Montgomery County Maryland 255 Rockville Pike, 2nd Floor
Department of Permitting Services Rockville, Maryland 20850-4166
240-777-6300 Fax 240-777-6339
http://www.montgomerycountymd.gov/permittingservices/

STANDARD EROSION AND SEDIMENT CONTROL NOTES

August 2008

1. The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the Department.
2. The permittee must obtain inspection and approval by DPS at the following points:
A. At the required pre-construction meeting.
B. Following installation of sediment control measures and prior to any other land disturbing activity.
C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
D. Prior to removal or modification of any sediment control structure(s).
E. Prior to final acceptance.
3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.
4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such times as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
6. All sediment basins, trap embankments, perimeter dikes, and all disturbed slopes steeper or equal to 3:1 shall be stabilized with sod, seed, and anchored straw mulch, or other approved stabilization measures, within seven (7) calendar days of establishment. All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.
7. The permittee shall apply sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within fourteen (14) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas, such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within fourteen (14) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.
10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
11. Permanent swales or other points of concentrated water flow shall be stabilized within 7 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.
12. Temporary sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the end of a rainfall.
16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
17. All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment.
18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
21. Temporary sediment trap(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one-half (1/2) the wet volume of the trap or when required by the sediment control inspector.
22. Sediment removed from traps shall be placed and stabilized in approved areas, but not within a floodplain.
23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work.
25. Off-site spoil or borrow areas must have prior approval by DPS.
26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:
A. Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non-erosive outlet; or
C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non-woven fabric), or approved equivalent, located in an undisturbed buffer area.
Remember: Dewatering operation and method must have prior approval by the DPS inspector.
27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with Montgomery County standards and specifications for topsoiling.

08-08

19.0 STANDARDS AND SPECIFICATIONS FOR LANDGRADING

Definition

Reshaping of the existing land surface in accordance with a plan as determined by engineering and survey layout.

Purpose

The purpose of land grading specification is to provide for erosion control and vegetative establishment on those areas where existing land surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal and vegetative treatment, etc.

Many counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices of erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into this plan:

1. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.
2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed, the slope should be no steeper than 3:1. 4:1 is preferred because of safety factorerated to mowing slopes.) Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.
3. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.
   a. Benches shall be a minimum of six feet wide to provide for ease of maintenance.
   b. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 and 3 percent, unless accompanied by appropriate design and computations.
   c. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary swale.
4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downslope by the use of a designed structure, except where:
   a. The face of the slope is or it shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.
   b. The face of the slope shall not be subject to any concentrated flows or surface water such as from natural drainageways, graded swales, downspouts, etc.
   c. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see section G), riprap or other approved stabilization methods.
5. Cut slopes occuring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have slopes cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and act to hold moisture, lime fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated slopes and carried to a suitable outlet.
6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.
7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, slippage, settlement, subsidence or other related damages.
8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a fozen foundation.
9. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subject to the provisions of this standard and specifications.
10. All disturbed areas shall be stabilized structurally or vegetatively in compliance 20.0 Standards and Specifications for Vegetative Stabilization.

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

This practice is limited to areas having 2:1 or flatter slopes.

For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications.

Topsoil Specifications - Soil to be used as topsoil must meet the following:

1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by DPS. Regardless, topsoil shall not be a mixture of contrasting textured subsoils, and shall contain less than 5 % by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 " in diameter.

The subsoil shall be tilled to a minimum depth of 6 inches before placement of topsoil.

Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 lbs per 1000 sq ft) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil.

Topsoil shall be tested and amended as per soil test recommendations.

Topsoil Application.

1. When topsoiling, maintain needed erosion and sediment control practices.
2. Topsoil shall be uniformly distributed in a 4-8 inch layer and lightly compacted to a minimum thickness of 4 inches. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
3. Topsoil shall not be placed while the topsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

POND VEGITATIVE STABILIZATION (from MD 342)

Permanent and temporary seeding, sodding and mulching.

I. SITE PREPARATION

Permanent or temporary vegetation shall be established within (7) seven calendar days on the surface of all sediment control practices such as diversions, grade stabilization structures, berms, waterways, sediment control basins, and all slopes greater than 3 horizontal to 1 vertical (3:1) and within (14) fourteen calendar days for all other disturbed or graded areas on the project site. Mulching may only be used on disturbed areas as temporary cover where vegetation is not feasible or where seeding cannot be completed because of weather.

II. SEEDBED PREPARATION AND SEEDING APPLICATION

Loosen the top layer of the soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment or such as disc harrows, chisel plows or rippers mounted on construction equipment. Incorporate the lime and fertilizer into the top 3 to 5 inches of the soil by discing or by other suitable means. Rough areas should not be rolled or dragged smooth, but left in a roughened condition. Steep slopes greater than 3:1 grade should be tracked by a dozer, leaving the soil in an irregular condition with the ridges running parallel to the contour of the slope. The top 1 to 3 inches of soil should be loose and friable. Permanent cover may require an application of topsoil. If so, it must meet the requirements set forth in section 21.0 Standards and Specifications for topsoil from the 1994 Standards and Specifications.

III. SOIL AMENDMENTS

Soil tests shall be made on sites over five acres to determine the exact requirements for both lime and fertilizer. For sites under five acres, In lieu of soil test, apply the following:

Fertilizer	Nitrogen	2 lbs/ sq. ft.	(90 lbs/ac)
	P_2O_5	4 lbs/ sq. ft.	(175 lbs/ac)
	K_2O	4 lbs/1,000 sq. ft.	(175 tons/ac)

For low maintenance areas apply 150 lbs/ac ureaform fertilizer (38-0-0) at 3.5 lbs/1,000 sf in addition to the above fertilizer at the time of seeding.

Ground limestone: 2tons/ac

IV. SEDIMENT CONTROL PRACTICE SEEDING

Select a seeding mixture from tables 25 or 26 in section G of the 1994 Standards and Specifications. Document seeding on the erosion and sediment control plan using appropriate chart below. Note: if sediment control practices are in for longer than 12 months, permanent seeding is required.

V. TEMPORARY/PERMANENT SEEDING MIXTURES AND RATES

Select a seeding mixture from tables 25 and 26 in section G of the 1994 Standards and Specifications. Document seeding on the erosion and sediment control plan using appropriate chart below.

Permanent Seeding Summary

Seed Mixture (Hardiness Zone 6b) From Table 25					Fertilizer Rate 10-10-10	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
Mix #7 *	Tall Fescue 85% Weeping Lovegrass (2%) Sericea Lespedeza (10%)	110 3 20	3/1 - 5/15 5/16 - 8/14 8/15 - 10/15	1/4"-1/2"	600 lb/ac (15 lb/1,000sf)	2 tons/ac (100lb/1,000sf)
Mix #3 **	Tall Fescue 85% Perennial Ryegrass (10%) Kentucky Bluegrass (5%)	5-8 lbs. 1000sf	3/1 - 5/15 8/15 - 10/15	1/4"-1/2"		

* For low maintenance areas only
** For lawn areas

Temporary Seeding Summary

Seed Mixture (Hardiness Zone 6b) (From Table 26)					Fertilizer Rate 10-20-20			Lime Rate
No.	Species	Application rate(lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
1	Annual ryegrass	50 lbs	3/1 - 4/30 8/15 - 11/1	1/4"-1/2"	90 lb/ac (2.0lb/ 1,000sf)	175 lb/ac (4 lb/ 1,000sf)	175 lb/ac (4 lb/ 1,000sf)	2tons/ac (100lb/ 1,000sf)
2	Weeping lovegrass	4 lbs	5/1 - 8/14	1/4"-1/2"				
					Equals 900 lbs. of 10-20-20 per acre			

VI. TURFGRASS ESTABLISHMENT
This includes lawns, parks, playgrounds, and commercial sites whichwill recieve a medium to a high level of maintenance. Areas to recieve seed shall be tilled by discing or other approved methods to a depth of 3 to 5 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting seedbed shall be in such a condition that future mowing of grasses will pose no difficulty. Use certified material and choose a turfgrass mixture from page G-20 of the 1994 Standards and Specifications or select from the list in the most current University of Maryland publication, Agronomy Mimeo #77, "Turfgrass Cultivar Recommendations for Maryland". See mimeo at the end of this section.

VII. Mulching
All seedings require mulching. Also mulch during non seeding dates until seeding can be done. Mulch shall be unchopped, unrotted, small grain straw applied at a rate of 2 tons/acre or 90 lbs./1,000 sf (2 bales). If mulch anchoring tool is used, apply 2.5 tons/acre. Mulch materials shall be relatively free of all kinds of weeds and shall be competely free of noxious weeds. Spread mulch uniformly, either mechanically or by hand, to a depth of 1 to 2 inches. Mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by mulch nettings, mulch anchoring tool, wood cellulose faber or liquid mulch binders.

Apply wood cellulose fiber at a dry weight of 1500 lbs/acre. If mixed with water, use 50 lbs. of wood cellulose fiber per 100 gallons of water.

Liquid binder should be applied heavier at the edge, where wind catches mulch in valleys, and on crest of banks. The remainder of the area should appear uniform after binder application. Apply rates recommended by the manufacturer to anchor and mulch. Staple light weight, plastic netting over mulch according to manufacturer's recommendations.

VIII. SODDING
Class of turfgrass sod shall be Maryland or Virginia State certified or approved sod. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod is to be laid with long edges parallel to the contour using staggered and with all ends tightly abutted and not overlapping. Sod shall be rolled and thoroughly watered after installation. Daily watering to maintain 4 inches of moisture for the first week is required in the absence of rainfall. Sod is not to be applied on frozen ground.

IX. MAINTENANCE
a. Irrigate – Apply minimum 1" of water every 3 to 4 days depending on soil texture, when soil moisture becomes deficient to prevent loss of stand of protective vegetation.

b. Repairs – If stand provides between 40% and 94% ground coverage, overseed and fertilize using half of the rates originally applied. If stand provides less than 40% coverage, reestablish stand following original rates and procedures.

Note: Use of this information does not preclude meeting of all the requirements of the 1994 Standards and Specifications for Soil Erosion and Sediment Control Vegetative Practices.

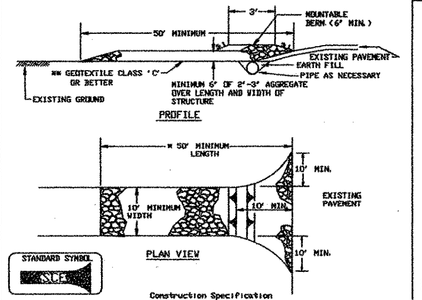
Table 27 - Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (Silt Fence)	0.40–0.80**	90	190

** US Std. Sieve CW-02215

The properties shall be determined in accordance with the following procedures:
- Apparent opening size MSMT 323
- Grab tensile strength ASTM D 1682:
  4 x 8" specimen, 1 x 2" clamps, 12"/min.
  strain rate in both principal directions of goetextile fabric.
- Burst strength ASTM D 3786

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

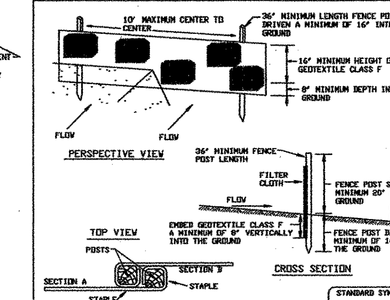


Construction Specification

1. Length – minimum of 50' (*50' for single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (Filter cloth) shall be placed over the existing ground prior to placing stone. **The prior approval authority may not require single family residences to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe will be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE | SOIL CONSERVATION SERVICE | PAGE F - IV - 9 | MARYLAND DEPARTMENT OF ENVIRONMENT | WATER MANAGEMENT ADMINISTRATION

DETAIL 22 – SILT FENCE



JOINING TWO ADJACENT SILT FENCE SECTIONS

Construction Specifications

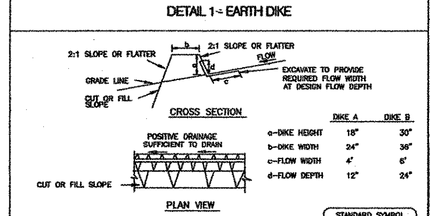
1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1"x2" or 1"x2" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of silt fence height.

U.S. DEPARTMENT OF AGRICULTURE | SOIL CONSERVATION SERVICE | PAGE F - IV - 9 | MARYLAND DEPARTMENT OF ENVIRONMENT | WATER MANAGEMENT ADMINISTRATION

DETAIL 1 – EARTH DIKE



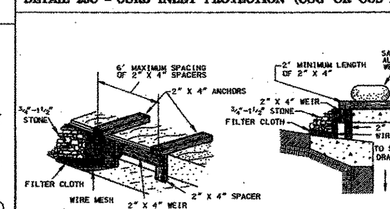
1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" – 7" stone or recycled concrete equivalent pressed into dike and 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE | SOIL CONSERVATION SERVICE | PAGE A-1-8 | MARYLAND DEPARTMENT OF ENVIRONMENT | WATER MANAGEMENT ADMINISTRATION

DETAIL 23C – CURB INLET PROTECTION (COG OR COS INLETS)



Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
3. Securely nail the 2" X 4" weir to a 2" long vertical spacer to be located between the weir and the inlet face (max. 4" apart).
4. Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1" beyond both ends of the throat opening.
6. Form the ½" x ½" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean ¾" x 1½" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow to not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

24.0 MATERIALS SPECIFICATIONS

Table 28 - Stone Size

	SIZE RANGE	D_{50}	D_{100}	ASSHTO	WEIGHT
NUMBER 57*	3/8"–1 1/2"	1/2"	1 1/2"	M–43	N/A
NUMBER 1	2"–3"	2 1/2"	3"	M–43	N/A
RIP–RAP**	4"–7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150lb.max.
CLASS II	N/A	16"	24"	N/A	700lb.max.
CLASS III	N/A	23"	34"	N/A	2,000lb.max.

* This classification is to be used on the inside face of stone outlets and check dams.

** This classification is to be used whenever small rip–rap is required. The State Highway Administration designation for this stone is Stones for Gabions (905.01.04)

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 8231 Expiration Date: 11/28/11 .

STATE OF MARYLAND · CHANDER S. DHALWALA · No. 8231 · PROFESSIONAL ENGINEER

Chander S. Dhalwala, P.E. Maryland Registration No. 8231 — 3/14/2011 Date

MCDPS APPROVED FOR:

Stormwater Management: SF/FS/INF/BA(5)
4-5-2011 Reviewed Date
Approved 4/5/11 Date
230470 SWM FILE #

Sediment Control Technical Requirements:
4-5-2011 Reviewed Date
Approved 4/5/11 Date

Administrative Requirements:
4-5-2011 Reviewed Date
233735 SEDIMENT CONTROL PERMIT #

NOTE
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.
THIS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

ENGINEERS
LAND PLANNERS
LAND SURVEYORS
RDA Engineering Co. Inc.
14803 MAIN STREET – UPPER MARLBORO, MD. 20772
UPPER MARLBORO (301)952-8300 (410)535-8800
PRINCE FREDERICK (301)855-8500 (410)535-8800
M:\1998\25\Sediment Control\Ws25_SC 2-7.dt

REVISIONS

JOB NO.	W-686
SCALE:	N/A
DESIGNED BY:	RH
DRAWN BY:	ERV
CHECKED BY:	CSD
DATE:	APRIL 2008

COMPOSITE, GRADING AND SEDIMENT CONTROL PLAN
DETAIL SHEET

MIRACLE TEMPLE ASSEMBLY OF GOD

ELECTION DISTRICT NO. 13
MONTGOMERY COUNTY, MARYLAND

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES
WATER RESOURCES

MODIFIED SUPER SILT FENCE

DATE: 6/03

SCALE: NONE

SHEET 8 of 9