

**EROSION & SEDIMENT CONTROL NOTES:**

1. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. GRAVEL CONSTRUCTION ENTRANCE WILL BE INSTALLED BEFORE CONSTRUCTION TRAFFIC INTO AND OUT OF PROJECT AREA BEGINS. STABILIZATION OF ALL REGRADED AND SOIL STOCKPILE AREAS WILL BE INITIATED AND MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF SEEKONK REGULATIONS. ALL EROSION CONTROL MEASURES ARE TO BE MAINTAINED AND UPGRADED AS REQUIRED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.
3. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE ENGINEER OR TOWN AGENCIES.
4. EACH HOUSE LOT SHALL BE REQUIRED TO MAINTAIN EROSION AND SEDIMENT CONTROLS DURING HOUSE CONSTRUCTION. ADDITIONAL MEASURES WILL BE REQUIRED TO PREVENT SEDIMENT DISCHARGE INTO THE STREET, DRAINAGE CHANNELS, INFILTRATION PONDS AND BIO-FILTER SWALE FROM THE INDIVIDUAL DEVELOPMENT OF EACH LOT.
5. SEEDING MIXTURE FOR FINISHED GRASSED AREAS WILL BE AS FOLLOWS:  
 KENTUCKY BLUE GRASS = 45  
 CREEPING RED FESCUE = 45  
 PERENNIAL RYE GRASS = 10  
 SEED TO APPLIED AT A RATE OF 4 LBS / 1000 S.F. FERTILIZER SHALL BE APPLIED AT A RATE OF 2 LBS / 1000 S.F. PLANTING SEASON SHALL BE APRIL 1 TO OCTOBER 15. AFTER OCTOBER 15 AREAS NOT SEEDDED SHALL BE STABILIZED WITH HAY BALE CHECK, FILTER FABRIC OR WOODEN MULCH AS REQUIRED TO CONTROL EROSION.
6. AREAS LEFT BARE BEFORE FINISH GRADING AND SEEDING IS ACHIEVED, SHALL RECEIVE A TEMPORARY SEEDING OF PERENNIAL RYE GRASS APPLIED TO A RATE OF 2 LBS / 1000 S.F. AT A DEPTH OF 1/2". LIMESTONE (EQUIVALENT TO BE 50 % CALCIUM PLUS MAGNESIUM OXIDE) SHALL BE APPLIED AS SEEDBED PREPARATION AT A RATE OF 90 LBS / 1000 S.F.. WHERE GRASS PREDOMINATES, FERTILIZE ACCORDING TO A SOIL TEST AT A MINIMUM APPLICATION RATE OF 1 LB OF NITROGEN PER 1000 S.F. AREAS TO BE LEFT BARE BEFORE FINISH GRADING AND SEEDING OUTSIDE OF PLANTING SEASONS SHALL RECEIVE AN AIR-DRIED WOOD CHIP MULCH, FREE OF COURSE MATTER, TREATED WITH 12 LBS NITROGEN PER TON, APPLIED AT A RATE OF 185-275 LBS / 1000 S.F.
7. CONTRACTOR SHALL BE ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFY THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
8. THE CONTRACTOR SHALL REQUEST THE SEEKONK CONSERVATION COMMISSION AGENT TO INSPECT AND APPROVE THE INSTALLATION OF ALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION. PERIODIC INSPECTIONS OF EROSION CONTROL MEASURES MAY BE PERFORMED BY THE AGENT. THE CONTRACTOR SHALL REPAIR, UPGRADE OR REPAIR ANY MEASURES THE AGENT MAY FEEL ARE IN NEED OF SUCH.
9. STOCKPILES OF SOIL SHALL BE SURROUNDED BY A SEDIMENT BARRIER. SOIL STOCKPILES TO BE LEFT BARE FOR MORE THAN FIFTEEN (15) DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION OR MULCH, IF STOCKPILES ARE TO REMAIN FOR MORE THAN SIXTY (60) DAYS, FILTER FABRIC SHALL BE USED IN PLACE OF HAY BALES. SIDE SLOPES SHALL NOT EXCEED 2 : 1. STOCKPILES SHALL BE LOCATED AT LEAST 100' FROM REGULATED WETLAND RESOURCE AREAS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL SHALL INCLUDE BUT NOT LIMITED TO SPRINKLING WATER ON EXPOSED SOILS AND HALL ROADS. CONTRACTOR SHALL CONTROL DUST TO PREVENT A HAZARD TO TRAFFIC ON ADJACENT ROADWAYS.
11. SEDIMENT SHALL BE REMOVED ONCE THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF THE SILT FENCE OR HAY BALE
12. ALL STOCKPILES SHALL BE SURROUNDED BY SEDIMENT CONTROLS AND SHALL BE LOCATED AT LEAST 100 FEET FROM REGULATED WETLAND RESOURCE AREAS.
13. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 14 DAYS SHALL BE STABILIZED.
14. ALL FACILITIES USED AS TEMPORARY MEASURES SHALL BE CLEANED PRIOR TO BEING PUT INTO FINAL OPERATION.

**NOTES**

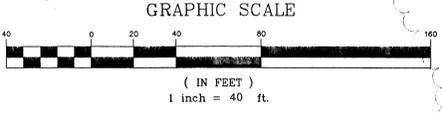
- CONSTRUCTION PROCEDURES AND SEQUENCING**
- THE ENGINEER SHALL HAVE THE SOLE RESPONSIBILITY FOR THE DESIGN IMPLEMENTATION. HE SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONTRACTORS AND SUBCONTRACTORS ARE AWARE OF THE PROVISIONS ON THE PLANS.
- THE CONTRACTOR SHALL ORGANIZE SITE CONSTRUCTION IN A MANNER WHICH WILL ENSURE THE IMMEDIATE STABILIZATION OF SURFACES. PERIMETER CONTROLS EQUAL APPROVED PROJECT LIMITS.
- PRIOR TO ANY CONSTRUCTION ON SITE, THE CONTRACTOR SHALL SETUP PRE-CONSTRUCTION MEETING WITH OWNER, ENGINEER, SEEKONK CON. COM., PLANNING AND DPW PERSONAL.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, A LINE OF STAKED HAY BALES AND SILT FENCE AND OR HAYBALES, WILL BE PLACED AT ALL CONSTRUCTION TOE OF SLOPES IN THE AREA OF ROADWAY, PONDS, LANDSCAPED AREAS, AND ALONG PERIMETER OF PROJECT LIMIT OF DISTURBANCE WHERE INDICATED ON PROJECT PLANS.
- RESERVE EROSION CONTROL DEVICES SHALL BE STOCKPILED ON SITE IN THE EVENT OF EMERGENCIES AND SHALL BE LOCATED 100' FROM REGULATED WETLAND RESOURCE AREAS.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS FOR THE PROPER STORAGE AND/OR REMOVAL OF DEBRIS ON SITE TO AVOID UNNECESSARY ACCUMULATION ON SITE.
- THE DETENTION AREAS SHALL BE CONSTRUCTED PRIOR TO COMMENCEMENT OF EARTHWORK ACTIVITIES. THE BASINS WILL ALSO BE UTILIZED FOR DE-WATERING.
- DRAINAGE SWALES SHALL BE CONSTRUCTED FROM DOWNSTREAM UP AND CONSTRUCTION SHALL INCLUDE THE PLACEMENT OF STONE AT THE FLARED PIPE ENDS AND OUTLET STRUCTURE INLETS AND OUTLETS AS SHOWN ON PROJECT PLANS.
- INSTREAM CONTROLS SUCH AS HAYBALE CHECK DAMS SHALL BE ESTABLISHED PRIOR TO CONSTRUCTION.
- TO PROTECT THE INFILTRATION SURFACES (BENEATH AND ADJACENT TO THE RECHARGE SYSTEMS) FROM DEGRADATION BY CONSTRUCTION ACTIVITIES INCLUDE:
1. PROVIDE DEEP ROTOTILLING OF VAIN FLOOR IMMEDIATELY PRIOR TO SEEDING WITH NO SUBSEQUENT TRAFFICKING ON SURFACE.
  2. PREVENTION OF CONTAMINATION OF THE EXPOSED SUBGRADE BY CONSTRUCTION VEHICLES.
  3. PREVENTION OF EXCESSIVE COMPACTION BY CONSTRUCTION VEHICLES.
  4. PREVENTION OF THE DISCHARGE OF WATER FROM CONSTRUCTION DEWATERING ACTIVITIES INTO THESE FACILITIES.
  5. PREVENTION OF DISCHARGE OF STORMWATER INTO THESE FACILITIES UNTIL THE CONTRIBUTING AREAS ARE STABILIZED, UNLESS SPECIFIC MEASURES ARE PROVIDED FOR PROTECTING AND RESTORING THE INFILTRATION SURFACE.

- CONSTRUCTION INSPECTION**
- THE ENGINEER SHALL BE CALLED ON SITE DURING THE CONSTRUCTION OF THE INFILTRATION BASINS AND BIOFILTER SWALES.
- THE ENGINEER SHALL BE ON SITE DURING THE CONSTRUCTION AND LAYOUT OF ALL OUTLET STRUCTURES.
- THE ENGINEER SHALL PERFORM FREQUENT INSPECTION OF THE STORMWATER SYSTEM DURING CONSTRUCTION, WITH CLEANING AND MAINTENANCE AS WARRANTED. DURING ACTIVE CONSTRUCTION PERIODS, WEEKLY INSPECTION IS REQUIRED.
- IF CONSTRUCTION IS SUSPENDED (E.G., OVER THE WINTER), THEN MONTHLY INSPECTIONS ARE REQUIRED. IN ADDITION, THE SYSTEM SHOULD BE CHECKED AFTER ANY SIGNIFICANT RAINFALL, TO INSURE IT IS FUNCTIONING CORRECTLY AND TO MONITOR SEDIMENT ACCUMULATION FROM THE DISTURBED AREAS OF THE SITE.
- CLEARING**
- CONSIDERATION SHALL BE GIVEN TO PRESERVING SPECIMEN TREES. THE ENGINEER SHALL BE CONTACTED TO REVIEW DESIGN IMPACTS AND APPROVE METHOD OF TREE PRESERVATION.
- BRUSH AND BRANCHES SHALL BE CHIPPED TO BE UTILIZED FOR WOOD MULCH WHERE FEASIBLE.
- GRUBBING AND STRIPPING**
- SUITABLE TOPSOIL SHALL BE STRIPPED FROM THE AREAS TO BE GRADED AND STOCKPILED FOR SUBSEQUENT USE AND/OR FOR LANDSCAPE PURPOSES.
- ROUGH GRADING**
- DURING GRADING, THE POTENTIAL FOR EROSION IS HIGH. DURING GRADING OPERATIONS, DISTURBED SLOPES WILL BE MULCHED AND VEGETATION ESTABLISHED TO PREVENT SEDIMENT EROSION TO THE SATISFACTION OF THE ENGINEER.
- MATERIAL VOLUME ESTIMATES**
- LOAM WILL BE STRIPPED AND STOCKPILED ON SITE  
 ROAD GRAVEL = 625 YARDS ±  
 PEASTONE = 25 YARDS ±  
 SAND (UTILITY BEDDING) = 155 YARDS ±

**OPERATION & MAINTENANCE PLAN**

- THIS PLAN SHOULD BE USED IN CONJUNCTION WITH SEPARATE OPERATIONS AND MAINTENANCE PLAN DOCUMENT FOR CALEB ESTATES DATED MARCH 18, 2011.
- THIS PLAN SHOULD BE USED IN CONJUNCTION WITH SEPARATE STORMWATER POLLUTION PREVENTION PLAN DOCUMENT FOR CALEB ESTATES DATED MARCH 18, 2011.
- THE MAINTENANCE AND UPKEEP ON THE ROADWAY WILL INCLUDE THE FOLLOWING ELEMENTS:
- CONSTRUCTION VEHICLES SHALL BE LIMITED TO ONE ACCESS POINT ON OLNEY STREET WHERE A CRUSHED-STONE CONSTRUCTION PAD ENTRANCE SHALL BE INSTALLED IN THIS AREA OF THE PERMANENT ROADWAY TO ENSURE THAT MUD AND DEBRIS ARE NOT TRACKED ONTO THE ROADWAY. IF MUD IS INADVERTENTLY TRACKED ONTO THE ROAD, IT SHOULD BE REMOVED PROMPTLY.
- GENERAL MAINTENANCE OF EROSION CONTROL ELEMENTS INCLUDING REGRADED, REVEGETATION, REPLACING RIPRAP, ETC., ON AN AS NEEDED BASIS.
- SWALES WILL BE INSPECTED SEMI-ANNUALLY BY THE OWNER AND WILL BE MAINTAINED AS REQUIRED. THE BASE OF THE PONDS AND SWALES SHALL BE MONITORED FOR APPROPRIATE GROWTH. WOODY GROWTH SHALL BE CLEARED AS PART OF THE SEMI ANNUAL MAINTENANCE PROGRAM.
- BUILD UP OF SEDIMENTATION AND DEBRIS SHALL BE MONITORED AND REMOVED ON A SEMI-ANNUALLY BASIS IN ORDER TO KEEP THE DISCHARGES AND FLOWS THROUGH THE SWALES FUNCTIONING PROPERLY.
- ALL STORMWATER MANAGEMENT SYSTEMS MUST HAVE AN OPERATION AND MAINTENANCE PLAN TO ENSURE THAT SYSTEMS FUNCTION AS DESIGNED.
- ORGANIC FERTILIZERS SHALL BE USED WITHIN 100' OF THE REGULATED WETLAND RESOURCE AREAS.
- ALL MAINTAINANCE BYPRODUCTS INCLUDING GRASS, BRUSH, SEDIMENTAION, ETC. SHALL BE REMOVED AND DISPOSED OF PROPERTLY. NO MATERIALS SHALL BE DUMPED WITH 25' OF THE WETLAND EDGE.
- THE OWNER WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM AND ALL OF ITS APPURTENANCES. THE FOLLOWING MAINTENANCE PROGRAM SHALL BE IMPLEMENTED:
- A. GRASSED CHANNEL (BIOFILTER SWALE)
    1. WATER QUALITY SWALES SHALL BE INSPECTED THE FIRST FEW MONTHS AFTER CONSTRUCTION AND TWICE PER YEAR AFTER. INSPECTIONS CONDUCTED BEFORE AND AFTER A STORM EVENT WILL HELP DETERMINE IF THE SWALES ARE WORKING AS DESIGNED.
    2. INSPECT SWALES TO MAKE SURE VEGETATION IS ADEQUATE AND SLOPES ARE NOT ERODING. CHECK FOR RILLING AND GULLYING.
    3. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
    4. TRASH AND OTHER DEBRIS SHOULD BE REMOVED.
    5. SEDIMENTS SHOULD BE REMOVED FROM THE SWALES AS NECESSARY, AND AT LEAST ONCE EVERY FOUR (4) YEARS OR WHEN ACCUMULATED DEPTH REACHES SIX INCHES (6"). ALL SEDIMENTS SHALL BE HANDLED PROPERLY AND DISPOSED IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

- B. DRAINAGE CHANNEL (GRASS)
    1. GRASS SWALES SHALL BE INSPECTED AT LEAST ONCE PER YEAR. INSPECTIONS CONDUCTED BEFORE AND AFTER A STORM EVENT WILL HELP DETERMINE IF THE SWALES ARE WORKING AS DESIGNED.
    2. SHALL BE MOWED TO NO LESS THAN 4 INCHES AND ALL GRASS CLIPPING SHALL BE REMOVED AFTER MOWING
    3. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
    4. TRASH AND OTHER DEBRIS SHOULD BE REMOVED.
    5. SEDIMENTS SHOULD BE REMOVED FROM THE SWALES AS NECESSARY, AND AT LEAST ONCE EVERY FOUR (4) YEARS OR WHEN ACCUMULATED DEPTH REACHES SIX INCHES (6"). ALL SEDIMENTS SHALL BE HANDLED PROPERLY AND DISPOSED IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
    6. REPAIR AREAS OF EROSION AND RE-VEGETATE AS NEEDED, BUT NO LESS THAN ONCE A YEAR.
  - C. INFILTRATION BASINS
    1. INSPECT FACILITY FOR SIGNS OF WETNESS OR DAMAGE TO STRUCTURES TWICE A YEAR.
    2. IF DEAD OR DYING GRASS ON THE BOTTOM IS OBSERVED, CHECK TO ENSURE THAT WATER PERCOLATES 2-3 DAYS FOLLOWING STORMS.
    3. SEED OR SOD TO RESTORE GROUND COVER.
    4. NOTE SIGNS OF PETROLEUM HYDROCARBON CONTAMINATION AND HANDLE PROPERLY.
    5. SHALL BE MOWED TO NO LESS THAN 4 INCHES AND ALL GRASS CLIPPING SHALL BE REMOVED AFTER MOWING
    6. TRASH AND OTHER DEBRIS SHOULD BE REMOVED.
    7. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
    8. REPAIR UNDERCUT AND ERODED AREAS AT INFLOW AND OUTFLOW STRUCTURES.
    9. SCRAPE BOTTOM AND REMOVE SEDIMENT. RESTORE ORIGINAL CROSS-SECTION AND INFILTRATION RATE EVERY FIVE YEARS
  - D. DETENTION BASINS
    1. DETENTION BASINS SHALL BE INSPECTED AT LEAST ONCE PER YEAR. INSPECTIONS CONDUCTED BEFORE AND AFTER A STORM EVENT WILL HELP DETERMINE IF THE BASINS ARE WORKING AS DESIGNED. DURING INSPECTIONS THE DEPTH OF SEDIMENT ACCUMULATION SHALL BE MEASURED AND THE OUTLET STRUCTURE SHOULD BE CHECKED FOR EVIDENCE OF CLOGGING. THE EMBANKMENT SHALL BE VISUALLY INSPECTED FOR EROSION, CRACKING, AND TREE GROWTH. THE INLET AND OUTLET STRUCTURES SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND CHANNEL EROSION CONTROL MEASURES.
    2. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
    3. THE DETENTION BASIN SIDE SLOPES AND EMBANKMENT SHOULD BE MOWED TWICE A YEAR. TRASH AND OTHER DEBRIS SHOULD BE REMOVED AT THIS TIME.
    4. SEDIMENTS SHOULD BE REMOVED FROM THE BASINS AS NECESSARY, AND AT LEAST ONCE EVERY FOUR (4) YEARS OR WHEN ACCUMULATED DEPTH REACHES SIX INCHES (6"). ALL SEDIMENTS SHALL BE HANDLED PROPERLY AND DISPOSED IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
- THE OWNER SHALL KEEP A WRITTEN RECORD OF INSPECTION DATES AND FINDINGS, MAINTENANCE OPERATIONS, AND ALL REPAIRS UNTIL THE ROAD IS ACCEPTED BY THE TOWN. AN INSPECTION/MAINTENANCE CHECKLIST SHALL BE USED IN THE SPECIFIED INSPECTIONS. RECORDS OF INSPECTIONS AND MAINTENANCE SHALL BE KEPT FOR AT LEAST THREE YEARS, AND AVAILABLE ON REASONABLE NOTICE FOR INSPECTION BY THE CONSERVATION COMMISSION.



I:\10-080 160 OLNEY STREET SEEKONK - DECASTRO\CAD\10-080-DEF\INTTIVE-NEW - 9-15-11.dwg: EROSION, 10/31/2011 12:40:28 PM

SUBJECT TO A COVENANT DULY EXECUTED DATED THE \_\_\_\_\_ DAY OF \_\_\_\_\_, RUNNING WITH THE LAND, TO BE DULY RECORDED BY OR FOR THE OWNER OF RECORD, THIS PLAN IS SUBJECT TO ALL CONDITIONS OF THE SEEKONK PLANNING BOARD CERTIFICATE OF ACTION DATED \_\_\_\_\_ FILED WITH THE SEEKONK TOWN CLERK ON \_\_\_\_\_ AND HEREWITH RECORDED AS A PART OF THIS PLAN.

I HEREBY CERTIFY THAT THERE HAS BEEN NO APPEAL TAKEN TO THIS PLANNING BOARD ACTION DURING THE 30 DAY STATUTORY APPEAL PERIOD.  
 DATE: \_\_\_\_\_ TOWN CLERK, TOWN OF SEEKONK \_\_\_\_\_

**SEEKONK PLANNING BOARD**  
 APPROVED UNDER SUBDIVISION CONTROL LAW

PRELIM. PLAN FILED _____	CHAIRMAN _____
DEF PLAN FILED _____	CLERK _____
PUBLIC HEARING _____	
DEF PLAN APPROVED _____	
DEF PLAN ENDORSED _____	

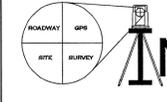
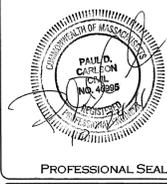
**EROSION CONTROL PLAN**

"CALEB ESTATES"  
 160 OLNEY STREET SEEKONK, MASSACHUSETTS  
 ASSESSORS MAP 6 LOT 40

APPLICANT: **DECASTRO BUILDERS, INC.**  
 25 ASYLUM ROAD, WARREN R.I. 02885

JOB # 10-080	SCALE: 1" = 40'	DRAWN BY: SCA	DATE: MAR. 18, 2011
-----------------	--------------------	------------------	------------------------

REVISED: OCTOBER 24, 2011 ENGINEER COMMENTS



PROFESSIONAL ENGINEERS AND LAND SURVEYORS  
 INSITE PROFESSIONAL COMPLEX, SUITE 1  
 1539 FALL RIVER AVENUE  
 SEEKONK, MA 02771  
 PHONE: (508) 336-4500 FAX: (508) 336-4558

**SHEET**  
**7**  
**OF 10**