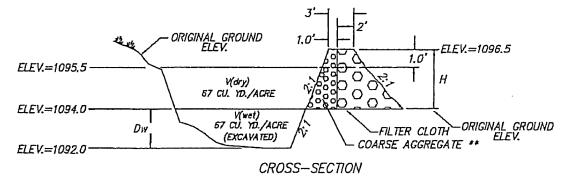
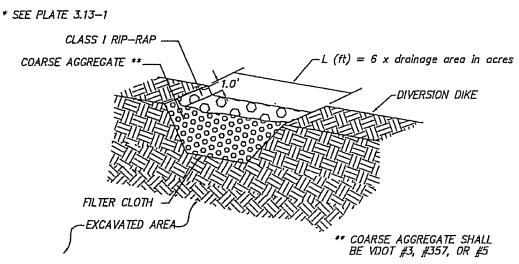
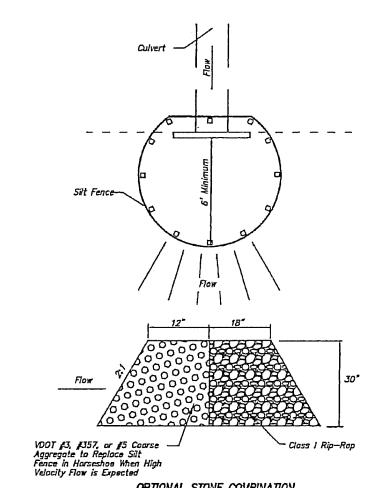


(IP) GRAVEL CURB INLET SEDIMENT FILTER

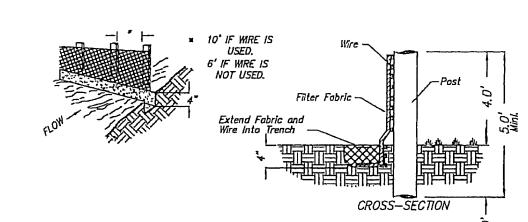




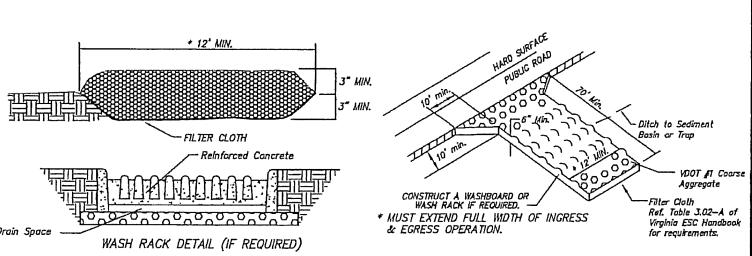
SEE PLAN FOR ADDITIONAL INFORMATION



OPTIONAL STONE COMBINATION SEE PLAN FOR ADDITIONAL INFORMATION DETAIL ADDED SEDIMENT TRAP



CONSTRUCTION OF A SILT FENCE (STD & SPEC 3.05)



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE (STD & SPEC 3.02)

DESCRIPTION QUANTITY UNIT COST TOTAL COST 1,260 SILT FENCE 4.00 5,040 EΑ 150.00 *750* INLET PROTECTION 1000 SF 50,00 3,550 PERMANENT SEEDING 1000 SF 40.00 TEMPORARY SEEDING 2,840 CONSTRUCTION EA 1,200.00 1,200 ENTRANCE CY100.00 100 PERMANENT RIP-RAP EΑ 400.00 400 CULVERT INLET PROTECTION 108 5.00 *540* TEMP. DIVERSION DIKE EΑ 1,500.00 1,500 TEMP. SEDIMENT TRAP SUB-TOTAL \$ 15,920 10% CONTINGENCY \$ 1,592

ESTIMATE | SOIL EROSION AND SEDIMENTATION

CONTROL COST ESTIMATE

REVISED

ALL COSTS GIVEN ARE COMPLETE IN PLACE

TOTAL BONDABLE COST

LOW-MAINTENANCE SLOPE

\$ 17,512

TEMPORARY SEEDING (STD & SPEC 3.31)

DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING MEASURES AS SHOWN HEREON, AND AS FURTHER DETAILED AS "STANDARD AND SPECIFICATION 3.31 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION. IN ADDITION TO AREAS OF GENERAL GRADING THAT WILL NOT BE FINE—GRADED FOR GREATER THAN 14 DAYS, THE FOLLOWING SPECIFIC E&S MEASURES SHALL BE STABILIZED WITH TEMPORARY SEEDING IMMEDIATELY UPON COMPLETION OF CONSTRUCTION OF THE TEMPORARY MEASURE:

- SOIL STOCKPILES - DIKES, DAMS, AND SIDES OF SEDIMENT BASINS - TEMPORARY ROADWAY EMBANKMENTS

PRIOR TO SEEDING, INSTALL NECESSARY EROSION CONTROL PRACTICES SUCH AS DIKES, WATERWAYS, AND BASINS. PROVIDE PLANTS AS SPECIFIED HEREIN, OR ENGINEER-APPROVED EQUAL.

LIME APPLICATION:

ADJUSTING THE SOIL PH BETWEEN 6.25 TO 6.5 IS EXTREMELY IMPORTANT FOR GRASS ESTABLISHMENT. A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL PH OF DENUDED SITES. HOWEVER, WHEN A SOIL TEST HAS NOT BEEN PERFORMED, APPLY 2 TONS/ACRE (90 POUNDS/1,000 SOUARE FEET) OF PULVERIZED AGRICULTURAL GRADE LIMESTONE

ERTILIZER SHALL BE APPLIED AS 450 LBS/ACRE OF 10—10—10 OR EQUIVALENT NUTRIENTS. LIME (AS APPLICABLE) AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4 TO 6 INCHES OF SOIL BY DISKING OR OTHER MEANS. WHEN APPLYING SLOWLY AVAILABLE NITROGEN. USE RATES AVAILABLE IN "EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES" AT http://www.deg.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf.

SURFACE ROUGHENING SHALL BE REQUIRED WHERE AREAS TO BE SEEDED HAVE BEEN COMPACTED, CRUSTED, OR HARDENED BY CONSTRUCTION TRAFFIC. AS REQUIRED, SEEDBEDS SHALL BE ROUGHENED IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.29 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, (TRACKING WITH BULLDOZER CLEATS SHALL BE USED IN SANDY SOILS)

SEED SHALL BE EVENLY APPLIED WITH THE SAME MEANS SPECIFIED HEREIN FOR PERMANENT SEEDING. SMALL GRAINS SHALL BE PLANTED NO MORE THAN ONE INCH DEEP, GRASSES AND LEGUMES SHALL BE PLANTED WITH NO LESS THAN

SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO STANDARD AND SPECIFICATION 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. EXCEPT THAT FIBER MULCH MAY NOT BE USED. STRAW MULCH SHALL BE USED DURING THESE PERIODS. TEMPORARY SEEDINGS MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY NOT REQUIRE MULCH.

<u>RE-SEEDING:</u> AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION SHALL BE RE-SEEDED AS

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS BY RANGE OF PLANTING DATES:

ANNUAL RYEGRASS @ 50 LB / ACRE 09/01 TO 02/15 WINTER RYE @ 50 LB / ACRÉ 02/16 TO 04/30 ANNUAL RYEGRASS @ 100 LB / ACRE 05/01 TO 08/31 GERMAN MILLET @ 50 LB / ACRE

PERMANENT SEEDING MIXTURE (STD & SPEC 3.32)

DISTURBED AREAS SHALL BE PERMANENTLY SEEDED WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE, OR ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN ONE YEAR.

PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN / MOUNTAIN AREA

APPLICATION RATES LAND USE <u>SPECIES</u> MINIMUM CARE LAWN TALL FESCUE(1) 90-100% (COMMERCIAL OR RESIDENTIAL) PERENNIAL RYEGRASS (2) 0-10% KENTUCKY BLUEGRASS TOTAL 200-250LBS/ACRE

HIGH-MAINTENANCE LAWN MINIMUM OF THREE UP TO FIVE VARIETIES OF KENTUCKY BLUEGRASS

TALL FESCUE (1)

TOTAL 125 LBS/ACRE FROM APPROVED LIST FOR USE IN VIRGINIA(1)

TALL FESCUE (1)
RED TOP GRASS OR CREEPING RED FESCUE GENERAL SLOPE (3:1 OR LESS) 2 LBS SEASONAL NURSE CROP (3) TOTAL 150 LBS/ACRE

(STEEPER THAN 3:1) RED TOP GRASS OR CREEPING RED FESCUE 2 LBS SEASONAL NURSE CROP (3) 20 LBS CROWNVETCH (4) TOTAL 150 LBS/ACRE

(1) WHEN SELECTING VARIETIES OF TURFGRASS, USE THE VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCIA) RECOMMENDED TURFGRASS VARIETY LIST. QUALITY SED WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY VCIA, A CURRENT TURFGRASS VARIETY LIST IS AVAILABLE AT THE LOCAL COUNTY EXTENSION OFFICE OR THROUGH VCIA AT 804-746-4884. (2) PERENNIAL RYEGRASS WILL GERMINATE FASTER AND AT LOWER SOIL TEMPERATURES THAN TALL FESCUES,

THEREBY PROVIDING COVER AND EROSION RESISTANCE FOR SEEDBED. (3) USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW: MARCH, APRIL - MAY 15TH----MAY 16TH - AUGUST 15TH------ FOXTAIL MILLET

AUGUST 16TH - SEPTEMBER, OCTOBER---- ANNUAL RYE NOVEMBER-FEBRUARY----- WINTER RYE (4) ALL LEGUME SEED MUST BE PROPERLY INOCULATED. IF FLATPEA IS USED, INCREASE TO 30 LBS/ACRE. IF

WEEPING LOVEGRASS IS USED, INCLUDE IN ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS, INCREASE TO 30-40 LBS/ACRE.

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS/ACRE (OR 12 LBS/1000 SOUARE FEET) - APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 90 LBS/1000 SQUARE FEET)

- A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL PH - INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4-6 INCHES OF SOIL BY DISKING OR OTHER MEANS. - WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN "EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES" AT

http://www.deg.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf.

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.

SOIL CONDITIONING:
INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING 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

<u>SEED APPLICATION:</u> 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.

GENERAL EROSION AND SEDIMENT CONTROL NOTES 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,

- 2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH
- 3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED.
- 4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
- 5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
- 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.

2 REVISED FEBRUARY 16, 2015 PER RKE. CO / VDOT / WVWA REVIEW - CLW Tax Parcel: 39.05-01-09.00 1 REVISED DECEMBER 11, 2014 PER RKE. CO / VDOT / WVWA REVIEW — CLW W.O. No.: 14-0046

TOTAL DISTURBED AREA = 2.73 AC. = 119,130 SQ. FT. TH OF CORBIN L. WHITE License No. 23843 02 - 1 6 - 2015

SOIL EROSION CONTROL DETAILS AND COST ESTIMATE SEVENTH DAY ADVENTIST REFORM MOVEMENT GENERAL CONFERENCE SHOWING THE CONSTRUCTION OF A NEW CHAPEL FACILITY AND

ASSOCIATED SITE IMPROVEMENTS SITUATE 5248 HOLLINS ROAD HOLLINS MAGISTERIAL DISTRICT COUNTY OF ROANOKE, VIRGINIA

Designed: C.L. White Drawn: C.L. White Date: October 03, 2014 As Shown Field Book: _____CH-8

*CWA CALDWELL WHITE ASSOCIATES ENGINEERS / SURVEYORS / PLANNERS 4203 MELROSE AVENUE P.O. BOX 6280 ROANOKE, VIRGINIA 24017-0260 (540) 388-3400

FAX: (540) 366-8702 SHEET C-15 OF 16