

FILE H:\3400\ES-1 E&SC Narrative.dwg

6.10. OUTLET PROTECTION (OP): SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.18. OUTLET PROTECTION IS AN ENERGY DISSIPATING DEVICE WHICH PROTECTS THE OUTLET AND REDUCES DOWNSTREAM EROSION BY REDUCING THE VELOCITY OF CONCENTRATED STORMWATER FLOWS.

6.11. RIPRAP (RR) / CHECK DAMS (CD): SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.19 AND 3.20. RIPRAP PROTECTS AND STABILIZES SLOPES AND SOILS IN CRITICAL EROSION AREAS. ADDITIONALLY, RIPRAP SLOWS THE VELOCITY OF CONCENTRATED RUNOFF. CHECK DAMS ARE EFFECTIVE IN REDUCING THE FLOW VELOCITY IN CHANNELS AND THEREFORE REDUCE THE POTENTIAL FOR EROSION IN NEWLY GRADED CHANNELS OR RECENTLY DISTURBED CHANNELS.

6.12. VEGETATIVE STREAMBANK STABILIZATION (VSS): INCLUDES THE USE OF VEGETATION TO STABILIZING STREAMBANKS AND TO PROTECT STREAMBANKS FROM THE EROSIIVE FORCES OF FLOWING WATER ALONG BANKS IN CREEKS, STREAMS AND RIVERS SUBJECT TO EROSION FROM EXCESS RUNOFF. (VSS) SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.22 TO RE-ESTABLISH A PERMANENT VEGETATIVE COVER AND STABILIZATION FOR STREAM BANKS DISTURBED DURING THE WORK OF THE PROJECT.

6.13. TEMPORARY VEHICULAR STREAM CROSSING (SC): CONSISTS OF A TEMPORARY STRUCTURAL SPAN INSTALLED ACROSS A FLOWING WATERCOURSE FOR USE BY CONSTRUCTION TRAFFIC OR DETOURED TRAFFIC WITHOUT DAMAGING THE CHANNEL OR BANKS AND TO KEEP SEDIMENT GENERATED BY CONSTRUCTION TRAFFIC OUT OF THE STREAM. (SC) SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.24.

6.14. UTILITY STREAM CROSSING (USC): CONSISTS OF A STRATEGY FOR IMPLEMENTING MEASURES AND PRACTICES FOR CROSSING SMALL WATERWAYS WHEN IN-STREAM UTILITY CONSTRUCTION IS INVOLVED IN ORDER TO HELP PROTECT SEDIMENT FROM ENTERING THE STREAM FROM CONSTRUCTION WITHIN APPROACH AREAS AND TO MINIMIZE THE AMOUNT OF DISTURBANCE WITHIN THE STREAM ITSELF. (USC) SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS AND IN CONFORMANCE WITH STD. AND SPEC. 3.25.

6.15. TOPSOILING (TO): SHALL BE APPLIED TO ALL DISTURBED AREAS WHICH ARE TO RECEIVE PERMANENT SEEDING AS INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN AND SHALL BE APPLIED IN ACCORDANCE WITH THE STD. AND SPEC. 3.30. TOPSOILING PROVIDES A METHOD FOR PRESERVING AND RE-USING THE SURFACE LAYER OF SOIL, OFTEN ENRICHED IN ORGANIC MATTER, IN ORDER TO OBTAIN A MORE DESIRABLE PLANTING AND GROWTH MEDIUM.

6.16. TEMPORARY SEEDING / STABILIZATION (TS): SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE AND SHALL CONFORM TO STD. AND SPEC. 3.31 AND THE SEEDING SCHEDULE ON THESE PLANS. ADDITIONALLY, TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN FOURTEEN (14) DAYS IN CONFORMANCE WITH STD. AND SPEC. 3.31.

6.17. PERMANENT SEEDING (PS): ALL DISTURBED AREAS BROUGHT TO FINAL GRADE THAT ARE NOT BUILT UPON (BUILDING, PAVEMENT, WALKS, ETC.) OR THAT ARE NOT LANDSCAPED SHALL BE SEEDED IN CONFORMANCE WITH STD. AND SPEC. 3.32 AND THE SEEDING SCHEDULE ON THESE PLANS. PERMANENT STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

6.18. SOIL STABILIZATION MATTING (B/M): SHALL BE VDOT STANDARD TYPE "TREATMENT 1" AND SHALL BE INSTALLED IN THE LOCATION SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND SHALL CONFORM TO STD. AND SPEC. 3.36. MATTING CAUSES SOIL/SEDIMENT TO DROP OUT OF STORMWATER AND FORMS AN EROSION RESISTANT VEGETATIVE COVER IN CHANNELS AND ON STEEP SLOPES.

7. MANAGEMENT STRATEGY AND SEQUENCE OF CONSTRUCTION:

7.1. CONSTRUCTION SHALL BE SEQUENCED SO LAND DISTURBING AND GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE. REFER TO THE "GENERAL SEQUENCE OF WORK" FOR ADDITIONAL INFORMATION.

7.2. THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY MARKED PRIOR TO START OF WORK.

7.3. SEDIMENT TRAPPING AND PERIMETER MEASURES SHALL BE INSTALLED AS THE FIRST STEP IN THE GRADING OPERATION AND SHALL BE SEEDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.

7.4. TEMPORARY SEEDING (TS) OR OTHER STABILIZATION MEASURES SHALL BE PLACED IMMEDIATELY FOLLOWING GRADING.

7.5. THE PROJECT SUPERINTENDENT OR THE RESPONSIBLE LAND DISTURBER (RLD) SHALL BE DIRECTLY RESPONSIBLE TO ENSURE THE MEASURES SPECIFIED HEREIN ARE INSTALLED AND MAINTAINED AND THE SEQUENCE OF WORK IS FOLLOWED.

7.6. AFTER PERFORMANCE OF THE WORK OF THE PROJECT AND UPON ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&SC MEASURES WILL BE CLEANED UP AND REMOVED.

8. PERMANENT STABILIZATION / REMOVAL OF MEASURES:

8.1. AFTER THE INSTALLED EROSION AND SEDIMENTATION CONTROL DEVICES ARE FOUND TO BE FUNCTIONAL, THE CONTRACTOR SHALL IMMEDIATELY PROCEED WITH CLEARING, GRUBBING, AND PRELIMINARY GRADING OPERATIONS. PERMANENT OR TEMPORARY STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN FOURTEEN (14) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.

8.2. FOLLOWING THE COMPLETION OF CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES AND STABILIZATION OF ALL AREAS, AND IT HAS BEEN DETERMINED THAT EROSION OR SEDIMENTATION IS NO LONGER OCCURRING ON THE SITE OR AT ITS BOUNDARIES, AND DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN, THE CONTRACTOR MAY THEN BEGIN TO REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES. THIS WORK SHALL BE DONE IN A CAREFUL, NEAT, AND ORGANIZED MANNER.

8.3. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT SHALL BE CAREFULLY REMOVED OR UNIFORMLY SPREAD OVER THE AREA AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

9. INSPECTION & MAINTENANCE REQUIREMENTS:

9.1. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL MAINTENANCE REQUIREMENTS OF THE EROSION AND SEDIMENT CONTROL MEASURES AS OUTLINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

9.2. ALL EROSION AND SEDIMENT MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE ITEMS LISTED BELOW FOR CRITICAL E&SC MEASURES SHALL BE CHECKED IN ACCORDANCE WITH THE REQUIREMENTS FOR EACH PARTICULAR ITEM.

9.3. STD & SPEC 3.02 - TEMPORARY STONE CONSTRUCTION ENTRANCE (CE) - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

9.4. STD & SPEC 3.05 - SILT FENCE (SF): SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH A DEPTH OF 6-INCHES. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

9.5. STD & SPEC 3.07 / 3.08 - STORM DRAIN INLET PROTECTION (IP)/ CULVERT INLET PROTECTION (CIP): THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

9.6. STD & SPEC 3.09 / 3.12 - TEMPORARY DIVERSION DIKES / DIVERSIONS: SHALL BE INSPECTED AFTER EVERY STORM AND REPAIRS MADE TO THE DIKE, FLOW CHANNEL, OUTLET OR SEDIMENT TRAPPING FACILITY, AS NECESSARY. ONCE EVERY TWO WEEKS, WHETHER A STORM EVENT HAS OCCURRED OR NOT, THE MEASURE SHALL BE INSPECTED AND REPAIRS MADE IF NEEDED. DAMAGES CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY.

9.7. STD & SPEC 3.13 - TEMPORARY SEDIMENT TRAP (ST): SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN VOLUME OF THE WET STORAGE. SEDIMENT REMOVAL FROM THE BASIN SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS. FILTER STONE SHALL BE REGULARLY CHECKED TO ENSURE THAT FILTRATION PERFORMANCE IS MAINTAINED. STONE CHOKED WITH SEDIMENT SHALL BE REMOVED AND CLEANED OR REPLACED. THE STRUCTURE SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE HEIGHT OF THE STONE OUTLET SHOULD BE CHECKED TO ENSURE THAT ITS CENTER IS AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.

9.8. STD. & SPEC. 3.17 - STORMWATER CONVEYANCE CHANNELS:

9.8.1. GRASS-LINED CHANNELS: DURING THE INITIAL ESTABLISHMENT, GRASS-LINED CHANNELS SHOULD BE REPAIRED IMMEDIATELY AND GRASS RE-ESTABLISHED IF NECESSARY. AFTER GRASS HAS BECOME ESTABLISHED, THE CHANNEL SHOULD BE CHECKED PERIODICALLY TO DETERMINE IF THE GRASS IS WITHSTANDING FLOW VELOCITIES WITHOUT DAMAGE. IF THE CHANNEL IS TO BE MOWED, IT SHOULD BE DONE IN A MANNER THAT WILL NOT DAMAGE THE GRASS.

9.8.2. RIPRAP-LINED CHANNELS: RIPRAP-LINED CHANNELS SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT SCOUR IS NOT OCCURRING BENEATH FABRIC UNDERLINING OF THE RIPRAP LAYER. THE CHANNEL SHOULD ALSO BE CHECKED TO DETERMINE THAT THE STONES ARE NOT DISLODGED BY LARGE FLOWS.

9.8.3. CONCRETE-LINED CHANNELS: CONCRETE-LINED CHANNELS SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT THERE IS NO UNDERMINING OF THE CHANNEL. PARTICULAR ATTENTION SHOULD BE PAID TO THE OUTLET OF THE CHANNEL. IF SCOUR IS OCCURRING AT THE OUTLET, APPROPRIATE OUTLET PROTECTION SHALL BE INSTALLED.

9.8.4. SEDIMENT DEPOSITION: IF THE CHANNEL IS BELOW A HIGH SEDIMENT-PRODUCING AREA, SEDIMENT SHOULD BE TRAPPED BEFORE IT ENTERS THE CHANNEL. IF SEDIMENT IS DEPOSITED IN A GRASS-LINED CHANNEL, IT SHOULD BE REMOVED PROMPTLY TO PREVENT DAMAGE TO THE GRASS. SEDIMENT DEPOSITED IN RIPRAP AND CONCRETE-LINED CHANNELS SHOULD BE REMOVED WHEN IT REDUCES THE CAPACITY OF THE CHANNEL.

9.9. STD & SPEC 3.19 AND 3.20 - RIP-RAP (RR) AND ROCK CHECK DAMS (CD): CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH RUNOFF-PRODUCING STORM EVENT. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE MEASURE. REGULAR INSPECTIONS SHOULD BE MADE TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED IMMEDIATELY.

9.10. STD & SPEC 3.32 - PERMANENT SEEDING (PS) - IN GENERAL, A STAND OF VEGETATION CANNOT BE DETERMINED TO BE FULLY ESTABLISHED UNTIL IT HAS BEEN MAINTAINED FOR ONE FULL YEAR AFTER PLANTING. IRRIGATION - NEW SEEDING SHOULD BE SUPPLIED WITH ADEQUATE MOISTURE. SUPPLY WATER AS NEEDED, ESPECIALLY LATE IN THE SEASON, IN ABNORMALLY HOT OR DRY WEATHER, OR ON ADVERSE SITES. WATER APPLICATION RATES SHOULD BE CONTROLLED TO PREVENT EXCESSIVE RUNOFF. RE-SEEDING - INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE. IF VEGETATIVE COVER IS INADEQUATE TO PREVENT RILL EROSION, OVER-SEED AND FERTILIZE IN ACCORDANCE WITH SOIL TEST RESULTS. IF A STAND HAS LESS THAN 40% COVER, RE-EVALUATE CHOICE OF PLANT MATERIALS AND QUANTITIES OF LIME AND FERTILIZER. THE SOIL MUST BE TESTED TO DETERMINE IF ACIDITY OR NUTRIENT IMBALANCES ARE RESPONSIBLE. RE-ESTABLISH THE STAND FOLLOWING SEEDED PREPARATION AND SEEDING RECOMMENDATIONS. FERTILIZATION - COOL SEASON GRASSES SHOULD BEGIN TO BE FERTILIZED 90 DAYS AFTER PLANTING TO ENSURE PROPER STAND AND DENSITY. WARM SEASON FERTILIZATION SHOULD BEGIN AT 30 DAYS AFTER PLANTING. APPLY MAINTENANCE LEVELS OF FERTILIZER AS DETERMINED BY SOIL TEST. IN THE ABSENCE OF A SOIL TEST, FERTILIZATION SHOULD BE AS INDICATED ON THE SEED SCHEDULE.

10. STORMWATER MANAGEMENT:

10.1. STORMWATER RUN-OFF FROM THE PROJECT SITE WILL BE COLLECTED BY NEW STORM DRAINAGE CURB SLOTS AND FLUMES OR OTHER INLET DEVICES AND CONVEYED BY PIPE OR CHANNEL, AND DISCHARGED DIRECTLY INTO GLADE CREEK - TRIBUTARY - A. ALL STORMWATER DISCHARGES SHALL OCCUR IN A NON-EROSIVE MANNER.

END OF EROSION & SEDIMENT CONTROL NARRATIVE

STATEMENT OF COMPLIANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS - 9VAC25-840-40 - MINIMUM STANDARDS

THE LAND-DISTURBING ACTIVITIES OF THIS PROJECT MUST COMPLY WITH THE 19 "MINIMUM STANDARDS" (MS) SPECIFIED IN SECTION 4VAC50-30-40 OF THE REGULATIONS (VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS) THAT ARE APPLICABLE TO THE PROJECT. THIS SECTION PROVIDES A RECITATION OF THE FULL TEXT OF THE 19 MINIMUM STANDARDS AND FOLLOWS WITH A "METHOD OF COMPLIANCE" WITH EACH MINIMUM STANDARD. THESE EROSION AND SEDIMENT CONTROL PLANS WERE PREPARED IN A MANNER TO ENSURE COMPLIANCE WITH THE MINIMUM STANDARDS.

THE CONTRACTOR AND THE CERTIFIED RESPONSIBLE LAND DISTURBER (RLD) SHALL PERFORM THE WORK OF THE PROJECT IN THE MANNER STATED AND IN A MANNER AND SEQUENCE SUCH THAT THE INTENT AND REQUIREMENTS OF THE MINIMUM STANDARDS ARE MET.

MS-1: Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may not be at final grade but will remain dormant for longer than fourteen (14) days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

METHOD OF COMPLIANCE: PERMANENT SEEDING (PS) AND TEMPORARY SEEDING (TS) MEASURES ARE SHOWN AND SPECIFIED ON THE EROSION AND SEDIMENT CONTROL PLANS AND DETAILS. CONTRACTOR SHALL REFER TO THESE DETAILS AS WELL AS THE NARRATIVE AND DETAILS FOR SEEDING REQUIREMENTS AND SCHEDULES.

MS-2: During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.

METHOD OF COMPLIANCE: IT IS ANTICIPATED THAT TOPSOIL AND/OR UN-SUITABLE MATERIAL WILL BE ENCOUNTERED ON THE PROJECT SITE. THE EARTHWORK ANALYSIS INDICATES THAT SOIL IMPORT WILL BE REQUIRED, SO EXCESS EXCAVATION STOCKPIILING SHOULD NOT BE REQUIRED. EXCESS TOPSOIL SHALL BE STOCKPILED ON THE PROJECT SITE AT THE LOCATION SHOWN OR HAULED FROM THE SITE AT THE CONTRACTORS OPTION. SHOULD STRIPED TOPSOIL BE TEMPORARILY STOCKPILED ON THE PROJECT SITE THE CONTRACTOR SHALL INSTALL THE REQUIRED E&SC MEASURES (PERIMETER CONTROL, TEMPORARY, AND PERMANENT SEEDING) AS SHOWN ON THE PLANS. UN-SUITABLE SOIL MATERIALS WILL BE EXPORTED FROM THE PROJECT SITE AND SHALL BE DISPOSED OF IN A LEGAL MANNER AND AT A SITE THAT IS DULY PERMITTED FOR LAND DISTURBANCE ACTIVITIES.

MS-3: A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.

METHOD OF COMPLIANCE: PERMANENT SEEDING (PS), ALONG WITH TOPSOILING (TO), AND MULCHING (MU) MEASURES ARE SHOWN AND SPECIFIED ON THE E&SC PLANS AND DETAIL SHEETS AS WELL AS IN THE NARRATIVE AND SEQUENCE OF WORK.

MS-4: Sediment basins and sediment traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.

METHOD OF COMPLIANCE: THESE PERIMETER SEDIMENT TRAPPING MEASURES ARE SHOWN ON THE E&SC PLAN SHEET AND ARE SPECIFIED TO BE INSTALLED PRIOR TO MAJOR LAND DISTURBANCE ACTIVITIES. REFER TO THE GENERAL NOTES, NARRATIVE, AND SEQUENCE OF WORK FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

MS-5: Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

METHOD OF COMPLIANCE: THIS REQUIREMENT IS STIPULATED IN THE GENERAL NOTES, NARRATIVE, AND SEQUENCE OF WORK.

MS-6: Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.

a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.

b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.

METHOD OF COMPLIANCE: ALL TEMPORARY SEDIMENT TRAPS (ST) COMPLY WITH THE ABOVE REQUIREMENTS. DRAINAGE DIVIDES FOR AREAS DRAINING TO THE MEASURE ARE SHOWN ON THESE PLANS OR ON THE CALCULATION SHEETS AND THE MEASURES ARE SIZED BASED ON THESE DRAINAGE DIVIDES. REFER TO THE TEMPORARY SEDIMENT TRAP (ST) "DESIGN SUMMARY TABLE" AND THE CALCULATIONS (IN THE STORMWATER POLLUTION PREVENTION PLAN - SWPPP) FOR THE DESIGN PARAMETER USED.

MS-7: Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

METHOD OF COMPLIANCE: NEW CUT AND FILL SLOPES OR EXISTING SLOPES THAT ARE TO BE DENUDED THAT ARE GREATER THAN 6-FEET IN HEIGHT ARE ANTICIPATED DURING THE WORK OF THE

CONTINUED ON NEXT SHEET



Date									
Revisions									

Issue Date:	3/10/2017
Drawn By:	DJS
Designed By:	DJS
Checked By:	MSA
Date:	



Mattern & Craig
ENGINEERS • SURVEYORS
701 FIRST STREET, S.W.
ROANOKE, VIRGINIA 24016
(540) 345-9342
FAX (540) 345-7691

City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN

APPROVED
by Adrian Gilbert 03/15/2018

BERKLEY ROAD OVER GLADE CREEK TRIBUTARY A
E&SC NARRATIVE (CONT.)
& MS-19 COMPLIANCE
CITY OF ROANOKE, VIRGINIA

Vertical Scale:	N/A
Horizontal Scale:	N/A
Commission Number:	34301
Sheet No.:	

ES-2