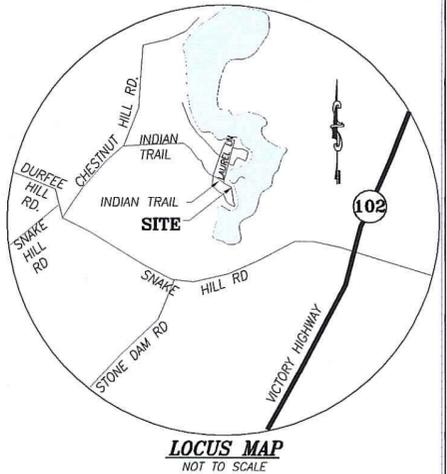


**NOTES:**

1. THIS SITE WILL BE SERVICED BY A PRIVATE WELL & ADVANCED TREATMENT ON-SITE WASTEWATER TREATMENT SYSTEM (OWTS). THE OWTS HAS BEEN DESIGNED TO MEET ALL ENVIRONMENTAL REGULATIONS AND SETBACKS CONTAINED WITHIN THE LATEST AMENDED VERSION (JANUARY 2008) OF THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WATER RESOURCES, "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION, AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS (OWTSs)." - APPROVAL: 0313-2701.
2. THIS SITE IS NOT LOCATED WITHIN A CRITICAL RESOURCE AREA AS DEFINED BY THE OWTS RULES & REGULATIONS.
3. ACCORDING TO FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 44007C0140G REVISED 3/2/09, A PORTION OF THIS SITE LIES IN FLOOD HAZARD ZONE AE, BASE FLOOD ELEVATION DETERMINED TO BE ELEVATION 437 MSL.
4. ALL WATERCOURSES, WETLANDS, AND DRAINS WITHIN 200' OF THE PROPOSED OWTS HAVE BEEN SHOWN ON THE VICINITY MAP.
5. PUBLIC SEWERS ARE NOT AVAILABLE TO THIS SITE. GLOCESTER HAS NO PLANS FOR SEWER LINE EXTENSION WITHIN THIS AREA.
6. PROPERTY LINES ARE BASED UPON A PLAN RECORDED IN THE OFFICE OF THE TOWN CLERK, GLOCESTER, RHODE ISLAND ENTITLED "SUNRISE GARDENS, SECTION NO. 2, GLOCESTER R.I. OWNED BY L.W. EBBETS, SCALE 1" = 60', SHEET NO. 1 OF 2, SURVEYED IN 1953 BY ALANSON ST. JOHN HALL, REGISTERED LAND SURVEYOR, REDRAWN 1961."
7. THIS PARCEL LIES IN A DEVELOPED NEIGHBORHOOD, WITH TYPICALLY HOMESITES RANGING FROM 1/4 TO 1/2 ACRES. THE PARCEL CONSISTS OF THREE PREVIOUSLY PLATTED LOTS, ENCOMPASSING 34,395± S.F.



**EROSION & SEDIMENT CONTROL NOTES:**

1. EXTREME CARE SHALL BE EXERCISED TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING A CRITICAL AREA (WETLAND, BUFFER ZONE, ADJUTING PROPERTY). THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE ANY DISTURBED AREAS.
2. ALL EROSION CONTROL METHODS, MATERIALS, AND MAINTENANCE SHALL BE ACCOMPLISHED ACCORDING TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL TEMPORARY EROSION AND SEDIMENT CONTROLS, AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. ALL RUNOFF SHALL BE CONTROLLED. IN NO CASE SHALL ANY DIRECT RUNOFF BE ALLOWED TO ENTER ONTO ADJUTING PROPERTIES OR INTO THE WETLAND BUFFERS.
4. HAYBALES/SILTFENCING SHALL BE PLACED IMMEDIATELY DOWN SLOPE OF SOIL DISTURBANCE AREAS AS SHOWN ON THE PLANS. ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
5. TEMPORARY STUMP PILES, BOULDER DUMPS, AND STOCKPILES OF EARTHEN MATERIALS SHALL BE WITHIN APPROVED UPLAND AREAS OUTSIDE OF WETLAND JURISDICTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS UNTIL ALL AREAS ARE STABILIZED. CONTROLS SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF VEGETATION IS ESTABLISHED.
  - A. IF SEDIMENTS ENTER A CRITICAL AREA, THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE THE AREA.
  - B. HAYBALES AND SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EVERY RAINFALL EVENT FOR EFFECTIVENESS. THE CONTRACTOR SHALL REPLACE OR REPAIR THE CONTROLS AS REQUIRED AND SHALL ALSO REMOVE ANY SEDIMENT WHICH ACCUMULATES UP TO ONE-HALF THE HEIGHT OF THE BALE/FENCE.

**SEQUENCE OF CONSTRUCTION:**

1. INSTALL PERIMETER SEDIMENT CONTROL MEASURES:
  - A. PERFORM SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION.
  - B. INSTALL SILT FENCE/HAYBALES PER R.I. STATE STANDARD.
  - C. INSTALL CONSTRUCTION FENCING AROUND AREAS NOT TO BE DISTURBED (OWTS DRAINFIELD & RAIN GARDEN)
  - D. INSTALL CONSTRUCTION ENTRANCE.
2. CLEAR AND GRUB AREA WITHIN PERMITTED WORKZONE.
3. STRIP & STOCKPILE TOPSOIL, AS NECESSARY. PROVIDE TEMPORARY STABILIZATION AROUND STOCKPILE (SEED PILE AND INSTALL SILT FENCE AROUND TOE OF SLOPE).
4. CONSTRUCT SITE AMENITIES.
5. PERFORM MAINTENANCE INSPECTIONS OF HAYBALES AND SILT FENCE CONDITIONS WEEKLY AND AFTER EVERY RAINFALL EVENT WITH 1/2" OR MORE. REPLACE OR REPAIR THE CONTROLS AS REQUIRED AND REMOVE ANY SEDIMENT WHICH ACCUMULATES UP TO ONE-HALF THE HEIGHT OF THE BALE/FENCE.
6. TEMPORARILY OR PERMANENTLY STABILIZE ALL DISTURBED AREAS WITHIN 7 DAYS OF GRUBBING WORK.
7. ONCE ADJUTING AREAS ARE ESTABLISHED WITH TURF AND STABILIZED, CONSTRUCT RAIN GARDEN.
8. PERMANENTLY STABILIZE LOT.
9. REMOVE ALL TEMPORARY SOIL AND SEDIMENT EROSION CONTROLS AFTER THE SITE IS FULLY STABILIZED WITH VEGETATION.

**ZONING REQUIREMENTS**

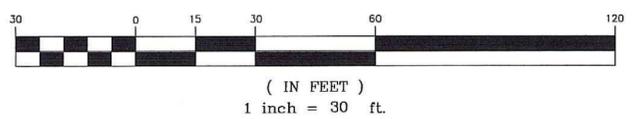
ZONING DISTRICT - A-3 (AGR./RES. - 3 ACRE)  
 SUBSTANDARD LOT OF RECORD  
**REQUIRED SETBACKS:**  
 FRONT - 30'  
 SIDE - 10'  
 REAR - 10'  
 MAX HEIGHT - 35'  
**LOT AREA CALCULATIONS:**  
 TOTAL PARCEL AREA: 10,500 S.F. (0.24 ACRES)  
 BIO-WETLAND AREA: 3,140 S.F. (0.07 ACRES)  
 PERIM WETLANDS: 4,910 S.F. (0.11 ACRES)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED APR 06 2011 FILE # 11-0038  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
 Nancy L. Freeman

**LEGEND:**

- - - 101 - - - EXISTING CONTOURS
- (01) - - - PROPOSED CONTOUR
- - - EXISTING SITE CONDITIONS
- - - PROPOSED CONDITIONS
- - - EXISTING PROPERTY LINE
- - - BUILDING SETBACKS
- - - EXISTING WATERLINE
- W - - - PROPOSED WATERLINE
- U/P - - - EXISTING UTILITY POLE
- - - DELINEATED WETLANDS
- - - WETLAND SETBACK
- - - MAX. POND ELEVATION
- - - TREELINE
- - - STONEWALL
- - - PROPOSED FENCE
- #1 / #L1 - - - TEST HOLES / BEDROCK TEST HOLES
- - - EROSION CONTROLS / HAYBALES
- - - L.O.D.

**GRAPHIC SCALE**



**RESIDENTIAL SITE PLAN**  
**INDIAN TRAIL**  
 PLAT 12 / SUNRISE GARDENS SECTION 1 / LOT 12  
 GLOCESTER, RHODE ISLAND

PREPARED BY: **JEFFREY J. CAMPOPIANO P.E.**  
 16 WEST MAIN STREET  
 WICKFORD, RHODE ISLAND 02852  
 JEFFREY.CAMPOPIANO@RIPE.COM 295-1118

PREPARED FOR: **DANIEL FAGAN**  
 9 HILLTOP DRIVE  
 NORTH SCITUATE, RI 02857

6282

REV.	DATE	DESCRIPTION	DATE: 2/23/2011

REGISTERED PROFESSIONAL ENGINEER

SCALE: 1" = 30'

**1**

SHEET 1 OF 2

**RAIN GARDEN CONSTRUCTION NOTES:**

- THE BIORETENTION AREA SHALL BE CONSTRUCTED FOLLOWING THE COMPLETION AND STABILIZATION OF OTHER SITE WORK. COMPACTION OF THE RAIN GARDEN AREA PRIOR TO AND DURING CONSTRUCTION MUST BE AVOIDED. EXCAVATION SHALL BE COMPLETED USING LIGHT EQUIPMENT WITH WIDE TRACKS. IF THE AREA DOES BECOMES COMPACTED, SOIL MUST BE TILLED TO A MINIMUM DEPTH OF 12".
- IF SPECIFIED, UNDERDRAINS SHALL BE PLACED ON A MINIMUM OF 3"0" WIDE SECTION OF FILTER CLOTH, OVERLAIN BY GRAVEL BEDDING FREE FROM FINES. PIPE SHALL BE SLOPED A MINIMUM OF 0.5%.
- FOLLOW SOIL SPECIFICATIONS TO PROVIDE A PLANTING MEDIA WITH ADOQUATE NUTRIENTS. PLANTING MEDIA SHALL BE PLACED IN 12" LIFTS.

PLANTING MEDIA - THE MATERIAL TO BE FURNISHED SHALL BE A UNIFORM MIX FREE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS OR OTHER MATERIAL WHICH WOULD PREVENT THE FORMATION OF A SUITABLE SEED BED. THE MEDIA SHALL CONSIST OF THE 4 PARTS PLANTING SOIL & 1 PART WELL AGED, AERATED, LEAF COMPOST.

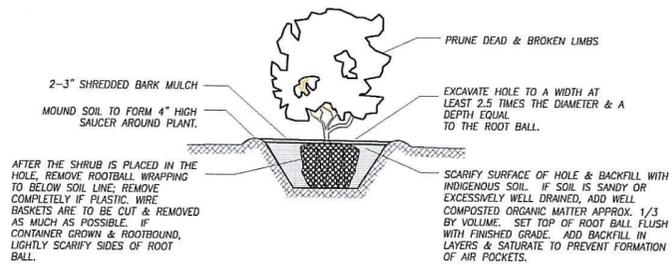
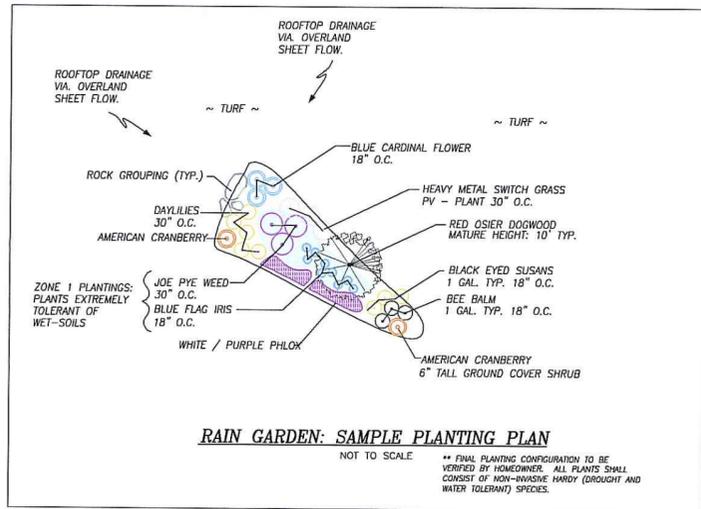
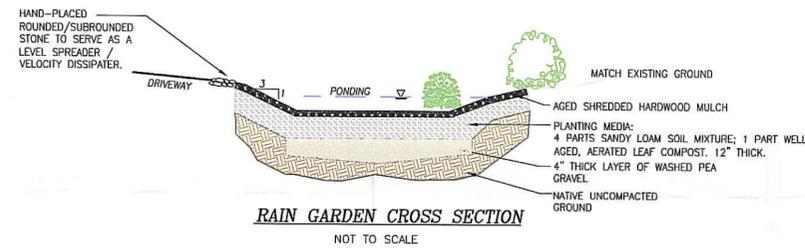
PLANTING SOIL:  
SAND: 85-88%  
SOIL FINES: 8-12% (NO MORE THAN 2% CLAY)  
ORGANIC MATTER: 3-5%

MULCH: MULCH ONLY AROUND THE INDIVIDUAL PLANTS USING WELL AGED SHREDDED HARDWOOD. BARK MULCH AND WOOD CHIPS ARE NOT TO BE USED AS THEY FLOAT TO THE SURFACE.

- PLANTS SHOULD BE PLANTED IN A PIT 6" LARGER THAN DIAMETER OF PLANTING BALL WITH BALL 1/8" OF INCH ABOVE THE FINAL GRADE SURFACE. PLANT ONLY NON-INVASIVE SPECIES. FOLLOW THE RECOMMENDED PERENNIAL PLANT LIST, UTILIZING LOW-MAINTENANCE, WATER AND DROUGHT TOLERANT SPECIES.

COMMON NAME	SCIENTIFIC NAME
Big Blue Stem	Andropogon gerardi
Bearberry	Arctostaphylos uva-ursi
Butterfly weed	Asclepias tuberosa
New England Aster	Aster novae-angliae
Tussock Sedge	Carex stricta
Carex	Carex species
Mountain Careopsis	Careopsis verticillata
Hoy Scented Fern	Dennstaedtia punctilobula
Purple Lovegrass	Eragrostis spectabilis
Joe-pye Weed	Eupatorium maculatum
Daylilies Yellow	Hemerocallis
Swamp Rose Mallow	Hibiscus moscheutos
Blue Flag	Iris versicolor
Soft Rush	Juncus effusus
Wood Aster	Oclemea acuminata
Evening Primrose	Oenothera biennis
Switch Grass	Panicum virgatum
Fountain Grass	Pennisetum alopecuroides
Fornie Dusk Beard	Penstemon prairie Dusk
Tongue	Phlox stolonifera
Phlox White	Phlox stolonifera
Phlox Purple	Phlox stolonifera
Black Eyed Susan	Rudbeckia hirta
Bluestem	Schizachyrium scoparium
Oneside Goldenrod	Solidago sempervirens
Golden rod	Solidago virgaurea

- MAINTENANCE: REPLACE DEAD PLANTS, DEAD-HEAD AND PRUNE AS REQUIRED. MULCH ANNUALLY; FERTILIZER SHALL NOT BE UTILIZED, AMEND SOIL YEARLY WITH A COMPOST MIX.



**SHRUB PLANTING DETAIL**  
SCALE: NONE

**ACCEPTABLE PLANTING MATERIALS:**

THE ACCEPTED PLANTING SEASON SHALL BE BETWEEN APRIL 1ST AND OCTOBER 15TH. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4) INCHES OF LOAM.

**LAWN MIXTURES:**

THE LAWN SEED MIXTURE SHALL BE A MINIMAL MAINTENANCE TURF GRASS MIXTURES WHICH REQUIRE REGULAR FERTILIZATION SHALL NOT BE UTILIZED.

ACCEPTABLE TURFGRASS SEED MIX:

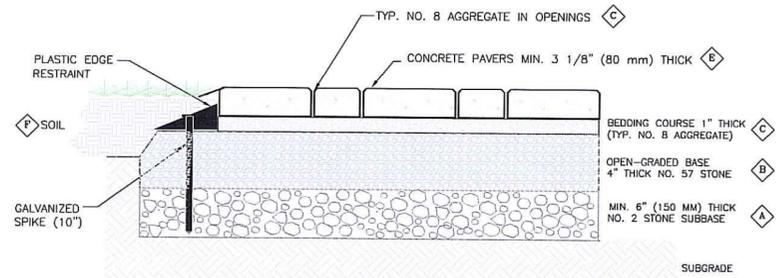
MIX	LBS./ACRE
RED FESCUE	75
KENTUCKY BLUEGRASS	15
COLONIAL BENTGRASS	5
PERENNIAL RYEGRASS	5

**BUFFER ZONES / WETLAND AREAS:**

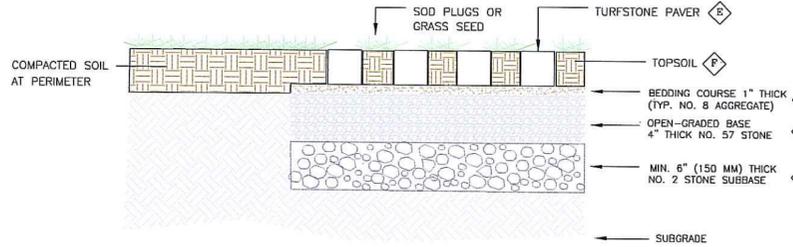
DISTURBED AREAS WILL BE SEEDDED WITH A WILDLIFE CONSERVATION MIX.

MIX	LBS./ACRE
REED CANARYGRASS	20
LADINO CLOVER	1

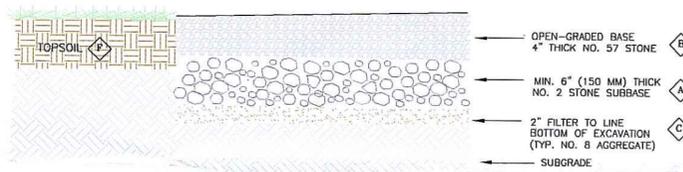
\* CLOVER SEED SHALL BE INOCULATED SEED.



**PERMEABLE DRIVEWAY: COMPOSITE PAVER INSTALLATION**  
NOT TO SCALE



**PERMEABLE DRIVEWAY: TURFSTONE PAVER INSTALLATION**  
NOT TO SCALE



**OPEN GRADED STONE DRIVEWAY DETAIL**  
NOT TO SCALE

**PERVIOUS DRIVEWAY CONSTRUCTION NOTES:**

- GENERAL:** ADJACENT AREAS SHALL BE COMPLETED & STABILIZED PRIOR TO CONSTRUCTION OF THE DRIVEWAY. AVOID COMPACTION OF THE DRIVEWAY AREA.
- EXCAVATION:** EXCAVATE TO THE DEPTH OF THE PROPOSED SUB-BASE. IF "A" HORIZON SOILS ARE ENCOUNTERED BENEATH THIS DEPTH CONTINUE TO EXCAVATE UNTIL A SUITABLE BASE MATERIAL IS ENCOUNTERED.
- MATERIALS:** A. CRUSHED STONE SHALL HAVE 90% FRACTURED FACES, LA ABRASION < 40 PER ASTM C131, MINIMUM CBR OF 80% PER ASTM D 1883. DO NOT USE APPLICATIONS FOR VEHICULAR APPLICATIONS. ALL STONE MATERIALS SHALL BE WASHED WITH LESS THAN 1% PASSING THE NO. 200 SIEVE. BASE, SUBBASE AND FILLER MATERIALS SHALL BE FREE OF FINES, ORGANIC MATTER AND OTHER FOREIGN SUBSTANCES, & SHALL CONFORM TO ASTM D 448 GRADATION AS SHOWN BELOW.

SUB-BASE: ASTM NO. 2		BASE: OPEN GRADED GRAVEL (ASTM NO. 57)	
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
3"	100%	1.5"	100%
2.5"	90%-100%	1"	95%-100%
2"	35%-70%	1/2"	25%-60%
1.5"	0%-15%	No. 4	0%-10%
3/4"	0%-5%	No. 8	0%-5%

BEDDING & JOINT/OPENING FILLER ASTM NO. 8		BACKFILL: BACKFILL MATERIAL SHALL BE COMPOSED OF HARD, DURABLE STONE AND COARSE TO FINE SAND, FREE OF PEAT, VEGETABLE OR ORGANIC MATTER, CLAY LUMPS & OTHER DEBRIS. THE GRANULAR FILL SHALL BE READILY COMPATIBLE AND SHALL NOT CONTAIN ANY STONES THAT ARE IN EXCESS OF 6".	
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
1/2"	100%	6"	100%
3/8"	85%-100%	#4	30-100%
No. 4	10%-30%	#200	0-8%
No. 8	0%-10%		
No. 16	0%-5%		

**PAVING STONES:** PAVING STONES SHALL BE OPEN CELL DESIGN MEETING THE REQUIREMENTS OF ASTM C 936-08 (STANDARD SPECIFICATIONS FOR INTERLOCKING CONCRETE PAVING UNITS) & C140 (STANDARD TEST METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS).

**LOAM:** LOAM - THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4") INCHES OF LOAM ON AREAS UP TO 10% IN GRADE. ALL OTHER AREAS OVER 10% GRADE SHALL RECEIVE A MINIMUM OF SIX (6") INCHES. THE MATERIAL TO BE FURNISHED SHALL CONSIST OF LOOSE, FRAGILE, SANDY LOAM OR LOAM TOPSOIL, FREE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS OR OTHER MATERIAL WHICH WOULD PREVENT THE FORMATION OF A SUITABLE SEED BED.

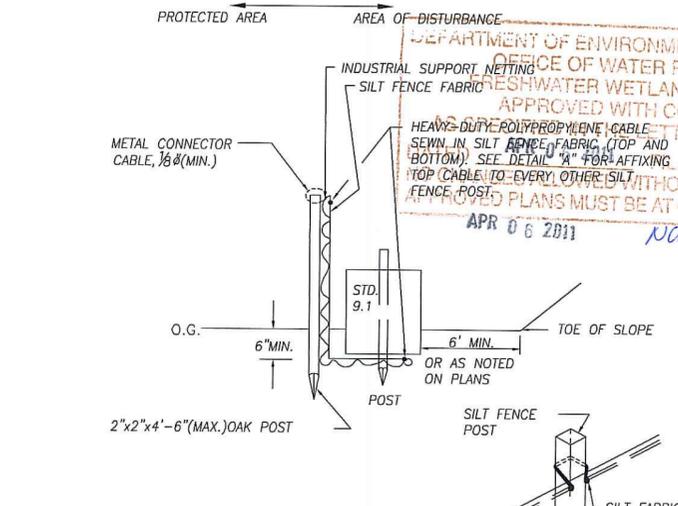
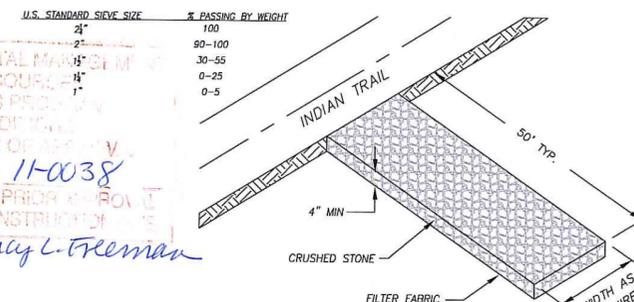
**SEED:** THE ACCEPTABLE PLANTING SEASON SHALL BE BETWEEN APRIL 1ST AND OCTOBER 15TH. IF THE DISTURBANCE DOES NOT FALL WITHIN THIS PERIOD THE CONTRACTOR SHALL PROVIDE TEMPORARY MULCHING UNTIL THE AREA CAN BE SEEDDED.

- PREPARATION:**
- KEEP AREA WHERE PAVEMENT IS TO BE CONSTRUCTED FREE FROM SEDIMENTS DURING ENTIRE JOB. PREVENT OVER COMPACTION OF DRIVEWAY AREA.
  - PROVIDE BERM AT DRIVEWAY/STREET LINE TO PREVENT OFF-SITE & STREET RUNOFF FROM ENTERING DRIVEWAY. BACKFILL REQUIRED TO MEET GRADES SHALL MEET THE REQUIREMENTS ABOVE AND BE COMPACTED TO A DENSITY OF 90% USING A VIBRATORY COMPACTOR.
  - VERIFY GRADES AND SLOPES, DRIVEWAY SHALL PITCH AWAY FROM OWTS AND DWELLING AT A MINIMUM OF 1-2% TOWARDS BIORETENTION AREA.
  - INSTALL SUB-BASE: MOISTEN, SPREAD AND COMPACT THE NO. 2 SUBBASE IN 4 TO 6" LIFTS. COMPACT SUB-GRADE TO A MINIMUM OF 90% AND A MAXIMUM OF 93%. COMPACTION SHALL BE IN ACCORDANCE WITH ASTM D1557. OVER-COMPACTION SHALL BE AVOIDED.
  - INSTALL OPEN GRADED BASE: INSTALL 4" THICK BASE & LIGHTLY COMPACT. THE BASE MATERIAL SHOULD SHOW NO SIGNS OF MOVEMENT WHEN COMPACTION IS COMPLETE.

- PAVER INSTALLATION:**
- PAVING STONES SHALL BE PERMEABLE OR OPEN CELL DESIGN MEETING THE REQUIREMENTS OF ASTM C 936-08 (STANDARD SPECIFICATIONS FOR INTERLOCKING CONCRETE PAVING UNITS) & C140 (STANDARD TEST METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS).
  - SPREAD BEDDING SAND (MEETING ASTM NO. 8 GRADATION) IN A 1" THICK LAYER.
  - ENSURE PAVERS ARE FREE FROM FOREIGN MATERIALS, LAY PAVERS IN PATTERNS SPECIFIED WITH JOINT OPENINGS AS SPECIFIED BY MANUFACTURER (TYP. 1/8"). FILL GAPS AND CUT EDGE UNITS.
  - COMPACT AND SEAT PAVERS IN SAND USING LOW AMPLITUDE, 75-90 HZ COMPACTOR CAPABLE OF 5,000 LBS. DO NOT COMPACT WITHIN 3" OF THE UNRESTRAINED EDGES OF PAVING UNITS.

**MAINTENANCE:** KEEP ADJACENT AREAS WELL MAINTAINED AND STABILIZED. REMOVE LEAVES/DEBRIS REGULARLY. RAKE & HOSE DOWN DRIVEWAY SEASONALLY TO PREVENT THE SURFACE FROM CLOGGING.

- SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE RI STANDARD SPECIFICATIONS.
- CRUSHED STONE SHALL CONFORM TO THE FOLLOWING GRADATION:



- NOTES:**
- STD. 9.1 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICES. SILT FENCE FABRIC SHALL NOT BE SLIT-STD. 9.1 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6" (MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED ON 8'-0" (MAX.) CENTERS IN WETLAND AREAS AND LOCATED ON 4'-0" (MAX.) CENTERS IN WETLAND RAVINE, GULLY OR DROPOFF AREAS AS SHOWN ON PLANS
  - R.I. STD. 9.1 AND SILT FENCE WILL BE PAID FOR UNDER THE APPROPRIATE PAY ITEMS, COMPLETE IN-PLACE.

**SITE PLAN DETAILS**  
INDIAN TRAIL  
PLAT 12 / SUNRISE GARDENS SECTION 1 / LOT 12  
GLOCESTER, RHODE ISLAND

PREPARED BY: **JEFFREY J. CAMPOPIANO P.E.**  
16 WEST MAIN STREET  
WICKFORD, RHODE ISLAND 02852  
PHONE: (401) 295-3037/FAX: (401) 295-1118

PREPARED BY: **DANIEL FAGAN**  
9 HILLTOP DRIVE  
NORTH SCITUATE, RI 02857

NO.	REV.	DATE	DESCRIPTION	DATE: 2/23/2011
6282				

REGISTERED PROFESSIONAL ENGINEER

SCALE: NTS

2  
SHEET 2 OF 2