

EAST GUT-SOUTHGATE WATERSHED ADAMS' PROPERTY-EAST END ROAD ST. CROIX, USVI AUGUST 2012



ST. CROIX (USVI)

Graphic Scale
0 20000
SCALE IN FEET
1:20000



VICINITY MAP

Graphic Scale
1-inch = 200-feet

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GENERAL NOTES:

- THIS PLAN SET IS NOT FOR CONSTRUCTION.
- ALL ELEVATIONS SHOWN ARE APPROXIMATE AND BASED ON ORTHOMETRIC IMAGERY AND AN AERIAL SURVEY PROVIDED BY THE UNITED STATES VIRGIN ISLANDS DEPARTMENT OF NATURAL RESOURCES (USVI DPNR) (2007).
- ROAD LAYOUT AND PROPERTY BOUNDARIES SHOULD BE CONSIDERED APPROXIMATE.

Plan Set:
**EAST GUT-SOUTHGATE WATERSHED
ADAMS' PROPERTY-EAST END ROAD
ST. CROIX, USVI**

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SURVEY NOTES

- 1. THE TOPOGRAPHY AND EXISTING SITE DETAIL DEPICTED HEREON WERE OBTAINED FROM AN INSTRUMENT SURVEY CONDUCTED ON THE GROUND BY THE HORSLEY WITTEN GROUP, INC ON JANUARY 18, 2012.
- 2. THE ELEVATIONS DEPICTED HEREON WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
- 3. ALL PROPERTY AND BOUNDARY LINES DEPICTED ARE APPROXIMATE ONLY.
- 4. EXISTING CONTOUR INTERVALS ARE EQUAL TO ONE FOOT.

SUMMARY OF PROPOSED ACTIVITY

- 1. THE PURPOSE OF THE PROJECT IS TO STABILIZE THE EXISTING ADAMS' GUT HEADCUT AND TO MINIMIZE THE AMOUNT OF SUSPENDED SEDIMENT THAT IS TRANSPORTED TO THE EAST END MARINE PARK. THE GUT IS CURRENTLY ERODING AS MUCH AS 10'-15' PER YEAR.
- 2. THE PROPOSED PROJECT IS LOCATED WITHIN THE ADAMS' FAMILY FARM ON ST. CROIX, USVI. THE CONSTRUCTION ACTIVITIES WILL OCCUR WITHIN THE CONFINES OF THE EAST GUT ON THE ADAMS' FARM.
- 3. LAND CLEARING AND SITE DISTURBANCE SHALL OCCUR ONLY WITHIN THE PROPOSED LIMIT OF WORK AREA. ALL TREES WITH A SIX-INCH CALIPER SIZE OR GREATER SHALL REMAIN WHEN POSSIBLE. CONSTRUCTION ENTRANCE(S) SHALL BE SITED TO AVOID EXISTING TREES GREATER THAN SIX-INCHES WHEN POSSIBLE.
- 4. STRIPPED TOPSOIL SHALL BE STOCKPILED AND REUSED ON-SITE IN ACCORDANCE WITH ENGINEER REQUIREMENTS.
- 5. STORMWATER WILL BE ALLOWED TO PASS THROUGH THE PROJECT SITE DURING CONSTRUCTION. TEMPORARY SEDIMENTATION BASINS SHALL BE CONSTRUCTED WITHIN THE PROJECT AREA TO CONTROL SITE RUNOFF AND SEDIMENT. A COMBINATION OF SILTATION FENCE AND CRUSHED STONE CHECK DAMS SHALL BE INSTALLED TO MINIMIZE OFF-SITE SEDIMENTATION.

GENERAL CONSTRUCTION NOTES

- 1. ALL SITE PREPARATION NECESSARY TO COMPLETE THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 2. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES, AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER(S) AND THE ENGINEER.
- 3. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
- 4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD-LOCATED UTILITIES AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED, INCOMPLETELY OR INACCURATELY SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING UTILITIES IN WORKING ORDER AND FREE FROM DAMAGE DURING THE ENTIRE DURATION OF THE PROJECT. ALL COST RELATED TO THE REPAIR OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
- 6. THE CONTRACTOR SHALL UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC. ALL PERSONNEL AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING BARRICADES, SAFETY LIGHTING AND CONES AS DETERMINED NECESSARY BY THE ENGINEER.
- 7. THE CONTRACTOR SHALL MAKE ALL CONNECTION ARRANGEMENTS WITH UTILITY COMPANIES, AS REQUIRED.
- 8. ALL IMPORTED MATERIAL SHALL BE CLEAN. NO MATERIAL WILL BE ACCEPTED FROM AN EXISTING OR FORMER CONTAMINATED SITE.
- 9. SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION WILL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONDUCTED BY A USVI REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS SHALL BE COORDINATED WITH THE ENGINEER.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL GRADE STAKES SET BY THE SURVEYOR. GRADE STAKES SHALL REMAIN UNTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. ANY RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES SHALL BE THE RESPONSIBILITY (INCLUDING COST) OF THE CONTRACTOR.
- 12. UNLESS OTHERWISE SPECIFIED ON THE PLANS AND DETAILS/SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT STANDARD SPECIFICATIONS OF THE CARIBBEAN AREA DIVISION OF THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS).
- 13. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK.
- 14. SOLID WASTES SHALL BE COLLECTED AND STORED IN A SECURED DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL SOLID WASTE MANAGEMENT REGULATIONS.
- 15. A PORTABLE RESTROOM FACILITY SHALL BE PROVIDED ON-SITE BY THE CONTRACTOR DURING THE ENTIRETY OF THE CONSTRUCTION PHASE.
- 16. THE CONTRACTOR SHALL RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK.
- 17. ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 4-INCHES OF LOAM INSTALLED AND BE SEEDDED WITH GRASS SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDDED AREAS UNTIL LAWN GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.
- 18. A HIGH WATER TABLE IS NOT ANTICIPATED. HOWEVER, IF THE WATER TABLE IS ENCOUNTERED DURING EXCAVATION, THE WATER TABLE SHALL BE TEMPORARILY LOWERED BY PUMPING. THE CONTRACTOR SHALL INSTALL A DEWATERING BASIN AS SHOWN IN THE DEWATERING BASIN DETAIL AND PROVIDE A DEWATERING PLAN DEPICTING PROPOSED DEWATERING LOCATION. THE PUMP DISCHARGE SHALL BE DIRECTED TO THIS BASIN TO PREVENT SEDIMENTS FROM LEAVING THE CONSTRUCTION AREA. THE CONTRACTOR SHALL INSTALL ADDITIONAL BASINS IF REQUIRED. INSTALL THE BASIN AS SHOWN ON THE SITE PLAN IF SO NOTED, OTHERWISE INSTALL THE BASIN(S) WITHIN THE LIMIT OF DISTURBANCE AS SHOWN BY THE SILT FENCE OR STRAWBALES.
- 19. LEDGE OR BOULDER EXCAVATION IS NOT ANTICIPATED FOR THIS SITE. HOWEVER, THE CONTRACTOR SHALL PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL. LEDGE AND/OR BOULDERS LESS THAN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. UNIT PRICE SHALL BE GIVEN FOR BOTH ON AND OFF SITE DISPOSAL. COST OF REPLACEMENT MATERIAL SHALL BE INCLUDED IF ADDITIONAL FILL MATERIAL IS REQUIRED.
- 20. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO AN APPROVED DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
- 21. CONCRETE TRUCKS, IF APPLICABLE, SHALL NOT BE WASHED ON-SITE. ANY CEMENT OR CONCRETE DEBRIS LEFT IN THE DISTURBED AREA SHALL BE REMOVED BY HAND AT THE CONTRACTOR'S EXPENSE.
- 22. BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ON-SITE IS PROHIBITED.
- 23. IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR IS TO IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER.
- 24. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED, AND REMOVED FROM THE SITE.

BASIC CONSTRUCTION SEQUENCE

- 1. SURVEY AND STAKE THE PROPOSED LIMIT OF DISTURBANCE AND LIMIT OF SEDIMENTATION BARRIERS.
- 2. PLACE SEDIMENTATION BARRIERS (STRAWBALES, SILT FENCE, ETC.) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE AS SHOWN ON THE PROJECT PLANS.
- 3. INSTALL TEMPORARY CONSTRUCTION ENTRANCES IN LOCATIONS SHOWN ON PLANS. NO OTHER ENTRANCES SHALL BE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION OR DELIVERY VEHICLES.
- 4. BEGIN CLEARING THE SITE AS REQUIRED.
- 5. SURVEY AND STAKE CENTERLINE OF THE PROPOSED DRAINAGE CHANNEL AND POOLS.
- 6. BEGIN CLEARING AND GRUBBING IN AREA OF THE DRAINAGE CHANNEL. TOPSOIL IS TO BE STRIPPED FROM THE AREA AND STOCKPILED IN APPROVED LOCATIONS. TOPSOIL STOCKPILES ARE TO BE PROTECTED BY A SEDIMENT BARRIER.
- 7. EXCAVATE AND ROUGH GRADE THE PROPOSED DRAINAGE CHANNEL AND POOLS AND ANY ADDITIONAL TEMPORARY BASINS NECESSARY TO CONTROL SITE RUNOFF AND SEDIMENTS. PERMANENT DRAINAGE POOLS SHALL BE TEMPORARILY SEEDDED.
- 8. INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, CHECK DAMS, PIPES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO THE CATCHMENT AREAS.
- 9. INSTALL ALL PROPOSED BOULDERS AND RIPRAP AREAS PER THE CONSTRUCTION DETAILS.
- 10. PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREAS.
- 11. COMPLETE ALL REMAINING PLANTING AND SEEDING.
- 12. REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS SHALL BE APPROVED BY THE ENGINEER AND WHEN THE CONTRIBUTING AREA HAS REACHED A MINIMUM OF 80% STABILIZATION.

GENERAL GRADING AND DRAINAGE NOTES

- 1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- 2. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- 3. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- 4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- 5. PROPOSED ELEVATIONS ARE SHOWN TO FINISH GRADE UNLESS NOTED OTHERWISE.
- 6. BACKFILL ADJACENT TO PIPES AND STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED SIX INCHES IN THICKNESS AND COMPACTED TO A DENSITY OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99. TESTING OF BACKFILL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

EROSION & SEDIMENT CONTROL NOTES

- 1. PRIOR TO THE START OF CONSTRUCTION NECESSARY PERMITS MUST BE FILED WITH THE VIRGIN ISLANDS DEPARTMENT OF NATURAL RESOURCES (DPNR). THE CONTRACTOR SHOULD REFER TO THE PERMITS REGARDING ALL EROSION CONTROL MATTERS AND SHALL MAINTAIN A COPY ON-SITE AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN ALL OF THE SITE EROSION CONTROL DOCUMENTATION, WEEKLY EROSION INSPECTION REPORTS COMPLETED BY THE DESIGNATED SITE PERSONNEL, AND ANY OTHER PERTINENT SITE DOCUMENTATION FOR A MINIMUM OF 3 YEARS FROM THE DATE OF PROJECT COMPLETION.
- 2. THE SITE CONSTRUCTION FOREMAN SHALL BE DESIGNATED AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS AND SHALL IMPLEMENT ALL NECESSARY MEASURES TO CONTROL EROSION AND PREVENT SEDIMENT FROM LEAVING THE SITE.
- 3. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS SHOWN ON THE DESIGN PLANS IN CONSULTATION WITH THE REGULATORY AGENT, AND AS DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER BEFORE ANY CONSTRUCTION ACTIVITIES ARE TO BEGIN. THESE MEASURES SHALL BE CHECKED, MAINTAINED/REPLACED AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. SUCH MEASURES SHALL REPRESENT THE LIMIT OF WORK, WHERE APPLICABLE. WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGH THE CONSTRUCTION PERIOD.
- 4. A MINIMUM SURPLUS OF 100 FEET OF EROSION CONTROL BARRIER (SILT FENCE, STRAWBALE, &/OR SILT SOCK) SHALL BE STOCKPILED ON-SITE AT ALL TIMES.
- 5. THE CONTRACTOR SHALL PROTECT THE RESOURCE AREA(S) FROM SEDIMENTATION DURING PROJECT CONSTRUCTION UNTIL ACCEPTANCE BY THE OWNER & IN CONFORMANCE WITH THE ORDER OF CONDITIONS.
- 6. A CONSTRUCTION EXIT SHALL BE CONSTRUCTED AS SHOWN IN THE DETAILS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. THE CRUSHED STONE PAD WILL BE REPLACED/CLEANED AS NEEDED TO MAINTAIN ITS EFFECTIVENESS.
- 7. THE LIMIT OF ALL CLEARING, GRADING AND DISTURBANCES SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE, ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION SHALL BE GRUBBED. THE REQUIRED SEDIMENTATION CONTROL FACILITIES MUST BE PROPERLY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK.
- 8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION AND PRIOR TO SCHEDULING EARTH-MOVING OR OTHER CONSTRUCTION ACTIVITIES WHICH WILL LEAVE LARGE DISTURBED AREAS UNSTABILIZED. IF INCLEMENT WEATHER IS PREDICTED, THE CONTRACTOR SHALL USE THEIR BEST PROFESSIONAL JUDGEMENT WHEN SCHEDULING CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR ENSURING THE NECESSARY EROSION CONTROL DEVICES ARE INSTALLED AND FUNCTIONING PROPERLY TO MINIMIZE EROSION FROM ANY IMPENDING WEATHER EVENTS.
- 9. ESC MEASURES SHALL BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF 0.25 INCH OR GREATER DURING CONSTRUCTION TO ENSURE THAT THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE INTACT AND FUNCTIONING PROPERLY. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY NO LATER THAN 24 HOURS AFTER IDENTIFICATION.
- 10. SOIL STOCKPILES LEFT OVERNIGHT SHALL BE SURROUNDED ON THEIR PERIMETERS WITH SILT SOCK, SILT FENCE, STRAWBALES, OR A COMBINATION OF SILT FENCE WITH STRAWBALE, AS DETERMINED NECESSARY.
- 11. DISTURBED AREAS AND SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME. THE CONTRACTOR SHOULD PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY AREAS HAVING A SLOPE GREATER THAN 4:1 SHALL BE REINFORCED WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE SITE IS PROPERLY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER.
- 12. SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS DURING CONSTRUCTION TO AID IN THE CAPTURE OF SITE RUNOFF AND SEDIMENT. IT WILL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR, IN CONSULTATION WITH THE ENGINEER, TO SIZE AND CREATE THESE BASINS IN APPROPRIATE LOCATIONS.
- 13. THE CONTRACTOR SHALL CONTAIN ALL SEDIMENT ON-SITE. ALL EXITS FROM THE SITE WILL BE SWEEP AS NECESSARY INCLUDING ANY SEDIMENT TRACKING. PAVED AREAS SHALL BE SWEEP AS NEEDED TO REMOVE SEDIMENT AND POTENTIAL POLLUTANTS WHICH MAY ACCUMULATE DURING SITE WORK.
- 14. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL TEMPORARY PRACTICES AND DISPOSED OF IN A PRE-APPROVED LOCATION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
- 15. THE CONTRACTOR SHALL PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED AT ANY TIME, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ON SITE OR MAKE READILY AVAILABLE TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER.
- 16. PROPER MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR IF DEWATERING IS NECESSARY DURING CONSTRUCTION. THESE MEASURES SHALL INCLUDE DEWATERING BAGS, TEMPORARY STRAWBALES, SILT FENCES, SILT SOCKS AND/OR OTHER APPROVED DEVICES. THE DEWATERING SETUP SHALL BE APPROVED BY THE ENGINEER.
- 17. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE OWNER.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR AFFECTED BY THE PROJECT. ANY SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK SHALL BE REMOVED PRIOR TO THE OWNER'S ACCEPTANCE.

GENERAL PLANTING NOTES:

- 1. SEASONS FOR PLANTING:
 - FALL / EARLY WINTER (WET SEASON): SEPTEMBER 15 THROUGH DECEMBER 31.
- 2. FURNISH AND INSTALL ALL PLANTS AS SHOWN ON THE DRAWINGS AND IN THE SIZE AND QUANTITIES SPECIFIED ON THE PLANTING SCHEDULE.
- 3. CONTRACTOR TO PROVIDE A ONE (1) YEAR GUARANTEE FOR ALL MATERIALS. CONTRACTOR GUARANTEES THAT PLANTS WILL REMAIN HEALTHY FOR ONE (1) GROWING SEASON. CONTRACTOR TO MAINTAIN ALL PLANTING AND SEEDED AREAS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO COMMENCE AT FINAL ACCEPTANCE. ANY REPLACEMENT PLANTS SHALL BE OF THE SAME SIZE AND SPECIES AS SPECIFIED WITH NEW GUARANTEE COMMENCING ON THE DATE OF REPLACEMENT.
- 4. ALL PLANT MATERIAL SHALL CONFORM, IN ALL RESPECTS, TO THE GUIDELINES OF "THE AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, INC. AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS. ALL PLANTS SHALL BE NURSERY GROWN AND HEALTHY, FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE, AND SHALL HAVE A WELL DEVELOPED ROOT SYSTEM.
- 5. ALL PLANTS SHALL BE PLANTED WITHIN ONE (1) WEEK OF PURCHASE. IF PLANTS ARE TO BE STORED AT THE SITE PRIOR TO PLANTING, THEY SHALL BE PROPERLY MAINTAINED AND WATERED BY THE CONTRACTOR.
- 6. ALL PLANT LAYOUT AND ACTUAL PLANTING LOCATIONS ARE TO BE FIELD VERIFIED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- 7. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY THE NATURAL RESOURCE CONSERVATION SERVICE (NRCS) OR ENGINEER PRIOR TO INSTALLATION.
- 8. FOR POTTED PLANTS, REMOVE THE PLANT FROM THE POT AND LOOSEN OR SCORE THE ROOTS BEFORE PLANTING SO THAT THEY MAY GROW OUTWARDS INTO THE SOIL.
- 9. FOR FIELD GROWN PLANTS, CUT AND REMOVE ANY PLASTIC, CUT AND REMOVE WIRE FROM THE TOP HALF OF ROOTBALL. UNTIE, CUT AND REMOVE BURLAP WRAP FROM AT LEAST THE TOP HALF OF THE ROOTBALL AND TURN DOWN ANY EXTRA BURLAP INTO THE HOLE MAKING SURE TO BURY THE MATERIAL COMPLETELY.
- 10. ALL PLANT PLUGS SHALL BE PLANTED UPRIGHT AND NOT AT AN ANGLE. PLANTING HOLES SHALL BE DUG LARGE ENOUGH AND DEEP ENOUGH TO ACCOMMODATE THE ENTIRE ROOT MASS. THE PLUGS SHALL BE PLANTED WITH NO TWISTED OR BALLED ROOTS AND SHALL BE PLANTED WITH NO ROOTS EXPOSED ABOVE THE GRADE LINE. THE SOIL SHALL BE HAND PACKED AROUND THE ENTIRE PLUG ROOT MASS.
- 11. THE PLANTING HOLE IS TO BE DUG THE SAME DEPTH AS THE ROOT BALL AND TWO TO THREE TIMES WIDER. SCORE ALL SIDES OF THE HOLE, PLACE THE PLANT IN THE HOLE SO THE TOP OF ROOT BALL IS EVEN WITH SOIL SURFACE. FILL THE HOLE HALFWAY AND THEN ADD WATER ALLOWING IT TO SEEP INTO BACK FILLED MATERIAL. BE SURE TO REMOVE ALL AIR POCKETS FROM BACK FILLED SOIL. DO NOT SPREAD SOIL ON TOP OF THE ROOTBALL. IF SOIL IS EXTREMELY POOR REPLACE BACK FILL WITH GOOD QUALITY TOP SOIL. AMEND THE SOIL, AS NECESSARY.
- 12. CREATE A 2" TO 4" BERM AROUND THE EDGE OF PLANTING HOLE WITH REMAINING SOIL TO RETAIN WATER.
- 13. MULCH ALL PLANTING BEDS AS SHOWN ON DRAWINGS. UNLESS NOTED OTHERWISE, ALL PLANTS TO RECEIVE 2-3 INCHES OF MULCH. DO NOT PILE OR MOUND MULCH AROUND THE PLANT STEMS OR TRUNK.
- 14. TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
- 15. ALL AREAS THAT ARE DISTURBED AND/OR GRADED DURING CONSTRUCTION ARE TO BE BROUGHT TO FINISHED GRADE WITH AT LEAST 6" MINIMUM DEPTH OF GOOD QUALITY LOAM AND SEEDDED WITH A QUICK GERMINATING GRASS SEED SUCH AS NEW ENGLAND EROSION CONTROL RESTORATION MIX OR AS SPECIFIED ON THE PLANS.
- 16. AN APPROPRIATE WATERING SCHEDULE SHALL BE ESTABLISHED BY THE CONTRACTOR FOR ALL PLANT MATERIAL BASED UPON PLANT SPECIES REQUIREMENTS AND SHOULD BE FOLLOWED UNTIL PLANTS ARE FULLY ESTABLISHED.
- 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PLANT CARE, MAINTENANCE AND WATERING ON SITE UNTIL SUCH TIME AS THE LANDSCAPING IS ACCEPTED BY THE PROPERTY OWNER OR AS DETERMINED BY ANY WRITTEN AGREEMENTS BETWEEN THE CONTRACTOR AND PROPERTY OWNER.

Revisions table with columns: No., Date, By, Appr., Description



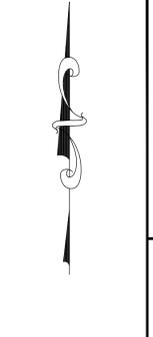
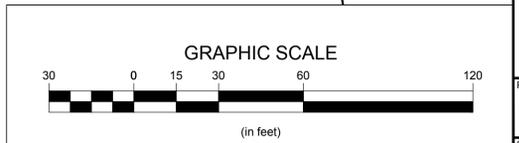
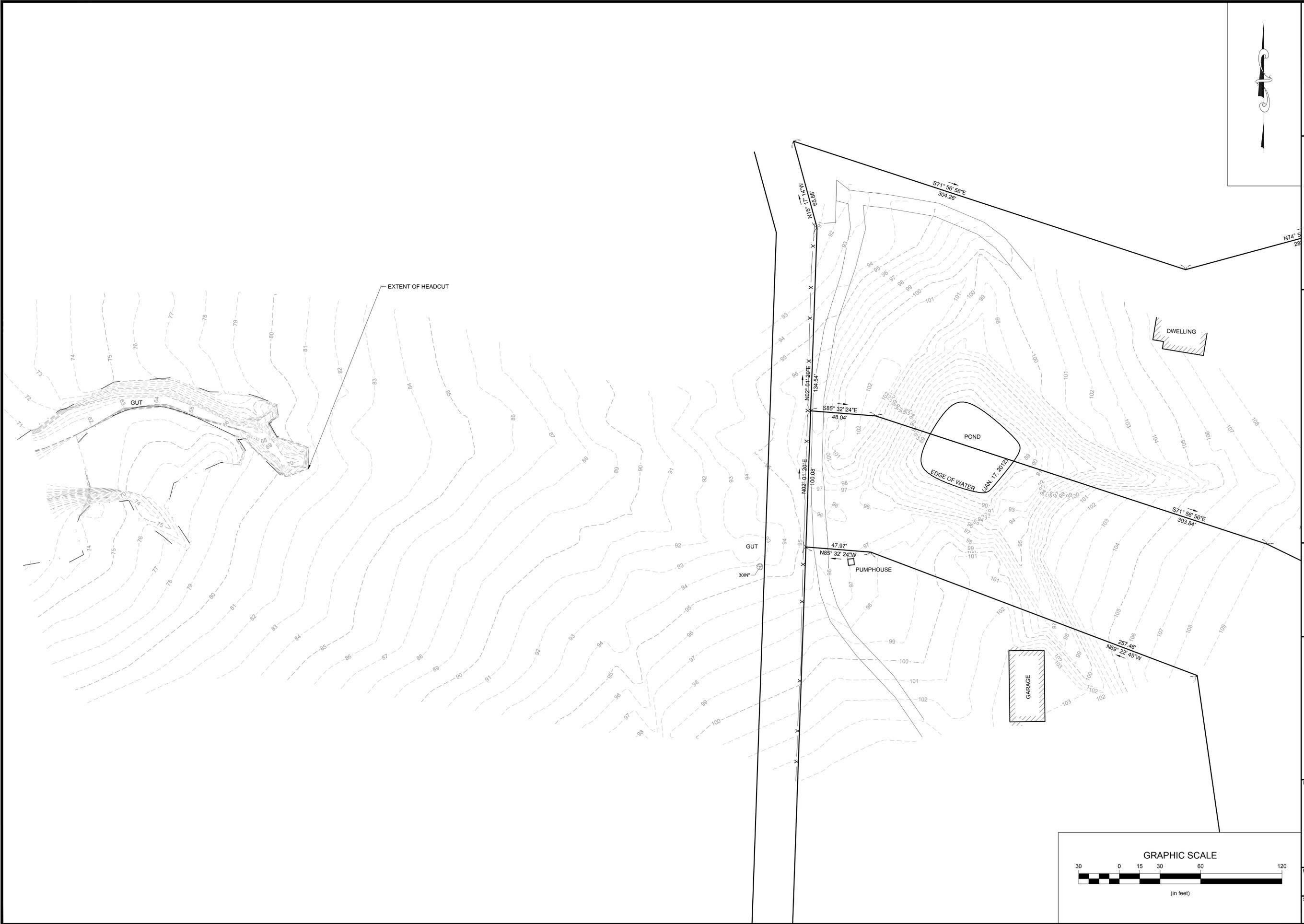
Horsley Witten Group, Inc. Sustainable Environmental Solutions
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

Plan Site: EAST GUT - SOUTHGATE WATERSHED
ADAMS' PROPERTY - EAST END ROAD
ST. CROIX, USVI
CONSTRUCTION NOTES

Prepared For: St. Croix Environmental Association
5022 Anchor Way, Suite 3
Christiansburg, St. Croix, USVI
Phone: (340) 773-1989
Fax: ---

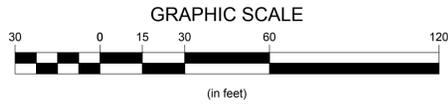
Survey Provided By: Horsley Witten Group, Inc.
90 Route 6A
Sandwich, MA 02563
Phone: (508) 833-6600
Fax: (508) 833-3150
Date: JAN. 18, 2012

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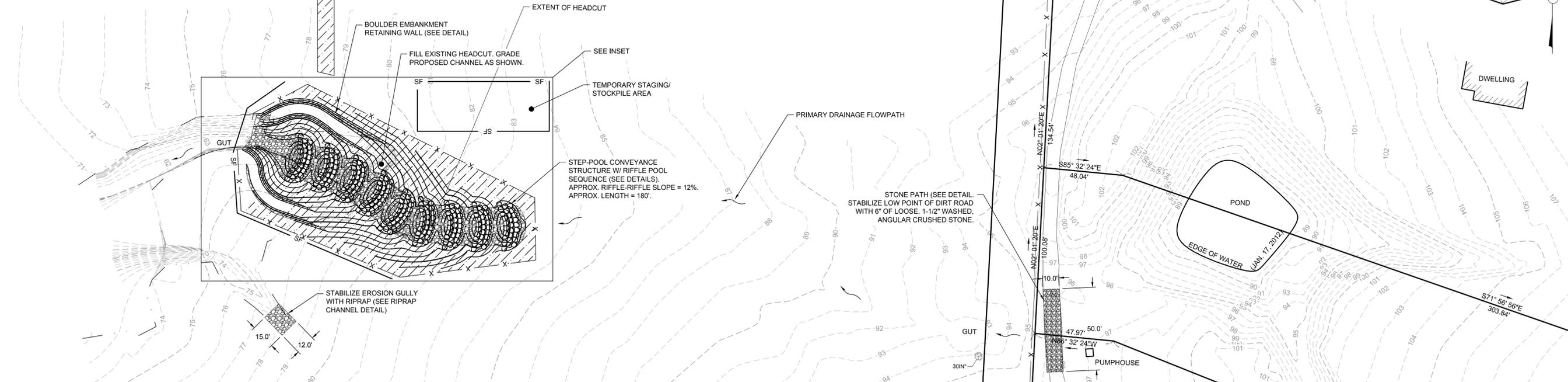
<p>Survey Provided By: Horsley Witten Group, Inc. 90 Route 6A Sandwich, MA 02563 Phone: (508) 833-6600 Fax: (508) 833-3150 Date: January 18, 2012</p>		<p>Registration:</p>																															
<p>Prepared For: St. Croix Environmental Association 5032 Archer Way, Suite 3 Christinead, St. Croix, USVI Phone: (340) 773-1989 Fax: ---</p>		<p>Plan Title: EXISTING CONDITIONS</p>																															
<p>Plan Set: EAST GUT-SOUTHGATE WATERSHED ADAMS' PROPERTY-EAST END ROAD ST. CROIX, USVI</p>		<p>Checked By: ACKRAC</p>																															
<p>Designed By: DWM</p>		<p>Date: AUGUST 2012</p>																															
<p>Revisions</p> <table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>By</th> <th>Appr</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Rev	Date	By	Appr	Description	1					2					3					4					5					<p>Horsley Witten Group, Inc. Sustainable Environmental Solutions www.horsleywitten.com 90 Route 6A Sandwich, MA 02563 508-833-6600 voice 508-833-3150 fax</p>	
Rev	Date	By	Appr	Description																													
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2																																	
3																																	
4																																	
5																																	

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CONSTRUCTION**



KEY DESIGN PARAMETERS
 DESIGN STORM EVENT = 1.5 YEAR RETURN PERIOD
 CHANNEL FLOW RATE, $Q_{1.5} = 50$ CFS
 CHANNEL VELOCITY, $V_{1.5} = 4.2$ FPS
 PRECIPITATION, $P_{1.5} = 4.1$ INCHES
 DRAINAGE AREA, DA = 121 ACRES

CONSTRUCTION ACCESS FROM THE NORTH (SEE DETAIL).
 ACTUAL LOCATION TO BE COORDINATED WITH THE OWNER.
 CONSTRUCTION PATH TO AVOID ALL TREES GREATER THAN 6" IN DIAMETER.



Revisions

Rev	Date	By	Appr	Description
1				
2				
3				
4				
5				

Checked By: ACKRAC
 Drawn By: KMH
 Design By: KMH
 Date: AUGUST 2012

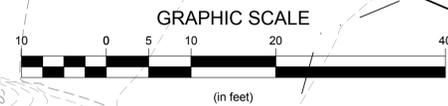
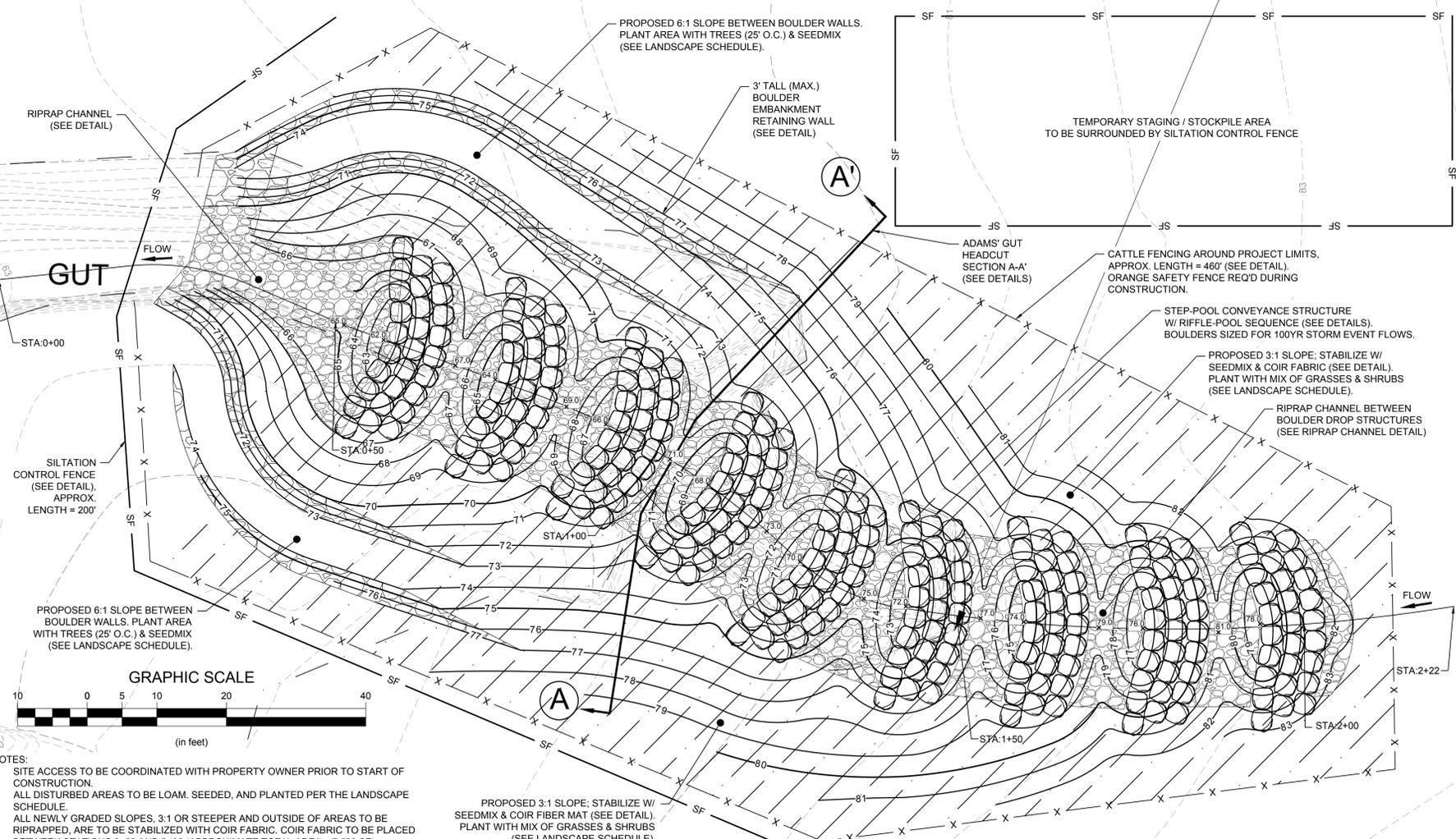
Plan Set: **EAST GUT-SOUTHGATE WATERSHED**
ADAMS' PROPERTY-EAST END ROAD
ST. CROIX, USVI
 Planning & Drainage

Prepared For: **St. Croix Environmental Association**
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Survey Provided By: **Horsley Witten Group, Inc.**
 90 Route 6A
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 Date: JAN. 18, 2012

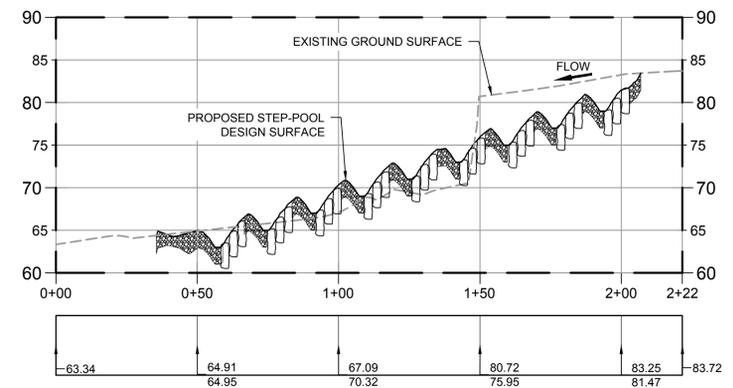
Registration: **DRAFT NOT FOR CONSTRUCTION**

Project Number: **11103** Sheet: **4 of 5**
 Sheet Number: **C-4**



NOTES:
 1. SITE ACCESS TO BE COORDINATED WITH PROPERTY OWNER PRIOR TO START OF CONSTRUCTION.
 2. ALL DISTURBED AREAS TO BE LOAM, SEEDED, AND PLANTED PER THE LANDSCAPE SCHEDULE.
 3. ALL NEWLY GRADED SLOPES, 3:1 OR STEEPER AND OUTSIDE OF AREAS TO BE RIPRAPPED, ARE TO BE STABILIZED WITH COIR FABRIC. COIR FABRIC TO BE PLACED BETWEEN STATIONS 0+50 AND 2+00 (APPROXIMATE TOTAL AREA = 7,500 SF).

PROPOSED 3:1 SLOPE; STABILIZE W/ SEEDMIX & COIR FIBER MAT (SEE DETAIL).
 PLANT WITH MIX OF GRASSES & SHRUBS (SEE LANDSCAPE SCHEDULE).



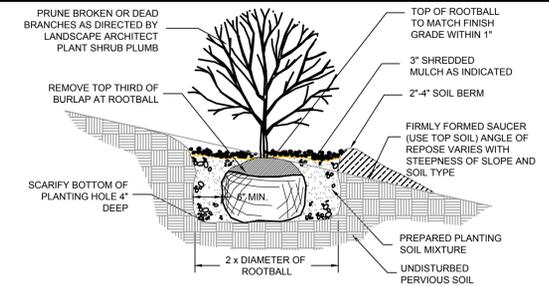
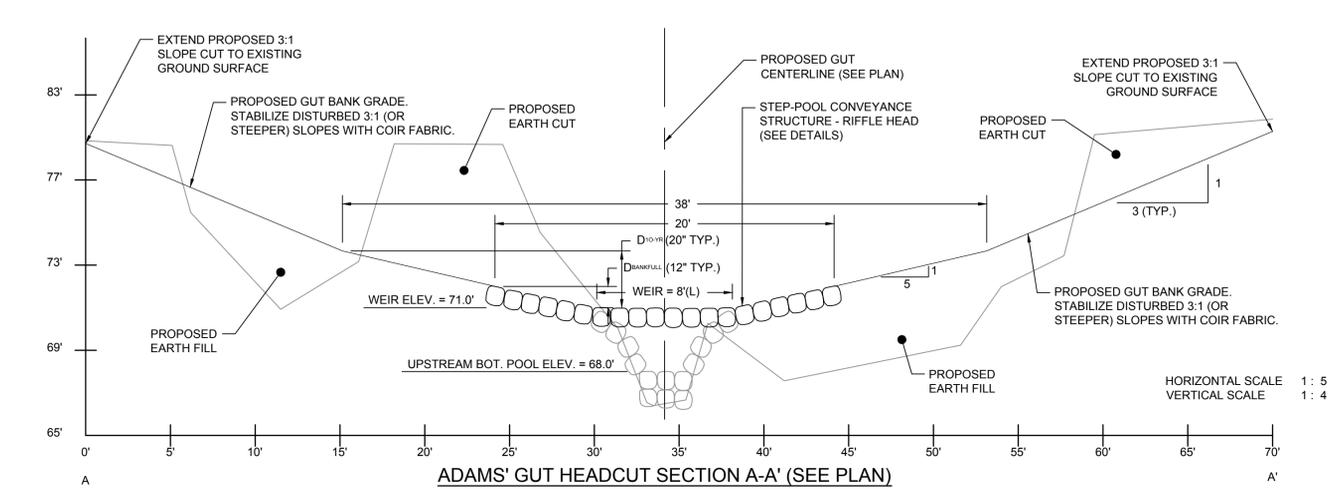
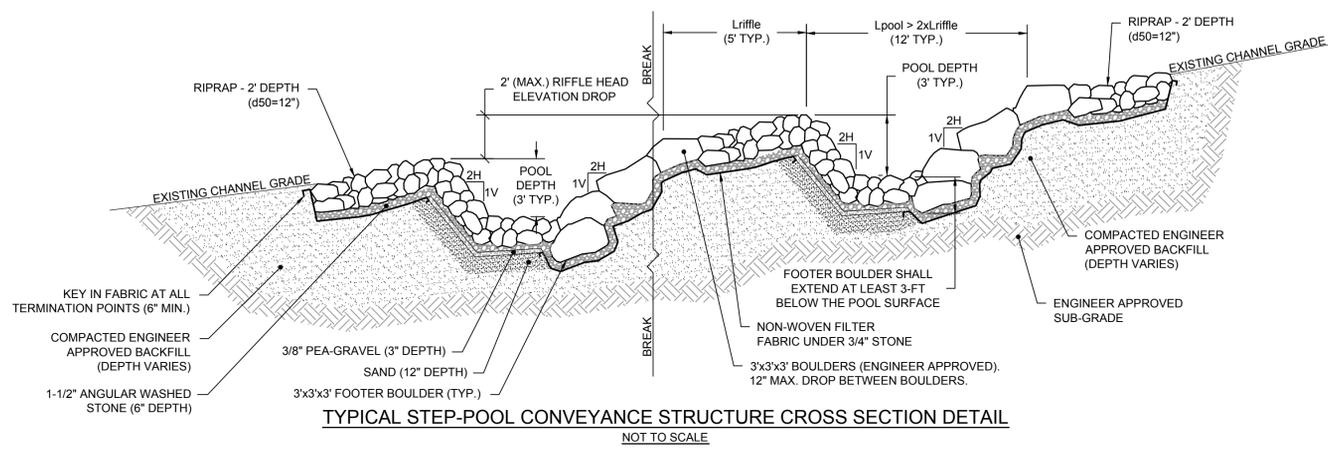
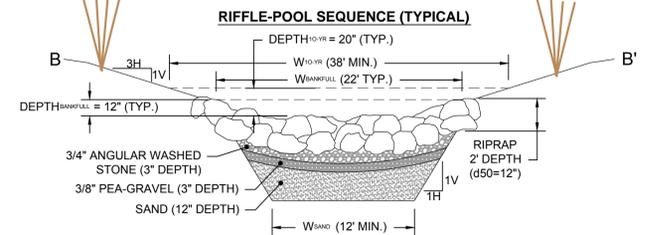
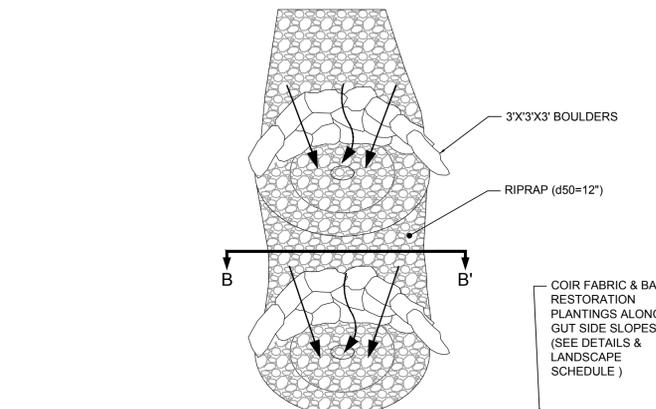
STEP POOL ALIGNMENT PROFILE
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'

LANDSCAPING SCHEDULE

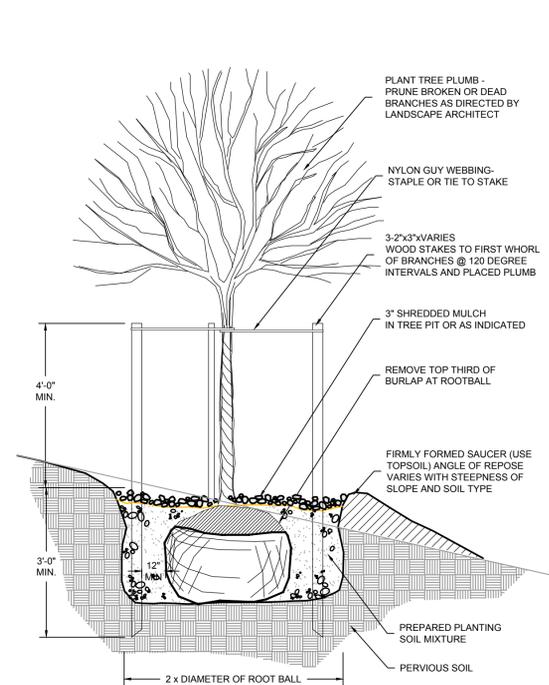
#	Botanical name	Common Name	Size	Spacing	Planting Location
2	<i>Andira inermis</i>	Dog Almond	10 gallon	25' O.C.	6:1 slope or flatter
2	<i>Bucida bucuera</i>	Black Olive	10 gallon	25' O.C.	6:1 slope or flatter
2	<i>Bursera simaruba</i>	Gumbo-limbo, Turpentine Tree	10 gallon	25' O.C.	6:1 slope or flatter
2	<i>Cordia rickseckeri</i>	Orange Manjack	10 gallon	25' O.C.	6:1 slope or flatter
175	<i>Lantana involucrata</i>	Buttonsage	2 gallon	3' O.C.	3:1 slope or flatter
32	<i>Tecoma stans</i>	Yellowbells, Ginger Thomas, Yellow Cedar	2 gallon	8' O.C.	3:1 slope or flatter
1500	<i>Fimbristylis cymosa</i>	Hurricane Grass	plugs	12" O.C.	3:1 slope or flatter
725	<i>Urochloa maxima (Panicum maximum)</i>	Guinea Grass	plugs	18" O.C.	3:1 slope or flatter
6,500 sq ft	Seed Mix	Bermuda/rye grass mix			All disturbed areas not riprapped

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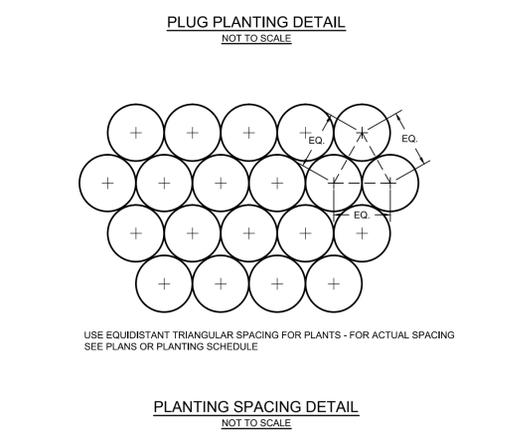
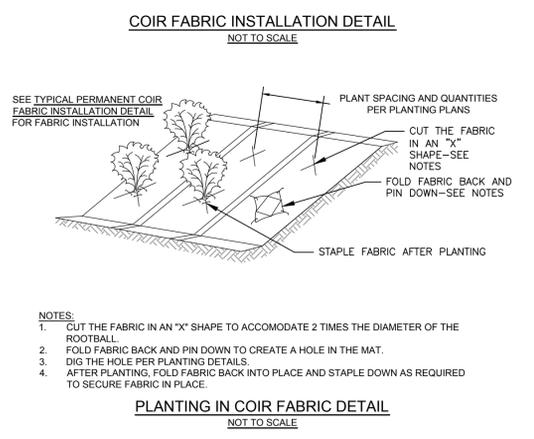
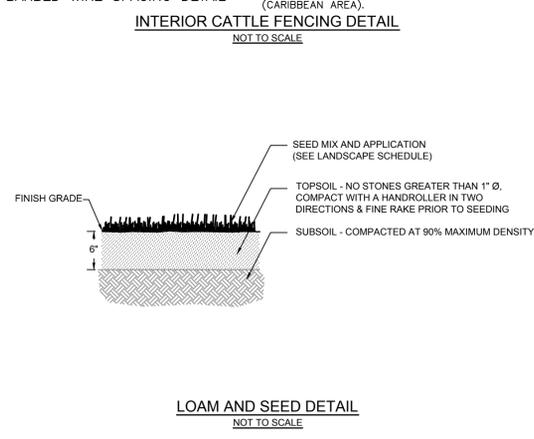
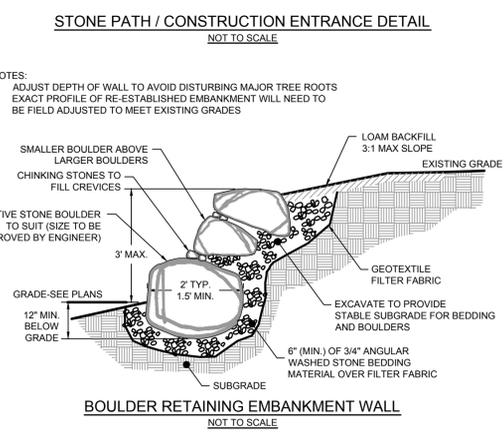
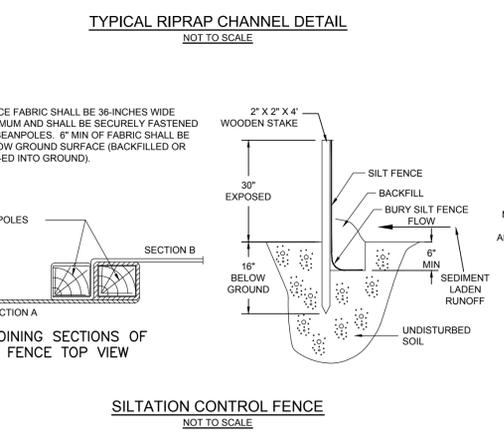
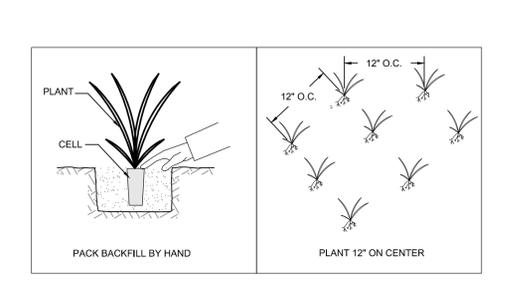
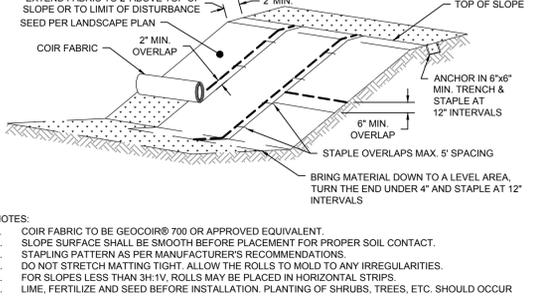
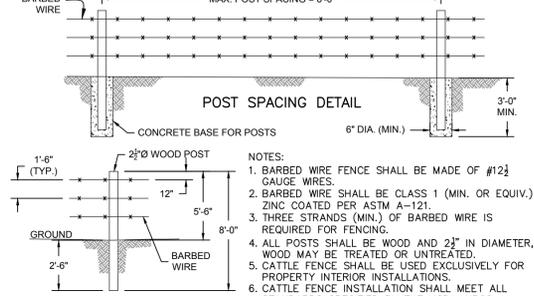
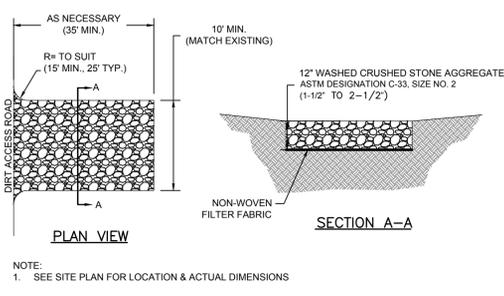
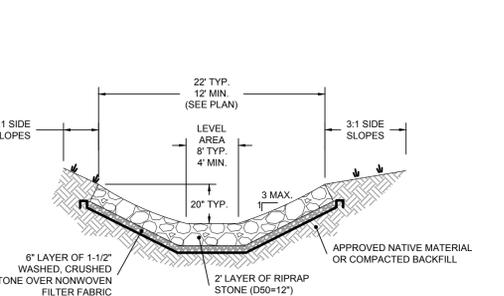
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NOTES:
1. PLANTING BACKFILL: 1/3 LOAM, 1/3 SAND, 1/3 PEAT, BY VOLUME.
2. WHEN PLANTING ON SLOPE-MODIFY SLOPE AS SHOWN.



NOTES:
1. PLANT TREE PLUMB - PRUNE BROKEN OR DEAD BRANCHES AS DIRECTED BY LANDSCAPE ARCHITECT
2. NYLON GUY WEBBING-STAPLE OR TIE TO STAKE



Revisions	Date	By	Appr.	Description

Checked By: ACKRAC
Drawn By: KMH
Designed By: KMH
Date: AUGUST 2012

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ADAMS' PROPERTY-EAST END ROAD
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DETAILS

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Fax: (508) 833-3150
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Registration: **DRAFT NOT FOR CONSTRUCTION**
Project Number: 11103
Sheet: 5 of 5
Sheet Number: C-5