

LEGEND

- CONTOUR INTERVAL: 2 FT.
- EXISTING CONTOUR: [Symbol]
- PROPOSED CONTOUR: [Symbol]
- DIRECTION OF DRAINAGE: [Symbol]
- WALK OUT BASEMENT: [Symbol]
- SPOT ELEVATION: [Symbol]
- EXISTING TREES TO REMAIN: [Symbol]

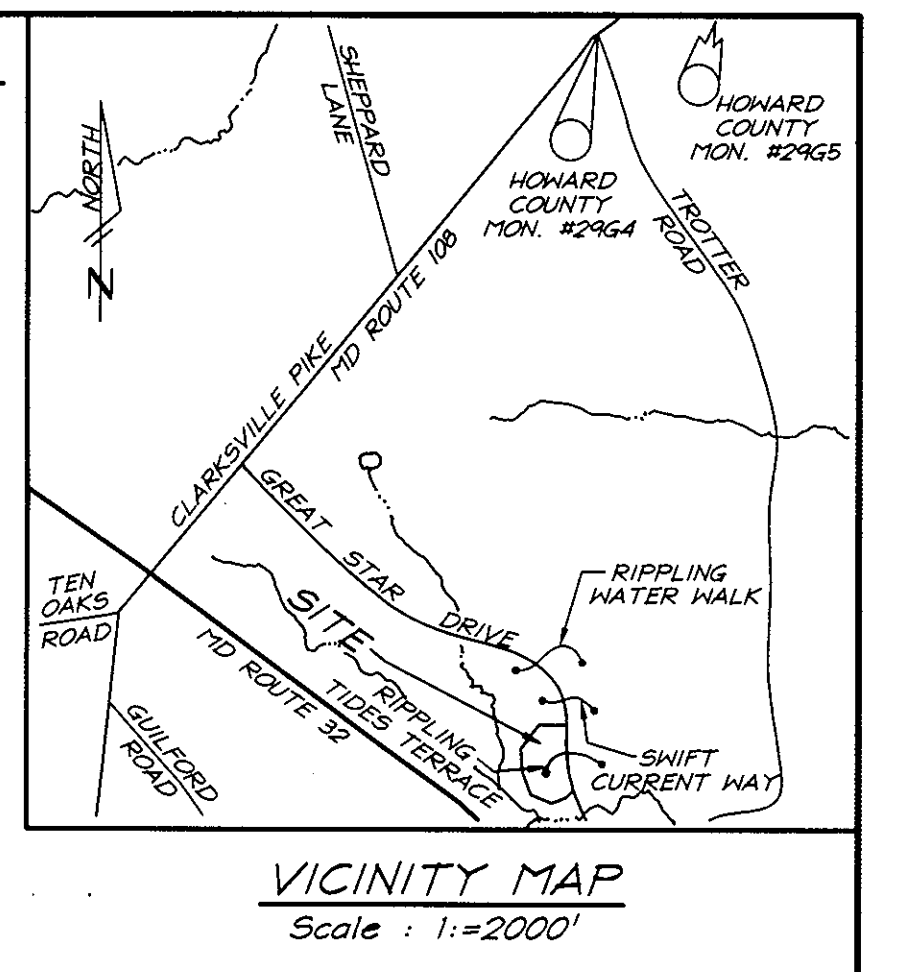
SHEET INDEX

DESCRIPTION	SHEET NO.
SITE DEVELOPMENT PLAN	1 of 3
SEDIMENT AND EROSION CONTROL PLAN	2 and 3 of 3

BENCHMARKS:
 Howard County Monument 2964
 Intersection of MD. Route 108 and Trotter Road
 Howard County Monument 2965
 an additional 2,544' Northeastly along MD. Route 108 away from Site

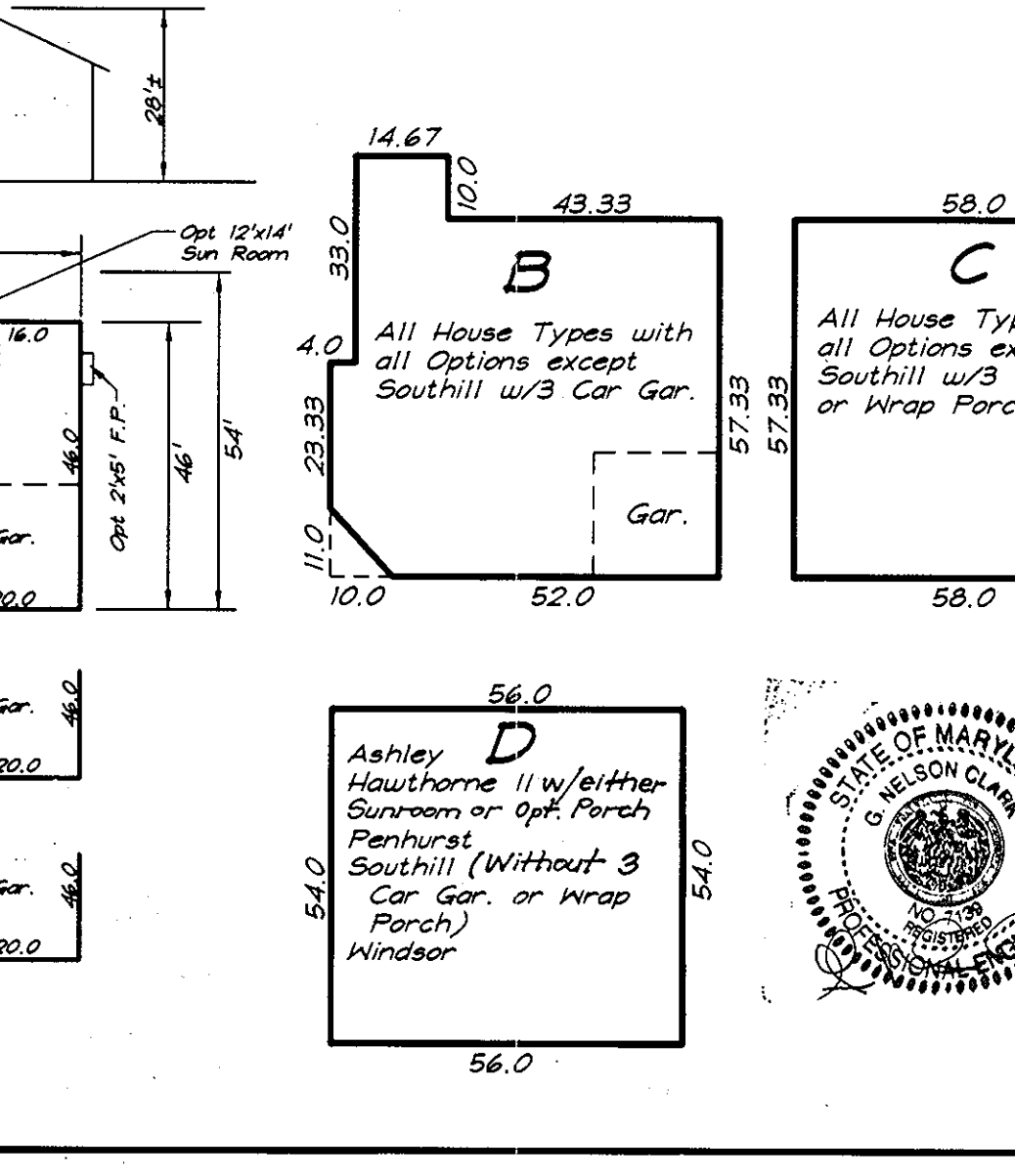
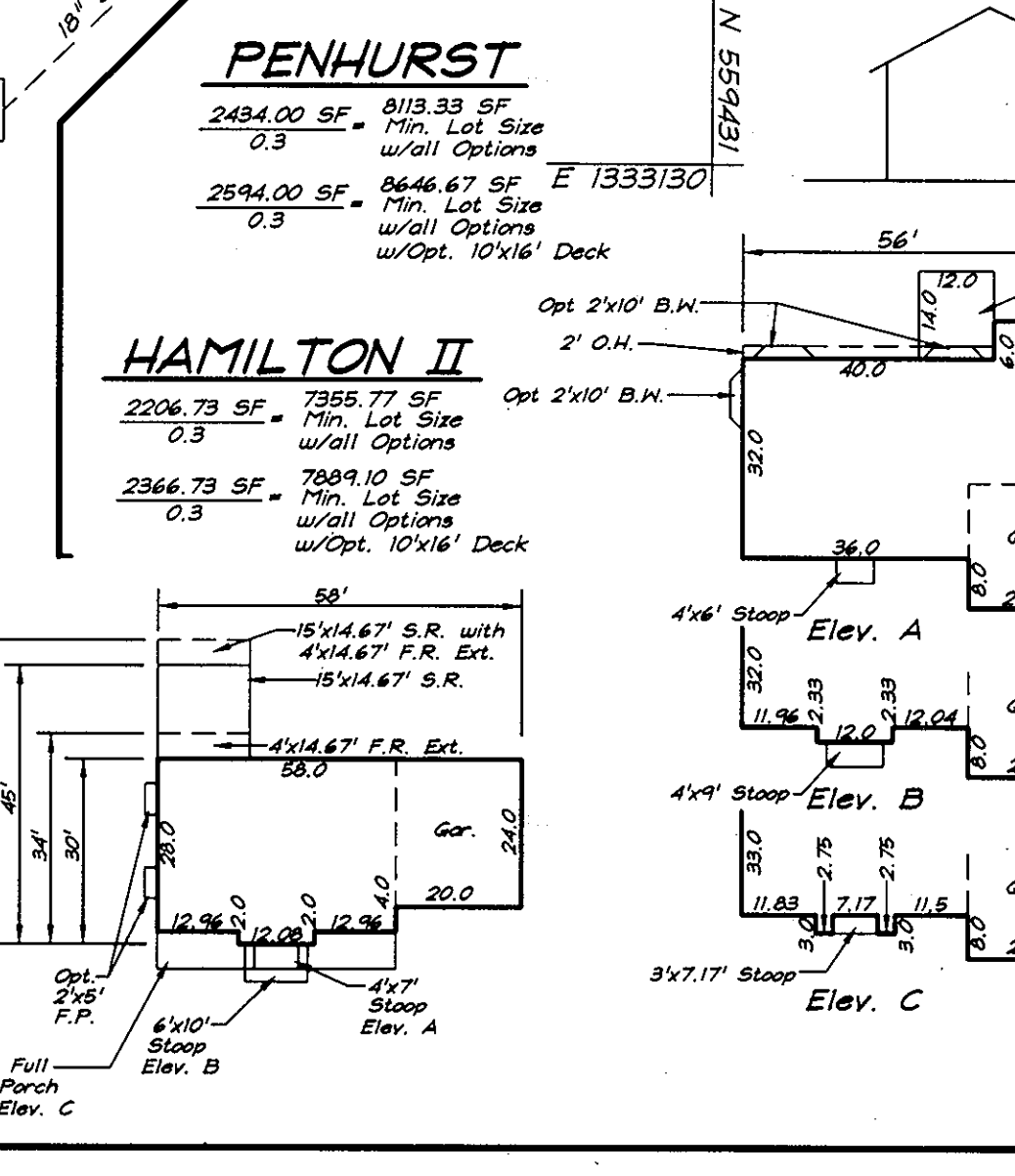
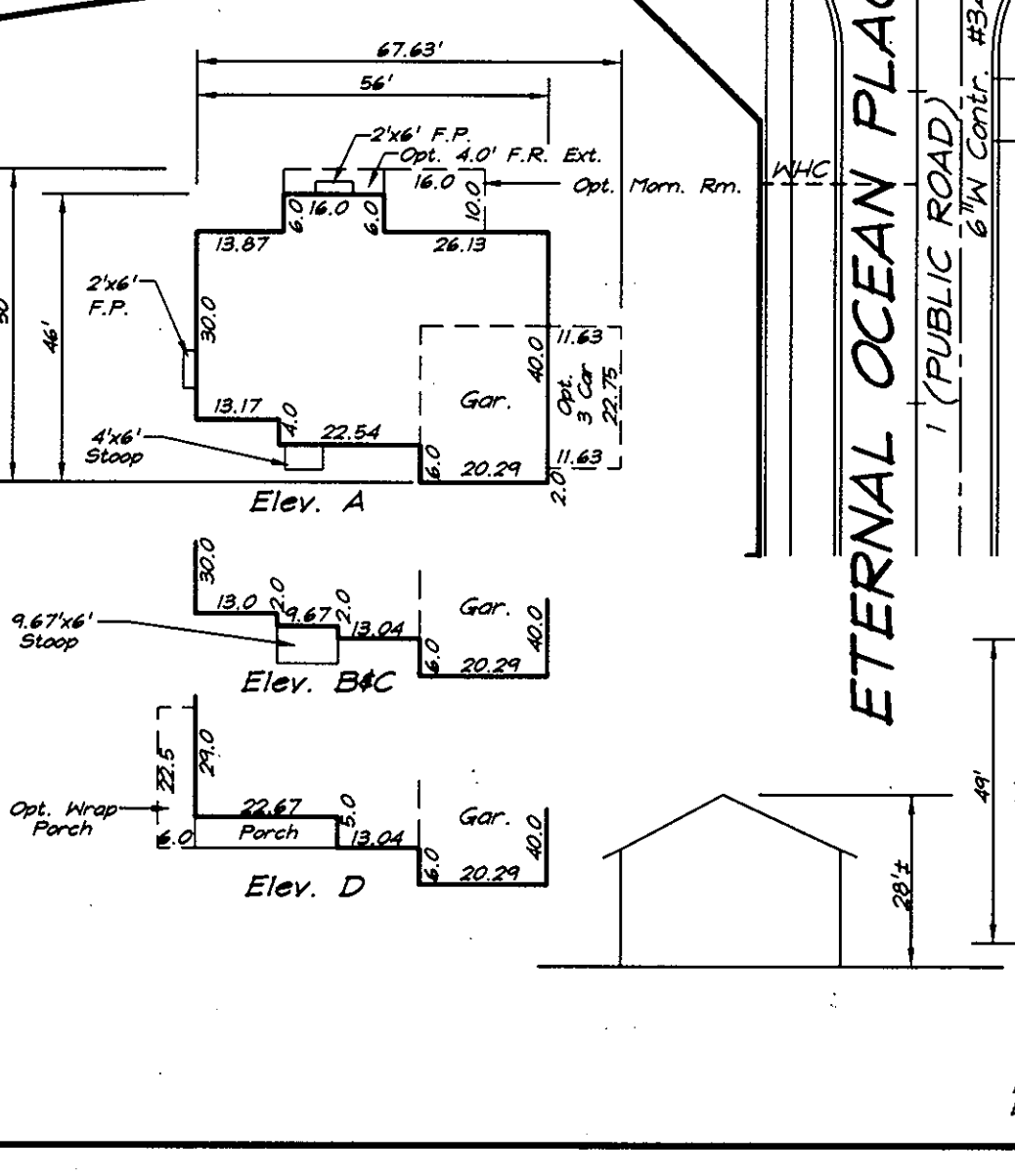
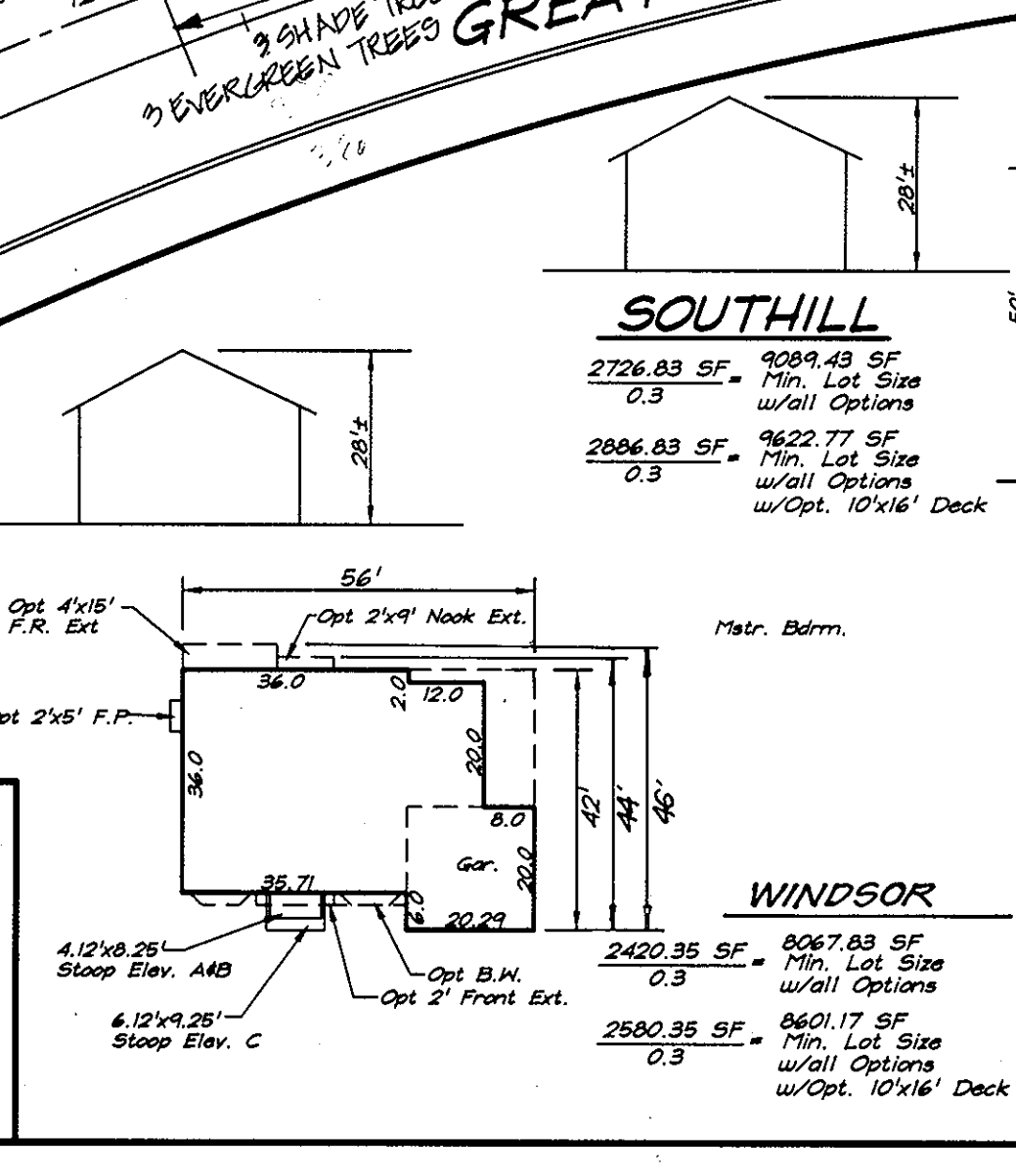
ADDRESS CHART

LOT NO.	STREET ADDRESS
40	6101 Rippling Tides Terrace
41	6111
42	6121
43	612B
44	6124
45	6120
46	6116
47	6112
48	6108
49	6104
50	6100



- GENERAL NOTES:**
- Subject property is zoned: NTSFLD per 10-18-93 Comprehensive Zoning Plan.
 - The total area included in this submission is: 4.2 Acres.
 - The total number of lots included in this submission is: 11
 - Improvement to property: Single Family Detached
 - The maximum lot coverage permitted is: 30%
 - Department of Planning and Zoning reference file numbers: S-93-2, P-95-10, WP-95-76, F-96-124.
 - Utilities shown as existing are taken from approved Water and Sewer plans Contract #34-3445-D, approved Road Construction plans F-96-124, and actual field survey.
 - Any damage to county owned rights-of-way shall be corrected at the developer's expense.
 - All roadways are public and existing.
 - The existing topography was taken from Road Construction Plans prepared by Gutschick, Little & Weber, P.A. in November 1996.
 - The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monuments Numbers: 2964 & 2965
 - The contractor shall notify the Department of Public Works/ Division of Construction Inspection at (410) 313-1880 at least twenty-four (24) hours prior to the start of work.
 - The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
 - For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05.
 - In accordance with FDP-Phase 222 Part III bay windows or chimneys not more than 10 feet in width may project not more than 4 feet into any setbacks; porches and decks may project not more than 3 feet into the front or rear setbacks. Wrap around porches cannot infringe into any required side yard setbacks. Exterior Basement Areaways may not encroach into any BRL.
 - Stormwater Management is provided per: F-96-124.
 - SHC Elevations shown are at the Property lines.
 - Stormwater Management Quantity will be provided by the existing stream valley upstream of the Great Star Culvert and by taking credit for the storage upstream of the existing SHA Culverts under MD Route 32, as described in a report prepared by Whitman, Requart and Assoc. Stormwater Management Quality will be provided by facilities at ES 101 and 301. Stormwater discharging from ES 701 and 601 will use the natural ground cover as a filtering buffer prior to the streams. These systems will be extended under a future submission and will have permanent water quality facilities constructed as a part of that extension.
 - This plan has been prepared in accordance with provision of Section 16-124 of the Howard County Code and the Landscape Manual. Financial surety for the required landscape trees in the amount of \$400.00 is part of the building grading permit application. See Schedule "A" for required surety on 1 1/2" by 1 1/2" basis, sheet 2 of 3. Financial surety shall be in compliance with Building restriction lines and (and) use of the same shall be in accordance with FDP 222, Part III, recorded in Plat Nos. 3054-A-1603 thru 3054-A-1605.
 - On May 18, 1995, WP-95-76, Waiver to allow grading within the 75' Foot Stream Buffer and 25' Foot Wetlands Buffer for the installation of Storm Drains and Stormwater Management Facilities, was granted, subject to various conditions as defined in the approval letter.

APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/29/98
 CHIEF, DIVISION OF LAND-DEVELOPMENT & SURVEYING
 DATE: 6/1/98



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

SPECIAL NOTES:
 This plan is for house siting and lot grading only. Improvements shown within the rights-of-way on this S.D.P. are not to be used for construction. For construction, see approved Road Construction Plans F-96-124 and/or approved Water and Sewer Plans Contract #34-3445-D.

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
VILLAGE OF RIVER HILL	4/3	40 THRU 50

PLAT NO.	BLOCK NO.	ZONE	TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
12758	7	NTSFLD	35	5TH	6055

WATER CODE	SEWER CODE
1-10	6653000

CLARK • FINEPROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED	DATE	SCALE
DM	5/29/98	1" = 30'

DRAWN	DATE	DRAWING
PS	5/29/98	1 of 3

CHECKED	DATE	JOB NO.
me	6/1/98	98-027

DATE	FILE NO.
April, 1998	98-027X

SITE DEVELOPMENT PLAN
 LOTS 40 THRU 50
COLUMBIA
 VILLAGE OF RIVER HILL
 SECTION 4 AREA 3
 FIFTH (5th) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR: THE RYLAND GROUP, INC.
 1447 York Road, #705
 Lutherville, Maryland 21043

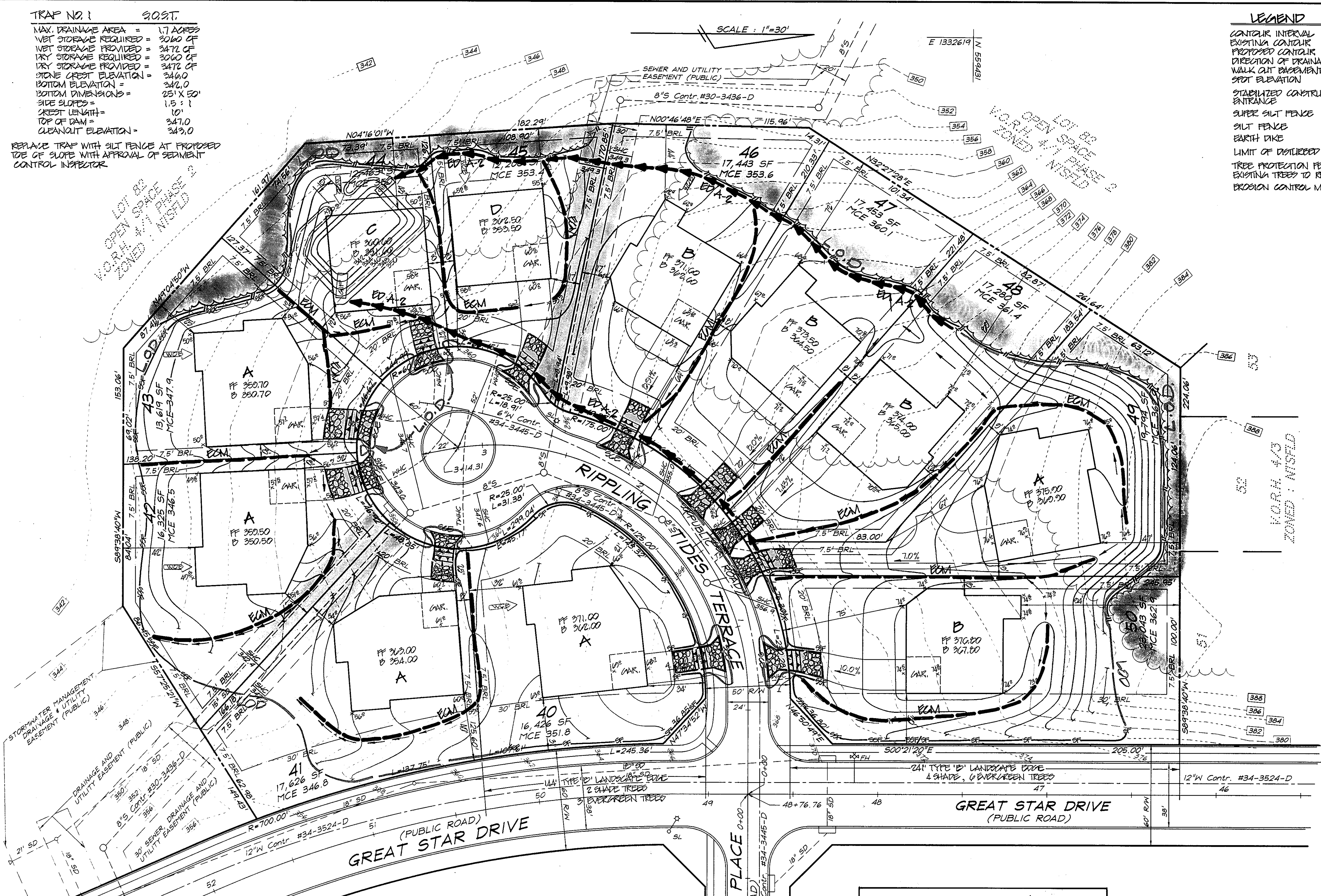
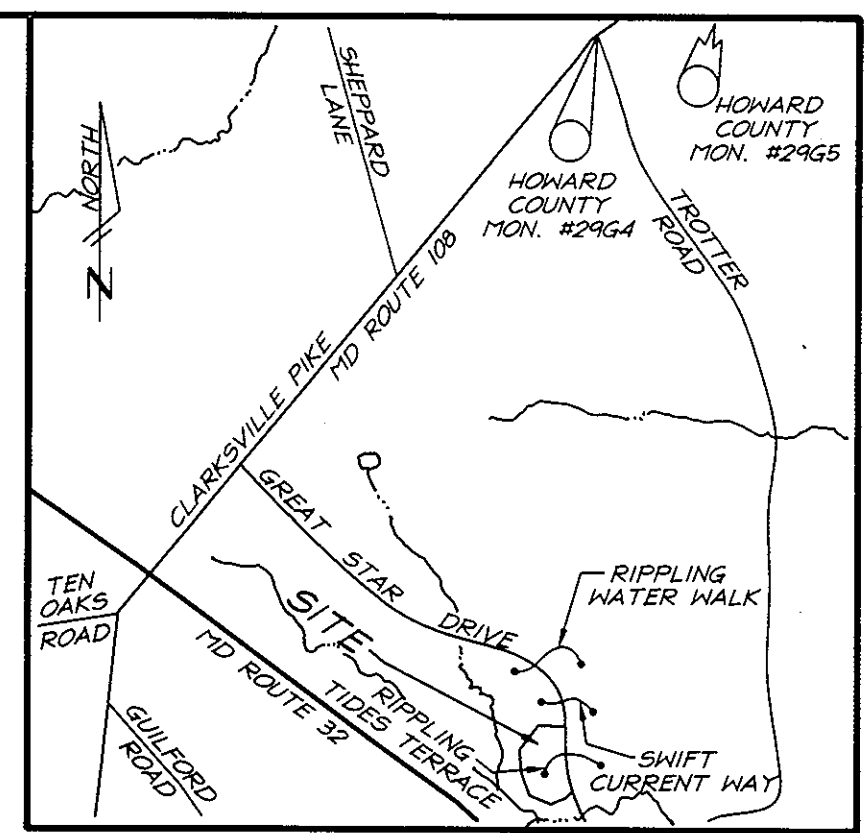
TRAP NO. 1 909T

MAX. DRAINAGE AREA = 17 ACRES
 NET STORAGE REQUIRED = 3040 CF
 NET STORAGE PROVIDED = 3472 CF
 DRY STORAGE REQUIRED = 3060 CF
 DRY STORAGE PROVIDED = 3472 CF
 STONE CREST ELEVATION = 349.0
 BOTTOM ELEVATION = 342.0
 BOTTOM DIMENSIONS = 25' X 50'
 SIDE SLOPES = 1.5 : 1
 CREST LENGTH = 10'
 TOP OF DAM = 347.0
 CLEANOUT ELEVATION = 343.0

REPLACE TRAP WITH SILT FENCE AT PROPOSED TOE OF SLOPE WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK CUT BASEMENT
- SPOT ELEVATION
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- SILT FENCE
- EARTH DIKE
- LIMIT OF DISTURBED AREA
- TREE PROTECTION FENCE
- EXISTING TREES TO REMAIN
- EROSION CONTROL MATTING



SCHEDULE 'A' PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	LOTS		TOTALS	
		40	50		
LANDSCAPE TYPE	A/B	B	D		
LINEAR FEET OF ROAD FRONTAGE		120	144	264	
NUMBER OF PLANTS REQUIRED	SHADE TREES 1/50	3	3	6	
	EVERGREEN TREES 1/40	3	4	7	
	SHRUBS			19	
NUMBER OF PLANTS PROVIDED	SHADE TREES			*	
	EVERGREEN TREES			*	
COMMENTS * PLANTING WILL BE PROVIDED PER THE NEW TOWN ALTERNATIVE COMPLIANCE METHOD (SEE GENERAL NOTE NO. 19)					
SLURRY AMOUNTS		\$600	\$700	\$1100	\$2400

NOTE: SEE SHEET 3 FOR TREE PLANTING DETAIL

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief Development Engineering Division
 Chief Division of Land Development
 Director

DEVELOPER'S/BUILDERS CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. 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 Howard Soil Conservation District or their authorized agencies, as are deemed necessary."

Signature of Developer/Builder: [Signature] Date: 4-6-98

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment 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: 5-14-98



OWNER / DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
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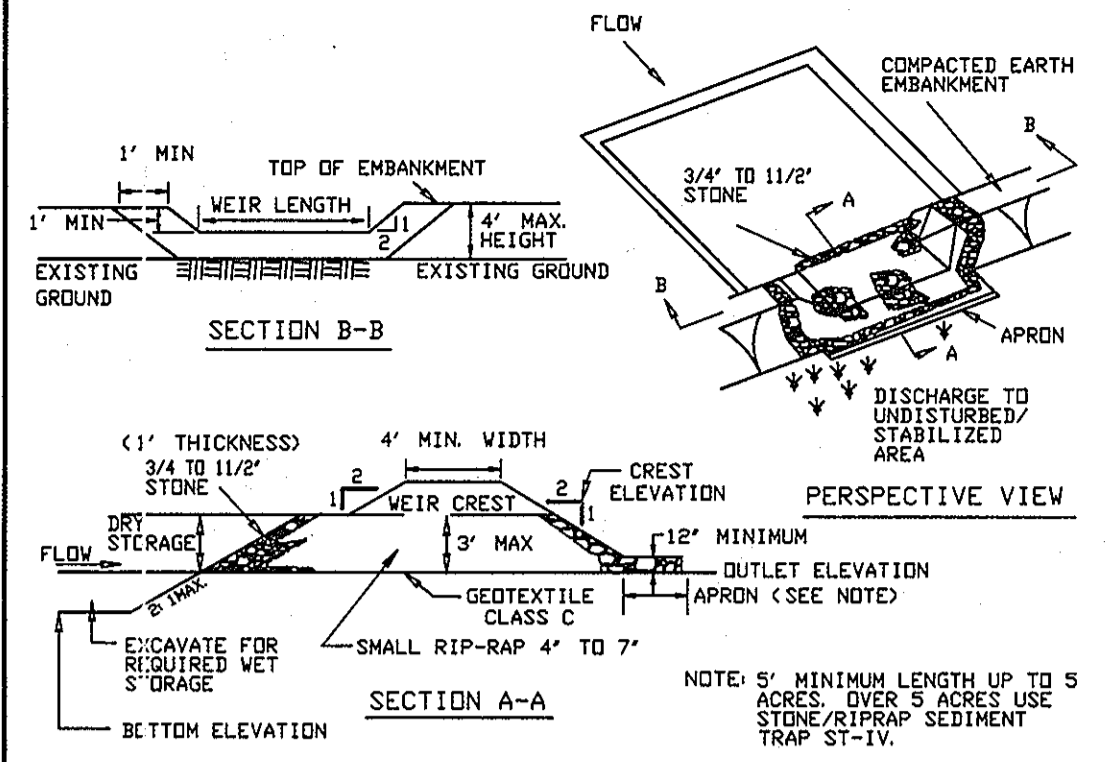
DESIGNED	DM	SCALE	1" = 30'
DRAWN	PS	DRAWING	2 of 3
CHECKED	TD	JOB NO.	98-027
DATE	APRIL, 1998	FILE NO.	98-02702

FOR: THE RYLAND GROUP, Inc.
 1447 York Road, #705
 Lutherville, Maryland 21093

Reviewed for S.C.D. and meets Technical Requirements
 Signature: [Signature] Date: 5/14/98
 U.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: 5/14/98
 Approved

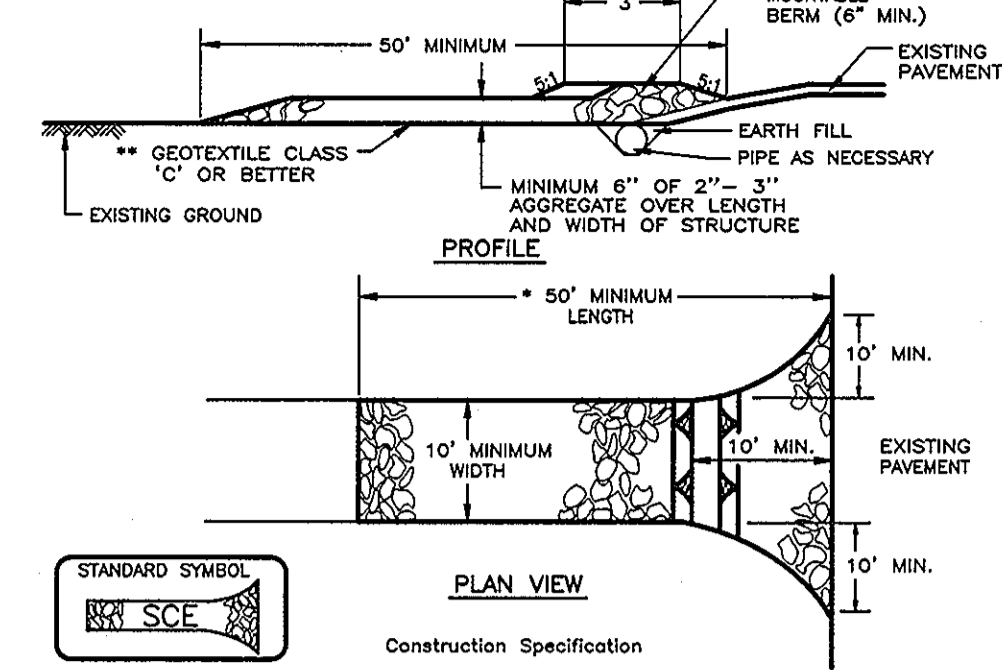
DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



- Construction Specifications**
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-9-10 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

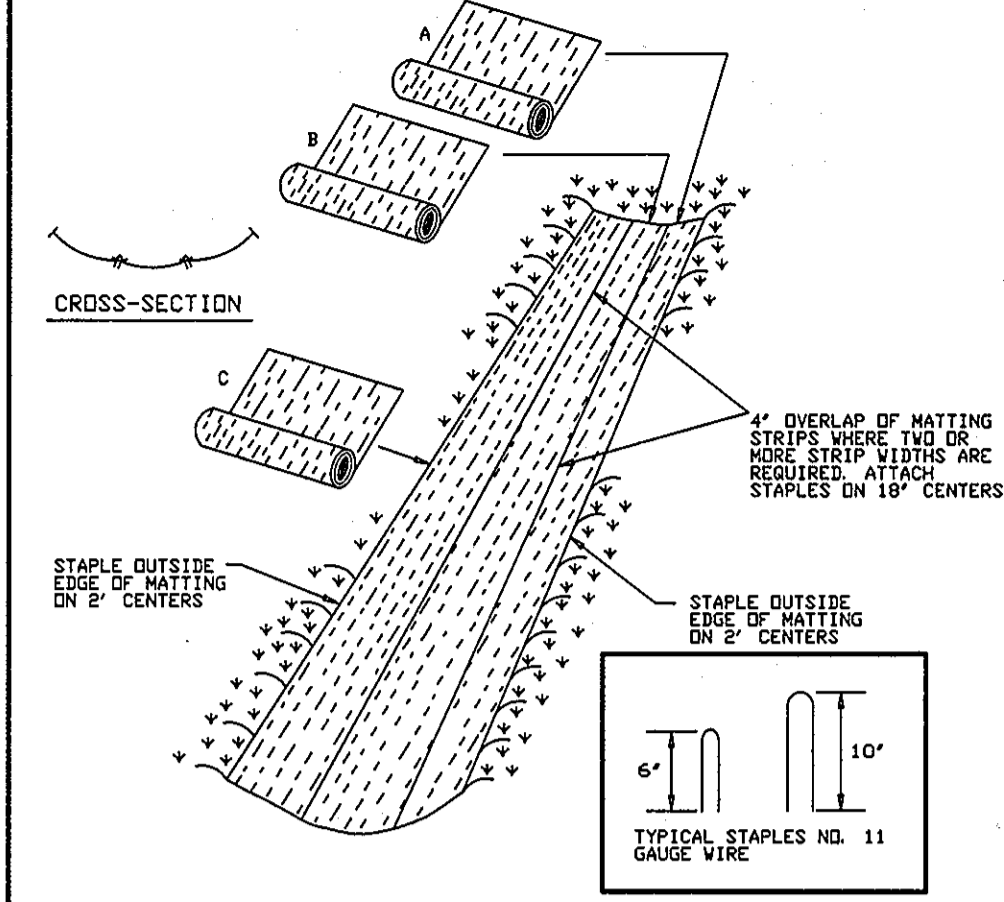
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Construction Specifications**
- Length - minimum of 50' (± 30' for a single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric (Filter cloth) shall be placed over the existing ground prior to placing stone. The cloth approval authority may not require single family residences to use geotextile.
 - 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.
 - 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 stable during the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipes should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 - 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 7-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

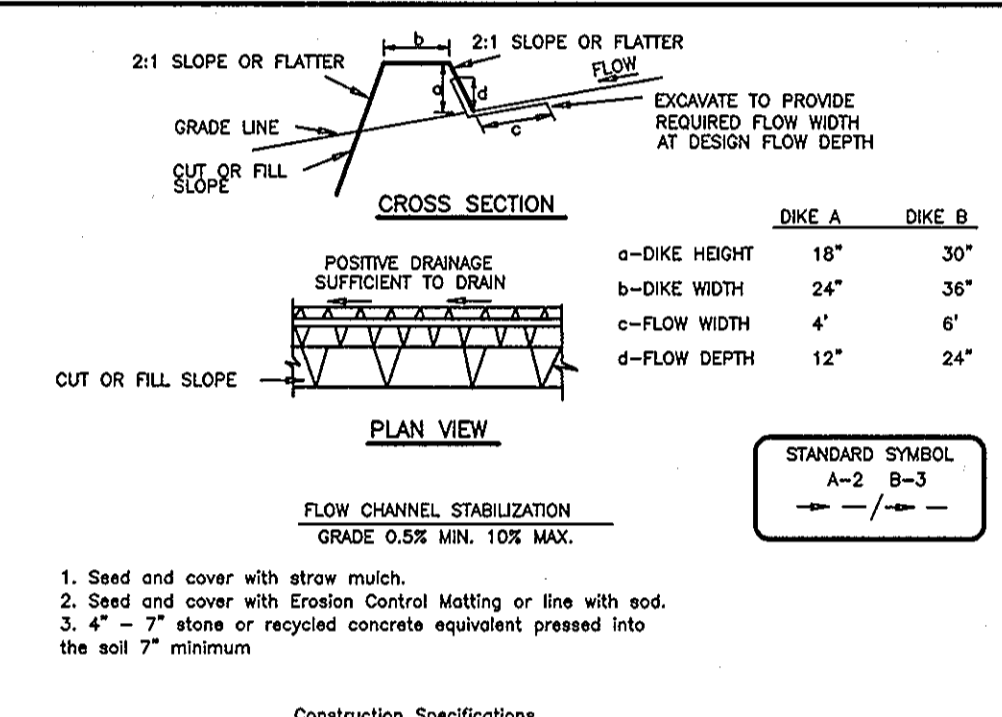
DETAIL 30 - EROSION CONTROL MATTING



- Construction Specifications**
- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and top firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 6" apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", ship lap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting line should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area effected by the flow must be key-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

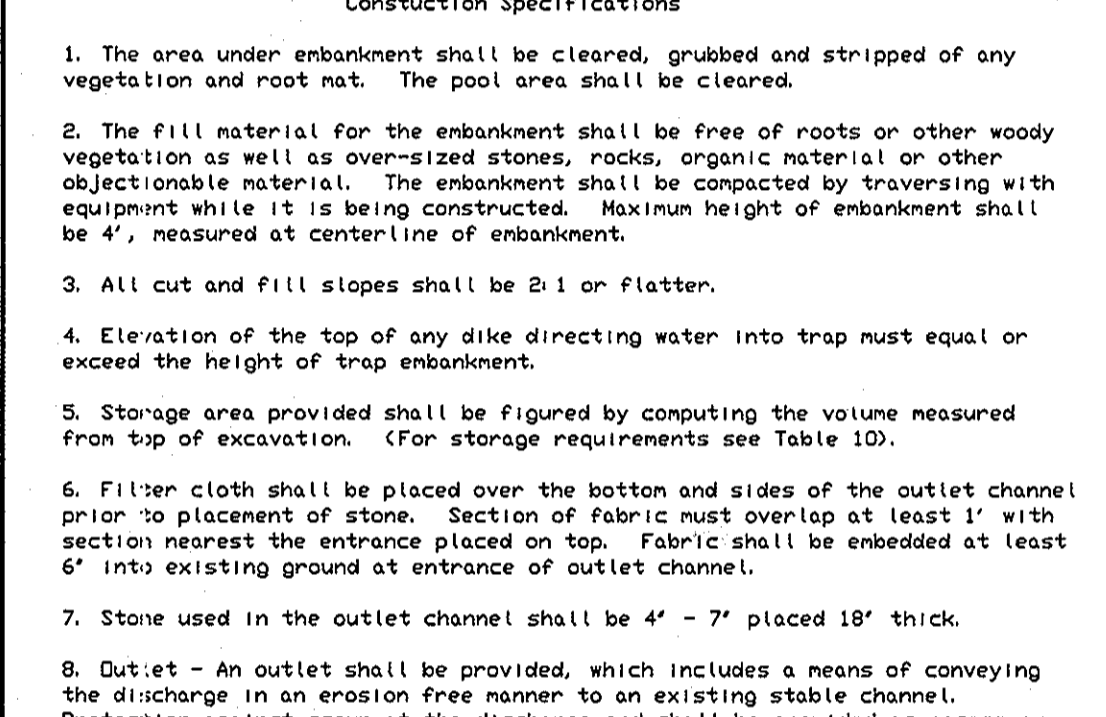
DETAIL 1 - EARTH DIKE



- Construction Specifications**
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or turf with sod.
 - 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area of a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 - 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.
 - Fill shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.

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

DETAIL 22 - SILT FENCE



- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 3/4" diameter (minimum) round and shall be galvanized or hot-dipped. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
 - 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 0.1 gal/ft²/minute (max.) Test: MSMT 322
Filtering Efficiency 75% (min.) Test: MSMT 322
 - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

2.10 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, are acidic, are 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 material is not adequate to produce vegetation.
- The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish adequate 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 plan.

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, topsoil may be salvaged for a given site type can be found in the representative soil 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, and/or silty loam. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate authority. Regardless, topsoil shall not be a mixture of contrasting textures.
 - Topsoil shall contain a minimum of 1% organic matter, coarse sand, silt, clay, coarse fragments, gravel, stones, roots, twigs, or other materials larger than 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as burrs, grass, weeds, or other materials, rocks, pebbles, or other debris as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 1000 lbs/1000 sq ft (1000 pounds per 1000 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 2.10.2 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

PERMANENT SEEDING NOTES

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

SEEDING PREPARATION: Loosen upper three inches of soil by raking, mixing or other acceptable means before seeding.

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

- Preferential Apply 2 tons per acre dolomitic limestone (70 lbs/100 sq ft.) and 600 lbs per acre 10-10-10 fertilizer (74 lbs/1000 sq ft.) before seeding. Harrow or disc into upper three inches of soil.
- Acceptable Apply 2 tons per acre dolomitic limestone (70 lbs/1000 sq ft.) and 600 lbs per acre 10-10-10 fertilizer (74 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 2 1/2 bushel per acre of annual ryegrass (3.2 gal/1000 sq ft.) For the period May 1 thru August 31, seed with 100 lbs per acre of urea (60 gal/1000 sq ft.) of annual ryegrass (3 gal/1000 sq ft.) for anchoring.

MULCHING: Apply 1/2 to 2 tons per acre (70 to 140 lbs/1000 sq ft.) of arched small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gallons per acre (5 gal/1000 sq ft.) of emulsified asphalt on flat areas. On slopes 4 feet or higher, use 340 gallons per acre (8.5 gal/1000 sq ft.) for anchoring.

REFER TO THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR RATE AND METHODS NOT COVERED.

SEDIMENT AND EROSION CONTROL NOTES

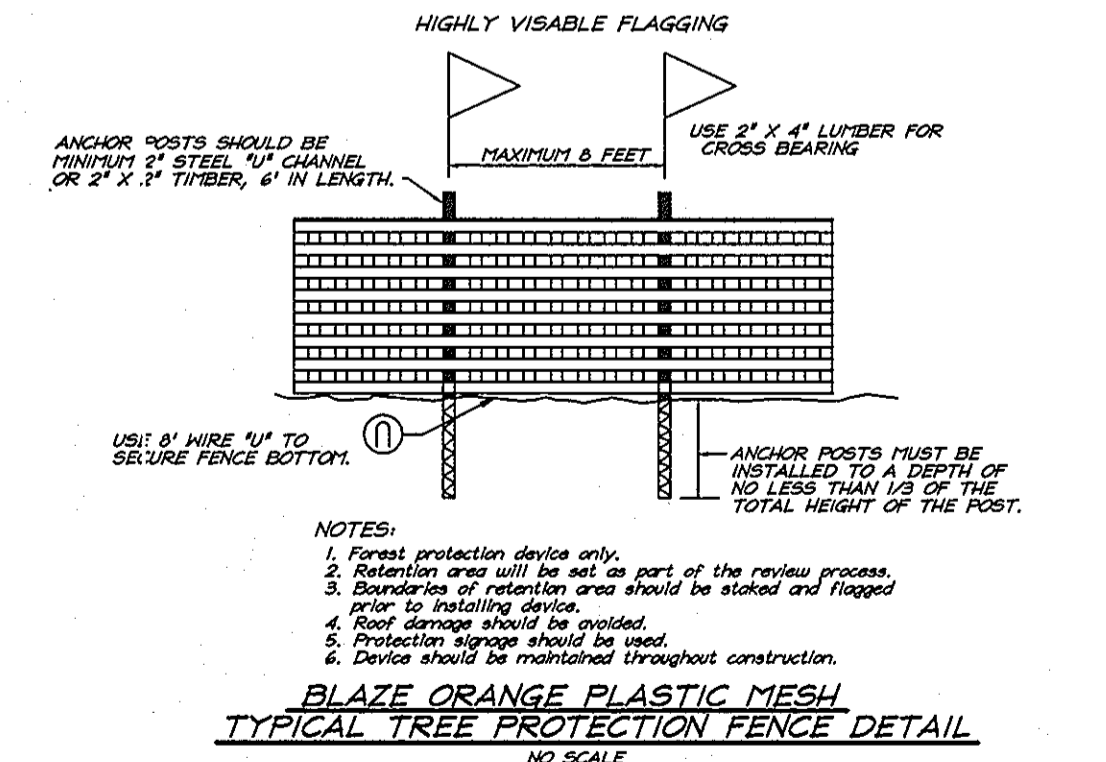
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (315-1855).
 - All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1984 MARYLAND STANDARDS AND SPECS. 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, dikes, perimeter slopes and all slopes greater than 3:1.
 - 14 days on all other disturbed or graded areas on the project site.
 - All sediment traps/basins shall be fenced and warning signs posted around their perimeters in accordance with Vol. I, 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 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for permanent seeding, soil, temporary seeding and mulching (See 2.10).
 - Temporary stabilization with mulch alone can only be done when reseeded seedlings 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:	422 Acres
Area Disturbed:	238 Acres
Area to be vegetatively stabilized:	216 Acres
Total Cost:	11,136,634
Total Cost:	5,228,614
 - 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 DPM 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 grading or grading inspection approvals may not be authorized until the initial approval by the inspection agency is made.
 - Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day.
 - The total amount of silt fence = 775 LF
 - The total amount of super silt fence = 115 LF
 - The total amount of earth dikes = 6428 LF
- * 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 its grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:

- | NO. | DESCRIPTION | NO. OF DAYS |
|-----|---|-------------|
| 1. | Obtain grading permit. | 7 |
| 2. | Install tree protection fence, control devices and stabilize. | 7 |
| 3. | Excavate for foundations, rough grade and temporarily stabilize. | 50 |
| 4. | Construct structures, sidewalks and driveways. | 60 |
| 5. | Final grade, stabilize and install Erosion Control Matting in accordance with standards and specifications. | 14 |
| 6. | Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize. | 7 |
| 7. | Final construction of houses on lots. | 44 |

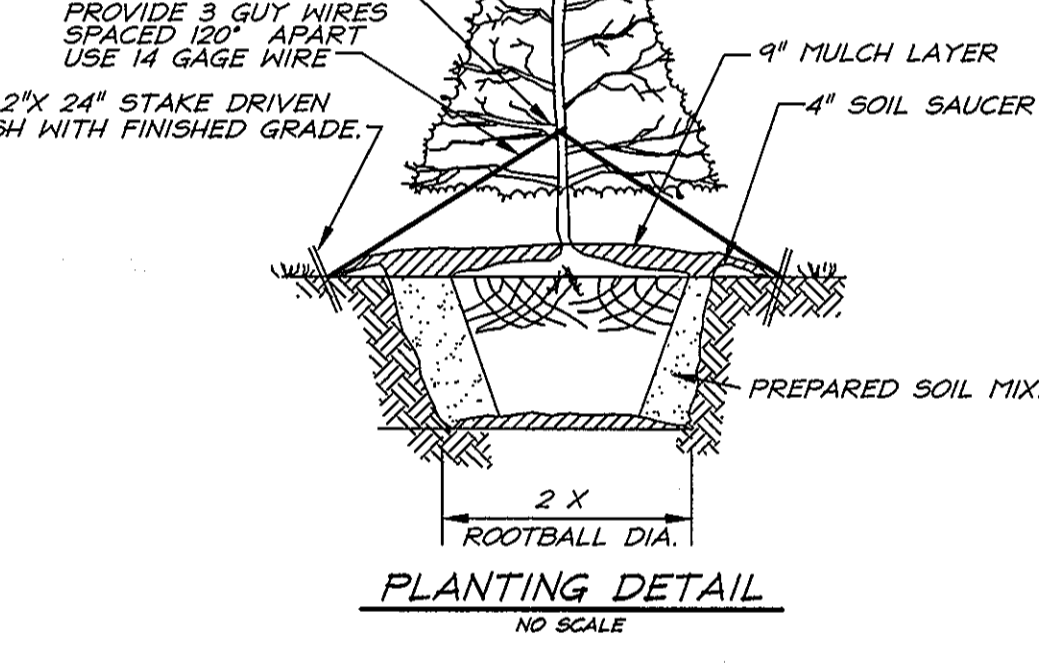
DETAIL 23 - SUPER SILT FENCE



- Construction Specifications**
- Fencing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 48" fabric and 6" length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt bulges removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth 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 0.1 gal/ft²/minute (max.) Test: MSMT 322
Filtering Efficiency 75% (min.) Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

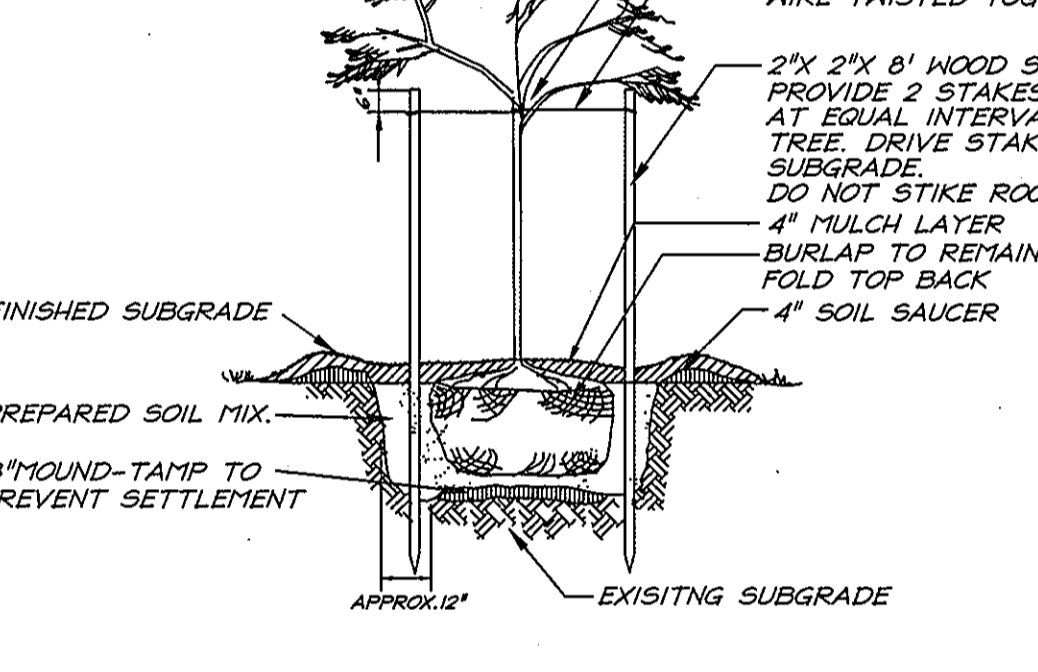
DETAIL 33 - SUPER SILT FENCE



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- Fencing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 48" fabric and 6" length posts.
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 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt bulges removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth 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 0.1 gal/ft²/minute (max.) Test: MSMT 322
Filtering Efficiency 75% (min.) Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 6 - GABION + INFLOW PROTECTION



- Construction Specifications**
- Gabion inflow protection shall be constructed of 9' x 3' x 9' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile Class C shall be installed under all gabion baskets.
 - The stone used to fill the gabion baskets shall be 4" - 7".
 - Gabions shall be installed in accordance with manufacturers recommendations.
 - Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-7-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

OWNER / DEVELOPER

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

CLARK • FINEFROCK & SACKETT, INC.

ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED	SCALE
TD	NO SCALE
DRAWN	NO. DRAWING
PS	3 of 3
CHECKED	JOB NO.
TD	98-027
DATE	FILE NO.
APRIL, 1998	98-0275e

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 inspections by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

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.

APPROVED: DEPARTMENT OF PLANNING & ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/29/98

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 5/29/98

APPROVED: DIRECTOR
DATE: 5/29/98

APPROVED: JOHN B. ROBERTSON 5/20/98
DATE: 5-14-98

APPROVED: G. NELSON CLARK
DATE: 5-14-98

SDP 08-118