

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

The purpose of this plan is to facilitate the construction of The Coves in Franklin County, VA. This project will consist of road and single family house construction with associated utilities.

EXISTING SITE CONDITIONS

The existing site is covered with trees, shrubs, and grassy vegetation.

ADJACENT AREAS

Rural farm land and lake front development.

CRITICAL EROSION AREAS

UTILIZED STRUCTURAL AND VEGETATIVE MEASURES

1. TEMPORARY CONSTRUCTION ENTRANCE (SECTION 3.02)

One temporary construction entrance will be installed. The entrance shall be composed of graded 3" stone to a minimum depth of 6". The entrance shall also run for a minimum distance of not less than 70' back from the existing edge of pavement.

2. SILT FENCE (SECTION 3.05)

Temporary silt fence and associated silt fence breaks shall be installed as indicated on the site plan.

3. INLET PROTECTION (SECTION 3.07)

In order to prevent sediment-laden runoff from clogging the sewer pipe during construction, inlet protection shall be used on each proposed inlet until upland areas are stabilized.

4. SEDIMENT BASIN (SECTION 3.14) WITH DIVERSION DIKE (SECTION 3.09)

Incorporating a diversion dike with an associated sediment basin is the most effective method of filtering sediment-laden runoff before it leaves the site and enters the drainage swale.

5. TEMPORARY SEEDING (SECTION 3.31)

Temporary seeding will be placed on all disturbed areas that will not be brought to final grade within one year or less. Temporary seeding will aid in the reduction of dust and sediment. Temporary seeding will be annual ryegrass (50 lbs./ac), Feb. 16 - April 30, German millet (60 lbs./ac), May 1 - Aug. 31.

6. PERMANENT SEEDING (SECTION 3.32)

All areas disturbed by construction shall be stabilized with permanent seeding immediately following finish grading. Erosion control blankets will be installed over fill slopes, which have been brought to final grade and have been seeded to protect the slopes from rill and gully erosion and to allow seed to germinate properly. Mulch (straw or fiber) will be used on relatively flat areas. In all seeding operations, seed, fertilizer and lime will be applied prior to mulching.

7. MULCHING (SECTION 3.35)

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.

GENERAL NOTES

1. All vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards of and specifications of the Virginia Erosion and Sediment Control Handbook, latest edition, and Virginia regulations.

2. The plan approving authority must be notified one week prior to the preconstruction conference, one week prior to the commencement of land disturbing activity, and one week prior to the final inspection.

3. All erosion and sediment control measures are to be placed prior to or as the first step in clearing.

4. A copy of the approved erosion and sediment control plans shall be maintained on site at all times.

5. The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan approving authority.

6. All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved.

7. The contractor shall inspect all erosion and sediment control measures periodically and after each runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

EROSION SEDIMENT CONTROL MINIMUM STANDARDS

Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade has been reached on any portion of the site. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may be at final grade but will remain dormant (undisturbed) for longer than thirty (30) days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one (1) year.

During construction of the project, soil stockpiles shall be stabilized or protected with sediment trapping measures. The contractor is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site.

A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that, in the opinion of the local program administrator or agent, is uniform, mature enough to survive and will inhibit erosion.

Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in the land disturbing activity and shall be made functional before upslope land disturbances occur.

Stabilization measures shall be applied to earthen structures such as dams, dikes, and diversions immediately after installation.

Cut and fill slopes shall be constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one (1) year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

Before newly constructed stormwater conveyance channels are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary stream crossing constructed of nonerodible material shall be provided. All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.

The bed and banks of any watercourse shall be stabilized immediately after work in the watercourse is completed.

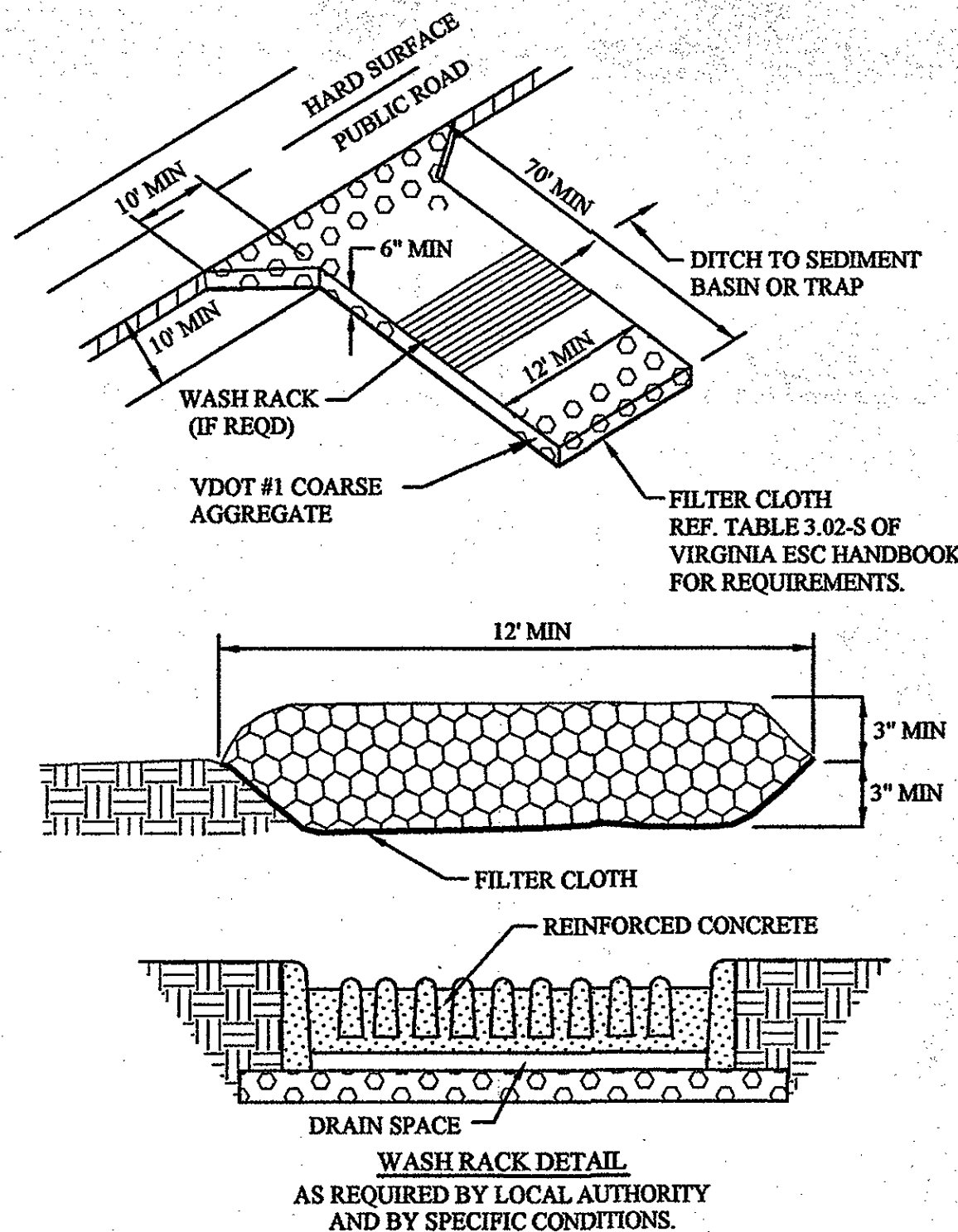
Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

- No more than 500 linear feet of trench may be opened at one time.
- Excavated material shall be placed on the uphill side of trenches.
- Effluent from dewatering operations shall be filtered or passed thru an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
- Applicable safety regulations shall be complied with.
- Restabilization shall be accomplished within these regulations.

Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of the day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner.

All erosion and sediment control structures and systems shall be maintained, inspected and repaired as needed to insure continued performance of their intended function. An inspection shall be made following any runoff producing storm event at least once in every two-week period and within 48 hours.

All temporary erosion and sediment control measures shall be removed within thirty (30) days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program administrator. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.



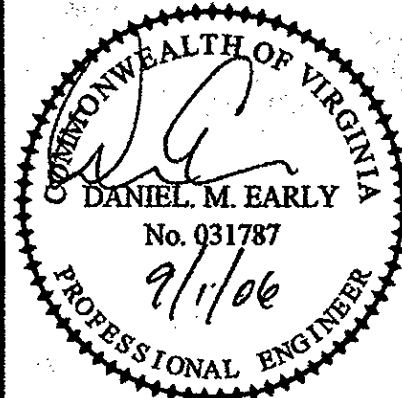
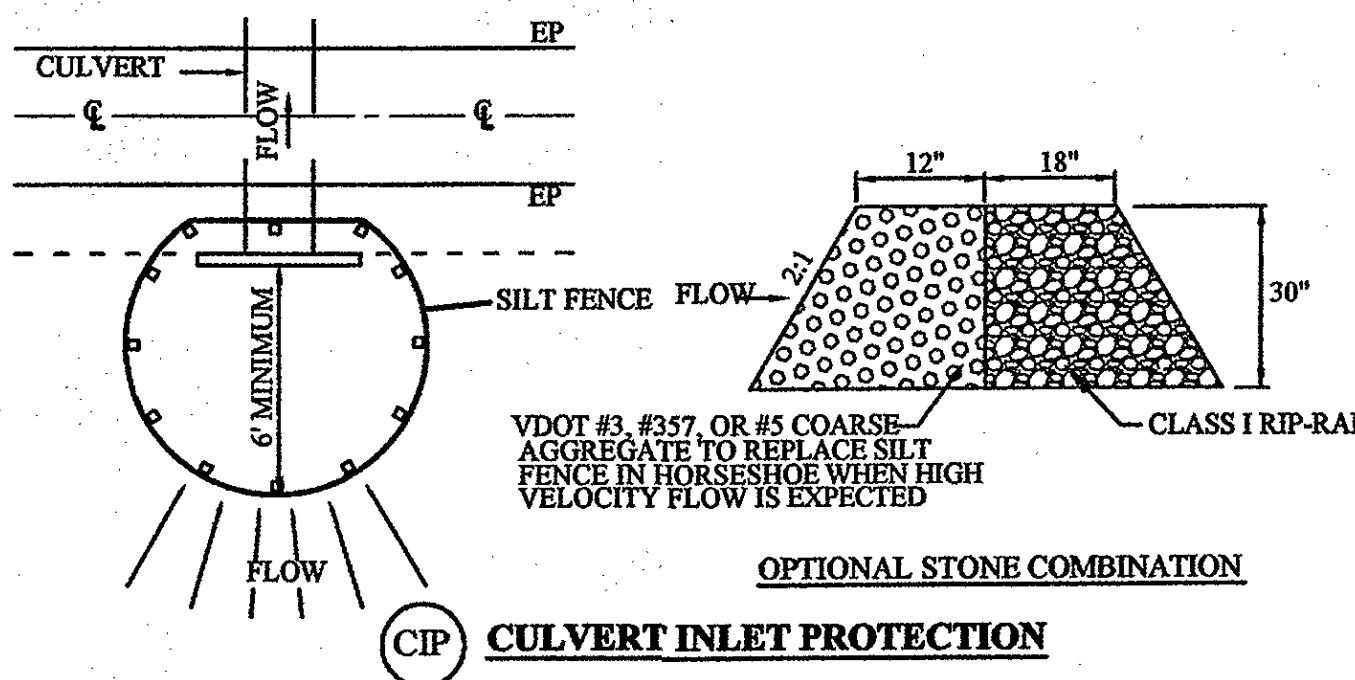
CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

SPECIFICATIONS:

- The height of the silt fence (in front of the culvert opening) shall be a minimum of 16" and shall not exceed 34"
- Extra strength filter fabric with a minimum spacing of stakes of 3' shall be used to construct the measure.
- The placement of silt fence should be approximately 6' from the culvert in the direction of incoming flow, create a "horseshoe" shape as shown in detail.
- 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:

- The structure shall be inspected after each rain and repairs made as needed.
- Aggregate shall be replaced or cleaned when inspection reveals that clogged voids are causing ponding problems which interfere with on-site construction.
- Temporary structures shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.



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 Optima Properties-Smith Mountain Lake, LLC Franklin County, Virginia

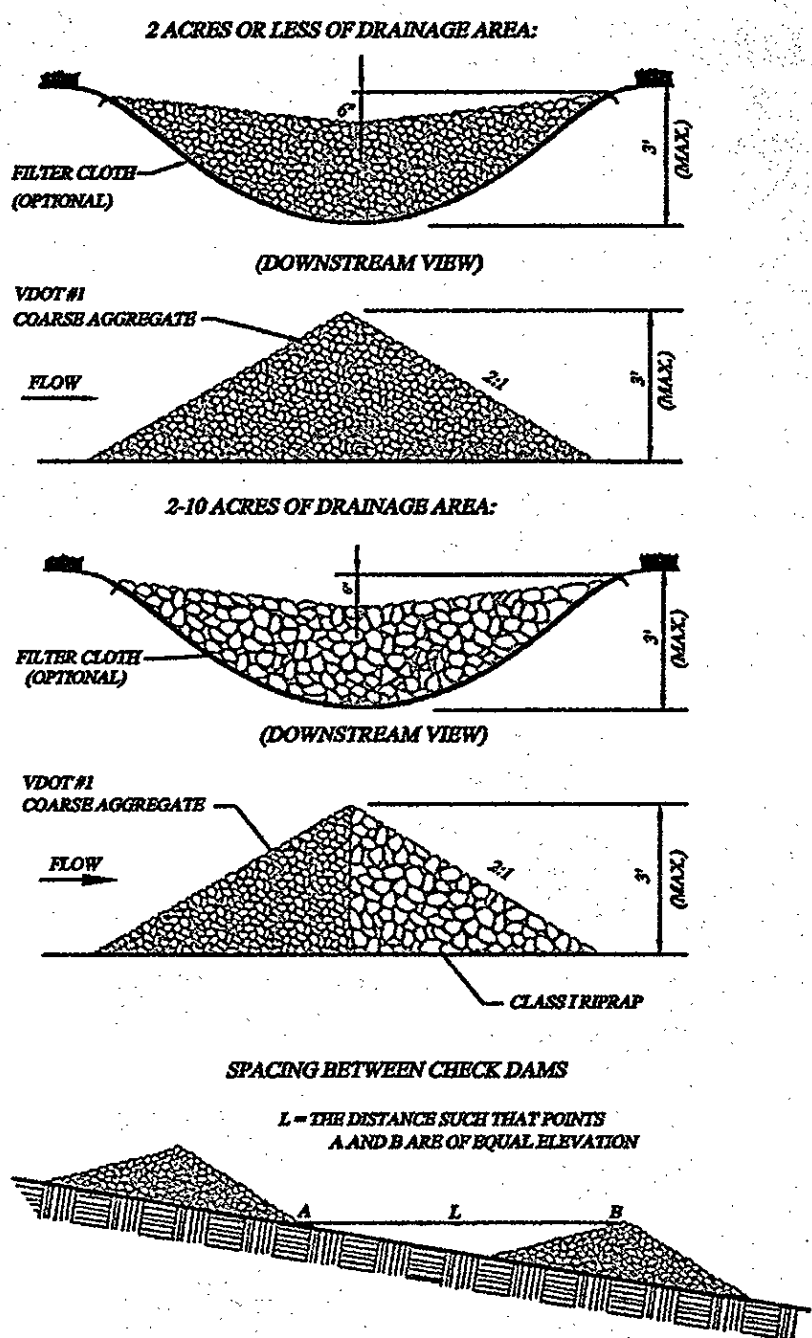
DRAWN BY: AH
DESIGNED BY: DME
CHECKED BY: DME
DATE: 01 MAY 2006
JOB NUMBER: 05271

REVISIONS:
No. 1 8/23/06
No. 2 9/1/07
No. 3 FINAL FOR CONSTRUCTION
No. 4

SHEET NO.:

C2.1

EROSION &
SEDIMENT
CONTROL DETAILS



GENERAL SPECIFICATIONS

- MAXIMUM HEIGHT OF DAM SHALL BE 3.0 FEET
- THE CENTER OF THE DAM SHALL BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES
- FOR ADDED STABILITY, THE BASE OF THE DAM CAN BE KEYED INTO THE SOIL
- APPROXIMATELY 4 INCHES
- THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPLAND DAM IS AT LEAST THE SAME ELEVATION AS THE TOE OF THE DOWNSTREAM DAM
- STONE SHOULD BE PLACED ACCORDING TO THE DETAIL ON THIS SHEET
- HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES
- FILTER CLOTH MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE THE REMOVAL OF THE STONE. SEE STANDARD AND SPEC. 3.19, RIP-RAP, IN THE VIRGINIA EROSION SEDIMENT CONTROL HANDBOOK, LATEST EDITION, FOR REQUIRED PHYSICAL PROPERTIES OF THE FILTER CLOTH

MAINTENANCE

- CHECK DAMS 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
- REGULAR INSPECTIONS SHALL BE MADE TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHALL BE CORRECTED IMMEDIATELY

REMOVAL OF PRACTICE

- UNLESS THEY WILL BE INCORPORATED INTO A PERMANENT STORMWATER MANAGEMENT CONTROL, CHECK DAMS MUST BE REMOVED WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED IN WHEN THEY ARE NO LONGER NEEDED. IN PERMANENT STREAMS, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN CASE OF GRASS-LINED DITCHES, CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS NOT YET RECOVERED TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDING AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED. THE USE OF FILTER CLOTH UNDERNEATH THE STONE WILL MAKE THE REMOVAL OF THE STONE EASIER.

CD ROCK CHECK DAM