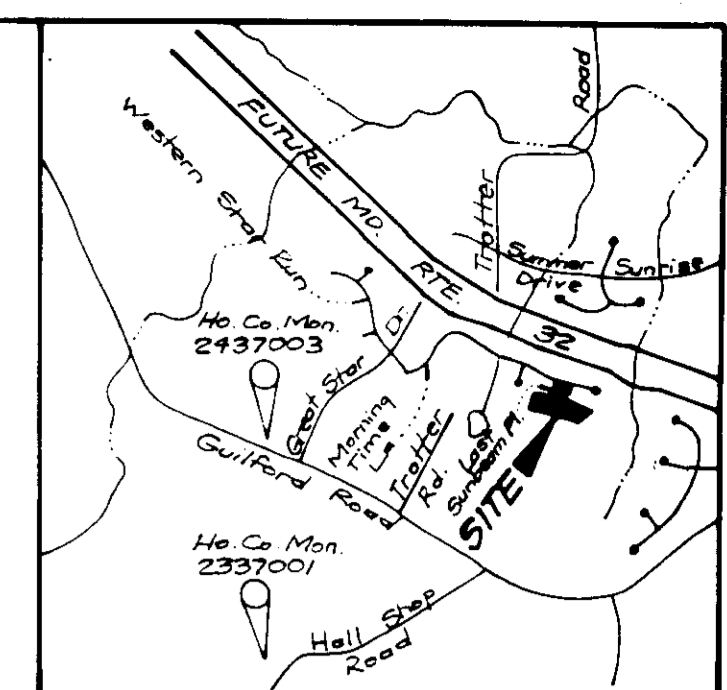


NO	REVISION	Date
1	Revisions to plan per Hb. Co. Comment Letter dated Nov. 17, 1994	11-29-94
2	Revisions to plan per Hb. Co. Comment Letter dated Jan. 4, 1995	1-9-95

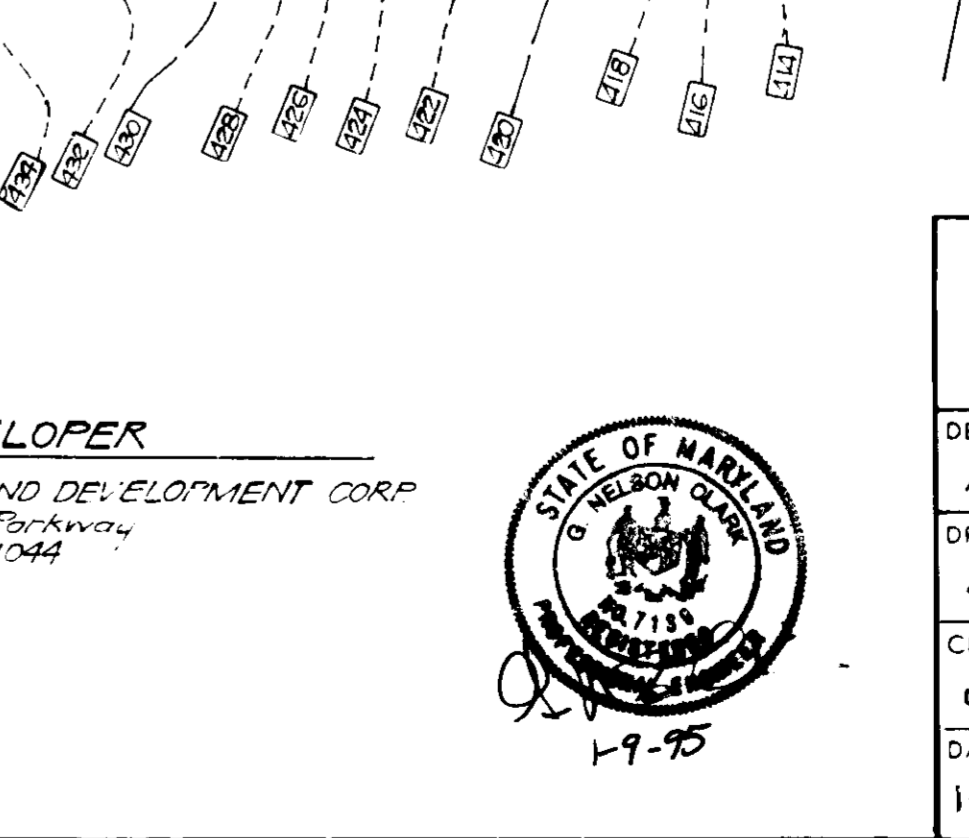
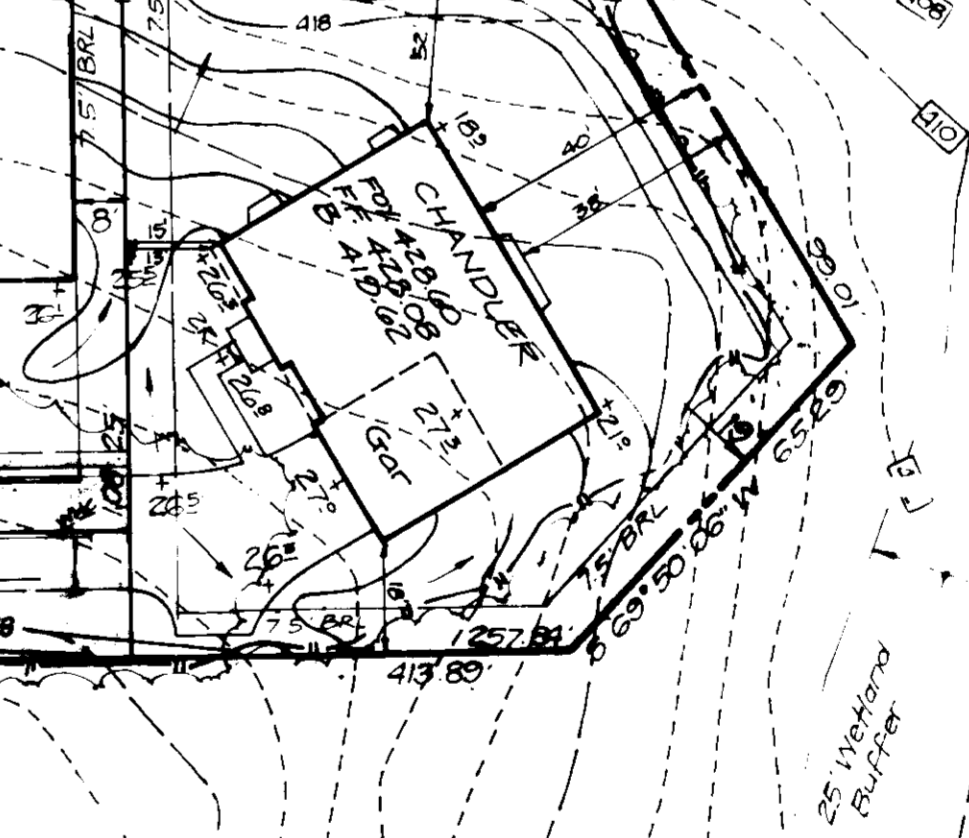
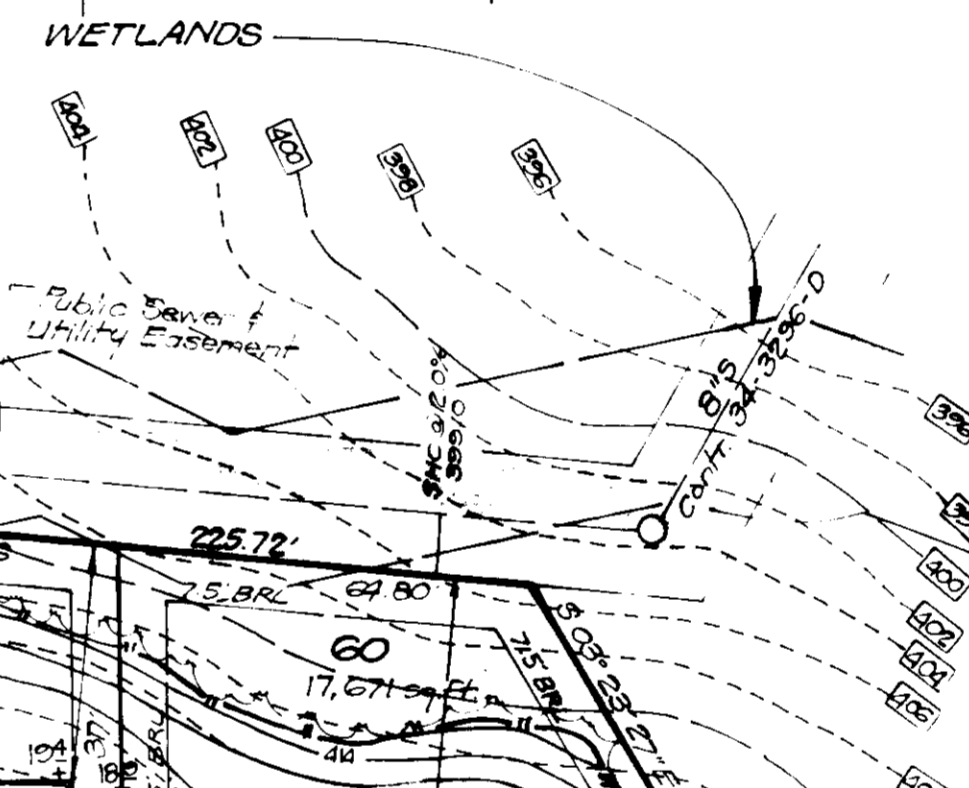
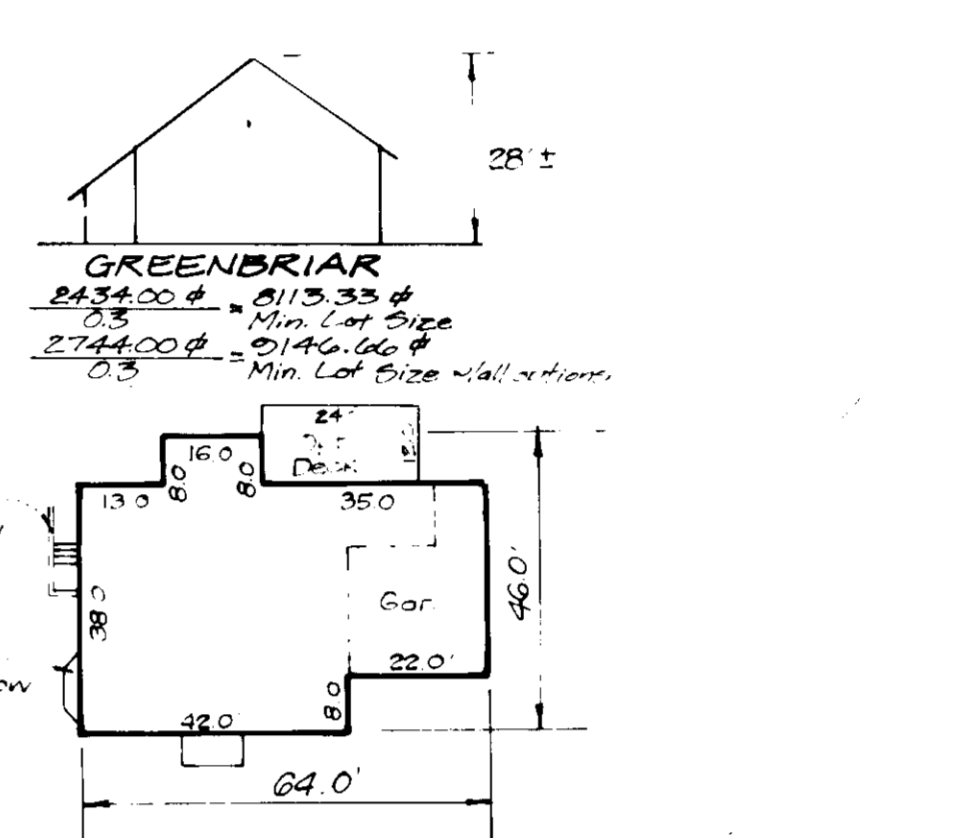
LEGEND

Contour Interval 2 FT
 Existing Contour ---
 Proposed Contour - - -
 Spot Elevation +10.5
 Direction of Drainage
 Walk out Basement
 Trees to be Saved
 Tree Protection Fence



BENCHMARKS

- Howard County Monument No. 2337001 - Elev = 426.035
North - 431672.385 East - 81527.783
- Howard County Monument No. 2347003 - Elev = 472.122
North - 434285.231 East - 820385.313
Concrete Monument, 0.25' Below Surface



- 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-94-61 and/or approved Water and Sewer Plans Contract #C-94-3296-0. Sewer House Connection Elevation is taken to the property line.
- GENERAL NOTES:**
- Subject property is zoned: NT per 10-18-93 Comprehensive Zoning Plan.
 - The total area included in this submission is: 92,082 SF or 2.11Ac.
 - The total number of lots included in this submission are: 8.
 - Improvement to property: Single family detached.
 - SHC elevations shown are of the property line.
 - Department of Planning and Zoning reference file numbers are: S-91-23, F-94-01, F-94-61.
 - Utilities shown as existing are taken from approved water and sewer plan Contract #34-3296-0, approved road construction plans F-94-61 and actual field survey.
 - Any damage to county owned rights-of-way shall be corrected at the developer's expense.
 - Storm water management is provided per: F-94-61.
 - All roadways are public and existing.
 - The existing topography shown was field run by C.F. & S. Inc. on 9-28-94. The existing street grades shown were taken from Road Construction Plans F-94-61 prepared by Kriener, Mueser and Assoc. Inc.
 - The coordinates shown herein are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monument Nos.: 2337001 and 2337003.
 - The contractor shall notify the Department of Public Works/ Division of Construction Inspection a 1-410-313-1800 at least twenty (20) days 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.
 - Under certain conditions, decks and porches may only extend 3 feet into front and rear setbacks areas as defined in Part 209, Part III. Bay windows and chimneys no more than 10 feet in width may project up to 4 feet into building setbacks as stated in Part 209, Part III.
 - For driveway entrance details refer to Hb. Co. Design Manual Volume II Std. Details R-6.03 & R-6.05.
 - The SWM Facilities proposed for this site are CLASS 'A' Hazard Facilities. In the event of failure of the embankment damage will be limited to floodplains and open space. Water quality is provided by oversized rip-rap pads sized to store 1/2 inch from roadways per F-94-61.
 - No clearing, grading or construction is permitted within the wetland or stream buffers except as determined essential by the Department of Planning and Zoning in accordance with Section 16.116 c) of the Subdivision and Land Regulations. Maximum Lot coverage permitted is 30%.

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
57	6312 Last Sunbeam Place
58	6316
59	6321
60	6317
61	6313
62	6309
63	6305
64	6301

SHEET INDEX

Sheet 1 - Site Development Plan
 Sheets 2 and 3 - Sediment and Erosion Control Plan

SUBMISSION NAME		SECTION/AREA	LOTS/PARCELS		
COLUMBIA VILLAGE OF RIVER HILL		2/3 Ph. I	57-64		
PLAT NO.	BLOCK NO.	ZONE	TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
11303	14 & 20	NT	35	5TH	6055
WATER CODE		SEWER CODE			
I-13		6652500 f 6653000			

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

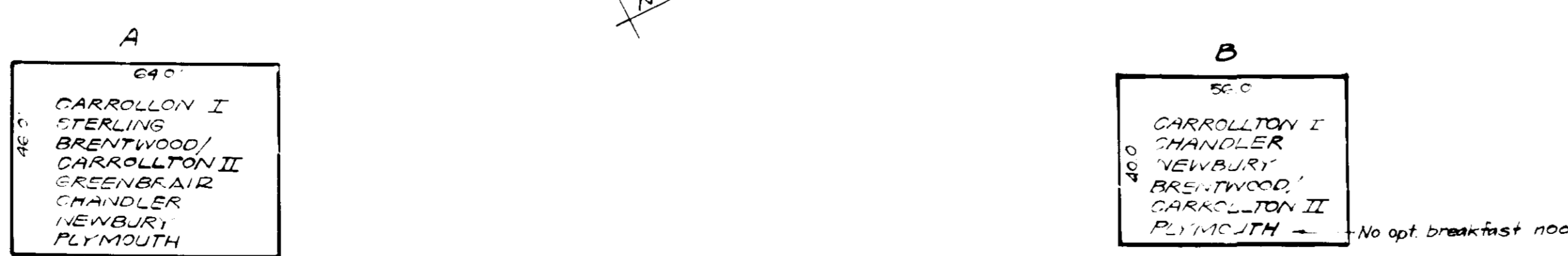
[Signature] 1/24/95
 DIRECTOR DATE

[Signature] 1/23/95
 CHIEF BUREAU OF ENGINEERING DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 1/23/95
 DIRECTOR DATE

[Signature] 1/18/95
 CHIEF BUREAU OF ENGINEERING DATE



OWNER/DEVELOPER

HOWARD RESEARCH AND DEVELOPMENT CORP
 10276 Little Patuxent Parkway
 Columbia, Maryland 21044

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD 21046 • (410) 381-7500 • BALTO • (301) 621-8100 - WASH

DESIGNED RMT
DRAWN BAL
CHECKED JME
DATE 1-3-95

SITE DEVELOPMENT PLAN
 LOTS 57 thru 64
COLUMBIA VILLAGE OF RIVER HILL
 SECTION 2 AREA 3 PHASE I
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 For: DOUGLAS HOMES
 P.O. Box 628
 Elkport City, Md 21043

SCALE 1"=30'
 DRAWING 1 OF 3
 JOB NO. 94-179
 FILE NO. 94-179-X

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. (913-1095)
 - All "setback" and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL.
 - Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days for 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 1983 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and temporary seedings (Sec. 52). 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:	21 Ac.
Area Disturbed:	2.61 Ac.
Area to be roofed or paved:	0.61 Ac.
Area to be vegetatively stabilized:	1.39 Ac.
Total Cut:	2207 cu yd.
Total Fill:	2051 cu yd.
 - 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 DWP 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.
 - All pipes to be blocked at the end of each day (see detail of this sheet).
 - The total amount of silt fence = **575 LF**.
- * It is the responsibility of the contractor to identify the spoil/borrow site 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.	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 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 house on Lot 60; See single lot sediment control detail this sheet.

PERMANENT SEEDING NOTES

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

SEEDING 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./1000 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 dolomitic limestone (92 lbs./1000 sq ft.) and 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 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 unrattled 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

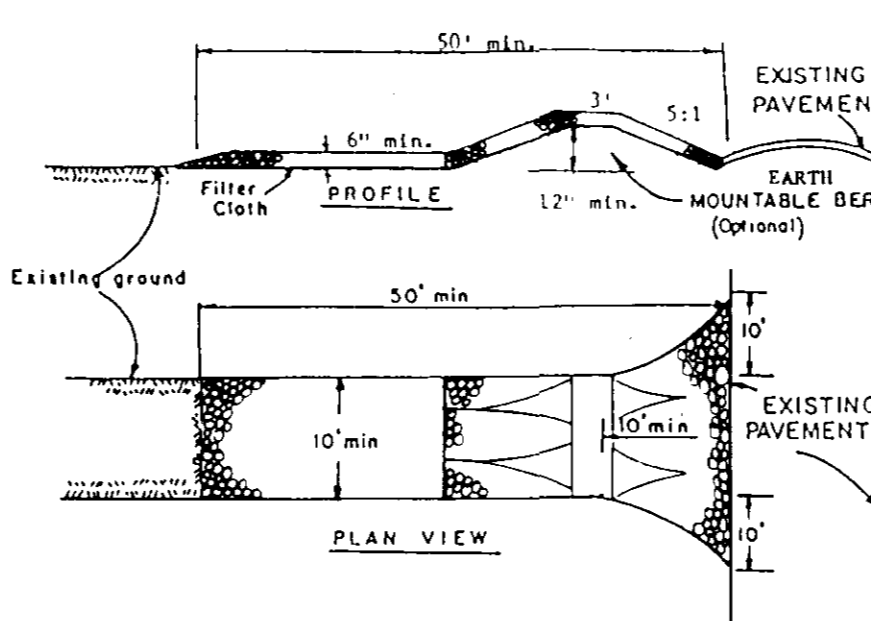
SEEDING PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

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 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 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use seed.

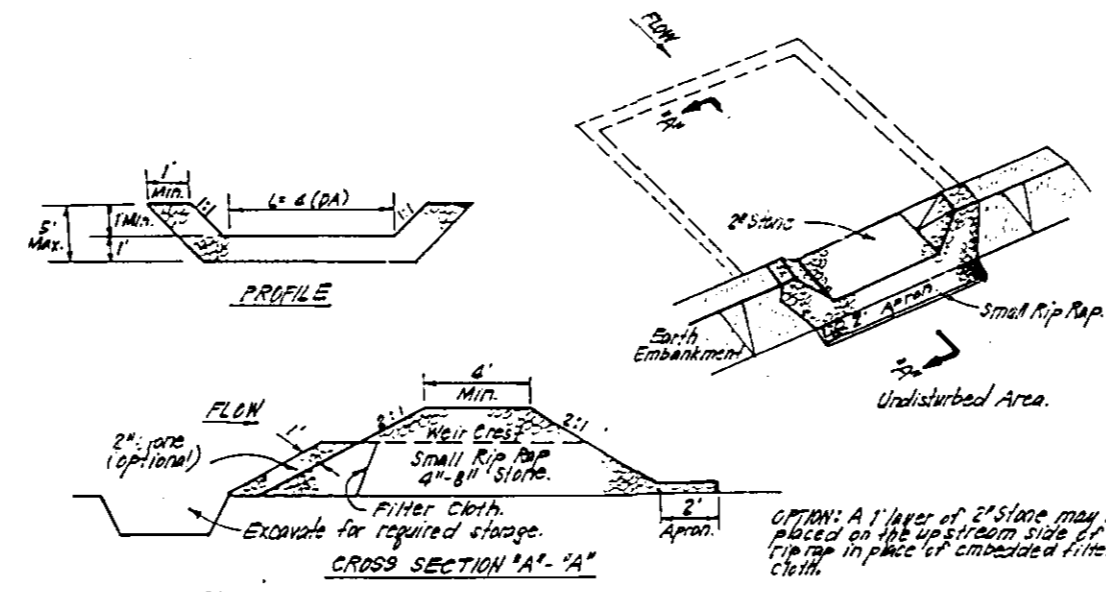
MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq ft) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher,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

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



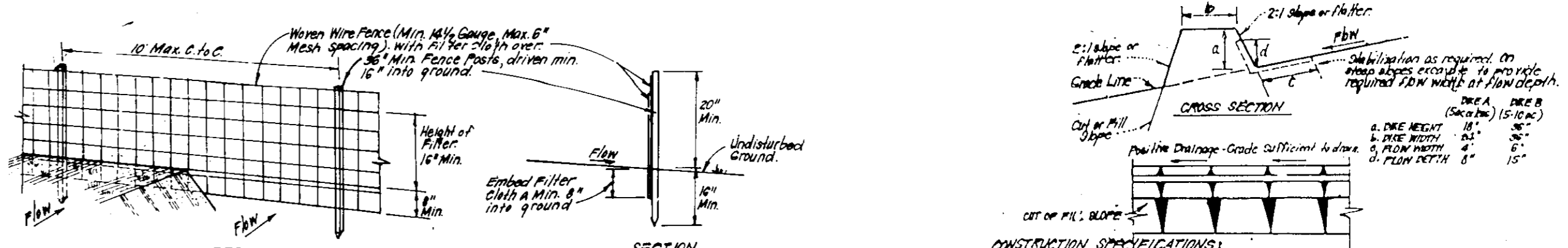
- CONSTRUCTION SPECIFICATIONS:**
- Stone Size - Use 3" stone, or recycled or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - Filter Cloth - Milbrite placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable beam with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 - Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)



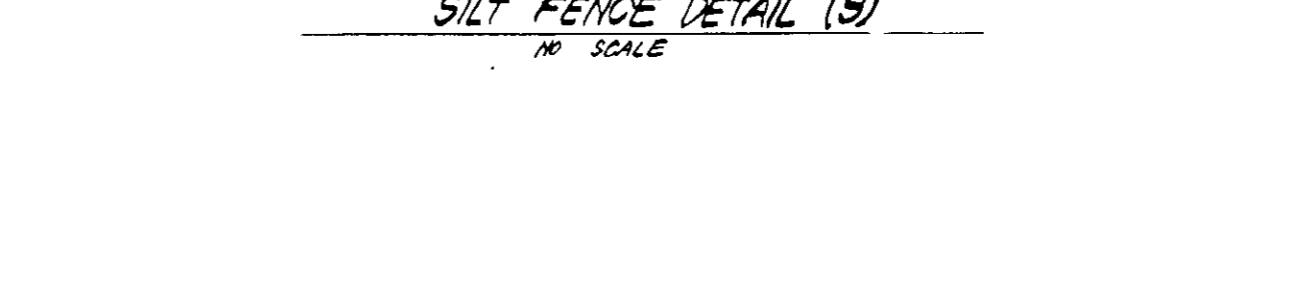
- CONSTRUCTION SPECIFICATIONS:**
- Any work embankment shall be cleared, grubbed and stripped of any vegetation and rock and the top soil shall be replaced.
 - The fill material for the embankment shall be free of rocks and other heavy vegetation as well as any steel elements, rods, pipes, conduits or other obstructions. The embankment shall be compacted by tamping with vibrators or other approved means.
 - All cut and fill slopes shall be 3:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 6" with a thickness of 2" aggregate placed on the up-slope side in the small rip-rap to stabilize the filter cloth on the slope.
 - Sediment shall be removed and rips restored to its original dimensions when the sediment has accumulated to its design depth of the trap.
 - The structure shall be inspected at the each rain and repairs made as needed.
 - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.)



- CONSTRUCTION SPECIFICATIONS:**
- When wire fences to be fastened securely to fence posts with wire ties or staples.
 - Filter Cloth to be fastened securely to wooden wire fence with 1/2" spaced every 36" at top and mid section.
 - When 2 sections of filter cloth section each other they shall be overlapped by 6" and stapled.
 - Maintenance shall be performed as needed and material removed when it begins to develop in silt fence.

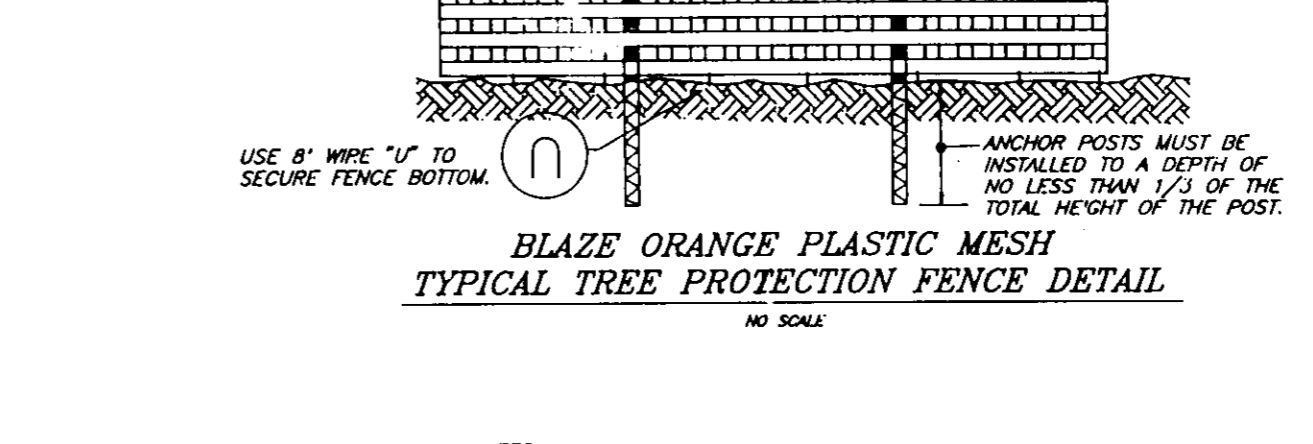
SILT FENCE DETAIL (S)



- CONSTRUCTION SPECIFICATIONS:**
- Anchor posts should be minimum 2" steel 1/2" channel or 2" x 2" timber, 6" in length.
 - Use 8" wire 1/2" to secure fence bottom.
 - Anchor posts must be installed to a depth of no less than 1/3 of the total height of the post.

BLAZE ORANGE PLASTIC MESH TYPICAL TREE PROTECTION FENCE DETAIL

NO SCALE



SINGLE LOT SEDIMENT CONTROL PLAN

NO SCALE

CONSTRUCTION SPECIFICATIONS:

- Structures shall be constructed by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- The mesh may be woven and side slopes may be 3:1 or flatter if excavated, to facilitate clearing by construction equipment.
- Field locations should be adjusted as needed to utilize a stabilized slope with a minimum of 3:1.
- Each dike shall have an outlet that functions with a minimum of 6" of water. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where it will have an outlet that functions with a minimum of 6" of water. Runoff shall be conveyed to the dike channel or the drainage area above the dike as not otherwise specified.
- Stabilization shall be: (a) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (b) Flow channel as per chart below.

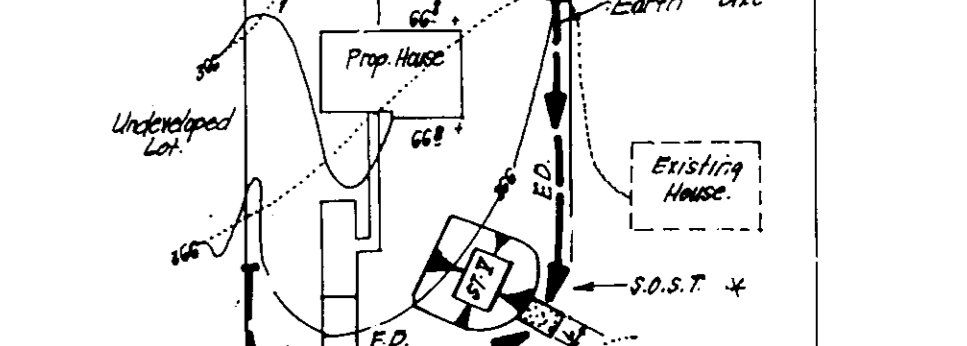
EARTH DIKE DETAIL (E.D.)

NO SCALE



STABILIZED CONSTRUCTION ENTRANCE (SCE)

NO SCALE



STONE OUTLET SEDIMENT TRAP (S.O.S.T.)

NO SCALE

NO.	DESCRIPTION	DATE	BY
1	DESIGNED	1/24/95	CLARK
2	DRAWN	1/24/95	BAL
3	CHECKED	1/24/95	ymc
4	DATE	1-9-95	

OWNER / DEVELOPER

HOWARD RESEARCH AND DEVELOPMENT CORP.
10275 Little Patuxent Parkway
Columbia, Maryland 21044

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] 1/24/95
DIRECTOR DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS

[Signature] 1/13/95
DIRECTOR DATE

Reviewed for HOWARD S.C.D. and meets Technical Requirements

[Signature] 1/19/95
Signature Date
US Soil Conservation Service

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

[Signature] 1/19/95
Approved

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."

[Signature] 10-11-94

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.

[Signature] 6 Nelson Clark Date



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

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7550 • FAX (301) 621-8100 • WASH

DESIGNED	ZAL	SCALE	AS SHOWN
DRAWN	BAL	DRAWING	3 OF 3
CHECKED	ymc	JOB NO.	94-179
DATE	1-9-95	FILE NO.	94-179-9E

SEDIMENT & EROSION CONTROL PLAN
LOTS 57 thru 64
COLUMBIA VILLAGE OF RIVER HILL
SECTION 2 AREA 3 PHASE I
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

For: DOUGLAS HOMES
P.O. Box 628
Ellicott City, Md 21043