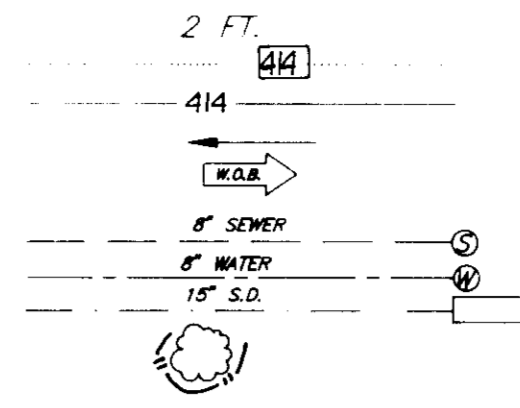


LEGEND

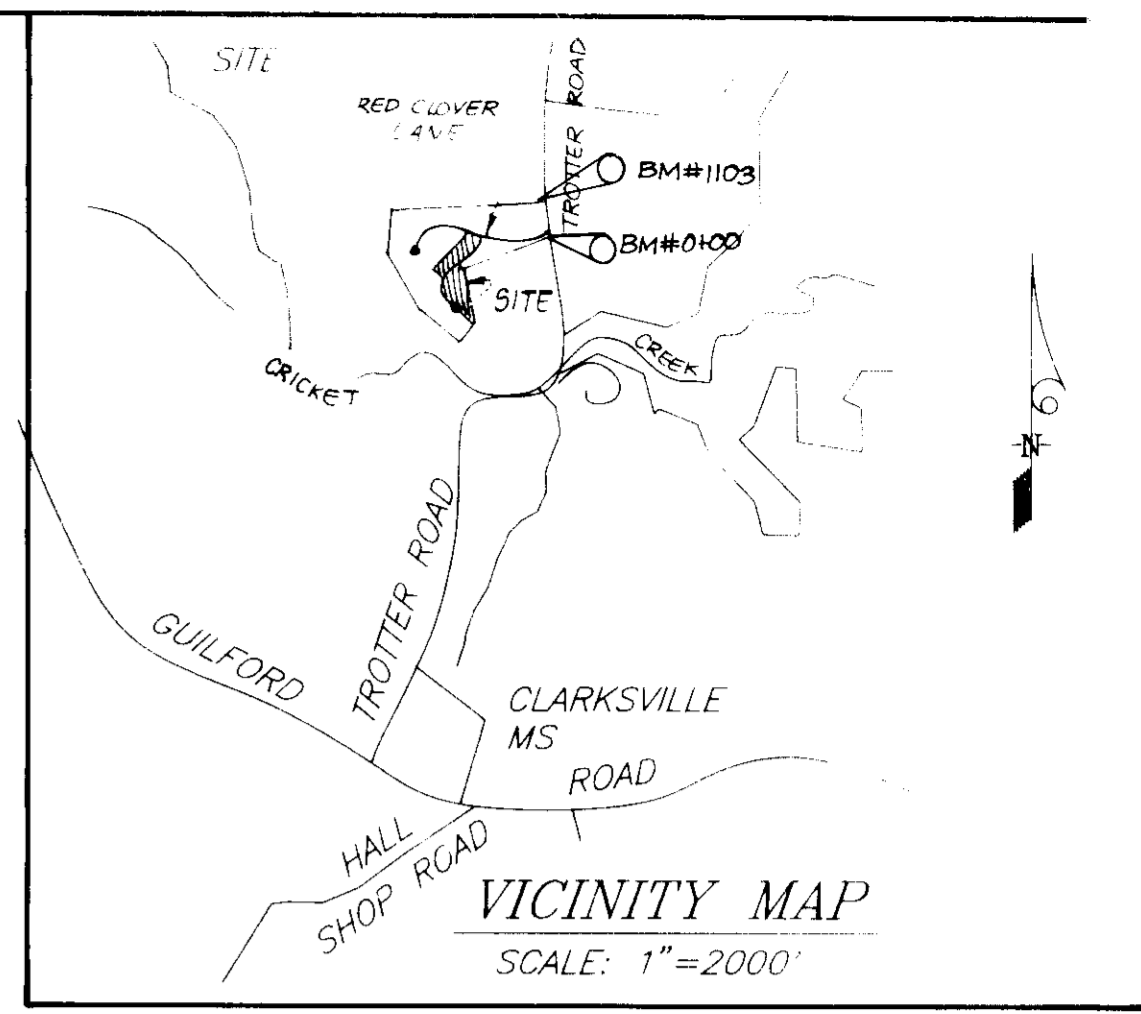
- CONTOUR INTERVAL
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING TREES TO REMAIN
- Tree Protection Fence



NOTE: LOTS 40 THRU 42 SHOWN FOR GRADING PURPOSES ONLY.

JOHN L. DUE
480/622
ZONED: NEW TOWN

JOHN L. DUE
441/722
ZONED: R



GENERAL NOTES:

1. The contractor shall notify the Department of Public Works, Bureau of Construction Inspection a (301) 792-7272 at least five (5) working days prior to the start of work.
2. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
3. The existing topography shown was taken from F-92-87 that was prepared by John R. Hendrichs, P.E.
4. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the NAD 27, Maryland Coordinate System - Control Stations No. s 2437001, 2337002, and 2330033.
5. Storm water management is provided per: F-92-87.
6. Any damage to county owned rights-of-way shall be corrected at the developer's expense.
7. Utilities shown as existing are taken from approved water and sewer plan Contract #34-3178-D, approved road construction plans F-92-87, and actual field survey.
8. Department of Planning and Zoning reference file numbers are: S-92-02, PB Case 274, W.P. 92-22, F-92-87, FDP-214.
9. All roadways are public and existing.
10. Subject property is zoned: New Town per 8-2-85 Comprehensive Zoning Plan.
11. The total area included in this submission is: 5.205 Acres
12. The total number of lots included in this submission are: 13
13. No clearing, grading, or construction is permitted within the wetland or stream buffers, except as approved by the Dept. of Planning and Zoning.
14. The maximum lot coverage is: 30%
15. Improvement to property: Single Family Detached Unit. See Howard County Standard Driveway Abutting Details R-6.01, R-6.03 & R-6.05.
16. The minimum setback restrictions from the property lines and the public road right-of-ways are to be in accordance with FDP-214.

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-92-87 and/or approved Water and Sewer Plans Contract #C-34-3178-D

LOT NUMBER	STREET ADDRESS
43	G033 WINTER GRAIN PATH
44	G029 " " "
45	G025 " " "
46	G021 WINTER GRAIN PATH

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
COLUMBIA VILLAGE OF RIVER HILL	1, 4	27-30 & 43-46
PLAT NO.	BLOCK NO.	ZONE
10368-60	8	NTSPL D
TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
35	511	G055
WATER CODE	SEWER CODE	
I-10	6653500	

Lot No	Gross Ac	Ft/98 Ac	Net Area	Pipe Stem	+ 10% Created	Min Lot Size
44	22,988 #	0	22,988 #	2200 #	0	18,788 #

SHEET INDEX
Site Development Plan sheets 1-2
Sediment/Erosion Control Plan sheets 3-5

OWNER / DEVELOPER:
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
11075 Little Patuxent Parkway
Columbia, MD. 21044

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
8/13/92
COUNTY HEALTH OFFICER

APPROVED HOWARD COUNTY DEPT. OF PLANNING & ZONING
8/10/92
DIRECTOR

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
8/10/92
DIRECTOR

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
8/10/92
CHIEF BUREAU OF ENGINEERING

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

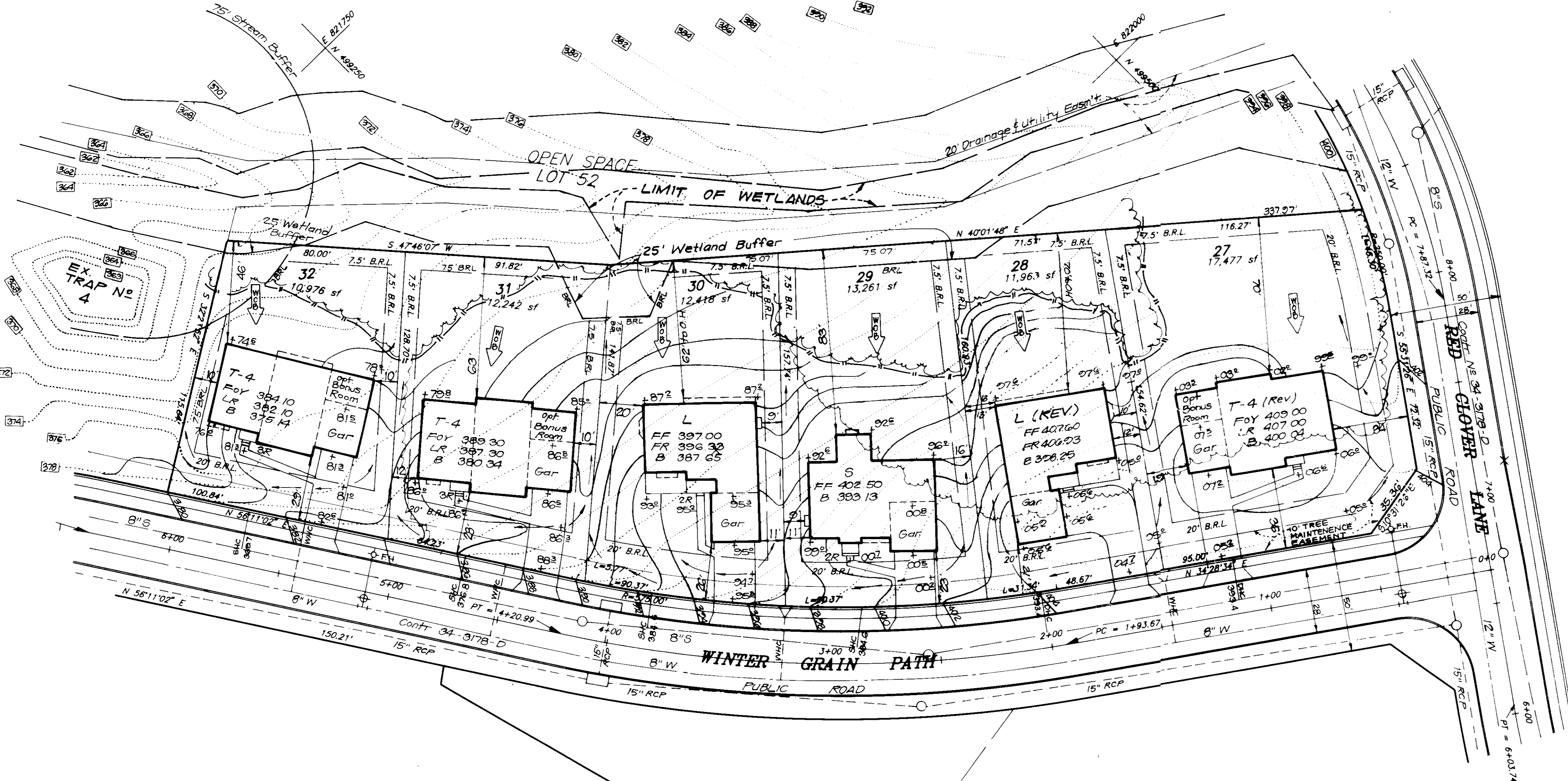
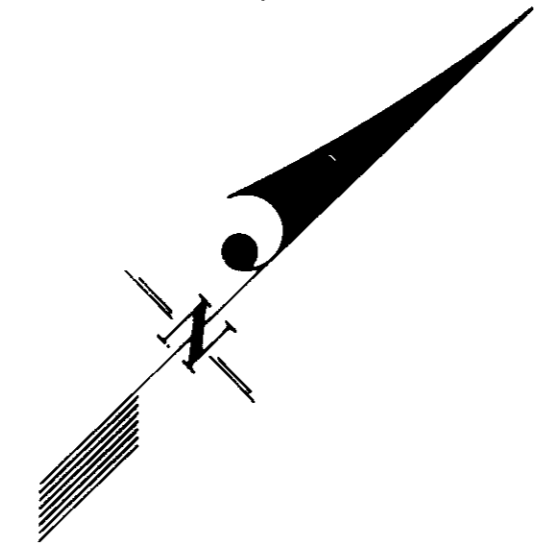
DESIGNED: UME
DRAWN: VLP, BAL
CHECKED: JME

SITE DEVELOPMENT PLAN
LOTS 27 thru 32 and 43 thru 46 and Grading Plan for Lots 40, 41, 42

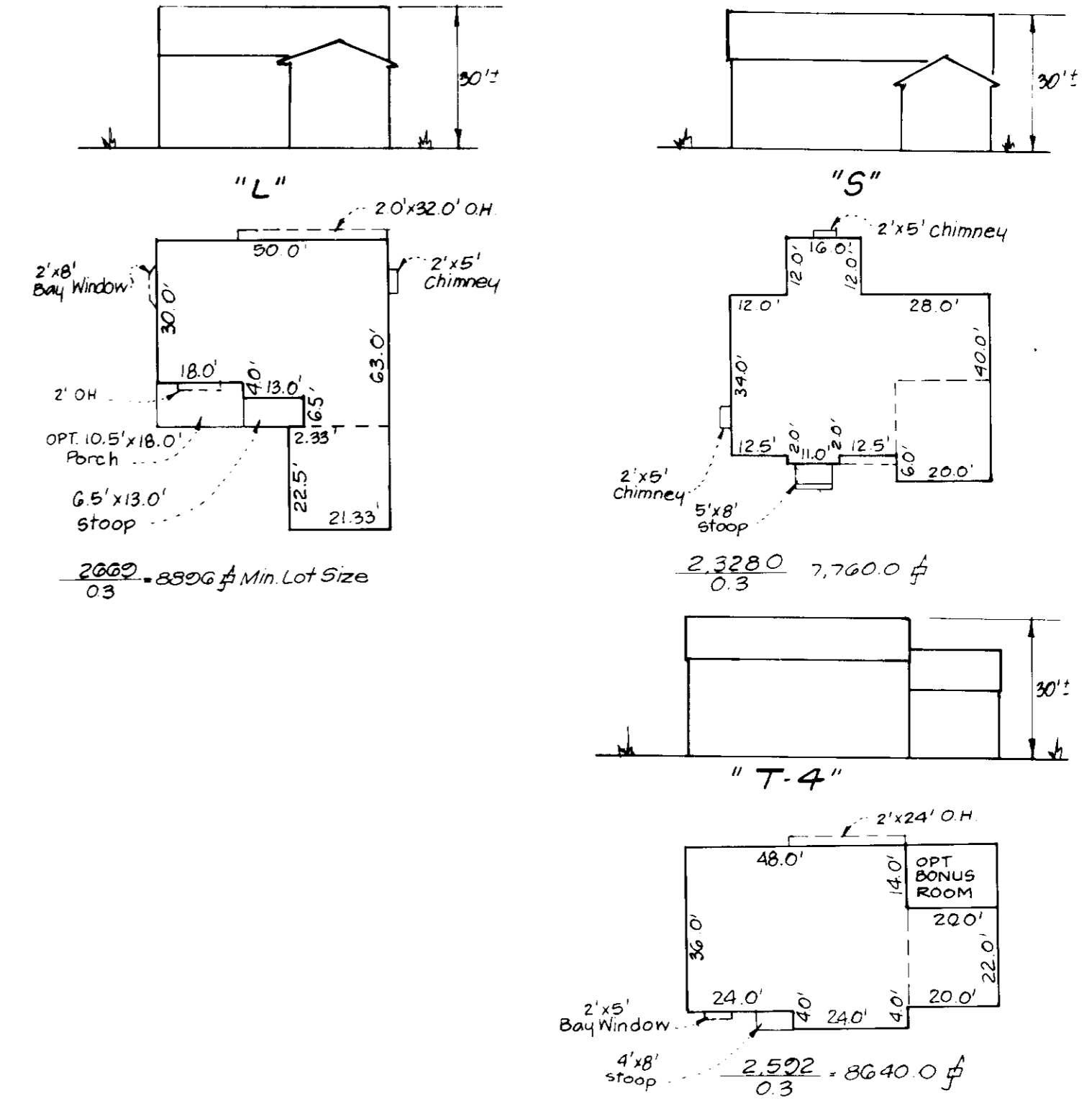
COLUMBIA
VILLAGE OF RIVER HILL
SECTION 1 AREA 4
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 30'
DRAWING: 1 OF 5
JOB NO: 92 064
FILE NO: 92 064X

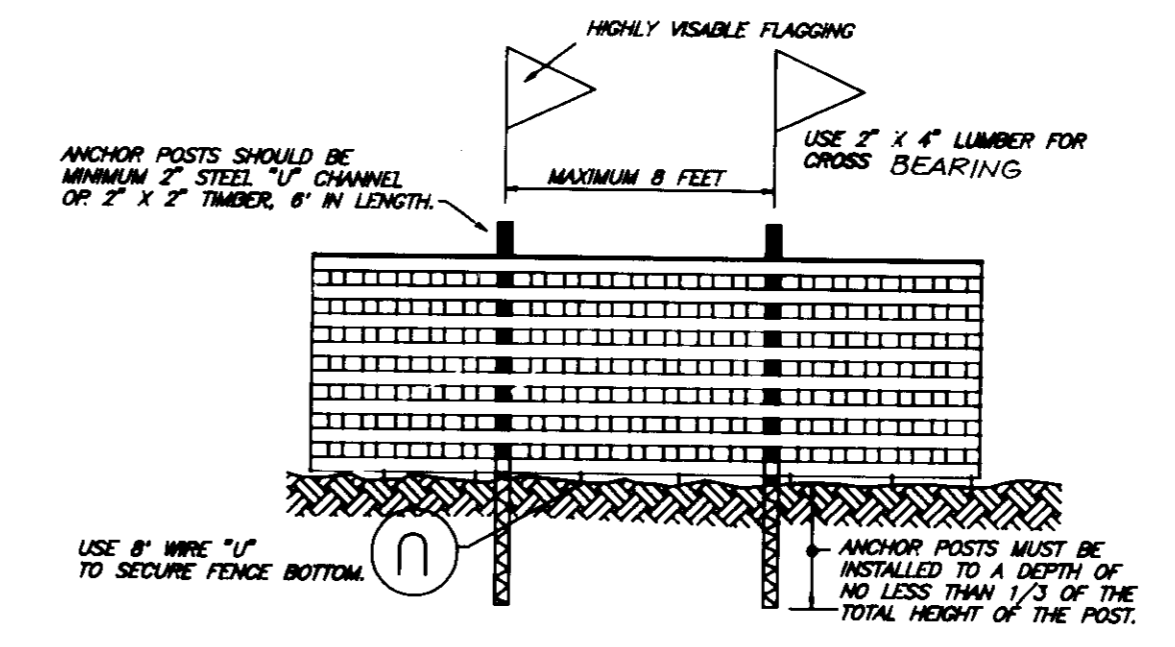
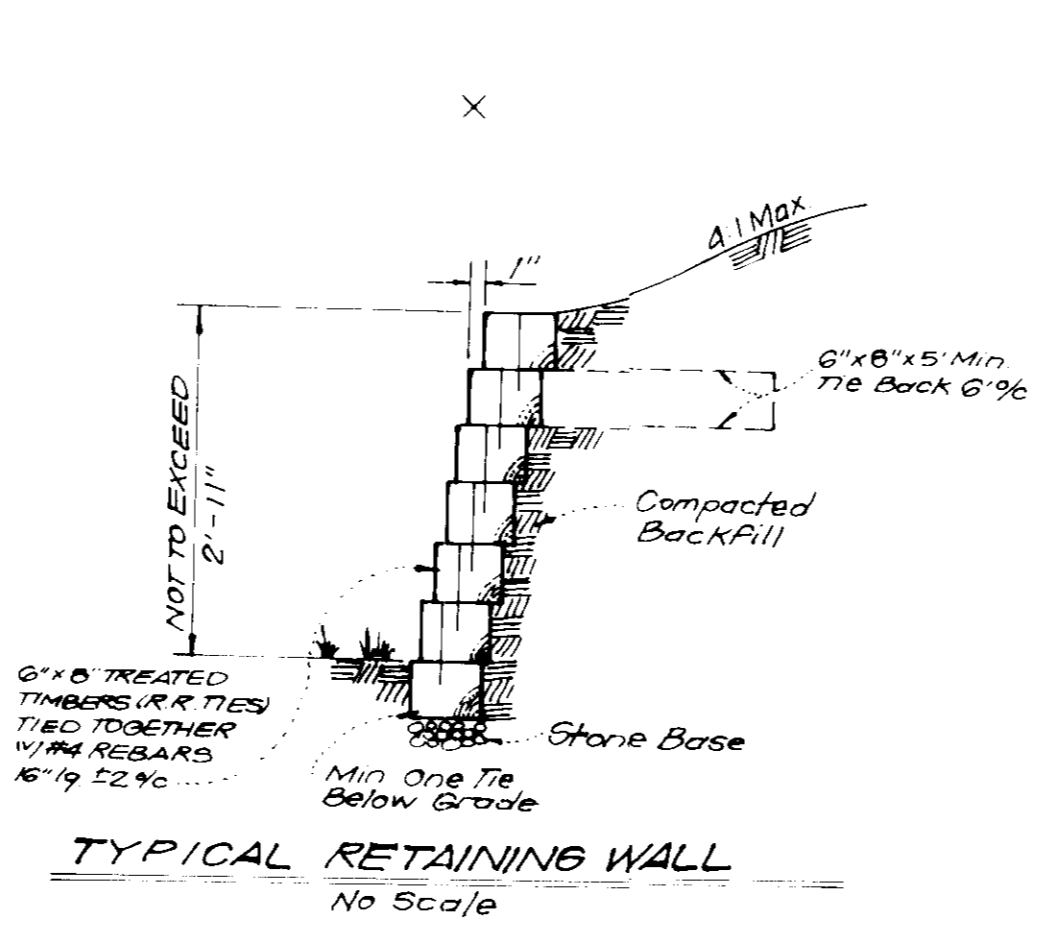
DATE: June 1992
FOR COLUMBIA BUILDERS, INC
P.O. Box 398
Columbia, Maryland 21044



TYPICAL HOUSES
Scale: 1" = 30'



ADDRESS CHART		
LOT NUMBER	STREET ADDRESS	STREET ADDRESS
27	G000	WINTER GRAIN PATH
28	G004	WINTER GRAIN PATH
29	G008	WINTER GRAIN PATH
30	G012	WINTER GRAIN PATH
31	G016	WINTER GRAIN PATH
32	G020	WINTER GRAIN PATH



- 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
at scale

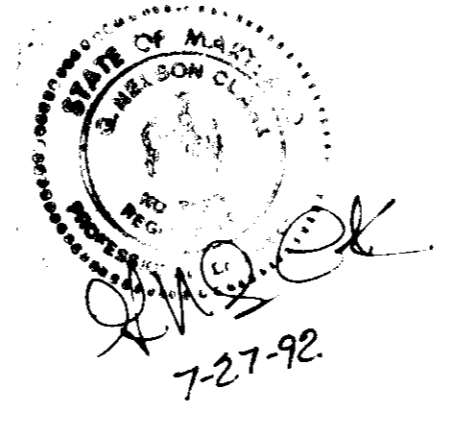
OWNER / DEVELOPER:
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
10275 Little Potomac Parkway,
Columbia, MD, 21044

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

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

No.	REVISIONS	DATE
1.	Rev. Area 4 and Lot 28	1-22-92



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

7135 MINISTREL WAY • COLUMBIA, MD 21045 • (301) 991-5600 • BALTO • MD • COLUMBIA • WASH

DESIGNED: JME
DRAWN: VLP, BAL
CHECKED: JME
DATE: JUNE 1992

SITE DEVELOPMENT PLAN
LOTS 27 thru 32 and 43 thru 46 and Grading Plan for Lots 40, 41 & 42

COLUMBIA
VILLAGE OF RIVER HILL
SECTION 1 AREA 4
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: COLUMBIA BUILDERS, INC.
PO Box 899
Columbia, Maryland 21044

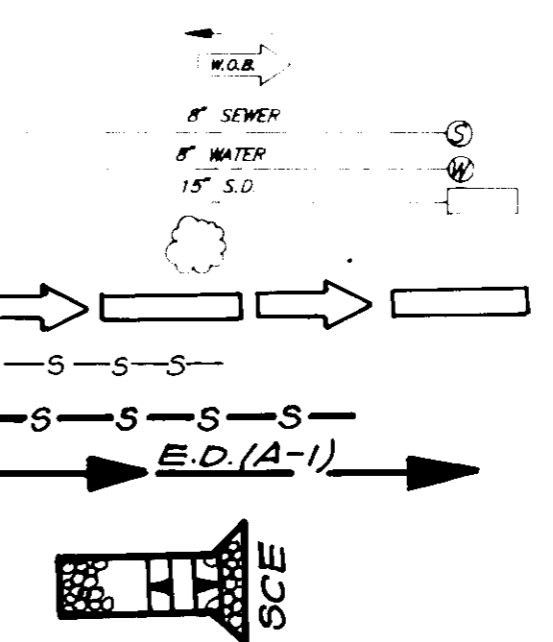
SCALE: 1" = 30'
DRAWING: 2 OF 5
JOB NO: 92-064
FILE NO: 92-064X

LEGEND

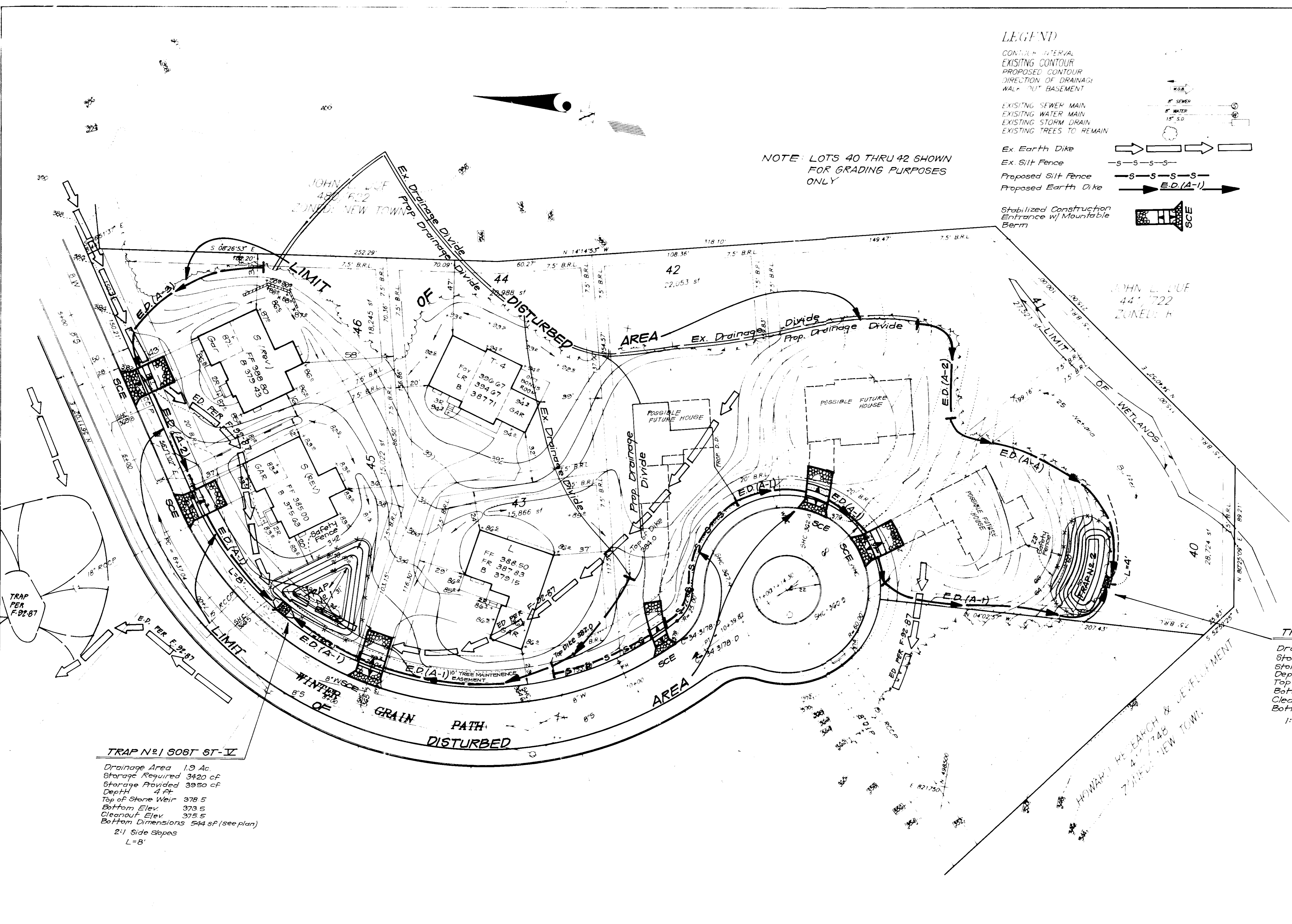
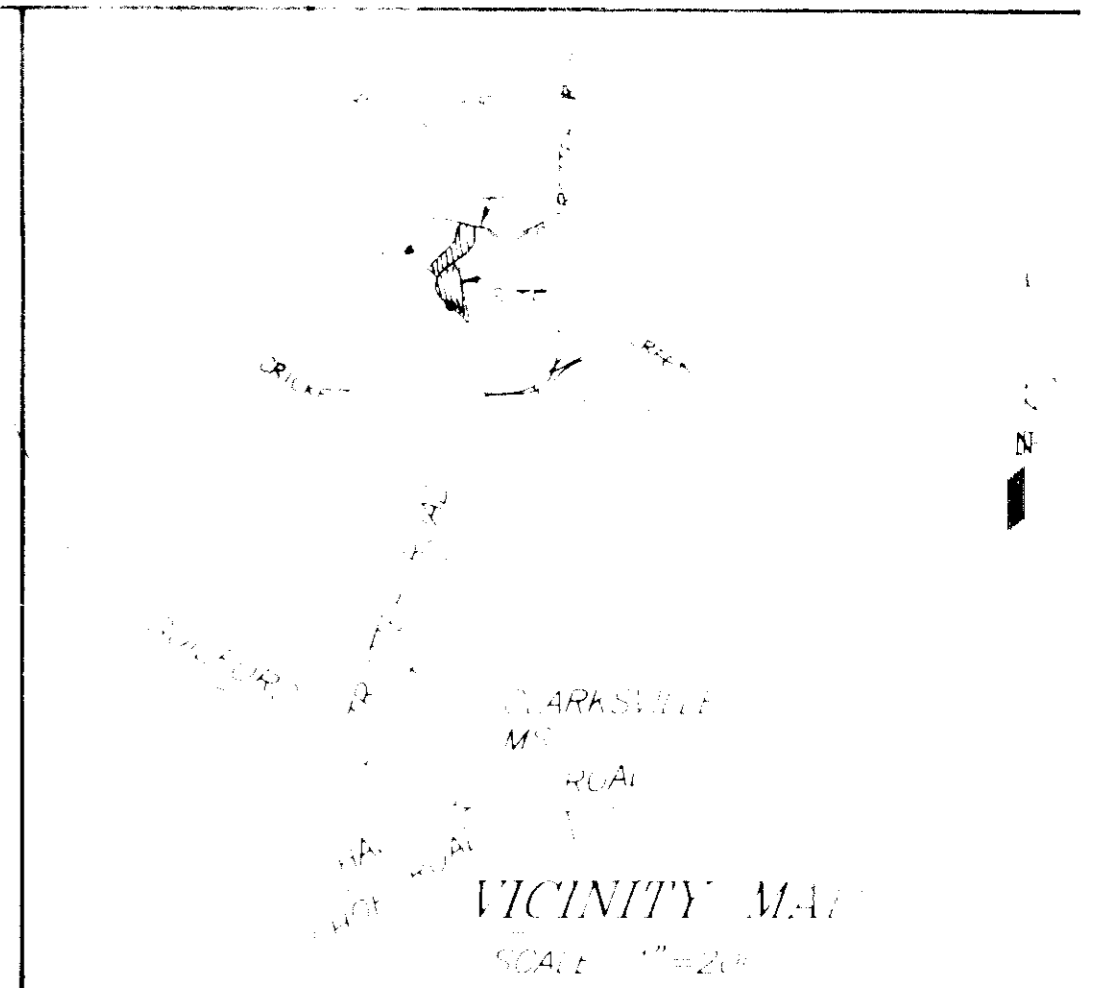
CONTOUR INTERVAL
 EXISTING CONTOUR
 PROPOSED CONTOUR
 DIRECTION OF DRAINAGE
 WALL "0" BASEMENT

EXISTING SEWER MAIN
 EXISTING WATER MAIN
 EXISTING STORM DRAIN
 EXISTING TREES TO REMAIN

Ex Earth Dike
 Ex Silt Fence
 Proposed Silt Fence
 Proposed Earth Dike



NOTE: LOTS 40 THRU 42 SHOWN FOR GRADING PURPOSES ONLY



TRAP N° 1 SOST ST-V
 Drainage Area 1.9 Ac
 Storage Required 3420 cf
 Storage Provided 3950 cf
 Depth 4 ft
 Top of Stone Weir 378.5
 Bottom Elev. 373.5
 Clearout Elev. 375.5
 Bottom Dimensions 544 SF (see plan)
 2:1 Side Slopes
 L=8'

TRAP N° 508T ST-V
 Drainage Area 0.7 Ac
 Storage Required 1260 cf
 Storage Provided 1260 cf
 Depth 3 ft
 Top of Stone Weir 354.0
 Bottom Elev. 350.0
 Clearout Elev. 351.5
 Bottom Dimensions 30'x7'
 1:1 Side Slopes In Cut
 L=4'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: [Signature] DATE: 8-13-92

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 DIRECTOR: [Signature] DATE: 8-13-92
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: [Signature] DATE: 8-11-92
 CHIEF BUREAU OF ENGINEERING

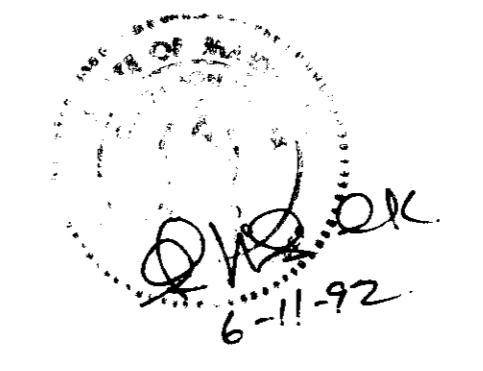
Reviewed for: HOWARD S.C.D.
 Name: [Signature]
 Signature: [Signature] Date: 7/27/92
 US Soil Conservation Service

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] Date: 6-12-92

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] Date: 6-11-92



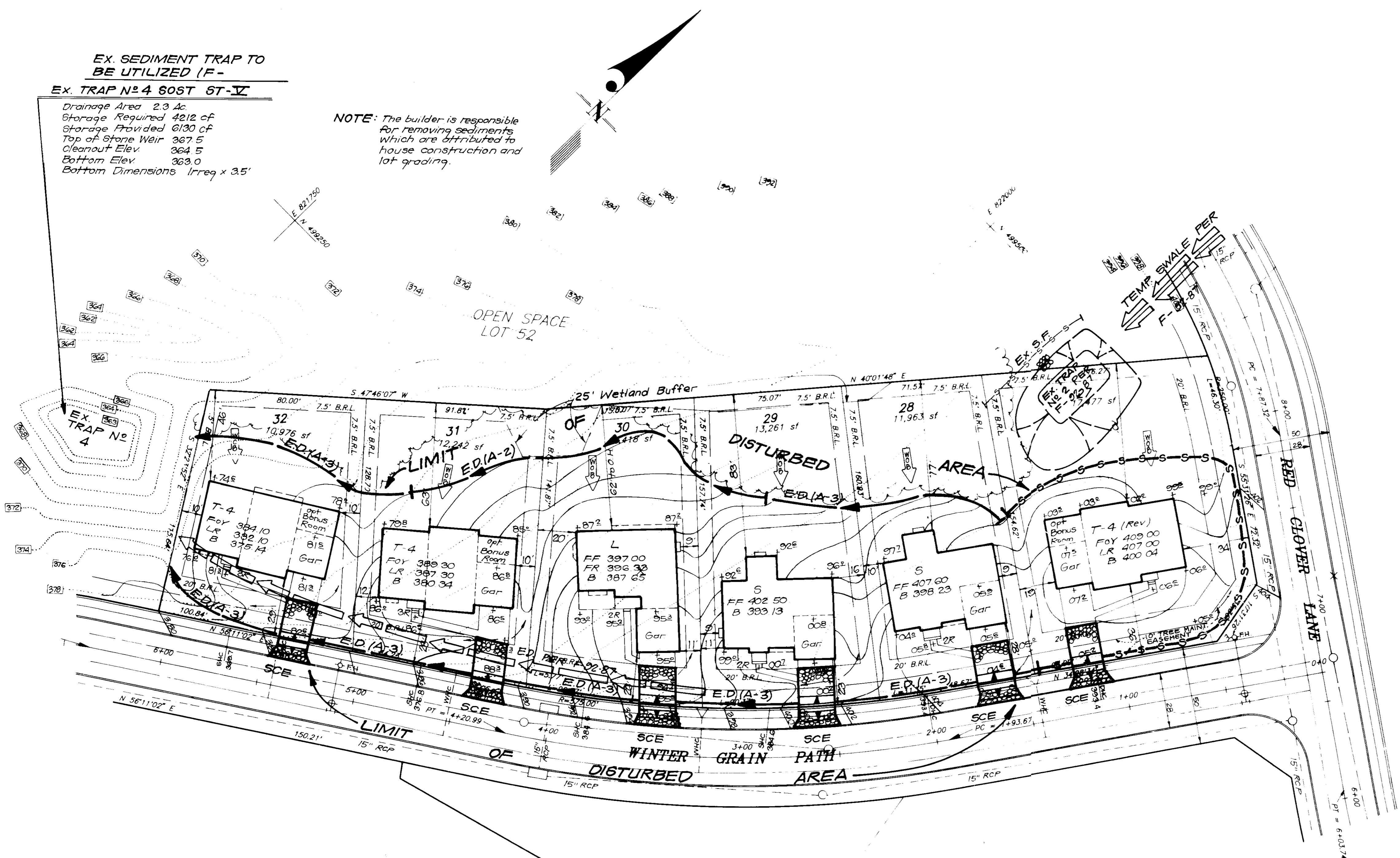
CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7100 MINTHILL WAY • COLUMBIA, MARYLAND • (410) 270-1000		
DESIGNED KIWM	SEDIMENT & EROSION CONTROL PLAN LOTS 27 thru 32 and 43 thru 46 and Grading Plan for Lots 40, 41 & 42	SCALE 1" = 30'
DRAWN BAL	COLUMBIA VILLAGE OF RIVER HILL SECTION 1 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 3075
CHECKED KIWM	FOR COLUMBIA BUILDERS, INC. P.O. Box 399 Columbia, Maryland 21044	JOB NO. 92 064
DATE June 1992		FILE NO. 92 064

EX. SEDIMENT TRAP TO BE UTILIZED (F-

EX. TRAP N^o 4 605T ST-V

Drainage Area 2.3 Ac
 Storage Required 4212 cf
 Storage Provided 6130 cf
 Top of Stone Weir 367.5
 Cleanout Elev. 364.5
 Bottom Elev. 363.0
 Bottom Dimensions Irreg x 3.5'

NOTE: The builder is responsible for removing sediments which are attributed to house construction and lot grading.



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *[Signature]* DATE: 5-13-92

APPROVED: HOWARD COUNTY DEPT OF PLANNING & ZONING
 DIRECTOR: *[Signature]* DATE: 5-21-92
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

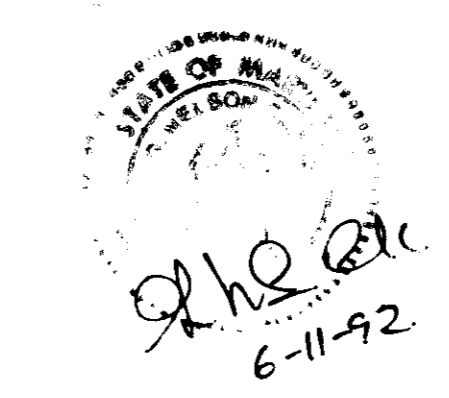
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *[Signature]* DATE: 6-11-92
 CHIEF BUREAU OF ENGINEERING: *[Signature]* DATE: 6-11-92

Reviewed for HOWARD S.C.D. Name
 and meets Technical Requirements
 Signature: *[Signature]* Date: 7/27/92
 US Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *[Signature]* Date: 7/27/92
 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: *[Signature]* Date: 6-12-92

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]* Date: 6-11-92



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

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS		
DESIGNED	SEDIMENT & EROSION CONTROL PLAN	SCALE
KIWM	LOTS 27 thru 32 and 43 thru 48 and Grading Plan for Lots 40, 41, 42	1" = 30'
DRAWN	COLUMBIA	DRAWING
BAL	VILLAGE OF RIVER HILL	4 OF 5
CHECKED	SECTION 1 AREA 4	JOB NO.
KIWM	5TH ELECTION DISTRICT	92 064
DATE	FOR COLUMBIA BUILDERS, INC	FILE NO.
JUNE 1992	P.O. Box 999	92 064
	Columbia, Maryland 21044	

SEDIMENT CONTROL NOTES

- 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. (992-2437)
- 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 1983 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: 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.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (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 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: **5.205** Acres
 Area Disturbed: **3.67** Acres
 Area to be roofed or paved: **0.87** Acres
 Area to be vegetatively stabilized: **2.80** Acres
 Total Cut: **840** Cu. yds
 Total Fill: **590** Cu. yds
 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 DFW 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) If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
- 12) All pipes to be blocked at the end of each day (see detail below).
- 13) The total amount of straw bale dikes/silt fence equals _____ L.F.

* It is the responsibility of the contractor to identify the spoil/borrow site and notify HCSO of the site and its grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:	No. of Days
A. Obtain Grading Permit and Install Sediment and Erosion Control Devices From Foundation Fence and Stabilize.	7
B. Excavate for Foundations and Rough Grade & Temporarily Stabilize.	30
C. Construct Structures, Sidewalks and Driveways.	30
D. Final Grade and stabilize in accordance with Seds. & Specs.	14
E. Upon approval of the sediment control inspector, remove sediment and erosion controls 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, 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 500 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 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 seeding legumines. During the period of October 16 thru February 28, protect site by: 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 contact 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 345 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 redisturbed where a short-term vegetative cover is needed.

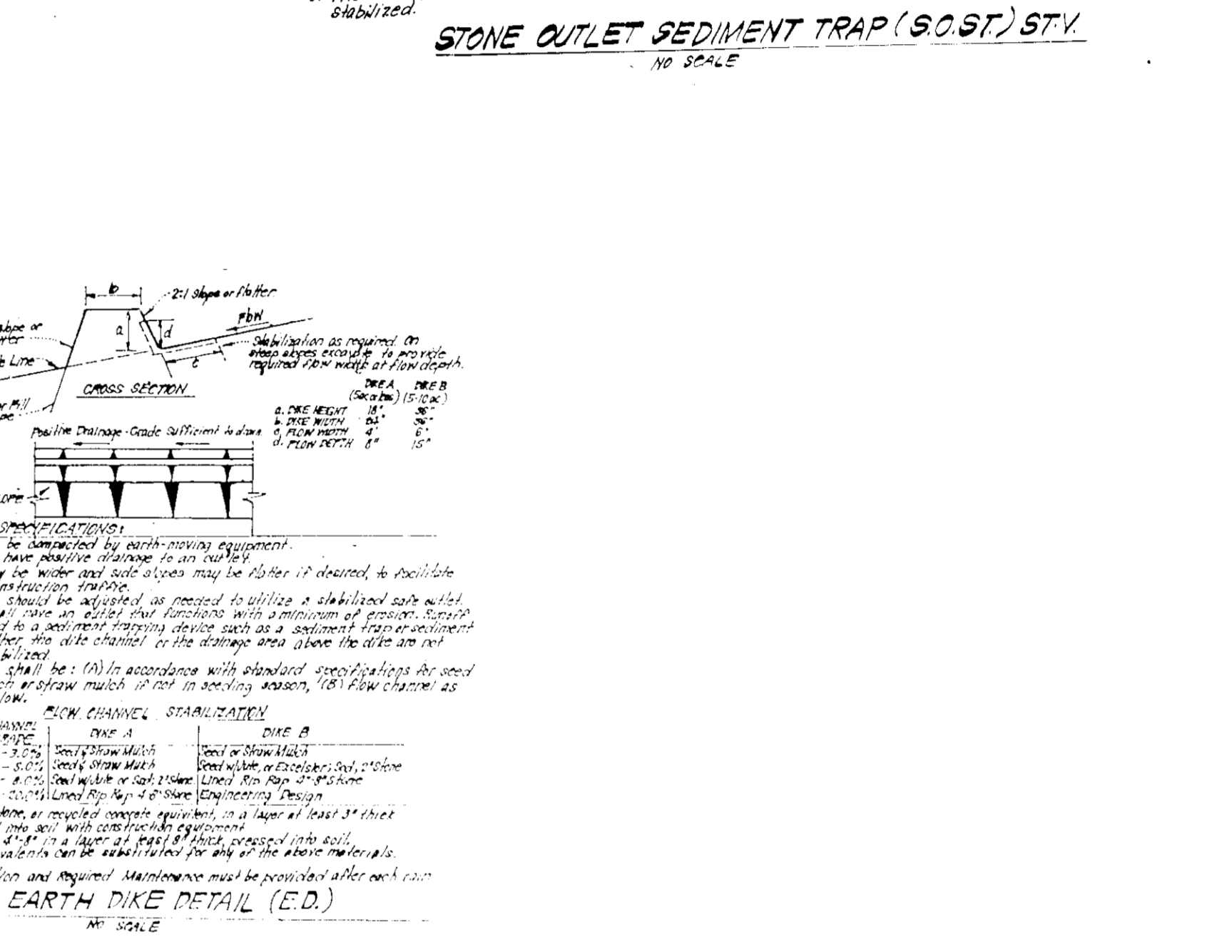
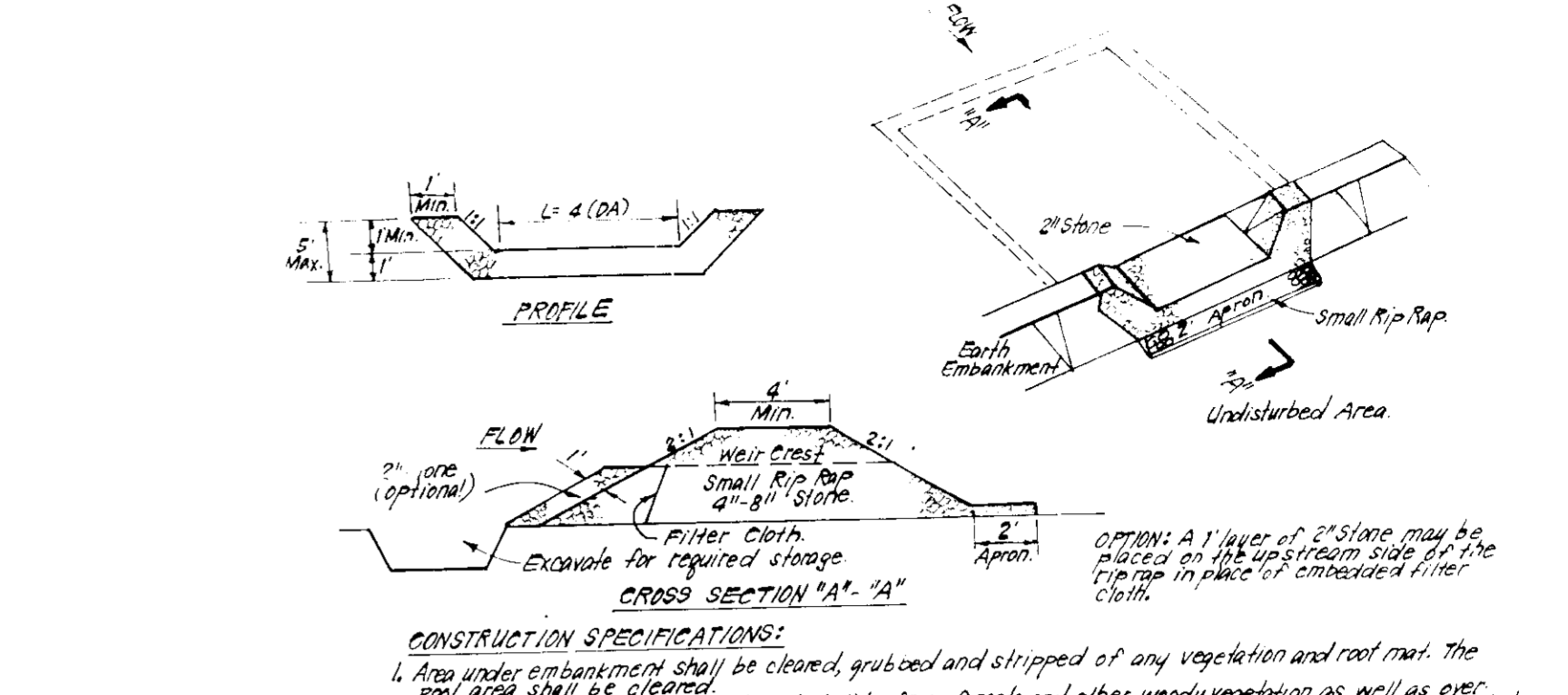
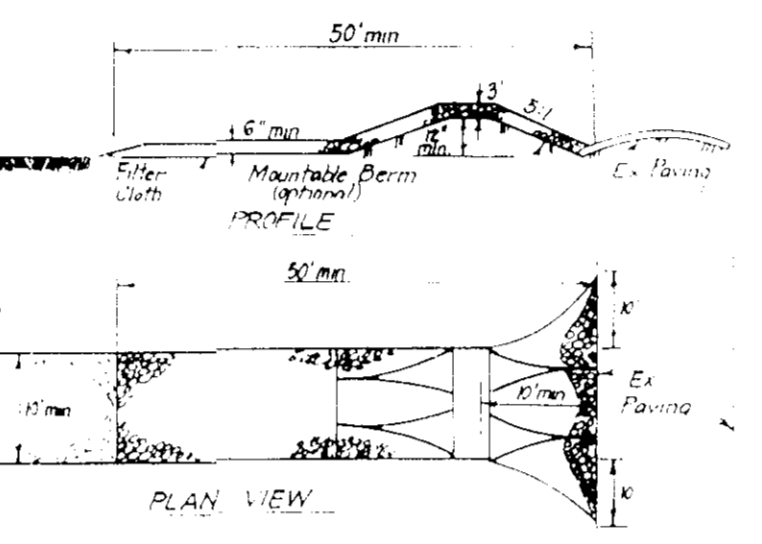
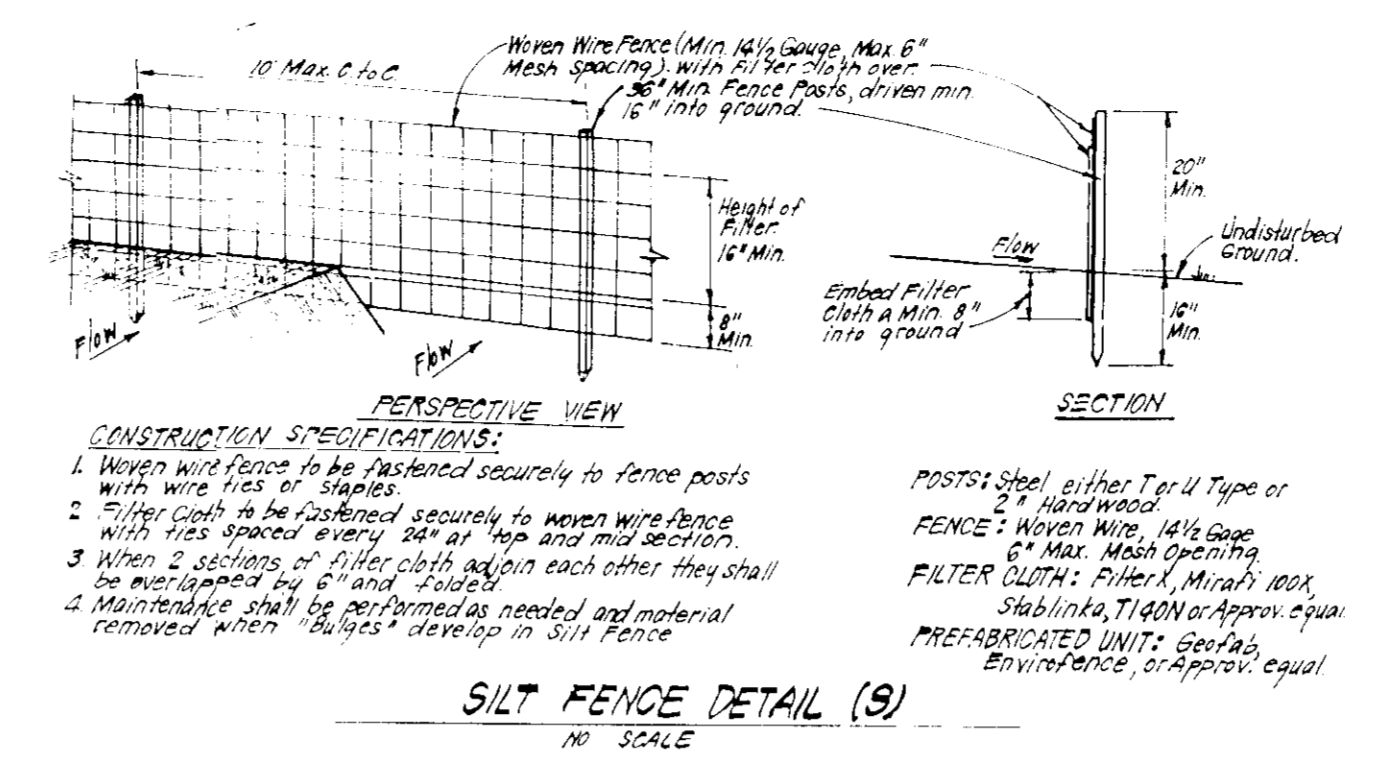
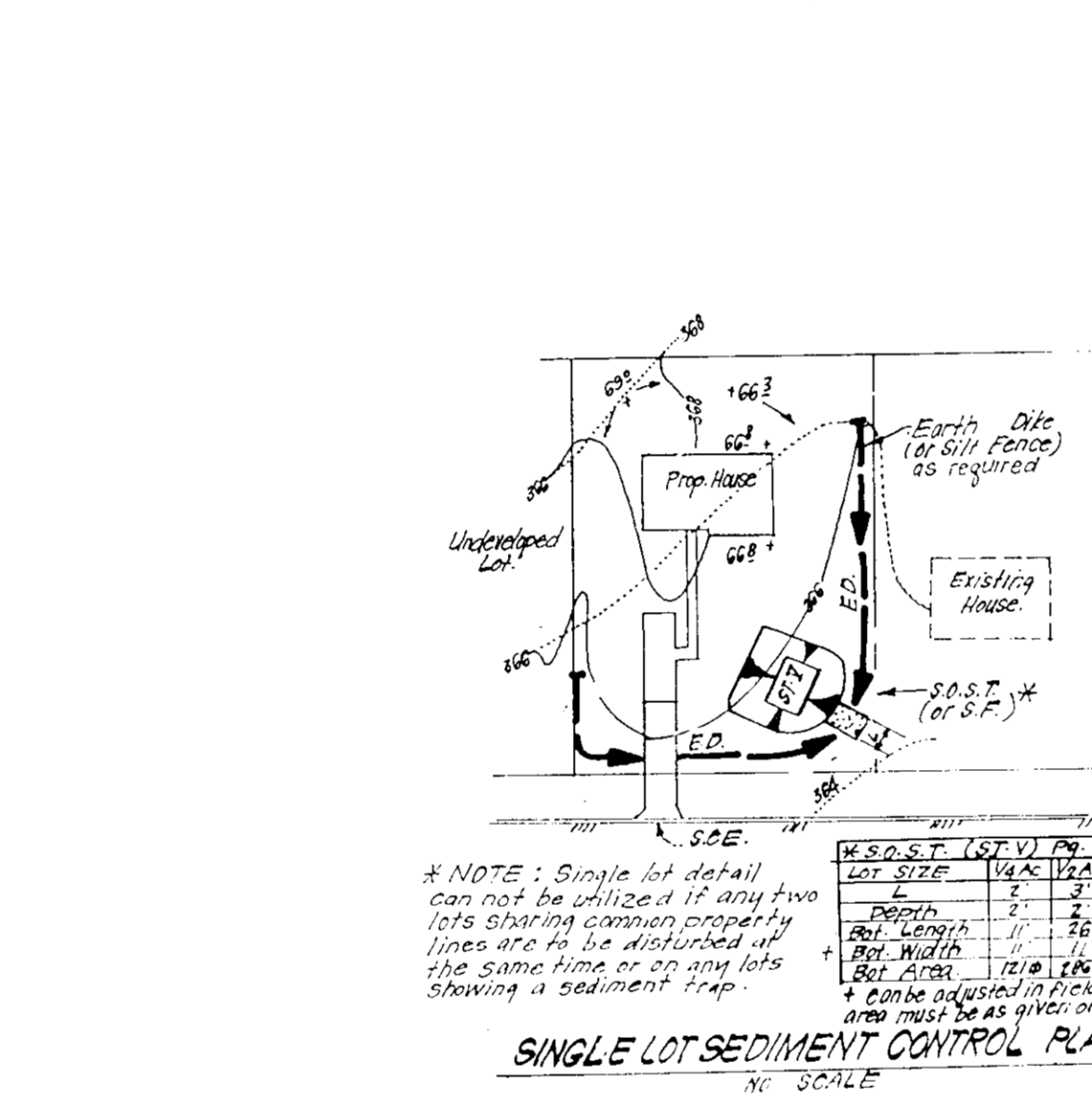
Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

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 24 bushels per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 2 lbs per acre of seeding legumines (.03 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 345 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for details not covered.



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

COUNTY HEALTH OFFICER: *[Signature]* DATE: 8-13-92

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

DIRECTOR: *[Signature]* DATE: 8/10/92

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

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

DIRECTOR: *[Signature]* DATE: 8-11-92

CHIEF BUREAU OF ENGINEERING: *[Signature]* DATE: 8-11-92

Reviewed for HOWARD COUNTY S.C.D. Name: *[Signature]* Date: 7/29/92

Signature: *[Signature]* Date: 7/29/92

US Soil Conservation Service

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

Signature: *[Signature]* Date: 7/29/92

Approved

DEVELOPER'S/BUILDER'S CERTIFICATE

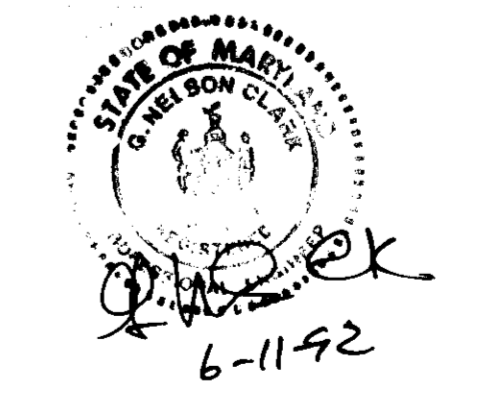
"I/We certify that all development and construction will be done according to this plan of development and plan for sediment and erosion control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training 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: *[Signature]* Date: 6-12-92

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]* Date: 6-11-92



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

7835 MINTHREY WAY • COLUMBIA, MD 21046 • (410) 279-1100

DESIGNED BY: KIWM

DRAWN BY: BAL

CHECKED BY: KIWM

DATE: JUNE 1992

SCALE: 1" = 30'

DRAWING: 5 OF 5

PROJECT NO: 92-004

FILE NO: 92-004

PROJECT: SEDIMENT & EROSION CONTROL PLAN LOTS 27 thru 32 and 43 thru 48 and Grading Plan for Lots 40, 41 & 42

LOCATION: COLUMBIA VILLAGE OF RIVER HILL SECTION 1 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FOR: COLUMBIA RESEARCH AND DEVELOPMENT CORPORATION 10275 Little Patuxent Parkway Columbia, Maryland 21044

DEVELOPER: COLUMBIA RESEARCH AND DEVELOPMENT CORPORATION 10275 Little Patuxent Parkway Columbia, Maryland 21044

SDP-92-117