

### 21.0 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 vegetable 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 where:
  - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
  - The original soil to be vegetated contains material toxic to plant growth.
  - The soil is so acidic that treatment with limestone is not feasible.
- 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 set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - 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 a soil scientist and approved by the appropriate approval authority. Fragments, 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.
  - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
  - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be applied at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

**For sites having disturbed areas under 5 acres:**

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

**For sites having disturbed areas over 5 acres:**

- On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
  - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
  - Organic content of topsoil shall be not less than 1.5 percent by weight.
  - Topsoil having available soil content greater than 500 parts per million shall not be used.
  - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit decomposition of chlo-ro-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

Topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization-Section 1- Vegetative Stabilization Methods and Materials.

**Topsoil Application:**

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
- Topsoil shall be uniformly distributed in a 4"-8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that seeding or seeding can proceed with a minimum of additional soil preparation and tillage. 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.
- Topsoil shall not be placed while the topsoil or subsoil 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.

### PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS REQUIRED.

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

**SOIL AMENDMENTS:** In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureiform fertilizer (9 lbs./1000 sq.ft.).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

**SEEDING:** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 80 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.6 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 15 thru February 28, protect site by Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring, Option (2) Use seed, Option (3) Seed with 80 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**MULCHING:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrifed small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of amulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

**MAINTENANCE:** Inspect all seeded areas and make needed repairs, replacements and reseedings.

### TEMPORARY SEEDING NOTES

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

**SOIL AMENDMENTS:** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.).

**SEEDING:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushels per acre of annual ryegrass (3.2 lbs./1000 sq.ft.) For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs./1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring, or use seed.

**MULCHING:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrifed small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of amulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

### SEDIMENT AND EROSION CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Section prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of the plan and are to be in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
  - 7 calendar days for all perimeter sediment control structures.
  - 14 calendar days for all interior sediment control structures.
  - 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above, in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for PERMANENT SEEDING, and temporary seeding and mulching (Sec. 6).
- Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

**SITE ANALYSIS:**

Total Area of Site:	527.00
Area Disturbed:	176.00
Area to be vegetatively stabilized:	351.00
Total Cost:	486.00
Total Fee:	186.00

Offsite Waste/Borrow Area Location: \_\_\_\_\_

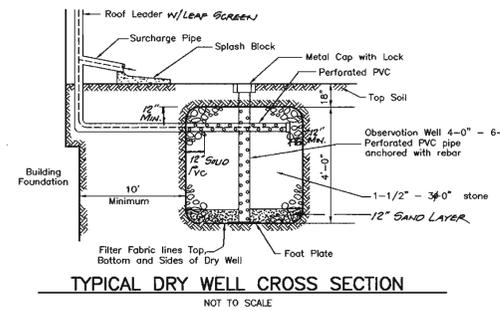
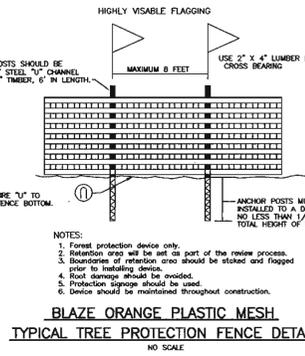
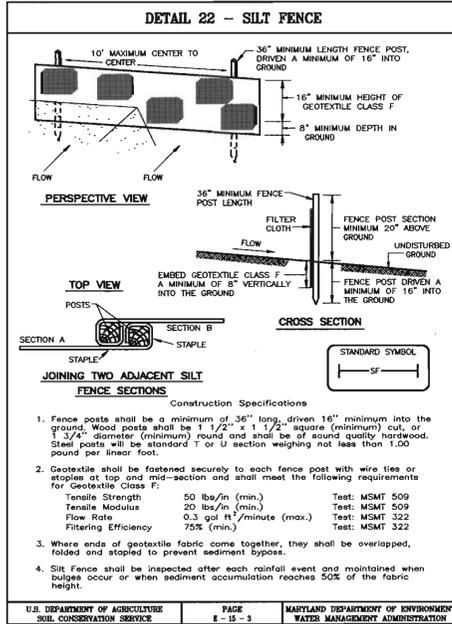
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities shall be backfilled and stabilized within one working day, or is limited to three pipe lengths.
- The total amount of earth dikes = N/A
- The total amount of super silt fence = 225 LF
- The total amount of super diversion fence = N/A

\* It is the responsibility of the contractor to identify the soil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

### CONSTRUCTION SEQUENCE:

	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	7
3. Install sediment and erosion control devices and stabilize.	30
4. Excavate for foundations, rough grade and temporarily stabilize.	30
5. Construct structures, sidewalks and driveways.	14
6. Final grade, install Erosion Control Matting and stabilize in accordance with standards and specifications.	7
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

\* Delay construction of houses on lots: N/A



### DRY WELL CHART

No.	AREA SF.	VOL. REQ. CF.	LENGTH	WIDTH	DEPTH	BOTTOM ELEV.
1	500	500	5'	5'	4'	417.00
2	500	500	5'	5'	4'	417.00
3	500	500	5'	5'	4'	420.00
4	500	500	5'	5'	4'	421.00

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF DEVELOPMENT ENGINEERS DIVISION

DATE: 12/6/04

DATE: 12/6/04

DATE: 12/6/04

Reviewed for HOWARD S.C.D. and meets Technical Requirements

Signature: [Signature] Date: 11/19/04

S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: [Signature] Date: 11/19/04

HOWARD S.C.D.

### DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for sediment and erosion control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

Signature: [Signature] Date: 11-12-04

### ENGINEER'S CERTIFICATE

I hereby certify that this plan for Sediment and Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: [Signature] Date: 11-12-04

G. NELSON CLARK



**CLARK · FINEFROCK & SACKETT, INC.**  
ENGINEERS · PLANNERS · SURVEYORS

7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.

DESIGNED RMT	<b>SEDIMENT AND EROSION CONTROL NOTES AND DETAIL SHEET</b> <b>LOT 23 BETHANY MANOR</b> DEED REF. 3733 TAX MAP 17 PARCEL 47B GRID 13 SECOND (2ND) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=30'
DRAWN JPH		DRAWING 2 OF 2
CHECKED RMT		JOB NO. 04-034
DATE 7-20-04		FILE NO. 04-034-X
		FOR: ROBERT WERTZ 5293 KERGER ROAD ELLCOTT CITY, MD 21043