

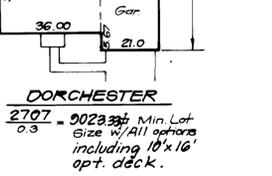
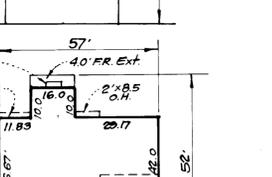
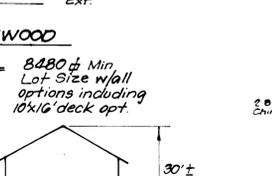
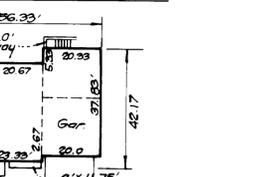
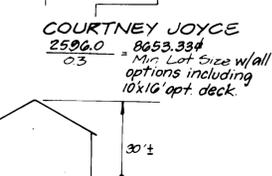
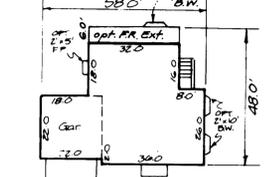
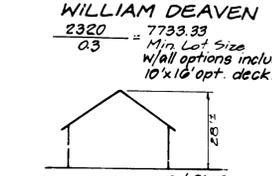
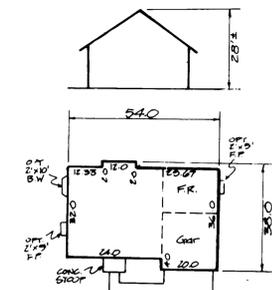
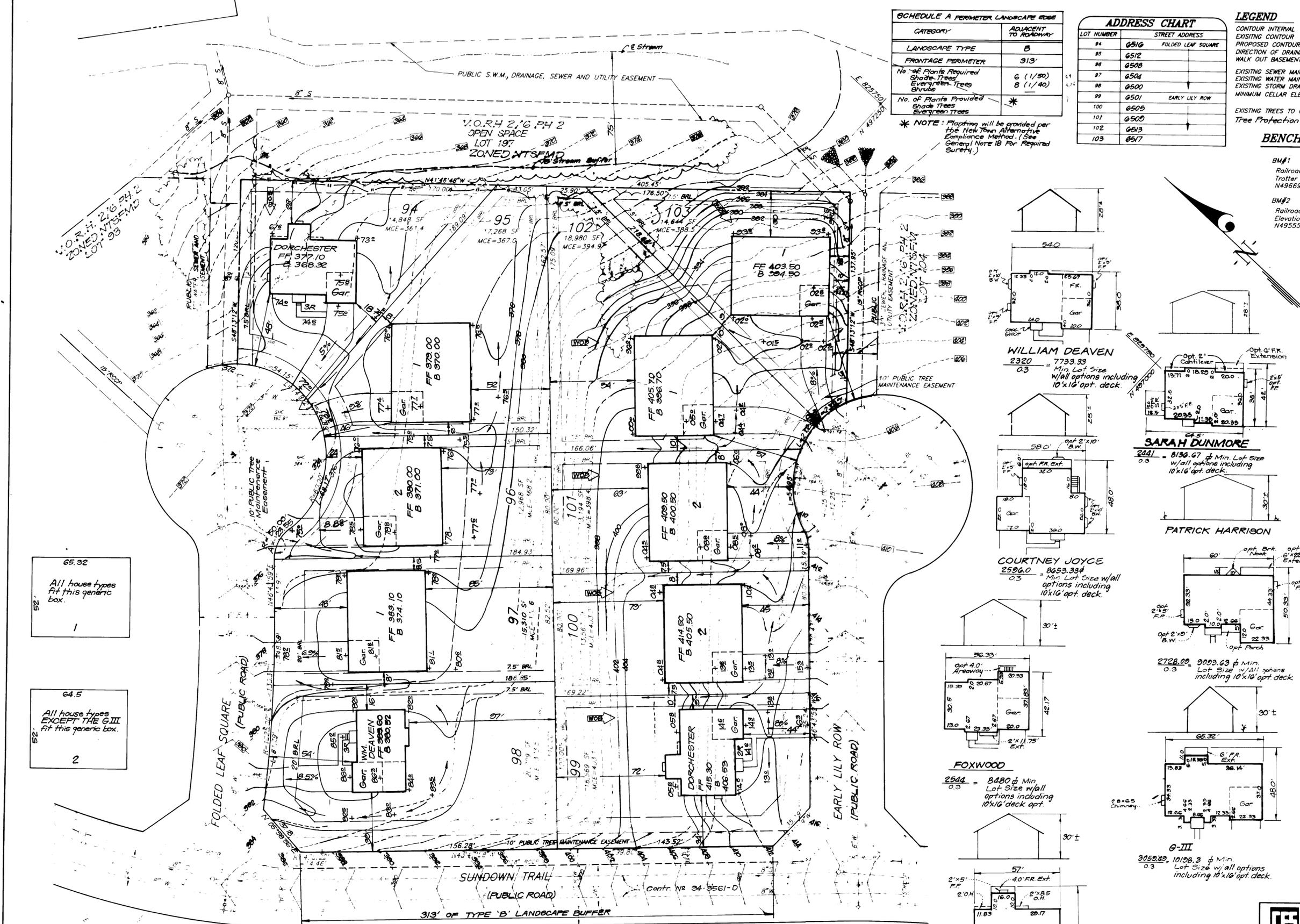
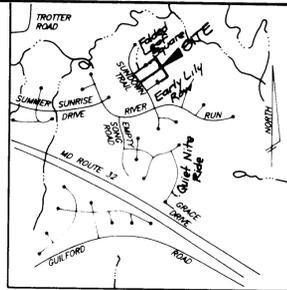
LANDSCAPE TYPE	ADJACENT TO ROADWAY
FRONTAGE PERIMETER	313'
No. of Plants Required Shade Trees Evergreen Trees Shrubs	6 (1/50) 8 (1/40)
No. of Plants Provided Shade Trees Evergreen Trees	*

\* NOTE: Planting will be provided per the New Town Alternative Compliance Method. (See General Note 18 For Required Surety.)

LOT NUMBER	STREET ADDRESS
94	0516 FOLDED LEAF SQUARE
95	0512
96	0508
97	0504
98	0500
99	0501 EARLY LILY ROW
100	0505
101	0500
102	0513
103	0517

**LEGEND**  
 CONTOUR INTERVAL  
 EXISTING CONTOUR  
 PROPOSED CONTOUR  
 DIRECTION OF DRAINAGE  
 WALK OUT BASEMENT  
 EXISTING SEWER MAIN  
 EXISTING WATER MAIN  
 EXISTING STORM DRAIN  
 MINIMUM CELLAR ELEVATION  
 EXISTING TREES TO REMAIN  
 Tree Protection Fence

**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



- GENERAL NOTES:**
- Subject property is zoned: N.T.S.F.M.D. per 10-18-93 Comprehensive Zoning Plan.
  - The total area included in this submission is: 3.628 Acres
  - The total number of lots included in this submission is: 10
  - Improvement to property: Single Family Detached
  - The maximum lot coverage permitted is: 30%
  - Department of Planning and Zoning reference file numbers are: S-91-03, P-95-17, F-96-98, F-96-138
  - Utilities shown as existing are taken from approved Water and Sewer Plans Contract # 34-3561-D approved Road Construction Plans F-96-138, 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 F-96-138 prepared by Riemer, Muegge & Associates, Inc., in August 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 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-6.03 and R-6.05.
  - Stormwater Management is provided per: F-96-138
  - 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.
  - SHC elevations shown are located at the property line.
  - LANDSCAPE SURETY:**  
 This plan has been prepared in accordance with provisions of Section 16-124 of the Ho. Co. Code and Landscape Manual. Financial Surety for the required landscape trees in the amount of \$100.00 is part of the builder's grading permit application. (\$700 for lot 96 and \$700.00 for lot 99 if applications are separate.)

**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-96-138 and/or approved Water and Sewer Plans Contract #34-3561-D.

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	SECTION/AREA	LOTS/PARCELS
COLUMBIA VILLAGE OF RIVER HILL	2/6	94 - 103
PLAT NO.	BLOCK NO.	ZONE
1241G	15	NT SFMD
TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
35	5TH	6055
WATER CODE	SEWER CODE	
I 12	6640000	

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief Development Engineering Division  
 Chief Division of Land Development  
 Date: 6/5/97  
 Date: 6/9/97  
 Date: 6/10/97

REVISIONS  
 Rev. and show elev. for all lots below  
 Specific notes on lots 94-99  
 Date: 8-5-97



**CLARK • FINEROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 • FAX (410) 381-6211 • WASH.

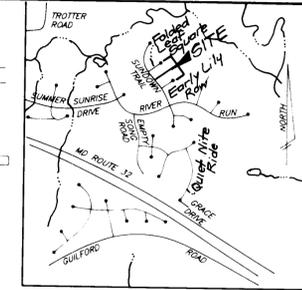
DESIGNED	JME	SITE DEVELOPMENT PLAN	SCALE
DRAWN	BAL	LOTS 94 - 103	1"=30'
CHECKED	PS	COLUMBIA VILLAGE OF RIVER HILL	DRAWING
DATE	4-14-97	SECTION 2, AREA 6, PHASE 2	1 OF 3
		FIFTH (5th) ELECTION DISTRICT	JOB NO
		HOWARD COUNTY, MARYLAND	97-046
		FOR: WILLIAMSBURG BUILDERS	FILE NO
		P.O. Box 1018	97-046 x
		Columbia, Maryland 21044	

TRAP No 1 506T (ST II)

Drainage Area 3.0 Ac  
 Storage Required 3.0 x 3600 = 10,800 cf  
 Storage Provided 10,820 cf  
 Storage Crest El. 370.5  
 Top of Dam 371.5  
 Bottom El. 367.5  
 Cleanout El. 360.0  
 Bottom Dimensions 36 x 76 x 3' Deep  
 2:1 Side Slopes  
 L=12'

**LEGEND**

- CONTOUR INTERVAL
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- MINIMUM CELLAR ELEVATION
- Tree Protection Fence
- EXISTING TREES TO REMAIN
- Silt Fence
- Super Silt Fence
- Earth Dike
- Stabilized Construction Entrance



Reviewed for S.C.D. and meets Technical Requirements.  
 Signature: *Cheryl Summers* Date: 6/19/97  
 U.S. Natural Resources Conservation Service

This Development Plan is Approved For Soil Erosion and Sediment Control By The Howard Soil Conservation District  
 Approved: *John A. ...* Date: 6/19/97

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief Development Engineering Division: *Cheryl Summers* Date: 6/5/97  
 Chief Division of Land Development: *L. Kent Sheehy* Date: 6/9/97  
 Director: *Angela S. ...* Date: 6/10/97

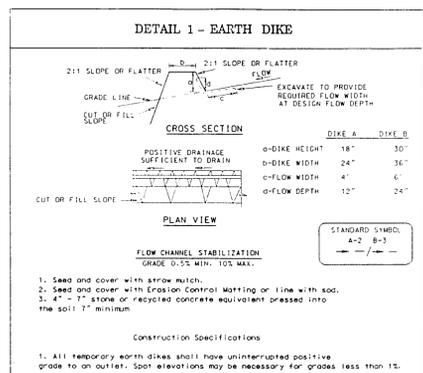
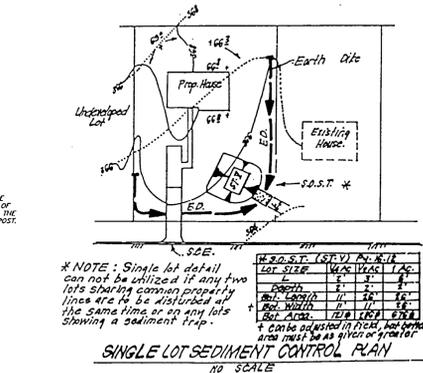
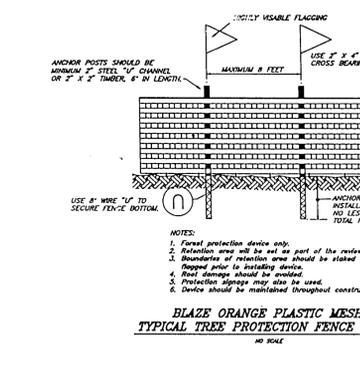
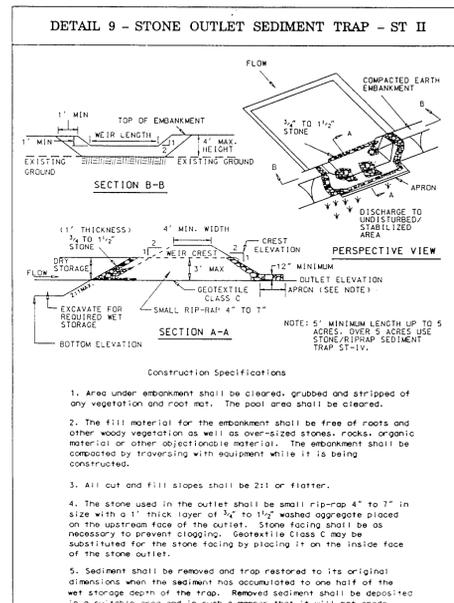
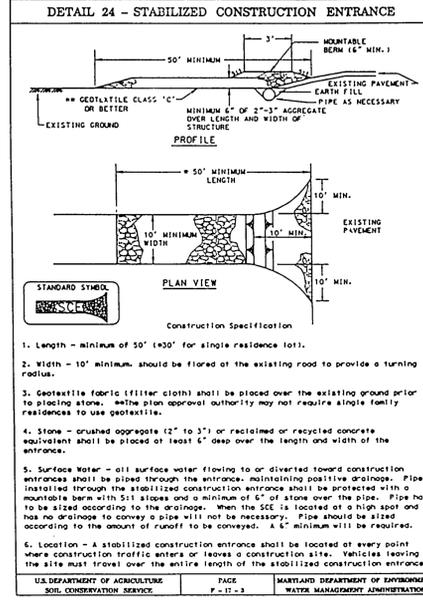
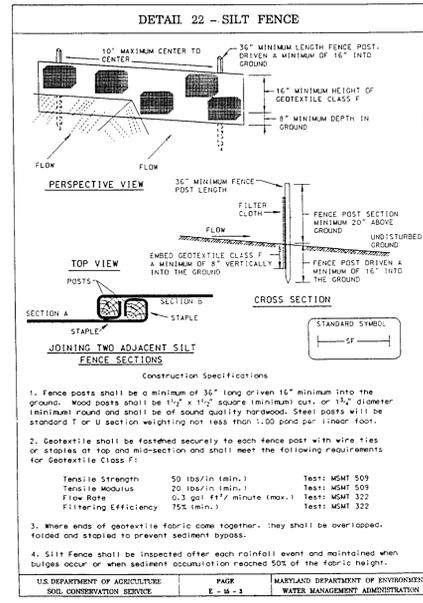
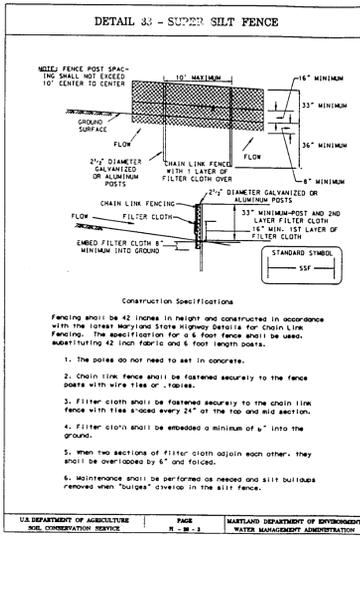
**DEVELOPER'S/BUILDERS CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. 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: *John A. ...* Date: 4-15-97

**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: *G. Nelson Clark* Date: 4-14-97



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

<b>CLARK • FINFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA MD 21045 • (410) 381-7500 FAX: (410) 381-8100 WASH.		
DESIGNED D.B.	<b>SEDIMENT &amp; EROSION CONTROL PLAN</b> LOTS 94 - 103 <b>COLUMBIA</b> <b>VILLAGE OF RIVER HILL</b> SECTION 2, AREA 6, PHASE 2 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: WILLIAMSBURG BUILDERS P.O. Box 1018 Columbia, Maryland 21044	SCALE 1"=30'
DRAWN BAL		DRAWING 2 OF 3
CHECKED D.A.P.		JOB NO 97-046
DATE 4-15-97		FILE NO 97-046 BE



**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 (11-1855).
- 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 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 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 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 1994 MARYLAND STANDARDS AND SPECS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec. 9). 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:	3.03 Ac
Area Disturbed:	3.10 Ac
Area to be seeded or sodded:	3.10 Ac
Area to be vegetatively stabilized:	2.1 Ac
Total Cut:	1.0 Ac
Offsite Wash/Borrow Area Location:	*
- 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.
- 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.
- The total amount of silt fence = 500 LF  
Total amount of Super Silt Fence 425 LF

**CONSTRUCTION SEQUENCE:**

NO. OF DAYS	NO. OF DAYS
1. Obtain grading permit	7
2. Install tree protection fence	7
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 driveway	30
6. Final grade and stabilize in accordance with Specs. and Specs.	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize	7

- Obey construction on Lot 92. After all areas draining to trap have been stabilized and approval of Inspector to remove traps has been obtained, install silt traps as shown for Phase 5. Remove sediment, fill traps (structural fill), grade and construct building. Complete site work and stabilize.

**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 (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 unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

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

**21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL**

**Definition**  
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

**Purpose**  
To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

**Conditions Where Practice Applies**

- This practice is limited to areas having 2:1 or flatter 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 continuing 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 providing 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, 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 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 and 1/2\"/>

**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.**

**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:

- 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.).
- 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 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.

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



**DEVELOPER'S/BUILDER'S CERTIFICATE**

"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."

*G. Nelson Clark*  
NAME DATE 4-15-97

**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*  
NAME DATE 4-14-97

Reviewed for HOWARD S.C.D. and meet Technical Requirements  
*John R. Roberts* 6/2/97  
National Resource Observation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John R. Roberts* 6/2/97  
Approved

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John R. Roberts* 6/5/97  
Chief, Development Engineering Division Date  
*John R. Roberts* 6/9/97  
Chief, Division of Land Development Date  
*John R. Roberts* 6/10/97  
Director Date

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

DESIGNED DB	<b>SEDIMENT &amp; EROSION CONTROL DETAILS</b> LOTS 94 - 103 <b>COLUMBIA VILLAGE OF RIVER HILL</b> SECTION 2, AREA 6, PHASE 2 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: WILLIAMSBURG BUILDERS P.O. Box 1018 Columbia, Maryland 21044	SCALE As Shown
DRAWN BAL		DRAWING 3 OF 3
CHECKED DAB.		JOB NO 97-046
DATE 4-15-97		FILE NO 97-0466E

SDP 97-126