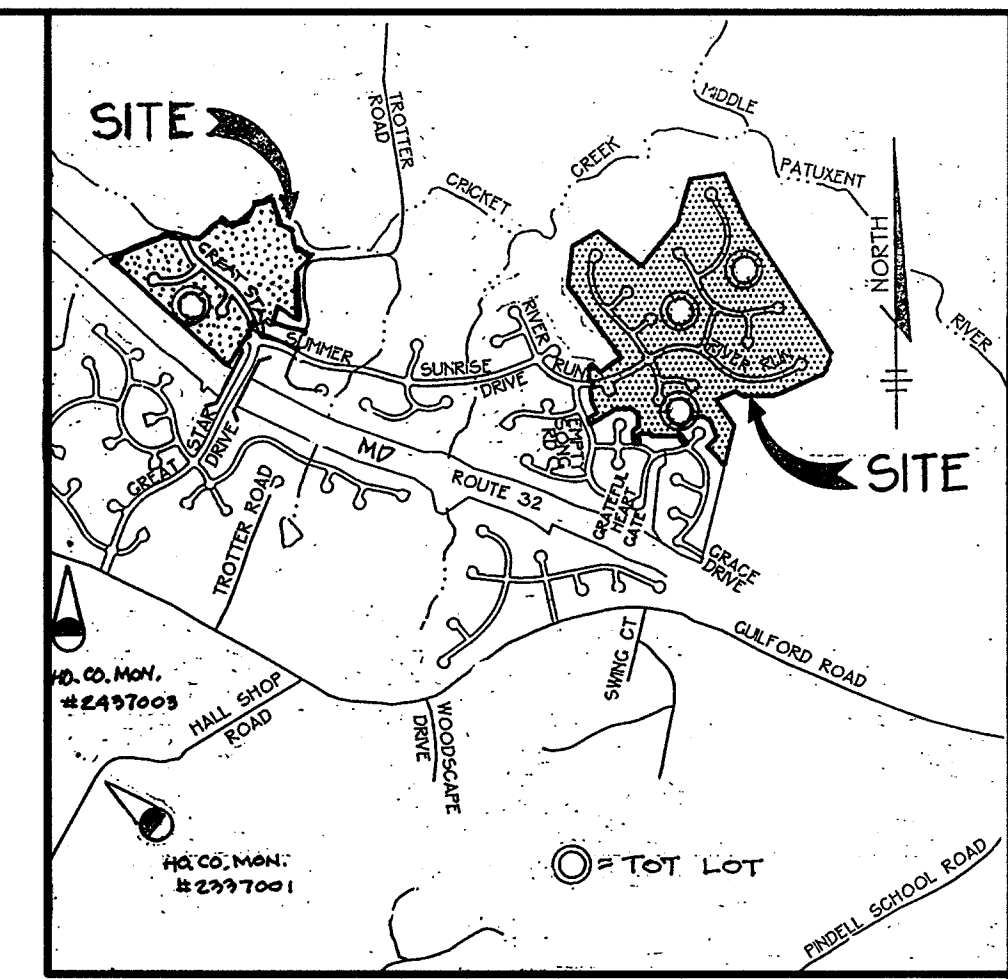


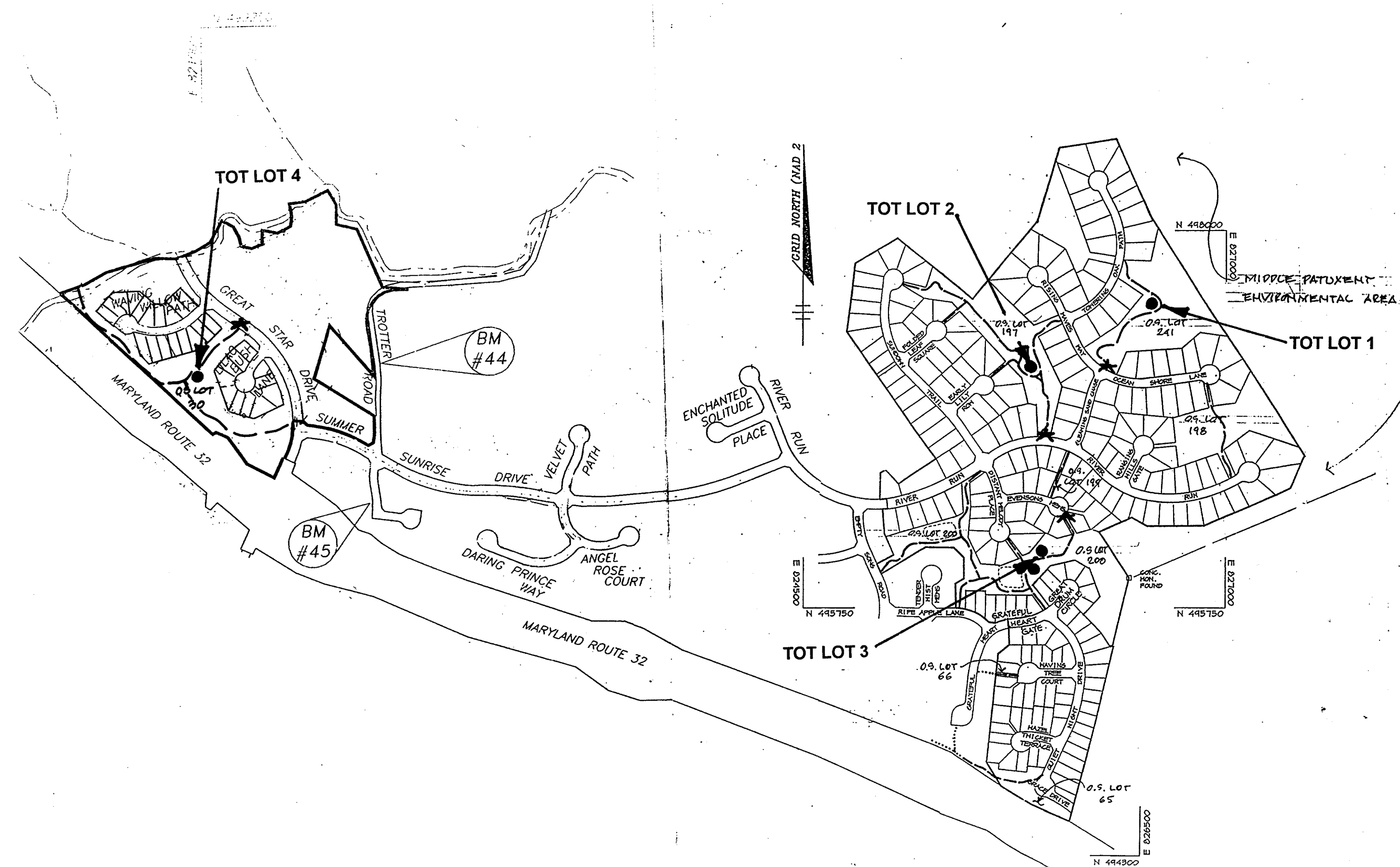
SITE DEVELOPMENT PLAN FOR VILLAGE OF RIVER HILL POINTERS RUN NEIGHBORHOOD TOT LOTS 1-4



VICINITY MAP
SCALE: 1"=2000'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
 2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) days prior to the start of work.
 3. The contractor shall notify "Miss Utility" at 1 (800) 257-7777 at least 48 hours prior to any excavation work.
 4. Project Background:
Location: Village of River Hill Tax Map 35
Zoning: New Town Open Space
Election District: 5th
- | Tot Lot# | Disturbed Area | VRH S/A | O.S. Lot | Lot Area | "F" Plan |
|---------------|----------------|---------------|----------|----------|----------|
| 1 | .31 Ac | VRH 2/6 ph. 3 | 241 | 6.7 Ac | F-97-125 |
| 2 | .52 Ac | VRH 2/6 ph. 2 | 197 | 5.8 Ac | F-96-138 |
| 3 | .23 Ac | VRH 2/6 ph. 2 | 200 | 8.6 Ac | F-96-138 |
| 4 | .19 Ac | VRH 2/5 | 30 | 10.5 Ac | F-95-48 |
| Total 1.39 Ac | | | | | |
- Other File References:
- SDP 98-14 For Construction of Pathways
FDP Phase 209, Part V and Part VI
5. Topography within limits of disturbance was field run at two foot contour intervals by Clark, Finefrock & Sackett, Inc., Dated December, 1998. Other topography was supplemented from road construction plans.
 6. Horizontal controls are based on Maryland State Grid System as per the respective record plats.
 7. Floodplain and wetland limits were derived from the respective record plats established under subdivision plans F95-48, F-96-138 and F-97-125.
 8. Stormwater management for these sites was provided under the original subdivision plans F95-48, F-96-138 and F-97-125.
 9. The existing utilities were located from available plans and records. The contractor must dig test pits, by hand, at all utility crossings and connection points to verify exact location.
 10. Any damage to County rights-of-way and paving of public roads shall be repaired immediately at the contractor's expense in accordance with the Howard County Specifications and Standards.
 11. All concrete for the site work shall be Class 2 concrete and shall be in accordance with the Maryland State Highway Administration specifications as amended to date.
 12. The limit of disturbance area on the site shall be marked with a construction fence prior to any clearing and grading activity for the tot lot construction.
 13. Maintenance of the tot lots will be the responsibility of the owner, The Columbia Association.
 14. All trees 12 inches and larger are not to be disturbed unless indicated on plans. All trees within limits of disturbance are to have tree protection fence installed around them.
 15. No disturbance of Wetlands or Stream Buffers is permitted unless specific waiver is approved.



LOCATION MAP
SCALE: 1"=600'

LEGEND

- CONTOUR INTERVAL 2 FT.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- SILT FENCE
- LIMIT OF DISTURBED AREA
- EXISTING TREES TO REMAIN
- ACCESS TO SITE & STABILIZED CONSTRUCTION ENTRANCE

COVER SHEET	
NO.	DESCRIPTION
1	COVER SHEET
2	TOT LOT NO. 1 SITE PLAN AND SEDIMENT & EROSION CONTROL
3	TOT LOT NO. 2 SITE PLAN AND SEDIMENT & EROSION CONTROL
4	TOT LOT NO. 3 SITE PLAN AND SEDIMENT & EROSION CONTROL
5	TOT LOT NO. 4 SITE PLAN AND SEDIMENT & EROSION CONTROL
6	DETAILS

ADDRESS CHART		
TOT-LOT	LOT NO.	ADDRESS
1	O.S. LOT 241	6616 Towering Oak Path
2	O.S. LOT 197	6515 River Run
3	O.S. LOT 200	6419 Distant Melody Place
4	O.S. LOT 30	6214 Lilac Bush Lane

SUBDIVISION NAME		SECTION/AREA	LOTS/PARCELS		
VILLAGE OF RIVER HILL		2/5	197,200,241		
		2/5	30		
PLAT NO.	BLOCK NO.	ZONE	TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
119.34-119.36		NT	35	5th	
128.35-128.36					
124.15-124.19					
WATER CODE		SEWER CODE			
NA		NA			

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

DESIGNED	WHT	SCALE
SITE DEVELOPMENT PLAN FOR TOT LOTS 1-4 VILLAGE OF RIVER HILL		
PHASES 2 AND 3 SECTION 2 AREA 6 O.S. LOTS 197, 200, 241 AND SECTION 2 AREA 5 O.S. LOT 30		DRAWING 1 of 6
TAX MAP 35 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND		JOB NO. 98-148
FOR: THE COLUMBIA ASSOCIATION, INC. 10221 WINDOPIN CIRCLE, SUITE 100 Columbia, Maryland 21044-3410 Phone: 410-381-0383		FILE NO. 98-148X
DATE	MARCH 99	

SUMMARY SITE ANALYSIS TOT LOTS 1-4

<p>ZONE DISTURBED AREAS IMPERVIOUS AREAS PERMEABLE AREAS MULCHED AREAS VEGETATIVELY STABILIZED AREAS TOTAL EARTH CUT TOTAL EARTH FILL TOTAL SPOIL</p>	<p>NT OPEN SPACE +/- 1.25 AC +/- 0.02 AC +/- 1.23 AC +/- 0.40 AC +/- 0.05 AC +/- 890 C.Y. +/- 890 C.Y. 0</p>
---	--

NOTE: CONSTRUCTION OF ALL BITUMINOUS PATHWAYS IS PERMITTED UNDER SDP 98-14

HOWARD COUNTY MONUMENT #2437003 STAMPED CONCRETE MONUMENT ON NORTH SIDE OF GUILFORD ROAD 10 FEET FROM EDGE OF PAVING.

HOWARD COUNTY MONUMENT #2337001 (ELEV. 496.095) STAMPED CONCRETE MONUMENT ON EAST SIDE OF HALL SHOP ROAD 27.5 FEET FROM EDGE OF PAVING.



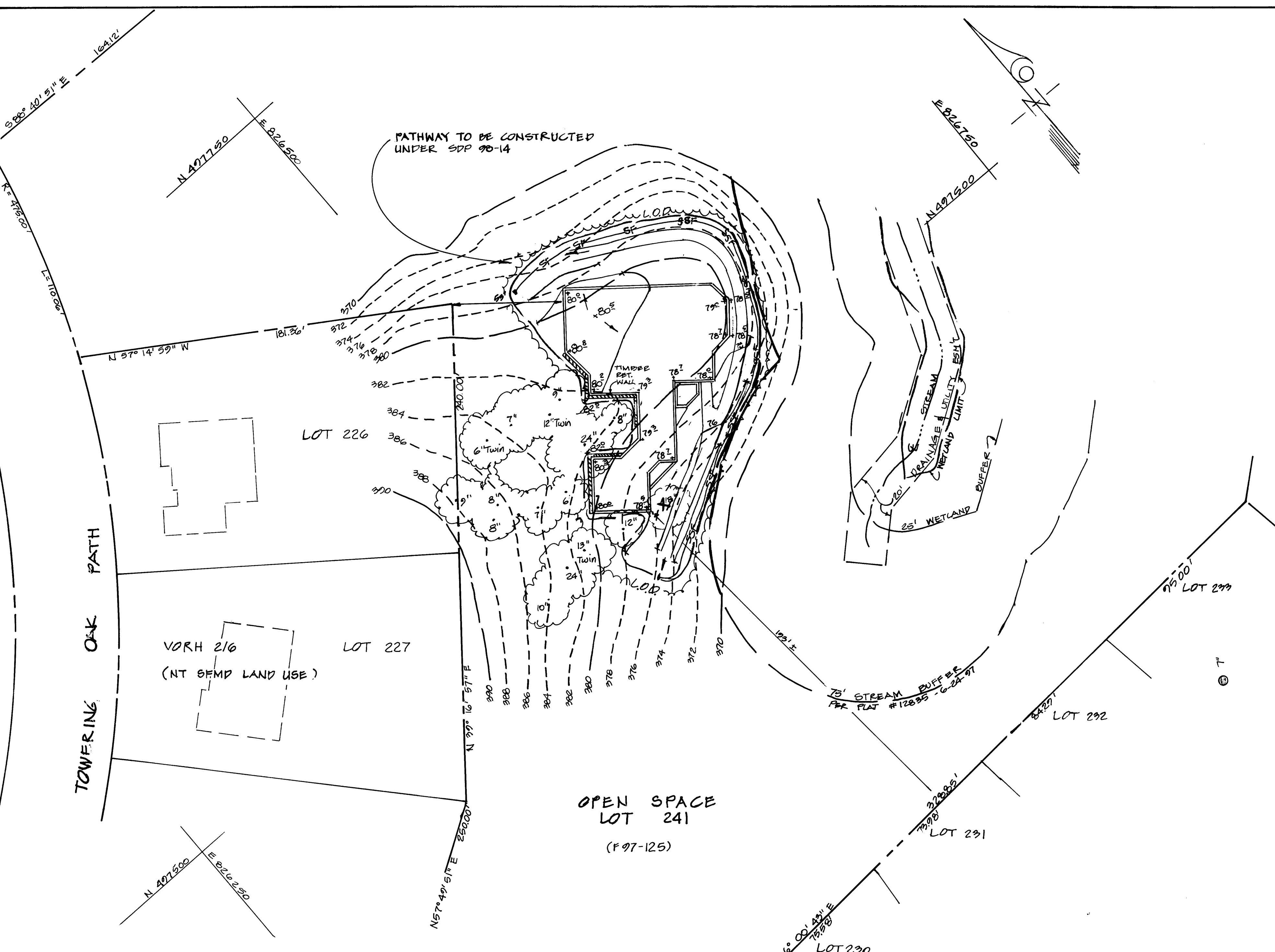
**APPROVED
PLANNING BOARD
of HOWARD COUNTY**

DATE 7/1/99

APPROVED: DEPARTMENT OF PLANNING & ZONING
[Signature] 9/21/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: DEPARTMENT OF PLANNING & ZONING
[Signature] 9/24/99
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING & ZONING
[Signature] 9/24/99
DIRECTOR



PATHWAY TO BE CONSTRUCTED UNDER SPP 99-14

LOT 226

LOT 227

OPEN SPACE LOT 241 (F97-125)

LOT 229

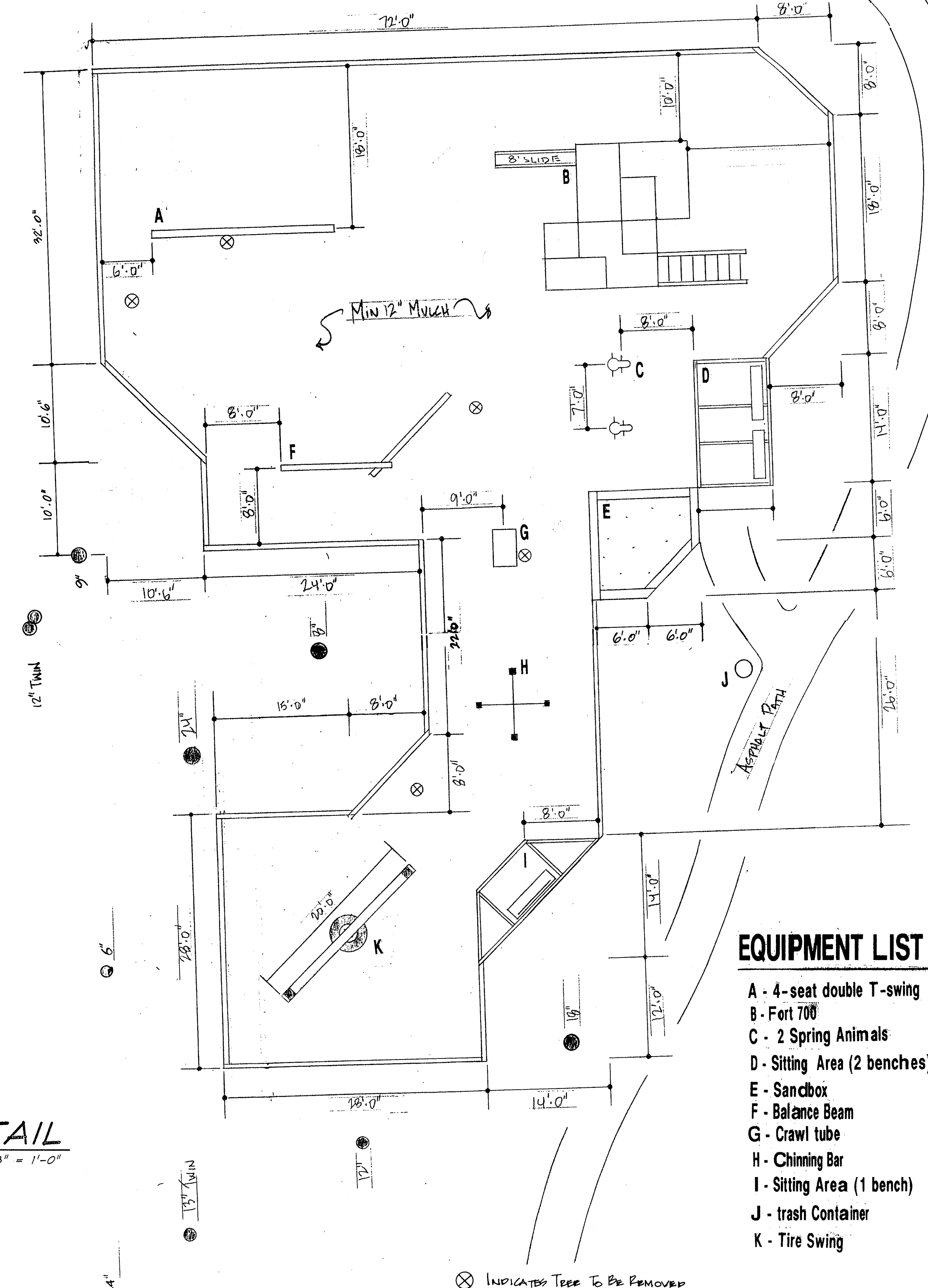
LOT 231

LOT 230

SITE ANALYSIS	
ZONE	NT OPEN SPACE
OPEN SPACE LOT #	241
TOTAL LOT AREA	6.7 AC
DISTURBED AREA	0.31 AC
IMPERVIOUS AREA	0
PERMEABLE AREA	0.31 AC
AREA TO BE VEGETATIVELY STABILIZED	0.15 AC
MULCHED AREA	0.16 AC
TOTAL CUT	180 CY
TOTAL FILL	180 CY
TOTAL SPOIL/BORROW	0

PLAN
SCALE: 1" = 30'

DETAIL
SCALE: 1/8" = 1'-0"



EQUIPMENT LIST

- A - 4-seat double T-swing
- B - Fort 700
- C - 2 Spring Animals
- D - Sitting Area (2 benches)
- E - Sandbox
- F - Balance Beam
- G - Crawl tube
- H - Chinning Bar
- I - Sitting Area (1 bench)
- J - trash Container
- K - Tire Swing

⊗ INDICATES TREE TO BE REMOVED

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 7/1/99

Reviewed for HOWARD S.C.D.
and meets Technical Requirements
Chief Summers 9/15/99
Signature Date
U.S. Natural Resource Conservation Service

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

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."

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.

OWNER
HOWARD RESEARCH AND DEVELOPMENT, CO.
10275 LITTLE PATUMENT PARKWAY
COLUMBIA, MARYLAND 21044

THE COLUMBIA ASSOCIATION
10221 WINGOPIN CIRCLE, SUITE 100
COLUMBIA, MARYLAND 21044-3410



APPROVED: DEPARTMENT OF PLANNING AND ZONING
W. Dammann 9/21/99
Chief, Development Engineering Division Date
Cinda Hamda 9/24/99
Chief, Division of Land Development and Research Date
Scott Scott 9/24/99
Director Date

John R. Johnston 9/15/99 Approved
David A. Ems 9/9/99
Richard J. Stapp 9/9/99

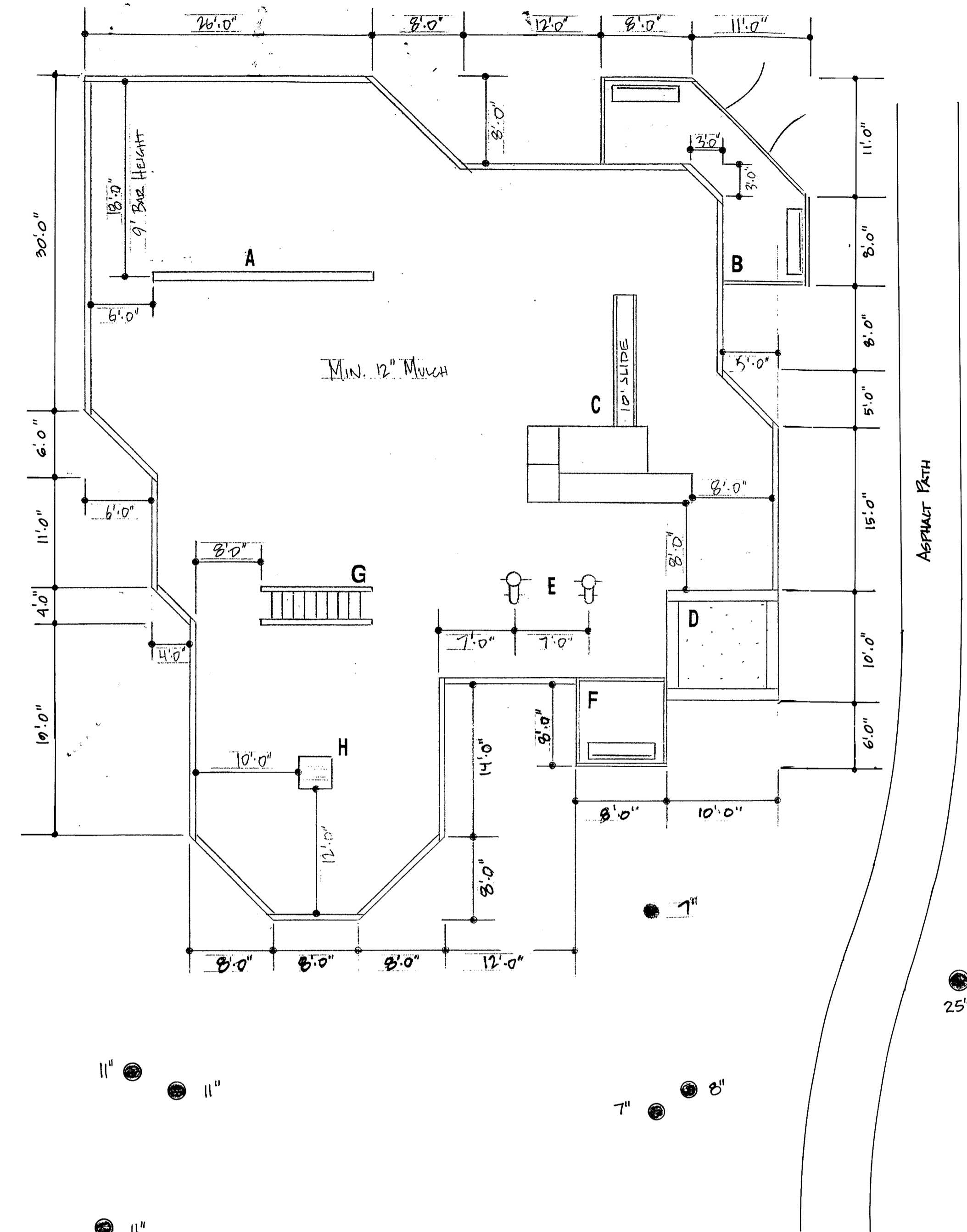
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED WHT	SITE DEVELOPMENT PLAN AND SEDIMENT & EROSION CONTROL PLAN TOT LOT ONE - TOWERING OAK PATH VILLAGE OF RIVER HILL SECTION 2, AREA 6 OPEN SPACE LOT 241 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: THE COLUMBIA ASSOCIATION, INC. 10221 WINGOPIN CIRCLE, SUITE 100 COLUMBIA, MARYLAND 21044-3410 PHONE: (410)-381-0383	SCALE AS-SHOWN
DRAWN ZAH/MM		DRAWING 2 OF 6
CHECKED		JOB NO. 98-14B
DATE MARCH 99		FILE NO. 98-14B-X



PLAN
SCALE: 1" = 30'

SITE ANALYSIS	
ZONE	NT OPEN SPACE
OPEN SPACE LOT #	197
TOTAL LOT AREA	5.8 AC.
DISTURBED AREA	0.82 AC.
IMPERVIOUS AREA	0
PERMEABLE AREA	0.82 AC.
AREA TO BE VEGETATIVELY STABILIZED	0.49 AC.
MULCHED AREA	0.09 AC.
TOTAL CUT	480 CY.
TOTAL FILL	480 CY.
TOTAL SPOILBORROW	0



DETAIL
SCALE: 1/8" = 1'-0"

EQUIPMENT LIST

- A - 4 Seat Double T-swing
- B - Sitting Area (2 Benches)
- C - Fort R-3
- D - Sandbox
- E - 2 Spring Animals
- F - Sitting Area (1 Bench)
- G - Horizontal Ladder
- H - Spring Pad
- I - Trash Container

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 7/1/99

Reviewed for: HOWARD S.C.D.
and State Technical Requirements
Signature: *Cheryl Summers* 9/15/99
Date: 9/15/99
U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED
FOR SOIL EROSION AND SEDIMENT
CONTROL BY THE HOWARD SOIL
CONSERVATION DISTRICT.
Signature: *John K. Denton* 9/15/99
Date: 9/15/99
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: *Debra A. Ellis* 9/9/99
Date: 9/9/99

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."

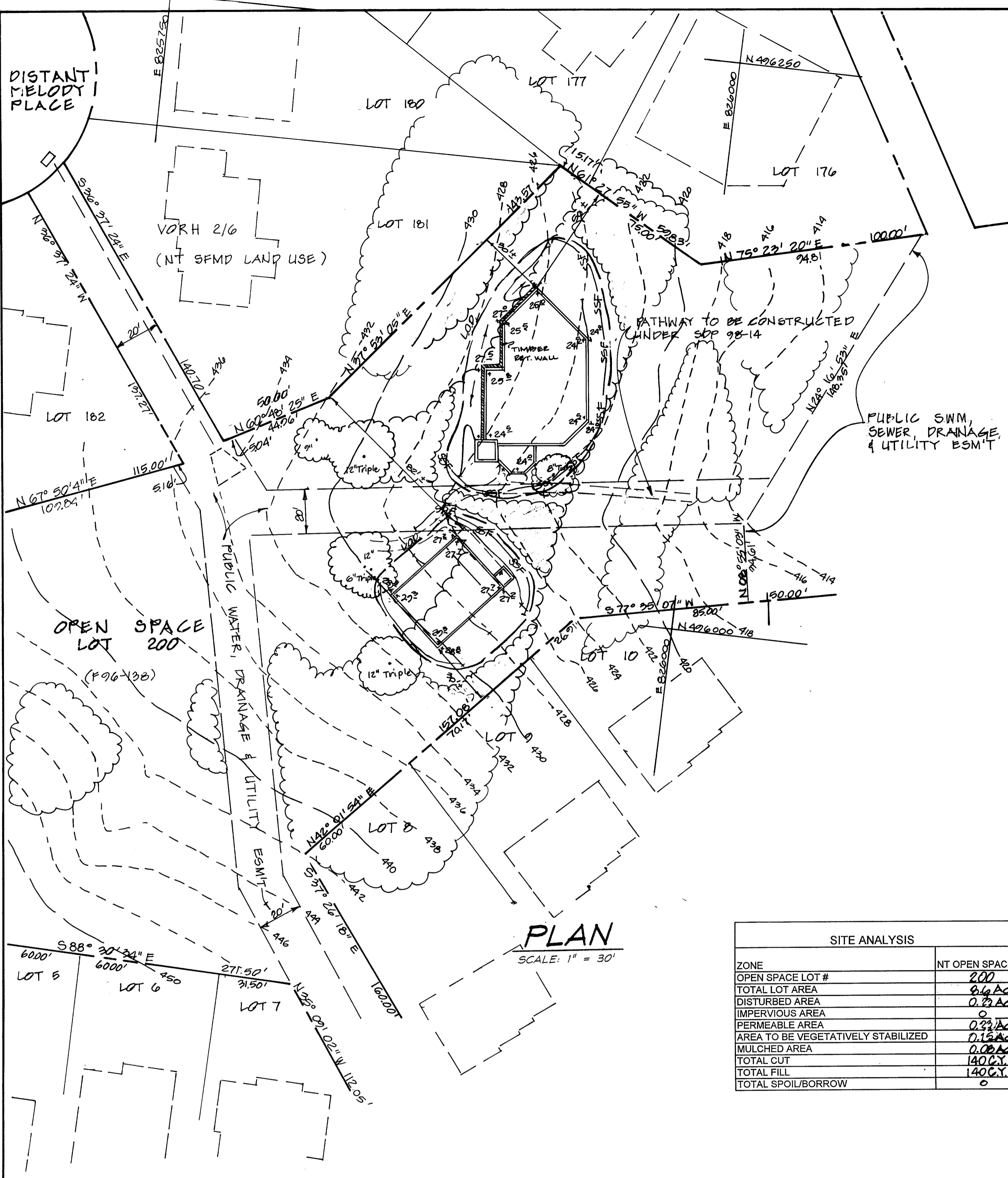
Signature: *Richard J. Stapp* 9.9.99
Date: 9.9.99



OWNER
HOWARD RESEARCH AND DEVELOPMENT, CO.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
THE COLUMBIA ASSOCIATION
10221 WINGOPIN CIRCLE, SUITE 100
COLUMBIA, MARYLAND 21844-3410

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 821-8100 - WASH.		SCALE AS-SHOWN DRAWING 3 OF 6 JOB NO. 98-149 FILE NO. 98-149 X
DESIGNED WHT DRAWN ZAH/MM CHECKED DATE MARCH 99	SITE DEVELOPMENT PLAN AND SEDIMENT & EROSION CONTROL PLAN TOT LOT TWO - EARLY LILY ROW VILLAGE OF RIVER HILL SECTION 2, AREA 6 OPEN SPACE LOT 197 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: THE COLUMBIA ASSOCIATION, INC. 10221 WINGOPIN CIRCLE, SUITE 100 COLUMBIA, MARYLAND 21044-3410 PHONE: (410)-381-0383	FILE NO. 98-149 X

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: *John P. ...* 9/21/99
Date: 9/21/99
Signature: *...* 9/24/99
Date: 9/24/99



PLAN
SCALE: 1" = 30'

SITE ANALYSIS	
ZONE	NT OPEN SPACE
OPEN SPACE LOT #	200
TOTAL LOT AREA	9.6 Ac.
DISTURBED AREA	0.23 Ac.
IMPERVIOUS AREA	0
PERMEABLE AREA	0.33 Ac.
AREA TO BE VEGETATIVELY STABILIZED	0.15 Ac.
MULCHED AREA	0.08 Ac.
TOTAL CUT	140 CY
TOTAL FILL	140 CY
TOTAL SPOIL/BORROW	0

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: 7/1/99

Reviewed for HOWARD S.C.D.
and meets Technical Requirements
Chief Sumner 9/15/99
Signature Date
U.S. National Resources Conservation Service

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

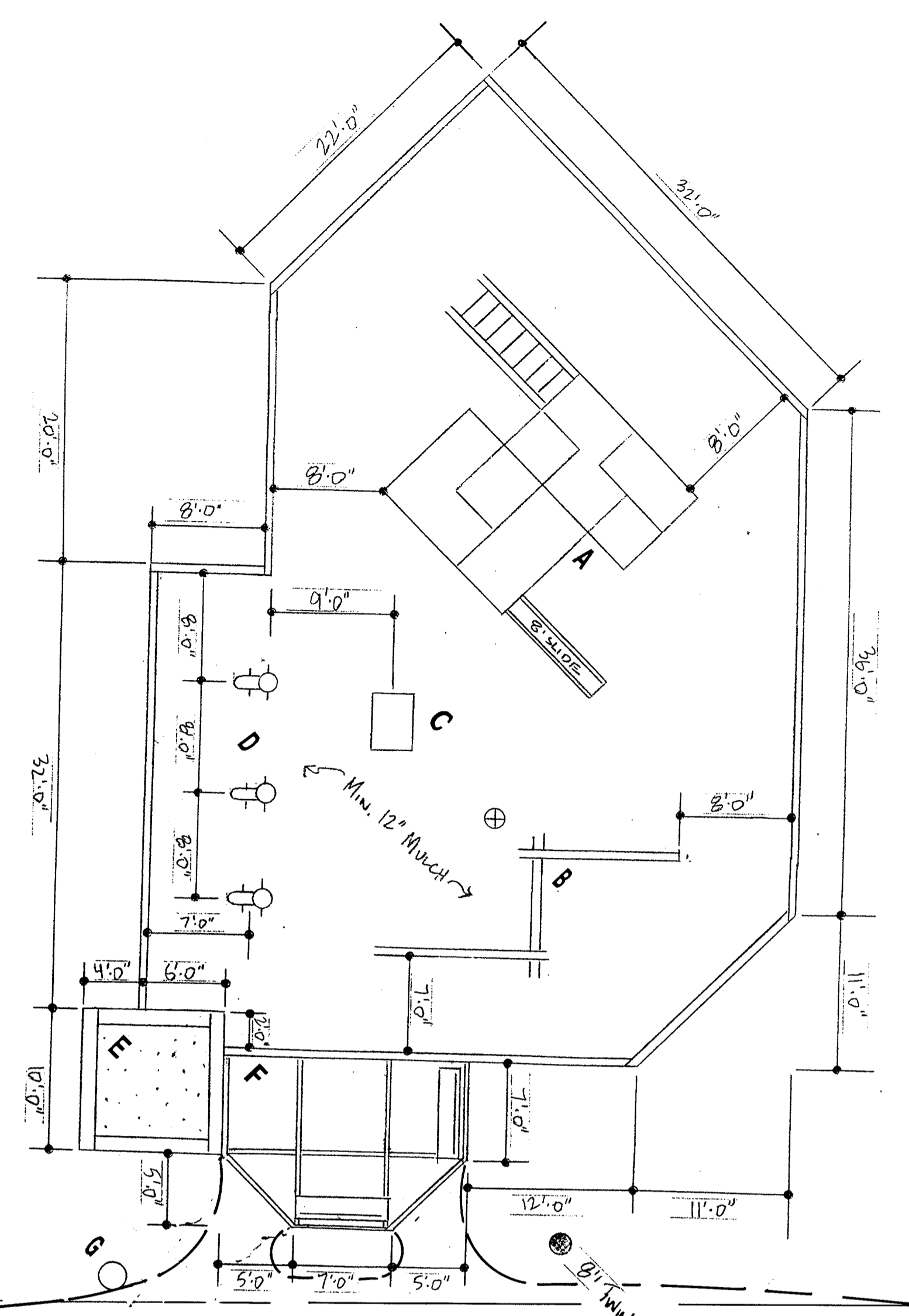
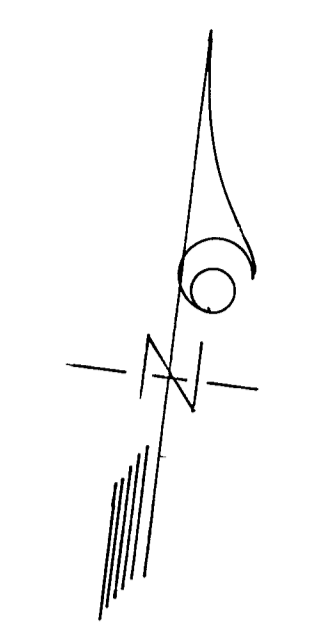
John P. Platten 9/15/99
Approved

OWNER
HOWARD RESEARCH AND DEVELOPMENT, CO.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

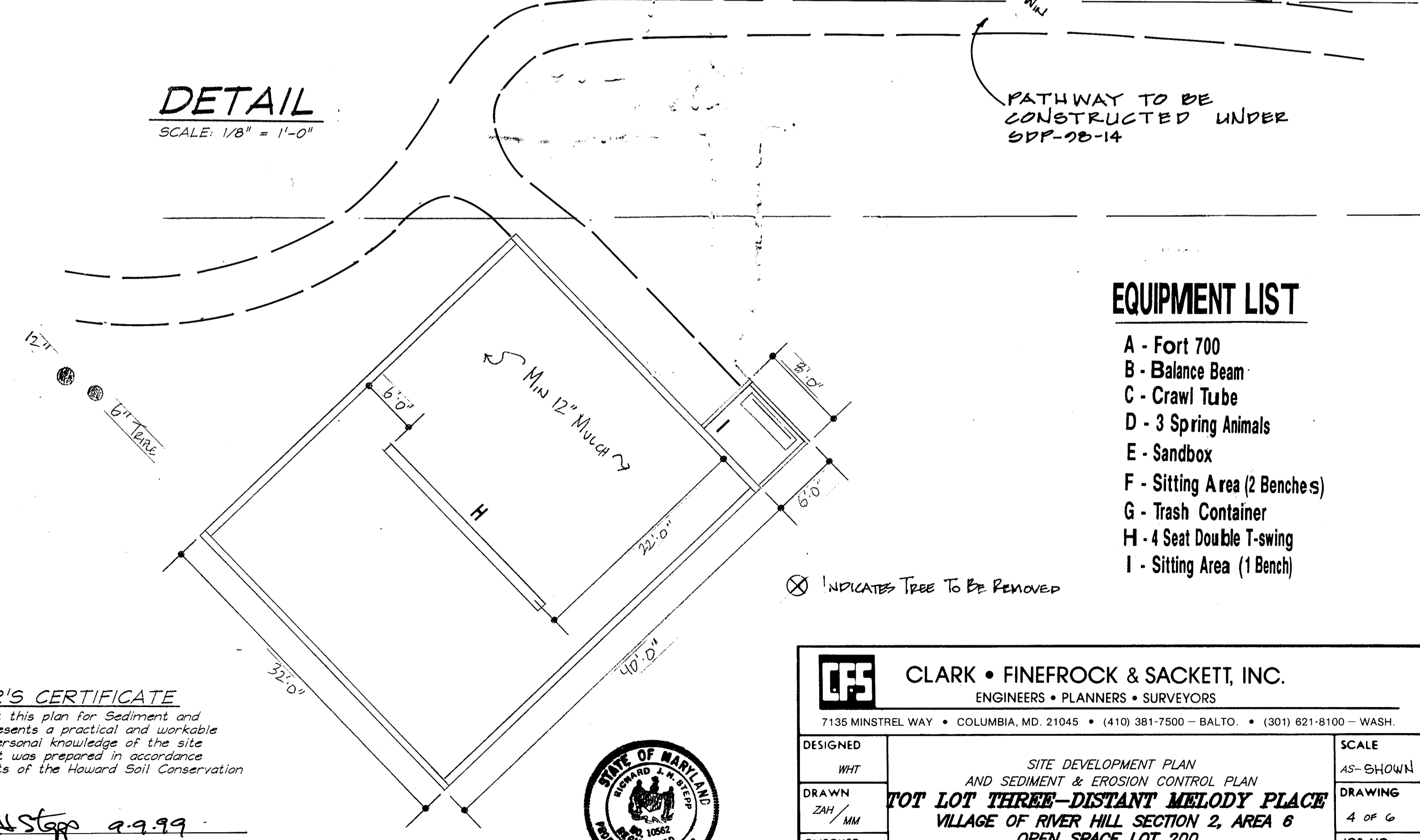
THE COLUMBIA ASSOCIATION
10221 WINCOPIN CIRCLE, SUITE 100
COLUMBIA, MARYLAND 21044-3410

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".
Debra A. Ecks 7/8/99

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.
Richard Justus 9-9-99



DETAIL
SCALE: 1/8" = 1'-0"



EQUIPMENT LIST

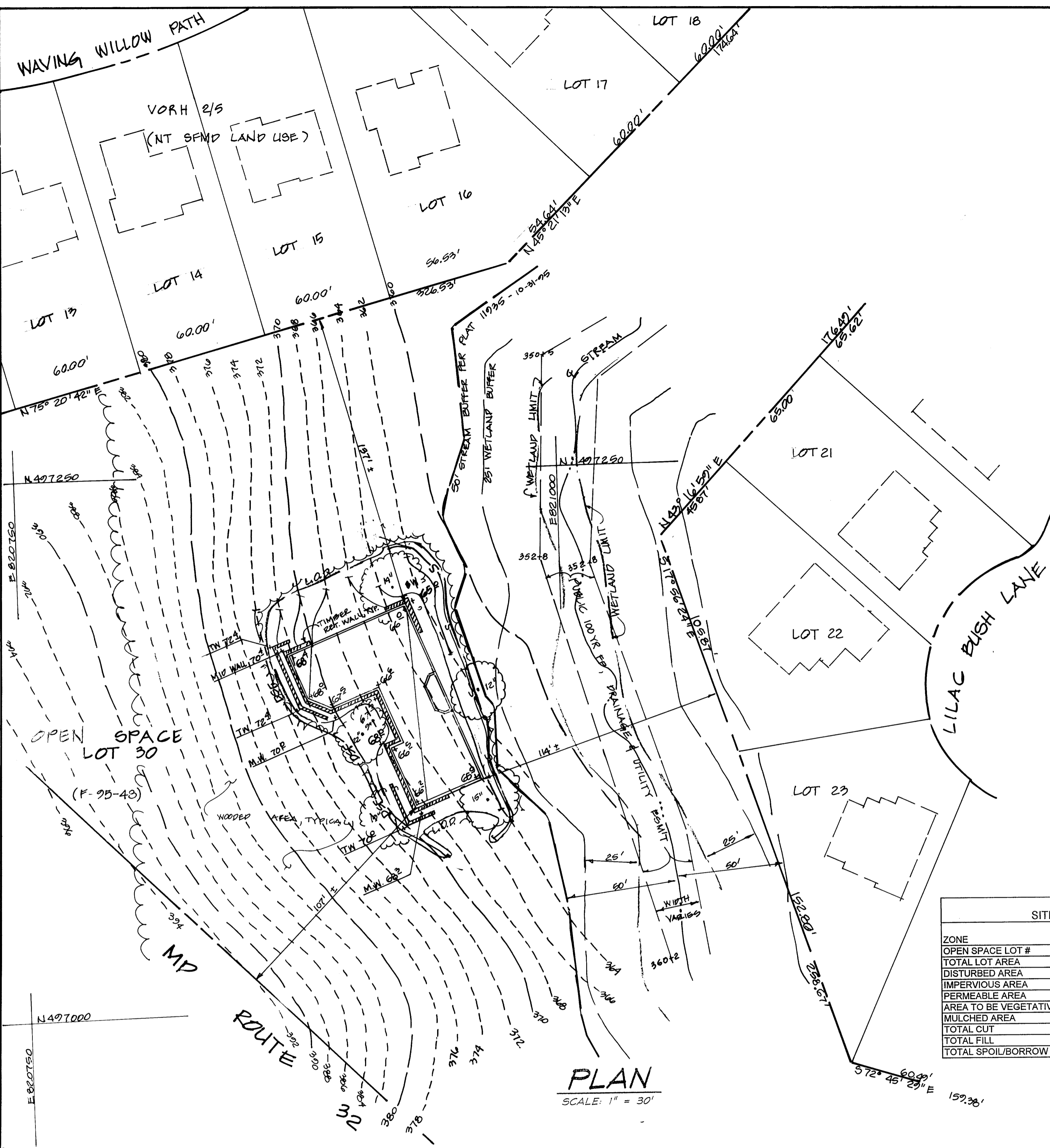
- A - Fort 700
- B - Balance Beam
- C - Crawl Tube
- D - 3 Spring Animals
- E - Sandbox
- F - Sitting Area (2 Benches)
- G - Trash Container
- H - 4 Seat Double T-swing
- I - Sitting Area (1 Bench)

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

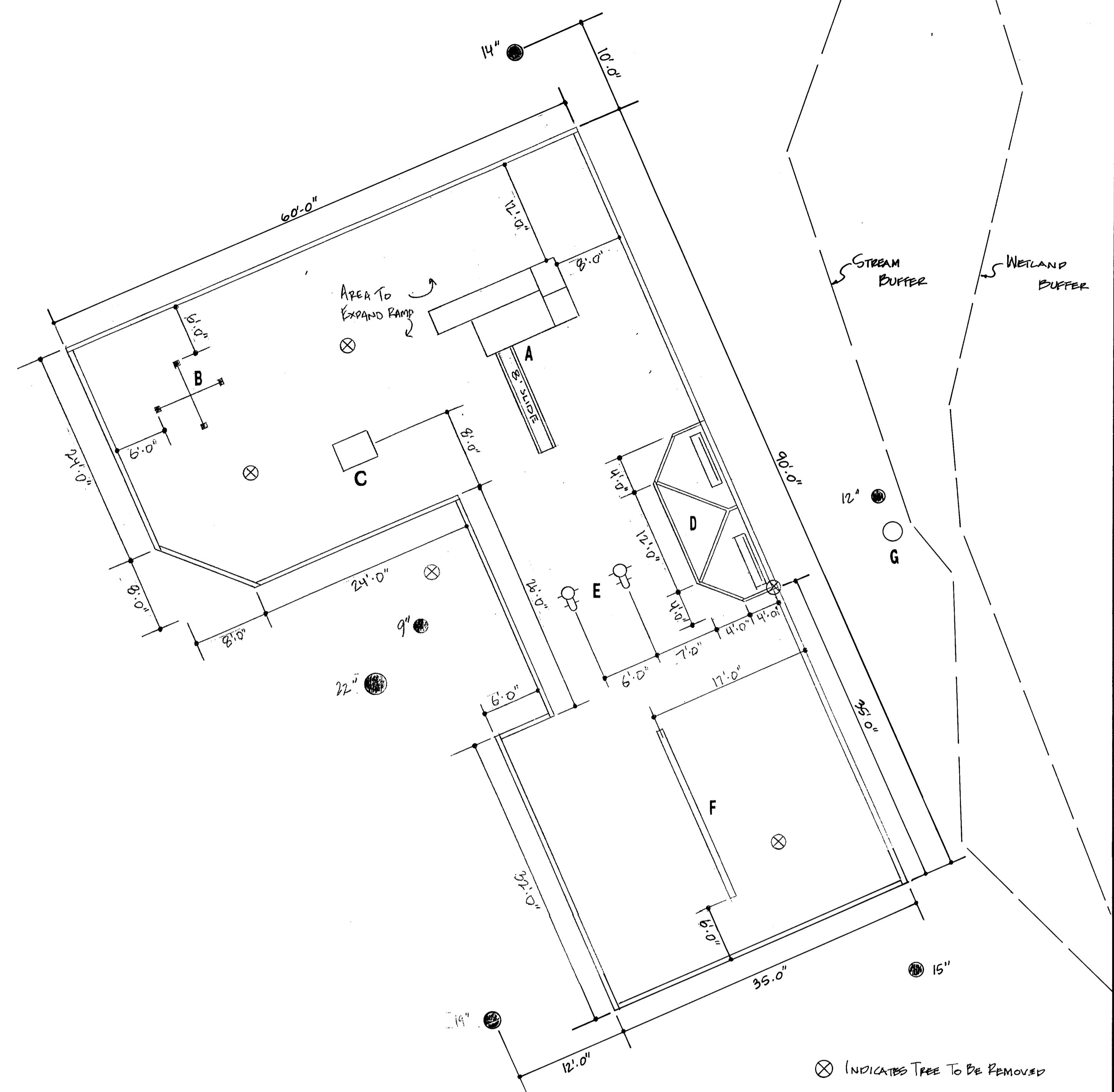
DESIGNED WHT	SITE DEVELOPMENT PLAN AND SEDIMENT & EROSION CONTROL PLAN TOT LOT THREE-DISTANT MELODY PLACE VILLAGE OF RIVER HILL SECTION 2, AREA 6 OPEN SPACE LOT 200 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS-SHOWN
DRAWN ZAH/MM		DRAWING 4 OF 6
CHECKED		JOB NO. 98-148
DATE MARCH 99		FILE NO. 98-148 X

FOR: THE COLUMBIA ASSOCIATION, INC.
10221 WINCOPIN CIRCLE, SUITE 100
COLUMBIA, MARYLAND 21044-3410
PHONE: (410)-381-0383





SITE ANALYSIS	
ZONE	NT OPEN SPACE
OPEN SPACE LOT #	30
TOTAL LOT AREA	10.9 Ac.
DISTURBED AREA	0.19 Ac.
IMPERVIOUS AREA	0
PERMEABLE AREA	0.19 Ac.
AREA TO BE VEGETATIVELY STABILIZED	0.12 Ac.
MULCHED AREA	0.07 Ac.
TOTAL CUT	90 CY.
TOTAL FILL	90 CY.
TOTAL SPOIL/BORROW	0



EQUIPMENT LIST

- A - Fort R-3
- B - Chinning Bar
- C - Crawl Tube
- D - Sitting Area (2 benches)
- E - 2 Spring Animals
- F - 4 Seat Double T-Swing
- G - Trash Container

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 7/1/99

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 8/2/99

Chief, Division of Land Development and Research 9/24/99

Director 9/24/99

Reviewed for HOWARD S.C.D.
and its Technical Requirements
by *Cheryl Simmons* 9/15/99
Signature Date
U.S. Natural Resource Conservation Service

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

John R. Dutton 9/15/99
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."

D. A. Ellis DEVIS A. ELLIS 9/9/99

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.

Rick J. Stepp 9-9-99



OWNER
HOWARD RESEARCH AND DEVELOPMENT, CO.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

THE COLUMBIA ASSOCIATION
10221 WINGOPIN CIRCLE, SUITE 100
COLUMBIA, MARYLAND 21044-3410

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED	SITE DEVELOPMENT PLAN AND SEDIMENT & EROSION CONTROL PLAN TOT LOT FOUR LILAC BUSH / WAVING WILLOW VILLAGE OF RIVER HILL SECTION 2, AREA 5 OPEN SPACE LOT 30 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE
DRAWN		AS-SHOWN
CHECKED		DRAWING
DATE		JOB NO.
FOR: THE COLUMBIA ASSOCIATION, INC. 10221 WINGOPIN CIRCLE, SUITE 100 COLUMBIA, MARYLAND 21044-3410		PHONE: (410)-381-0383 FILE NO. 98-146 X
MARCH 99		98-145

SEDIMENT AND EROSION CONTROL NOTES

- 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 (713-1855).
- 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.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
 - 7 calendar days for all disturbed or graded areas on the project site.
 - 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 perimeter in accordance with Vol. I, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (See C).
- 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 Open Space:	31.6ac
Area Disturbed:	17.25ac
Area to be seeded or paved:	17.25ac
Area to be vegetatively stabilized:	17.25ac
Total Cut:	885cy
Off-site Waste/Borrow Area Location:	885cy
- 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.
- 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.
- The total amount of silt fence = 860 LF
- The total amount of super silt fence =
- The total amount of earth dike =

* It is the responsibility of the contractor to identify the spot/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.	NO. OF DAYS
1. Obtain grading permit.	1
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.	60
6. Final grade and stabilize in accordance with Specs. and Specs.	14
7. Upon approval of the 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-LEIVED 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.) 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.)
- 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 periods March 1 thru April 30, and August 1 thru October 15, seed with 80 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 80 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 80 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 unruffed 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 reseeding.

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 ryegrass (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 unruffed 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.

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:

- The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- 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.
- The original soil to be vegetated contains material toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible.

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 Experiment Station.

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.

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 Experiment Station.

Topsoil Application

i. 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.

Topsoil Application

i. Topsoil shall be uniformly distributed in a 4" - 6" 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.

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Topsoil Application

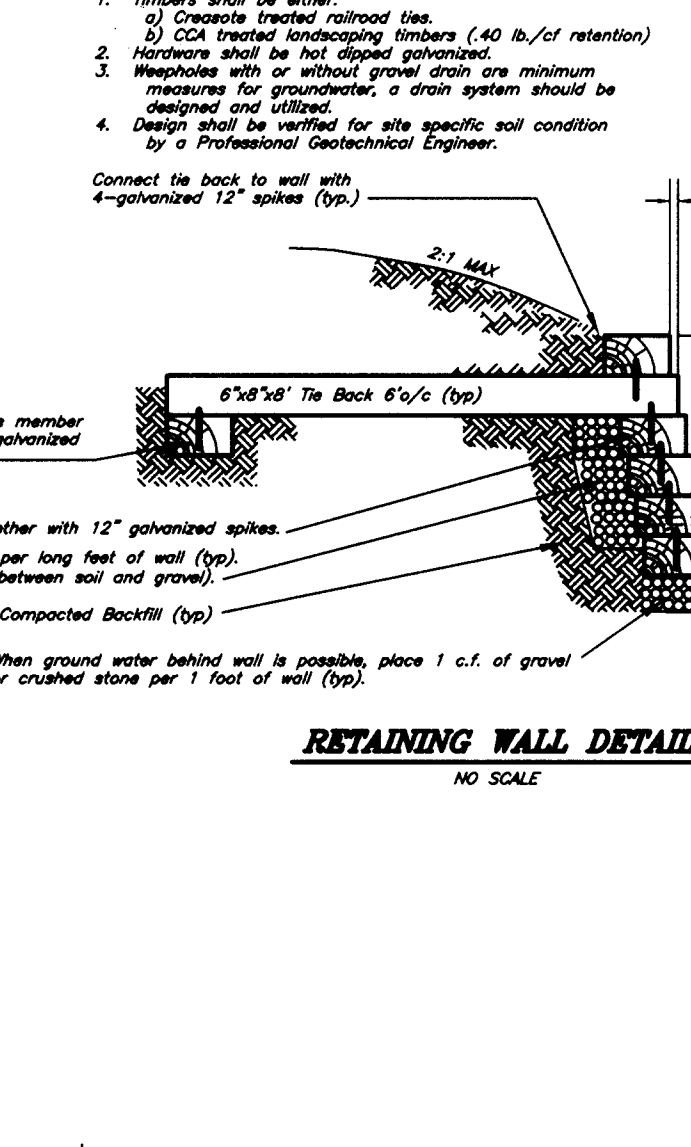
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RETAINING WALL DETAIL

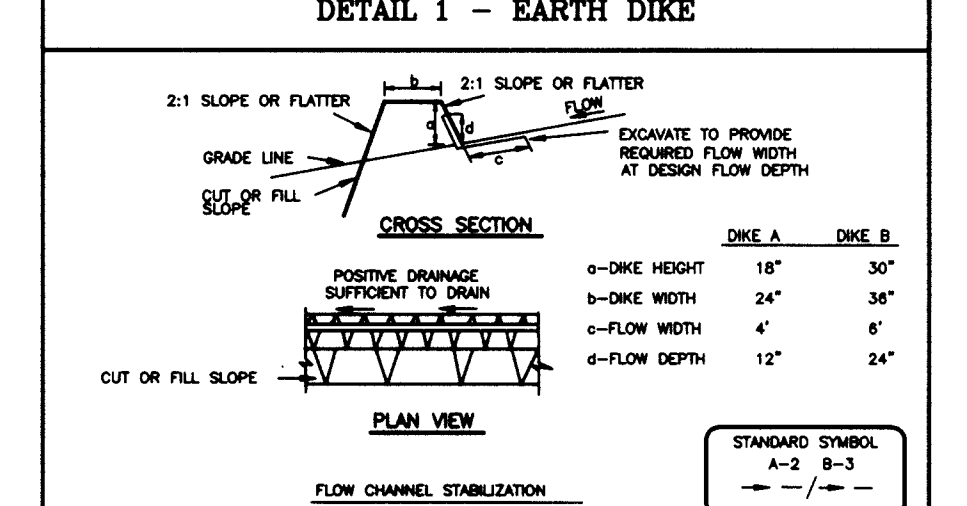
NO SCALE



TYPICAL SECTION AT TIMBER EDGE

NO SCALE

DETAIL 1 - EARTH DIKE



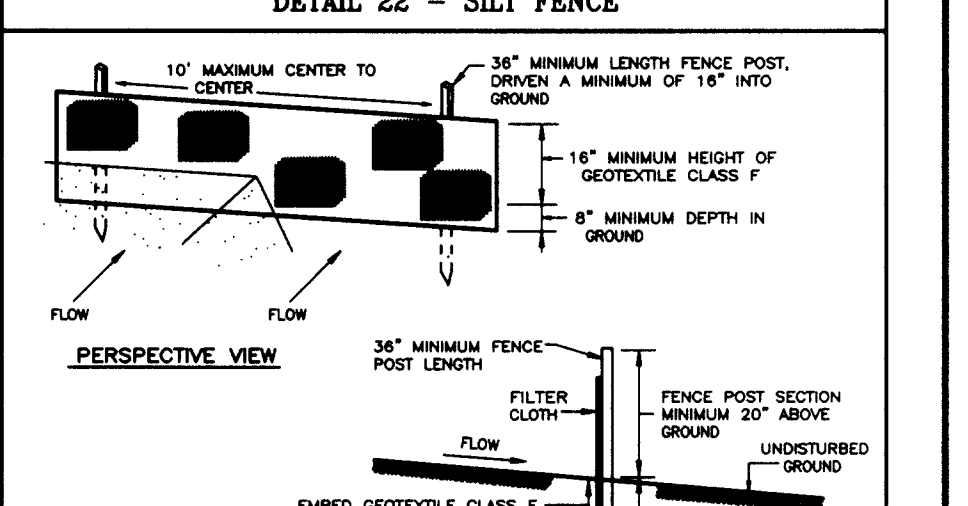
CONSTRUCTION SPECIFICATIONS

1. All temporary earth dikes shall have unimpeded positive grade to an outlet. Spot seedings may be necessary for grasses less than 1X.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area of at least equal velocity.
4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



CONSTRUCTION SPECIFICATIONS

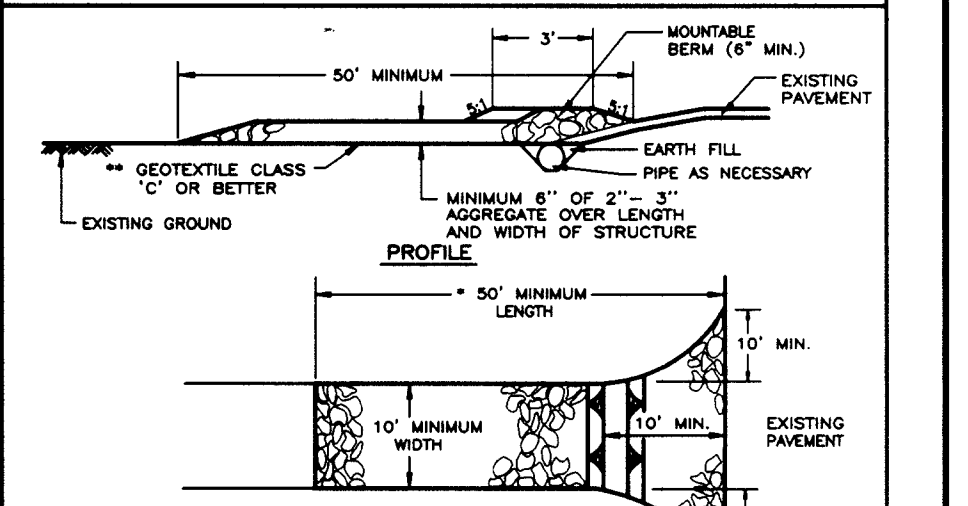
1. Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Flood gates shall be 1/2" x 1/2" (minimum) dia. or 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be allowed if U section weighing not less than 1.00 pound per linear foot.
2. Geotextile shall be prepared 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 ft ² /min (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 surge scour or when sediment accumulation reaches 50% of the fabric height.
5. Inspection and maintenance must be provided periodically and after each rain event.

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MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATION

1. Length - minimum of 50' (+ 30' for a 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 stoning. 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 mounded 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, including leaving the site from the entire length of the stabilized construction entrance.

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NOTE: TYPICAL LOCATION OF CONSTRUCTION ENTRANCE TO BE THE SAME AS FOR THE ADJACENT PATHWAY. FINAL LOCATION TO BE APPROVED BY THE INSPECTOR FOR EACH CASE, PRIOR TO CONSTRUCTION.

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 7/1/99

Reviewed for HOWARD COUNTY S.C.D. and Technical Requirements by: John K. Hunter 7/1/99
U.S. National 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.

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.



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

DESIGNED	SCALE
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CHECKED	JOB NO.
	98-148
DATE	FILE NO.
MARCH 99	98-148

FOR: THE COLUMBIA ASSOCIATION, INC.
10221 WINCOPIN CIRCLE, SUITE 100
COLUMBIA, MARYLAND 21044-3410
PHONE: (410)-381-0383