

FOREST CONSERVATION NOTES

SEQUENCE OF CONSTRUCTION

INDIVIDUAL TREE PRESERVATION AND STRESS REDUCTION MEASURES

ID #	PRESERVATION TREE	RP	DRF	CA	SP	MB	DRW
6	Siberian Elm	X	X	X	X	X	X

TERMINOLOGY

(RP) ROOT PRUNING IS TO BE PERFORMED OUTSIDE THE TREE PROTECTION FENCE AND THE CRITICAL ROOT ZONE. IT IS TO BE ACCOMPLISHED BY A VIBRATORY PLOW WITH A SERRATED CUTTING EDGE OR A ROOT CUTTER WITH A 36" WHEEL TO A DEPTH OF 24". CHAIN DRIVEN TRENCHERS ARE NOT ACCEPTABLE. (SEE DETAIL)

(DRF) DEEP ROOT FERTILIZE UTILIZING A HYDRAULIC PUMP TO INJECT A LIQUID SOLUTION OF 30-10-7 ARBORICULTURAL GRADE FERTILIZER AND A BIOROOT STIMULATOR SUCH AS "ROOTS" OR "ESSENTIAL".

(CA) CORE AERATION IS TO BE DONE WITH A HAND-HELD MANUAL PUNCH CORE AERATOR AT 2 HOLES PER SQ.FT. THROUGHOUT ROOT ZONE. INCORPORATE AN ORGANIC PRODUCT (LEAFGROW) AND AN INORGANIC PRODUCT(SAND OR SOLITE) DURING THE AERATION PROCESS.

(SP) SANITATION PRUNE TO REMOVE ALL DEAD OR DYING LIMBS GREATER THAN ONE INCH ON A TREE TO IMPROVE ITS HEALTH AND APPEARANCE. THIN CROWN WHERE NECESSARY TO REDUCE CANOPY DENSITY BY MAXIMUM TWENTY-FIVE PERCENT TO COMPENSATE FOR ROOT LOSS AND CONSTRUCTION STRESS.

(MB) MULCH BEDS ARE TO BE 2-3" SHREDDED HARDWOOD MULCH, SHREDDED PINE BARK MULCH, OR COMPOSTED WOOD CHIPS. FRESHLY CUT WOODCHIPS ARE NOT ACCEPTABLE.

(DRW) DEEP ROOT WATERING TO OCCUR ON A WEEKLY BASIS DURING DROUGHT PERIODS.

Pre-construction

- An on-site pre-construction meeting shall be required after the limits of disturbance have been staked and flagged, but before any clearing or grading begins. The owner shall contact the Maryland National Capital Park and Planning Commission (MNCPPC) Planning Department inspection staff (301-495-4581) 48 hours prior to commencing construction to verify the limits of disturbance and discuss tree protection and tree care measures. The attendees at this meeting should include: developer's representative, construction superintendent, MD licensed tree expert or ISA certified arborist, MNCPPC staff, and sediment control inspector.
- No clearing or grading shall begin before stress-reduction measures have been implemented, unless otherwise permitted by Montgomery County. Appropriate measures (see Forest Conservation Plan) may include, but are not limited to:
 - Root pruning
 - Crown reduction or pruning
 - Watering
 - Fertilizing
 - Vertical mulching
 Measures not specified on the FCP may be requested as determined by the MNCPPC inspector in coordination with the State of Maryland licensed tree expert or International Society of Arboriculture certified arborist. Documentation of stress reduction must be sent to MNCPPC Environmental Planning Division 8787 Georgia Ave, Silver Spring, Maryland.

- All stress-reduction measures must be performed by a State of Maryland licensed tree expert or International Society of Arboriculture certified arborist. Documentation of stress reduction must be sent to MNCPPC Environmental Planning Division 8787 Georgia Ave, Silver Spring, Maryland.
- Temporary tree protection devices shall be installed per the Forest Conservation Plan and prior to any construction/activities. Tree protection fencing locations should be staked in the field prior to the preconstruction meeting. MNCPPC inspector, in coordination with the DPS sediment control inspector may make field adjustments to increase the survivability of trees and forest shown as saved on the approved plan. Temporary tree protection devices may include:
 - Chain link fence (four feet high)
 - Snow fence (four feet high)
 - Super silt fence
 - 14 gauge 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.

- Temporary protection devices shall be maintained and installed by the contractor for the duration of the construction project and must not be altered without prior approval from MNCPPC. No equipment, trucks, materials, or debris may be stored within the tree protection fence areas during the entire construction project. No access to the fenced area will be permitted. Tree protection fencing shall not be removed without approval of MNCPPC. Tree protection devices to be coordinated with erosion and sediment control devices as indicated on the approved ESC plan.
- Forest Retention Area signs shall be installed as required by inspector. Tree stakes shall be installed along the Afforestation/Reforestation project perimeter at 25 foot intervals. They shall be 2" x 2" x 3", and driven plumb 1' below grade.

- Long-term protection devices will be installed per the Forest Conservation Plan and attached details. Installation will occur at the appropriate time during the construction project.
- Periodic inspections by MNCPPC will occur during the construction project. Corrections and repairs to all tree protection devices, as determined by the inspector, must be made within the timeframe established by the MNCPPC inspector.
- After construction is completed, an inspection shall be requested. Corrective measures which may be required include:
 - Removal and replacement of dead or dying trees
 - Pruning of dead or declining limbs
 - Soil erosion
 - Fertilization
 - Watering
 - Wound covers
 - Clean up of retention areas

- After inspection and completion of corrective measures have been undertaken, all temporary protection devices shall be removed from the site. No additional grading, seeding, or burial of debris may take place.

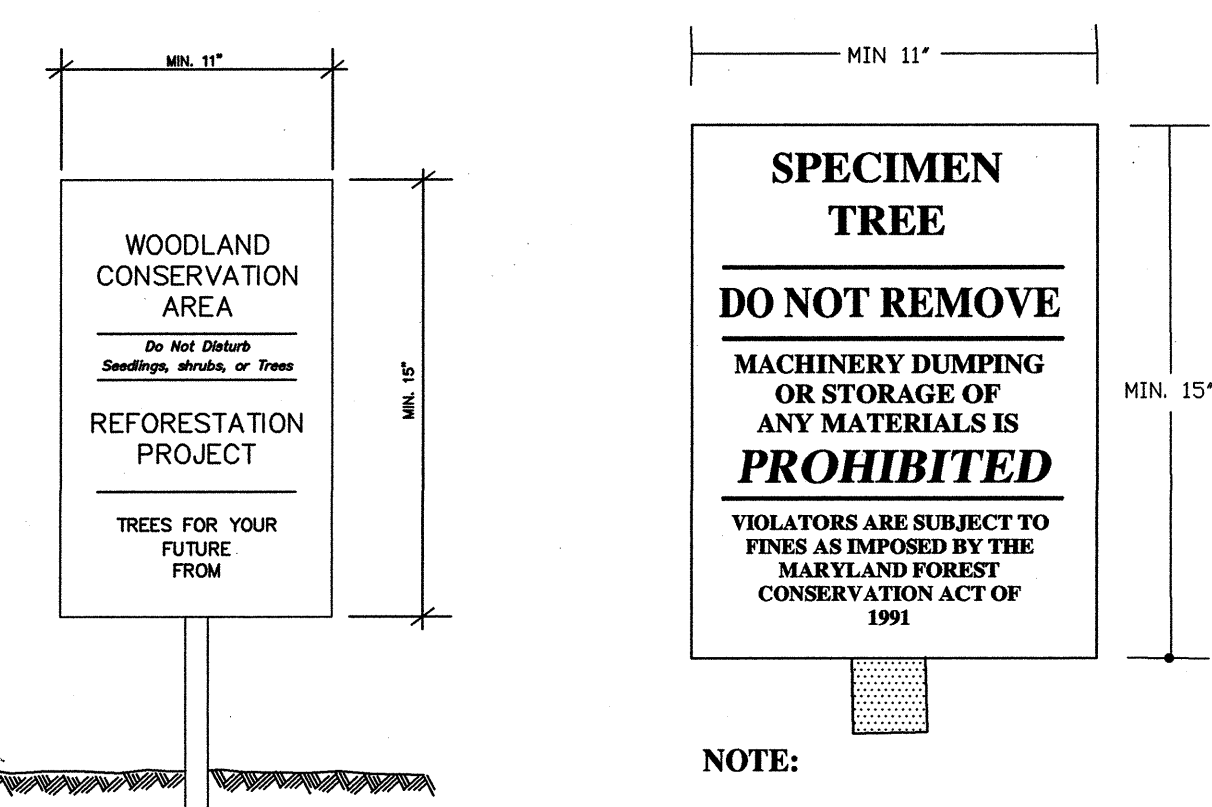
Planting:

- Owner shall contact MNCPPC Planning Department staff before planting.
- Contractor to mow afforestation area and remove all invasive plants (ie: multiflora rose, mulberry trees) and apply herbicide, only if determined to be needed by MNCPPC Planning Department inspector, to eliminate competition of weed seed prior to planting. MNCPPC inspector will determine if additional measures are needed.
- All plant material shall be approved by the Owner or duly appointed representative prior to planting. If plant material is not available substitutions may be made with prior approval from the developer and Montgomery County.
- Size and standards of plant materials shall conform to latest edition of "USA Standards for Nursery Stock", by the American Association of Nurserymen, Inc. (AAN).
- All plants shall be placed so as not to obstruct drainage.
- Plants shall be installed randomly in a triangular or staggered pattern (not in a straight line). Container stock shall be spaced minimum 8-12 feet on center. Bare root stock shall be spaced minimum 6-8 feet on center. See detail.
- Slow release fertilizer (osmocate 10-10-5) shall be applied at the time of planting at the rate of 600 lbs. per acre.
- Where field conditions exist which would adversely affect plant performance, or interfere with proper planting procedures, the contractor shall notify the Owner prior to installation of plant material.
- All trees are to be located a minimum distance of 5' from all utility boxes, 5' from a storm drain inlet or manhole, 10' from a fire hydrant, 15' from any public street light, and 5' from any driveway aprons.
- Remove litter and debris as required during the first growing season and at the beginning of the second growing season.
- Plants shall be installed only between the months of January and May and between September and December when the ground is not frozen. Plants shall be guaranteed for one-year period from the time of installation. Any replacement must be installed as above.
- All disturbed areas within the Forest Conservation easement to be seeded with Southern Tier Consulting, Inc. (716-968-3120), Native/Naturalized Wildflower Seed Mix (Northeast) at a rate of 23 pounds per acre.
- After planting is complete, MNCPPC inspector must inspect the planted area to determine if planted area is acceptable and required maintenance period may begin or further additional measures are needed in order for the planted area to be accepted. At the discretion of the MNCPPC inspector, up to one-half of the financial security may be released if stock and planted area is in good condition.

Maintenance:

- The plant material shall be maintained by the owner/developer for two (2) years after the completion. Maintenance shall consist of:
 - Remove and replace all dead or diseased vegetation.
 - Remove all invasive non-native plants.
 - Necessary watering, fertilization, or pest control.
 - Shall not be mowed unless directed by Montgomery County.
- Maintenance of the afforestation/reforestation area for a period of two years is required per the Montgomery County Tree Technical Manual. During this maintenance period the health and vigor of the plantings shall be monitored and may include the need to specify actions to correct existing problems. The following inspection schedule shall be carried out:
 - Year 1 and 2: Two inspections per year: inspect in the beginning of the growing season (May or June), and in-spect at the end of the growing season (September or October).
 - At the end of the second year the survival rate of all the afforestation/reforestation areas shall be 100% of the total trees planted, additional plant material may be needed to be planted to bring the total count up to the 100%.
- At the end of the maintenance period a final inspection shall be set up at the site with the Owner or owner's representative and a staff member from MNCPPC to insure that the required afforestation/reforestation survival rate has been achieved.

- Schedule a pre-construction meeting with the Developer's representative, Construction Superintendent, tree professional, MNCPPC staff, and sediment control inspector. Call at least 48 hours prior to beginning construction. Contact Miss Utility at 1-800-257-7777 for water and sewer locations at 301-309-3093, 48 hours prior to any land disturbance.
- Install sediment control devices. Install Tree Protection Fencing and perform Root Pruning operations.
- Clear, grub, and begin excavating and grading.
- Begin building construction.
- Begin water, sewer, WHC, SHC, and other utility construction.
- Begin stormwater management drywell & infiltration trench construction.
- Begin driveway paving.
- As various areas are completed, place topsoil and sod/seed on grassed areas in conformance with these plans and the "Standard Erosion and Sediment Control Notes".
- Upon completion and site stabilization, and with the approval of the sediment control inspector, all sediment control structures shall be removed.
- Upon completion, conduct final City inspection with M-NCP&PC staff.
- Remove tree protection fence.



- NOTE:
- Attachment of signs to trees is prohibited.
 - Signs should be properly maintained.
 - Avoid injury to roots when placing posts for the signs.
 - Signs should be posted to be visible to all construction personnel from all directions.

Bond Estimate: 88 trees x \$250 installed = \$22,000
 29 shrubs x \$15 installed = \$ 435
 Total = \$22,435

FOREST CONSERVATION WORKSHEET

Matthew's Property

NET TRACT AREA: 5-Aug-02

A. Total tract area ...	1.21
B. Land dedication acres (parks, county facility, etc.) ...	0.00
C. Land dedication for roads or utilities (not being constructed by this plan) ...	0.08
D. Area to remain in commercial agricultural production/use ...	0.00
E. Other deductions (specify)	0.00
F. Net Tract Area	1.13

LAND USE CATEGORY: (from Trees Technical Manual)
 Input the number "1" under the appropriate land use, limit to only one entry.

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	1	0	0

EXISTING FOREST COVER:

I. Existing forest cover	0.44
J. Area of forest above afforestation threshold	0.00
K. Area of forest above conservation threshold	0.00

BREAK EVEN POINT:

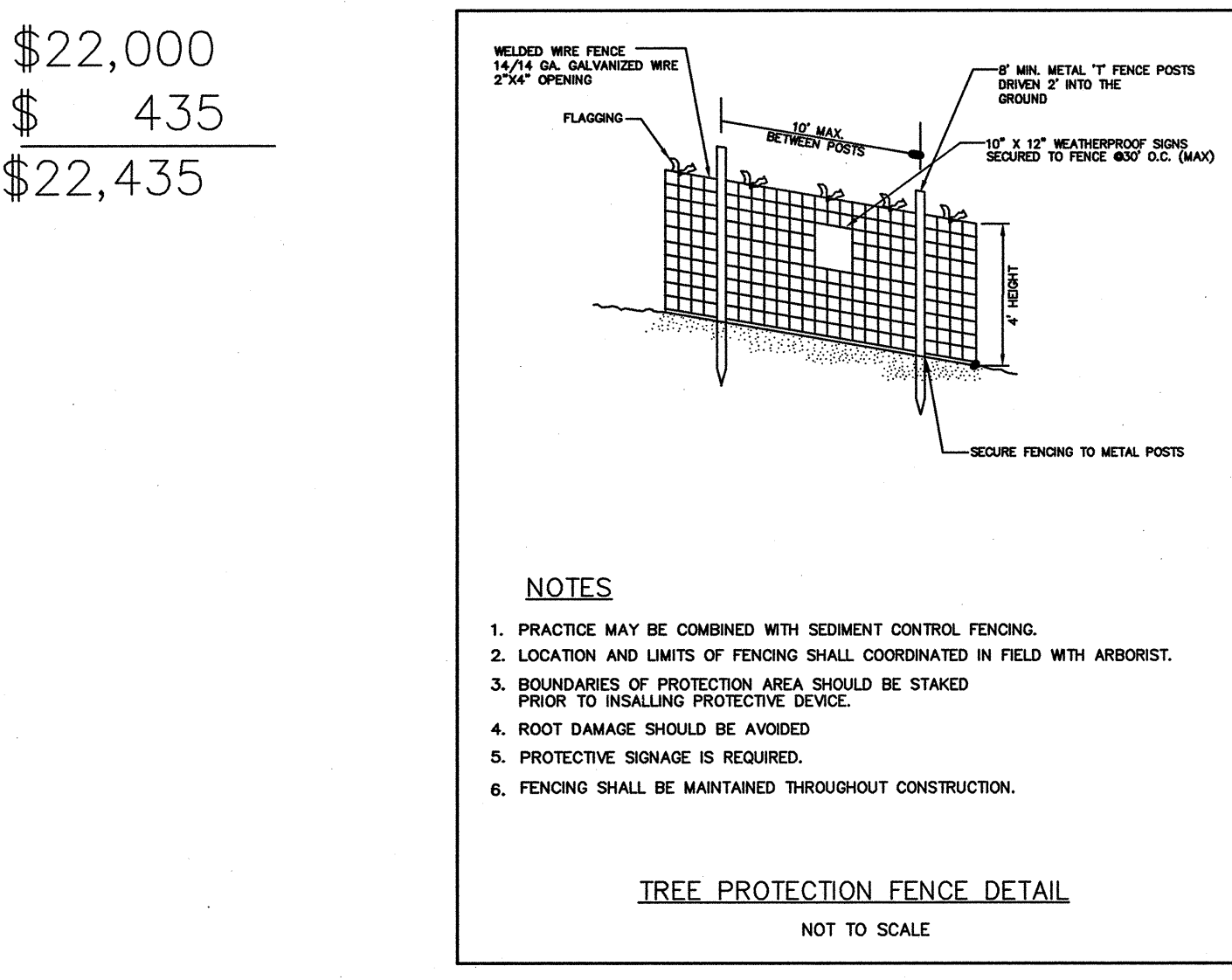
L. Forest retention above threshold with no mitigation	0.00
M. Clearing permitted without mitigation	0.00

PROPOSED FOREST CLEARING:

N. Total area of forest to be cleared	0.00
O. Total area of forest to be retained	0.44

PLANTING REQUIREMENTS:

P. Reforestation for clearing above conservation threshold	0.00
Q. Reforestation for clearing below conservation threshold	0.00
R. Credit for retention above conservation threshold	0.00
S. Total reforestation required	0.00
T. Total afforestation required	0.01
U. Credit for landscaping (may not exceed 20% of "S")	0.00
V. Total reforestation and afforestation required	0.01



FOREST CONSERVATION TABLE

DESCRIPTION	SIZE
Total Tract Area	8.17 Acres
Tract remaining in Agricultural Use	0.00 Acres
Road & utility ROW (unimproved)	0.50 Acres
Existing Forest	0.81 Acres
Total Forest Retention	0.74 Acres
Total Forest Cleared	0.07 Acres
Land Use Category	C-1 (4.04 AC), R-60 (3.01 AC), & R-C (1.12 AC)
Afforestation Threshold	15-20%
Reforestation Threshold	15-20-50%
Forest in Wetlands Retained	0.08 Acres
Cleared	0.00 Acres
Planted	0.26 Acres
Forest in 100-year Floodplain Retained	0.00 Acres
Cleared	0.00 Acres
Planted	0.00 Acres
Forest in Stream/Valley Buffer Retained	0.66 Acres
Cleared	0.00 Acres
Planted	0.86 Acres
Forest in other Priority Areas Retained	0.00 Acres
Cleared	0.00 Acres
Planted	0.00 Acres
Stream Valley Buffer Length (linear feet)	941 Feet
Average Width (per side)	125 Feet

FOREST CONSERVATION PLANT SCHEDULE

QTY	BOTANICAL NAME	COMMON NAME	CAL	HGT	ROOT
Shade Trees					
9	Acer rubrum	Red Maple	2-2 1/2"		B&B/Cont
9	Liriodendron tulipifera	Tulip Poplar	2-2 1/2"		B&B/Cont
9	Quercus palustris	Pin Oak	2-2 1/2"		B&B/Cont
9	Quercus alba	White Oak	2-2 1/2"		B&B/Cont
9	Acer saccharinum	Silver Maple	2-2 1/2"		B&B/Cont
9	Fraxinus americana	White Ash	2-2 1/2"		B&B/Cont
9	Quercus rubra	Red Oak	2-2 1/2"		B&B/Cont
Understory Trees					
6	Sassafras albidum	Sassafras	2-2 1/2"		B&B/Cont
5	Nyssa sylvatica	Black Gum	2-2 1/2"		B&B/Cont
5	Ilex opaca	American Holly	2-2 1/2"		B&B/Cont
5	Amelanchier canadensis	Servicberry	2-2 1/2"		B&B/Cont
5	Juniperus virginiana	Eastern Red Cedar	2-2 1/2"		B&B/Cont
Shrubs					
6	Lindera benzoin	Spicebush	18-24"		B&B/Cont
6	Viburnum dentatum	Southern Arrowwood	18-24"		B&B/Cont
6	Ilex verticillata	Winterberry	18-24"		B&B/Cont
6	Sambucus canadensis	Elderberry	18-24"		B&B/Cont
5	Vaccinium corymbosum	Highbush blueberry	18-24"		B&B/Cont

The 0.88 acres of Afforestation Area will be planted with the above plant material at a rate of:
 -100 2"-2 1/2"-caliper trees/acre x 0.88 acres = 88 trees
 -Shrub species shall be planted at 1/3 the rate of trees: 88 trees x 1/3 = 29 shrubs
 -The mix of trees planted shall be 70% dominant species (62 trees) and 30% understory species (26 trees) planted at a maximum spacing of 15' on center.
 -Multistem trees may total caliper of all stems to equal 2-2 1/2"

FC-2

FOREST CONSERVATION PLAN
 ASHTON, PARCEL H & LOTS 1-8
ASHTON MEETING PLACE
 LOT 1, PARCEL F, TP 356, TP 357, TP 411, TP 454, TP 456, TP 457, TP 462, TP 464, TP 509
 8TH ELECTION DISTRICT - MONTGOMERY COUNTY - MARYLAND

MHG Macris, Hendricks & Glascock, P.A.
 Engineers ■ Planners
 Landscape Architects ■ Surveyors

9220 Wightman Road, Suite 120
 Montgomery Village, Maryland
 20886-1279

Phone 301.870.0840
 Fax 301.948.0893
 www.mhga.com

Proj. Mgr. MDP	Designer VSB
Date 11-1-07	Scale as noted
Project No. 05-325-11	Sheet 2 of 2