

Permanent and Temporary Seeding, Sodding and Mulching

SEDIMENT CONTROL NOTES

- The developer is responsible for the acquisition of all required easement, right and/or rights-of-way pursuant to the discharge from the erosion and sediment control practices, stormwater management practices and the discharge of stormwater onto or across and grading or other work to be performed on adjacent or downstream properties affected by this plan.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than three horizontal to one vertical (3:1) and b) fourteen 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.
- On all sites with disturbed areas in excess of two acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals will not be authorized until this initial approval by the inspection agency is made.
- Approval shall be requested upon final stabilization of all sites with disturbed areas in excess of two acres before removal of controls.
- The owner/developer that signs the certification on an erosion and sediment control plan is the responsible party regardless of any sale of the property or work of subcontractors. Erosion and sediment control plans are approved for one owner/developer only. All permits under an erosion and sediment control plan must and can only be issued to the owner/developer that signs the certification on the plan.
- PGSCD approval of a erosion and sediment control plan, pursuant to meeting local permit requirements for grading, building or street permits, etc., is valid only when the work to be performed under the permit is the same as (no more/no less than) that contained in the plan as approved by the PGSCD.
- Any changes or modifications to an approved erosion and sediment control plan, not approved by the PGSCD, shall invalidate the plan approval.
- Offsite borrow or spoil areas must have an approved and active erosion and sediment control plan.
- Temporary designed sediment basins shall be removed within 36 months after the beginning of construction of the basin.
- On small pond approvals:
 - The owner or engineer will notify PGSCD promptly in writing when construction is begun and when construction is completed.
 - The project shall be constructed under the supervision of the engineer-in-charge. Within 30 days of the completion of construction, the engineer-in-charge that designed the structure shall provide PGSCD with an As-Built plan and shall certify, with the engineer's seal, that the MD378 pond was constructed as shown on the As-Built plans.
 - The approval is valid only for use by the applicant and may not be transferred to another unless written approval for such transfer is obtained from PGSCD.
- Disturbed surface area 1.79 AC
 Volume of spoil material _____
 Volume of borrow material _____
- List Predominant soil types and general description per PGSCD soil survey:
 A6(AURA AND CROOM GRAVELLY LOAMS), SH2(SASSAFRAS SANDY LOAM),
 BR2(DELTVILLE SILT LOAM)

- Site Preparation**
Permanent or temporary vegetation shall be established within seven (7) 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 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.
- Seeded 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 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 should be tracked by a dozer, leaving the soil in an irregular condition with 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.
- 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 5 acres, in lieu of a soil test, apply the following:

 Fertilizer Nitrogen 2 lbs/1000 sq. ft. (90 lbs/ac)
 P₂O₅ 4 lbs/1000 sq. ft. (175 lbs/ac)
 K₂O 4 lbs/1000 sq. ft. (175 lbs/ac)

 For low maintenance areas apply 150 lbs/ac ureaform fertilizer (38-0-0) at 3.5 lbs/1000 sq. ft. in addition to the above fertilizer at the time of seeding.

 Ground Limestone 2 tons/ac

- Sediment Control Practice Seeding**
Select a seeding mixture from table 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.

19.0 STANDARDS AND SPECIFICATIONS

FOR LAND GRADING

Definition

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

Purpose

The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the 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 surroundings 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 for 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 the plan:

- 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.
- 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 factors related to mowing steep slopes.) Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.
- 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.
 - Benches shall be a minimum of six-feet wide to provide for ease of maintenance.
 - 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 percent and 3 percent, unless accompanied by appropriate design and computations.

- Temporary/Permanent Seeding Mixtures and Rates**
Select a seeding mixture from appropriate table 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.

Temporary Seeding Summary

Seed Mixture (Hardness Zone 7g) From table 26						
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-10-10)	Lime Rate
	ANNUAL RYEGRASS	50	2/1-4/30 8/15-11/1	1/4"- 1/2"	600 lb/ac (15 lb/1000sf)	2 tons/ac (100 lb/1000 sf)
	MILLET	50	5/1-8/14	1/2"		

Permanent Seeding Summary

Seed Mixture (For Hardness Zone 7g) From Table 25								
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)			Lime Rate
					N	P2O5	K2O	
3	BALL PEARL (BGR) PER. INTERGRASS (IG) REN. BLUEGRASS (BG)	125 15 10	3/1-5/15 8/15-11/15	1/4"-1/2"	2 lb/1000 sf	4 lb/1000 sf	4 lb/1000 sf	2 tons/ac (100 lb/1000 sf)
					= 900 lbs/ac of 10-20-20			

- Turfgrass Establishment**
This includes lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by discing or by other approved methods to a depth of 3 to 5 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1/2 inches in diameter shall be removed. The resulting seedbed shall be in such 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".

- Mulching**
All seedings require mulching. Also mulch during non-seeding dates until seeding can be done.

Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons/acre or 90 lbs/1000 sq. ft. (2 bales). If a mulch anchoring tool is used, apply 2.5 tons/acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly,

mechanically or by hand, to a depth of 1-2 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 fiber or liquid mulch binders.

Apply wood cellulose fiber at a dry weight of 1,500 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 the mulch according to manufacturer's recommendations.

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

- Maintenance**
 - 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.
 - 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 all of the requirements of the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control Vegetative Practices.

SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

PHASE I

- INSTALL CONSTRUCTION ENTRANCE TO SITE. (WEEK 1 TO WEEK 2)
- INSTALL TREE PROTECTION, SUPER SILT FENCE AND SEDIMENT BASIN WHERE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN BEFORE STARTING GRADING OPERATIONS. (WEEK 2 TO WEEK 4)
- MINIMIZE CLEARING AND GRADING OPERATIONS TO AREAS NECESSARY FOR IMMEDIATE CONSTRUCTION ACTIVITY. (WEEK 4 TO WEEK 6)
- STRIP AND STOCKPILE TOPSOIL FOR USE DURING FINAL CONSTRUCTION (WEEK 4 TO WEEK 6)
- INSTALL SUMP PIT UPSTREAM OF BASIN CONSTRUCTION OUTLET WATER AWAY FROM EXCAVATION (WEEK 6 TO WEEK 8)
- INSTALL INITIAL DIVERSION FOR BASIN PRINCIPLE SPILLWAY (WEEK 8 TO WEEK 10)
- CONSTRUCT BASIN PRINCIPLE SPILLWAY, TEMPORARY OUTFALL PIPE AND PERMANENT OUTFALL STRUCTURES 11 AND 10 (WEEK 10 TO WEEK 13)
- EXCAVATE SEDIMENT BASIN (WEEK 13 TO WEEK 15)
- STABILIZE AREAS ASSOCIATED WITH THE BASIN (WEEK 15 TO WEEK 16)
- PERFORM GRADING OPERATIONS TO BRING SITE TO SUBGRADE ELEVATION AS DEPICTED IN PHASE I PLAN UNDER G-PERMIT (WEEK 16 TO WEEK 24)
- INSTALL WATER AND SEWER SERVICES (WEEK 20 TO WEEK 24)

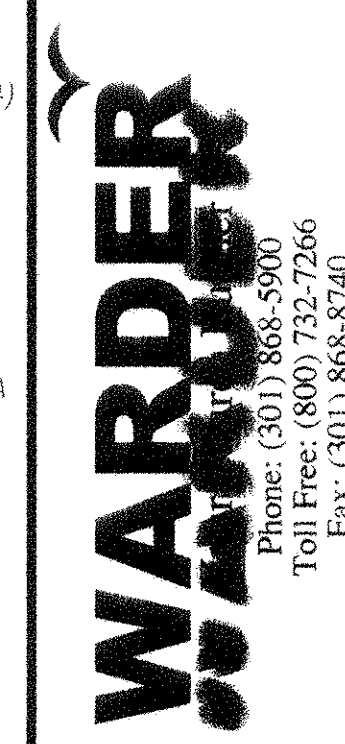
PHASE II

- ONCE BUILDING PERMIT HAS BEEN APPROVED, CONSTRUCT BUILDING FOUNDATION. (WEEK 25 TO WEEK 33)
- INSTALL CURB AND GUTTER, SIDEWALK, AND PAVEMENT EXCEPT FOR AREA OF UNDERGROUND DETENTION SYSTEM (WEEK 33 TO WEEK 36)
- REESTABLISH DISTURBED AREAS AS SOON AS POSSIBLE. (WEEK 36 TO WEEK 38)
- RESTORE ALL DISTURBED AREAS NOT OCCUPIED BY BUILDING OR PAVT AS DETAILED IN SEDIMENT CONTROL NOTES. (WEEK 38 TO WEEK 40)
- WHEN SITE IS STABILIZED, INSTALL REMAINING STORM DRAIN SYSTEM, U/G DETENTION AND INFILTRATION TRENCH, REMOVE TEMPORARY BASIN OUTLET (WEEK 40 TO WEEK 44)
- INSTALL REMAINING CURB AND GUTTER, SIDEWALK, AND PAVEMENT AROUND UNDERGROUND DETENTION SYSTEM (WEEK 45 TO WEEK 47)
- INSTALL LANDSCAPING AS SHOWN ON LANDSCAPE PLAN. (WEEK 47 TO WEEK 49)
- WHEN ENTIRE SITE IS STABILIZED, REMOVE EROSION CONTROL MEASURES UPON APPROVAL OF COUNTY INSPECTOR. (WEEK 50 TO WEEK 52)

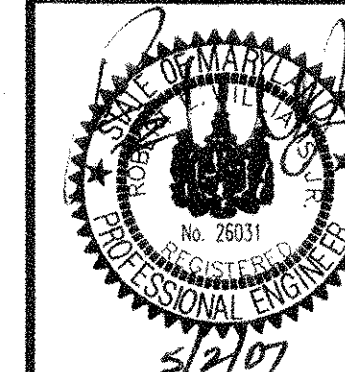
* NOTE: THE LENGTH OF LIFE FOR THE TEMPORARY SEDIMENT BASIN IS NOT TO EXCEED 3 YEARS

REVISIONS:

NO.	DESCRIPTION



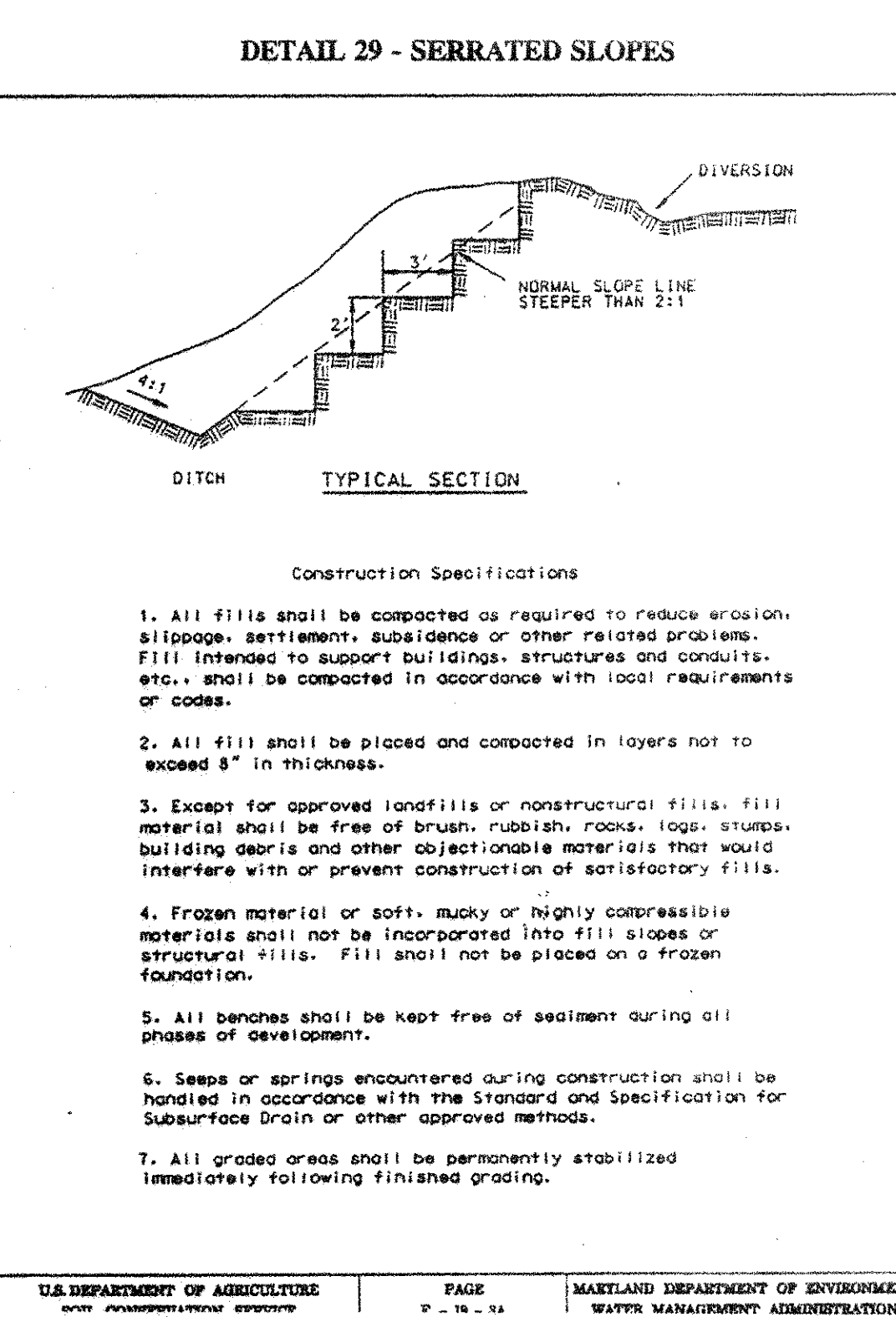
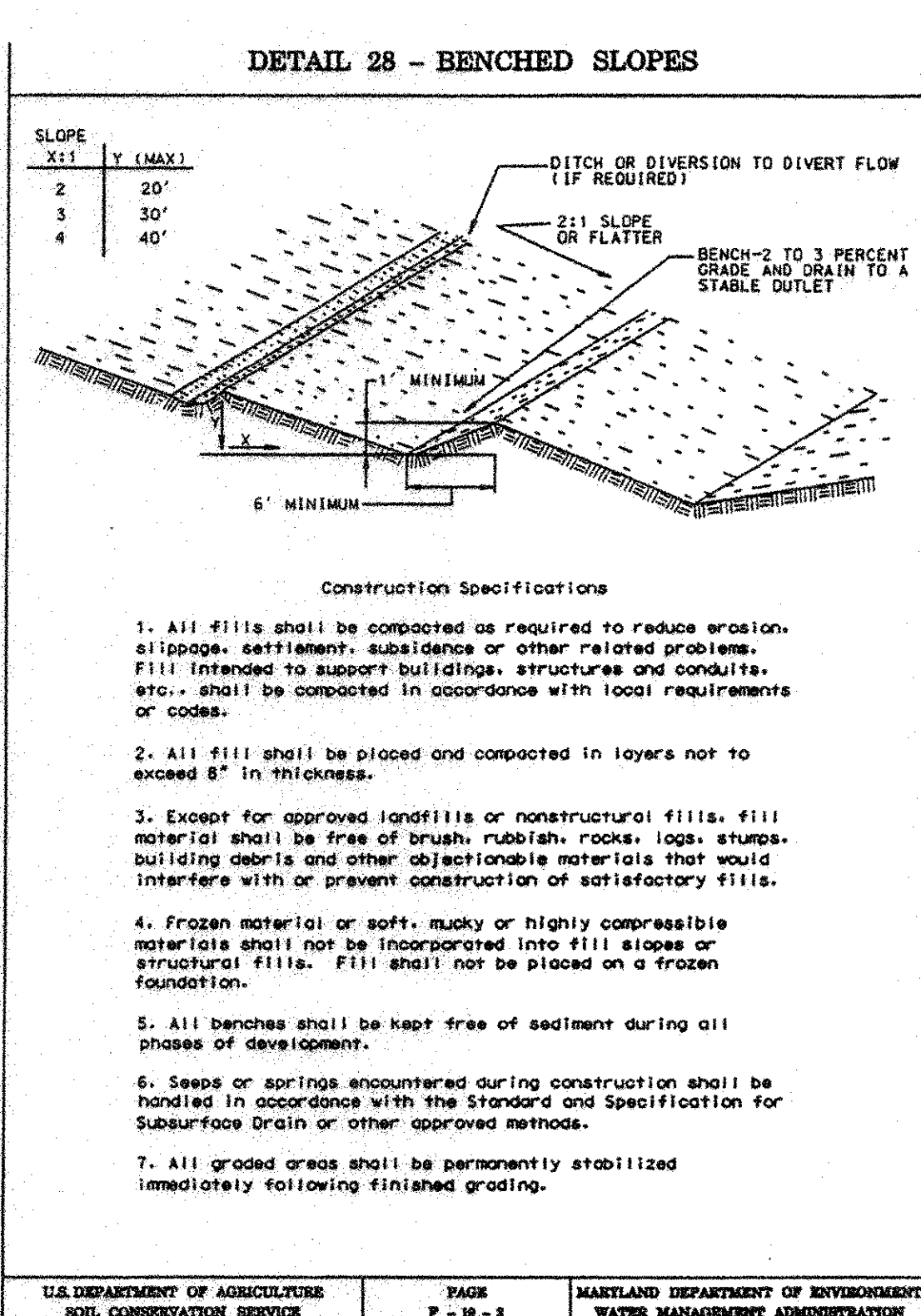
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DATE: APRIL 2007
SCALE: N/A
DRAWING NAME:
19D09-ESN

EROSION & SEDIMENT CONTROL NOTES
PROJECT: BETH SHALOM AME ZION CHURCH
6TH ELECTION DISTRICT
PRINCE GEORGE'S COUNTY, MARYLAND

SHEET SC 4 OF 7
FILE No. MDPG-19D09-01



MISS UTILITY
"For location of utilities call 1-800-257-7777
48 hours in advance of any work in this area"

CAUTION - NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AND TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.