

**GENERAL NOTES**

- Subject property zoned "RC-DEO" per the 02/02/04 Comprehensive Zoning Plan and per the Comp Lite Zoning Amendments effective on July 28, 2006.
- The soils shown on this plan are derived from the soil Survey Geographic (SSURGO) database for Howard County, Maryland. The data source for this product is the U.S. Department of Agriculture, Natural Resources Conservation Service.
- Gross area of site: 60.161 Ac.±
- Topography shown hereon is based on an aerial survey prepared by Harford Aerial Surveys in Jan. 2001, Howard County topo, and proposed grades (now existing) for the Maple Ridge subdivision, F-02-73, recorded 11/7/2002.
- Original wetlands delineation and report and forest stand delineation prepared by ECO-Science Professionals, Inc. approved under S-00-06 on 4/3/00. Wetland delineation as shown was confirmed in April 2009 by Exploration Research, Incorporated.
- The project is within the metropolitan planning district.
- Previous Howard County file numbers: F-91-72; S-00-06; P-01-05; F-02-73; F-10-031
- 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 08DA and 08HA were used for this project.
- No clearing, grading or construction is permitted within the wetlands, streams or their required buffers approved by Howard County. In accordance with COMAR Title 01, Subtitle 05, Chapter 04, agricultural activities in the non-abandoned wetlands are exempt from permit requirements, also, a permit from the Army Corps of Engineers is not required for disturbance in the non-abandoned wetlands that are associated with agricultural activities.
- In accordance with section 16.115.(d) of the subdivision and land development regulations this development has a non-critical floodplain and therefore is exempt from delineating the floodplain on the non-buildable preservation parcel. The 100 year floodplain is depicted on the buildable preservation parcel per study by FSH Associates April 2009.
- As no development is proposed other than planting, no search of these items was conducted: steep slopes greater than 25%, rare, threatened or endangered species or critical habitats for rare, threatened or endangered species, historic structures or other historic resources (including trees and cemeteries).
- No power lines were surveyed at this time because none are located near the proposed planting areas.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual. Landscaping requirements were met during the original subdivision process for Maple Ridge under F-02-73
- This project complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation under the original subdivision for Maple Ridge, F-02-73.

**SITE ANALYSIS DATA CHART**

- A. Total Project Area: 60.161 Ac.±
- B. Area of Plan Submission: 39,560 Ac.±
- C. Present Zoning Designation: RC-DEO
- D. Proposed Use for Site: Forest Conservation Easements, 1 Buildable Parcel
- E. Total Number of Units Proposed on Submission: 1
- F. Applicable DPZ File References: F-91-72; S-00-06; P-01-05; F-02-73; F-10-031

**Planting Plan Narrative**

The total tract area consists of 60.16 acres of land. The project area consists of 39,560 acres (total tract area with existing easements netted out). The existing site, which is currently an old tree nursery in limited use, will be turned into a Forest Bank, with the buildable parcel retaining enough land to support a small farmette.

The planting rate was determined using the planting rate for seedlings or whips of 350 TPA (Trees Per Acre). There are existing grass 12'-20' wide vehicle paths that will continue to be utilized for maintenance and upkeep.

In areas where no trees or very few trees currently exist, a straight 350 TPA planting rate was applied. Where areas of existing trees exist, enhancement plantings are proposed at a reduced rate. Because the existing trees lack diversity or may be non-native, full credit was not taken for these areas. If existing trees are predominantly 1"-2" diameter, the planting rate was determined using the 350 TPA planting rate, and subtracting the existing TPA. In areas where existing trees are predominantly 2" diameter or greater, the planting rate used is 350 TPA less double the existing TPA to account for the larger size of the stock. This approximates the 2:1 planting credit difference between 1" and 2" stock. To aid in creating diversity where these calculations determine only a small number of trees are suggested, a minimum TPA of 70 was determined for enhancement plantings, representing 1/5 of 350 TPA (5 species proposed for enhancement planting).

All tree species proposed in the plant list are native species. Proposed tree species were chosen to complement and augment existing trees. In areas of enhancement planting that are primarily canopy trees, a majority of understory trees and evergreen trees were chosen for the plant list, with perhaps another canopy tree for added diversity and/or a shrub species for added understory. The reverse is true for the enhancement planting areas that are primarily understory trees. Areas designated as straight planting areas are proposed to be planted with a mix of canopy, understory, and evergreen trees. Areas near existing forest conservation easements propose plants that were approved for those easements.


The six easements created will enhance existing nearby wooded and forest areas to enhance forest diversity and wildlife habitat corridors and add forest in priority areas (floodplain, wetlands, streams and their buffers). Total easement area is 26.06 acres.

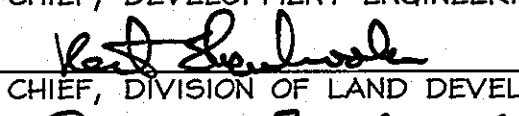
**FOREST CONSERVATION EASEMENT TABLE**

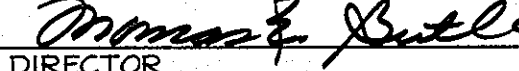
EASEMENT	TYPE	AREA (AC.)
5	Planting	1.84
	Enhancement Planting	2.30
6	Planting	10.31
	Enhancement Planting	7.04
7	Planting	0.78
8	Planting	0.69
	Enhancement Planting	0.07
9	Planting	0.05
	Enhancement Planting	0.83
10	Planting	1.37
	Enhancement Planting	0.78
TOTALS	Planting	15.04
	Enhancement Planting	11.02
	Total Easement Area	26.06

The forest conservation easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Manual. No clearing, grading or construction is permitted within the forest conservation easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

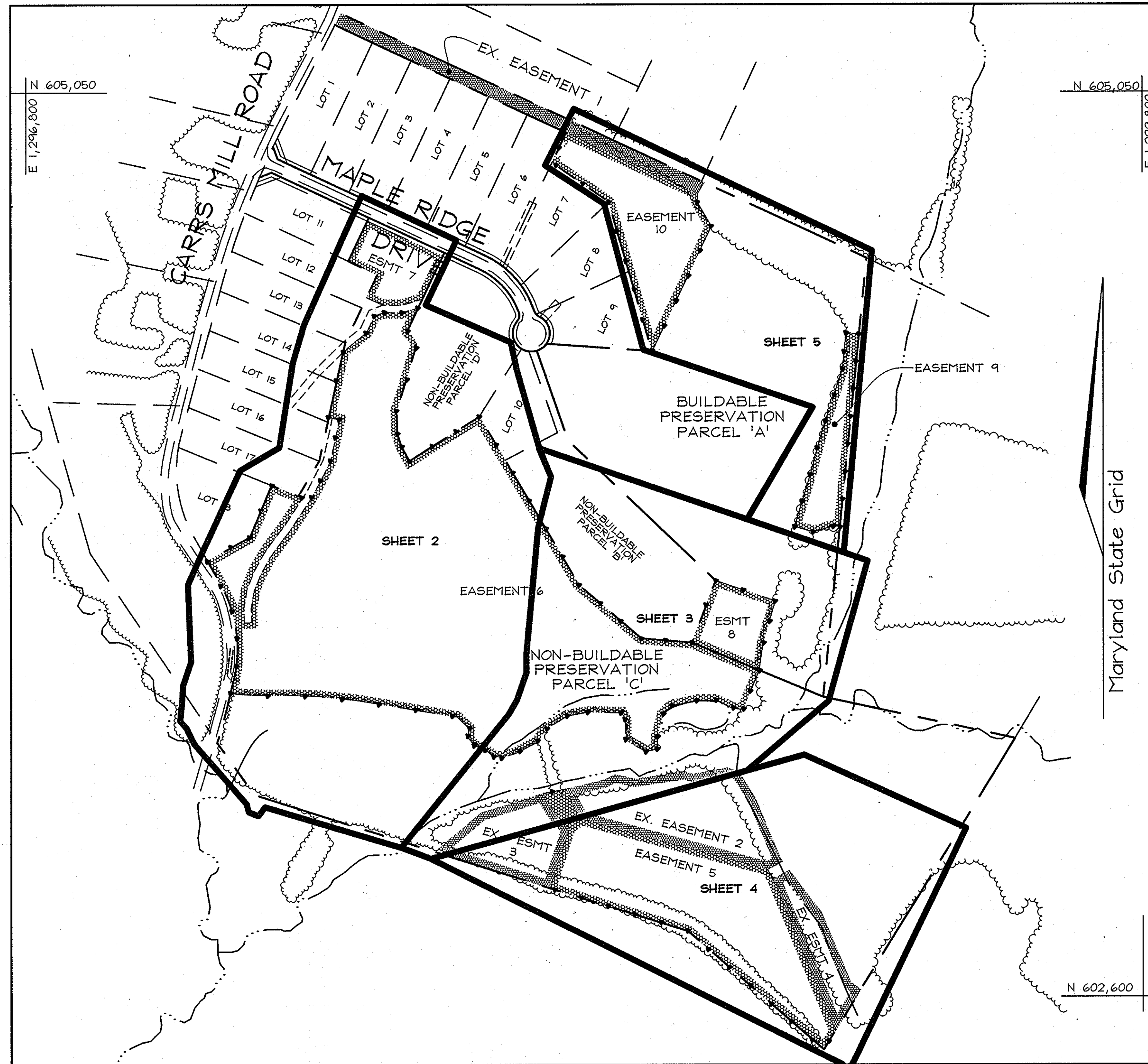
 3/17/11  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

 3/17/11  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

 3/17/11  
 DIRECTOR DATE

No.	Description	Date
1	REVISE ALL SHEETS REFLECTING COMPLETE BONDING UTILIZATION OF FOREST BANK FOR WP-11-048	2011 MAY 14

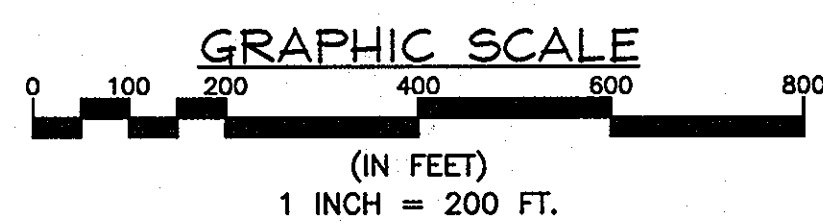
# SITE DEVELOPMENT PLAN FOR A FOREST BANK MAPLE RIDGE PRESERVATION PARCEL 'A' & 'C' HOWARD COUNTY, MARYLAND



**LEGEND**

- Ex. Forest Conservation Easement
- Proposed Forest Conservation Easement

**LOCATION MAP**  
SCALE: 1"=200'



**PROFESSIONAL CERTIFICATION**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #22415 Expiration Date: 7/29/2011

**OWNER/DEVELOPER**

Maple Ridge L.L.L.P.  
c/o James N. Ward Jr., General Partner  
16307 Carrs Mill Road  
Woodbine, Maryland 21747

**PERMIT INFORMATION CHART**

Subdivision Name: Maple Ridge Forest Bank on Preservation Parcels 'A' & 'C'	Section/Area: N/A	Lot/Parcel No.: 51
Plot #: 21476-21478	Grid: 14	Zoning: RC-DEC
Water Code: N/A	Tax Map No.: 8	Elect. District: 4th
	Census Tract: 604001	
	Sewer Code: N/A	

**FLOODPLAIN LINE TABLE**

LINE	LENGTH	BEARING
FP1	35.46'	N64°14'19"E
FP2	34.33'	N47°39'17"E
FP3	48.96'	N81°37'01"E
FP4	69.00'	N21°04'52"E
FP5	116.29'	N02°28'35"E
FP6	64.38'	N29°21'03"E
FP7	77.06'	N34°18'08"E
FP8	70.59'	N12°32'00"E
FP9	60.55'	N17°10'05"E
FP10	67.04'	N69°50'35"E
FP11	33.82'	N23°34'55"E
FP12	46.44'	N28°27'02"N
FP13	69.76'	N22°50'57"E
FP14	73.58'	N15°07'26"E
FP15	13.08'	N03°01'06"N
FP16	5.15'	N28°04'02"E

**FOREST BANK NOTE**

Per arrangement with county Department of Planning and Zoning and Real Estate Services staff, the entire Forest Bank will be recorded at the outset under Plat of Revision, F-10-31 (see surety note below). As new developments buy into the bank, they will be recorded in the Forest Bank Utilization table below, as amended by red-line process.

**FOREST BANK UTILIZATION TABLE**  
Receiving Project: Southern Reinforcement WP-11-048

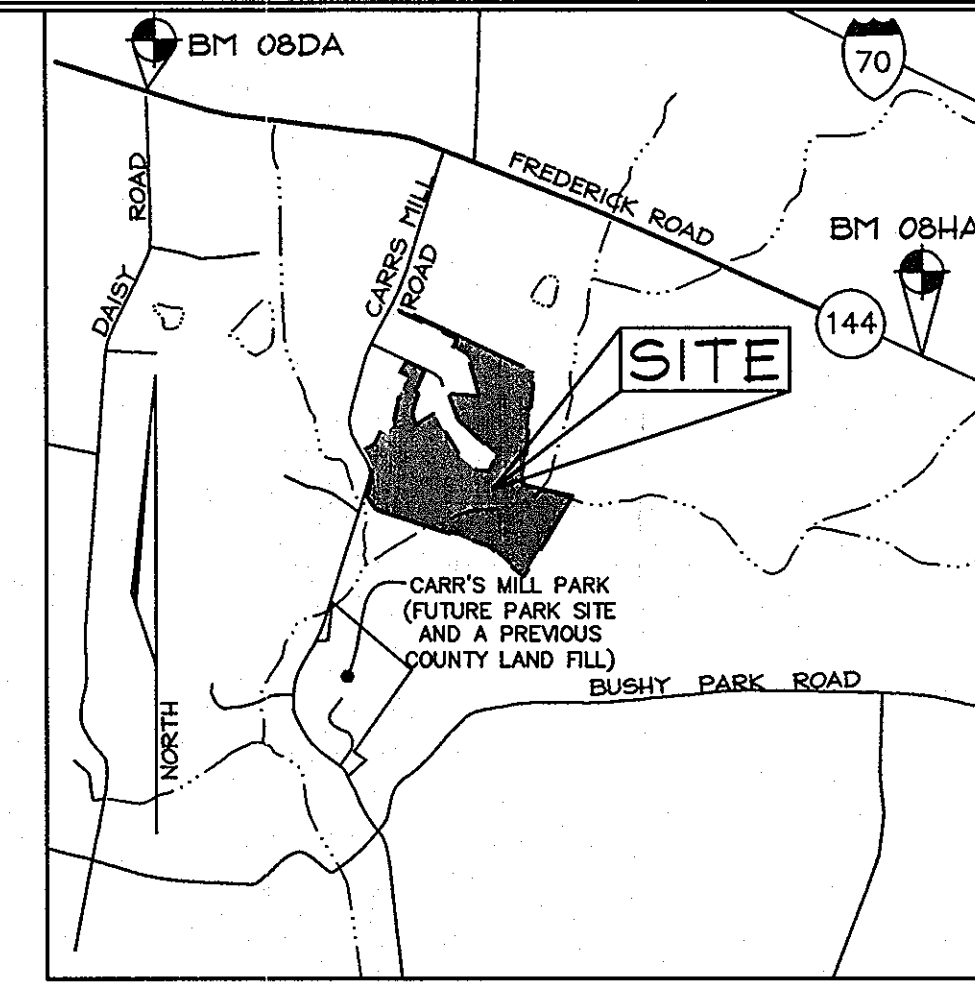
Area	Total Area Used
25.97	25.97

**FOREST BANK BONDING**

Sheet(s)	Area Bonded	Planting (s.f.)	Enhancement (s.f.)	Total Bond Amount	Bonding Start Date
2	2.09 Ac.	8876	82331	\$37,371.00	
2-6	23.97 Ac.	646,292	397,936	\$482,161.00	

**SURETY NOTE**

Total surety that would be required to record the entire forest bank at once, given the current bonding Fee Schedule rates shown, is \$519,531.00 (655,165 s.f. \* 0.50/s.f. = \$327,584.00) + (479,867 s.f. \* 0.40/s.f. = \$191,947.00). Per arrangement with county Department of Planning and Zoning and Real Estate Services staff, portions of the Forest Bank shall be bonded as the owner is able to secure financing for additional area. The bond shall be posted as part of a Developer's Agreement created for the new area of bank to be dedicated and allow for its 2-year clock to begin. This incremental bonding will be recorded in the table above, as amended by red-line process. Additionally, the area bonded will be outlined on the affected sheets, as shown in the legend, and the "Future" designation removed from the planting area note labels. The entire easement will have been recorded along with the first Developer's Agreement under Plat of Revision, F-10-31; Plat #21476, 21478. The Easement holders for Parcels A and C are the Maple Ridge HOA and Howard County.



**VICINITY MAP**

SCALE: 1"=2000'  
ADC Map 4692; Grids B8, C8, B9 & C9

**BENCHMARKS**

Sta. 08DA	N 606,934.189	E 1,295,730.523	El.: 554.836' (feet)
Sta. 08HA	N 604,769.622	E 1,302,045.281	El.: 621.796' (feet)

**EXISTING TREES IN N-1**

NATIVE	NON-NATIVE
pin oak 16%	crabapple 2%
ycamore 7%	English oak 11%
red oak 3%	zelkova 8%
red maple 8%	European beech 7%
sugar maple 1%	kausa dogwood 5%
black locust 1%	blue spruce 1%
scarlet oak 4%	pear # 1%
swamp white oak 1%	littletleaf linden 11%
white ash 2%	Norway maple # 4%
fringetree 1%	ginkgo 1%
musclewood 1%	katsuratsree 1%
tulip poplar 1%	Norway spruce 4%
white pine 1%	boxwood 6%
red cedar 2%	island cypress 1%
American holly 2%	hybrid hollies 4%
sweetbay magnolia 1%	southern magnolia 1%
hemlock 6%	amur maple 11%

(\*To Be Removed - potentially invasive)

**SHEET INDEX**

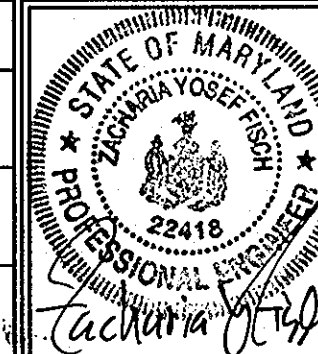
DESCRIPTION	SHEET No.
Cover Sheet	1 of 6
Forest Conservation Plan	2 of 6
Forest Conservation Plan	3 of 6
Forest Conservation Plan	4 of 6
Forest Conservation Plan	5 of 6
Forest Conservation Plan Details	6 of 6

**ADDRESS CHART**

LOT/PARCEL #	STREET ADDRESS
Parcel 'A'	15439 Maple Ridge Drive, Woodbine, Md 21797
Parcel 'C'	Carrs Mill Road, Woodbine, Md 21797

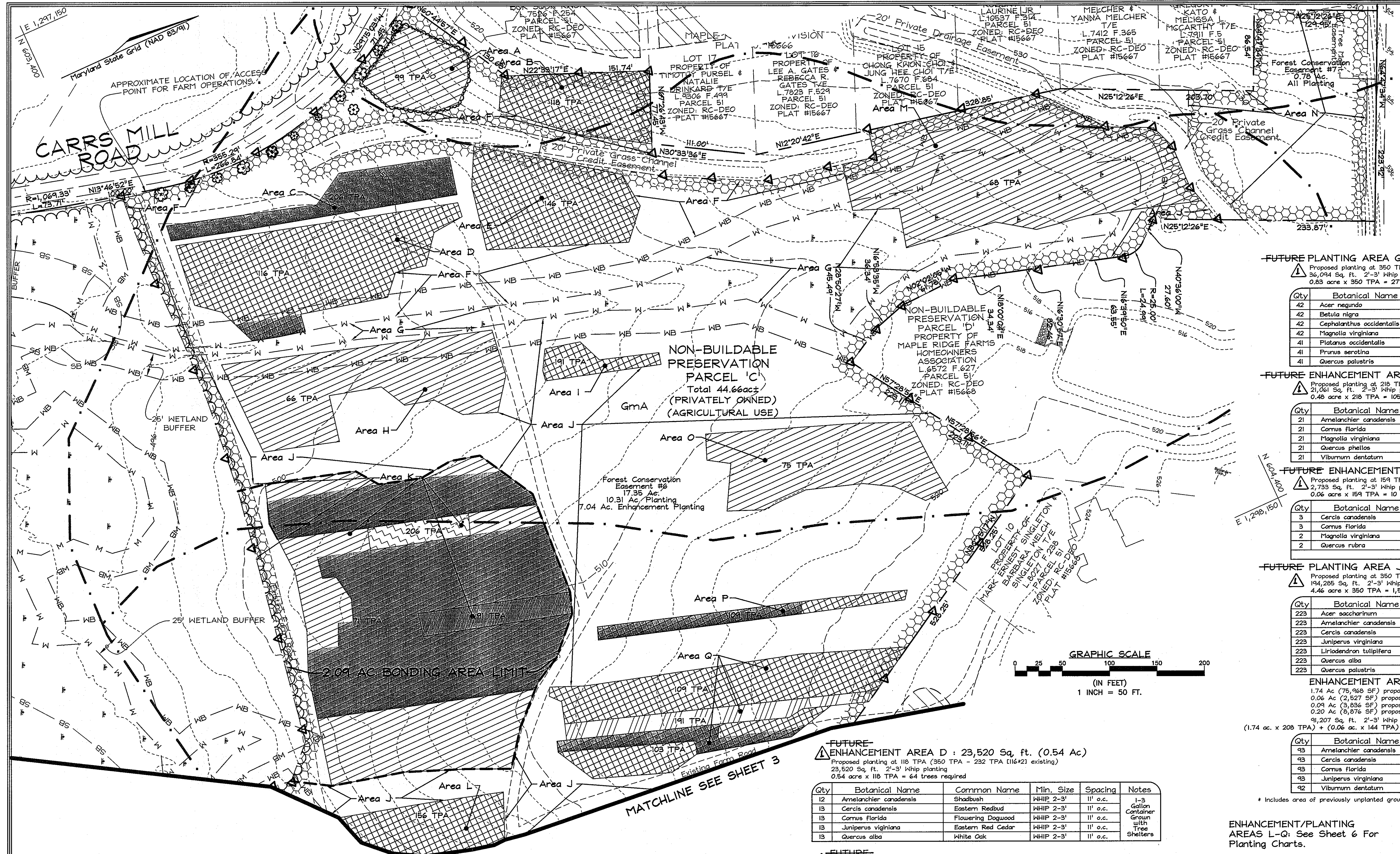
**COVER SHEET  
MAPLE RIDGE  
FOREST BANK ON  
PRESERVATION PARCELS 'A' & 'C'**

TAX MAP 8 GRID 14 & 20 PARCEL 51 PLAT #15667  
4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane Elkridge, MD 21075  
Tel: 410-567-5200 Fax: 410-798-1882  
E-mail: info@fsher.com

DESIGN BY: SMM/RAB  
DRAWN BY: SMM  
CHECKED BY: RAB/SLH  
SCALE: AS SHOWN  
DATE: Feb. 10, 2011  
N.O. No.: 3499/2456  
SHEET No.: 1 OF 6



**LEGEND**

- Existing Contour
- Existing Trestle
- Existing Septic Easement
- Stream Centerline
- Stream Buffer
- Wetland
- Wetland Buffer
- Soil Boundary
- Trees less than 2" DBH TPA less than 200
- Trees less than 2" DBH TPA of 200 or more
- Trees 2" DBH or more TPA less than 100
- Trees 2" DBH or more TPA of 100 or more
- Non-Native species
- Bonded Forest Bank Limit
- Forest Conservation Easement

**FUTURE PLANTING AREA G : 36,094 Sq. ft. (0.83 Ac)**  
 Proposed planting at 350 TPA  
 36,094 Sq. ft. 2"-3" Whip planting  
 0.83 acre x 350 TPA = 277 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
42	Acer negundo	Boxelder	WHIP 2-3'	11' o.c.	
42	Betula nigra	River Birch	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
42	Cephalanthus occidentalis	Butterbush	WHIP 2-3'	11' o.c.	
42	Magnolia virginiana	Sweetbay Magnolia	WHIP 2-3'	11' o.c.	
41	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
41	Prunus serotina	Black Cherry	WHIP 2-3'	11' o.c.	
41	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA H : 21,061 Sq. ft. (0.48 Ac)**  
 Proposed planting at 210 TPA (350 TPA - 132 TPA [66\*2] existing)  
 21,061 Sq. ft. 2"-3" Whip planting  
 0.48 acre x 210 TPA = 105 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
21	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
21	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
21	Magnolia virginiana	Sweetbay Magnolia	WHIP 2-3'	11' o.c.	
21	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	
21	Viburnum dentatum	Arrowwood Viburnum	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA I : 2,733 Sq. ft. (0.06 Ac)**  
 Proposed planting at 159 TPA (350 TPA - 191 TPA existing)  
 2,733 Sq. ft. 2"-3" Whip planting  
 0.06 acre x 159 TPA = 10 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
3	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
3	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
2	Magnolia virginiana	Sweetbay Magnolia	WHIP 2-3'	11' o.c.	
2	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	

**FUTURE PLANTING AREA J : 194,285 Sq. ft. (4.46 Ac)**  
 Proposed planting at 350 TPA  
 194,285 Sq. ft. 2"-3" Whip planting  
 4.46 acre x 350 TPA = 1,561 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
223	Acer saccharinum	Silver Maple	WHIP 2-3'	11' o.c.	
223	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
223	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
223	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
223	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
223	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	
223	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	

**ENHANCEMENT AREA K : 91,207 Sq. ft. (2.09 Ac)\***  
 1.74 Ac (75,969 SF) proposed planting at 208 TPA (350 TPA - 142 TPA [71\*2] existing)  
 0.06 Ac (2,527 SF) proposed planting at 144 TPA (350 TPA - 206 TPA existing)  
 0.04 Ac (3,836 SF) proposed planting at 259 TPA (350 TPA - 91 TPA existing)  
 0.20 Ac (8,876 SF) proposed planting at 350 TPA  
 91,207 Sq. ft. 2"-3" Whip planting  
 (1.74 ac. x 208 TPA) + (0.06 ac. x 144 TPA) + (0.04 ac. x 259 TPA) + (0.20 ac. x 350 TPA) = 464 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
93	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
93	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
93	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
93	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
92	Viburnum dentatum	Arrowwood Viburnum	WHIP 2-3'	11' o.c.	

\* Includes area of previously unplanted ground between existing nursery enhancement and the existing forest treeline.

ENHANCEMENT/PLANTING AREAS L-Q: See Sheet 6 For Planting Charts.

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 650 HOWARD LANE  
 ELLENOR, MARYLAND 21076  
 TEL: (410) 667-5210 FAX: (410) 796-1566



**OWNER/DEVELOPER**  
 Maple Ridge L.L.P.  
 c/o James W. Ward Jr., General Partner  
 Woodbine, Maryland 21797  
 Telephone: 410-442-2033

**FOREST CONSERVATION PLAN**  
**MAPLE RIDGE FOREST BANK ON PRESERVATION PARCELS 'A' & 'C'**  
 TAX MAP B GRID 14 # 20 PARCEL 51 PLAT #15667  
 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FSH Associates**  
 Engineers Planners Surveyors  
 6339 Howard Lane Elkridge, MD 21075  
 TEL: 410-567-5200 Fax: 410-796-1562  
 E-mail: info@fsher.com

DESIGN BY: SMM/RAB  
 DRAWN BY: SMM  
 CHECKED BY: RAB/SLH  
 SCALE: 1"=50'  
 DATE: Feb. 10, 2011  
 N.O. No.: 3499/2456  
 SHEET No.: 2 OF 6

**FUTURE ENHANCEMENT AREA A : 7,047 Sq. ft. (0.16 Ac)**  
 Proposed planting at 152 TPA (350 TPA - 198 TPA [99\*2] existing)  
 7,047 Sq. ft. 2"-3" Whip planting  
 0.16 acre x 152 TPA = 24 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
4	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
5	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
5	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
5	Ilex opaca	American Holly	WHIP 2-3'	11' o.c.	
5	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA B : 9,644 Sq. ft. (0.22 Ac)**  
 Proposed planting at 114 TPA (350 TPA - 236 TPA [118\*2] existing)  
 9,644 Sq. ft. 2"-3" Whip planting  
 0.22 acre x 114 TPA = 25 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
5	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
5	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
5	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
5	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
5	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA D : 23,520 Sq. ft. (0.54 Ac)**  
 Proposed planting at 118 TPA (350 TPA - 232 TPA [116\*2] existing)  
 23,520 Sq. ft. 2"-3" Whip planting  
 0.54 acre x 118 TPA = 64 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
12	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
13	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
13	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
13	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
13	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA E : 14,927 Sq. ft. (0.34 Ac)**  
 Suggested planting at 58 TPA (350 TPA - 292 TPA [146\*2] existing); Use 70 TPA  
 14,927 Sq. ft. 2"-3" Whip planting  
 0.34 acre x 70 TPA = 24 trees required

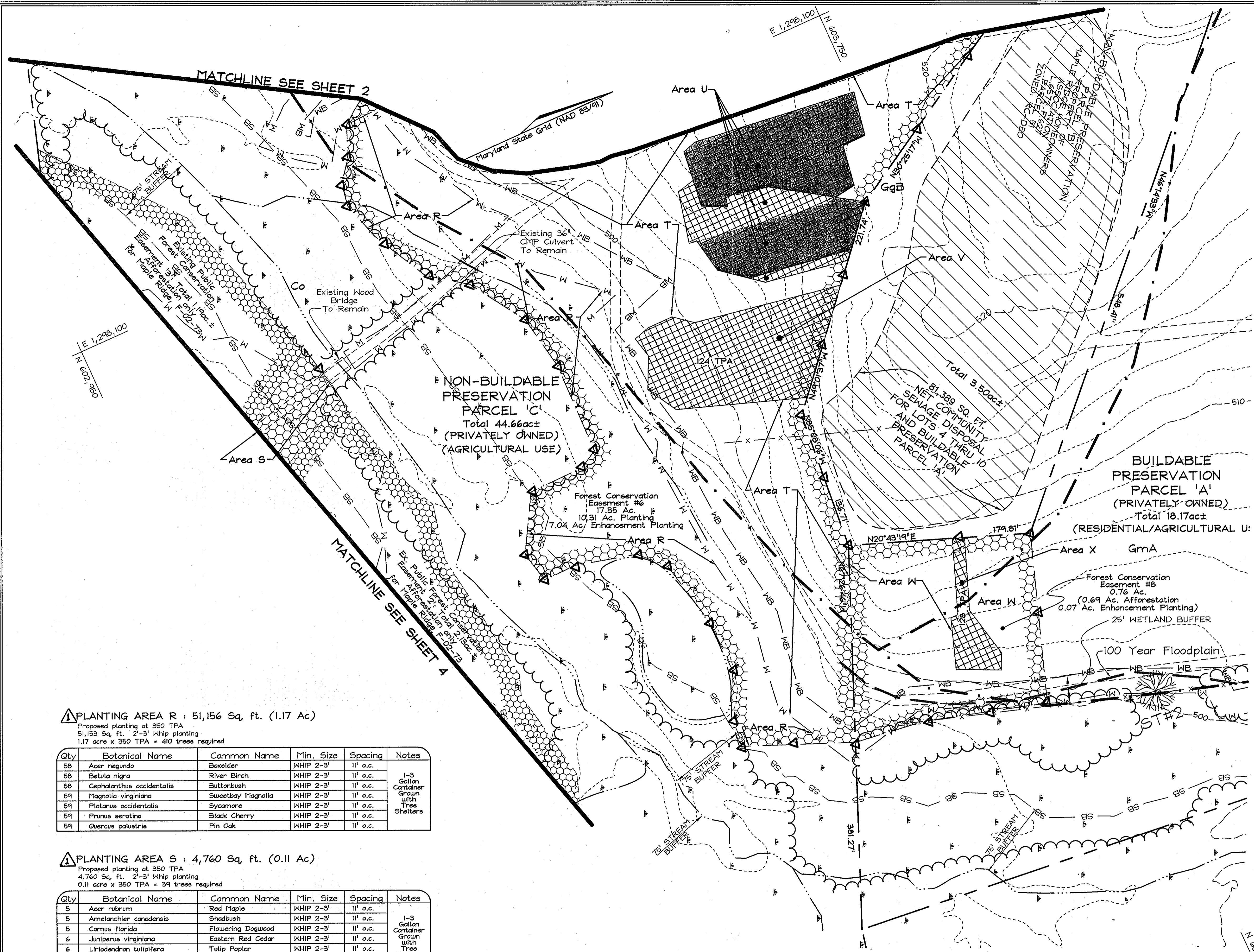
Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
4	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
5	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
5	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
5	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
5	Ilex opaca	American Holly	WHIP 2-3'	11' o.c.	

**FUTURE PLANTING AREA F : 69,098 Sq. ft. (1.59 Ac)**  
 Proposed planting at 350 TPA  
 69,098 Sq. ft. 2"-3" Whip planting  
 1.59 acre x 350 TPA = 557 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
80	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
80	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
80	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
80	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
79	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
79	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	
79	Sassafras albidum	Sassafras	WHIP 2-3'	11' o.c.	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 3/12/11 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 3/17/11 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 3/17/11 DATE  
 DIRECTOR

Rev 5/11



**LEGEND**

- Existing Contour
- Existing Treeline
- Existing Septic Easement
- Stream Centerline
- Stream Buffer
- Wetland
- Wetland Buffer
- Soil Boundary
- 100 Year Floodplain
- Trees less than 2" DBH TPA less than 200
- Trees less than 2" DBH TPA of 200 or more
- Trees 2" DBH or more TPA less than 100
- Trees 2" DBH or more TPA of 100 or more
- Non-Native species
- Banded Forest Bank Limit
- Forest Conservation Easement

**ENHANCEMENT AREA U : 24,773 Sq. ft. (0.57 Ac)**  
 0.38 Ac. (16,584 SF) proposed planting at 92 TPA (350 TPA - 258 TPA existing)  
 0.19 Ac. (8,189 SF) proposed planting at 14 TPA (350 TPA - 336 TPA (160+2) existing)  
 24,773 Sq. ft. 2"-3" Whip planting  
 (0.38 acre x 92 TPA) + (0.19 acre x 14 TPA) = 38 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
7	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
7	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
8	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
8	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	
8	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	

**ENHANCEMENT AREA V : 16,084 Sq. ft. (0.37 Ac)**  
 Proposed planting at 102 TPA (350 TPA - 248 TPA (124+2) existing)  
 16,084 Sq. ft. 2"-3" Whip planting  
 0.37 acre x 102 TPA = 38 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
8	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
8	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
8	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
7	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
7	Ilex opaca	American Holly	WHIP 2-3'	11' o.c.	

**PLANTING AREA W : 30,124 Sq. ft. (0.69 Ac)**  
 Proposed planting at 350 TPA  
 30,124 Sq. ft. 2"-3" Whip planting  
 0.69 acre x 350 TPA = 242 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
34	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
34	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
34	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
35	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
35	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
35	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
35	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	

**ENHANCEMENT AREA X : 2,938 Sq. ft. (0.07 Ac)**  
 Proposed planting at 94 TPA (350 TPA - 256 TPA (126+2) existing)  
 2,938 Sq. ft. 2"-3" Whip planting  
 0.07 acre x 94 TPA = 7 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
3	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
2	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
2	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	

**PLANTING AREA R : 51,156 Sq. ft. (1.17 Ac)**  
 Proposed planting at 350 TPA  
 51,156 Sq. ft. 2"-3" Whip planting  
 1.17 acre x 350 TPA = 410 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
58	Acer negundo	Boxelder	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
58	Betula nigra	River Birch	WHIP 2-3'	11' o.c.	
58	Cephalanthus occidentalis	Butturbush	WHIP 2-3'	11' o.c.	
59	Magnolia virginiana	Sweetbay Magnolia	WHIP 2-3'	11' o.c.	
59	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
59	Prunus serotina	Black Cherry	WHIP 2-3'	11' o.c.	
59	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	

**PLANTING AREA S : 4,760 Sq. ft. (0.11 Ac)**  
 Proposed planting at 350 TPA  
 4,760 Sq. ft. 2"-3" Whip planting  
 0.11 acre x 350 TPA = 39 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
5	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
5	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
5	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
6	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
6	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
6	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
6	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	

**PLANTING AREA T : 89,598 Sq. ft. (2.06 Ac)**  
 Proposed planting at 350 TPA  
 89,598 Sq. ft. 2"-3" Whip planting  
 2.06 acre x 350 TPA = 721 trees required

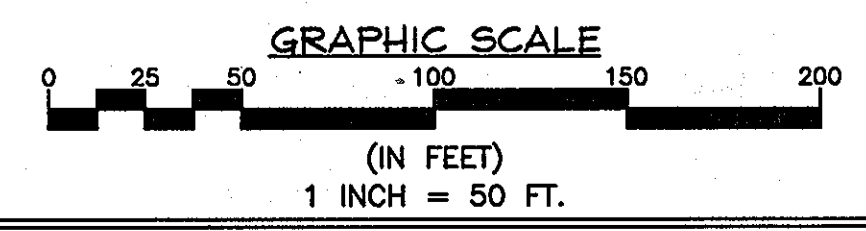
Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
103	Acer saccharinum	Silver Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
103	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
103	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
103	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
103	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
103	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	
103	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Michael J. ...* 3/17/11  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Robert ...* 3/17/11  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Thomas & Butler* 3/17/11  
 DIRECTOR DATE



**OWNER/DEVELOPER**  
 Maple Ridge L.L.P.  
 c/o James W. Ward Jr., General Partner  
 16307 Carrs Mill Road  
 Woodbine, Maryland 21797  
 Telephone: 410-442-2033

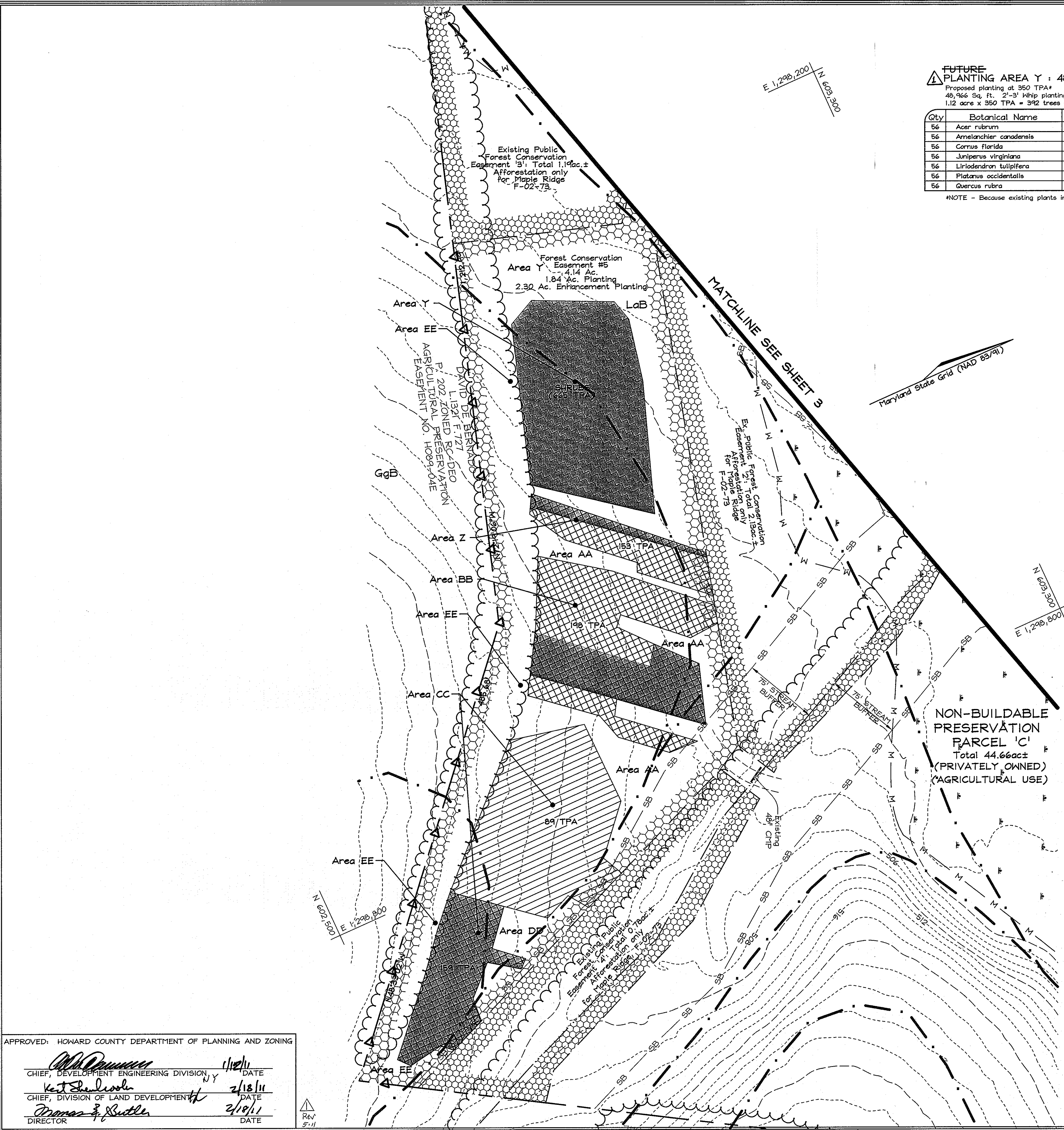


**FOREST CONSERVATION PLAN**  
**MAPLE RIDGE**  
**FOREST BANK ON**  
**PRESERVATION PARCELS 'A' & 'C'**

TAX MAP 8 GRID 14 # 20 PARCEL 51 PLAT #15667  
 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: SMM/RAB  
 DRAWN BY: SMM  
 CHECKED BY: RAB/SLH  
 SCALE: 1"=50'  
 DATE: Feb. 10, 2011  
 W.O. No.: 3499/2456  
 SHEET No.: 3 OF 6

**FSH Associates**  
 Engineers Planners Surveyors  
 6339 Howard Lane Ekriggs, MD 21075  
 Tel: 410-567-5200 Fax: 410-796-1562  
 E-mail: info@fsher.com



**FUTURE PLANTING AREA Y : 48,966 Sq. ft. (1.12 Ac)**  
 Proposed planting at 350 TPA\*  
 48,966 Sq. ft. 2'-3' Whip planting  
 1.12 acre x 350 TPA = 392 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
56	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
56	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
56	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
56	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
56	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
56	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
56	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	

\*NOTE - Because existing plants in this area are exclusively non-native shrubs, no credit was taken

**FUTURE ENHANCEMENT AREA Z : 6,599 Sq. ft. (0.15 Ac)**  
 Suggested planting at 44 TPA (350 TPA - 306 TPA [153\*2] existing); Use 70 TPA  
 6,599 Sq. ft. 2'-3' Whip planting  
 0.15 acre x 70 TPA = 11 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
3	Acer saccharinum	Silver Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
2	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
2	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
2	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
2	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	

**FUTURE PLANTING AREA AA : 21,519 Sq. ft. (0.49 Ac)**  
 Proposed planting at 350 TPA  
 21,519 Sq. ft. 2'-3' Whip planting  
 0.49 acre x 350 TPA = 172 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
24	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
24	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
25	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
25	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
25	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
25	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
25	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA BB : 23,488 Sq. ft. (0.54 Ac)**  
 Proposed planting at 152 TPA (350 TPA - 198 TPA existing)  
 23,488 Sq. ft. 2'-3' Whip planting  
 0.54 acre x 152 TPA = 82 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
16	Acer saccharinum	Silver Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
16	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
16	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
17	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
17	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA CC : 33,003 Sq. ft. (0.76 Ac)**  
 0.53 Ac (22,963 SF) proposed planting at 261 TPA (350 TPA - 89 TPA existing)  
 0.23 Ac (10,050 SF) proposed planting at 32 TPA (350 TPA - 318 TPA [159\*2] existing)  
 33,003 Sq. ft. 2'-3' Whip planting  
 (0.53 acre x 261 TPA) + (0.23 acre x 32 TPA) = 146 trees required

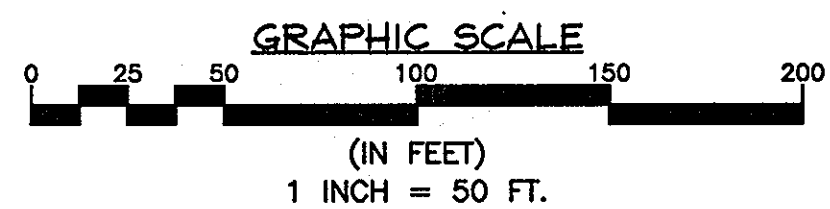
Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
29	Acer saccharinum	Silver Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
29	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
29	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
29	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
30	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	

**FUTURE PLANTING AREA DD : 5,053 Sq. ft. (0.12 Ac)**  
 Proposed planting at 350 TPA  
 5,053 Sq. ft. 2'-3' Whip planting  
 0.12 acre x 350 TPA = 42 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
6	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
6	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
6	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
6	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
6	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
6	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
6	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	

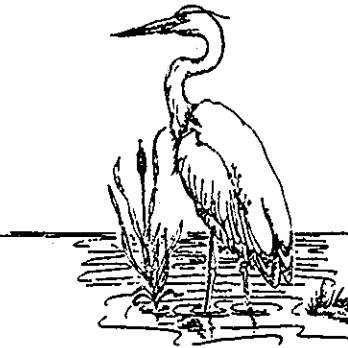
**FUTURE ENHANCEMENT AREA EE : 37,090 Sq. ft. (0.85 Ac)**  
 Proposed planting - interior 10' along hedgerow (11,484 sf/0.26 ac) at 350 TPA  
 11,484 Sq. ft. 2'-3' Whip planting  
 0.26 acre x 350 TPA = 91 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
19	Acer rubrum	Silver Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
18	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
18	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
18	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
18	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	



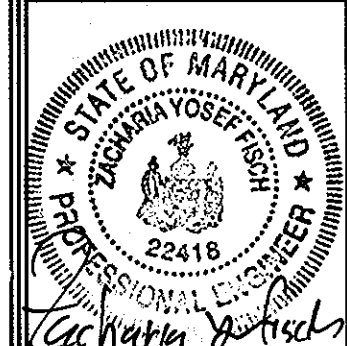
**LEGEND**

- Existing Contour
- Existing Treeline
- Existing Septic Easement
- Stream Centerline
- Stream Buffer
- Wetland
- Wetland Buffer
- Soil Boundary
- Trees less than 2" DBH TPA less than 200
- Trees less than 2" DBH TPA of 200 or more
- Trees 2" DBH or more TPA less than 100
- Trees 2" DBH or more TPA of 100 or more
- Non-Native species
- Bonded Forest Bank Limit
- Forest Conservation Easement



**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 8559 BOWEN LANE  
 BLOOMING MARLBOROUGH 21075  
 TEL: (410) 567-5200 FAX: (410) 798-1582

**FOREST CONSERVATION PLAN**  
**MAPLE RIDGE**  
**FOREST BANK ON**  
**PRESERVATION PARCELS 'A' & 'C'**  
 TAX MAP 8 GRID 14 # 20 PARCEL 51 PLAT #15667  
 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



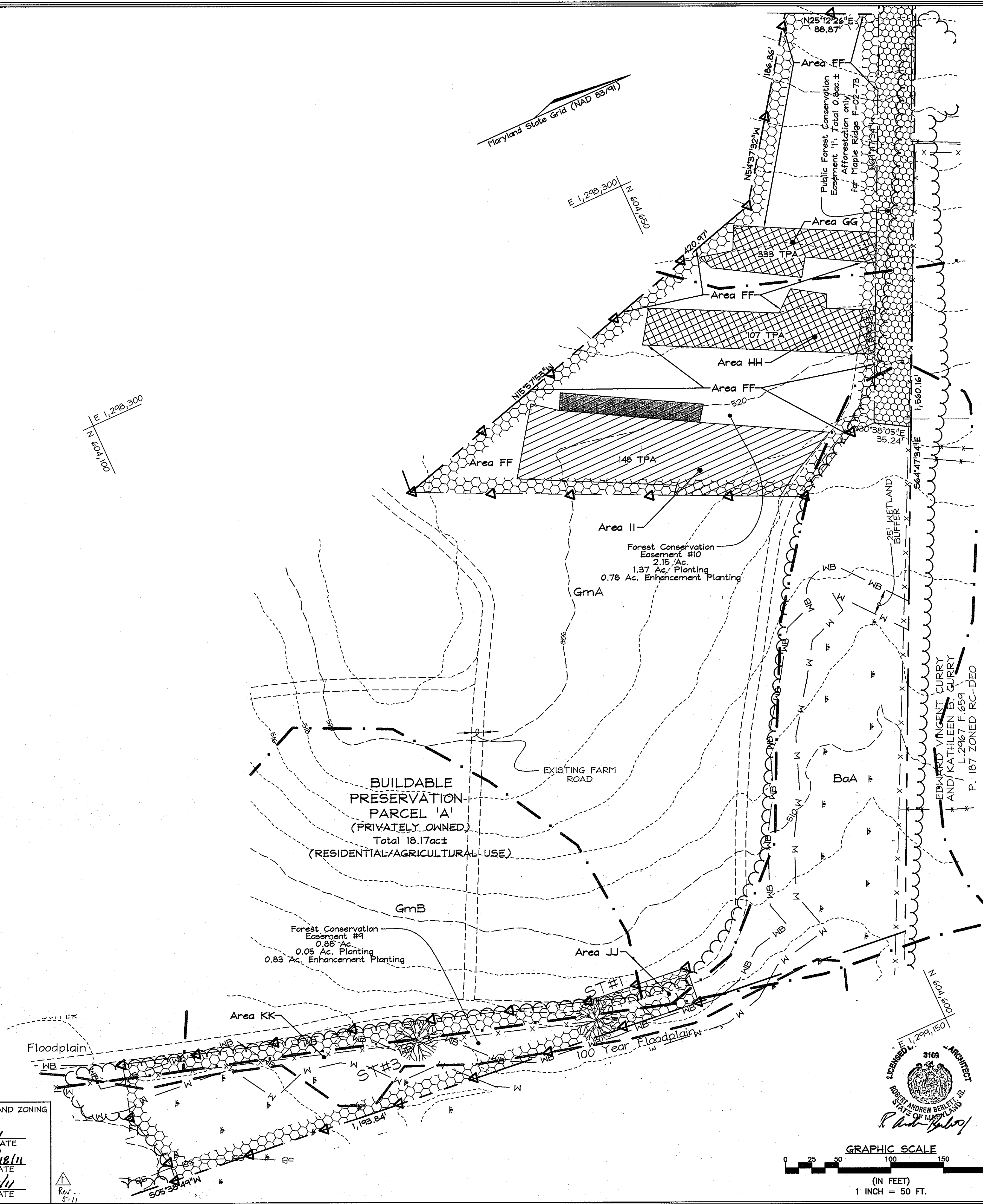
**FSH Associates**  
 Engineers Planners Surveyors  
 6339 Howard Lane Elkridge, MD 21075  
 Tel: 410-567-5200 Fax: 410-798-1582  
 E-mail: info@fisher.com

DESIGN BY: SHM/RAB  
 DRAWN BY: SHM  
 CHECKED BY: RAB/SLH  
 SCALE: 1"=50'  
 DATE: Dec. 21, 2010  
 P.L.O. No.: 3499/2456  
 SHEET No.: 4 OF 6

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 11/12/11 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT 2/18/11 DATE  
 DIRECTOR 2/18/11 DATE



**OWNER/DEVELOPER**  
 Maple Ridge L.L.P.  
 c/o James W. Haral, Jr., General Partner  
 16307 Carrs Mill Road  
 Woodbine, Maryland 21797  
 Telephone: 410-442-2033



**FUTURE PLANTING AREA FF : 59,567 Sq. ft. (1.37 Ac)**

Proposed planting at 350 TPA  
59,567 Sq. ft. 2'-3' Whip planting  
1.37 acre x 350 TPA = 480 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
68	Acer rubrum	Red Maple	NHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
68	Amelanchier canadensis	Shadbush	NHIP 2-3'	11' o.c.	
68	Cornus florida	Flowering Dogwood	NHIP 2-3'	11' o.c.	
69	Juniperus virginiana	Eastern Red Cedar	NHIP 2-3'	11' o.c.	
69	Liriodendron tulipifera	Tulip Poplar	NHIP 2-3'	11' o.c.	
69	Platanus occidentalis	Sycamore	NHIP 2-3'	11' o.c.	
69	Quercus rubra	Red Oak	NHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA GG : 5,267 Sq. ft. (0.12 Ac)**

Suggested planting at 17 TPA (350 TPA - 333 TPA existing); Use 70 TPA  
5,267 Sq. ft. 2'-3' Whip planting  
0.12 acre x 70 TPA = 8 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
2	Amelanchier canadensis	Shadbush	NHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
3	Ilex opaca	American Holly	NHIP 2-3'	11' o.c.	
3	Quercus alba	White Oak	NHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA HH : 8924 Sq. ft. (0.20 Ac)**

Proposed planting at 136 TPA (350 TPA - 214 [107\*2] TPA existing)  
8924 Sq. ft. 2'-3' Whip planting  
0.20 acre x 136 TPA = 27 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
6	Amelanchier canadensis	Shadbush	NHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
6	Cercis canadensis	Eastern Redbud	NHIP 2-3'	11' o.c.	
5	Cornus florida	Flowering Dogwood	NHIP 2-3'	11' o.c.	
5	Ilex opaca	American Holly	NHIP 2-3'	11' o.c.	
5	Quercus alba	White Oak	NHIP 2-3'	11' o.c.	
5	Quercus phellos	Willow Oak	NHIP 2-3'	11' o.c.	

**FUTURE ENHANCEMENT AREA II : 19,949 Sq. ft. (0.46 Ac)**

Proposed planting at 202 TPA (350 TPA - 148 TPA existing)  
19,949 Sq. ft. 2'-3' Whip planting  
0.46 acre x 258 TPA = 93 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
18	Amelanchier canadensis	Shadbush	NHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
18	Cercis canadensis	Eastern Redbud	NHIP 2-3'	11' o.c.	
19	Cornus florida	Flowering Dogwood	NHIP 2-3'	11' o.c.	
19	Ilex opaca	American Holly	NHIP 2-3'	11' o.c.	
19	Quercus phellos	Willow Oak	NHIP 2-3'	11' o.c.	
19	Quercus prinus	White Oak	NHIP 2-3'	11' o.c.	

**FUTURE PLANTING AREA JJ : 2,056 Sq. ft. (0.05 Ac)**

Proposed planting at 350 TPA  
2,056 Sq. ft. 2'-3' Whip planting  
0.05 acre x 350 TPA = 18 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
3	Acer negundo	Boxelder	NHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
3	Betula nigra	River Birch	NHIP 2-3'	11' o.c.	
3	Magnolia virginiana	Sweetbay Magnolia	NHIP 2-3'	11' o.c.	
3	Platanus occidentalis	Sycamore	NHIP 2-3'	11' o.c.	
3	Prunus serotina	Black Cherry	NHIP 2-3'	11' o.c.	
3	Quercus palustris	Pin Oak	NHIP 2-3'	11' o.c.	

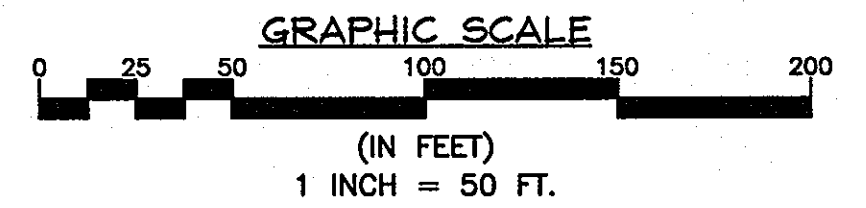
**FUTURE ENHANCEMENT AREA KK : 36,160 Sq. ft. (0.83 Ac)**

Proposed planting at 200 TPA (350 TPA - 150 [75\*2] TPA existing)  
36,160 Sq. ft. 2'-3' Whip planting  
0.83 acre x 200 TPA = 166 trees required

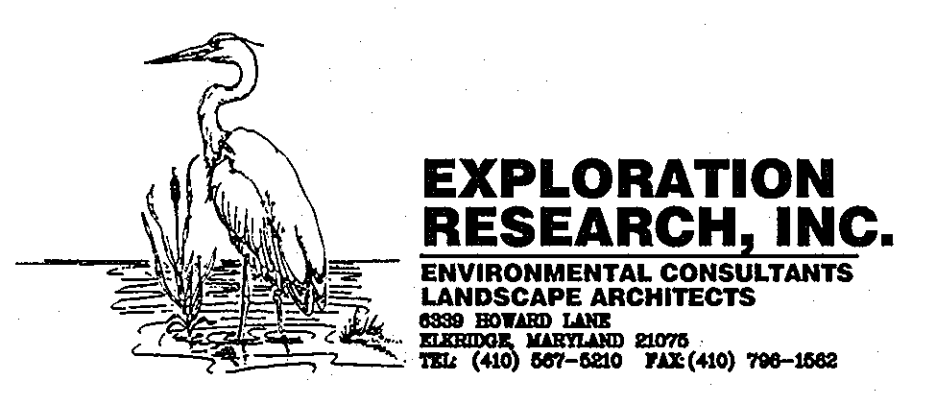
Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
34	Acer negundo	Boxelder	NHIP 2-3'	11' o.c.	1-3 Gallon Container Group with Tree Shelters
33	Betula nigra	River Birch	NHIP 2-3'	11' o.c.	
33	Magnolia virginiana	Sweetbay Magnolia	NHIP 2-3'	11' o.c.	
33	Platanus occidentalis	Sycamore	NHIP 2-3'	11' o.c.	
33	Prunus serotina	Black Cherry	NHIP 2-3'	11' o.c.	
33	Quercus palustris	Pin Oak	NHIP 2-3'	11' o.c.	

**LEGEND**

- Existing Contour
- Existing Treeline
- Existing Septic Easement
- Stream Centerline
- Stream Buffer
- Wetland
- Wetland Buffer
- Soil Boundary
- 100 Year Floodplain
- Trees less than 2" DBH TPA less than 200
- Trees less than 2" DBH TPA of 200 or more
- Trees 2" DBH or more TPA less than 100
- Trees 2" DBH or more TPA of 100 or more
- Non-Native species
- Bonded Forest Bank Limit
- Forest Conservation Easement



**OWNER/DEVELOPER**  
Maple Ridge L.L.P.  
c/o James W. Ward Jr., General Partner  
16307 Core Hill Road  
Woodbine, Maryland 21797  
Telephone: 410-442-2033



**FOREST CONSERVATION PLAN**  
**MAPLE RIDGE FOREST BANK ON PRESERVATION PARCELS 'A' & 'C'**  
TAX MAP 8 GRID 14 # 20 PARCEL 51 PLAT #15667  
4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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DESIGN BY: SHM/RAB  
DRAWN BY: SHM  
CHECKED BY: RAB/SLH  
SCALE: 1"=50'  
DATE: Dec. 21, 2010  
W.O. No.: 3499/2456  
SHEET No.: 5 OF 6

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John J. ...* 11/21/11 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Neil ...* 2/18/11 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT

*Thomas ...* 2/18/11 DATE  
DIRECTOR

NOTE: For locations of areas L through Q, see sheet 2.

**FUTURE**  
**ENHANCEMENT AREA L : 8,116 Sq. ft. (0.19 Ac)**  
 Suggested planting at 38 TPA (350 TPA - 312 TPA (156\*2) existing); Use 70 TPA  
 8,116 Sq. ft. 2'-3' Whip planting  
 0.19 acre x 70 TPA = 13 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
2	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
2	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
3	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
3	Ilex opaca	American Holly	WHIP 2-3'	11' o.c.	
3	Sassafras albidum	Sassafras	WHIP 2-3'	11' o.c.	

**FUTURE**  
**ENHANCEMENT AREA M : 38,185 Sq. ft. (0.88 Ac)**  
 Proposed planting at 214 TPA (350 TPA - 136 TPA (68\*2) existing)  
 38,185 Sq. ft. 2'-3' Whip planting  
 0.88 acre x 214 TPA = 188 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
38	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
38	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
37	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
37	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
37	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	

**FUTURE**  
**PLANTING AREA N : 34,013 Sq. ft. (0.78 Ac)**  
 Proposed planting at 350 TPA  
 34,013 Sq. ft. 2'-3' Whip planting  
 0.78 acre x 350 TPA = 273 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
34	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
34	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
34	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
34	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
34	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	

**FUTURE**  
**ENHANCEMENT AREA O : 16,270 Sq. ft. (0.37 Ac)**  
 Proposed planting at 200 TPA (350 TPA - 150 TPA (75\*2) existing)  
 16,270 Sq. ft. 2'-3' Whip planting  
 0.37 acre x 200 TPA = 74 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
15	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
15	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
15	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
15	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
14	Viburnum dentatum	Arrowwood Viburnum	WHIP 2-3'	11' o.c.	

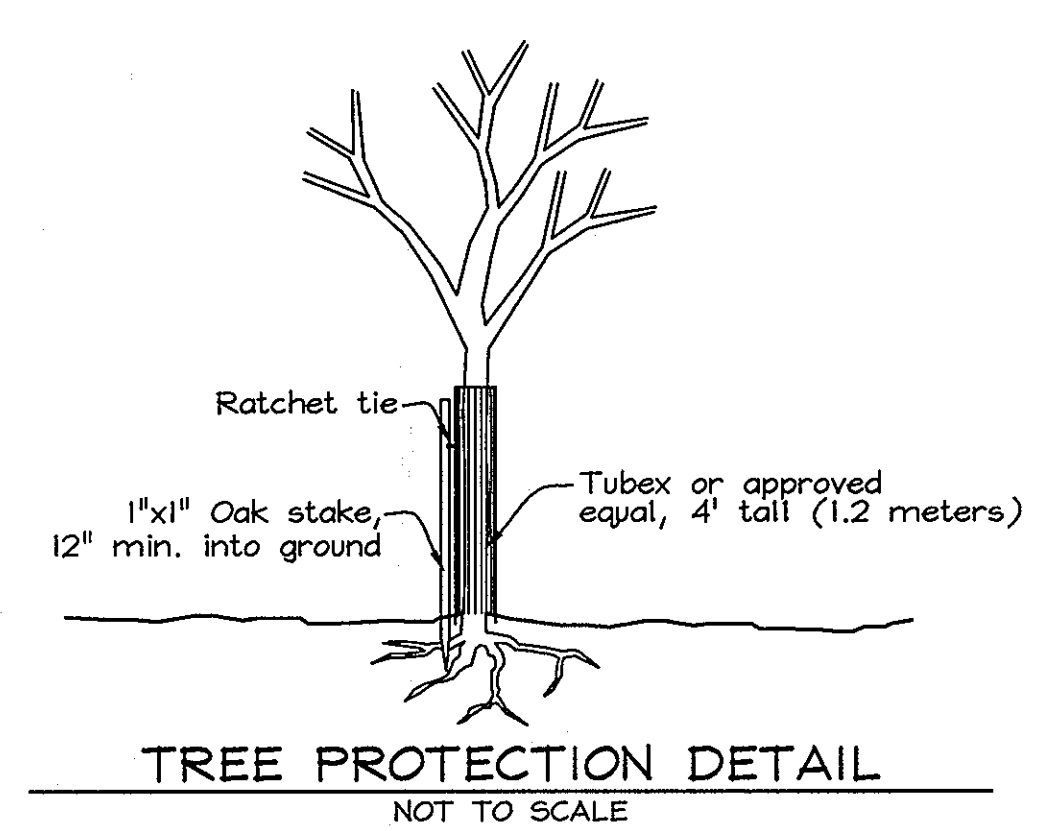
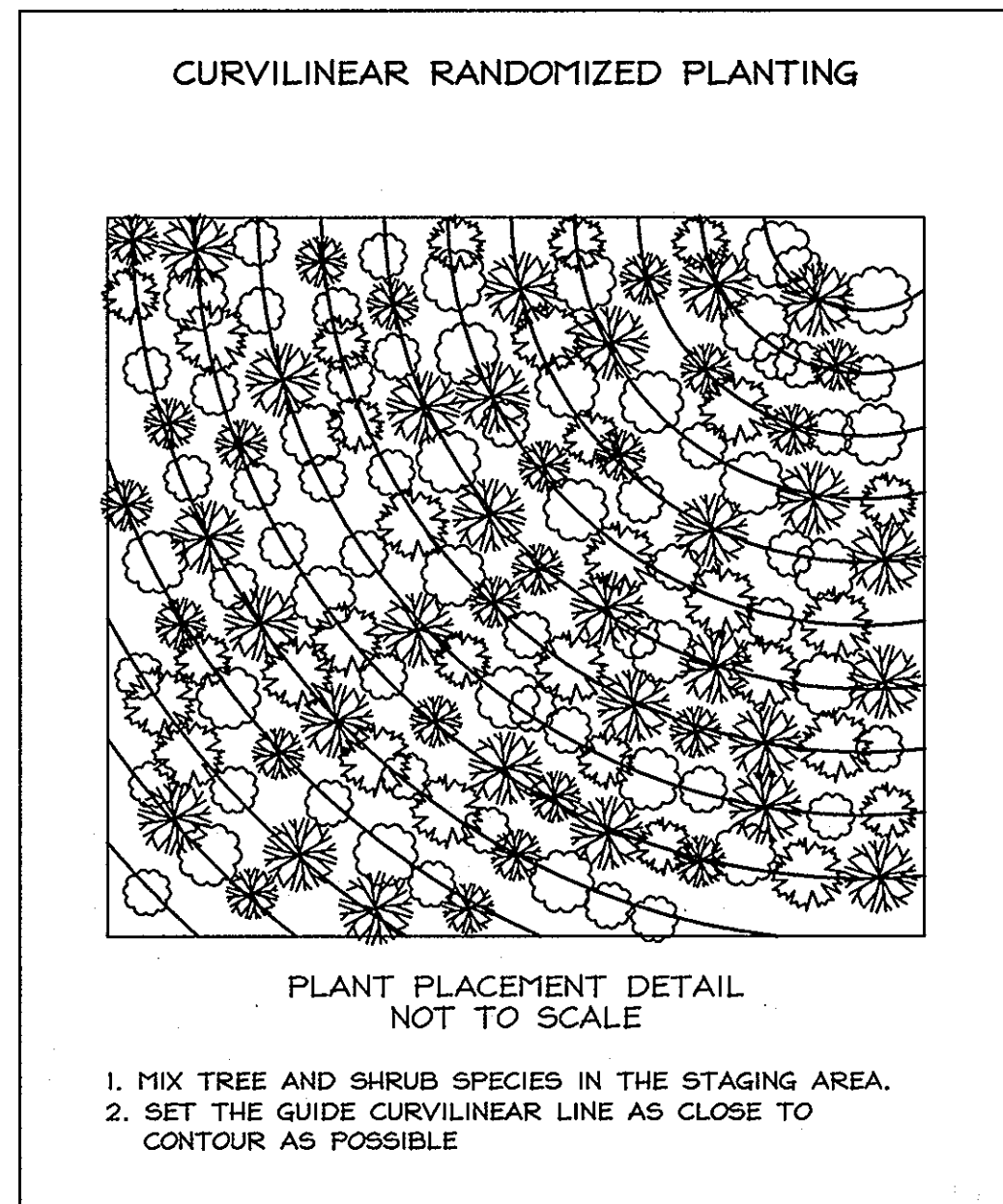
**FUTURE**  
**ENHANCEMENT AREA P : 4,156 Sq. ft. (0.10 Ac)**  
 Proposed planting at 132 TPA (350 TPA - 218 TPA (109\*2) existing)  
 4,156 Sq. ft. 2'-3' Whip planting  
 0.10 acre x 132 TPA = 13 trees required

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
3	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
3	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
3	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
2	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
2	Viburnum dentatum	Arrowwood Viburnum	WHIP 2-3'	11' o.c.	

**FUTURE**  
**ENHANCEMENT AREA Q : 29,342 Sq. ft. (0.67 Ac)**  
 0.35 Ac (15,220 SF) proposed planting at 132 TPA (350 TPA - 218 TPA (109\*2) existing)  
 0.12 Ac (5,243 SF) proposed planting at 154 TPA (350 TPA - 191 TPA existing)  
 0.20 Ac (8,874 SF) proposed planting at 144 TPA (350 TPA - 206 TPA (103\*2) existing)  
 29,342 Sq. ft. 2'-3' Whip planting  
 (0.35 acre x 132 TPA) + (0.12 acre x 154 TPA) + (0.20 acre x 144 TPA) = 94 trees required

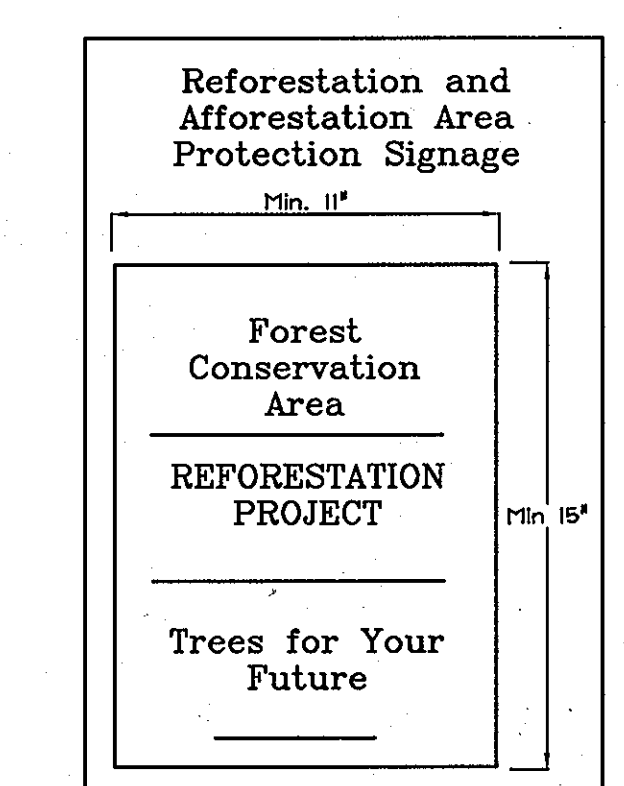
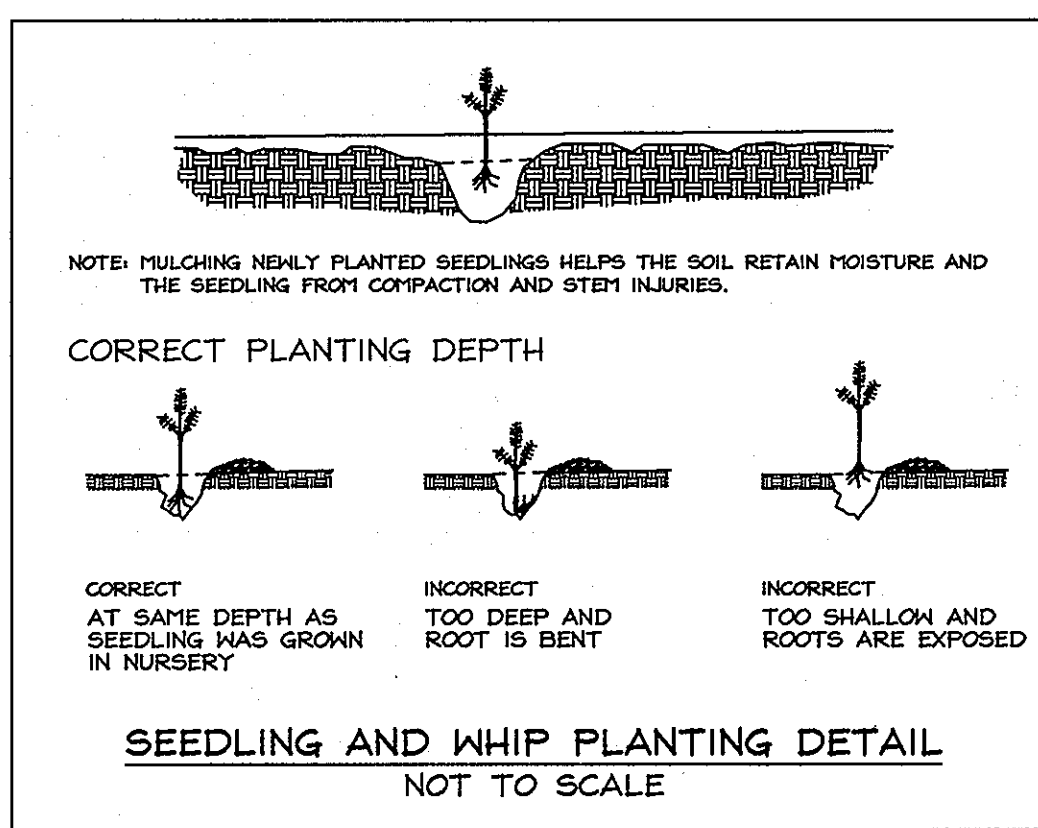
Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
18	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
19	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
19	Ilex opaca	American Holly	WHIP 2-3'	11' o.c.	
19	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	
19	Viburnum dentatum	Arrowwood Viburnum	WHIP 2-3'	11' o.c.	

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
BaA	Boile silt loam, 0 to 3 percent slopes	D
Co	Codorus and Hattboro silt loams, 0 to 3 percent slopes	C
GaA	Glenelg loam, 0 to 3 percent slopes	B
GaB	Glenelg loam, 3 to 8 percent slopes	B
GaC	Glenelg loam, 8 to 15 percent slopes	B
GaD	Glenelg loam, 15 to 25 percent slopes	B
LmB	Legare-Montalto silt loams, 3 to 8 percent slopes	B
MaD	Major loam, 15 to 25 percent slopes	B
MdD	Major loam, 15 to 25 percent slopes, very rocky	B
MkF	Major-Brinklow complex, 25 to 65 percent slopes, very rocky	B
UoF	Udorthents, Highway, 0 to 65 percent slopes	-
W	Water	-



- Planting Notes**
- Initial planting inspection and certification required. Planting contractor to notify ERI qualified professional 24 hours in advance of planting.
  - Reforestation 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 conditions warrant.
  - 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 shall be planted in accordance with the planting diagram, planting details and planting schedule.
  - Plant 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.
  - Planting materials shall be nursery grown and inspected prior to planting. Plants not conforming to the American Standards for Nursery Stock specifications for size, form, vigor, or roots, or due to trunk wounds, breakage, desiccation, insect or disease must be replaced.
  - 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 watering operation should allow for watering during installation to completely soak backfill materials.
  - Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
  - Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical augering is preferred with scarification of the sides of each hole.
  - All nursery stock to be sprayed with deer repellent containing Biltrax such as Repellex. All nursery stock to be grown with deer repellent tablets in growing medium, such as Repellex Tablets.

- Planting/Enhancement Area Monitoring Notes**
- Initial planting inspection and certification required. Planting contractor to notify ERI qualified professional 24 hours in advance of planting.
  - 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 24 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.
  - A final inspection and certification by the ERI qualified professional is required after the second growing season. 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.



**SIGNAGE NOTE:** All tree protection signs shall be placed on metal 1 1/2 inch posts or pressure treated wood poles. No attachment of signs to trees is permitted. Signs shall be placed every 75' to 100' as shown on plan view. Signage shall remain in place in perpetuity.

**OVERALL PLANTING LIST**

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
137	Acer negundo	Boxelder	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
388	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	
380	Acer saccharinum	Silver Maple	WHIP 2-3'	11' o.c.	
906	Amelanchier canadensis	Shadbush	WHIP 2-3'	11' o.c.	
136	Betula nigra	River Birch	WHIP 2-3'	11' o.c.	
100	Cephalanthus occidentalis	Butterbush	WHIP 2-3'	11' o.c.	
664	Cercis canadensis	Eastern Redbud	WHIP 2-3'	11' o.c.	
560	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
72	Ilex opaca	American Holly	WHIP 2-3'	11' o.c.	
810	Juniperus virginiana	Eastern Red Cedar	WHIP 2-3'	11' o.c.	
724	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
160	Magnolia virginiana	Sweetbay Magnolia	WHIP 2-3'	11' o.c.	
333	Platanus occidentalis	Sycamore	WHIP 2-3'	11' o.c.	
136	Prunus serotina	Black Cherry	WHIP 2-3'	11' o.c.	
385	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	
412	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.	
218	Quercus phellos	Willow Oak	WHIP 2-3'	11' o.c.	
274	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
82	Sassafras albidum	Sassafras	WHIP 2-3'	11' o.c.	
148	Viburnum dentatum	Arrowwood Viburnum	WHIP 2-3'	11' o.c.	

**Native Seed Mix**

Percentage	Botanical Name	Common Name
25%	Agrostis alba	Redtop
25%	Carex vulpinoidea	Fox Sedge
25%	Alopecurus pratensis	Meadow Fox Tail
20%	Andropogon scoparius	Little Bluestem
5%	Chrysanthemum leucanthemum	Ox Eye Daisy

**FOREST CONSERVATION EASEMENT TABLE**

EASEMENT	TYPE	AREA (AC.)
5	Planting Enhancement Planting	1.84
6	Planting Enhancement Planting	10.31
7	Planting	0.78
8	Planting Enhancement Planting	0.69
9	Planting Enhancement Planting	0.07
10	Planting Enhancement Planting	0.85
	Planting Enhancement Planting	1.37
	Planting Enhancement Planting	0.78
TOTALS	Planting Enhancement Planting	15.04
	Planting Enhancement Planting	11.02
	Total Easement Area	26.06

**Planting Areas Description**  
 The proposed planting and enhancement areas totaling 25.41 ac. are proposed to be located on Non-Buildable Preservation Parcel 'C' and the perimeter of Buildable Preservation Parcel 'A'. The current land use is as a tree nursery, making it an ideal area to plant and provide forest. Plantings fill in areas between existing forest conservation easements, existing forest, and several existing tree stands.

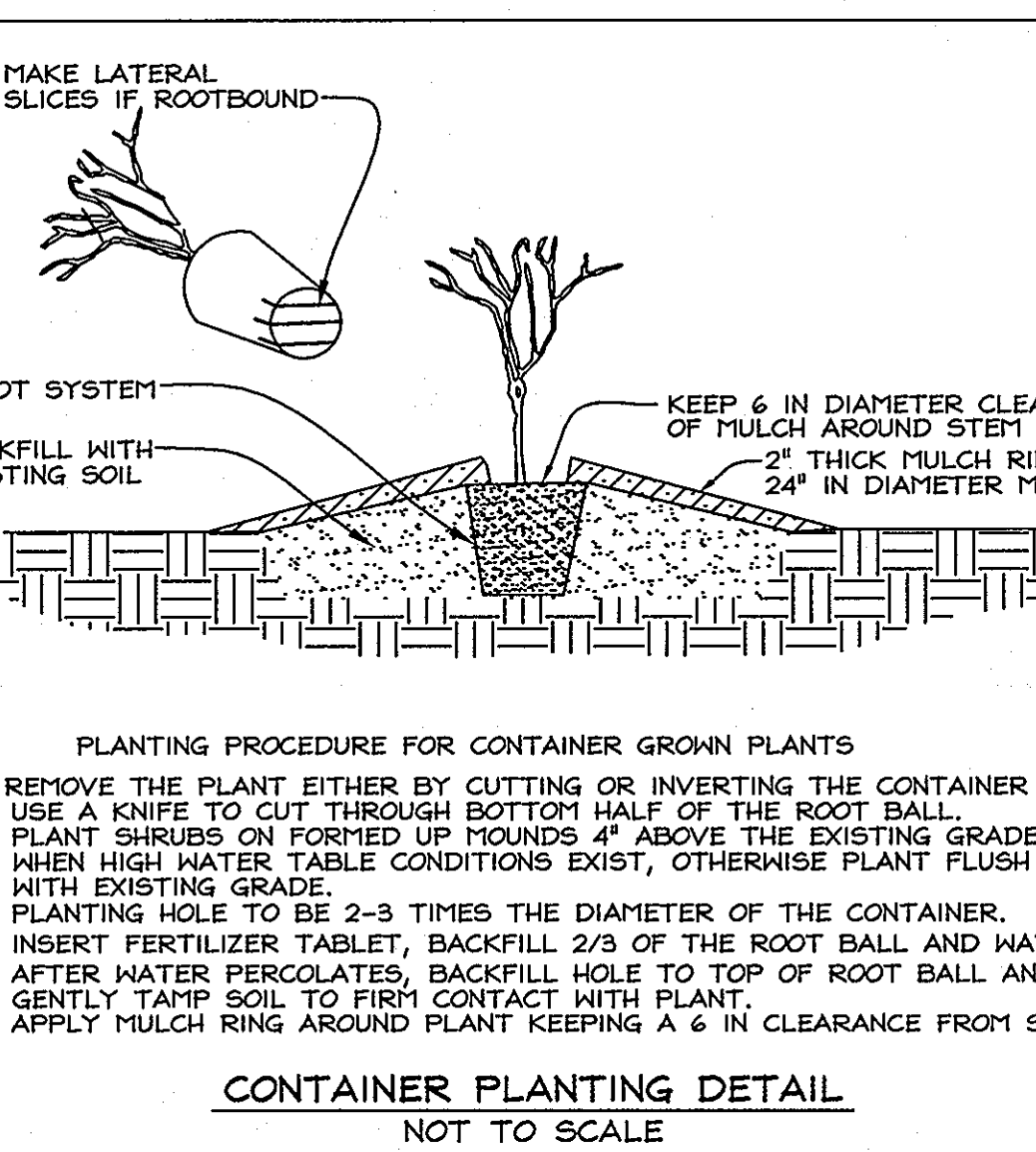
Planting will utilize a variety of species as shown in the proposed planting schedule. Stock will be randomly placed per the details on this sheet. All container grown stock will utilize tree shelters. The entire area will be stabilized with the described seed mix cover crop.

**Plant Selection and Density Spacing Requirements.**  
 Planting Material Size and Density Spacing:  
 Planting size and density shall be varied with a combination of planting stock. Planting quantity and spacing are based on square footage credit, which varies by material size. A total of 43,560 sq. ft. of planting credit must be fulfilled for each acre planted. This credit can be fulfilled with any combination of material size in accordance with the following chart.

**Plant Material Size Table**

Material Size	Spacing	TPA	Sq. Ft. Credit per Plant	Comments
2" caliper trees	20' x 20'	100	435.6	B & B
1" caliper trees	15' x 15'	200	217.8	B & B
seedlings or whips	11' x 11'	350	125	Container 1-3 gal w/tree shelters
seedlings or shrubs	8' x 8'	700	62	Bare root

The forest conservation easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Manual. No clearing, grading or construction is permitted within the forest conservation easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.



- 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 ON FORMED UP MOUNDS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
  - PLANTING HOLE TO BE 2-3 TIMES THE DIAMETER OF THE CONTAINER.
  - INSERT FERTILIZER TABLET, BACKFILL 2/3 OF THE ROOT BALL AND WATER.
  - AFTER WATER PERCOLATES, BACKFILL HOLE TO TOP OF ROOT BALL AND GENTLY TAMP SOIL TO FIRM CONTACT WITH PLANT.
  - APPLY MULCH RING AROUND PLANT KEEPING A 6 IN CLEARANCE FROM STEM.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 3/17/11

CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 3/17/11

DIRECTOR  
 DATE: 3/17/11

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 6939 HOWARD LANE  
 ELLENBORO, MARYLAND 21076  
 TEL: (410) 587-5200 FAX: (410) 798-1582

**FOREST CONSERVATION PLAN DETAILS**  
**MAPLE RIDGE FOREST BANK ON PRESERVATION PARCELS 'A' & 'C'**

TAX MAP 8 GRID 14 # 20 PARCEL 51 PLAT #15667  
 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FSH Associates**  
 Engineers Planners Surveyors  
 6339 Howard Lane Elkridge, MD 21075  
 Tel: 410-587-5200 Fax: 410-798-1582  
 E-mail: info@fshri.com

DESIGN BY: SHM/RAB  
 DRAWN BY: SHM  
 CHECKED BY: RAB/SLH  
 SCALE: N/A  
 DATE: Feb. 10, 2011  
 W.O. No.: 3499/2456  
 SHEET No.: 6 OF 6

**OWNER/DEVELOPER**  
 Maple Ridge L.L.C.  
 c/o James W. Ward Jr., General Partner  
 16307 Carrs Mill Road  
 Woodbine, Maryland 21797  
 Telephone: 410-442-2033