Woodland Condos

2732 Woodland Ave. Duluth, MN.

R-P Regulating Plan
August 29, 2025

Titanium Partners

DSGW Architects

NCE

TJPA Design

Approval

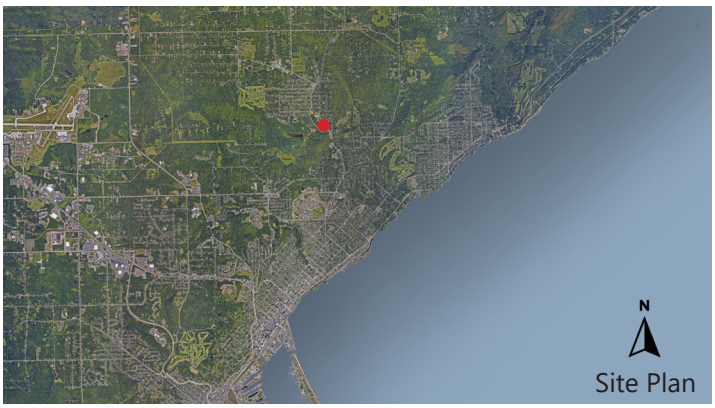
Sign

Signed by:
Jennifer L R Moses
978B952DFFDE448...

Date 10/7/2025 | 16:28:45 CDT

Site History

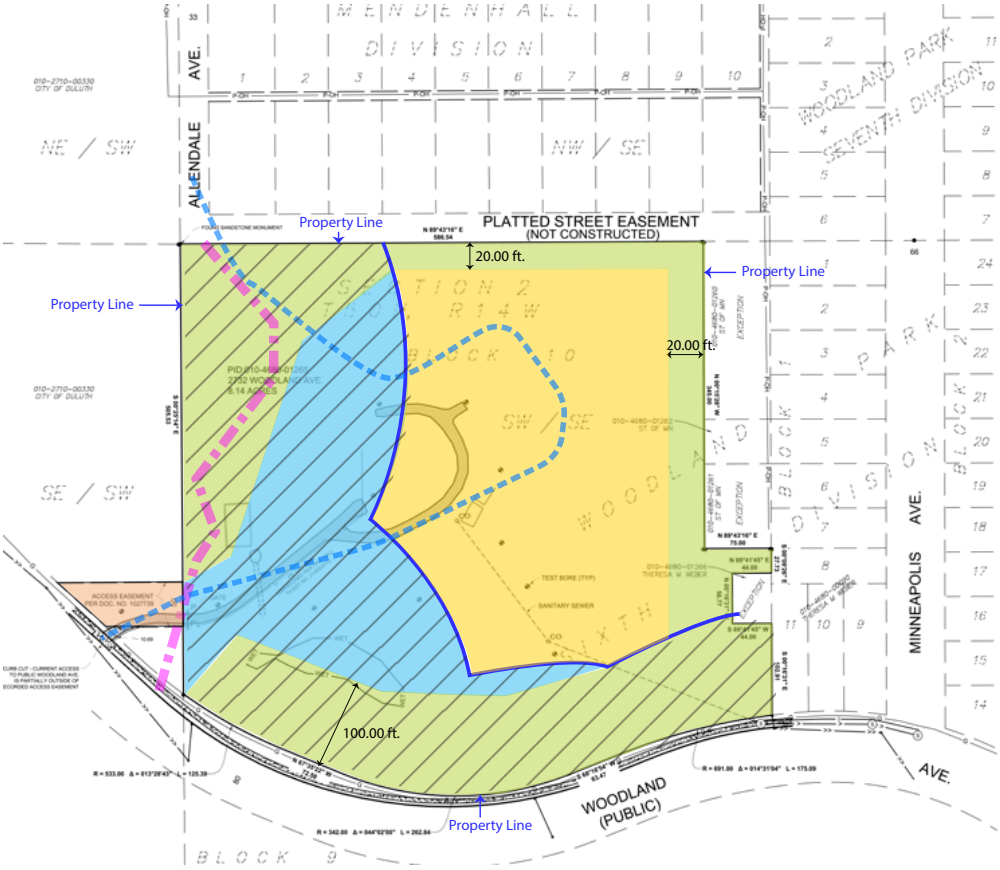
Previously two-single family homes were built on the property along with the existing drive that can still be seen today. These homes were demolished years ago. This site has sat vacant for many years. In 2025, the site was rezoned from a R-1 to R-P that established the basis for the regulating plan.



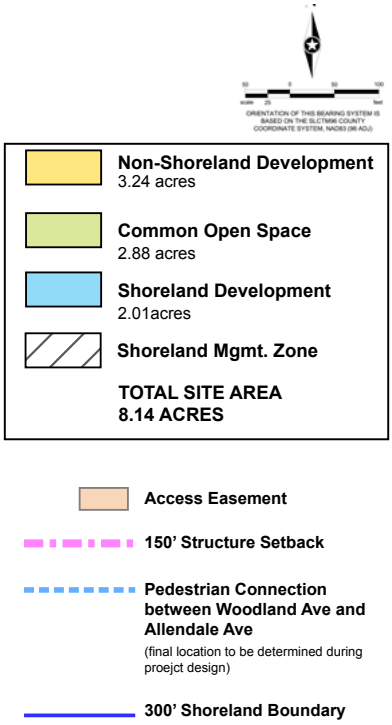
Concept Plan for 2025 Rezoning

The concept plan below was submitted to City of Duluth on 3/5/2025 for rezoning the property from R-1 to R-P. An ordinance amending the offical zoning map to reclassify the parcels was approved by the Duluth City Council on 5/12/2025.

PLUMA-2502-0001



2732 Woodland Avenue



DEVELOPMENT DENSITY

Shoreland Area	Max. 24 Units
Non-Shoreland Area	Max. 75 Units minus units located in Shoreland

OPEN SPACE IN SHORELAND AREA

Shoreland Area	4.83 Acres
50% of Shoreland*	2.42 Acres
Common Open Space In Shoreland	2.42 Acres
Total Common Open Space	2.85 Acres

**Per state statute residential in shoreland with 50% of Shoreland in Common Open Space.*

Site Data

Lot Metrics

Total Site Area	8.14 acres	
Minimum Common Space (30% of Site Area)	2.44 acres	
Proposed Common Space Site Area	2.88 acres	35.3%
Residential Site Area	5.36 acres	64.7%
Proposed Density Unit per Acre of Residential Site	14 per acre (maximum density permitted is 75 units	

Setback

Front Yard	100’ R.O.W.
Rear Yard	20’
Side yard	20’

Permitted Uses (per Table 50-19.8)

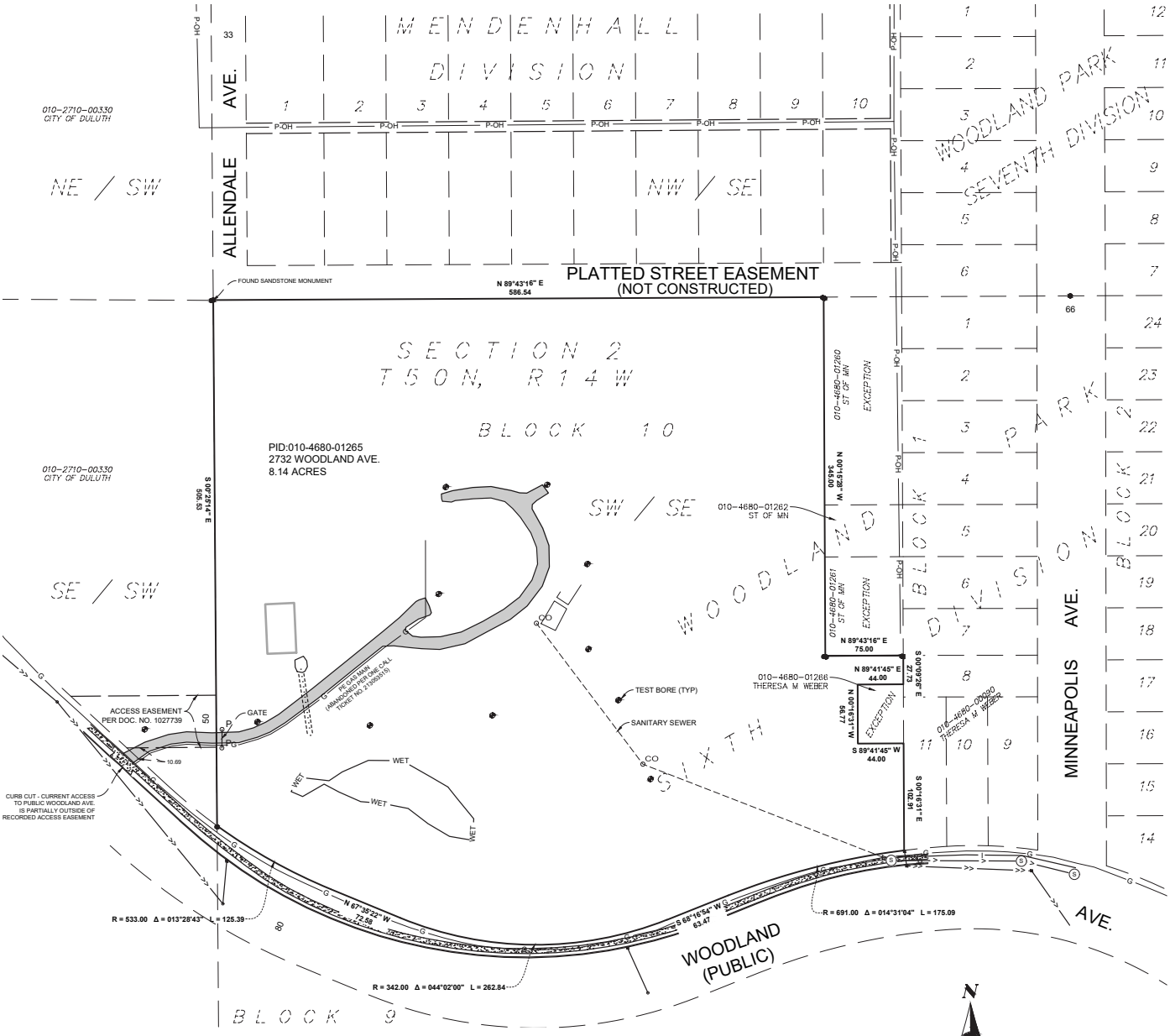
Previous zone was R-1

RESIDENTIAL USES

Household Living

- Dwelling, Single Family
- Dwelling, Two Family
- Dwelling, townhouse
- Dwelling, Multi Family

Survey



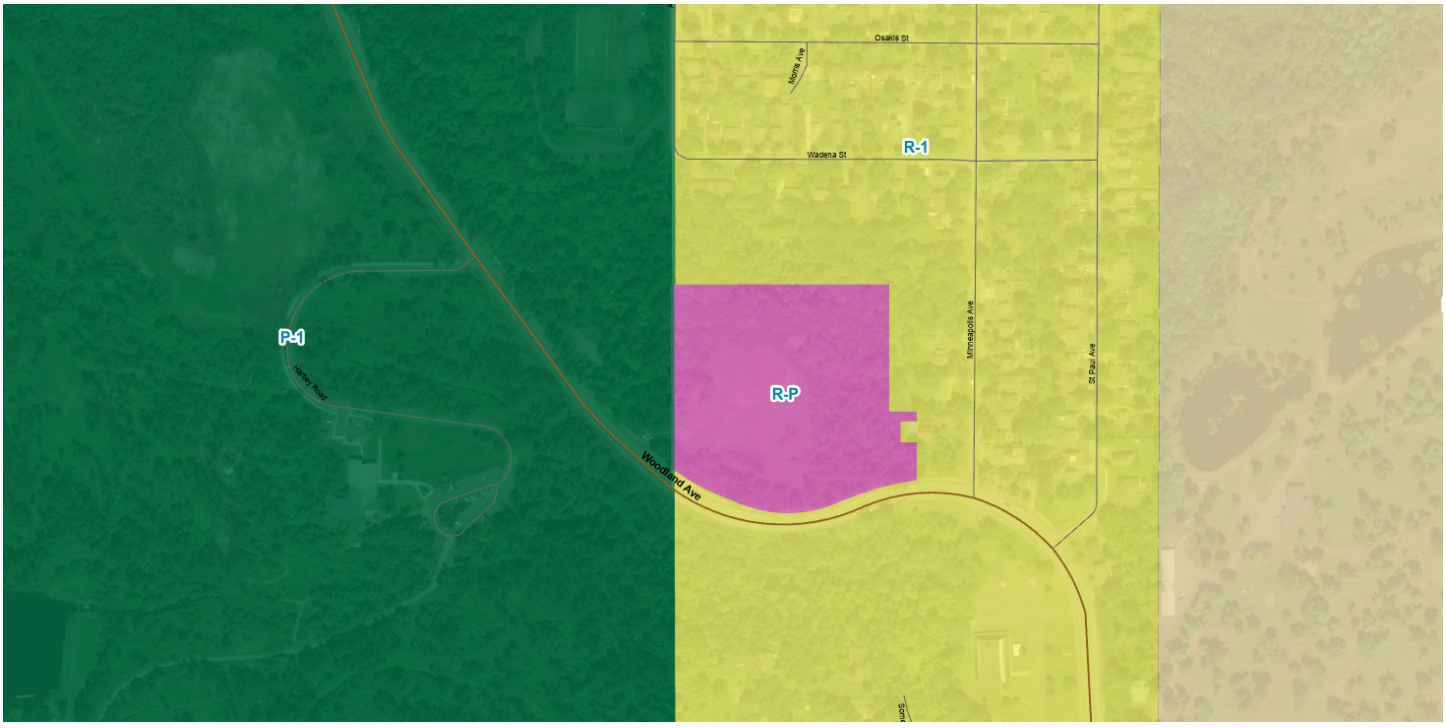
ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE SLCTM96 COUNTY COORDINATE SYSTEM, NAD83 (96 ADJ)

LEGEND

- DENOTES FOUND IRON MONUMENT
- DENOTES SET 5/8"x18" REBAR WITH CAP STAMPED 45848
- FO — FO — DENOTES BURIED FIBER OPTIC CABLE
- T-BUR — T — DENOTES BURIED PHONE CABLE AND PEDESTAL
- TV-BUR — TV — DENOTES BURIED TV CABLE AND PEDESTAL
- P-BUR — DENOTES BURIED ELECTRIC CABLE
- DENOTES OVERHEAD ELECTRIC, POLE AND DOWN GUY ANCHOR
- P-OH — DENOTES OVERHEAD UTILITIES
- G — DENOTES GAS MAIN
- DENOTES WOODED AREA
- DENOTES SECTION LINE
- DENOTES BOUNDARY LINE
- DENOTES SURVEY LINE
- DENOTES RIGHT OF WAY LINE
- DENOTES EASEMENT LINE
- WET — DENOTES WETLAND
- DENOTES MONITORING WELL
- DENOTES BOLLARD

Site Zoning Map

Below is the current site zoning map showing the site and adjacent properties.



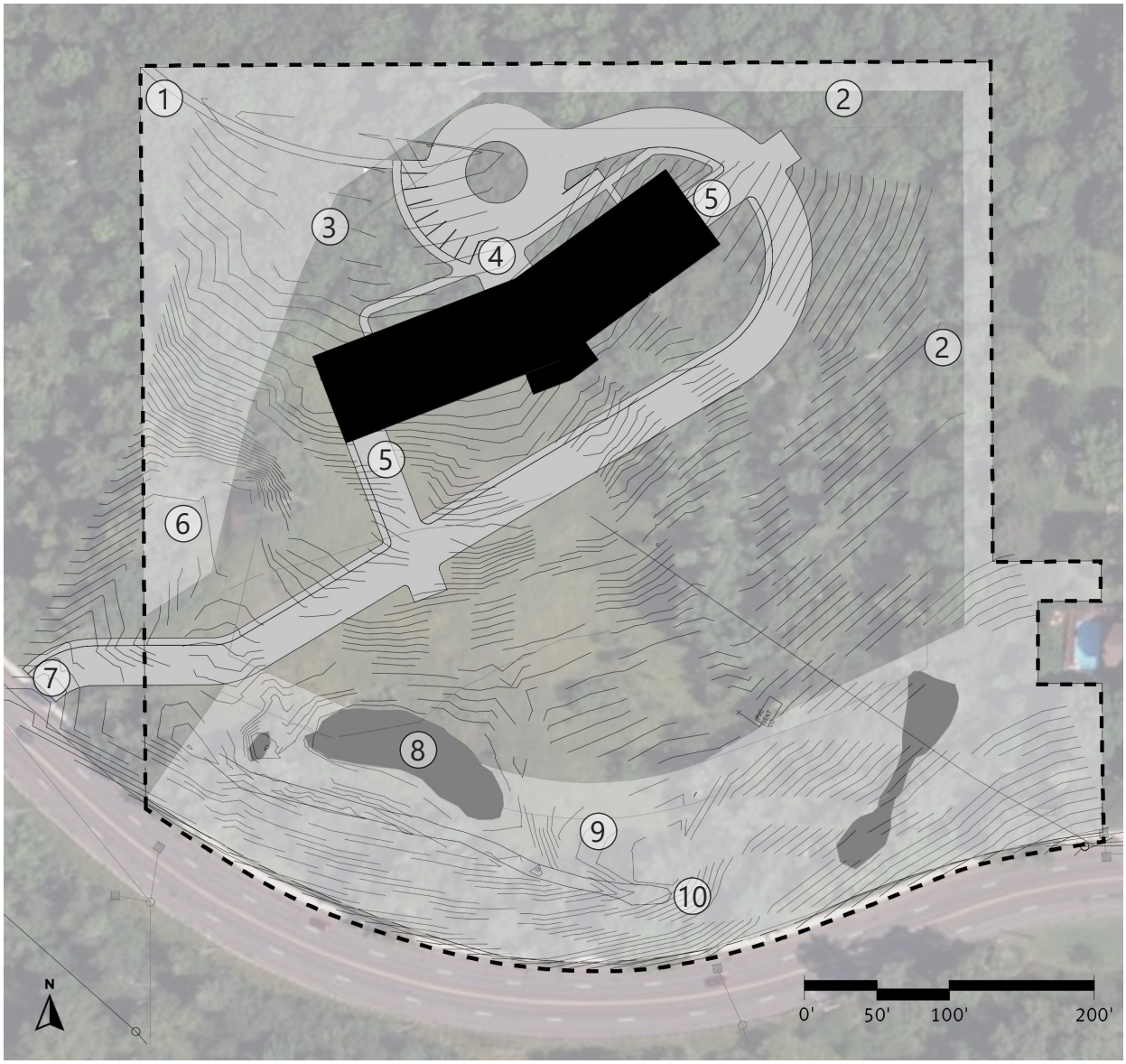
Duluth Streets
- Interstate
- MN Highway
- CSAH; County Rds
- Local Roads

Zoning
- F-5 (Mid-Rise Community Shopping and Office)
- F-6 (Mid-Rise Neighborhood Shopping)
- F-7 (Downtown Shopping)
- F-8 (Downtown Mix)
- RR-1 (Rural Residential 1)
- RR-2 (Rural Residential 2)
- R-1 (Residential Traditional)
- R-2 (Residential Urban)
- R-P (Residential Planned)
- MU-C (Mixed Use Commercial)
- MU-I (Mixed Use Institutional)
- MU-N (Mixed Use Neighborhood)
- MU-P (Mixed Use Planned)
- I-G (Industrial General)
- P-1 (Park)

General Layout

Below is a general layout of the development's roadways, parking, a multifamily building and landscape. All regulation and code related items are included in the following pages.

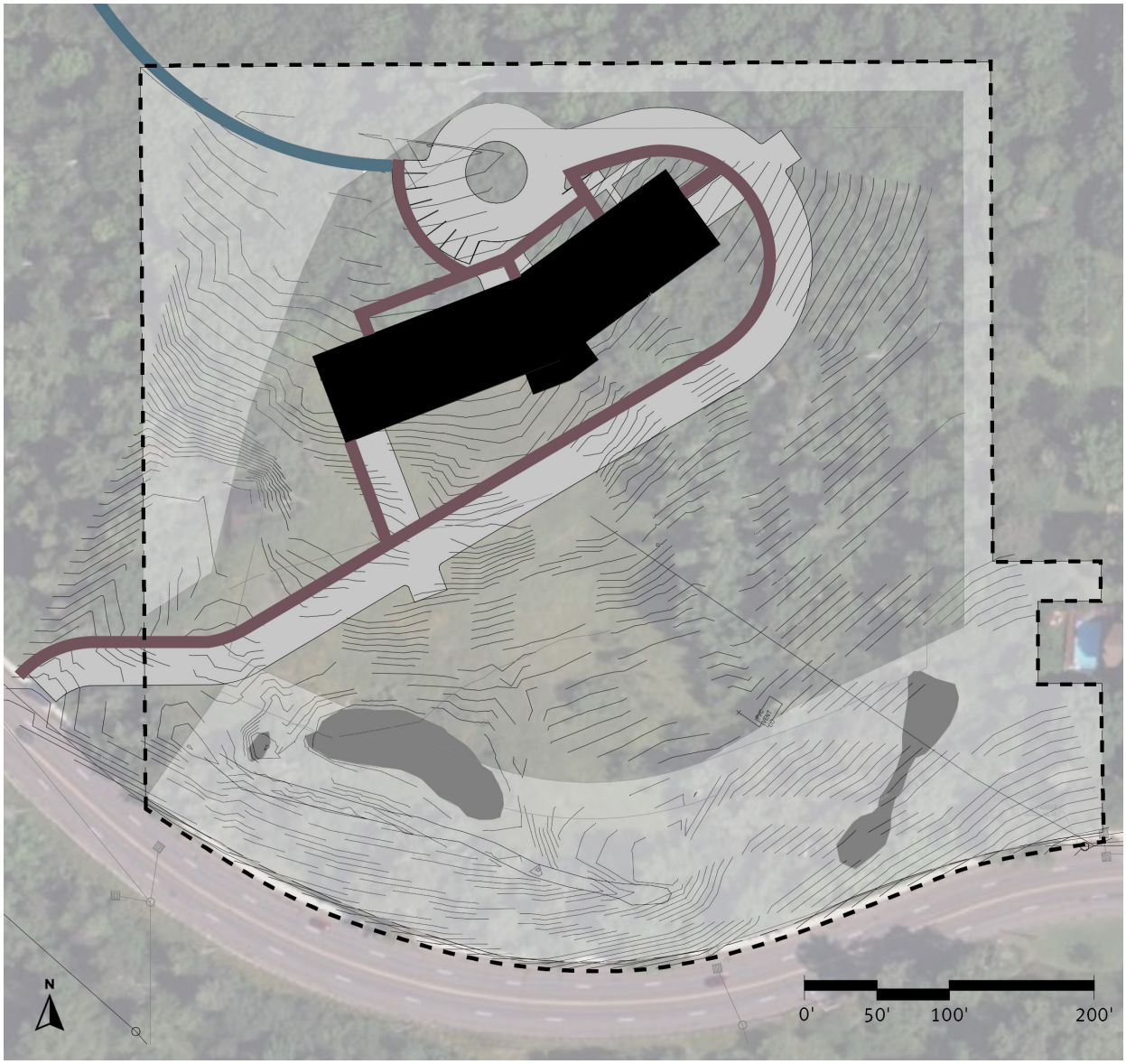
Please note, if any code-related item is not specifically called out in the following pages, it is assumed that the code-related item will comply with the City of Duluth's UDC. All signage and site lighting will comply with the UDC standards. All landscaping, including parking lot landscaping, will also be in accordance with UDC standards. Please note that some UDC standards are used here as a guideline as this is a private development with private roads and not all UDC standards are required. A 20' wide existing landscape buffer will be preserved on the shared borders in conformance with Section 50-25.5.A of the UDC.



1. Trail to Allendale St.
2. 20' Setback
3. Surface Lot - Stalls
4. Main Building Entrance
5. Entrance to underground parking
6. Shoreland Setback
7. Proposed Driveway
8. Storm Water Retention Pond
9. 100' Setback from Woodland Ave. right-of way
10. Common Open Space (all light grey)

Circulation Path

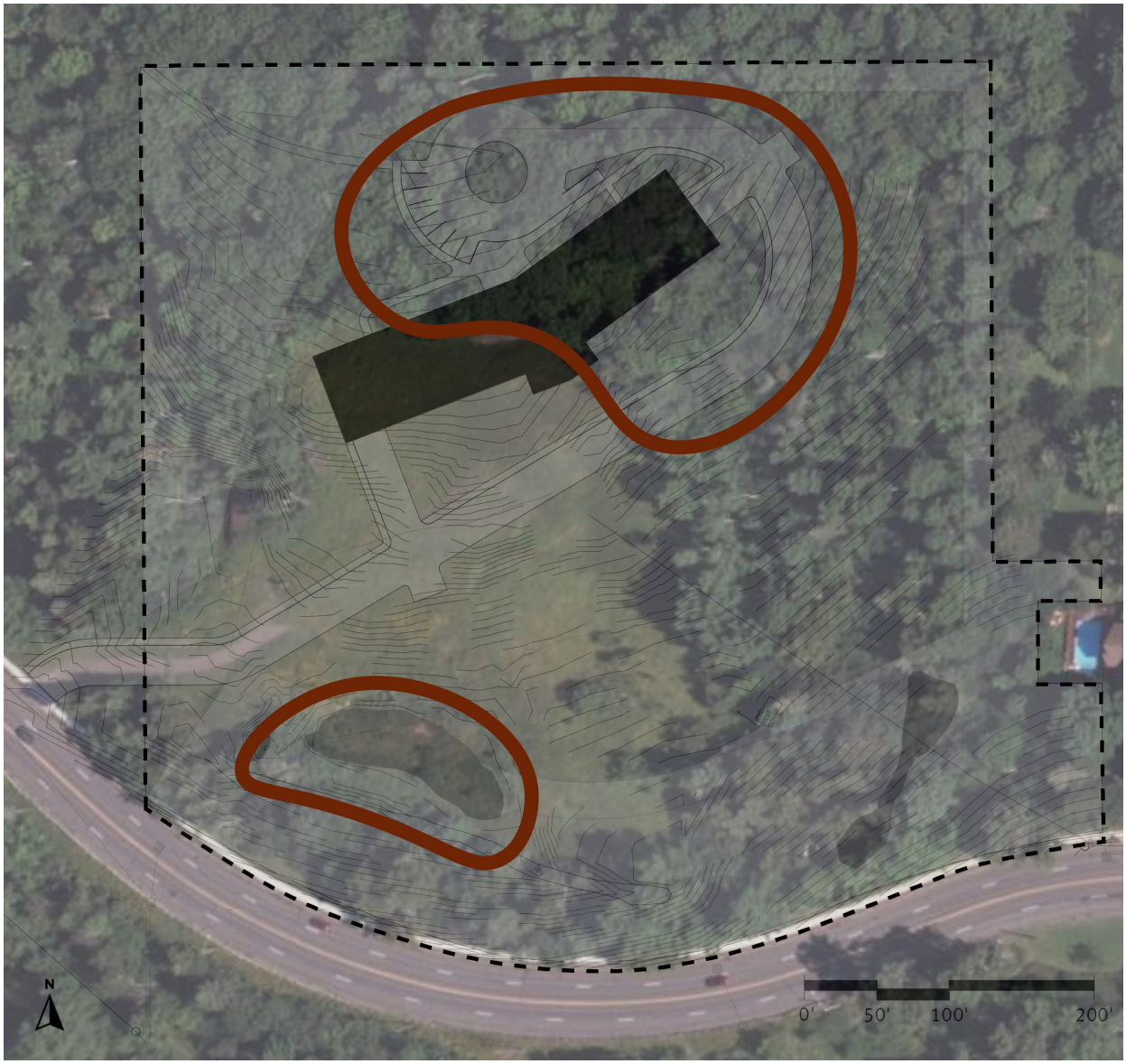
The circulation path is indicated below in purple. The private roadway will have a 5′ sidewalk up to the development main entry and stair cores. There is currently a sidewalk along Woodland Ave. There will be a path connecting the surface lot to Allendale St. in the NW corner. The collective circulation effectively connects residents to surrounding areas for trasportation and recreation, as well as allowing neighbors to walk through the development site. Trails, sidewalks and roads to be owned and maintained by property owner(s). The road width will be a minimum of 26′ and the width of the sidewalk will be a minimum of 5′. There will be a path in the north west connecting Allendale Ave to the sidewalks for pedestrian traffic from the neighboring communities. The development will be accessed from Woodland Ave via an easement across the adjacent parcel to the west.



Concrete Sidewalk
Pervious surfaced pathway
Roadways

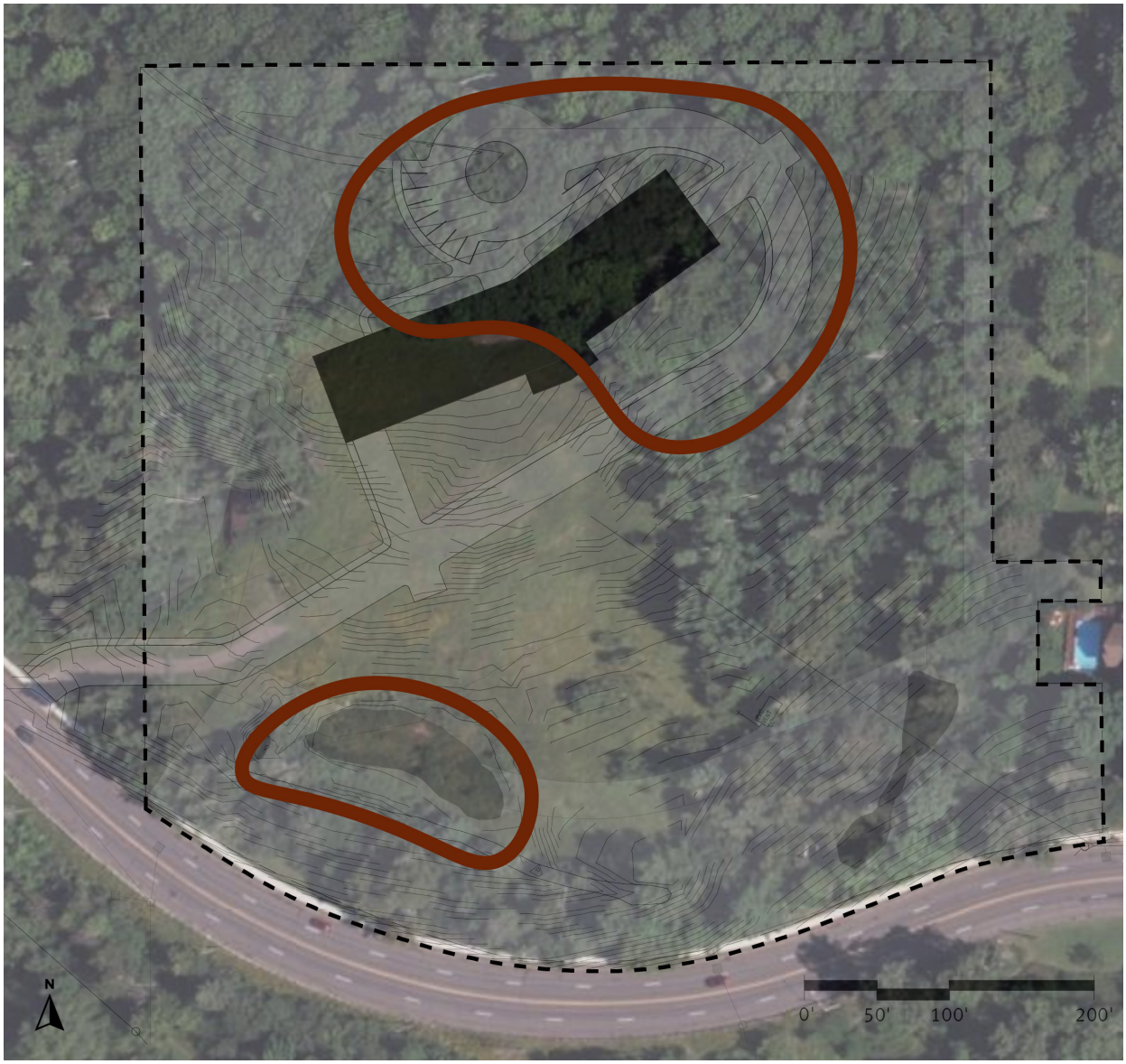
Natural Resources Inventory

The majority of road construction will be on previously developed land and it is anticipated there will be minimal natural resources impacted. Half of the building will be situated on a grass field and will minimize impacts to natural resources, the other half will remove the minimum number of trees as possible. A thorough inventory has been conducted to include a tree inventory to include all special trees and trees of interest, wetlands, rock outcrops, and view sheds (see appendices). It will indicate wetlands and significant trees to be protected during construction. The surface lot will also be landscaped to comply with the UDC guidelines. Tree replacement will be conducted in conformance with Sec 50-25.9 of the UDC, tree planting will be prioritized to provide the maximum public or wildlife benefits, such as along trails and sidewalk corridors or near natural habitat areas.



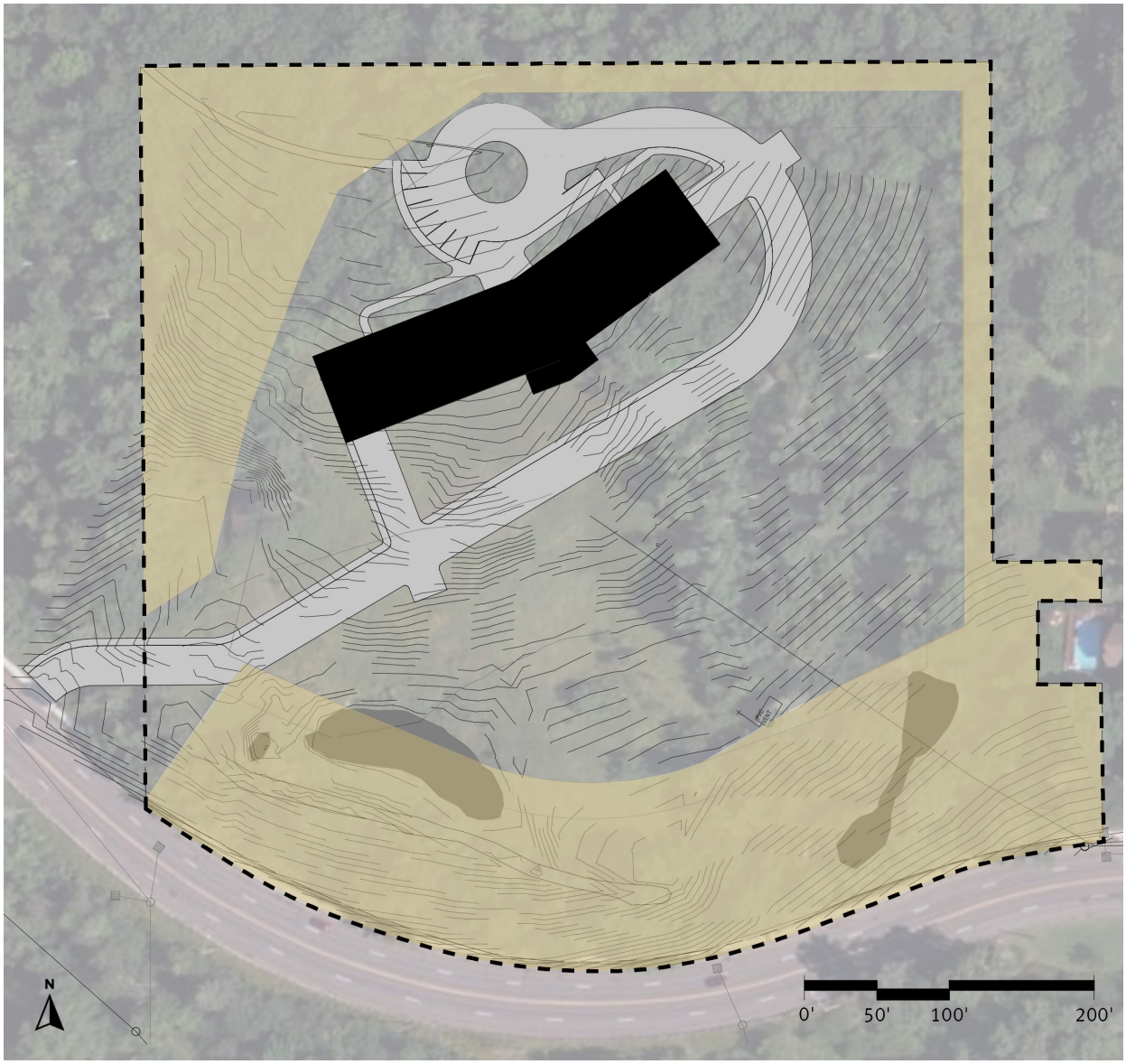
Natural Resources Inventory (cont'd)

A portion of this 8.14 acre parcel falls within the cold river shoreland tributary to Tischer Creek. The building will be situated outside of the 150' structure setback. The only permitted access to the site is via a direct connection to Woodland Ave. A shoreland variance was approved to permit the driveway to encroach into the 75' shoreland setback for impervious surfaces. There is 4.83 acres of the property within the Shoreland. 50% or 2.42 acres will be dedicated as Common Open Space.



Common Open spaces

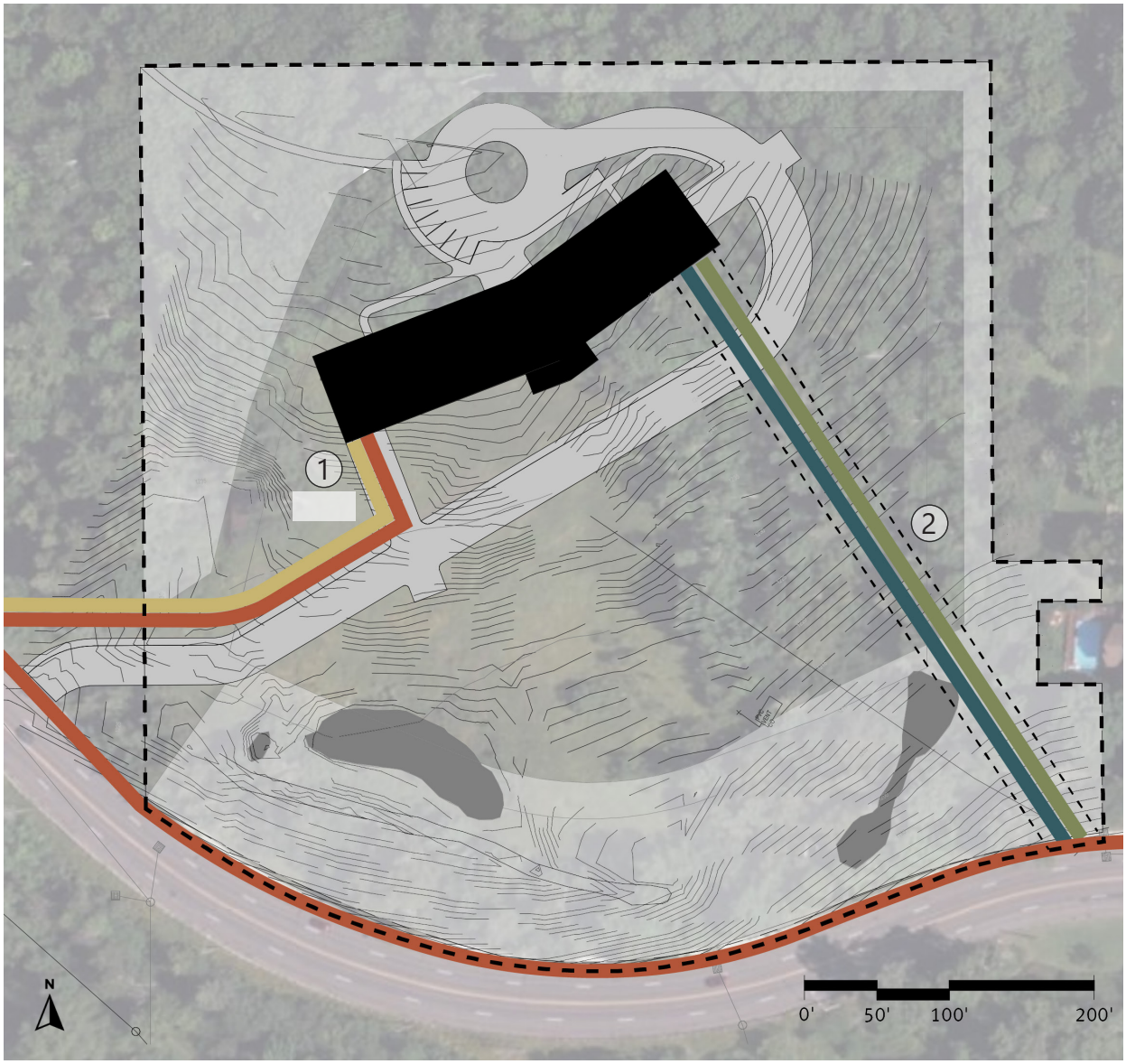
36% of the site will be classified as open space. The development's design will maximize natural vistas and ecological features of the site while also using the existing landscape to screen the mass of the building from the north. The trail connection to Allendale will remain to the north. The open spaces will not include areas within 25' of the building, impervious areas, any area in the public right of way or spaces between buildings and roadways. The two wetland areas will be impacted. The larger one to the west is a man made pond and will be repurposed into a storm water pond. The second, smaller one will be temporarily impacted to construct utilities thru that corridor. All weland impacts will require prior approval in conformance with the Wetland Conservation Act. The common open space will remain naturally vegetated and not mowed or turf grass.



Common open space

Utility Plan

The sanitary and water main will follow the existing service lines beginning at the SE corner of the lot. This is the upper limit of utilities in Woodland Ave. The gas and electric will follow the new driveway alignment. The water and sanitary will be public utility mains that will run in a 30' wide utility easement from Woodland Ave NW thru the site, terminating on the north side of the building. The route thru the open space was chosen because this is where the existing utilities are located, will minimize impacts to trees and and maintain a natural buffer on the east site. The impacts in the common open space will be restored by uitilizing the excavated soils for backfilling impacted areas and revegetating with native seed mixes.



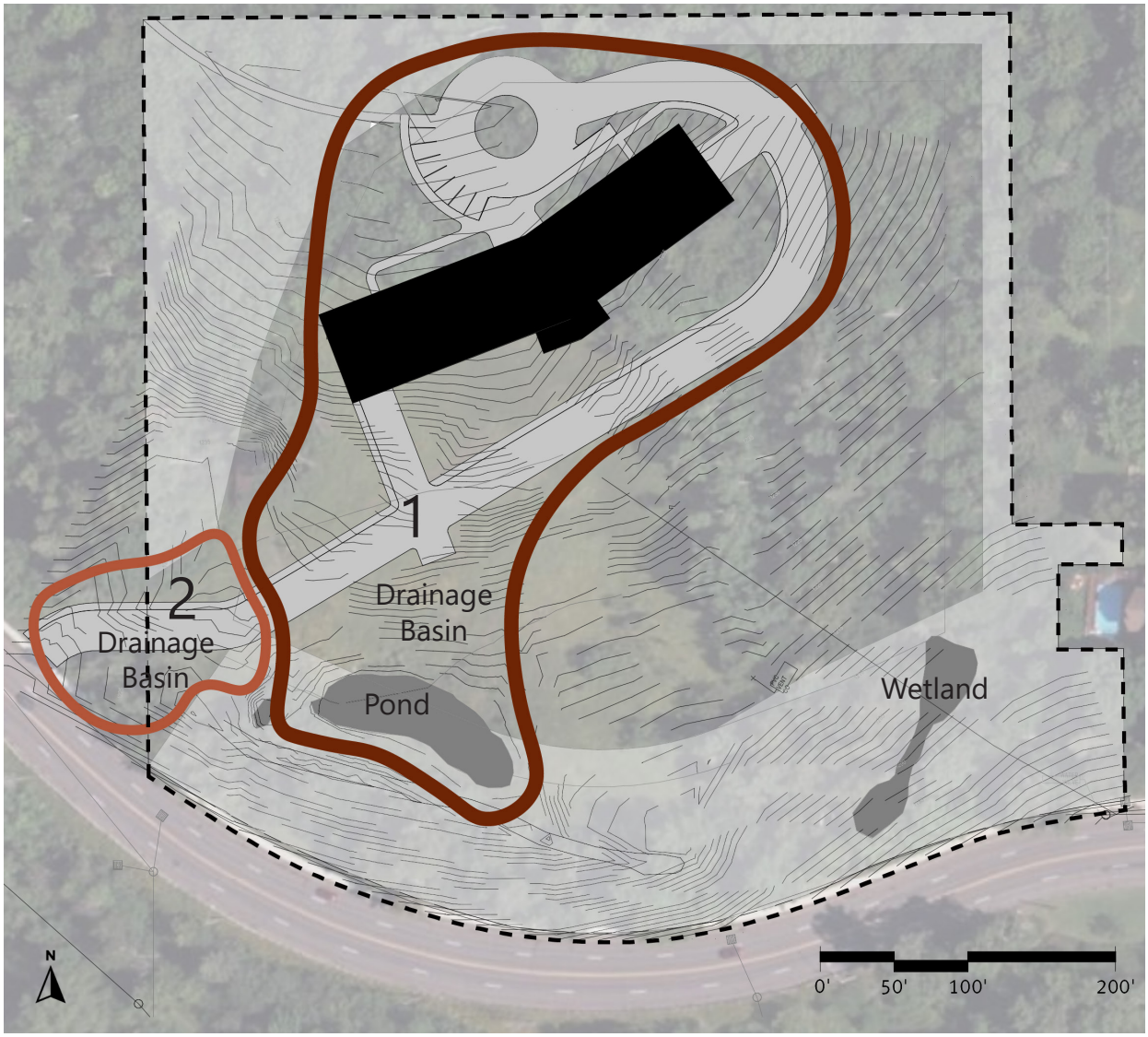
1. Transformer and generator
2. 30' Utility easement

Gas	(Private)
Electrical	(Private)
Water	(Public)
Sanitary	(Public)

Storm Water Management

The storm water management plan will be broken down into two basins. The larger, northern most basin will capture, convey and treat the storm water in a newly constructed storm waterpond. This pond will be located in the a previously dug pond. The second basin is at the SW corner of the site and will capture and treat a small amount of runoff from the lower section of the driveway. This will be treated via a sump catch basin and connected into the county storm sewer on Woodland Ave.

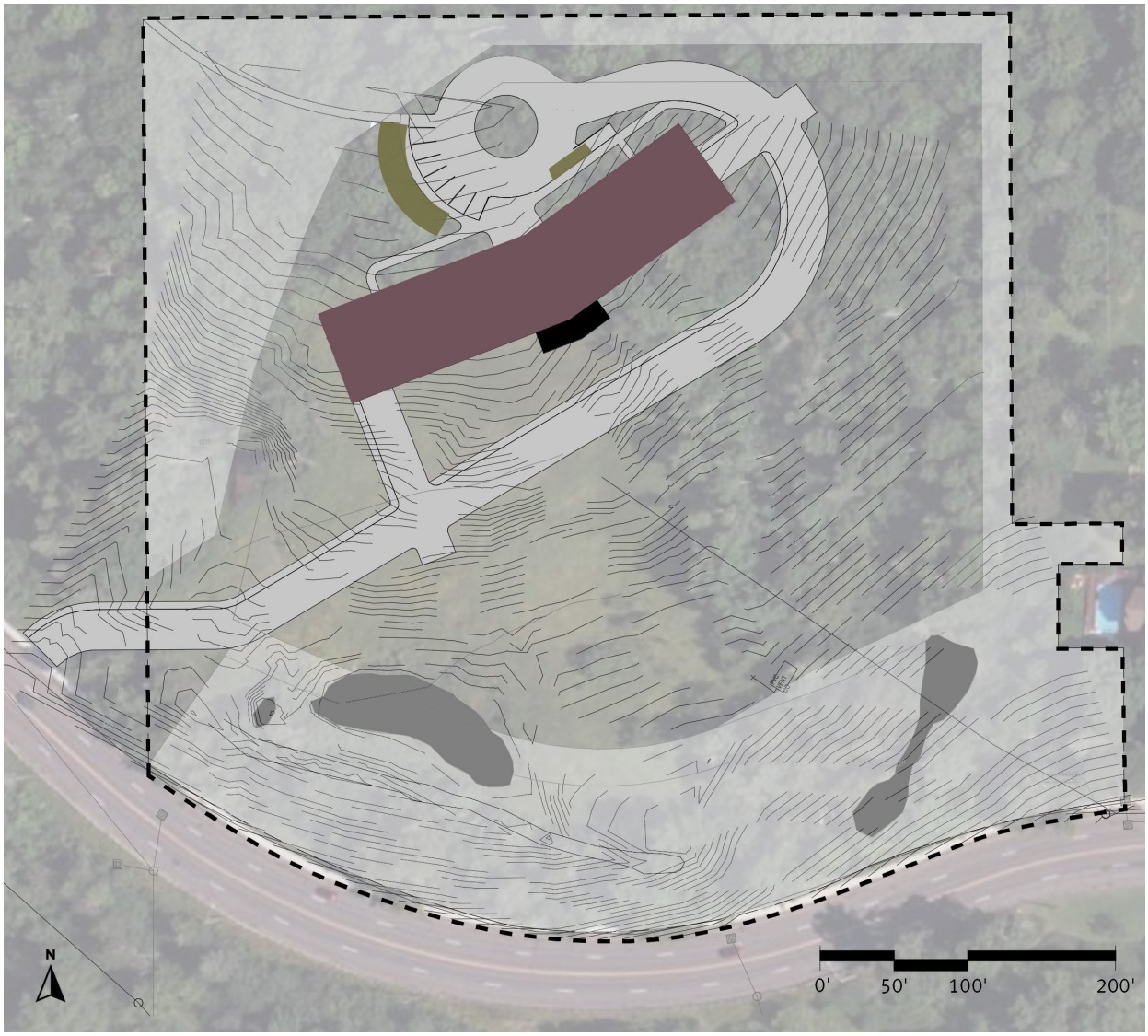
The storm water management program will be designed to meet the storm water standards in the UDC. The site will minimize the potential for temperature increase of stormwater runoff discharged from the project, via filtration and under drains, a proven method for cooling storm water. Rate control will meet the specified 75% of predevelopment peak flow rates for 10 and 100 year events; and 90% of predevelopment peak flow rate for 2 year event. 50% of total suspended solids removal will be met with a combination of sump catch basin & filtration basin.



Parking Plan

This project is anticipated to have a parking ration of 2:1 of underground parking in a semi-conditioned garage. There will be visitor stalls north of the building. There will be EV charging stalls in the surface lot and inside the podium. There will be a 10'x30' loading stall east of the roundabout. All parking will comply with UDC standards. Visitor bike parking will be provided infront of the building's main entrance.

Added traffic flows will be directed toward Woodland Ave. The Developer and their team worked closely with St. Louis County and City of Duluth for the preparation of traffic improvements to Woodland Avenue that were recently completed. This includes a concrete median which ends on the west side of the property and a shared center left turn lane. The Duluth City council passed a resolution of municipal consent with the county for this work. The improvements create a better flow of traffic around the nearby S-curve and provide the current development with a safer & more efficient route of transit.



Surface Lot - 7 Stalls - 1 ADA Stall
Underground Parking - 66 Stalls

Building Standards - Materials

Acceptable materials include brick, stone, composite siding and cladding, metal panel, glass, with complimentary color choices. Durability, sustainability, and visual harmony are to be considered in selection and use of appropriate materials.

1. Metal Roof or Architectural Singles
2. Panelized Siding - Vertical - 8" Exposure
3. Panelized Siding - Horizontal - 8" Exposure
4. Guard Rail
5. Windows
6. Masonry
7. Frame Wood-Like Accents
8. Wood Fence that meets UDC standards in Sec 50-26

The building height is calculated from the front door to the midpoint of the roof gable. The maximum height allowed is 45".

Building review and permit submittals will include review and approval by the Land Use Supervisor prior to issuance of any construction permits.

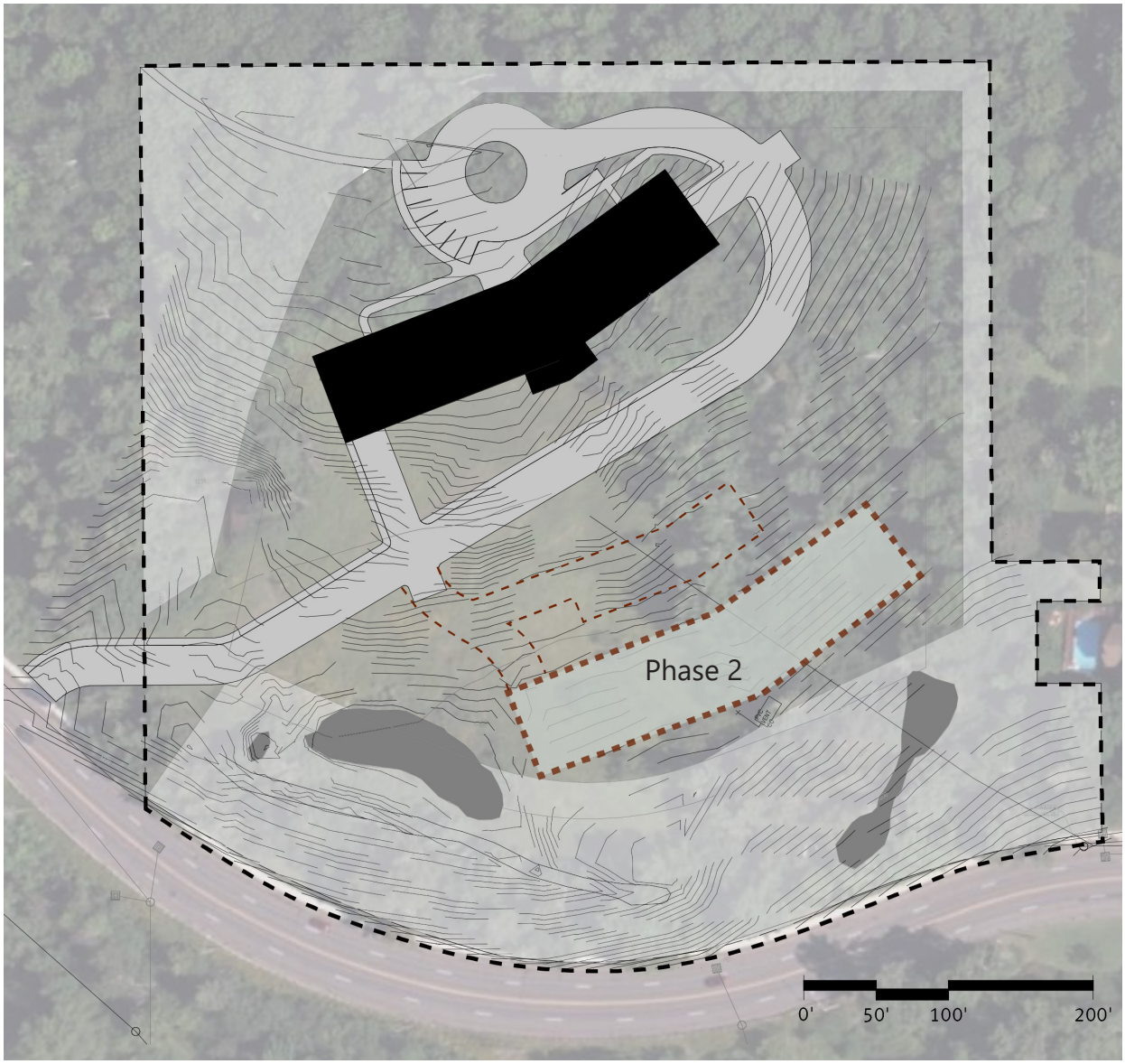
Building Standards - Guiding Principles:

Proposed buildings will comply with UDC Chapter 50-30.1

- Buildings to be designed to be viewed from all sides with attention paid to appropriate ornamentation to provide visual interest at the pedestrian scale.
- All building sides include fenestration sufficient to provide visibility into all spaces around buildings.
- Trash will be stored inside buildings.
- All mechanicals to be located within buildings or within screened roof-top spaces. Gas meter banks to be concealed from view with vegetative screening. Transformers and generators will also be screen with vegetation.
- Exterior lighting must be limited to fully-downcast, cutoff fixtures without trespass on neighboring properties and in compliance with Sec 50-31 of the UDC.
- Outlining of building facades and roof lines is not permitted. Building facade lighting and landscape accent lighting permitted.
- The development will adhere to all accessibility standards.
- Facade lengths will not exceeded 80’ without projections or recesses.
- Roof-lines extending over 100’ will have elevation changes.
- The 3 out of 11 design features to provide visual relief along facades will be; gables, covered porches and recesses/shadow lines as outlinded in UDC section 50-30.1

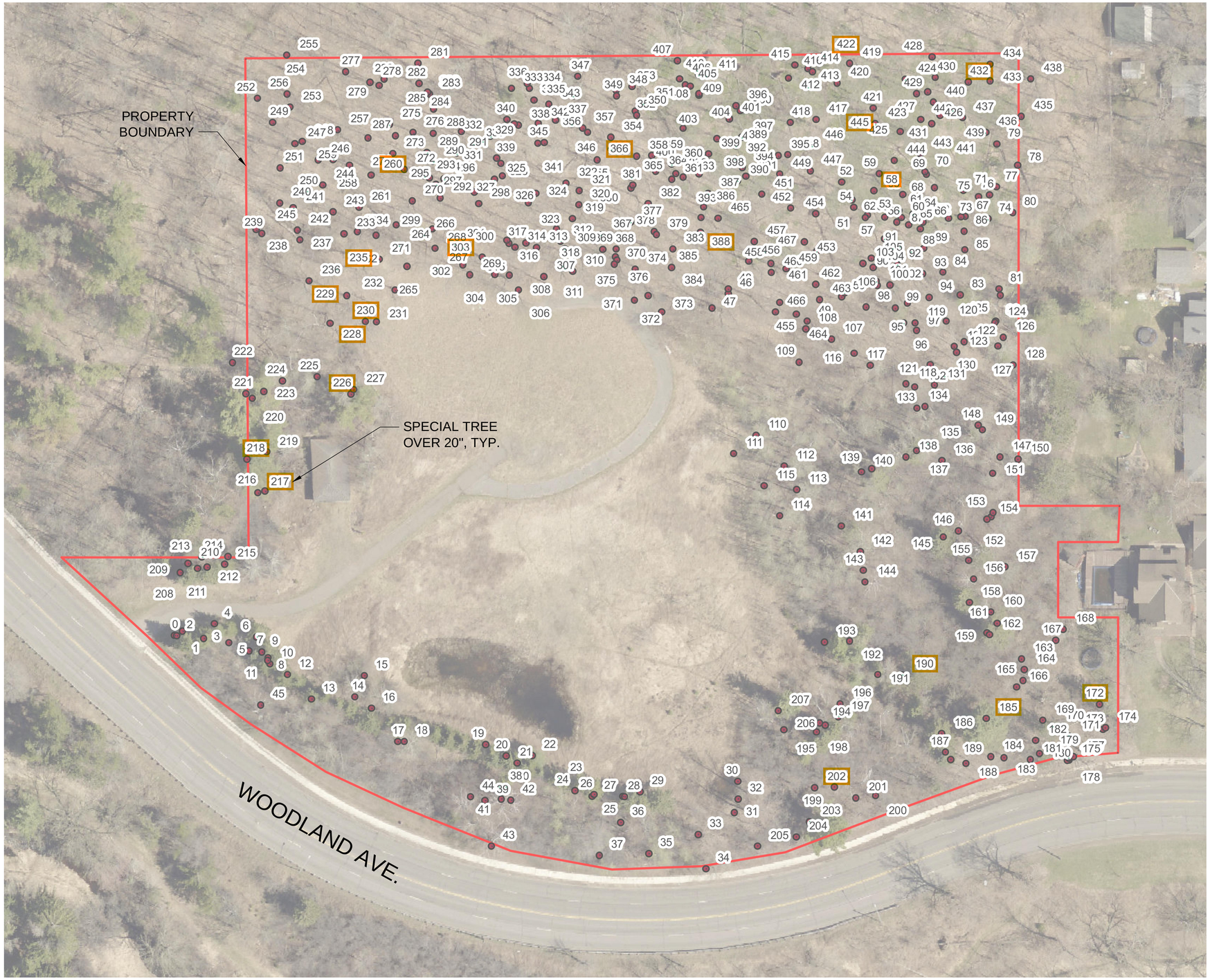
Phase 2

The south portion of the site will remain undeveloped, with the plan that a possible seperate building might be constructed at a later point. The size, scale and program of the future development is unknown at this point.



Attachments

- Tree Inventory
- Wetland Delineation



SAS
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+ ASSOCIATES
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Duluth, MN 55802
(p) 218.391.1335

Issue Record/Revision

Purpose	Date

WOODLAND AVE TREE INVENTORY

DULUTH, MINNESOTA

0 40' 80'
ONE INCH

Sheet Key

Sheet Title
TREE INVENTORY

Date: 11/1/2021
Drawn By: AMA
Checked By: LWS
Project Number 21310
Sheet Number L-1.1

ID#	Species	Diameter	UDC Classification	Northing	Easting	Comment
0	White Spruce	8.00	Tree of Interest	3362142.819	4849878.583	
1	White Spruce	7.10	Tree of Interest	3362146.139	4849884.684	leaning 45 degrees
2	Red Pine	10.00	Tree of Interest	3362142.661	4849880.317	
3	Other	6.25		3362140.687	4849900.786	balsam fir
4	White Pine	6.50	Tree of Interest	3362151.675	4849908.939	
5	Other	0.00		3362137.261	4849920.012	balsam fir
6	Red Pine	10.50	Tree of Interest	3362141.730	4849940.993	
7	White Spruce	7.00	Tree of Interest	3362131.087	4849935.419	
8	Red Pine	10.00	Tree of Interest	3362125.983	4849949.610	
9	Red Pine	6.75	Tree of Interest	3362130.233	4849944.928	
10	Red Pine	10.75	Tree of Interest	3362121.027	4849951.126	
11	Red Pine	10.50	Tree of Interest	3362123.991	4849949.382	
12	Red Pine	11.25	Tree of Interest	3362113.215	4849964.566	
13	Red Pine	9.50	Tree of Interest	3362094.576	4849982.594	
14	Other	10.50	Tree of Interest	3362096.196	4850015.528	balsam poplar
15	Other	21.25	Tree of Interest	3362112.355	4850022.678	boxelder
16	Red Pine	11.00	Tree of Interest	3362087.623	4850028.158	
17	Red Pine	9.00	Tree of Interest	3362062.235	4850048.069	
18	Other	13.50	Tree of Interest	3362062.341	4850053.206	quaking aspen
19	Red Pine	8.50	Tree of Interest	3362059.983	4850114.923	
20	Red Pine	8.25	Tree of Interest	3362051.416	4850130.608	
21	Red Pine	9.00	Tree of Interest	3362045.909	4850139.011	
22	White Pine	6.75	Tree of Interest	3362051.753	4850150.311	
23	White Spruce	7.25	Tree of Interest	3362034.313	4850170.447	
24	Red Pine	9.75	Tree of Interest	3362025.053	4850182.845	
25	White Spruce	10.25	Tree of Interest	3362020.633	4850195.878	
26	Red Pine	7.50	Tree of Interest	3362022.045	4850197.367	
27	Red Pine	11.25	Tree of Interest	3362020.602	4850219.149	
28	White Spruce	9.00	Tree of Interest	3362020.255	4850220.578	
29	Red Pine	12.50	Tree of Interest	3362024.230	4850232.307	
30	Other	19.25	Tree of Interest	3362032.010	4850306.264	cottonwood
31	Other	22.50	Tree of Interest	3362008.408	4850303.976	cottonwood
32	Other	10.50	Tree of Interest	3362018.786	4850306.707	cottonwood
33	Other	25.50	Tree of Interest	3361991.591	4850276.259	cottonwood
34	Other	18.25	Tree of Interest	3361965.617	4850282.287	boxelder
35	Other	12.25	Tree of Interest	3361977.157	4850238.800	quaking aspen
36	Other	11.00	Tree of Interest	3362000.800	4850217.371	white birch
37	Other	10.75	Tree of Interest	3361975.864	4850201.428	quaking aspen
38	White Spruce	11.50	Tree of Interest	3362027.824	4850124.916	
39	Other	10.50	Tree of Interest	3362017.444	4850114.536	white birch
40	Other	10.50	Tree of Interest	3362027.619	4850130.238	white birch
41	Other	11.50	Tree of Interest	3362018.706	4850126.943	white birch
42	Other	11.75	Tree of Interest	3362017.723	4850134.283	white birch
43	Other	14.00	Tree of Interest	3361982.730	4850119.402	white birch
44	Other	12.00	Tree of Interest	3362020.365	4850103.739	white birch
45	Other	14.50	Tree of Interest	3362089.933	4849944.254	white birch
46	Oak	19.50	Tree of Interest	3362402.248	4850299.220	red damaged
47	Oak	17.00	Tree of Interest	3362391.480	4850287.079	red
48	Oak	19.20	Tree of Interest	3362405.941	4850299.131	red
49	Basswood	11.00	Tree of Interest	3362381.322	4850359.175	
50	Yellow Birch	11.00	Tree of Interest	3362400.148	4850385.257	
51	Sugar Maple	16.50	Tree of Interest	3362473.725	4850392.930	
52	Sugar Maple	13.00	Tree of Interest	3362487.097	4850385.157	
53	Basswood	13.00	Tree of Interest	3362461.948	4850404.928	
54	Basswood	14.00	Tree of Interest	3362467.750	4850394.419	damaged
55	Basswood	18.25	Tree of Interest	3362460.025	4850403.321	
56	Basswood	13.00	Tree of Interest	3362456.618	4850427.196	
57	Elm	7.00	Tree of Interest	3362443.963	4850417.678	
58	Basswood	20.75	**Special Tree > 20"**	3362480.436	4850409.790	
59	Sugar Maple	9.00	Tree of Interest	3362493.372	4850414.010	
60	Basswood	8.50	Tree of Interest	3362459.887	4850430.452	
61	Oak	11.50	Tree of Interest	3362465.574	4850428.716	red
62	Oak	15.25	Tree of Interest	3362460.177	4850417.991	red
63	Sugar Maple	10.75	Tree of Interest	3362477.462	4850431.749	
64	Sugar Maple	9.50	Tree of Interest	3362462.728	4850439.377	fused 9.5/8 17.25 base
65	Sugar Maple	6.50	Tree of Interest	3362454.435	4850436.236	
66	Basswood	13.75	Tree of Interest	3362456.791	4850447.096	
67	Basswood	14.50	Tree of Interest	3362460.863	4850479.121	
68	Sugar Maple	9.00	Tree of Interest	3362482.688	4850455.874	
69	Basswood	12.00	Tree of Interest	3362492.735	4850449.604	
70	Basswood	13.00	Tree of Interest	3362494.699	4850448.712	
71	Sugar Maple	7.00	Tree of Interest	3362480.760	4850477.815	
72	Oak	19.75	Tree of Interest	3362460.482	4850475.743	red split trunk 19.75/7.25 26 base
73	Oak	12.00	Tree of Interest	3362459.534	4850466.381	red
74	Sugar Maple	8.75	Tree of Interest	3362459.066	4850496.354	8.75/8.5 16 base
75	Sugar Maple	6.25	Tree of Interest	3362475.880	4850489.159	
76	Elm	7.00	Tree of Interest	3362477.296	4850497.442	dead
77	Elm	9.00	Tree of Interest	3362483.355	4850502.683	dead
78	Basswood	9.50	Tree of Interest	3362499.828	4850518.986	
79	Basswood	15.00	Tree of Interest	3362515.814	4850503.096	
80	Sugar Maple	6.25	Tree of Interest	3362463.899	4850515.178	
81	Other	11.25	Tree of Interest	3362405.824	4850504.687	quaking aspen
82	Sugar Maple	8.50	Tree of Interest	3362381.442	4850502.184	
83	White Spruce	8.50	Tree of Interest	3362401.315	4850475.329	
84	Basswood	8.50	Tree of Interest	3362418.710	4850462.261	
85	Basswood	9.75	Tree of Interest	3362435.557	4850478.810	broken just above split
86	Basswood	7.75	Tree of Interest	3362449.614	4850478.293	
87	Basswood	9.00	Tree of Interest	3362451.457	4850444.932	split 9/7.25 11.5 below split
88	Basswood	9.25	Tree of Interest	3362434.434	4850438.068	
89	Basswood	7.75	Tree of Interest	3362436.711	4850447.639	
90	Basswood	8.25	Tree of Interest	3362438.343	4850429.555	
91	Basswood	6.50	Tree of Interest	3362436.832	4850424.038	
92	Basswood	9.00	Tree of Interest	3362424.510	4850427.608	
93	Sugar Maple	6.50	Tree of Interest	3362417.520	4850447.051	
94	Basswood	6.75	Tree of Interest	3362399.336	4850451.624	
95	Sugar Maple	6.25	Tree of Interest	3362395.119	4850435.206	
96	Basswood	7.00	Tree of Interest	3362380.139	4850432.464	
97	Other	12.00	Tree of Interest	3362374.601	4850442.335	black ash
98	Basswood	8.50	Tree of Interest	3362392.268	4850403.908	fused 8.5/7.5 13.5 base
99	White Spruce	8.00	Tree of Interest	3362391.411	4850425.972	
100	Basswood	11.50	Tree of Interest	3362408.659	4850412.437	
101	Basswood	11.00	Tree of Interest	3362411.652	4850411.653	
102	Basswood	8.50	Tree of Interest	3362408.793	4850421.972	
103	Sugar Maple	12.50	Tree of Interest	3362425.419	4850401.468	
104	Sugar Maple	6.00	Tree of Interest	3362422.155	4850409.052	
105	Sugar Maple	6.50	Tree of Interest	3362429.231	4850407.788	
106	Basswood	6.50	Tree of Interest	3362402.728	4850387.379	
107	Other	12.00	Tree of Interest	3362367.821	4850377.533	quaking aspen
108	Basswood	11.50	Tree of Interest	3362375.556	4850357.918	fused 11.5/8.5 17 base
109	Oak	7.00	Tree of Interest	3362350.233	4850353.145	fused 7/6.25 12 base
110	Other	10.25	Tree of Interest	3362294.790	4850320.226	quaking aspen
111	Other	10.75	Tree of Interest	3362280.902	4850303.355	quaking aspen
112	Other	14.50	Tree of Interest	3362271.544	4850341.546	quaking aspen
113	Other	12.75	Tree of Interest	3362253.765	4850351.139	quaking aspen
114	Other	13.75	Tree of Interest	3362233.769	4850338.211	quaking aspen
115	Other	13.25	Tree of Interest	3362256.334	4850326.429	quaking aspen
116	Other	10.00	Tree of Interest	3362356.893	4850394.625	quaking aspen
117	Other	12.25	Tree of Interest	3362347.729	4850406.888	quaking aspen
118	Yellow Birch	10.75	Tree of Interest	3362333.991	4850434.223	
119	Basswood	7.50	Tree of Interest	3362380.121	4850441.137	
120	Other	10.75	Tree of Interest	3362381.549	4850464.782	quaking aspen
121	Sugar Maple	12.00	Tree of Interest	3362348.296	4850452.368	
122	Other	10.50	Tree of Interest	3362365.977	4850478.237	quaking aspen
123	Oak	12.50	Tree of Interest	3362357.790	4850472.467	red
124	Sugar Maple	6.50	Tree of Interest	3362380.297	4850501.606	
125	Other	10.50	Tree of Interest	3362401.133	4850505.920	quaking aspen
126	Basswood	10.50	Tree of Interest	3362369.229	4850508.143	fused 10.5/9.5 20 base
127	Other	13.50	Tree of Interest	3362362.418	4850503.927	quaking aspen
128	Sugar Maple	7.25	Tree of Interest	3362348.209	4850515.504	
129	Other	11.50	Tree of Interest	3362362.177	4850470.699	quaking aspen
130	Yellow Birch	7.00	Tree of Interest	3362339.623	4850463.353	
131	Sugar Maple	7.00	Tree of Interest	3362333.204	4850455.841	
132	Basswood	10.50	Tree of Interest	3362331.540	4850440.937	
133	Other	11.50	Tree of Interest	3362315.419	4850442.386	quaking aspen
134	Other	10.25	Tree of Interest	3362316.655	4850448.503	quaking aspen
135	Other	13.00	Tree of Interest	3362288.650	4850450.764	quaking aspen
136	White Spruce	12.50	Tree of Interest	3362275.623	4850461.245	
137	Other	10.50	Tree of Interest	3362283.068	4850442.155	quaking aspen
138	Other	12.00	Tree of Interest	3362278.406	4850434.149	quaking aspen
139	White Spruce	11.75	Tree of Interest	3362269.579	4850408.080	
140	Other	15.00	Tree of Interest	3362267.008	4850400.164	quaking aspen
141	Other	12.50	Tree of Interest	3362225.839	4850384.924	quaking aspen
142	White Spruce	8.25	Tree of Interest	3362206.379	4850399.380	
143	Other	10.75	Tree of Interest	3362192.325	4850401.716	white birch
144	Other	16.00	Tree of Interest	3362183.478	4850402.966	white birch
145	White Spruce	16.50	Tree of Interest	3362217.609	4850462.528	
146	Other	11.00	Tree of Interest	3362222.376	4850473.829	white birch split 11/9.5 19.25 bse
147	Other	10.25	Tree of Interest	3362278.408	4850505.468	quaking aspen
148	Other	13.75	Tree of Interest	3362302.461	4850488.795	quaking aspen
149	Other	13.50	Tree of Interest	3362298.984	4850492.264	quaking aspen
150	Other	11.50	Tree of Interest	3362276.702	4850519.038	quaking aspen
151	Other	10.75	Tree of Interest	3362265.740	4850499.902	quaking aspen
152	Other	11.50	Tree of Interest	3362232.777	4850498.862	green ash
153	Other	15.25	Tree of Interest	3362236.051	4850500.188	white birch
154	Other	13.00	Tree of Interest	3362231.142	4850495.545	white birch
155	White Spruce	10.25	Tree of Interest	3362199.771	4850481.548	
156	Other	10.50	Tree of Interest	3362185.703	4850485.505	white birch
157	Basswood	16.50	Tree of Interest	3362195.114	4850509.195	fused 16.5/8.5 22.75 base
158	White Spruce	15.75	Tree of Interest	3362167.842	4850482.321	
159	White Spruce	5.25	Tree of Interest	3362144.887	4850495.523	
160	White Spruce	8.50	Tree of Interest	3362160.592	4850498.736	
161	White Spruce	12.00	Tree of Interest	3362152.034	4850503.237	
162	White Spruce	12.50	Tree of Interest	3362143.345	4850497.379	
163	Basswood	9.00	Tree of Interest	3362124.966	4850521.873	
164	Basswood	8.75	Tree of Interest	3362117.084	4850523.909	
165	Basswood	9.75	Tree of Interest	3362108.593	4850523.054	
166	Basswood	6.50	Tree of Interest	3362103.612	4850517.932	
167	Sugar Maple	11.00	Tree of Interest	3362139.167	4850547.868	
168	Sugar Maple	10.50	Tree of Interest	3362147.571	4850553.400	
169	White Spruce	11.00	Tree of Interest	3362078.514	4850537.982	
170	Basswood	9.25	Tree of Interest	3362073.668	4850545.664	
171	Sugar Maple	10.50	Tree of Interest	3362066.507	4850557.840	
172	White Spruce	21.00	**Special Tree > 20"**	3362090.696	4850581.189	
173	Sugar Maple	9.75	Tree of Interest	3362071.428	4850583.589	
174	Sugar Maple	7.75	Tree of Interest	3362072.700	4850585.517	
175	Other	27.50	Tree of Interest	3362048.484	4850558.010	cottonwood
176	Other	26.00	Tree of Interest	3362047.891	4850556.728	cottonwood
177	Other	21.50	Tree of Interest	3362050.955	4850560.992	cottonwood
178	Other	26.75	Tree of Interest	3362049.719	4850557.646	cottonwood
179	Sugar Maple	6.00	Tree of Interest	3362055.131	4850541.473	
180	White Spruce	8.00	Tree of Interest	3362053.139	4850535.516	
181	Sugar Maple	13.50	Tree of Interest	3362048.659	4850528.481	
182	Sugar Maple	10.25	Tree of Interest	3362063.074	4850532.493	
183	Sugar Maple	7.50	Tree of Interest	3362050.057	4850508.504	
184	Sugar Maple	8.00	Tree of Interest	3362050.907	4850498.639	
185	White Pine	29.50	**Special Tree > 20"**	3362079.828	4850494.938	
186	White Spruce	18.00	Tree of Interest	3362068.499	4850461.088	
187	White Spruce	10.00	Tree of Interest	3362054.327	4850464.028	
188	Sugar Maple	10.00	Tree of Interest	3362045.698	4850479.621	
189	Sugar Maple	7.75	Tree of Interest	3362048.771	4850468.089	
190	White Pine	22.50	**Special Tree > 20"**	3362112.834	4850431.399	
191	White Spruce	7.00	Tree of Interest	3362113.094	4850412.786	
192	Red Pine	17.50	Tree of Interest	3362138.512	4850391.260	
193	White Pine	11.75	Tree of Interest	3362137.919	4850372.196	
194	Other	10.75	Tree of Interest	3362076.412	4850368.539	white birch
195	White Spruce	12.75	Tree of Interest	3362074.718	4850372.664	
196	Other	10.25	Tree of Interest	3362090.882	4850384.251	white birch
197	White Spruce	7.50	Tree of Interest	3362081.274	4850382.823	
198	White Spruce	13.00	Tree of Interest	3362069.602	4850366.237	
199	Other	13.50	Tree of Interest	3362027.956	4850379.652	white birch
200	Basswood	14.00	Tree of Interest	3362021.205	4850411.011	
201	Basswood	16.00	Tree of Interest	3362019.555	4850396.008	topped damaged
202	White Pine	22.75	**Special Tree > 20"**	3362027.143	4850364.689	
203	Sugar Maple	6.25	Tree of Interest	3362001.522	4850360.816	
204	Sugar Maple	6.25	Tree of Interest	3361989.864	4850350.708	
205	Sugar Maple	7.50	Tree of Interest	3361982.913	4850321.257	
206	Other	10.50	Tree of Interest	3362071.267	4850341.289	white birch
207	White Pine	15.50	Tree of Interest	3362085.723	4850337.128	white birch
208	White Spruce	7.50	Tree of Interest	3362192.205	4849867.485	
209	White Spruce	10.00	Tree of Interest	3362190.507	4849883.116	
210	White Spruce	7.00	Tree of Interest	3362197.455	4849888.781	
211	White Spruce	9.50	Tree of Interest	3362193.775	4849896.238	
212	White Spruce	9.00	Tree of Interest	3362194.691	4849903.433	
213	Other	10.00	Tree of Interest	3362202.388	4849899.410	white birch
214	Oak	10.00	Tree of Interest	3362202.706	4849919.138	
215	White Spruce	6.00	Tree of Interest	3362197.021	4849916.811	
216	Basswood	15.00	Tree of Interest	3362252.487	4849947.348	
217	White Pine	28.00	**Special Tree > 20"**	3362251.110	4849941.962	
218	White Pine	28.50	**Special Tree > 20"**	3362276.824	4849933.574	
219	White Pine	16.50	Tree of Interest	3362282.239	4849948.680	
220	White Pine	16.00	Tree of Interest	3362322.936	4849937.797	
221	White Pine	11.75	Tree of Interest	3362326.368	4849932.907	
222	White Pine	17.00	Tree of Interest	3362349.988	4849922.925	
223	Other	14.50	Tree of Interest	3362328.210	4849946.463	
224	Other	14.50	Tree of Interest	3362336.200	4849960.490	quaking aspen
225	Other	12.50	Tree of Interest	3362339.232	4849987.071	quaking aspen
226	White Pine	22.00	**Special Tree > 20"**	3362326.084	4850012.496	
227	Other	17.50	Tree of Interest	3362329.600	4850014.328	quaking aspen
228	Oak	23.00	**Special Tree > 20"**	3362379.705	4849996.652	red oak
229	Oak	24.00	**Special Tree > 20"**	3362400.971	4850009.597	red
230	Oak	22.50	**Special Tree > 20"**	3362381.187	4850023.572	red
231	Sugar Maple	13.00	Tree of Interest	3362380.862	4850031.850	mostly dead
232	Oak	15.00	Tree of Interest	3362405.037	4850046.082	red mostly dead
233	Yellow Birch	27.00	Tree of Interest	3362447.686	4850007.266	mostly dead
234	Oak	15.00	Tree of Interest	3362449.494	4850017.621	red
235	Oak	21.00	**Special Tree > 20"**	3362421.145	4850001.567	red
236	Sugar Maple	15.00	Tree of Interest	3362411.873	4849980.770	mostly dead
237	Sugar Maple	11.00	Tree of Interest	3362443.008	4849973.831	fused 11 / 7 17 total
238	Sugar Maple	8.50	Tree of Interest	3362450.976	4849940.630	
239	Sugar Maple	8.00	Tree of Interest	3362448.129	4849944.998	
240	Sugar Maple	8.80	Tree of Interest	3362471.196	4849958.692	
241	Sugar Maple	9.00	Tree of Interest	3362467.647	4849968.682	
242	Basswood	10.00	Tree of Interest	3362450.482	4849971.897	
243	Sugar Maple	7.50	Tree of Interest	3362464.484	4849998.778	
244	Oak	9.75	Tree of Interest	3362484.860	4849991.261	red
245	Oak	19.75	Tree of Interest	3362480.457	4849979.192	red
246	Oak	18.25	Tree of Interest	3362503.987	4849987.711	red
247	Oak	16.50	Tree of Interest	3362516.091	4849970.137	red
248	Basswood	8.00	Tree of Interest	3362517.694	4849975.611	
249	Oak	17.50	Tree of Interest	3362532.187	4849953.116	red
250	Oak	16.75	Tree of Interest	3362504.183	4849963.886	red
251	Oak	17.50	Tree of Interest	3362497.904	4849958.855	red
252	Oak	13.00	Tree of Interest	3362550.495	4849941.557	fused 13 / 11 21.5 base
253	Basswood	17.00	Tree of Interest	3362543.954	4849966.286	
254	Oak	15.00	Tree of Interest	3362564.429	4849953.982	red
255	Oak	14.00	Tree of Interest	3362583.257	4849964.029	red
256	Oak	12.50	Tree of Interest	3362553.787	4849964.133	red
257	Oak	16.00	Tree of Interest	3362526.804	4850002.404	red fused 16/16.25 30 base
258	Oak	12.50	Tree of Interest	3362504.286	4849999.000	red fused 12.5/12.5 21 base
259	Oak	14.00	Tree of Interest	3362499.620	4850011.292	red
260	Yellow Birch	21.00	**Special Tree > 20"**	3362492.197	4850027.833	mostly dead damaged
261	Basswood	12.50	Tree of Interest	3362467.710	4850018.577	
262	Oak	12.50	Tree of Interest	3362446.636	4850031.690	red
263	Oak	7.50	Tree of Interest	3362454.460	4850047.075	red
264	Oak	16.50	Tree of Interest	3362438.983	4850048.990	red 16.5/12.5 23.5 base
265	Oak	7.50	Tree of Interest	3362423.129	4850054.942	red
266	Basswood	11.50	Tree of Interest	3362447.039	4850067.856	
267	Sugar Maple	7.00	Tree of Interest	3362421.366	4850077.859	
268	Basswood	13.50	Tree of Interest	3362436.805	4850076.694	
269	Oak	13.00	Tree of Interest	3362416.659	4850103.196	red
270	Other	11.00	Tree of Interest	3362472.893	4850059.145	quaking aspen
271	Oak	14.50	Tree of Interest	3362428.442	4850033.936	fused 14.5 / 12 23.5 base
272	Oak	13.50	Tree of Interest	3362496.684	4850053.004	red
273	Basswood	7.50	Tree of Interest	3362508.491	4850044.328	
274	Basswood	10.00	Tree of Interest	3362520.598	4850025.479	
275	Basswood	7.50	Tree of Interest	3362530.803	4850041.620	
276	Sugar Maple	8.00	Tree of Interest	3362524.654	4850059.811	
277	Oak	12.00	Tree of Interest	3362570.819	4850008.556	red
278	Oak	17.00	Tree of Interest	3362562.661	4850027.012	17/13 27.5 base
279	Basswood	12.75	Tree of Interest	3362560.403	4850033.932	
280	Oak	9.00	Tree of Interest	3362565.066	4850037.838	red
281	Oak	12.50	Tree of Interest	3362577.361	4850063.240	12.5/12 20 base
282	Oak	15.75	Tree of Interest	3362561.972	4850064.171	red
283	Oak	10.00	Tree of Interest	3362553.904	4850072.159	red
284	Oak	14.00	Tree of Interest	3362539.459	4850063.811	red
285	Oak	15.00	Tree of Interest	3362542.119	4850075.547	red
286	Oak	9.00	Tree of Interest	3362555.391	4850070.852	red
287	Oak	13.75	Tree of Interest	3362522.264	4850046.356	red
288	Oak	13.75	Tree of Interest	3362523.837	4850075.427	red
289	Oak	11.50	Tree of Interest	3362509.479	4850070.383	red
290	Oak	8.00	Tree of Interest	3362502.829	4850075.031	red
291	Oak	10.00	Tree of Interest	3362508.768	4850092.840	red
292	Oak	9.50	Tree of Interest	3362474.915	4850080.436	red
293	Oak	11.50	Tree of Interest	3362491.629	4850068.374	
294	Oak	12.00	Tree of Interest	3362490.396	4850072.201	red
295	Oak	11.00	Tree of Interest	3362485.181	4850077.304	
296	Oak	11.50	Tree of Interest	3362489.439	4850083.298	red
297	Oak	17.50	Tree of Interest	3362479.594	4850106.297	
298	Oak	18.50	Tree of Interest	3362470.624	4850109.837	red
299	Oak	12.50	Tree of Interest	3362451.279	4850074.741	red 12.5/12.5 21.5 base
300	Oak	12.00	Tree of Interest	3362437.358	4850097.443	red
301	Elm	6.50	Tree of Interest	3362439.818	4850091.152	
302	Oak	8.50	Tree of Interest	3362424.245	4850097.916	
303	Oak	20.25	**Special Tree > 20"**	3362429.890	4850112.456	red
304	Oak	10.50	Tree of Interest	3362416.851	4850122.022	red
305	Oak	14.00	Tree of Interest	3362416.476	4850133.133	red 14/13 21.5 base
306	Oak	13.00	Tree of Interest	3362404.929	4850139.919	13/12.5 25.5 base
307	Oak	14.50	Tree of Interest	3362415.189	4850159.052	red
308	Oak	15.00	Tree of Interest	3362423.547	4850173.147	red
309	Oak	8.00	Tree of Interest	3362436.383	4850174.920	red
310	Oak	16.50	Tree of Interest	3362419.263	4850181.226	red
311	Oak	12.75	Tree of Interest	3362421.617	4850174.894	red
312	Oak	9.75	Tree of Interest	3362442.132	4850171.975	red
313	Oak	10.50	Tree of Interest	3362437.289	4850153.634	red
314	Oak	7.75	Tree of Interest	3362437.505	4850137.112	red
315	Basswood	11.75	Tree of Interest	3362440.543	4850132.926	
316	Oak	16.50	Tree of Interest	3362442.688	4850131.193	red
317	Oak	13.00	Tree of Interest	3362440.776	4850145.475	red
318	Oak	15.25	Tree of Interest	3362451.461	4850168.924	red
319	Sugar Maple	12.50	Tree of Interest	3362459.098	4850180.889	
320	Oak	17.50	Tree of Interest	3362469.838	4850185.721	red
321	Oak	17.75	Tree of Interest	3362480.540	4850186.179	red
322	Oak	8.50	Tree of Interest	3362486.036	4850176.038	red
323	Oak	17.50	Tree of Interest	3362471.289	4850147.637	red
324	Sugar Maple	11.50	Tree of Interest	3362478.483	4850153.001	
325	Yellow Birch	9.00	Tree of Interest	3362489.118	4850121.585	
326	Oak	16.00	Tree of Interest	3362491.669	4850127.882	red
327	Oak	10.50	Tree of Interest	3362501.240	4850126.555	red
328	Other	11.50	Tree of Interest	3362505.404	4850123.316	quaking aspen
329	Oak	11.50	Tree of Interest	3362518.107	4850112.587	red
330	Oak	7.50	Tree of Interest	3362516.093	4850105.529	red
331	Oak	10.00	Tree of Interest	3362525.252	4850096.736	red
332	Oak	17.50	Tree of Interest	3362521.910	4850118.706	red
333	White Pine	13.50	Tree of Interest	3362558.077	4850134.846	
334	Oak	14.00	Tree of Interest	3362557.984	4850148.415	red
335	Other	13.75	Tree of Interest	3362549.232	4850151.592	quaking aspen
336	Other	19.00	Tree of Interest	3362562.001	4850146.706	quaking aspen
337	Oak	7.00	Tree of Interest	3362533.857	4850168.156	red
338	Other	12.50	Tree of Interest	3362530.327	4850139.986	quaking aspen
339	Oak	11.25	Tree of Interest	3362531.201	4850136.664	red
340	Sugar Maple	9.50	Tree of Interest	3362534.569	4850131.093	
341	Other	14.75	Tree of Interest	3362516.358	4850154.694	quaking aspen
342	Other	16.50	Tree of Interest	3362531.599	4850155.123	quaking aspen
343	Oak	7.50	Tree of Interest	3362546.001	4850163.173	red
344	Oak	12.00	Tree of Interest	3362552.548	4850181.222	red
345	Other	16.00	Tree of Interest	3362516.999	4850159.408	quaking aspen
346	Other	17.00	Tree of Interest	3362531.177	4850180.163	quaking aspen
347	Other	12.00	Tree of Interest	3362567.220	4850184.957	quaking aspen
348	Sugar Maple	9.25	Tree of Interest	3362556.266	4850214.251	
349	Oak	16.50	Tree of Interest	3362552.607	4850214.518	red
350	Oak	6.25	Tree of Interest	3362540.769	4850228.610	red
351	Sugar Maple	7.75	Tree of Interest	3362546.715	4850234.412	
352	Oak	16.50	Tree of Interest	3362537.861	4850229.800	red
353	Oak	9.00	Tree of Interest	3362559.584	4850226.039	red
354	Sugar Maple	12.50	Tree of Interest	3362521.255	4850210.038	
355	Oak	11.00	Tree of Interest	3362512.045	4850210.331	red
356	Yellow Birch	7.50	Tree of Interest	3362524.788	4850192.422	
357	Other	17.25	Tree of Interest	3362528.000	4850188.727	quaking aspen
358	Oak	16.50	Tree of Interest	3362506.746	4850229.743	red
359	Oak	8.00	Tree of Interest	3362507.262	4850241.134	red
360	Oak	13.00	Tree of Interest	3362500.553	4850256.072	red fuesed 13/10.5 20 based
361	Oak	16.25	Tree of Interest	3362489.249	4850256.348	red
362	Basswood	12.50	Tree of Interest	3362493.398	4850259.338	
363	Basswood	8.00	Tree of Interest	3362490.726	4850264.878	
364	Basswood	7.50	Tree of Interest	3362495.088	4850244.303	
365	Oak	15.50	Tree of Interest	3362491.002	4850225.540	red
366	Oak	21.50	**Special Tree > 20"**	3362503.901	4850199.790	red
367	Oak	12.00	Tree of Interest	3362447.046	4850202.337	red
368	Oak	17.00	Tree of Interest	3362435.893	4850203.973	red 17/13.5 25.5 base
369	Basswood	10.00	Tree of Interest	3362436.065	4850214.085	
370	Basswood	11.75	Tree of Interest	3362424.679	4850212.745	
371	Oak	12.50	Tree of Interest	3362397.332	4850227.987	red
372	Oak	7.50	Tree of Interest	3362400.801	4850238.430	red
373	Oak	18.00	Tree of Interest	3362388.298	4850248.633	red
374	Oak	14.50	Tree of Interest	3362420.977	4850228.708	red
375	Oak	12.00	Tree of Interest	3362430.366	4850213.503	red
376	Oak	10.00	Tree of Interest	3362427.849	4850214.720	red
377	Oak	18.50	Tree of Interest	3362456.752	4850224.930	red
378	Basswood	10.50	Tree of Interest	3362449.579	4850243.022	
379	Basswood	6.50	Tree of Interest	3362447.233	4850244.656	
380	Oak	13.25	Tree of Interest	3362482.586	4850225.165	red
381	Basswood	12.50	Tree of Interest	3362484.847	4850226.589	
382	Oak	14.50	Tree of Interest	3362470.534	4850238.402	red
383	Sugar Maple	14.50	Tree of Interest	3362436.026	4850257.296	
384	Oak	11.50	Tree of Interest	3362422.207	4850256.241	
385	Oak	12.50	Tree of Interest	3362448.873	4850277.922	red
386	Oak	15.75	Tree of Interest	3362468.049	4850280.466	red
387	Sugar Maple	7.50	Tree of Interest	3362478.245	4850283.874	
388	Oak	21.00	**Special Tree > 20"**	3362459.951	4850278.726	red
389	Sugar Maple	6.25	Tree of Interest	3362514.732	4850304.998	
390	Sugar Maple	6.50	Tree of Interest	3362488.211	4850306.028	
391	Basswood	14.50	Tree of Interest	3362491.298	4850312.516	
392	Sugar Maple	9.50	Tree of Interest	3362504.802	4850304.266	
393	Oak	18.25	Tree of Interest	3362492.997	4850276.845	red
394	Basswood	6.75	Tree of Interest	3362498.181	4850309.986	
395	Basswood	11.00	Tree of Interest	3362507.198	4850337.306	
396	Sugar Maple	8.25	Tree of Interest	3362545.117	4850305.128	
397	Sugar Maple	10.25	Tree of Interest	3362521.179	4850309.469	
398	Basswood	8.00	Tree of Interest	3362520.068	4850290.444	
399	Basswood	7.25	Tree of Interest	3362508.468	4850284.063	
400	Sugar Maple	9.00	Tree of Interest	3362527.791	4850264.878	
401	Sugar Maple	18.50	Tree of Interest	3362535.233	4850299.985	
402	Sugar Maple	6.25	Tree of Interest	3362534.691	4850300.043	
403	Sugar Maple	8.50	Tree of Interest	3362552.966	4850277.020	
404	Other	15.25	Tree of Interest	3362554.106	4850276.939	red maple
405	Basswood	13.50	Tree of Interest	3362560.921	4850266.586	
406	Sugar Maple	8.00	Tree of Interest	3362565.346	4850262.274	
407	Sugar Maple	13.00	Tree of Interest	3362579.301	4850260.593	
408	Sugar Maple	11.25	Tree of Interest	3362572.072	4850275.315	leaner
409	Sugar Maple	12.75	Tree of Interest	3362559.600	4850270.244	
410	Sugar Maple	15.00	Tree of Interest	3362568.643	4850276.613	
411	Sugar Maple	6.00	Tree of Interest	3362567.988	4850282.290	
412	Sugar Maple	6.50	Tree of Interest	3362565.845	4850344.895	
413	Sugar Maple	6.25	Tree of Interest	3362559.383	4850359.776	
414	Sugar Maple	9.00	Tree of Interest	3362573.165	4850359.629	
415	Sugar Maple	6.50	Tree of Interest	3362575.802	4850349.734	
416	Sugar Maple	6.25	Tree of Interest	3362570.772	4850363.137	
417	Sugar Maple	14.50	Tree of Interest	3362534.442	4850365.714	
418	Sugar Maple	16.50	Tree of Interest	3362532.376	4850346.391	
419	Sugar Maple	16.00	Tree of Interest	3362577.256	4850391.434	
420	Sugar Maple	9.00	Tree of Interest	3362562.164	4850382.071	
421	Sugar Maple	13.00	Tree of Interest	3362543.084	4850409.237	
422	Basswood	24.25	**Special Tree > 20"**	3362583.424	4850371.921	
423	Sugar Maple	17.25	Tree of Interest	3362531.348	4850410.931	
424	Sugar Maple	14.50	Tree of Interest	3362565.075	4850433.710	
425	Sugar Maple	6.00	Tree of Interest	3362525.169	4850429.653	
426	Sugar Maple	8.00	Tree of Interest	3362531.275	4850453.502	
427	Sugar Maple	19.50	Tree of Interest	3362555.467	4850450.429	
428	Sugar Maple	7.00	Tree of Interest	3362582.061	4850453.878	
429	Oak	11.25	Tree of Interest	3362554.203	4850442.228	red
430	Basswood	16.00	Tree of Interest	3362566.334	4850456.466	
431	Sugar Maple	10.50	Tree of Interest	3362537.926	4850459.981	
432	Sugar Maple	24.00	**Special Tree > 20"**	3362563.006	4850481.473	
433	Sugar Maple	12.50	Tree of Interest	3362563.897	4850498.113	
434	Oak	19.00	Tree of Interest	3362576.475	4850497.959	red
435	Sugar Maple	14.50	Tree of Interest	3362537.040	4850521.626	
436	Basswood	10.00	Tree of Interest	3362524.870	4850494.592	
437	Sugar Maple	12.00	Tree of Interest	3362535.903	4850477.210	
438	Basswood	17.50	Tree of Interest	3362565.276	4850528.813	
439	Basswood	14.00	Tree of Interest	3362541.688	4850469.639	dying
440	Sugar Maple	8.00	Tree of Interest	3362547.887	4850455.019	
441	Sugar Maple	13.00	Tree of Interest	3362504.060	4850462.647	
442	Yellow Birch	18.00	Tree of Interest	3362534.348	4850445.274	damaged
443	Sugar Maple	14.00	Tree of Interest	3362508.217	4850444.924	
444	Basswood	12.25	Tree of Interest	3362503.406	4850425.323	
445	Oak	28.50	**Special Tree > 20"**	3362523.800	4850382.304	red
446	Sugar Maple	17.25	Tree of Interest	3362514.656	4850362.816	
447	Basswood	9.00	Tree of Interest	3362495.694	4850361.793	dying
448	Basswood	18.50	Tree of Interest	3362507.884	4850344.325	
449	Sugar Maple	7.00	Tree of Interest	3362493.136	4850338.281	
450	Sugar Maple	9.50	Tree of Interest	3362541.123	4850308.399	
451	Sugar Maple	9.50	Tree of Interest	3362477.809	4850324.772	
452	Elm	7.00	Tree of Interest	3362467.273	4850346.655	
453	Sugar Maple	6.75	Tree of Interest	3362441.818	4850357.022	
454	Basswood	8.50	Tree of Interest	3362463.211	4850365.614	
455	Basswood	15.00	Tree of Interest	3362395.591	4850338.294	
456	Basswood	13.75	Tree of Interest	3362426.843	4850314.753	
457	Basswood	14.75	Tree of Interest	3362442.077	4850319.022	
458	Basswood	15.00	Tree of Interest	3362425.422	4850331.791	
459	Basswood	15.00	Tree of Interest	3362421.212	4850343.084	
460	Sugar Maple	7.75	Tree of Interest	3362418.351	4850331.953	
461	Basswood	8.50	Tree of Interest	3362434.568	4850366.287	
462	Basswood	7.00	Tree of Interest	3362409.409	4850365.624	diseased
463	Oak	16.00	Tree of Interest	3362397.916	4850368.575	
464	Oak	13.75	Tree of Interest	3362386.668	4850350.848	
465	Elm	7.00	Tree of Interest	3362459.447	4850291.369	
466	Sugar Maple	8.50	Tree of Interest	3362388.234	4850335.020	
467	Oak	19.75	Tree of Interest	3362434.501	4850327.078	
468		0.00		0.000	0.000	Property Corner
469		0.00		0.000	0.000	Property Corner
470		0.00		0.000	0.000	Property Corner
471		0.00		0.000	0.000	Property Corner

SAS
LANDSCAPE ARCHITECTURE
+ ASSOCIATES
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219 West First Street, suite 350
Duluth, MN 55802
(p) 218.391.1335

Issue Record/Revision

Purpose | Date

WOODLAND AVE TREE INVENTORY

DULUTH, MINNESOTA

Sheet Key

Sheet Title
TREE INVENTORY DATA

Date: 11/1/2021
Drawn By: AMA
Checked By: LWS
Project Number 21310
Sheet Number L-1.2

Nov 01, 2021 - 2:51pm
P:\21310 - Woodland Ave Site Tree Surevey - NCEB1 - 21310 - Woodland Ave Tree Inventory.dwg

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit: City of Duluth	**County:** St. Louis
Applicant Name: Northland Consulting Engineers	**Applicant Representative:** WSP
Project Name: 2732 Woodland Avenue	**LGU Project No. (if any):** PL 21-190
Date Application Received by LGU: 10/18/2021	
Date of LGU Decision: 11/13/2021	
Date this Notice was Sent: 11-15-2021	

WCA Decision Type - check all that apply

☒ Wetland Boundary/Type ☐ Sequencing ☐ Replacement Plan ☐ Bank Plan (not credit purchase)
☐ No-Loss (8420.0415) ☐ Exemption (8420.0420)
Part: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H Subpart: ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

Replacement Plan Impacts (replacement plan decisions only)

Total WCA Wetland Impact Area:
Wetland Replacement Type: ☐ Project Specific Credits: ☐ Bank Credits:
Bank Account Number(s):

Technical Evaluation Panel Findings and Recommendations (attach if any)

☐ Approve ☐ Approve w/Conditions ☐ Deny ☐ No TEP Recommendation

LGU Decision

☐ Approved with Conditions (specify below)[1] ☒ Approved[1] ☐ Denied
List Conditions:

Decision-Maker for this Application: ☒ Staff ☐ Governing Board/Council ☐ Other:

Decision is valid for: ☒ 5 years (default) ☐ Other (specify):

[1] *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision[1].

☐ Attachment(s) (specify):
☒ Summary: **Approve a wetland delineation prepared by WSP dated October 18, 2021**

[1] *Findings must consider any TEP recommendations.*

Attached Project Documents

☐ Site Location Map ☒ Project Plan(s)/Descriptions/Reports (specify): Application

Appeals of LGU Decisions

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for $500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator
Minnesota Board of Water & Soils Resources
520 Lafayette Road North
St. Paul, MN 55155
travis.germundson@state.mn.us

Does the LGU have a local appeal process applicable to this decision?

☒ Yes[1] ☐ No

[1]*If yes, all appeals must first be considered via the local appeals process.*

Local Appeals Submittal Requirements (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

Planning Commission 160 City Hall, 411 West First Street Duluth, MN 55802

Notice Distribution (include name)

Required on all notices:

☒ SWCD TEP Member: R.C. Boheim	☒ BWSR TEP Member: David Demmer
☒ LGU TEP Member (if different than LGU contact): Kyle Deming	
☒ DNR Representative: Sam Martin	
☐ Watershed District or Watershed Mgmt. Org.: NA	
☒ Applicant (notice only):	☒ Agent/Consultant (notice only):

Optional or As Applicable:

☒ Corps of Engineers:	
☐ BWSR Wetland Mitigation Coordinator (required for bank plan applications only):	
☐ Members of the Public (notice only):	☐ Other:

Signature: Kyle Deming	**Date:** 11-13-2021

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.

PARCEL 010-4680-01265

WETLAND DELINEATION REPORT

NORTHLAND CONSULTING ENGINEERS

DATE: OCTOBER 2021

WSP USA INC.
4602 GRAND AVENUE
SUITE 300
DULUTH, MN 55807

WSP.COM

OCTOBER 18, 2021

FIGURES

APPENDICES

1 INTRODUCTION

WSP USA, Inc. (WSP) completed a wetland delineation for City of Duluth Parcel Id 010-04680-01265 (Site). The Site is located at 2732 Woodland Avenue in Section 2 of Township 50 North, Range 14 West in Duluth, Minnesota (**Figure 1**). The delineation area covers approximately 8.3 acres within Duluth Parcel Id 010-04680-01265 as shown in **Figure 2**. The Site consists of a former residential property where the house has been removed. Land cover within and the Site is open grassland (former mowed yard), hardwood forest, a pond, and some wetland. The adjacent land use is residential to the north, east, and south with Hartley Nature Center to the west.

The purpose of the wetland delineation was to identify wetland and other aquatic resource boundaries and classify the wetland plant community types. The delineation will be used to aid in project planning and to identify potential wetland and aquatic resource impacts.

WSP was on-site to conduct the wetland delineation on October 15, 2021. Normal circumstances were present during the time of the site visit. The National Weather Service monthly climate report for Duluth, MN reported antecedent precipitation 5.99 inches below normal since January 1st and 0.18 inches below normal since September 1st. The results of the delineation are presented in this report.

2 DELINEATION METHODOLOGY

Wetlands present within the Site were identified and delineated using the procedures described in the *U.S. Army Corps of Engineers* (*USACE) Wetlands Delineation Manual* (Environmental Laboratory, Waterways Experiment Station, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (US Army Engineer Research and Development Center, 2011). These methods utilize the standard multi-parameter approach (vegetation, hydrology, and soils) for wetland identification as outlined in the Corps of Engineers Wetland Determination Data Forms. In general, an area is considered a wetland if hydrophytic vegetation, wetland hydrology, and hydric soils are present. Delineated wetlands were classified in accordance with the classification systems set forth in *Wetlands of the United States* (Shaw and Fredine. 1971. USFWS Circular 39) and *Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979. FWS/OBS Publication 79/31).

2.1 DESKTOP REVIEW

WSP completed a desktop review for the Site by reviewing and analyzing a variety of available information to identify the presence or absence of wetlands. Resources reviewed include:

- U.S. Fish and Wildlife Service National Wetland Inventory (NWI)
- Minnesota Department of Natural Resources (MNDNR) Public Waters Inventory (PWI)
- Natural Resources Conservation Service (NRCS) Web Soil Survey
- U.S. Geological Survey (USGS) Topographic base map
- Aerial photos
- Light Detection and Ranging (LiDAR) Data
- National Weather Service (NWS) Climatological Report

The NWI and PWI did not identify any wetlands or public waters within the Site. The soil survey also did not identify any hydric soils within the delineation area.

2.2 ON-SITE WETLAND DELINEATION

WSP's on-site wetland delineation followed the USACE procedure for identifying wetland boundaries by completing the appropriate number of sampling points, investigating the required wetland criteria, and identifying the boundary between wetland and upland areas. A soil sampling auger or tiling shovel was used to complete soil sampling points and check the soils and hydrology at periodic intervals throughout the delineated boundary to confirm accuracy and/or adjust the boundary accordingly. All wetland boundaries within the property were flagged with *Wetland Delineation* flagging tape and geolocated using a sub-meter accuracy global positioning system (GPS) and incorporated into a geographic information system (GIS) using ArcGIS 10.7 GIS software. The Site GPS data is being used to aid in Site planning.

3 RESULTS

3.1 WETLAND DELINEATION

Two wetlands, Wetland A and Wetland B were identified within the delineation area.

Wetland A is located in the southcentral part of the delineation area and covers approximately 0.12 acres. Wetland A appears to be a manmade pond. A rip rap catch basin adjacent to the garage captures precipitation that flows through a culvert and ephemeral drainage into the west part of Wetland A. There is a spillway connecting the west part of wetland A to the east portion of Wetland A. A large berm surrounds the south and east sides of the pond. The pond is not visible on the 1991 aerial image attached as **Figure 3**. The west part of Wetland A appears to hold water seasonally or after precipitation events and is a Type 1 – Seasonally Saturated Basin. The east portion is much larger and has a larger watershed. The east part of Wetland A is a Type 3 – Shallow Marsh plant community dominated by *Alnus incana* and *Salix interior* in the shrub layer along the edge with *Equisetum hyemale* and *Scirpus cyperinus* in the herbaceous layer. The Wetland A sampling point met wetland hydrology criteria A2 – High Water Table, A3 – Saturation, and D5 – FAC-Neutral Test. Hydric soil indicators F3 – Depleted Matrix, and F8 – Redox Depressions were present. Wetland A is not identified on the NWI or PWI. The source of hydrology for Wetland A appears to be from precipitation and runoff.

Wetland B is located in the southeast corner of the property and covers approximately 0.07 acres. Wetland B is a Type 6 – Shrub-carr dominated by invasive, nonnative, *Frangula alnus* in the shrub layer with nonnative *Myosotis scorpoides* in the herbaceous layer. The Wetland B sampling point met wetland hydrology criteria A3 – Saturation and D5 – FAC-Neutral Test. Hydric soil indicators F6 - Redox Dark Surface and F8 – Redox Depressions were present. Wetland B is not identified on the NWI or PWI. Wetland B receives runoff from an ephemeral drainage and discharges on a slope to Woodland Avenue. The source of hydrology for Wetland B appears to be from precipitation. Water table and saturation was not observed at the time of sampling due to below normal precipitation conditions.

Four sampling points were completed within and adjacent to Site wetlands to characterize the vegetation, soils, and hydrology. Sampling point locations were chosen to delineate the upland/wetland boundary and characterize the different plant communities. Sampling points were labeled with an alphabetical wetland identifier, followed by the sampling point number, then an upland or wetland designation (e.g. A1W is associated with Wetland A (A), and is the first (1) wetland (W) sampling point).

See **Figure 2** for details on the wetland boundaries and sampling point locations, and **Figure 3** for 1991 aerial image. Photographs of select Site features are included in **Appendix A**. Specifics of observed vegetation, hydrology, and soil characteristics of the Site wetlands are included on the USACE Wetland Determination Data Forms for Routine Determination in **Appendix B**. The soil survey map units and hydric soil classifications are included in **Appendix C**.

4 SUMMARY

The delineated wetlands meet the criteria outlined in the *USACE Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. The boundaries of the wetlands will be submitted to the Local Government Unit (LGU), along with a Minnesota Joint Application Form requesting delineation concurrence.

Prepared by: _____

Rob Peterson
Certified Wetland Delineator, No. 1039 (MN)
Professional Wetland Scientist, No. 2443

5 REFERENCES

Cowardin, L.M., V.M. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Biological Services Program, Washington, DC, USA. FWS/OBS-79/31. 103pp.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2016. The National Wetland Plant List: 2016 Update of Wetland Ratings. Phytoneuron 2016-41: 1-42., http://www.phytoneuron.net/.

National Oceanic and Atmospheric Administration's National Weather Service. http://www.nws.noaa.gov/climate/.

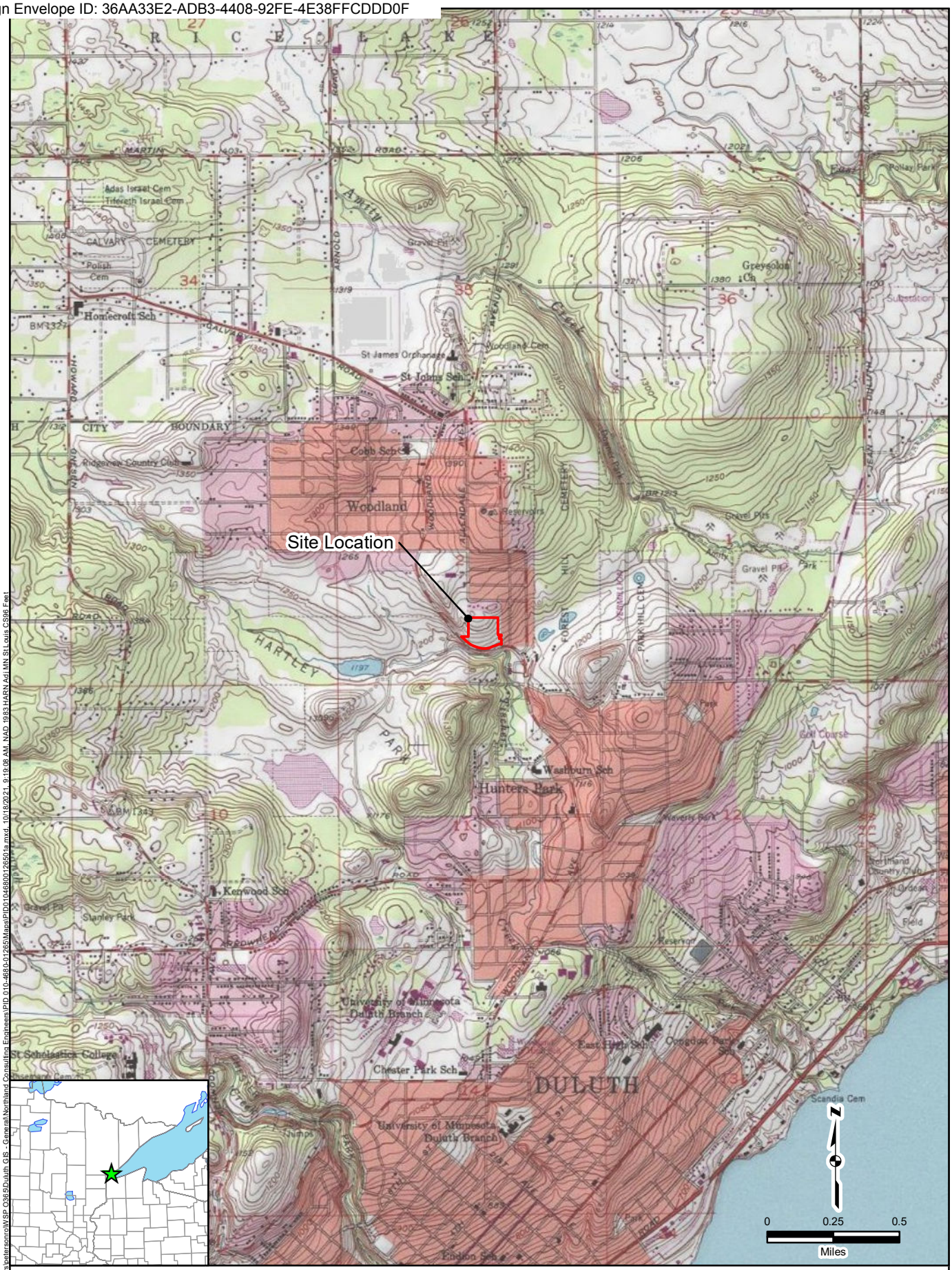
Reed, Jr., P.B. 1988. National List of Plant Species that Occur in Wetlands: National Summary. U.S. Fish and Wildlife Service. Biol. Rep. 88 (24). 244 pp.

Shaw, S.P. and C.G. Fredine. 1971. Wetlands of the United States. U.S. Fish and Wildlife Circular 39. U.S. Department of the Interior, Washington, D.C. 67 pp.

U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USDA, Natural Resources Conservation Service. 2021. Custom Soil Resource Report, http://websoilsurvey.sc.egov.usda.gov/.

FIGURES



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Duluth, MN 55807
TEL: +1 218 336 8820

PARCEL 010-4680-01265
DULUTH, MINNESOTA

PREPARED FOR

NORTHLAND CONSULTING ENGINEERS

FIGURE 01

SITE LOCATION
OCTOBER, 2021

WSP Office: Duluth, MN | Source: C:\Users\petersonro\WSP 0365\Duluth GIS - General\Northland Consulting Engineers\PID 010-4680-01265\Mxds\PID010468001265Ia.mxd, 10/18/2021, 9:19:08 AM, NAD 1983 HARN Adj MN St Louis CS96 Feet

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DULUTH, MINNESOTA

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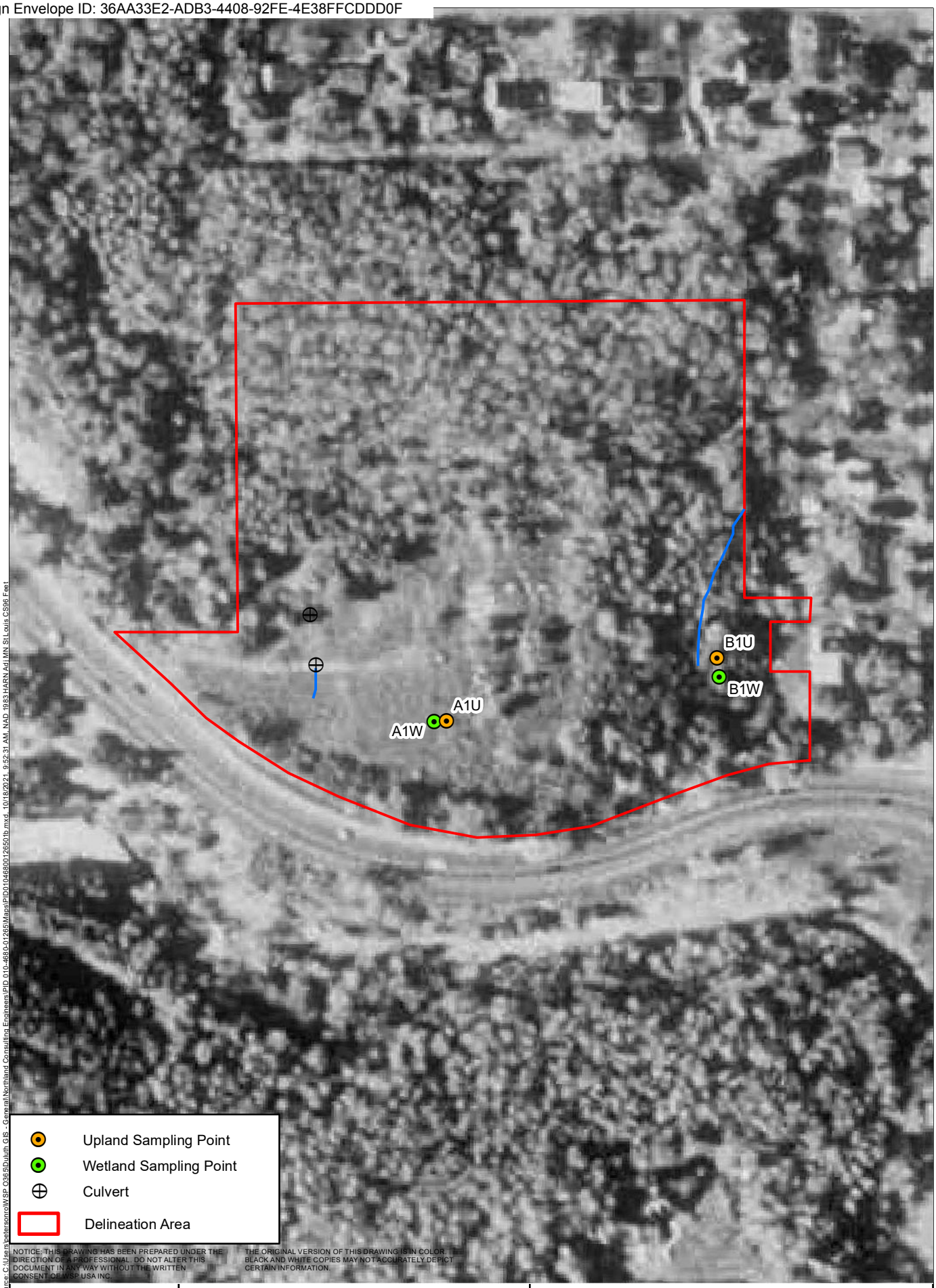
FIGURE 02

WETLAND BOUNDARIES AND SAMPLING POINT LOCATIONS
OCTOBER, 2021



Upland Sampling Point
Wetland Sampling Point
Culvert
Delineation Area

NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

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FIGURE 03

1991 AERIAL IMAGE
OCTOBER, 2021

APPENDIX

A SITE PHOTOGRAPHS

Photo 1:Wetland A at sampling point A1W facing southwest. Shallow Marsh plant community. Appears to be excavated.

Photo 2:Wetland A at sampling point A1W facing north.

Photo 3:View of upland slope facing northeast from Wetland A.

Photo 4:Wetland B at sampling point B1W facing west. Shrub-carr plant community.

Photo 5:Wetland B at sampling point B1U facing north. Hardwood Forest plant community.

Photo 6:Click or tap here to enter text.

APPENDIX

B USACE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Parcel Id 010-4680-01265 City/County: Duluth Sampling Date: 10/15/21

Applicant/Owner: Northland Consulting Engineers State: MN Sampling Point: A1U

Investigator(s): WSP - Rob Peterson Section, Township, Range: Sec. 2, T50n, R14W

Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): convex Slope %: 8-10

Subregion (LRR or MLRA): LRR K Lat: 46.83888 Long: -92.07858 Datum: WGS84

Soil Map Unit Name: F138D-Ahmeek-Normanna-Canosia complex, 0 to 18% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No ____	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Open grassland upslope from pond. Soils appear to be fill. Antecedent precipitation is below normal.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
X

VEGETATION – Use scientific names of plants. Sampling Point: A1U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 FT)			
1. *Poa pratensis*	35	Yes	FACU
2. *Lotus corniculatus*	30	Yes	FACU
3. *Solidago canadensis*	20	Yes	FACU
4. *Tanacetum vulgare*	10	No	FACU
5. *Cirsium arvense*	2	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	97 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	97	x 4 =	388
UPL species	0	x 5 =	0
Column Totals:	97 (A)		388 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point A1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	5YR 4/3	100					Loamy/Clayey	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

Soil is likely fill material.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Parcel Id 010-4680-01265 City/County: Duluth Sampling Date: 10/15/21

Applicant/Owner: Northland Consulting Engineers State: MN Sampling Point: A1W

Investigator(s): WSP - Rob Peterson Section, Township, Range: Sec. 2, T50N, R14W

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 0-1

Subregion (LRR or MLRA): LRR K Lat: 46.83888 Long: -92.07858 Datum: WGS84

Soil Map Unit Name: F138D-Ahmeek-Normanna-Canosia complex, 0 to 18% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sampling point was completed in Wetland A that appears to be a man-made pond. The pond does not appear in the 1991 aerial photo and seems to be part of home construction completed after 1991. Antecedent precipitation is below normal.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Surface water present within 10 feet of the sampling point.

VEGETATION – Use scientific names of plants. Sampling Point: A1W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Alnus incana*	5	Yes	FACW
2. *Salix interior*	3	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	8 =Total Cover		
Herb Stratum (Plot size: 5 FT)			
1. *Equisetum hyemale*	80	Yes	FAC
2. *Scirpus cyperinus*	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	8	x 2 =	16
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	108 (A)		276 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point A1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	5YR 4/2	80	5YR 4/6	20	C	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Parcel Id 010-4680-01265 City/County: Duluth Sampling Date: 10/15/21

Applicant/Owner: Northland Consulting Engineers State: MN Sampling Point: B1U

Investigator(s): WSP - Rob Peterson Section, Township, Range: Sec. 2, T50N, R14W

Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): convex Slope %: 5

Subregion (LRR or MLRA): LRR K Lat: 46.83904 Long: -92.07731 Datum: WGS84

Soil Map Unit Name: F138D-Ahmeek-Normanna-Canosia complex, 0 to 18% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Hardwood Forest. Antecedent precipitation is below normal.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology observed.

VEGETATION – Use scientific names of plants. Sampling Point: B1U

Tree Stratum (Plot size: 30 FT)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula papyrifera*	30	Yes	FACU
2. *Pinus strobus*	5	No	FACU
3. *Rhamnus cathartica*	5	No	FAC
4.			
5.			
6.			
7.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 FT)			
1. *Rhamnus cathartica*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5 FT)			
1. *Rhamnus cathartica*	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	90 (A)		305 (B)

Prevalence Index = B/A = 3.39

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Bareground 70%. Vegetation met by FAC buckthorn.

SOIL

Sampling Point B1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	7.5YR 7/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Parcel Id 010-4680-01265 City/County: Duluth Sampling Date: 10/15/21

Applicant/Owner: Northland Consulting Engineers State: MN Sampling Point: B1W

Investigator(s): WSP - Rob Peterson Section, Township, Range: Sec. 2, T50N, R14W

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 0-1

Subregion (LRR or MLRA): LRR K Lat: 46.83904 Long: -92.07731 Datum: WGS84

Soil Map Unit Name: F138D-Ahmeek-Normanna-Canosia complex, 0 to 18% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sampling point was completed in Wetland B that is connected to an ephemeral drainage. Wetland B is a chrub-carr dominated by glossy buckthorn and true forget-me-not. Antecedent precipitation is below normal.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: B1W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 FT)			
1. *Frangula alnus*	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	30 =Total Cover		
Herb Stratum (Plot size: 5 FT)			
1. *Myosotis scorpioides*	60	Yes	OBL
2. *Carex intumescens*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	5	x 2 =	10
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		160 (B)

Prevalence Index = B/A = 1.68

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point B1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/1	80	7.5YR 4/6	20	C	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

APPENDIX

C USDA SOIL SURVEY INFORMATION

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,590 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: St. Louis County, Minnesota, Duluth Part
Survey Area Data: Version 19, Sep 10, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
F138D	Ahmeek-Normanna-Canosia complex, 0 to 18 percent slopes	5.1	60.9%
F147D	Ahmeek-Canosia-Rock outcrop complex, 0 to 25 percent slopes	3.2	38.3%
F159D	Urban land-Ahmeek-Normanna complex, 3 to 18 percent slopes	0.1	0.8%
Totals for Area of Interest		**8.3**	**100.0%**

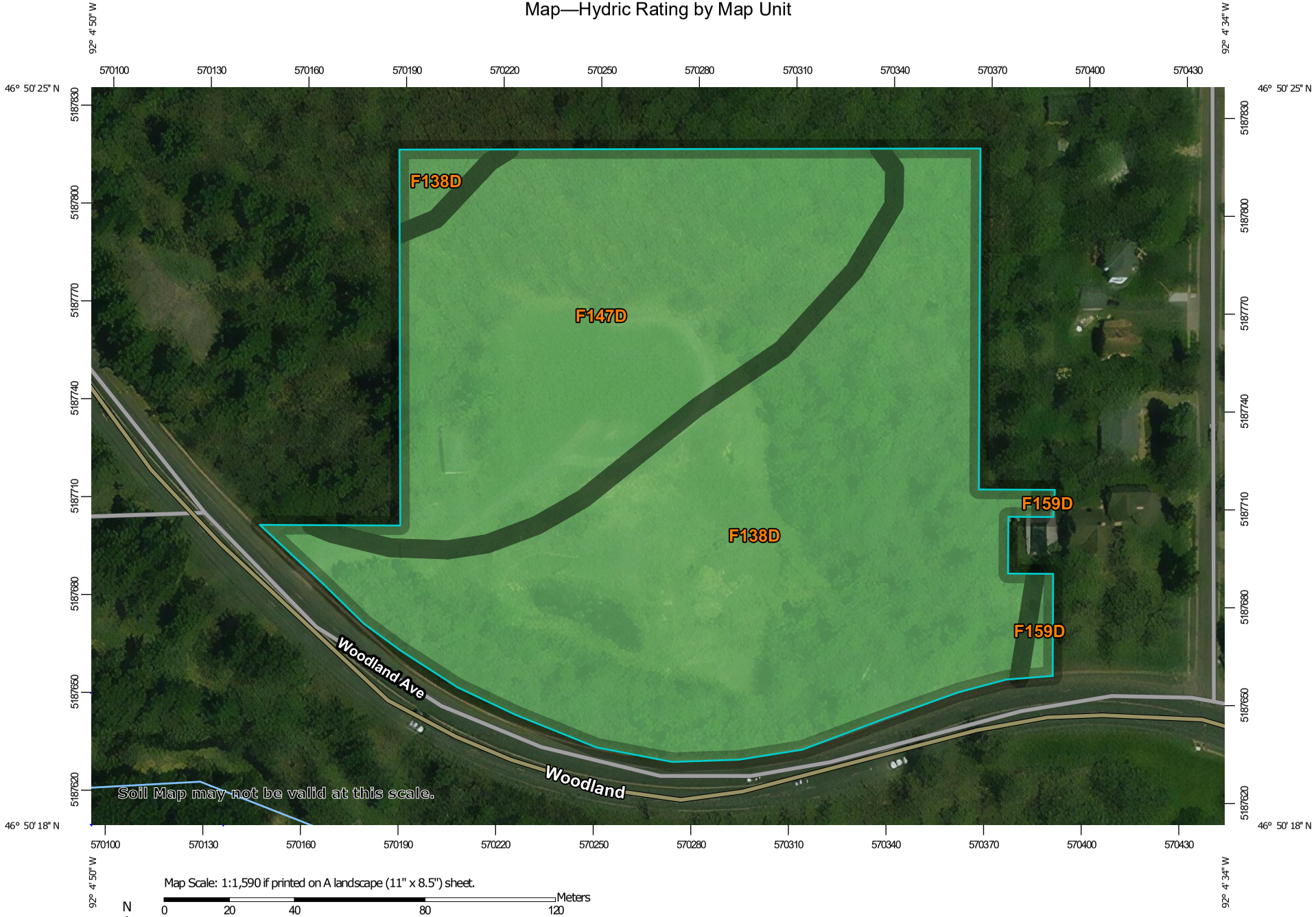
Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

Custom Soil Resource Report
Map—Hydric Rating by Map Unit



Map Scale: 1:1,590 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
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- Local Roads

Background
- Aerial Photography

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F159D	Urban land-Ahmeek-Normanna complex, 3 to 18 percent slopes	5	0.1	0.8%
Totals for Area of Interest			**8.3**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower