STORMWATER MANAGEMENT COST ESTIMATE ALL COSTS GIVEN ARE COMPLETE IN PLACE UNIT COST TOTAL COST DESCRIPTION UNIT QUANTITY 18' FLARED END LUMP 60" ASP 47 34 STRUCTURES LUMP ACCESS ROAD LUMP AS-BUILTS SUB-TOTAL 10% CONTINGENCY TOTAL PROJECT COST SEDIMENT BASIN SCHEMATIC **ELEVATIONS** SEDIMENT CLEANDUT POINT ("WET" STORAGE REDUCED DESIGN ELEVATIONS WITH EMERGENCY SPILLWAY DESIGN HIGH WATER (25-YR. STORM ELEV.) | MIN. 2.0' - RISER CREST DESIGN ELEVATIONS WITHOUT EMERGENCY SPILLWAY (RISER PASSES 25-YR. EVENT)

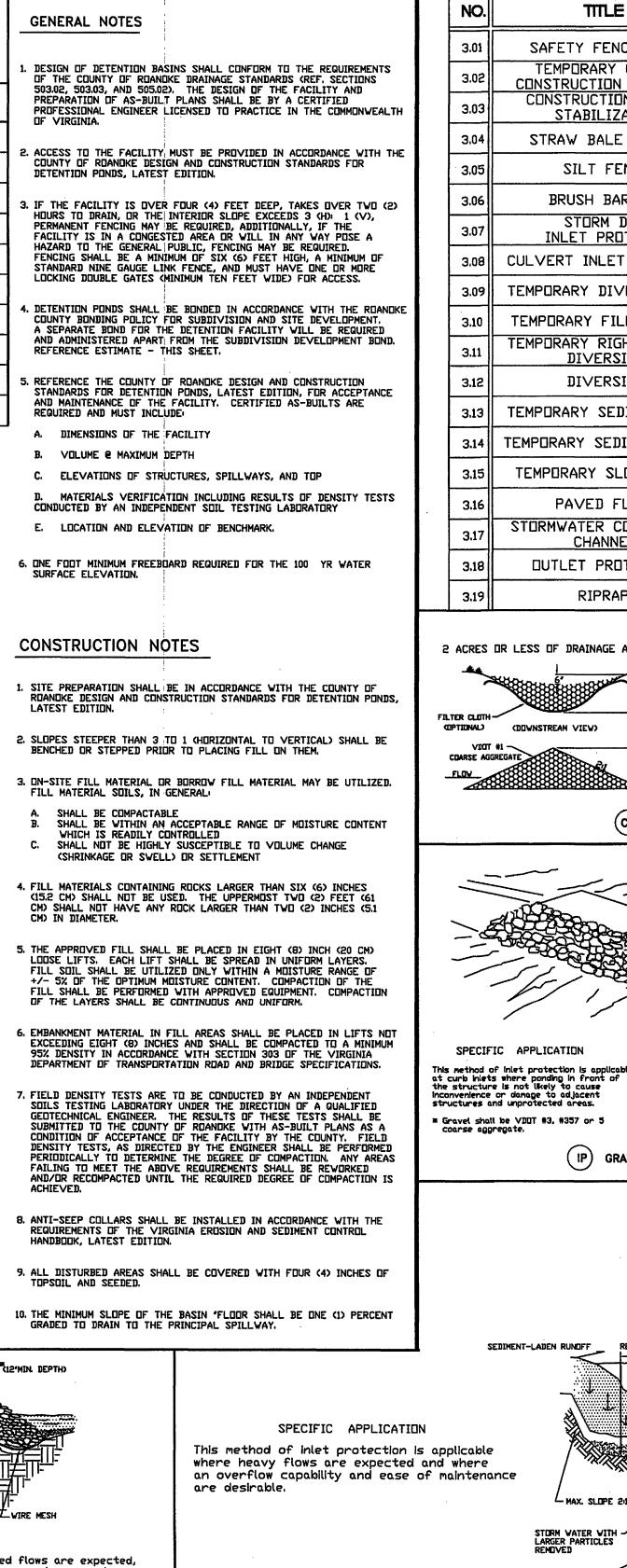
SPECIFIC APPLICATION

to adjacent structures and unprotected areas.

* Gravel shall be VDOT #3, #357 or #5 coarse aggregate

This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure night cause excessive inconvenience or damage

(IP) GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



GENERAL NOTES

REFERENCE ESTIMATE - THIS SHEET.

REQUIRED AND MUST INCLUDE:

A. DIMENSIONS OF THE FACILITY

B. VOLUME @ MAXIMUM DEPTH

CONSTRUCTION NOTES

FILL MATERIAL SOILS, IN GENERAL

400

75

3500

1000

400

10,260

3525

952

7000

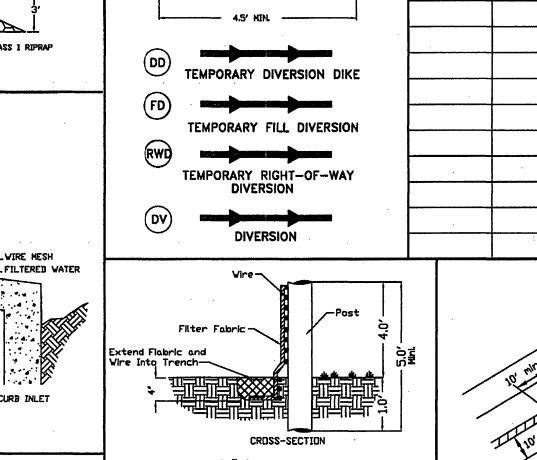
1000

23,137

ž 2313

25,450

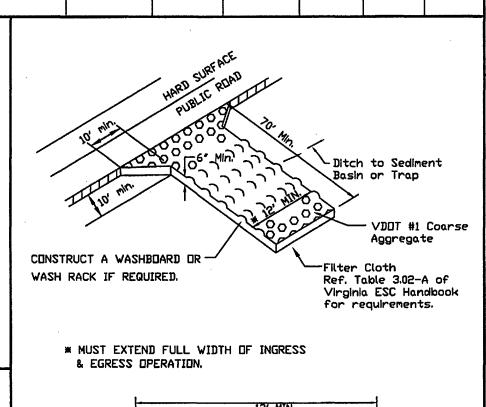
SYMBOL SYMBOL SAFETY FENCE ROCK CHECK DAMS TEMPORARY GRAVEL LEVEL SPREADER CONSTRUCTION ENTRANCE CONSTRUCTION ROAD STABILIZATION STRUCTURAL STREAMBANK STRAW BALE BARRIER TEMPORARY VEHICULAR SILT FENCE STREAM CROSSING BRUSH BARRIER (33333333) UTILITY STREAM CROSSING 三群三 STORM DRAIN **₽** DEWATERING STRUCTURE INLET PROTECTION CULVERT INLET PROTECTION(CIP) TURBIDITY CURTAIN TEMPORARY DIVERSION DIKE (DD) SUBSURFACE DRAIN TEMPORARY FILL DIVERSION SURFACE ROUGHENING TEMPORARY RIGHT-OF-WAY TOPSOILING -------- DIVERSION DIVERSION TEMPORARY SEEDING ----(13)----TEMPORARY SEDIMENT TRAP ----(R)-----PERMANENT SEEDING TEMPORARY SEDIMENT BASIN BERMUDA GRASS AND TEMPURARY SLUPE DRAIN ZOYSIAURASS ESTABLISHMENT ---PAVED FLUME MULCHING TORMWATER CONVEYANCE SOIL STABILIZATION BLANKETS AND MATTING CHANNEL REES, SHRUBS, VINES OUTLET PROTECTION AND GROUND COVERS TREE PRESERVATION RIPRAP AND PROTECTION DUST CONTROL 2 ACRES OR LESS OF DRAINAGE AREA 2-10 ACRES OF DRAINAGE AREA FILTER CLUTH-(OPTIONAL) (DOWNSTREAM VIEW) (DOWNSTREAM VIEW) (CD) ROCK CHECK DAM TEMPORARY DIVERSION DIKE TEMPORARY FILL DIVERSION



10' IF WIRE IS

USED.

6' IF WIRE IS



67 CU. YD./ACRE

(ST) SEDIMENT TRAP

TEMPORARY SEDIMENT TRAP DATA

STORAGE (C.Y.)

REQ'D DESIGN

* SEE PLATE 3.13-1

CLASS I RIP-RAP-

FILTER CLOTH -

-EXCAVATED AREA-

For areas less than 3.0 acres. For areas larger than 3.0 acres, A SEDIMENT BASIN, is required

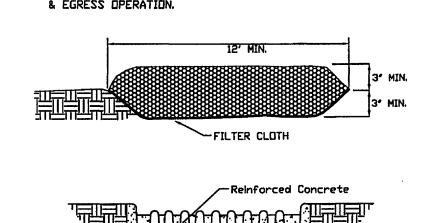
DRAINAGE AREA (ACRES)

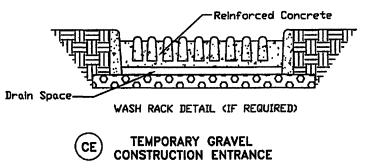
See Detail this sheet.

STRUCTUR

COARSE AGGREGATE **-

CROSS-SECTION





K-31 FESCUE @ 5 LB / 1000 SF ANNUAL RYE @ 1/2 LB / 1000 SF 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

K-31 FESCUE @ 5 LB / 1000 SF

1 FEBRUARY TO 1 JUNE K-31 FESCUE @ 5 LB / 1000 SF

SEPTEMBER TO 15 OCTOBER

ANNUAL RYE @ 1/2 LB / 1000 SF

1 JUNE TO 1 SEPTEMBER K-31 FESCUE @ 5 LB / 1000 SF GERMAN MILLET @ 1/2 LB / 1000 SF

BURZY WINTER RYE @ 1/2 LB / 1000

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. MULCH: 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 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 = 0.799 AC. = 34,833.98 SQ. FT.

EROSION-SILTATION CONTROL COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE QUANTITY UNIT COST TOTAL COST DESCRIPTION CONSTRUCTION 500 EΑ 500 ENTRANCE SILT FENCE 3.00 930 FILTER CLOTH ORIGINAL GROUNI EA 450 INLET PROTECTION 150 [EMPORARY LF DIVERSION DIKE **TEMPORARY** LF FILL DIVERSION -Length(ft) =
6 x Brainage Area (ac.) EΑ EDIMENT TRAP EΑ CHECK DAM 1000 SF 14.32 572.80 PERMANENT SEEDING 150 150 DUTLET PROTECTION SEDIMENT BASIN ** CUARSE AGGREGATE SHALL BE VDUT #3,#357 OF#5

SUB-TOTAL

10% CONTINGENCY

TOTAL PROJECT COST

GENERAL NOTES 2602.80

260.28

2863.08

KEY PLAN

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- I. 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
- 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 MODIFICATIONS.
- 3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
- 4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR 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 PROPERTY AT THE END OF EACH DAY'S WORK.
- 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 ROANDKE COUNTY.
- THE LOCATION OF ALL OFF-SITE FILL OR BURROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANDKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT. AN EROSION SEDIMENT CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.

PERMANENT SEEDING MIXTURE

TYPE B (SLOPES 3:1 OR STEEPER)

RED TOP 2 1/8 LB / 1000 SF

15 AUGUST TO 1 OCTOBER

15 MARCH TO 1 MAY CROWN VETCH @ 1/2 LB / 1000 SF F PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF

CROWN VETCH @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF RED TOP @ 1/8 LB / 1000 SF



SPECTRUM DESIGN

10 CHURCH AVE SE, PLAZA SUITE 1 ROANOKE, VIRGINIA 24011 540.342.6001 ROANOKE - MARION

B & D LOCK, INC.

SITE **IMPROVEMENTS**

SPECTRUM DESIGN PROJECT NO. 04051

AS BUILT

DATE
DESIGN ARCHITECT
PROJECT ARCHITECT
PROJECT ENGINEER 7 JUNE, 2005 CHECKED BY DRAWN BY

NUMBER

SHEET TITLE

REVISIONS

COUNTY ESC DETAILS

DEPARTMENT ENGINEERING AND INSPECTIONS 1. Apron lining may be rip-rap, grouted rip-rap, or concrete.

2. La is the length of the rip-rap apron as calculated using plates 1.36d and 1.36e.

3. d = 1.5 times the maximum stone diameter, but not less than 6'.

STORM WATER WITH LARGER PARTICLES REMOVED

EXCAVATED DROP INLET SEDIMENT TRAP

(IP) GRAVEL CURB INLET SEDIMENT FILTER

000000 Section A-A Section A-A <u>Pipe Outlet To Flat Area</u> <u>With No Defined Chan</u>nel <u>Pipe Dutlet</u>To <u>Well-Defined Chan</u>nel OP OUTLET PROTECTION

(SF) CONSTRUCTION OF A SILT FENCE

ROANOKE DETAILS COUNTY