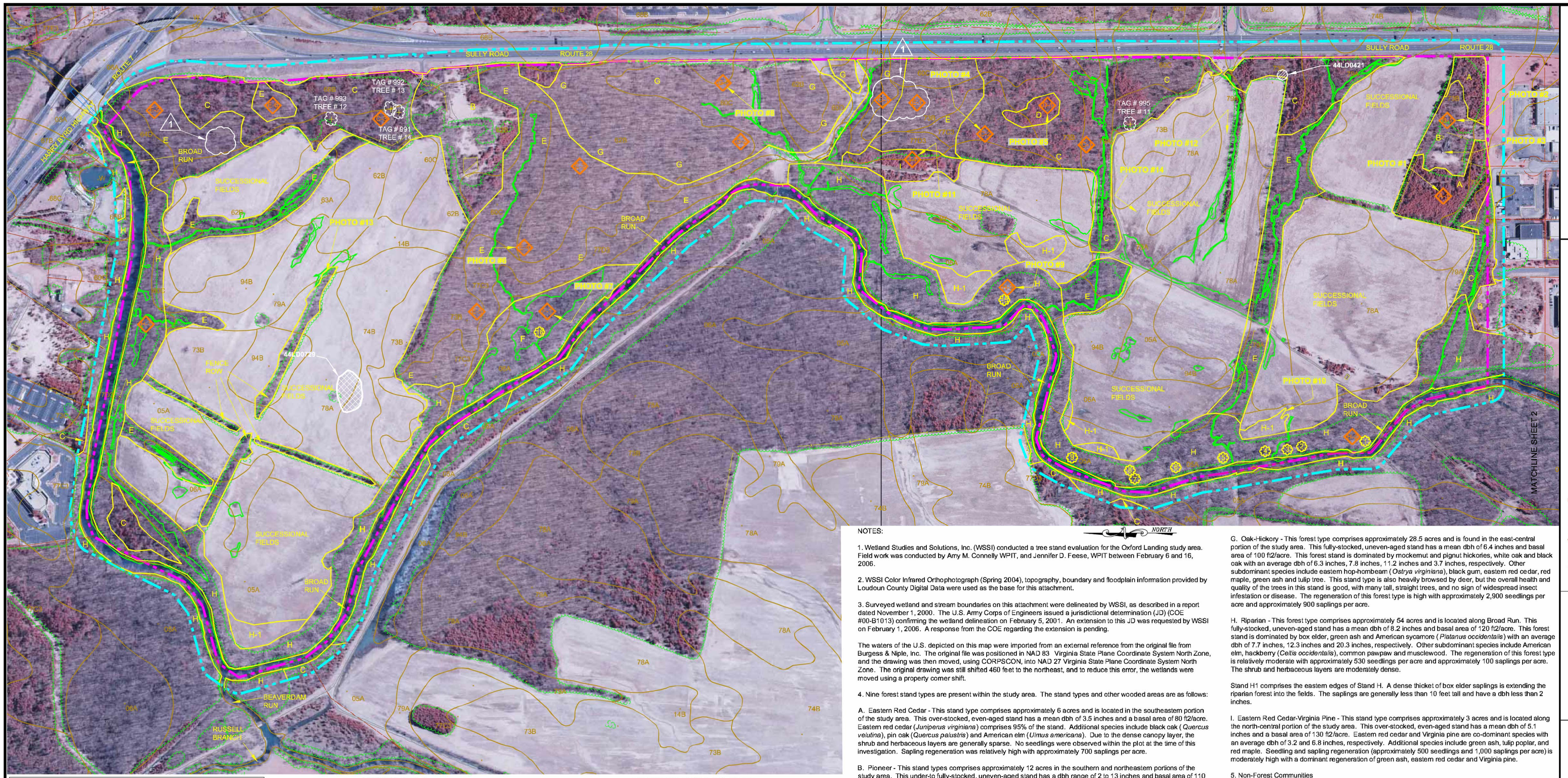

LEGEND

- SITE BOUNDARY
- 100-FOOT OFF-SITE STUDY AREA LIMITS
- JURISDICTIONAL WETLANDS AND OTHER WATERS OF THE U.S. (SEE NOTE #3)
- TREE STAND BOUNDARY (WITH FOREST STAND TYPE)
- TREE STAND FOREST PLOT CENTER
- POTENTIAL SPECIMEN TREE SURVEYED LOCATION (SEE NOTE #7)
- POTENTIAL SPECIMEN TREE APPROXIMATE LOCATION (SEE NOTE #6)
- SOIL SERIES BOUNDARY AND SYMBOL
- MAJOR FLOODPLAIN BOUNDARY (LOUDOUN COUNTY DIGITAL DATA)
- ARCHEOLOGICAL SITE 44LD0729 REQUIRES FURTHER STUDY (PHASE II INVESTIGATION) OR AVOIDANCE PER A PHASE I THUNDERBIRD ARCHEOLOGICAL ASSOCIATES, INC. REPORT ENTITLED "A PHASE I INVESTIGATION OF THE CIRCA 420 ACRE A.S. RAY PROPERTY ALONG BROAD RUN, LOUDOUN COUNTY, VIRGINIA" AND DATED MARCH 2001. THIS SITE WAS NOT SURVEY-LOCATED.
- ARCHEOLOGICAL SITE 44LD0421 (KILGOUR CEMETERY): A JAMES MADISON UNIVERSITY ARCHEOLOGICAL RESEARCH CENTER PHASE II REPORT, DATED 1988, RECOMMENDS A CEMETERY RELOCATION OR AVOIDANCE. THIS SITE WAS NOT SURVEY-LOCATED.

MAPPED SOILS

MAPPING UNIT NUMBERS	SOIL SERIES NAME	SLOPE
3A	COMUS SILT LOAM	0-3 %
5A	ROWLAND SILT LOAM	0-3 %
6A	BOWMANSVILLE SILT LOAM	0-3 %
14B	MANASSAS SILT LOAM	1-8 %
60C	SYCOLINE-CATLETT	7-15 %
60D	CATLETT GRAVELLY SILT LOAM	15-25 %
62B	KELLY-SYCOLINE COMPLEX	3-8 %
63A	KELLY SILT LOAM	0-3 %
64D	OAKHILL GRAVELLY SILT LOAM VERY STONY	15-25 %
65B	MONTALTO SILTY CLAY LOAM	3-8 %
67B	HAYMARKET AND JACKLAND	2-8 %
68B	HAYMARKET AND JACKLAND VERY STONY	2-8 %
68C	HAYMARKET AND JACKLAND VERY STONY	8-15 %
69A	ELBERT SILT CLAY LOAM	0-3 %
73B	PENN SILT LOAM	3-8 %
73C	PENN SILT LOAM	8-15 %
74B	ASHBURN SILT LOAM	1-8 %
77C3	NESTORIA GRAVELLY SLT LM SEVERLY ERD	8-15 %
77D3	NESTORIA GRAVELLY SLT LM SEVERLY ERD	15-25 %
78A	DULLES SILT LOAM	0-3 %
79A	ALBANO SILT LOAM	0-3 %
94B	ALLEGHENY SILT LOAM	0-5 %

POTENTIAL SPECIMEN TREES

Tree Number	Common Name	Scientific Name	DBH (in)	General Health/ Condition
1	American Sycamore	*Platanus occidentalis*	31.5	Fair
2	American Sycamore	*Platanus occidentalis*	32.2	Fair
3	American Sycamore	*Platanus occidentalis*	33.9	Good
4	Bitternut Hickory	*Carya glabra*	31.0	Fair
5	American Sycamore	*Platanus occidentalis*	42.7	Very Good
6	American Sycamore	*Platanus occidentalis*	40.5	Fair to Good
7	Shumard Oak	*Quercus shumardii*	34.5	Good
8	Shumard Oak	*Quercus shumardii*	32.7	Good
9	Shumard Oak	*Quercus shumardii*	37.5	Fair to Good
10	Pignut Hickory	*Carya glabra*	22.4	Very Good
11	Virginia Pine	*Pinus virginiana*	18.7	Very Good
12	Eastern Red Cedar	*Juniperus virginiana*	22.4	Very Good
13	White Oak	*Quercus alba*	27.7	Good
14	Eastern Red Cedar	*Juniperus virginiana*	31.1	Fair to Good
15	American Sycamore	*Platanus occidentalis*	60.6	Very Good
16	Green Ash	*Fraxinus pennsylvanica*	34.0	Fair

NOTES:

1. Wetland Studies and Solutions, Inc. (WSSI) conducted a tree stand evaluation for the Oxford Landing study area. Field work was conducted by Amy M. Connelly WPIT, and Jennifer D. Feese, WPIT between February 6 and 16, 2006.

2. WSSI Color Infrared Orthophotograph (Spring 2004), topography, boundary and floodplain information provided by Loudoun County Digital Data were used as the base for this attachment.

3. Surveyed wetland and stream boundaries on this attachment were delineated by WSSI, as described in a report dated November 1, 2000. The U.S. Army Corps of Engineers issued a jurisdictional determination (JD) (COE #00-B1013) confirming the wetland delineation on February 5, 2001. An extension to this JD was requested by WSSI on February 1, 2006. A response from the COE regarding the extension is pending.

The waters of the U.S. depicted on this map were imported from an external reference from the original file from Burgess & Niple, Inc. The original file was positioned in NAD 83 Virginia State Plane Coordinate System North Zone, and the drawing was then moved, using CORPSCON, into NAD 27 Virginia State Plane Coordinate System North Zone. The original drawing was still shifted 460 feet to the northeast, and to reduce this error, the wetlands were moved using a property corner shift.

4. Nine forest stand types are present within the study area. The stand types and other wooded areas are as follows:

A. Eastern Red Cedar - This stand type comprises approximately 6 acres and is located in the southeastern portion of the study area. This over-stocked, even-aged stand has a mean dbh of 3.5 inches and a basal area of 80 ft2/acre. Eastern red cedar (*Juniperus virginiana*) comprises 95% of the stand. Additional species include black oak (*Quercus velutina*), pin oak (*Quercus palustris*) and American elm (*Ulmus americana*). Due to the dense canopy layer, the shrub and herbaceous layers are generally sparse. No seedlings were observed within the plot at the time of this investigation. Sapling regeneration was relatively high with approximately 700 saplings per acre.

B. Pioneer - This stand types comprises approximately 12 acres in the southern and northeastern portions of the study area. This under-to fully-stocked, uneven-aged stand has a dbh range of 2 to 13 inches and basal area of 110 ft2/acre. Dominant species within this forest type include black locust (*Robinia pseudoacacia*), box elder (*Acer negundo*), eastern red cedar, and American elm. Subdominant species include red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*) and mockernut hickory (*Carya alba*). This forest stand type is associated with abandoned and dilapidated farm structures and houses. The seedling and sapling regeneration is high with approximately 4,700 seedlings per acre and 1,300 saplings per acre (primarily box elder).

C. Mixed Coniferous-Deciduous - This stand type comprises approximately 38 acres primarily in the eastern portion of the study area with smaller areas located in the northeastern and northwestern portions of the study area. This fully-stocked, uneven-aged stand has a dbh range of 2 to 22 inches with a mean dbh of 5.4 inches and basal area of 90 ft2/acre. Dominant species within this forest type include eastern red cedar, Virginia pine (*Pinus virginiana*), red maple, green ash and American elm. This stand is heavily browsed by deer, but exhibits overall good health and quality with many tall, straight trees, and no sign of widespread insect infestation or disease. The seedling regeneration is relatively high with approximately 1,300 seedlings per acre. Sapling regeneration is moderately low with approximately 170 saplings (primarily downy serviceberry (*Amelanchier arborea*) with eastern red cedar and green ash).

D. Virginia Pine - This stand type comprises approximately 1.0 acre in the east-central portion of the study area. This fully-stocked, even-aged stand has a mean dbh of 5.6 inches and a basal area of 150 ft2/acre. Virginia pine is the dominant species within this forest type. The few hardwood species within the canopy of this stand include green ash and sweet bird cherry (*Prunus avium*). Due to the dense canopy layer, the regeneration within this stand type is low with approximately 200 seedlings per acre composed primarily of oak species (*Quercus* spp.). No saplings were observed within the plot during this investigation.

E. Mixed Hardwood - This stand type comprises approximately 63.5 acres and is found throughout the study area. This fully-stocked, uneven-aged stand has a mean dbh of 6.0 inches with a dbh range from 2 to 30 inches and a basal area of 90 ft2/acre. This forest type includes red maple, green ash, tulip tree (*Liriodendron tulipfera*), a variety of oak species, American elm, musclewood (*Carpinus caroliniana*), black cherry (*Prunus serotina*), sweet bird cherry, mockernut and pignut (*Carya glabra*) hickories, black gum (*Nyssa sylvatica*) and common persimmon (*Diospyros virginiana*). Although this stand is heavily browsed by deer, the overall health and quality of the trees in this stand is good, with many tall, straight trees, and no sign of widespread insect infestation or disease. The regeneration of this forest type is relatively moderate with approximately 880 seedlings per acre and approximately 300 saplings per acre.

F. Bottomland Hardwood - This stand type comprises approximately 8 acres and is found in the northwestern portion of the study area. This fully-stocked, uneven-aged stand has a mean dbh of 8.9 inches with dbh ranging from 3 to 33 inches and a basal area of 90 ft2/acre. Green ash and musclewood are co-dominants in this forest type with a dbh of 13 inches and 4 inches, respectively. Subdominant species in this forest type include American elm, pin oak, box elder, red maple, and mockernut and pignut hickories. Although this stand is heavily browsed by deer, the overall health and quality of the trees in this stand is fair to good, with many tall, straight trees. The regeneration of this forest type is relatively low with approximately 500 seedlings per acre. No saplings were observed within the plot during this investigation.

G. Oak-Hickory - This forest type comprises approximately 28.5 acres and is found in the east-central portion of the study area. This fully-stocked, uneven-aged stand has a mean dbh of 6.4 inches and basal area of 100 ft2/acre. This forest stand is dominated by mockernut and pignut hickories, white oak and black oak with an average dbh of 6.3 inches, 7.8 inches, 11.2 inches and 3.7 inches, respectively. Other subdominant species include eastern hop-hornbeam (*Ostrya virginiana*), black gum, eastern red cedar, red maple, green ash and tulip tree. This stand type is also heavily browsed by deer, but the overall health and quality of the trees in this stand is good, with many tall, straight trees, and no sign of widespread insect infestation or disease. The regeneration of this forest type is high with approximately 2,900 seedlings per acre and approximately 900 saplings per acre.

H. Riparian - This forest type comprises approximately 54 acres and is located along Broad Run. This fully-stocked, uneven-aged stand has a mean dbh of 8.2 inches and basal area of 120 ft2/acre. This forest stand is dominated by box elder, green ash and American sycamore (*Platanus occidentalis*) with an average dbh of 7.7 inches, 12.3 inches and 20.3 inches, respectively. Other subdominant species include American elm, hackberry (*Celtis occidentalis*), common pawpaw and musclewood. The regeneration of this forest type is relatively moderate with approximately 530 seedlings per acre and approximately 100 saplings per acre. The shrub and herbaceous layers are moderately dense.

Stand H1 comprises the eastern edges of Stand H. A dense thicket of box elder saplings is extending the riparian forest into the fields. The saplings are generally less than 10 feet tall and have a dbh less than 2 inches.

I. Eastern Red Cedar-Virginia Pine - This stand type comprises approximately 3 acres and is located along the north-central portion of the study area. This over-stocked, even-aged stand has a mean dbh of 5.1 inches and a basal area of 130 ft2/acre. Eastern red cedar and Virginia pine are co-dominant species with an average dbh of 3.2 and 6.8 inches, respectively. Additional species include green ash, tulip poplar, and red maple. Seedling and sapling regeneration (approximately 500 seedlings and 1,000 saplings per acre) is moderately high with a dominant regeneration of green ash, eastern red cedar and Virginia pine.

5. Non-Forest Communities

Wooded Borders / Tree-lined Fencerows

Many tree-lined fencerows divide the fields. Mature eastern red cedar trees are often at the center of these linear features. These tree-lined areas are comprised of relatively mature trees. In addition to eastern red cedar, red maple, green ash, box elder, pin oak, American elm, poison ivy and Japanese honeysuckle are prevalent in these wooded areas.

Successional Fields

The fields, which comprise a large portion of the study area, are becoming established with pioneer species. There are a few scattered individuals of eastern red cedar and green ash seedlings. Herbaceous vegetation is dense and species include, but are not limited to, broomsedge (*Andropogon virginicus*), serrate-leaf blackberry (*Rubus argutus*), joint-head arthraxon (*Arthraxon hispidus*) and soft rush (*Juncus effusus*).

6. Potential specimen trees were located through a general pedestrian survey. Trees noteworthy due to their large size (~30 inches or greater dbh) and/or quality were examined and evaluated based on relative condition. The large trees documented within the floodplain characterize the numerous potential specimen trees not documented in the floodplain forest stand. See table on this attachment for general information and the attached report for a detailed description.

7. The specimen trees outside of the floodplain were located in the field using conventional survey methods. Field locations were completed November 15, 2006. Four potential specimen trees were identified in the eastern portion of the study area. Please note that the potential specimen trees in the floodplain were not survey-located.

8. One of the specimen trees identified during the original field work could not be located by WSSI's surveyors. Therefore, on November 17 and November 27, 2006, WSSI environmental scientists, Jennifer D. Feese, WPIT and Amy M. Connelly, WPIT, and on November 20 Jennifer D. Feese, WPIT and Laura A. B. Giese, PhD, PWS, PWD, CF, CSE visited the site in an attempt to locate Specimen Tree #10. After a thorough pedestrian reconnaissance, the tree was not able to be found. Upon further examination of data collected during the original field work, the tree was below the 30" DBH recommendations provided by Loudoun County. Therefore, this tree was removed as a potential specimen tree.

9. Based upon these subsequent field visits, two other revisions were made to the exhibit as noted below:

- Tree Stand Forest Plots E-2 and G-2, both located in the central portion of the study area, have been changed to E-1 and G-1, respectively.
- A duplicate tree stand forest plot was inadvertently added to the map in the northeastern portion of the study area. Subsequently this symbol has been removed.

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Attachment I: Tree Stand Evaluation

Prepared For: Tritec Real Estate Company, Inc.

Oxford Landing

Loudoun County, Virginia

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COMMONWEALTH OF VIRGINIA
ERIC S. SIEGEL
No. 023416
07/21/09
PROFESSIONAL ENGINEER

REVISIONS

No.	Date	Description	Rev. By	App. By
1	11/30/06	SURVEY LOCATED POTENTIAL SPECIMEN TREES – TREE NUMBERS 11 THROUGH 14 AND REVISIONS PER ADDITIONAL FIELD INVESTIGATION	AMC	LABG

DATE: March 2006

SCALE: 1" = 300'

Horizontal Datum: VCS NAD 27

Vertical Datum: NGVD 29

Boundary and Topo Source: Loudoun County Digital Data

Design	Draft	Approved
AMC	AMC	LABG/MH

Sheet # 28 of 35

FILE No. ZP-1675-2