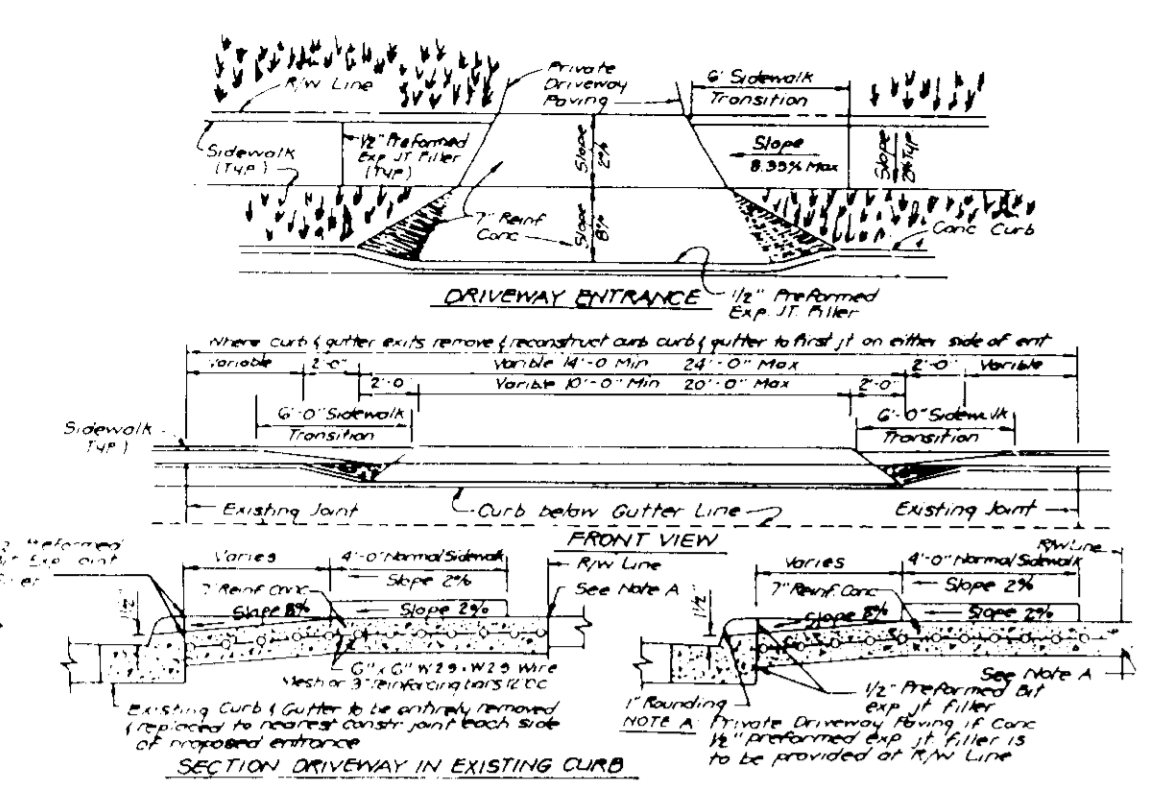
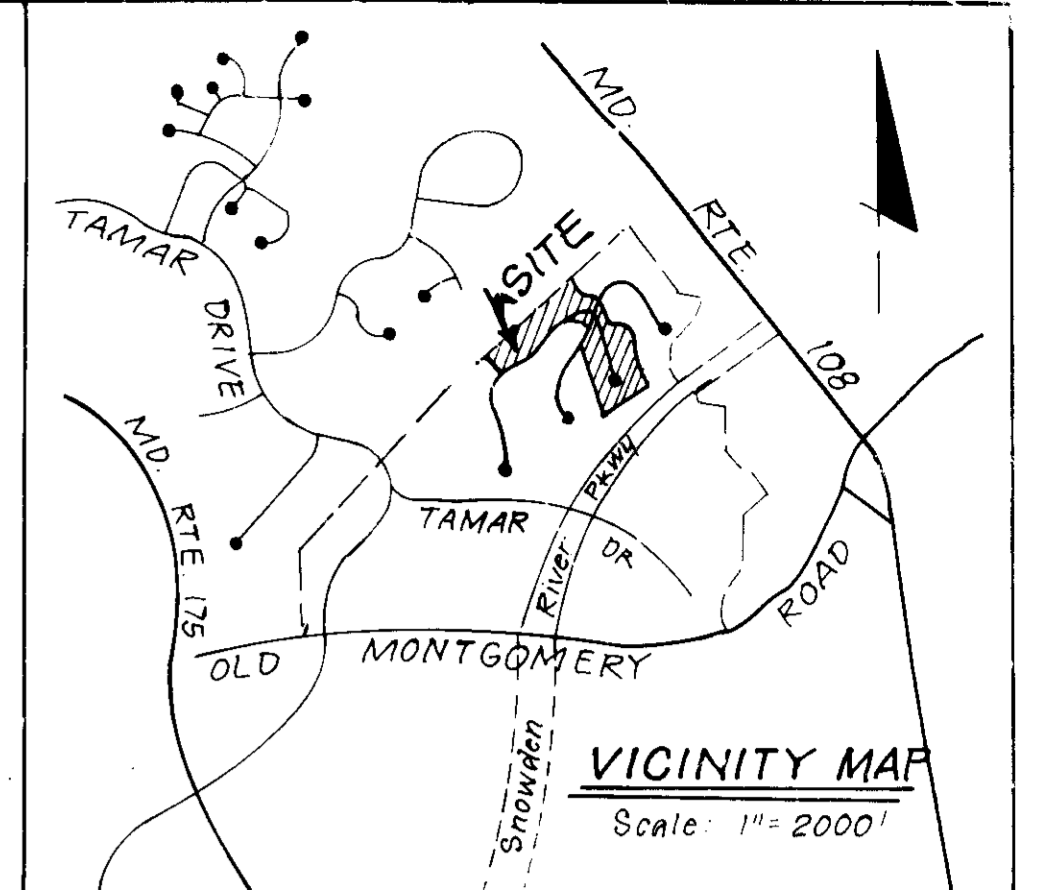


NO	REVISIONS	Date
1	Rev hse and grade lot 3, Add hse typical	3-4-82
2	Rev hse of qrd lot 3	7-22-82
3	Rev hse of qrd lot 5, Add hse typical	9-22-82



DRIVEWAY ABUTTING CLOSED SECTION WITH STR 7" COMB CURB & GUTTER & SIDEWALK SET BACK FROM CURB



LEGEND

- Contour Interval 2 FT
- Existing Contour 410
- Proposed Contour 410
- Spot Elevation +10B
- Director of Drainage Walk out Basement
- Trees to be Saved
- Existing Trees

GENERAL NOTES

- Subject property zoned N.T.B.F.M.D per Comprehensive Zoning Plan dated 8-2-85
- The coordinates shown hereon are based on the Maryland State Grid System and derived from the following Howard County Control Stations 2642001, 2643002, 2643003, 2643004, 2643005 & 2643006.
- All roads are public and existing.
- Any damage to county owned rights-of-way to be corrected at the Developers expense.
- Total area included: 6.67 Ac.
- Total number of lots 26
- The contractor or developer shall contact the Construction Inspection Survey Division, 24 hours in advance of commencement of work at 702-2830.
- Reference numbers: S-87-46, P87-83, F88-211

SPECIAL NOTES

- Approved Road Construction Plans shall be used for all utilities.
- The water and sewer house connections not included in a Developer's Agreement shall conform to Howard County Plumbing Code. The on-site WHO shall install copper. The SHC shall be 4" iron.
- The stormwater management provided for in the Village of Longreach 3/2 F 88-171.
- Public water and sewer shown for reference only. For more detailed information see water and sewer plans Contract No C24-1805

LOT #	STREET	ADDRESS
1	8505	Window Latch Way
2	8509	
3	8513	
4	8517	
5	8521	
6	8525	
7	8529	
8	8533	

NOTE: Topo on this sheet was field run by Clark Fineprock & Sackett, Inc Dated 10/1/88

OWNER/DEVELOPER	Subdivision Name	COLUMBIA	Section	Area	Lots	
HOWARD RESEARCH & DEVELOPMENT LAND CO	Village of Longreach		3	3	1-8, 48-65	
	Plan No.	8361	Block No.	1	Zone	N.T.B.F.M.D
	Water Table	E07 & G08	Sewer Code	3550000		

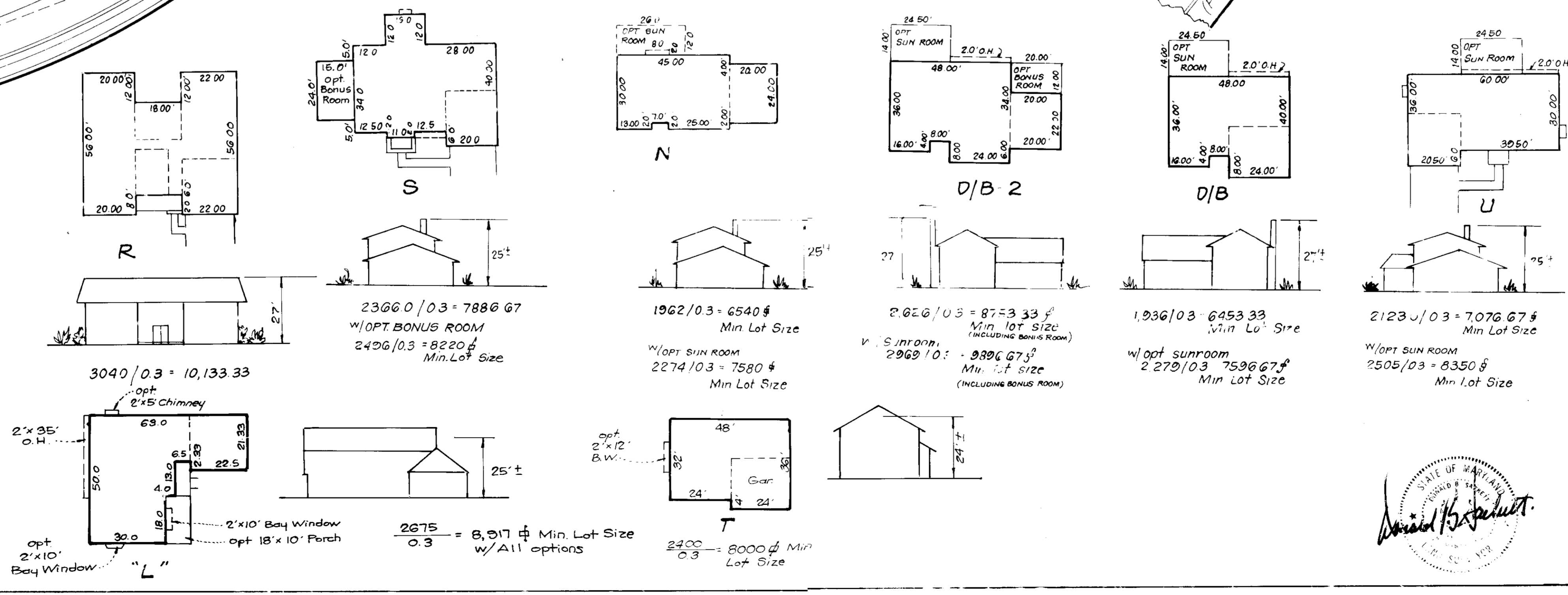
CLARK • FINEPROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

111 MONTELEONE WAY • COLUMBIA, MARYLAND • (410) 336-1500 • BALTIMORE • (410) 336-1500

DESIGNED	VL	SCALE	1" = 30'
DRAWN	GS BAIL	DRAWING	1 of 2
CHECKED	JME	JOB NO.	38
DATE	11-23-88	FILE NO.	88-121 X

TYPICAL HOUSES

Scale 1" = 20'
Note: All houses have 1 roof eaves



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

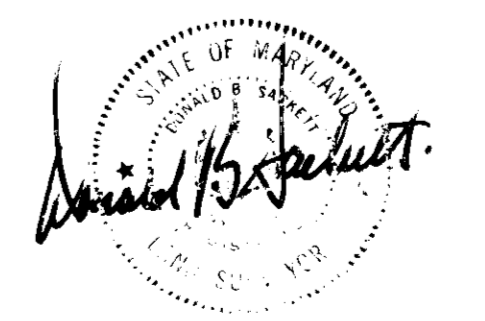
DATE: 6-2-89

APPROVED FOR PLANNING AND ZONING, HOWARD COUNTY OFFICE OF PLANNING & ZONING

DATE: 6/2/89

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

DATE: 5-25-89



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, disking 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. Narrow or disc into upper three inches of soil. At 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. Narrow 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 50 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 (0.05 lbs/1000 sq ft) of vernal lovegrass. During the period of October 16 thru February 28, protect after bare option (1) 2 tons per acre of 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 untreated 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

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking 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 25 bushels per acre of annual ryegrass (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of vernal lovegrass (0.07 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 untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

SEEDING SCHEDULE

- 1) 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 (992-2137)
- 2) All work must conform to the provisions of this plan and all work must conform with the 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 10 to 15 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1. b) 15 days as to all other disturbed or graded areas on the project site.
- 4) All sediment structures shall be fenced and warning signs posted around their perimeter in accordance with Vol. II, Chapter 11, of the HOWARD COUNTY DISTRICT MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (Sec. 52), temporary seedings (Sec. 50) and mulching (Sec. 53). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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:

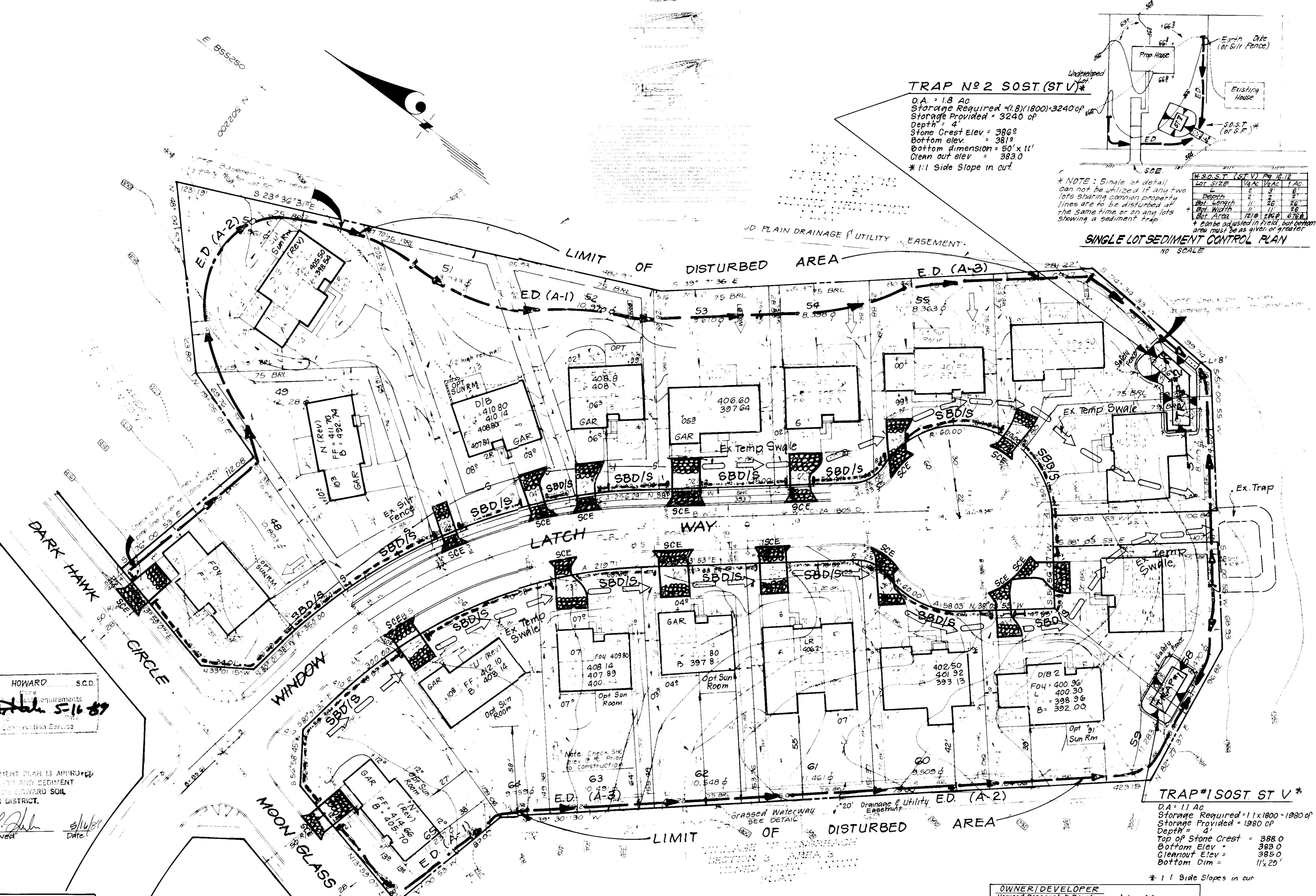
Total Area of Site	6,652 Acres
Area to be Seeded or Paved	5,730 Acres
Area to be Constructively Sealed	2,065 Acres
Total Site	11,445 Acres
Other waterway area location	N/A
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired in the same day of disturbance.
- 9) Additional sediment control must be provided, if deemed necessary by the Howard County 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 control, 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) If houses are to be constructed on a "No-Soil" basis, at random, Simple Soil Sediment Control as shown below shall be implemented.
- 12) All papers to be filed at the end of each day (see detail below) N/A
- 13) The total length of straw or disk/silt fence equals 1330' L.F.

- Reviewed for HOWARD COUNTY S.C.D. by *John H. H. 5-16-89*
- Approved by *Stephen L. Doherty* 5/16/89 Date
- THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.

APPROVED FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
DATE: 6-2-89

APPROVED FOR PLANNING & ZONING
DATE: 6-13-89

APPROVED FOR PUBLIC WATER AND PUBLIC SEWAGE
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 5-24-89



TRAP #2 SOST (ST V)*

D.A. = 1.8 AC
Storage Required = 1.8(1800) = 3240 CF
Storage Provided = 3240 CF
Depth = 4'
Stone Crest Elev = 386.2
Bottom Elev = 381.9
Bottom dimension = 5'0" x 11'
Clean out elev = 383.0
* 1:1 Side Slope in out.

* NOTE: Single or 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. * can be adjusted in field, but bottom area must be as given or larger.

NO. S.O.S.T.	LOT V. NO.	NO. 16.12
Lot Size	1/4 AC	1 AC
Depth	2'	2'
St. Elev.	11'	5'
Bot. Width	11'	5'
Bot. Area	121.0	67.6

SINGLE LOT SEDIMENT CONTROL PLAN
NO SCALE

TRAP #1 SOST ST V*

D.A. = 1.1 AC
Storage Required = 1.1(1800) = 1980 CF
Storage Provided = 1980 CF
Depth = 4'
Top of Stone Crest = 388.0
Bottom Elev = 383.0
Cleanout Elev = 385.0
Bottom Dim = 11' x 23'
* 1:1 Side Slopes in out.

DEVELOPERS/BUILDERS CERTIFICATE

I/We certify that this plan for erosion and sediment control... will be done in accordance with the requirements and specifications of the Howard County Sediment Control Inspector...
Signature of Developer/Builder: *John H. H.* 1-19-89 Date

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* 5-19-89 Date



OWNER/DEVELOPER
Howard Research & Development Land Co.
10275 Little Patuxent Parkway
Columbia, Md 21044

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

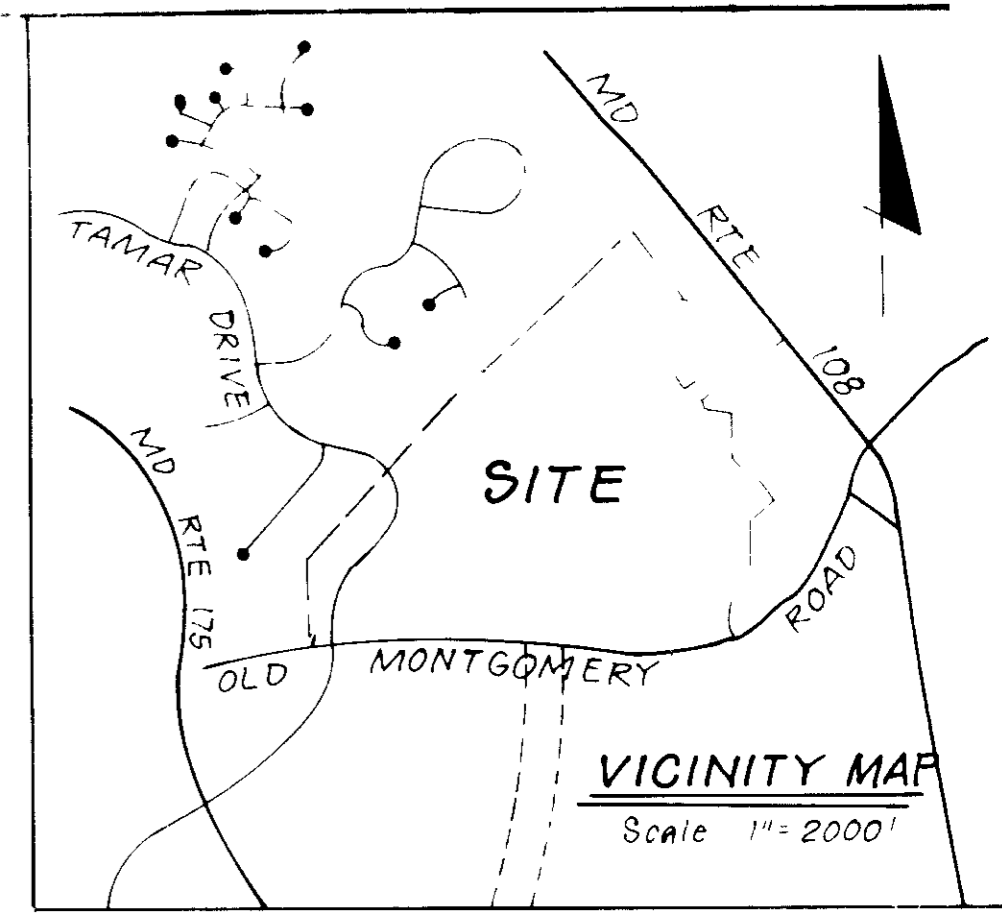
DESIGNED: GLO
DRAWN: G.S.
CHECKED: G.L.B.

SEDIMENT AND EROSION CONTROL PLAN
LOTS 1-8 and 48-65
COLUMBIA
VILLAGE OF LONGREACH
SECTION 3 AREA 3
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'
DRAWING: 3 of 4
NO. 88-121

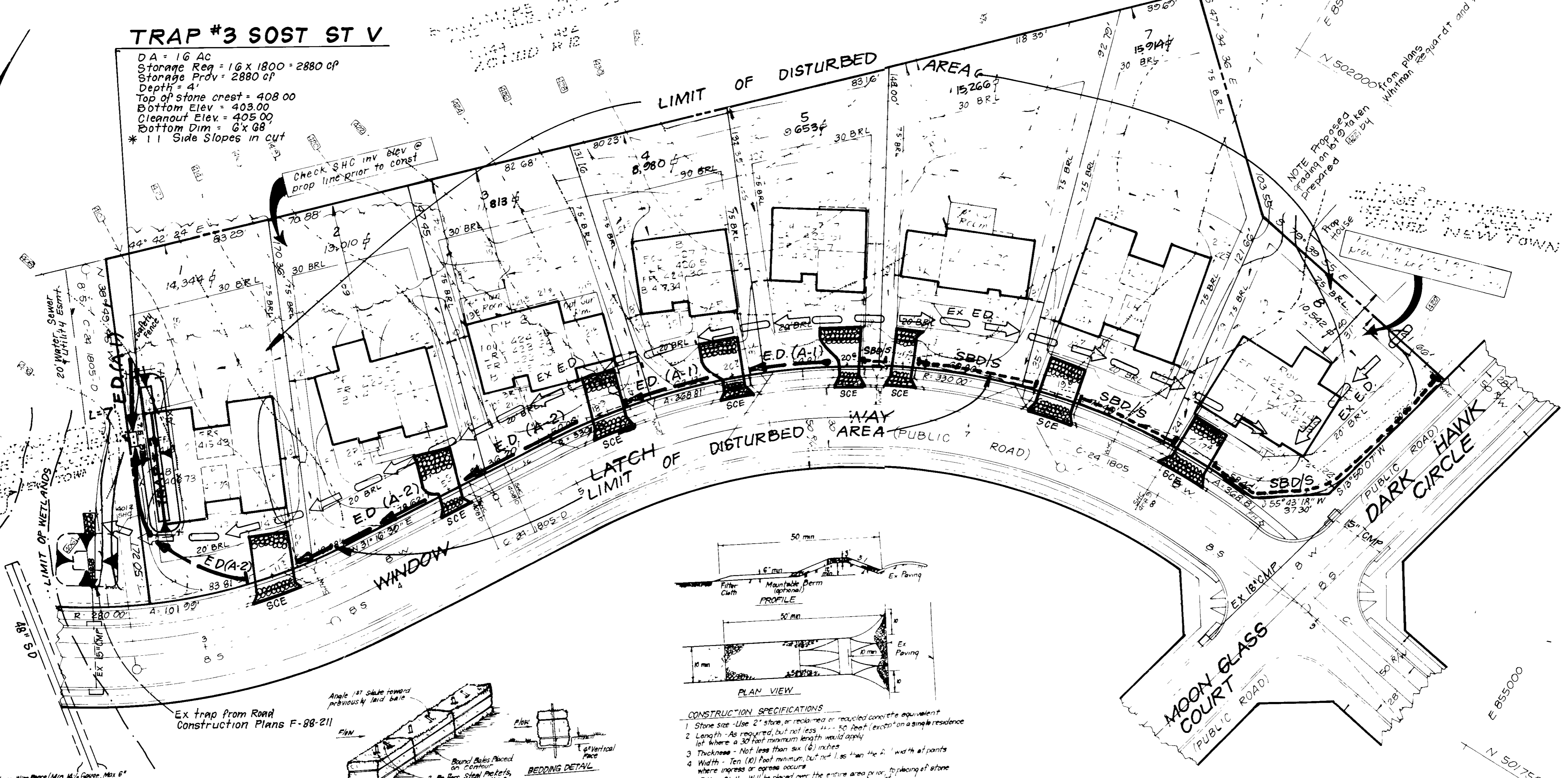
For: Columbia Builders, Inc.
3 Lakeside North, Suite 200
Columbia, Maryland 21044

11-23-88 85 121 SE
SDF 80 108



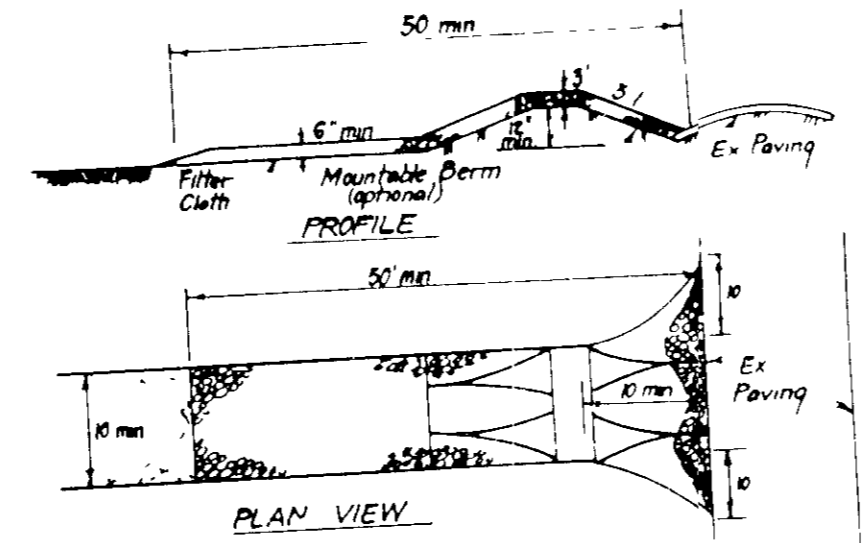
TRAP #3 SOST ST V

DA = 16 AC
 Storage Req = 16 x 1800 = 2880 CF
 Storage Prdv = 2880 CF
 Depth = 4'
 Top of stone crest = 408.00
 Bottom Elev = 403.00
 Cleanout Elev = 405.00
 Bottom Dim = 6' x 8'
 * 1:1 Side Slopes in cut



LEGEND

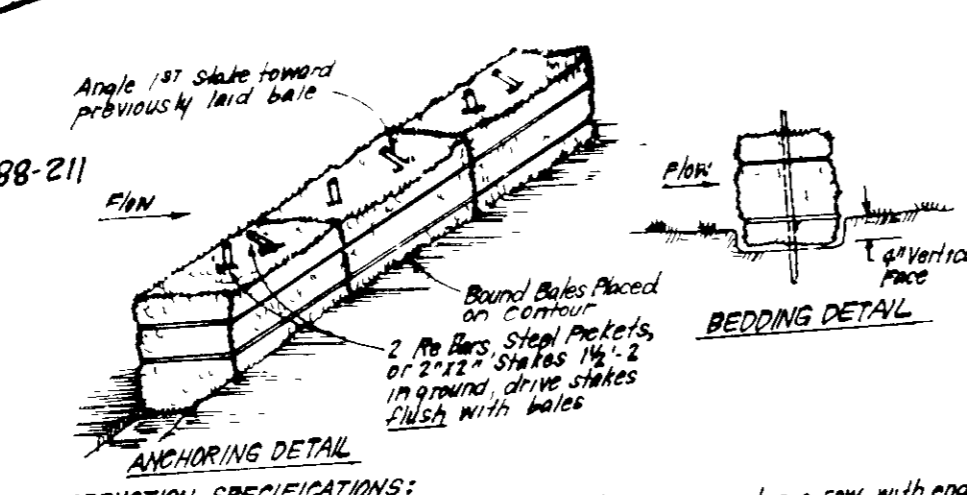
- Contour Interval 2 FT
- Existing Contour 400
- Proposed Contour 410
- Spot Elevation +10.5
- Direction of Drainage
- Walk out Basement
- Trees to be Saved
- Existing Trees
- Straw Bale Dike (SBDIS)
- Earth Dike (E.D. (A-1))
- Stabilized Const Entrance



CONSTRUCTION SPECIFICATIONS

1. Stone size - Use 2" stone or recycled concrete equivalent
2. Length - As required, but not less than 50' length (except on a single residence lot where a 30' foot minimum length would apply)
3. Thickness - Not less than six (6) inches
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs
5. Filter Cloth - Will be placed over the entire area prior to placing of stone
6. 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 slope will be permitted
7. 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 cleaning of any means used to trap sediment. All sediment applied, dropped, washed or tracked onto public rights-of-way must be removed immediately
8. 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
9. Periodic inspection and needed maintenance shall be provided after each rain trapping device

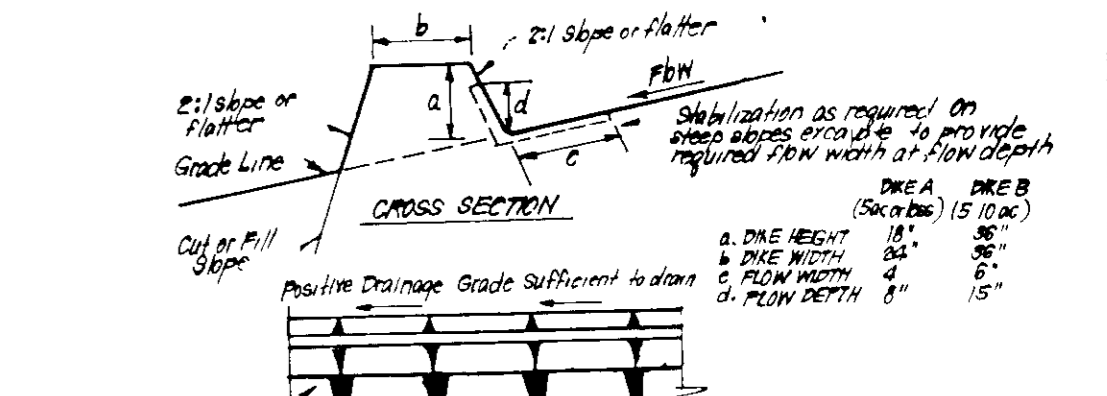
STABILIZED CONSTRUCTION ENTRANCE (SCE)



CONSTRUCTION SPECIFICATIONS

1. Bales shall be stacked at the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales
2. Each bale shall be embedded in the soil a min of 4" and placed so the bindings are horizontal
3. Bales shall be securely anchored in place by either 2 stakes or re bars driven thru the bales
4. The 1st stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bales
5. Inspection shall be frequent and repair/replacement shall be made promptly as needed
6. Stakes shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage

STRAW BALE DIKE DETAIL (SBD)



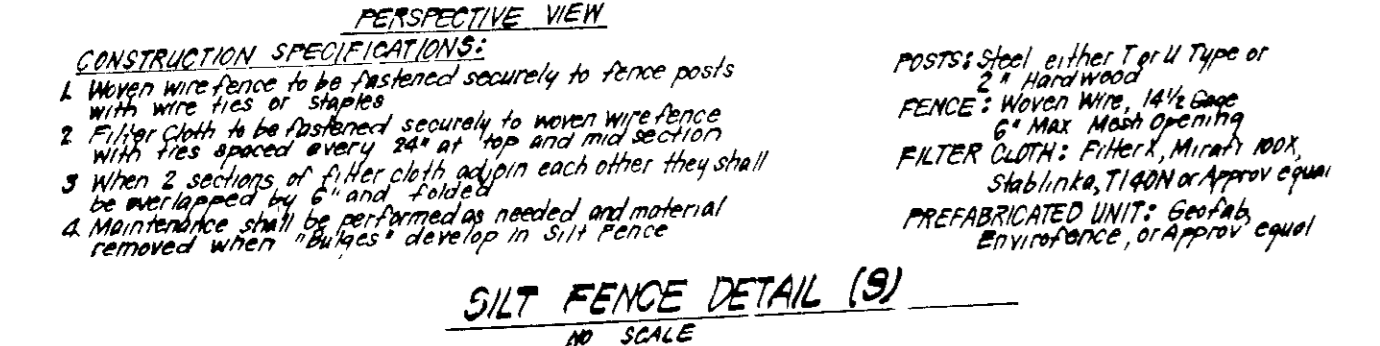
CONSTRUCTION SPECIFICATIONS

1. All dikes shall be constructed by earth-moving equipment
2. All dikes shall have positive drainage to an outlet
3. Top width may be wider and side slopes may be flatter if desired, to facilitate cleaning by stabilization device
4. Dike location should be adjusted as needed to utilize a stabilized site as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized
5. Earth dikes shall have a filter and function with a minimum of erosion. Runoff shall be directed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized
6. Dike location 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.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL WIDTH	DIKE A	DIKE B
1	15'-30'	Seed & Straw Mulch	Seed or Straw Mulch
2	3'-10'	Seed & Straw Mulch	Seed or Straw Mulch
3	3'-10'	Seed or Straw Mulch	Seed or Straw Mulch
4	3'-10'	Seed or Straw Mulch	Seed or Straw Mulch
5	3'-10'	Seed or Straw Mulch	Seed or Straw Mulch

EARTH DIKE DETAIL (E.D.)



SILT FENCE DETAIL (S)

- CONSTRUCTION SPECIFICATIONS:
1. Heavy wire fence to be fastened securely to fence posts with wire ties at 4' intervals
 2. Filter cloth to be fastened securely to heavy wire fence with ties spaced every 30" at top and mid section
 3. When 2 sections of filter cloth are used, they shall be overlapped by 6" and stapled
 4. Maintenance shall be performed as needed and material removed when "bulges" develop in silt fence

DEVELOPER'S/BUILDERS CERTIFICATE

I hereby certify that all development on this site will be done according to the plan of subdivision and all other erosion and sediment control and that all erosion and sediment control in the construction process shall be in accordance with the Department of Natural Resources and the Department of the Environment and Planning. I am for the Control of Sediment and Erosion on this site. I also authorize periodic inspection by the Department of the Environment and Planning or their authorized agents, if deemed necessary.

Signature of Developer/Builder: *Blaine C. Smith* Date: *4/23/88*

DEVELOPMENT PLAN IS APPROVED

FOR SOIL EROSION AND SEDIMENT CONTROL, EROSION CONTROL SOIL CONSERVATION DISTRICT

Signature: *Stephen R. Clark* Date: *5/16/87*

REVIEWED FOR HOWARD SCD

and Technical Requirements: *5-16-87*

U.S. Soil Conservation Service

CONSTRUCTION SEQUENCE

NO OF DAYS	DESCRIPTION
7	A. Obtain Grading Permit and Install Sediment and Erosion Control Devices and Stabilize.
30	B. Excavate for foundations and Rough Grade & Temporarily Stabilize
200	C. Construct Structures, Sidewalks and Driveways.
30	D. Final Grade and stabilize in accordance with Stds. & Specs.
10	E. Upon approval of the sediment control inspector remove sediment and erosion controls and stabilize

* Delay construction on Lots 1 & 57 Construct house utilizing single lot control upon removal of trap

OWNER/DEVELOPER
 HOWARD RESEARCH DEVELOPMENT
 LAND CO
 10215 Little Patuxent Pkwy
 Columbia, MD 21044

CLARK • FINEROCK & SACKETT, INC
 ENGINEERS • PLANNERS • SURVEYORS

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control is in accordance with the requirements of the site and meets all the requirements of the Department of the Environment and Planning in accordance with the existing regulations of the State of Maryland.

Signature: *G. Nelson Clark* Date: *11-28-88*

SEDIMENT AND EROSION CONTROL PLAN

LOTS 1-B and 33-56
COLUMBIA VILLAGE OF LONGREACH
 SECTION 3 AREA 3
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR COLUMBIA BUILDERS INC
 3 Lakefront North, Suite 200
 Columbia, Maryland 21044

DATE: 11-23-88

6-2-87
 6.12.88
 9/14/89
 10/26/89
 3-24-89

COMMUNITY PLANNING & LAND DEVELOPMENT