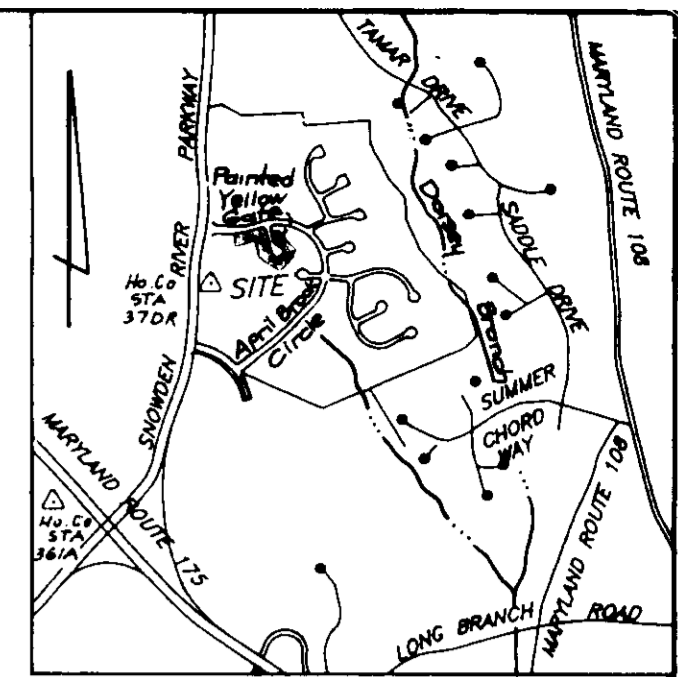
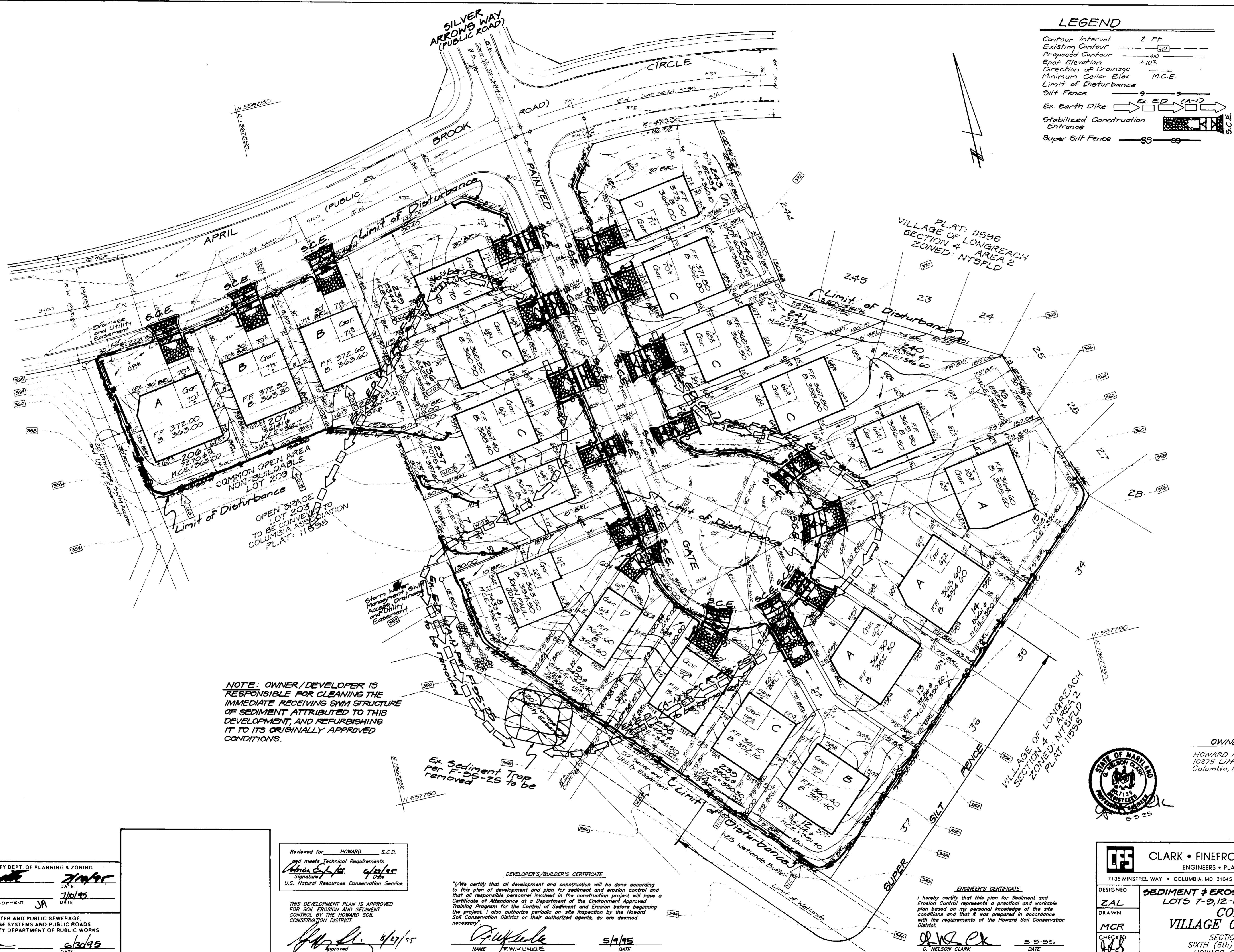


LEGEND

- Contour Interval 2 FT
- Existing Contour
- Proposed Contour
- Spot Elevation +10%
- Direction of Drainage
- Minimum Cellar Elev. M.C.E.
- Limit of Disturbance
- Silt Fence
- Ex. Earth Dike
- Stabilized Construction Entrance
- Super Silt Fence



VICINITY MAP
SCALE: 1"=2000'



NOTE: OWNER/DEVELOPER IS RESPONSIBLE FOR CLEANING THE IMMEDIATE RECEIVING SWM STRUCTURE OF SEDIMENT ATTRIBUTED TO THIS DEVELOPMENT, AND REFURBISHING IT TO ITS ORIGINALLY APPROVED CONDITIONS.

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



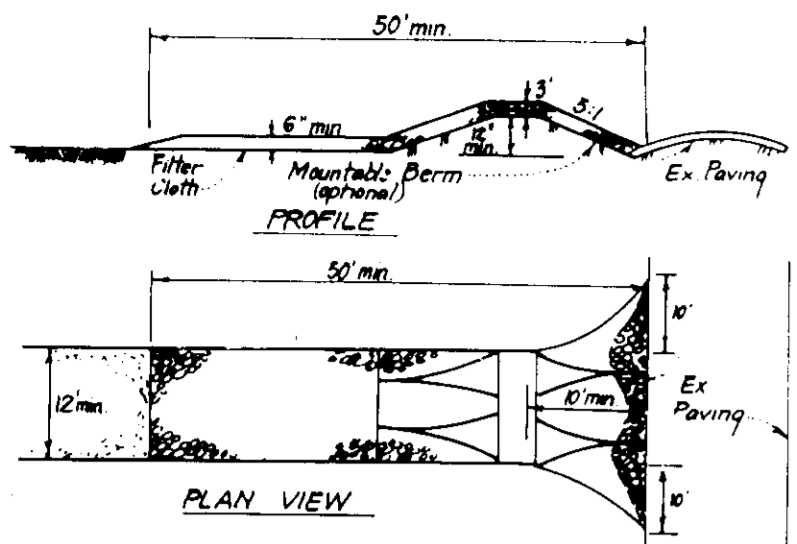
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
[Signature] 7/10/95
DIRECTOR DATE
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 6/30/95
DIRECTOR DATE
[Signature] 6/30/95
CHIEF BUREAU OF ENGINEERING M.K. DATE

Reviewed for HOWARD S.C.D. and meets Technical Requirements
[Signature] 6/21/95
Signature Date
U.S. 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.
[Signature] 5/1/95
NAME F.W. KUNKLE DATE

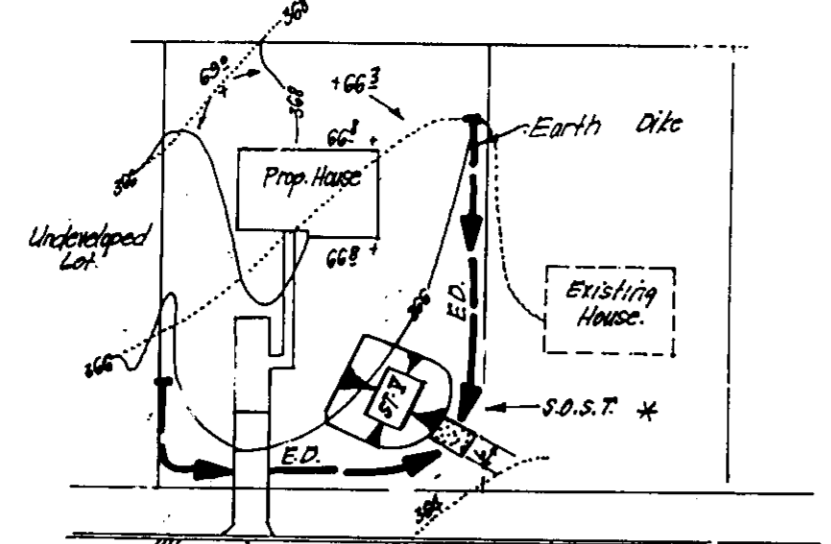
ENGINEER'S CERTIFICATE
I hereby certify that this plan for Sediment and Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
[Signature] 5-3-95
C. NELSON CLARK DATE

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED	ZAL	SCALE 1" = 30'
DRAWN	MCR	DRAWING 2 OF 3
CHECKED	<i>[Signature]</i>	JOB NO. 95-006
DATE	5/1/95	FILE NO. 95-006B
SEDIMENT & EROSION CONTROL PLAN LOTS 7-9, 12-16, 206-208, 235-243 COLUMBIA VILLAGE OF LONGREACH SECTION 4 AREA 2 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: PATRIOT HOMES, INC. P.O. Box 1018 Columbia, MD 21044		



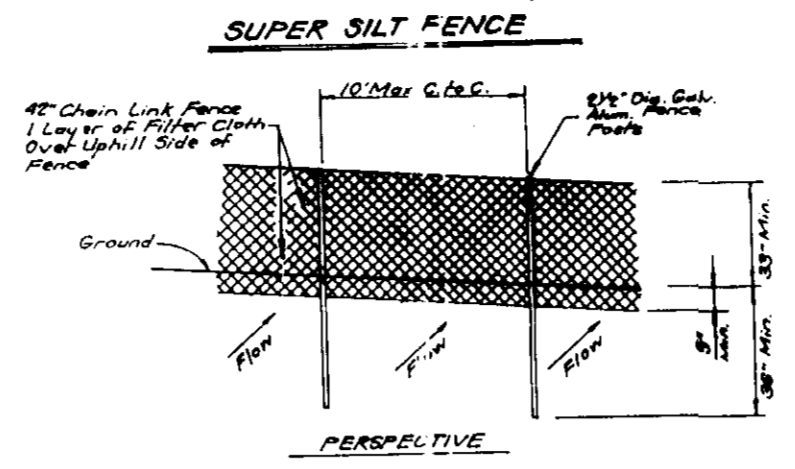
- CONSTRUCTION SPECIFICATIONS:**
- Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 50' length (except on a single residence lot where a 30' maximum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) feet minimum, but not less than the full width of points where ingress or egress occurs.
 - Filter Cloth - Will be placed over the entire area prior to paving 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 berm 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, be conditionally demand and repair and/or cleanup of any impurities used to trap sediment. All sediment applied, trapped or tracked onto public rights-of-way must be removed immediately.
 - Warning - 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)
NO SCALE



* NOTE: Single lot detail can not be utilized if any two lots sharing common property lines are to be disturbed at the same time or on any lots showing a sediment trap.

SINGLE LOT SEDIMENT CONTROL PLAN
NO SCALE



Fencing

Fencing shall be 42" high chain link fence constructed in accordance with the latest Maryland State Highway Administration Standard Details 690.01 and 690.02. The specifications for a 3'-6" fence shall be used, substitute 42 inch fabric and posts. Posts shall be placed without concrete embasment.

- Chain link fence to be fastened securely to fence posts with ties or staples.
- Filter cloth to be fastened securely to chain link fence with ties spaced every 24 inches at top and mid section.
- When two sections of filter cloth adjoin each other they shall be overlapped by 6 inches and folded.
- Maintenance shall be performed as needed and material removed when bulges develop in the silt fence.

SEDIMENT AND EROSION CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permit prior to the start of any construction. (313-1855)
- All vegetation 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 redistribution, 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 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 1983 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51) and (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow site 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:	3.444
Area to be roofed or paved:	3.614
Area to be vegetatively stabilized:	1.004
Total Cut:	4.608
Total Fill:	0.830
Offsite Waste/Borrow 'Yes 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.

The total amount of silt fence = 2030 LF
Super Silt Fence = 300 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. OF DAYS
1. Obtain grading permit	7
2. Install sediment and erosion control devices and stabilize.	14
3. Excavate for foundations, rough grade and temporarily stabilize.	30
4. Construct structures, sidewalks and driveways.	60
5. Final grade and stabilize in accordance with Stds. and Specs.	14
6. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

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/1000 sq ft.) before seeding, 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 ureiform fertilizer (9 lbs./1000 sq ft.)
 - 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 6000 lbs per acre (14 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 50 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.

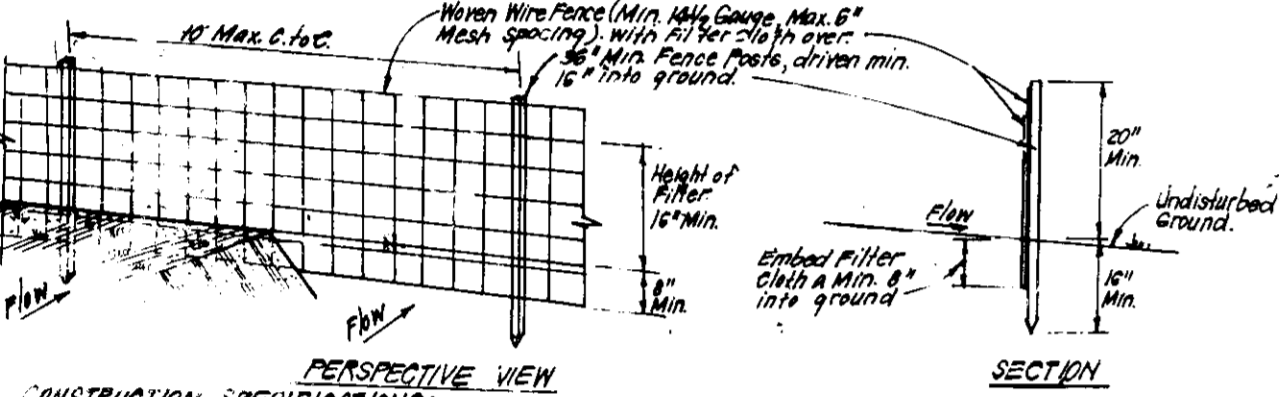
MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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 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 sod.
- 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:**
- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
 - When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and material removed when bulges develop in silt fence.
 - Silt Fence to be installed at 3' to 5' intervals.

SILT FENCE DETAIL (S)
NO SCALE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
DIRECTOR: [Signature] DATE: 7/10/95
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR: [Signature] DATE: 6/30/95
CHIEF BUREAU OF ENGINEERING M.V. [Signature] DATE: 6/30/95

Reviewed for HOWARD S.C.D. and meets Technical Requirements
Signature: [Signature] DATE: 6/21/95
Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Signature: [Signature] DATE: 6/21/95

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: [Signature] NAME: F.W. KUNKLE DATE: 5/9/95

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: [Signature] NAME: G. NELSON CLARK DATE: 5-9-95



OWNER/DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT CORP.
10275 LITTLE PATENT PARKWAY
Columbia, Maryland 21044

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED	ZAL	SCALE AS NOTED
DRAWN	MCR	DRAWING 30F3
CHECKED	[Signature]	JOB NO. 95-006
DATE	5/9/95	FILE NO. 95-006
SEDIMENT & EROSION CONTROL DETAILS LOTS 7-9, 12-16, 206-208, 235-243 COLUMBIA VILLAGE OF LONGREACH SECTION 4 AREA 2 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: PATRIOT HOMES, INC. P.O. Box 1018 Columbia, MD 21044		