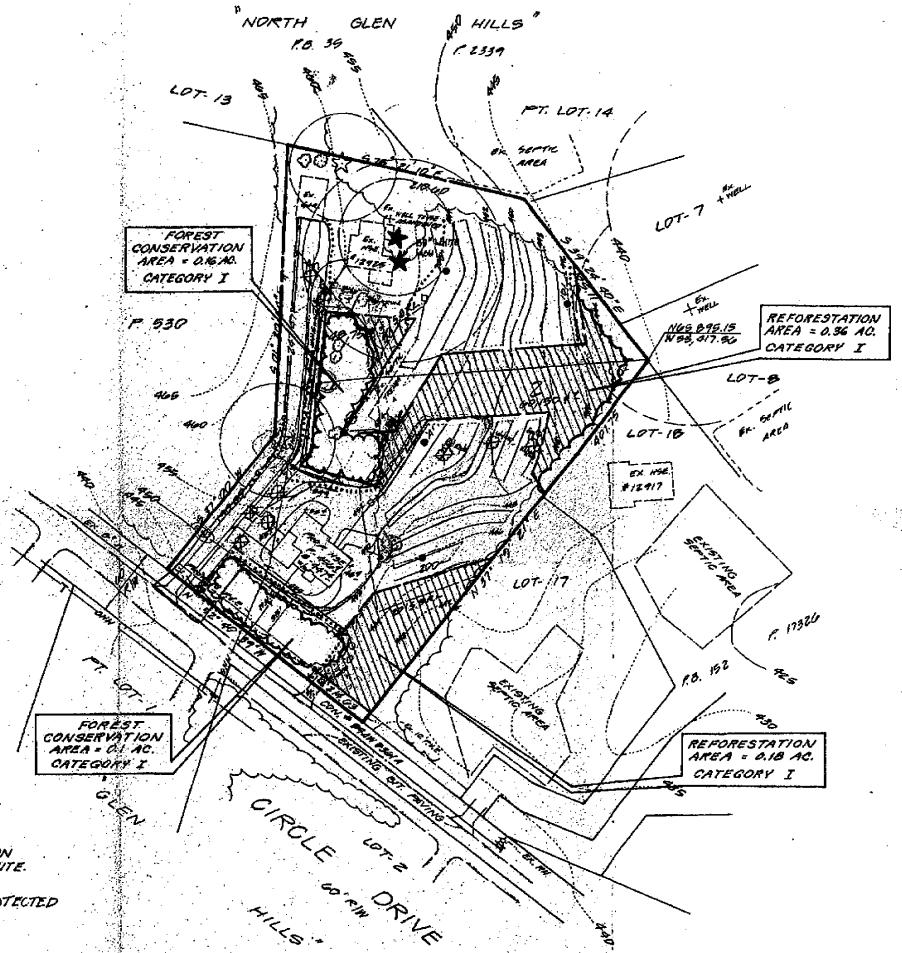
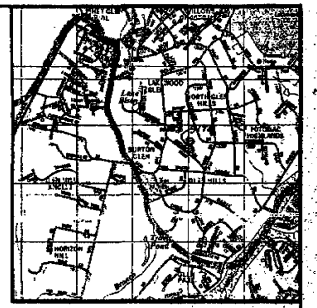
KEY

- SPECIMEN TREE TO REMAIN AND BE PROTECTED.
- SPECIMEN TREE TO REMAIN IF POSSIBLE
- TREE TO REMAIN
- TREE TO BE REMOVED
- EXISTING FOREST BOUNDARY
- FOREST TO REMAIN
- REFORESTATION AREA
- TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- FOREST CONSERVATION EASEMENT
- CRITICAL ROOT ZONE





606 94

NOTES

1. Topography taken from M-NCP & PC Topo Sheet No.35A; The contour interval is 2 feet, DATUM IS "SANDERS FARM & FIELDS SURVEY FOR SEPTIC AREAS".
2. Boundary location from deeds and plats recorded among the land records of Montgomery County, Maryland.
3. The property is zoned RE-1 (Residential Estate - 1 acre min. lot).
4. Water and sewer category W-1 and S-6, respectively.
5. Area tabulation: Site Area = 2.6± ac.; Area of Street Dedication = 0.12± ac.; Net Site Area = 2.5± ac.
6. Number of lots proposed by this plan is 2.
7. Lot lines and lot areas are scaled for intersectional purposes only and are subject to change upon final computations.
8. Proposed land use is single family detached residential units.
9. Soil series consists of Sinclair Channery silt loam (ranging unit 21CC) according to sheet 19 of the Soil Survey for Montgomery County, Maryland (interim report dated July, 1957).
10. This site is within the Potomac Subregion Master Plan.
11. This site is within the Potomac Transportation Policy Area.
12. A Natural Resources Inventory Map/Forest Stand Delineation Plan has been approved by the M-NCP & PC Environmental Planning Division, reference no. 4-95249.
13. The entire site drains to the Watts Branch watershed. The State of Maryland has designated this portion of the Watts Branch Watershed as Class I waters.
14. Stormwater management standard waiver category request APPROVED FEB. 15, 1996.
15. Servicing utility companies are:

Sewer	- On-Site (Septic)
Electric	- P.E.P.C.O
Telephone	- Bell Atlantic
Natural Gas	- Wash. Gas
Water	- W.S.S.C.

16. EX. WELL ON LOT-1 TO BE ABANDONED AND SEALED BY A LICENSED WELL DRILLER PRIOR TO BUILDING PERMIT APPROVAL FOR LOT-2.
17. EX. SEPTIC TRENCH ON LOT-1 TO BE ABANDONED AND NEW SEPTIC INSTALLED AND APPROVED PRIOR TO BUILDING PERMIT APPROVAL FOR LOT-2.

THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION

FINAL FOREST CONSERVATION PLAN

APPROVAL

Plan No. 1-98070 4/10/98

DATE

TAX MAP GR 34 WSSC 217 NW 10

FOREST CONSERVATION WORKSHEET

A.	Total area of tract:		2.5 ac.
B.	Area within 100 year flood plain:		0.0 ac.
C.	Area of land to be used for agriculture:		0.0 ac.
D.	Area within NSSO or WSSOT zon/easement compatibility:		0.0 ac.
E.	Net tract area:		2.5 ac.
F.	Land use category:	Residential	
G.	Afforestation threshold:	20 % of net tract area =	0.5 ac.
H.	Conservation threshold:	20 % of net tract area =	0.5 ac.
I.	Existing forest cover:		0.4 ac.
J.	Forest cover above afforestation threshold:		0.0 ac.
K.	Forest cover above conservation threshold:		0.1 ac.

CALCULATION OF BREAK-EVEN POINT

L.	Break even point:	0.6 ac.
M.	Forest area to be retained:	0.1 ac.
N.	Total area of forest to be cleared:	0.4 ac.

CALCULATION OF REFORESTATION REQUIREMENT

O.	Reforestation requirement:	0.5 ac.

CALCULATION OF AFFORESTATION REQUIREMENT

P.	Area of forest above conservation threshold to be cleared:	0.1 ac.
Q.	Area of forest below conservation threshold to be cleared:	0.4 ac.
R.	Forested area above conservation threshold to be saved:	0.0 ac.
S.	Planting required for clearing above threshold:	0.0 ac.
T.	Planting required for clearing below threshold:	0.8 ac.
U.	Credit for forest saved above conservation threshold:	0.0 ac.
V.	Total reforestation requirement:	0.8 ac.

ROYAL PLANTING REQUIREMENT

W.	Afforestation and reforestation:			0.8 ac.
X.	Credit for trees and landscaping:			
	Landscaped Trees:	p.f. @ Full credit =		0.0 ac.
		s.f. @ 1/4 credit =		0.0 ac.
	Individual/Street Trees:			
	Full credit	trees @	ft.dia.ea. @ 20 yrs.	0.0 ac.
	1/4 credit	trees @	ft.dia.ea. @ 20 yrs.	0.0 ac.
	Specimen/Champion Trees	12,665	s.f. of C.R.Z. =	0.3 ac.
			Total credit =	0.3 ac.
Y.	Total forest planting requirement:			0.6 ac.

NOTES:

- Any apparent inconsistency of displayed totals due to value rounding.
- This spreadsheet format reflects the worksheet contained in the Approved Technical Manual, dated September, 1992, by the Montgomery County Planning Department.

NOTE: ALL FOREST CONSERVATION REQUIREMENTS MET ON-SITE.

59" WHITE ASH TO BE PROTECTED

SURVEYOR'S CERTIFICATE

I hereby certify that the boundary shown hereon is correct based on existing deeds and plats recorded among the Land Records of Montgomery County, Maryland, subject to change upon completion of a final survey. Topography from sources noted hereon.

Oct. 31, 1997
Date

Douglas W. Rapp, III
Professional Land Surveyor
Md. Reg. No. 10716

PREPARED FOR:
MR. KEVIN SMART
2401 RESEARCH BLVD. SUITE 320
ROCKVILLE, MD. 20850
301/840-9100 FAX. 301/975-9626

REVISIONS

REVISED PLAN PER DRC COMMENTS 3-9-98
REVISED LAYOUT LOT-2 PER DRC 4-10-98

FOREST CONSERVATION PLAN
F. 528

MHG
JUN 1 1998

NORTH GLEN HILLS

4TH ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

Macris, Hendricks and Glascock, P.A.
Engineers • Planners • Surveyors
Suite 120
9220 Wightman Road
Gaithersburg, Maryland
20879
(301)670-0840

Designed	Drawn
VIC	CHK
Date	Scale
4/6/98	1"=50'
Job No.	Sheet
95-541	1 of 2

ATTACHMENT C

PLAT No. 20796

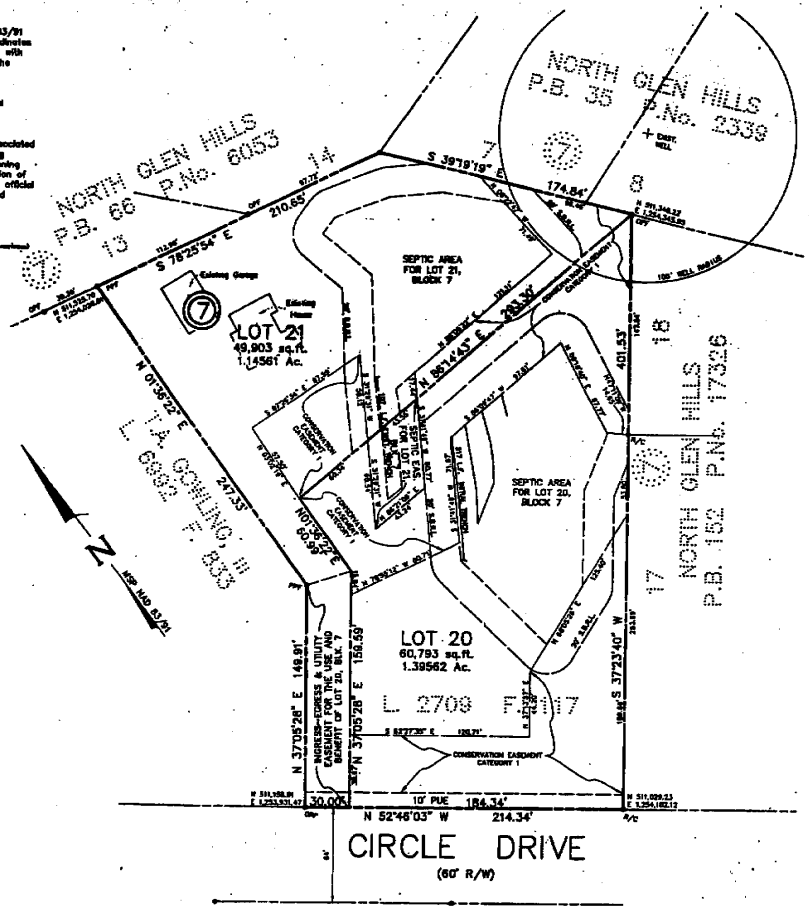
Notes

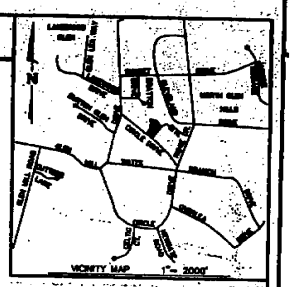
1. This property is zoned RE-1.
2. This approval of this plat is predicated on the availability of public water prior to the construction of homes.
3. Septic Building Restriction Lines subject to change only with the Montgomery County Department of Permitting Services approval. Septic areas are designed for a 6-bedroom house, except Lot 21, Block 7 which is designed for a 4 bedroom house.
4. Coordinates shown hereon are based on the Maryland State NAD 83/91 Datum as projected by MSSC. Stations used are No. 19588 with coordinates of North 510,278.655 feet and East 1,254,218.304 feet and No. 19587 with coordinates of North 510,184.481 feet and East 1,254,903.127 feet. The scale factor for this site is 0.999936232.
5. The property shown hereon is subject to the requirements of the Montgomery County Forest Conservation Law of 1992, including approval of a Final Forest Conservation Plan and appropriate agreements prior to issuance of a sediment control permit. #
6. All terms, conditions, agreements, limitations, and requirements associated with any preliminary plan, site plan, project plan, or other plan, allowing development of this property, approved by the Montgomery County Planning Board are intended to survive and not be extinguished by the recordation of this plat, unless expressly contemplated by the plan as approved. The official public files for any such plan are maintained by the Planning Board and available for public review during normal business hours.

ADDENDUM TO NOTE 5:

And also: On Lot 21, Block 7, including the preservation of the 30" White Ash (Fraxinus americana) enclosed through a Category I Conservation Easement (L.13178 F.421)

7. The existing well on Lot 21 needs to be properly abandoned prior to building permit approval for Lot 20.
8. This plat is subject to a covenant regarding payment for future construction or reconstruction of Circle Drive, Plat in the Montgomery County Land Records in Liber 15705 at Folio 237.





SURVEYOR'S CERTIFICATE

We hereby certify that the plat shown hereon is correct; that it is a subdivision of all of the land conveyed by Dorothy Beall and Charles William Beall to Marion J. Bryant and Charles William Bryant by deed dated February 11, 1960 and recorded among the Land Records of Montgomery County, Maryland, in Liber 2709 at Folio 117. We hereby certify that, once engaged as described in the owner's dedication hereon, all monuments and all property markers and other boundary markers will be set as delineated hereon in accordance with the provisions of Section 50-24(e) of the Montgomery County Code. There is no street dedication by this plat. The total area included on this plat is 110,696 square feet or 2.54123 acres.

5/26/98 Douglas H. Riggs
Date Douglas H. Riggs, P.E.
By: Douglas H. Riggs, II
Professional Land Surveyor
Md. Reg. No. 10712

STATE OF MARYLAND — DOUGLAS H. RIGGS — NO. 10712 — REGISTERED — PROFESSIONAL LAND SURVEYOR

OWNER'S DEDICATION

Harold C. Smith, Jr., Personal Representative of the Estate of Charles William Bryant, who died January 02, 1997 per Administration W-20711 Charles William Bryant being the surviving T/E of Marion J. Bryant (deceased per Will of Charles William Bryant) owner of the property shown hereon, hereby adopts this plat of subdivision; establishes and grants to Montgomery County, Maryland or other appropriate agency, temporary slope easements twenty-five (25) feet wide over the lots shown hereon, adjacent, contiguous, and parallel to the street lines, the slope easements shall be extinguished after all required public improvements in adjacent roadways have been accepted for maintenance by Montgomery County, Maryland or other appropriate agency; hereby grants a Public Utilities Easement (P.U.E.) as shown hereon to the parties named in a document entitled "Terms and Provisions of Public Utility Easements" as recorded in Liber 3534 at Folio 457 among the Land Records of Montgomery County, Maryland, subject to all current and applicable regulations of all federal, state, and local governing agencies; hereby grant a Conservation Easement as shown hereon to the parties named in a document entitled "Conservation Easement Agreement, Category I" as recorded in Liber 13178 at Folio 412 among the Land Records of Montgomery County, Maryland, subject to the terms set forth therein. As owner of this subdivision, I, my successors and assigns, will cause all property corner markers and any other required monumentation, to be set by a registered Maryland Land Surveyor, in accordance with Section 50-24(e)(2) of the Montgomery County Code.

There are no suits, liens, leases, mortgages, or trusts, affecting the property included in this plat of subdivision.

5/11/98
Date
Harold C. Smith, Jr., Personal Representative of the Estate of Charles William Bryant

FILED
JUL 22 1998

PLAT OF SUBDIVISION
LOTS 20 & 21, BLOCK 7
NORTH GLEN HILLS
ELECTION DISTRICT No. 4
MONTGOMERY COUNTY, MARYLAND
SCALE: 1" = 50' MAY, 1998

MACRIS, HENDRICKS & GLASCOCK, P.A.
ENGINEERS • PLANNERS • SURVEYORS
9220 WIGHTMAN ROAD, SUITE 120
GAITHERSBURG, MD. 20879-1226
(301) 670-0840

95-341

FOR PUBLIC WATER AND PRIVATE SEPTIC SYSTEMS ONLY 19521919805019930606Ø1

THE MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION
MONTGOMERY COUNTY PLANNING BOARD
APPROVED: MAY 14, 1998
CHAIRMAN — ASST SECRETARY-TREASURER
M.N.C.P.& P.C. RECORD FILE No. 606-44

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT of PERMITTING SERVICES
APPROVED: JUNE 10, 1998
DIRECTOR

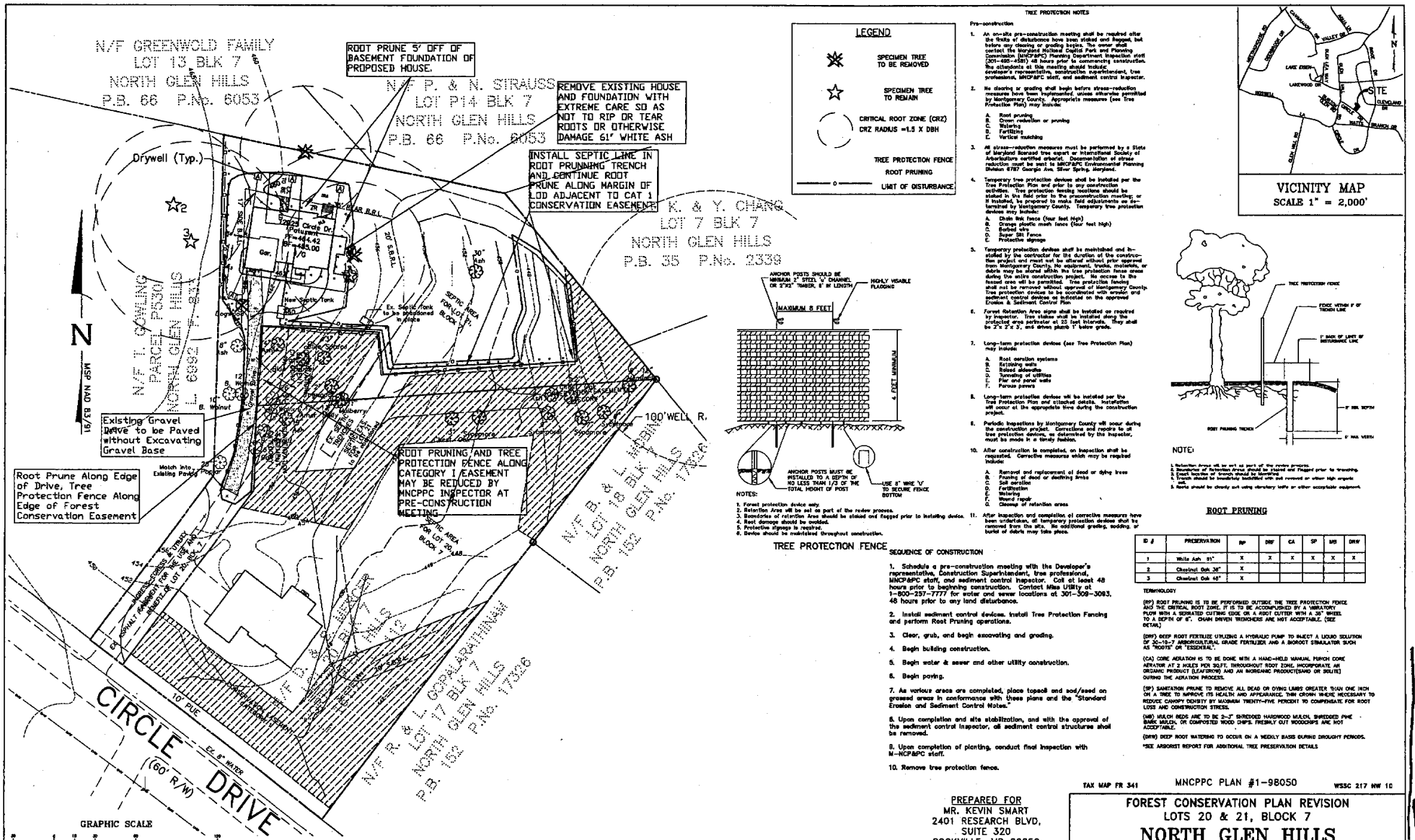
DATE:
Plat Book:
Plat No.:

PLAT TABULATION

Number of Lots	=	2
Area of Lots	=	110,696 sq. ft.
Area of Street Dedication	=	0 sq. ft.
Total Area	=	110,696 square feet or 2.54123 acres

MSA SSU 1244-7537 606-44

ATTACHMENT D



LEGEND

- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREE TO REMAIN
- CRITICAL ROOT ZONE (CRZ)
- CRZ RADIUS =1.5 X DBH
- TREE PROTECTION FENCE
- ROOT PRUNING
- LIMIT OF DISTURBANCE

TREE PROTECTION NOTES

Pre-construction

1. 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 (MNCP&PC) Planning Department Inspection staff (301-495-4581) 48 hours prior to commencing construction. The attendants at this meeting should include: developer's representative, construction superintendent, tree professional, MNCP&PC staff, and sediment control inspector.
2. No clearing or grading shall begin before stress-reduction measures have been implemented, unless otherwise permitted by Montgomery County. Appropriate measures (see Tree Protection Plan) may include:
   A. Root pruning
   B. Crown reduction or pruning
   C. Watering
   D. Fertilizing
   E. Vertical mulching
3. 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 MNCP&PC Environmental Planning Division 8787 Georgia Ave. Silver Spring, Maryland.
4. Temporary tree protective devices shall be installed per the Tree Protection Plan and prior to any construction activities. Tree protection fencing locations should be staked in the field prior to the preconstruction meeting; or if installed, be prepared to make field adjustments as determined by Montgomery County. Temporary tree protection devices may include:
   A. Chain link fence (four feet High)
   B. Orange plastic mesh fence (four feet high)
   C. Barbed wire
   D. Super SRI Fence
   E. Protective signage
5. 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 Montgomery County. 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 Montgomery County. Tree protection devices to be coordinated with erosion and sediment control devices as indicated on the approved Erosion & Sediment Control Plan
6. Forest Retention Area signs shall be installed as required by inspector. Tree stakes shall be installed along the protected area perimeter at 25 feet intervals. They shall be 2"± 2"± 5', and driven plumb 1' below grade.
7. Long-term protection devices (see Tree Protection Plan) may include:
   A. Root aeration systems
   B. Retaining walls
   C. Raised sidewalks
   D. Tunneling of utilities
   E. Pier and panel walls
   F. Porous pavers
8. Long-term protection devices will be installed per the Tree Protection Plan and attached details. Installation will occur at the appropriate time during the construction project.
9. Periodic inspections by Montgomery County will occur during the construction project. Corrections and repairs to all tree protection devices, as determined by the inspector, must be made in a timely fashion.
10. After construction is completed, an inspection shall be requested. Corrective measures which may be required include:
    A. Removal and replacement of dead or dying trees
    B. Pruning of dead or declining limbs
    C. Soil aeration
    D. Fertilization
    E. Watering
    F. Wound repair
    G. Cleanup of retention areas
11. After inspection and completion of corrective measures have been undertaken, all temporary protection devices shall be removed from the site. No additional grading, sodding, or burial of debris may take place.

NOTES:
1. Forest protection device only.
2. Retention Area will be set as part of the review process.
3. Boundaries of retention Area should be staked and flagged prior to installing device.
4. Root damage should be avoided.
5. Protective signage is required.
6. Device should be maintained throughout construction.

TREE PROTECTION FENCE

NOTE:
1. Retention Areas will be set as part of the review process.
2. Boundaries of Retention Areas should be staked and flagged prior to trenching.
3. Exact location of trench should be determined.
4. Trench should be immediately backfilled with soil removed or other high organic soil.
5. Roots should be cleanly cut using chainsaw tools or other acceptable equipment.

ROOT PRUNING

ID #	PRESERVATION	RP	DRF	CA	SP	MS	DRW
1	White Ash 91"	X	X	X	X	X	X
2	Chestnut Oak 38"	X					
3	Chestnut Oak 48"	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" BLADES TO A DEPTH OF 6". 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.

(MS) 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.

*SEE ARBORIST REPORT FOR ADDITIONAL TREE PRESERVATION DETAILS

SEQUENCE OF CONSTRUCTION

1. Schedule a pre-construction meeting with the Developer's representative, Construction Superintendent, tree professional, MNCP&PC 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.
2. Install sediment control devices. Install Tree Protection Fencing and perform Root Pruning operations.
3. Clear, grub, and begin excavating and grading.
4. Begin building construction.
5. Begin water & sewer and other utility construction.
6. Begin paving.
7. 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."
8. Upon completion and site stabilization, and with the approval of the sediment control inspector, all sediment control structures shall be removed.
9. Upon completion of planting, conduct final inspection with M-NCP&PC staff.
10. Remove tree protection fence.

TAX MAP FR 341 MNCPPC PLAN #1-98050 WSSC 217 NW 10

PREPARED FOR
MR. KEVIN SMART
2401 RESEARCH BLVD,
SUITE 320
ROCKVILLE, MD 20850
(301) 840-5766

NO.	DATE	DESCRIPTION	BY

FOREST CONSERVATION PLAN REVISION
LOTS 20 & 21, BLOCK 7
NORTH GLEN HILLS
PLAT 20796
4TH 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 301.670.0840
Fax 301.948.0693
www.mhgpa.com

Proj. Mgr.	Designer
JCG	LEW
Date	Scale
06/15/05	1"=30'
Project No.	Sheet
95.341.14	1 of 2

ATTACHMENT (1 of 2)

North Glen Hills
(Lot 21, Block 7)
#12925 Circle Drive

Arborist Report

A field inspection was performed on November 16, 2004 with the purpose of evaluating the existing condition of the 61" diameter White Ash (*Fraxinus Americana*). This report also specifically addresses the potential for retaining the tree with regard to the planned demolition of the existing two-story wood frame home and construction of a new home. The report is to serve not only as an assessment of the tree's current condition, but also to identify the potential impacts to the health and structural integrity of the tree including preventative stress reduction measures.

The tree was previously identified on the Natural Resource Inventory / Forest Stand Delineation (No. 4-98090) as Tree No. 44 (59" diameter White Ash). The Maryland National Park & Planning Commission (M-NCPPC) approved the NRI/FSD on November 17, 1997. The NRI/FSD was prepared along with a Forest Conservation Plan to satisfy requirements of the 1998 subdivision of former Parcel 528 into two lots. The disturbance and traffic associated with construction of the home on Lot 20 was far removed from the root zone of the 61" diameter White Ash and had no impact upon its health. The tree was listed as being in good condition at the time of the initial inventory and is still in reasonably good condition considering its age. The specimen White Ash (Tree No.44) is identified as being protected under a Category II Conservation Easement (L.13178 F. 421) on the Plat of Subdivision. As stated in the easement, ***"Diseased or hazardous Trees or Tree limbs may be removed to prevent personal injury or property damage after a minimum of ten business days notice to the Planning Director, unless such notice is not practical in an emergency situation."***

If the 2" diameter increase in girth over 7 years is a representative average, the tree would be about 213 years old. This equates to a growth rate of 0.2857" per year. Many of the years in the last ten years (this year not included) have been drought or near drought years, therefore a better gauge of the tree's growth rate might be somewhere in the 0.30" to 0.35" per year range. This would yield an age between 174 years and 203 years. Growth rates vary with a number of factors and the low branching and spreading habit of this tree is indicative of a very open environment with no limitations for sunlight. Trees growing up within forest environments have a slower growth rate due to the greater competition for resources including sunlight, nutrients, and water. There are many pruned branches and one sediment filled cavity as noted on the Tree Save Plan dated 11/16/04. The tree is in fair to good condition with some dieback in the canopy but no signs of fungal fruiting bodies, oozing sap (slime flux), or rot along the root flare or base of trunk. The numerous pruning scars and the presence of epicormic growth (also known as watersprouts) arising out of major limbs testify that the tree has been (and may currently be) undergoing stress. "Ash decline" is the terminology used to describe the slow process of dieback, branch tip death, and defoliation over the years that lead up to a sparse, unhealthy appearance. Ash decline typically involves many factors and the stresses are often nonpathogenic. The canopy dieback of the 61" diameter White Ash on-site is not so severe as to be irreversible and several means to reduce stress could go a long way in contributing to its recovery

The site is located in Maryland's Piedmont Physiographic Province. The bedrock on-site is mapped as the Upper Peltic Schist formerly known as the Wissahickon Formation. This rock is now believed to be Upper Cambrian or Lower Ordovician (480 to 520 million years) in age rather than Precambrian as once thought. The common quartz intrusions are likely much younger and large quartz boulders outcrop on-site. This rock underlies the Blocktown channery silt loam (Soil Survey Mapping Unit 116C). The larger quartz boulders are several square feet in size and soil depth is typically 21 inches to bedrock. The existing home was built in 1900 according to the Maryland Department of Taxation and Assessments. The home has no basement but does have a earthen crawl space of about 4.5 feet in depth below the adjacent ground surface. A very cursory look into the crawl space area did not reveal any apparent foundation damage or intrusion of roots into the crawl space. The tenant said she is not aware of any foundation damage but there are some cracks in the upper walls of the house. The adjacent ground elevation at the western side of the tree at the edge of the house is 459.0. The tree and the home are in a well-drained upland position with slopes of about 6% draining to the east. Poor drainage is definitely not a problem. If anything, the area may be somewhat excessively drained.

The 61" diameter White Ash is centered about 4 feet off the eastern side of the house and a major branch of about 24 inches in diameter actually rubs against the house at about 10 foot height. A second White Ash of 35" diameter is located nearby at the northeastern corner of the house. This tree (No.43) was listed as being in fair condition on the 1998 NRI/FSD. This tree is located about 21 feet away from the larger White Ash and has also experienced some decline. Although the two trees share a portion of canopy area and, in so doing, buffer each other from damaging winds, the smaller tree is less healthy and has a much weaker structure. Due to the poor health and poor form of the smaller tree, it is recommended that this tree be removed. Some of the large trees just off-site adjacent to the western property line are also of concern due to fair to poor health. It is recommended that the owners of Parcel 530 be contacted to arrange pruning and removal of selected trees that pose a significant hazard risk to the current and future occupants of 12925 Circle Drive. A 48" diameter Chestnut Oak is of particular concern. This tree is near the existing garage and is located in a field of large quartz boulders. The tree has a hollow base with a large fungal mass at the base. Significant die-back in the canopy also attests to the poor condition of this tree. The off-site Chestnut Oak is a potential hazard given its proximity to both the existing and future homes. Several other off-site large trees in this area (mostly Chestnut Oaks) are in fair condition and are in need of pruning, if not removal.

In addition to the root pruning, tree protection fence, and stress reduction measures prescribed by the Tree Save Plan, it is recommended that the 61" diameter White Ash be treated with the growth regulator known as paclobutrazol. Marketed under the trade name "Cambistat", this treatment has proven particularly successful with older trees experiencing dieback in the canopy or under stress due to drought or construction damage. Paclobutrazol actually inhibits cell elongation but in so doing increases the number of fine root hairs, increases drought resistance and restores vigor to slowly declining trees. Additional information regarding this treatment may be found at the following web site: http://www.mirhowsciyance.com/framesets/TakTreSet.htm. Some measure of success has been achieved even with younger trees in urban streetscape settings where a major goal is to slow growth of the tree in order to reduce the frequency of pruning maintenance and extend the lifespan of the tree. According to the recommended dosage (see attached), 1,016 ml of Cambistat should be mixed with 11,187 ml water for a basal drench application. At the manufacturers suggested price of $440.00 per gallon (prices vary), one gallon (3,785 ml/gal) could be used to treat several other large trees. Information and instructions for performing a basal drench application are attached.

The following tree maintenance and stress reduction measures are proposed:

- Advise owners of Parcel 530 that trees on their property near the common property line are in fair to poor condition and in need of removal/pruning as previously discussed.
- Tree Protection fencing to be installed to help protect the critical root zone of the 61" diameter White Ash as shown on the Tree Save Plan. Storage/stockpiling of equipment and building materials should be kept out of this area.
- Demolition of existing house should be undertaken with great care to avoid damage to the 61" diameter Ash. Potential root damage is of particular concern during removal of the foundation. An air spade should be used to trench along the outer perimeter of the foundation to locate tree roots. If cutting is necessary, it should be done by hand with a pruner or saw. Upon completion of house demolition, any exposed roots should be backfilled with top soil immediately.
- Root pruning as shown on the Tree Save Plan should be performed along intersection of new basement excavation and critical root zone of White Ash. Upon completion of root pruning, the tree protection fence should be placed as far from tree (as close to the root pruning line) as possible.
- To avoid compaction and abrasion of critical roots during construction, the area between the root pruning line and the tree base should be covered with six inches of mulch. ¾-inch plywood sheets that are fastened to each other should be laid on top of the mulch layer.
- Upon completion of new house construction, remove grass from minimum 7-foot radius around base of tree taking care to avoid damaging shallow roots. Place two to three inches of hardwood bark mulch over exposed area. Leave root flare and trunk free of contact with mulch.
- On-site trees to be preserved shall be pruned. Pruning shall be limited to removal of deadwood within crown that is over 1.5 inches in diameter. Other limbs that are in the way of construction or are damaged in the construction process may be removed at the discretion of the arborist. Pruning shall conform to ANSI-300 pruning standards.
- The sediment filled cavity on the 61" diameter White Ash is in a vertically aligned stub and should be inspected for rot and be pruned through sound wood, if possible, at an angle to facilitate positive drainage and avoid further accumulation of moisture, leaf litter, and other material.
- Debris from pruning shall be removed from the site or chipped for use as mulch.
- Typically, the prescribed fertilization utilizes an application rate of 1 to 2 pounds of nitrogen per 1,000 square feet of root zone being fertilized. Ideally, the mixture is determined by a soil test for the area. Excess nitrogen can cause more harm to a tree making it more susceptible to disease and insect infestation. Unless a soil test determines that more nitrogen is appropriate, it is recommended that a rate of 1 pound of nitrogen per 1,000 square feet be used during the dormant season. The formulation should be balanced with a majority of nitrogen in slow release form. An approved root stimulant should be included in the fertilization formula.
- Lightning protection per ANSI A-300 standards and Best Management Practices should be installed to help mitigate the risk of tree failure during electrical storms. Typically this involves the installation of two copper cables along the central leader of the tree from the top to the ground on opposite sides of the trunk and anchored to a 10-foot long metal rod buried vertically in the ground at least 10 feet away from the trunk.
- The 61" White Ash poses a moderate hazard risk currently and it should be recognized that even a tree in excellent health is not without risk. Future owners should be willing to accept this level of risk and take appropriate measures to maintain/improve the health of the specimen White Ash. They should closely monitor the tree for signs of decline. Should the health of the tree become such as to increase its hazard risk, it should be removed immediately.
- All of the above arboricultural measures should be performed by or under the direction of an International Society of Arboriculture certified arborist and a Maryland Licensed Tree Expert.

All of measures discussed above including the paclobutrazol treatment are highly advised given the age and signs of decline that currently exist in the 61" White Ash. If these treatments/stress reduction measures pose an unacceptable financial burden, or if unobserved root loss or decay in more than 33% of the buttress roots is discovered, then removal is advised.

J.D. Sievers

Doug Sievers
ISA Certified Arborist No. MA-0753A
Maryland Licensed Tree Expert No.850

*NOTE: Recommendations for 61" White Ash were changed from 'Save' to 'Remove' and back to 'Save' again during course of site planning. Changes were based on septic system requirements with special allowances made in effort to preserve specimen tree. While adjustments to the septic system design have reduced impacts to the tree, there can be no guaranty or certainty regarding its long term survival. Close attention and adherence to prescribed stress reduction measures and post-construction monitoring with appropriate after-care measures will help ensure survival of this specimen tree.

TAX MAP FR 341 WSSC 217 NW 10

FOREST CONSERVATION PLAN REVISION
LOTS 20 & 21, BLOCK 7
NORTH GLEN HILLS
PLAT 20796
4TH ELECTION DISTRICT – MONTGOMERY COUNTY – MARYLAND

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Proj. Mgr.	Designer
JCG	LEW
Date	Scale
06/15/05	NTS
Project No.	Sheet
95.341.14	2 of 2

ATTACHMENT E (2 of 2 - This writeup is also found in Attachment F)