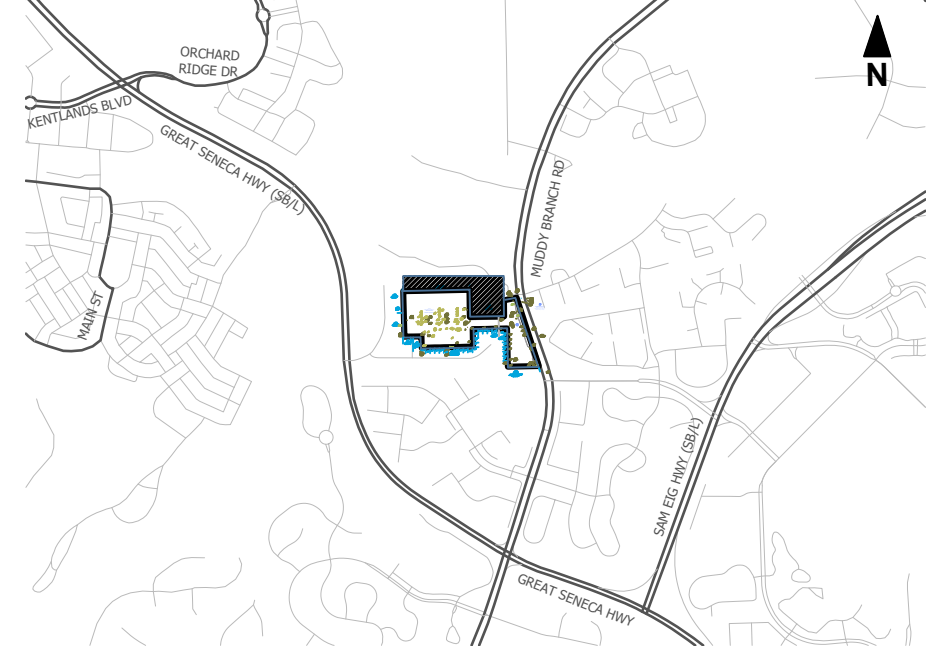


VICINITY MAP



Legend

- Site Boundary
- Existing 1-Foot Contours
- Soils Boundary
- Steep Slopes 15-25%
- Steep Slopes >25%
- DP-# Wetland Data Sample Point
- ST-### Specimen Tree & Critical Root Zone (CRZ)
- FSD-# Forest Stand Data Point
- Forest Stand 1- Sloping Forest, Well Drained, Moderately Eroded Soil (19,749 sf)
- Forest Stand 2 (33,883 SF)
- Tree Line
- Landscaped Areas
- x Fence
- Off-site forested area (7.76-ac)

Site-Specific Notes:

1. PARENT PARCEL IS ZONED RESIDENTIAL
2. WATER FEATURES WERE DELINEATED BY ECS ON DECEMBER 27, 2022 AND LOCATED USING A SUB-METER ACCURACY GPS UNIT.
3. ECS DID NOT IDENTIFY ANY ONSITE FEATURES WHICH ARE BELIEVED TO REPRESENT JURISDICTIONAL WATERS.
4. ENVIRONMENTAL FEATURES DEPICTED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND SUBJECT TO CHANGE UNTIL CONFIRMED BY REGULATORY PERSONNEL.
5. STEEP SLOPES GREATER THAN 15% ARE PRESENT ON SITE BUT ARE MAN-MADE.
6. ON DECEMBER 21, 2022, ECS SUBMITTED A REQUEST TO DNR WILDLIFE AND HERITAGE SERVICE FOR AN ENVIRONMENTAL REVIEW FOR RARE, THREATENED AND ENDANGERED SPECIES. A RESPONSE IS PENDING.
7. ACCORDING TO FEMA AND MD MERLIN THERE ARE NO 100 -YEAR OR 500-YEAR FLOOD PLAINS PRESENT.
8. ACCORDING TO MD MERLIN THE PROPERTY IS LISTED ON THE MARYLAND INVENTORY OF HISTORIC PROPERTIES AS- GAITHERSBURG NIKE LAUNCH SITE. THE SITE IS NOT ELIGIBLE FOR INCLUSION ON THE NATIONAL REGISTER OF HISTORIC PROPERTIES. NO OTHER HISTORIC PROPERTIES ARE LOCATED NEAR THE SUBJECT PROPERTY.
9. LAND SURROUNDING THE PROPERTY IS HIGH DENSITY RESIDENTIAL AROUND THE SUBJECT RPPROPERTY IN ALL DIRECTIONS. TO THE NORTHEAST, A SMALL PARCEL IS ZONED AS INSTITUTIONAL.
10. NO CRITICAL AREAS ARE LOCTED ON OR WITHIN 2 MILES OF THE SUBJECT PROPERTY.
11. NO HIGHLY ERODIBLE SOILS ARE LOCATED ON SITE.
12. A TOTAL OF 7.76-AC OF WOODED LAND EXTENDS OFF SITE TO THE NORTH.

**CITY OF GAITHERSBURG**  
31 SOUTH SUMMIT AVENUE, GAITHERSBURG, MARYLAND 20877

**NRI / FSD APPROVAL**

THE CITY OF GAITHERSBURG HEREBY GRANTS APPROVAL OF  
**NATURAL RESOURCE INVENTORY/  
FOREST STAND DELINEATION**

FOR APPLICATION NO. ENV-9483-2023

DATE 2-22-23 BY

Landscaping Summary

Landscaping Area	Composition	Condition
Landscape area 1	The area is planted with <i>Cuprocyparis leylandii</i> , <i>Forsythia suspensa</i> , and a variety of <i>Rhododendron</i> species.	Trees and shrubs are in fair to good shape. Low level of invasive herbaceous species. Area is frequently mowed keeping invasives low.
Landscape area 2	The area is planted with <i>Cuprocyparis leylandii</i> , <i>Forsythia suspensa</i> , with <i>Prunus serotina</i> , <i>Gleditsia triacanthos</i> planted by homeowners.	Trees are in fair to good condition but very high levels of invasive species present such as <i>Lonicera maackii</i> , <i>Paulownia tomentosa</i> and a high level of invasive herbaceous species such as <i>Microstegium vimineum</i>
Landscape area 3	Most of the planted <i>C. leylandii</i> on the subject property are gone along the central portion of the fence. Homeowners have planted <i>Ilex opaca</i> and <i>P. serotina</i> along the fence.	Trees are in poor to fair condition but very high levels of invasive species present such as <i>Lonicera maackii</i> , with a moderate level of invasive herbaceous species such as <i>Microstegium vimineum</i> , <i>Lonicera japonica</i>
Landscape area 4	Not a lot of planted <i>C. leylandii</i> landscaping still present. Area is primarily <i>I. opaca</i> , <i>P. serotina</i> , <i>L. maackii</i> and <i>P. tomentosa</i>	This area has a high level of pilgrim species and invasives. Low quality stand with high level of herbaceous invasive species present such as <i>M. vimineum</i> , <i>L. japonica</i>
Landscape area 5	There are two distinct areas here. A landscape buffer of planted <i>C. leylandii</i> with <i>P. serotina</i> , <i>I. opaca</i> , and <i>Acer rubrum</i> along the fence. A small grove of <i>Liriodendron tulipifera</i> is present within the subject property.	The landscaped area within the subject property is in fair to good condition with some invasive species. The planted trees are in good condition. The grove of <i>L. tulipifera</i> is in fair to good condition with heavy vine growth of <i>Smilax rotundifolia</i> and <i>Vitis sps.</i>
Landscape area 6	The planted <i>C. leylandii</i> on the subject property are mixed with <i>I. opaca</i> , <i>P. serotina</i> , <i>L. maackii</i> , <i>P. tomentosa</i> and <i>Elaeagnus umbellata</i> .	This stand is in poor to fair condition with a high level of invasive species. Trees and plants on the other side of the fence that belong to the HOA are in better condition.

SPECIMEN TREES				
Tree Number	Common Name	Scientific Name	DBH (inches)	Condition / Comments
601	Tulip poplar	<i>Liriodendron tulipifera</i>	32.0	Good / 2 trunks, few LDLs
602	Tulip poplar	<i>Liriodendron tulipifera</i>	32.2	Good / 2 trunks
603	Tulip poplar	<i>Liriodendron tulipifera</i>	28.0	Good
604	Tulip poplar	<i>Liriodendron tulipifera</i>	28.1	Good
605	Tulip poplar	<i>Liriodendron tulipifera</i>	28.2	Good / Few LDLs
606	Tulip poplar	<i>Liriodendron tulipifera</i>	25.0	Good
607	Tulip poplar	<i>Liriodendron tulipifera</i>	26.2	Good / Few LDLs
608	Tulip poplar	<i>Liriodendron tulipifera</i>	33.3	Good / 2 trunks
609	Tulip poplar	<i>Liriodendron tulipifera</i>	29.0	Good / Few LDLs
610	Tulip poplar	<i>Liriodendron tulipifera</i>	27.7	Good
611	Tulip poplar	<i>Liriodendron tulipifera</i>	25.0	Good
612	Tulip poplar	<i>Liriodendron tulipifera</i>	27.5	Good
613	Tulip poplar	<i>Liriodendron tulipifera</i>	41.5	Good
614	Tulip poplar	<i>Liriodendron tulipifera</i>	26.0	Fair / 2 trunks w/ one dead
615	Tulip poplar	<i>Liriodendron tulipifera</i>	28.2	Good / Few LDLs
616	Tulip poplar	<i>Liriodendron tulipifera</i>	24.2	Good
978	Red maple	<i>Acer rubrum</i>	40.0	Poor / Half of tree is dead
979	Red maple	<i>Acer rubrum</i>	25.0	Good / Couple LDLs, minor vine growth
980	Tulip poplar	<i>Liriodendron tulipifera</i>	24.2	Good
982	Tulip poplar	<i>Liriodendron tulipifera</i>	27.5	Good
984	Tulip poplar	<i>Liriodendron tulipifera</i>	24.1	Good / 2 trunks
985	Tulip poplar	<i>Liriodendron tulipifera</i>	26.0	Good
986	Tulip poplar	<i>Liriodendron tulipifera</i>	32.0	Good
987	Tulip poplar	<i>Liriodendron tulipifera</i>	26.2	Good
988	Virginia pine	<i>Pinus virginiana</i>	24.1	Good
989	Virginia pine	<i>Pinus virginiana</i>	25.0	Good
990	Red maple	<i>Acer rubrum</i>	28.3	Good
991	Red maple	<i>Acer rubrum</i>	26.0	Good
992	Red maple	<i>Acer rubrum</i>	28.7	Good / Few LDLs
993	Red maple	<i>Acer rubrum</i>	32.0	Good
994	Tulip poplar	<i>Liriodendron tulipifera</i>	25.8	Good / Few LDLs
995	Eastern cottonwood	<i>Populus deltoides</i>	29.5	Good

Forest Stand Analysis and Priorities-Stand 1						
	Part A	Part B	Part C			
Stand	Structure (Out of 20)	Condition (Out of 20)	Location (Out of 20)	Total (out of 60)	Priority for Preservation (H, M or L)	Priority for Restoration (H, M or L)
1	13	9	10	32	L	L

Forest Stand Analysis and Priorities-Stand 2						
	Part A	Part B	Part C			
Stand	Structure (Out of 20)	Condition (Out of 20)	Location (Out of 20)	Total (out of 60)	Priority for Preservation (H, M or L)	Priority for Restoration (H, M or L)
1	16	11	10	37	M	M

Forest Survey Summary

Muddy Branch located at 770 Muddy Branch Road, Gaithersburg, Montgomery County, Maryland (Lat: 39.117088 N, Long: 77.219605 W); the site is further identified by the Maryland Department of Assessment and Taxation (MDAT) online database as Parcel Identification Number 09-00821711. The site totals approximately 13.71 acres. The site is developed with a few structures and is nearly entirely paved except for a few grassy and wooded areas. Two trees with a DBH > 24" were located on site.

Stand One

A small, planted area on site qualifies as a forest equaling 19,749 SF with at least 100 trees per acre with a diameter at breast height greater than 2 inches. Stand one is dominated by planted red cedar (*Juniperus virginiana*) with a mix of pilgrim tree species found within, including Tulip poplar (*Liriodendron tulipifera*), black cherry (*Prunus serotina*) and loblolly pine (*Pinus taeda*). The stand is medium aged with most dominant trees having a DBH of 6-10". The forest is located on an artificial hill created as a visual buffer. The herbaceous layer is primarily absent except for the presence of invasive Japanese honeysuckle (*Lonicera japonica*). The shrub layer consists almost exclusively of either *J. virginiana* and *L. tulipifera* shrubs or invasive Princess tree (*Paulownia tomentosa*) and Asian honeysuckle bush (*Loicera morrowii*).

Due to the low species diversity in the canopy, low structural diversity within the forested area, the absence of any specimen trees, wetland features or streams, and the artificial hillslope on which the trees are planted, the forest has a low priority for preservation and restoration.

Stand Two

Stand two is a portion of a larger forest stand that is adjacent to the parent parcel to the north. The parcel boundaries extend into the forest stand approximately 10 feet with a portion of that stand present inside the fence line. The upper canopy is primarily dominated by large sized tulip poplar (*Liriodendron tulipifera*) with a middle canopy comprised of red maples (*Acer rubrum*), black cherry (*Prunus serotina*) and red cedar (*Juniperus virginiana*). The red cedar portion of the stand is in significant decline. The stand is relatively healthy, however significant downed woody debris is present and consists primarily of red cedar. The herbaceous layer is sparse and consists mostly of green brier (*Smilax rotundifolia*) with a low level of invasive species present and heavy deer grazing is evident throughout the stand.

The stand has a medium priority for preservation and restoration due to the mixed quality of the stand. There are high quality specimen trees, and low invasive species count but a high percent of down woody debris, no wetlands, streams or other environmental features.

Soils Table

Map Unit Symbol	Map Unit Name	Hydric Rating	Drainage Class
1C	Gaila silt loam, 8 to 15 percent slopes	Not hydric	Well drained
2B	Glenelg silt loam, 3 to 8 percent slopes	Not hydric	Well drained
66UB	Wheaton-Urban land complex, 0 to 8 percent slopes	Not hydric	Well drained
66UC	Wheaton-Urban land complex, 8 to 15 percent slopes	Not hydric	Well drained

This Forest Stand Delineation has been prepared in accordance with all State and local ordinances which were in effect as of the date shown below. The undersigned is a qualified professional in accordance with COMAR 08.19.06.01.

Jennifer Anderson 2/21/2023



January 25, 2023  
Jennifer Anderson  
ECS Mid-Atlantic, LLC  
14026 Thunderbolt Place, Suite 100  
Chantilly, VA 20151-3232

RE: Environmental Review for ECS Project No. 47-156903, Muddy Branch Property, Tax Map FS32 Parcel P322, Gaithersburg, Montgomery County, Maryland

Dear Ms. Anderson:  
  
The Wildlife and Heritage Service has no official records for State or Federal listed, candidate, proposed, or rare plant or animal species within the project area shown on the map provided. As a result, we have no specific concerns regarding potential impacts to such species or recommendations for protection measures at this time. If the project changes in the future such that the limits of proposed disturbance or overall site boundaries are modified, please provide us with revised project maps and we will provide you with an updated evaluation.  
  
Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at [Lori.Byrne@maryland.gov](mailto:Lori.Byrne@maryland.gov) or at (410) 260-8573.

Sincerely,

Lori A. Byrne  
Environmental Review Coordinator  
Wildlife and Heritage Service  
MD Dept. of Natural Resources

ER# 2022.1872.MO

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ECS - MID-ATLANTIC, LLC  
1340 CHARWOOD ROAD  
SUITE B  
HANOVER, MD 21076  
1-800-822-3489  
410-859-1300  
(FAX) 703-834-5827

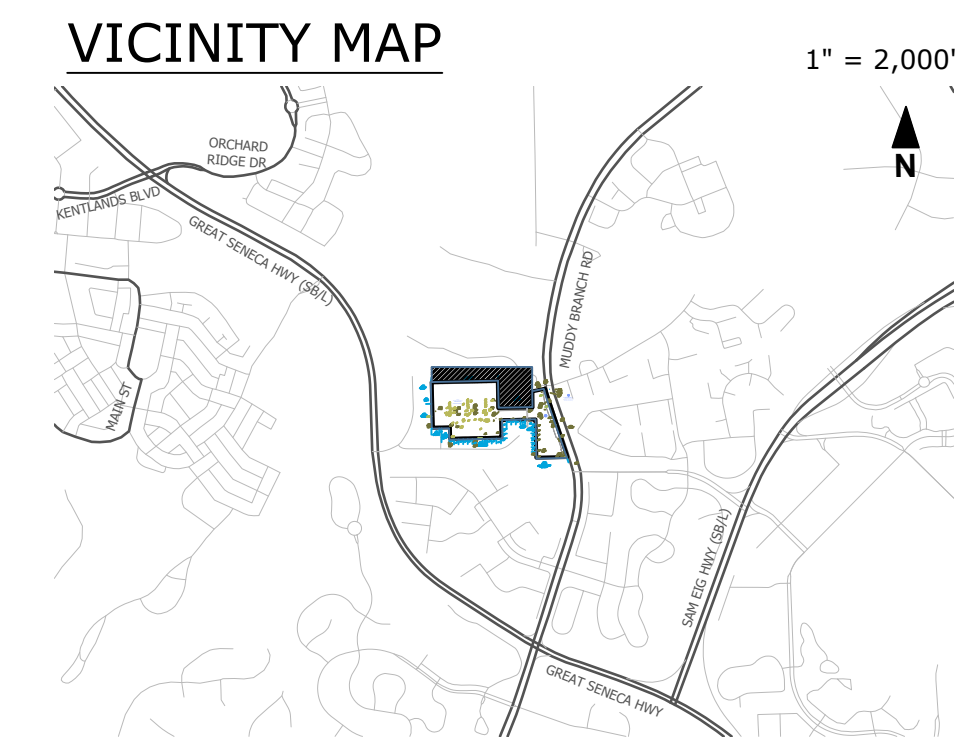
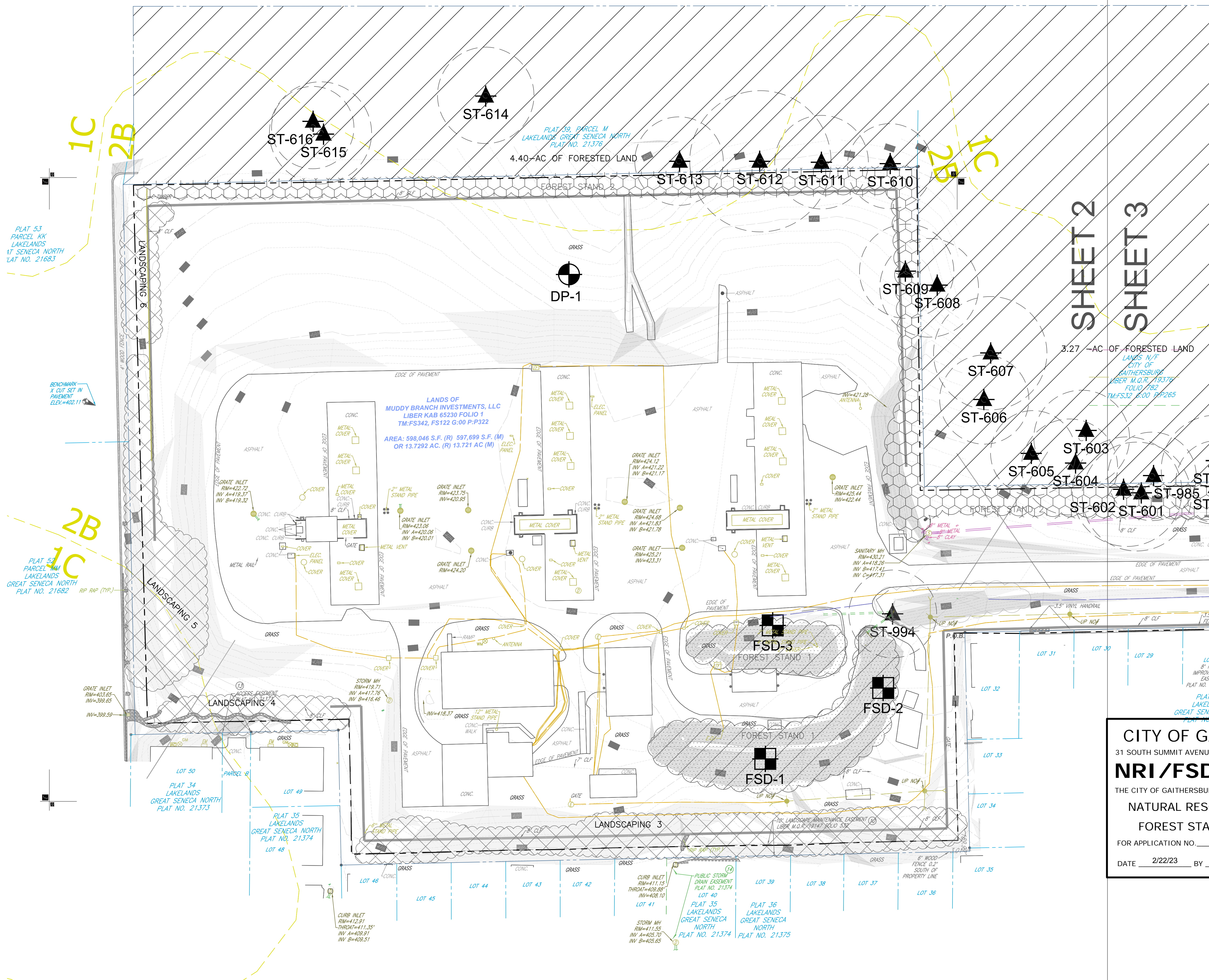
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**ECS**

**MUDDY BRANCH ROAD  
770 MUDDY BRANCH ROAD  
GAITHERSBURG, MONTGOMERY COUNTY, MARYLAND**

**NATURAL RESOURCE INVENTORY  
FOREST STAND DELINEATION PLAN  
BOHLER ENGINEERING**

ENGINEER	DRAFTING
AMM	JDA
SCALE	1" = 100'
PROJECT NO.	47-15903
SHEET	1 OF 3
DATE	01-13-2023

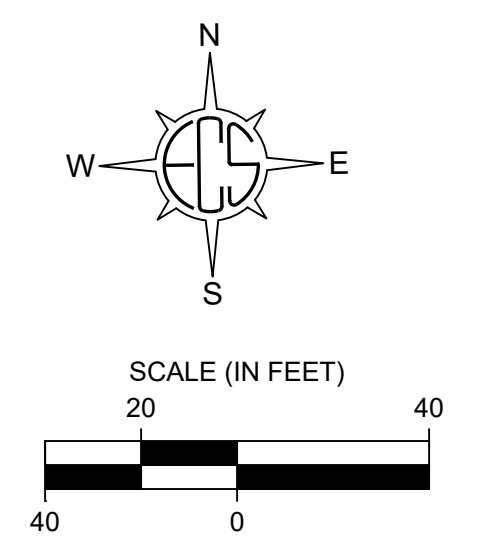


- ### Legend
- Site Boundary
  - Existing 1-Foot Contours
  - Soils Boundary
  - Steep Slopes 15-25%
  - Steep Slopes >25%
  - Wetland Data Sample Point (DP-#)
  - Specimen Tree & Critical Root Zone (CRZ) (ST-###)
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  - Fence
  - Off-site forested area (7.76-ac)

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*Jennifer Anderson* 2/21/2023  
 Jennifer Anderson

**CITY OF GAITHERSBURG**  
 31 SOUTH SUMMIT AVENUE, GAITHERSBURG, MARYLAND 20877  
**NRI/FSD APPROVAL**  
 THE CITY OF GAITHERSBURG HEREBY GRANTS APPROVAL OF  
**NATURAL RESOURCE INVENTORY/  
 FOREST STAND DELINEATION**  
 FOR APPLICATION NO. ENV-9483-2023  
 DATE 2/22/23 BY *[Signature]*



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 HANOVER, MD 21078  
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**ECS**

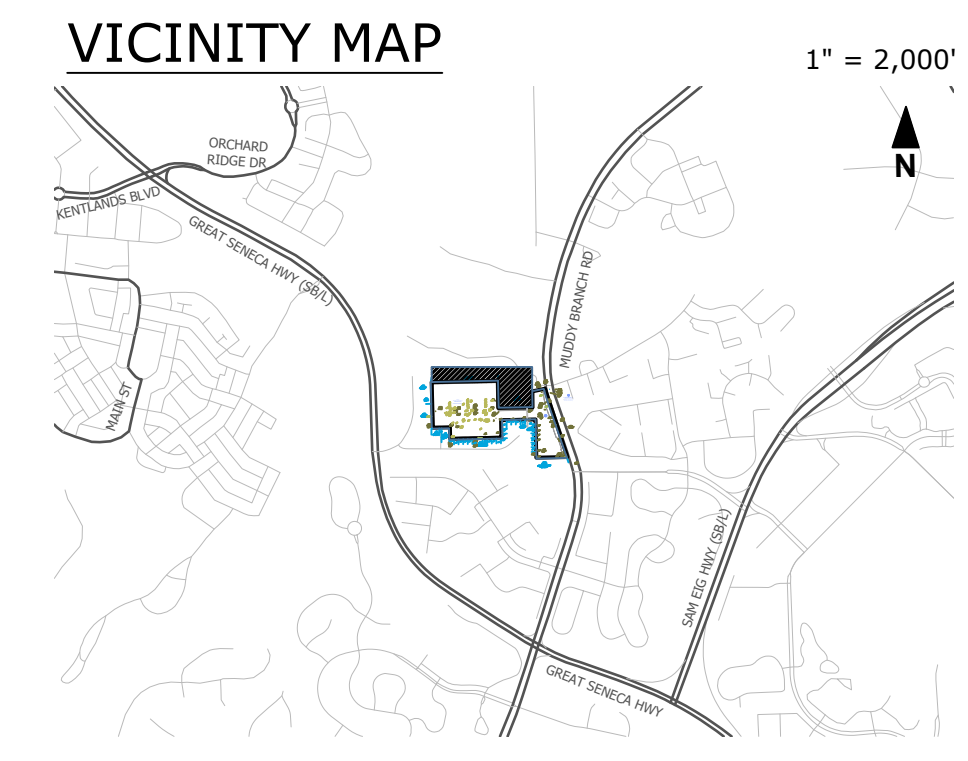
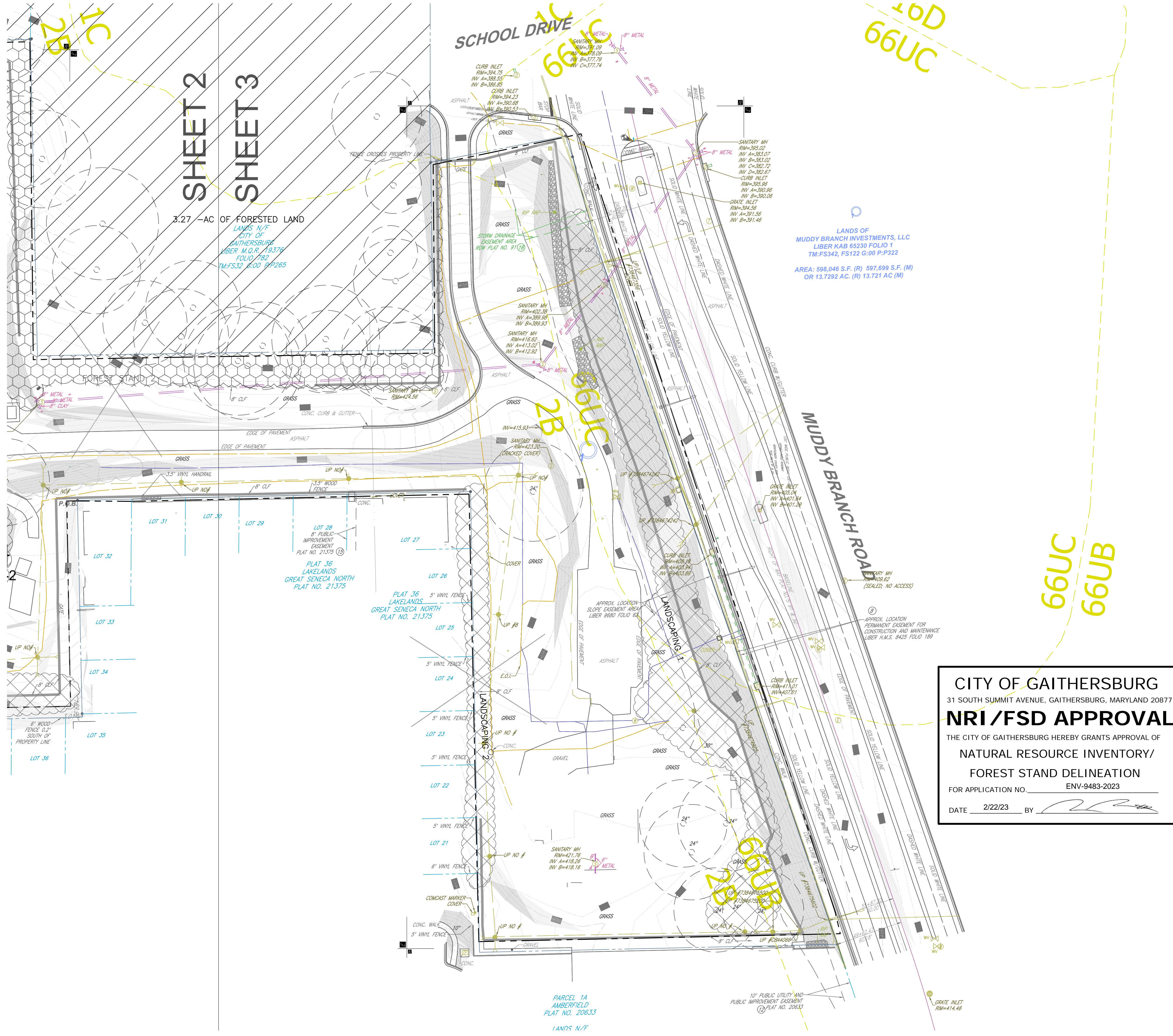
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**NATURAL RESOURCE INVENTORY  
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 BOHLER ENGINEERING**

ECS REVISIONS  
 TJW 02/16/2023  
 JDA 2/21/23

ENGINEER	DRAFTING
AMM	JDA

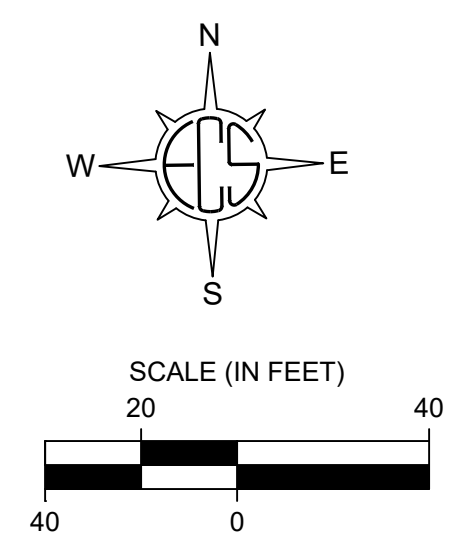
SCALE 1" = 40'  
 PROJECT NO. 47-15903  
 SHEET 2 OF 3  
 DATE 01-13-2023



- Legend**
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 Jennifer Anderson 2/21/2023



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**FOREST STAND DELINEATION PLAN**  
**BOHLER ENGINEERING**

ECS REVISIONS

TJW	02/16/2023
JDA	2/21/2023

ENGINEER	DRAFTING
AMM	JDA

SCALE 1" = 40'

PROJECT NO. 47:15903

SHEET 3 OF 3

DATE 01-13-2023