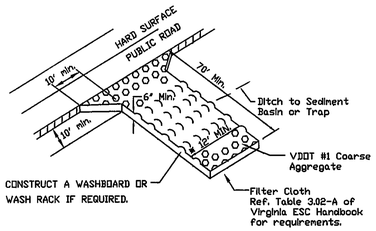
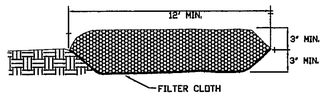
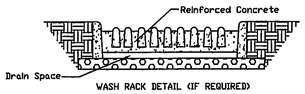


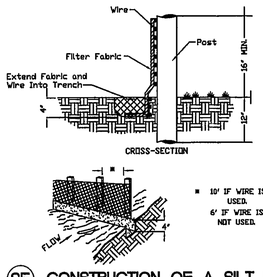
* MUST EXTEND FULL WIDTH OF INGRESS & EGRESS OPERATION.





WASH RACK DETAIL (IF REQUIRED)

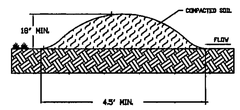
(CE) TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



(SF) CONSTRUCTION OF A SILT FENCE

SPECIFIC APPLICATION

This method of inlet protection is applicable where heavy flows are expected and where an overflow capability and ease of maintenance are desirable.

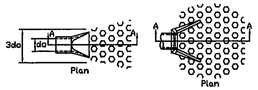


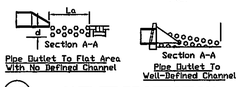
(DD) TEMPORARY DIVERSION DIKE

(FD) TEMPORARY FILL DIVERSION

(RWD) TEMPORARY RIGHT-OF-WAY DIVERSION

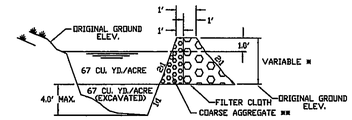
(DV) DIVERSION





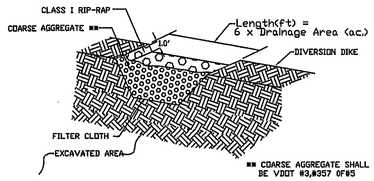
(OP) OUTLET PROTECTION

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 136d and 136e.
3. d = 1.5 times the maximum stone diameter, but not less than 6".



CROSS-SECTION

* SEE PLATE 3.13-1



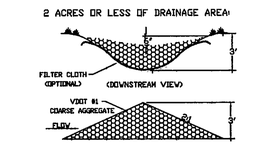
** COARSE AGGREGATE SHALL BE VDOT #3,#357 OR #5

(ST) SEDIMENT TRAP

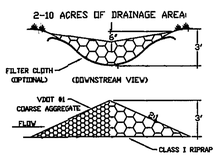
NOTE:
FOR AREAS LESS THAN 3.0 ACRES. FOR AREAS LARGER THAN 3.0 ACRES A SEDIMENT BASIN IS REQUIRED. SEE DETAIL THIS SHEET.

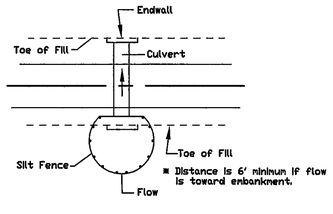
TEMPORARY SEDIMENT TRAP DATA

STRUCTURE	DRAINAGE AREA (ACRES)	STORAGE (C.Y.) REQ'D	STORAGE (C.Y.) DESIGN	WEIR LENGTH (FT.)	WEIR HEIGHT (FT.)	BERM HEIGHT (FT.)
ST1	1.1	147	159	6.6	1.75	2.75
		WET = 26' X 40' X 3' (TOP) = 76 CY				
		DRY = 33' X 47' X 1.75' (TOP) = 83 CY				

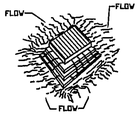


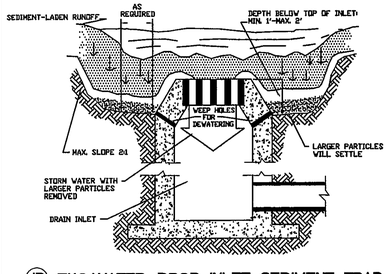
(CD) ROCK CHECK DAM





(CIP) SILT FENCE CULVERT INLET PROTECTION

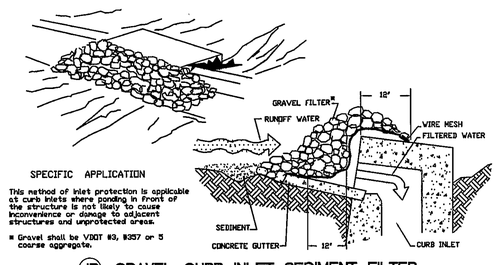




(IP) EXCAVATED DROP INLET SEDIMENT TRAP

SPECIFIC APPLICATION

This method of inlet protection is applicable where heavy flows are expected and where an overflow capability and ease of maintenance are desirable.

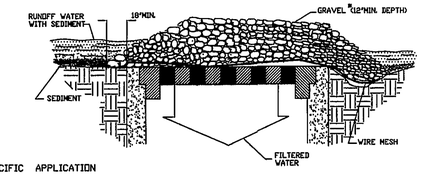


SPECIFIC APPLICATION

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



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 VDOT #3, #357 or #5 coarse aggregate.

(IP) GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

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

THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY. THIS PLAN WAS PREVIOUSLY APPROVED BY FRANKLIN COUNTY UNDER SEPARATE COVER. IT IS INCLUDED WITH THIS SET TO COMPLETE THE OVERALL PLAN SET.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
THIS PROJECT CONSISTS OF THE EXPANSION OF THE GRADING FOR THE CONSTRUCTION OF 12 FUTURE CONDOMINIUM UNITS AND ASSOCIATED PARKING, WATER, SANITARY SEWER, AND STORM DRAIN SYSTEMS.

EXISTING SITE CONDITIONS
THIS SITE CONSISTS OF MODERATELY STEEP LAND THAT DRAINS TO THE SOUTH INTO SMITH MOUNTAIN LAKE. THE SITE IS PREDOMINATELY WOODED.

SOILS EVERYWHERE ONSITE ARE CLAY-LOAM FROM 0 TO 42" IN DEPTH AND LOAM AT DEPTHS GREATER THAN 42".

CRITICAL AREAS
PRESERVING THE TOPOGRAPHY AT THE LAKE SHORELINE WITHIN THE LIMITS OF THE 100 YEAR FLOODPLAIN IS CRITICAL. SPECIAL CARE SHALL BE TAKEN TO PREVENT SEDIMENT TRANSPORT AND VEGETATION DEGRADATION IN THIS AREA.

ADJACENT AREAS
THIS SITE IS BORDERED TO THE NORTH BY ROUTE 654, TO THE EAST BY EXISTING RESIDENTIAL PROPERTY, TO THE WEST BY UNDEVELOPED LAND, AND TO THE SOUTH BY SMITH MOUNTAIN LAKE.

OFFSITE AREAS
NO OFFSITE FILL OR BORROW SITES ARE COVERED BY THIS EROSION AND SEDIMENT CONTROL

EROSION AND SEDIMENT CONTROL MEASURES
CONSTRUCTION ENTRANCE (3.02) – A STONE CONSTRUCTION ENTRANCE WILL BE INSTALLED TO MINIMIZE THE AMOUNT OF MUD TRANSPORTED INTO EXISTING ROADS.

SILT FENCE (3.05) – SILT FENCE WILL BE INSTALLED AT THE LOWER ENDS OF THE SITE TO INTERCEPT AND DETAIN SEDIMENT.

INLET PROTECTION (3.07) – INLET PROTECTION WILL BE INSTALLED AT ALL INLETS TO MINIMIZE SEDIMENT BUILDUP WITHIN THE PIPE.

DIVERSION DIKE (3.09) – DIVERSION DIKES WILL BE CONSTRUCTED TO DIVERT SEDIMENT-LADEN RUNOFF TO SEDIMENT TRAPS.

OUTLET PROTECTION (3.18) – OUTLET PROTECTION WILL BE INSTALLED AT THE END OF ALL CULVERTS TO MINIMIZE SCOUR AND DOWNSTREAM EROSION.

PERMANENT STABILIZATION
ALL AREAS ONSITE WHICH WILL NOT RECEIVE BUILDINGS OR PAVEMENT MUST RECEIVE PERMANENT SEEDING AS SOON AS THOSE AREAS REACH FINAL GRADE. FOR PERMANENT SEEDING SPECIFICATIONS PLEASE SEE THIS SHEET.

STORMWATER MANAGEMENT
ALL CONCENTRATED RUNOFF FROM THIS DEVELOPMENT WILL DISCHARGE INTO AN ADEQUATE CHANNEL (SMITH MOUNTAIN LAKE).

MAINTENANCE
ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. IN PARTICULAR:

1. *THE SEDIMENT TRAP WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP. CLEAN OUT AS NECESSARY TO MAINTAIN DESIGN VOLUMES.*
2. *OUTLET PROTECTION WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF STONE IS CLOGGED BY SEDIMENT, IT WILL BE REMOVED AND CLEANED OR REPLACED.*
3. *THE SILT FENCE WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT BUILDUP REACHES THE MIDWAY POINT OF THE SILT FENCE.*
4. *ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS REQUIRED TO ACHIEVE A GOOD STAND OF GRASS.*

TEMPORARY SEEDING

TEMPORARY SEEDING SHALL BE APPLIED WITHIN SEVEN DAYS TO ANY DISTURBED SURFACE THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM OR OFF-SITE AREAS, AND TO PROVIDE PROTECTION TO BARE SOILS EXPOSED DURING CONSTRUCTION UNTIL PERMANENT VEGETATION OR OTHER EROSION CONTROL MEASURES CAN BE ESTABLISHED.

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH PERMANENT SEEDING WITHIN 7 DAYS OR IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING WILL BE DONE ACCORDING TO STANDARD AND SPECIFICATION 3.32 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH STRAW MULCH.

(PS) PERMANENT SEEDING MIXTURE

ACCOMPANY THE INSPECTOR (S).
Permanent Seeding:

Minimum Care Lawn: Total Lb. Per Acre

Commercial or Residential 200–250 Lb/Acre
Kentucky 31 or turf type tall fescue 90–100%
Improved perennial rye grass 0–10%*
Kentucky Bluegrass 0–10%

High Maintenance Lawn:
. Minimum of three (3) up to five (5) varieties of blue grass from approved list for use in VA 125 Lb/Ac.

General Slope (3:1 or Less):
. Kentucky 31 Fescue 128 Lb./Ac.
Red Top Grass 2 Lb./Ac.
*Seasonal Nurse Crop** 20 Lb./Ac.*
150 Lb./Ac.

Low Maintenance Slope (Steeper than 3:1):
. Kentucky 31 Fescue 108 Lb./Ac.
Red Top Grass 2 Lb./Ac.
*Seasonal Nurse Crop** 20 Lb./Ac.*
*Crownvetch*** 20 Lb./Ac.*
150 Lb./Ac.

**Perennial rye grass will germinate faster and at a lower soil temperature than fescue, thereby providing cover and erosion resistance for seedbed.*

***Use seasonal nurse crop in accordance with seeding dates as stated below:*
March, April thru May 15.....Annual Rye
May 16th thru August 15th.....Foxtail Millett
August 16 thru Sept., Oct.....Annual Rye
Nov. Thru Feb.....Winter Rye

****If Flatpea is used, increase to 30 Lb./Acre. All legume seed must be properly inoculated. Weeping Lovegrass may also be included in any slope or low maintenance mixture during warmer seeding periods; add 10–20 Lb./acre in mixes.*

Lime shall be applied at a rate of 2 tons/acre pulverized agricultural grade limestone (90 lbs/1000 ft^2)

Fertilizer shall be applied at a rate of 1000 lbs/acre 10–20–10 or equivalent nutrients (23 lbs/ 1000ft^2)

Straw mulch shall be applied to all permanently seeded areas at a rate of ninety (90) pounds per one thousand square feet over the seeded area. Straw mulch shall be anchored or tacked down with string or other approved materials.

The contractor shall inspect seeded areas 2 weeks after seeding, at which time sparse areas shall be prepared and reseeded to establish permanent cover on all disturbed areas.

Any areas not achieving adequate stabilization within one year will be restabilized.

Permanent seeding shall be in accordance with specification 3.32 of the 1992 Virginia Erosion & Sediment Control Handbook.

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P.O. BOX 20669
ROANOKE, VIRGINIA 24018
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FAX: (540) 772-9445
E-MAIL: MAIL@LUMSDENPC.COM

COMMONWEALTH OF VIRGINIA
THOMAS C. DALE
No. 033002
3/4/05
PROFESSIONAL ENGINEER

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SOUTH POINTE CONDOMINIUMS AT THE WATERFRONT - BUILDING 400

PREPARED FOR
WILLARD CONSTRUCTION OF ROANOKE VALLEY, INC.
GILLS CREEK MAGISTERIAL DISTRICT
FRANKLIN COUNTY, VIRGINIA

NO.	DATE	REVISIONS DESCRIPTION
1		
2		
3		
4		
5		

DATE: MARCH 04, 2005
SCALE: NONE
COMMISSION NO: 2001-389
CADD FILE: \01\01389\ENG\BLDG 400\389COMP40

SHEET 10 OF 10