

DESIGN CRITERIA

- PEAK FLOW = 2 BEDROOMS 115 GALLONS PER DAY / BEDROOM = 230 GPD
- CATEGORY 1 SYSTEM & SOIL CATEGORY BM* = 1.9 GAL/SF/DAY
- SIZE OF GEOMAT:
 - 230 GPD / 1.9 GAL/SF/DAY = 121.1 S.F.
 - 121.1 S.F. / 3.25 LF/S.F. = 37.2 LF REQUIRED
 - ONE (1) 38" LF LINE = 38" LF X 3.25 LF/S.F. = 123.5 S.F.
- PER SOIL EVALUATION REPORT (RIDEM OWTS NO. 0613-1057)

DISCHARGE DOSE

TOTAL DAILY FLOW = 230 GALLON/DAY
 DOSING RATE: 38 LF @ 0.75 GAL/LF = 28.5 GALLONS
 + DRAINBACK = 2.2 GAL (3/4" OF 1.25" SCH. 40 PIPE)
 DOSE SETTINGS: 30.7 GALLON DOSE/23.5 GALLON/LQ. FT. = 1.3 FT.
ADVANTECH DOSE/TIMER SETTING (SEE ATTACHED CALCULATIONS)

230 GAL. PUMP Q = 31.9 GPM RECIRCULATION RATIO 5 TO 1
 RUN TIME = 0.59 HRS/DAY
 PUMP ON = 0.22 MINUTES/DOSE
 PUMP OFF = 6.59 MINUTES
 OVERRIDE PUMP ON = 0.17 MINUTES/DOSE
 OVERRIDE PUMP OFF = 3.29 MINUTES
 TOTAL CYCLES PER DAY = 211.60

SCHEDULE OF PVC PIPE SIZES

BUILDING TO SEPTIC TANK	4" SCH 35
SEPTIC TANK TO TEXTILE FILTER	1" SCH 40 OR EQUAL
TEXTILE FILTER MANIFOLD	1" SCH 40 OR EQUAL
TEXTILE FILTER LATERALS	3/4" SCH 40 OR EQUAL
TEXTILE FILTER TO RSV	2" SCH 40 OR EQUAL
RSV TO PUMP BASIN	2" SCH 40
PUMP BASIN TO DRAINFIELD (GEOMAT)	1 1/4" SCH 40 OR EQUAL
DRAINFIELD (GEOMAT) MANIFOLD	1-1/4" SCH 40 OR EQUAL
DRAINFIELD (GEOMAT) LATERALS	1" SCH 40 OR EQUAL

INVERT SCHEDULE

LOCATION	ELEVATION
INVERT OUT OF HOUSE	609.5± (GRAVITY)
INVERT INTO SEPTIC TANK	609.17± (GRAVITY)
INVERT THROUGH SPLITTER VALVE	609.34± (GRAVITY)
INVERT OUT OF SEPTIC TANK TO ADVANTECH FILTER	610.50± (PRESSURE)
INVERT INTO ADVANTECH FILTER LATERAL	612.00± (PRESSURE)
INVERT OUT OF ADVANTECH FILTER	610.00± (GRAVITY)
INVERT INTO PUMP BASIN	609.25± (GRAVITY)
INVERT OUT OF PUMP BASIN	610.00± (PRESSURE)
INVERT DRAINFIELD LATERALS (GEOMAT)	611.00± (PRESSURE)

LIST OF COMPONENTS

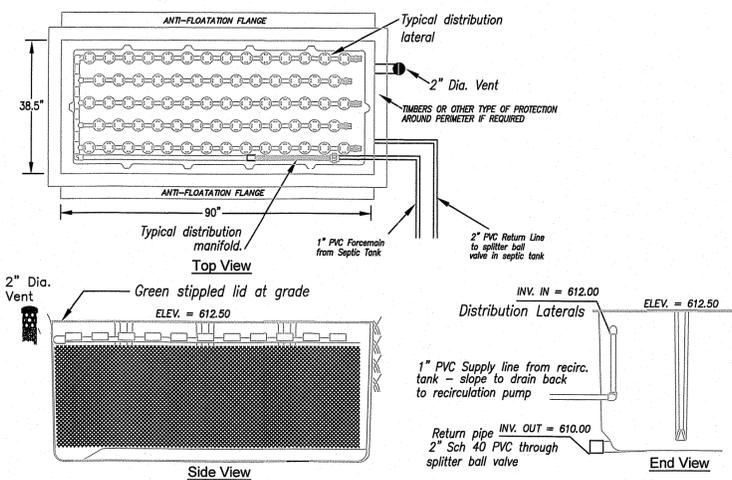
- 1,500 GALLON 2-COMPARTMENT CONCRETE SEPTIC TANK WITH PUMP VAULT AND RECIRCULATION SPLITTING VALVE WITH SIDE RSV ADAPTER AND OSI PF3005 PUMP
- 24" DIAMETER X 6" DEEP PUMP BASIN W/ KRAIN INDEXING VALVE AND PF1005 FC PUMP.
- AX20 ADVANTECH TEXTILE FILTER.
- ONE (1) 38" LONG LINE OF GEOMAT 3900 TRENCH (AREA = 123.5 SF)
- ORCONO SYSTEMS, INC. CONTROL PANEL.

SOIL DESCRIPTION*

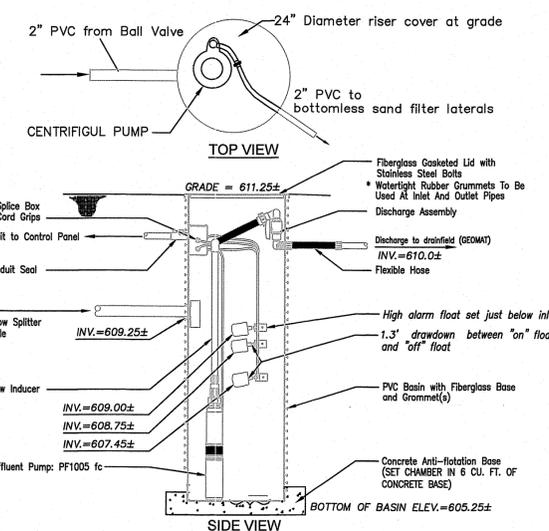
SEV TH 20-05 ESHWT = 30" FROM ORIGINAL GRADE TOTAL DEPTH OF TH = 84"

HORIZON	DEPTH	TEXTURE	SOIL CATEGORY
0-4"	FSL	4	
4-15"	SL	3	
15-28"	GSL	3	
28-34"	GSL	3	
34-96"	GCOSL	8	

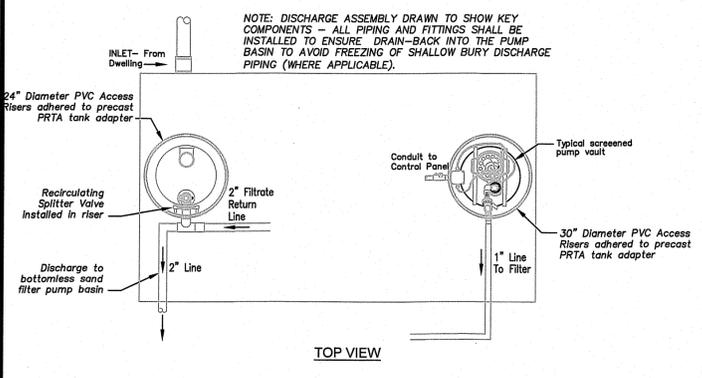
*SOIL EVALUATION PERFORMED ON 6/23/06 BY RIDEM SOIL EVALUATOR D-4028; ADDITIONAL TEST RESULTS PERFORMED ON 10/20/20. SEE SOIL EVALUATION REPORT (APPLICATION NO. 0613-1057) FOR COMPLETE SOIL EVALUATION DESCRIPTION.



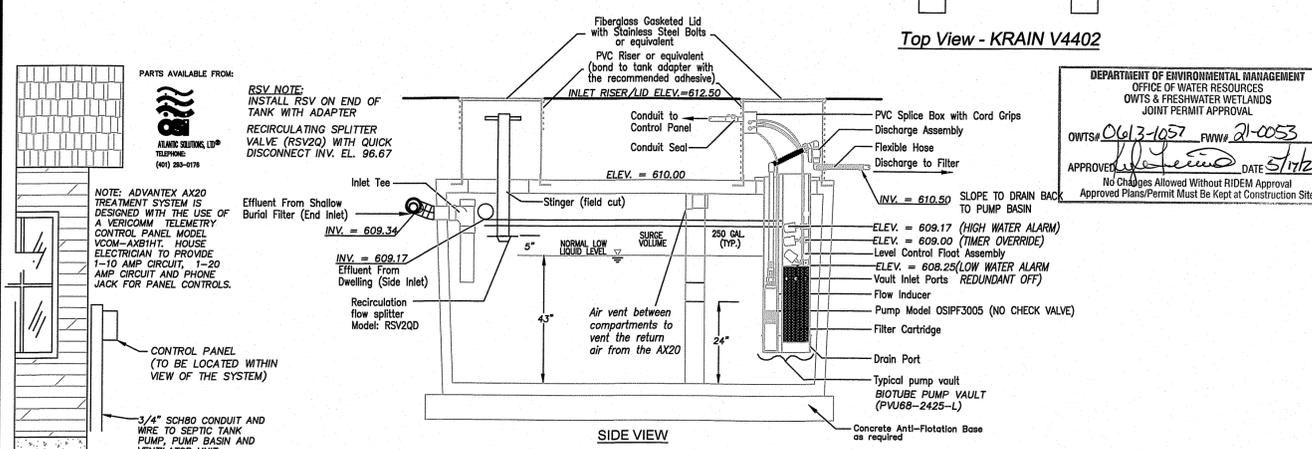
AX 20 ADVANTECH Textile Filter
NOT TO SCALE



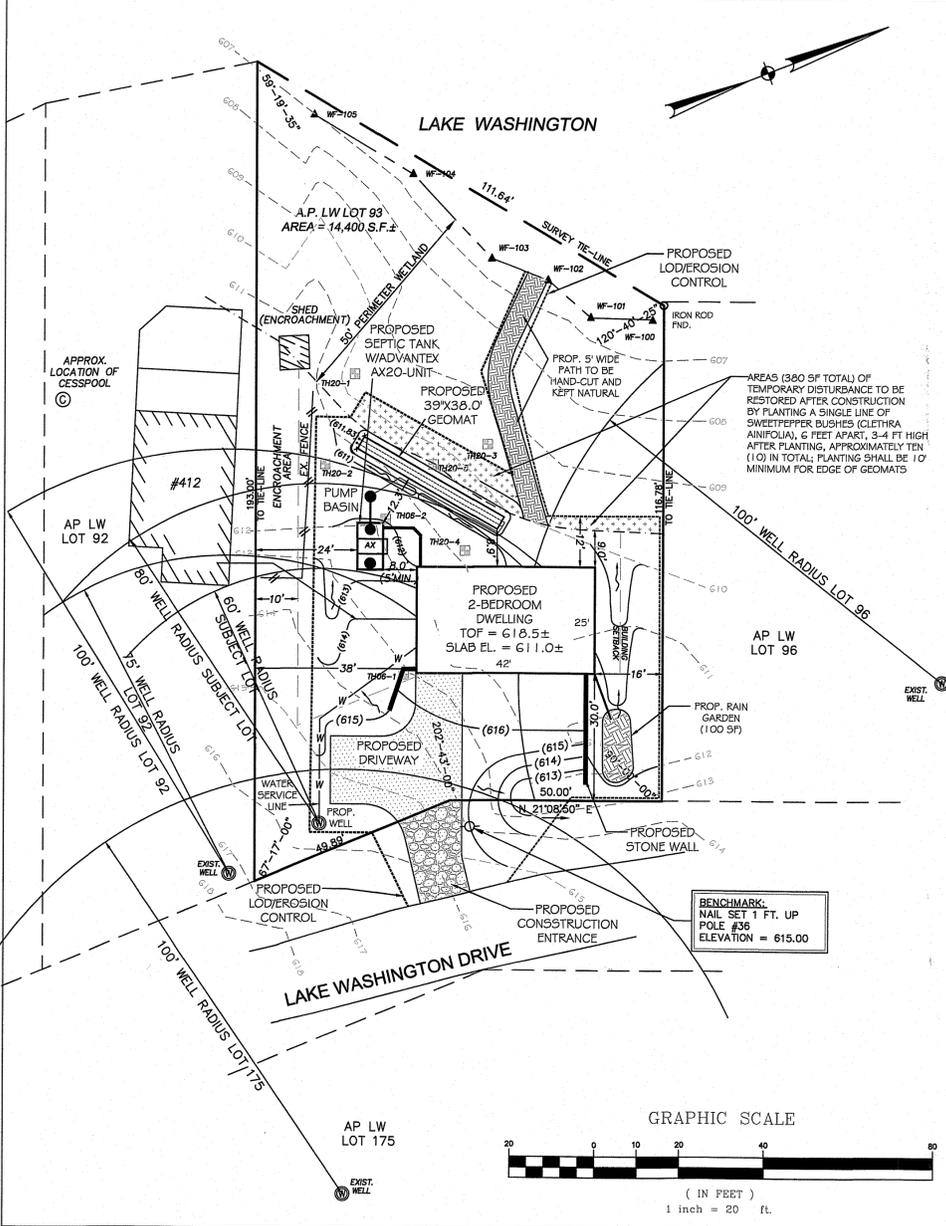
BOTTOMLESS SAND FILTER PUMP BASIN (24" DIAMETER) WITH EFFLUENT PUMPING ASSEMBLY
NOT TO SCALE



TOP VIEW

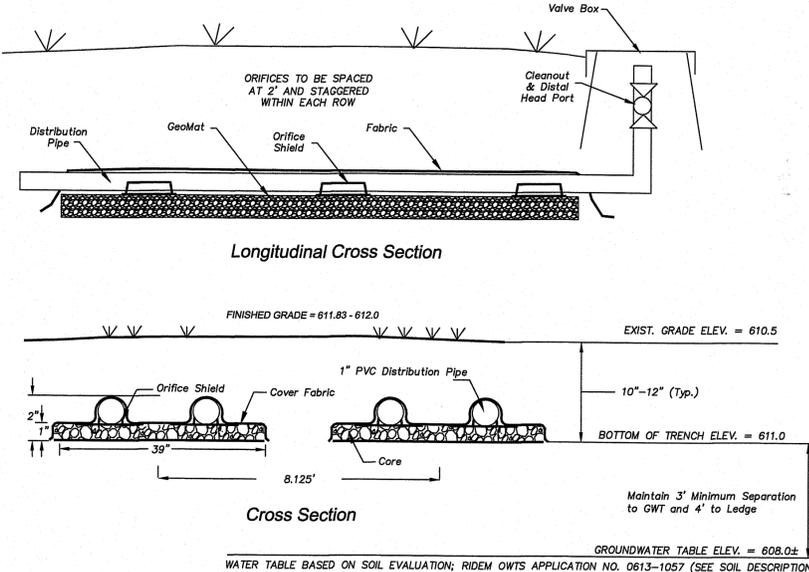


REPS (Recirculating Effluent Pump System) 1,500 GALLON 2-COMPARTMENT TANK W/SIDE RSV & AX-20 UNIT ON TOP
NOT TO SCALE



GRAPHIC SCALE
1 inch = 20 ft.

GeoMat™ 3900 Leaching System Details
NOT TO SCALE



Cross Section

GROUNDWATER TABLE ELEV. = 608.0±
WATER TABLE BASED ON SOIL EVALUATION; RIDEM OWTS APPLICATION NO. 0613-1057 (SEE SOIL DESCRIPTION)



LOCUS MAP
SCALE: 1" = 60'

LEGEND

STONE LINE	N/F	NOW OR FORMERLY
RETAINING WALL	—	EXISTING CONTOUR
PROPERTY LINE	—	PROPOSED CONTOUR
FOUND DRILL HOLE	⊙	SPOT GRADE
FOUND IRON ROD	⊙	SPOT GRADE
FOUND IRON PIPE	⊙	SPOT GRADE
UTILITY POLE	⊙	EXISTING TREE
EXISTING WELL	⊙	EXISTING TREES TO BE REMOVED
WATER LINE	—	GRADE TO DRAIN
GAS LINE	—	PROPOSED EROSION CONTROL (FILTER SOCK, STRAW WATTLE AND/OR SILT FENCE)
OVERHEAD WIRE	—	
SOIL EVALUATION TEST HOLE	⊙	
SQUARE FEET	SF	
ACRES	AC	
TOP OF FOUNDATION	TOF	
TAX ASSESSOR'S PLAT	AP	

SURVEY NOTE:
PROPERTY LINE & TOPOGRAPHY SURVEY PERFORMED BY INTERNATIONAL MAPPING & SURVEYING CORP.
PLAN NAME: SURVEY PLAN WITH EXISTING CONDITIONS PLAN.
PREPARED FOR KEVIN O'HAIRE
ON LAKE WASHINGTON DRIVE, GLOCESTER, RHODE ISLAND,
A.P. LW LOT 93. DATE: DECEMBER 18, 2020.
SCALE: 1" = 20'.

WETLAND NOTE:
FRESHWATER WETLANDS PRESENT ON SITE WERE DELINEATED BY MANSON & ASSOCIATES, INC. ON 10/15/20 AND HAS AN ASSOCIATED 50-FOOT PERIMETER WETLAND; SEE ATTACHED REPORT.

OWNER:
ESTATE OF ELIZABETH H. O'HAIRE
STEPHEN O'HAIRE, EXECUTOR
7 LINDEN ROAD
EAST SANDWICH, MA 02537

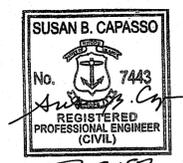
APPLICANT:
KEVIN & STEPHEN O'HAIRE
7 LINDEN ROAD
EAST SANDWICH, MA 02537

RIDEM OWTS APPLICATION NO. 0613-1057

PROPOSED OWTS PLAN

Project:
KEVIN O'HAIRE
A.P. LW LOT 93
LAKE WASHINGTON DRIVE
GLOCESTER, RHODE ISLAND

Prepared By:
SUSAN B. CAPASSO, P.E.
PO BOX 621
NORTH SITUATE, RHODE ISLAND 02857
401-261-8870
MARCH 1, 2021 - Revised MAY 5, 2021
PROJECT NO: 20-81 SHEET 1/2



Office of Water Resources
Environmental Management
MAY 10 2021

BIORETENTION AREA PLANTING NOTES:

THE FOLLOWING IS A LIST OF POTENTIAL BIORETENTION AREA PLANTINGS. A FULL PLANTING DETAIL WILL BE PROVIDED FOR FINAL DEVELOPMENT PLAN REVIEW.

PLANT SPECIES WERE SELECTED FROM THE RHODE ISLAND COASTAL PLANT GUIDE PREPARED BY THE URI CELS AND RI CRMC. ONLY THOSE NATIVE PLANTS THAT ARE SUITABLE FOR RAIN GARDENS AND ARE TOLERANT OF WET SOILS ARE SHOWN HERE.

SPECIES	COMMON NAME	PLANT TYPE
<i>Ilex opaca</i>	AMERICAN HOLLY	TREE
<i>Iris versicolor</i>	BLUE FLAG	PERENNIAL
<i>Carex stricta</i>	TUSSOCK SEDGE	GRASS
<i>Cephalanthus occidentalis</i>	COMMON BUTTONBUSH	SHRUB
<i>Comptonia perfoliata</i>	SWAMP SPICEBUSH	SHRUB
<i>Cornus racemosa</i>	GRAY DOGWOOD	SHRUB
<i>Ilex glabra</i>	INKBERRY HOLLY	SHRUB
<i>Ilex verticillata</i>	WINTERBERRY HOLLY	SHRUB
<i>Lindera benzoin</i>	SPICEBUSH	SHRUB
<i>Photinia melanocarpa</i>	BLACK CHOKEBERRY	SHRUB
<i>Photinia pyrifolia</i>	RED CHOKEBERRY	SHRUB
<i>Rhododendron viscosum</i>	SWAMP AZALEA	SHRUB
<i>Vaccinium corymbosum</i>	HIGHBUSH BLUEBERRY	SHRUB
<i>Viburnum dentatum</i>	ARROWWOOD	SHRUB

TREES SHALL BE PLANTED WITH A DENSITY OF NO MORE THAN ONE PER 250 SF. SPACED 15 FT ON CENTER. SHRUBS SHALL BE PLANTED 5-10 FT ON CENTER AND HERBACEOUS VEGETATION PLANTED 2.5 FT ON-CENTER.

BIORETENTION AREA LOCATED AT LEAST 10 FT FROM BUILDING FOUNDATION, 15 FT FROM EXIST. OWTS AND 25 FT FROM ANY WELL OR WATER SUPPLY.

ROOF GUTTER DOWNSPOUTS SHALL DIRECT WATER TO BIORETENTION AREA VIA UNDERGROUND PIPING OR OVERLAND WHERE UNDERGROUND PIPING IS UNFEASIBLE OR NOT PERMISSIBLE.

STORMWATER MANAGEMENT DESIGN CALCULATIONS*

AREAS REQUIRED FOR WATER QUALITY VOLUME (WV):
HOUSE ROOF AREA = 1,050 SF

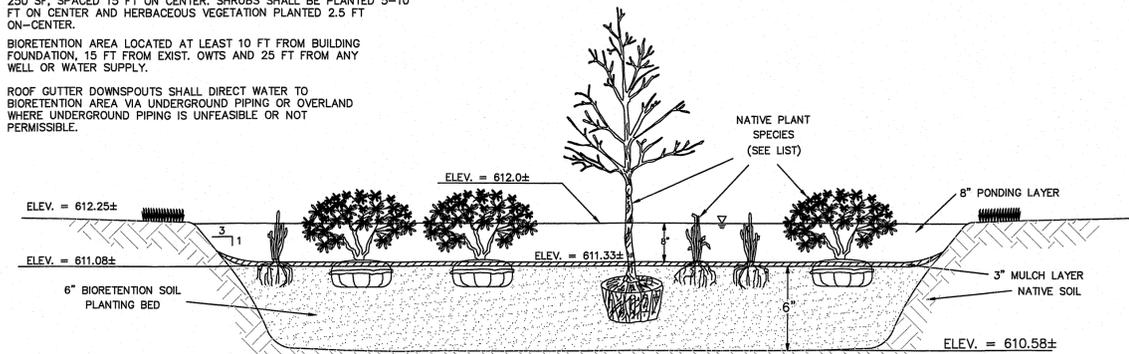
PROPOSED RAIN GARDEN

USING AN 8" DEEP RAIN GARDEN:
88 SF SURFACE AREA/1100 SF OF IMPERVIOUS SURFACE AREA OF GARDEN AREA REQUIRED;
100 SF PROVIDED

* RAIN GARDEN SIZING BASED ON THE STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT SECTION 300.6 OF THE RI COASTAL RESOURCES MANAGEMENT PROGRAM (RCRMP) DOCUMENT: SECTION C: RAIN GARDENS AND TABLE B: RAIN GARDEN SIZING GUIDANCE FOR SANDY SOILS. SANDY SOILS DETERMINED BY RIDEM SOIL EVALUATION APPLICATION NO.: 0613-1057.

THE WATER QUALITY DESIGN IS BASED ON RECOMMENDATIONS AND PROCEDURES AS DEFINED AND AS REQUIRED IN MINIMUM STANDARD 11, IN THE LATEST RHODE ISLAND STORMWATER DESIGN AND INSTALLATION MANUAL (RIDIM).

THE RECOMMENDATIONS AND GUIDELINES OF THE RIDIM AND THE LATEST RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE INCORPORATED INTO THE CONSTRUCTION PRACTICES ON SITE.



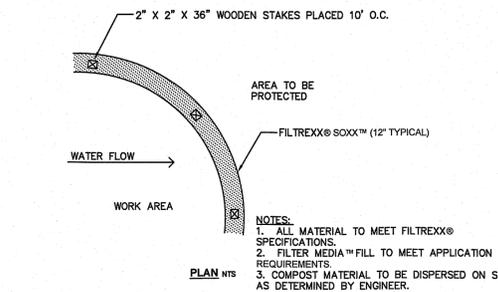
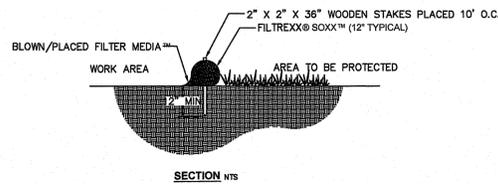
BIORETENTION AREA (RAIN GARDEN) - TYPICAL CROSS-SECTION
NOT TO SCALE

GENERAL OWTS CONSTRUCTION NOTES

- ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS WHETHER NOTED HEREON, OR NOT, SHALL BE IN CONFORMANCE WITH THE RIDEM OFFICE OF WATER RESOURCES, RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ON-SITE WASTEWATER TREATMENT SYSTEMS, AS AMENDED.
- THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLAN ON-SITE AT ALL TIMES.
- THE CONTRACTOR MUST FOLLOW ALL ITEMS CIRCLED IN THE LOWER RIGHT HAND AREA OF THE OWTS APPLICATION LABELED--IMPORTANT AND NOTIFY ENGINEER DURING THE DIFFERENT STAGES OF CONSTRUCTION TO ALLOW THE ENGINEER TO OBSERVE COMPLIANCE WITH THE APPROVED PLANS, AS REQUIRED BY RIDEM.
- THE CONTRACTOR SHALL COMPLY WITH ALL ADDITIONAL TERMS OF APPROVAL AS MAY BE REQUIRED BY RIDEM.
- THE CONTRACTOR MUST NOTIFY LICENSED DESIGNER 48 HOURS PRIOR TO START OF CONSTRUCTION WITH VALID INSTALLER'S LICENSE NUMBER. DESIGNER MUST NOTIFY RIDEM 24 HOURS PRIOR TO START OF CONSTRUCTION IN ACCORDANCE WITH RIDEM RULE 6.47.
- THE LICENSED DESIGNER SHALL WITNESS AND INSPECT ALL ASPECTS OF THE INSTALLATION, KEEP RECORDS, PREPARE THE CERTIFICATE OF COMPLETION AND PROVIDE O & M INFORMATION AND RECOMMENDATIONS TO THE OWNER, IN ACCORDANCE WITH RIDEM RULE 6.47.
- PROPERTY LINE AND TOPOGRAPHICAL SURVEY DEPENDING ON THIS PLAN WAS OBTAINED FROM THE EXISTING CONDITIONS PLAN PREPARED BY INTERNATIONAL MAPPING & SURVEYING CORP. THE CONTRACTOR SHALL VERIFY PROPERTY LINE LOCATION, BENCHMARK ELEVATIONS AND ALL FIELD CONDITIONS PRIOR TO ANY CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING SEWER INVERTS PRIOR TO CONSTRUCTION (BUILDING, SEPTIC TANK, GREASE TANK, D-BOX & FIELD).
- IF FIELD CONDITIONS VARY FROM PLANS OR IF CONTRACTOR ENCOUNTERS UNANTICIPATED CONDITIONS DURING CONSTRUCTION WHICH INDICATE THAT THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, INSTALLER SHALL STOP CONSTRUCTION AND NOTIFY THE LICENSED DESIGNER RESPONSIBLE FOR WITNESSING AND INSPECTING THE INSTALLATION IN ACCORDANCE WITH RIDEM RULE 6.47.
- THERE ARE NO EXISTING OR PROPOSED PRIVATE DRINKING WATER WELLS WITHIN 200' OF THE PROPOSED OWTS AREA EXCEPT AS SHOWN.
- THERE ARE NO EXISTING OR PROPOSED PUBLIC WATER SUPPLY WELLS WITHIN 500' OF THE PROPOSED OWTS AREA EXCEPT AS SHOWN.
- ALL KNOWN OWTS'S WITHIN 100' OF EXISTING OR PROPOSED WELLS ARE SHOWN.
- ALL KNOWN OWTS'S WITHIN 100' OF ADJACENT PROPERTY LINES ARE SHOWN.
- THERE ARE NO KNOWN EXISTING OR PROPOSED SUBSURFACE DRAINS WITHIN 50 FEET OF THE PROPOSED OWTS.
- THE CONTRACTOR SHALL CALL "DIG-SAFE" AND VERIFY THE LOCATION OF ALL THE UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO START OF LAND DISTURBING ACTIVITIES.
- CLEAR ALL TREES, BRUSH AND STUMPS WITHIN 10' OF SYSTEM.
- STRIP LEACHING AREA PERIMETER 5' IF INVERT OF LEACHFIELD IS AT OR ABOVE EXISTING GRADE OR IF FILL OR OTHER HTM IS FOUND. EXCAVATE DOWN TO WATER TABLE AS SHOWN ON PLAN, REMOVE ALL TOPSOIL, UNDERBRASS MATERIAL AND SOIL CONTAINING FINES. REPLACE WITH SEPTIC GRAVEL AS REQUIRED AND SPECIFIED IN RIDEM REGULATIONS.
- INSTALLER MUST ASSURE THAT BOTTOM AND SIDES OF EXCAVATION FOR THE LEACHFIELD ARE NOT COMPACTED OR SMOEAD.
- NO VEHICULAR TRAFFIC IS ALLOWED OVER THE LEACHFIELD.
- ALL PVC PIPE SHALL BE 4" DIA. SDR 35 OR EQUIVALENT, UNLESS OTHERWISE NOTED.
- DISTRIBUTION LINES MUST BE INTERCONNECTED AT ALL ENDS AND AT INTERVALS NOT EXCEEDING 25'.
- MAINTAIN INVERT ELEVATION (FULL PERIMETER) FOR FEET AROUND SYSTEM AS SHOWN.
- EXISTING SEPTIC TANK(S) TO REMAIN IN SERVICE SHALL BE PUMPED AND INSPECTED. EXISTING TANK(S) SHALL BE REPLACED IF CONDITION IS FOUND TO BE INADEQUATE. PROPOSED SEPTIC TANKS SHALL CONFORM TO ALL STANDARDS SET FORTH IN THE RIDEM OWTS REGULATIONS AS STATED IN NOTE NO. 1.
- ALL MANHOLES SHALL BE SET TO GRADE; GRADE TO DIVERT SURFACE RUNOFF.
- THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENCE OR OMISSION OF A USER OF AN OWTS, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE OWTS.
- THIS SYSTEM IS NOT DESIGNED TO HANDLE A GARBAGE DISPOSAL, OTHER HIGH WATER USE UNITS AND/OR ANY DISCHARGE FROM ANY WATER TREATMENT SYSTEMS.
- THE CONTRACTOR SHALL PROVIDE DESIGNER WITH MATERIAL RECEIPTS FOR ALL CONSTRUCTION MATERIALS PRIOR TO DESIGNER ISSUING CERTIFICATE OF CONSTRUCTION.
- ALL CURBING, PAVEMENT, LANDSCAPING AND OTHER EXISTING SITE CONDITIONS DISTURBED DURING THE CONSTRUCTION WORK SHALL BE RESTORED PER THE OWNER'S SPECIFICATION BY CONTRACTOR.
- CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULE WITH THE OWNER.
- GROUNDWATER TABLE FLUCTUATES ANNUALLY, NO GUARANTEE OF A DRY BASEMENT OR IMPLD.
- GROUNDWATER TABLE BASED ON SOIL EVALUATION TEST HOLES, RIDEM APPLICATION NO. 0613-1057.
- ALL APPLICANTS OBTAINING AN OWTS PERMIT FOR A RIDEM APPROVED ALTERNATIVE OR EXPERIMENTAL TECHNOLOGY REQUIRING SPECIAL OPERATION AND MAINTENANCE PROCEDURES SHALL: A) FILE A COPY OF THE INITIALLY EXECUTED CONTRACT FOR THE OWTS'S OPERATION AND MAINTENANCE WITH THE LAND EVIDENCE RECORDS OF THE MUNICIPALITY IN WHICH THE OWTS IS LOCATED AND B) SUBMIT TO THE DEPARTMENT A CERTIFIED COPY OF THE RECORDED PERMIT SETTING FORTH THE DATE OF THE RECORDATION AND THE BOOK.

ADVANTEX/GEOMAT CONSTRUCTION NOTE

- THE PROPOSED SEPTIC TANK SHALL BE PROVIDED WITH A PVC INLET TEE AND A SCREENED PUMP VAULT IN THE OUTLET END. AN ACCESS RISER SHALL BE INSTALLED DIRECTLY ABOVE THE INLET TEE AND BALL VALVE, AND THE SCREENED PUMP VAULT.
- ALL SEPTIC TANKS SHALL BE A WATERTIGHT WITH 24" DIAMETER INLET AND OUTLET ACCESS RISERS. RISERS SHALL BE PVC WITH SECURED FIBERGLASS LID. IF CONCRETE TANK IS USED, ABS TANK ADAPTOR SHALL BE CAST INTO PLACE. TANK SHALL BE VACUUM TESTED WHEN CONSTRUCTED OR SEAMS SHALL BE WRAPPED WITH 6" BUTYL MASTIC.
- THE PROPOSED SEPTIC TANK SHALL BE SEALED TO ENSURE WATER TIGHTNESS AND CAN BE PURCHASED FROM JOLLEY PRECAST, INC. 1-800-774-8066.
- ALL TANKS AND APPURTENANCES SHALL BE CONSTRUCTED SUCH THAT ALL ELEMENTS ACT AS A SINGLE WATERTIGHT UNIT & SHALL BE CONSTRUCTED ACCORDING TO ASTM STANDARD C-1227-97A OR ANY SUPERSEDING UPGRADING OF THIS STANDARD. ALL RISER TANKS SHALL BE CAST IN PLACE. ALL RISER TANK MANHOLES, ALL INLETS AND OUTLETS SHALL BE CAST IN PLACE WITH CAST-A-SEAL.
- THE ADVANTEX AX20 TREATMENT SYSTEM CONSISTS OF A PACKED BED FILTER THAT USES SPECIALLY DESIGNED TEXTILE FILTERS WITHIN A PRE-ASSEMBLED UNIT.
- PUMPS SHALL BE AS MANUFACTURED BY ORENCO SYSTEMS, INC. OR APPROVED EQUAL. SEPTIC TANK PUMP TO ADVANTEX FILTER-CEL EX300S, PUMP CHAMBER PUMP TO ORENCO SYSTEMS, INC. OR APPROVED EQUAL. SEPTIC TANK PUMP TO ADVANTEX FILTER-CEL EX300S SHALL BE EQUIPPED WITH A HIGH WATER LEVEL VISIBLE AND AUDIBLE ALARM POWERED BY A CIRCUIT SEPARATE FROM THE PUMP POWER. THE ALARM SHALL BE LOCATED IN A NORMALLY OCCUPIED AREA OF THE FACILITY OR SHALL BE INSTALLED AS SHOWN ON THE SITE PLAN.
- SMALL DIAMETER, PRESSURIZED PVC PIPE SHALL BE SCH 40 OR EQUAL, WITH SOLVENT WELDED CONNECTIONS.
- ALL ORGANIC MATERIAL BELONGING TO THE AREA OF THE PROPOSED GEOMAT SHALL BE STRIPPED AND BACK FILLED WITH FILTER SAND ASTM-33 OR SEPTIC GRAVEL IF REQUIRED, AS SHOWN ON THE PLAN.
- CONTRACTOR TO COMPACT SOIL BENEATH ALL PRESSURE AND GRAVITY LINES.
- CONTRACTOR TO COORDINATE STARTUP WITH MAINTENANCE CONTRACTOR, ELECTRICIAN, AND ENGINEER PRIOR TO COMPLETION.
- CONSTRUCTION OF THE SYSTEM AFTER OCTOBER 31ST, SHALL REQUIRE SYSTEM TO BE COVERED AND/OR INSULATED PER MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR WINTER CONDITIONS.
- ALL APPLICANTS OBTAINING AN OWTS PERMIT FOR A RIDEM APPROVED ALTERNATIVE OR EXPERIMENTAL TECHNOLOGY REQUIRING SPECIAL OPERATION AND MAINTENANCE PROCEDURES SHALL: A) FILE A COPY OF THE INITIALLY EXECUTED CONTRACT FOR THE OWTS'S OPERATION AND MAINTENANCE WITH THE LAND EVIDENCE RECORDS OF THE MUNICIPALITY IN WHICH THE OWTS IS LOCATED AND B) SUBMIT TO THE DEPARTMENT A CERTIFIED COPY OF THE RECORDED PERMIT SETTING FORTH THE DATE OF THE RECORDATION AND THE BOOK.



FILTREXX® SEDIMENT CONTROL

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA* FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTER SOCK NOTES

- Soxx™ shall meet Filtrex Soxx™ Specifications and use Filtrex GrowingMedia™.
- Contractor is required to be a Filtrex Certified™ Installer.
- Soxx™ must be installed and stabilized before flow is allowed from culverts and storm outlets.
- Land surface shall be cleared of debris, including rocks, roots, large clods, and sticks prior to Soxx™ installation.
- Channel bed shall be made smooth prior to installation of Soxx™.
- Soil bed may be compacted and graded prior to installation.
- The upslope end of the Soxx™ shall be installed under the lip of the culvert or outlet drain to ensure initial storm flow contact is on top of the Soxx™, not under or in front of the system.
- Soxx™ shall be placed parallel to water flow, where socks are tightly abutted to prevent water seepage between and underneath the Soxx™.
- Once in place, Soxx™ shall be lightly compacted and abutting edges leveled to tighten seal between socks and encourage even water flow over Soxx™ system.
- Stakes shall be installed through the middle of the Soxx™ on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. Top of stakes should be cut off, leaving 3 in (75mm) above the top of the Soxx™.
- Soxx™ may be seeded at the time of application, seed selection will be determined by the Engineer.

EROSION AND SEDIMENTATION CONTROL CONSTRUCTION NOTES:

- EROSION AND SEDIMENTATION (E&S) CONTROLS WILL BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORK ALONG THE LIMITS OF DISTURBANCE (LOD) AS SHOWN ON THE SITE PLAN AND DETAILS.
- CRITICAL AREAS SUCH AS WETLAND AREAS, SLOPED AND STREAMS SHALL BE PROTECTED AS PER PLAN AND, IN THE PRESENCE OF WETLANDS, PER THE CONDITIONS OF THE CRMC ASSENT ORDER AND/OR RIDEM PERMIT.
- ALL E&S CONTROLS SHALL BE FULLY MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL VEGETATIVE STABILIZATION HAS BEEN ACHIEVED. E&S CONTROLS ARE TO BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING ALL PRECIPITATION EVENTS THAT EXCEED ALL OF 1.0" OR MORE OR WHICH PRODUCES STORMWATER RUNOFF. UNDER NO CIRCUMSTANCE SHALL THE E&S CONTROLS BE COVERED WITH FILL MATERIAL. ANY FILL MATERIAL THAT IS PLACED ON OR AGAINST E&S CONTROLS SHALL BE IMMEDIATELY REMOVED.
- ALL FILTER SOX (OR SILT FENCE AND/OR STRAW WATTLES) SHALL BE INSTALLED IN ACCORDANCE WITH THE RIDEM STANDARD DETAILS. ALL RETRIEVED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE MOST CURRENT VERSION OF THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK AND THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION MANUAL, AS APPROPRIATE.
- ALL EXPOSED SLOPES, INCLUDING STOCKPILES OF MATERIAL, SHALL RECEIVE TEMPORARY SEDIMENTATION AND EROSION CONTROLS. THIS WILL INCLUDE LOAMING AND SEEDING, MULCHING, HAYMATS, ETC., TO STABILIZE THE AREA. DO NOT EVAPORATE BETWEEN INSPECTIONS.
- ANY REFUELING, HAYMAKING AND SPECIFICATIONS BELONGING FOR ROAD AND BRIDGE CONSTRUCTION.
- CONTACT DIG-SAFE AND UTILITY COMPANIES FOR EXACT ON-SITE LOCATION OF EXISTING UNDERGROUND UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL OBTAIN REQUIRED INSPECTION SCHEDULE OF THE MUNICIPALITY, UTILITY COMPANIES AND ALL OTHER REQUIRED PARTIES AND SHALL STRICTLY ADHERE TO THOSE REQUIREMENTS.
- ALL CONTRACTORS SHALL ADHERE TO ALL CONDITIONS OF CONSTRUCTION APPROVALS AND SHALL KEEP A COPY OF ALL APPROVALS ON-SITE DURING CONSTRUCTION. CONTRACTOR SHALL READ ALL APPROVALS PRIOR TO START OF CONSTRUCTION AND SHALL CLARIFY ANY QUESTIONS BEFOREHAND.
- OIL ABSORBING PILLOWS OR OTHER MEANS SHALL BE USED TO REMOVE ACCUMULATIONS OF HYDROCARBONS (OIL, GREASE) THAT ARE REGULARLY OBSERVED TO CONTAIN HYDROCARBONS, THAT DO NOT EVAPORATE BETWEEN INSPECTIONS.
- ANY ON-SITE DISPOSAL OF SOLID WASTE, INCLUDING EARTH MATERIALS, SHALL OCCUR OUTSIDE RIDEM/CRMC JURISDICTIONAL WETLANDS AND OUTSIDE OF THE CONSTRUCTION AREAS (UNLESS OTHERWISE DESIGNATED). ANY MATERIAL NOT RE-USED ON-SITE SHALL BE HAULED OFF-SITE TO AN AUTHORIZED, LEGAL LOCATION.
- ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE INFORMED THAT THE CLEANING OF EQUIPMENT IS PROHIBITED IN AREAS WHERE THE WASH-WATER WILL DRAIN DIRECTLY TO WETLANDS.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND DIG-SAFE MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS TO INCLUDE, BUT NOT BE LIMITED TO, TREES, STUMPS, UNSUITABLE MATERIAL, BITUMINOUS PAVEMENT, ETC.
- MATTING AS SPECIFIED BY ENGINEER OR ENVIRONMENTAL CONSULTANT IS TO BE PLACED ALONG ACCESS ROUTE FROM PAVED DRIVEWAY TO STAGING AREA FOR ANY EQUIPMENT MOVEMENT.
- ALL STORMWATER FACILITIES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT VERSION OF RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL.

SOIL STABILIZATION & PLANTING PROGRAM

ACCEPTABLE PLANTING MATERIALS: LOAM - THE MATERIAL TO BE FURNISHED SHALL CONSIST OF LOOSE, FRIABLE SANDY LOAM OR LOAM TOPSOIL FREE OF A MIXTURE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS AND OTHER MATERIAL WHICH WILL PREVENT THE FORMATION OF A SUITABLE SEED BED.

SEED MIXTURES - ALL LEGUME SEED SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING WITH THE APPROPRIATE INOCULUM FOR EACH VARIETY. ALL INOCULA SHALL BE FRESH AND SHALL BE USED WITHIN THE DATE LIMIT PRESCRIBED BY THE MANUFACTURER.

FOR RELATIVELY FLAT SLOPES:

MIX	% BY WEIGHT
RED FESCUE - CHEWING'S PENNLAWS OR CREEPING	70
KENTUCKY BLUEGRASS	15
COLONIAL BENTGRASS - ASTORIA OR	5
PERENNIAL RYEGRASS	10
- SEEDING RATE = 100 LBS. PER ACRE	
MIX	% BY WEIGHT
RED FESCUE - PENNLAWS OR CREEPING	75
PERENNIAL RYEGRASS	5
COLONIAL BENTGRASS - ASTORIA OR	5
EXETER	15
BIROFOOT TREFLOL - EMPIRE	15
- SEEDING RATE: 100 LBS. PER ACRE	
MIX	% BY WEIGHT
CREEPING RED FESCUE	50
TALL FESCUE OR REED CANARYGRASS*	50

* USE REED CANARYGRASS WHERE MOWING IS NOT REQUIRED.

THE ACCEPTED PLANTING SEASON SHALL BE BETWEEN APRIL 1ST AND OCTOBER 15TH. CONTRACTOR SHOULD COORDINATE, ON ALL DISTURBED AREAS, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4) INCHES OF LOAM ON AREAS UP TO 10% IN GRADE. ALL AREAS OVER 10% SHALL RECEIVE A MINIMUM OF SIX (6) INCHES.

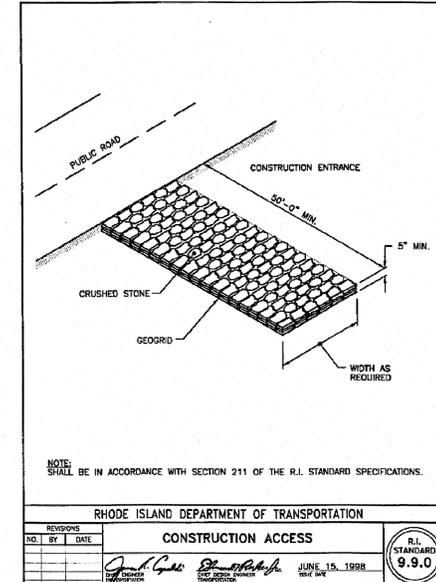
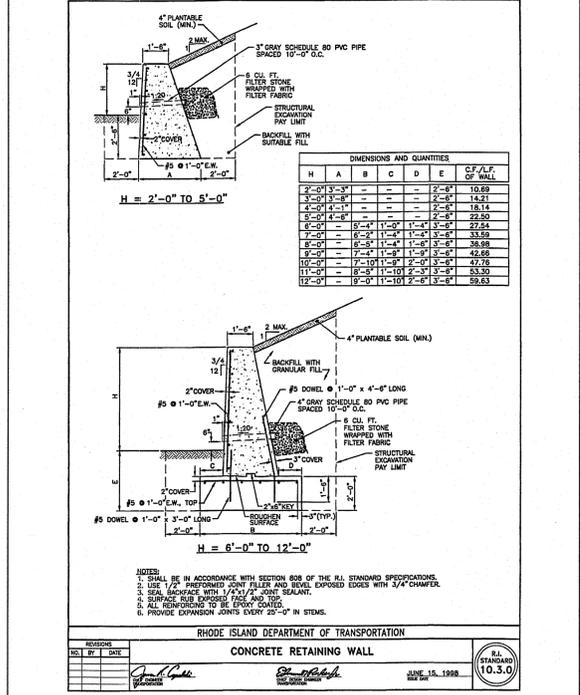
REFERENCE IS HEREBY MADE TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, REVISED AUGUST 2014, PUBLISHED BY THE SOIL CONSERVATION SERVICE. THE GUIDELINES SHOWN THEREIN SHOULD BE INCORPORATED INTO THE CONSTRUCTION PRACTICES ON SITE.

GENERAL CONSTRUCTION NOTES:

- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE AND THE MUNICIPALITY IN WHICH WORK IS BEING PERFORMED PRIOR TO START OF ANY WORK.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DOCUMENT EXISTING CONDITIONS OF SURROUNDING PROPERTIES AND TO MAINTAIN THE INTEGRITY OF THE SAME. ANY DAMAGE TO AND THE COST OF REPAIR OF UTILITIES, ROADWAYS, STRUCTURES AND SURROUNDING PROPERTY SHALL BE FULLY BORNE BY THE CONTRACTOR.
- ALL WORKMANSHIP AND MATERIALS SHALL MEET OR EXCEED THE LATEST STANDARDS OF THE MUNICIPALITY, AND THE LATEST STATE STANDARDS AND SPECIFICATIONS BELONGING FOR ROAD AND BRIDGE CONSTRUCTION.
- CONTACT DIG-SAFE AND UTILITY COMPANIES FOR EXACT ON-SITE LOCATION OF EXISTING UNDERGROUND UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL OBTAIN REQUIRED INSPECTION SCHEDULE OF THE MUNICIPALITY, UTILITY COMPANIES AND ALL OTHER REQUIRED PARTIES AND SHALL STRICTLY ADHERE TO THOSE REQUIREMENTS.
- ALL CONTRACTORS SHALL ADHERE TO ALL CONDITIONS OF CONSTRUCTION APPROVALS AND SHALL KEEP A COPY OF ALL APPROVALS ON-SITE DURING CONSTRUCTION. CONTRACTOR SHALL READ ALL APPROVALS PRIOR TO START OF CONSTRUCTION AND SHALL CLARIFY ANY QUESTIONS BEFOREHAND.
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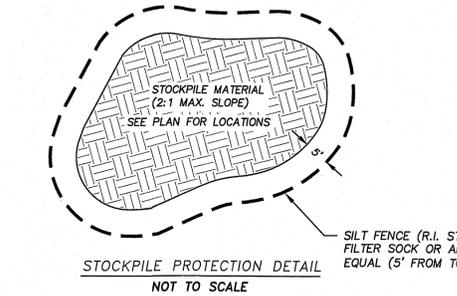
GENERAL LANDSCAPING NOTES:

- ALL DISTURBED AREAS ARE TO BE REVEGETATED AS SOON AS POSSIBLE. ALL BANKS AND SLOPING AREAS ARE TO RECEIVE A MINIMUM OF 6" OF CLEAN TOPSOIL, THEN SEED AND FERTILIZE. LEVEL AREAS TO RECEIVE 4" MIN. OF CLEAN TOPSOIL, SEED AND FERTILIZE.
- SEED AND SOD SHALL CONSIST OF A BLEND OF KENTUCKY BLUE GRASSES. PLANT BY SUPPLIER'S SPECIFICATIONS.
- LINE SHALL BE APPLIED AS NECESSARY.
- USE OF HAY OR STRAW MULCH DURING SLOPE STABILIZATION IN CONJUNCTION WITH TEMPORARY SEEDING, APPLY MULCH AT A RATE OF 75 TO 100 LBS. PER 1000 SQUARE FEET.
- CONTRACTOR TO MAINTAIN TREE REMOVAL AT A MINIMUM.
- STOCKPILE ALL STRIPPED TOPSOIL FOR LATTER USE. THE LOCATION IS TO BE APPROVED BY THIS ENGINEER. MULCH AND TEMPORARY SEED THE STOCKPILE.
- REMOVE ALL ROCKS 3" OR LARGER IN PLANTING AREA.
- ALL CLEARING SHALL CONFORM TO THE LIMITS AS SHOWN ON PLANS. CLEARING LIMITS ARE TO BE MARKED IN THE FIELD BY THE ENGINEER.



CONSTRUCTION ENTRANCE DETAIL NOTES:

- CONSTRUCTION ENTRANCE DEPTH SHALL BE A MINIMUM OF 5" THICK.
- CONSTRUCTION ENTRANCE WIDTH SHALL BE THE AT LEAST THE FULL WIDTH OF THE INGRESS/EGRESS ACCESS POINT.
- CONSTRUCTION ENTRANCE LENGTH SHALL BE A MINIMUM OF 50'.
- AGGREGATE SIZE SHALL BE RIDOT 2" CRUSHED STONE OR GRAVEL.
- DETAIL BASED ON RHODE DEPARTMENT OF TRANSPORTATION DETAIL, R.I. STANDARD 9.9.0 CONSTRUCTION ACCESS, AND RIDOT STANDARD STANDARD SPECIFICATIONS, SECTION 211, CONSTRUCTION ACCESSSES.



RIDEM OWTS APPLICATION NO. 0613-1057

PROPOSED NOTES & DETAILS

Project:
**KEVIN O'HAIRE
A.P. LW LOT 93
LAKE WASHINGTON DRIVE
GLOCESTER, RHODE ISLAND**

Prepared By:
SUSAN B. CAPASSO, P.E.
PO BOX 621
NORTH SCITUATE, RHODE ISLAND 02857
401-261-8870
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PROJECT NO.: 20-81 SHEET 2/2