

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

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. 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,

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible 11. 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

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as 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 Experimental Station.

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

i. 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 agranomist or a soil scientist and approved by the appropriate approval authority. 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 that I and 1/2" in

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. 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 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.

II. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil
 amendments as specified in 20,0 Vegetative Stabilization –
 Section I - Vegetative Stabilization Methods and Materials.

For sites having disturbed areas over 5 acres: i. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following: a, pH for topsoil shall be between 6.0 and 7.5. If

6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
b. Organic content of topsoil shall be not less than

the tested soil demonstrates a pH of less than

1.5 percent by weight. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
d. No sod or seed shall be placed on soil soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials. NOTE: Topsoil substitutes or amendments, as recommended

by a qualified agranomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of

ii. Place topsoil (if required) and apply soil ammendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. 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.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

iii. 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 sodding 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.

iv. Topsoil shall not be place 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

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

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

1) Preferred-Apply 2 tons per acre dolomitic limestone (92 lbs/ 100 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 ureaform fertilizer (9 lbs/1000 sq.ft.)

2) Acceptable-Apply 2 tons per acre dolomatic 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 I thru April 30, and August I thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May I thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 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 sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted 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 emulsified 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, discing or other acceptable means before seeding, if not previously

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

SEEDING: For periods March I thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.) For the period May I thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November I thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING: Apply I 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted 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 emulsified 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.

7. SITE ANALYSIS:

and establishment of grasses.

Control Inspector.

Total Area of Site: 3.12 AC.
Area Disturbed: 3.00 AC.
Area to be roofed or paved: 1.17 AC.
Area to be vegetatively stabilized: 1.83 AC.
Total Cut
Total Fill
Offsite Waste/Borrow Area Location: * 8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same

SEDIMENT AND EROSION CONTROL NOTES

according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS, FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).

3. Followina initial soil disturbance or redisturbance, permanent or

4. All sediment traps/basins shown must be fenced and warning

5. All disturbed areas must be stabilized within the time period

signs posted around their perimeters in accordance with Vol.1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm

specified above, in accordance with the 1994 MARYLAND STAND-ARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec G).

Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination

to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment

6. All sediment control structures are to remain in place and are

a) 7 calendar days for all perimeter sediment control stuctures, dikes, perimeter slopes and all slopes greater than 3:1
 b) 14 days as to all other disturbed or graded areas on the

2. All vegetative and structural practices are to be installed

temporary stabilization shall be completed within:

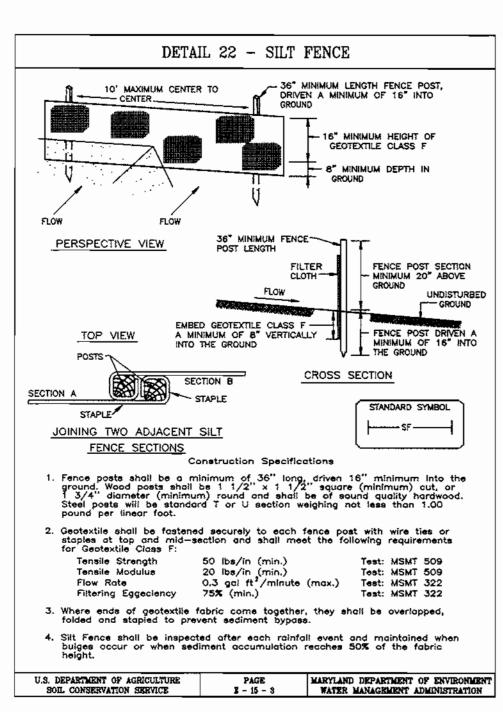
- Additional sediment control must be provided, if deemed neces-sary by the Howard County DPW Sediment Control Inspector.
- 10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment 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
- II. Trenches for the construction of utilities is limited to three pipe lenaths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
- The total amount of silt fence =
- 13. The total amount of super silt fence = 14. The total amount of earth dike =
 - * It is the responsibility of the contractor to identify the spoil/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.

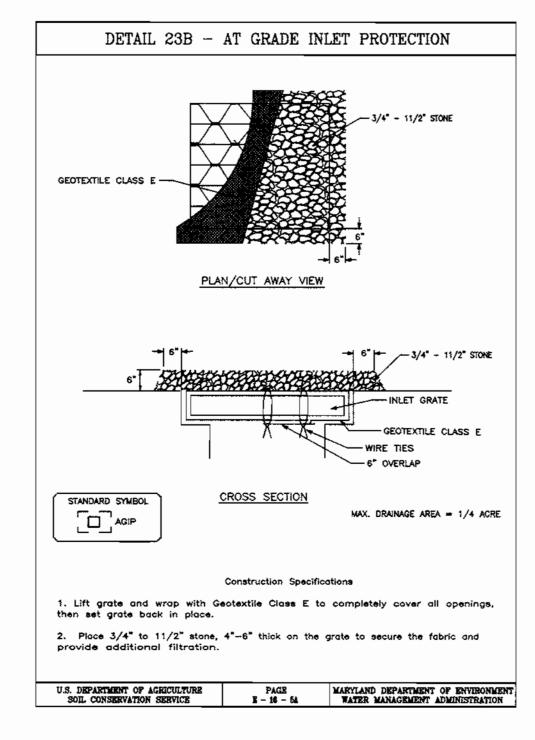
CONSTRUCTION SEQUENCE:

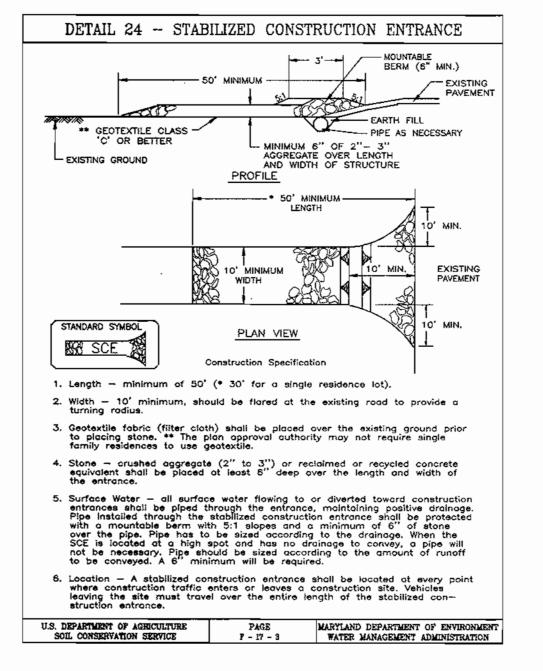
NO. OF DAYS Obtain grading permit<u>.</u> . Relocate 18" CMP Clean Water Diversion Outfall Instali sediment and erosion control devices and stabilize. Excavate for foundations, rough grade and temporarily stab<u>ilize.</u> 30.

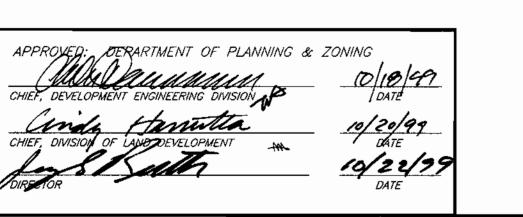
Construct structures, sidewalks and driveways. 60.

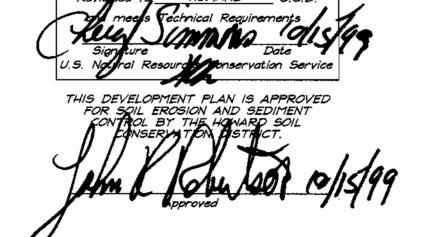
Final grade and stabilize in accordance with Stds. and Specs. 14 Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.









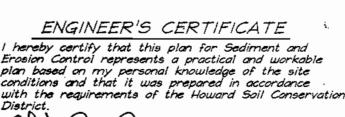


DEVELOPER'S/BUILDER'S CERTIFICATE

"I/Wie 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 Marganiant. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed



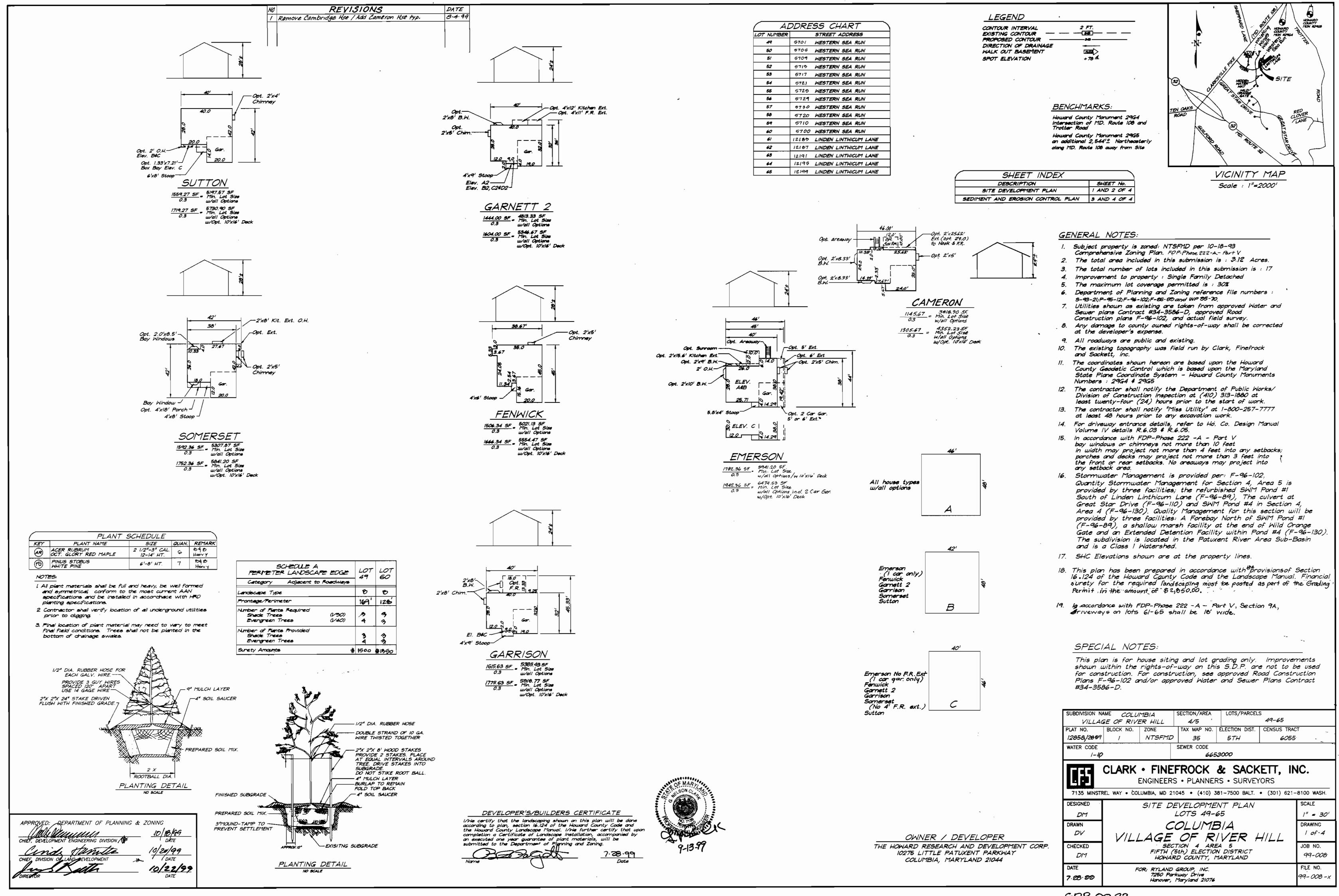
7.28-99

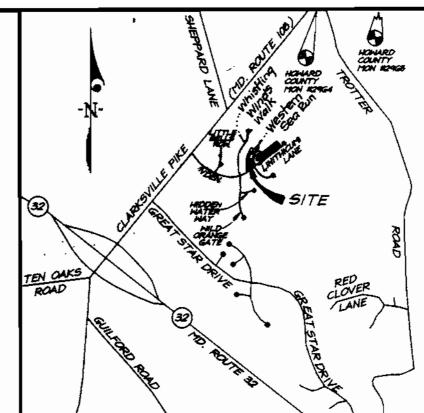




OWNER / DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044

SEDIMENT & EROSION CONTROL PLAN								
7135 MINST	CICNED							
ESIGNED	SEDIMENT & EROSION CONTROL PLAN	SCALE						
		1" = 30'						
RAWN	COLLIMBIA	DRAWING						
DSV		EERS • PLANNERS • SURVEYORS MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH. T # EROSION CONTROL PLAN LOTS 49 thru 65 COLUMBIA E OF RIVER HILL JOB NO. 10 (2ND) ELECTION DISTRICT WARD COUNTY, MARYLAND GROUP INC. EKWAY DRIVE FILE NO.						
CHECKED		JOB NO.						
	HOWARD COUNTY, MARYLAND	99-008						
ATE	FOR: RYLAND GROUP INC.	FILE NO.						
	7250 PARKWAY DRIVE HANOVER, MARYLAND 21076	99-008-SE						





SUBDIVISION NAME COLUMBIA			SECTION/AREA	LOTS/PARCELS		
VILLAGE OF RIVER HILL			4/5	49-65		
PLAT NO.	BLOCK NO.	ZONE	TAX MAP NO.	ELECTION DIST.	CENSUS TRACT	,
12858 _y 126 5 9	1	NTSFMD	35	5TH	6055	
WATER CODE			SEWER CODE			- 3
			((50000			

