

TS TEMPORARY SEEDING

SEED:  
1 September to 15 February  
Annual ryegrass @ 25 lb-50 lb / acre  
Cereal (winter) rye @ 25 lb-50 lb / acre  
  
16 February to 30 April  
Annual ryegrass @ 60 lb-100 lb / acre  
  
May 1 to 31 August  
German millet @ 50 lb / acre  
  
1 September to 15 October  
K-31 fescue @ 5 lb / 1000 SF  
Annual rye @ 1/2 lb / 1000 SF  
  
LIME:  
PH Below 4.2 - 3 tons per acre of agricultural limestone  
PH 4.2 to 5.2 - 2 tons per acre of agricultural limestone PH 5.2 to 6 - 1 tons per acre of agricultural limestone  
  
FERTILIZER:  
10-20-10 @ 600 lb / acre  
  
MULCH:  
Shall be used over all seeded areas and shall be applied in accordance with Standard and Specification 3.35 of the Virginia Erosion and Sediment Control Handbook, latest edition.  
  
SOIL CONDITIONS:  
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.

FS PERMANENT SEEDING

**TYPE A**  
15 OCTOBER TO 1 FEBRUARY  
K-31 FESCUE @ 5 LB / 1000 SF  
BORZY WINTER RYE @ 1/2 LB / 1000 SF  
  
1 FEBRUARY TO 1 JUNE  
K-31 FESCUE @ 5 LB / 1000 SF  
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  
  
1 SEPTEMBER TO 15 OCTOBER  
K-31 FESCUE @ 5 LB / 1000 SF  
ANNUAL 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:  
Shall be used over all seeded areas and shall be applied in accordance with Standard and Specification 3.35 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.

TYPE B (SLOPES 3:1 OR STEEPER)

15 MARCH TO 1 MAY  
CROWN VETCH @ 1/2 LB / 1000 SF  
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF  
RED TOP @ 1/8 LB / 1000 SF  
  
15 AUGUST TO 1 OCTOBER  
CROWN VETCH @ 1/2 LB / 1000 SF  
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF  
RED TOP @ 1/8 LB / 1000 SF

MU MULCHING

ORGANIC MULCH MATERIALS AND APPLICATION RATES			
MULCHES	RATES:		NOTES:
	PER ACRE	PER 1000 SQ.FT.	
STRAW OR HAY	1 1/2 - 2 TONS (MINIMUM 2 TONS FOR WINTER COVER)	70 - 90 LBS	FREE FROM WEEDS AND COARSE MATTER. MUST BE ANCHORED. SPREAD WITH MULCH BLOWER OR BY HAND.
FIBER MULCH	MINIMUM 1500 LBS.	35 LBS	DO NOT USE AS MULCH FOR WINTER COVER OR DURING HOT, DRY PERIODS. * APPLY AS SLURRY.
CORN STALKS	4 - 6 TONS	185 - 275 LBS.	CUT OR SHREDDED IN 4-6" LENGTHS. AIR-DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER OR BY HAND.
WOOD CHIPS	4 - 6 TONS	185 - 275 LBS.	FREE OF COARSE MATTER. AIR-DRIED. TREAT WITH 12 LBS. NITROGEN PER TON. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.
BARK CHIPS OR SHREDDED BARK	50 - 70 CU.YDS.	1 - 2 CU. YDS.	FREE OF COARSE MATTER. AIR-DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.
* WHEN FIBER MULCH IS THE ONLY AVAILABLE MULCH DURING PERIODS WHEN STRAW SHOULD BE USED, APPLY AT A MINIMUM RATE OF 2000 LBS./AC. OR 45 LBS./1000 SQ.FT.			

- Prior to mulching, complete required grading and install needed sediment control practices.
- Lime and fertilizer should be incorporated and surface roughening accomplished as needed, seed should be applied prior to mulching except in the following cases:  
A. Where seed is to be applied as part of a hydroseeder slurry containing fiber mulch.  
B. Where seed is to be applied following a straw mulch spread during winter months.
- Application: mulch material shall be spread uniformly, by hand or machine. When spreading straw by hand, divide the area to be mulched into approximately 1,000 sq.ft. sections and place 70-90 lbs. (1 1/2 to 2 bales) of straw in each section to facilitate uniform distribution.
- Mulch anchoring: straw mulch must be anchored immediately after spreading to prevent displacement. Other organic mulches listed in table do not require anchoring. The following methods of anchoring straw may be used:  
1. Mulch anchoring tool (often referred to as a krimper or krimper tool): this is a tractor-drawn implement designed to punch mulch into the soil surface. This method provides good erosion control with straw. It is limited to use on slopes no steeper than 3:1 where equipment can operate safely. Machinery shall be operated on the contour.  
2. Fiber mulch: apply fiber mulch by means of a hydroseeder at a rate of 500-750 lbs. / acre over top of straw mulch or hay. It has an added benefit of providing additional mulch to the newly seeded area.  
3. Liquid mulch binders: application of liquid mulch binders and tackifiers should be heaviest at the edges of areas and at crests of ridges and banks, to prevent displacement. The remainder of the area should have binder applied uniformly. Binder may be applied after mulch is spread or may be sprayed into mulch as it is being blown onto the soil. The following types of binders may be used:  
A. Synthetic binders - formulated binders or organically formulated products may be used as recommended by the manufacturer to anchor mulch.  
B. \* Asphalt - any type of asphalt thin enough to be blown from spray equipment is satisfactory. Recommended for use are rapid curing (rc-70, rc-250, rc-800), medium curing (mc-250, mc-800) and emulsified asphalt (es-1, es-1, cms-2, ms-2, rs-1, rs-2, crs-1 and crs-2).  
\*Note: when this method is used, environmental concerns should be addressed to ensure that petroleum-based products do not enter valuable water supplies. Avoid applications into waterways of channels.  
4. Mulch netting: lightweight plastic, cotton, or paper nets may be stapled over the mulched according to manufacturer's recommendations.  
5. Pegs and twine: because it is labor-intensive, this method is feasible only in small areas where other methods cannot be used. Drive 8 to 10 inch wooden pegs to within 3 inches of the soil surface, every 4 feet in all directions. Stakes may be driven before or after straw is spread. Secure mulch by stretching twine between pegs in a criss-cross-within-a-square. Turn twine 2 or more times around each peg.

Chemical mulches  
Chemical mulches\* may be used alone only in the following situations:  
A. Where no other mulching material is available  
B. In conjunction with temporary seeding during the times when mulch is not required for that practice.  
C. From March 15 to May 1 and August 15 to September 30, provided that they are used on areas with slopes no steeper than 4:1, which have been roughened in accordance with surface roughening, Standard and Specification 3.29 of the Virginia Erosion and Sediment Control Handbook, latest edition. If fill erosion occurs, another mulch material shall be applied immediately.  
\*Note: chemical mulches may be used to bind other mulches or with fiber mulch in a hydroseeded slurry at any time. Manufacturer's recommendations for application of chemical mulches shall be followed.  
  
Maintenance  
All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, re-install netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place up until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.

GENERAL SPECIFICATIONS  
TEMPORARY ACCESS ROADS AND PARKING AREAS

- Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
- Temporary parking areas should be located on naturally flat areas to minimize grading. Grades should be sufficient to provide drainage but should not exceed 4 percent.
- Roadbeds shall be at least 14 feet wide for one-way traffic and 20 feet wide for two-way traffic.
- All cuts and fills shall be 2:1 or flatter to the extent possible.
- Drainage ditches shall be provided as needed and shall be designed and constructed in accordance with stormwater conveyance channel, std. & spec. 3.17
- The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
- A 6-inch course of VDOT #1 coarse aggregate shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric may be applied to the roadbed for additional stability. Design specifications for filter fabric can be found within Std. & Spec. 3.02 of the Virginia Erosion and Sediment Control Handbook, latest edition, temporary stone construction entrance. In "heavy duty" traffic situations (see table 3.02-a), stone should be placed at an 8 to 10-inch depth to avoid excessive dissipation or maintenance needs.

PERMANENT ROADS AND PARKING AREAS

Permanent roads and parking areas shall be designed and constructed in accordance with applicable vdot or local criteria except that an initial base course of gravel of at least 6 inches shall be applied immediately following grading.

VEGETATION

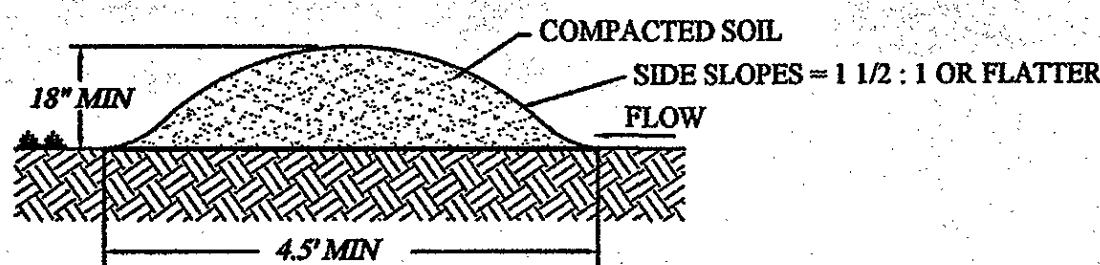
All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications contained in the virginia erosion and sediment control handbook.

MAINTENANCE

Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. Seeded areas adjacent to the roads and parking areas should be checked periodically to ensure that vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.

CONSTRUCTION ROAD STABILIZATION CRS

DD DIVERSION DIKE



GRADE:

The channel behind the dike shall have a positive grade to a stabilized outlet. If the channel slope is less than or equal to 2%, no stabilization is required. If the slope is greater than 2%, the channel shall be stabilized in accordance with virginia erosion and sediment control handbook std. & spec. 3.17, stormwater conveyance channel.

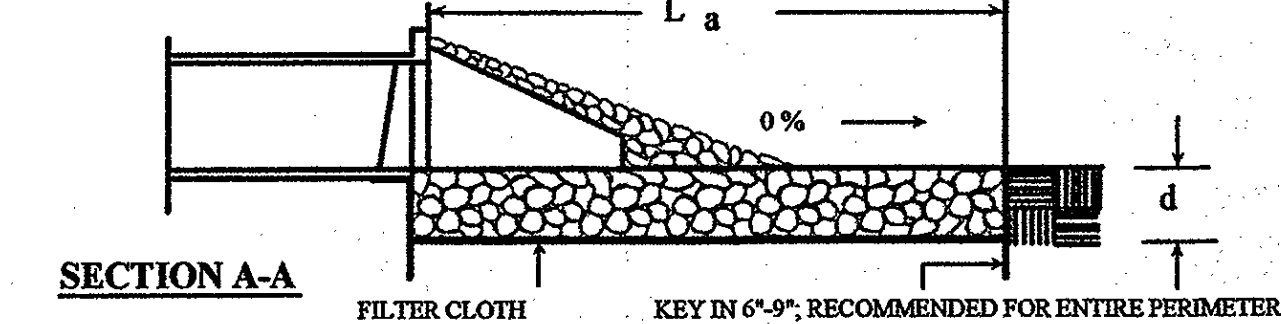
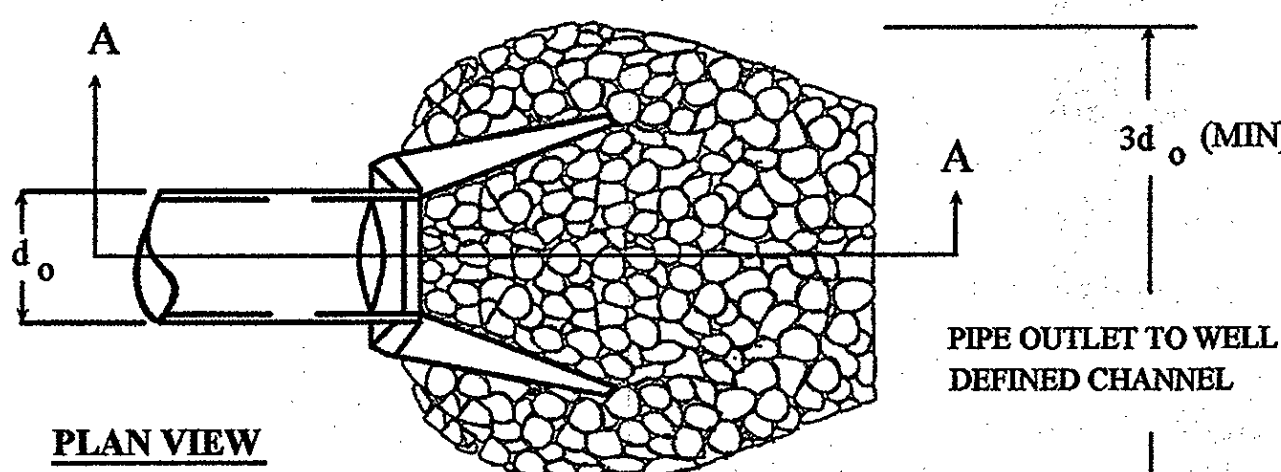
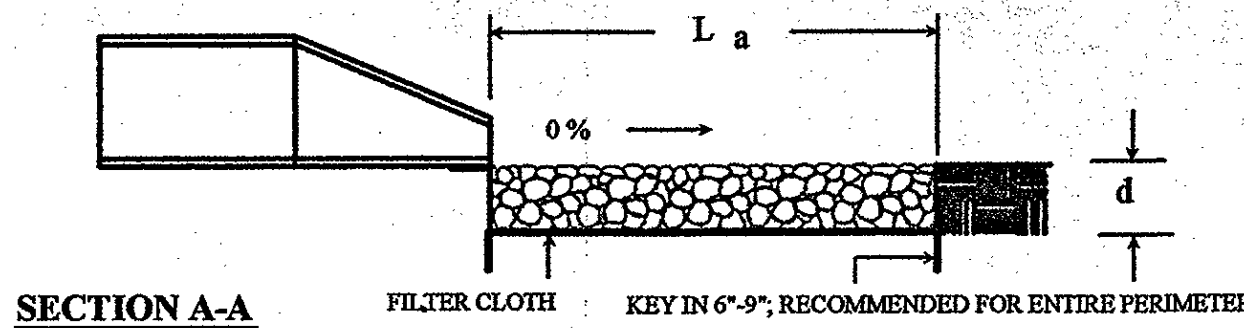
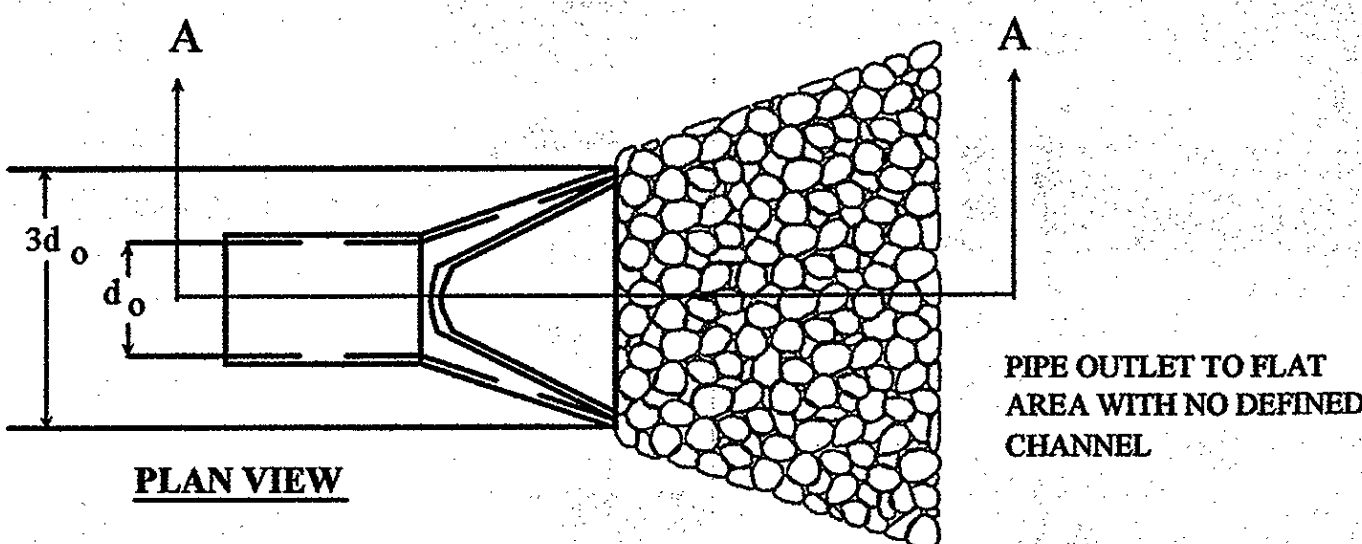
SPECIFICATIONS:

- Temporary diversion dikes must be installed as a first step in the land-disturbing activity and must be functional prior to upswep land disturbance.
- The dike should be adequately compacted to prevent failure.
- Temporary or permanent seeding and mulch shall be applied to the diversion dike immediately following its construction.
- The dike should be located to minimize damages by construction operation and traffic.

MAINTENANCE:

The diversion dike shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the diversion dike shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.

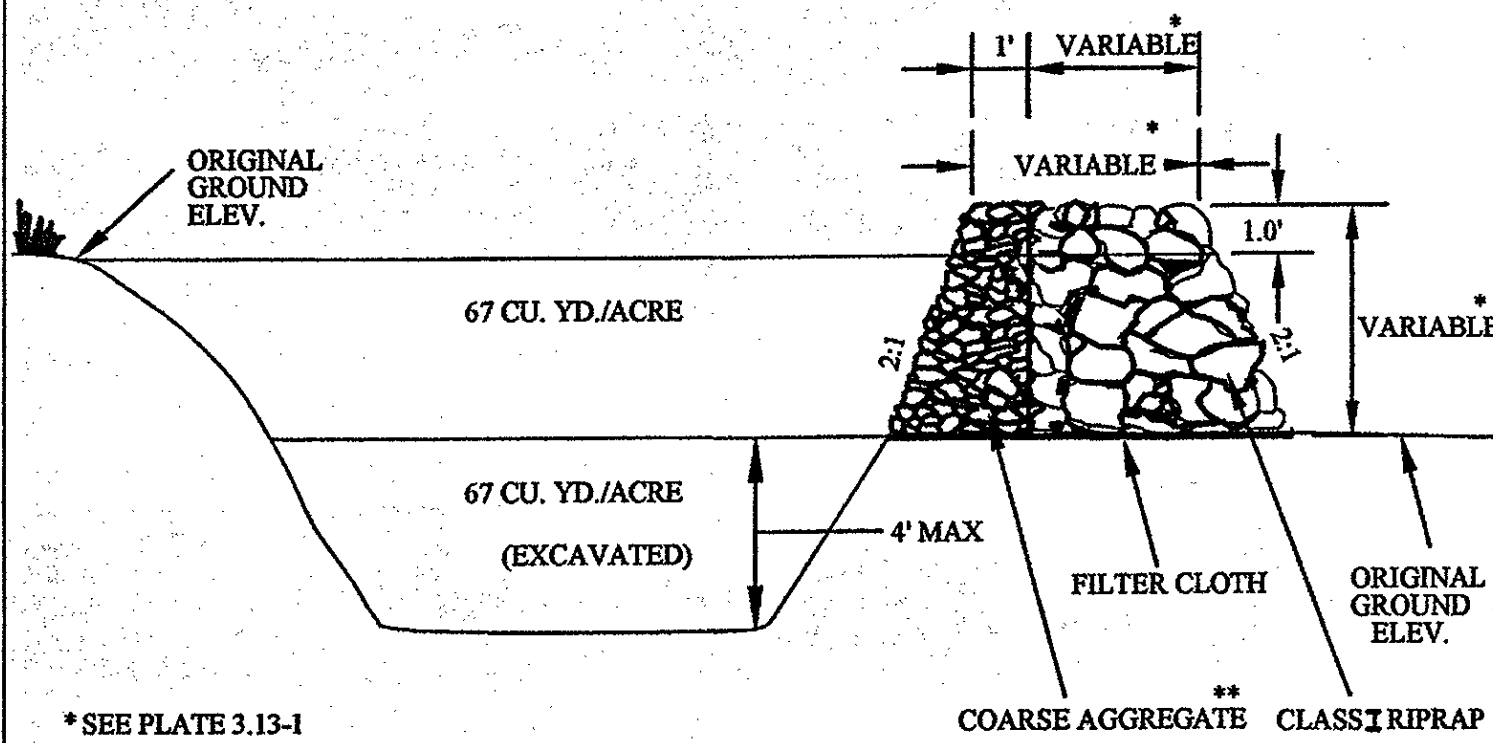
PIPE OUTLET CONDITIONS



NOTES:

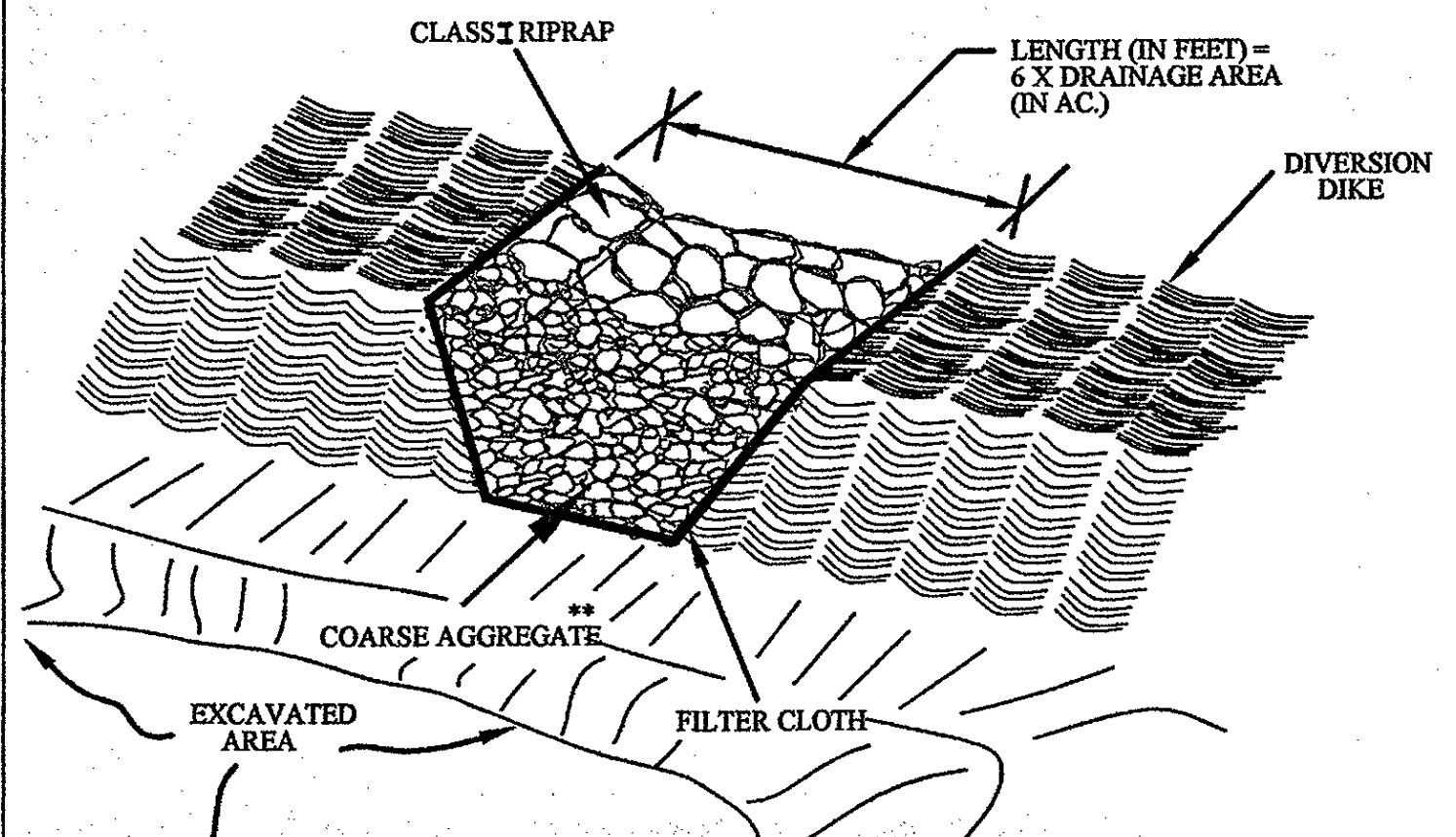
- Apron lining may be riprap, grouted riprap, gabion basket, or concrete.
- La is the length of the riprap apron as calculated using plates 3.18-3 and 3.18-4.
- d = 1.5 times the maximum stone diameter, but not less than 6 inches.

TEMPORARY SEDIMENT TRAP



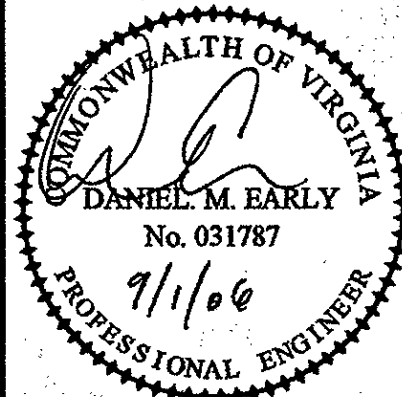
\* SEE PLATE 3.13-1

CROSS SECTION OF OUTLET



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

OUTLET (PERSPECTIVE VIEW)



ACS  
DESIGN

ENGINEERING • SURVEYING  
LANDSCAPE ARCHITECTURE  
CONSTRUCTION MANAGEMENT

2203 PETERS CREEK ROAD  
ROANOKE, VIRGINIA 24017  
P 540.562.2345 F 562.2344  
INFO@ACSDSIGNLLC.COM  
WWW.ACSDSIGNLLC.COM

THE Coves at Smith Mountain Lake

The Coves at Smith Mountain Lake  
Optima Properties-Smith Mountain Lake, LLC  
Franklin County, Virginia

DRAWN BY: AH  
DESIGNED BY: DME  
CHECKED BY: DME  
DATE: 01 MAY 2008  
JOB NUMBER: 05271

REVISIONS:  
No. 1 5/11/07  
No. 2 FINAL FOR CONSTRUCTION  
No. 3  
No. 4

SHEET NO.:  
C2.2

EROSION &  
SEDIMENT  
CONTROL DETAILS