

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION:
THE PROJECT AREA IS LOCATED ALONG HUNT CAMP ROAD IN ROANOKE COUNTY AND CONSISTS OF A ROAD EXTENSION TO HUNT CAMP ROAD FOR SITE GRADING OF RESIDENTIAL TRACTS. ADDITIONAL IMPROVEMENTS INCLUDE SANITARY SEWER EXTENSION AND STORM DRAINAGE SYSTEM TO SERVE THIS DEVELOPMENT. THE TOTAL DISTURBED AREA IS APPROXIMATELY 4.1 ACRES.

EXISTING SITE CONDITIONS:
THE SITE IS CURRENTLY AN UNPAVED, MOSTLY WOODED RESIDENTIALLY ZONED TRACT. THE SITE CONTAINS AN EXISTING JURISDICTIONAL WATERCOURSE, WHICH FLOWS FROM EAST TO WEST THROUGH THE SITE TO AN EXISTING STORMWATER MANAGEMENT FACILITY WHICH WAS DESIGNED TO ADEQUATELY DETAIN RUNOFF FROM THIS PROPOSED DEVELOPMENT.

ADJACENT AREAS:
THE PROJECT AREA IS BORDERED BY EXISTING RESIDENTIAL LOTS TO THE SOUTH AND EAST (SECTIONS OF HUNTING HILLS), UNDEVELOPED WOODED AREA TO THE WEST, AND EXISTING RESIDENTIAL LOTS TO THE NORTH.

QUESTIONS:
NO OFFSITE AREAS ARE CURRENTLY ASSOCIATED WITH THIS PLAN. ALL MATERIAL THAT IS REMOVED FROM OR DELIVERED TO THIS SITE IN ASSOCIATION WITH THIS PROJECT SHALL BE FROM A PERMITTED CUT OR FILL SITE. THE LOCATION OF ALL OFF-SITE FILL OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT. AN EROSION CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.

SOILS:
SOILS INFORMATION IS BASED ON AN INSPECTION OF THE USDA WEB SOIL SURVEY AND HAS NOT BEEN FIELD VERIFIED. THE ONSITE SOILS ARE INDICATED TO BE AS FOLLOWS:

EDGEMONT CHANNERY SANDY LOAM, 35 TO 60% SLOPES (MAP UNIT 156)

HYDROLOGIC SOIL GROUP: A
DEPTH OF THE RESTRICTIVE FEATURE: MORE THAN 80 INCHES
DEPTH TO WATER TABLE: MORE THAN 80 INCHES
DRAINAGE CLASS: WELL DRAINED
AVAILABLE WATER CAPACITY: LOW
SOIL PROFILE: 0 TO 8 INCHES: CHANNERY SANDY LOAM, 6 TO 38 INCHES: CLAY LOAM, 38 TO 62 INCHES: LOAM.

CRITICAL AREAS:
THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MINIMIZE THE POTENTIAL FOR ANY SEDIMENT LEAVING THE SITE ONTO ADJACENT PROPERTY.

SPECIAL PRECAUTION SHOULD BE TAKEN WHEN WORKING IN PROXIMITY TO THE NATURAL WATERCOURSES (JURISDICTIONAL) ON THIS SITE. NO DISTURBANCE OF THESE WATERCOURSES IS PROHIBITED.

MINIMUM STANDARDS:
REFER TO DEQ MINIMUM STANDARDS.

EROSION AND SEDIMENT CONTROL MEASURES:

CONSTRUCTION ENTRANCE (3.02) - A STONE CONSTRUCTION ENTRANCE WILL BE INSTALLED TO MINIMIZE THE AMOUNT OF MUD TRANSPORTED INTO EXISTING ROADS.

SILT FENCE (3.05) - SILT FENCE WILL BE INSTALLED AT THE LOWER ENDS OF THE PROJECT SITE TO INTERCEPT SEDIMENT LAIDEN RUN-OFF PRIOR TO EXITING THE SITE.

INLET PROTECTION (3.07) - INLET PROTECTION WILL BE INSTALLED AT EACH STORM DRAIN INLET TO MINIMIZE THE AMOUNT OF SEDIMENT LAIDEN RUNOFF FROM ENTERING THE STORM DRAIN SYSTEM.

TEMPORARY DIVERSION DIKE (3.08) - A TEMPORARY DIKE OF COMPACTED SOIL WILL BE CONSTRUCTED TO DIVERT SLOPE RUNOFF AWAY FROM A DISTURBED AREA, AND/OR TO DIVERT SEDIMENT LAIDEN RUNOFF FROM A DISTURBED AREA TO A SEDIMENT TRAPPING MEASURE.

TEMPORARY SEDIMENT TRAP (3.13) - A TEMPORARY PONDING AREA FORMED BY AN EARTHEN EMBANKMENT WITH A STONE OUTLET PROVIDED TO DETAIN SEDIMENT-LADEN RUNOFF LONG ENOUGH TO ALLOW THE MAJORITY OF SEDIMENT TO SETTLE OUT.

OUTLET PROTECTION (3.18) - THE INSTALLATION OF RIP RAP CHANNEL SECTIONS BELOW STORM DRAIN OUTLETS.

RIP-RAP (3.18) - RIP-RAP SHALL PROVIDE A PERMANENT, EROSION-RESISTANT GROUND COVER OF LARGE, LOOSE ANGULAR STONE WITH FILTER FABRIC TO PROTECT THE SOIL FROM EROSION RUNOFF.

ROCK CHECK DAM (3.20) - ROCK CHECK DAM PROVIDES A STONE DAM TO REDUCE VELOCITY WITHIN A DRAINAGE DITCH.

TEMPORARY SEEDING (3.31) - TEMPORARY SEEDING SHALL BE APPLIED TO TEMPORARY DIVERSION DIKES, TOPSOIL STOCKPILES, AND ALL AREAS TO BE ROUGH GRADED, BUT NOT FINISHED GRADED DURING THE INITIAL PHASE OF CONSTRUCTION. TEMPORARY SEEDING SHALL BE FAST GERMINATING, TEMPORARY VEGETATION AND INSTALLED IMMEDIATELY FOLLOWING GRADING, OR INSTALLATION IF A TEMPORARY MEASURE. SEE ALSO MINIMUM STANDARDS.

PERMANENT SEEDING (3.32) - PERMANENT SEEDING SHALL BE INSTALLED ON ALL DISTURBED AREAS OF THE SITE NOT OTHERWISE STABILIZED.

MULCHING (3.35) - ALL DISTURBED AREAS SHALL BE MULCHED AFTER SEEDING. STRAW MULCH SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE AND ANCHORED WITH 750 LBS PER ACRE OF FIBER MULCH OVER THE SEED AREA.

SOIL STABILIZATION BLANKETS & MATING (3.36) - THE INSTALLATION OF PROTECTIVE BLANKETS (TYPE 1) ON A PREPARED PLANTING OF A STEEP SLOPE.

PERMANENT STABILIZATION:
AREAS NOT COVERED BY LANDSCAPING OR OTHER PERMANENT HARD SURFACE SHALL BE STABILIZED WITH PERMANENT SEEDING. THE CONTRACTOR SHALL ENSURE THAT A STRONG STAND OF GRASS IS ESTABLISHED BEFORE THE REMOVAL OF EROSION CONTROL MEASURES.

MAINTENANCE:
ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BI-WEEKLY AND AFTER EVERY RUNOFF PRODUCING RAINFALL. A LOG OF DATES AND INSPECTIONS SHALL BE KEPT. ANY DEFICIENCIES THAT ARE FOUND SHALL BE CORRECTED IMMEDIATELY. ACCUMULATED SEDIMENT AT TRAPPING MEASURES SHALL BE ROUTINELY REMOVED. THE CONTRACTOR AND RLD SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING:

ALL DITCHES, SWALES, AND NATURAL WATERCOURSES DOWNSTREAM OF THIS PROJECT SHALL BE FIELD INSPECTED DURING AND AFTER CONSTRUCTION BY THE RLD TO ENSURE COMPLIANCE WITH DEQ'S MS-19. IF EROSION OR SCOUR IS OCCURRING THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL CORRECTIVE MEASURES.

SEDIMENT TRAP SHALL BE INSPECTED REGULARLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN DESIGN VOLUMES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED AND THEN TEMPORARY MEASURES PROPERLY REMOVED.

ALL SEEDING AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEED AS REQUIRED TO ACHIEVE A GOOD STAND OF GRASS.

THE CONSTRUCTION ENTRANCE SHALL BE CHECKED REGULARLY TO ENSURE THAT MUD IS NOT TRANSPORTED ONTO THE ADJACENT ROADS. THE STONE SHALL BE REMOVED, CLEANED, OR REPLACED AS REQUIRED FOR THE CONSTRUCTION ENTRANCE TO FUNCTION PROPERLY.

STORMWATER MANAGEMENT CONSIDERATIONS:
THE EXISTING STORMWATER MANAGEMENT BASIN LOCATED IMMEDIATELY TO THE NORTHWEST OF THE PROPOSED CUL-DE-SAC WAS CONSTRUCTED TO SERVE THIS DEVELOPMENT FOR STORMWATER QUANTITY. NUTRIENT CREDITS WILL BE ACQUIRED TO MEET THE MINIMUM POLLUTANT REMOVAL REQUIREMENTS. REFER TO STORMWATER MANAGEMENT CALCULATIONS FOUND IN THE "PROJECT CALCULATIONS" WORKBOOK ASSOCIATED WITH THIS PROJECT.

CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING MINIMUM STANDARDS:

- Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year. **APPLY SEEDING MIXTURES IN ACCORDANCE WITH SPECIFICATIONS 3.31 AND 3.32 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (PERMIT) TO ALL AREAS THAT DO NOT HAVE A NON-ERODIBLE SURFACE AS SHOWN ON THIS PLAN.**
- 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. **INSTALL EARTHEN STRUCTURES AS SHOWN ON THIS PLAN. INITIAL APPLICATION OF PERMANENT SEEDING. ADDITIONAL SLOPE STABILIZATION MEASURES ARE TO BE CONSIDERED AS CONDITIONS DICTATE.**
- 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. **SEE MINIMUM STANDARD 1.**
- Sediment basins and 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 upstate land disturbance takes place. **INSTALL EROSION CONTROL MEASURES AS OUTLINED IN THE CONSTRUCTION SEQUENCE.**

- Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation. **INSTALL EARTHEN STRUCTURES AS SHOWN ON THIS PLAN.**
- Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
 - 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.
 - 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 outlet 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 eroded surface or those conditions expected to exist while the sediment basin is utilized.

- INSTALL SEDIMENT TRAP AS SHOWN ON THIS PLAN.
- 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. **REMOVED ANY AREAS THAT DO NOT HAVE AN ESTABLISHMENT OF A GOOD STAND OF GRASS AFTER INITIAL APPLICATION OF PERMANENT SEEDING. ADDITIONAL SLOPE STABILIZATION MEASURES ARE TO BE CONSIDERED AS CONDITIONS DICTATE.**

- Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or pipe drain structure. **CONCENTRATED RUNOFF SHALL BE CONTAINED IF POSSIBLE TO AVOID FLOW DOWN CUT OR FILL SLOPES. INSTALL DIVERSIONS AS SHOWN ON THIS PLAN.**
- Whenever water seeps from a slope face, adequate drainage or other protection shall be provided. **THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY UPON THEIR DISCOVERY OF ANY WATER SEEPS.**

- All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the sewerage system. That being verified, the inlets or otherwise treated to remove sediment. **INLET PROTECTION SHALL BE INSTALLED AS SHOWN ON THIS PLAN.**
- Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel. **OUTLET PROTECTION IS PROPOSED AT THE OUTLET OF STORM DRAINAGE PIPES AS SHOWN ON THIS PLAN.**

- When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of coaseways and cofferdams. **EROTER III MAY BE USED FOR THESE STRUCTURES IF ARMED BY NONERODIBLE COVER MATERIALS. NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**
- When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**

- All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**
- The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**

- Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
 - More than 500 linear feet of trench may be opened at one time.
 - Excavated material shall be placed on the uphill side of trenches.
 - Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
 - Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
 - Restabilization shall be completed in accordance with these regulations.
 - Applicable safety regulations shall be complied with.

- INSTALL UNDERGROUND UTILITY LINES PER THE ABOVE REQUIREMENTS.
- Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by sweeping or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities. **ADAPTABLE MEASURES SHALL BE PROVIDED FOR THE CLEANING OF MUD AND SEDIMENT FROM CONSTRUCTION VEHICLES PRIOR TO ENTERING PUBLIC STREETS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MUD AND SEDIMENT TRANSPORTED FROM THIS SITE ONTO THE PUBLIC STREETS. CONSTRUCTION VEHICLES SHALL BE INSTALLED PER THE ABOVE REQUIREMENTS.**

- 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 and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation. **EROSION & SEDIMENT CONTROL MEASURES SHALL NOT BE REMOVED WITHOUT ROANOKE CITY PERMISSION AND SHALL BE IN ACCORDANCE WITH ABOVE REQUIREMENTS.**

MINIMUM STANDARDS CONTINUED:

- Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency duration of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels.
 - Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those areas where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outlet of the pipe or pipe system shall be performed.

- Adequacy of all channels and pipes shall be verified in the following manner:
 - The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or
 - Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overlap channel banks nor cause erosion of channel bed or banks.

- All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overlap the banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and
- Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

- If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:
 - Improve the channels to a condition where a ten-year storm will not overlap the banks and a two-year storm will not cause erosion of channel bed or banks; or
 - Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;

- Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or
- Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESOP authority to prevent downstream erosion.

- The applicant shall provide evidence of permission to make the improvements.
- All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development of the subject project.

- If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESOP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.
- Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipater shall be placed at the outlet of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

- All on-site channels must be verified to be adequate.
- Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

- In applying these stormwater runoff criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

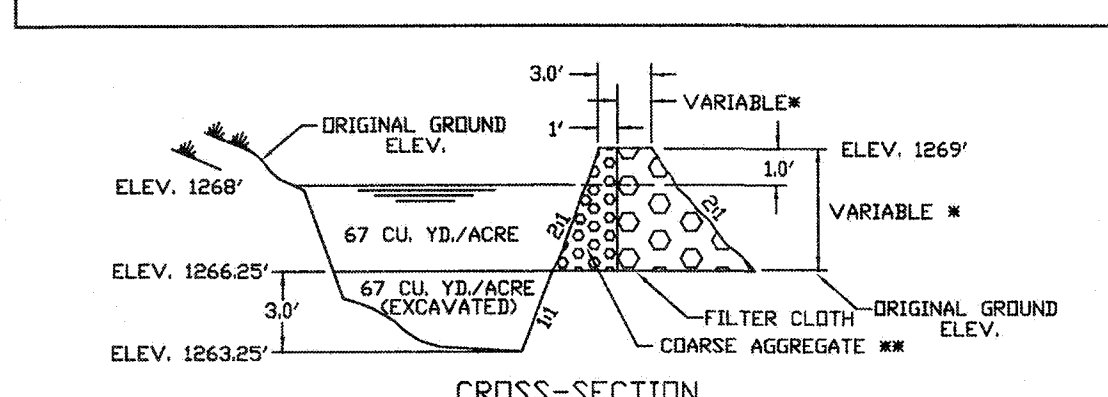
- All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.
- Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural and man-made channels if the practices are designed to:
 - detain the water quality volumes and release it over 48 hours;
 - detain and release over 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and
 - reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to 62.1-44.15.54 or 62.1-44.15.65 of the Act.

- For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of 62.1-44.15.52 A of the Act and this subsection shall be satisfied by compliance with water quality requirements in the Stormwater Management Act (62.1-44.15.24 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 5VAC25-870-46 of the Virginia Stormwater Management Program (VSMP) Permit Regulations.

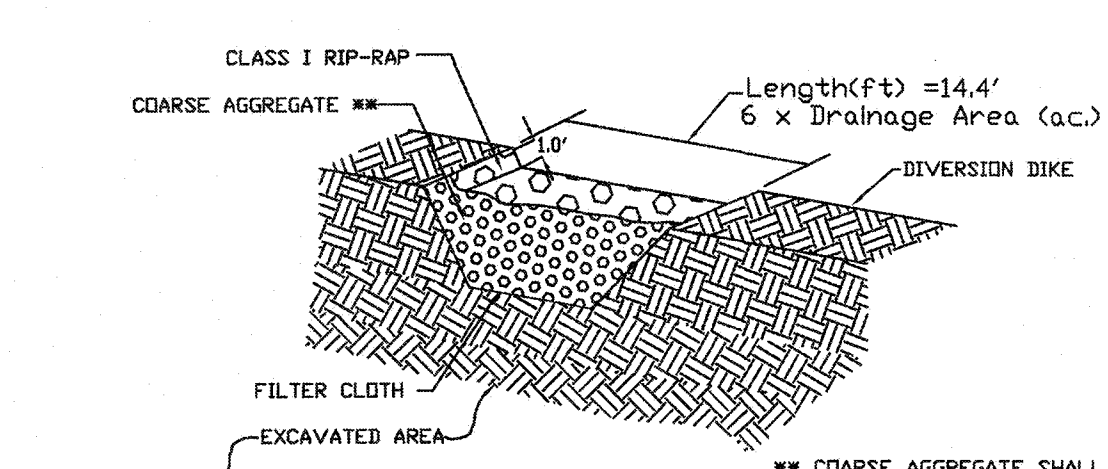
- Compliance with the water quality minimum standards set out in 5VAC25-870-66 of the Virginia Stormwater Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 19.

- THE EXISTING STORMWATER MANAGEMENT BASIN TO THE SOUTH WAS CONSTRUCTED TO SERVE THIS PURPOSE FOR STORMWATER QUANTITY. NUTRIENT CREDITS WILL BE ACQUIRED TO MEET THE MINIMUM POLLUTANT REMOVAL REQUIREMENTS. REFER TO STORMWATER MANAGEMENT CALCULATIONS FOUND IN THE "PROJECT CALCULATIONS" WORKBOOK ASSOCIATED WITH THIS PROJECT.

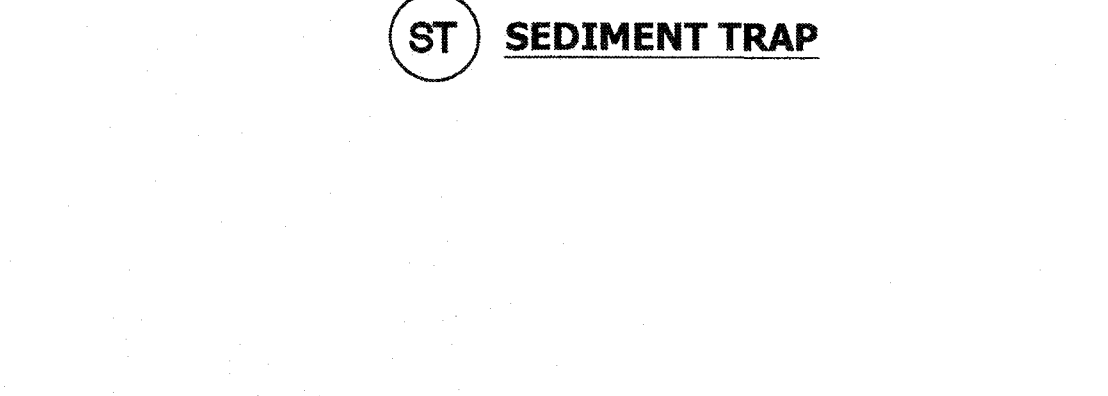
TEMPORARY SEDIMENT TRAP DATA					
STRUCTURE	MAX. DRAINAGE AREA (ACRES)	STORAGE (C.Y.)		WEIR LENGTH (FT.)	WEIR HEIGHT (FT.)
		REQ'D	DESIGN		
ST1	2.4	322	329	14.4	1.75
BOTTOM OF MET = 15' x 66" (ELEV. = 1263.25') TOP OF MET = 27' x 78' 3.0' DEPTH (ELEV. = 1268.25') TOP OF DRY = 35' x 85' 1.75' DEPTH (ELEV. = 1268')					



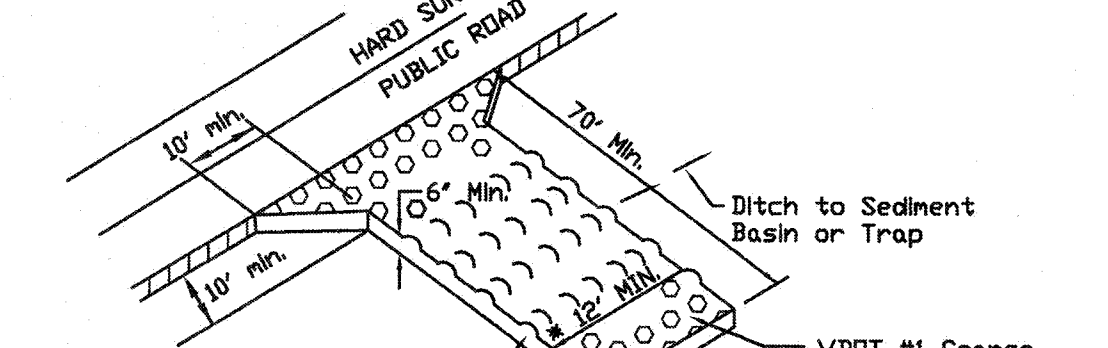
CROSS-SECTION



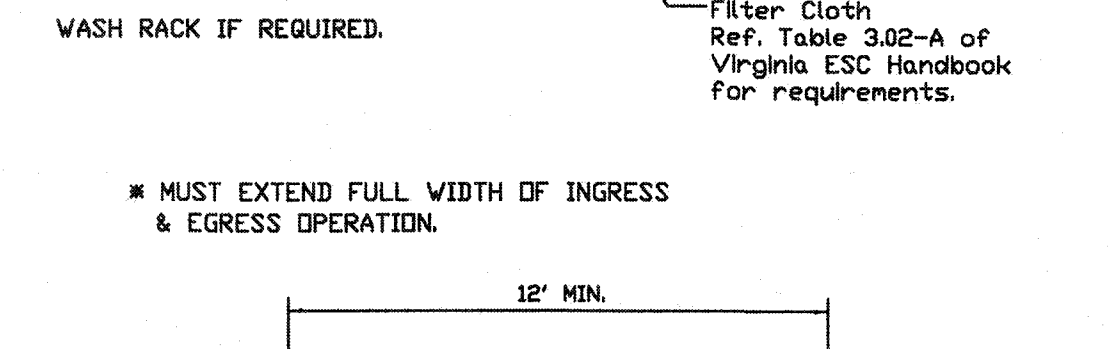
ST SEDIMENT TRAP



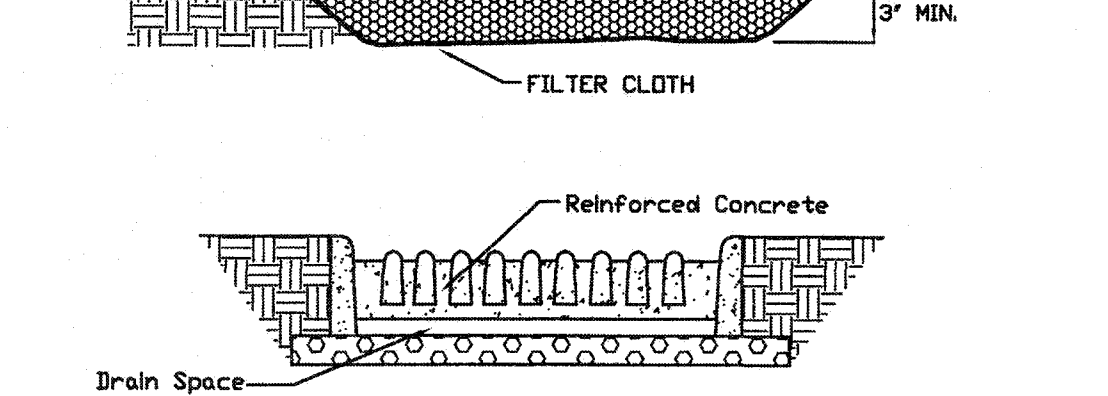
CONSTRUCT A WASHBOARD OR WASH RACK IF REQUIRED.



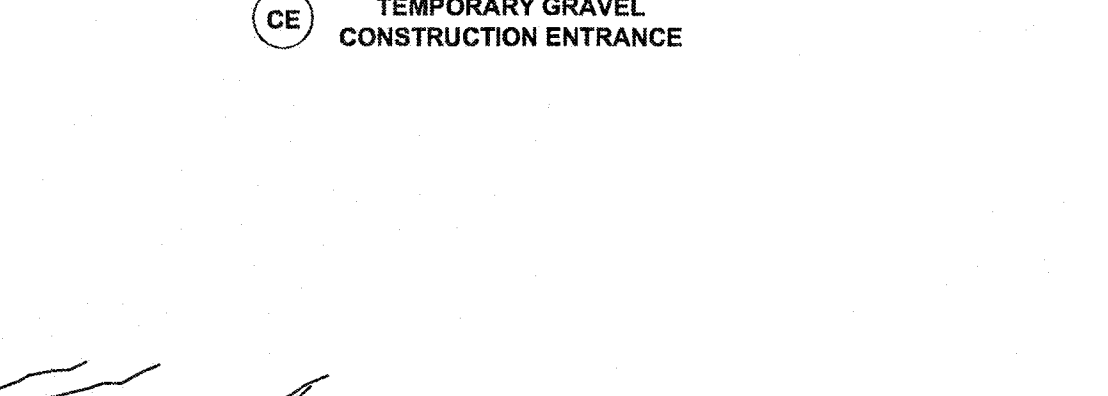
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



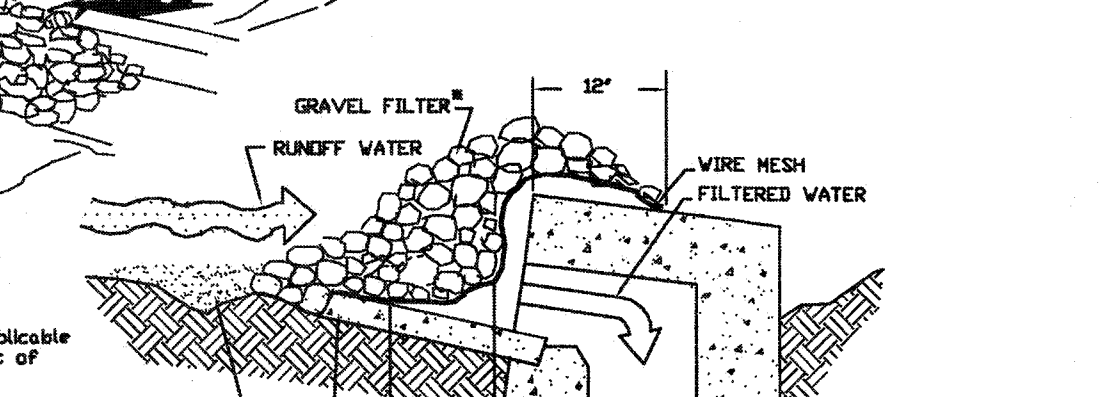
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EROSION & SEDIMENT CONTROL COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EACH	1	\$1,200.00	\$1,200.00
SILT FENCE	L.F.	1539	\$4.00	\$6,156.00
DIVERSION DIKE OR FILL DIVERSION	L.F.	2015	\$5.00	\$10,075.00
TEMPORARY STREAM CROSSING	EACH	1	\$1,500.00	\$1,500.00
INLET PROTECTION	EACH	9	\$150.00	\$1,350.00
TEMPORARY SEEDING	S.F.	178,600	\$0.04	\$7,144.00
SEDIMENT TRAP	EACH	1	\$1,500.00	\$1,500.00
CHECK DAM	EACH	4	\$100.00	\$400.00
OUTLET PROTECTION	EACH	2	\$250.00	\$500.00
PERMANENT SEEDING AND MULCHING	S.F.	178,600	\$0.05	\$8,930.00
BLANKET MATING	S.F.	42,200	\$0.25	\$10,550.00
SUB-TOTAL				\$49,305.00
10% CONTINGENCY				\$4,931.00
TOTAL PROJECT COST				\$54,236.00

PLAN REVISION No. 2:
-REVISED ESC BONDING TABLE & ESC NARRATIVE BASED ON INCLUSION OF NEW LOTS 7 & 8.GENERAL EROSION AND SEDIMENT CONTROL NOTES,
ROANOKE COUNTY, VIRGINIA

ES-1-UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 622-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2-THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE ONSITE PRECONSTRUCTION CONFERENCE. ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3-ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4-A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND NARRATIVE, AS WELL AS A COPY OF THE LAND DISTURBING PERMIT, SHALL BE MAINTAINED ON THE SITE AT ALL TIMES. THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR WILL DELIVER THESE MATERIALS AT THE PRECONSTRUCTION CONFERENCE.

ES-5-PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6-THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7-ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING THE LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8-DURING DRAINAGE OPERATION, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9-THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RAINFALL-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. AN INSPECTION REPORT MUST BE COMPLETED ONCE EVERY FIVE WORKING DAYS, BEGINNING WITH COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND WITHIN 48 HOURS OF ANY SIGNIFICANT RAINFALL EVENT. REPORTS MUST BE FILED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), WHICH MUST BE KEPT ONSITE. FAILURE TO COMPLETE A REPORT WILL BE GROUNDS FOR IMMEDIATE REVOCATION OF THE LAND DISTURBING PERMIT. A STANDARD INSPECTION REPORT FORM WILL BE SUPPLIED, WHICH SHOULD BE COMPLETED AS NECESSARY. THIS PROVISION IN NO WAY WAIVES THE DUTY OF ROANOKE COUNTY PERSONNEL TO CONDUCT SITE INSPECTIONS, NOR DOES IT DEFTY THE RIGHT OF THE PERMITTEE (S) TO ACCOMPANY THE INSPECTOR (S).

ES-10-THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RAINFALL-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. AN INSPECTION REPORT MUST BE COMPLETED ONCE EVERY FIVE WORKING DAYS, BEGINNING WITH COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND WITHIN 48 HOURS OF ANY SIGNIFICANT RAINFALL EVENT. REPORTS MUST BE FILED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), WHICH MUST BE KEPT ONSITE. FAILURE TO COMPLETE A REPORT WILL BE GROUNDS FOR IMMEDIATE REVOCATION OF THE LAND DISTURBING PERMIT. A STANDARD INSPECTION REPORT FORM WILL BE SUPPLIED, WHICH SHOULD BE COMPLETED AS NECESSARY. THIS PROVISION IN NO WAY WAIVES THE DUTY OF ROANOKE COUNTY PERSONNEL TO CONDUCT SITE INSPECTIONS, NOR DOES IT DEFTY THE RIGHT OF THE PERMITTEE (S) TO ACCOMPANY THE INSPECTOR (S).

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