

TREE VARIANCE MITIGATION LIST					
KEY	QTY	BOTANICAL NAME	COMMON NAME	CAL.	SIZE / ROOT
SHADE TREES					
ARU	19	Acer rubrum	Red Maple	3-3 1/2"	B&B AS SHOWN
PAA	24	Platanus x acerifolia	London Planetree	3-3 1/2"	B&B AS SHOWN
GRU	10	Quercus rubra	Northern Red Oak	3-3 1/2"	B&B AS SHOWN

Note: These mitigation plantings are per previously approved plans

2018 Amendment Tree Variance Detail Table						
Tree ID #	Species	DBH	Impact / Remove	% Impacted	Condition	Mitigation
8	Sycamore	32	Impact Only	25%	Good	stress reduction measures
9	Sycamore	33	Impact Only	23%	Good	stress reduction measures
13	Sycamore	41	Impact Only	29%	Good	stress reduction measures
15	Sycamore	40	Impact Only	13%	Good	stress reduction measures
17	Sycamore	34	Impact Only	15%	Good	stress reduction measures
355	Black Walnut	35	Impact Only	11%	Fair	stress reduction measures

PREVIOUSLY APPROVED IMPACTED SPECIMEN TREES

Specimen Trees Impacted by the Previous LOD

34, 38, 41, 46, 66, 198

Specimen Trees Impacted by the Proposed LOD

10, 11, 13, 17, 19, 35, 37, 61, 67, 72, 73, 74, 75, 76, 77, 92, 93, 97, 98, 108, 110, 120, 122, 125, 149, 150, 158, 168, 169, 170, 181, 182, 196, 214, 218

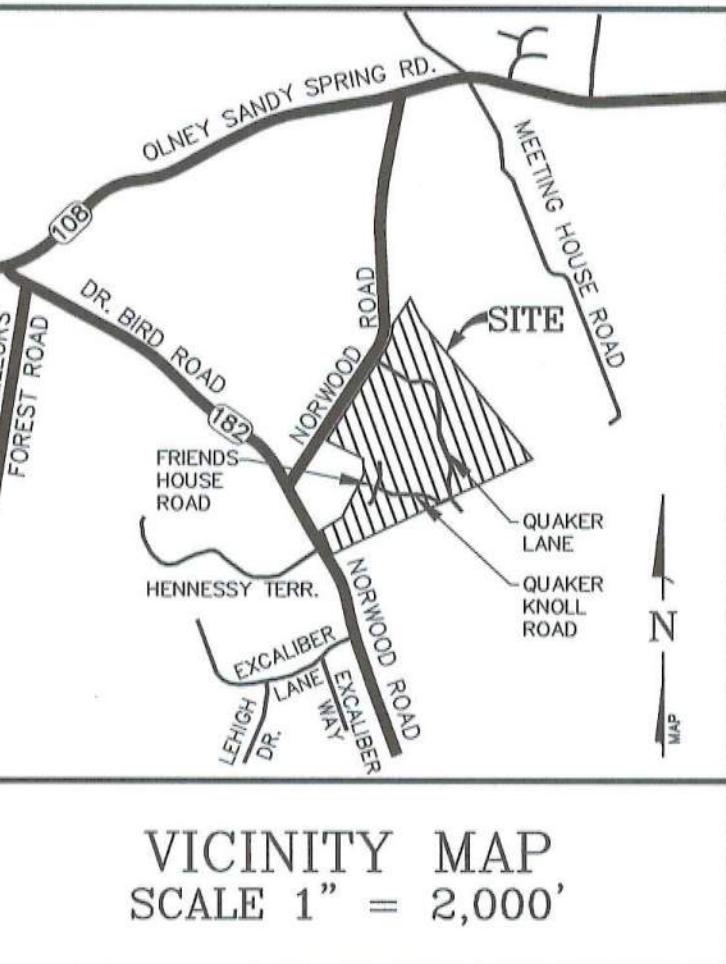
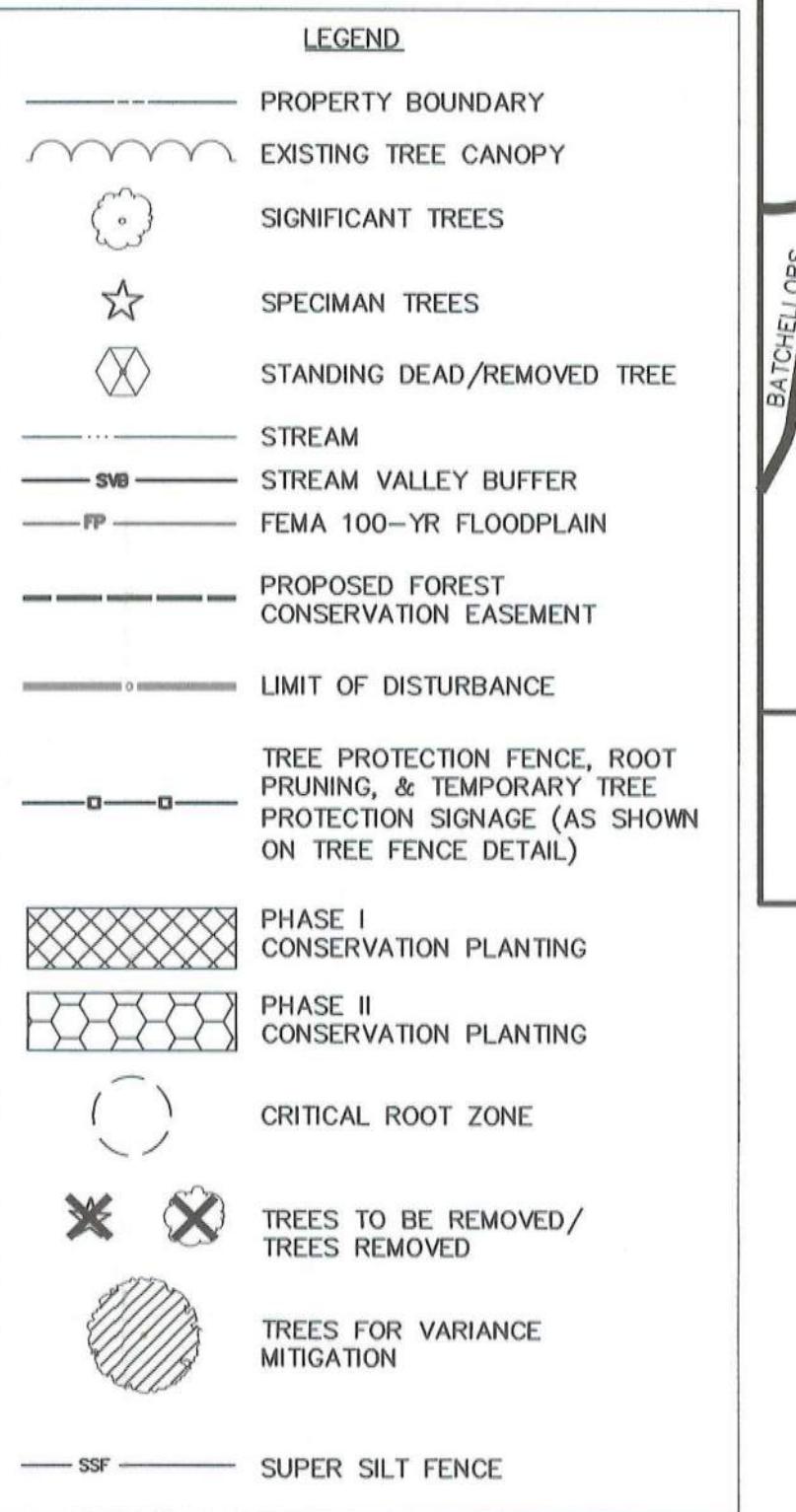
Trees on/near Historic Property Impacted the Proposed LOD

219, 244, 245, 259, 354



GENERAL NOTES

- The purpose of this plan is for the modification of the existing Special Exceptions: Housing and Related Facilities for Senior Adults and Persons with Disabilities (S-452-C) and Nursing Home and Domiciliary Care Homes (S-856-A)
- Boundary Information is based on boundary survey prepared by MHG
- Topographic information is two foot contour interval from topographic survey prepared by MHG. Surrounding property information is from M-NCPPC GIS.
- NRIF/SD 4-97071 has been approved for this site on 10/24/03. Preliminary/Final Forest Conservation Plan S-1855 was also approved on 10/24/03.
- Water and Sewer Category: W-1 & S-1 respectively
- This site is within the 1998 Sandy Spring/Ashton Master Plan area.
- This site is within the Pauxtent Annual Growth Policy Area.
- This site is within the Northwest Branch Watershed (Class IV).
- This plan is not for construction purposes.
- Portions of this site are in the 100-Yr FEMA floodplain as shown on FIRM 24031C02020 effective 9/29/2006.
- The proposed future trail connection as shown within the stream valley buffer may require an amendment to this Final Forest Conservation Plan prior to implementation.
- Tree locations from Stantec Forest Conservation Plan CBA-1855 approved on 1/20/17. Off-site trees on adjacent historic property (L.8333 F.21) and ROW trees located by MHG February 2018.



FOREST CONSERVATION WORKSHEET					
NET TRACT AREA:					
A. Total tract area	62.41 *				
B. Land dedication acres (parks, county facility, etc.)	0.00				
C. Land dedicated for roads or utilities (not being constructed by this plan)	3.71 **				
D. Area to remain in commercial agricultural production/use	0.00				
E. Other dedications (specify)	0.00				
F. Net Tract Area	= 58.70				
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	1	0	0	0	0
G. Afforestation Threshold ...	20% x F = 11.74				
H. Conservation Threshold ...	25% x F = 14.68				
EXISTING FOREST COVER					
I. Existing forest cover	= 16.59 ***				
J. Area of forest above afforestation threshold	= 4.85				
K. Area above conservation threshold	= 1.92				
BREAK EVEN POINT:					
L. Forest retention above threshold with no mitigation	= 15.06				
M. Clearing permitted without mitigation	= 1.53				
PROPOSED FOREST CLEARING:					
N. Total area of forest to be cleared	= 3.93				
O. Total area of forest to be retained	= 12.66				
PLANTING REQUIREMENTS:					
P. Reforestation for clearing above conservation threshold	= 0.48				
Q. Reforestation for clearing below conservation threshold	= 4.03				
R. Credit for retention above conservation threshold	= 0.00				
S. Total reforestation required	= 4.51				
T. Total afforestation required	= 0.00				
U. Credit for landscaping (may not exceed 20% of "S")	= 0.00				
V. Total reforestation and afforestation required	= 4.51				

worksheet updated 8/5/2002

* 62.18 acres Parcel C, plus off-site disturbance.
 ** 3.71 acres of existing storm drain and sanitary sewer easement excluded from the tract area.
 *** 20.30 acres per approved FCTP F-1836, but excluding 3.71 acres of existing storm drain and sanitary sewer easement.

Note: 1. Applicant is proposing to plant 3.56 acres of forest within the conservation easement.
 2. The area of 11.74 acres is the area required to be retained within the tract area.
 3. As part of this amendment a discrepancy was found in the forest conservation numbers as shown on the previously approved plan. A previous easement was listed as 20.02 acres and the actual area is 19.21 acres.

FOREST CONSERVATION DATA TABLE	
DESCRIPTION	SIZE
Tract Area (Parcel C)	62.18 Acres
Off-site	0.23 Acres
Subtotal Tract Area	62.41 Acres
Existing SDSS Easmt	3.71 Acres
Net Total	60.70 Acres
Existing Forest	16.59 Acres
Total Forest Retention	12.66 Acres
Total Forest Cleared	3.93 Acres
Land Use Category	RE-2
Afforestation Threshold	20%
Conservation Threshold	25%
Linear Feet of Stream Valley Buffer	3,900 feet
Acre of Stream Valley Buffer	16.74 Acres
Area of Forest within Stream Valley Buffer	11.57 Acres

TAX MAP JT341
PARCEL "C"
PLAT 145958TH ELECTION DISTRICT
MONTGOMERY COUNTY
MARYLANDFRIENDS HOUSE
RETIREMENT COMMUNITYTHE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSIONFinal Forest Conservation Plan
APPROVAL

Plan No. CBA-1855

Signature

Date

PROJ. MGR PGL
DRAWN BY FCJ

SCALE 1" 100'

DATE 03/08/18

FINAL FOREST
CONSERVATION PLAN
ALL PHASES

FC1.01

PROJECT NO. 96.380.16

SHEET NO. 1 OF 3

QUALIFIED PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS CORRECT AND THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF EXISTING STATE AND COUNTY FOREST CONSERVATION LEGISLATION.

4/26/18
DATEFRANK C. JOHNSON
Signature

RECOGNIZED AS QUALIFIED PROFESSIONAL
BY MD. DEPT. OF NATURAL RESOURCES
COMAR 08.19.06.01

DEVELOPER'S CERTIFICATE
The Undersigned agrees to execute all the features of the Approved Final Forest Conservation Plan No. CBA-1855, including financial bonding, forest planting, maintenance and all other applicable agreements.
Developer's Name: Friends House Retirement Community Kevin Harrington
Company: Contact Person

Address: 17340 Quaker Lane Sandy Spring, MD 20860

Phone: 301.924.7528

Email: kharrington@friendshouse.com

Signature:

RECEIVED
MAY 01 2018
Montgomery County
Planning Department

**FRIENDS HOUSE
RETIREMENT COMMUNITY
17340 QUAKER LANE
SANDY SPRING, MARYLAND 20860
MR. KEVIN HARRINGTON
EXECUTIVE DIRECTOR
KHARRINGTON@FRIENDSHOUSE.COM
PHONE: 301-924-7528
FAX: 301-924-2265**



PHASE I TREE REFORESTATION LIST				
QTY	BOTANICAL NAME	COMMON NAME	CAL.	SIZE / ROOT
SHADE TREES				
73	<i>Carpinus caroliniana</i>	American Hornbeam	1" cal.	Container
67	<i>Fagus grandifolia</i>	American Beech	1" cal.	Container
114	<i>Platanus occidentalis</i>	American Sycamore	1" cal.	Container
74	<i>Prunus serotina</i>	Black Cherry	1" cal.	Container
112	<i>Quercus coccinea</i>	Scarlet Oak	1" cal.	Container
160	<i>Quercus prinus</i>	Chestnut Oak	1" cal.	Container
TOTAL	600			
SHRUBS				
67	<i>Amelanchier canadensis</i>	Shadblow Serviceberry		#3 Cont.
67	<i>Asimina triloba</i>	Paw Paw		#3 Cont.
66	<i>Lindera benzoin</i>	Spicebush		#3 Cont.
TOTAL	200			

Planting rate was determined from the Montgomery County Tree Technical Manual, pg. 36: 5. Standards- '1" caliper trees/ acre, shrubs must be planted at one third the rate of trees'.

Planting area proposed = 3.00 acres
 Rate = 200 1" caliper trees/ acre
 $3.00 \times 200 = 600$ trees total
 Shrubs = 1/3 tree total = 200 shrubs total

Planting Distribution: All plant species specified should be located in a random positive association pattern and evenly distributed

Throughout the indicated planting area.

Spacing:

- Trees: approximately 15'-20' o.c.
- Shrubs: evenly distributed

Note:

The contractor shall make appropriate adjustments to tree spacing and field locate proposed plantings around existing vegetation.

PHASE II TREE REFORESTATION LIST					
QTY	BOTANICAL NAME	COMMON NAME		CAL.	SIZE / ROOT
SHADE TREES					
11	<i>Carpinus caroliniana</i>	American Hornbeam		1" cal.	Container
9	<i>Fagus grandifolia</i>	American Beech		1" cal.	Container
12	<i>Platanus occidentalis</i>	American Sycamore		1" cal.	Container
10	<i>Prunus serotine</i>	Black Cherry		1" cal.	Container
14	<i>Quercus coccinea</i>	Scarlet Oak		1" cal.	Container
16	<i>Quercus prinus</i>	Chestnut Oak		1" cal.	Container
TOTAL	72				
SHRUBS					
8	<i>Amelanchier canadensis</i>	Shadblow Serviceberry		#3 Cont.	
8	<i>Asimina triloba</i>	Paw Paw		#3 Cont.	
8	<i>Lindera benzoin</i>	Spicebush		#3 Cont.	

Planting rate was determined from the Montgomery County Tree Technical Manual, pg. 36: 5. Standards- '1" caliper trees/ acre, shrubs 1/4 acre.

must be planted at one third the rate of trees'.

Planting area proposed = 0.36 acres
 Rate = 200 1" caliper trees/ acre
 $0.36 \times 200 = 72$ trees/ acre

0.36 x 200 = 72 trees total
1/3 tree total = 24 shrubs total
Shrubs =

Spacing:
Trees: approximately 15'-20' o.c.
Shrubs: evenly distributed
Note:

The contractor shall make appropriate adjustments to tree spacing and field locate proposed plantings around existing vegetation. Whenever possible, proposed tree plantings should be located at least 15 feet from existing trees.

IFICATION

QUALIFIED PROFESSIONAL CERTIFICATION
THAT THE INFORMATION SHOWN HEREON IS CORRECT AND THAT
IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF
THE FOREST CONSERVATION ACT OF 1985.

Franklin S. Johnson

RECOGNIZED AS QUALIFIED PROFESSIONAL
BY MD. DEPT. OF NATURAL RESOURCES
COMAR 08.19.06.01

DEVELOPER'S CERTIFICATE
Undersigned agrees to execute all the features of the Approved Final Forest
Preservation Plan No. CBA-1855, including financial bonding, forest
care, maintenance and all other applicable agreements.



MAY 01 2018

Montgomery County
Planning Department

SPECIMEN & SIGNIFICANT TREES			
ID	COMMON NAME	SLT	BOTANICAL NAME
1	Oriental Plane	18'-24'-30'	Platanus orientalis
2	Oriental Plane	38'	Platanus orientalis
3	Oriental Plane	26'	Platanus orientalis
4	Oriental Plane	32'	Platanus orientalis
5	Oriental Plane	42'	Platanus orientalis
6	Oriental Plane	28'-38'	Platanus orientalis
7	Oriental Plane	32'	Platanus orientalis
8	Oriental Plane	36'	Platanus orientalis
9	Oriental Plane	36'	Platanus orientalis
10	Oriental Plane	38'	Platanus orientalis
11	Oriental Plane	22'-36'-38'	Platanus orientalis
12	Oriental Plane	30'	Platanus orientalis
13	Oriental Plane	30'	Platanus orientalis
14	Oriental Plane	12'-18'-22'-28'	Platanus orientalis
15	Oriental Plane	30'	Platanus orientalis
16	Oriental Plane	32'	Platanus orientalis
17	Oriental Plane	38'	Platanus orientalis
18	Red Maple	36'-5'	Acer rubrum
19	White Pine	40'	Pinus strobus
20	Pinon	13'-16'-17'	Pinus sp.
21	Southern Red Oak	27'	Quercus falcata
22	Mockernut Hickory	29'	Carya tomentosa
23	Red Oak	31'	Quercus rubra
24	Red Oak	38'	Quercus rubra
25	White Oak	26'	Quercus alba
26	Red Oak	28'	Quercus rubra
27	Pin Oak	29'	Quercus palustris
28	Red Oak	29'	Quercus rubra
29	Persimmon	18'	Diospyros virginiana
30	Red Oak	29'	Quercus sp.
31	White Oak	30'	Quercus sp.
32	Red Oak	29'	Quercus sp.
33	White Oak	29'	Quercus alba
34	Southern Red Oak	32'	Quercus falcata
35	Red Oak	34'	Quercus rubra
36	Dead Oak	36'	Quercus sp.
37	Tulip Poplar	32'	Populus tremuloides
38	Tulip Poplar	32'	Populus tremuloides
39	Dead Oak	36'	Quercus sp.
40	Red Oak	27'	Quercus sp.
41	* White Oak	32'	Quercus alba
42	* White Oak	24'	Quercus alba
43	* White Oak	24'	Quercus alba
44	* Red Oak	29'	Quercus rubra
45	* Red Oak	29'	Quercus sp.
46	* White Oak	35'	Quercus alba
47	Mockernut Hickory	26'	Carya tomentosa
48	Tulip Poplar	29'	Populus tremuloides
49	Tulip Poplar	29'	Populus tremuloides
50	Red Oak	26'	Quercus sp.
51	Pin Oak	26'	Quercus palustris
52	Tulip Poplar	29'	Populus tremuloides
53	Tulip Poplar	24'	Populus tremuloides
54	* White Oak	33'	Quercus alba
55	* White Oak	29'	Quercus alba
56	Tulip Poplar	29'	Populus tremuloides
57	Red Oak	27'	Quercus sp.
58	Red Oak	27'	Quercus sp.
59	Dead-stump	26'	Quercus sp.
60	* White Oak	33'	Quercus alba
61	Pin Oak	27'	Quercus palustris
62	White Oak	27'	Quercus alba
63	Dead-stump	25'	Quercus sp.
64	* White Oak	26'	Quercus alba
65	Red Oak	26'	Quercus sp.
66	Red Oak	27'	Quercus sp.
67	* White Oak	42'	Quercus alba
68	Red Maple	32'	Acer rubrum
69	Swamp White Oak	29'	Quercus bicolor
70	Red Maple	46'	Acer rubrum
71	Red Maple	46'	Acer rubrum
72	* White Pine	38'	Pinus strobus
73	* White Pine	32'	Pinus strobus
74	* White Pine	32'	Pinus strobus
75	White Locust	26'	Gleditsia triacanthos
76	White Locust	27'	Gleditsia triacanthos
77	* Willow Oak	41'	Quercus phellos
78	Red Maple	47'	Acer rubrum
79	Weping Willow	47'	Salix babylonica
80	* Pin Oak	39'	Quercus palustris
81	Black Cherry	30'	Prunus serotina
82	Pin Oak	32'	Quercus palustris
83	Pin Oak	23'	Quercus palustris
84	* Pin Oak	30'	Quercus palustris
85	* Pin Oak	30'	Quercus palustris
86	* Pin Oak	30'	Quercus palustris
87	* Pin Oak	32'	Quercus palustris
88	Red Maple	17'-16'-16'-18'	Quercus rubra
89	White Pine	34'	Pinus strobus
90	Pin Oak	35'	Quercus palustris
91	Black Cherry	28'	Prunus serotina
92	* Black Walnut	44'	Juglans nigra
93	Black Walnut	45'	Juglans nigra
94	Black Walnut	26'	Juglans nigra
95	Mulberry	15'-18'-18'-18'	Morus sp.
96	* Scarlet Oak	50'	Quercus coccinea
97	Pin Oak	44'	Quercus palustris
98	Red Maple	30'	Quercus palustris
99	Black Walnut	30'	Juglans nigra
100	* Black Walnut	30'	Juglans nigra
101	White Locust	19'	Gleditsia triacanthos
102	White Locust	26'	Gleditsia triacanthos
103	Black Locust	19'	Gleditsia triacanthos
104	* Black Locust	30'	Robinia pseudoacacia
105	* Black Locust	26'	Robinia pseudoacacia
106	* Black Locust	30'	Angiosperm
107	Black Locust	26'	Robinia pseudoacacia
108	Black Locust	30'	Angiosperm
109	Common Apple	18'	Pyrus malus
110	* Sycamore	30'	Platanus occidentalis
111	Pin Oak	21'-5'	Quercus palustris
112	Dead-stump	15'-12'-10'-12'	Quercus palustris
113	Yew	30'	Taxus sp.
114	* White Ash	22'-33'	Fraxinus americana
115	* European Beech	44'	Fagus sylvatica
116	* European Beech	57'	Fagus sylvatica

Sequence of Events for Properties Required To Comply With Forest Conservation Plans, Exemptions from Submitting Forest Conservation Plans, and Tree Save Plans

The property owner is responsible for ensuring all tree protection measures are performed in accordance with the approved final forest conservation plan or tree save plan, and as modified in the field by a Planning Department Forest Conservation Inspector. The measures must meet or exceed the most recent standards published by the American National Standards Institute (ANSI A300).

Pre-Construction

- An on-site pre-construction meeting is required after the limits of disturbance have been staked and flagged and before any land disturbance.
- The property owner must arrange for the meeting and the following people must participate at the preconstruction meeting: the property owner or their representative, construction superintendent, International Society of Arboriculture (ISA) certified arborist/MD Licensed Tree Expert (representing owner) that will implement the tree protection measures, The Planning Department Forest Conservation Inspector, and Montgomery County Department of Permitting Services (DPS) Sediment Control Inspector. The purpose of this meeting is to verify the limits of disturbance and discuss specific tree protection and tree care measures shown on the approved plan. No land disturbance shall begin before tree protection and stress-reduction measures have been implemented and approved by the Planning Department's Forest Conservation Inspector.
 - a. Typical tree protection devices include:
 - i. Chain link fence (four feet high)
 - ii. Super silt fence with wire string between the support poles (minimum 4 feet high) with high visibility flagging.
 - iii. 14 gauge 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.
 - b. Typical stress reduction measures may include, but are not limited to:
 - i. Root pruning with a root cutter or vibratory plow designed for that purpose. Trenchers are not allowed, unless approved by the Forest Conservation Inspector.
 - ii. Crown Reduction or pruning
 - iii. Watering
 - iv. Fertilizing
 - v. Vertical mulching
 - vi. Root aeration systems
- Measures not specified on the Forest Conservation Plan may be required as determined by the Forest Conservation Inspector in coordination with the property owner's arborist.
- A Maryland Licensed Tree Expert must perform, or directly supervise, the implementation of all stress reduction measures. Documentation of the process (including photographs)

ID	COMMON NAME	SLT	BOTANICAL NAME	CONDITION	REMARKS
117	* European Beech	30'	Fagus sylvatica	Very Good	Off-site - Historic property
118	Slippery Elm	28'	Ulmus rubra	Good	Off-site - Historic property Removed
119	Sycamore	24'	Platanus occidentalis	Good	Removed
120	* Red Maple	17"-26'-32'	Acer rubrum	Good	Spills @ 7'
121	* Tulip Poplar	26'	Populus tremuloides	Good	Staking and Guying to be removed after 6 months.
122	* Sugar Maple	30'	Acer saccharum	Good	Water @ planting when soil pit is 1/2 back.
123	Red Maple	24"	Acer rubrum	Good	Water @ planting when soil pit is 1/2 back.
124	Pin Oak	28'	Quercus palustris	Good	Off-site - Removed
125	* Tulip Poplar	32"-28"	Acer rubrum	Good	Heavily pruned; spills @ 3'; off-site
126	Tulip Poplar	27"	Populus tremuloides	Good	Root ball
127	Tulip Poplar	28"	Ulmus americana	Good	Root ball
128	Red Maple	28"	Acer rubrum	Good	Root ball
129	White Oak	23"	Quercus alba	Good	Root ball
130	Tulip Poplar	28"	Populus tremuloides	Good	Root ball
131	Tulip Poplar	28"	Ulmus americana	Good	Root ball
132	Tulip Poplar	28"	Ulmus americana	Good	Root ball
133	Tulip Poplar	24"	Ulmus americana	Good	Root ball
134	Tulip Poplar	29.5"	Ulmus americana	Good	Root ball
135	* Tulip Poplar	44"	Ulmus americana	Good	Root ball
136	Tulip Poplar	34.5"	Ulmus americana	Good	Root ball
137	* Red oak	30"	Quercus sp.	Good	Root ball
138	Tulip Poplar	37"	Ulmus americana	Good	Root ball
139	* Tulip Poplar	37"	Ulmus americana	Good	Root ball
140	* Tulip Poplar	37"	Ulmus americana	Good	Root ball
141	* Tulip Poplar	40"	Ulmus americana	Good	Root ball
142	Tulip Poplar	27"	Ulmus americana	Good	Root ball
143	Tulip Poplar	26.5"	Ulmus americana	Good	Root ball
144	Tulip Poplar	27"	Ulmus americana	Good	Root ball
145	* Tulip Poplar	34.5"	Ulmus americana	Good	Root ball
146	Tulip Poplar	26.5"	Ulmus americana	Good	Root ball
147	Pignut Hickory	26"	Carya glabra	Good	Root ball
148	Sweetgum	28"	Liquidambar styraciflua	Good	Root ball
149	* Tulip Poplar	33"	Ulmus americana	Good	Root ball
150	Red Maple	30"	Acer rubrum	Good	Root ball
151	Tulip Poplar	29"	Ulmus americana	Good	Root ball
152	Cherry	24"	Prunus sp.		