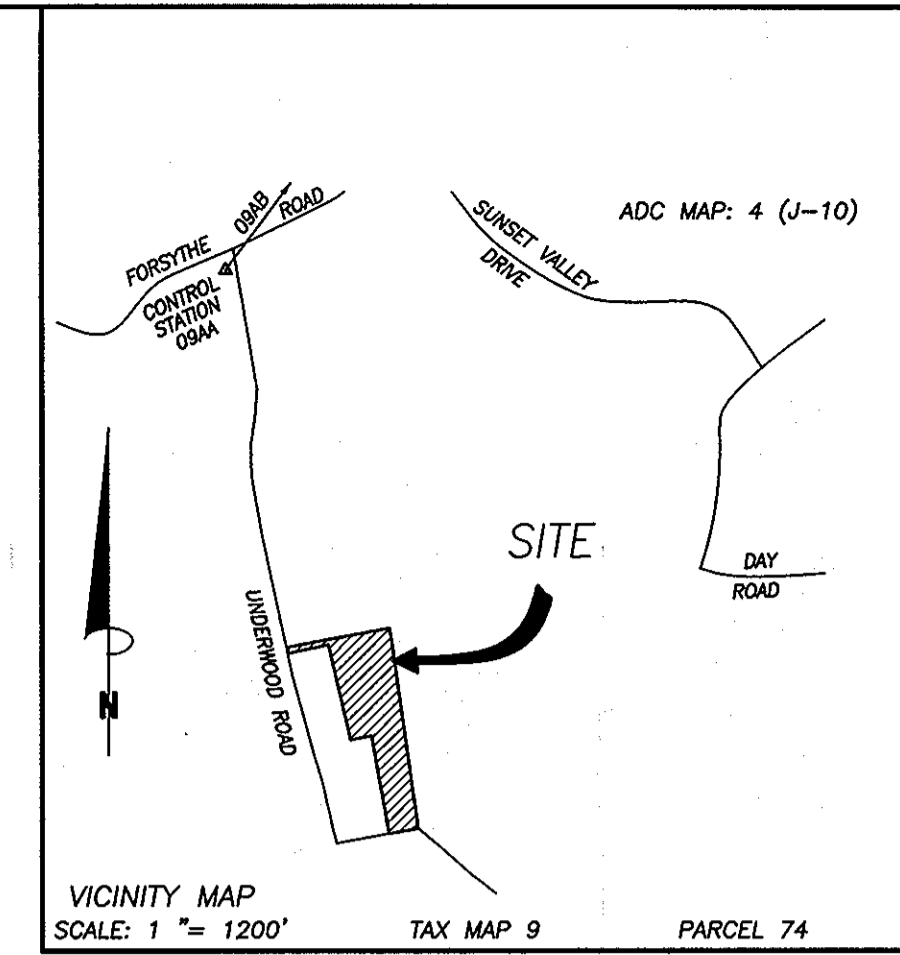


LEGEND

	RETENTION AREA		LOD
	PLANTING AREA		ENVIRONMENTAL SETBACK-HOUSE ONLY ACCESSORY STRUCTURES ARE ALLOWED
	SOILS LINE/SYMBOL		FOREST
	FOREST ESMT. AND SIGNAGE		AGRICULTURE
	REMOVAL AREA		LAWN



FOREST CONSERVATION WORKSHEET
VERSION 1.1

NET TRACT AREA:

A. Total tract area.....	=	8.19
B. Area within 100 year floodplain.....	=	0
C. Area to remain in agricultural production.....	=	0
D. Net tract area.....	=	8.19

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

Input the number "1" under the appropriate land use zoning, and limit to only one entry.

ARA	MDR	IDA	HDR	MPD	CA
0	1	0	0	0	0
E. Afforestation Threshold.....	20%	x D =	1.64		
F. Conservation Threshold.....	25%	x D =	2.05		

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain).....	=	1.54
H. Area of forest above afforestation threshold.....	=	0.00
I. Area of forest above conservation threshold.....	=	0.00

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation.....	=	0.00
K. Clearing permitted without mitigation.....	=	0.00

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared.....	=	0.10
M. Total area of forest to be retained.....	=	1.44

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold.....	=	0.00
P. Reforestation for clearing below conservation threshold.....	=	0.20
Q. Credit for retention above conservation threshold.....	=	0.00
R. Total afforestation required.....	=	0.20
S. Total afforestation required.....	=	0.10
T. Total reforestation and afforestation required.....	=	0.30

*0.04 acres of removal amount will be retained, but not put into easement

BRIEF NARRATIVE:

- The subject property has one stand of evergreen/hardwood mature forest central to Lot 4, and one stand along the western property line of Lots 3 and 4 which consists of a young hardwood mix. The woodland suitability factors are 30 for both stands. Both stands are surrounded by lawns.
- No wetlands were observed within the stand or on site.
- No streams or buffers exist on the site.
- No critical habitats or rare, threatened or endangered species are known to exist on the site.
- No historic structures exist on the site.
- No specimen trees exist on the site.
- The tree line shown on lots 3 & 4 were field located by VanMar and Associates on March 30, 2009.
- Topography is from the 2004 Howard County LIDAR Contours.
- Conservation requirements per Section 18.1202 of the Howard County Code and Forest Conservation Act for this Subdivision have been fulfilled through the forest retention credit of 1.44 acres of existing forest on the two lots in accordance with the adopted DPZ Policy dated August 19, 1999, for residential lots greater than 60,000 sq.ft. and the planting of 0.30 acres of forest. Required planting = afforestation of 0.10 acres of forest, and reforestation of 0.20 acres.

ADDITIONAL NARRATIVE NOTES:

- The property owner has connected and extended small areas of existing forest to form contiguous forest.
- The conditions of forest along the adjoining Witkowski property creates forest corridors through the neighborhood.
- The addition and upkeep of these forest areas buffers the neighbors from one another.
- The use of these practices creates valued environmental resource areas, increases habitat values, provides air and water quality benefits, and adds aesthetic value to the neighborhood.
- The owner is using selective clearing along an existing garden and a pre-existing trash pile, along with supplemental planting.
- Some plantings have been cultivated on site, using seedlings from adjoining properties. The owner has several decades of experience in farming, tree farming, and gardening techniques.
- Additionally, whips and tubex will be used for additional plantings. All forest planting will incorporate the use of tubex as a protective barrier against browsing and other hazards.

FOREST CONSERVATION NOTES:

- The number of trees in the existing woods exceeds the 100 stem per acre threshold as defined in the Forest Conservation Manual.
- There is no 100 year floodplain on-site per Community Panel No. 240044 0009B FEMA Map, Community.
- A preconstruction meeting is to be arranged as follows: After the boundaries of the limits of disturbance have been staked and flagged and the forest protection devices have been installed, and before any disturbance has taken place on site, a pre-construction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate local inspectors should attend. The purpose of this meeting will be to:
 - Identify the locations of the forest retention areas, specimen trees, limits of construction, employee parking areas, and equipment staging areas on site plans.
 - Inspect all flagged boundaries, retention devices, and Sediment and Erosion control devices on site.
 - Make all necessary adjustments.
 - Assign responsibilities as appropriate and discuss penalties.
 - This plan is for site afforestation, reforestation, tree protection and conservation measures only.
- All contractors performing work on this site shall notify "Miss Utility" 48 hours prior to any construction or grading by calling 1-800-257-7777 for the location of all utilities.
- The contractors performing work on the site are responsible for protecting existing native and non-invasive plantings during construction.
- Stabilize all disturbed areas as directed by inspectors.
- For tree pruning and care methods please refer to the National Arborist Standards, latest edition.
- Proposed Forest Removal: 0.06 Ac.
- Proposed Forest to Remain as Retention Credit: 1.44 Ac.
- Proposed Forest Planting: 0.30 Ac.
- Forest clearing permitted without mitigation = 0.00 Ac.
- Surety in the amount of \$19,080.00 shall be posted with the developer's agreement under F-09-046, a final, in accordance with per Section 18.1202 of the Howard County Code and the Forest Conservation Act. Conservation requirements have been fulfilled through the forest retention credit of 1.44 acres of existing forest and the planting of 0.30 acres of forest. Required surety = afforestation planting of 0.10 acres of forest (4,356 Sq. Ft. x \$0.50 = \$2,178.00); reforestation planting of 0.20 acres of forest (8,712 Sq. Ft. x \$0.50 = \$4,356.00); and retention of 1.44 acres of forest (62,726.4 Sq. Ft. x \$0.20 = \$12,545.28).
- This plan is subject to compliance with the approval conditions for WP-09-118, a waiver of the Subdivision and Land Development Regulations, 16.120(b)(4), to environmental features on Parcels greater than 10 acres approved by the Dept. of Planning & Zoning, Development Engineering Division on May 5, 2009.

SEQUENCE OF CONSTRUCTION:

- Flag limits of tree planting and brush removal.
- Arrange pre-construction meeting with the City/County.
- Call "Miss Utility" at 1-800-257-7777 prior to any work for the location of all utilities.
- Install tree protection measures, tree protection signage, and conduct brush removal and site afforestation measures as called for on the plans.
- After site has been stabilized and all planting has been completed remove tree protection measures and signage.

SIGNAGE NOTES:

- Forest conservation easement signage to be installed using 2" x 2" timber, 6' in length and installed to a depth of no less than 1/3 of the total height of post.
- Signage may be installed on anchor posts used for support of Tree Protection Fence, and post may remain after construction is complete and mesh is removed.
- Boundaries of Retention area should be staked and flagged prior to installing device.
- Space signs every 100 feet and as shown.

ACREAGE OF PLANTING: 0.30 Acres x 350 whips/acre = 105 whips required

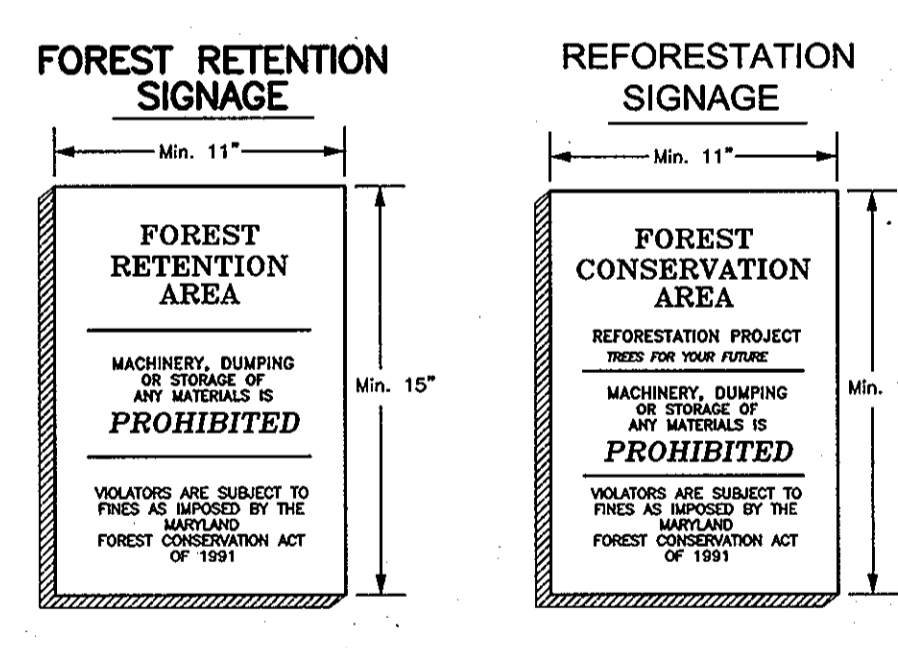
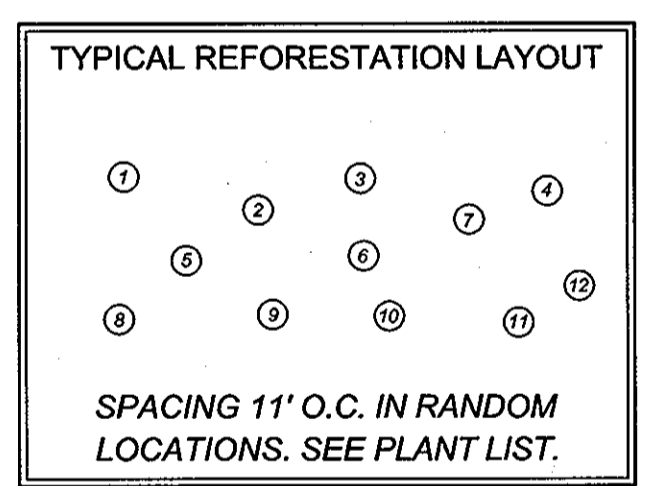
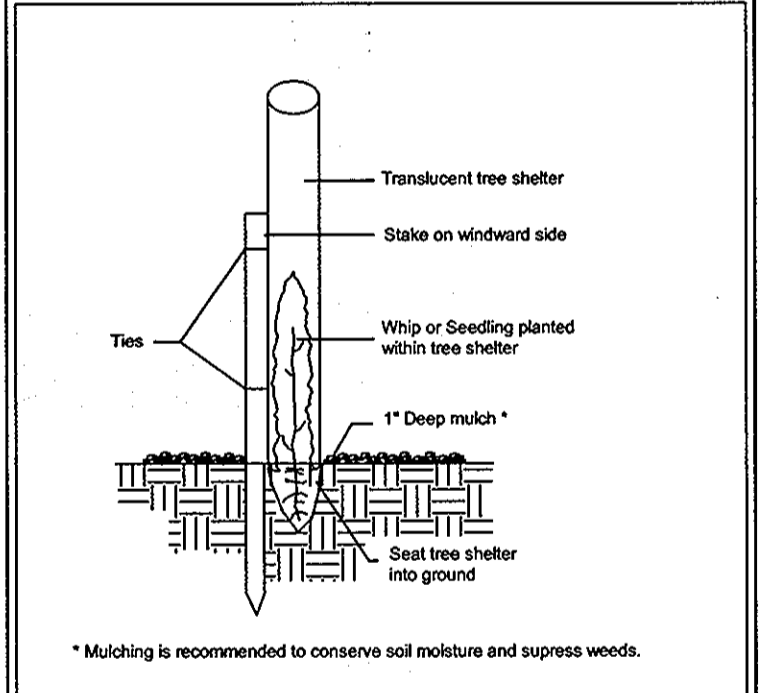
TYPE OF PREPARATION NEEDED: Remove existing wire fence, stilt fence and invasive species, if present. See Forest Conservation Specifications for discussion regarding removal of invasives. Minimize soil disturbances as much as possible. All exposed soil areas to be stabilized with a mix of native and naturalized grasses and legumes designed for use in reforestation areas, or in wetland soil areas, a mix of native or naturalized grasses adapted to survive in temporarily or seasonally saturated soils. Mow area prior to planting.

PLANTING SPECIFICATIONS:

- Plant whips in tree shelters per detail and in accordance with manufacturers recommendations.
- Whips to be planted on a 11' x 11' grid and mixed in a random manner per detail.
- Do not plant within 20' of a property line abutting an agricultural use.

Source: Within 100 mile radius of Maryland if possible
Seed Mix: "Field and Forest Mix" available from Sylva Native Nursery & Seed Co. or approved equal.

WHIP PLANTING DETAIL



NOTES:

- Forest conservation easement signage to be installed using 2" x 2" timber, 6' in length and installed to a depth of no less than 1/3 of the total height of post.
- SPACE SIGNS AS SHOWN.

APPENDIX C FOREST STAND ANALYSIS TABLE
Project Name: EWELL PROPERTY

KEY	A. TYPE OF COMMUNITY	B. AREA* (1/10 Acre)	C. SOIL INFORMATION**			D. EXISTING VEGETATION (Dominant Species and Approx. %)			E. STAND CHARACTERISTICS			F. FOREST AREA IN SENSITIVE ENVIRONMENTS (Acres)	G. HABITAT VALUE
			1. Soil types	2. Typical forest cover for soil type	3. Woodland Suitability Index	1. Size (Diam)	2. Age	3. General Conditions					
F1	FOREST	1.02 AC±	ChB2	Mixed Oak, Maple, Poplar, Black Gum	30	Various Hardwoods	1-3.0	>100 Yrs	GOOD	0 AC±	GOOD		
F2	FOREST	0.51 AC±	ChB2	Mixed Oak, Maple, Poplar, Black Gum	30	Various Hardwoods	1-3.0	>100 Yrs	GOOD	0 AC±	GOOD		

UPLAND AREA SPECIES

SPECIES	WHIPS
DOMINANT PIONEER 24%	
1 Black Cherry	Phenax serotina 6
2 Sassafras	Sassafras albidum 6
3 Red Maple	Acer rubrum 6
4 Tulip Poplar	Liriodendron tulipifera 7
DOMINANT CLIMAX 36%	
5 Shagbark Hickory	Carya ovata 9
6 Chestnut Oak	Quercus prinus 10
7 American Sycamore	Platanus occidentalis 11
8 White Oak	Quercus alba 10
UNDERSTORY 40%	
9 Whitebait	Hemlock virginiana 10
10 Spottedbush	Lindera benzoin 10
11 Elderberry	Sambucus canadensis 11
12 Serviceberry	Amelanchier spp. 11
TOTAL	105

SOIL TYPE	SYMBOL	LAND CAPABILITY	RESTRICTED?	Kw	SLOPE %	HYDRIC?	HYDROLOGIC SOIL GROUP
Chester Silt Loam	ChA	I-4	NO	≥.35	0-3%	NO	B
Chester Silt Loam	ChB2	IIe-4	NO	≥.35	3-8%	NO	B

APPROVED SUBSTITUTIONS

Hawthorn	Crataegus sp.
Pine Oak	Quercus palustris
Cottonwood	Populus populus
White Pine	Pinus strobus
Eastern Red Cedar	Juniperus virginiana
Dawn Redwood	Metasequoia glyptostroboides
Golden Rain Tree	Koeleria paniculata
Fraxinus	Alnus incana
Douglas Fir	Pseudotsuga menziesii
Yew	Taxus sp.
Forsythia	Forsythia sp.
American Holly	Ilex opaca

FOREST EASEMENT #1 LINE TABLE			FOREST EASEMENT #2 LINE TABLE			FOREST EASEMENT #3 LINE TABLE		
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L22	S76°59'14"W	125.071	L6	S77°02'42"W	32.39'	L1	N17°04'14"W	378.00'
L23	N10°26'23"W	304.39'	L7	N17°17'35"W	55.52'	L2	S86°49'36"E	35.40'
L24	N27°12'02"E	4.07'	L8	S88°16'21"W	32.13'	L3	S13°11'09"E	369.42'
L25	N07°35'42"W	32.54'	L9	N10°00'26"W	15.02'	L4	S79°29'17"W	35.01'
L26	N11°27'05"E	17.64'	L10	N28°23'35"E	31.54'			
L27	N34°36'35"E	27.56'	L11	N21°19'35"W	28.95'			
L28	S77°10'37"E	14.05'	L12	N17°25'17"E	46.24'			
L29	S57°35'13"E	84.71'	L13	N22°29'12"W	84.68'			
L30	S25°33'53"E	21.85'	L14	N19°29'25"W	36.50'			
L31	S17°13'25"E	18.60'	L15	S17°01'16"W	19.89'			
L32	S18°31'00"W	22.27'	L16	N07°55'12"W	48.90'			
L33	S59°29'59"W	48.54'	L17	N19°29'25"W	36.50'			
L34	S2°01'10"E	23.87'	L18	N07°26'53"W	27.62'			
L35	S56°56'47"E	35.61'	L19	N07°19'21"E	136.22'			
L36	S12°39'49"E	59.70'	L20	N07°19'21"E	136.22'			
L37	S67°12'12"E	15.95'	L21	S13°03'45"E	341.99'			
L38	S18°01'33"E	34.05'						
L39	S38°11'49"E	45.43'						
L40	S21°20'19"E	32.47'						
L41	S76°59'14"W	23.69'						
L42	N13°03'45"W	28.00'						

DATE: 04/08/09

REVISIONS: COMMENTS

FOREST STAND DELINEATION
FOREST CONSERVATION PLAN
LOTS 3 & 4
TAX MAP 9 GRID 8 PARCEL P/O 74
EWELL PROPERTY
(A RESUBDIVISION OF LOT 2,
AS RECORDED IN PLAT #18984)
SITUATED ON UNDERWOOD ROAD
ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND
SCALE: 1" = 100', JANUARY, 2009

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
810 South State Street P.O. Box 538 Mount Airy/Maryland 21771
(301) 829 2890 (301)851 5015 (410) 545 2751

OWNERS:
MALCOLM W. EWELL
DAISY W. EWELL
1251 UNDERWOOD ROAD
SYKESVILLE MD. 21784
410-442-1091

7/1/09

F09.046