

TAVE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY 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

SIGNATURE OF DEVELOPER - MARK GHEILER

2-20-04

SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION

Baltimore, Maryland 21208 410-486-5693 SDP 04 - 32

03-032

SDP04-32

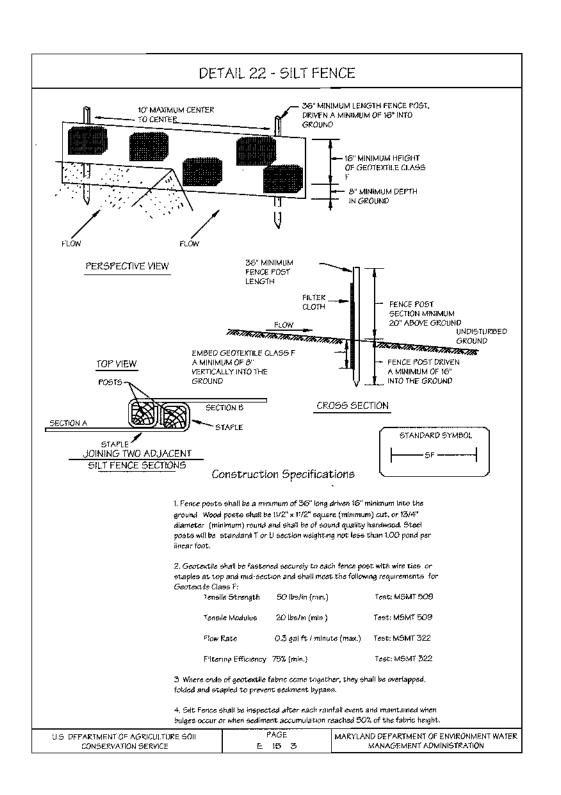
Tax Map No. 37 Grid 15 1st Election District, Howard County, Maryland

RRIG CORPORATION 3403 Old Post Drive

Previous Submittals: WPO3-74, FO2-128 & FO2-129

HECKED

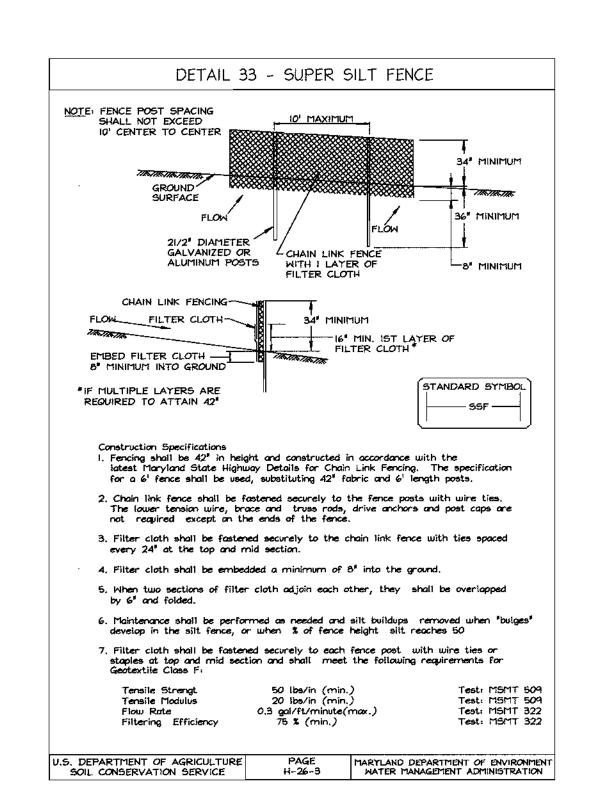
8/2003



#### HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- 1. 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)
- 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 5:1. b) 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 perimeter 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 accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (Section G) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination
- and establishment of grasses. 6. 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.
- 7. Site Analysis: Total Area of Site Area Disturbed Area to be roofed or paved Area to be vegetatively stabilized 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 day of disturbance. Additional sediment control must be provided, if deemed necessary by the Howard
- County 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 made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

SITE PERIMETER TABLE						
Perimeter No.	Perimeter Length	Buffer Type				
1	177 LF	Α				
2	52 LF	Α				
3	118 LF	Α				
4	296 LF	Α				
5	211 LF	Α				
6	64 LF	В				
7	221 LF	В				
8	70 LF	В				
9	185 LF	В				



#### 21.0 STANDARD 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

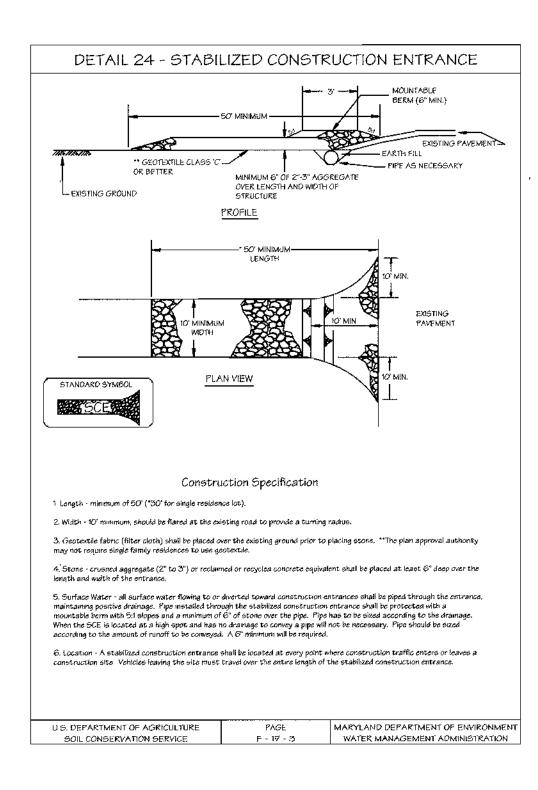
- I. This practice is limited to areas having 2:1 or flatter slopes where:
- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish
- continuing supplies 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.
- II. 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 agronomist or 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 than 1-1/2" in diameter.
- 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.

# III. 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 [ - Vegetative Stabilization Methods and Materials.



#### IV. 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 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.
- b. Organic content of topsoil shall be not less than 1.5 percent by weight.
- c. 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 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 agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization --Section I - Vegetative Stabilization Methods and Materials.

# V. Topsoil Application

- i. 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
- iv. 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
- VI. Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
- . Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
  - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
  - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements
  - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet,
- ii. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb./1,000 square feet, and 1/3 the normal lime application rate. References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub.#1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

HOWARD SOIL CONSERVATION DISTRICT PERMANENT 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: In lieu of soil test recommendations, use one of the following 1) PREFERRED -- Apply 2 tons per acres dolomitic limestone (92 lbs/1000sq. ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

fertilizer (9 lbs/1000sq. ft.) 2) ACCEPTABLE -- Apply 2 tons per acres dolomitic limestone (92 lbs/1000sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

At time of seeding, apply 400 lbs per acre 30-0-0 ureaform

SEEDING -- For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

MULCHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000eq. 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/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sa. ft.) for anchoring.

MAINTENANCE -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

# HOWARD SOIL CONSERVATION DISTRICT TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-termvegetative cover

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/1000sq. ft.).

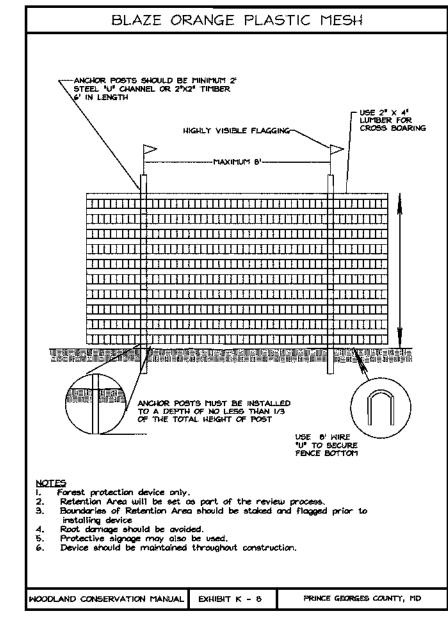
SEEDING -- For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. ft.). For the period November 16 thru February 28, 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.

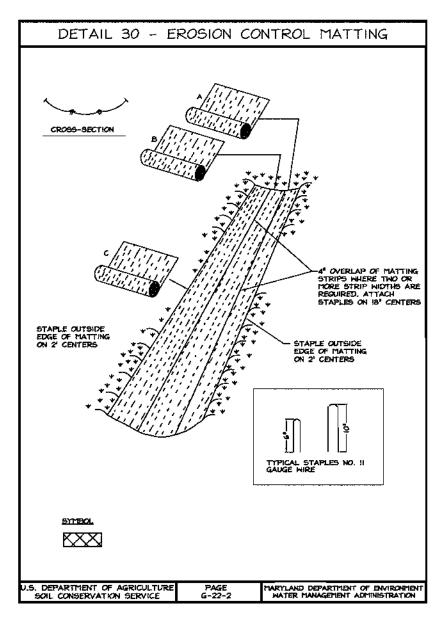
MULCHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet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

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

# TREE PLANTING NOTES

- 1. Notify "Miss Utility" 72 hours prior to installation of all plant material.
- 2. Plant installation must conform to the minimum standards cited in the latest edition of Landscape Specification Guidelines, published by the Landscape Contractors Association.
- 3. Plants to be located in the field by the owner or owner's
- representative. Notify owner 72 hours in advance of planting.
- 4. A Certification of Landscape Installation is required as per the
- Howard County Landscape Ordinance. 5. The number, size, location of plants shall not be changed without the approval of the Landscape Architect. Substitutions must be
- included in the recommended plant list in the Howard County Landscape Ordinance. 6. Trees may not be planted within 5 feet of drain inlets, 5 feet of an
- open space access strip and 10 feet of a driveway. Bailed and burlapped plant material shall not be accepted if bail is
- cracked or broken before or during planting. Protect all plants from drying by either sun of wind. 8. Tree pits shall be backfilled with 50% topsoil, 25% peat 25% sand
  - with one pound of 10-10-10 fertilizer per pit. 9. Top soil shall be sandy loam soil free from noxious weeds or grasses,
- roots, clay clumps, stones, sticks, etc. Peat moss shall be commercial with pi 4.5 to 5.5, free of woody material or harmful minerals.
- 10. All plants shall be watered at planting with weekly watering thereafter for the first 80 days. Watering shall continue bimonthly or as necessary to maintain plants in a healthy condition during the guarantee period.
- 11. Maintain the site in an orderly manner. Streets and sidewalks shall be swept clean. All rejected or dead materials shall be immediately removed from the site.
- 12. Plant material to be alive and healthy at the time of the guarantee period (one year), as specified in the Howard County Landscape Ordinance.
- 13. Maintenance shall begin immediately after planting and continue to the end of quaranteed period. 14. Maintenance consist of pruning, watering weeding, re-mulching,
- resetting plants to proper grades as needed and repairing guys and staked as needed.





EROSION CONTROL MATTING 2. Staple the 4° overlap in the channel center using an 18° spacing Before stapling the outer edges of the matting, make sure the matting is emooth and in firm contact with the soil. Staples shall be placed 2' apart with 4 name for each strip, 2 outer name, and 2 alternating name down the center. 5. Where one roll of motting ends and another begins, the end of this top strip shall overlop the upper end of the lower strip by 4°, shipling fashion. Reinforce the overlop with a double row of staples spaced 6° apart in a staggered pattern on either side. The discharge and of the motting liner should be similarly secured with 2 double rows of stoples. Note: If flow will enter from the edge of the motting then the area effected by the flow must be keyed-in, U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE G-22-2A WATER MANAGEMENT ADMINISTRATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING



ENGINEER'S CERTIFICATE "I HEREBY CERTIFY THAT THIS PLAN FOR EROSION WIND BE WARN, CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON WERSONAL KNOW BOGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED ASSOCIANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRI

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING O THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTIO PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRON-MENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY T

HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED 2-20.04 SIGNATURE OF DEVELOPER - MARK GHEILER

CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND

SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL

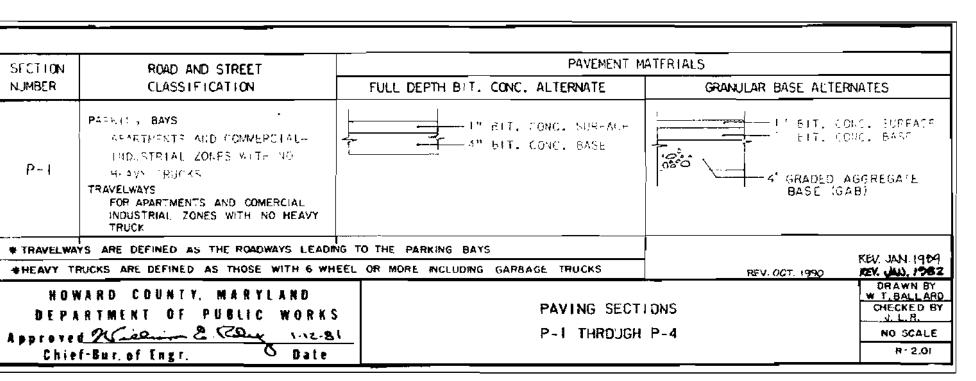
DISTRICT.



REVISIONS Date By Description EDS KBW 8/2003

LDE, INC. 9250 Rumsey Road, Suite 106, Columbia, MD. 21045 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax) Sediment & Erosion Control & Landscape Notes and Details

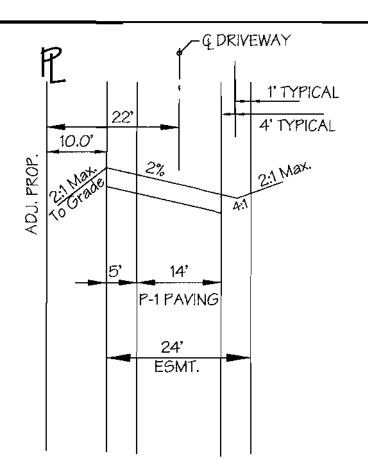
JENMAR HOMES N/A AT MAYFIELD LOTS 1, 4, 5, 6 & OPEN SPACE LOT 3 3 of 4 PARCEL 403 JOB NO. Tax Map No. 37 Grid 15 03-032 1st Election District, Howard County, Maryland Previous Submittals: WP03-74, F02-128 & F02-129 OWNER/DEVELOPER: RRIG CORPORATION FILE NO. 3403 Old Post Drive 3DP04-32 Baltimore, Maryland 21208 410-486-5693



SURFACE SAND FILTER							
FILTER NO.:	West/Filter1	East / Filter 2					
PreTreatment Sedimentation Chamber:	8' X 16'	11' X 22'					
Invert PreTreatment Chamber:	274.00	274.00					
Maximum Ponding Depth:	0.85	0.52					
Ponding Elevation:	274.85	274.52					
Top Elevation:	276.00	276.00					
Filter Bed Dimensions:	9' X 18'	10' X 20'					
Maximum Ponding Depth:	1	1					
Maximum Ponding Elevation:	275.00	275.00					
Top Elevation:	276.00	276.00					
Overflow Spillway Elevation:	275.00	275.00					
Elev. @ Top of Topsoil Layer:	274.00	274.00					
Elev. @ Top of Sand Layer:	273.75	273.75					
Elev. @ Top of Gravel Underdrain:	272.25	272.25					
INVERT Pipe Outfall:	271.25	271.25					
Perforated Pipe Size:	4"	4"					

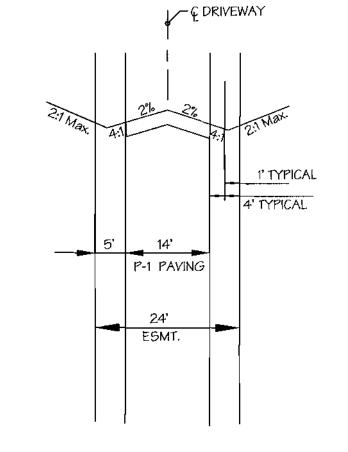
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (SAND FILTER #1 AND SAND FILTER #2)

- 1. The stormwater wetland facilty shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- 2. The top and side slopes of the embankment shall be moved a minimum of once per year, when vegetation reached 18 inches in height or as needed.
- 3. Filters that have a grass cover shall be moved a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- 4. Debris and litter shall be removed during regular mowing operations and as needed.
- 5. Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- 6. Remove silt when it exceeds four (4) inches deep in the forebay.
- 7. When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of the discolored materila shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- 8. A log book shall be maintained to determine the rate at which the facilty drains.
- 9. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- 10. Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



USE-IN-COMMON DRIVEWAY TYPICAL SECTION (MAYFIELD AVENUE. TO EAST LOT 1)

Not To Scale



USE-IN-COMMON DRIVEWAY TYPICAL SECTION (EAST LOT 1 TO END @ LOT 5 HOUSE)

Not To Scale

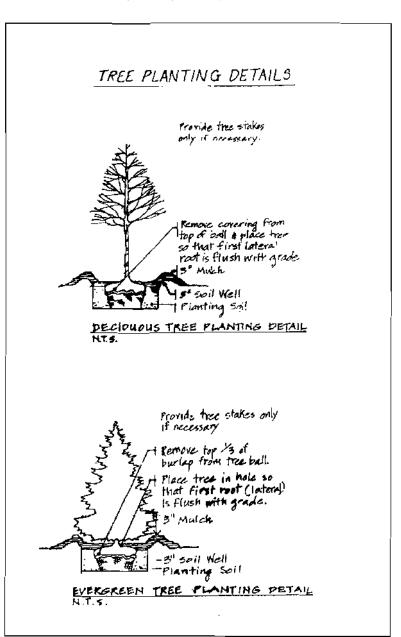
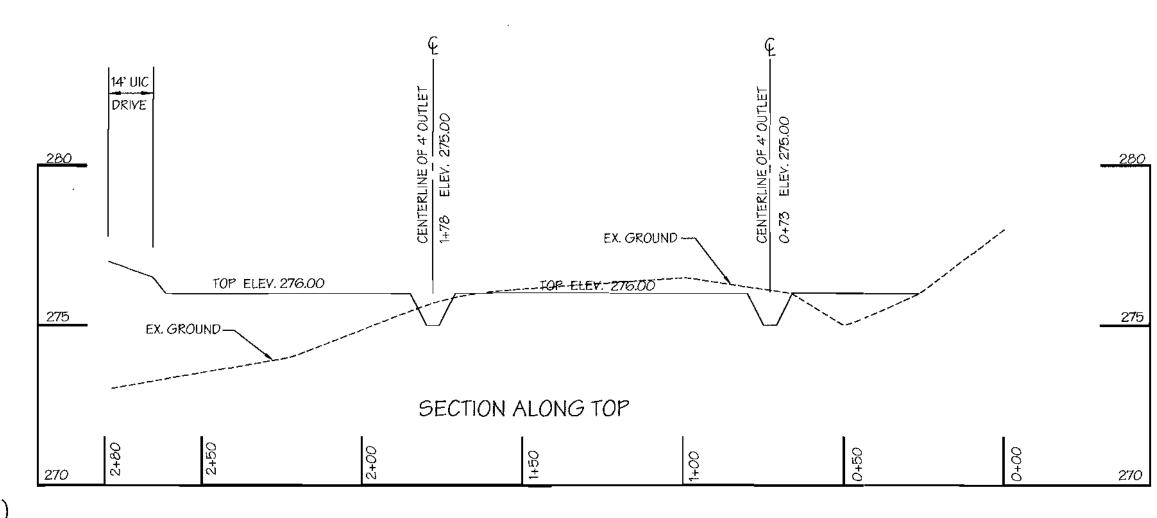
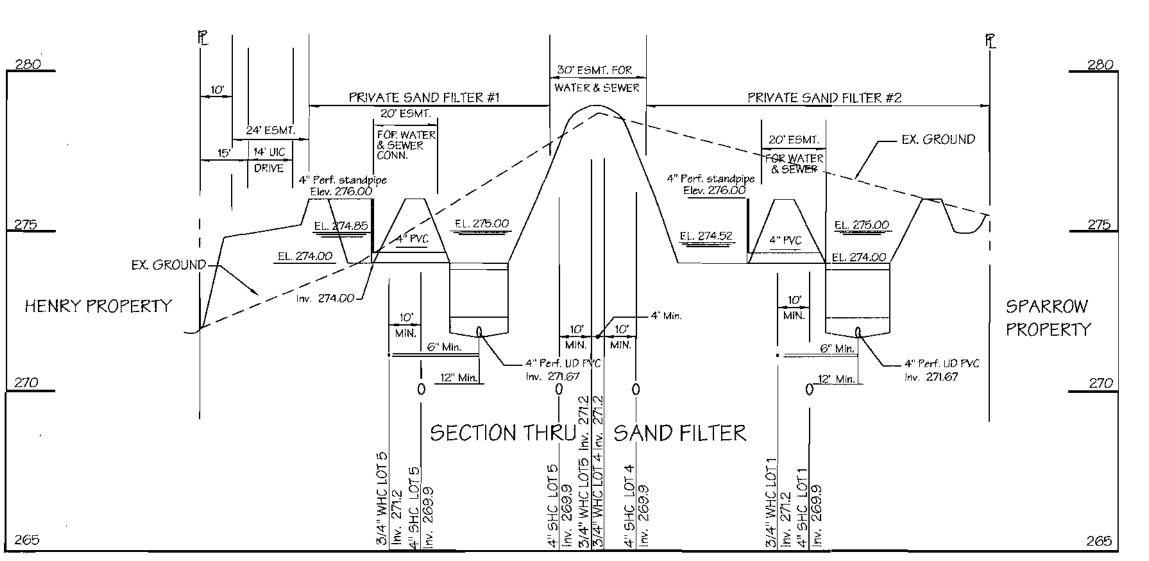


Table B.3.1 Material Specifications For Sand Filters Material Specification / Test Method Size Notes Sand substitutions such as Diabase and Graystone #10 are not Sand clean AASHTO-M-6 or 0.02" to 0.04" acceptable. No calcium carbonated or dolomitic sand substitutions ASTM-C-33 concrete sand are acceptable. No "rock dust" can be used for sand. AASHTO-M-43 0.375" to 0.75" Underdrain Gravel ASTM-D-4833 (puncture 0.08" thick Geotextile Fabric Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel strength - 125 lb.) layer may be substituted for geotextiles meant to "separate" sand equivalent opening ASTM-D-4632 (Tensile size of #80 sieve filter lavers. strength - 300 lb.) F75B, Type PS 28 or 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel Underdrain Piping 4" - 6" rigid AASHTO-M-278 schedule 40 PVC over pipes; not necessary underneath pipes. or SDR35

## CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS

- 1. Material Specifications for Sand Filters:
- The allowable materials for sand filter construction are detailed in Table B.3.1. Refer to "Center For Watershed Protections and Maryland" Department of the Environment", 2000. 2000 Stormwater Design Manual Volume II = Stormwater Design Appendices, Baltimore Maryland; as amended and shown hereon.
- 2. Sand Filter Construction Specifications:
- Provide sufficient maintenance access (ie: 12 foot wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10%; gravel slopes to 15%; paved slopes to 25%.
- Absolutely no runoff is to enter the filter until all contributing drainage areas have been stabilized.
- The surface of the filter bed is to be level.
- Surface sand filters may be planted with appropriate grasses; see Appendix A.

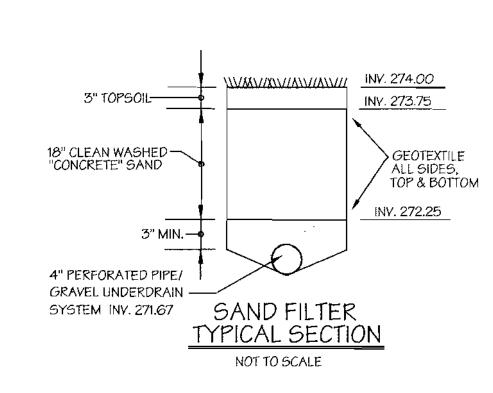


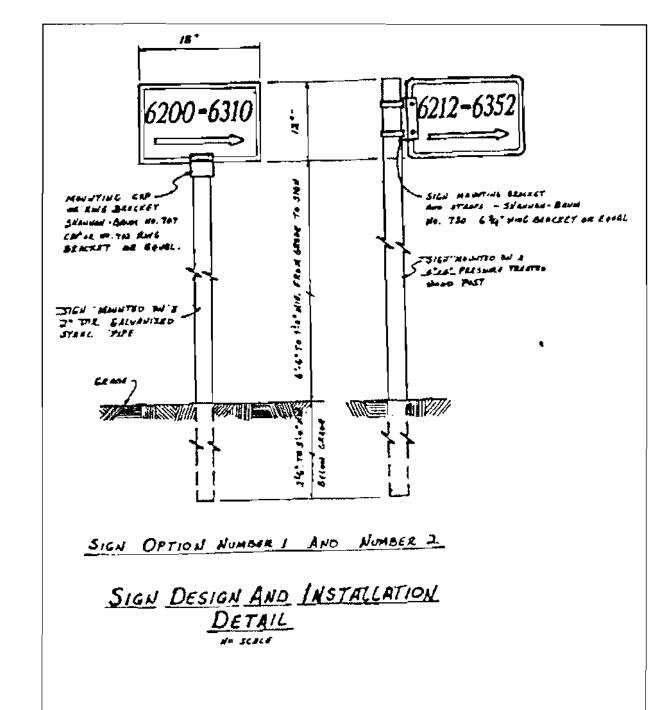


# SAND FILTER SECTIONS

SCALE: 1" = 30' Hor. 1'' = 3'

		REVISIONS No. Date By Description					
	No.	Date	Ву	Description	n		
Anna Paris T		<u> </u>			DESIGNED		
THE STATE OF THE S					ED9		
					DRAWN		
nri.					KBV		
\nX					CHECKED		
2/20/04					BDE		
1					DATE		
					8/20		





# SIGN SPECIFICATIONS

- 1. The sign size shall be 12" x 18".
- 2. The sign material shall be .080 gauge thickness anodized aluminum
- 3. The sign shall have a green background with 3" high white reflective numbers and arrow with a white reflective
- 4. Where a private road name is in use or part of a private Homeowner's Articles of Incorporation agreement the sign size will be enlarged to accommodate the necessary lettering but remain proportional to the above design limits.
- 5. The sign will be installed within the common driveway easement area as noted on the final plat.
- 6. Address number identification signs are to be provided under the tenants of the Homeowner's Association Incorporation or a Property Management Company for installation and maintenance in accordance with the Department of Planning and Zoning Address Numbering System and per Section 3.503(a) of the Howard County Code - Public Signs. Maintenance/repair and replacement of the address number directional signs will be the responsibility of the Homeowner's Association or a Property Management Company.
- 7. Compliance regarding the installation of the new address number directional signs will be enforced by the Department of Inspections, Licenses and Permits at the time of final approval for issuance of the Use and Occupancy

