EROSION AND SEDIMENT CONTROL NARRATIVE

A SOILS MAP IS ATTACHED WHICH SHOWS THE LOCATION OF VARIOUS SOILS WITHIN THE CONSTRUCTION AREA. THE FOLLOWING SYMBOLS CORRESPOND WITH SOIL TYPES ON THE MAP FILL SITE BASE SOIL (EXISTING SOIL TYPE AT TAX # 86.01-01-07) SOIL NAME, TYPE, SLOPE RANGE % DISTURBED AREA HAYESVILLE FINE SANDY LOAM, 15/25 1.04 AC.

SOIL AT "THE PRESERVE AT TWO FORD ROAD" SOIL NAME, TYPE, SLOPE RANGE % HAYESVILLE FINE SANDY LOAM, 25/50

THE FOLLOWING PROPERTIES CORRESPOND WITH SOIL TYPES. EROSION POTENTIAL PERMEABILITY MODERATE MODERATE

TYPICAL SEQUENCE. DEPTH AND COMPOSITION LAYERS IN THE SOILS ARE AS FOLLOWS:

26D Hayesville fine sandy loam, 15 to 25% slopes
Surface layer: 0-4 inches, dark b
Subsurface: 4 to 8 inches, broi
Subsoil: 8 to 15 inches, str 0-4 inches, dark brown fine sandy loan 4 to 8 inches, brown fine sandy loam 8 to 15 inches, strong brown loam 15 to 24 inches, yellowish red clay loam 24 to 43 inches, red clay

43 to 51 inches, red and yellowish red clay loarn 51 to 61 inches, red, brownish yellow, and white sandy clay loam

28E Hayesville fine sand Surface layer: Subsurface: Subsoil: 0–4 inches, dark brown fine sandy loam 4 to 8 inches, brown fine sandy loam 8 to 15 inches, strong brown loam 15 to 24 inches, yellowish red clay loam 24 to 43 inches, red clay 43 to 51 inches, red and yellowish red clay loam 51 to 81 inches, red, brownish yellow, and white sandy clay loan

IT IS CRITICAL THAT THE EROSION AND SEDIMENT CONTROL MEASURES BE MAINTAINED O PREVENT ANY SEDIMENT FROM REACHING THE GLADE CREEK TRIBUTARY.

GENERAL STANDARDS: ALL EROSION AND SEDIMENT CONTROL PRACTICES AND PROCEDURES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT

SEE DEO'S MINIMUM STANDARDS LISTED ON THE ROANOKE COUNTY ESC DETAIL SHEET. 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 625-02-00 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 ONSITE PRECONSTRUCTION

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

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 DEWATERING OPERATION, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES
PERIODICALLY AND AFTER EACH RUNOFF-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
FILED WITH THE BOTETOURT COUNTY EROSION AND SEDMENT CONTROL ADMINISTRATOR ONCE EVERY TWO WEEKS, BEGINNING WITH COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND WITHIN 48 HOURS OF ANY RUNOFF-PRODUCING RAINFALL EVENT. FAILURE TO SUBMIT A REPORT WILL BE GROUNDS FOR IMMEDIATE REVOCATION OF THE LAND DISTURBING PERMIT. REPORTS MUST BE POSTMARKED WITHIN 24 HOURS OF THE DEADLINE. A STANDARD INSPECTION REPORT FORM WILL BE SUPPLIED, WHICH SHOULD BE COPIED AS NECESSARY. THIS PROVISION IN NO WAY WAIVES THE RIGHT OF BOTETOURT COUNTY PERSONNEL TO CONDUCT SITE INSPECTIONS, NOR DOES IT DENY THE RIGHT OF THE PERMITTEE (S) TO ACCOMPANY THE INSPECTOR (S).

CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING MINIMUM STANDARDS

MS-1: THOUGH TS / PS LABELS ARE SHOWN GENERICALLY ON THE PLANS, THE CONTRACTOR SHALL SEED ALL AREAS NOT INDICATED TO BE OTHERWISE STABILIZED WITH PERMANENT SEED MIXTURE WITHIN 7 DAYS OF REACHING FINAL GRADE OR WITH TEMPORARY SEED MIXTURE ANY AREA YET TO REACH FINAL GRADE BUT THAT IS NOT PROPOSED TO BE ACTIVELY INVOLVED IN THE WORK WITHIN 30 DAYS. THESE SEED MIXTURES AND APPLICATION SPECIFICATIONS ARE SHOWN HEREON. THE CONTRACTOR SHALL HONOR THE CLEARING AND GRADING LIMITS SHOWN ON THE PLAN.

MS-2: THE CONTRACTOR SHALL STABILIZE WITH TS AND PROTECT FROM EROSION, WITH ANY APPLICABLE METHOD, ALL STOCKPILES AND ANY ON-SITE OR OFF-SITE BORROW OR SPOIL AREAS, AS APPLICABLE. APPROVAL OF THIS PLAN DOES NOT COVER OFF-SITE BORROW OR SPOIL AREAS. 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 FOR REVIEW AND APPROVAL BY THE PLAN

MS-3: WHERE TS/PS ARE NOT APPLICABLE PROVIDE OTHER MEANS OF STABILIZATION (CRS, ETC.) WITHIN 7 DAYS OF REACHING FINAL GRADE OR WITHIN 30 DAYS WHERE THE AREA IS YET TO REACH FINAL GRADE BUT IS NOT PROPOSED TO BE ACTIVELY INVOLVED

MS-4: ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED IN ADVANCE OF THE WORK THEY ARE INTENDED TO PROTECT. MS-5: EARTHEN CONTROLS AND STRUCTURES SHALL BE STABILIZED IMMEDIATELY UPON

MS-6: WHERE A SEDIMENT TRAP (<3 ACRES OF DRAINAGE) OR SEDIMENT BASIN (>3 ACRES OF DRAINAGE) ARE INDICATED CALCULATIONS SHOWN ARE BASED ON OUTLINED DRAINAGE AREAS. CONTRACTOR SHALL HONOR INDICATED DRAINAGE DIVIDES AND CONFORM TO VOLUMES, DETAILS, ETC. PROVIDED ON PLANS.

MS-7: CARE HAS BEEN TAKEN IN DESIGN TO MINIMIZE DRAINAGE OVER SLOPES AND PROVIDE A SUITABLE PROTECTIVE STABILIZATION METHOD. CONTRACTOR SHALL PROTECT SLOPE AREAS DURING AND AFTER CONSTRUCTION FROM CONCENTRATED RUNOFF AND THE EROSION EFFECTS OF WIND AND RAIN. STABILIZE AS SOON AS PRACTICAL TO MINIMIZE

MS-8: WHERE CONCENTRATED RUNOFF HAS BEEN ROUTED DOWN SLOPES CARE HAS BEEN TAKEN TO DESIGN AN ADEQUATE CHANNEL OR DRAIN. CONTRACTOR SHALL INSTALL THESE MEASURES ALONG WITH THEIR STABILIZATION AS SOON AS PRACTICAL TO

NOT APPLICABLE; NO CHANNELS OR DRAINS ARE PROPOSED OVER SLOPES. MS-9: NOT APPLICABLE; SEEPAGE THROUGH SLOPES IS NOT ANTICIPATED TO BE ENCOUNTERED ON THIS PROJECT.

MS-10: INLET OR CULVERT INLET PROTECTION IS PROPOSED FOR THE INLETS OF ALL STORM SEWERS OR CULVERTS ON-SITE. RLD SHALL INSURE PROPER INSTALLATION AND ASSURE ADEQUATE SIZING BASED ON DRAINAGE AREA OF EACH INLET. MS-11: RLD SHALL VERIFY THAT ADEQUATE CHANNEL LININGS AND PROPER OUTLET PROTECTION IS IN PLACE PRIOR TO OPERATION OF STORM SEWER SYSTEM. MS-12: WHEN WORKING IN AND AROUND A LIVE WATERCOURSE, THE CONTRACTOR

SHALL TAKE GREAT CARE TO MINIMIZE IMPACT ON THE STREAM. ASSURE THAT PROPER PERMITS FROM DEQ / COE ARE IN HAND PRIOR TO COMMENCING SUCH WORK. MS-13: WHERE MORE THAN 2 TRIPS IN 6 MONTHS ARE EXPECTED ACROSS A LIVE VATERCOURSE OBTAIN THE NECESSARY PERMIT AND INSTALL A TEMPORARY STREAM

STREAM CROSSING IS NOT APPLICABLE; NO STREAM CROSSINGS ARE PLANNED FOR

MS-14: OTHER FEDERAL, STATE, AND LOCAL REGULATIONS MUST BE MET WHEN WORKING IN LIVE WATERCOURSES. WORK PLANNED FOR THE RESTORATION AND STABILIZATION OF THE EXISTING STREAM

APPROVAL PRIOR TO CONSTRUCTION. MS-15: THE BED AND BANKS OF DISTURBED WATERCOURSES MUST BE STABILIZED

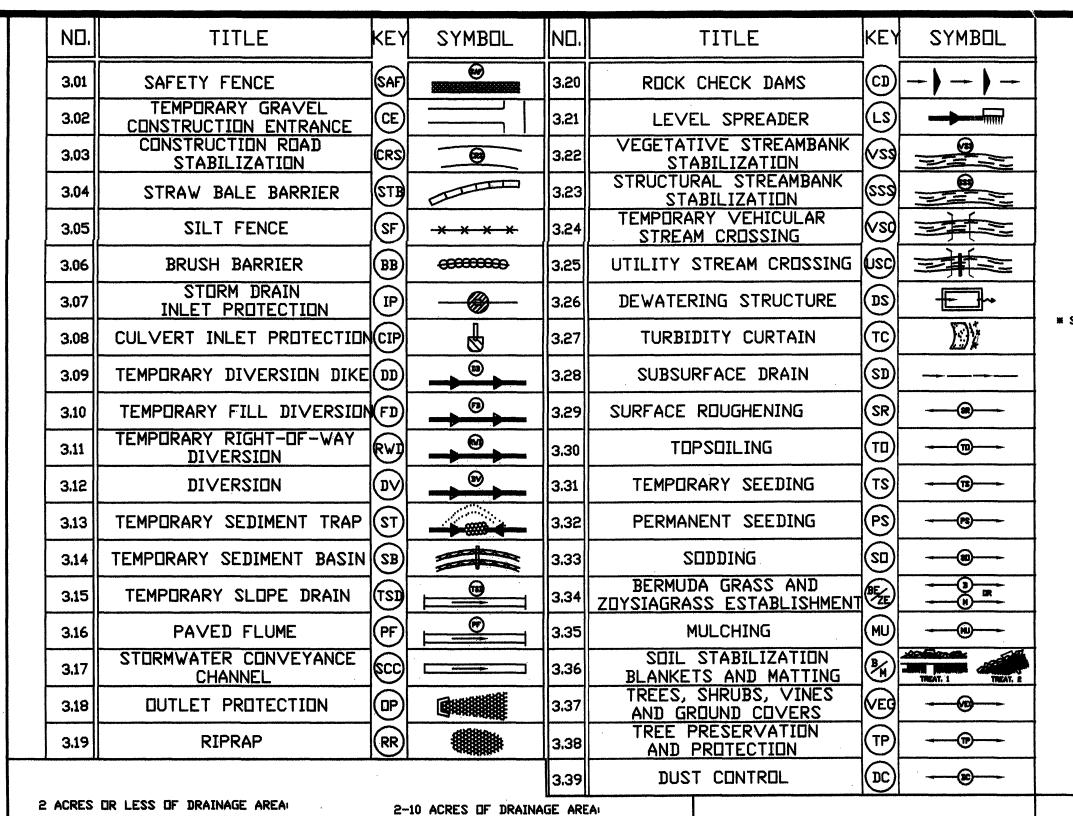
ALONG THE WEST SIDE OF THE PROPERTY SHALL BE SUBMITTED TO DCR FOR

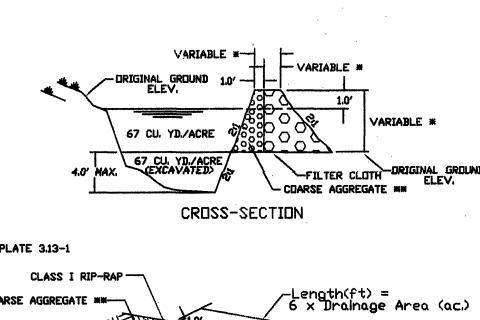
MS-16: REGARDING UTILITY INSTALLATIONS, NO MORE THAN 500 LF OF TRENCH MAY BE trench. Effluent of any dewatering system used must be filtered. Trenches SHALL BE PROPER BACKFILLED AND COMPACTED PER DETAIL AND SPECS. COMPLETED INSTALLATION SHALL BE RE-STABILIZED MIMEDIATELY.

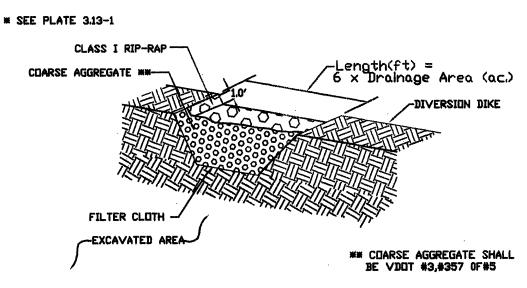
MS-17: THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND / OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT THE STREETS ARE IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.

MS-18: SEE MAINTENANCE UNDER ESC NARRATIVE FOR REMOVAL OF TEMPORARY

MS-19: STORMWATER MANAGEMENT PROVIDED INCREASES IN STORMWATER VOLUME, VELOCITY, AND PEAK RUNOFF HAVE BEEN
ADDRESSED IN THE PLAN PER CALCULATIONS SUBMITTED FOR REVIEW. RESPONSIBLE
LAND DISTURBER SHALL PAY PARTICULAR ATTENTION TO OFF—SITE AREAS CONTRIBUTING RUNOFF TO THE SITE, OFF-SITE LOCATIONS RECEIVING RUNOFF FROM THIS PROJECT, AND PROPER OPERATION OF STORMWATER MANAGEMENT PRACTICES ON—SITE. 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 DCR'S MS-19. IF EROSION OR SCOUR IS OCCURRING THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL CORRECTIVE MEASURES.







SEDIMENT TRAP

FOR AREAS LESS THAN 3.0 ACRES. FOR AREAS LARGER THAN 3.0 ACRES A SEDIMENT BASIN

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. IS REQUIRED. SEE DETAIL THIS SHEET. 2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERVISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.

3.0'

VDOT #1 Coarse

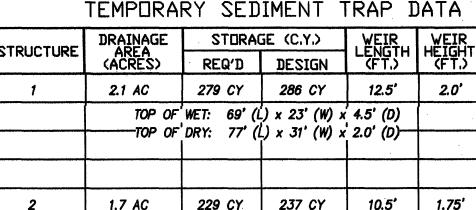
Aggregate

Filter Cloth

Ref. Table 3.02-A of

for requirements.

Virginia ESC Handbook



TEMPORARY DIVERSION DIKE (FD) TEMPORARY FILL DIVERSION TEMPORARY RIGHT-OF-WAY

DIVERSION

CROSS-SECTION

10' IF WIRE IS

USED.

CONSTRUCT A WASHBOARD OR

WASH RACK IF REQUIRED.

Filter Fabric -

1.75' 2.75 229 CY TOP OF WET: 67' (L) x 22' (W) x 3.75' (D) —TOP OF 'DRY: 74' (L') x 29' (W) x' 1.75' (D)— 10.5 1.7 AC 229 CY 250 CY *2.0*′ TOP OF WET: 56' (L) x 25' (W) x 4.0' (D) -TOP OF DRY: 64' (L) x 33' (W) x 2.0' (D)-

6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE COUNTY. TEMPORARY SEEDING MIXTURE PLANTING DATES RATE (LBS./ACRE) 3.0' 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) 50 - 100 SEPT. 1 - FEB. 15 CEREAL (WNTER) RYE (SECALE CEREALE) ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) 60 - 100

PROPERTY AT THE END OF EACH DAY'S WORK.

MAY. 1 - AUG. 31 GERMAN MILLET (SETARIA ITALICA)

EROSION-SILTATION CONTROL

LF

EA

ACRE

EA

DATED SEPTEMBER 8, 2004.

DESCRIPTION

SILT FENCE

TEMPORARY

DIVERSION DIKE

SEDIMENT TRAP

TEMPORARY AND

CULVERT INLET

PROTECTION

SUB-TOTAL

10% CONTINGENCY

TOTAL PROJECT COST

ALL COSTS GIVEN ABOVE ARE COMPLETE IN PLACE

PERMANENT SEEDING

COST ESTIMATE

1) BONDED WITH APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR "WEDGEWOOD"

QUANTITY

1,337

1,154

3.31

ALSO SEE APPROVED EROSION

AND SEDIMENT CONTROL PLAN

DATED: 3 JAN. 2005.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

. ALL SUIL ERUSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS

ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT

4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNDFF BE DIVERTED OR

UNIT COST

\$ 3.00

\$ 2.00

1,000.00

2,000.00

75.00

TOTAL COST

\$ 4,011.00

\$ 2,308.00

\$ 1,000.00

6,620.00

\$ 14,014.00

\$ 1,402.00

\$ 15,416.00

\$ 75.00

TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

TYPE B (SLOPES 31 OR STEEPER)



TYPE A 15 MARCH TO 1 MAY CROWN VETCH @ 1/2 LB / 1000 SF 15 OCTOBER TO 1 FEBRUARY K-31 FESCUE @ 5 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF RED TOP @ 1/8 LB / 1000 SF BURZY WINTER RYE @ 1/2 LB / 1000 SF 1 FEBRUARY TO 1 JUNE K-31 FESCUE @ 5 LB / 1000 SF 15 AUGUST TO 1 DCTOBER CROWN VETCH @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF annual Rye e 1/2 LB / 1000 SF RED TOP @ 1/8 LB / 1000 SF

JUNE TO 1 SEPTEMBER K-31 FESCUE @ 5 LB / 1000 SF GERNAN MILLET @ 1/2 LB / 1000 SF 1 SEPTEMBER TO 15 OCTOBER K-31 FESCUE @ 5 LB / 1000 SF ANNUAL RYE @ 1/2 LB / 1000 SF

140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE FERTILIZER: 5-20-10 @ 25 LB / 1000 SF 38-0-0 @ 7 LB / 1000 SF

IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESERVING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

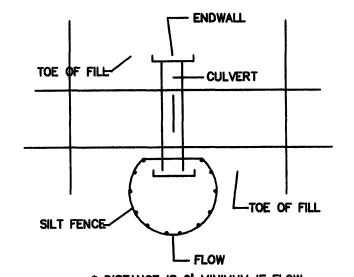
SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 5.68 AC.

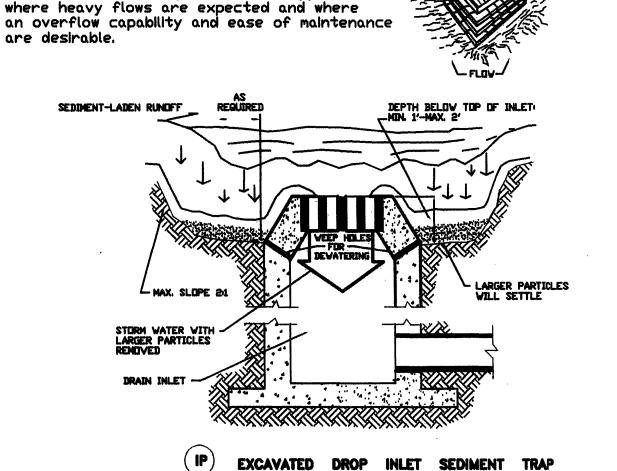
ravel (12 min Depth) - SEDIMENT

SPECIFIC APPLICATION This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures and unprotected areas.

* Gravel shall be VDDT #3, #357 or #5 coarse aggregate. (IP) GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



* DISTANCE IS 6' MINIMUM IF FLOW IS TOWARD EMBANKMENT. SILT FENCE CULVERT INLET **PROTECTION**



(IP) GRAVEL CURB INLET SEDIMENT FILTER

FILTER CLOTH

(CD) ROCK CHECK DAM

(DOWNSTREAM VIEV)

SPECIFIC APPLICATION

Gravel shall be VDOT #3, #357 or 5

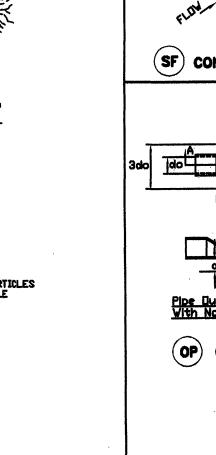
coarse aggregate.

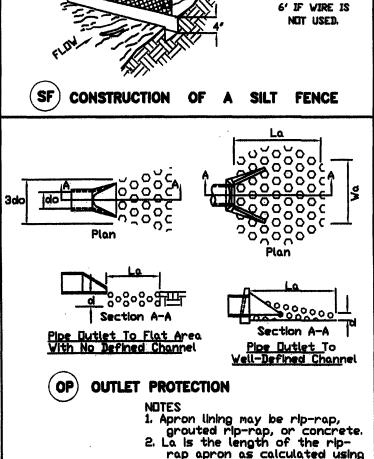
This nethod of inlet protection is applicable at curb inlets where ponding in front of the structure is not likely to cause inconvenience or damage to adjacent structures and unprotected areas.

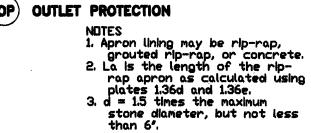
SPECIFIC APPLICATION

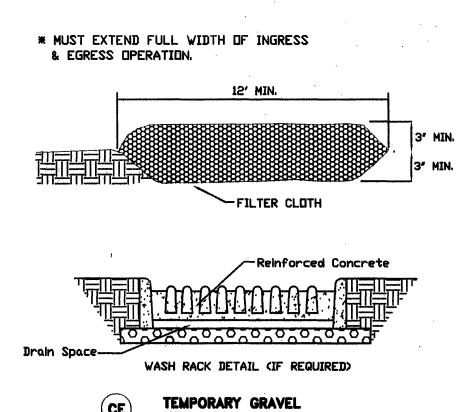
This method of inlet protection is applicable

(DOWNSTREAM VIEW)









CONSTRUCTION ENTRANCE

DEPARTMENT ENGINEERING AND INSPECTIONS

NO.	REVISIONS	DATE
6		
5		
4		
3	ENGR. & INSPEC.	10-27-93
2	ENGR. & INSPEC.	08-05-93
1	ENGR. & INSPEC.	04-10-93

COUNTY OF ROANOKE

DATE: 11/02/93 SCALE: NO SCALE DRAWING BY: CLN, AF G:\CAD\DETAILS\EROSION\EROSION) APPROVED BY: GWS,III

EROSION & SEDIMENT CONTROL STORMWATER MANAGEMENT DETAILS 13 13

WVWA ID# 6YDKEF

COMM. No.: 2002-244