

GENERAL NOTES

- This plan is subject to compliance with the 4th Edition of the Howard County Subdivision Regulations and the recently amended Howard County Zoning Regulations pursuant to Council Bill 50-2001.
- Subject property zoned RR-DEO per 10/16/93 Comprehensive Zoning Plan.
- Private water and sewer will be used within this site.
- Total area of property = 30.543 ac.±
- Area of proposed public R/W: 2.687 ac.±
- Number of proposed buildable lots: 11
- Area of proposed buildable lots: 11.486 ac.±
- Number of proposed non-buildable preservation parcels: 1
Area of proposed non-buildable preservation parcels: 2.49 ac.±
- Number of proposed buildable preservation parcels: 1
Area of proposed buildable preservation parcels: 13.98 ac.±
- Density calculations:
a.) Number of lots based on own density:
 $30.543ac / 4.25 = 7.18$, therefore 7 units
b.) Net Tract Area:
 $30.543ac - 4.34ac(100 \text{ yr. Floodplain}) - 0.67ac(\text{slopes } 25\% \text{ or greater}) = 25.53ac$
c.) Maximum number of lots allowed based on DEO option:
 $25.53ac / 2 = 12.76 = 12$ units.
d.) Total number of DEO units required:
 $12 - 7 = 5$ units
- Open space requirements:
a.) Minimum open space required = $30.543ac \times 5\% = 1.527$ ac.
b.) Non-buildable preservation parcel 'B' will be owned and maintained by the H.O.A. and will contain the Stormwater Management Facility. This Non-buildable preservation parcel will satisfy the open space requirements. Total area: 2.49 Ac.±
- The lots shown hereon comply with the minimum ownership, width and lot area as required by the Maryland State Department of the Environment.
- This area designates a private sewage easement of at least 10,000 square feet (10,000 square feet per lot for shared drain fields associated with a shared sewage disposal facility) as required by the Maryland State Department of the Environment for individual sewage disposal (COMAR 26.04.03). Improvements of any nature in this area are restricted until public sewage is available. These easements shall become null and void upon connection to a public sewage system. The County Health Officer shall have the authority to grant variances for encroachments into the private sewage easement. Recordation of a modified sewage easement shall not be necessary.
- All wells and septic fields within 100' of property's boundary have been shown where pertinent.
- The septic fields are located on soil types CHC2, Cs, MgC2, MIB2, MID2 and MID3 as per the soil survey of Howard County, Soils Map #14.
- All percolation test holes and their elevations have been field located by C.B. Miller and Associates, registered land surveyor.
- On-site topography based on a Field Run Topographic Survey prepared by C.B. Miller & Associates in August, 2001 with two foot contours (one foot contours are provided in the septic area for Preservation Parcel 'A'). Off-site and non-critical topography based on Howard County 1993 Aerial Topographic Surveys with five foot contours.
- The septic field proposed for the Sand Mound system on Preservation Parcel 'A' is located on areas with slopes less than 12%. The septic area for Preservation Parcel 'A' is suitable for Sand Mound type systems only.
- All wells to be drilled prior to submittal of record plat for signature.
- Groundwater appropriations permit to be obtained prior to submittal of record plat for signature.
- Existing house on Lot 1 to remain.
- Existing well and septic system on Lot 1 to be properly abandoned and replaced prior to submittal of record plat for signature.
- A.F.F.O. traffic study prepared by Street Traffic Studies, approved under S-01-29 on 6/19/01.
- Wetlands delineation and report and Forest Stand delineation prepared by Exploration Research Inc. approved under S-01-29 on 6/19/01.
- The project is not within the metropolitan district.
- Previous Howard County file numbers: S-01-29;
- The project is in conformance with the latest Howard County Standards unless waivers have been approved.
- The coordinates shown hereon are based upon the Howard County Geodetic Control which is based on the Maryland State Plane Coordinate system. Howard County monument numbers 15CA and 15FA were used for this project.
- S.W.M. for cpy and wpy is provided in a Micro Pool Extended Detention Facility and rev will be provided for in grass swales. The facility will be publicly owned with joint maintenance by the H.O.A. and Howard County.
- No clearing, grading or construction is permitted within wetlands, streams or their required buffers.
- The floodplain study for this project prepared by FSH Associates in October, 2001.
- The noise study for this project was prepared by Staiano Engineering Inc. in October, 2001.
- The geotechnical report for this project was prepared by Herbst, Benson and Associates dated January, 2002.
- Street trees along Stiles Way and perimeter landscaping will be shown at Final Plan stage.
- For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipestem and road right-of-way line and not to the pipestem lot driveway.
- Forest Conservation for this project is met by retention of 5.12ac of existing forest on Preservation Parcel 'A' and afforestation of 0.12ac on Preservation Parcel 'B'.

PRELIMINARY PLANS TWIN PINES

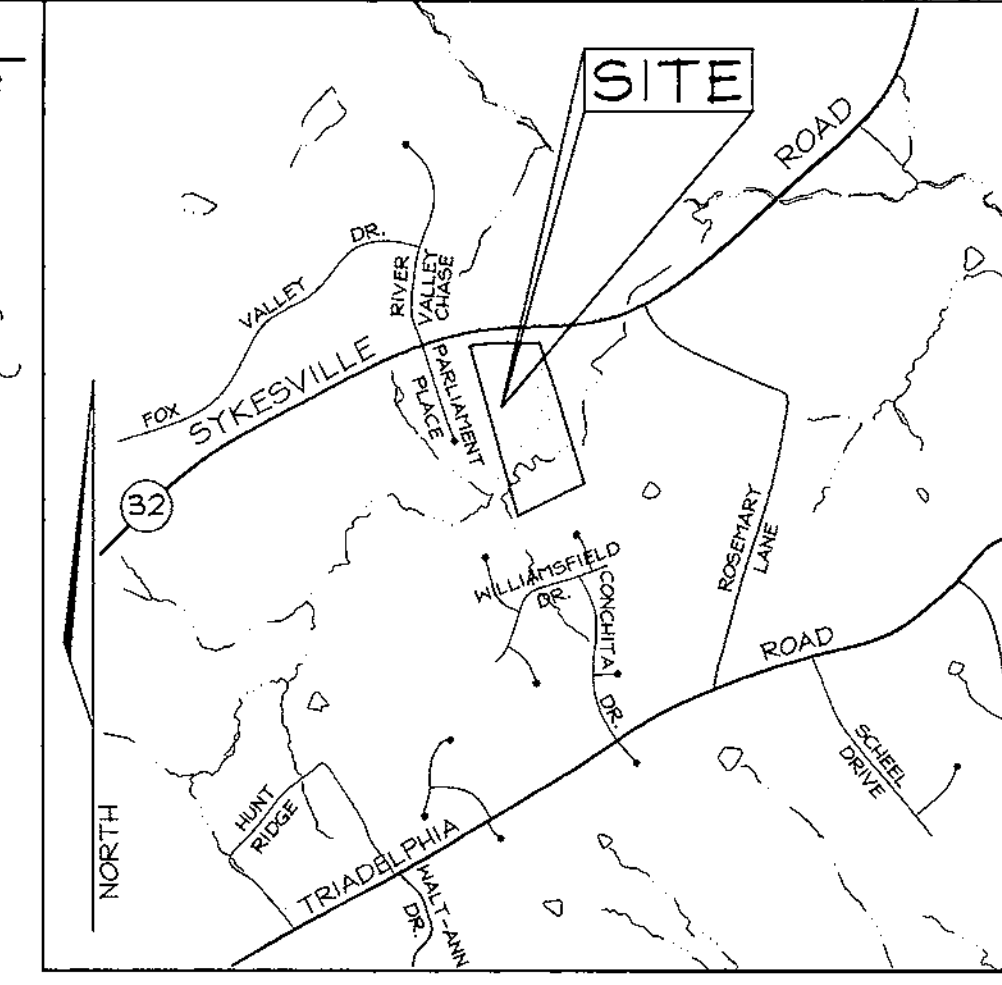
LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A' AND 'B' HOWARD COUNTY, MARYLAND



LOCATION MAP
SCALE: 1"=200'

LEGEND

- Existing Contour
- Proposed Contour
- Direction of Flow
- Existing Spot Elevation
- Proposed Spot Elevation
- Existing Trees
- Proposed Septic Easement
- Existing Septic Easement
- 15-24.9% Slopes
- 25-50% Slopes
- Wetlands
- Use-In-Common Access Easement
- Existing Perc Test (Passed)
- Existing Perc Test (Failed)
- Existing Dry Well



VICINITY MAP
SCALE: 1"=2000'

**U.S. EQUIVALENT
COORDINATE TABLE**

POINT	NORTHING	EASTING
900	588,872.0122	1,321,476.8887
901	588,222.8312	1,321,682.0134
904	587,295.3194	1,321,965.1479
905	586,958.4962	1,321,277.8243
906	587,229.6250	1,321,201.4400
909	588,836.5648	1,320,746.0805
910	588,870.8096	1,321,214.8501

BENCHMARKS

Sta. 15CA	N 182,533.6973	E 404,139.3307	El.: 157.3223 (meters)
	N 598,862.638	E 1,325,913.787	El.: 516.148 (feet)
Sta. 15FA	N 181,632.8032	E 404,052.1342	El.: 148.4227 (meters)
	N 595,906.955	E 1,325,627.710	El.: 486.950 (feet)

SHEET INDEX

DESCRIPTION	SHEET No.
Cover Sheet	1 of 8
Preliminary Plan	2 of 8
Preliminary Plan	3 of 8
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	4 of 8
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	5 of 8
Preliminary Forest Conservation Plan	6 of 8
Preliminary Forest Conservation Plan	7 of 8
Preliminary Forest Conservation Plan	8 of 8

CENTERLINE ROAD CURVE DATA

CURVE No.	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	100.00'	82.71'	47°23'51"	N24°53'37"W	80.38'
C2	90.00'	152.07'	82°48'23"	N02°11'08"W	134.61'
C3	100.00'	122.17'	70°00'00"	N18°13'04"E	114.72'
C4	75.00'	70.00'	53°28'34"	N04°57'23"E	67.43'

* Curve No. 3 meets the requirements for a speed control device

ROAD CLASSIFICATION

ROAD NAME	CLASSIFICATION	R/W
Stiles Way	Public Access Place	40'

MINIMUM LOT SIZE CHART

LOT NUMBER	GROSS AREA (sf)	PIPESTEM AREA (sf)	MINIMUM LOT SIZE
2	49,372±	3,299±	46,073±
7	48,837±	528±	48,309±
8	48,304±	1,636±	46,668±

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 3/12/02
COUNTY HEALTH OFFICER DATE

DESIGNED BY: PS
DRAWN BY: PS
CHECKED BY: ZYF
SCALE: 1"=100'
DATE: Feb. 27, 2002
W.O. No.: 3048
SHEET No. 1 OF 8

OWNER
Clifton E. & Betty K. Harrison
P.O. Box 287
West Friendship, Maryland 21794

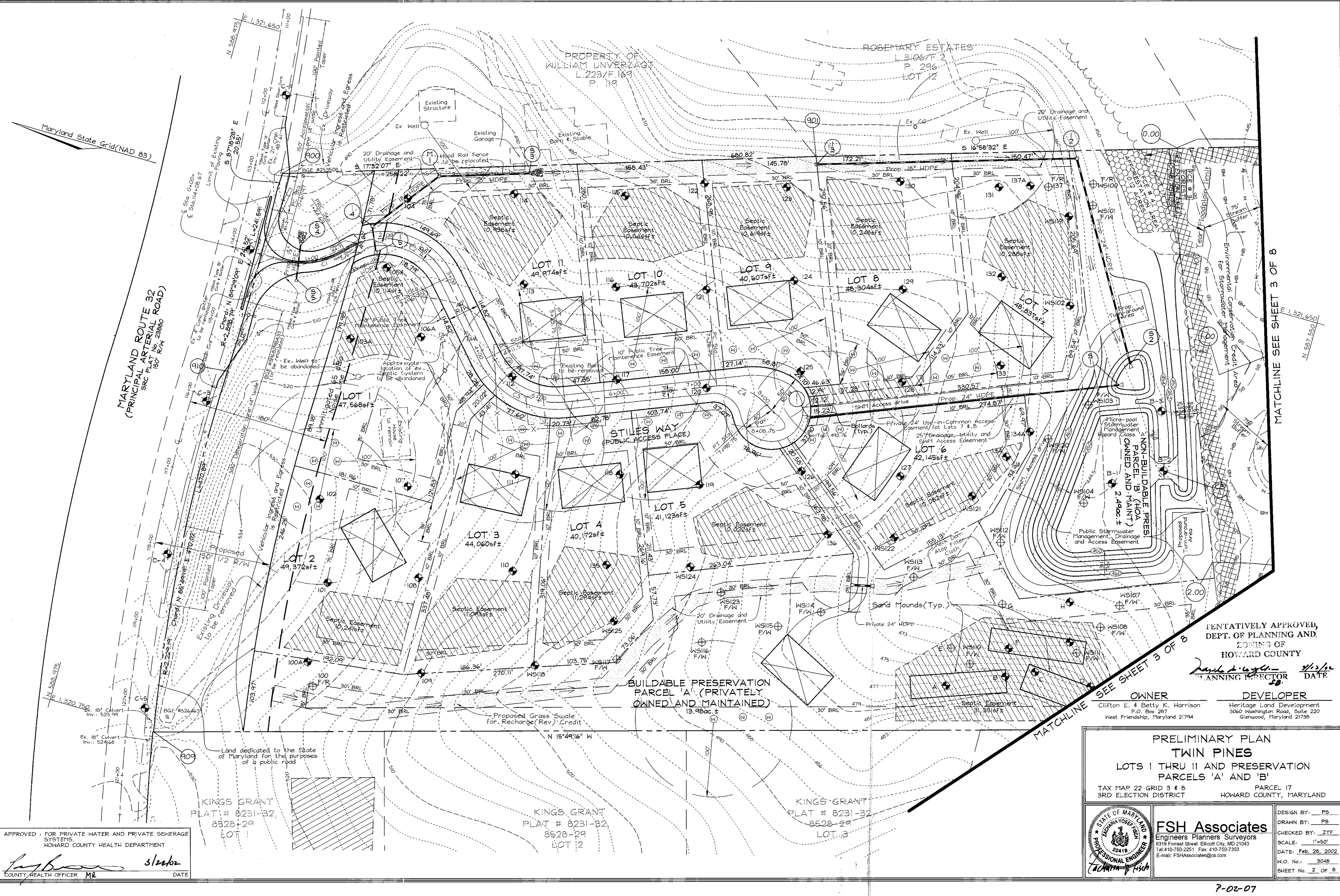
DESIGNER
[Signature]
DATE: 2/28/02

DEVELOPER
Heritage Land Development
3040 Washington Road, Suite 220
Glenwood, Maryland 21758

COVER SHEET
TWIN PINES
LOTS 1 THRU 11 AND PRESERVATION
PARCELS 'A' AND 'B'

TAX MAP 22 GRID 3 # 8 PARCEL 17
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street Ellicott City, MD 21043
Tel: 410-750-2251 Fax: 410-750-7350
E-mail: FSHAssociates@cs.com



MATCHLINE SEE SHEET 3 OF 8

TENTATIVELY APPROVED,
DEPT. OF PLANNING AND
ZONING OF
HOWARD COUNTY

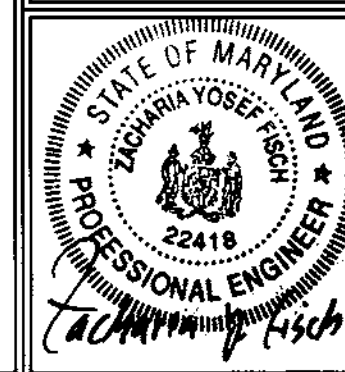
David A. Taylor *W. J. ...*
PLANNING DIRECTOR DATE

OWNER	DEVELOPER
Clifton E. & Betty K. Harrison P.O. Box 287 West Friendship, Maryland 21794	Heritage Land Development 3060 Washington Road, Suite 220 Glenwood, Maryland 21738

PRELIMINARY PLAN
TWIN PINES
LOTS 1 THRU 11 AND PRESERVATION
PARCELS 'A' AND 'B'

TAX MAP 22 GRID 3 & 8
3RD ELECTION DISTRICT

PARCEL 17
HOWARD COUNTY, MARYLAND



FSH Associates
Engineers Planners Surveyors
8318 Forrest Street, Ellicott City, MD 21043
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E-mail: FSHAssociates@cs.com

DESIGN BY: PS
DRAWN BY: PS
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SCALE: 1"=50'
DATE: Feb. 28, 2002
W.O. No.: 304B
SHEET No. 2 OF 8

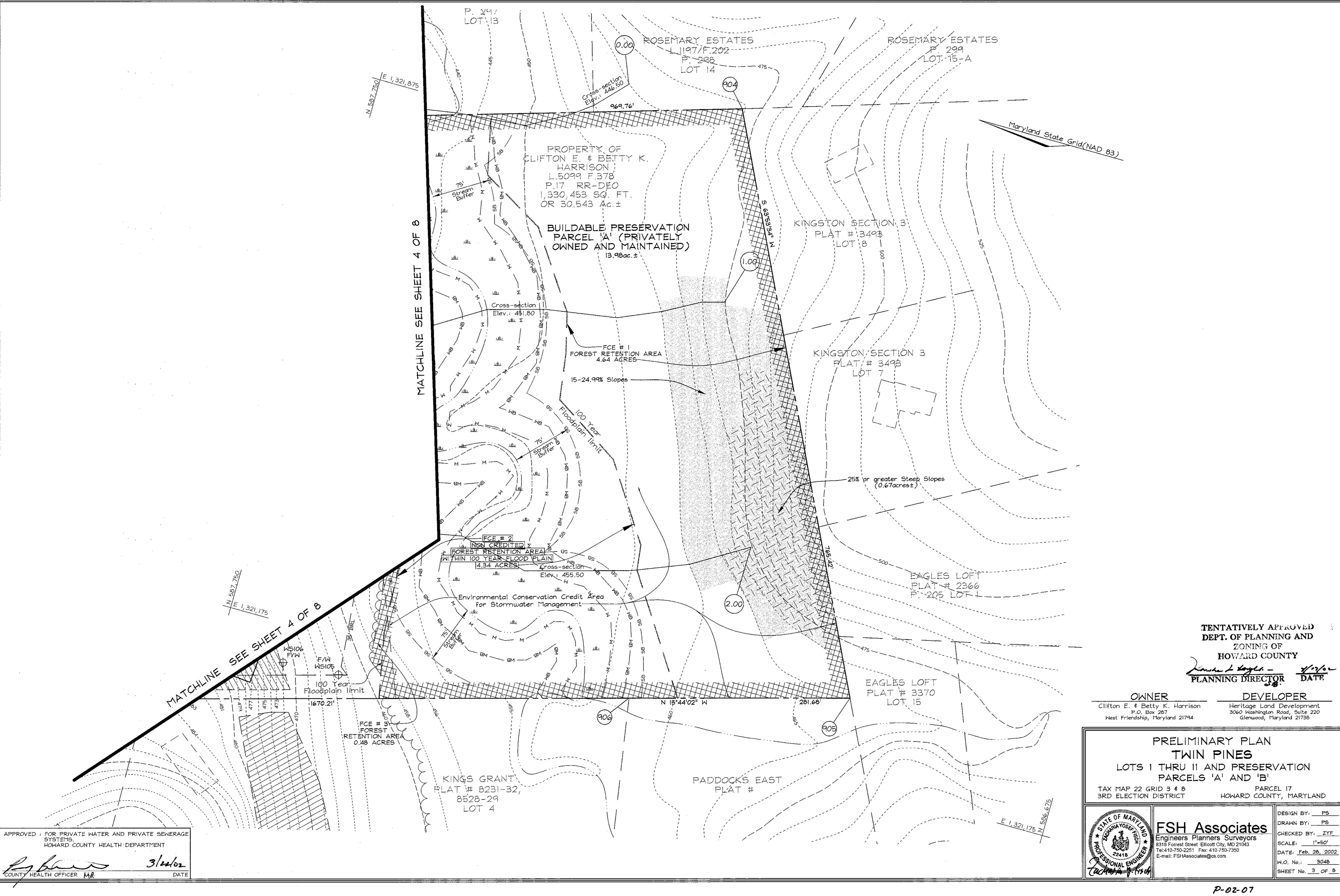
APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

John ...
COUNTY HEALTH OFFICER MR DATE 3/28/02

KINGS GRANT
PLAT # 8231-32
8528-29
LOT 1

KINGS GRANT
PLAT # 8231-32
8528-29
LOT 2

KINGS GRANT
PLAT # 8231-32
8528-29
LOT 3



TENTATIVELY APPROVED
 DEPT. OF PLANNING AND
 ZONING OF
 HOWARD COUNTY
Richard L. Taylor - *4/12/02*
 PLANNING DIRECTOR DATE

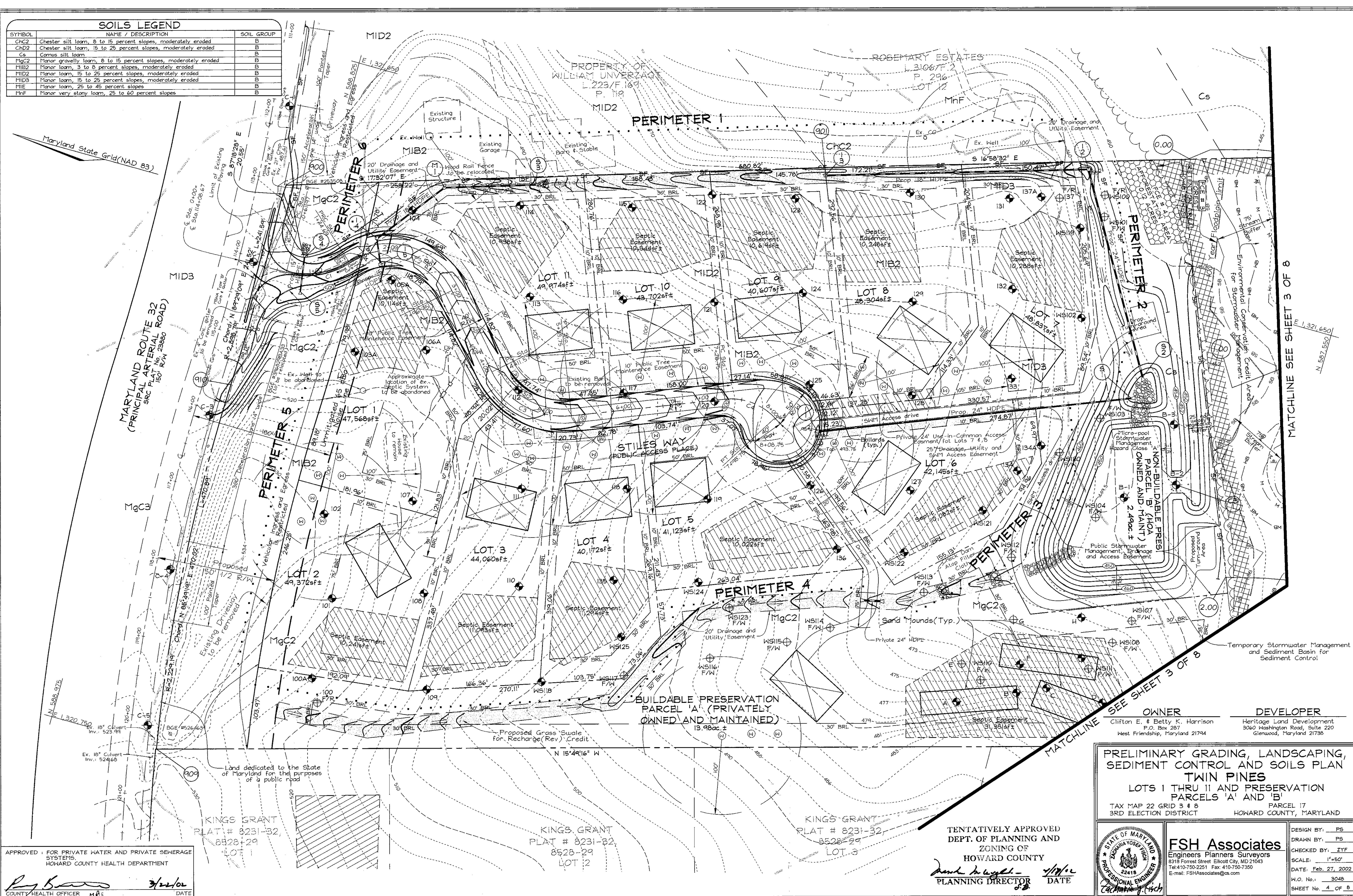
OWNER Clifton E. & Betty K. Harrison P.O. Box 287 West Friendship, Maryland 21794	DEVELOPER Heritage Land Development 3060 Washington Road, Suite 220 Glenwood, Maryland 21738
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PRELIMINARY PLAN
TWIN PINES
 LOTS 1 THRU 11 AND PRESERVATION
 PARCELS 'A' AND 'B'
 TAX MAP 22 GRID 3 # 8 PARCEL 17
 3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE
 SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
[Signature]
 COUNTY HEALTH OFFICER
 DATE 3/22/02

	FSH Associates Engineers Planners Surveyors 8318 Forrest Street, Ellicott City, MD 21043 Tel: 410-750-2251 Fax: 410-750-7350 E-mail: FSHAssociates@cs.com	DESIGN BY: PS
		DRAWN BY: PS
		CHECKED BY: ZYF
		SCALE: 1"=50'
		DATE: Feb. 28, 2002
		N.O. No.: 3048
		SHEET No. 3 OF 8

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester silt loam, 15 to 25 percent slopes, moderately eroded	B
Cs	Comus silt loam	B
MgC2	Manor gravelly loam, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MID2	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MID3	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MIE	Manor loam, 25 to 45 percent slopes	B
MnF	Manor very stony loam, 25 to 60 percent slopes	B

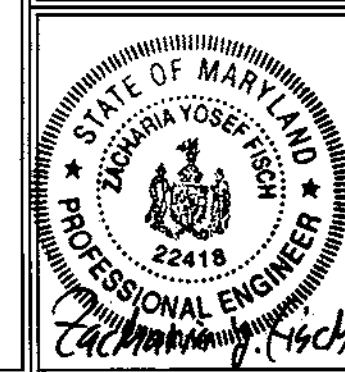


APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER *[Signature]* DATE 3/22/02

TENTATIVELY APPROVED
 DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY
 PLANNING DIRECTOR *[Signature]* DATE 4/18/02

OWNER: Clifton E. & Betty K. Harrison
 DEVELOPER: Heritage Land Development

PRELIMINARY GRADING, LANDSCAPING, SEDIMENT CONTROL AND SOILS PLAN
 TWIN PINES
 LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A' AND 'B'
 TAX MAP 22 GRID 3 & 8 PARCEL 17
 3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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 DRAWN BY: PS
 CHECKED BY: YTF
 SCALE: 1"=50'
 DATE: Feb. 27, 2002
 M.O. No.: 3048
 SHEET No. 4 OF 8

MATCHLINE SEE SHEET 3 OF 8

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester silt loam, 15 to 25 percent slopes, moderately eroded	B
Cs	Cornus silt loam	B
MgC2	Manor gravelly loam, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MID2	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MID3	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MIE	Manor loam, 25 to 45 percent slopes	B
MnF	Manor very stony loam, 25 to 60 percent slopes	B

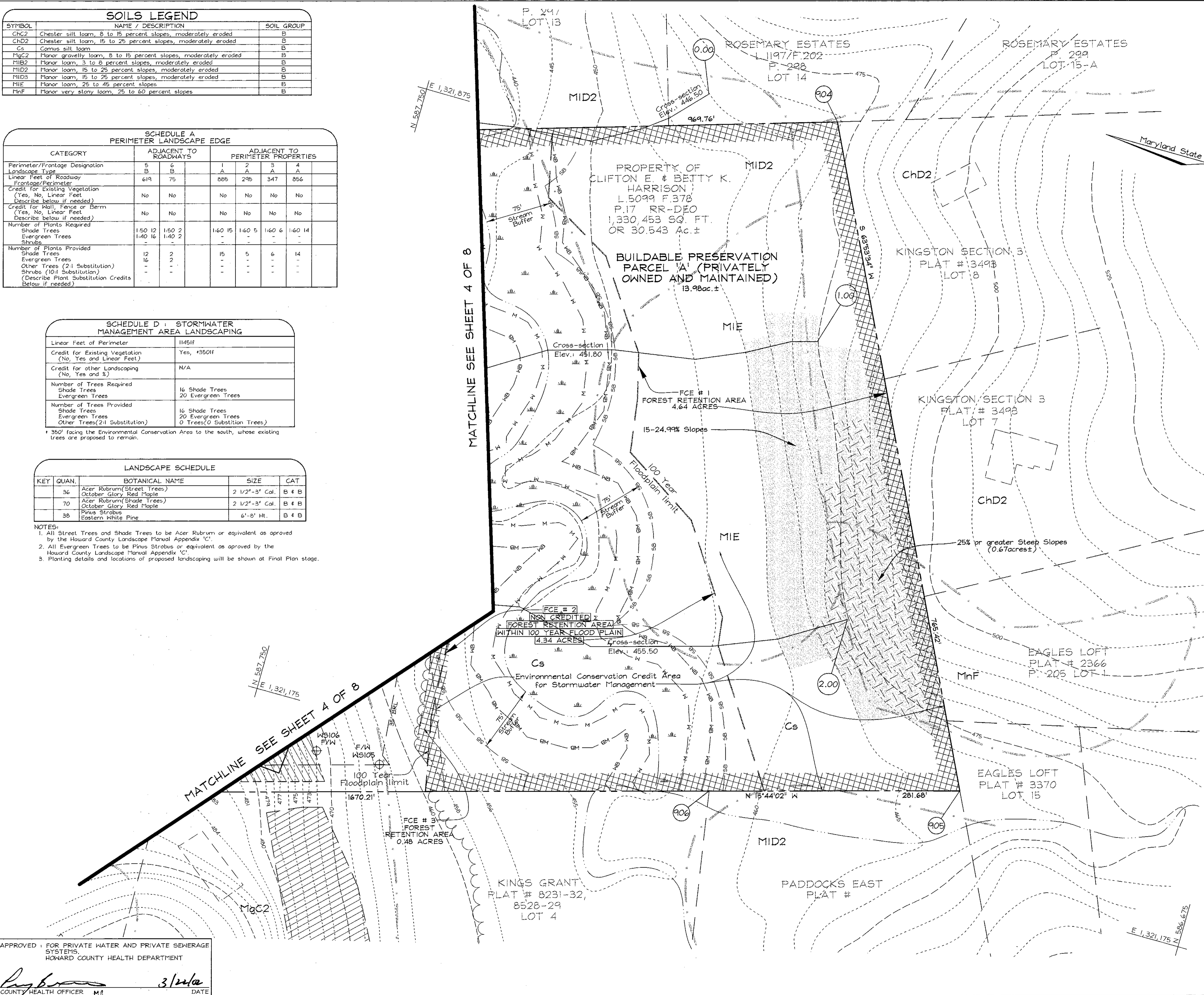
SCHEDULE A PERIMETER LANDSCAPE EDGE						
CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES			
	5	6	1	2	3	4
Perimeter/Frontage Designation	B	B	A	A	A	A
Linear Feet of Roadway	619	75	885	295	347	856
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)	No	No	No	No	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)	No	No	No	No	No	No
Number of Plants Required						
Shade Trees	1:50 12	1:50 2	1:60 15	1:60 5	1:60 6	1:60 14
Evergreen Trees	1:40 16	1:40 2	-	-	-	-
Shrubs	-	-	-	-	-	-
Number of Plants Provided						
Shade Trees	12	2	15	5	6	14
Evergreen Trees	16	2	-	-	-	-
Other Trees (2:1 Substitution)	-	-	-	-	-	-
Shrubs (10:1 Substitution)	-	-	-	-	-	-
(Describe Plant Substitution Credits Below if needed)						

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING	
Linear Feet of Perimeter	11451f
Credit for Existing Vegetation (No, Yes and Linear Feet)	Yes, *3501f
Credit for other Landscaping (No, Yes and %)	N/A
Number of Trees Required	
Shade Trees	16 Shade Trees
Evergreen Trees	20 Evergreen Trees
Number of Trees Provided	
Shade Trees	16 Shade Trees
Evergreen Trees	20 Evergreen Trees
Other Trees (2:1 Substitution)	0 Trees (0 Substitution Trees)

* 350' facing the Environmental Conservation Area to the south, whose existing trees are proposed to remain.

LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
36		Acer Rubrum (Street Trees)	2 1/2" - 3" Cal.	B & B
		October Glory Red Maple		B & B
70		Acer Rubrum (Shade Trees)	2 1/2" - 3" Cal.	B & B
		October Glory Red Maple		B & B
38		Pinus Strobus	6' - 8' HT.	B & B
		Eastern White Pine		B & B

- NOTES:
- All Street Trees and Shade Trees to be Acer Rubrum or equivalent as approved by the Howard County Landscape Manual Appendix 'C'.
 - All Evergreen Trees to be Pinus Strobus or equivalent as approved by the Howard County Landscape Manual Appendix 'C'.
 - Planting details and locations of proposed landscaping will be shown at Final Plan stage.



TENTATIVELY APPROVED
DEPT. OF PLANNING AND ZONING OF
HOWARD COUNTY
David A. Taylor
PLANNING DIRECTOR
4/12/02
DATE

OWNER: Clifton E. & Betty K. Harrison
P.O. Box 287
West Friendship, Maryland 21794

DEVELOPER: Heritage Land Development
3060 Washington Road, Suite 220
Glenwood, Maryland 21738

PRELIMINARY GRADING, LANDSCAPING,
SEDIMENT CONTROL AND SOILS PLAN
TWIN PINES
LOTS 1 THRU 11 AND PRESERVATION
PARCELS 'A' AND 'B'
TAX MAP 22 GRID 3 # 8 PARCEL 17
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

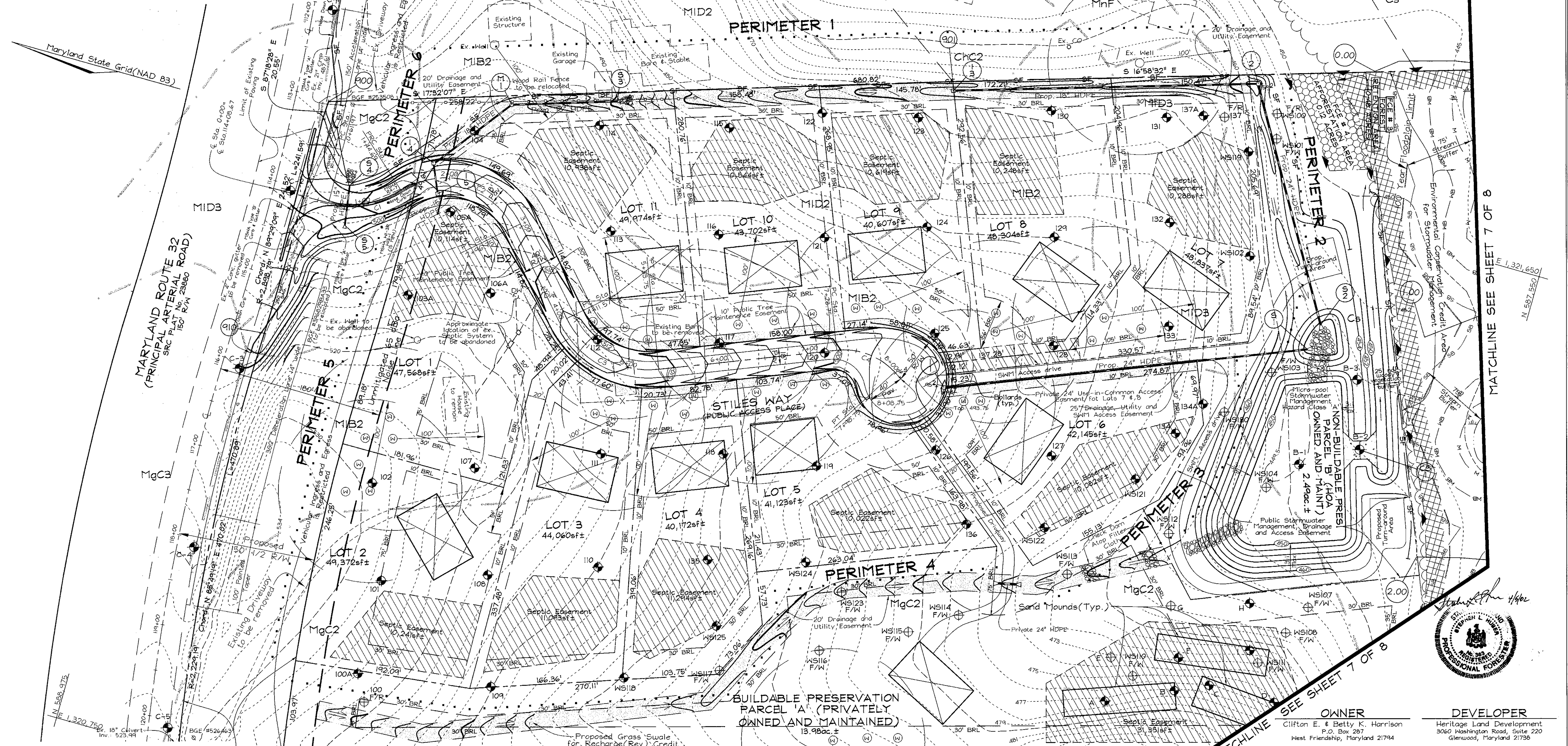


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Engineers Planners Surveyors
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DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: ZYF
SCALE: 1"=50'
DATE: Feb. 28, 2002
W.O. No.: 3048
SHEET No.: 5 OF 8

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT
Raymond M. ...
COUNTY HEALTH OFFICER
3/22/02
DATE

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester silt loam, 15 to 25 percent slopes, moderately eroded	B
Cs	Conoway silt loam	B
MgC2	Major gravelly loam, 8 to 15 percent slopes, moderately eroded	B
MIB2	Major loam, 3 to 8 percent slopes, moderately eroded	B
MID2	Major loam, 15 to 25 percent slopes, moderately eroded	B
MID3	Major loam, 15 to 25 percent slopes, moderately eroded	B
MIE	Major loam, 25 to 45 percent slopes	B
MnF	Major very stony loam, 25 to 60 percent slopes	B



SYMBOL	DESCRIPTION
[Dashed line]	100 YEAR FLOODPLAIN
[Wavy line]	TREELINE
[Hatched pattern]	WETLANDS
[Cross-hatched pattern]	PROPOSED FOREST RETENTION AREA
[Diagonal hatched pattern]	PROPOSED AFFORESTATION AREA
[Dotted pattern]	FOREST RETENTION AND PRESERVATION AREA SIGN
[Solid line]	TREE PROTECTION FENCE

LEGEND

Land dedicated to the State of Maryland for the purposes of a public road

KINGS GRANT
AT # 8231-32
8528-29
LOT 1

KINGS GRANT
PLAT # 8231-32
8528-29
LOT 2

KINGS GRANT
PLAT # 8231-32
8528-29
LOT 3

TENTATIVELY APPROVED
DEPT. OF PLANNING AND ZONING OF
HOWARD COUNTY

Mark J. ...
PLANNING DIRECTOR

John ...
DATE

OWNER
Clifton E. & Betty K. Harrison
P.O. Box 287
West Friendship, Maryland 21794

DEVELOPER
Heritage Land Development
3060 Washington Road, Suite 220
Glenwood, Maryland 21738

PRELIMINARY FOREST CONSERVATION PLAN
TWIN PINES
LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A' AND 'B'

TAX MAP 22 GRID 3 & 8 PARCEL 17
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street Ellicott City, MD 21043
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E-mail: FSHAssociates@com.com

EXPLORATION RESEARCH INC.
ENVIRONMENTAL CONSULTANTS

8310 FORREST STREET
ELICOTT CITY, MARYLAND 21043
TEL: (410) 760-1150 FAX: (410) 760-7800

DESIGN BY: DH
DRAWN BY: DH
CHECKED BY: SH
SCALE: 1"=50'
DATE: Feb. 28, 2002
W.O. No.: 3048
SHEET No. 6 OF 8

LEGEND

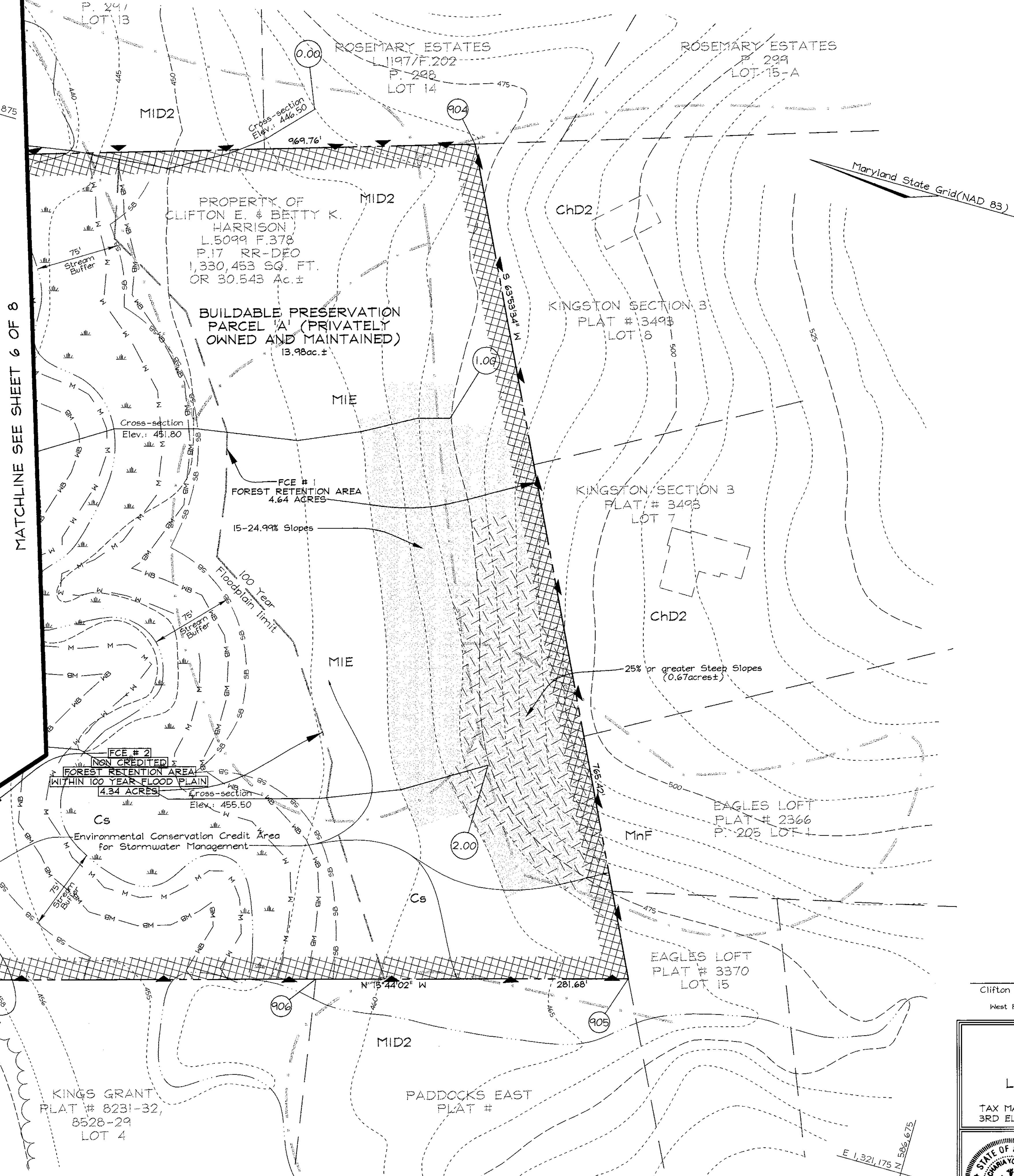
- 100 YEAR FLOODPLAIN
- TREELINE
- WETLANDS
- PROPOSED FOREST RETENTION AREA
- PROPOSED AFFORESTATION AREA
- FOREST RETENTION AND PRESERVATION AREA SIGN
- TPF TREE PROTECTION FENCE

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester silt loam, 15 to 25 percent slopes, moderately eroded	B
Cs	Carous silt loam	B
MgC2	Manor gravelly loam, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MID2	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MID3	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MIE	Manor loam, 25 to 45 percent slopes	B
MnF	Manor very stony loam, 25 to 60 percent slopes	B

MATCHLINE SEE SHEET 6 OF 8

MATCHLINE SEE SHEET 6 OF 8



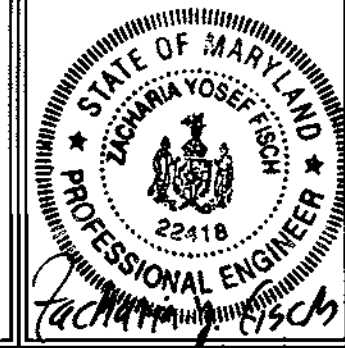
TENTATIVELY APPROVED
 DEPT. OF PLANNING AND ZONING OF
 HOWARD COUNTY
David A. ... 4/12/02
 PLANNING DIRECTOR DATE



OWNER Clifton E. & Betty K. Harrison
 P.O. Box 287
 West Friendship, Maryland 21794

DEVELOPER Heritage Land Development
 3060 Washington Road, Suite 220
 Glenwood, Maryland 21738

PRELIMINARY FOREST CONSERVATION PLAN
TWIN PINES
 LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A' AND 'B'
 TAX MAP 22 GRID 3 # 8 PARCEL 17
 3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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 E-mail: FSHAssociates@cs.com

DESIGN BY: DH
 DRAWN BY: DH
 CHECKED BY: SH
 SCALE: 1"=50'
 DATE: Feb. 27, 2002
 W.O. No.: 3048
 SHEET No. 7 OF 8

FOREST CONSERVATION NARRATIVE

This Forest Conservation Plan was prepared in accordance with the Howard County Forest Conservation Manual.

Option "B" for Cluster Subdivisions will be utilized wherein the entire preservation parcel will be included in the calculations. The existing site consists of 30.543 acres with approximately 4.34 acres of floodplain. There are a total of 5.12 acres of existing forest on the net tract area. A large portion of the forest on site is located within the floodplain. The afforestation requirement is .12 acres. Onsite afforestation will be utilized, adjacent to the existing forest and within the proposed Forest Conservation Easement. The Forest Conservation Easement includes 9.46 acres of forest retention and .12 acres of afforestation. This reforestation area total includes 4.34 acres of non credited forest contained within the floodplain.

The 0.12 acre afforestation area FCE-4 is primarily abandoned crop land. This area will be planted with 350 stems/acre, containerized seedlings.

AFFORESTATION AREA 0.12 Ac

Qty	Botanical Name	Common Name	Min. Size	Spacing	NOTES
11	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	CONTAINER
11	Liquidambar styraciflua	Sweet Gum	WHIP 2-3'	11' o.c.	CONTAINER
11	Fraxinus pennsylvanica	Green Ash	WHIP 2-3'	11' o.c.	CONTAINER
11	Platanus Occidentalis	Sycamore	WHIP 2-3'	11' o.c.	CONTAINER

FOREST CONSERVATION EASEMENT TABLE

EASEMENT #	ACREAGE	EASEMENT TYPE
1	4.64 AC	FOREST RETENTION
2	4.34 AC	FOREST RETENTION
3	0.48 AC	FOREST RETENTION
4	0.12 AC	AFFORESTATION
9.46 AC RETENTION		
.12 AC AFFORESTATION		
TOTAL	9.58 AC	

FOREST CONSERVATION WORKSHEET

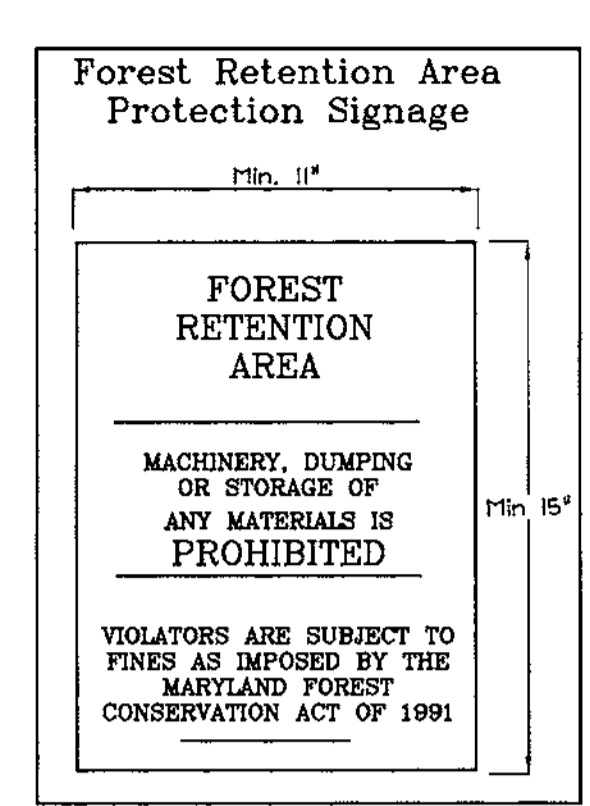
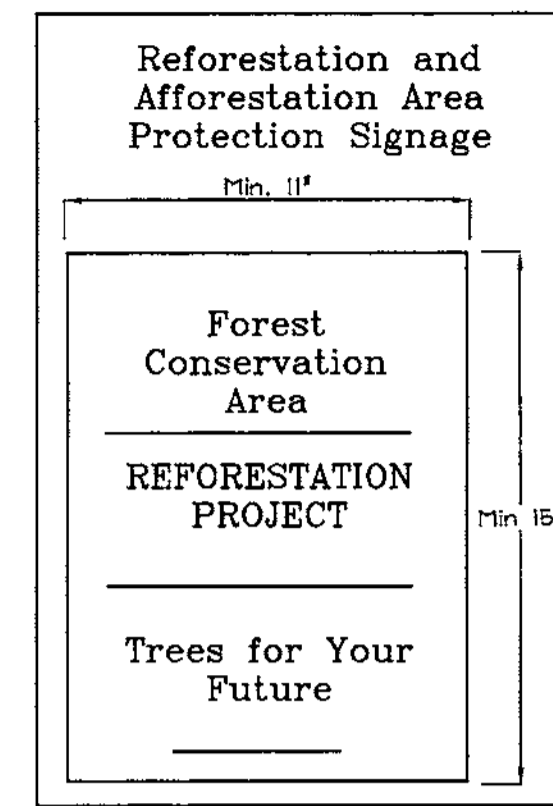
Net Tract Area	Acres
A. Total Tract Area	30.543
B. Area Within 100 Year Floodplain	4.34
C. Other deductions	0
D. Net Tract Area	26.203
Zoning Use Category: RESIDENTIAL-RURAL MEDIUM DENSITY	
Land Use Category	
E. Afforestation Minimum (20 % x D)	5.24
F. Conservation Threshold (25 % x D)	6.55
Existing Forest Cover	
G. Existing Forest on Net Tract Area	5.12
H. Forest Area Above Afforestation Threshold	0
I. Forest Area Above Conservation Threshold	0
Breakeven Point	
J. Forest Retention Above Threshold with no Mitigation	6.55
K. Clearing Permitted without Mitigation	0
Proposed Forest Clearing	
L. Forest Areas to be Cleared	0
M. Forest Areas to be Retained	5.12
Planting Requirements	
N. Reforestation for Clearing Above Threshold	0
P. Reforestation for Clearing Below the Threshold	0
Q. Credit for Retention Above Conservation Threshold	0
R. Total Reforestation Required	0
S. Total Afforestation Required	.12
T. Total Reforestation and Afforestation Requirement	.12

AFFORESTATION AREA MONITORING NOTES

- Monthly visits during the first growing season are to assess the success of the plantings and to determine if supplemental watering, pest control or other actions are necessary. Early spring visits will document winter kill and autumn visits will document summer kill.
- The minimum survival rate shall be 75% of the total number of trees planted per acre at the end of the two year maintenance period. Wild tree seedlings from natural regeneration on the planting site may be counted up to 50% toward the total survival number if they are healthy native species at least 12 inches tall.
- Survival will be determined by a stratified random sampling of the plantings. The species composition of the sample population should be proportionate to the amount of each species in the entire planting to be sampled.
- Effective monitoring will assess plant survivability during the first growing season and make recommendations for reinforcement plantings if required at that time.

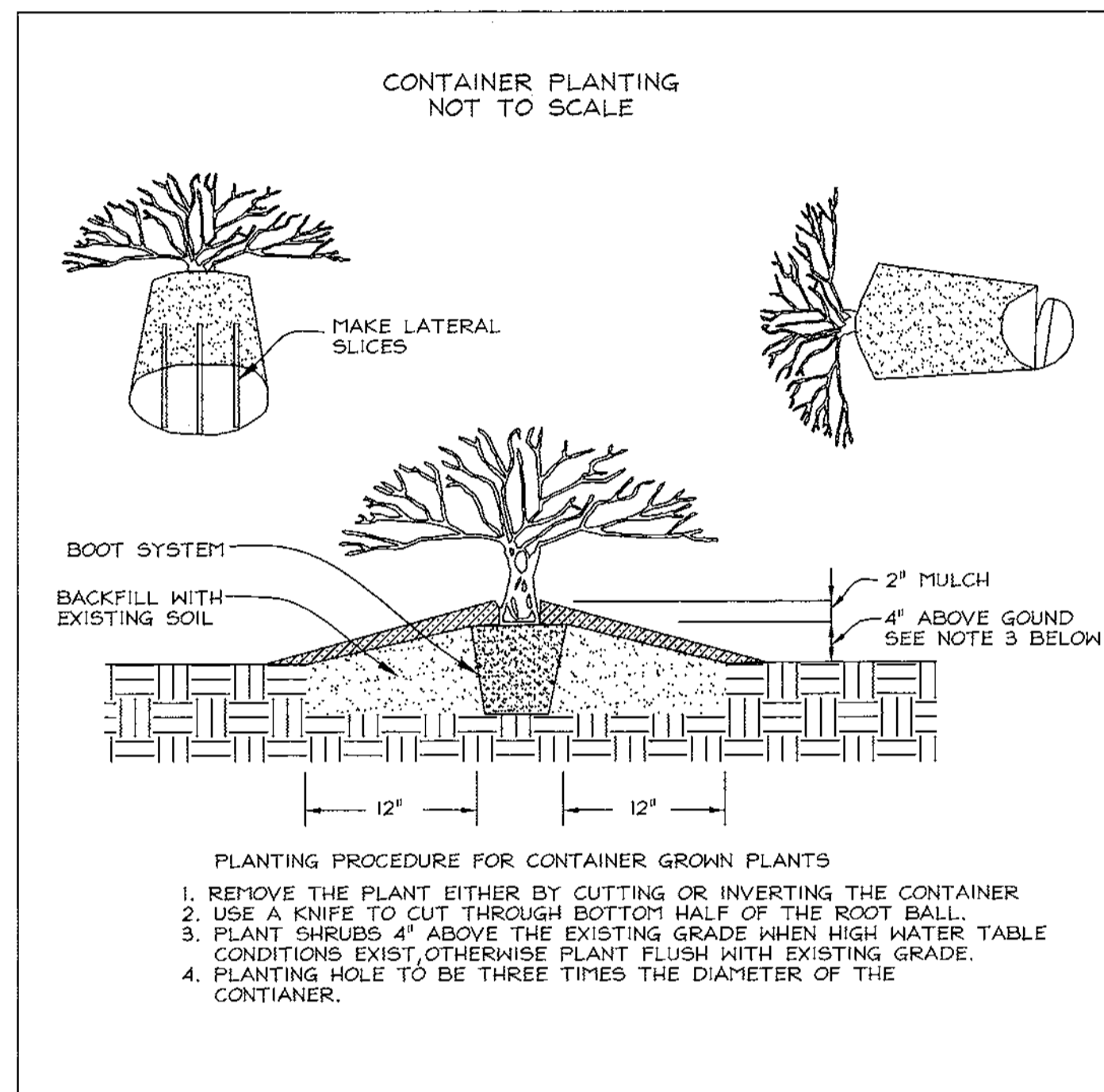
AFFORESTATION PLANTING NOTES

- Afforestation areas may be planted as soon as reasonable to do so. Late winter-early spring plantings are preferred. Earliest planting dates will vary from year to year but planting may generally begin as soon as the ground is no longer frozen. Alternate planting dates may be considered as condition warrants.
- Soil amendments and fertilization recommendations will be made based upon the results of soil analysis for nitrogen, phosphorus, potassium, organic matter content and pH. If required, fertilizer will be provided using a slow release, soluble 16-8-16 analysis designed to last 5-8 years contained in polyethylene perforated bags such as manufactured by ADCO Works, P.O. Box 310 Hollins, N.Y. 11423 or approved equal.
- Plant materials will be planted in accordance with the Planting Distribution Diagram, Planting Details and plant schedule.
- Plant material shall be nursery grown and inspected prior to planting. Plants not conforming to the American Standard for Nursery Stock specifications for size, form, vigor, or roots, or due to trunk wounds, breakage, desiccation, insect or disease must be replaced.
- Planting stock must be protected from desiccation at all times prior to planting. Materials held for planting shall be moistened and placed in cool shaded areas until ready for placement.
- Newly planted trees may require watering at least once per week during the first growing season depending on rainfall in order to get established. The initial planting operation should allow for watering during installation to completely soak backfill material.
- Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
- All stock to be container grown with deer repellent tablets in growing medium, such as "repellex".
- Spray all trees with deer repellent immediately after planting and apply as necessary during warrant period.

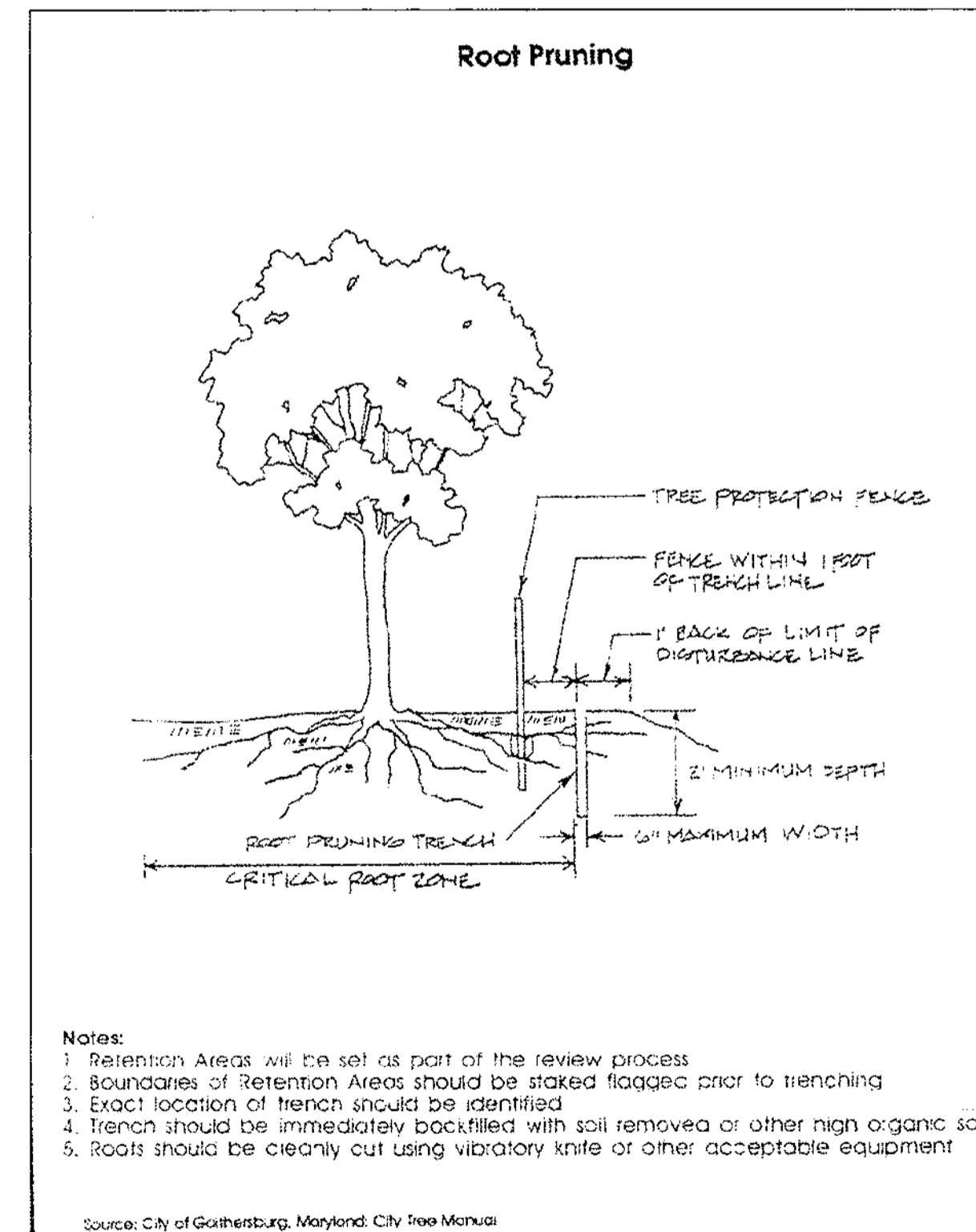


SIGN DETAIL: PERMANENT SIGN

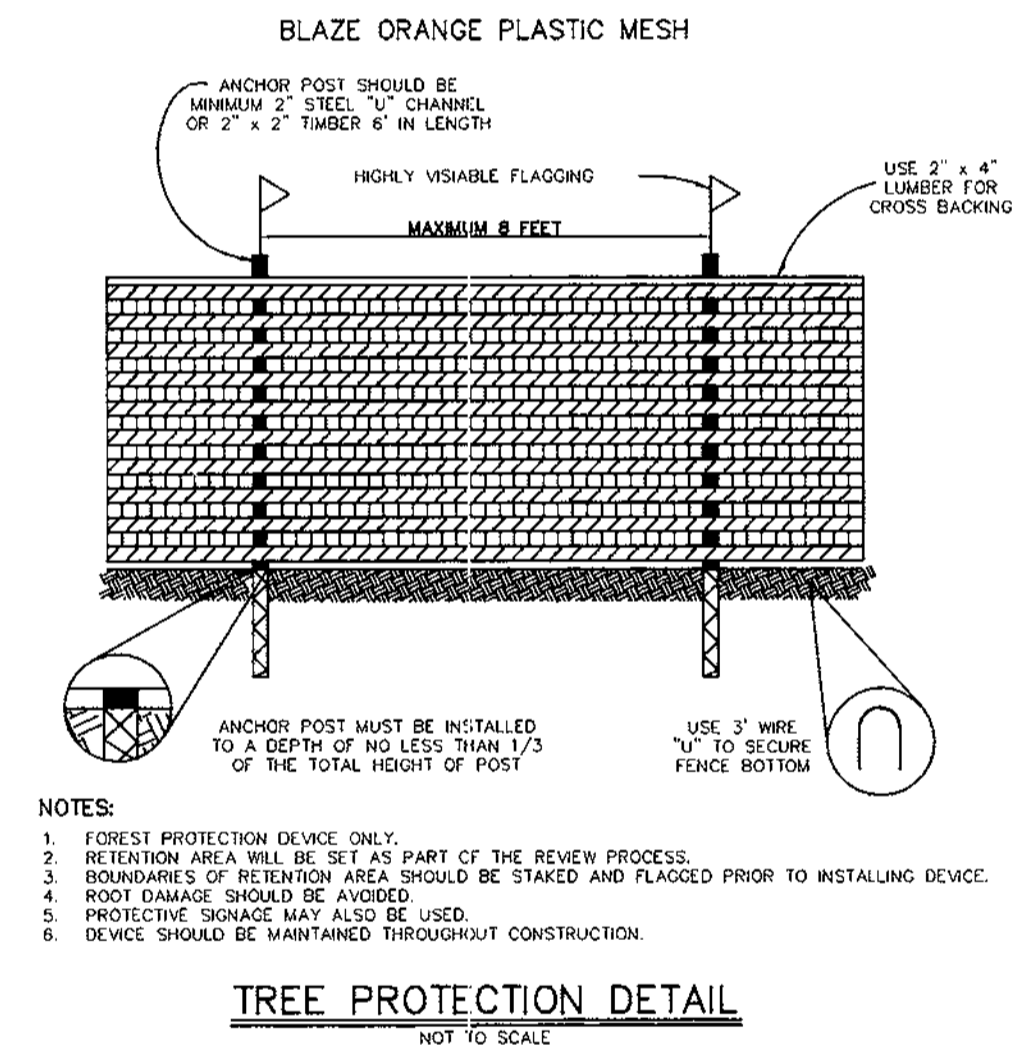
SIGNAGE NOTE: ALL TREE PROTECTION SIGNS SHALL BE PLACED ON ALUMINUM POSTS OR PRESSURE TREATED WOOD POLES. NO ATTACHMENT OF SIGNS TO TREES IS PERMITTED.



- PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS**
- REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER
 - USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
 - PLANT SHRUBS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
 - PLANTING HOLE TO BE THREE TIMES THE DIAMETER OF THE CONTAINER.

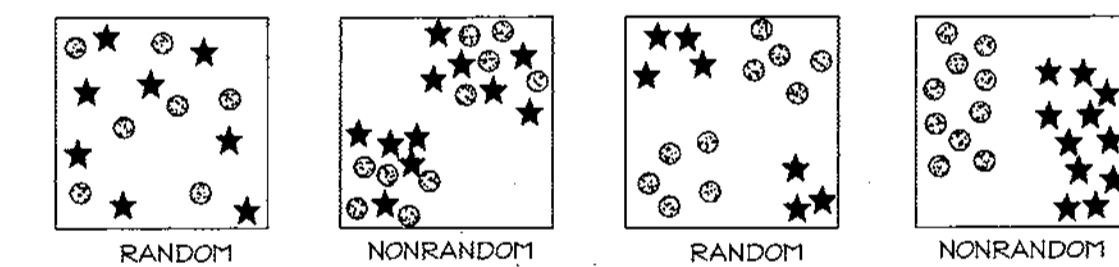


- Notes:**
- Retention Areas will be set as part of the review process.
 - Boundaries of Retention Areas should be staked flagged prior to trenching.
 - Exact location of trench should be identified.
 - Trench should be immediately backfilled with soil removed or other high organic soil.
 - Roots should be cleanly cut using vibratory knife or other acceptable equipment.



- NOTES:**
- FOREST PROTECTION DEVICE ONLY.
 - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 - ROOT DAMAGE SHOULD BE AVOIDED.
 - PROTECTIVE SIGNAGE MAY ALSO BE USED.
 - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TYPICAL FOREST TREE DISTRIBUTION PATTERNS

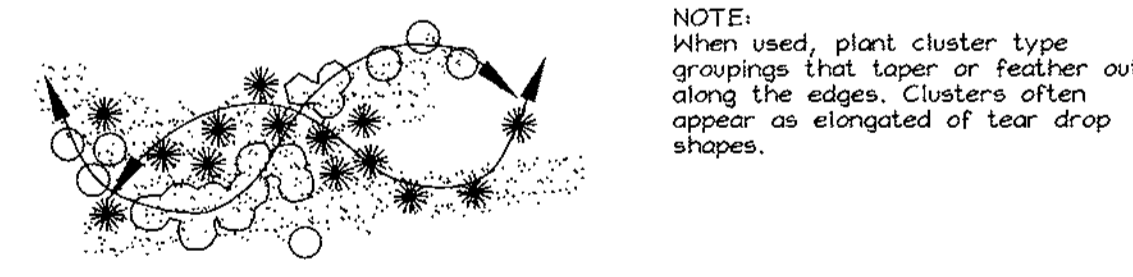


POSITIVE ASSOCIATION **NEGATIVE ASSOCIATION**

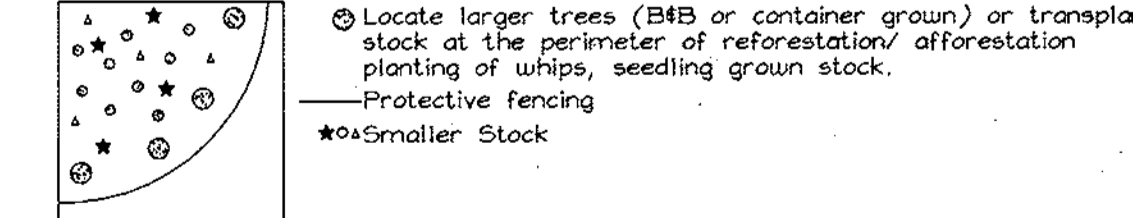
★ SPECIES 1 ⊗ SPECIES 2

NOTE: Naturally occurring populations of trees tend to be found in informal groupings. A cluster of trees is really a mosaic of different species groups. The objective of an afforestation/ reforestation plan is to select the appropriate species and distribution pattern for a chose site that mimic natural patterns.

AGGREGATE DISTRIBUTION DRIFT

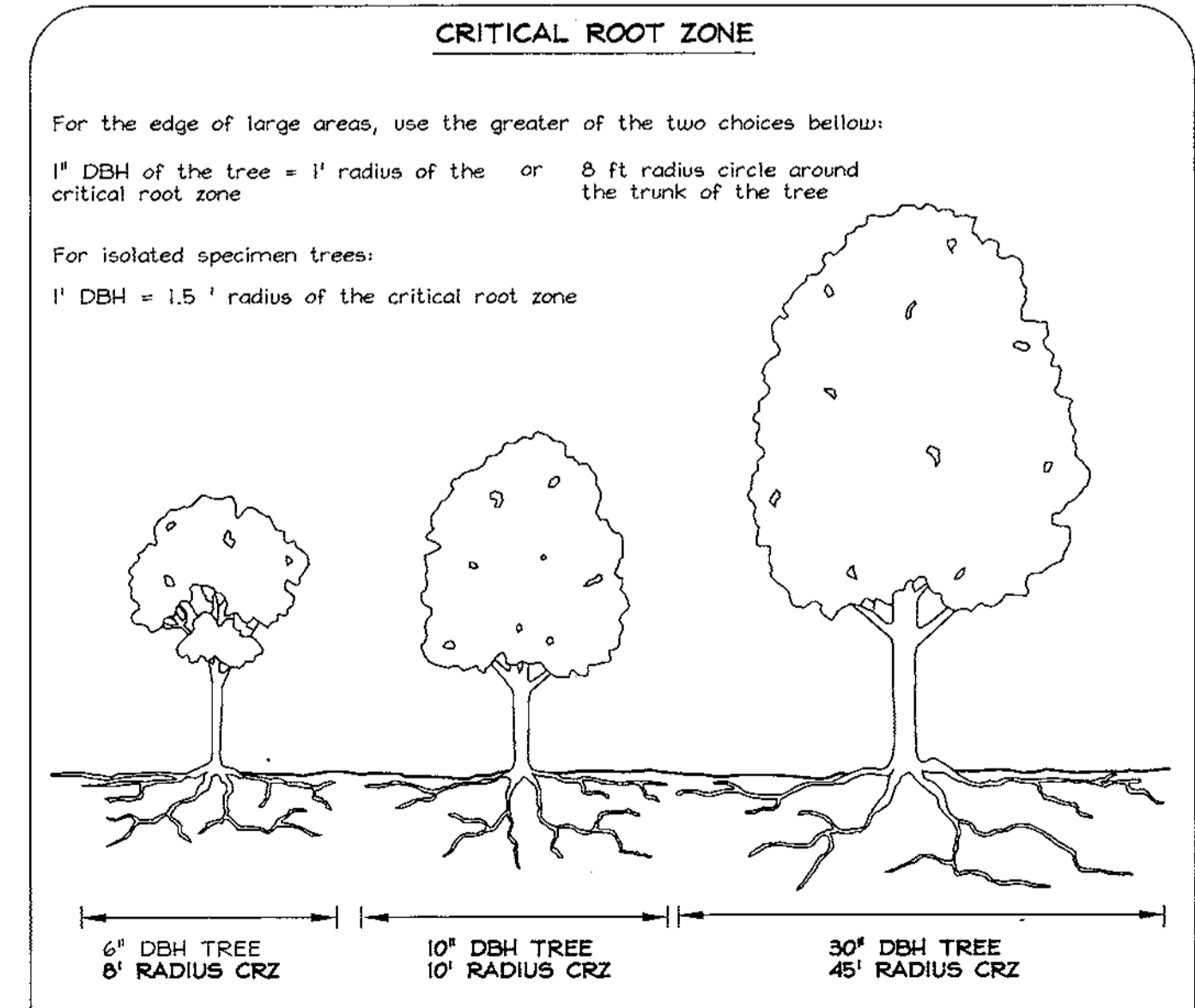


MIXING TRANSPLANT STOCK

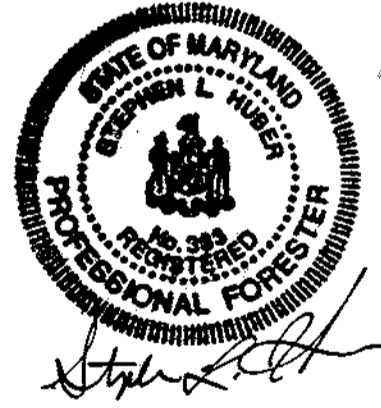


Source: Adapted from Forest Conservation Manual, 1991.

PLANTING DISTRIBUTION PATTERNS **FIGURE 3.B.2**



TENTATIVELY APPROVED
DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY
Mark D. Wolfe
PLANNING DIRECTOR



OWNER
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P.O. Box 287
West Friendship, Maryland 21794

DEVELOPER
Heritage Land Development
3060 Washington Road, Suite 220
Glenwood, Maryland 21738

PRELIMINARY FOREST CONSERVATION PLAN
TWIN PINES
LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A' AND 'B'
TAX MAP 22 GRID 3 & B PARCEL 17
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND



FSH Associates
Engineers Planners Surveyors
8318 Forrest Street, Ellicott City, MD 21043
Tel: 410-750-2251 Fax: 410-750-7350
E-mail: FSHAssociates@cs.com

DESIGN BY: DH
DRAWN BY: DH
CHECKED BY: SH
SCALE: As Shown
DATE: Feb. 28, 2001
W.O. No.: 3048
SHEET No. 8 OF 8

