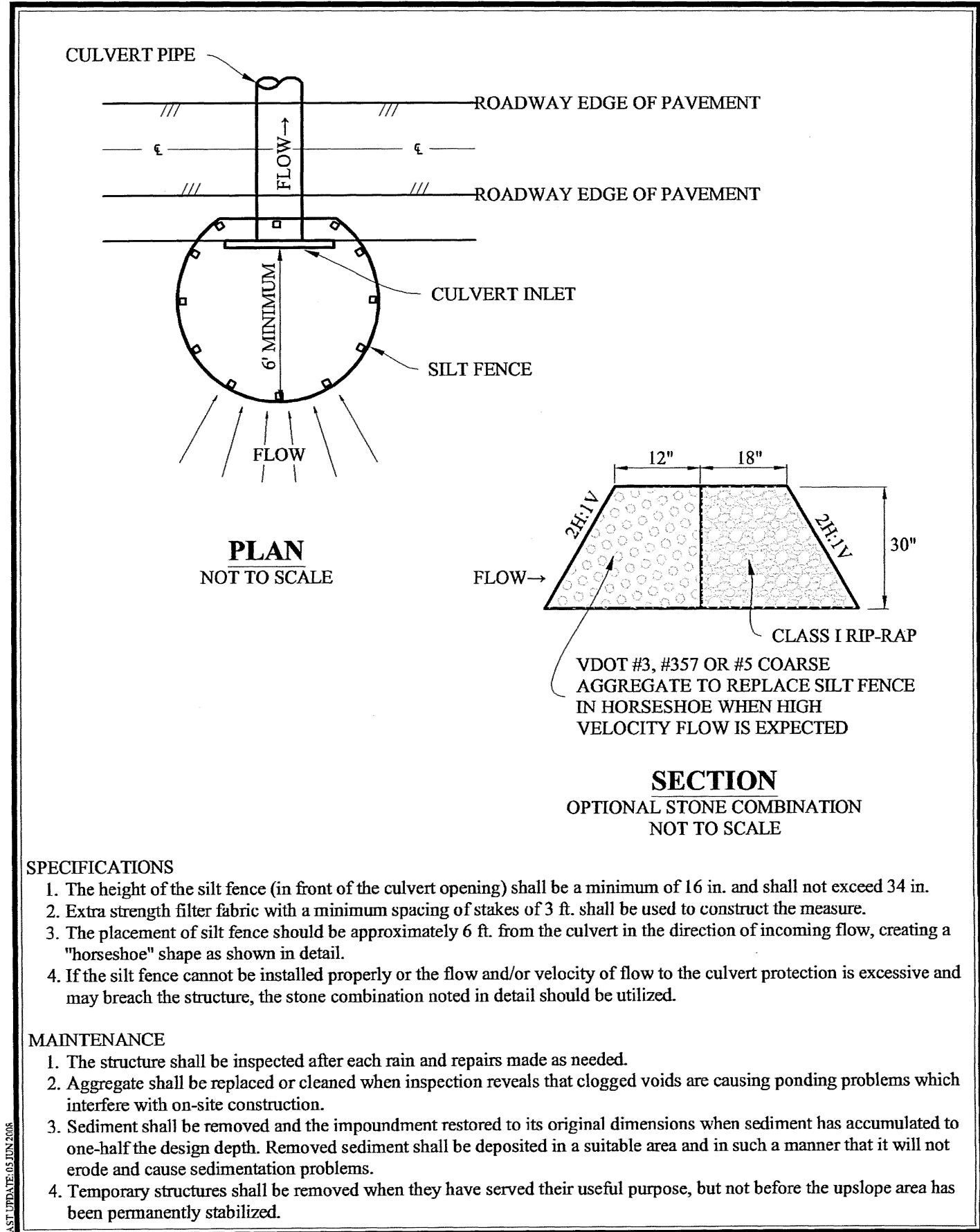
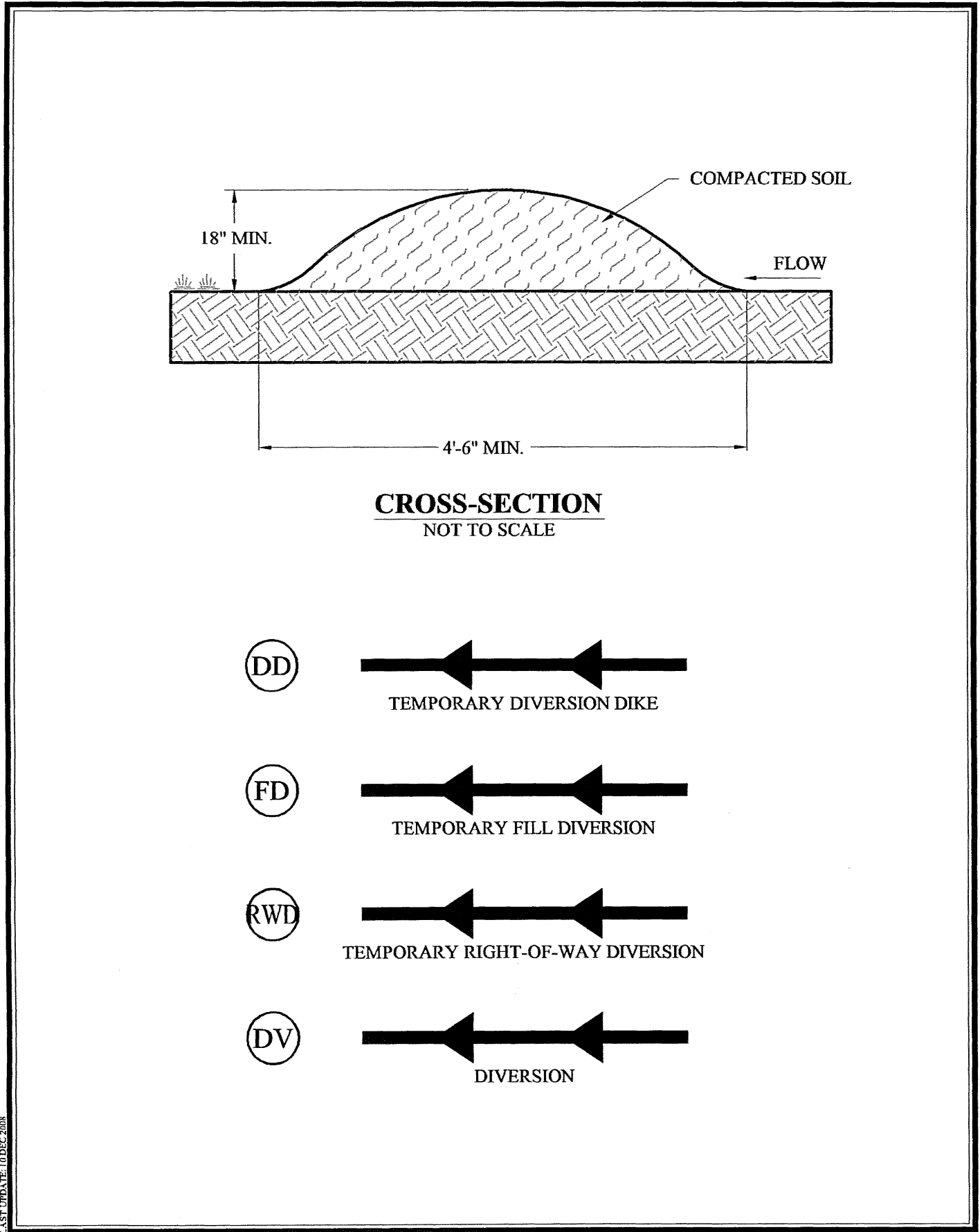


ACS DESIGN MU - MULCHING
Refer to and comply with the Standards and Specifications of the Virginia Erosion & Sediment Control Handbook, latest edition. This information is based on and modeled after it and is provided as a quick reference.



ACS DESIGN DD - DIVERSION DIKES
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ACS DESIGN MU - MULCHING
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ORGANIC MULCH MATERIALS AND APPLICATION RATES			
Mulches	Rate per acre	Rate per 1000SF	NOTES
Straw or hay	1½ - 2 tons (min. 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.
Com stalks	4 - 6 tons	35 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 CY	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.

NOTES

- Before 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 before mulching except in the following cases:
 - Where seed is to be applied as part of a hydroseeder slurry containing fiber mulch.
 - 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 SF 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:
 - Mulch anchoring tool (often referred to as a crimper or crimper 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 along the contours.
 - 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.
 - 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 as it is being sprayed into mulch as it is being blown onto the soil.
- Mulch nettings. Lightweight plastic, cotton, or paper nets may be stapled over the mulch according to manufacturer's recommendations.
- Peg and twine. Because it is labor-intensive, this method is feasible only in small areas where other methods cannot be used. Drive 8-10 inch wood pegs every 4 feet into 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, synthetic binders, and asphalt binders may be used in situations as described in VESCH, latest edition.
- 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 occurs, 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.

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TYPE A SEED MIX SELECTION	
SEEDING DATE	SEED MIX
15 October to 1 February	KY-31 fescue @ 5 lb / 1000 SF winter rye @ 1/2 lb / 1000 SF
1 February to 1 June	KY-31 fescue @ 5 lb / 1000 SF annual rye @ 1/2 lb / 1000 SF
1 June to 1 September	KY-31 fescue @ 5 lb / 1000 SF German millet @ 1/2 lb / 1000 SF
1 September to 15 October	KY-31 fescue @ 5 lb / 1000 SF annual rye @ 1/2 lb / 1000 SF

TYPE B (SLOPES 3:1 OR STEEPER) SEED MIX SELECTION	
SEEDING DATE	SEED MIX
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

LIME:
140 lb / 1000 SF pulverized agricultural limestone

FERTILIZER:
5-20-10 @ 25 lb / 1000 SF
38-0-0 @ 7 lb / 1000 SF

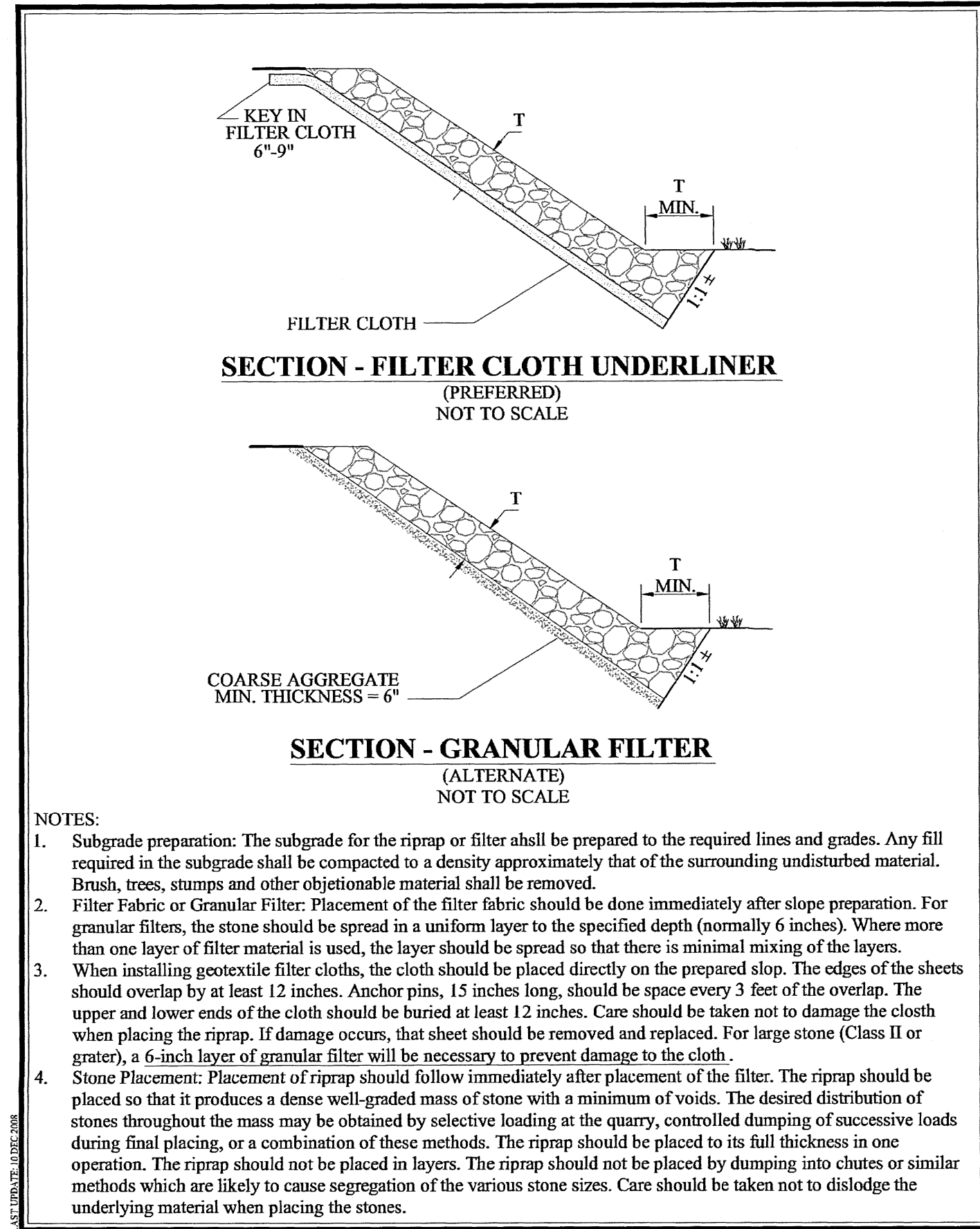
MULCH:
Shall be used over all seeded areas and shall be applied in accordance with Standard and Specification 3.35 of the Virginia Erosion and Sediment Control Handbook, latest edition.

SOIL CONDITIONING:
Incorporation of lime and fertilizer, selection of certified seed, mulching, maintenance of new seedlings, and reseedling shall be in accordance with specifications contained within the Virginia Erosion and Sediment Control Handbook, latest edition.

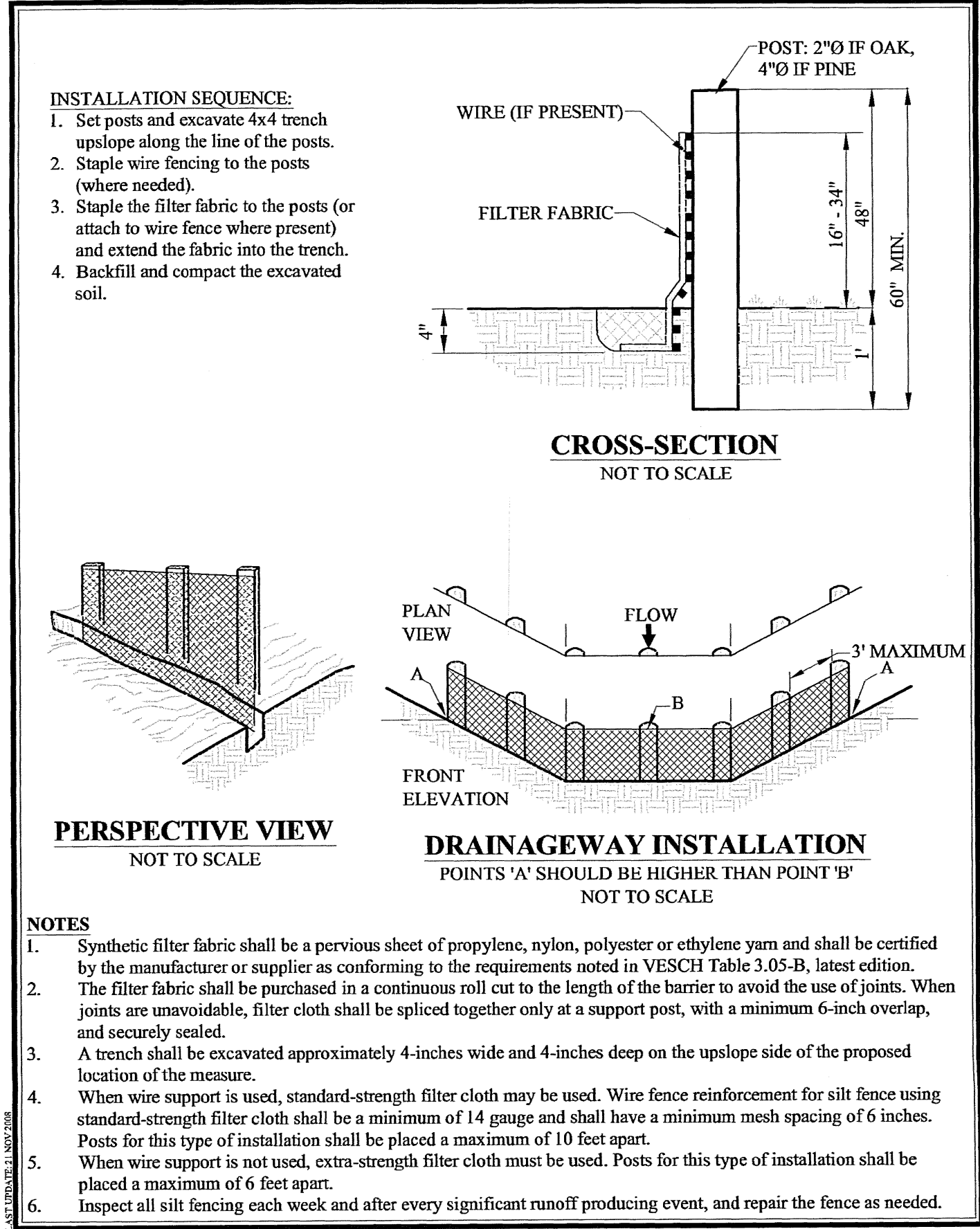
Additional seeding to be performed as required by the inspector.

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.

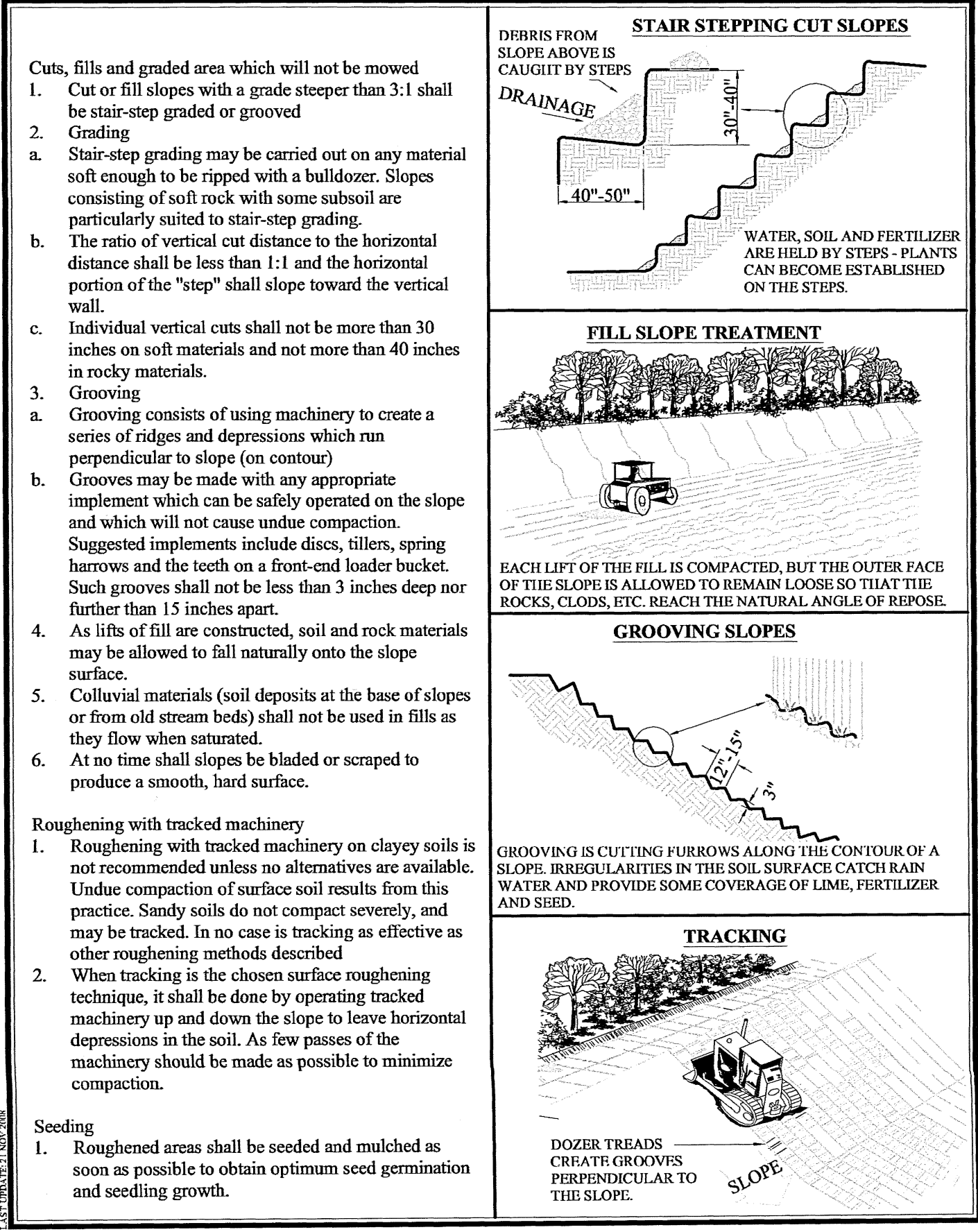
ACS DESIGN PS - PERMANENT SEEDING
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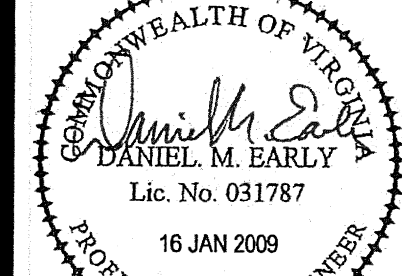
ACS DESIGN RR - RIPRAP
Refer to and comply with the Standards and Specifications of the Virginia Erosion & Sediment Control Handbook, latest edition. This information is based on and modeled after it and is provided as a quick reference.



ACS DESIGN SF - SILT FENCE BARRIER
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ACS DESIGN SR - SURFACE ROUGHENING
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DRAWN BY: CEK,WTW
DESIGNED BY: CEK
CHECKED BY: DES
DATE: 16 JAN 2009
JOB NUMBER: 05353A

REVISIONS:

No. 1	
No. 2	
No. 3	
No. 4	
No. 5	

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EROSION CONTROL
NOTES AND DETAILS