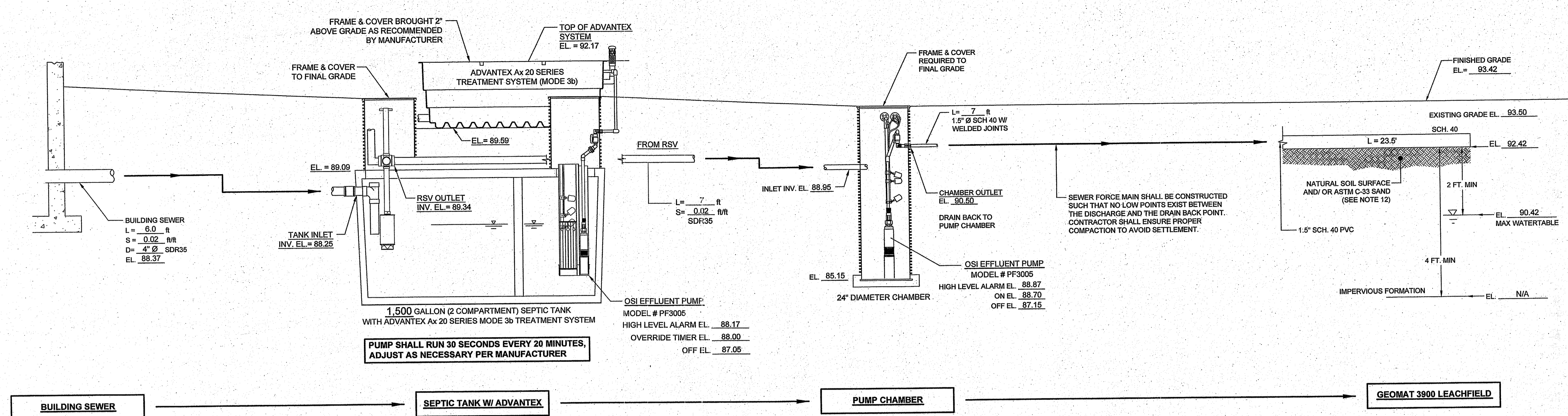
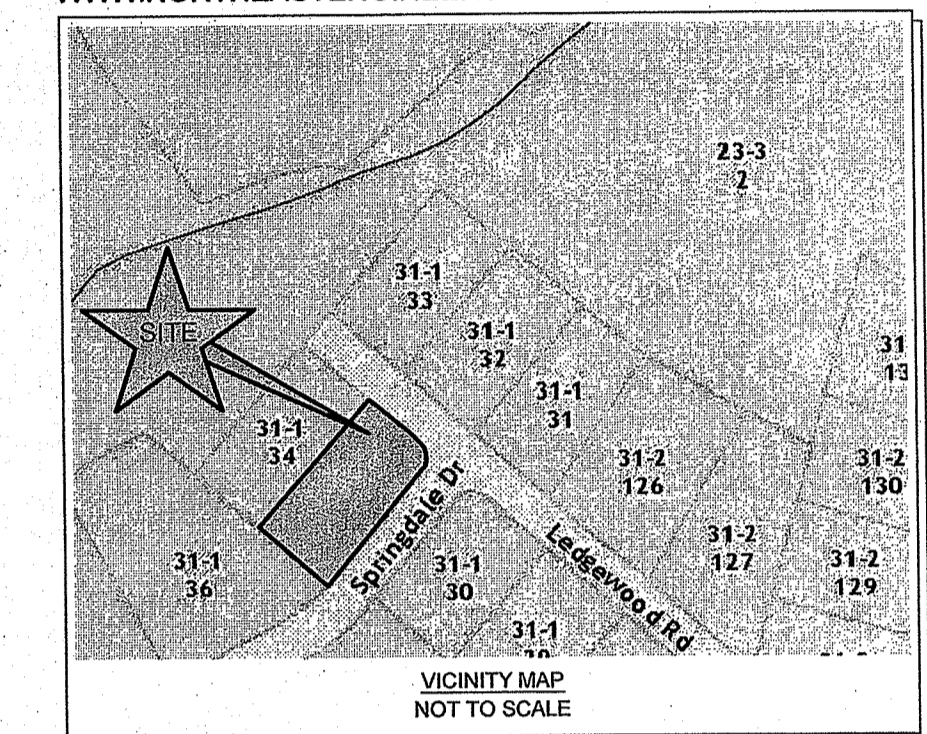


A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN, RHODE ISLAND 02842
PHONE (401) 849-0810 FAX (401) 846-4169
WWW.NORTHEASTENGINEERS.COM

SITE/CIVIL
LAND PLANNING
WATERFRONT SURVEYING
GEOTECHNICAL
ENVIRONMENTAL
TRANSPORTATION
STRUCTURAL
MATERIALS TESTING

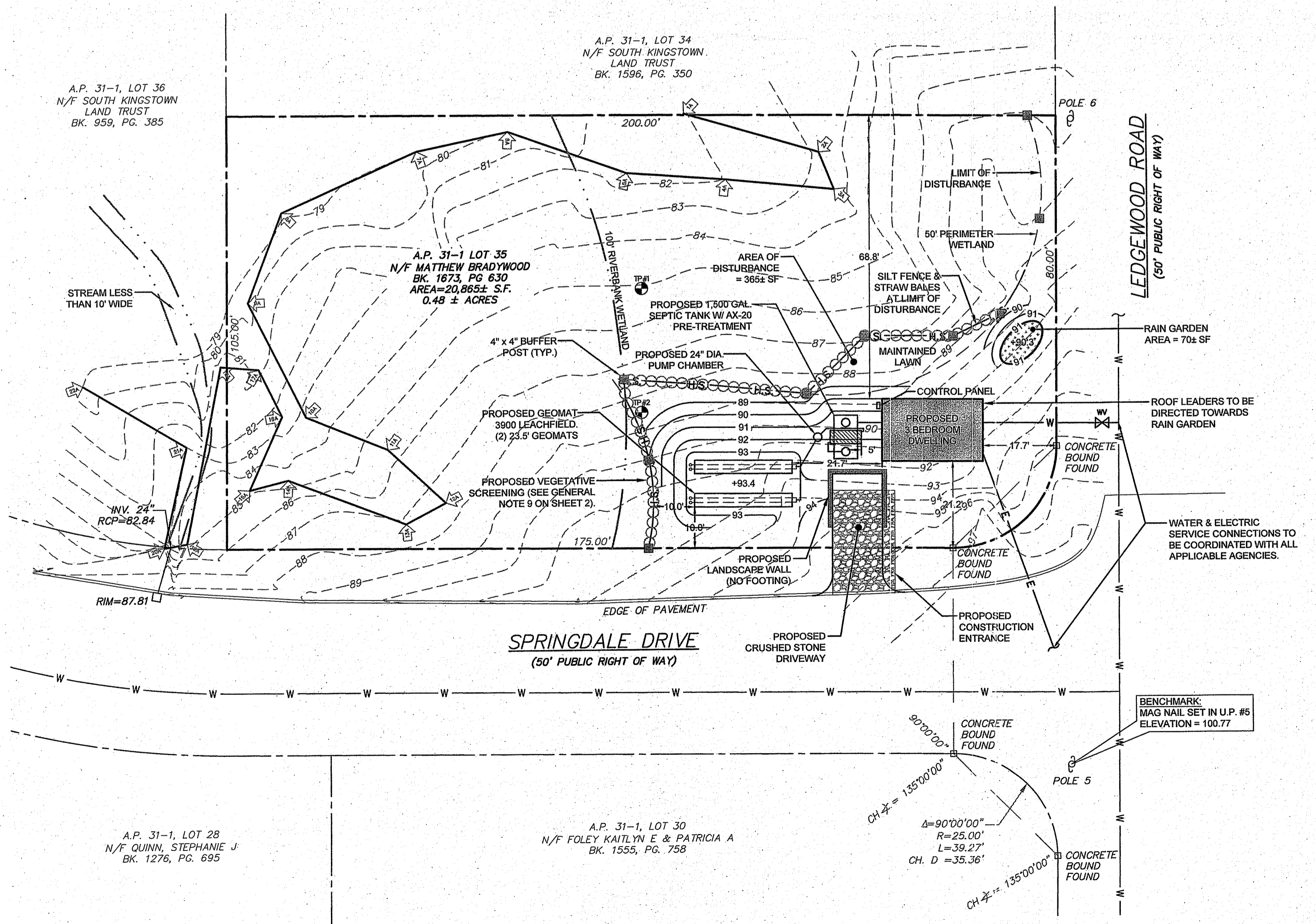


SEWER PROFILE
SCALE: NOT TO SCALE

DESIGN COMPUTATION		
DESIGN PERC. RATE	DESIGN APP. RATE	SEEPAGE SYSTEM:
CATEGORY 6m	2.3 gal/SF/day	ADVANTEK AX-20 WITH A GEOMAT 3900 LEACHFIELD
DESIGN WATER TABLE:		
TH 2: WT = 37"	TOTAL LEACHING AREA REQUIRED: 150 SF	
SEWAGE FLOW:		
3 BEDROOMS x 115 g/day = 345 g/day	LEACHING AREA PROVIDED: 152 SF	
SEPTIC TANK:		
CAPACITY PROVIDED: 1,500 GALLONS	NUMBER OF GEOMATS: 2	
	LENGTH OF EACH GEOMAT: 23.5 FT	
	WIDTH OF EACH GEOMAT: 3.25 FT	

- GENERAL OWTS SYSTEM NOTES:**
- 1) ALL BRUSH AND TREES WILL BE CLEARED WITHIN (10') R OF THE SYSTEM.
 - 2) A MINIMUM ELEVATION OF 92.42, CORRESPONDING TO THE INVERT OF THE GEOMAT LATERALS, SHOULD BE MAINTAINED WITHIN 5 FEET OF OWTS.
 - 3) ALL EXISTING AND PROPOSED PRIVATE WELLS WITHIN 200 FT. OF OWTS ARE SHOWN. ALL PUBLIC WELLS EXISTING OR PROPOSED WITHIN 500' ARE SHOWN.
 - 4) NO DRAINS OR WATER LINES ARE KNOWN TO EXIST OR ARE TO BE CONSTRUCTED IN THE PROXIMITY OF THE SYSTEM WITHIN THE DISTANCES SPECIFIED IN RIDEM OWTS TABLE 6.23.
 - 5) PROPOSED TANKS, INLETS, OUTLETS, & PIPING MUST BE WATERTIGHT TO PREVENT THE INFILTRATION OF GROUND WATER.
 - 6) THE SYSTEM FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE STATE OF RHODE ISLAND, DEPARTMENT ENVIRONMENTAL MANAGEMENT, "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION, AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS."
 - 7) THE DESIGN INTENT IS TO MEET THE STATE STANDARDS. SINCE THIS PLAN HAS BEEN CREATED TO GAIN THE NECESSARY PERMITTING, NO CONSTRUCTION INSTALLATIONS HAVE COMMENCED. BECAUSE THIS IS NOT A "RECORD DRAWING OF AS-BUILT CONDITIONS" AND NOTHING HAS BEEN INSTALLED, THE ENGINEER SIGNING AND STAMPING THIS PLAN IS NOT GUARANTEEING THE OPERATION OF THE INSTALLED SEPTIC SYSTEM. UPON THE APPROVED SYSTEM INSTALLATION, THE DESIGN ENGINEER WILL SUPERVISE, VERIFY, AND CERTIFY THAT THE SYSTEM WAS INSTALLED AS SPECIFIED ON THE APPROVED PLAN.
 - 8) ANTI-FLOATATION DEVICES AS PROVIDED BY THE MANUFACTURER SHALL BE USED FOR THE PROPOSED ADVANTEK POD.
 - 9) NO FOUNDATION DRAIN LINES ARE TO BE CONSTRUCTED WITHIN 25 FT. OF THE OWTS OR BUILDING SEWER.
 - 10) SEWER FORCE MAIN SHALL BE CONSTRUCTED SUCH THAT NO LOW POINTS EXIST BETWEEN THE DISCHARGE AND THE DRAIN BACK POINT. CONTRACTOR SHALL ENSURE PROPER COMPACTION TO AVOID SETTLEMENT.
 - 11) ANY PIPING SUBJECT TO VEHICULAR TRAFFIC SHALL BE SCH. 40 OR EQUIVALENT.
 - 12) EXISTING AP LAYER WITHIN LEACHFIELD AREA SHALL BE REMOVED AND FILLED TO INVERT ELEVATION WITH C-33 SAND CONFORMING TO SECTION 6.37 OF THE RIDEM RULES.
 - 13) THE PROPOSED LEACHFIELD AREA SHALL BE PROTECTED FROM ANY ACTIONS THAT COULD RESULT IN THE COMPACTION OF SOILS INCLUDING PARKING, VEHICLE TRAFFIC, STAGING AREAS, ETC.
 - 14) SEPTIC TANK INLET AND OUTLET PIPES SHALL BE CONNECTED TO THE TANK WITH WATERTIGHT SEALED FLEXIBLE JOINTS. THE PIPE GASKET SHALL BE AN INTEGRAL PART OF ALL TANKS AND THE PIPE GASKET SHALL BE FASTENED TO THE PIPE WITH A STAINLESS STEEL RETRACTABLE CLAMP PER RIDEM RULE 6.27.

SOIL EVALUATION DATA												
TP#	HORIZON	DEPTH (INCHES)	HORIZON BOUNDARIES			SOIL COLORS		RE-DOX DESCRIPTION	TEXTURE	STRUCTURE	CONSISTENCE	SOIL CATEGORY
			DIST	TOPO	MATRIX	REDOX FEATURES						
1	Ap	0-9	a	s	10YR 2/2	--	--	--	sil	1Fgr	vfr	5
	Bw1	9-17	g	w	10YR 4/4	--	--	sil	1Fsbk	fr	5	
	Bw2	17-24	c	s	10YR 5/4	--	--	sil	1Fsbk	fr	5	
	Bw3	24-38	a	i	2.5Y 4/3	7.5YR 4/6 5Y 6/2	c.c.p -c.d	sil	1Fsbk	fr	5	
	2C1	38-60	g	i	2.5Y 4/2	--	--	gls	Ø-m	vfr	6m	
2	Ap	0-8	a	s	10YR 2/2	--	--	sil	1Fgr	vfr	5	
	Bw1	8-26	g	w	10YR 4/6	--	--	sil	1Fsbk	fr	5	
	Bw2	26-37	c	s	10YR 4/4	--	--	sil	1Fsbk	fr	5	
	Bw3	37-44	a	i	2.5Y 5/3	7.5YR 4/6 2.5Y 6/1	c.m.p m.c.d	sil	1Fsbk	fr	5	
	2C1	44-60	g	i	2.5Y 4/2	--	--	gls	Ø-m	vfr	6m	



LEGEND

- PROPERTY LINE
- ADJUTTERS PROPERTY LINE
- - - - - EXISTING TOPOGRAPHIC CONTOUR
- - - - - EDGE OF PAVEMENT
- - - - - 100' RIVERBANK WETLAND
- - - - - 50' PERIMETER WETLAND
- - - - - PROPOSED CONTOUR
- - - - - PROPOSED SPOT ELEVATION
- - - - - PROPOSED WATER SERVICE
- - - - - PROPOSED ELECTRIC SERVICE
- - - - - SILT FENCE & STRAW BALES
- - - - - LIMIT OF DISTURBANCE
- - - - - CATCH BASIN
- - - - - UTILITY POLE
- - - - - IRON ROD
- - - - - CONCRETE BOUND
- - - - - 4' x 4' BUFFER POST
- - - - - WETLAND FLAG

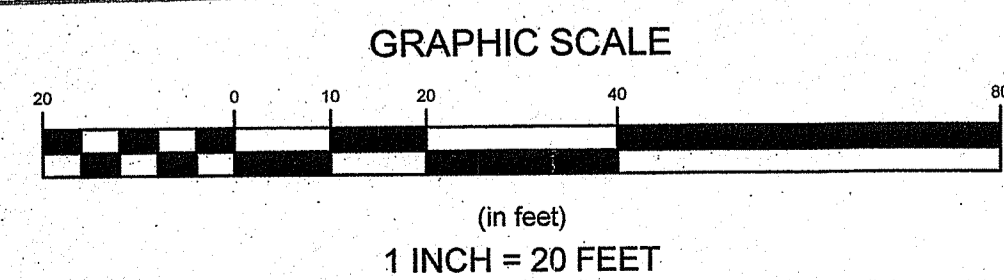
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL

OWTS# 04321659 RW# 17-0062

APPROVED: [Signature] DATE 10/10/19

No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must Be Kept at Construction Site

Environmental Management
AUG 8 2019
Office of Water Resources



1	RIDEM COMMENTS	7/19/19	
No.	Revision	Date	App.
Designed by:	GES	Drawn by:	DJW
Checked by:		Date:	26APR19
Project Title:			
A.P. 31-1 LOT 35			
SPRINGDALE DRIVE			
SOUTH KINGSTOWN, RHODE ISLAND			
Client/Owner:			
MATTHEW BRADYWOOD 1012 KINGSTOWN ROAD WAKEFIELD, RI 02879			
Issued for:			
RIDEM			
Drawing Title:			
PROPOSED CONDITIONS PLAN			
Drawing Number:			
C-1			
Sheet 1 of 3			
Project Number:			
16157.1			
Survey Index:			
38 - 31-1 - 35			
OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.			

GENERAL NOTES

- PROPERTY LINE AND EXISTING CONDITIONS ARE THE RESULT OF A FIELD SURVEY BY NORTHEAST ENGINEERS & CONSULTANTS, INC. ON SEPTEMBER 23, 2016.
- WETLAND DELINEATED BY KATHLEEN MANGAN ON AUGUST 31, 2016.
- SITE LIES WITHIN FEMA FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) PER THE FLOOD INSURANCE RATE MAP 44000C0185H, LAST REVISED OCTOBER 19, 2010.
- ALL PROPOSED WORK TO BE CONDUCTED ABOVE THE 100 YEAR FLOODPLAIN ELEVATION.
- SUBJECT PARCEL LIES WITHIN THE R-20 ZONING DISTRICT.
- NORTH ARROW SCALED FROM SOUTH KINGSTOWN GIS MAP AND SHOULD BE CONSIDERED APPROXIMATE.
- SOIL TYPE IN THIS VICINITY IS 'SMB', SCIO VERY STONY SILT, PER THE NATURAL RESOURCE CONSERVATION SOIL SURVEY. THIS SOIL IS HYDROLOGIC GROUP "C".
- THE PROPOSED GRADING SHOWN IS THE MINIMUM NECESSARY FOR THE OWTS SYSTEM AND RAIN GARDEN.
- PER RIDEM APPROVAL, A DENSE, CONTINUOUS ROW OF EVERGREEN PLANTINGS SHALL BE PROVIDED ALONG THE LIMIT OF DISTURBANCE, AS SHOWN. PLANTINGS SHALL BE PLACED SIX (6) TO EIGHT (8) FEET ON CENTER AND FOUR (4) FEET TALL AFTER PLANTING. THIS CERTIFICATION DOES NOT EXTEND TO THE PROPOSED PLANTINGS. A R/C CERTIFIED LANDSCAPE ARCHITECT SHOULD BE CONSULTED FOR THESE PURPOSES. THESE FEATURES ARE NOT INCLUDED UNDER THE ENGINEER'S CERTIFICATION OF THIS PLAN.
- ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION AT 1-888-344-7233, AND/OR ALL LOCAL UTILITY COMPANIES).

UTILITY NOTES

- EXISTING WATER AND ELECTRIC STRUCTURES WERE SURVEY LOCATED BY NE&C IN SEPTEMBER 2016 AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- WATER MAINS SHOWN WITHIN SPRINGDALE DRIVE AND LEDGEWOOD ROAD REFLECT LOCATIONS GIVEN BY A KINGSTOWN WATER DISTRICT REPRESENTATIVE ON APRIL 19, 2017.
- THE LOCATION OF PROPOSED ELECTRICAL CONDUIT AND CONNECTIONS TO THE EXISTING OVERHEAD SERVICES IN SPRINGDALE DRIVE ARE PRELIMINARY. FINAL DESIGN OF THE ELECTRICAL SERVICES ARE SUBJECT TO DESIGN REVIEW AND APPROVAL BY NATIONAL GRID.
- THE LOCATION OF THE PROPOSED WATER LINE SERVICE IS PRELIMINARY AND SUBJECT TO REVIEW AND APPROVAL BY THE TOWN OF SOUTH KINGSTOWN.
- ELECTRIC, TELEPHONE AND CABLE SERVICES SHALL BE INSTALLED UNDERGROUND.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASSUMPTIONS, DEDUCTIONS, OR CONCLUSIONS HE/SHE MAY MAKE OR DERIVE FROM THE SUBSURFACE INFORMATION OR DATA FURNISHED ON THE PLANS. THE CONTRACTOR MUST SATISFY HIMSELF/HERSELF THROUGH HIS/HER OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED.
- IF THE CONTRACTOR ELECTS NOT TO EXPOSE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO EXCAVATION, HE/SHE FORFEITS HIS/HER RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EFFLUENT ASSOCIATED WITH THE CONSTRUCTION ACTIVITY AND THE DISINFECTION AND HYDROTASTING OPERATIONS TO SAFEGUARD PUBLIC HEALTH AND SAFETY IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF HEALTH REQUIREMENTS. ALL PERMITS AND LICENSES FOR CONSTRUCTION WATER DISPOSAL, INCLUDING ALL APPLICATIONS, CHARGES, FEES, AND TAXES, ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- ANY APPLICABLE UTILITY EASEMENTS SHALL BE ESTABLISHED PRIOR TO FINAL APPROVAL.

SOIL EROSION AND SEDIMENT CONTROL NOTES

- CONSTRUCTION SEQUENCE:
 - DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
 - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE LOCATED AS SHOWN ON PLANS. CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THIS ENTRANCE.
 - INSTALL SILT FENCES, SILT SACKS, CHECK DAMS AND/OR STRAW BALES AS INDICATED ON THE DRAWINGS TO CONTROL EROSION AND PREVENT SEDIMENT CONTAMINATION OF WETLANDS PRIOR TO ANY EARTH MOVING ACTIVITIES.
 - REMOVE TREES ONLY WHERE NECESSARY. ALL STUMPS TO BE GROUND OR DISPOSED OFF SITE.
 - FIELD STAKE AREA OF RAIN GARDEN. MINIMAL DISTURBANCE SHALL BE ALLOWED IN THIS AREA PRIOR TO RAIN GARDEN CONSTRUCTION.
 - EXCAVATE AREA OF RESIDENCE IN ACCORDANCE WITH THE ARCHITECTURAL PLANS AND DETAILS. ONLY THOSE AREAS UNDER CONSTRUCTION WILL BE DISTURBED BY EARTHWORK.
 - CONSTRUCT & CONNECT UTILITY SERVICES.
 - TEMPORARY SOIL STOCKPILES SHALL BE PROTECTED WITH ADDITIONAL EROSION CONTROL MEASURES AS SHOWN.
 - ESTABLISH A VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE TOWN ENGINEER. COMPLETE AREAS OF LANDSCAPING.
 - UPON COMPLETION OF CONSTRUCTION AND PRIOR TO REMOVAL OF EROSION & SEDIMENT CONTROLS, CONTRACTOR SHALL CONTACT SOUTH KINGSTOWN D.P.W. FOR A FINAL INSPECTION.
 - MAINTAIN SITE IN ACCORDANCE WITH THE MAINTENANCE NOTES. EROSION CONTROLS MUST BE MAINTAINED AND REMAIN IN PLACE UNTIL THE LAWN HAS RECEIVED TWO (2) MOWINGS.

- NOTES:
 - DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. ONLY THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME.
 - ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE STABILIZED WITHIN FOURTEEN DAYS IN ACCORDANCE WITH TEMPORARY MEASURES IN THE VEGETATIVE PRACTICE NOTES.
 - AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOP SOIL TO REMOVE VEGETATION, ROOTS, AND ANY OTHER OBJECTIONABLE MATERIAL.
 - ALL FILL SHALL BE COMPACTED TO 95% MAX. DENSITY TO REDUCE EROSION, SLIPPAGE, SETTLEMENT SUBSIDENCE, OR OTHER RELATED PROBLEMS.
 - FILL INTENDED TO SUPPORT BUILDING STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES AND SPECIFICATIONS.
 - ALL FILL SHALL BE PLACED AND COMPACTED TO 95% MAX. DENSITY IN LAYERS NOT TO EXCEED 12" IN THICKNESS FILLS.
 - FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
 - FROZEN, SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.
 - FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION SUBGRADE.
 - SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
 - ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF FINISH GRADING IN ACCORDANCE WITH THE VEGETATIVE PRACTICE NOTES.
 - REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED AND VEGETATED AREAS HAVE RECEIVED TWO MOWINGS.

WATER QUALITY CALCULATIONS

PROPOSED IMPERVIOUS (SQUARE FEET)	
RESIDENCE	364
TOTAL	364

PROPOSED NEW IMPERVIOUS = 364 SF
 WATER QUALITY REQ. FOR NEW IMPERVIOUS = 364 SF / 12 = 31 CF

PER TABLE 8 OF THE STORMWATER MANAGEMENT GUIDANCE DOCUMENT FOR A SINGLE FAMILY RESIDENTIAL DEVELOPMENT, AN 8" DEEP RAIN GARDEN IN SILT LOAM AND LOAM WOULD REQUIRE AN AREA OF 59 SQUARE FEET TO PROVIDE SUFFICIENT TREATMENT.

A RAIN GARDEN WITH AN AREA OF 70 SQUARE FEET IS PROVIDED.

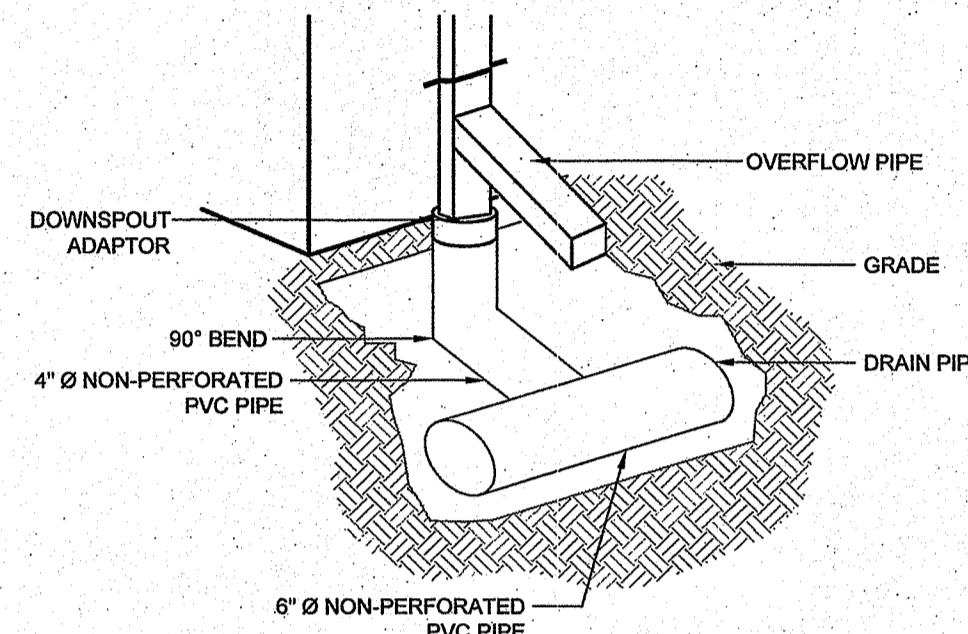
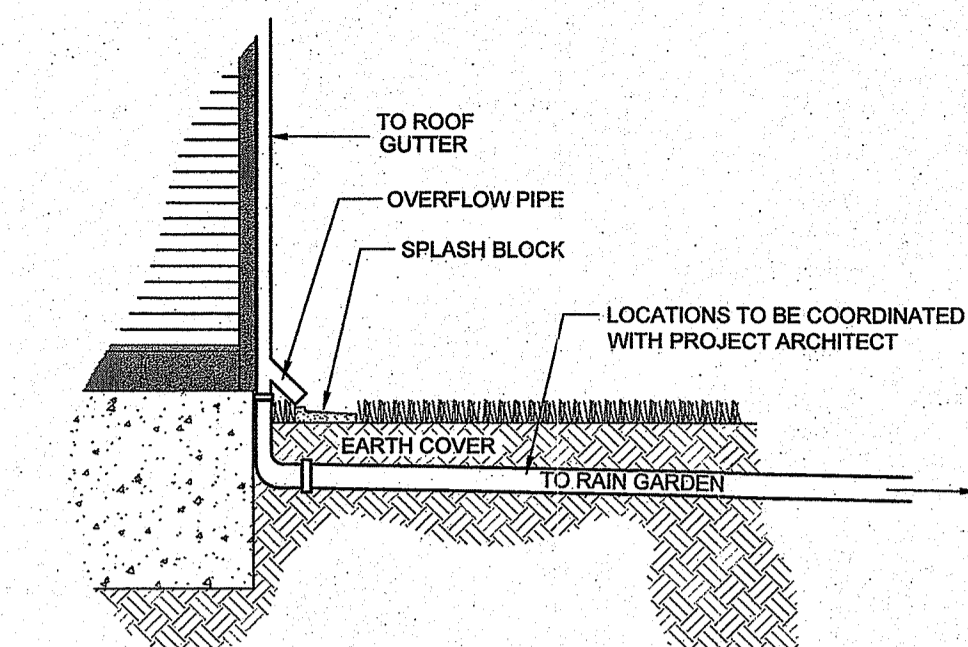
3. VEGETATIVE PRACTICE:

PERMANENT MEASURES:

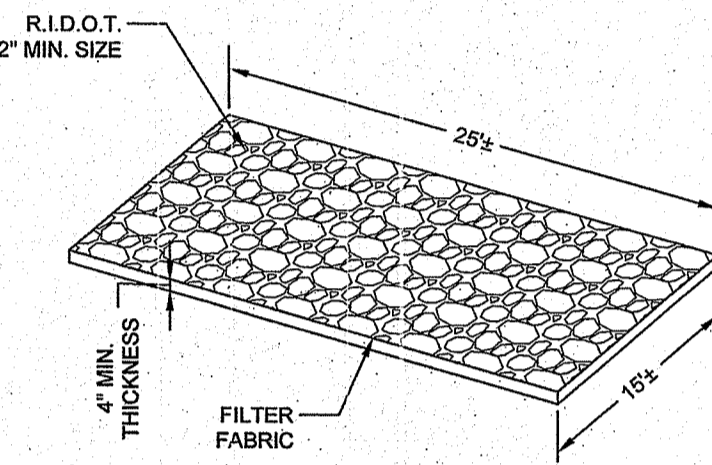
- SLOPES SHALL NOT BE STEEPER THAN 1 VERTICAL TO 3 HORIZONTAL UNLESS OTHERWISE SPECIFIED.
 - LOAM AND SEED REQUIREMENTS ARE SPECIFIED IN RIDOT L01 & L02.
 - A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED. THE LOAM SHALL BE GRADED TO A SMOOTH CONDITION AND STONES AND OTHER OBJECTS LARGER THAN 2 INCHES SHALL BE REMOVED.
- TEMPORARY MEASURES (FOR TEMPORARY PROTECTION OF DISTURBED AREAS)
- LIMESTONE AND FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:
 LIMESTONE: 3 TONS/ACRE
 FERTILIZER: (10-10-10); 600 LBS/ACRE
 - SEED SHALL BE APPLIED AT THE FOLLOWING RATE:
 WINTER RYE: 100 LBS/ACRE
 - STRAW MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TONS/ACRE.

4. MAINTENANCE:

- DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED, THE EROSION CONTROL MEASURES SHALL BE INSPECTED.
- AT A MINIMUM THE SILT FENCING, STRAW BALES AND FILTER SOCK BARRIERS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. SEDIMENT TRAPPED BEHIND THE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REGRADED ON THE SITE.
 - EROSION CONTROL BLANKETS SHALL BE INSPECTED ON A WEEKLY BASIS.
 - SILT SACKS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. DURING HEAVY RAIN EVENT, IT MAY BE NECESSARY TO TEMPORARILY REMOVE SACKS IN ORDER TO PREVENT FLOODING. SEDIMENT TRAPPED WITHIN SACKS SHALL BE DISPOSED OF OFF SITE AT A LICENSED FACILITY OR REGRADED ON THE SITE.
 - THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSPECTED WEEKLY, AND REESTABLISHED AS NECESSARY.
 - SEEDDED AREAS WILL BE FERTILIZED AND RESEEDDED AS NECESSARY TO INSURE ESTABLISHMENT OF A VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE TOWN ENGINEER.

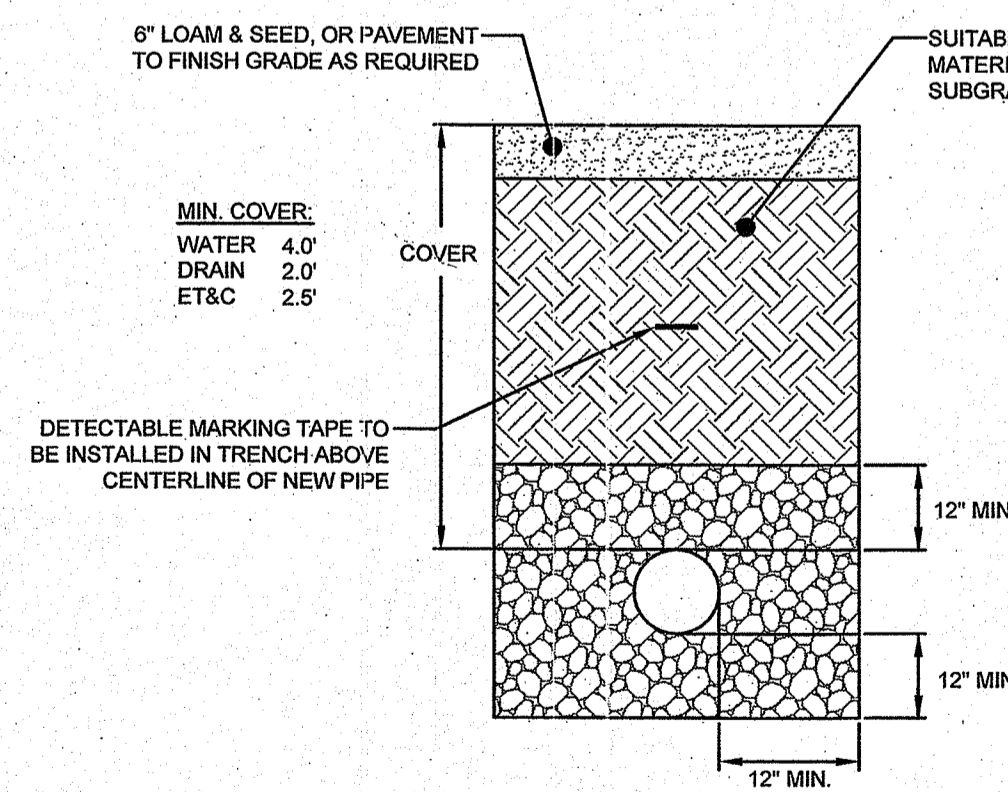


ROOF DOWNSPOUT DETAILS
SCALE: NOT TO SCALE



CONSTRUCTION ENTRANCE
SCALE: NOT TO SCALE

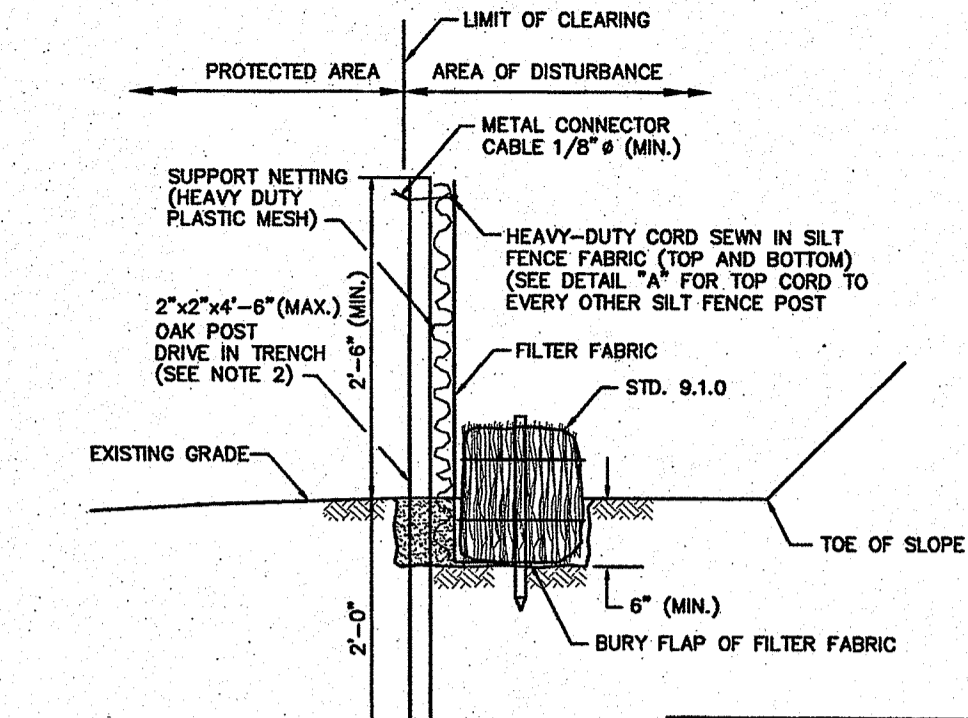
ZONING DATA: R-20		
	REQUIRED	PROPOSED
MIN. LOT SIZE:	20,000 S.F.	20,865 S.F. ±
LOT FRONTAGE:	100'	175'
SETBACKS:		
FRONT	35'	21.2'
REAR	35'	68.8'
CORNER SIDE:	25'	16.8'
SIDE:	15'	15.8'
BUILDING HEIGHT:	35' MAX	35' MAX
LOT COVERAGE:	25% MAX	1.8%



UTILITY TRENCH DETAIL
SCALE: NOT TO SCALE

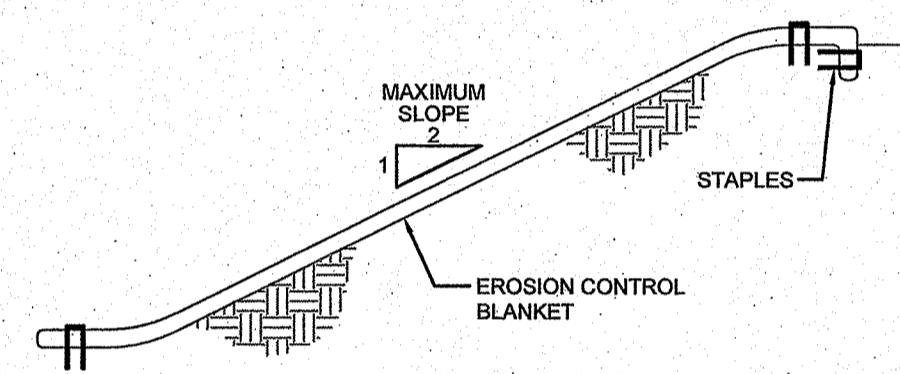
TRENCH NOTES:

- UNSATURABLE MATERIAL SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 12-INCHES BELOW THE DESIGN INVERT ELEVATION.
- TRENCH PROTECTION SHALL BE REQUIRED IN ACCORDANCE WITH OSHA REGULATIONS, AND AS OTHERWISE REQUIRED TO PROTECT UTILITIES, ROADWAYS, AND ADJACENT STRUCTURES.
- DRAIN PIPES SHALL BE LAID BEGINNING AT THE DOWNSTREAM END OF THE PIPE LINE.
- ALL DRAIN PIPES SHALL BE ADS N-12 TYPE IB (SOLITIGHT OR SCH40 PVC) UNLESS OTHERWISE INDICATED.
- BACKFILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN HEIGHT WHEN INSTALLED UNDER LANDSCAPED AREAS ONLY. INSTALLATIONS UNDER PAVEMENT REQUIRE BACKFILL MATERIAL TO BE PLACED IN LAYERS NOT TO EXCEED 6" IN HEIGHT. THESE LAYERS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (AASHTO T180). SUITABLE BACKFILL SHALL BE FREE OF LOAM, CLAY, ORGANIC MATTER AND PARTICLES LARGER THAN 2 INCHES IN DIAMETER.
- DRAINAGE PIPE TRENCHES SHALL BE BEDDED WITH CRUSHED STONE OR SCREENED GRAVEL. THESE MATERIALS MUST CONFORM TO RIDOT STANDARD M.01.09 TYPE II MATERIAL.
- WATER PIPE TRENCHES MUST BE BEDDED WITH SAND CONTAINING NO PARTICLES LARGER THAN 3/8". THIS MATERIAL MUST CONFORM TO AASHTO M6 REQUIREMENTS.
- UTILITY INSTALLATIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE TOWN OF SOUTH KINGSTOWN PUBLIC WORKS DEPARTMENT.
- WHEN TRENCH EXCAVATION IS ADJACENT TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY PROTECT THEM FROM DAMAGE.



- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 - STD. 91.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 91.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4"-6" (MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAINNIE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 - 1"x1"x4"-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 - SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

BALED STRAW EROSION CHECK AND SILT FENCE COMBINED (RIDOT 9.3.0)
SCALE: NOT TO SCALE



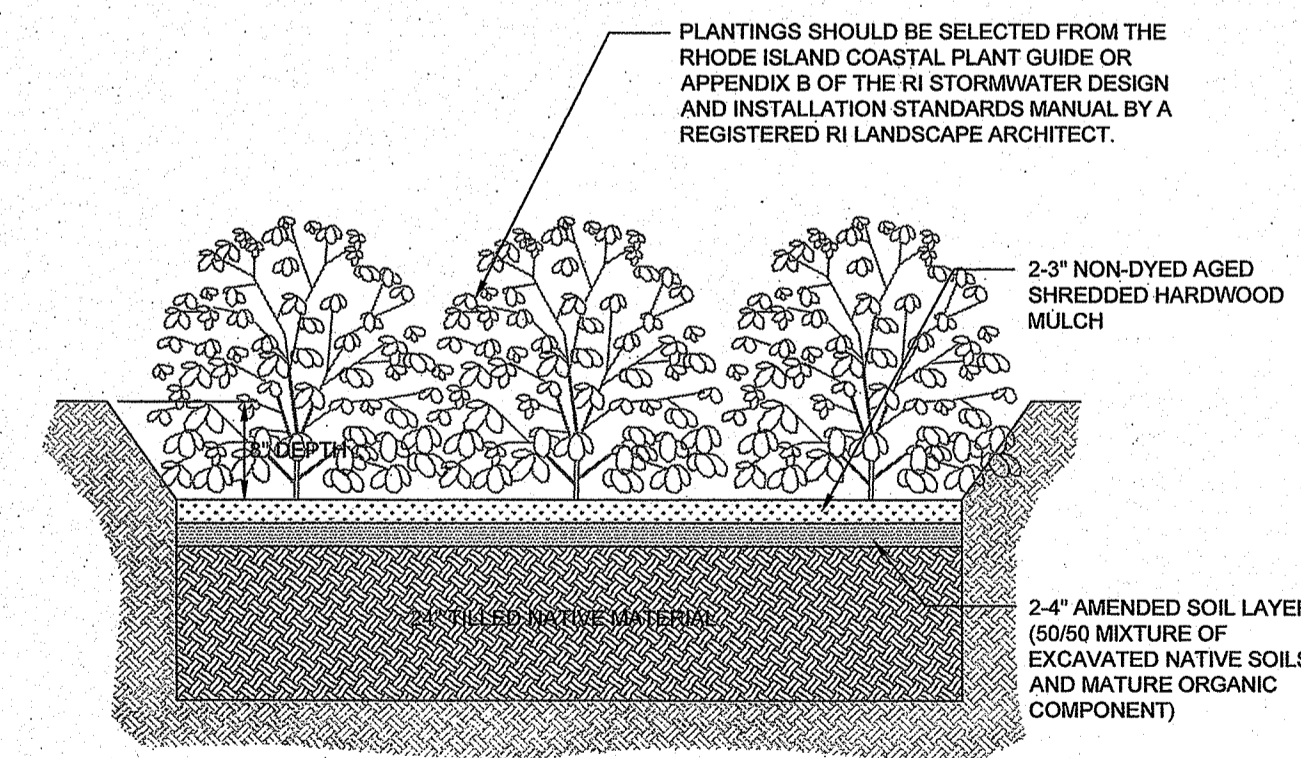
CROSS SECTION

NOTES:

- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
- ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
- WHEN BLANKETS MUST BE SPICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

EROSION CONTROL BLANKET

SCALE: NOT TO SCALE

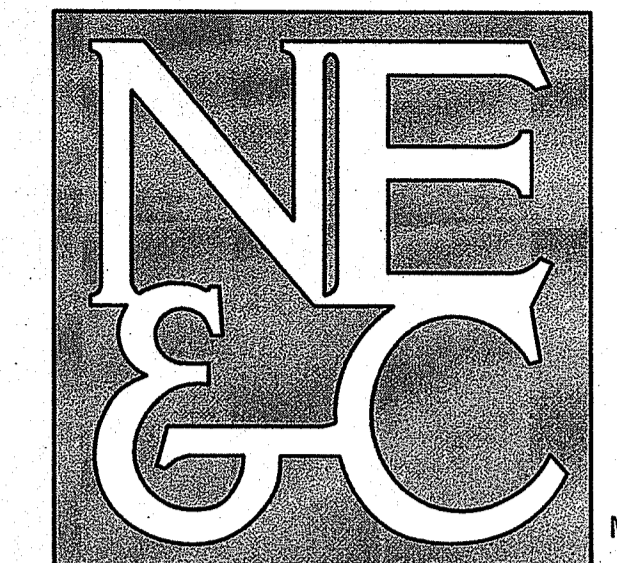


NOTES:

- A CRUSHED STONE ENTRANCE SHALL BE INSTALLED AT INFLOW TO PREVENT CHANNELING.
- DOWNHILL SIDE OF GARDEN SHALL BE BERMED TO PROVIDE THE NECESSARY DEPTH.

TYPICAL RAIN GARDEN CROSS SECTION
SCALE: NOT TO SCALE

NORTHEAST ENGINEERS & CONSULTANTS, INC.

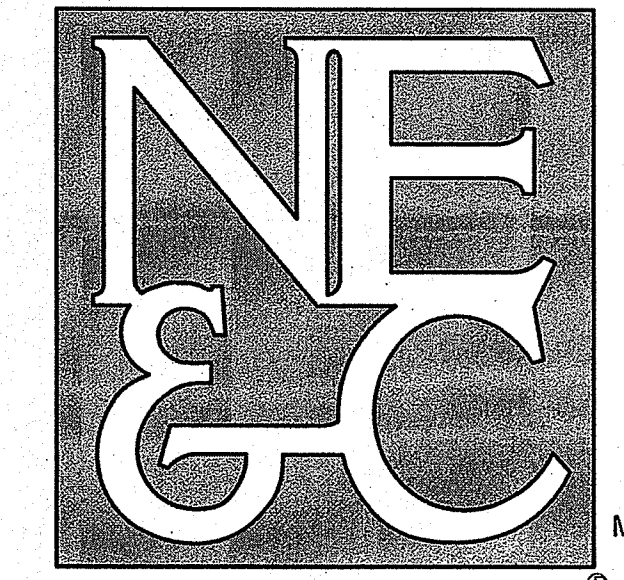


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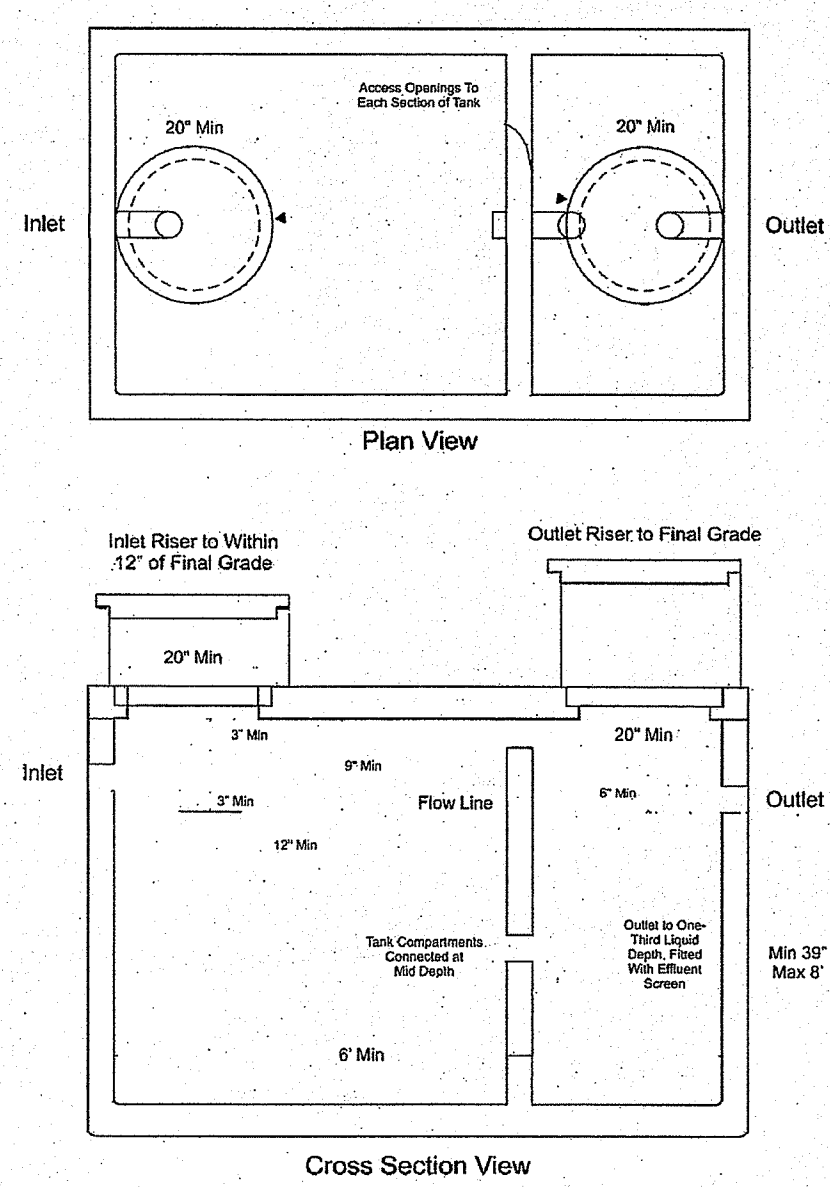
- SITE/CIVIL
- LAND PLANNING
- WATERFRONT
- SURVEYING
- GEOTECHNICAL
- ENVIRONMENTAL
- TRANSPORTATION
- STRUCTURAL
- MATERIALS TESTING

1		RIDEM COMMENTS		7/19/19	
No.	Revision	Date	App.		
Designed By:	GES	Drawn by:	DJV	Checked by:	
Scale:	AS SHOWN	Date:	26APR19		
Project Title:					
A.P. 31-1 LOT 35 SPRINGDALE DRIVE SOUTH KINGSTOWN, RHODE ISLAND					
Client/Owner:					
MATTHEW BRADYWOOD 1012 KINGSTOWN ROAD WAKEFIELD, RI 02879					
Issued for:					
RIDEM					
Drawing Title:					
NOTES					
Drawing Number:					
N-1					
Sheet 2 of 3					
Project Number:					
16157.1					
Survey Index:					
38 - 31-1 - 35					
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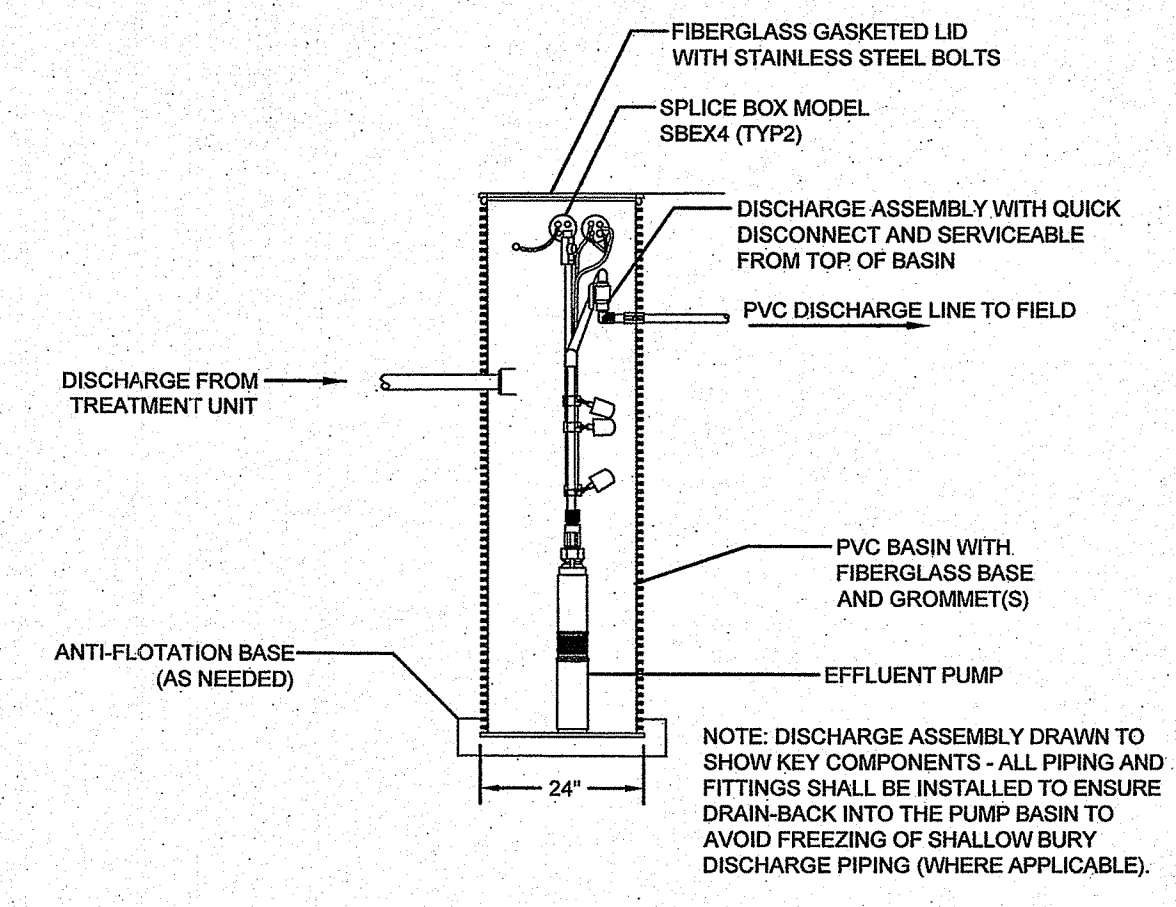


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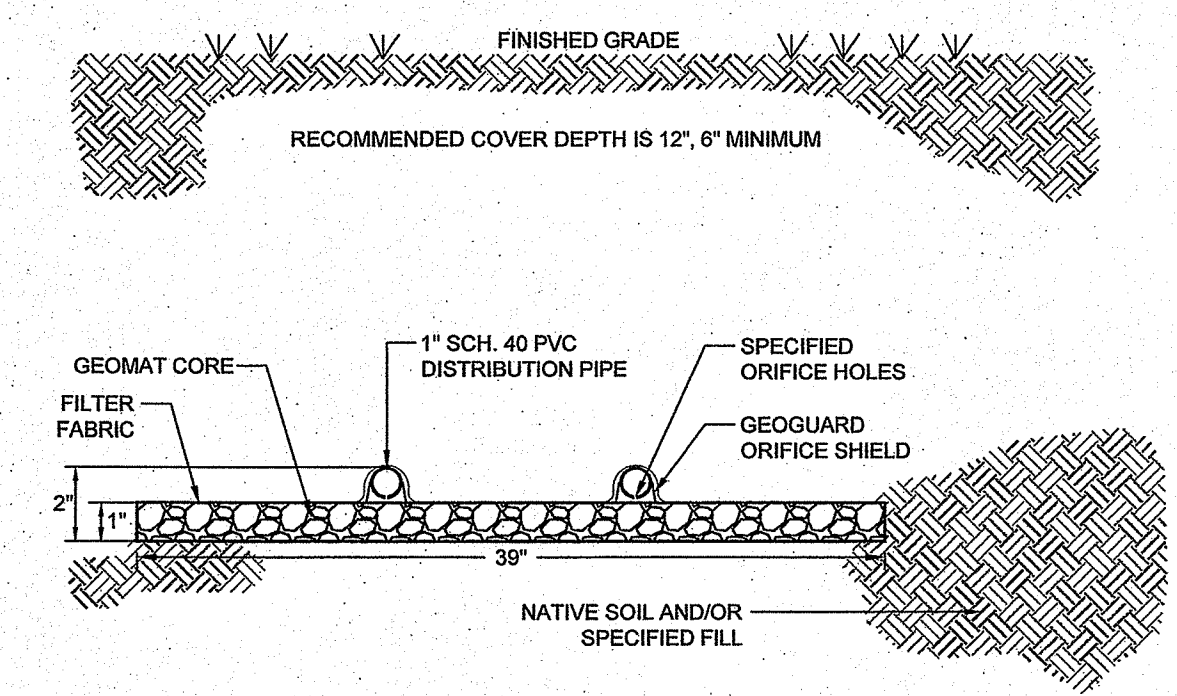
55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842
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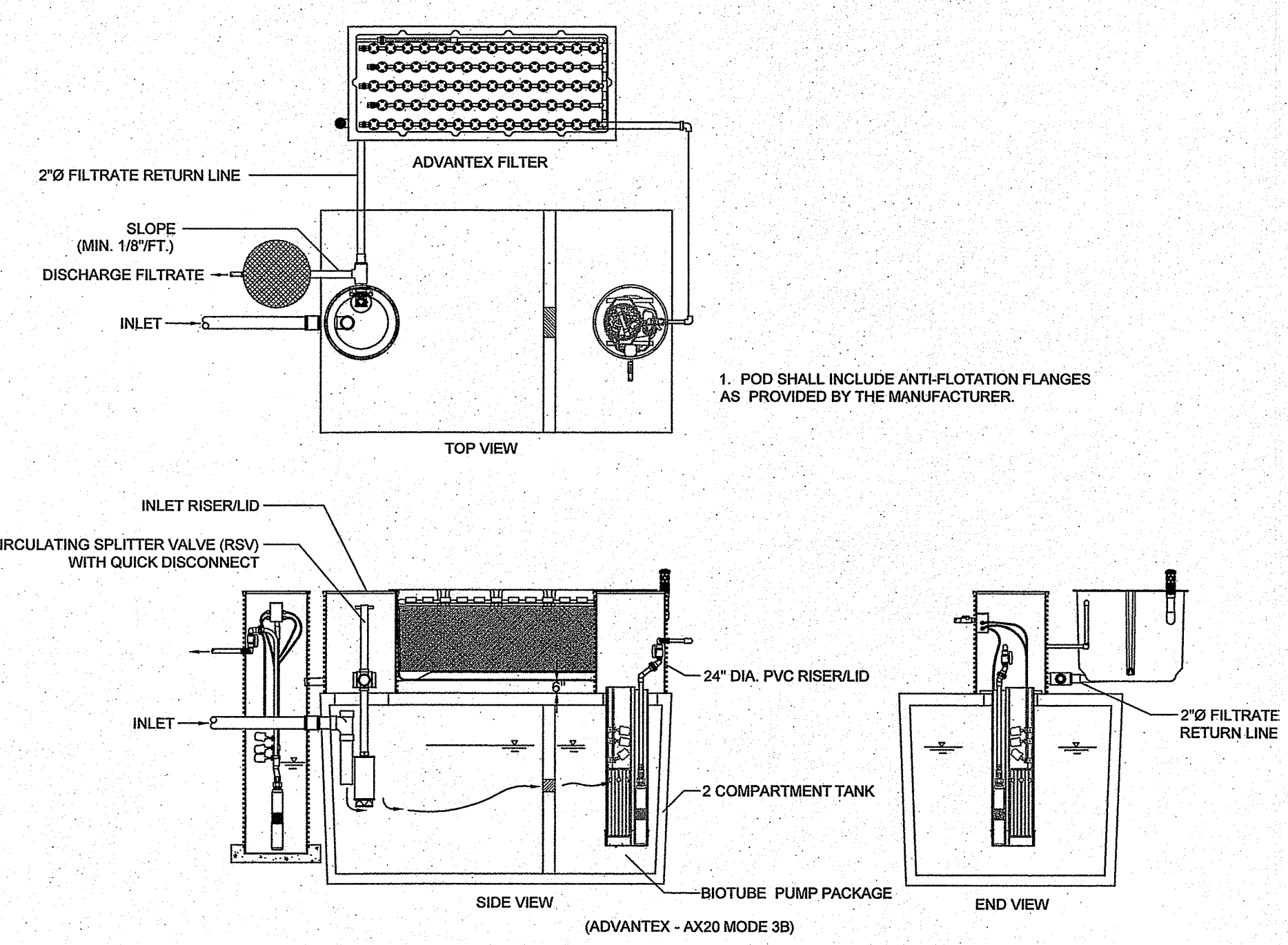
SEPTIC TANK DETAIL (1,500gal.)
SCALE: NOT TO SCALE



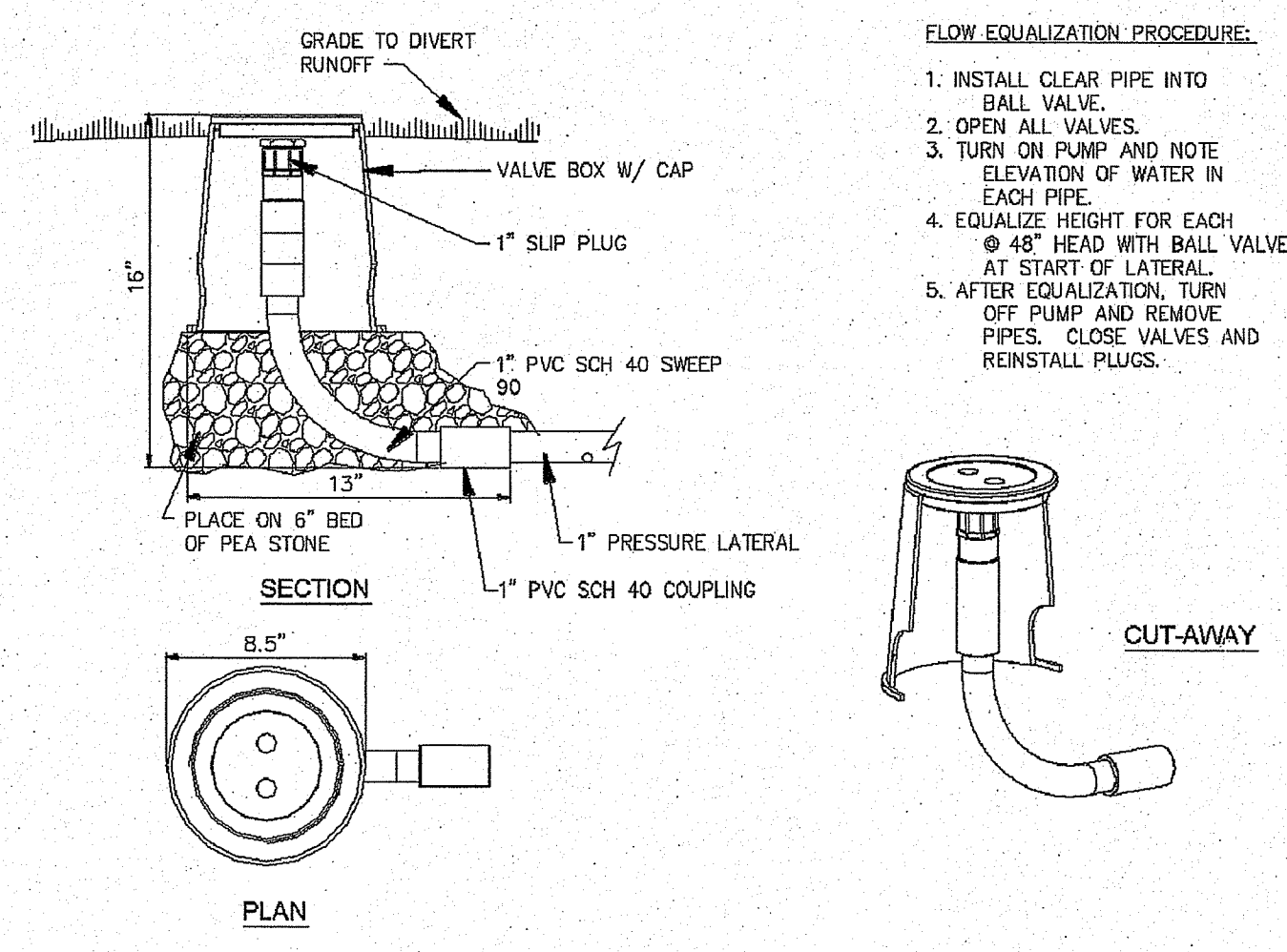
TYPICAL PUMP CHAMBER WITH HIGH HEAD PUMP
SCALE: NOT TO SCALE



GEOMAT 3900 LEACHING SYSTEM CROSS SECTION
SCALE: NOT TO SCALE

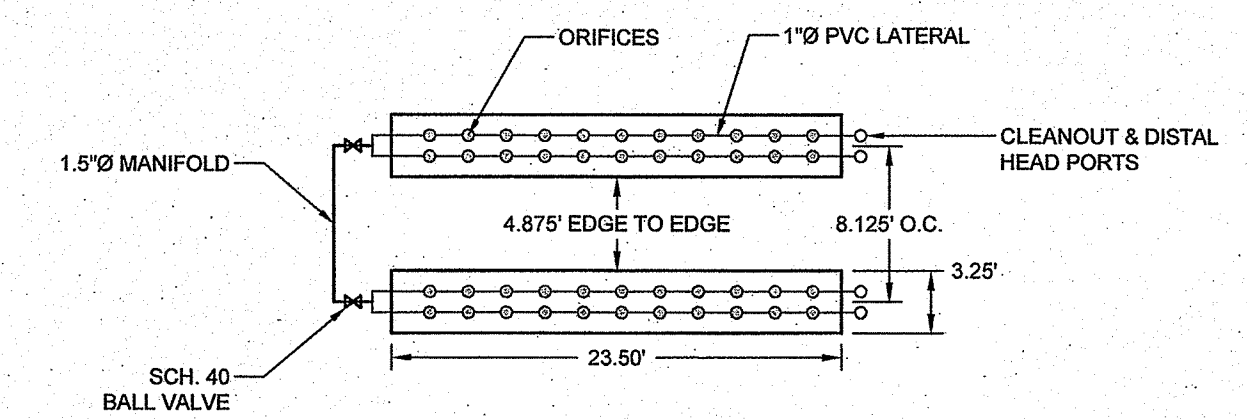


ADVANTEK TREATMENT SYSTEM AX-20 MODE 3B (TYPICAL)
SCALE: NOT TO SCALE



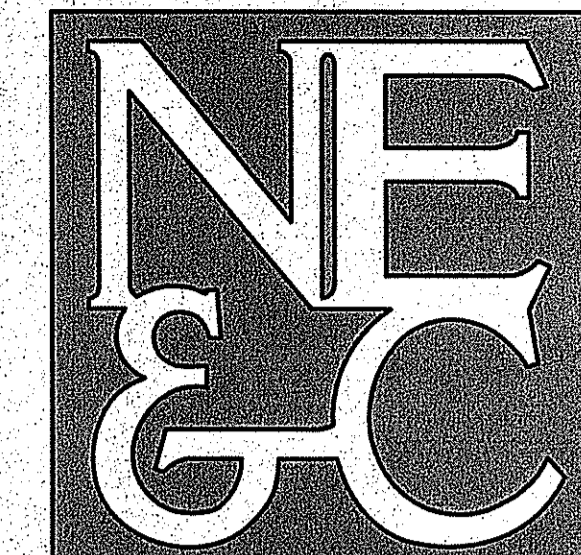
DISTAL HEAD SCHEMATIC
SCALE: NOT TO SCALE

- FLOW EQUALIZATION PROCEDURE:**
1. INSTALL CLEAR PIPE INTO BALL VALVE.
 2. OPEN ALL VALVES.
 3. TURN ON PUMP AND NOTE ELEVATION OF WATER IN EACH PIPE.
 4. EQUALIZE HEIGHT FOR EACH ϕ 45" HEAD WITH BALL VALVE AT START OF LATERAL.
 5. AFTER EQUALIZATION, TURN OFF PUMP AND REMOVE PIPES, CLOSE VALVES AND REINSTALL PLUGS.



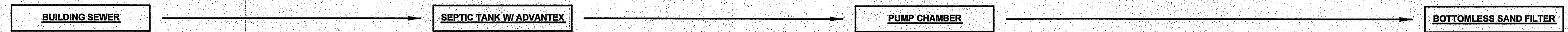
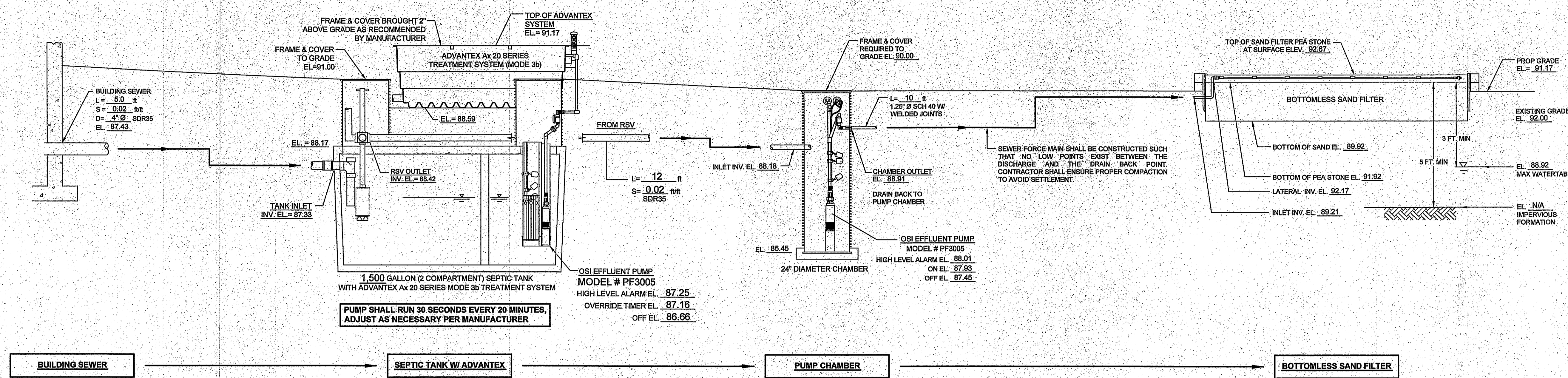
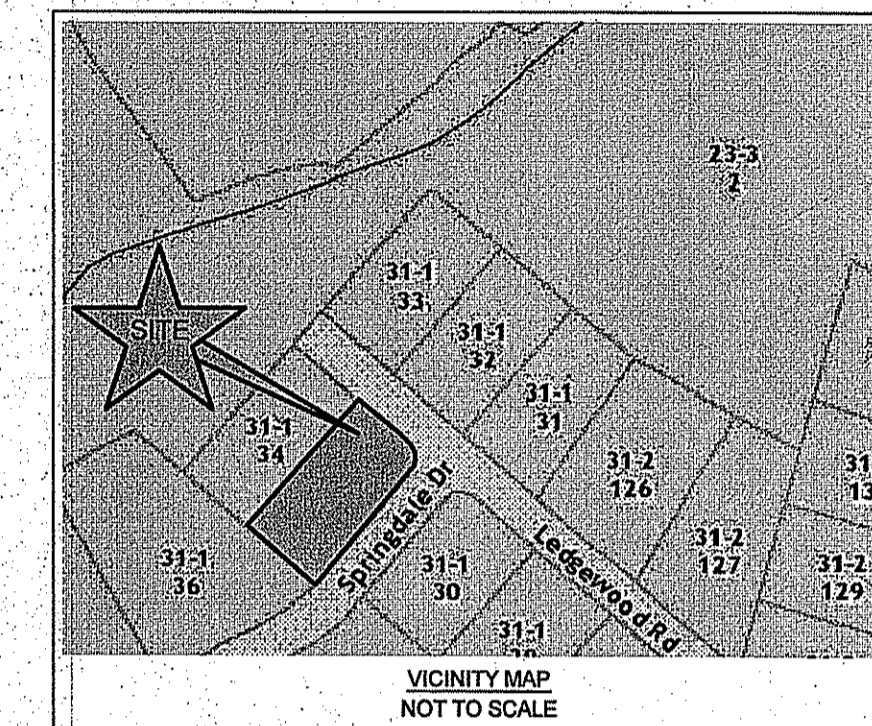
GEOMAT 3900 LEACHING SYSTEM PLAN VIEW
SCALE: 1" = 10'

RIDEM COMMENTS		7/19/19	
No.	Revision	Date	App.
Designed By: GES		Drawn by: DJW	
Scale: AS SHOWN		Date: 26APR19	
Project Title:			
A.P. 31-1 LOT 35 SPRINGDALE DRIVE SOUTH KINGSTOWN, RHODE ISLAND			
Client/Owner:			
MATTHEW BRADYWOOD 1012 KINGSTOWN ROAD WAKEFIELD, RI 02879			
Issued for:			
RIDEM			
Drawing Title:			
OWTS DETAILS			
Drawing Number:		D-1	
Sheet		3 of 3	
Project Number:		16157.1	
Survey Index:		38 - 31-1 - 35	
<p>OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.</p>			



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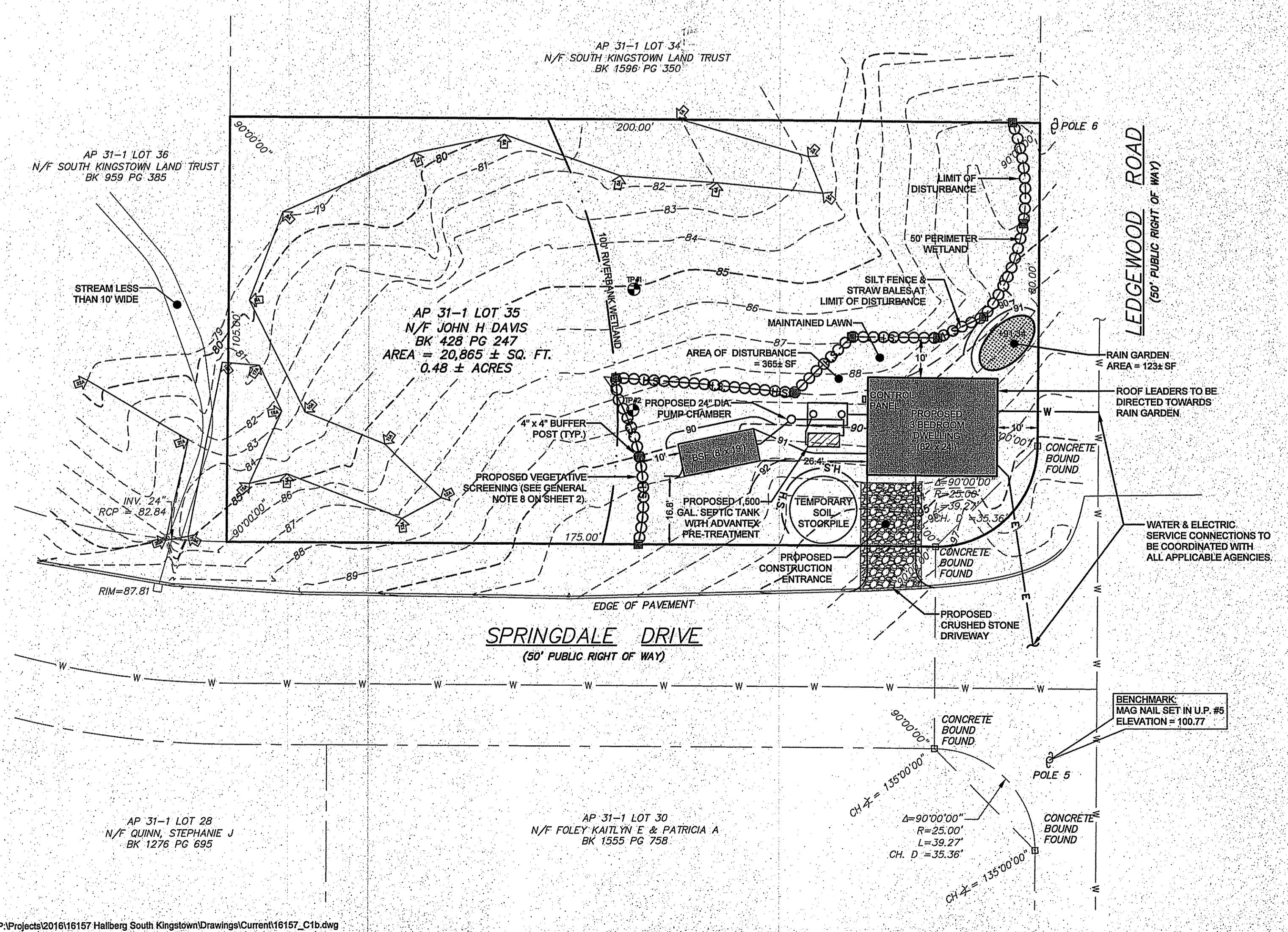
DESIGN COMPUTATION	
DESIGN PERC. RATE	DESIGN APP. RATE
CATEGORY 6m	2.3 gal/SF/day
SEWAGE SYSTEM: ADVANTEX AX 20 WITH A BOTTOMLESS SAND FILTER	
DESIGN WATER TABLE: TH 2 - WT @ 37"	
SEWAGE FLOW: 3 BEDROOMS x 115 g/day = 345 g/day	
SEPTIC TANK: CAPACITY PROVIDED: 1,500 GALLONS	
TOTAL LEACHING AREA REQUIRED:	150 SF
LEACHING AREA PROVIDED:	152 SF
NUMBER OF LATERALS:	4
LENGTH OF SAND FILTER:	19 FT
WIDTH OF SAND FILTER:	8 FT

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL
OWTS# 0432-1659 PWW# 17-0062
APPROVED: *[Signature]* DATE: 5/11/17
No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must Be Kept at Construction Site

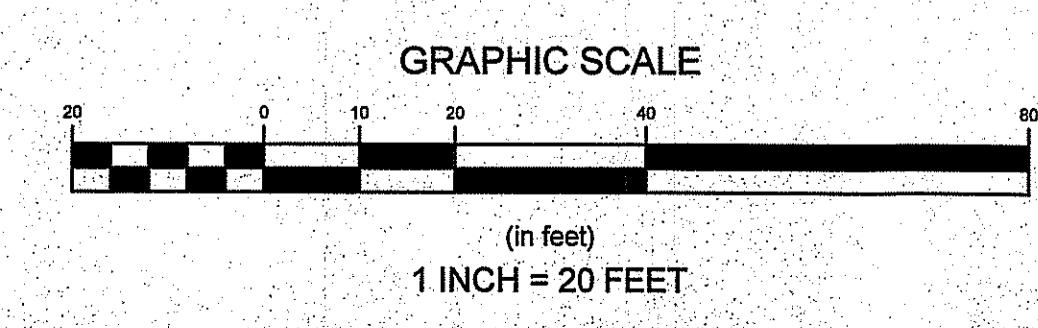
"Copy of Permit and Operation/
Maintenance contract must be
filed in land evidence records
prior to conformance"

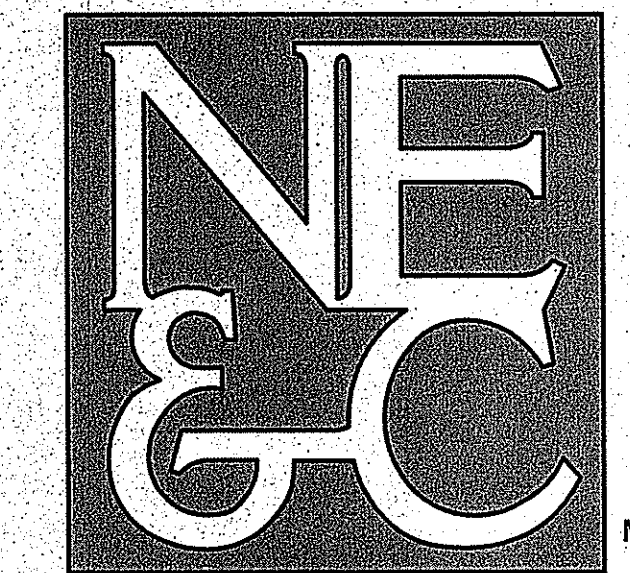
- GENERAL OWTS SYSTEM NOTES:**
- ALL BRUSH AND TREES WILL BE CLEARED WITHIN (10) FT OF THE SYSTEM.
 - A MINIMUM ELEVATION OF .88.92, CORRESPONDING TO 2 FEET BELOW THE BOTTOM OF THE PEASTONE, SHOULD BE MAINTAINED WITHIN 5 FEET OF OWTS.
 - ALL EXISTING AND PROPOSED PRIVATE WELLS WITHIN 200 FT. OF OWTS ARE SHOWN. ALL PUBLIC WELLS EXISTING OR PROPOSED WITHIN 500' ARE SHOWN.
 - NO DRAINS OR WATER LINES ARE KNOWN TO EXIST OR ARE TO BE CONSTRUCTED IN THE PROXIMITY OF THE SYSTEM WITHIN THE DISTANCES SPECIFIED IN RIDEM OWTS TABLE 22.1.
 - PROPOSED TANKS, INLETS, OUTLETS, & PIPING MUST BE WATERTIGHT TO PREVENT THE INFILTRATION OF GROUND WATER.
 - THE SYSTEM FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE STATE OF RHODE ISLAND, DEPARTMENT ENVIRONMENTAL MANAGEMENT, "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION, AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS."
 - THE DESIGN INTENT IS TO MEET THE STATE STANDARDS. SINCE THIS PLAN HAS BEEN CREATED TO GAIN THE NECESSARY PERMITTING, NO CONSTRUCTION INSTALLATIONS HAVE COMMENCED, BECAUSE THIS IS NOT A "RECORD DRAWING OF AS-BUILT CONDITIONS" AND NOTHING HAS BEEN INSTALLED. THE ENGINEER SIGNING AND STAMPING THIS PLAN IS NOT GUARANTEEING THE OPERATION OF THE INSTALLED SEPTIC SYSTEM. UPON THE APPROVED SYSTEM INSTALLATION, THE DESIGN ENGINEER WILL SUPERVISE, VERIFY, AND CERTIFY THAT THE SYSTEM WAS INSTALLED AS SPECIFIED ON THE APPROVED PLAN.
 - ANTI-FLOATATION DEVICES AS PROVIDED BY THE MANUFACTURER SHALL BE USED FOR THE PROPOSED ADVANTEX POD.
 - NO FOUNDATION DRAIN LINES ARE TO BE CONSTRUCTED WITHIN 25 FT. OF THE OWTS OR BUILDING SEWER.
 - SEWER FORCE MAIN SHALL BE CONSTRUCTED SUCH THAT NO LOW POINTS EXIST BETWEEN THE DISCHARGE AND THE DRAIN BACK POINT. CONTRACTOR SHALL ENSURE PROPER COMPACTION TO AVOID SETTLEMENT.
 - LAND OWNER MUST MINIMIZE SHADING OF THE BOTTOMLESS SAND FILTER. THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RECOMMENDS THAT BOTTOMLESS SAND FILTER BE EXPOSED TO THE SUNLIGHT TO PREVENT FREEZING DURING THE WINTER MONTHS.
 - ALL FILL BENEATH THE BOTTOMLESS SAND FILTER SHALL BE REMOVED AND REPLACED WITH ISDS GRAVEL.

SOIL EVALUATION DATA												
TP#	HORIZON	DEPTH (INCHES)	HORIZON BOUNDARIES		SOIL COLORS			RE-DOX DESCRIPTION	TEXTURE	STRUCTURE	CONSISTENCE	SOIL CATEGORY
			DIST	TOPO	MATRIX	RE-DOX FEATURES	RE-DOX FEATURES					
TP# 1	Ap	0-9	a	s	10YR 2/2	-	-	-	sil	1Fgr	vfr	5
	Bw1	9-17	g	w	10YR 4/4	-	-	-	sil	1Fbk	fr	5
	Bw2	17-24	c	s	10YR 5/4	-	-	-	sil	1Fbk	fr	5
	Bw3	24-38	a	i	2.5Y 4/3	7.5YR 4/6	5Y 6/2	c,c,p	sil	1Fbk	fr	5
	2C1	38-60	g	i	2.5Y 4/2	-	-	-	gls	Ø-m	vfr	6m
TP# 2	2C2	60-120	-	-	2.5Y 5/2	-	-	-	gsl	Ø-m	fr	6m



1	RIDEM OWTS/WETLANDS COMMENTS	04/19/17	
No.	Revision	Date	App.
Designed By:	Drawn by: DJW	Checked by:	
Scale:	1" = 20'	Date:	16JAN17
Project Title:			
A.P. 31-1 LOT 35 SPRINGDALE DRIVE SOUTH KINGSTOWN, RHODE ISLAND			
Client/Owner:			
SCOT HALLBERG 235 MAIN STREET SOUTH KINGSTOWN, RI			
Issued for:			
RIDEM			
Drawing Title:			
PROPOSED CONDITIONS PLAN			
Drawing Number:			
C-1			
Sheet 1 of 4			
Project Number:			
16157.0			
Survey Index:			
38 - 31-1 - 35			
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LAND PLANNING
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GEOTECHNICAL
ENVIRONMENTAL
TRANSPORTATION
STRUCTURAL
MATERIALS TESTING

GENERAL NOTES

- PROPERTY LINE AND EXISTING CONDITIONS ARE THE RESULT OF A FIELD SURVEY BY NORTHEAST ENGINEERS & CONSULTANTS, INC. ON SEPTEMBER 23, 2016.
- WETLAND DELINEATED BY KATHLEEN MANGAN ON AUGUST 31, 2016.
- SITE LIES WITHIN FEMA FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) PER THE FLOOD INSURANCE RATE MAP 44090C0185H, LAST REVISED OCTOBER 19, 2010.
- ALL PROPOSED WORK TO BE CONDUCTED ABOVE THE 100 YEAR FLOODPLAIN ELEVATION.
- SUBJECT PARCEL LIES WITHIN THE R-20 ZONING DISTRICT.
- NORTH ARROW SCALED FROM SOUTH KINGSTOWN GIS MAP AND SHOULD BE CONSIDERED APPROXIMATE.
- SOIL TYPE IN THIS VICINITY IS 'Sb1', SC10 VERY STONY SILT, PER THE NATURAL RESOURCE CONSERVATION SOIL SURVEY. THIS SOIL IS HYDROLOGIC GROUP 'C'.
- PER RIDEM APPROVAL, A DENSE, CONTINUOUS ROW OF EVERGREEN PLANTINGS SHALL BE PROVIDED ALONG THE LIMIT OF DISTURBANCE. PLANTINGS SHALL CONSIST OF MOUNTAIN LAUREL (KALMA LATIFOLIA) PLANTED SIX (6) TO EIGHT (8) FEET ON CENTER, AND FOUR (4) FEET TALL AFTER PLANTING. THIS CERTIFICATION DOES NOT EXTEND TO THE PROPOSED PLANTINGS. A RI CERTIFIED LANDSCAPE ARCHITECT SHOULD BE CONSULTED FOR THESE PURPOSES. THESE FEATURES ARE NOT INCLUDED UNDER THE ENGINEER'S CERTIFICATION ON THIS PLAN.
- ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION AT 1-888-344-7233, AND/OR ALL LOCAL UTILITY COMPANIES).

GRADING NOTES

- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT RUNOFF FROM LEAVING THE SITE.
- ALL GRADED AREAS SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER THE GRUBBING WORK HAS BEEN COMPLETED.
- THE TOWN SHALL BE INFORMED OF THE LOCATION OF THE DISPOSAL SITE, IF ANY, FOR THE PROJECT.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE TOWN. PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH THE COMMUNITY NOISE CONTROL STANDARDS.
- THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE TOWN.
- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE GRADING WORK IS INITIATED.
- TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN PLACE AND ESTABLISHED.
- IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- NONCOMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHALL COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.

UTILITY NOTES

- EXISTING WATER AND ELECTRIC STRUCTURES WERE SURVEY LOCATED BY NE&C IN SEPTEMBER 2016 AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- WATER MAINS SHOWN WITHIN SPRINGDALE DRIVE AND LEDGEWOOD ROAD REFLECT LOCATIONS GIVEN BY A KINGSTOWN WATER DISTRICT REPRESENTATIVE ON APRIL 19, 2017.
- THE LOCATION OF PROPOSED ELECTRICAL CONDUIT AND CONNECTIONS TO THE EXISTING OVERHEAD SERVICES IN SPRINGDALE DRIVE ARE PRELIMINARY. FINAL DESIGN OF THE ELECTRICAL SERVICES ARE SUBJECT TO DESIGN REVIEW AND APPROVAL BY NATIONAL GRID.
- THE LOCATION OF THE PROPOSED WATER LINE SERVICE IS PRELIMINARY AND SUBJECT TO REVIEW AND APPROVAL BY THE TOWN OF SOUTH KINGSTOWN.
- ELECTRIC, TELEPHONE AND CABLE SERVICES SHALL BE INSTALLED UNDERGROUND.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASSUMPTIONS, DEDUCTIONS, OR CONCLUSIONS HE/SHE MAY MAKE OR DERIVE FROM THE SUBSURFACE INFORMATION OR DATA FURNISHED ON THE PLANS. THE CONTRACTOR MUST SATISFY HIMSELF/HERSELF THROUGH HIS/HER OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED.
- IF THE CONTRACTOR ELECTS NOT TO EXPOSE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO PIPELINE EXCAVATION, HE/SHE FORFEITS HIS/HER RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EFFLUENT ASSOCIATED WITH THE CONSTRUCTION ACTIVITY AND THE DISINFECTION AND HYDROTREATING OPERATIONS TO SAFEGUARD PUBLIC HEALTH AND SAFETY IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF HEALTH REQUIREMENTS. ALL PERMITS AND LICENSES FOR CONSTRUCTION WATER DISPOSAL, INCLUDING ALL APPLICATIONS, CHARGES, FEES, AND TAXES, ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- ANY APPLICABLE UTILITY EASEMENTS SHALL BE ESTABLISHED PRIOR TO FINAL APPROVAL.

SOIL EROSION AND SEDIMENT CONTROL NOTES

- CONSTRUCTION SEQUENCE:
 - DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
 - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE LOCATED AS SHOWN ON PLANS. CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THIS ENTRANCE.
 - INSTALL SILT FENCES, SILT SACKS, CHECK DAMS AND/OR STRAW BALES AS INDICATED ON THE DRAWINGS TO CONTROL EROSION AND PREVENT SEDIMENT CONTAMINATION OF WETLANDS PRIOR TO ANY EARTH MOVING ACTIVITIES.
 - REMOVE TREES ONLY WHERE NECESSARY. ALL STUMPS TO BE GROUND OR DISPOSED OF OFF SITE.
 - FIELD STAKE AREA OF RAIN GARDEN. MINIMAL DISTURBANCE SHALL BE ALLOWED IN THIS AREA PRIOR TO RAIN GARDEN CONSTRUCTION.
 - EXCAVATE AREA OF RESIDENCE IN ACCORDANCE WITH THE ARCHITECTURAL PLANS AND DETAILS. ONLY THOSE AREAS UNDER CONSTRUCTION WILL BE DISTURBED BY EARTHWORK.
 - CONSTRUCT & CONNECT UTILITY SERVICES.
 - TEMPORARY SOIL STOCKPILES SHALL BE PROTECTED WITH ADDITIONAL EROSION CONTROL MEASURES AS SHOWN.
 - ESTABLISH A VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE TOWN ENGINEER. COMPLETE AREAS OF LANDSCAPING.
 - UPON COMPLETION OF CONSTRUCTION AND PRIOR TO REMOVAL OF EROSION & SEDIMENT CONTROLS, CONTRACTOR SHALL CONTACT SOUTH KINGSTOWN D.P.W. FOR A FINAL INSPECTION.
 - MAINTAIN SITE IN ACCORDANCE WITH THE MAINTENANCE NOTES. EROSION CONTROLS MUST BE MAINTAINED AND REMAIN IN PLACE UNTIL THE LAWN HAS RECEIVED TWO (2) MOWINGS.

2. NOTES:

- DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. ONLY THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME. DURING DEVELOPMENT, WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE STABILIZED WITHIN FOURTEEN DAYS IN ACCORDANCE WITH TEMPORARY MEASURES IN THE VEGETATIVE PRACTICE NOTES.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOP SOIL TO REMOVE VEGETATION, ROOTS, AND ANY OTHER OBJECTIONABLE MATERIAL.
- ALL FILL SHALL BE COMPACTED TO 95% MAX. DENSITY TO REDUCE EROSION, SLIPPAGE, SETTLEMENT SUBSIDENCE, OR OTHER RELATED PROBLEMS.
- FILL INTENDED TO SUPPORT BUILDING STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES AND SPECIFICATIONS.
- ALL FILL SHALL BE PLACED AND COMPACTED TO 95% MAX. DENSITY IN LAYERS NOT TO EXCEED 12" IN THICKNESS FILLS.
- FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN, SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION SUBGRADE.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF FINISH GRADING IN ACCORDANCE WITH THE VEGETATIVE PRACTICE NOTES.
- REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED AND VEGETATED AREAS HAVE RECEIVED TWO MOWINGS.

3. VEGETATIVE PRACTICE:

PERMANENT MEASURES:

- SLOPES SHALL NOT BE STEEPER THAN 1 VERTICAL TO 3 HORIZONTAL UNLESS OTHERWISE SPECIFIED.
 - LOAM AND SEED REQUIREMENTS ARE SPECIFIED IN RIDOT L.01 & L.02.
 - A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED. THE LOAM SHALL BE GRADED TO A SMOOTH CONDITION AND STONES AND OTHER OBJECTS LARGER THAN 2 INCHES SHALL BE REMOVED.
- TEMPORARY MEASURES (FOR TEMPORARY PROTECTION OF DISTURBED AREAS)
- LIMESTONE AND FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:
LIMESTONE: 3 TONS/ACRE
FERTILIZER: (10-10-10); 600 LBS/ACRE
 - SEED SHALL BE APPLIED AT THE FOLLOWING RATE:
WINTER RYE: 100 LBS/ACRE
 - STRAW MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TONS/ACRE.

4. MAINTENANCE

- DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED, THE EROSION CONTROL MEASURES SHALL BE INSPECTED.
- AT A MINIMUM THE SILT FENCING, STRAW BALES AND FILTER SOCK BARRIERS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. SEDIMENT TRAPPED BEHIND THE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REGRADED ON THE SITE.
 - EROSION CONTROL BLANKETS SHALL BE INSPECTED ON A WEEKLY BASIS.
 - SILT SACKS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. DURING HEAVY RAIN EVENT, IT MAY BE NECESSARY TO TEMPORARILY REMOVE SACKS IN ORDER TO PREVENT FLOODING. SEDIMENT TRAPPED WITHIN SACKS SHALL BE DISPOSED OF OFF SITE AT A LICENSED FACILITY OR REGRADED ON THE SITE.
 - THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSPECTED WEEKLY, AND REESTABLISHED AS NECESSARY.
 - SEEDDED AREAS WILL BE FERTILIZED AND RESEEDDED AS NECESSARY TO INSURE ESTABLISHMENT OF A VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE TOWN ENGINEER.

LEGEND

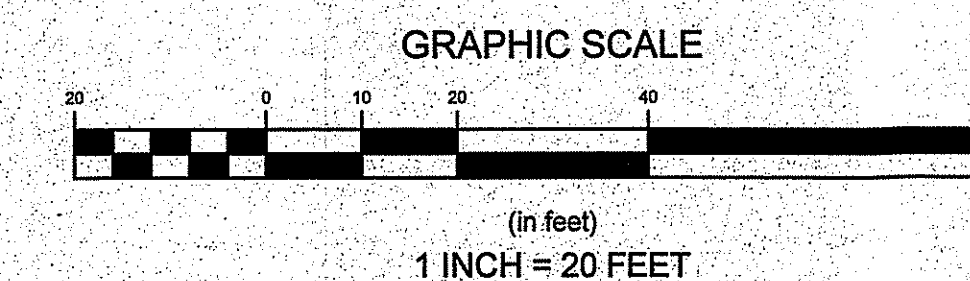
---	PROPERTY LINE
---	ABUTTERS PROPERTY LINE
---	EXISTING TOPOGRAPHIC CONTOUR
---	EDGE OF PAVEMENT
---	100' RIVERBANK WETLAND
---	50' PERIMETER WETLAND
---	PROPOSED CONTOUR
---	PROPOSED WATER SERVICE
---	PROPOSED ELECTRIC SERVICE
---	SILT FENCE & STRAW BALES
---	LIMIT OF DISTURBANCE
---	ROW OF EVERGREEN PLANTINGS
---	CATCH BASIN
---	UTILITY POLE
---	IRON ROD
---	CONCRETE BOUND
---	4" x 4" BUFFER POST
---	WETLAND FLAG

ZONING DATA: R-20

	REQUIRED	PROPOSED
MIN. LOT SIZE:	20,000 S.F.	20,865 S.F. ±
LOT FRONTAGE:	100'	175'
SETBACKS:		
FRONT:	35'	17.5'
REAR:	35'	63.5'
CORNER SIDE:	25'	10'
SIDE:	15'	158'
BUILDING HEIGHT:	35' MAX	35' MAX
LOT COVERAGE:	25% MAX	3.7%

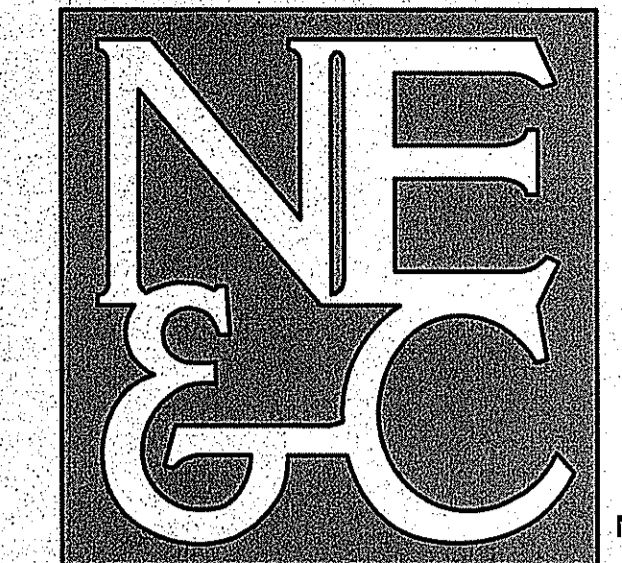
WATER QUALITY CALCULATIONS

PROPOSED IMPERVIOUS (SQUARE FEET)	PER TABLE 8 OF THE STORMWATER MANAGEMENT GUIDANCE DOCUMENT FOR A SINGLE FAMILY RESIDENTIAL DEVELOPMENT, AN 8" DEEP RAIN GARDEN IN SILT LOAM AND LOAM WOULD REQUIRE AN AREA OF 123 SQUARE FEET TO PROVIDE SUFFICIENT TREATMENT.
RESIDENCE: 768	
TOTAL: 768	
PROPOSED NEW IMPERVIOUS = 768 SF	
WATER QUALITY REQ. FOR NEW IMPERVIOUS = 768 SF / 12 = 64 CF	A RAIN GARDEN WITH AN AREA OF 123 SQUARE FEET IS PROVIDED.

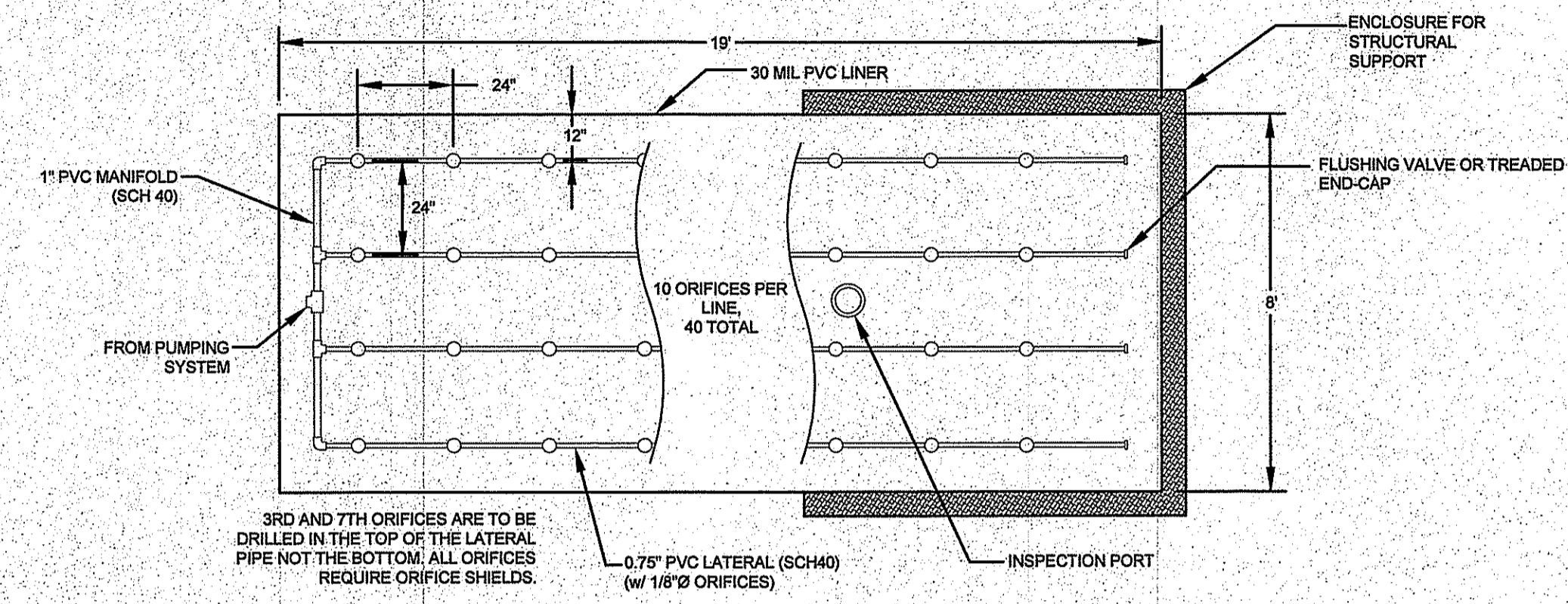


1	RIDEM OWTS/WETLANDS COMMENTS	04/19/17	
No.	Revision	Date	App.
Designed by:	Drawn by: DJW	Checked by:	
Scale:	1" = 20'	Date:	16JAN17
Project Title:			
<p>A.P. 31-1 LOT 35 SPRINGDALE DRIVE SOUTH KINGSTOWN, RHODE ISLAND</p>			
Client/Owner:			
<p>SCOT HALLBERG 235 MAIN STREET SOUTH KINGSTOWN, RI</p>			
Issued for:			
<p>RIDEM</p>			
Drawing Title:			
<p>NOTES</p>			
Drawing Number:			
<p>N-1</p>			
Sheet 2 of 4			
Project Number:			
<p>16157.0</p>			
Survey Index:			
<p>38 - 31-1 - 35</p>			
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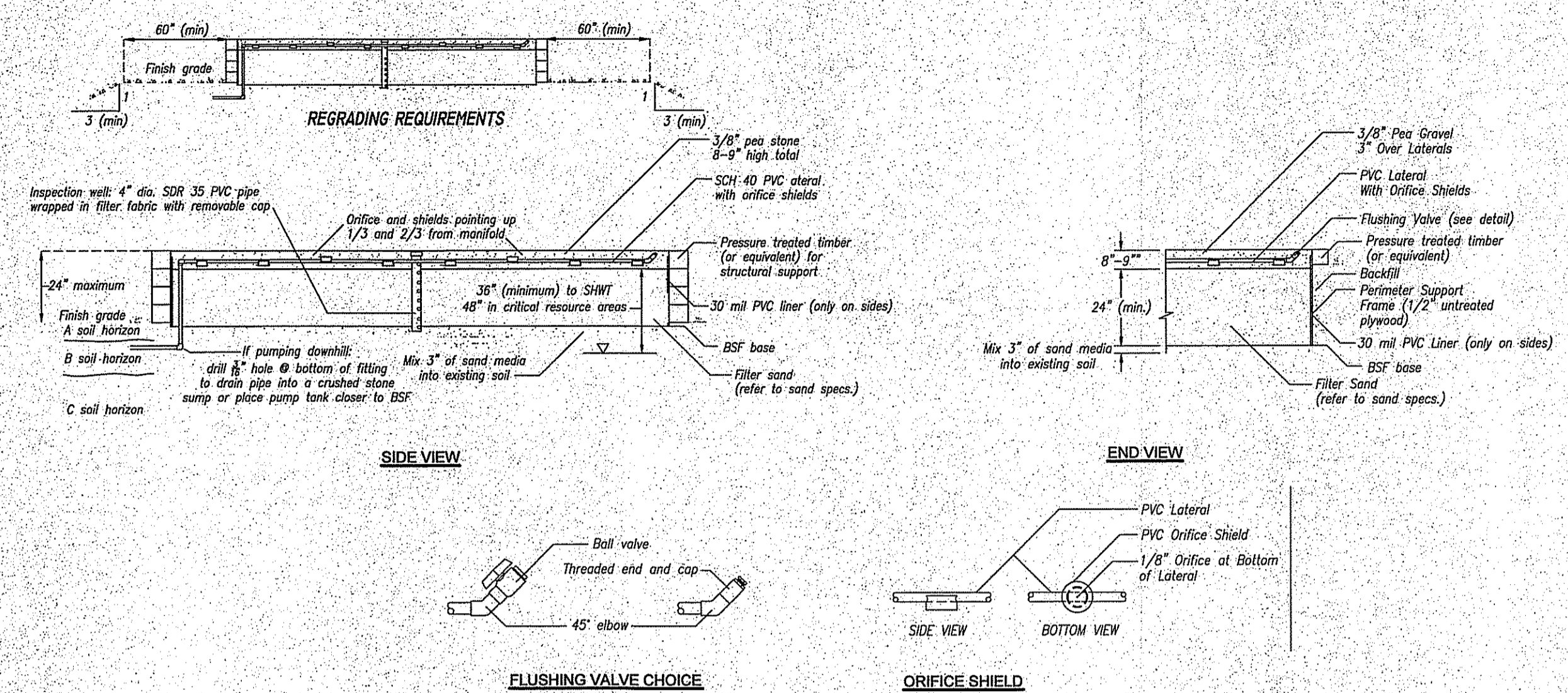
MAY 11 2017



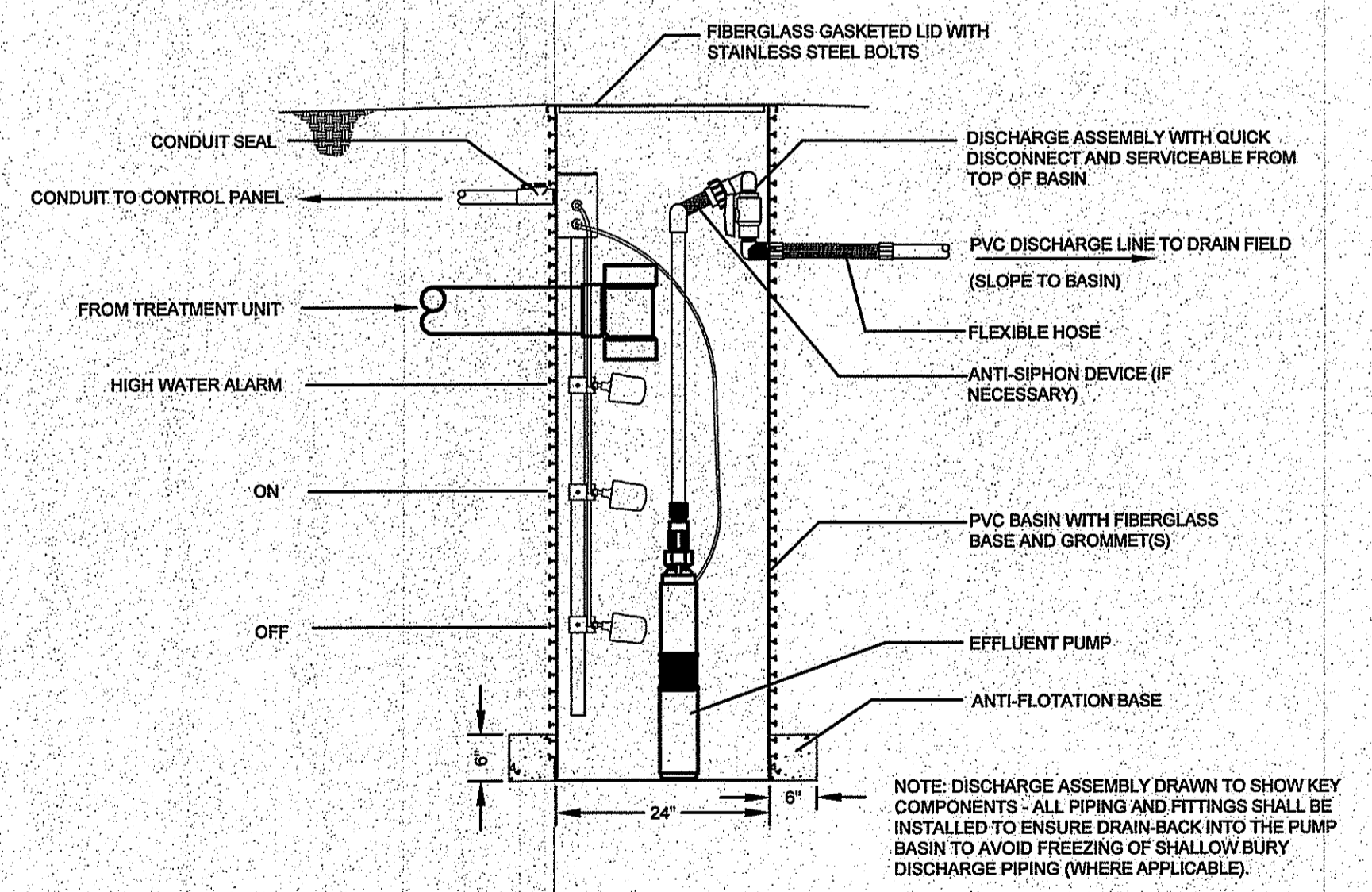
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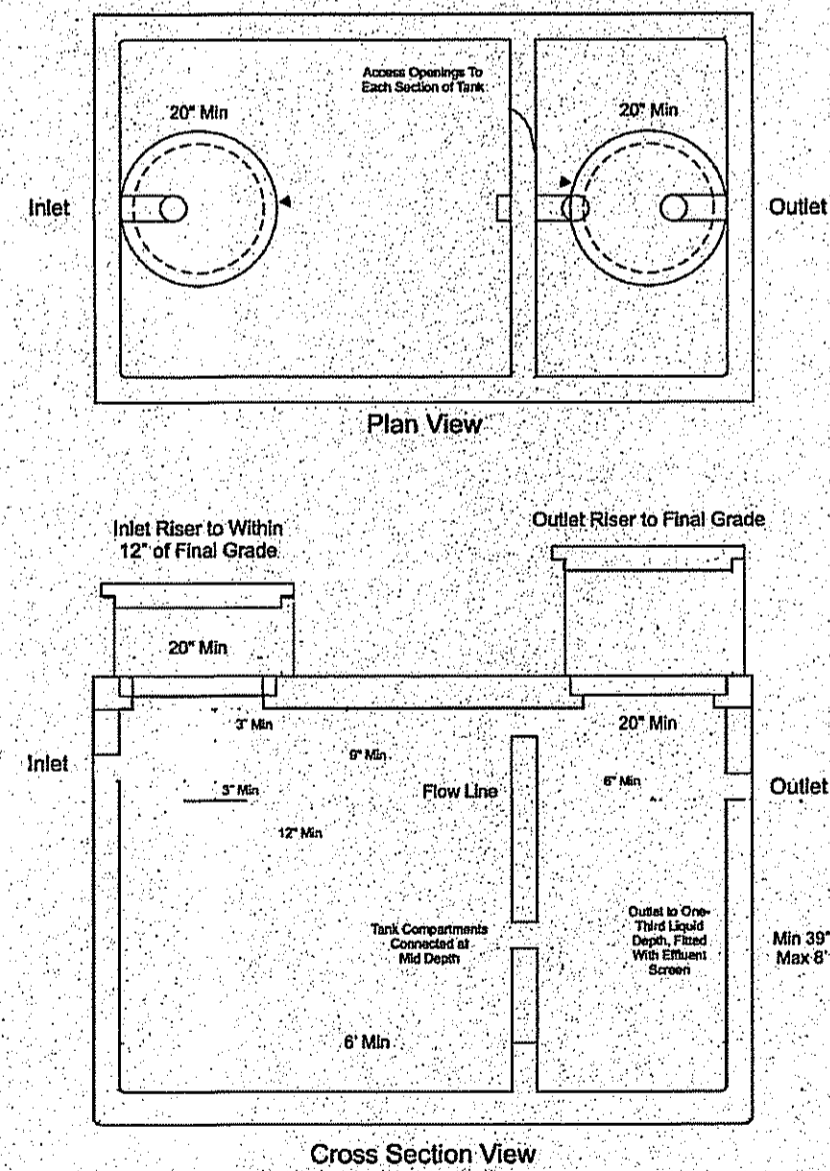
8' x 19' BOTTOMLESS SAND FILTER
SCALE: NOT TO SCALE



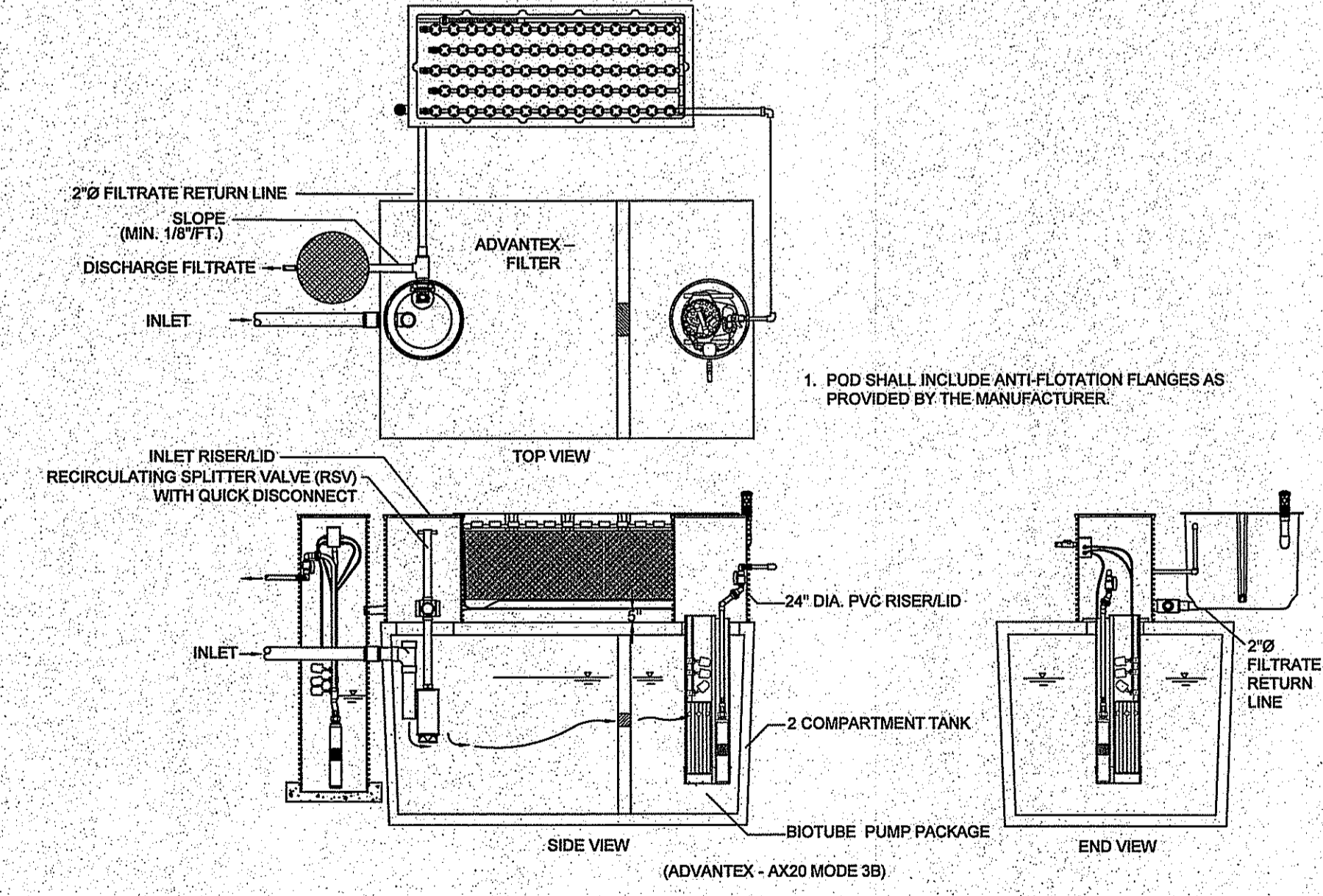
TYPICAL BOTTOMLESS SAND FILTER
SCALE: NOT TO SCALE



TYPICAL PUMP CHAMBER WITH HIGH HEAD PUMP
SCALE: NOT TO SCALE

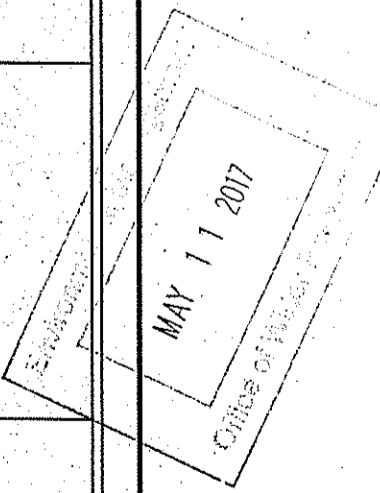
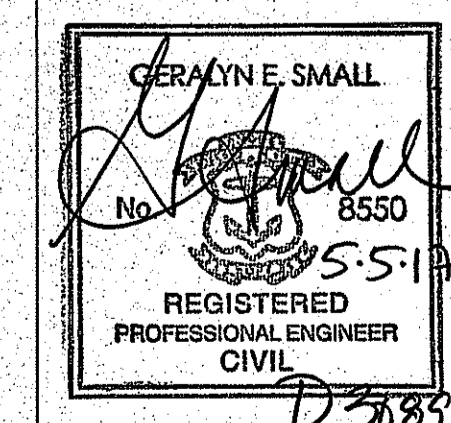


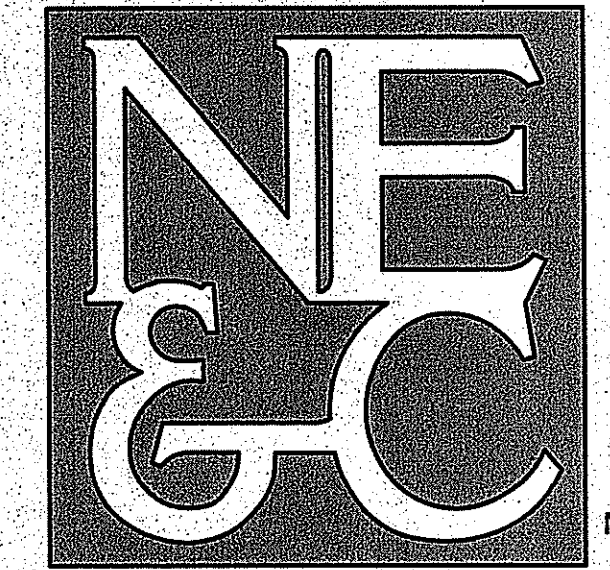
SEPTIC TANK DETAIL (1,500gal.)
SCALE: NOT TO SCALE



ADVANTEX TREATMENT SYSTEM
SCALE: NOT TO SCALE

1	RIDEM OWTS/WETLANDS COMMENTS	04/19/17	
No.	Revision	Date	App.
Designed By:	Drawn by:	DJW	Checked by:
Scale:	AS SHOWN	Date:	16JAN17
Project Title:			
A.P. 31-1 LOT 35 SPRINGDALE DRIVE SOUTH KINGSTOWN, RHODE ISLAND			
Client/Owner:			
SCOT HALLBERG 235 MAIN STREET SOUTH KINGSTOWN, RI			
Issued for:			
RIDEM			
Drawing Title:			
OWTS DETAILS			
Drawing Number:		D-1	
Sheet 3 of 4		Project Number:	
		16157.0	
Survey Index:		38 - 31-1 - 35	
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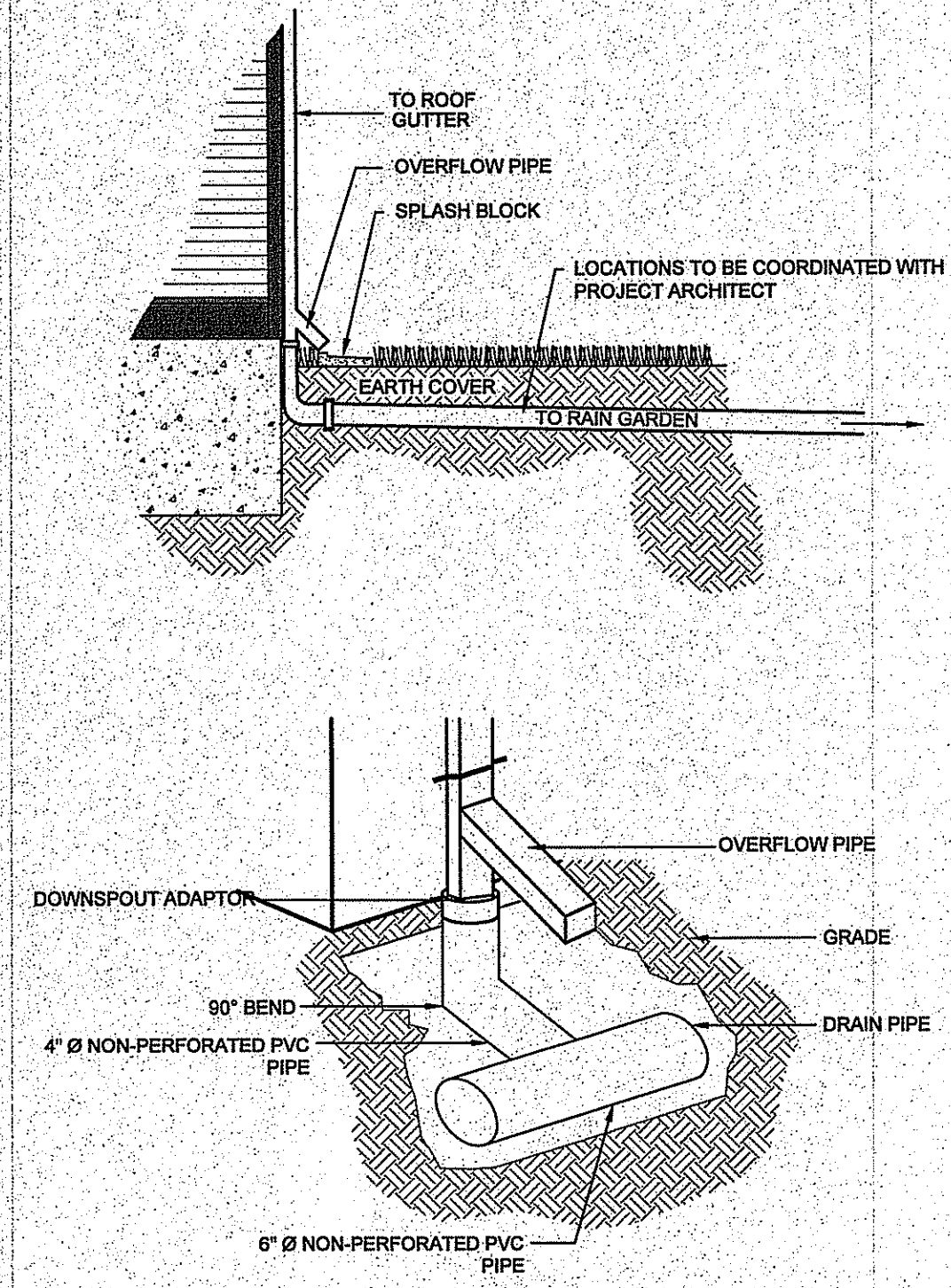




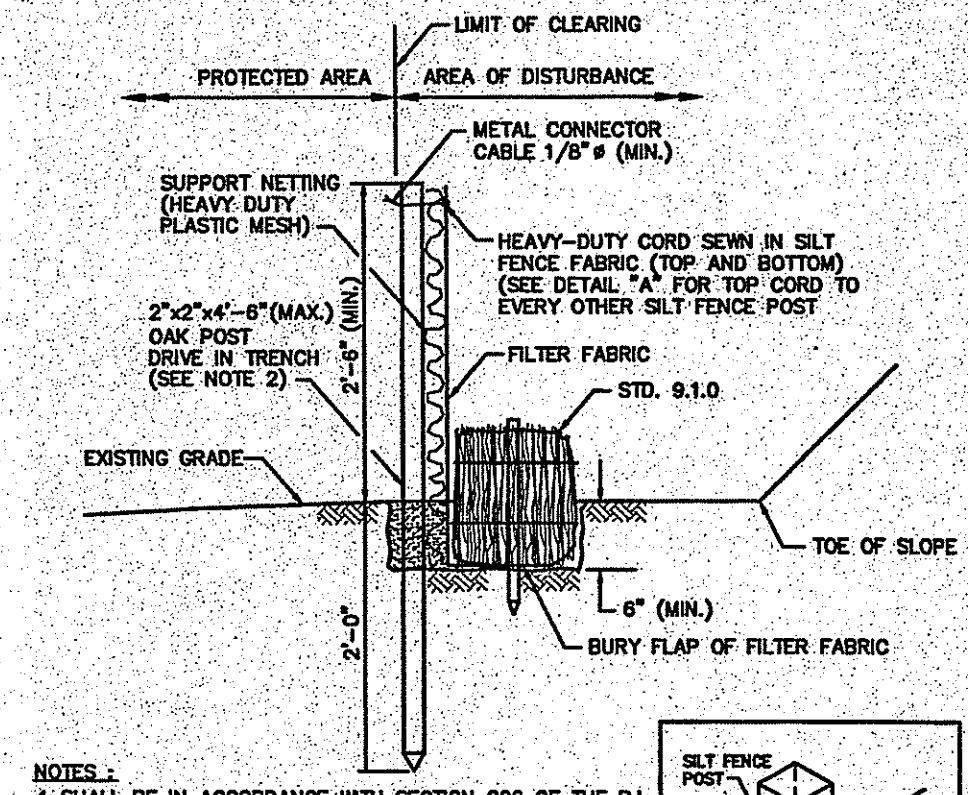
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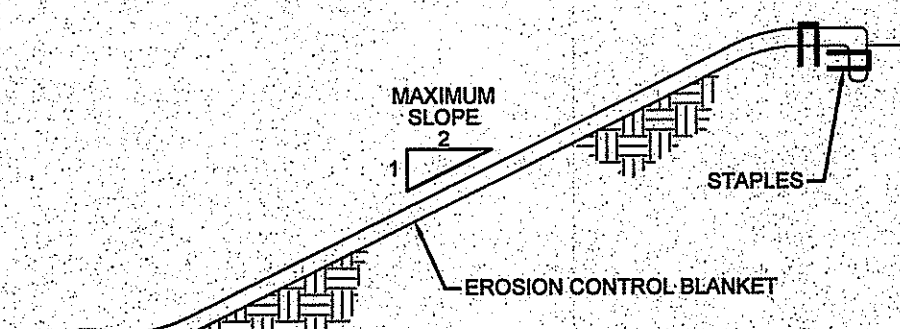


ROOF DOWNSPOUT DETAILS
SCALE: NOT TO SCALE



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.
 2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6" (MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND BARRIE, GULLY OR DRCP-OFF AREAS AS SHOWN ON PLANS.
 3. 1"x4"x4" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

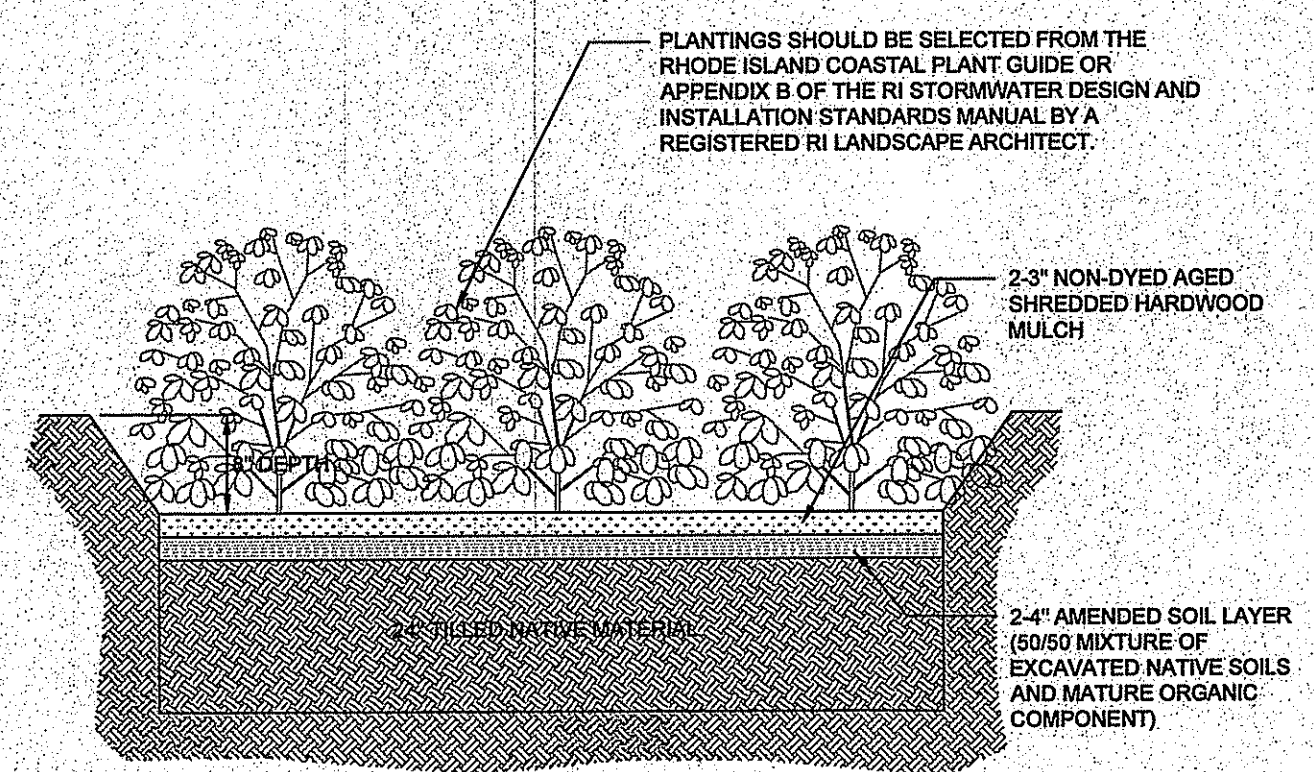
BALED STRAW EROSION CHECK AND SILT FENCE COMBINED (RIDOT 9.3.0)
SCALE: NOT TO SCALE



CROSS SECTION

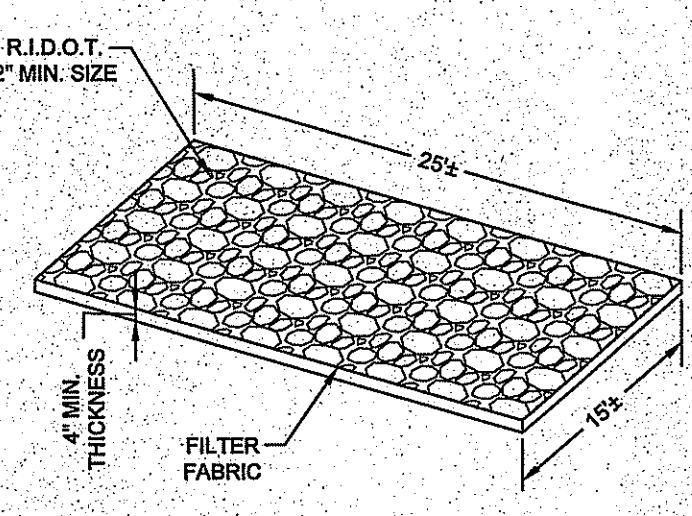
- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
 2. ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 3. ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
 5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

EROSION CONTROL BLANKET
SCALE: NOT TO SCALE

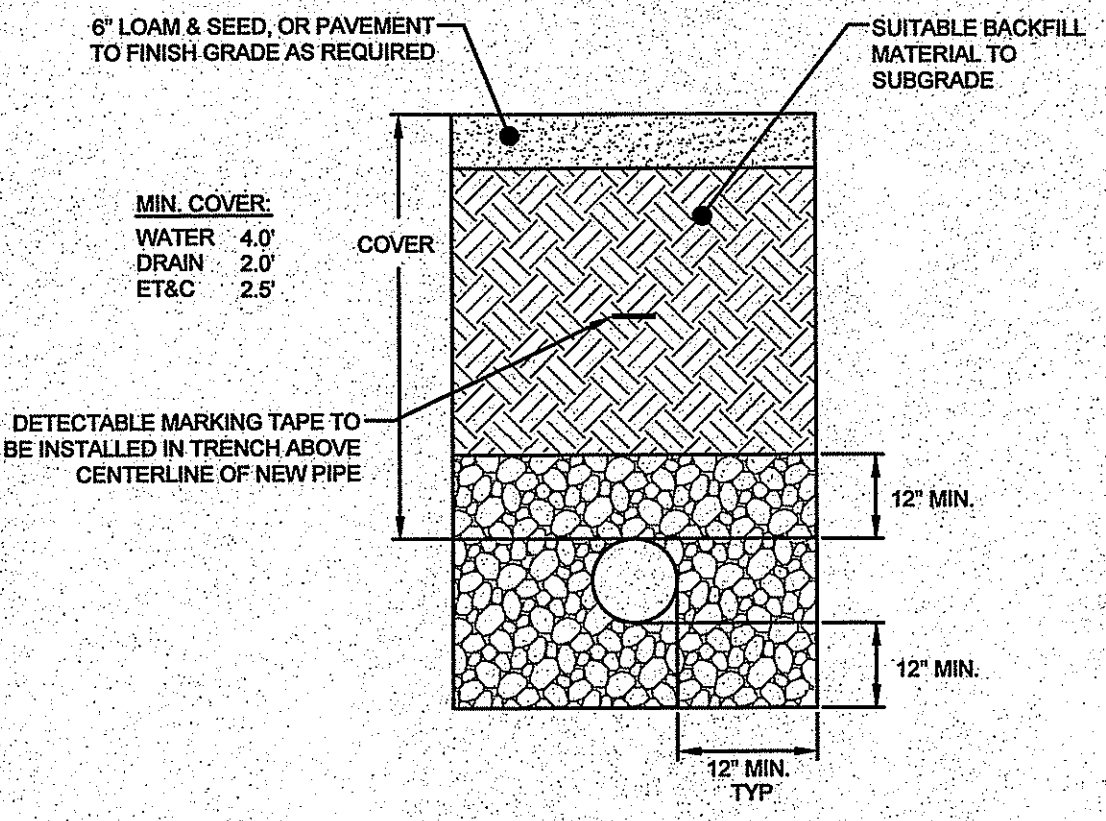


- NOTES:**
1. A CRUSHED STONE ENTRANCE SHALL BE INSTALLED AT INFLOW TO PREVENT CHANNELING.
 2. DOWNHILL SIDE OF GARDEN SHALL BE BERMED TO PROVIDE THE NECESSARY DEPTH.

TYPICAL RAIN GARDEN CROSS SECTION
SCALE: NOT TO SCALE

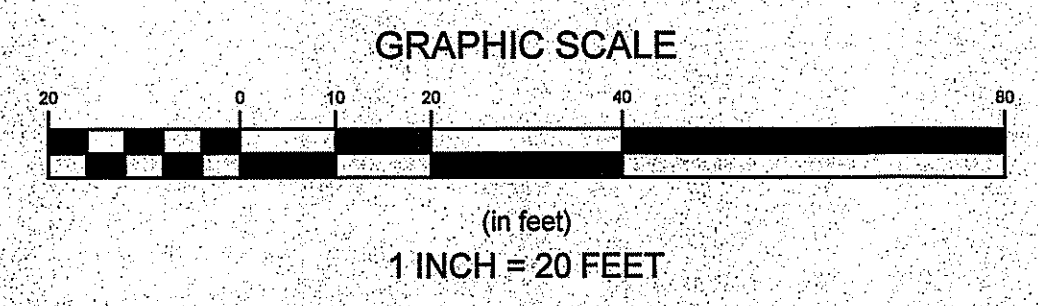


CONSTRUCTION ENTRANCE
SCALE: NOT TO SCALE



UTILITY TRENCH DETAIL
SCALE: NOT TO SCALE

- TRENCH NOTES:**
1. UNSUITABLE MATERIAL SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 12-INCHES BELOW THE DESIGN INVERT ELEVATION.
 2. TRENCH PROTECTION SHALL BE REQUIRED IN ACCORDANCE WITH OSHA REGULATIONS, AND AS OTHERWISE REQUIRED TO PROTECT UTILITIES, ROADWAYS, AND ADJACENT STRUCTURES.
 3. DRAIN PIPES SHALL BE LAID BEGINNING AT THE DOWNSTREAM END OF THE PIPE LINE.
 4. ALL DRAIN PIPES SHALL BE ADS N-12 TYPE IB (SOILTIGHT OR SCH40 PVC) UNLESS OTHERWISE INDICATED.
 5. BACKFILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN HEIGHT WHEN INSTALLED UNDER LANDSCAPED AREAS ONLY. INSTALLATIONS UNDER PAVEMENT REQUIRE BACKFILL MATERIAL TO BE PLACED IN LAYERS NOT TO EXCEED 6" IN HEIGHT. THESE LAYERS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (AASHTO T163). SUITABLE BACKFILL SHALL BE FREE OF LOAM, CLAY, ORGANIC MATTER AND PARTICLES LARGER THAN 2 INCHES IN DIAMETER.
 6. DRAINAGE PIPE TRENCHES SHALL BE BEDDED WITH CRUSHED, STONE OR SCREENED GRAVEL. THESE MATERIALS MUST CONFORM TO RIDOT STANDARD M.01.00 TYPE II MATERIAL.
 7. WATER PIPE TRENCHES MUST BE BEDDED WITH SAND CONTAINING NO PARTICLES LARGER THAN 30". THIS MATERIAL MUST CONFORM TO AASHTO M6 REQUIREMENTS.
 8. UTILITY INSTALLATIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE TOWN OF SOUTH KINGSTOWN PUBLIC WORKS DEPARTMENT.
 9. WHEN TRENCH EXCAVATION IS ADJACENT TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY PROTECT THEM FROM DAMAGE.



1	RIDEM OWTS/WETLANDS COMMENTS	04/19/17	
No.	Revision	Date	App.
Designed By:	Drawn by: DJW	Checked by:	
Scale:	AS SHOWN	Date:	16JAN17

Project Title:
**A.P. 31-1 LOT 35
SPRINGDALE DRIVE
SOUTH KINGSTOWN, RHODE ISLAND**

Client/Owner:
**SCOT HALLBERG
235 MAIN STREET
SOUTH KINGSTOWN, RI**

Issued for:
RIDEM

Drawing Title:
SESC DETAILS

	Drawing Number: D-2
	Sheet 4 of 4
	Project Number: 16157.0
	Survey Index: 38 - 31-1 - 35

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