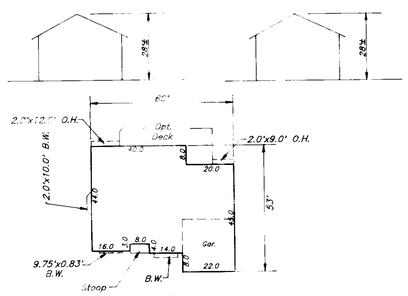
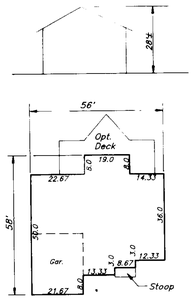


CALIFORNIA

2786.09 SF / 0.1 = 8286.97 SF Min. Lot Size



BERKELEY II

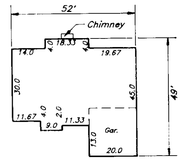
2612.05 SF / 0.3 = 8706.83 SF Min. Lot Size

A

Berkeley
Berkeley 2
California
Catalina
Granada III
New Malibu
Santa Cruz
Ventura
Vista

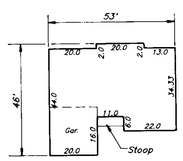
B

Berkeley
Catalina
Granada III
New Malibu
Santa Cruz
Ventura
Vista



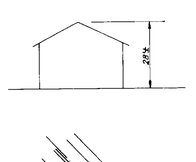
CATALINA

1981.52 SF / 0.3 = 6605.07 SF Min. Lot Size



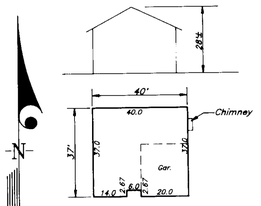
VENTURA

2037.48 SF / 0.3 = 6791.63 SF Min. Lot Size



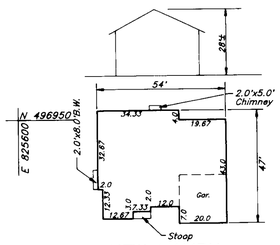
BERKELEY

2207.40 SF / 0.3 = 7358.0 SF Min. Lot Size



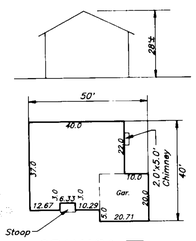
VISTA

1463.98 SF / 0.3 = 4879.93 SF Min. Lot Size



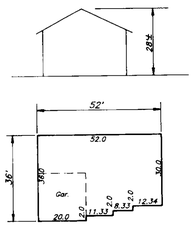
NEW MALIBU

2332.66 SF / 0.3 = 7775.53 SF Min. Lot Size



GRANADA III

1749.88 SF / 0.3 = 5832.93 SF Min. Lot Size



SANTA CRUZ

1742.04 SF / 0.3 = 5806.8 SF Min. Lot Size

SCHEDULE A PERIMETER LANDSCAPE EDGE	
Category	Adjacent to Roadways
Landscape Type	B
Frontage/Perimeter	1176
Number of Plants Required Shade Trees Evergreen Trees Shrubs	2 (1/50) 3 (1/40)
Number of Plants Provided Shade Trees Evergreen trees	* *

COMMENTS: *PLANTING WILL BE PROVIDED PER THE NEW TOWN ALTERNATIVE COMPLIANCE METHOD (SEE GENERAL NOTE NO. 19)

LEGEND

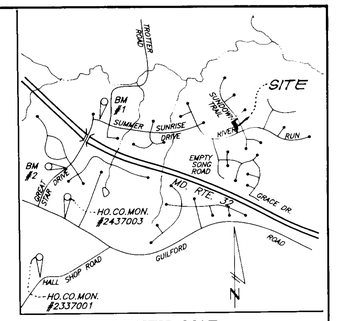
CONTOUR INTERVAL 2 FT.
EXISTING CONTOUR
PROPOSED CONTOUR
DIRECTION OF DRAINAGE
WALK-OUT BASEMENT
EXISTING SEWER MAIN
EXISTING WATER MAIN
EXISTING STORM DRAIN
EXISTING TREES TO REMAIN

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
68	6455 RIVER RUN
69	6401 SUNDOWN TRAIL
70	6405 SUNDOWN TRAIL
71	6409 SUNDOWN TRAIL
72	6413 SUNDOWN TRAIL

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



VICINITY MAP

Scale : 1"=2000'

GENERAL NOTES:

1. Subject property is zoned: NT/SFMD per 10-18-93 Comprehensive Zoning Plan.
2. The total area included in this submission is : 1.812 Ac.
3. The total number of lots included in this submission is: 5
4. Improvement to property : Single Family Detached
5. The maximum lot coverage permitted is: 30% - including decks.
6. Department of Planning and Zoning reference file numbers : S-91-03, P-84-01, F-86-98, F-86-138
7. Utilities shown as existing are taken from approved Water and Sewer plans Contract # 34-3561-D , approved Road Construction plans F-86-138 , 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-86-138 prepared by Riemer, Mwenge & Associates, Inc., in August 1986.
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 Control stations: Nos 2337001 & 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 & R-6.05
15. In accordance with FDP-Phase 20B 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.
16. Stormwater Management is provided per: F-86-138.
17. Stormwater Management Quantity Control is provided by the Maryland Route 32 Stream Crossings. Water Quality is provided by Publicly Owned Bioretention Areas.
18. SHC elevations shown are located at the property line.

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-86-138 and/or approved Water and Sewer Plans Contract # 34-3561-D.

SHEET INDEX

GENERAL NOTES CONTINUED

19. 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 road & landscape trees in the amount of $500 is part of the builders grading permit application.

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 — Date 6/20/97
Chief, Division of Land Development — Date 6/24/97
Director — Date 6/26/97

SUBDIVISION NAME: VILLAGE OF RIVER HILL			SECTION/AREA: TWO/SIX	LOTS/PARCELS: 68 THRU 72	
PLAT NO.: 12415-12419	BLOCK NO.: 15 & 21	ZONE: NT SFMD	TAX MAP NO.: 37	ELECTION DIST.: 6TH	CENSUS TRACT: 6055
WATER CODE: I-12			SEWER CODE: 6652500		

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

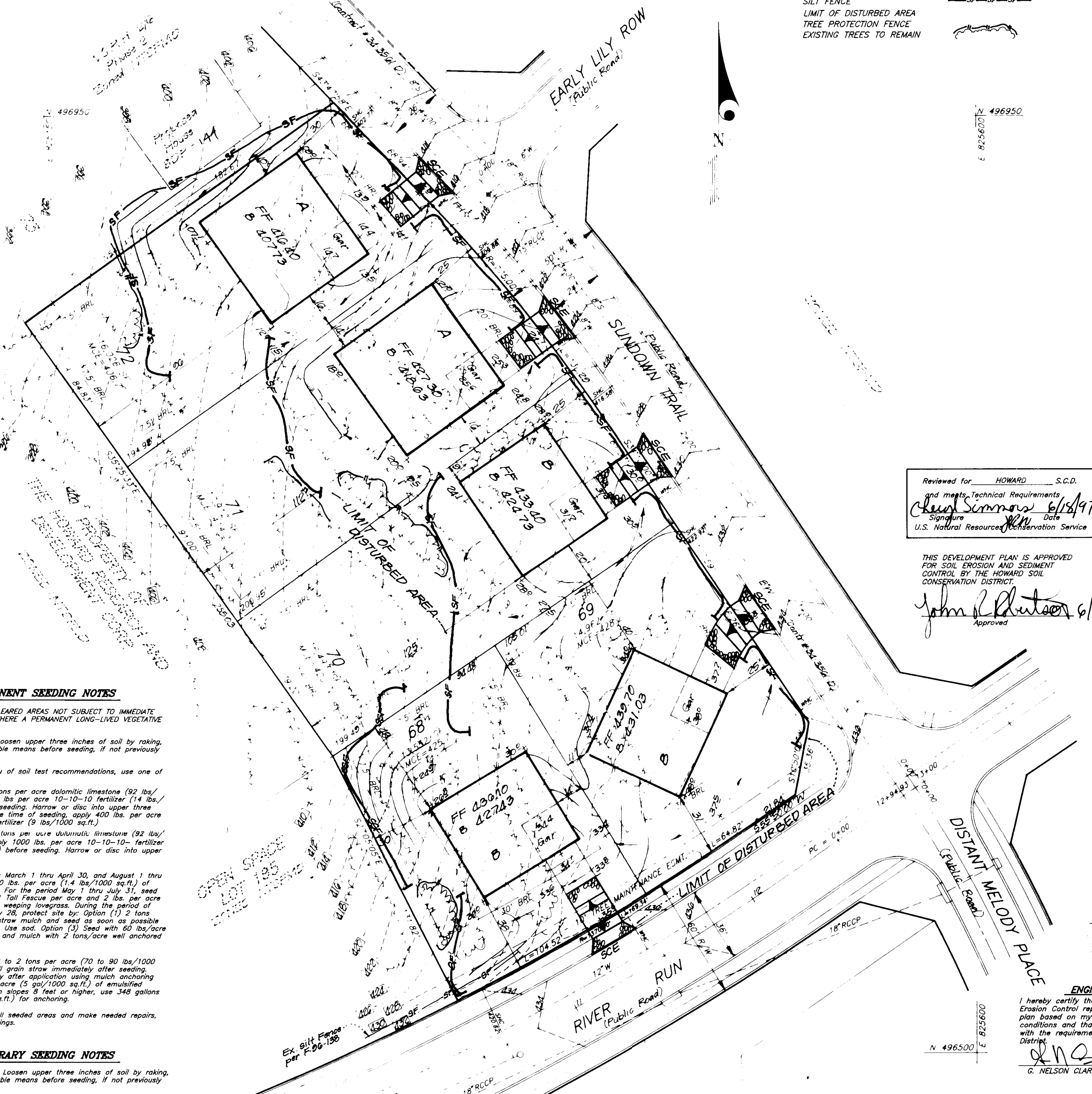
DESIGNED: DM	SITE DEVELOPMENT PLAN 68-72	SCALE: 1"=30'
DRAWN: PS	**COLUMBIA VILLAGE OF RIVER HILL**	DRAWING: 1 of 2
CHECKED: DM	SECTION 2 AREA 6 PHASE 2 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO.: 97-054
DATE: 4-30-97	FOR: ALLAN HOMES 10280 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046	FILE NO.: 97-054X

STATE OF MARYLAND — G. NELSON CLARK — No. 7139 — REGISTERED PROFESSIONAL ENGINEER

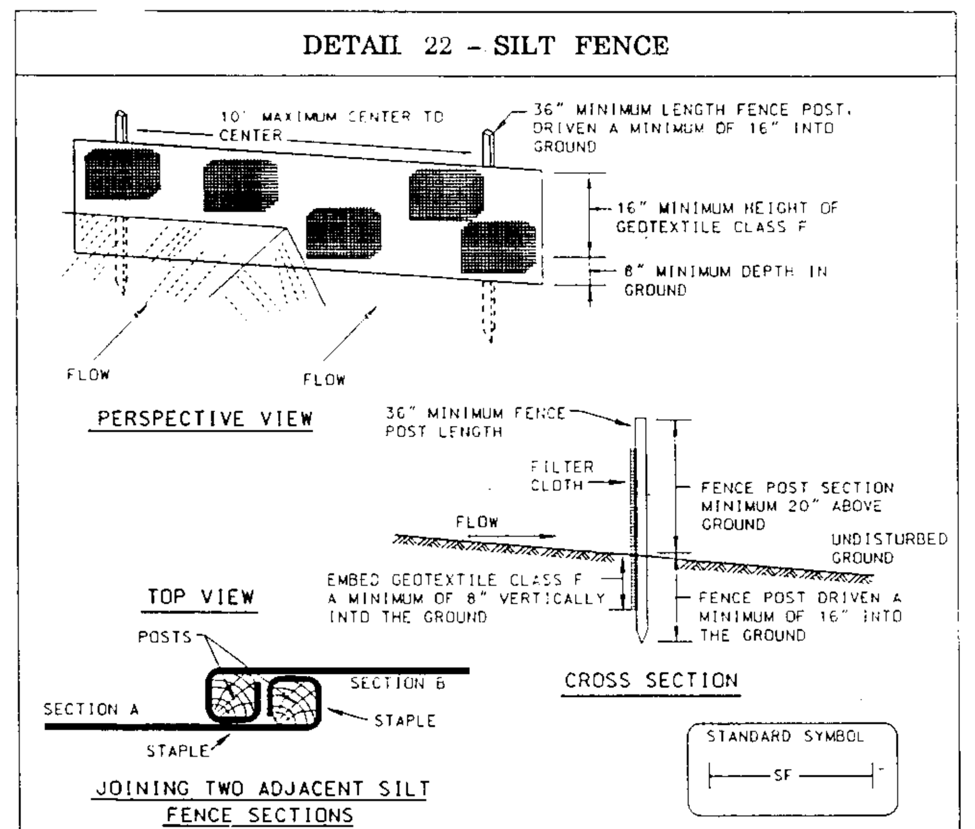
SDP 97-135

LEGEND

- CONTOUR INTERVAL — 2 FT.
- 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
- LIMIT OF DISTURBED AREA
- TREE PROTECTION FENCE
- EXISTING TREES TO REMAIN



DETAIL 22 - SILT FENCE



Construction Specifications

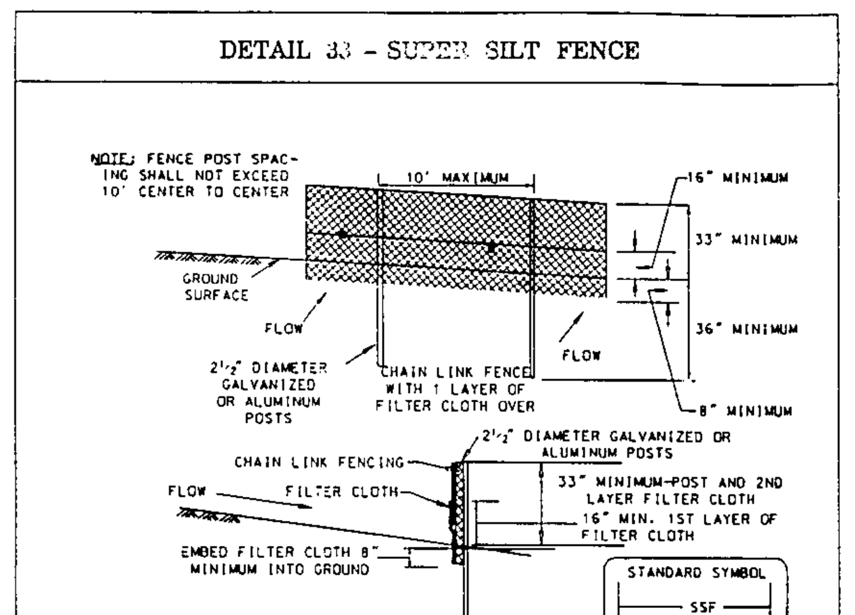
1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E-15-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE

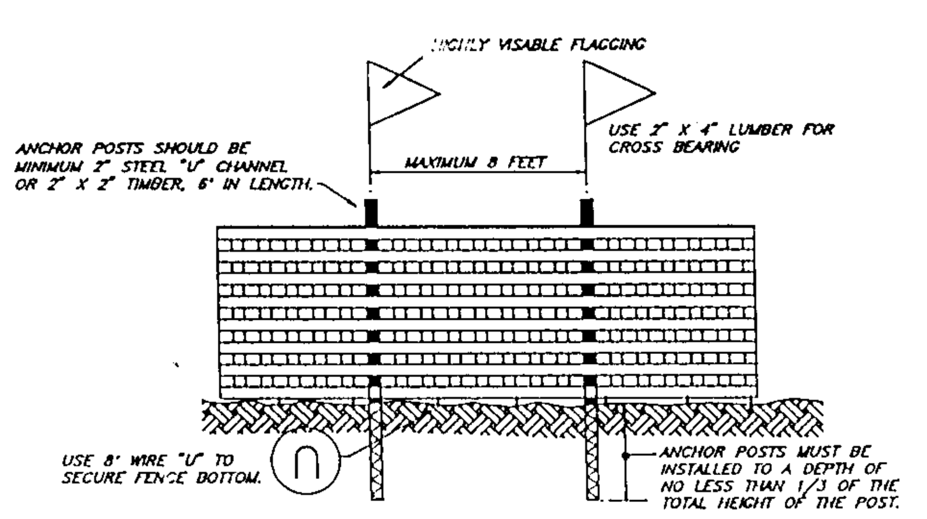


Construction Specifications

Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.

1. The poles do not need to set in concrete.
2. Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence.

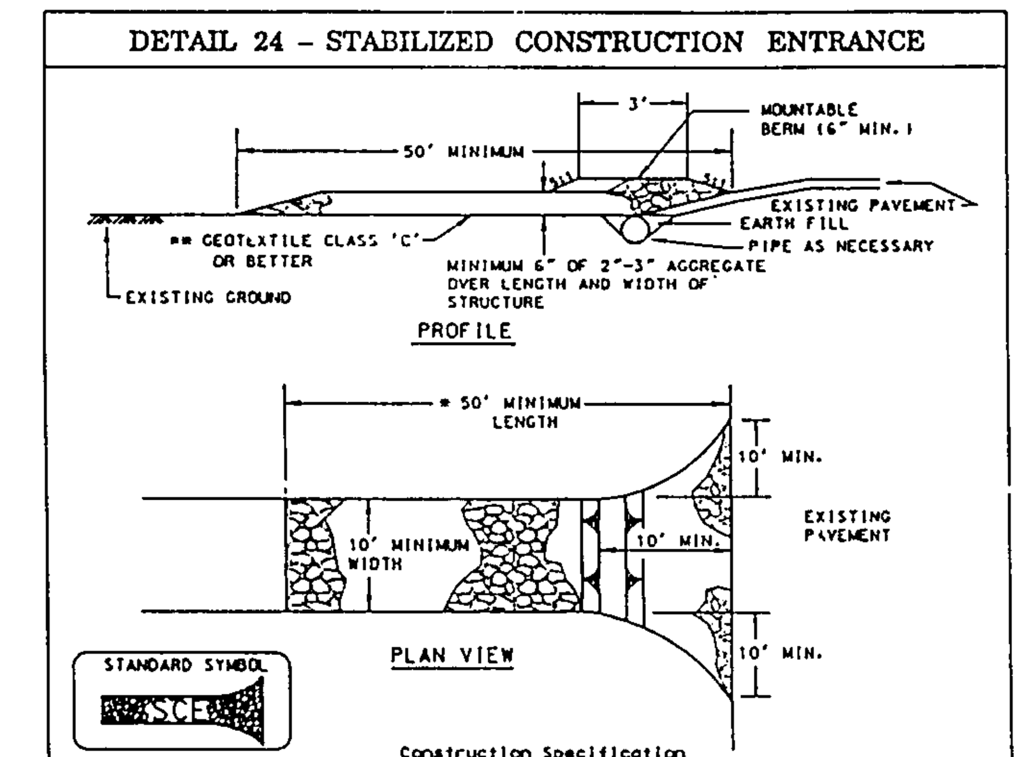
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



NOTES:
1. Forest protection device only.
2. Retention area will be set as part of the review process.
3. Boundaries of retention area should be staked and flagged prior to installing device.
4. Root damage should be avoided.
5. Protection signage may also be used.
6. Device should be maintained throughout construction.

BLAZE ORANGE PLASTIC MESH
TYPICAL TREE PROTECTION FENCE DETAIL
NO SCALE

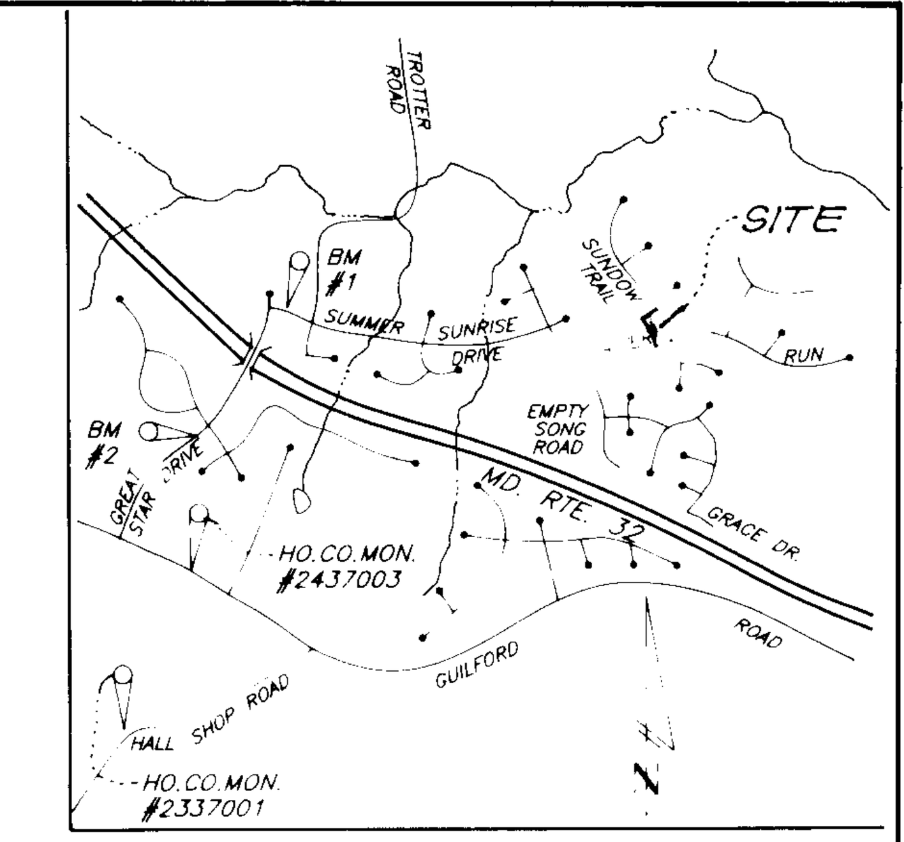
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



VICINITY MAP

Scale 1"=2000'

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 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 (.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.

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.

Reviewed for HOWARD S.C.D. and meets Technical Requirements
Signature 6/18/97 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 6/18/97

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:	1.812 Ac.
Area Disturbed:	1.39 Ac.
Area to be roofed or paved:	0.33 Ac.
Area to be vegetatively stabilized:	1.06 Ac.
Total Cut:	1790 c.y.
Total Fill:	1819 c.y.
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 = 823 LF
13. The total amount of super silt fence = 120 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.	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

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 — DATE

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.

OWNER / DEVELOPER

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

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 — 4-30-97 DATE

STATE OF MARYLAND — G. NELSON CLARK — No. 7130 — REGISTERED PROFESSIONAL ENGINEER

APPROVED DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division	6/20/97 Date
Chief, Division of Land Development and Research	6/24/97 Date
Director	6/26/97 Date

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

DESIGNED KIWM	SEDIMENT AND EROSION CONTROL PLAN 68–72	SCALE 1" = 30'
DRAWN PS	**COLUMBIA VILLAGE OF RIVER HILL**	DRAWING 2 of 2
CHECKED KMc	SECTION 2 AREA 6 PHASE 2 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 97-054
DATE 4-30-97	FOR: ALLAN HOMES 10260 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046	FILE NO. 97-054SE

SDP 97-135