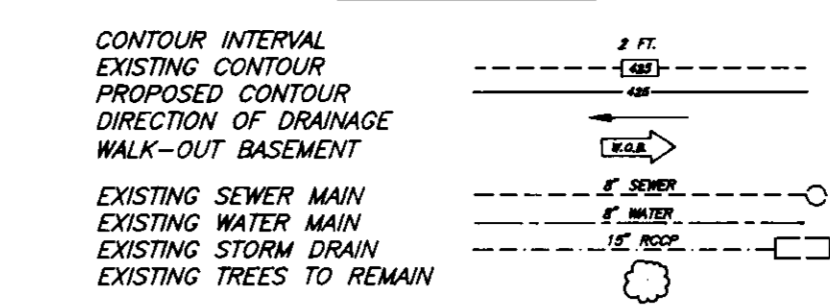
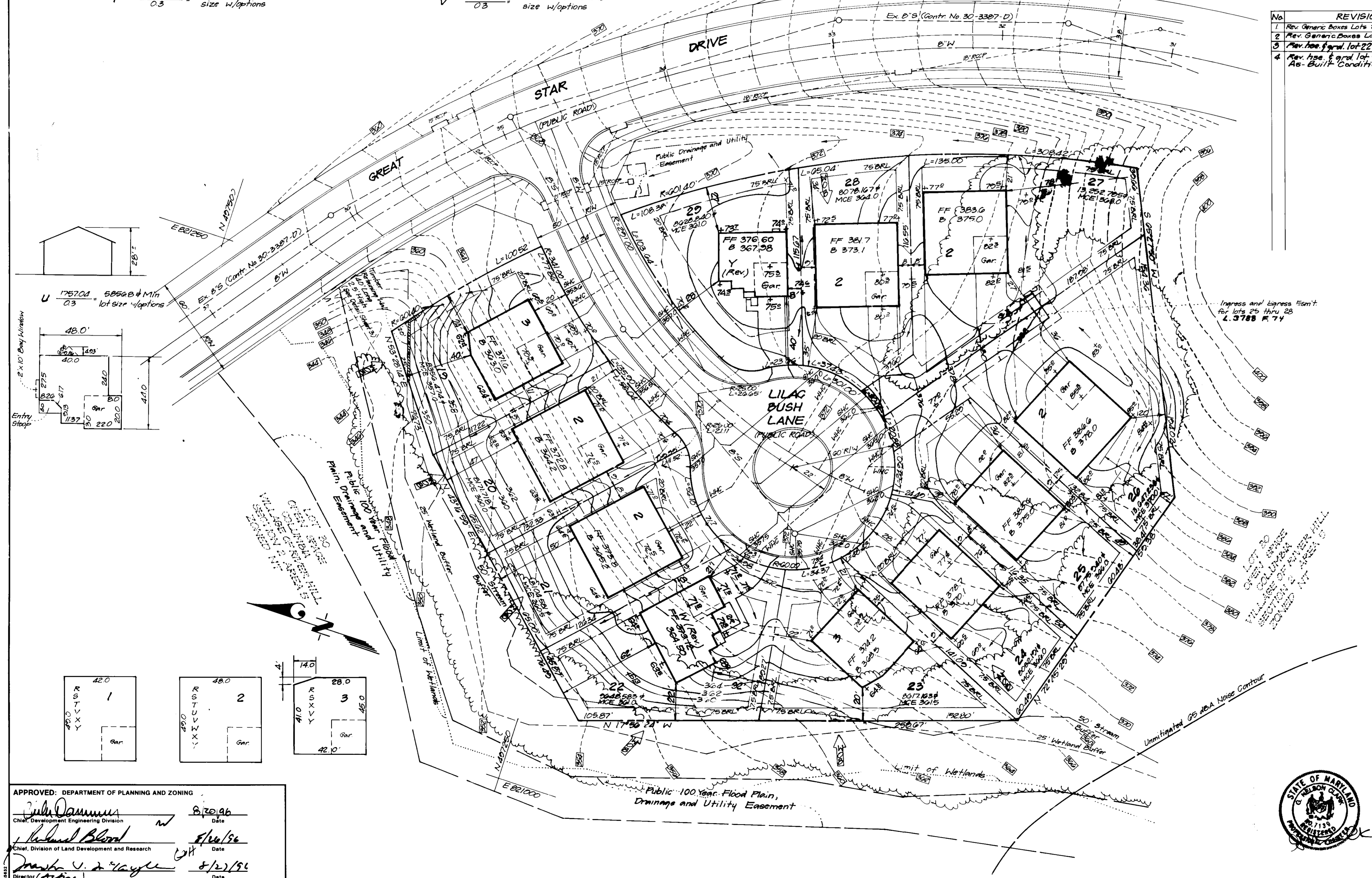
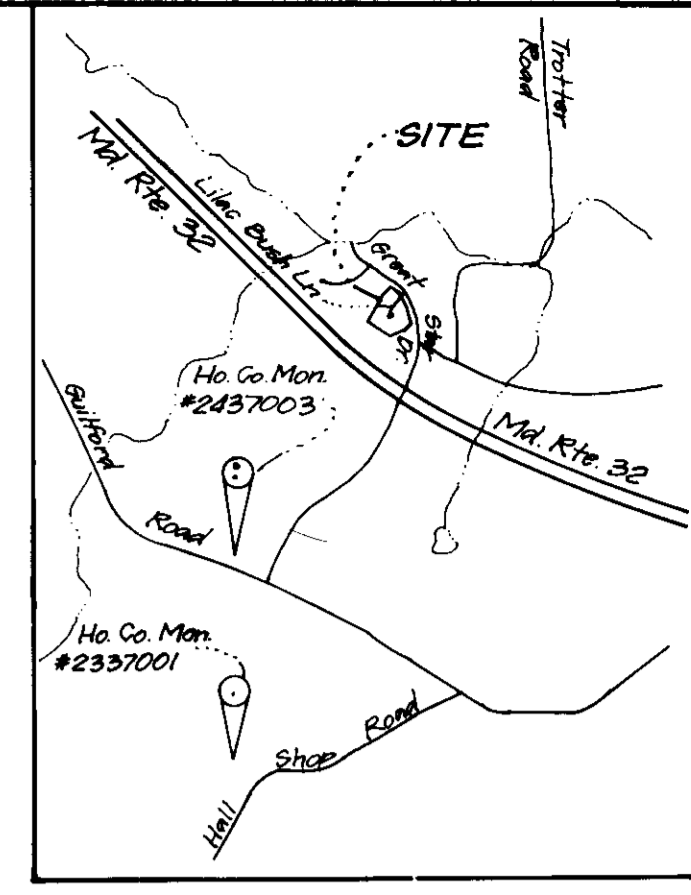


LEGEND



ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
19	0200 LILAC BUSH LANE
20	0204
21	0208
22	0212
23	0216
24	0221
25	0217
26	0213
27	0209
28	0205
29	0201



No	REVISIONS	DATE
1	Rev. Generic Boxes Lots 22 & 23	8-9-96
2	Rev. Generic Boxes Lots 19, 22, 23 & 29	8-8-96
3	Rev. hse. & grad. lot 22	12-16-97
4	Rev. hse. & grad. lot 25 to show As-Built Conditions	4-14-98

GENERAL NOTES:

- Subject property is zoned: N.T.S.F.L.D. per 10-18-93 Comprehensive Zoning Plan.
- The total area included in this submission is: 2.373 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 are: F-95-48, S-91-03, P-94-05, WP-95-34.
- Utilities shown as existing are taken from approved Water and Sewer plans Contract # 34-3336-D, approved Road Construction plans F-95-48, 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 George William Stephens, Jr. and Assoc. on 1-25-95 (95-48)
- The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monument Nos.: 2337001 and 2437003
- 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.0.03 & R.0.05
- Stormwater Management is provided per: F-95-48
- In accordance with Final Development Plan Phase 200 Part X 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.

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-95-48 and/or approved Water and Sewer Plans Contract #34-3336-D.

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

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

SUBDIVISION NAME COLUMBIA VILLAGE OF RIVER HILL	SECTION/AREA 2/5	LOTS/PARCELS 19 - 29
PLAT NO. 11934-11936	BLOCK NO. 14	ZONE N.T.S.F.L.D.
TAX MAP NO. 35	ELECTION DIST. 5TH	CENSUS TRACT G055
WATER CODE I-10	SEWER CODE G053000	

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

DESIGNED: MJP
DRAWN: PS
CHECKED: jmc
DATE: 8-12-96

SITE DEVELOPMENT PLAN
LOTS 19 - 29
COLUMBIA VILLAGE OF RIVER HILL
SECTION 2, AREA 5
FIFTH (5TH) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: GOODIER BUILDERS, Inc.
5054 Dorsey Hall Drive suite 205
Ellicott City, MARYLAND 21042

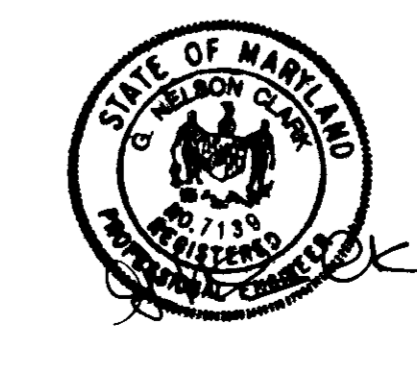
SCALE: 1"=30'
DRAWING: 1 of 3
JOB NO.: 96-107
FILE NO.: 96-107X

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Jill Dammer
Chief, Development Engineering Division
Date: 8/20/96

Richard Blood
Chief, Division of Land Development and Research
Date: 8/16/96

Frank V. Layne
Director (Planning)
Date: 8/22/96



TRAP No. 1 S.O.S.T. ST II

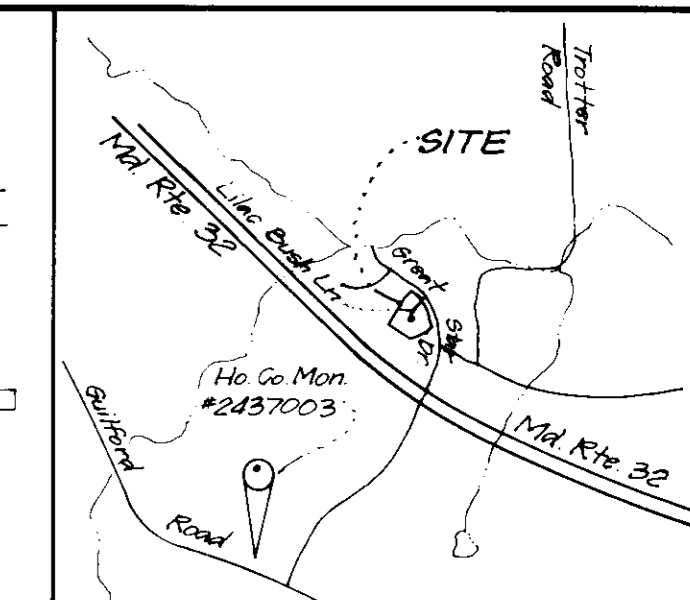
D.A. = 1.3 Ac. (Prop. & Ex.)
 Storage Required = 1.3(3600) = 4680 CF
 Storage Provided = 4725 CF
 Top of Stone Weir = 371.0
 Bottom Elevation = 366.0
 Clean Out Elevation = 367.25
 Top of Embankment = 372.0
 Bottom Dimensions = 37' x 13'
 L = 6'
 Side Slopes = 2:1

TRAP No. 2 S.O.S.T. ST II

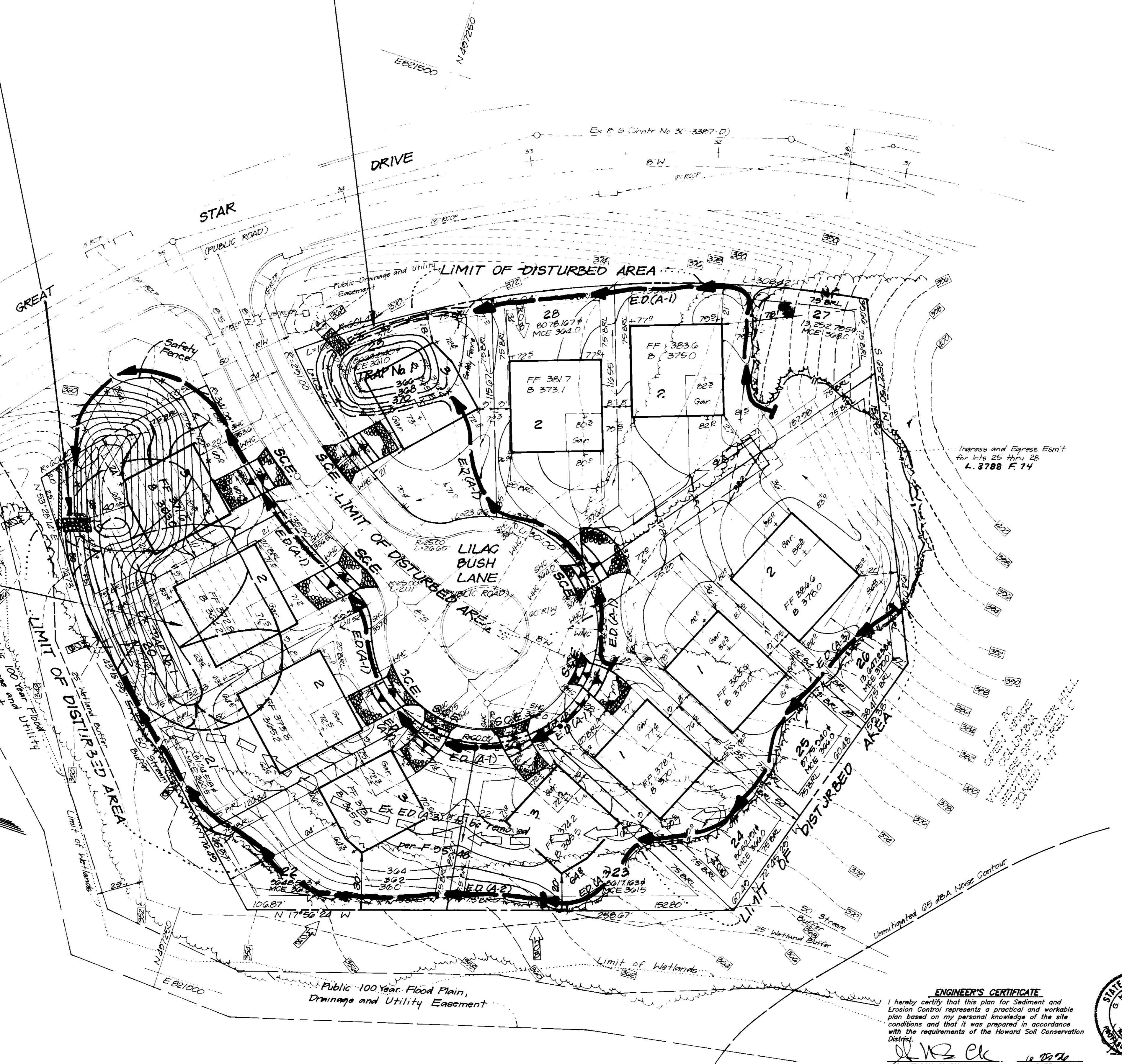
D.A. = 1.2 Ac. (Prop. & Ex.)
 Storage Required = 1.2(3600) = 4320 CF
 Storage Provided = 4320 CF
 Top of Stone Weir = 350.0
 Bottom Elev. = 346.0
 Clean Out Elev. = 347.0
 Bottom Dimensions = 12' x 46'
 L = 0'
 Side Slopes = 2:1

LEGEND

- CONTOUR INTERVAL
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- SILT FENCE
- EARTH DIKE
- LIMIT OF DISTURBED AREA
- TREE PROTECTION FENCE
- EXISTING TREES TO REMAIN



No.	REVISIONS	DATE
1	Rev. Generic Boxes Lots 22 & 23	8-9-96
2	Rev. Generic Boxes 19, 22, 23, 25, 54E Trap	8-8-96



Upon Removal of Ex. Trap No. 1 (F-95-45), Trap No. 2 will be constructed, as approved by the Inspector.

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."

Robert C. Goodwin 6-25-96
 NAME DATE

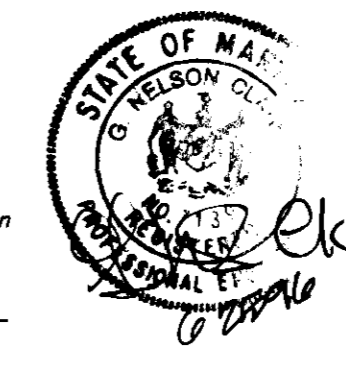
OWNER / DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

Reviewed for HOWARD S.C.D. and meets Technical Requirements
J. H. Wolford 8/16/96
 Signature Date
 U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 8/16/96
 Approved

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 8/26/96
 Chief, Division of Land Development and Research
Frankie J. DeCange 8/21/96
 Director

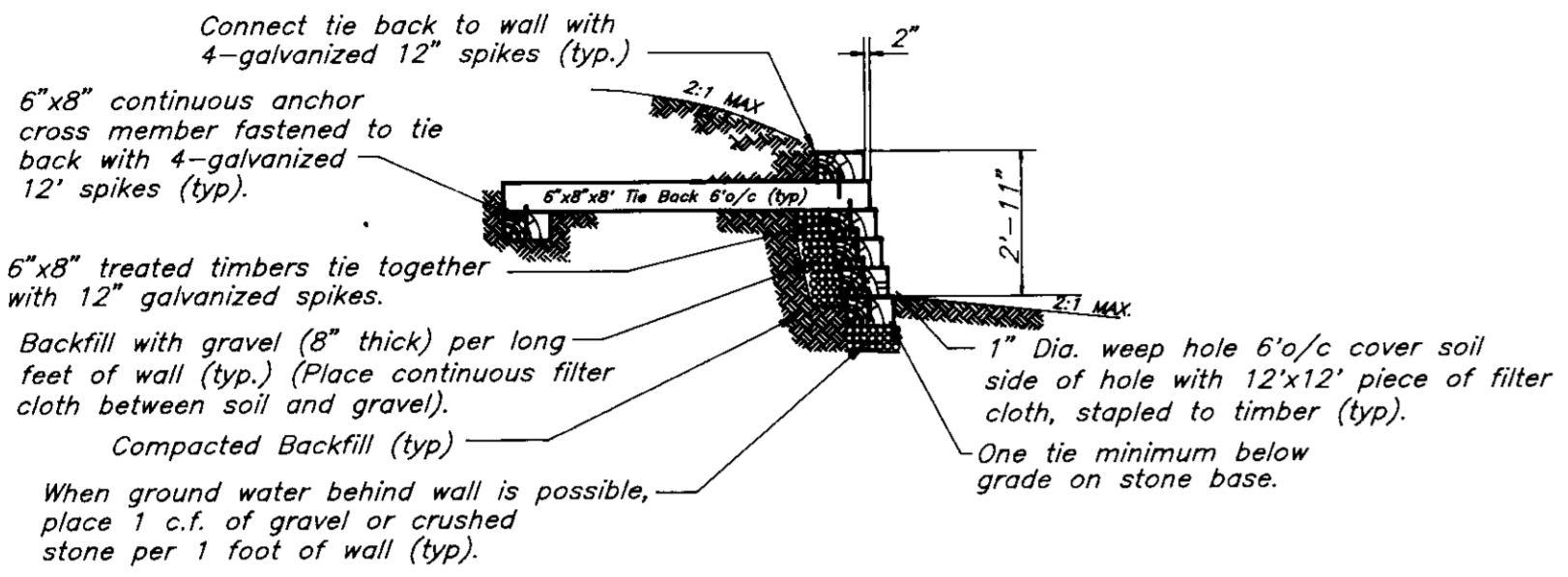
ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Sediment and Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
G. Nelson Clark 6-25-96
 DATE



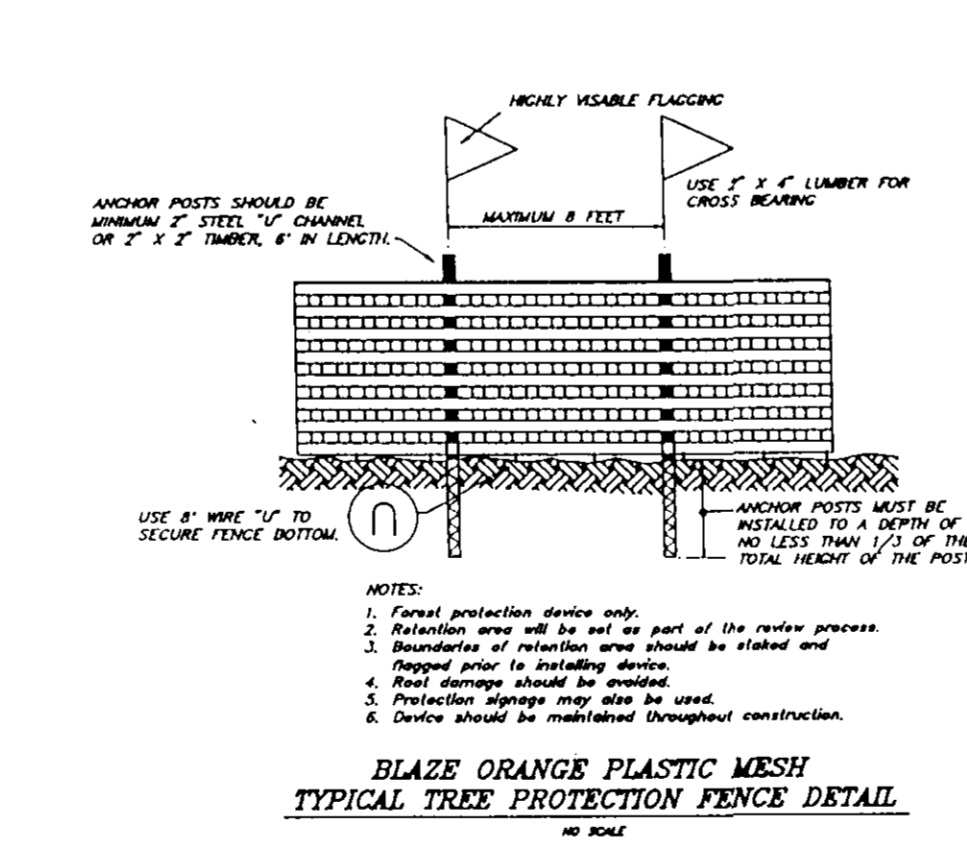
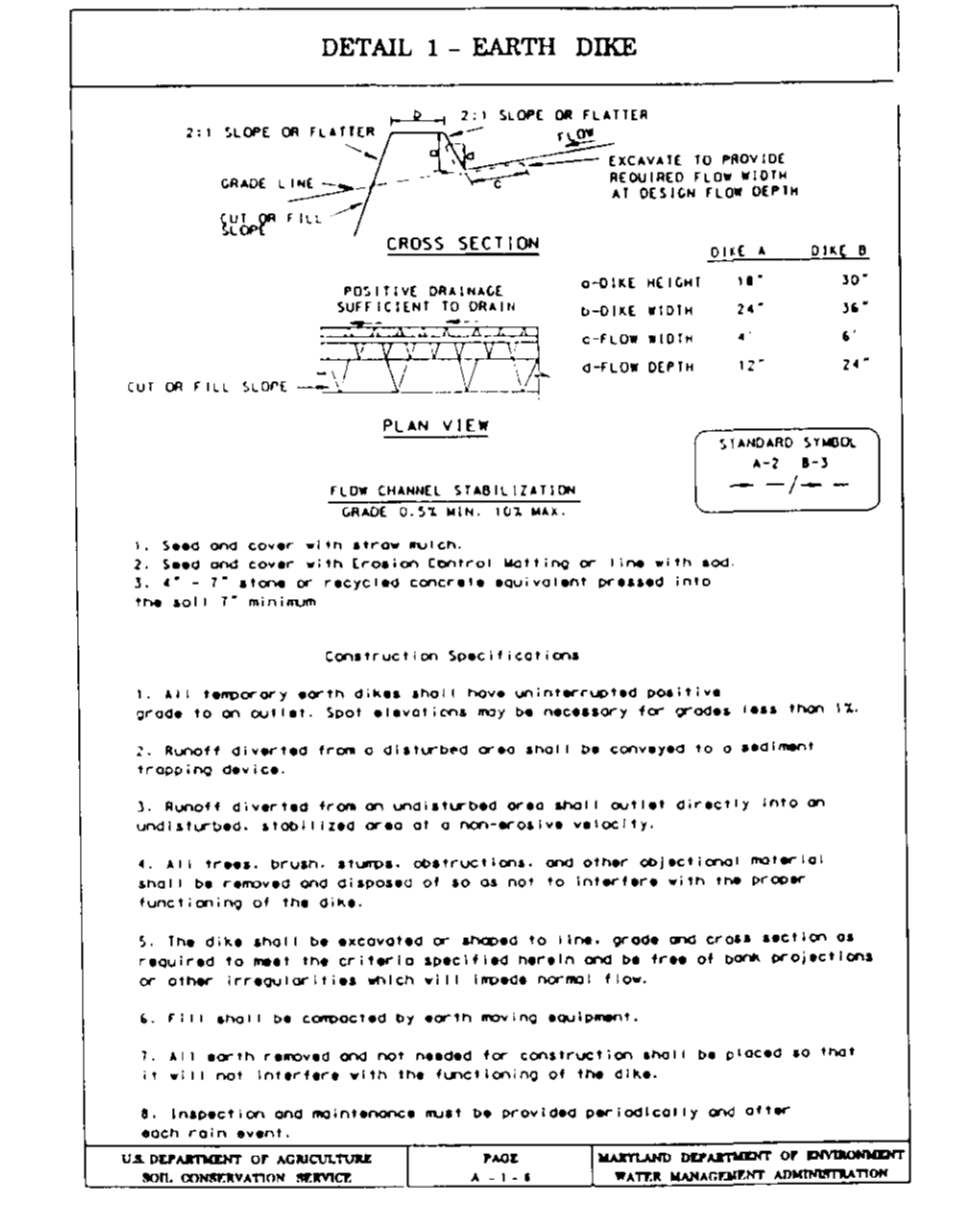
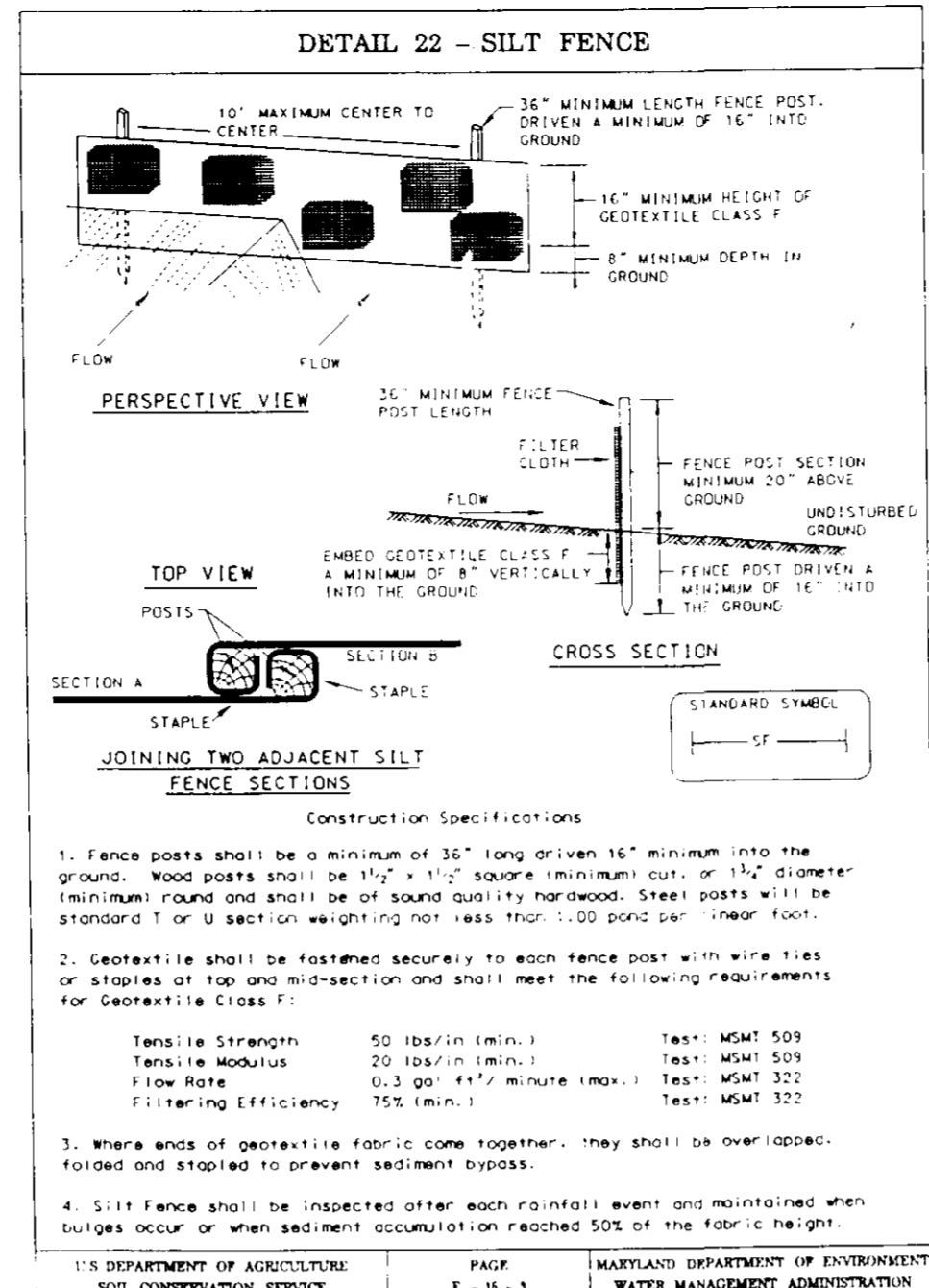
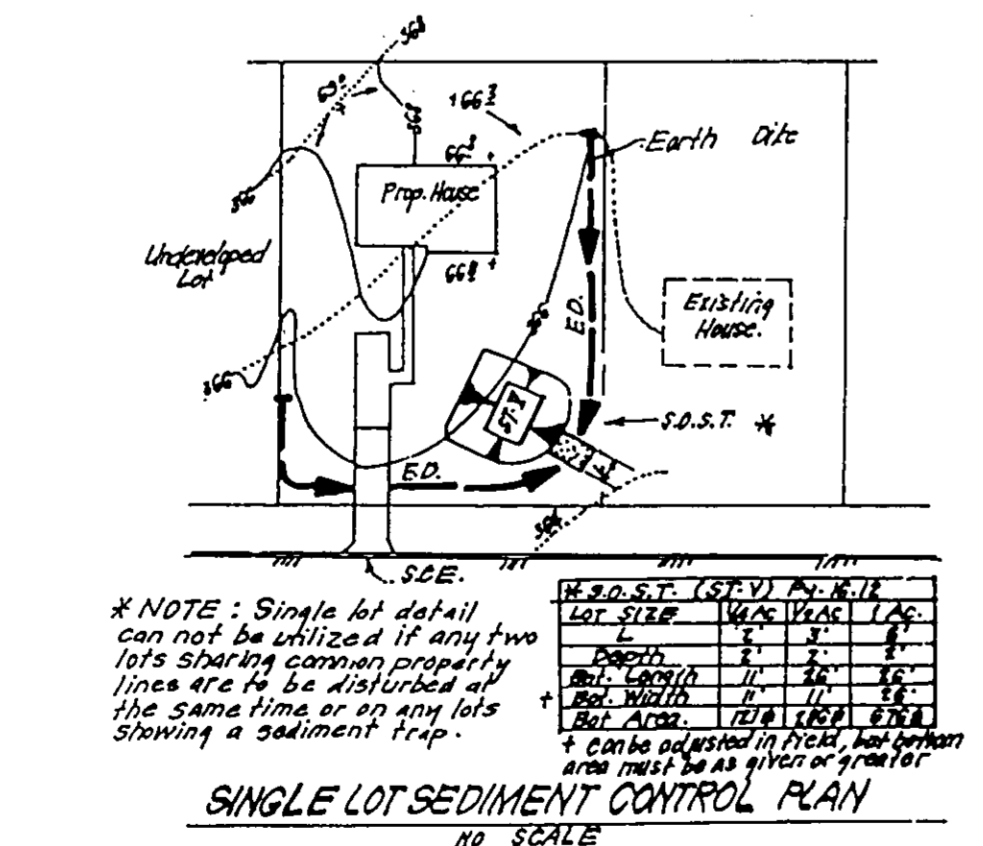
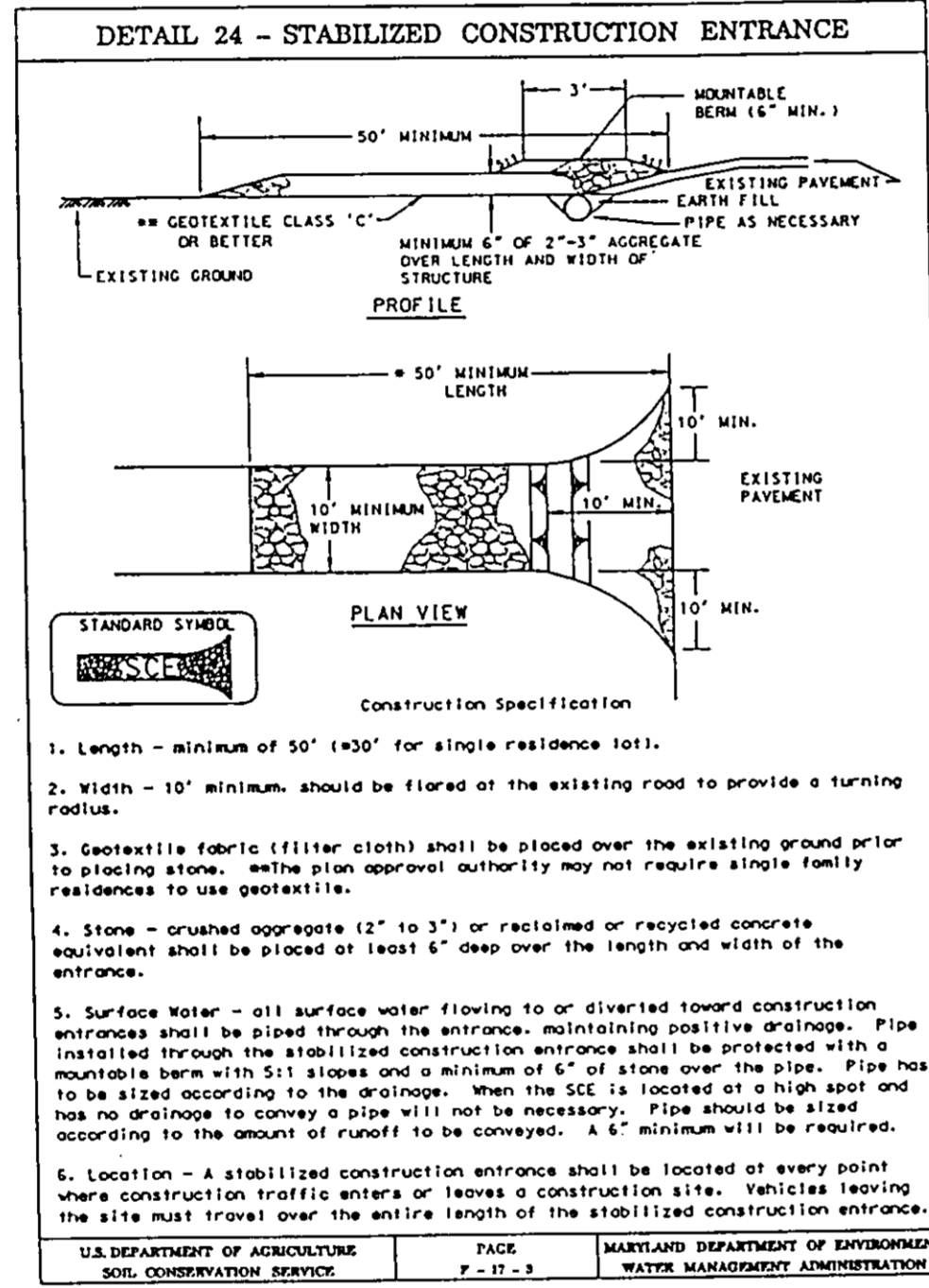
CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALTO • (301) 621-8100 WASH		
DESIGNED	SEDIMENT AND EROSION CONTROL PLAN LOTS 19 - 29 COLUMBIA VILLAGE OF RIVER HILL SECTION 2, AREA 5 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: GOODIER BUILDERS, Inc. 3024 Dursay Hill Drive Suite 205 Ellicott City, MARYLAND 21042	SCALE
DRAWN		1"=30'
CHECKED		DRAWING
DATE		2 of 3
		JOB NO.
	96-107	FILE NO.
	96-107	SDP 96-150

NOTES:

- Timbers shall be either:
 - Cresote treated railroad ties.
 - CCA treated landscaping timbers (40 lb./cf retention)
- Hardware shall be hot dipped galvanized.
- Weepholes with or without gravel drain are minimum measures for groundwater, a drain system should be designed and utilized.
- Design shall be verified for site specific soil condition by a Professional Geotechnical Engineer.



TIMBER RETAINING WALL DETAIL
NO SCALE



PERMANENT SEEDING NOTES

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

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.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-20 uniform 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 60 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 (0.5 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 seed Option (3) Seed with 60 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 untreated 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

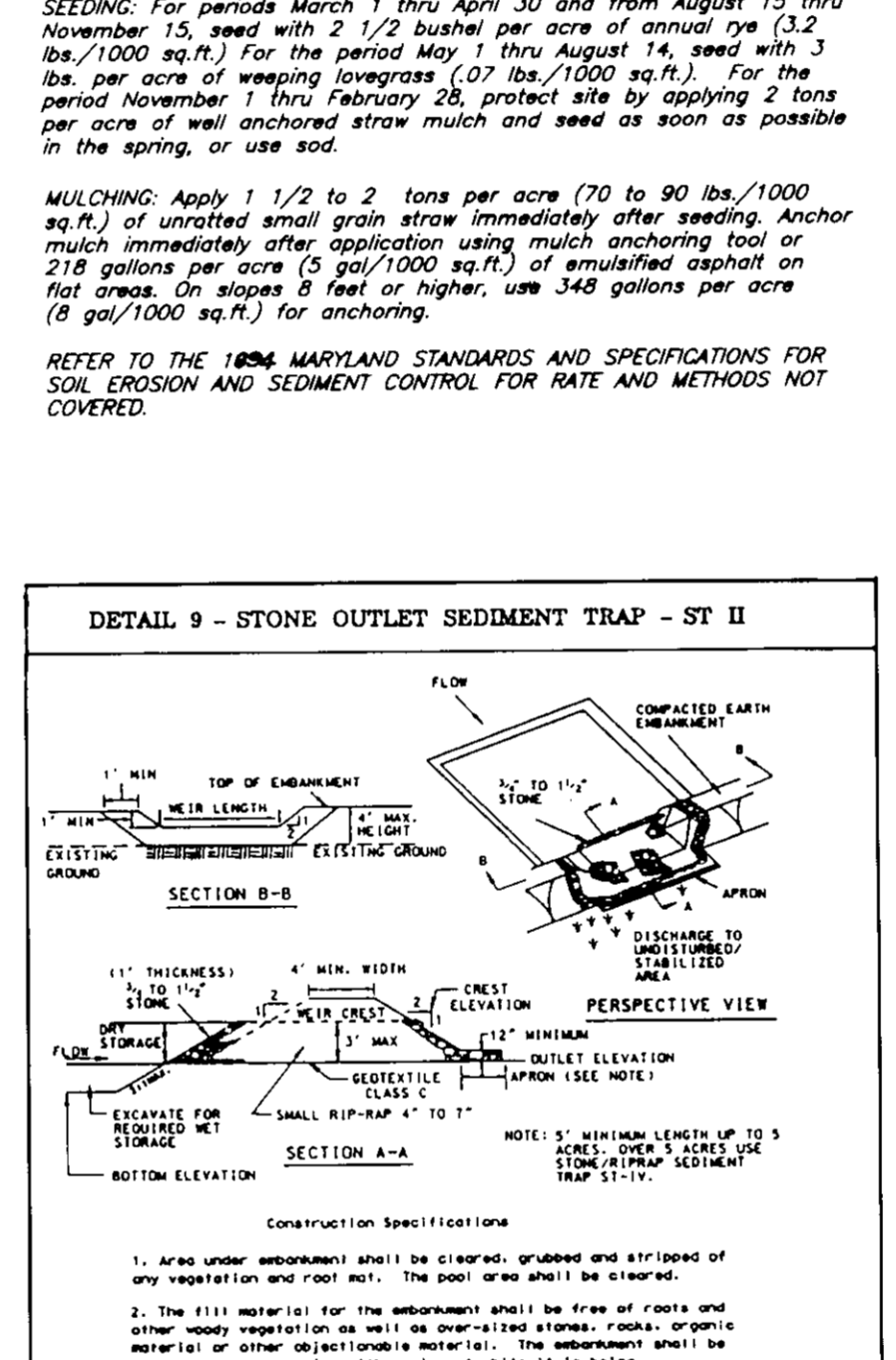
SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

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

SEEDING: For the periods March 1 thru April 30 and August 1 thru November 15, seed with 2 1/2 bushels per acre of annual ryegrass (12 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 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./1000 sq.ft.) of untreated 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 1986 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



CONSTRUCTION SPECIFICATIONS

- Trap area measurement shall be cleared, graded and staked of any vegetation and rock. The soil area shall be staked.
- The fill material for the embankment shall be free of roots and other objectionable material. The embankment shall be compacted by tamping with equipment while it is being constructed.
- All out and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small (1/4" to 3/4" in size) with a 1/4" to 1/2" layer of 1/2" to 1/4" rounded aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent sloughing. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
- Settlement shall be removed and trap restored to its original elevation when the sediment has accumulated to the level of the stone storage depth of the trap. Removal shall be completed in a suitable area and in such a manner that it will not affect the structure.
- The structure shall be inspected periodically and after each rain and repairs made as needed.
- Construction of trap shall be carried out in such a manner that sediment distribution is desired. Once constructed, the top and outlet face of the embankment shall be stabilized with seed and mulch. Pairs of construction lines shall be placed in accordance with Green Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon tree completion and maintained around trees during the life of the trap.
- The structure shall be completed by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
- Refer to Section 9 for specifications concerning trap development.
- Minimum trap depth shall be measured from the water elevation.
- The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
- Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be secured at least 4' into the outlet channel at the entrance of the outlet channel.
- Outlet - An outlet shall be provided, including a means of conveying the discharge to an erosion free area or to existing stable channel.

21.0 STANDARDS AND SPECIFICATIONS

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 containing 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 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 Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, all loam, sandy clay loam, or very sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textures, subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, silt, roots, trash, or other materials larger than 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - 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.
- 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.
 - Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Soil 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. Limestone 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.

SEDIMENT AND EROSION CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 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 12, 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 seedings, sod, temporary seedings and mulching (Sec. 9-20-1 thru 9-23-3).
- 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:	237Ac
Area Disturbed:	236Ac
Area to be roofed or paved:	0.79Ac
Area to be vegetatively stabilized:	1.87Ac
Total Cut:	1325CY
Offsite Waste/Borrow Area Location:	0000CY
- 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.
- The total amount of silt fence = **35LF**

CONSTRUCTION SEQUENCE

NO. OF DAYS	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	1
3. Install sediment and erosion control devices and stabilize.	1
4. Excavate for foundations, rough grade and temporarily stabilize.	80
5. Construct structures, sidewalks and driveways.	80
6. Final grade and stabilize in accordance with Sds and Specs.	12
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *Richard Blood* 8/26/96
 Chief, Division of Land Development and Research: *Wanda S. LeVey* 8/26/96
 Director: *Wanda S. LeVey* 8/26/96

Reviewed for HOWARD S.C.D. and meets Technical Requirements: *J. H. Woodfield* 8/26/96
 Signature: *J. H. Woodfield* Date: 8/26/96
 Natural Resources Conservation Service

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."

NAME: *Chris Cloudie* DATE: *8-26-96*

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.

J. H. Woodfield 8/26/96



CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA MD 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH

DESIGNED	SEDIMENT AND EROSION CONTROL DETAILS	SCALE
KI/M	LOTS 19 - 29	1"=30'
DRAWN	COLUMBIA	DRAWING
PS	VILLAGE OF RIVER HILL	3 of 3
CHECKED	SECTION 2 AREA 5	JOB NO.
K/M	FIFTH (5th) ELECTION DISTRICT	96-107
DATE	HOWARD COUNTY, MARYLAND	FILE NO.
6/23/96	FOR: GODDIER BUILDERS, Inc.	96-107 SE
	5554 Dorsey Hill Drive Suite 205	
	Ellicott City, MARYLAND 21042	

SDP 96-150