

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GIB2	Glenelg loam, 3 to 8 percent slopes, moderately eroded	B
MtB2	Mt. Airy channery loam, 3 to 8 percent slopes, moderately eroded	A

Forest Tree Protection and Management Notes

- Tree protection devices shall be installed prior to any grading or land
- After the boundaries of the retention areas have been staked and flagged the Howard County Inspector is required.
- Provide maintenance to tree protection devices and signage to maintain their integrity throughout the duration of the project.
- Attachment of signs to tree protection devices to maintain their integrity throughout the duration of the project.
- Any significant changes made to the Forest Conservation Plan shall be made with the prior approval if the Howard County Dept. Of Planning and
- No burial of discarded material is permitted within the Forest Conservation and Planting areas.
- No open burning within 100 feet of wooded areas is permitted.
- Post construction phase.
 - Inspect existing trees around the perimeter of the site for signs of root or trunk damage and excessive soil compaction.
 - Remove dead or dying trees and evaluate for hazard tree removal.
 - All temporary forest protection devices will be removed after construction.
 - Following completion of construction, prior to use, the county inspector shall inspect the entire site for compliance with this Forest Conservation

Forest Conservation Narrative

This Forest Conservation Plan complies with the Howard County Manual of 1998 and the Maryland Forest Conservation Act of 1991.

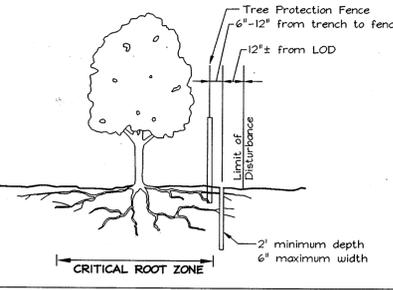
The site consists of 14.44 Ac. of residual land from a previous subdivision. The site contains 12.12 Ac. of forest. These woodlands will be preserved to the maximum extent possible utilizing retention on lots greater than 60,000 s.f. The on-lot retention will total 5.35 Ac. as shown, which is enough to exceed the break even point. The clearing and retention areas shown include the future lots' limits of disturbance. We do not anticipate that the lots will be cleared any more than is necessary; limits of disturbance reflect the maximum that could be needed. This includes preservation of Specimen Trees where possible. Due to there being no easements, there is no surety required, per DPZ Policy Memo Dated 5/1/99.

Soil Protection Zone Notes

- The Soil Protection Zone shall include all areas contained inside the Limit of Disturbance.
- Where possible, the Soil Protection Zone shall extend to the drip line of specimen trees. For other groups of trees, the zone shall be the drip line or 40% of the height of the tree, whichever is greater.
- No construction activity is permitted within the Soil Protection Zone.
- If soil has been compacted or grading has taken place in the vicinity of the Soil Protection Zone, root pruning shall be implemented per Root Pruning detail, shown on this plan.
- Root pruning shall occur prior to the beginning of construction.
- Where the Soil Protection Zone must encroach inside the Critical Root Zone of a tree, soil disturbance shall be mitigated with vertical mulching, radial trenching, or another method approved by the ERI Forest Conservation Professional.
- Prior to construction, the Limits of Disturbance shall be marked and the ERI Professional shall determine which trees will need preventative treatment or removal.
- Tree maintenance and removal shall be undertaken by a qualified MD Tree Expert to ensure damage to surrounding trees is minimized.
- Brush and limbs removed for construction shall be chipped and spread at the edge of the Soil Protection Zone to a depth of 6 inches. This shall occur outside the Soil Protection Zone where compaction could impact otherwise unprotected Critical Root Zone.

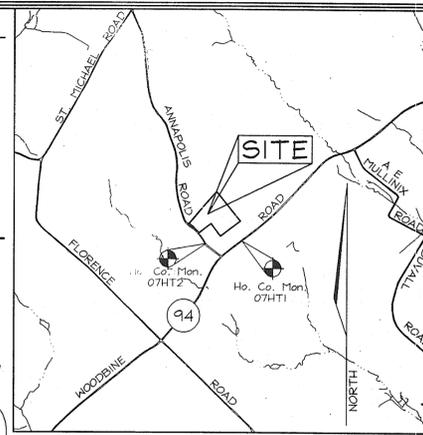
ROOT PRUNING

- Retention areas shall be set prior to construction
- Boundaries of retention areas shall be flagged, and location of trench shall be specified by ERI Qualified Professional.
- Roots shall be cut cleanly with root pruning equipment. Where roots are found, trenching shall be done by air spade or hand tools. Roots 1" shall be cut with a hand saw.
- Trench shall be immediately backfilled with soil removed or high organic content soil.
- Any other techniques shall be approved by the ERI Qualified Professional before implementation.



LEGEND

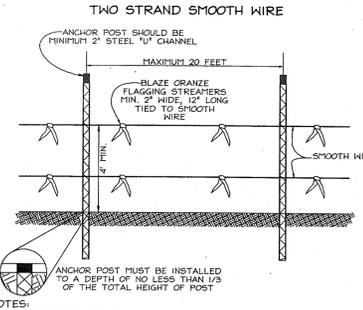
- Moderate Slopes 15% to 24.9% slopes
- Existing Well
- Forest Stand Boundary
- Forest Retention on Lots Greater Than 60,000 s.f.
- Tree Protection Fence - TPF
- Existing Contour
- Proposed Contour
- Existing Spot Elevation
- Existing Trees to Retain



FOREST CONSERVATION WORKSHEET

Item	Acres
Net Tract Area	
A. Total Tract Area	14.44
B. Area Within 100 Year Floodplain	0
C. Other deductions	0
D. Net Tract Area	14.44
Zoning Use Category: RESIDENTIAL-SUBURBAN	
Land Use Category	
E. Afforestation Minimum (20 % x D)	2.89
F. Conservation Threshold (25 % x D)	3.61
Existing Forest Cover	
G. Existing Forest on Net Tract Area	12.12
H. Forest Area Above Conservation Threshold	8.51
Break-even Point	
I. Forest Retention Above Threshold with no Mitigation	5.31
J. Clearing Permitted without Mitigation	6.81
Proposed Forest Clearing	
K. Forest Areas to be Cleared	6.77
L. Forest Areas to be Retained	5.35
Planting Requirements	
M. Reforestation for Clearing Above Threshold	1.69
N. Reforestation for Clearing Below the Threshold	0
P. Credit for Retention Above Conservation Threshold	1.74
Q. Total Reforestation Required	0
R. Total Afforestation Required	0
S. Total Reforestation and Afforestation Requirement	0

VICINITY MAP



- 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 CONSTRUCTION.
 - ROOT DAMAGE SHOULD BE AVOIDED.
 - PROTECTIVE SIGNAGE MAY ALSO BE USED.
 - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION DETAIL

NOT TO SCALE

SPECIMEN TREES

Key	Name	Scientific Name	DBH	Condition	Retained
ST-1	Scarlet Oak	Quercus coccinea	38"	Poor	No
ST-2	Scarlet Oak	Quercus coccinea	34.5"	Good	No
ST-3	Scarlet Oak	Quercus coccinea	34"	Fair	No
ST-4	White Oak	Quercus alba	32.5"	Fair	No
ST-5	Black Oak	Quercus velutina	37"	Fair	No
ST-6	Chestnut Oak	Quercus prinus	31"	Fair	No
ST-7	Chestnut Oak	Quercus prinus	34.5"	Good	Yes
ST-8	Chestnut Oak	Quercus prinus	32"	Good	Yes
ST-9	Chestnut Oak	Quercus prinus	32"	Fair	Yes
ST-10	Tulip Poplar	Liriodendron tulipifera	32"	Fair	No
ST-11	Tulip Poplar	Liriodendron tulipifera	40"	Good	Yes
ST-12	Chestnut Oak	Quercus prinus	32"	Fair	No
ST-13	Chestnut Oak	Quercus prinus	37"	Poor	No
ST-14	Black Oak	Quercus velutina	31"	Poor	No
ST-15	Chestnut Oak	Quercus prinus	30.5"	Poor	Yes
ST-16	Chestnut Oak	Quercus prinus	31"	Poor	Yes
ST-17	Chestnut Oak	Quercus prinus	35"	Fair	Yes
ST-18	Chestnut Oak	Quercus prinus	31"	Fair	Yes
ST-19	Black Oak	Quercus velutina	32"	Fair	Yes
ST-20	Chestnut Oak	Quercus prinus	37"	Good	Yes
ST-21	Chestnut Oak	Quercus prinus	33"	Fair	Yes
ST-22	Chestnut Oak	Quercus prinus	32"	Poor	Yes
ST-23	Chestnut Oak	Quercus prinus	38.5"	Fair	No

Note: Trees listed as not retained may be kept depending upon final limits of disturbance. The list shows the maximum number that could be removed.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

FOREST STAND ANALYSIS TABLE								
KEY	TYPE OF COMMUNITY	AREA (Acres)	SOIL INFORMATION			EXISTING VEGETATION (Type and approx. %)	FOREST AREA IN SENSITIVE ENVIRONMENTS	
			SOIL TYPE	TYPICAL FOREST COVER	WOODLAND SUITABILITY INDEX			
FI	Upland Hardwoods	12.12	GIB2	Oak & Upland Hardwood	75-84	Good	Chestnut Oak 40% Black Oak 25% Scarlet Oak 20% White Oak 10% Tulip Poplar 5%	0.1 Ac. on Steep Slopes 15-25%
OFI	Open Field	2.32	MtB2		55-64	Poor		

Forest Stand Delineation Narrative

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

FI This 12.12 Ac stand encompasses most of the site. The stand is a mature chestnut oak association with chestnut, scarlet, black and white oaks dominating the canopy. Numerous specimen trees are found throughout the stand. Understory species include mountain laurel, virginia pine, loubush blueberry, blackberry, greenbriar, and overstory species saplings. There is evidence of fire damage to a significant number of the larger trees. This area would be a moderate priority for retention due to the number of specimen trees.

OFI This 2.32 Ac area contains mixed grasses and forbs. The field was previously used as a pasture but has since become unmaintained meadow. There are no sensitive environments in the field.

OWNER
 Elsie D. Sartorio
 10520 Samona Avenue
 Cockeysville, MD 21030-2402

DEVELOPER/ CONTRACT PURCHASER
 Heritage Land Development
 3060 Washington Road, Suite 220
 Glenwood, Maryland 21738
 Tel: (410) 489-7900
 Fax: (410) 489-4754

FOREST STAND DELINEATION & FOREST CONSERVATION PLAN

SARTORIO PROPERTY
 LOTS 1-2 A RESUBDIVISION OF LOT 4 ELSIE H. DAVIS
 SUBDIVISION PLAT #8144

TAX MAP 07 GRID 21
 4TH ELECTION DISTRICT

PARCEL 123
 HOWARD COUNTY, MARYLAND

DESIGN BY: AB
 DRAWN BY: MA/AB
 CHECKED BY: SLH/STP
 SCALE: 1"=100'
 DATE: Jan 06, 2005
 P.L.O. No.: 3279
 SHEET No.: 1 OF 1



EXPLORATION RESEARCH, INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 8018 FOREST STREET
 BELTSVILLE CITY, MARYLAND 21043
 TEL: (410) 750-1100 FAX: (410) 750-7850
 EMAIL: EXPLORATION@EXRC.COM



FSH Associates
 Engineers Planners Surveyors
 8318 Forest Street | Beloit City, MD 21043
 Tel: (410) 750-2251 Fax: (410) 750-7350
 E-mail: info@fsha.biz