK)
 TOTAL CYCLES PER DAY = 460 GPD / 65.7 GAL/DOSE = 7 DOSES A DAY
 PUMP CYCLES ON 7 TIMES A DAY, ONCE EVERY 205 MINUTES
 PUMP OPERATES @ 40 GAL/MIN @ 23 FT. HEAD
 67 GAL / 40 GAL/MIN = 1.68 MIN.
 PUMP OPERATES FOR 1.68 MIN. EACH CYCLE

OWNER'S NOTES:

1. FOOD/GARBAGE GRINDERS ARE PROHIBITED FROM BEING CONNECTED TO THE SEPTIC SYSTEM.
2. VEHICLE PARKING OR TRAFFIC OVER THE SEPTIC TANK IS PROHIBITED.
3. BACKWASH WATER FROM WATER TREATMENT SYSTEMS (IF INSTALLED) SHALL NOT BE DISCHARGED INTO THE SEPTIC SYSTEM.
4. SEPTIC TANKS SHALL BE PUMPED OUT EVERY 24 MONTHS AND EFFLUENT FILTERS WASHED ANNUALLY UNLESS MORE FREQUENT MAINTENANCE IS DETERMINED TO BE REQUIRED BY OPERATION AND MAINTENANCE PROVIDER OF THE OWTS SYSTEM.
5. ONLY WASTEWATER AS DEFINED IN THE RIDEM OWTS REGULATIONS IS ALLOWED TO BE DISCHARGED INTO THE SEPTIC SYSTEM. ABSOLUTELY NO CHEMICALS, OILS, FATS, GREASE, OR PAINTS ARE ALLOWED. THIS IS NOT A GARBAGE DISPOSAL SYSTEM.
6. NO TREES OR LARGE SHRUBS SHALL BE PLANTED WITHIN 10 FEET OF THE LEACHFIELD.
7. NO SUBSURFACE DRAINS OR SUBDRAINS SHALL BE INSTALLED WITHIN 50 FEET OF THE OWTS UNLESS IN ACCORDANCE WITH OWTS REGULATIONS.
8. THE DESIGN INTENT IS TO MEET THE STATE STANDARDS. THE SYSTEM OPERATION IS DEPENDENT ON PROPER USAGE, AND IT'S OPERATION IS NOT GUARANTEED BY THIS PLAN.

CONTRACTOR'S NOTES - CONSTRUCTION:

1. NOTIFY ENGINEER 5 DAYS PRIOR TO START OF CONSTRUCTION.
2. PRODUCT AND MATERIAL SPECIFICATION SHEETS FOR ALL COMPONENTS SHALL BE PROVIDED TO ENGINEER PRIOR TO ENGINEER NOTIFYING RIDEM FOR START OF CONSTRUCTION. THIS INCLUDES: 1) SEPTIC TANK; 2) D-BOX; 3) SEPTIC GRAVEL SIEVE ANALYSIS (IF SPECIFIED); 4) FILTER FABRIC; 5) ASTM C-33 SAND SIEVE ANALYSIS
3. SURVEYOR TO STAKE OUT LEACHFIELD CORNERS FOR REVIEW AND APPROVAL BY ENGINEER.
4. ENGINEER TO APPROVE BOTTOM OF LEACHFIELD BED PRIOR TO PLACEMENT OF SAND.
5. SCARIFY LEACHFIELD BOTTOM IMMEDIATELY PRIOR TO PLACEMENT OF SAND, NOT THE DAY BEFORE.
6. ENGINEER TO INSPECT SEPTIC TANK PRIOR TO BACKFILLING. CONTRACTOR SHALL PROVIDE VACUUM TEST REPORT FROM TANK MANUFACTURER.
7. ENGINEER TO INSPECT COMPLETED SYSTEM PRIOR TO BACKFILLING. FINE GRADE LEACHFIELD AND SEPTIC TANK AREA SO RUNOFF DOES NOT FLOW ONTO AREA FROM UPLAND AREAS DURING & AFTER CONSTRUCTION.
8. ALL CONCRETE RISER SECTIONS SHALL BE MORTARED/SEALED WATERTIGHT TO TANK.
9. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD AND DESIGN DATA SHOWN HEREON TO BE REPORTED TO THE ENGINEER.
10. ANY DAMAGE OR DISTURBANCE OF LAND DUE TO CONSTRUCTION ACTIVITIES TO ADJUTING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR.

GRADING & DRAINAGE NOTES:

1. CONTRACTOR TO FINE GRADE LOTS IN ACCORDANCE WITH STATE OF RHODE ISLAND ONE AND TWO FAMILY DWELLING CODE. LOTS SHALL BE GRADED SO THAT ADDITIONAL ACCUMULATION OF SURFACE WATER DOES NOT OCCUR ACROSS ADJOINING PROPERTY. SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE OR OTHER POINT OF COLLECTION SO AS NOT TO CREATE A HAZARD. LOTS SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS. THE GRADE AWAY FROM FOUNDATION WALLS SHALL FALL A MINIMUM OF 6" WITHIN THE FIRST 10 FEET. IMPERVIOUS SURFACES (DRIVEWAY) SHALL BE SLOPED AWAY FROM HOUSE AT A SLOPE OF 2% FOR AT LEAST 10 FEET.
2. DO NOT ALLOW STREET RUNOFF TO ENTER SUBJECT PROPERTY.
3. ROOF DOWNSPOUT RUNOFF SHALL BE PIPED TO ROOF INFILTRATION SYSTEM.
4. GRADING SHALL DIRECT DRIVEWAY RUNOFF SHALL TO THE VEGETATED SWALE.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 OWTS & FRESHWATER WETLANDS
 JOINT PERMIT APPROVAL
 CWTS# 0109-0637_FWW# 23-0102
 APPROVED: [Signature] DATE: 4/8/23
 No Changes Allowed Without RIDEM Approval
 Approved Permit Must Be Kept at Construction Site

TIMOTHY J. BEHAN
 No. 6278
 REGISTERED PROFESSIONAL ENGINEER
 06/13/2023

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RHODE ISLAND 02908
 (401) 273-6600

REVISIONS

No.	DATE	DRWN	CHKD
1	06-08-23	SMA	TJB

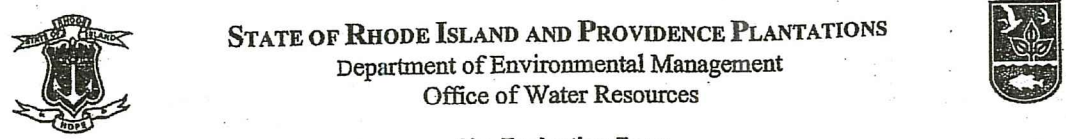
ONSITE WASTEWATER TREATMENT PLAN
 FOR
 AP 9-19, LOT 343
 1125 SOUTH ROAD
 IN
 EAST GREENWICH, RHODE ISLAND
PROPOSED OWTS PLAN

SCALE: 1" = 30' SHEET NO: 1 OF 3
 DRAWN BY: SMA DESIGN BY: SMA CHECKED BY: TJB
 DATE: MARCH 2023 PROJECT NO 23010.00

DRAWING ISSUE:

- CONCEPT
- CUSTOMER APPROVAL
- PERMITTING
- CONSTRUCTION
- AS-BUILT
- OTHER:

ONLY PLANS ISSUED FOR CONSTRUCTION SHALL BE USED FOR CONSTRUCTION



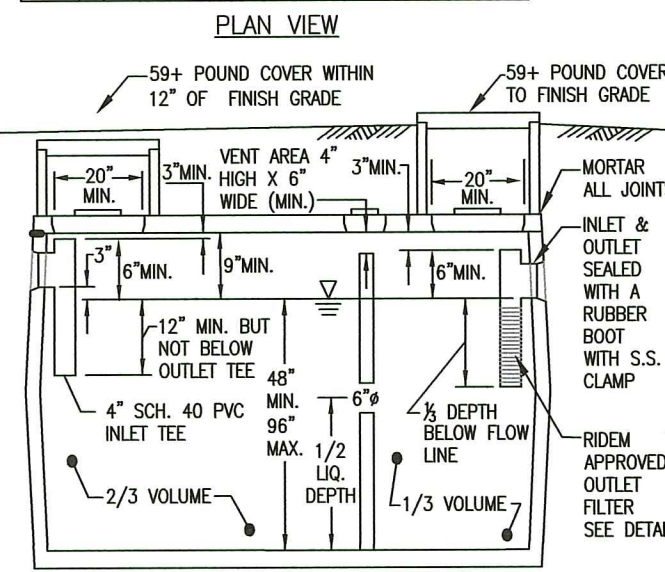
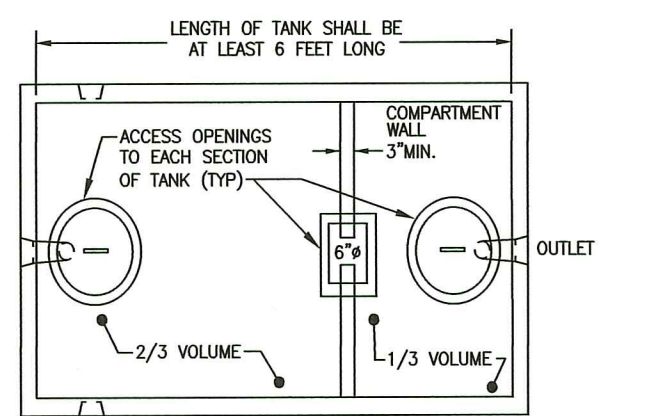
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
Department of Environmental Management
Office of Water Resources

Site Evaluation Form
Part A - Soil Profile Description Application Number

Property Owner: Almas Garabala
Property Location: South Road, East Greenwich, Map 19 1st 27-4
Date of Test Hole: 12/19/23
Soil Evaluator: THOMAS J. PENNEPE III License Number: D-4015
Weather: OVERCAST, 30°F Shaded: Yes No Time:

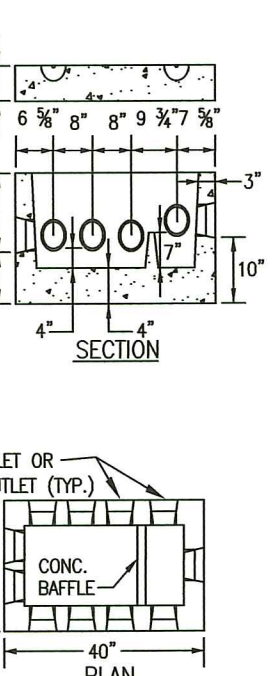
Horizon	Depth	Horizon Boundaries	Soil Colors	Re-Doz Features	Re-Doz Description	Texture	Structure	Consistence	Soil Category
A	0-8	a s	10w2y4			FSL	1,9R	FR	3
Bw	8-32	a w	10w2y8			SL	1,5Bk	FR	3
C	32-120	g s	7.5w2y6 7.5w2y8	m,m,d	gls	0,1M	FR	6	

Soil Class: ABlaton III Total Depth of each Test Hole: 120"
Depth to Groundwater Seepage: N/A @ 120" Depth to Impervious or Limiting Layer: 0-7" to 10" @ 120"
Estimated Seasonal High Water Table: 72" (Bottom) Comments: Many surface stains to area of test holes.

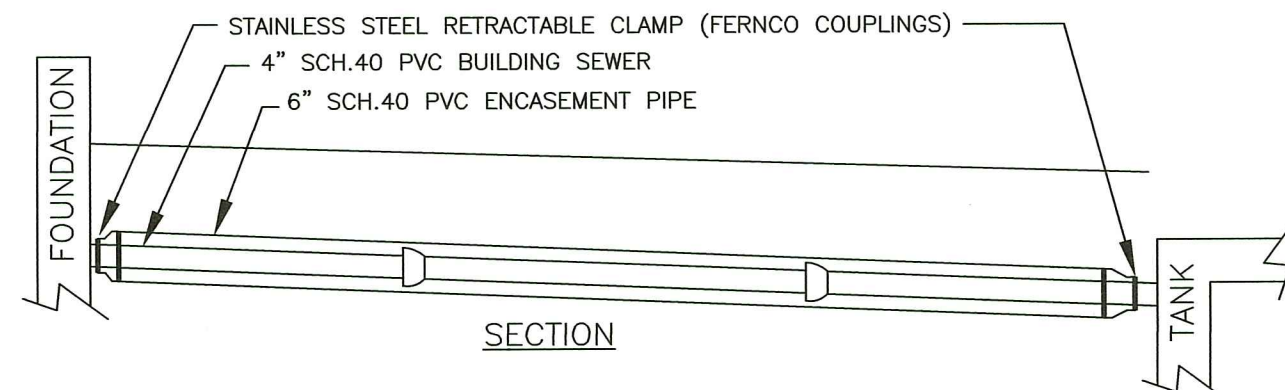


SEPTIC TANK DETAIL
NOT TO SCALE

- DISTRIBUTION BOX NOTES:**
- D-BOX SHALL BE CONSTRUCTED OF 4,000 PSI (MIN.) CONCRETE, BE CAPABLE OF WITHSTANDING H-20 LOADINGS & A TOP LOAD CARRYING CAPACITY OF 300 LBS./SQ. INCH.
 - INLET SHALL ACCEPT 4" SCH 40 OR SDR 35 PVC PIPE.
 - OUTLETS SHALL HAVE STATE APPROVED SEALS THAT ACCEPT 4" SCH 40 OR 4" SDR 35 PVC PIPE.
 - FINISHED COVER TO WITHIN 12" OF FINISHED GRADE WITH CONCRETE RISERS AND PLACE A MARKER TO FINISH GRADE OVER THE COVER.
 - D-BOX SHALL BE PLACED ON A LEVEL AND COMPACTED BASE.
 - D-BOX SHALL HAVE A MINIMUM AREA OF 3 SQUARE FEET.
 - PROVIDE AN INLET TEE IF A CONCRETE BAFFLE IS NOT PROVIDED.
 - PIPES SHALL EXTEND INTO THE DISTRIBUTION BOX ONE (1) INCH.
 - D-BOX AND ALL PIPE PENETRATIONS SHALL BE MADE WATER TIGHT.



DISTRIBUTION BOX DETAIL
NOT TO SCALE



BUILDING SEWER SLEEVE
NOT TO SCALE

NOTE: 8" SCH-40 PVC ENCASEMENT PIPE MAY BE REQUIRED TO ACCOMMODATE PIPE BENDS

9.1 ASTM C-33 Sand Specifications

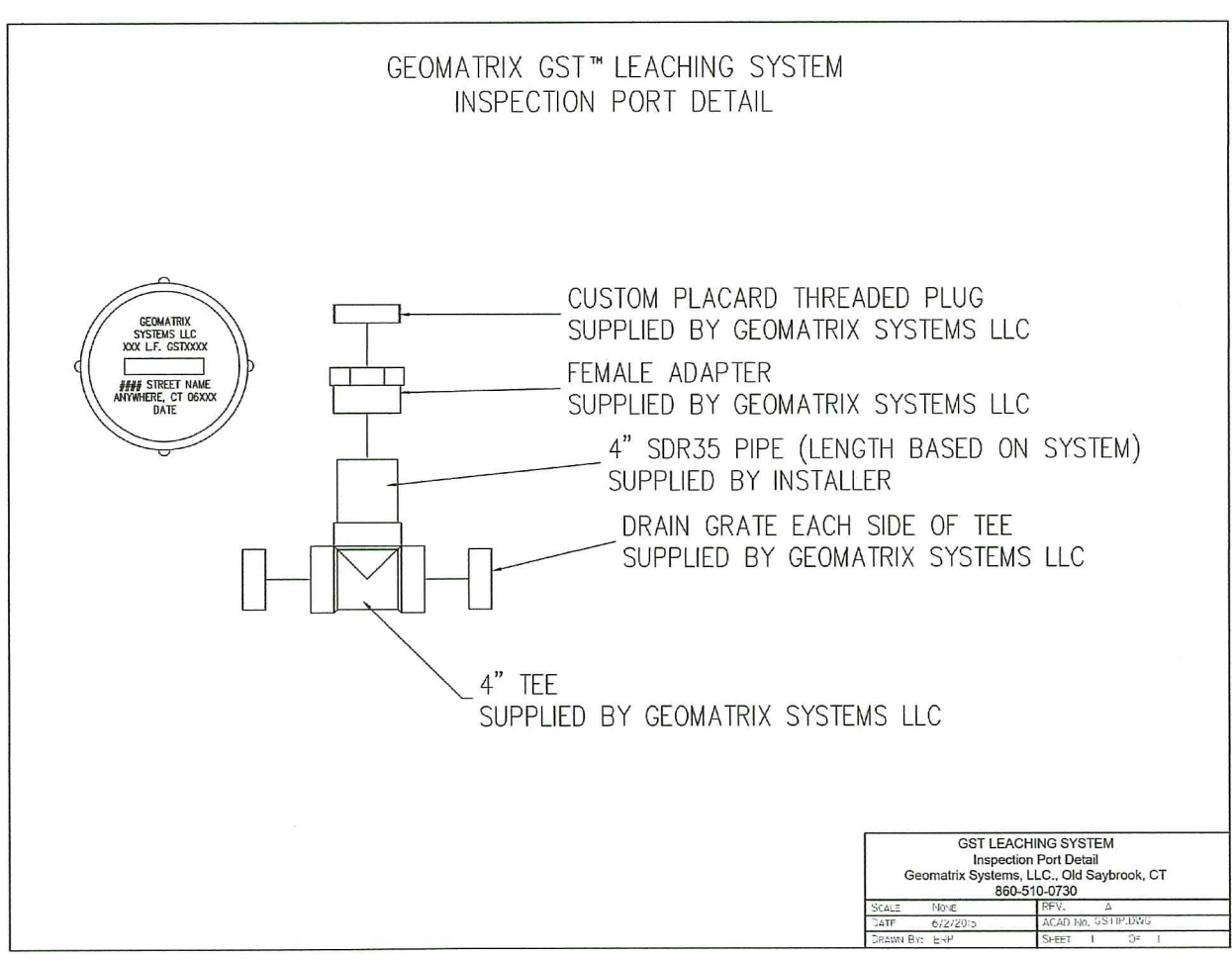
Sieve Size	Percent Passing
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10
#200	0-3

9.2 Clean Washed 3/4 to 1/2 Inch Stone

Sieve Size	Percent Passing (by weight)
2-Inch	N/A
1.5-Inch	N/A
1-Inch	100
3/4-Inch	90-100
1/2-Inch	20-55
3/8-Inch	0-15
#4	0-5
#40	0-3
#200	0-1.5

SEPTIC TANK NOTES:

- SEPTIC TANK SHALL BE WATER TIGHT AND CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
- PRECAST REINFORCED CONCRETE TANKS SHALL CONFORM WITH ASTM C-1227-02, LATEST EDITION.
- TANKS SHALL BE PERMANENTLY MARKED AT THE INLET END OF THE TANK WITH DATE OF MANUFACTURE; NAME OF MANUFACTURER; CAPACITY; AN EXTERNAL LOSS FOR WHICH TANK IS DESIGNED TO RESIST.
- A WARNING LABEL AT ALL OPENINGS SHALL BE PROVIDED WHICH READS "ENTRANCE INTO THE TANK COULD BE FATAL".
- TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
- TANK SHALL BE INSTALLED ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE.
- SURFACE WATER SHALL BE DIVERTED AWAY FROM THE TANK OPENINGS.
- TANK SHALL NOT BE DAMAGED DURING BACKFILLING. BACKFILL MATERIAL SHALL BE FREE OF LARGE STONES, STUMPS, WASTE, CONSTRUCTION MATERIAL, RUBBISH, ORGANIC MATERIAL, AND FROZEN SOILS.
- TANK AND RISERS SHALL BE TESTED FOR WATER TIGHTNESS BY EITHER VACUUM TESTING OR WATER PRESSURE TEST AS SPECIFIED IN THE "RULES". CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT THE TEST PASSED PRIOR TO C.O.C.
- JOINTS OF ALL CONCRETE TANKS SHALL BE SEALED WITH A 1" DIA. BUTYL RUBBER SEALANT OR APPROVED EQUAL.



GEOMATRIX GST™ LEACHING SYSTEM INSPECTION PORT DETAIL

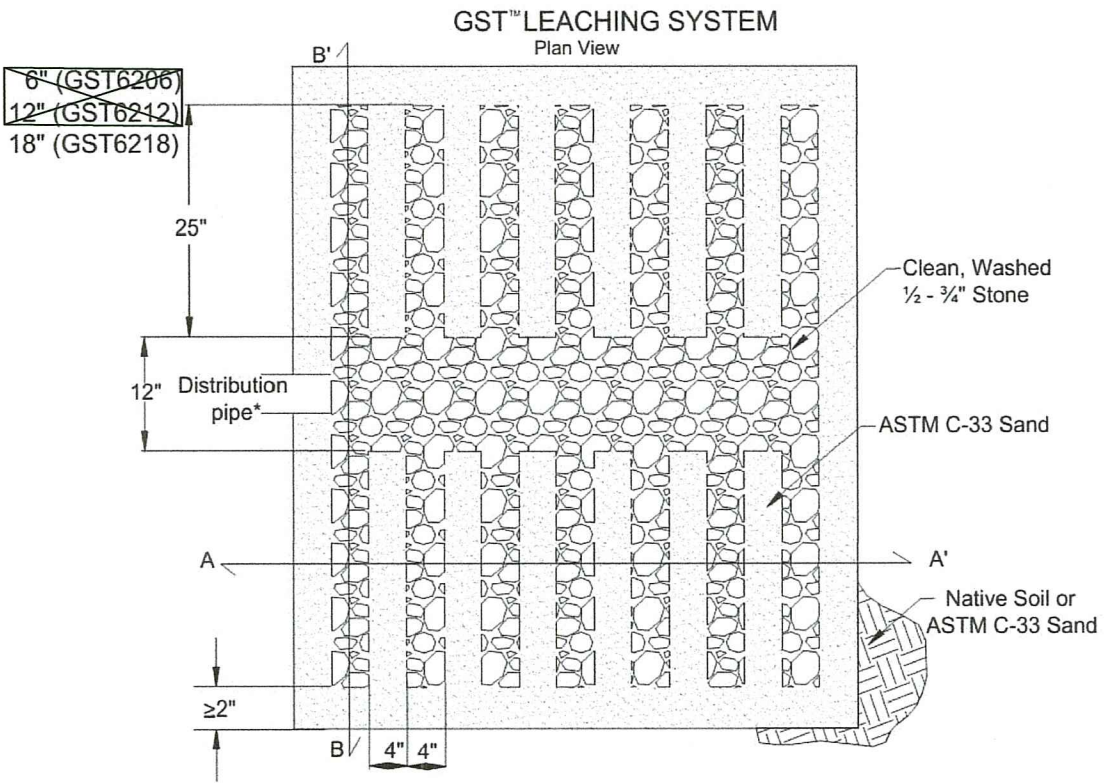


Figure 4
GEOMATRIX GST™ LEACHING SYSTEM A-A CROSS SECTION

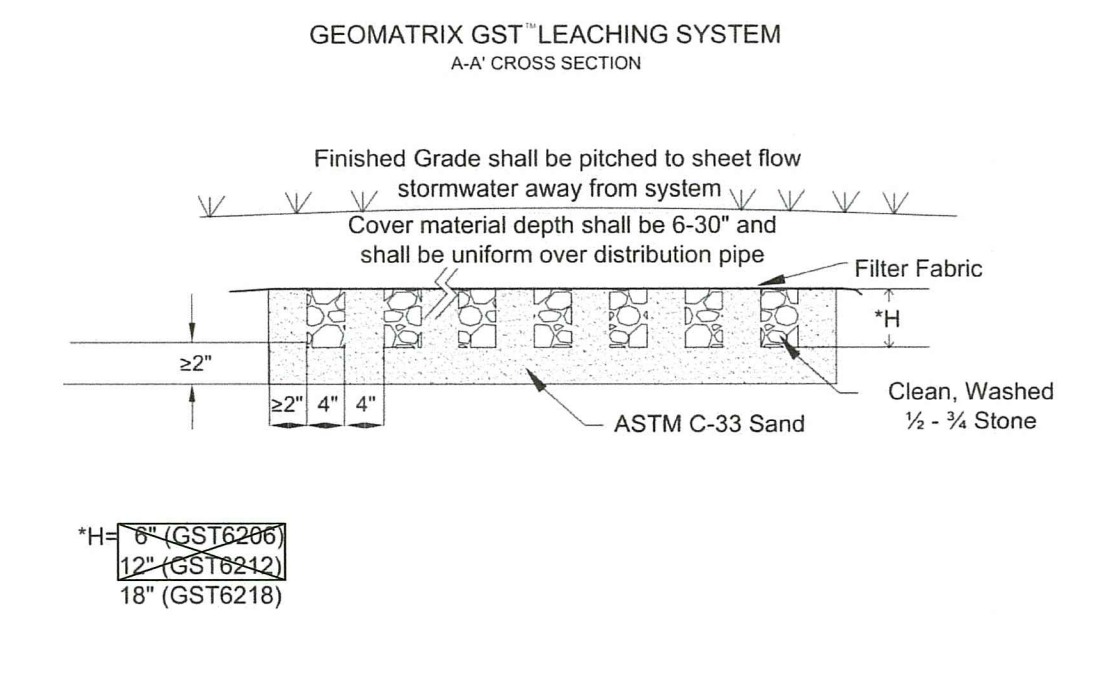


Figure 5
GST™ 62" LEACHING SYSTEM H-20

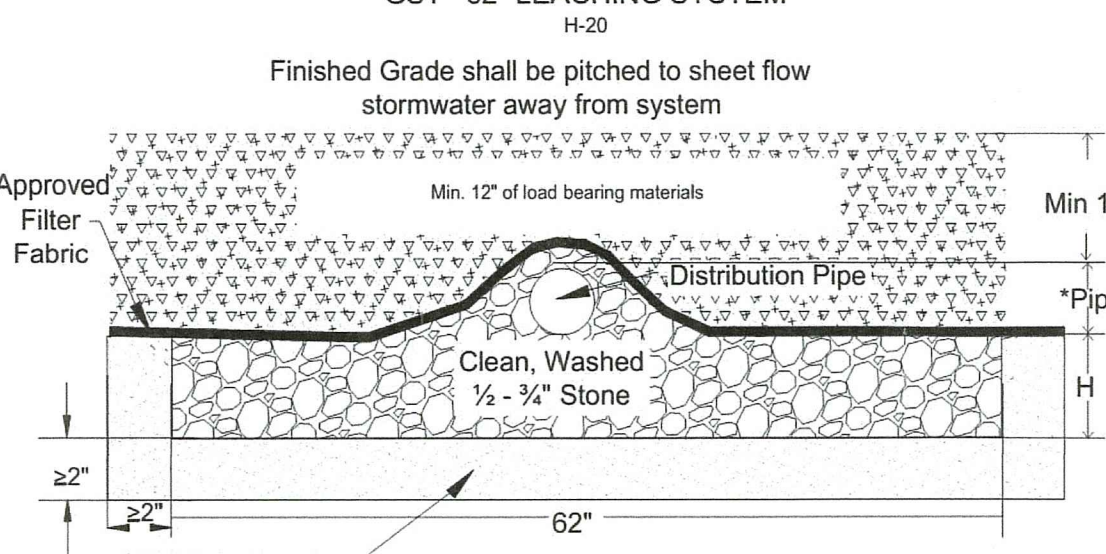
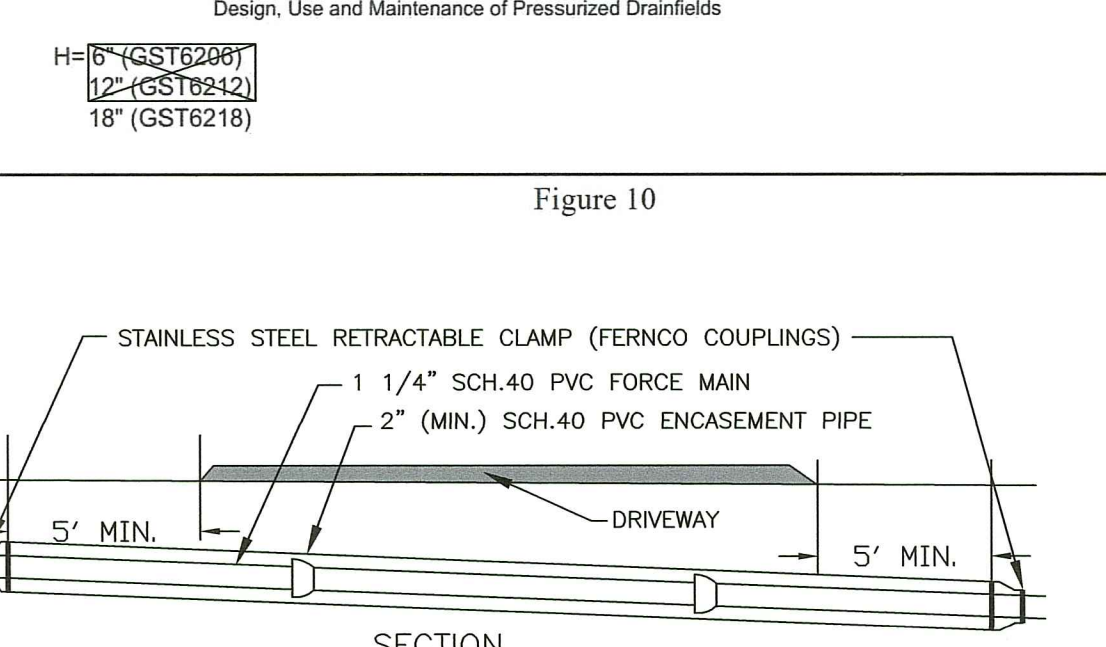


Figure 10
FORCE MAIN SLEEVE



FORCE MAIN SLEEVE
NOT TO SCALE

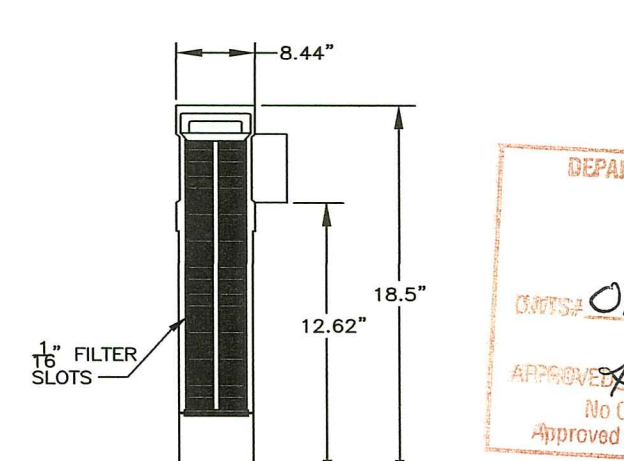
NOTE: 2" SCH-40 PVC ENCASEMENT PIPE TO EXTEND 5- FEET BEYOND EDGE OF DRIVEWAY ON BOTH SIDES.

- GENERAL NOTES:**
- THIS PLAN WAS PREPARED FOR RIDEM SEPTIC SYSTEM PERMIT ONLY AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER. THIS IS NOT THE BUILDING PERMIT PLOT PLAN.
 - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS", LATEST REVISION, AS REGULATED THROUGH THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (THESE ARE REFERRED TO AS THE "RULES") AND THE STATE OF RHODE ISLAND ONE & TWO FAMILY DWELLING BUILDING CODE.
 - THE PROPOSED ACTIVITIES (ARE ___) OR (ARE NOT ___) UNDER THE RHODE ISLAND COASTAL RESOURCE MANAGEMENT COUNCIL'S JURISDICTION.
 - PUBLIC SEWERS (ARE ___) OR (ARE NOT ___) LOCATED WITHIN 200 FEET OF THE PROPERTY LINE.
 - DRINKING WATER LINES (ARE ___) OR (ARE NOT ___) LOCATED WITHIN 50 FEET OF THE PROPOSED OWTS. ALL DRINKING WATER LINES WITHIN 50 FEET OF THE PROPOSED OWTS HAVE BEEN SHOWN, IF PRESENT.
 - WATER SUPPLY IS BY (PUBLIC WATER SYSTEM ___) OR (PRIVATE WELL ___).
 - THERE (ARE ___) OR (ARE NOT ___) EXISTING AND PROPOSED PRIVATE DRINKING WATER WELLS LOCATED WITHIN THE SPECIFIED SETBACK DETAILED IN THE "RULES" + 100 FEET. IF WELL(S) ARE PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
 - THERE (ARE ___) OR (ARE NOT ___) EXISTING AND PROPOSED WELLS SERVING NON-POTABLE USES WITHIN 100' OF THE OWTS. IF WELL(S) ARE PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
 - THERE (ARE ___) OR (ARE NOT ___) EXISTING AND PROPOSED PUBLIC DRINKING WATER SUPPLY WELLS WITHIN 500 FEET OF THE PROPOSED OWTS. IF WELL(S) ARE PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN. THE TYPE OF PUBLIC WELL, IF PRESENT, IS NOTED NEXT TO THE WELL.
 - THERE (ARE ___) OR (ARE NOT ___) WATERCOURSES AND WETLANDS WITHIN 200 FEET OF THE PROPOSED OWTS. IF PRESENT, THE LOCATIONS ARE SHOWN ON THE PLAN.
 - THERE (ARE ___) OR (ARE NOT ___) STORM AND SUBSURFACE DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS. SAID DRAINS (DO ___) OR (DO NOT ___) DISCHARGE DIRECTLY OR INDIRECTLY INTO A CRITICAL RESOURCE AREA AS IDENTIFIED IN THE "RULES".
 - THE PROPOSED OWTS (IS ___) OR (IS NOT ___) LOCATED WITHIN THE WATERSHED OF A PUBLIC WATER SUPPLY.
 - THE PROPOSED OWTS (IS ___) OR (IS NOT ___) LOCATED WITHIN A CRITICAL RESOURCE OF CONCERN IS ___ FEET. N/A
 - THERE (ARE ___) OR (ARE NOT ___) EXISTING AND/OR PROPOSED WELLS(S) WITHIN 200 FEET OF ANY PROPOSED WELL. IF PRESENT, THE LOCATION AND SIZE HAS BEEN SHOWN ON THE PLAN.
 - EXISTING OWTS WITH A DESIGN FLOW GREATER THAN 1,000 GAL/DAY (ARE ___) OR (ARE NOT ___) LOCATED WITHIN 400 FEET OF THE PROPOSED WELL. IF PRESENT, THE LOCATION AND SIZE HAS BEEN SHOWN ON THE PLAN.
 - THERE (ARE ___) OR (ARE NOT ___) AREAS ON SUBJECT PROPERTY WHERE SOIL HAS BEEN EXCAVATED AND/OR WHERE STORM DEPOSITED SAND IN THE BACKDUNE ENVIRONMENT OR WHERE HUMAN TRANSPORTED MATERIAL HAS BEEN DEPOSITED.
 - THE POTENTIAL FOR FLOODING WITHIN 100 FEET OF THE PROPOSED OWTS DOES NOT EXIST.
 - THE PROPOSED WELL, IF APPLICABLE, (DOES ___) OR (DOES NOT ___) REQUIRE A VARIANCE FROM RIDEM'S "RULES AND REGULATIONS GOVERNING THE ENFORCEMENT OF CHAPTER 46-13.2 RELATING TO THE DRILLING OF DRINKING WATER WELLS".
 - THIS APPLICATION (IS ___) OR (IS NOT ___) PART OF A SUBDIVISION OF FIVE (5) LOTS OR LESS WITH EXISTING ROAD FRONTAGE.
 - THE SUBJECT PROPERTY (IS ___) OR (IS NOT ___) SERVED WITH AN OWTS & PRIVATE WELL. THE NITROGEN LOADING RATE SHALL NOT EXCEED 345 GAL/DAY PER 20,000 SQUARE FEET OF PROPERTY WHEN SERVED WITH AN OWTS & PRIVATE WELL.
 - THE CONTRACTOR SHALL STAKE AND FLAG THE LEACHFIELD AREA TO PROTECT THE LEACHFIELD FROM VEHICLE TRAFFIC AND EXCESSIVE WEIGHT LOADS BEFORE AND DURING CONSTRUCTION OF THE OWTS AND THE STRUCTURE. FLAGGING SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES AT THE SITE ARE COMPLETE.

SEPTIC GRAVEL SPECIFICATION:

GRAVEL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 3". UP TO 10% MAY BE SIZED BETWEEN 3/4" AND 3". GRAVEL SHALL MEET THE FOLLOWING:

SI-EV SIZE	% PASSING	SI-EV SIZE	% PASSING
3/4"	100% (see above)	#40	10%-50%
#4	55%-100%	#100	0%-20%
#10	40%-100%	#200	0%-2%



EFFLUENT FILTER
NOT TO SCALE

MODEL: ZABEL 8"x18" A100 OR EQUAL
DAILY FLOW OF 920 GAL/DAY OR GREATER



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL
DATE: 01/09/2023
APPROVED: [Signature] DATE: 01/09/23
No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must be Kept at Construction Site

APPLICANT:
SNR CONSTRUCTION, LLC.
4 SPRING HILL DRIVE
JOHNSTON, RI 02919
CONTACT: SERGIO ROSALES

PUMP CHAMBER BOUYANCY CALCULATIONS

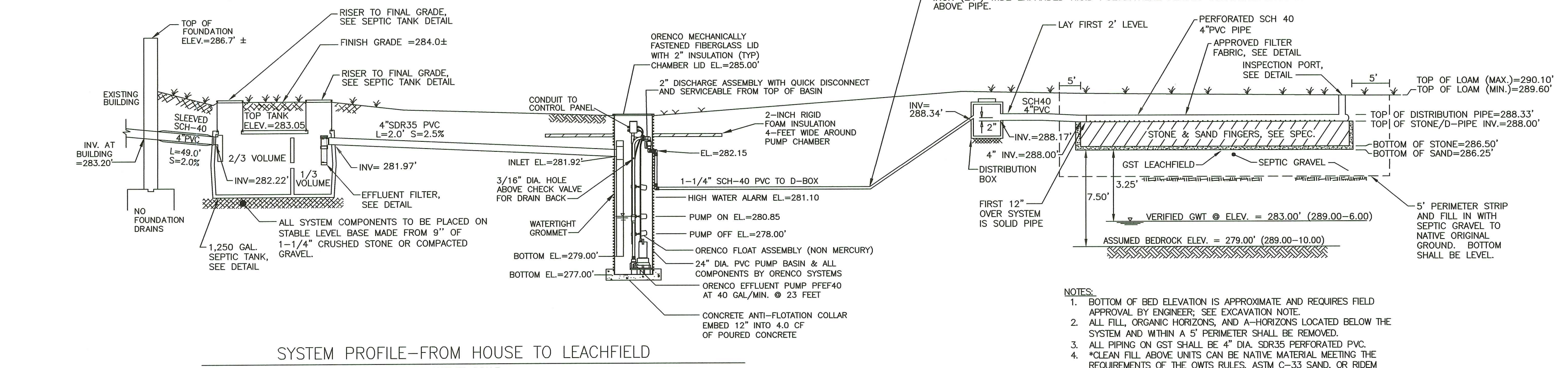
PUMP CHAMBER	TOP CHAMBER (FT)	BOTTOM CHAMBER (FT)	HEIGHT (FT)	ESHGW (FT)	DEPTH OF CHAMBER IN GW (FT)	UPWARD THRUST (LBS)	CONCRETE BALAST REQUIRED (CF)	CONCRETE PROVIDED (CF)	CONCRETE PROVIDED (LB)
LOT-4	285.00	277.00	8	280.00	3.00	588	3.9	4	600

UPWARD THRUST PER VERTICLE FT. OF 2.0 FT DIAM. CHAMBER
 $\pi(R)^2 \times 1 \text{ FT} \times 62.4 \text{ LB/FT}^3 = 3.1416 \times (1 \text{ FT})^2 \times 1 \text{ FT} \times 62.4 \text{ LB/FT}^3 = 196 \text{ LBS/VERTICLE FT.}$

1. CALCULATIONS IGNORE THE WEIGHT OF PUMP CHAMBERS, PUMPS, RISERS AND COVERS
2. WEIGHT OF CONCRETE = 150 LB/CF

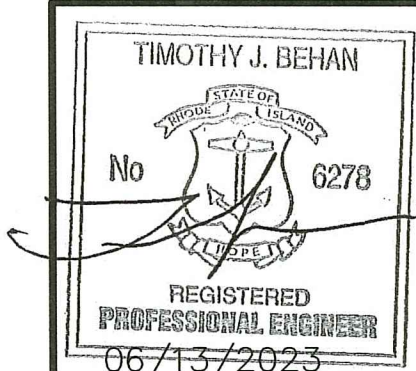
CONCRETE TANK BOUYANCY CALCULATIONS

UNIT(S)	TANK SIZE (GAL)	TOP TANK (FT)	BOTTOM TANK (FT)	ESHGW (FT)	DEPTH OF TANK IN GW (FT)	UPWARD THRUST (LBS)	WEIGHT OF TANK (PER MANUFACTURER)	CONCRETE BALAST REQUIRED (CF)	CONCRETE PROVIDED (CF)
LOT-4	1,500.00	283.05	277.63	279.00	1.37	6,667.8	10,083	0	0



SYSTEM PROFILE-FROM HOUSE TO LEACHFIELD
NOT TO SCALE

- NOTES:**
- BOTTOM OF BED ELEVATION IS APPROXIMATE AND REQUIRES FIELD APPROVAL BY ENGINEER; SEE EXCAVATION NOTE.
 - ALL FILL, ORGANIC HORIZONS, AND A-HORIZONS LOCATED BELOW THE SYSTEM AND WITHIN A 5' PERIMETER SHALL BE REMOVED.
 - ALL PIPING ON GST SHALL BE 4" DIA. SDR35 PERFORATED PVC.
 - *CLEAN FILL ABOVE UNITS CAN BE NATIVE MATERIAL MEETING THE REQUIREMENTS OF THE OWTS RULES, ASTM C-33 SAND, OR RIDEM SPECIFIED GRAVEL.



REVISIONS

No.	DATE	DRWN	CHKD
1	06-08-23	SMA	TJB

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
(401) 273-6600

ONSITE WASTEWATER TREATMENT PLAN
FOR
AP 9-19, LOT 343
1125 SOUTH ROAD
IN
EAST GREENWICH, RHODE ISLAND
PROPOSED OWTS DETAILS

SCALE: AS SHOWN SHEET NO: 2 OF 3
DRAWN BY: SMA DESIGN BY: SMA CHECKED BY: TJB
DATE: MARCH 2023 PROJECT NO 23010.00

EROSION CONTROL NARRATIVE:

PROJECT DESCRIPTION: THE DEVELOPMENT CONSISTS OF THE CONSTRUCTION OF A SINGLE FAMILY DWELLING WHICH INCLUDES CONSTRUCTION OF DRIVEWAY, SEPTIC SYSTEM, PRIVATE WELL, ROOF INFILTRATION SYSTEM FOR ROOF RUNOFF AND MISCELLANEOUS APPURTENANT ITEMS.

TOTAL LAND DISTURBANCE = 40,450± SQ. FT. (0.93± ACRES)

EMERGENCY PHONE NUMBERS: CONTACT SERGIO ROSALES AT 401-497-0546 FOR IMMEDIATE ATTENTION.

SOIL EROSION AND SEDIMENT CONTROL MEASURES: DOWN GRADIENT AREAS OF ALL DISTURBED AREAS SHALL BE PROTECTED WITH COMPOST FILTER SOCK AKA SILT SOCK AS SHOWN ON THE PLANS/DETAILS. ALL SOIL STOCK PILE AREAS SHALL BE PROTECTED FROM SOIL EROSION AS SHOWN ON THE DETAIL. STABILIZE ALL DISTURBED AREAS AS SOON AS POSSIBLE WITH GRASS SEED OR A 2 INCH LAYER OF WOOD MULCH. ALL CATCH BASINS IN THE IMMEDIATE VICINITY OF SITE SHALL BE PROTECTED AGAINST SOIL EROSION. ALL CONSTRUCTION VEHICLES ENTERING PROPERTY SHALL TRAVEL OVER A 'CONSTRUCTION ACCESS' ENTRANCE WHICH IS CONSTRUCTED IN ACCORDANCE WITH DETAIL.

TREES/STUMPS/TOPSOIL: ALL TREES/STUMPS SHALL BE REMOVED AND DISPOSED OFF SITE. BURIAL OF TREES/STUMPS IS NOT PERMITTED. ALL TOPSOIL ON SITE SHALL REMAIN ON-SITE UNLESS APPROVED BY TOWN/CITY.

SCHEDULE: WORK IS ANTICIPATED TO COMMENCE IN MARCH 2023 AND BE COMPLETED BY FALL 2023.

SEQUENCE & STAGING OF LAND DISTURBING ACTIVITIES:

1. ALL WORK TO BE COORDINATED WITH PERMIT AGENCIES.
2. PLACE PERIMETER SEDIMENTATION CONTROL DEVICES (COMPOST FILTER SOCK) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE SHALL SOIL DISTURBANCE EXTEND BEYOND THE SEDIMENTATION CONTROL DEVICES SHOWN ON THE PLAN.
3. CONSTRUCT CONSTRUCTION ENTRANCE DEVICES 9.9.0.
4. CLEAR AND GRUB SITE.
5. ROUGH IN DRIVEWAY AND BEGIN CONSTRUCTION OF NEW DWELLING (EXCAVATING AND GRADING, ETC.). ALL STRIPPED SOILS WHICH ARE STOCKPILED SHALL BE STOCKPILED AND PROTECTED BY A ROW OF SEDIMENTATION DEVICES, REFER TO DETAIL.
6. CONSTRUCT UTILITIES IF APPLICABLE (GAS, WATER, SEWER, ELECTRIC, STORM DRAINS, ETC.)
7. FINISH CONSTRUCTION OF DWELLING.
8. CONSTRUCT DRIVEWAY PER WETLAND PERMIT.
9. CONSTRUCT ROOF DRYWELL SYSTEM AND VEGETATED SWALE.
10. ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED TO ESTABLISH PERMANENT VEGETATION.
11. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES WHEN SITE IS STABILIZED.

EROSION CONTROL & SOIL STABILIZATION PROGRAM:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND PROCEDURES SET FORTH IN THE RIDEM FRESHWATER WETLAND PERMIT #23-0016, CITY/TOWN LAND DEVELOPMENT AND SUBDIVISION REGULATIONS, AND CITY/TOWN CODE OF ORDINANCES.
2. EXTREME CARE SHALL BE EXERCISED AS TO PREVENT ANY MATERIALS FROM ENTERING WETLANDS, THE ROADWAYS, ROADWAY DRAINAGE SYSTEMS, AND ADJACENT PROPERTY.
3. STAKED COMPOST FILTER SOCKS SHALL BE INSTALLED WHERE SHOWN ON THE PLAN AND AS REQUIRED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTIES, WETLANDS AND THE ROADWAY DRAINAGE SYSTEM.
4. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
5. ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15 SHALL BE SEEDED OR PROTECTED BY THAT DATE.

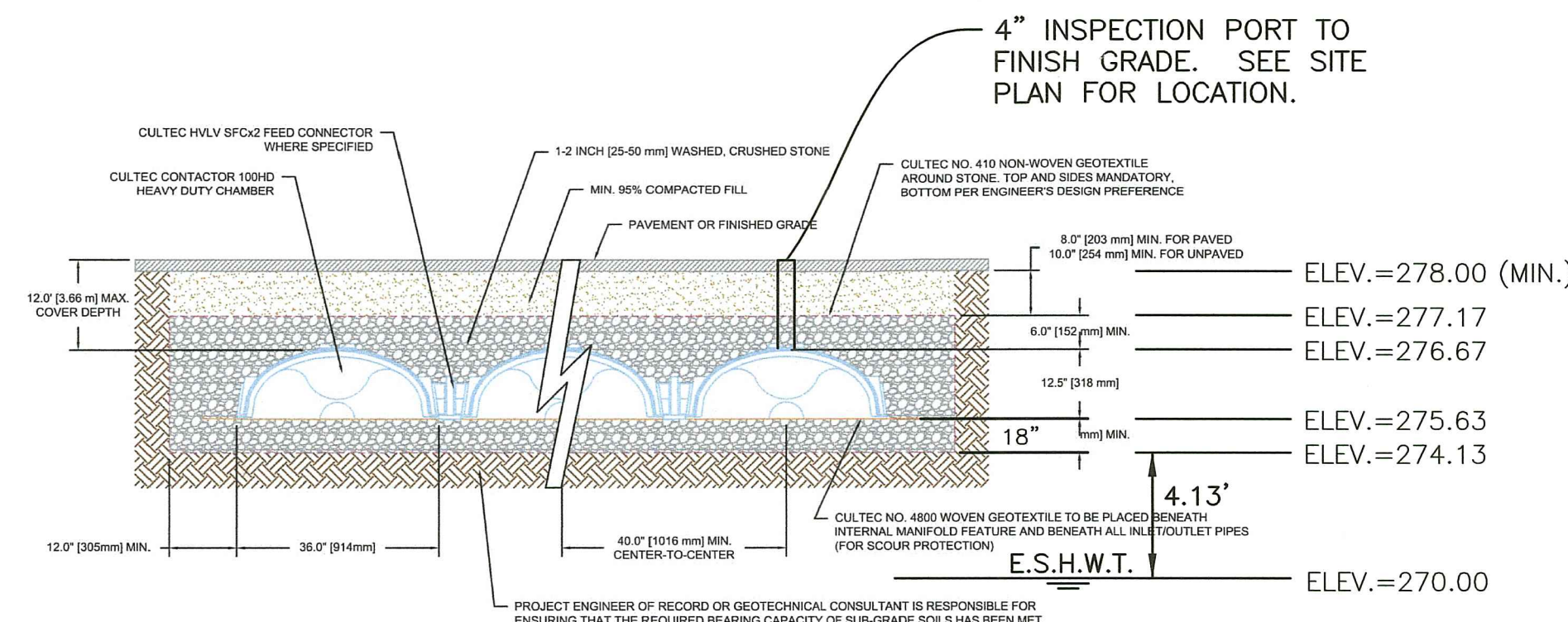
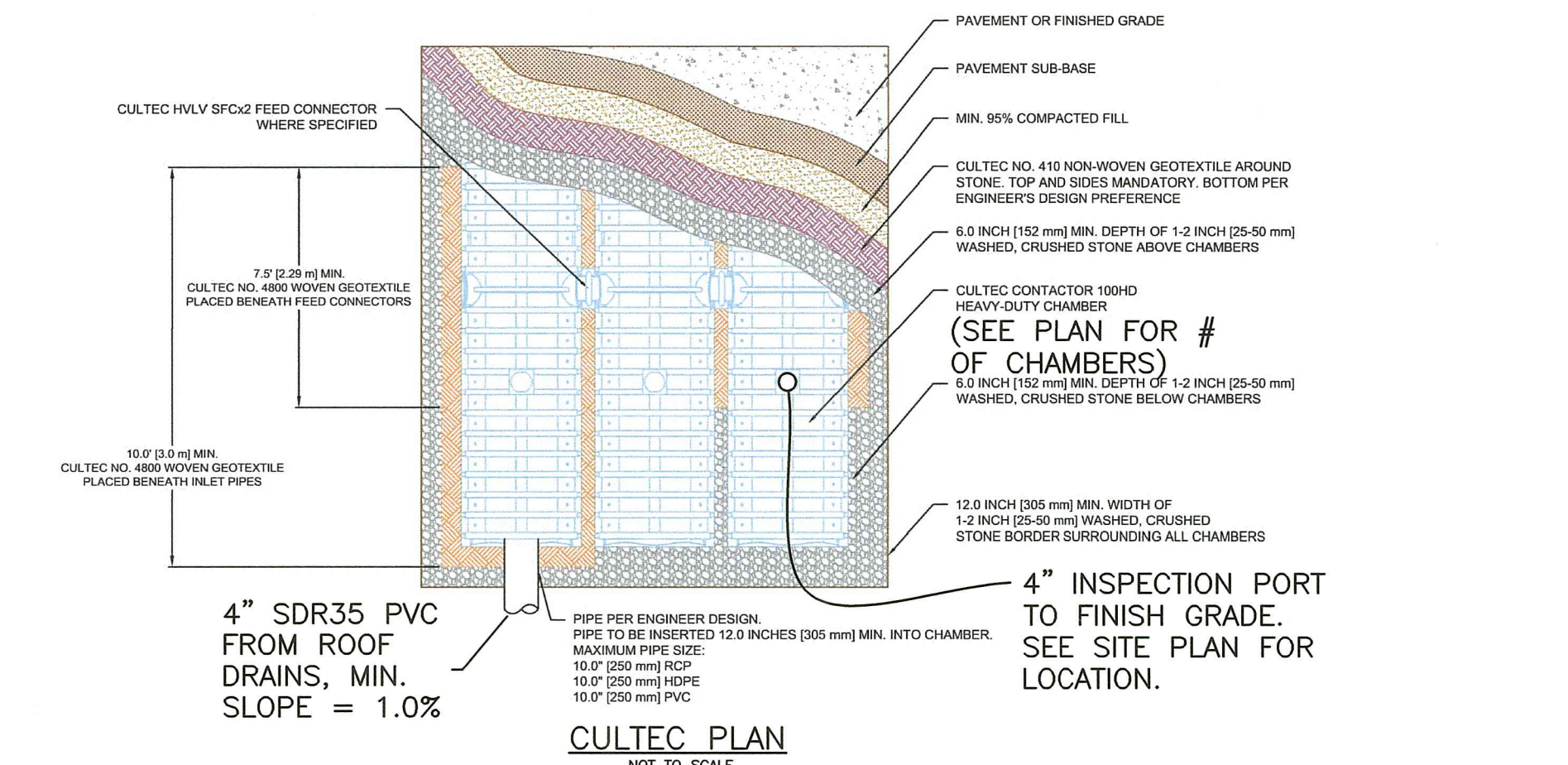
SEED MIX: (RIDOT STANDARD)

CREeping RED FESCUE	75 LBS/ACRE
KENTUCKY BLUE GRASS	15 LBS/ACRE
COLONIAL BENT GRASS	5 LBS/ACRE
PERENNIAL RYE GRASS	5 LBS/ACRE

6. TEMPORARY TREATMENTS SHALL CONSIST OF STRAW OR FIBER MULCH OR PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE RIDEM, TOWN, ENGINEER OR OWNER AT NO ADDITIONAL COST.
7. STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
8. ALL NEW COMPOST FILTER SOCKS OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
9. STOCKPILES SHALL HAVE NO SLOPE GREATER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED COMPOST FILTER SOCKS. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS OF TIME SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF STRAW OR FIBER MATTING.
10. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
11. ADDITIONAL COMPOST FILTER SOCKS AND OTHER TREATMENTS SHALL BE PROVIDED AS DIRECTED BY ENGINEER, RIDEM OR LOCAL REPRESENTATIVES AT NO ADDITIONAL COST.
12. THE CONTRACTOR SHALL REFERENCE THE "RI EROSION AND SEDIMENT CONTROL HANDBOOK" AS PREPARED BY THE US DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, (AS REVISED) AS A GUIDE.
13. THE CONTRACTOR SHALL INSPECT THE SOIL EROSION CONTROL DEVICES AFTER EVERY RAIN STORM EVENT AND EVERY SEVEN DAYS DURING DRY PERIODS. ANY SOIL MIGRATION PAST THE DEVICES SHALL BE REMOVED AND THE SOIL EROSION CONTROL DEVICES SHALL BE RE-ESTABLISHED TO PREVENT SOIL EROSION. ALL ACCUMULATED SEDIMENT IN FRONT OF THE DEVICES SHALL BE REMOVED AFTER EVERY RAIN STORM EVENT.
14. ALL DISTURBED SOIL AREAS SHALL BE PROTECTED AGAINST SOIL EROSION BY PLACEMENT OF STAKED COMPOST FILTER SOCKS ON THE DOWN GRADIENT SIDE OF THE DISTURBED AREA(S). SHOULD THE VOLUME AND/OR RATE OF STORMWATER RUNOFF BE TOO GREAT FOR A SINGLE DEVICE, THEN MULTIPLE ROWS OF COMPOST FILTER SOCKS ARE REQUIRED.
15. AT THE END OF THE PROJECT ALL SEDIMENT IN THE DRAIN MANHOLE SLUMPS & PIPES SHALL BE REMOVED.
16. DISTURBED SOILS SHALL BE STABILIZED AS SOON AS PRACTICABLE AS DETERMINED BY OWNER/ENGINEER.
17. TEMPORARY VEGETATION AND/OR MULCHING SHALL BE USED TO PROTECT EXPOSED LAND AREAS DURING DEVELOPMENT.
18. PERMANENT (FINAL) VEGETATION SHALL BE PLANTED AND SUPPLEMENTAL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE.
19. UNTIL A DISTURBED AREA IS STABILIZED, SEDIMENT IN THE RUNOFF WATER SHALL BE TRAPPED BY THE USE OF DEBRIS BASINS, SEDIMENT BASINS, SILT TRAPS OR SIMILAR MEASURES.
20. DURING GRADING OPERATIONS, APPROPRIATE MEASURES FOR DUST CONTROL SHALL BE EXERCISED BY USE OF SPRAY WATER APPLIED OR APPROVED EQUAL.
21. A CONTRACTOR SHALL INSPECT AND MAINTAIN THE EROSION AND SEDIMENT CONTROL SYSTEM AS SPECIFIED. CONSTRUCTION INSPECTION AND MAINTENANCE SHALL BE PERFORMED AFTER EACH RAINSTORM EVENT AND ON A WEEKLY BASIS.

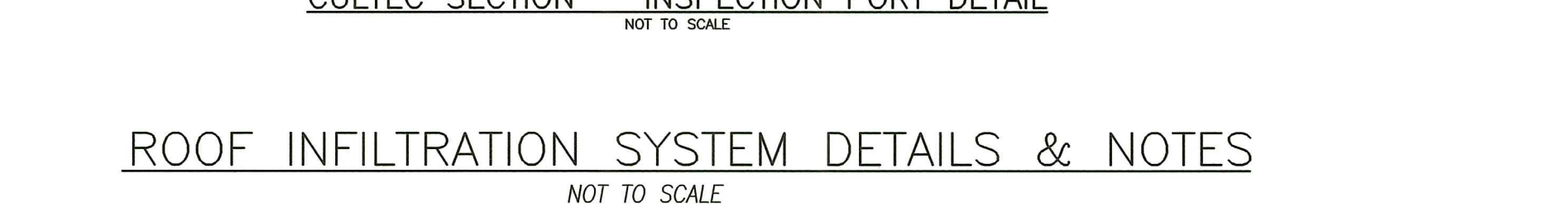
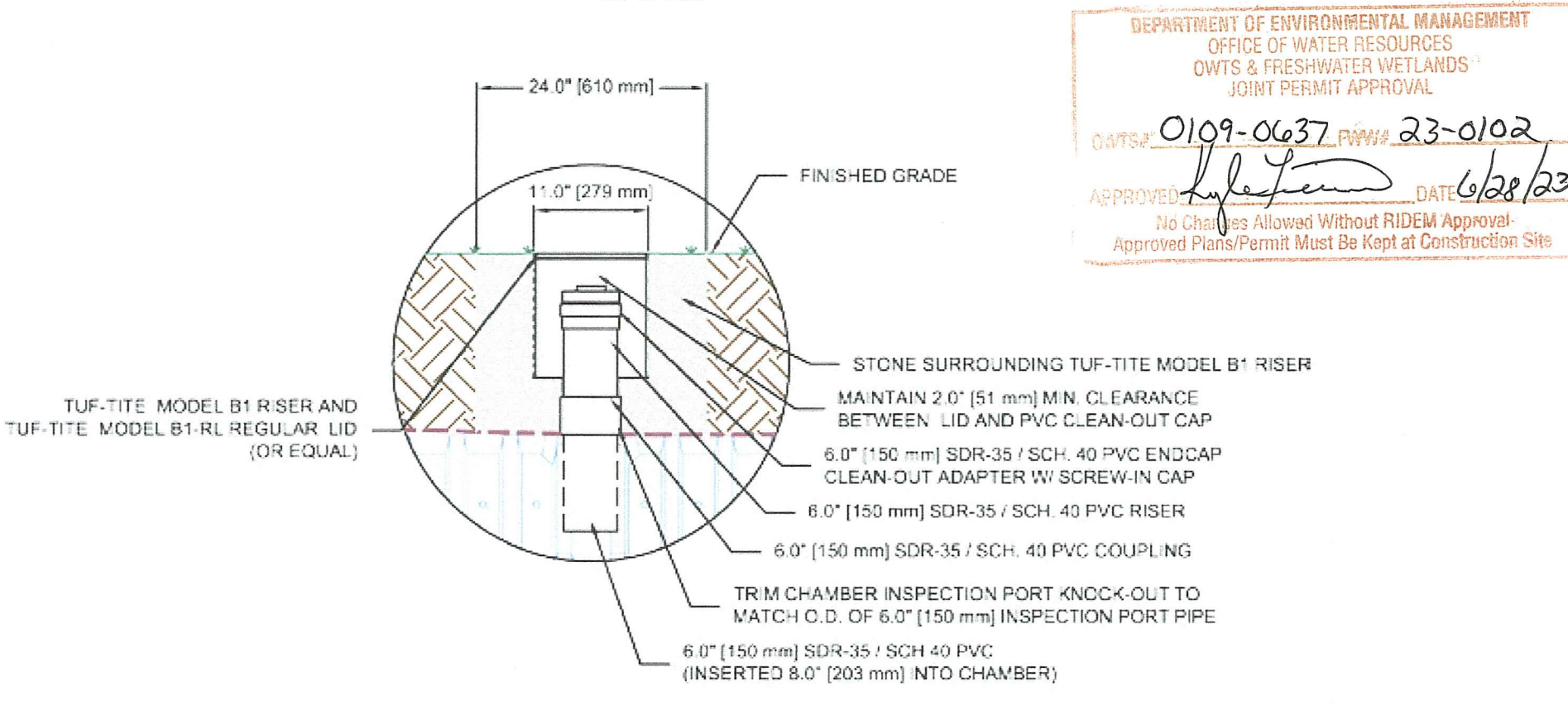
CRUSHED STONE SPECIFICATION FOR DRIVEWAY

- 3/4" TO 1-1/2" CRUSHED STONE
- A MINIMUM OF 75% SHALL BE 3/4" TO 1-1/2" CRUSHED GRANITE STONE, CLEAN, FREE OF DIRT, FINES, VEGETATION AND OTHER DEBRIS.
- THE REMAINING 25% SHALL CONTAIN 12.5% 1/8" TO 3/4" AND 12.5% 3/8" TO 5/8". ALL 2'S ARE +/- 5%.
- THE MIX SHALL BE DESIGNED FOR LOW VOLUME MAINTENANCE DRIVEWAYS.



NOTE: REMOVE ALL LEDGE WITHIN 3' OF BOTTOM OF SYSTEM, IF APPLICABLE.
 NOTE: KEEP CHAMBER FIELD AT LEAST 25' OFF SEPTIC DRAIN FIELD AND 50 FEET OFF WELLS.
 NOTE: STANDARD CHAMBER IN LIEU OF HD CHAMBERS CAN BE USED WITH AUTHORIZATION OF ENGINEER.
 NOTE: ALL DRAIN PIPE SHALL BE BEDDED IN 3/4" CRUSHED STONE 8" MIN. AROUND PIPE.

CULTEC SECTION - INSPECTION PORT DETAIL

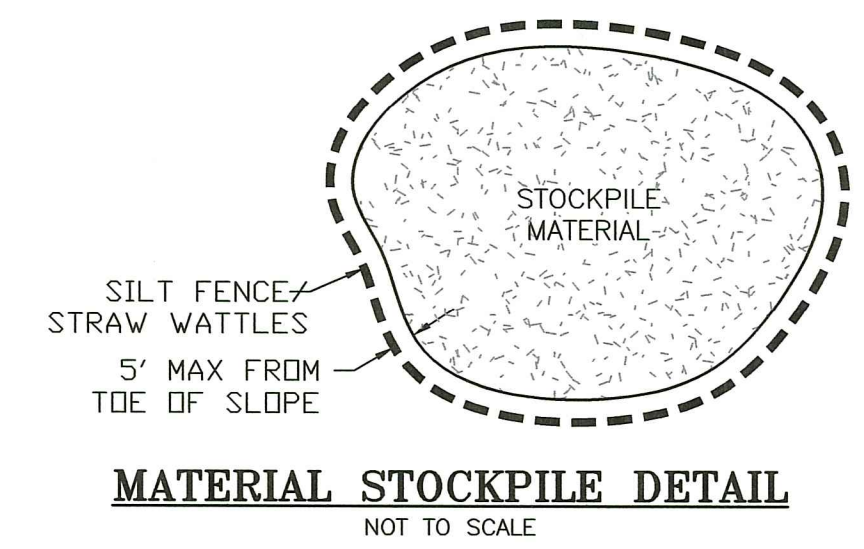


CULTEC SYSTEM NOTES:

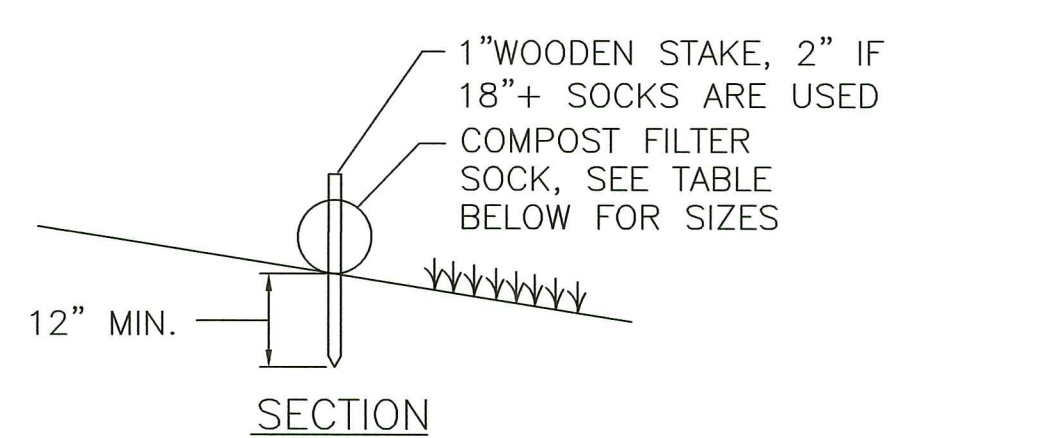
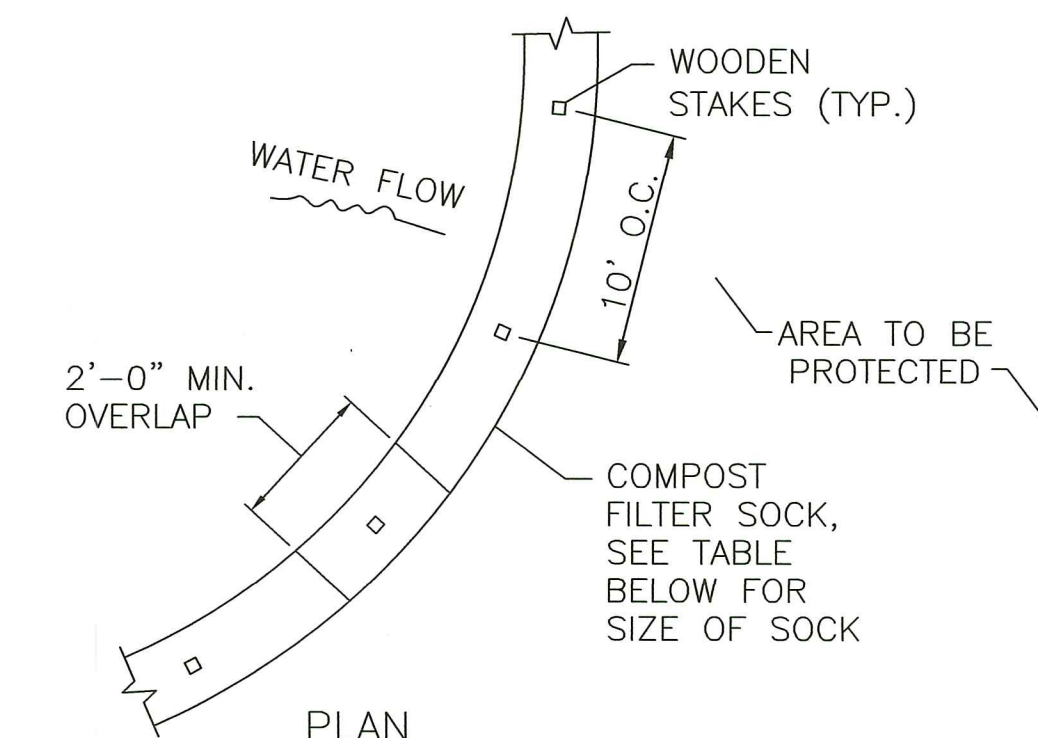
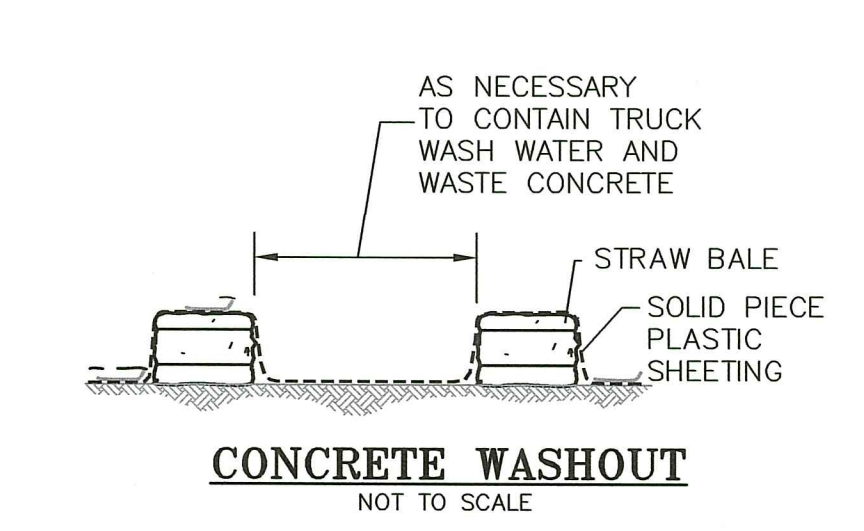
1. ALL WORK PERFORMED IN ACCORDANCE WITH CULTEC RECOMMENDATIONS.
2. CULTEC SYSTEM INSTALLATION MUST BE INSPECTED BY THE ENGINEER IF CERTIFICATION IS REQUIRED.
3. CULTEC SYSTEMS MAY BE SPLIT INTO TWO SYSTEMS EACH RECEIVING HALF OF THE ROOF AREA WHEN AUTHORIZED BY ENGINEER.
4. INFILTRATION SYSTEM CHAMBERS SHALL BE CULTEC CONTRACTOR 100 HD UNITS.
5. STONE AROUND INFILTRATORS SHALL BE WASHED, CRUSHED STONE FREE OF FINES.
6. CULTEC SYSTEMS SHALL BE LOCATED 25' MIN. FROM OWTS'S, 50' FROM WELLS AND 10' MIN. FROM SLAB BUILDINGS AND PROPERTY LINES.
7. ALL PIPE UNDER DRIVEWAYS SHALL BE SDR35 PVC OR APPROVED EQUAL AND BEDDED IN 3/4" CRUSHED STONE 8" MIN. AROUND PIPE.

CULTEC SYSTEM MAINTENANCE NOTES:

1. INFILTRATOR CHAMBERS SHALL BE PERIODICALLY INSPECTED AND MAINTAINED DURING CONSTRUCTION AND A MINIMUM OF TWICE PER YEAR UPON COMPLETION OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF ALL DRAINAGE FACILITIES, AS PER THEIR RESPECTIVE PROGRAMS, UNTIL FINAL ACCEPTANCE BY THE OWNER.
3. UPON FINAL ACCEPTANCE, THE OWNER SHALL BE RESPONSIBLE FOR ALL DRAINAGE INSPECTION AND MAINTENANCE.
4. ANY INADVERTENT OR DELIBERATE DISCHARGE OF WASTE OIL OR ANY OTHER POLLUTANT TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION OF THE RIDEM-UC PROGRAM.
5. ANY INCIDENT OF GROUNDWATER CONTAMINATION RESULTING FROM THE IMPROPER DISCHARGE OF CONTAMINANTS TO THE DISPOSAL SYSTEM SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE RIDEM WILL REQUIRE THE PROPERTY OWNER TO PREMEDIATE ANY INCIDENTS THAT MAY ADVERSELY IMPACT THE QUALITY OF THE GROUNDWATER.
6. VEHICLE TRAFFIC OVER THE SYSTEM IS NOT PERMITTED.



CONCRETE WASHOUT



- NOTES:**
1. ALL MATERIAL TO MEET REQUIREMENTS OF SECTION 206 OF RI STANDARD SPECIFICATIONS.
 2. SUBMIT SHOP DRAWING OF COMPOST MATERIAL FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.
 3. COMPOST FILTER SOCK IS AN 'OR EQUAL' TO COMPOST FILTER BERM WHEN INSTALLED IN ACCORDANCE WITH THE TABLE PROVIDED BELOW:

MAXIMUM SLOPE LENGTH ABOVE COMPOST FILTER SOCK, (FEET) AND DIAMETER OF SOCK REQUIRED:

SLOPE	8" SOCK	12" SOCK	18" SOCK	24" SOCK
2%	300'	375'	500'	650'
5%	200'	250'	275'	325'
10%	100'	125'	150'	200'
20%	50'	65'	70'	130'
30%	30'	40'	45'	65'
40%	30'	40'	45'	50'
50%	20'	25'	30'	35'

COMPOST FILTER SOCK

NOT TO SCALE

PREPARED FOR:

SNR CONSTRUCTION, LLC
 4 SPRING HILL DRIVE
 JOHNSTON, RI 02919

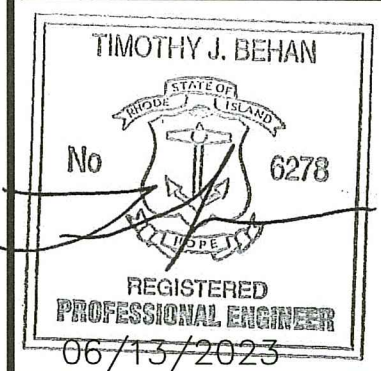
MATERIALS SIZE

SQUARE MESH SIEVES	2" CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	95-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	-	-
1 INCH	0-5	-	0-15
3/4 INCH	-	0-5	-
1/2 INCH	-	-	0-5
3/8 INCH	-	-	-

NOTE: STABILIZATION PAD TO BE IN CONFORMANCE WITH STANDARDS SET FORTH IN THE "RHODE ISLAND GUIDELINES FOR SOIL & SEDIMENT CONTROL."

RIP-RAP STABILIZATION PAD @ CONSTRUCTION ENTRANCE

NOT TO SCALE

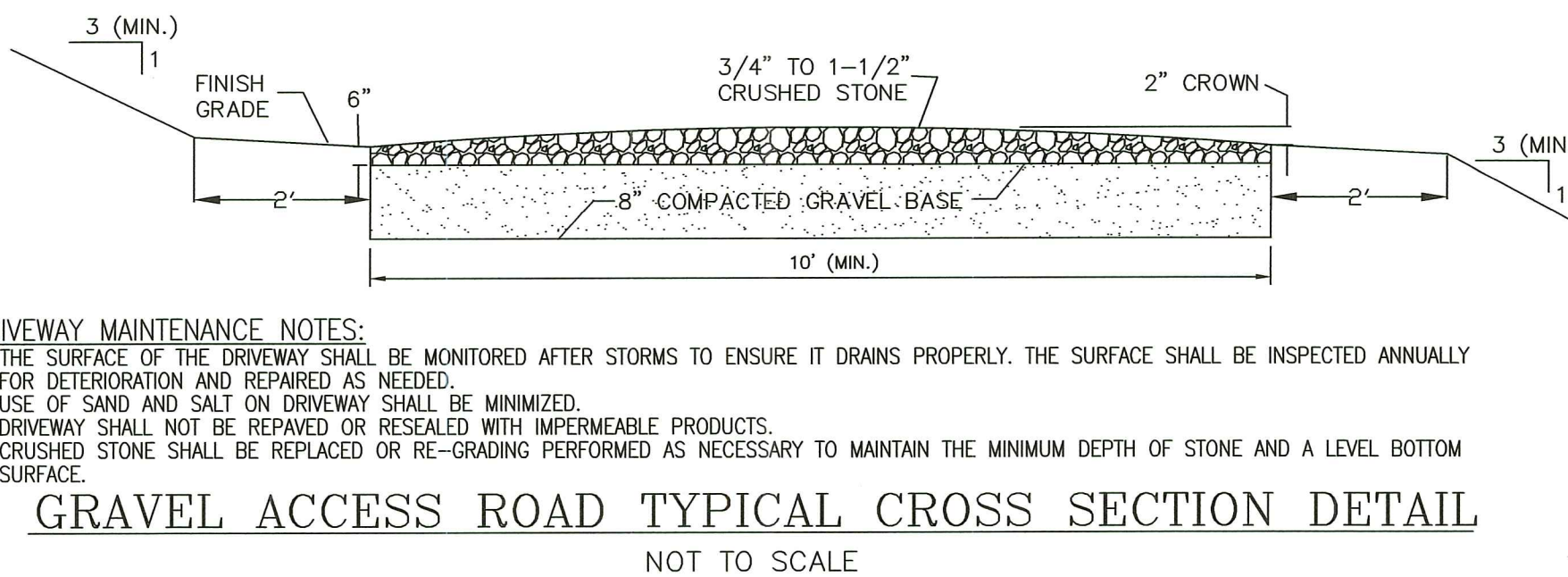


REVISIONS

No.	DATE	DRWN	CHKD
1	06-08-23	SMA	TJB

ONSITE WASTEWATER TREATMENT PLAN
 FOR
 AP 9-19, LOT 343
 1125 SOUTH ROAD
 IN
 EAST GREENWICH, RHODE ISLAND
SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: AS SHOWN'	SHEET NO: 3 OF 3	
DRAWN BY: SMA	DESIGN BY: SMA	CHECKED BY: TJB
DATE: MARCH 2023	PROJECT NO 23010.00	



- DRIVEWAY MAINTENANCE NOTES:**
1. THE SURFACE OF THE DRIVEWAY SHALL BE MONITORED AFTER STORMS TO ENSURE IT DRAINS PROPERLY. THE SURFACE SHALL BE INSPECTED ANNUALLY FOR DETERIORATION AND REPAIRED AS NEEDED.
 2. USE OF SAND AND SALT ON DRIVEWAY SHALL BE MINIMIZED.
 3. DRIVEWAY SHALL NOT BE REPAIRED OR RESEALED WITH IMPERMEABLE PRODUCTS.
 4. CRUSHED STONE SHALL BE REPLACED OR RE-GRADING PERFORMED AS NECESSARY TO MAINTAIN THE MINIMUM DEPTH OF STONE AND A LEVEL BOTTOM SURFACE.
- GRAVEL ACCESS ROAD TYPICAL CROSS SECTION DETAIL**
 NOT TO SCALE