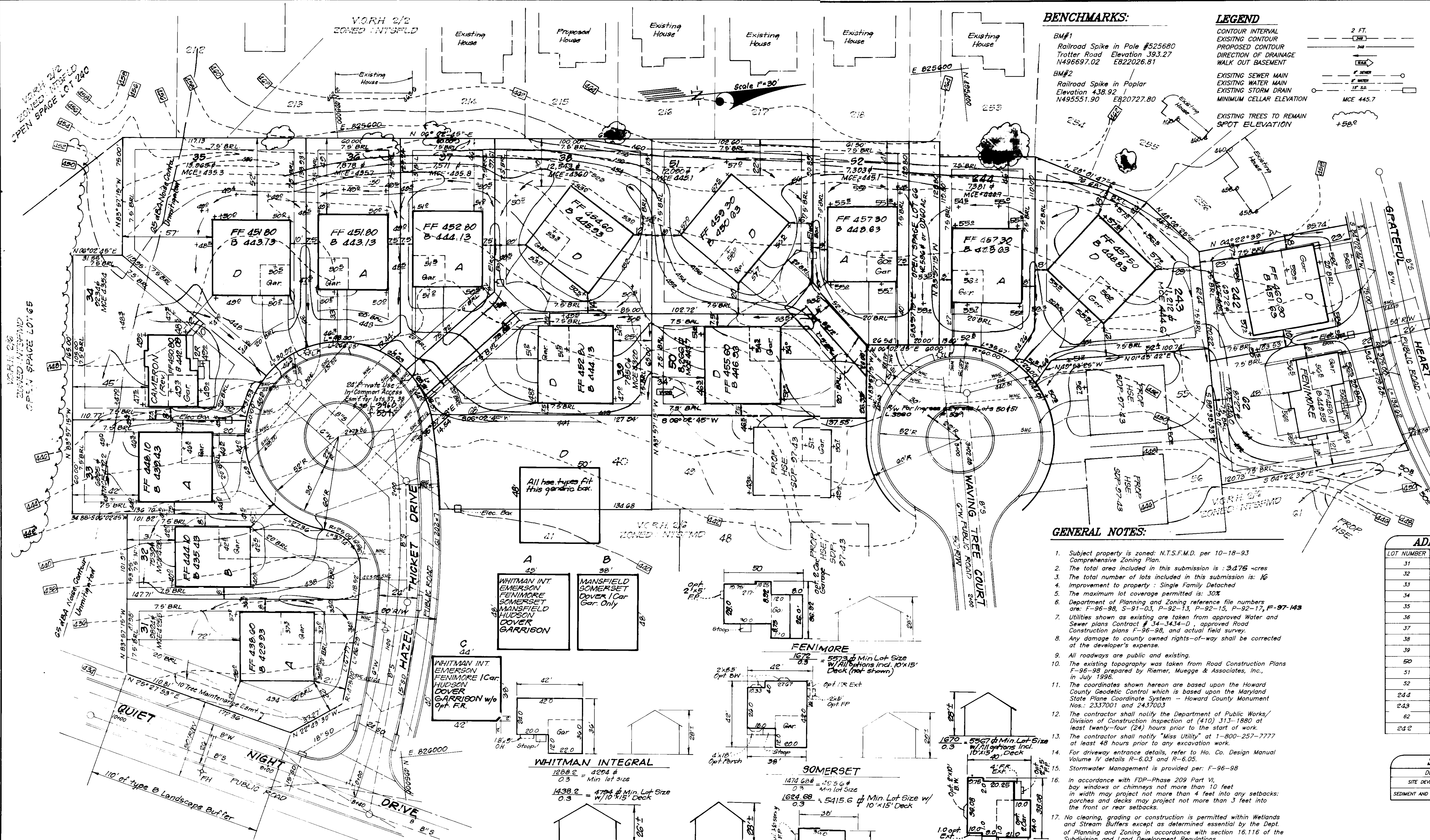
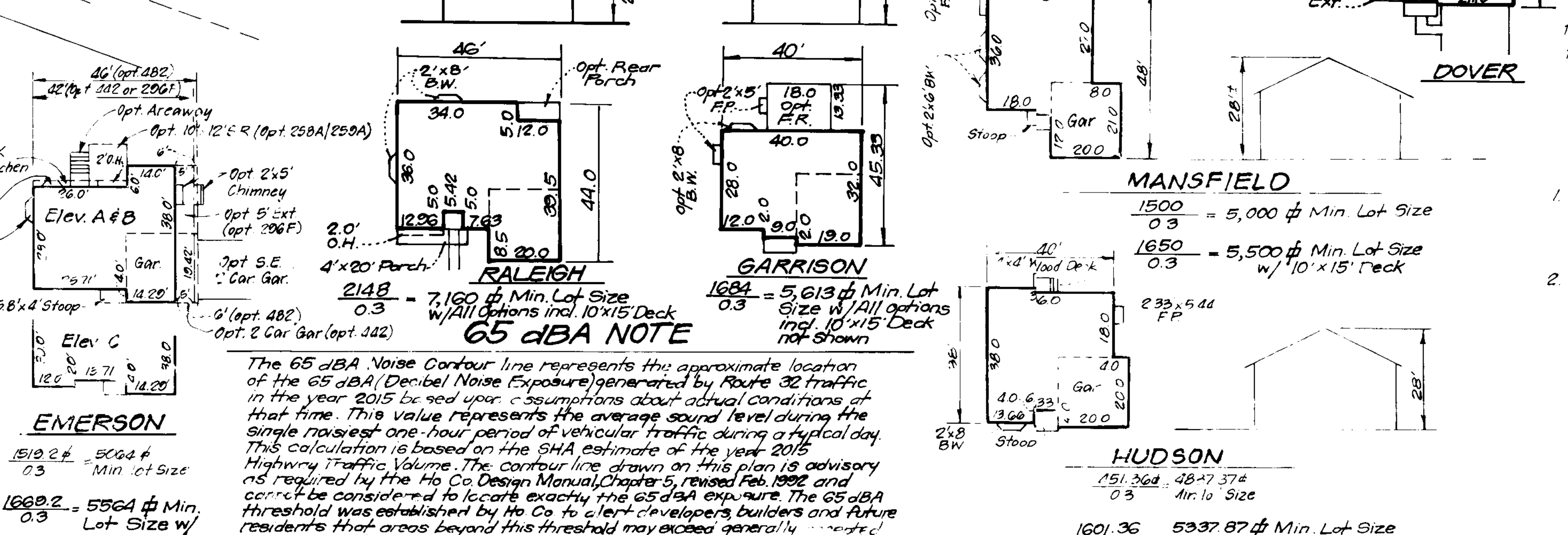




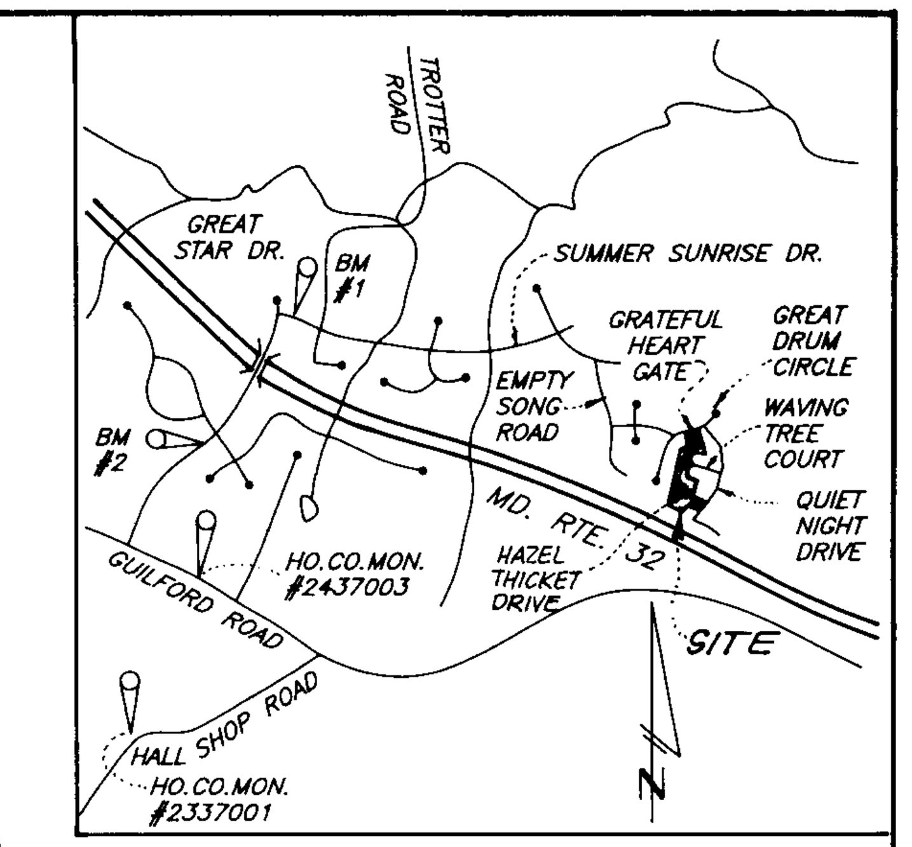
BENCHMARKS:

BM#1
Railroad Spike in Pole #525680
Trotter Road Elevation 393.27
N496697.02 E822026.81

BM#2
Railroad Spike in Poplar
Elevation 438.92
N495551.90 E820727.80

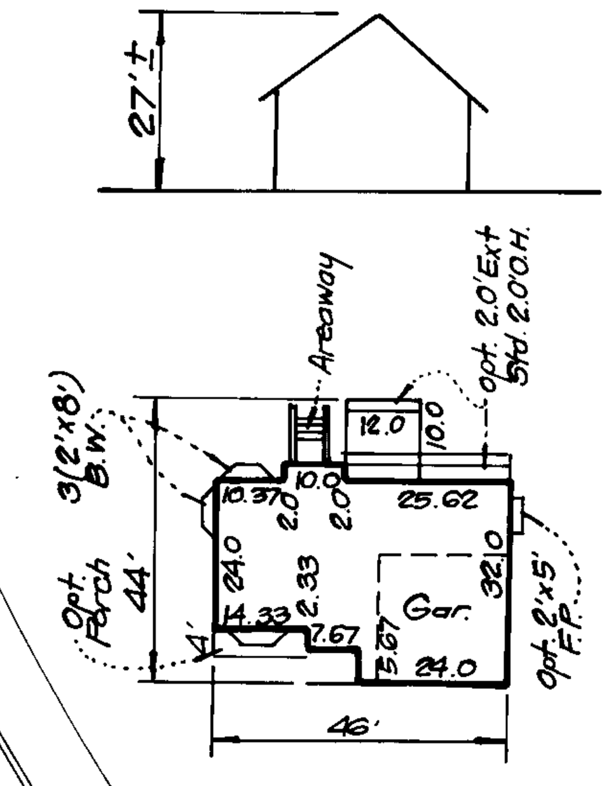
LEGEND

CONTOUR INTERVAL	2 FT.
EXISITNG CONTOUR	348
PROPOSED CONTOUR	348
DIRECTION OF DRAINAGE	
WALK OUT BASEMENT	W.O.B.
EXISITNG SEWER MAIN	8" SEWER
EXISITNG WATER MAIN	8" WATER
EXISTING STORM DRAIN	15" S.D.
MINIMUM CELLAR ELEVATION	MCE 445.7
EXISTING TREES TO REMAIN	
SPOT ELEVATION	+58°



VICINITY MAP

Scale : 1"=2000'



CAMERON

1848 / 0.3 = 6160 # Min. Lot Size Incl. All options & 10' x 15' Deck not shown

GENERAL NOTES:

1. Subject property is zoned: N.T.S.F.M.D. per 10–18–93 Comprehensive Zoning Plan.
2. The total area included in this submission is : 3.475 acres
3. The total number of lots included in this submission is: 16
4. Improvement to property : Single Family Detached
5. The maximum lot coverage permitted is: 30%
6. Department of Planning and Zoning reference file numbers are: F–96–98, S–91–03, P–92–13, P–92–15, P–92–17, F-97-143
7. Utilities shown as existing are taken from approved Water and Sewer plans Contract # 34–3434–D , approved Road Construction plans F–96–98, and actual field survey.
8. Any damage to county owned rights–of–way shall be corrected at the developer's expense.
9. All roadways are public and existing.
10. The existing topography was taken from Road Construction Plans F–96–98 prepared by Riemer, Muegge & Associates, Inc., in July 1996.
11. 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
12. 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.
13. The contractor shall notify "Miss Utility" at 1–800–257–7777 at least 48 hours prior to any excavation work.
14. For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R–6.03 and R–6.05.
15. Stormwater Management is provided per: F–96–98
16. In accordance with FDP–Phase 209 Part VI, 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.
17. No clearing, grading or construction is permitted within Wetlands and Stream Buffers except as determined essential by the Dept. of Planning and Zoning in accordance with section 16.116 of the Subdivision and Land Development Regulations.
18. SHC elevations shown are located at the property line.
19. Stormwater Management Quantity is provided by the MD. Rte. 32 stream crossings. Water Quality is provided by publicly owned Bioretention Areas.
20. 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 req'd 5 landscape trees in the amount of $500 is part of the builders grading permit application

SPECIAL NOTES:

1. 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–96–98 and/or approved Water and Sewer Plans Contract #34–3434–D.
2. All lots are capable of accomodating a minimum 150 sq. ft. deck without exceeding the maximum 30% lot coverage

ADDRESS CHART

LOT NUMBER	STREET ADDRESS	
31	6501	HAZEL THICKET DRIVE
32	6505	HAZEL THICKET DRIVE
33	6509	HAZEL THICKET DRIVE
34	6513	HAZEL THICKET DRIVE
35	6517	HAZEL THICKET DRIVE
36	6521	HAZEL THICKET DRIVE
37	6524	HAZEL THICKET DRIVE
38	6520	HAZEL THICKET DRIVE
39	6516	HAZEL THICKET DRIVE
50	6517	WAVING TREE COURT
51	6521	WAVING TREE COURT
52	6525	WAVING TREE COURT
244	6524	WAVING TREE COURT
243	6520	WAVING TREE COURT
62	6388	GREATFUL HEART DRIVE
242	6392	GREATFUL HEART DRIVE

REVISIONS

Nº		Date
3	Rev. hse. & grd. lot 34	1-5-98
2	Rev. hse. & grd. lot 62	9-30-97
1	Add Dover, Garrison, Cameron, Raleigh hse. types. Add Fenimore 2 Car Gar. and Generic D box	6-27-97

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

SCHEDULE A PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways
Landscape Type	B
Frontage/Perimeter	110'
Number of Plants Required	
Shade Trees	2 (1/50)
Evergreen Trees	3 (1/40)
Shrubs	—
Number of Plants Provided	
Shade Trees	*
Evergreen trees	*

COMMENTS: *PLANTING WILL BE PROVIDED PER THE NEW TOWN ALTERNATIVE COMPLIANCE METHOD. (SEE GENERAL NOTE NO. 20.)

65 dBA NOTE

The 65 dBA Noise Contour line represents the approximate location of the 65 dBA (Decibel Noise Exposure) generated by Route 32 traffic in the year 2015 based upon assumptions about actual conditions at that time. This value represents the average sound level during the single noisiest one-hour period of vehicular traffic during a typical day. This calculation is based on the SHA estimate of the year 2015 Highway Traffic Volume. The contour line drawn on this plan is advisory as required by the Ho Co. Design Manual, Chapter 5, revised Feb. 1992 and cannot be considered to locate exactly the 65 dBA exposure. The 65 dBA threshold was established by Ho Co to alert developers, builders and future residents that areas beyond this threshold may exceed generally accepted noise levels established by The U.S. Dept. of Housing and Urban Development.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] Chief, Development Engineering Division	5/16/97 Date
[signature] Chief, Division of Land Development and Research	5/19/97 Date
[signature] Director	5/19/97 Date

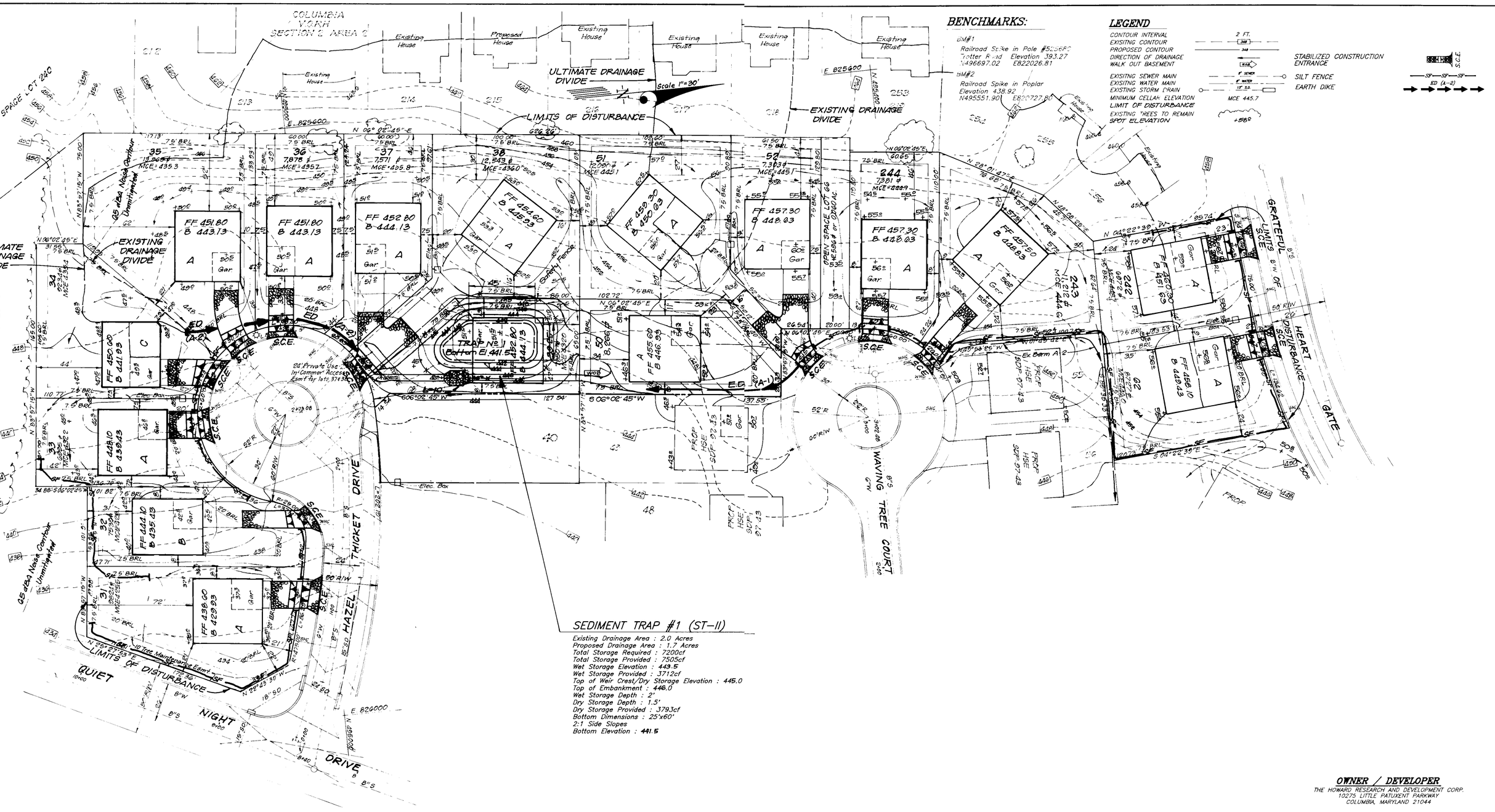
SUBDIVISION NAME: COLUMBIA VILLAGE OF RIVER HILL			SECTION/AREA: 2/6	LOTS/PARCELS: 242-244, 31-39, 50-52, 62	
PLAT NO.: 12394, 12395, 12696	BLOCK NO.: 15 & 21	ZONE: NT SFMD	TAX MAP NO.: 35	ELECTION DIST.: 5TH	CENSUS TRACT: 6055
WATER CODE: I 12			SEWER CODE: 6640000		

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

DESIGNED: JME	SITE DEVELOPMENT PLAN LOTS 31-39, 50-52, 62, 242-244 **COLUMBIA** **VILLAGE OF RIVER HILL** SECTION 2, AREA 6, PHASE 1 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE: 1"=30'
DRAWN: ZAH		DRAWING: 1 of 3
CHECKED: JME		JOB NO.: 96-170
DATE: Feb 27, 97	FOR: THE RYLAND GROUP, Inc. 1447 YORK ROAD #705 Lutherville, Maryland 21093	FILE NO: 96-170 x

STATE OF MARYLAND · C. NELSON CLARK · 7139 · PROFESSIONAL ENGINEER

SDP 97-101



BENCHMARKS:

BM#1
Railroad Spike in Pole #5136PC
Trotter Road Elevation 393.27
N496697.02 E822026.81

BM#2
Railroad Spike in Poplar
Elevation 438.92
N495551.90 E820727.80

LEGEND

CONTOUR INTERVAL 2 FT.
EXISITNG CONTOUR 348
PROPOSED CONTOUR 348
DIRECTION OF DRAINAGE
WALK OUT BASEMENT BOB
EXISITNG SEWER MAIN 8" SEWER
EXISTING WATER MAIN 8" WATER
EXISTING STORM DRAIN 15" S.D.
MINIMUM CELLAR ELEVATION MCE 445.7
LIMIT OF DISTURBANCE
EXISTING "REES TO REMAIN
SPOT ELEVATION +588

STABILIZED CONSTRUCTION ENTRANCE S.C.E.
SILT FENCE SF SF SF
EARTH DIKE ED (A-2)

SEDIMENT TRAP #1 (ST-11)

Existing Drainage Area : 2.0 Acres
Proposed Drainage Area : 1.7 Acres
Total Storage Required : 7200cf
Total Storage Provided : 7505cf
Wet Storage Elevation : 443.5
Wet Storage Provided : 3712cf
Top of Weir Crest/Dry Storage Elevation : 445.0
Top of Embankment : 446.0
Wet Storage Depth : 2'
Dry Storage Depth : 1.5'
Dry Storage Provided : 3793cf
Bottom Dimensions : 25'x60'
2:1 Side Slopes
Bottom Elevation : 441.5

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	5/16/97 Date
Director of Land Development	5/19/97 Date
Director	5/19/97 Date

Reviewed for HOWARD S.C.D.
and meets Technical Requirements
Signature 2-15-97 Date
U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Approved 5/13/97

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 2-27-97 DATE

ENGINEER'S CERTIFICATE

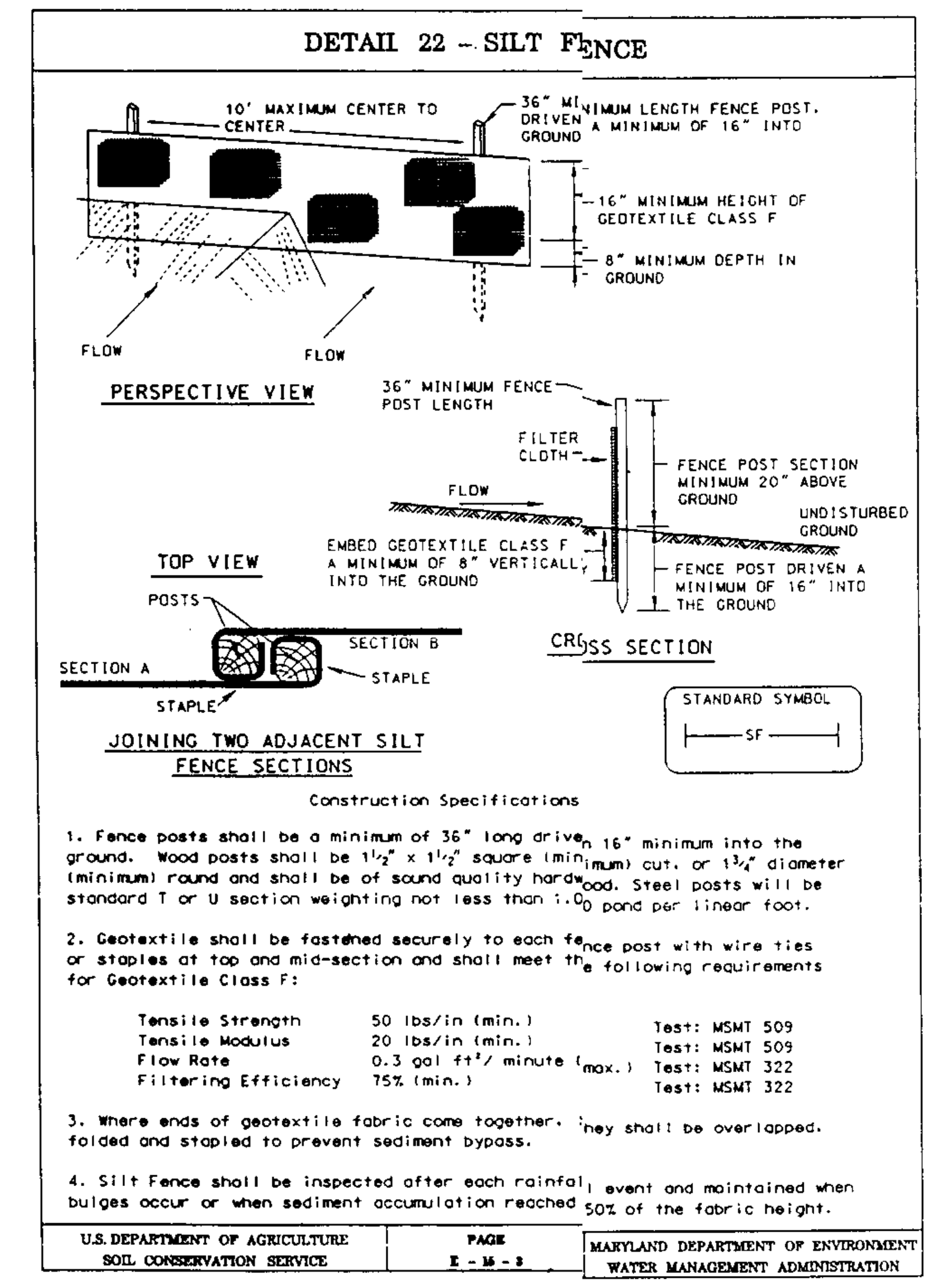
I hereby certify that this plan for Sediment and Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

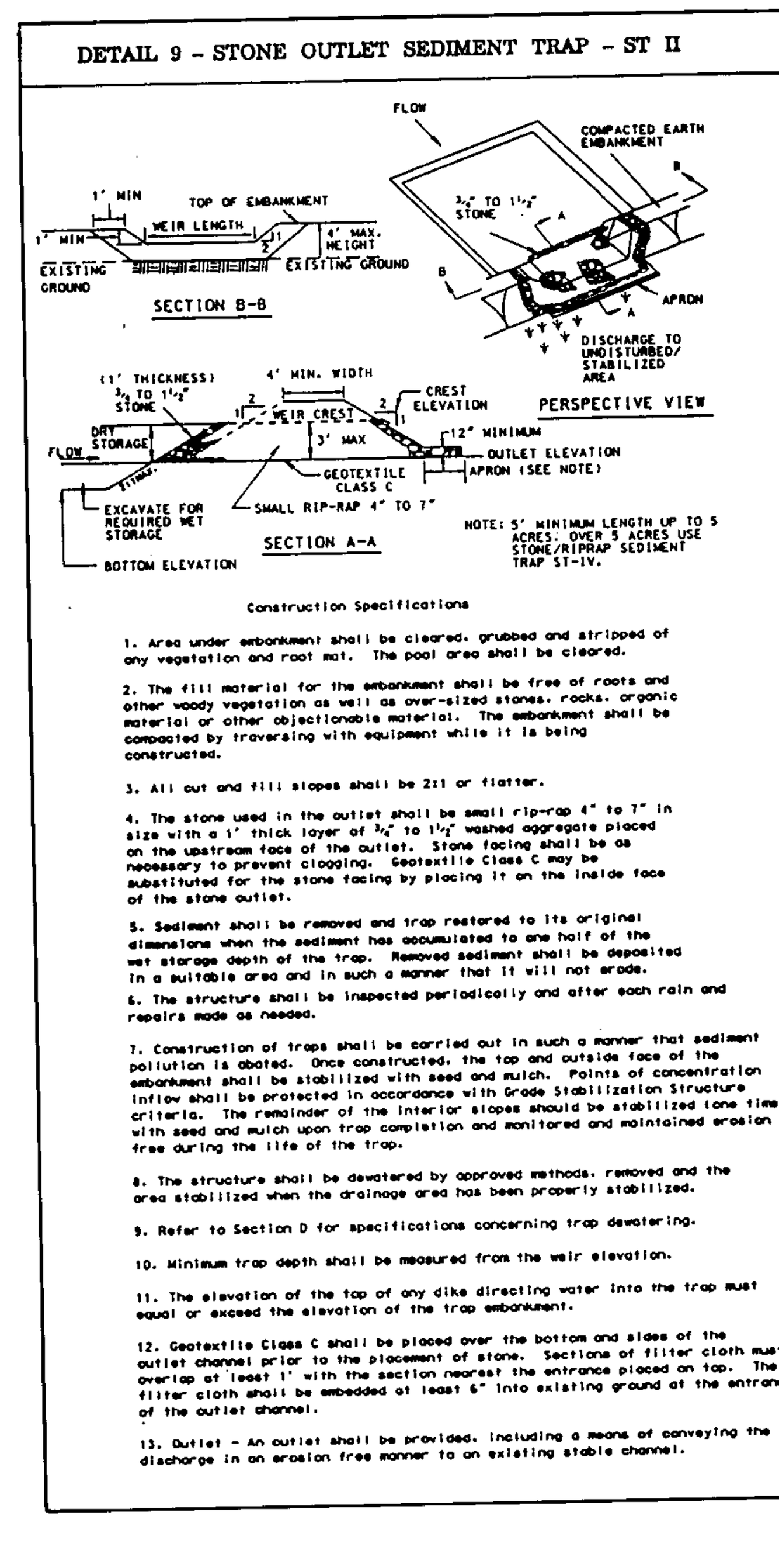
G. NELSON CLARK 2-27-97 DATE

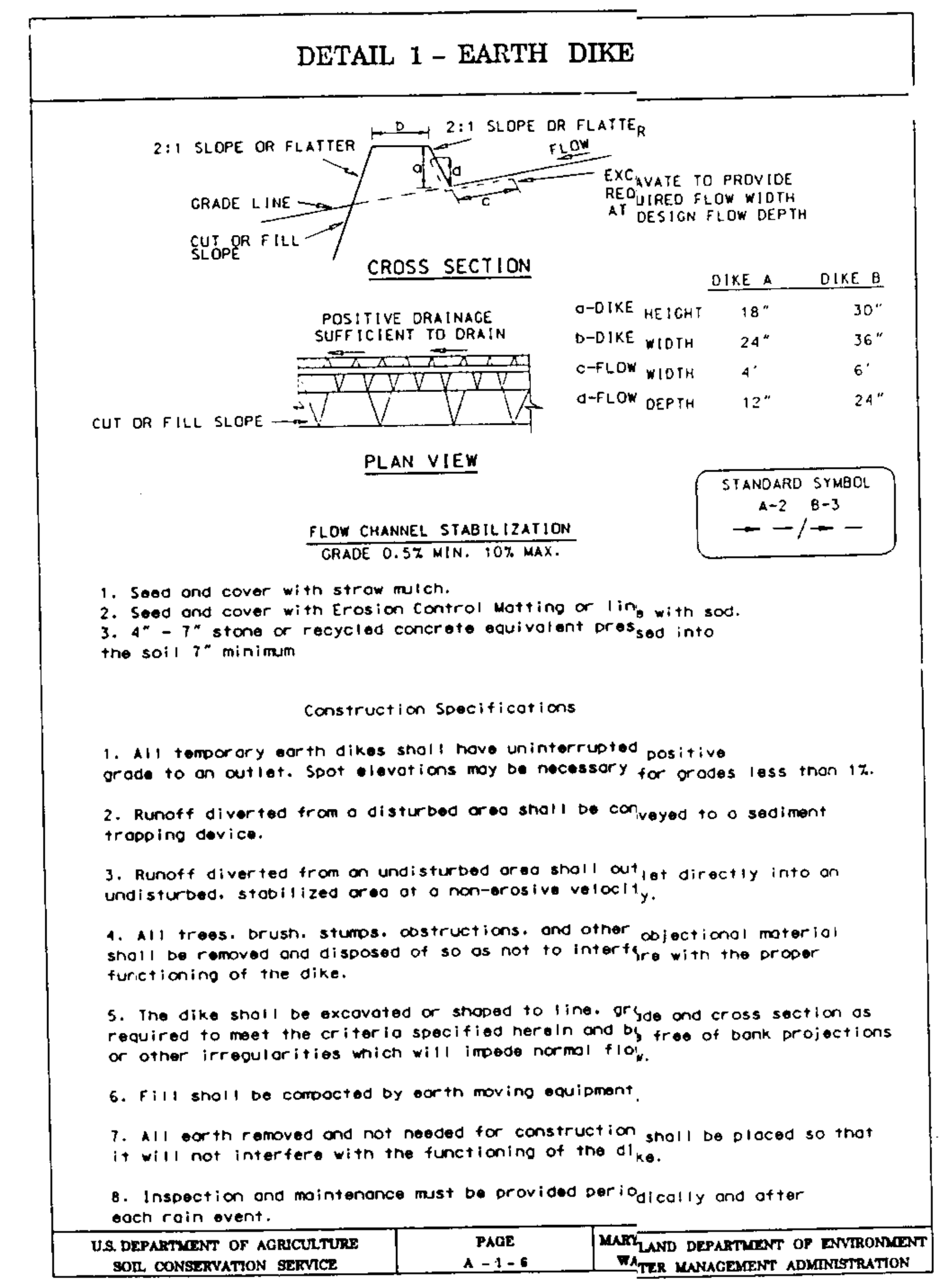
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA MD 21045 • (410) 381-7500 BALTO. • (301) 621-8100 WASH.

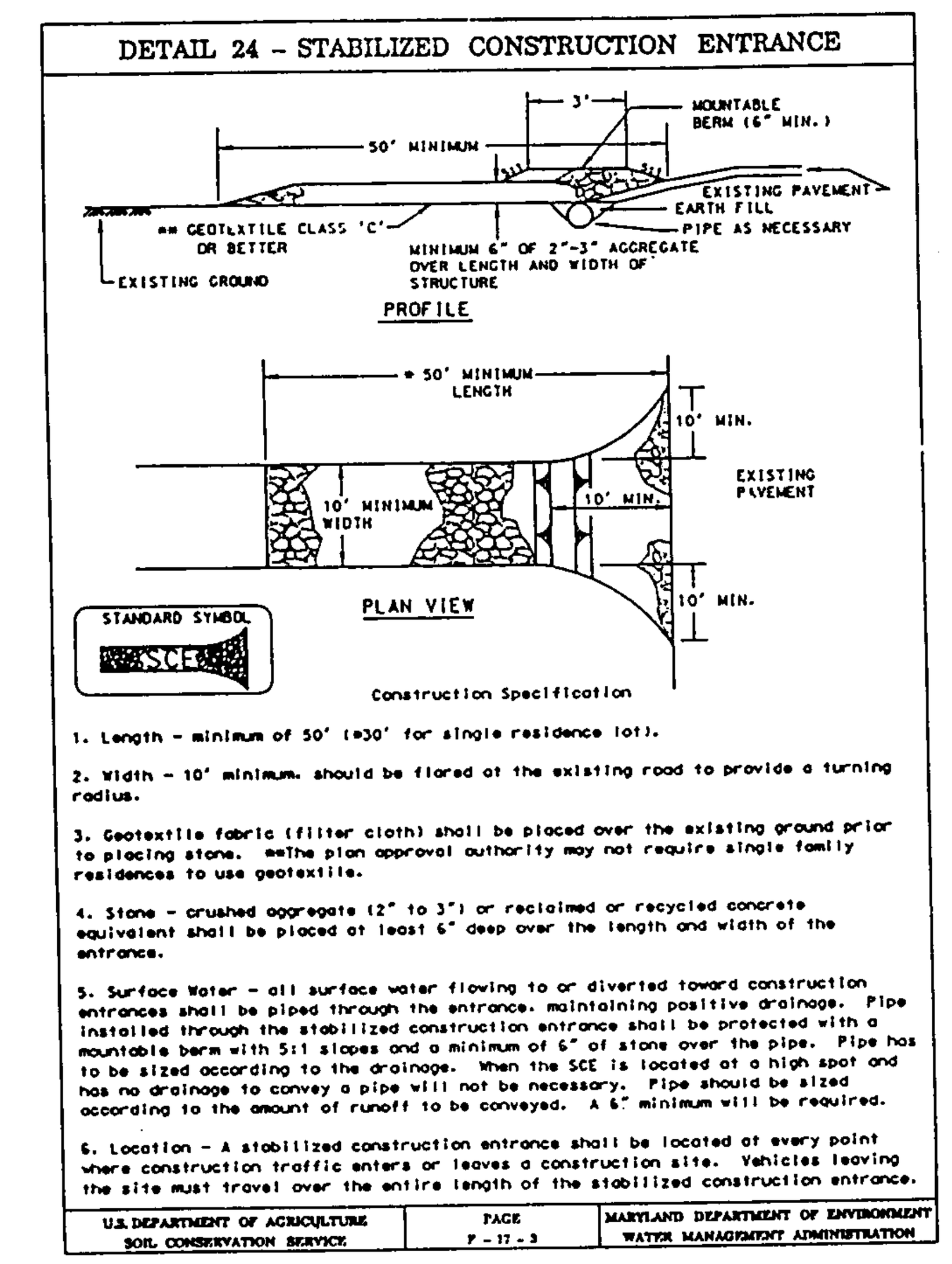
DESIGNED DB	SEDIMENT AND EROSION CONTROL PLAN LOTS 31-38, 50-52, 62, 242-244	SCALE 1"=30'
DRAWN PS	COLUMBIA VILLAGE OF RIVER HILL	DRAWING 2 of 3
CHECKED D.A.B.	SECTION 2, AREA 6, PHASE 1 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO 96-170
DATE Feb 27,97	FOR: THE RYLAND GROUP, Inc. 1447 YORK ROAD #702 Lutherville, Maryland 21093	FILE NO 96-170se

SDP 97-101









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

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 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 1 and 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.

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.

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 water pockets.

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 seedbed preparation.

SEDIMENT AND EROSION CONTROL NOTES

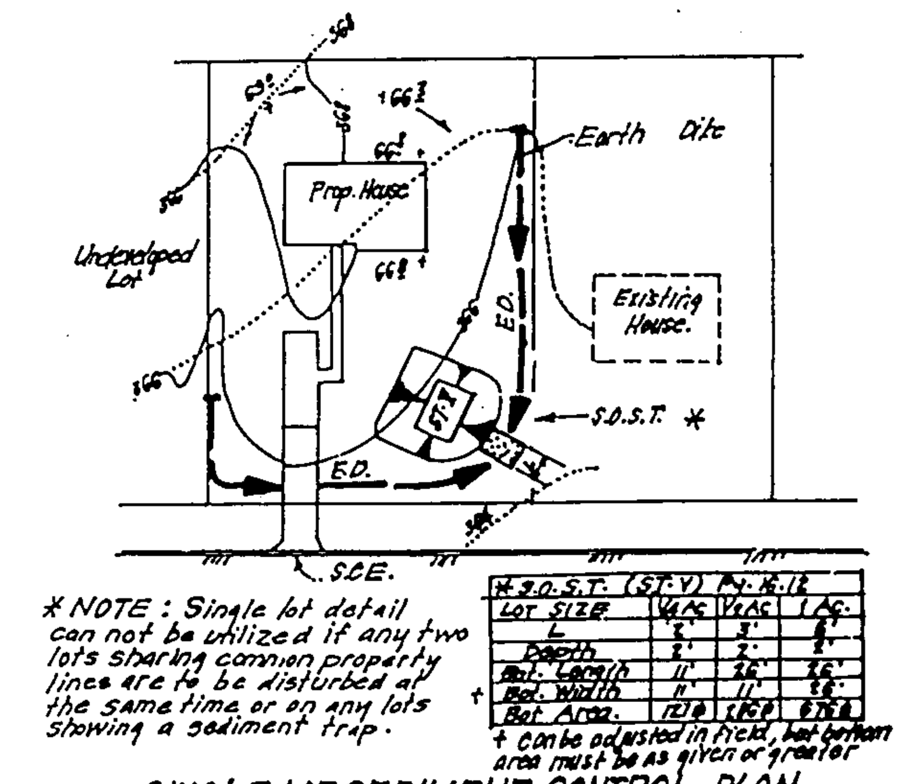
1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within:
   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 project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol.1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. 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 seeding and mulching (Sec G).
   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: 3.32 Acres
   - Area Disturbed: 3.1 Acres
   - Area to be roofed or paved: 1.0 Acres
   - Area to be vegetatively stabilized: 2.1 Acres
   - Total Cut: 3570 CY
   - Total Fill: 5470 CY
   - 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.
9. Additional sediment control must be provided, if deemed necessary 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 made.
11. 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, whichever is shorter.
12. The total amount of silt fence = 1100 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 it's grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:

	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	N/A
3. Install sediment and erosion control devices and stabilize.	14
4. Excavate for foundations, rough grade and temporarily stabilize.	30
5. Construct structures, sidewalks and driveways.	60
6. Final grade and stabilize in accordance with Stds. and Specs.	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

* Delay construction of houses on lots: 39
See single lot sediment control detail, this sheet.



SINGLE LOT SEDIMENT CONTROL PLAN
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, discing or other acceptable means before seeding, if not previously loosened.

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 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 (.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 straw.

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 loosened.

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

SEEDING: For periods March 1 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 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 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.

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REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

OWNER / DEVELOPER

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

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 5/16/97 — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 5/19/97 — DATE

DIRECTOR — 5/19/97 — DATE

Reviewed for HOWARD S.C.D. and meets Technical Requirements
Signature — 05-13-97 — Date
U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved — 5/13/97

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NAME — 2-27-97 — DATE

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G. NELSON CLARK — 2-27-97 — DATE

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

DESIGNED DB	SEDIMENT AND EROSION CONTROL DETAILS LOTS 31-39, 50-52, 62, 242-244 COLUMBIA VILLAGE OF RIVER HILL SECTION 2, AREA 6, PHASE 1 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=30'
DRAWN PS		DRAWING 3 of 3
CHECKED D.A.B.		JOB NO. 96-170
DATE Feb. 27, 97	FOR: THE RYLAND GROUP, Inc. 1447 York Road #705 Lutherville, Maryland 21093	FILE NO. 96-170se

SDP 97-101