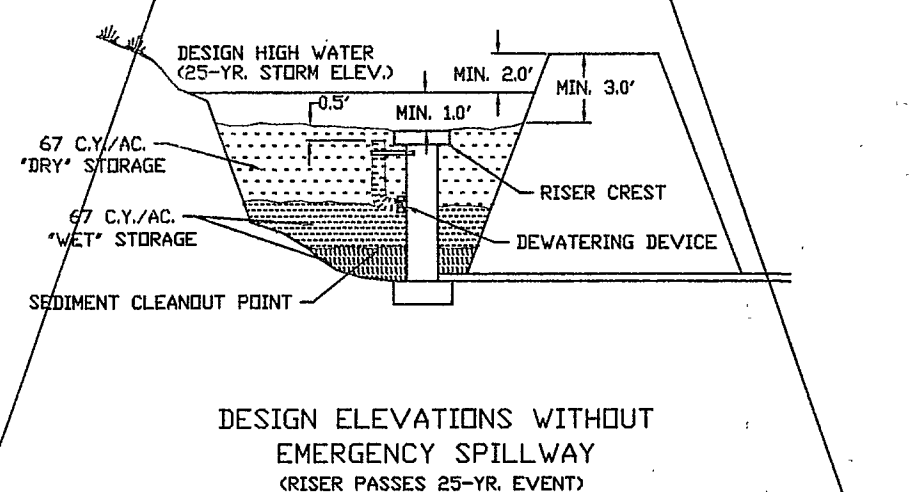
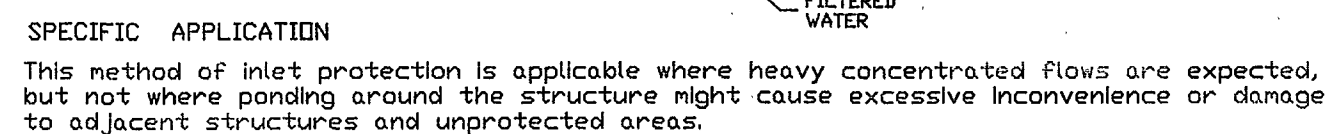


ALL COSTS GIVEN ARE COMPLETE IN PLACE

SEDIMENT BASIN SCHEMATIC
ELEVATIONS



DESIGN ELEVATIONS WITHOUT
EMERGENCY SPILLWAY
(RISER PASSES 25-YR. EVENT)



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

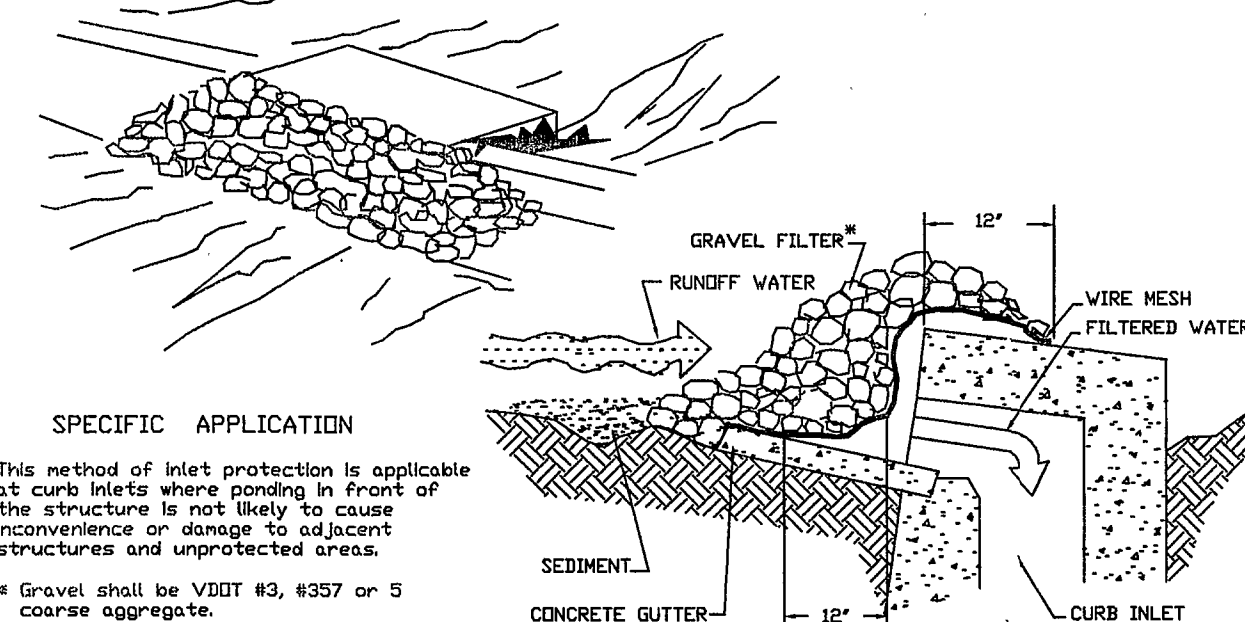
IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

GENERAL NOTES

1. DESIGN OF DETENTION BASINS SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF ROCKLAND DRAINAGE STANDARDS (REF. SECTIONS 503A2, 5030.3, AND 5050.2). 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 ROCKLAND 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 SHALL 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 FENCING FACILITY, AND MUST HAVE ONE OF MORE LOCKING DOUBLE GATES (MINIMUM TEN FEET WIDE) FOR ACCESS.
4. DETENTION POND(S) SHALL BE BONDED IN ACCORDANCE WITH THE ROCKLAND COUNTY BONDING POLICY FOR SUBDIVISION AND SITE DEVELOPMENT. PERMANENT BONDING FACILITY FOR DETENTION FACILITY WILL BE REQUIRED AND ADMINISTERED APART FROM THE SUBDIVISION DEVELOPMENT BOND. REFERENCE ESTIMATE - THIS SHEET.
5. REFERENCE THE COUNTY OF ROCKLAND 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.
6. ONE FOOT MINIMUM FREEBOARD REQUIRED FOR THE 100 YR WATER SURFACE ELEVATION.

CONSTRUCTION NOTES

1. SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE COUNTY OF ROCKEGE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION POUNDS 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 BE HIGHLY 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) OF FILL SHALL 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) LIFTED 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 OF ROCKEGE WITH AS-BUILT PLANS AS A CONDITION FOR PAYMENT. 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 COLLARS 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 SEEDS.
10. THE MINIMUM SLOPE OF THE BASIN FLOOR SHALL BE ONE (1) PERCENT GRADED TO DRAIN TO THE PRINCIPAL SPILL-WAY.



SPECIFIC APPLICATION

This method 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.

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

(IP) GRAVEL CURB INLET SEDIMENT FILTER



NO.	TITLE	KEY	SYMBOL	NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	(SAF)		3.20	ROCK CHECK DAMS	(CD)	
3.02	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	(CE)		3.21	LEVEL SPREADER	(LS)	
3.03	CONSTRUCTION ROAD STABILIZATION	(CRS)		3.22	VEGETATIVE STREAMBANK STABILIZATION	(VSS)	
3.04	STRAW BALE BARRIER	(STB)		3.23	STRUCTURAL STREAMBANK STABILIZATION	(SSS)	
3.05	SILT FENCE	(SF)		3.24	TEMPORARY VEHICULAR STREAM CROSSING	(VSC)	
3.06	BRUSH BARRIER	(BB)		3.25	UTILITY STREAM CROSSING	(USC)	
3.07	STORM DRAIN INLET PROTECTION	(IP)		3.26	DEWATERING STRUCTURE	(DS)	
3.08	CULVERT INLET PROTECTION	(CIP)		3.27	TURBIDITY CURTAIN	(TC)	
3.09	TEMPORARY DIVERSION DIKE	(DD)		3.28	SUBSURFACE DRAIN	(SD)	
3.10	TEMPORARY FILL DIVERSION	(FD)		3.29	SURFACE ROUGHENING	(SR)	
3.11	TEMPORARY RIGHT-OF-WAY DIVERSION	(RWJ)		3.30	TOPSOILING	(TD)	
3.12	DIVERSION	(DV)		3.31	TEMPORARY SEEDING	(TS)	
3.13	TEMPORARY SEDIMENT TRAP	(ST)		3.32	PERMANENT SEEDING	(PS)	
3.14	TEMPORARY SEDIMENT BASIN	(SB)		3.33	SODDING	(SD)	
3.15	TEMPORARY SLOPE DRAIN	(TSD)		3.34	BERMUDA GRASS AND ZOYSIAURASS ESTABLISHMENT	(BGE)	
3.16	PAVED FLUME	(PF)		3.35	MULCHING	(MU)	
3.17	STORMWATER CONVEYANCE CHANNEL	(SCC)		3.36	SOIL STABILIZATION BLANKETS AND MATTING	(S/M)	
3.18	OUTLET PROTECTION	(OP)		3.37	TREES, SHRUBS, VINES AND GROUND COVERS	(VEG)	
3.19	RIPRAP	(RR)		3.38	TREE PRESERVATION AND PROTECTION	(TP)	
				3.39	DUST CONTROL	(DC)	



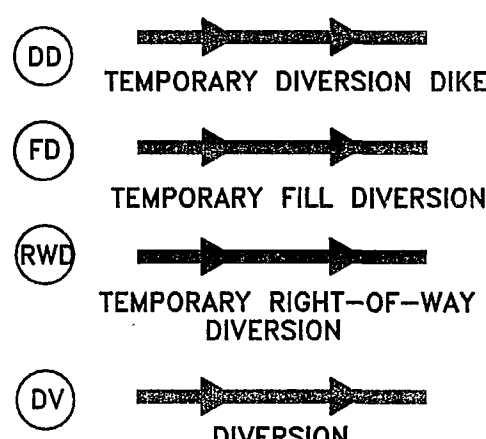
CROSS-SECTION



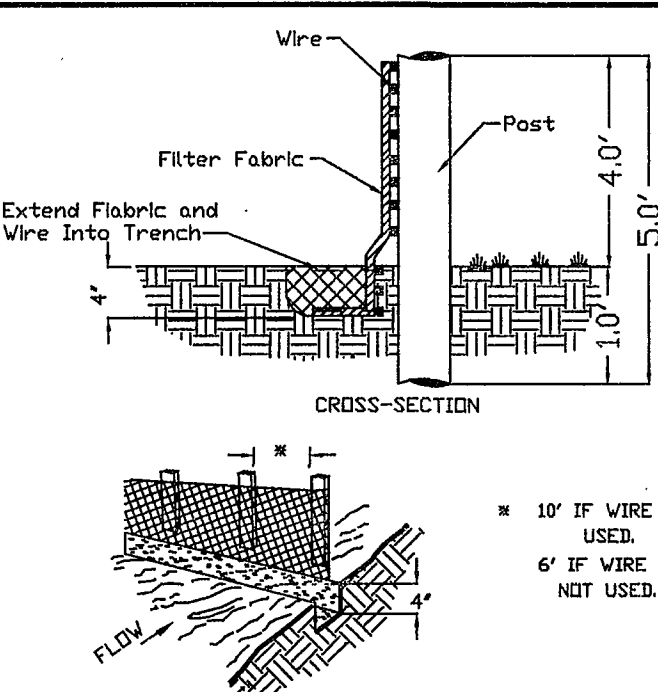
NOTES

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 design.

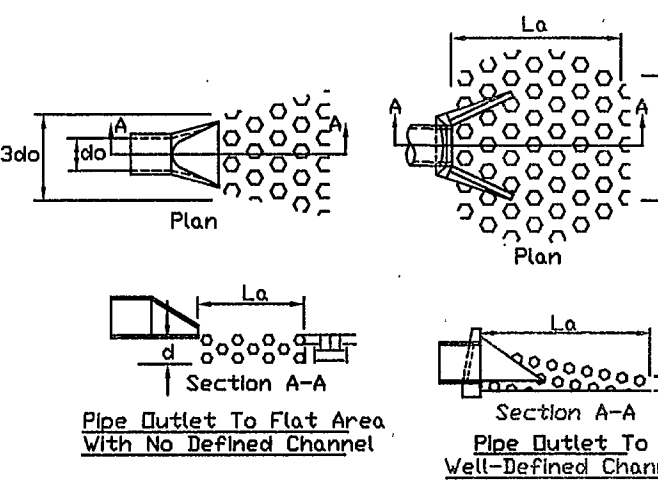
TEMPORARY SEDIMENT TRAP DATA

[illegible]

(SF) CONSTRUCTION OF A SILT FENCE

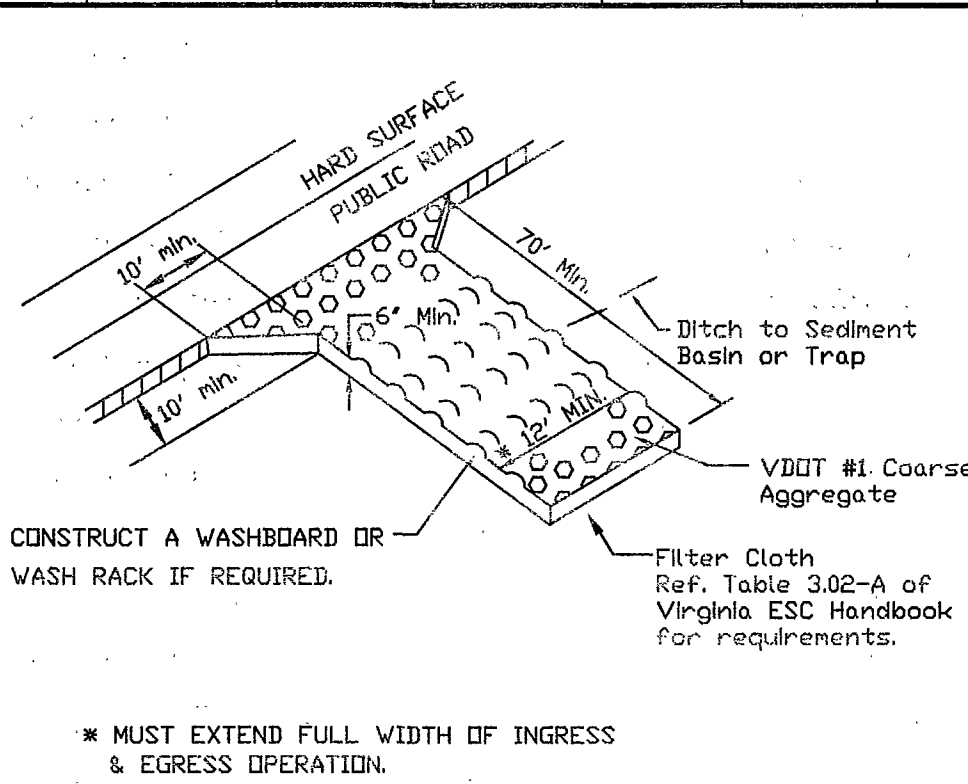


(SF) CONSTRUCTION OF A SILT FENCE

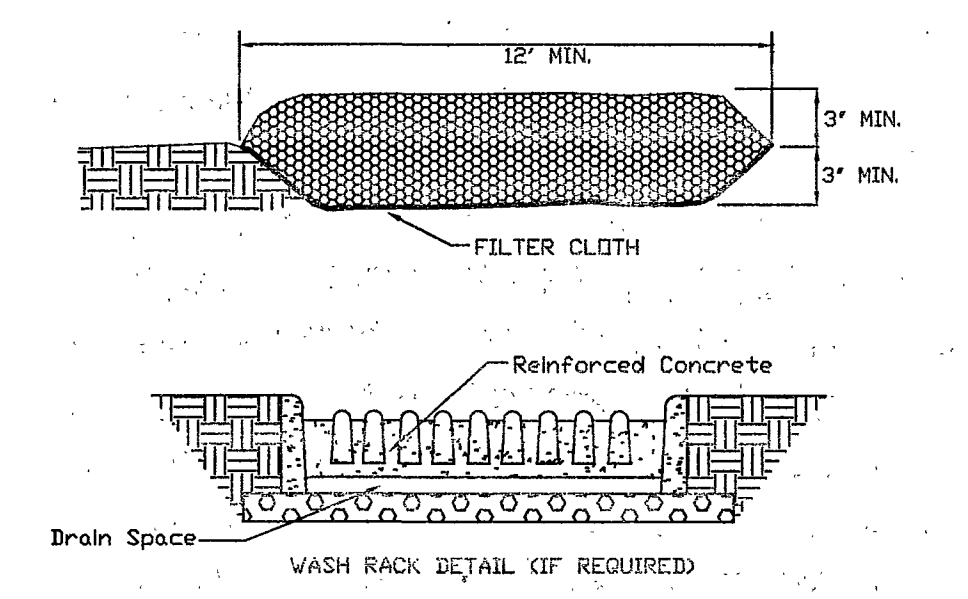


① OP OUTLET PROTECTION.

- NOTES**
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 L36d and L36e.
 3. $d = 1.5$ times the maximum stone diameter, but not less



* MUST EXTEND FULL WIDTH OF INGRESS
& EGRESS OPERATION.



CE TEMPORARY GRAVEL
CONSTRUCTION ENTRANCE

ALL COSTS GIVEN ARE COMPLETE IN PLAC

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EA	1	\$ 1,200	\$ 1,200
SILT FENCE	LF	708	4.00	2,832
INLET PROTECTION	EA	3	150	450
TEMPORARY SEEDING	1000 SF	10	35.00	350
PERMANENT SEEDING MULCHING	1000 SF	10	35.00	350
BLANKET MATTING	LF	815	3.50	2,852
CONSTRUCTION ROAD STABILIZATION	LF	450	4.00	1,800
STORMWATER CONVEYANCE CHANNEL	LF	70	6.00	420
RIGHT OF WAY DIVERSION	EA	1	50.00	50
SUB-TOTAL				\$ 10,304
10% CONTINGENCY				\$ 1,030
TOTAL PROJECT COST				\$ 11,334

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, LATEST EDITION.
2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR AMEND THESE MODIFICATIONS TO THE 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 ALL 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.

(PS) PERMANENT SEEDING MIXTURE

TYPE A	TYPE B (SLIPES 34 UR STEEPER)
OCTOBER 1 TO 1 FEBRUARY	5 MARCH TO 1 MAY
1 LB FESCUE @ 5 LB / 1000 SF	CROWN VETCH @ 1/2 LB / 1000 SF
1 LB WINTER RYE @ 1/2 LB / 1000 SF	PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
	RED TOP @ 1/8 LB / 1000 SF
FEBRUARY TO 1 JUNE	5 AUGUST TO 1 OCTOBER
1 LB FESCUE @ 5 LB / 1000 SF	CROWN VETCH @ 1/2 LB / 1000 SF
1 LB WINTER RYE @ 1/2 LB / 1000 SF	PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
	RED TOP @ 1/8 LB / 1000 SF
JUNE TO 1 SEPTEMBER	
1 LB FESCUE @ 5 LB / 1000 SF	
1 LB WINTER RYE @ 1/2 LB / 1000 SF	
1 LB CRAN MILET @ 1/2 LB / 1000 SF	
SEPTEMBER TO 15 OCTOBER	
1 LB FESCUE @ 5 LB / 1000 SF	
1 LB WINTER RYE @ 1/2 LB / 1000 SF	

LIME 140 LB / 1000 SF PULVERIZED 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 1.75 OF THE VIRGINIA EROSION
AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING:
INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED
SEED, MULCHING, MOWING WITH OR WITHOUT NEW SEEDINGS, 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,
MULTIPACKER SEEDER, OR HYDRASEEDER ON A FIRM, FRIABLE, SEEDED.

TOTAL DISTURBED AREA = 1.09 AC. = 47,480 SQ. FT.

DEPARTMENT
OF
ENGINEERING AND INSPECTIONS

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

COUNTY OF ROANOKE

DATE: 11/02/93

SCALE: NO SCALE

DRAWING BY: CLN,AF (G:\CAD\DETAILS\EROS)

DESIGNED BY:

APPROVED BY: GWS,III

LIFEWISE FITNESS
EROSION & SEDIMENT CONTROL
STORMWATER MANAGEMENT DETAILS

SHEET
5 OF 8