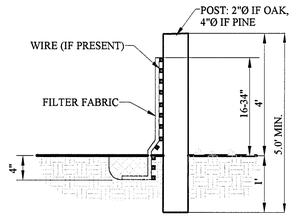
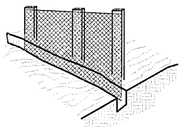
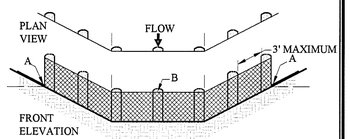
INSTALLATION SEQUENCE:
1. Set posts and excavate 4x4 trench upslope along the line of the posts.
2. Staple wire fencing to the posts (where needed).
3. Staple the filter fabric to the posts (or attach to wire fence where present) and extend the fabric into the trench.
4. Backfill and compact the excavated soil.



CROSS-SECTION
NOT TO SCALE



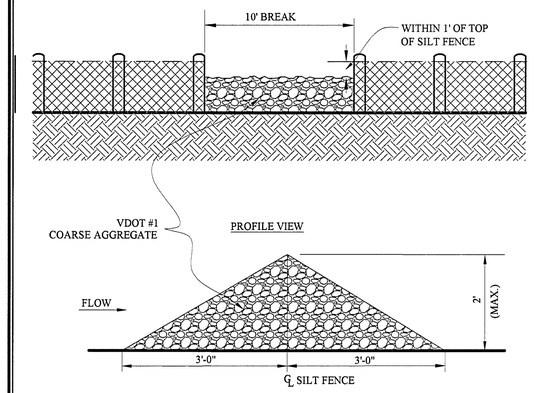
PERSPECTIVE VIEW
NOT TO SCALE



DRAINAGEWAY INSTALLATION
POINTS 'A' SHOULD BE HIGHER THAN POINT 'B'
NOT TO SCALE

NOTES
1. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the requirements noted in VESCH Table 3.05-B
2. Wire fence reinforcement for silt fence using standard-strength filter cloth shall be a minimum of 14 gauge and shall have a minimum mesh spacing of 6 inches.
3. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are unavoidable, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.
4. A trench shall be excavated approximately 4-inches wide and 4-inches deep on the upslope side of the proposed location of the measure.
5. When wire support is used, standard-strength filter cloth may be used. Post for this type of installation shall be placed a maximum of 10-feet apart.
6. Inspect all silt fencing each week and after every significant runoff producing event, and repair the fence as needed.

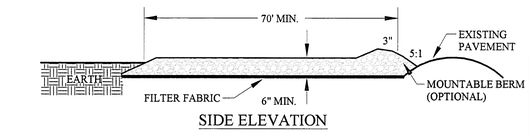
ACS DESIGN SF - SILT FENCE BARRIER
This information is based on and modeled after Standard & Specification 3.05 of the Virginia Erosion & Sediment Control Handbook, Rev. 2003



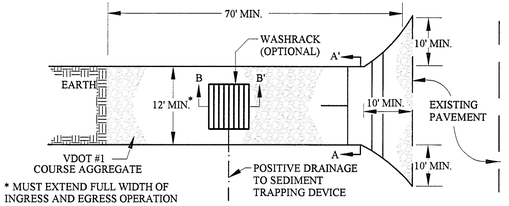
GENERAL SPECIFICATIONS
1. The silt fence break shall consist of VDOT #1 coarse aggregate stone placed at a break in the low point of the silt fence. This stone shall create a dam, of which the maximum height shall be 2.0 feet.
2. For added stability, the base of the silt fence break can be keyed into the soil about 6 inches.
3. Stone should be placed according to the detail on this sheet. Hand or mechanical placement will be necessary to achieve complete coverage.
4. The silt fence break shall not be removed until the upstream slope has been stabilized and it is safe to remove the silt fence. The silt fence break shall be removed at the same time as the silt fence.

MAINTENANCE
1. The silt fence break, along with the silt fence, shall be checked for sediment accumulation after each runoff producing storm event. Sediment should be removed when it reaches one half of the original height of the measure.

ACS DESIGN ES-01 SILT FENCE BREAK
2203 PETERS CREEK ROAD, NW - ROANOKE, VIRGINIA 24017 - Phone 540.562.2345 - Fax 540.562.2344
ENGINEERING - SURVEYING - LANDSCAPE ARCHITECTURE - CONSTRUCTION MANAGEMENT

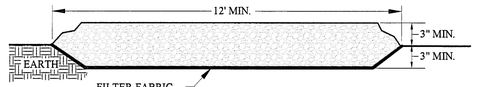


SIDE ELEVATION

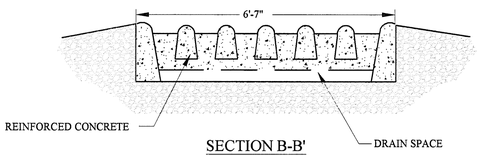


* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

PLAN VIEW



SECTION A-A'



SECTION B-B'

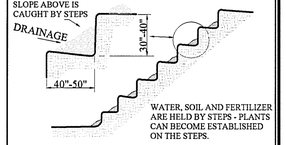
ACS DESIGN CE - TEMPORARY STONE CONSTRUCTION ENTRANCE
This information is based on and modeled after Standard & Specification 3.02 of the Virginia Erosion & Sediment Control Handbook, Rev. 2003

Cuts, fills and graded area which will not be mowed
1. Cut or fill slopes with a grade steeper than 3:1 shall be stair-step graded or grooved
2. Grading
a. Stair-step grading may be carried out on any material soft enough to be ripped with a bulldozer. Slopes consisting of soft rock with some subsoil are particularly suited to stair-step grading.
b. The ratio of vertical cut distance to the horizontal distance shall be less than 1:1 and the horizontal portion of the "step" shall slope toward the vertical wall.
c. Individual vertical cuts shall not be more than 30 inches on soft materials and not more than 40 inches in rocky materials.
3. Grooving
a. Grooving consists of using machinery to create a series of ridges and depressions which run perpendicular to slope (on contour)
b. Grooves may be made with any appropriate implement which can be safely operated on the slope and which will not cause undue compaction. Suggested implements include discs, tillers, spring harrows and the teeth on a front-end loader bucket. Such grooves shall not be less than 3 inches deep nor further than 15 inches apart.
4. As lifts of fill are constructed, soil and rock materials may be allowed to fall naturally onto the slope surface.
5. Colluvial materials (soil deposits at the base of slopes or from old stream beds) shall not be used in fills as they flow when saturated.
6. At no time shall slopes be bladed or scraped to produce a smooth, hard surface.

Roughening with tracked machinery
1. Roughening with tracked machinery on clayey soils is not recommended unless no alternatives are available. Undue compaction of surface soil results from this practice. Sandy soils do not compact severely, and may be tracked. In no case is tracking as effective as other roughening methods described
2. When tracking is the chosen surface roughening technique, it shall be done by operating tracked machinery up and down the slope to leave horizontal depressions in the soil. As few passes of the machinery should be made as possible to minimize compaction.

Seeding
3. Roughened areas shall be seeded and mulched as soon as possible to obtain optimum seed germination and seedling growth.

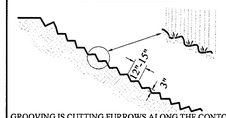
STAIR STEPPING CUT SLOPES



FILL SLOPE TREATMENT

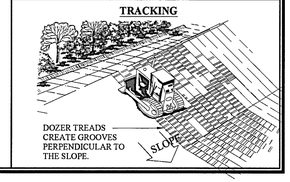
EACH LIFT OF THE FILL IS COMPACTED, BUT THE OUTER FACE OF THE SLOPE IS ALLOWED TO REMAIN LOOSE SO THAT THE ROCKS, CLODS, ETC. REACH THE NATURAL ANGLE OF REPOSE.

GROOVING SLOPES

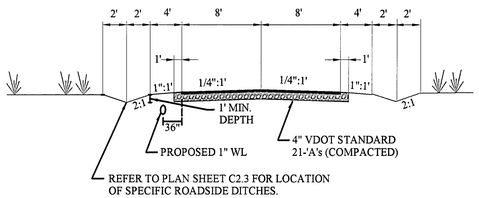


GROOVING IS CUTTING FURROWS ALONG THE CONTOUR OF A SLOPE. IRREGULARITIES IN THE SOIL SURFACE CATCH RAIN WATER AND PROVIDE SOME COVERAGE OF LIME, FERTILIZER AND SEED.

TRACKING



ACS DESIGN SR - SURFACE ROUGHENING
This information is based on and modeled after Standard & Specification 3.29 of the Virginia Erosion & Sediment Control Handbook, Rev. 2003

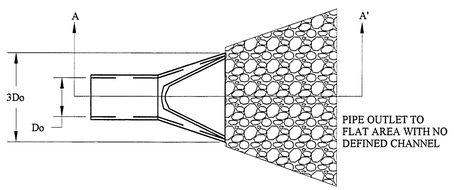


TYPICAL PAVEMENT SECTION
FOR WWTP ACCESS ROAD

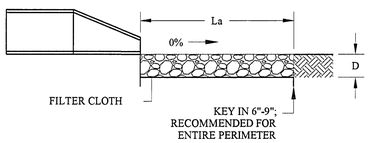
NOT TO SCALE

Notes:
1. WWTP access road is proposed as a private street, not designed to VDOT standards.
2. Road does not require VDOT acceptance.

ACS DESIGN WWTP ACCESS ROAD TYPICAL SECTION



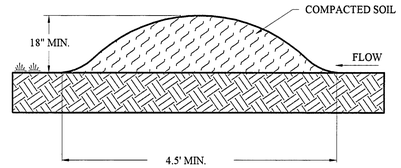
PLAN VIEW

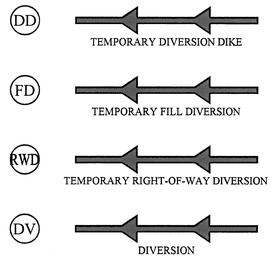


SECTION A-A'

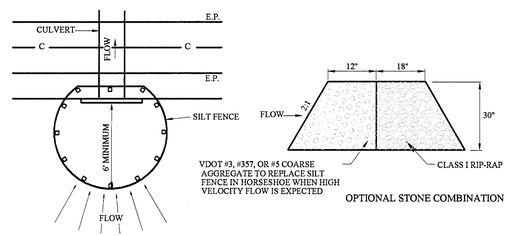
Notes:
1. Apron lining may be riprap, grouted riprap, gabion basket, or concrete.
2. La is the length of the riprap apron as calculated using plates 3.18-3 and 3.18-4.
3. D = 1.5 times the maximum stone diameter, but not less than 6 inches.

ACS DESIGN OP2 - PIPE OUTLET PROTECTION - NO DEFINED CHANNEL
This information is based on and modeled after Standard & Specification 3.18 of the Virginia Erosion & Sediment Control Handbook, Rev. 2003





ACS DESIGN DD - DIVERSION DIKES
This information is based on and modeled after Standards & Specifications 3.09, 3.10, 3.11 & 3.12 of the Virginia Erosion & Sediment Control Handbook, Rev. 2003



OPTIONAL STONE COMBINATION

SPECIFICATIONS
1. The height of the silt fence (in front of the culvert opening) shall be a minimum of 16 in. and shall not exceed 34 in.
2. Extra strength filter fabric with a minimum spacing of stakes of 3 ft. shall be used to construct the measure.
3. The placement of silt fence should be approximately 6 ft. from the culvert in the direction of incoming flow, creating a "horseshoe" shape as shown in detail.
4. If the silt fence cannot be installed properly or the flow and/or velocity of flow to the culvert protection is excessive and may breach the structure, the stone combination noted in detail should be utilized.

MAINTENANCE
1. The structure shall be inspected after each rain and repairs made as needed.
2. Aggregate shall be replaced or cleaned when inspection reveals that clogged voids are causing ponding problems which interfere with on-site construction.
3. Sediment shall be removed and the impoundment restored to its original dimensions when sediment has accumulated to one-half the design depth. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems.
4. Temporary structures shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

ACS DESIGN CIP1 - SILT FENCE CULVERT INLET PROTECTION
This information is based on and modeled after Standard & Specification 3.08 of the Virginia Erosion & Sediment Control Handbook, Rev. 2003

COMMONWEALTH OF VIRGINIA
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9/4/07
PROFESSIONAL ENGINEER

ACS DESIGN
ENGINEERING • SURVEYING
LANDSCAPE ARCHITECTURE
CONSTRUCTION MANAGEMENT

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WESTLAKE VILLAGE
CENTRAL SEWER SYSTEM
FRANKLIN COUNTY, VIRGINIA

DRAWN BY:	JJD
DESIGNED BY:	DME
CHECKED BY:	DME
DATE:	15 JUNE 2007
JOB NUMBER:	06145

REVISIONS:
No. 1
No. 2
No. 3
No. 4

SHEET NO.:
C2.2

EROSION & SEDIMENT CONTROL DETAILS