

ALL COSTS GIVEN ARE COMPLETE IN PLACE

SEDIMENT BASIN SCHEMATIC ELEVATIONS



1. DESIGN OF DETENTION BASINS SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF ROCKNIDE DRAINAGE STANDARDS. (REF. SECTIONS 50302, 50303, AND 50502). THE DESIGN OF THE FACILITY AND PREPARATION OF AS-BUILT PLANS SHALL BE BY A CERTIFIED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE COMMONWEALTH OF VIRGINIA.
2. ACCESS TO THE FACILITY MUST BE PROVIDED IN ACCORDANCE WITH THE COUNTY OF ROCKNIDE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS, LATEST EDITION.
3. IF THE FACILITY IS OVER FOUR (4) FEET DEEP, TAKES OVER TWO (2) HOURS TO DRAIN, OR THE INTERIOR SLOPE EXCEEDS 3 (H) 1 (V), PERMANENT FENCING MAY BE REQUIRED. ADDITIONALLY, IF THE FACILITY IS IN A CONGESTED AREA OR WILL IN ANY WAY POSE A HAZARD TO THE GENERAL PUBLIC, FENCING MAY BE REQUIRED. FENCING SHALL BE A MINIMUM OF SIX (6) FEET HIGH, A MINIMUM OF STANDARD NINE GAUGE LINK FENCE, AND MUST HAVE ONE OR MORE LOCKING DOUBLE GATES (MINIMUM TEN FEET WIDE) FOR ACCESS.
4. DETENTION PONDS SHALL BE BONDED IN ACCORDANCE WITH THE ROCKNIDE COUNTY BONDING POLICY FOR SUBDIVISION AND SITE DEVELOPMENT, A SEPARATE BOND FOR THE DETENTION FACILITY WILL BE REQUIRED. THE FACILITY IS IN A CONGESTED AREA OR WILL IN ANY WAY POSE A HAZARD TO THE GENERAL PUBLIC, A SUBDIVISION DEVELOPMENT BOND, REFERENCE ESTIMATE - THIS SHEET.
5. REFERENCE THE COUNTY OF ROCKNIDE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS, LATEST EDITION, FOR ACCEPTANCE AND MAINTENANCE OF THE FACILITY. CERTIFIED AS-BUILTS ARE REQUIRED AND MUST INCLUDE:
 - A. DIMENSIONS OF THE FACILITY
 - B. VOLUME @ MAXIMUM DEPTH
 - C. ELEVATIONS OF STRUCTURES, SPILLWAYS, AND TOP
 - D. MATERIALS VERIFICATION INCLUDING RESULTS OF DENSITY TESTS CONDUCTED BY AN INDEPENDENT SOIL TESTING LABORATORY
 - E. LOCATION AND ELEVATION OF BENCHMARK.

1. SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE COUNTY OF ROCKHIGE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS LATEST EDITION.
2. SLOPES STEEPER THAN 3 TO 1 (HORIZONTAL TO VERTICAL) SHALL BE BENCHED OR STEPPED PRIOR TO PLACING FILL ON THEM.
3. ON-SITE FILL MATERIAL OR BORROW FILL MATERIAL MAY BE UTILIZED. FILL MATERIAL, SOILS, IN GENERAL:
 - A. SHALL BE COMPACTABLE
 - B. SHALL BE WITHIN AN ACCEPTABLE RANGE OF MOISTURE CONTENT (WHICH IS READILY CONTROLLED)
 - C. SHALL NOT HAVE ANY ROCK SUSCEPTIBLE TO VOLUME CHANGE (SHRINKAGE OR SWELL) OR SETTLEMENT
4. FILL MATERIALS CONTAINING ROCKS LARGER THAN SIX (6) INCHES (152 CM) SHALL NOT BE USED. THE UPPERMOST TWO (2) FEET (61 CM) SHALL NOT HAVE ANY ROCK LARGER THAN TWO (2) INCHES (51 CM) IN DIAMETER.
5. THE APPROVED FILL SHALL BE PLACED IN EIGHT (8) INCH (20 CM) LOOSE LIFTS, EACH LIFT SHALL BE SPREAD IN UNIFORM LAYERS. FILL SOIL SHALL BE UTILIZED ONLY WITHIN A MOISTURE RANGE OF +/- 5% OF THE OPTIMUM MOISTURE CONTENT. COMPACTION OF THE FILL SHALL BE PERFORMED WITH APPROVED EQUIPMENT. COMPACTION OF THE LAYERS SHALL BE CONTINUOUS AND UNIFORM.
6. EMBANKMENT MATERIAL IN FILL AREAS SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT (8) INCHES AND SHALL BE COMPACTED TO A MINIMUM 95% DENSITY IN ACCORDANCE WITH SECTION 303 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
7. FIELD DENSITY TESTS ARE TO BE CONDUCTED BY AN INDEPENDENT SOILS TESTING LABORATORY UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER. THE RESULTS OF THESE TESTS SHALL BE SUBMITTED TO THE COUNTY ENGINEER WITH AS-BUILT PLANS A CONDITION OF ACCEPTANCE OF THE FACILITY BY THE COUNTY. FIELD DENSITY TESTS, AS DIRECTED BY THE ENGINEER SHALL BE PERFORMED PERIODICALLY TO DETERMINE THE DEGREE OF COMPACTION. ANY AREAS FAILING TO MEET THE ABOVE REQUIREMENTS SHALL BE REWORKED, AND/OR RECOMPACTED UNTIL THE REQUIRED DEGREE OF COMPACTION IS ACHIEVED.
8. ANTI-SLEEP COLLAPRS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
9. ALL DISTURBED AREAS SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL AND SEED.
10. THE MINIMUM SLOPE OF THE BASIN FLOOR SHALL BE ONE (1) PERCENT GRADED TO DRAIN TO THE PRINCIPAL SPILLWAY.







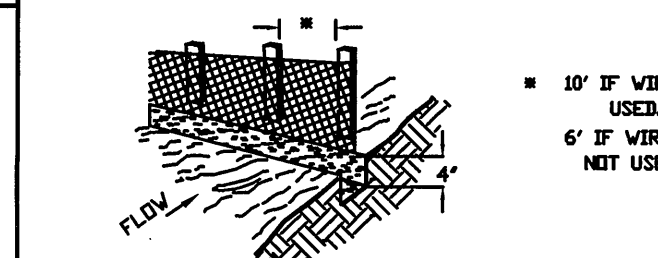
This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures and unprotected areas.

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

IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

COUNTY OF ROANOKE


 DD TEMPORARY DIVERSION DIKE

 FD TEMPORARY FILL DIVERSION

 RWD TEMPORARY RIGHT-OF-WAY DIVERSION

 DV DIVERSION



Plan

Section A-A

Section B-B

Pipe Outlet To Flat Area
with No Defined Channel

OP OUTLET PROTECTION

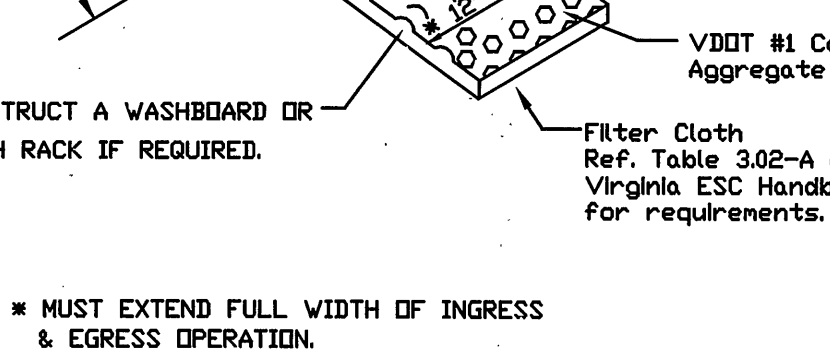
NOTES

1. Apron lining may be rip-rap, grouted rip-rap, or concrete.
2. L_a is the length of the rip-rap apron as calculated on plates 1.36d and 1.36e.
3. $d = 1.5$ times the maximum stone diameter, but not



NOTES

For areas less than 3.0 acres. For areas larger than 3.0 acres, A SEDIMENT TRAP, is required. Please see Va. ESC manual for details.

[illegible]

* MUST EXTEND FULL WIDTH OF INGRESS
& EGRESS OPERATION.



ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EA	1	\$ 1,000	\$ 1,000
SILT FENCE	LF	482	2.00	964.00
INLET PROTECTION	EA	4	100	400.00
TEMPORARY DIVERSION DIKE	LF	517	2.00	1,034
TEMPORARY FILL DIVERSION	LF			
SEDIMENT TRAP	EA	1	1,500	1,500
CHECK DAM	EA	11	50	550
PERMANENT SEEDING	1000 SF	250	20	5000
OUTLET PROTECTION	EA	2	200	400
SEDIMENT BASIN	EA	1	500	500
RIGHT OF WAY DIVERSION	EA	1	50	50
TEMPORARY SEEDING	1000 SF	250	20	5000
SUB-TOTAL				\$ 16,398
10% CONTINGENCY				\$ 1,639
TOTAL PROJECT COST				\$ 18,037

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.
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 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. THESE SYMBOLS SHALL BE USED TO BE UTILIZED IN ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE COUNTY.

TYPE A	TYPE B (SLOPES 34 OR STEEPER)
15 OCTOBER TO 1 FEBRUARY	15 MARCH TO 1 MAY
K-31 FESCUE @ 5 LB / 1000 SF	GRVNL VETCH @ 1/2 LB / 1000 SF
BURZY WINTER RYE @ 1/2 LB / 1000 SF	PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
	RED TOP @ 1/8 LB / 1000 SF
1 FEBRUARY TO 1 JUNE	15 AUGUST TO 1 OCTOBER
K-31 FESCUE @ 5 LB / 1000 SF	GRVNL VETCH @ 1/2 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF	PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
	RED TOP @ 1/8 LB / 1000 SF
1 JUNE TO 1 SEPTEMBER	
K-31 FESCUE @ 5 LB / 1000 SF	
GERMAN 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	

LIME: 140 LB / 1000 SF FULVERIZED AGRICULTURAL LIMESTONE .
FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF
MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE
APPLIED IN ACCORDANCE WITH SECTION 1.73 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 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 = 5.85 AC. = 254,826 SQ. FT.

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

SHEET
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