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Memorandum

To:	Excelsior Energy Center, LLC
From:	TRC
Subject:	Wetland and Stream Delineation Supplement Excelsior Energy Center
Date:	March 2025

On November 26 and December 3, 2024, TRC completed a supplemental delineation effort for the proposed Excelsior Energy Center, located in the Town of Byron, Genesee County, New York (Attachment A – Figure 1). This supplemental field effort covered portions of five tax parcels totaling approximately 4.5 acres (Survey Area). Four of these parcels were added after the original delineation effort was completed in 2019. One of the parcels had been included in the original delineation effort but one small portion of it was revisited in search of potential alternative access. The field team documented all wetlands and surface waters (including rivers, streams, ponds, lakes, etc.) regardless of jurisdictional status. This memorandum summarizes the results of the wetland and stream delineation conducted for the Survey Area.

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1.0 General Survey Area Conditions

The weather during the survey on November 26, 2024 was partly sunny and windy with temperatures generally between 47° and 45° Fahrenheit; winds were steadily blowing east between 15 and 20 miles per hour (MPH), with wind gusts up to 39 MPH. The Survey Area did not experience precipitation during the November 26 site delineation and received less than 1 inch (0.91 in) the week prior. Weather during the survey on December 3, 2024 was sunny and cold with temperatures near 32° Fahrenheit. Winds were blowing southeast between 10 and 16 MPH with gusts up to 30 MPH. The Survey Area did not experience precipitation during the December 3 survey; however, the Survey Area received approximately two inches of snow in the week prior to the delineation. By the time the December 3 survey was conducted the snow was sparse enough to allow for an adequate survey.

2.0 Regulatory Authority

2.1 United States Army Corps of Engineers

In accordance with Section 404 of the Clean Water Act (CWA), the United States Army Corp of Engineers (USACE) asserts jurisdiction over Waters of the United States (WOTUS). WOTUS are defined as wetlands, streams, and other aquatic resources under the regulatory authority of Title 33 Code of Federal Regulations (CFR) Part 328 and the United States Environmental Protection Agency (EPA) per Title 40 CFR Part 230.3(s). Wetlands are defined as "*those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions*" (EPA, 2023).

The jurisdiction statuses of the above waters and features reflect the recent amendments to the WOTUS definition resulting from *Sackett v. EPA* published in the Federal Register in September 2023 (Federal Register 2023).

Summary of Key Points:

The USACE (and the EPA) will only assert jurisdiction over the following waters:

- Traditional interstate navigable waters
- Relatively permanent bodies of water connected to traditional navigable waters
- Wetlands that directly abut such bodies of water

The agencies will not assert jurisdiction over:

- Prior converted cropland, adopting United States Department of Agriculture's (USDA) definition and generally excluding wetlands that were converted to cropland prior to December 23, 1985;
- Waste treatment systems, including treatment ponds or lagoons that are designed to meet the requirements of the CWA;

- Ditches (including roadside ditches), excavated wholly in and draining only dry land, and that do not carry a relatively permanent flow of water;
- Artificially irrigated areas, that would revert to dry land if the irrigation ceased;
- Artificial lakes or ponds, created by excavating or diking dry land that are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- Artificial reflecting pools or swimming pools, and other small ornamental bodies of water created by excavating or diking dry land;
- Waterfilled depressions, created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction operation is abandoned and the resulting body of water meets the definition of WOTUS;
- Swales and erosional features (e.g., gullies, small washes), that are characterized by low volume, infrequent, or short duration flow.

3.0 Wetland and Stream Delineation Methodology

Prior to initiating field investigations, TRC conducted a desktop review of publicly available data to determine the potential presence of federal and state mapped wetlands and streams within the Survey Area. TRC wetland scientists subsequently performed field investigations to identify aquatic features within the Survey Area. Delineations for wetlands and streams were performed in accordance with criteria set forth in the 1987 Manual (Environmental Laboratory, 1987) and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (USACE, 2012) (Supplement). Data was collected from a sample plot in each delineated wetland. Depending on the size of the delineated area and any change in cover type, multiple sample plots of the delineated wetland may have been taken. Delineation data was recorded on USACE Wetland Determination Forms (Attachment C). The boundaries of wetlands were located with a GPS unit with reported sub-meter accuracy.

Hydrology, hydrophytic vegetation, and hydric soils make up the criteria set forth in the 1987 Manual (Environmental Laboratory, 1987), and are the key components to assess when delineating a wetland. These three components are thoroughly analyzed via the USACE Wetland Determination Forms. For a more in-depth analysis of each component, refer to the October 2019 Wetland and Stream Delineation Report.

4.0 Survey Area Soil Characteristics

All soil map units identified within the Survey Area by the Natural Resources Conservation Service (NRCS) soil survey are outlined in Table 1. Refer to Figure 2 of Attachment A for graphically depicted soil map units of the Survey Area.

Hydric Soil Rating indicates the percentage of map units that meet the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor non-hydric components in the higher positions on the landform, and map units that are made up dominantly of non-

hydric soils may have small areas of minor hydric components in the lower positions on the landform. As such, each map unit is rated based on its respective components and the percentage of each component within the map unit. Although a soil series is given a general hydric soil rating on the online databases, this is for reference only and does not supersede site specific conditions in the field documenting hydric soil presence.

Two of the soil map units within the Survey Area contain percentages (33% or more) of mapping units with hydric soil inclusions suggestive of the presence of a wetland feature on-site (Figure 2 of Attachment A).

Table 1. Mapped Soils within the Survey Area

Map Unit Symbol	Map Unit Name	Slope (%)	Drainage Class	Hydric Rating (%)	Acres in Survey Area	Percent of Survey Area (%)
CaA	Canandaigua silt loam	0 – 2	Poorly drained	95	0.22	4.9
CeB	Cazenovia silt loam	3 – 8	Moderately well drained	0	0.04	0.9
FpA	Fredon gravelly loam	0 – 3	Somewhat poorly drained	10	0.09	2.1
LmA	Lima silt loam	0 – 3	Moderately well drained	1	0.37	8.3
LmB	Lima silt loam	3 – 8	Moderately well drained	1	1.09	24.1
LoA	Lyons soils	0 – 3	Poorly drained	95	0.10	2.2
OdB	Odessa silt loam	3 – 8	Somewhat poorly drained	4	0.11	2.4
OnA	Ontario loam	0 – 3	Well drained	0	0.17	3.8
OnB	Ontario loam	3 – 8	Well drained	0	0.81	17.9
OnC	Ontario loam	8 – 15	Well drained	0	0.62	13.7
Te	Teel silt loam	NA	Moderately well drained	5	0.19	4.2

Table 1. Mapped Soils within the Survey Area

Map Unit Symbol	Map Unit Name	Slope (%)	Drainage Class	Hydric Rating (%)	Acres in Survey Area	Percent of Survey Area (%)
Wk	Wakeville silt loam	0 – 3	Somewhat poorly drained	10	0.71	15.6

5.0 Federal and State Mapped Wetlands and Streams

The United States Fish and Wildlife Service (USFWS) is the principal agency tasked with providing information to the public on the status and trends of wetlands on a national scale. The USFWS National Wetland Inventory (NWI) is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of nationwide wetlands (where mapped). NWI wetlands do not exclusively carry any federal jurisdiction with their mapped boundaries. These wetlands are utilized as a reference guide by TRC field biologists to conduct a more informed site survey in the delineation of wetlands and streams potentially subject to federal jurisdiction under the CWA within in the Survey Area.

Review of the NWI mapping during the preliminary desktop analysis indicated that there are four federally mapped wetland features and two federally mapped riverine features within the Survey Area (Figure 3 of Attachment A). The four wetland features are classified as Freshwater Forested/Shrub Wetland (PFO1A, PFO1B, PFO1C, and PFO1/SS1A). The two riverine features are identified by R5UBH and R4SBA. During the Survey Area delineation, TRC biologists identified four of the NWI features (PFO1A, PFO1C, R4SBA, and R5UBH). The other wetlands mapped on the NWI mapper were not observed by TRC biologists. Of the two NWI features that were not observed, the very southern corner of the PFO1B occurs in the northwest corner of one of the Survey Area polygons (Figure 3 Page 1.4), this feature was not observed to extend into the Survey Area. The PFO1/SS1A which occurs in the southwestern Survey Area polygon (Figure 3 Page 1.3) surrounding stream S-MWG-1 was disturbed due to landowner activity, and did not contain hydric soils or strong hydrology indicators.

Review of NYSDEC mapping through access to the online NYSDEC Environmental Resource Mapper (ERM) tool indicates that there are no NYSDEC-mapped freshwater wetlands or their adjacent 100-foot protective buffers mapped within the Survey Area. The closest NYSDEC freshwater wetland to the Survey Area is BY-13 and it is located 0.8 miles northwest of the Survey Area. The NYSDEC classification system of freshwater wetlands provides class rankings (I-IV) for wetlands according to their specific ability to provide multiple predetermined functions and values (Class I having the highest rank, descending through to Class IV).

Based on available NYSDEC stream classification mapping, there are two mapped streams within the Survey Area. Table 2 provides a detailed summary of all NYSDEC classified (protected and unprotected) streams within the Survey Area.

Table 2. NYSDEC Mapped Streams within the Survey Area

Stream Name and NYSDEC Regulatory ID Number	USGS Sub-basin HUC 8 and Name	NYSDEC Classification and Standard	Cumulative Linear Feet within Survey Area
Black Creek 821-20	04130003 Lower Genesee	C	147
Bigelow Creek 821-52	04130003 Lower Genesee	C	178

6.0 RESULTS

6.1 General Overview

The Survey Area contains primarily agriculture land cover. Dominant vegetation at the time of survey included reed canary grass (*Phalaris arundinacea*), annual bluegrass (*Poa annua*), Eastern cottonwood (*Populus deltoides*), white clover (*Trifolium repens*), black willow (*Salix nigra*), Eastern skunk cabbage (*Symplocarpus foetidus*), and riverbank grape (*Vitis riparia*).

TRC scientists adjusted and extended the boundaries of one previously mapped wetland, W-IBP-1, which is classified as a combination of palustrine forested (PFO) and palustrine emergent (PEM). It was determined that two small upland areas warranted removal from the originally delineated wetland in one portion of the Survey Area, while a wetland extension was appropriate in another portion of the Survey Area to the northeast. TRC scientists also identified and delineated two new streams, S-MWG-1 (perennial), and S-MWG-2, (ephemeral), within the Survey Area. Two previously mapped streams were extended as well. Stream S-IBP-1, a perennial feature, and stream S-JJB-3, an intermittent feature, were both extended in the northern, central portion of the Survey Area (Figure 4 of Attachment A).

6.2 Delineated Wetlands

Seven percent (0.38 acres) of the approximately 4.5-acre Survey Area is classified as wetland. Table 3 and Table 4 detail the wetlands and streams delineated/extended within the Survey Area. Representative photographs were taken of each delineated wetland community and stream within the Survey Area and are included in Attachment B. Completed wetland determination data forms and TRC stream data forms are provided in Attachment C.

Wetland W-IBP-1, within this supplemental Survey Area, consists of 0.35 acre of PFO wetland, and 0.03 acre of PEM wetland, located in the central part of the Survey Area. It extends offsite on the north and northeast border of the Survey Area. Wetland W-IMP-1 is mapped as a NWI palustrine forested, temporary flooded broad-leaved deciduous wetland (PFO1A), and palustrine forested, seasonally flooded broad-leaved

deciduous wetland (PFO1C). Within the delineated PFO area, indicators of wetland hydrology include water-stained leaves (B9), saturation (A3), water marks (B1), sediment deposits (B2), oxidized rhizospheres on living roots (C3), drift deposits (B3), presence of reduced iron (C4), and sparsely vegetated concave surface (B8). Dominant vegetation includes black willow, eastern skunk cabbage, riverbank grape, and spotted touch-me-not (*Impatiens capensis*). The hydric soil indicator was redox dark surface (F6), with a silty clay loam texture. Within the PEM portion of the wetland, indicators of wetland hydrology include oxidized rhizospheres on living roots (C3). The dominate vegetation includes reed canary grass. The hydric soil indicator observed was a depleted matrix (F3), with a silty clay texture.

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Table 3. Delineated Wetlands within the Survey Area

Wetland Field Desig-nation	Cover Type Classification[1] and Acreage				Total Wetland Acreage within Survey Area	NWI Cover Type[2]	NYSDEC Wetland ID	NYSDEC Wetland Class	Associated Buffer	Latitude of Centroid	Longitude of Centroid
	PEM	PSS	PFO	PUB							
W-IBP-1	0.03	-	0.35	-	0.38	PFO1A/ PFO1C	N/A	N/A	None	43.0691	-78.0657
Total Wetland Acreage Delineated:					0.38						

6.3 Delineated Streams

Stream S-MWG-1 is an approximately 20-foot-wide, 6 to 12-inches-deep, perennial stream with two-foot-high banks. Approximately 178 linear feet were delineated within the Survey Area. The streambed consists of silt/clay and cobble/gravel substrate. The stream originates from offsite to the south and flows northeast/north offsite. The stream is a known tributary to a named WOTUS, Genesee River, and corresponds to a mapped NWI riverine lower perennial unconsolidated feature (R2UBH) and a Class C unprotected NYSDEC mapped stream feature, Bigelow Creek.

Stream S-MWG-2 is an approximately two-foot wide, 0 to 6-inches-deep, ephemeral stream with 0.75-foot-high banks. Approximately 149 linear feet were delineated within the Survey Area. The streambed consists of silt/clay substrate. The stream originates at a culvert which drains the agricultural field to the west and flows southeast/east into stream S-MWG-1.

Stream S-IBP-1 is an approximately 20-foot-wide, 12 to 24-inches-deep, perennial stream with 1.5 to 2.5-foot high banks. Approximately 147 linear feet were delineated within the Survey Area. The streambed consists of cobble/gravel substrate. The stream originates from offsite in the eastern central portion of the Survey Area and flows north offsite. Wetland W-IBP-1 is located adjacent to stream towards the northeast corner and towards the northwest of the stream that intersects with the northern part of the Survey Area. The stream is a known tributary to a named WOTUS, Genesee River, and corresponds to a mapped NWI riverine lower perennial unconsolidated feature (R2UBH) and a Class C unprotected NYSDEC mapped stream feature, Black Creek.

Stream S-JJB-3 is an approximately 4-foot-wide, 0 to 6-inches-deep, intermittent drainage ditch with approximately 3-foot-high banks. Approximately 204 linear feet were delineated within the Survey Area. The streambed consists of silt/clay substrate. The stream originates offsite to the east at a culvert which conveys flow beneath Route 237 and flows west/southwest into stream S-IBP-1. The stream corresponds to a mapped NWI riverine intermittent streambed feature (R4SBA) and flows into a Class C unprotected NYSDEC mapped stream feature, Black Creek (S-IBP-1).

Table 4. Delineated Streams within the Survey Area

Stream Field Designation	Flow Regime Classification	Linear Feet within Survey Area	NYSDEC Stream Name and Regulation ID Number	NYSDEC Classification and Standard	Associated Buffer	Latitude of Centroid	Longitude of Centroid
S-IBP-1	Perennial	147	Black Creek 821-20	Class C	None	43.0692	-78.0650
S-JJB-3	Intermittent	204	N/A	None	None	43.0692	-78.0642
S-MWG-1	Perennial	356	Bigelow Creek and tribs 821-52	Class C	None	43.0610	-78.0743
S-MWG-2	Ephemeral	149	N/A	None	None	43.0611	-78.0749
Total Stream Length Delineated:		856					

7.0 Conclusion

TRC's supplemental delineation on November 26 and December 3, 2024 recorded one wetland and four streams in the Survey Area. Wetland W-IBP-1 consists of 0.35 acres of PFO wetland cover type and 0.03 acres of PEM wetland cover type within the Survey Area. Two perennial streams, S-IBP-1 and S-MWG-1, one intermittent stream S-JJB-3, and one ephemeral stream, S-MWG-2, were also delineated within the Survey Area.

8.0 References

Environmental Laboratory. (1987). *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers: Waterways Experiment Station; Vicksburg, MS.

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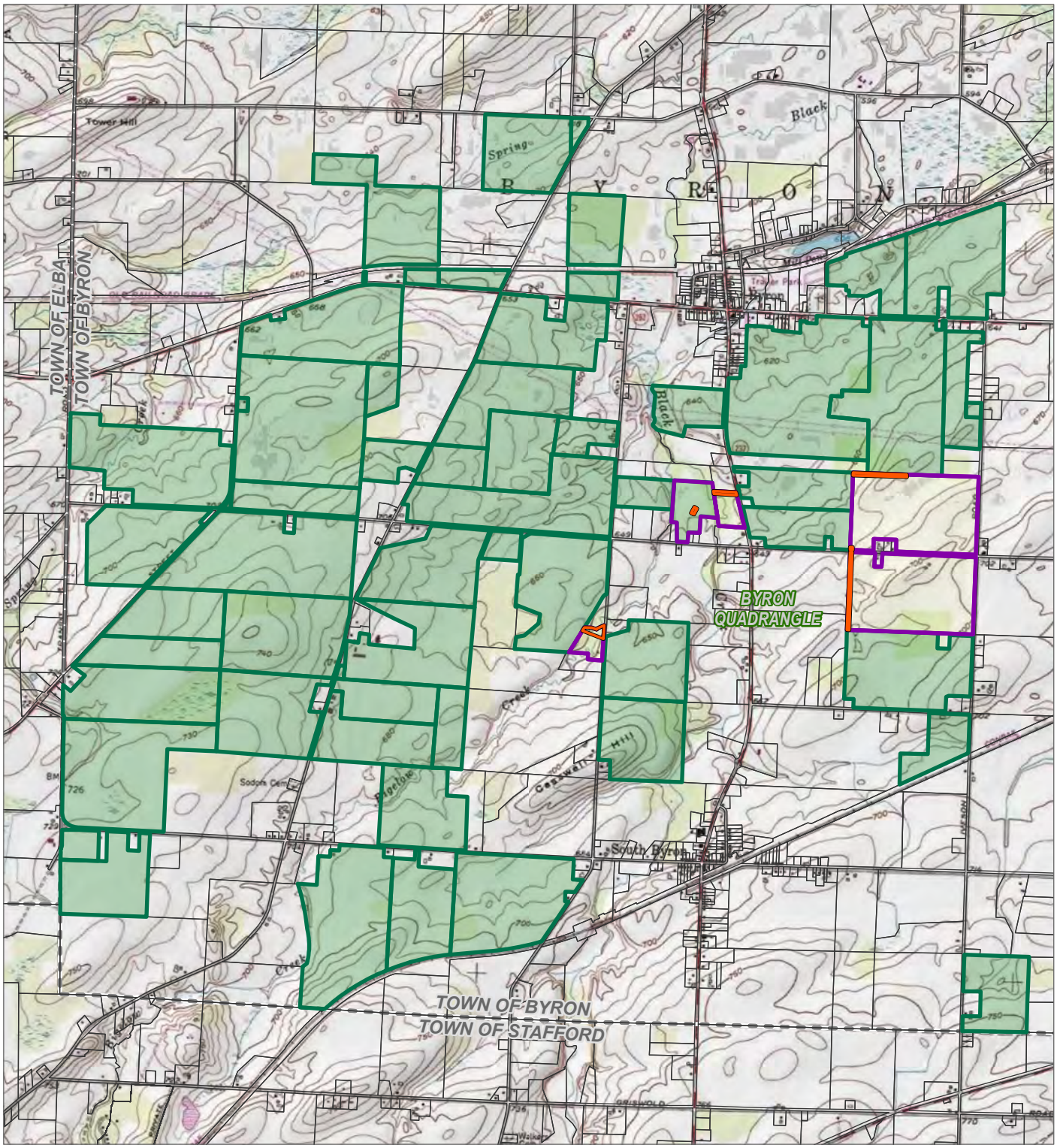
ATTACHMENT A

Figures



SURVEY AREA
2024 SUPPLEMENTAL SURVEY PARCEL
USGS 24K QUAD BOUNDARY
PROJECT PARCEL
PARCEL BOUNDARY
TOWN BOUNDARY

BASE MAP: USGS 24K TOPOGRAPHIC MAP SERVICE (THE NATIONAL MAP)
DATA SOURCES: USGS, ESRI, TRC

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PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 1
PROJECT LOCATION MAP

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
CHECKED BY:	A. KAILAS		
APPROVED BY:	J. DICKEY		**PAGE 1.1**
DATE:	FEBRUARY 2025		

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3 CORPORATE DRIVE
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PHONE: 518.348.1190

FILE: EXCELSIOR_NEER_2024

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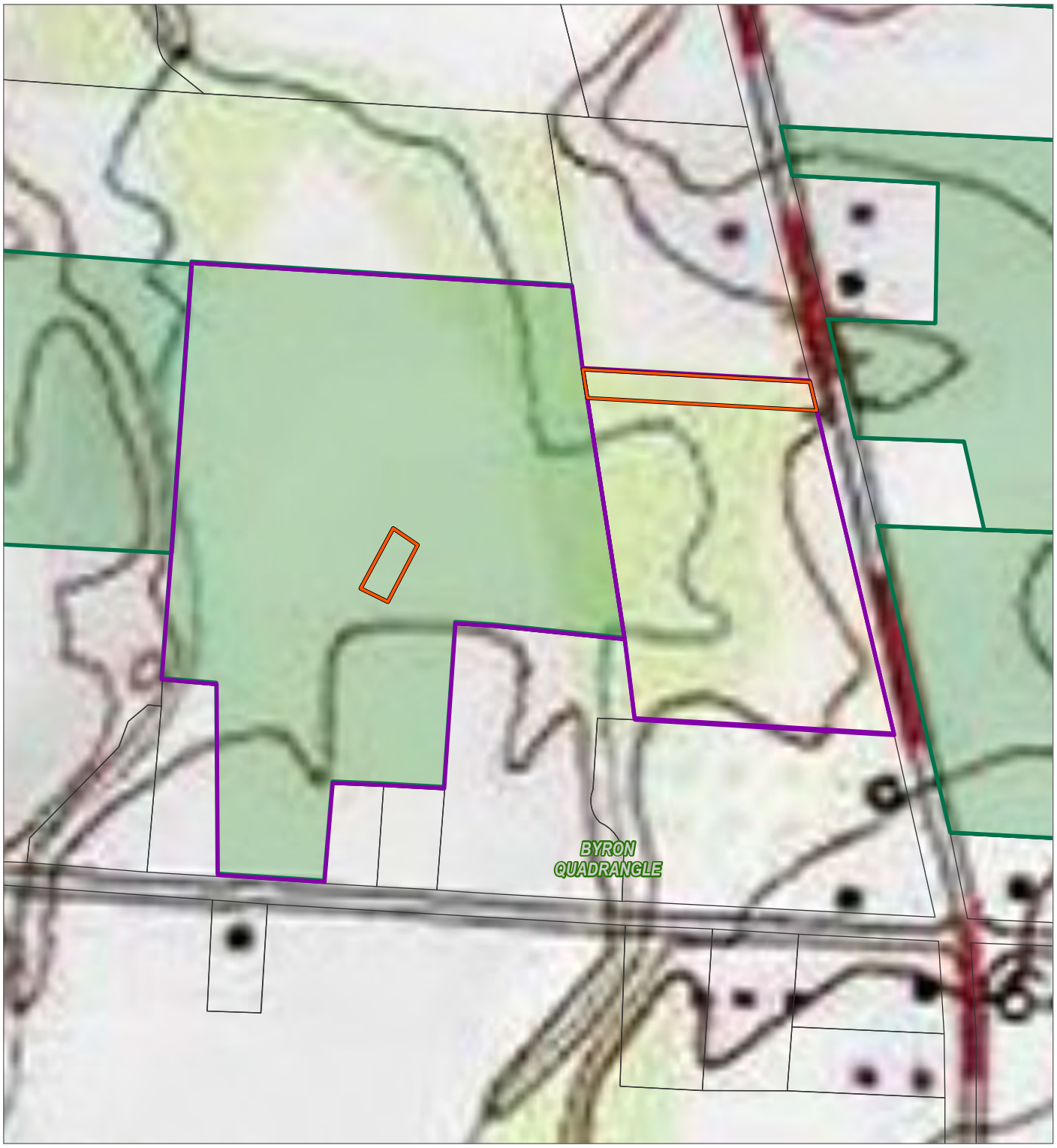

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2024 SUPPLEMENTAL SURVEY PARCEL
USGS 24K QUAD BOUNDARY
PROJECT PARCEL
PARCEL BOUNDARY
TOWN BOUNDARY

BASE MAP: USGS 24K TOPOGRAPHIC MAP SERVICE (THE NATIONAL MAP)
DATA SOURCES: USGS, ESRI, TRC

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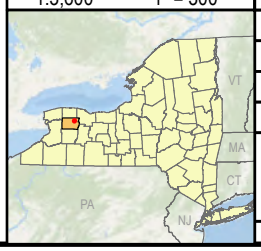

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PARCEL BOUNDARY
TOWN BOUNDARY

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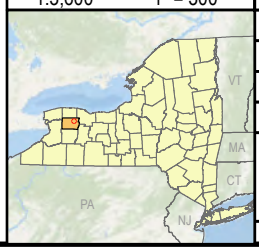

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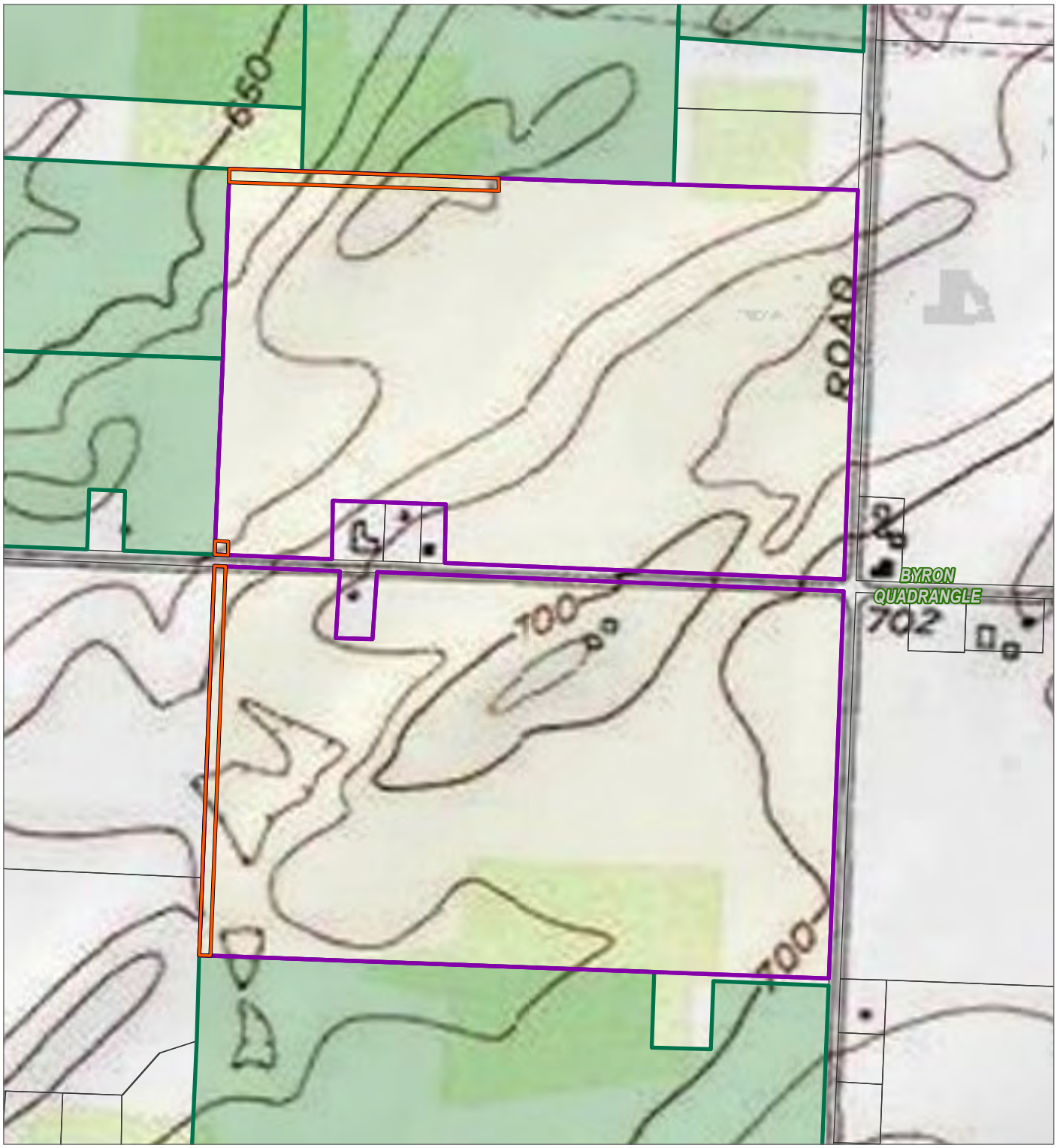

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2024 SUPPLEMENTAL SURVEY PARCEL
USGS 24K QUAD BOUNDARY
PROJECT PARCEL
PARCEL BOUNDARY
TOWN BOUNDARY

BASE MAP: USGS 24K TOPOGRAPHIC MAP SERVICE (THE NATIONAL MAP)
DATA SOURCES: USGS, ESRI, TRC

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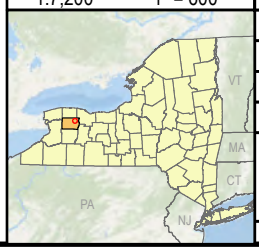

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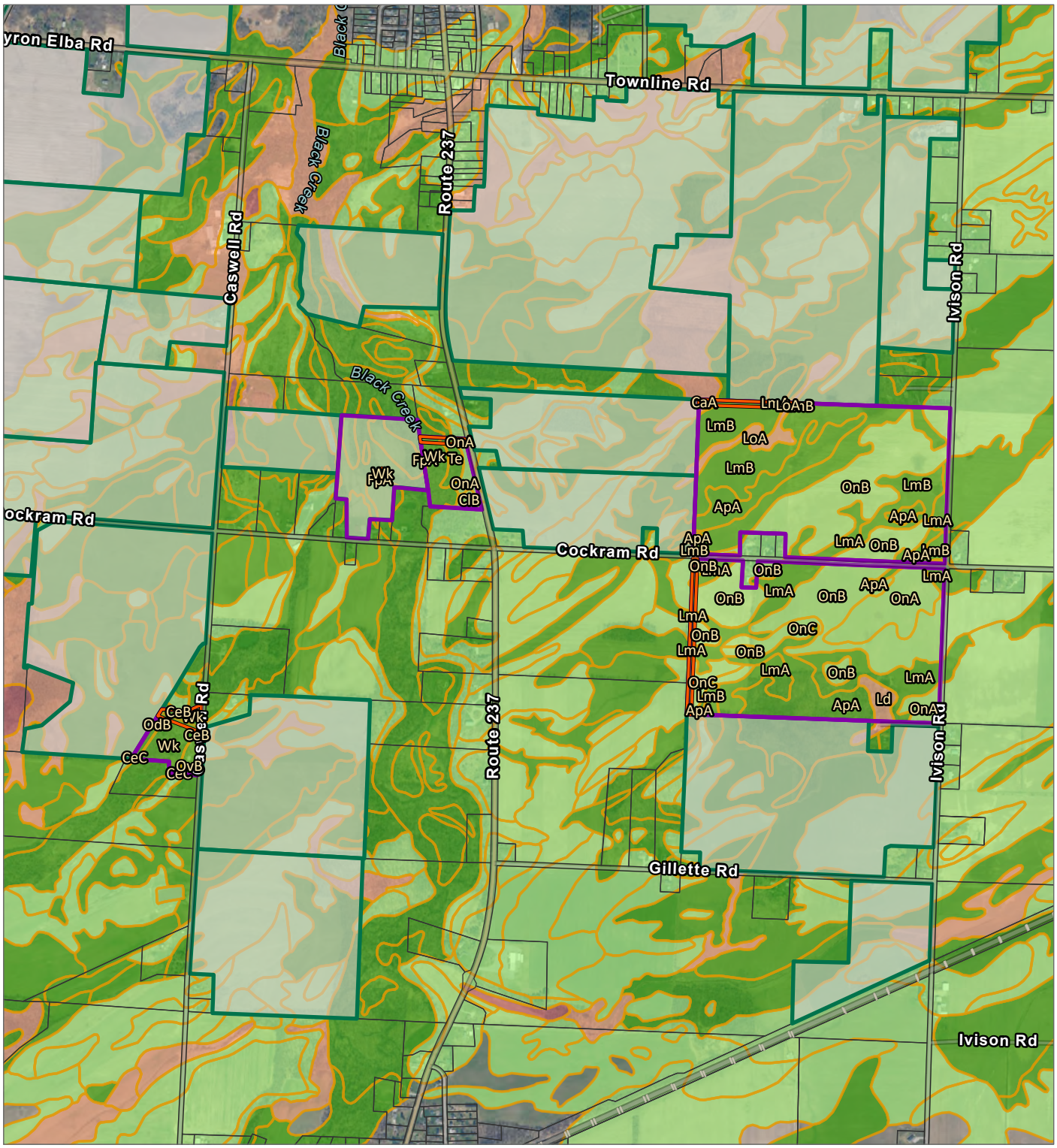

SURVEY AREA BOUNDARY
- SURVEY AREA
- 2024 SUPPLEMENTAL SURVEY PARCEL
- PROJECT PARCEL
- PARCEL BOUNDARY

SOIL HYDRIC RATING

POTENTIAL WETLAND SOIL LANDSCAPES
- NOT HYDRIC (0%)
- PREDOMINANTLY NON-HYDRIC (1-32%)
- PARTIALLY HYDRIC (33-65%)
- PREDOMINANTLY HYDRIC (66-99%)
- HYDRIC (100%)
- SOIL MAP UNIT

BASE MAP: NAIP IMAGERY
DATA SOURCES: USGS, ESRI, NRCS, TRC, LSR

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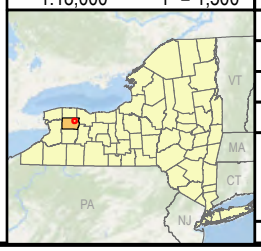

PROJECT:
EXCELSIOR ENERGY CENTER, LLC
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TITLE:
FIGURE 2
SOILS MAP

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DATE:	FEBRUARY 2025		

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3 CORPORATE DRIVE
SUITE 202
CLIFTON PARK, NY 12065
PHONE: 518.348.1190

FILE: EXCELSIOR_NEER_2024

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE NEW YORK CENTRAL FIPS 3102 FT US; MAP ROTATION: 0
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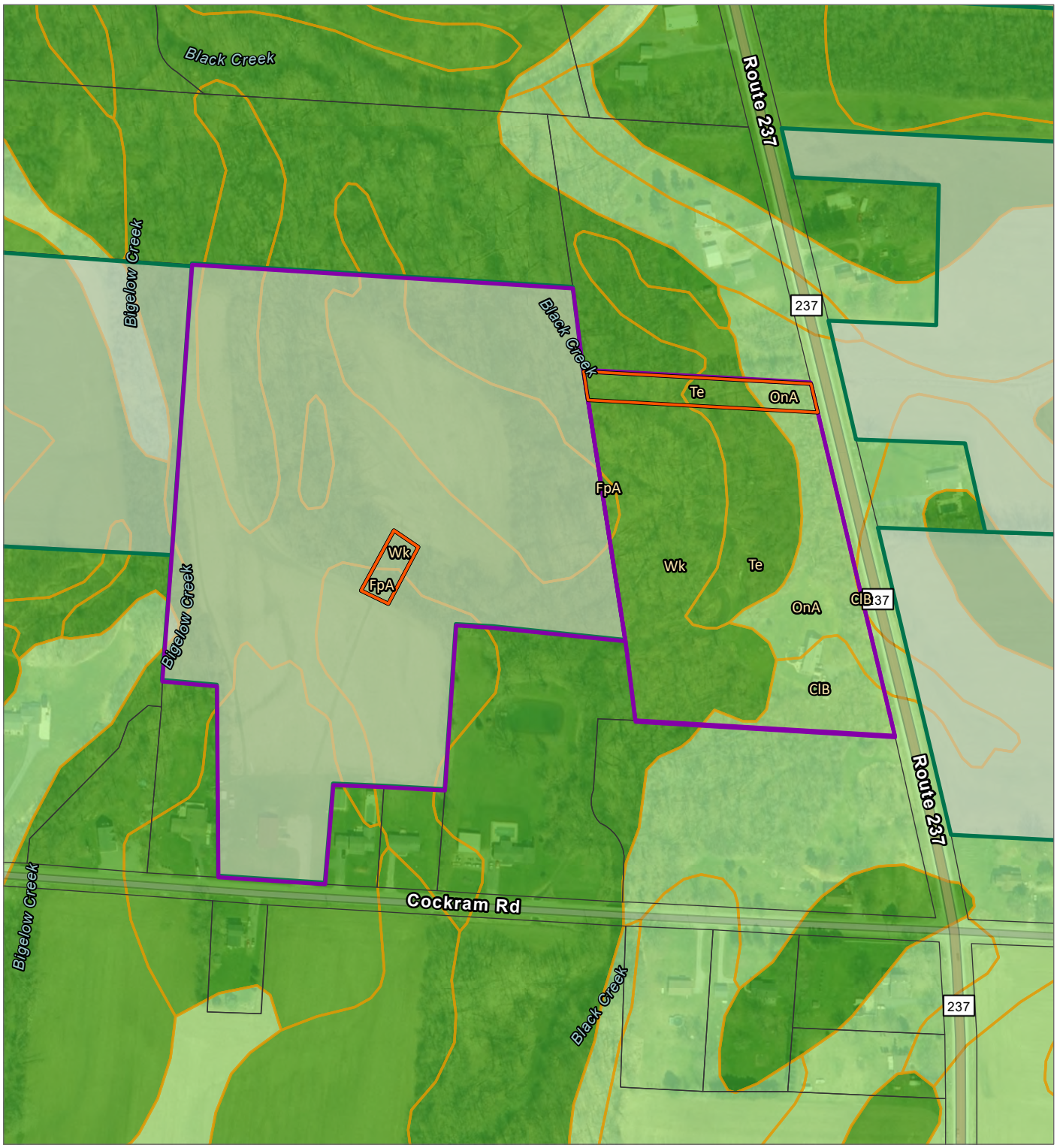


SURVEY AREA BOUNDARY
- SURVEY AREA
- 2024 SUPPLEMENTAL SURVEY PARCEL
- PROJECT PARCEL
- PARCEL BOUNDARY

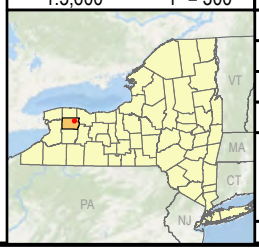
SOIL HYDRIC RATING

POTENTIAL WETLAND SOIL LANDSCAPES
- NOT HYDRIC (0%)
- PREDOMINANTLY NON-HYDRIC (1-32%)
- PARTIALLY HYDRIC (33-65%)
- PREDOMINANTLY HYDRIC (66-99%)
- HYDRIC (100%)
- SOIL MAP UNIT

BASE MAP: NAIP IMAGERY
DATA SOURCES: USGS, ESRI, NRCS, TRC, LSR

N

0 150 300
FEET
1:3,600 1" = 300'



PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 2
SOILS MAP

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
CHECKED BY:	A. KAILAS		
APPROVED BY:	J. DICKEY		**PAGE 1.2**
DATE:	FEBRUARY 2025		

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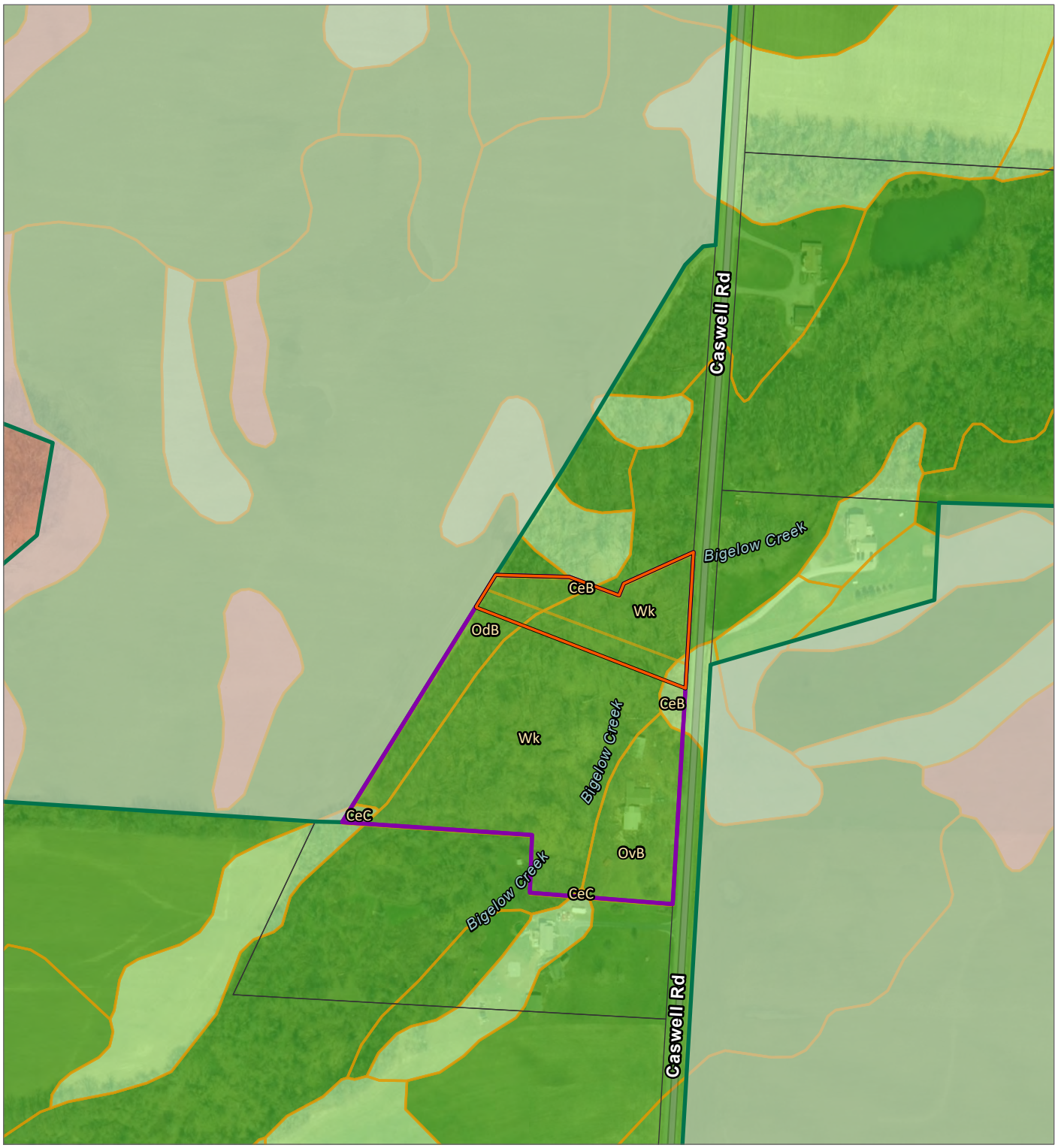

SURVEY AREA BOUNDARY
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- 2024 SUPPLEMENTAL SURVEY PARCEL
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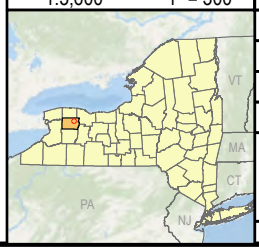

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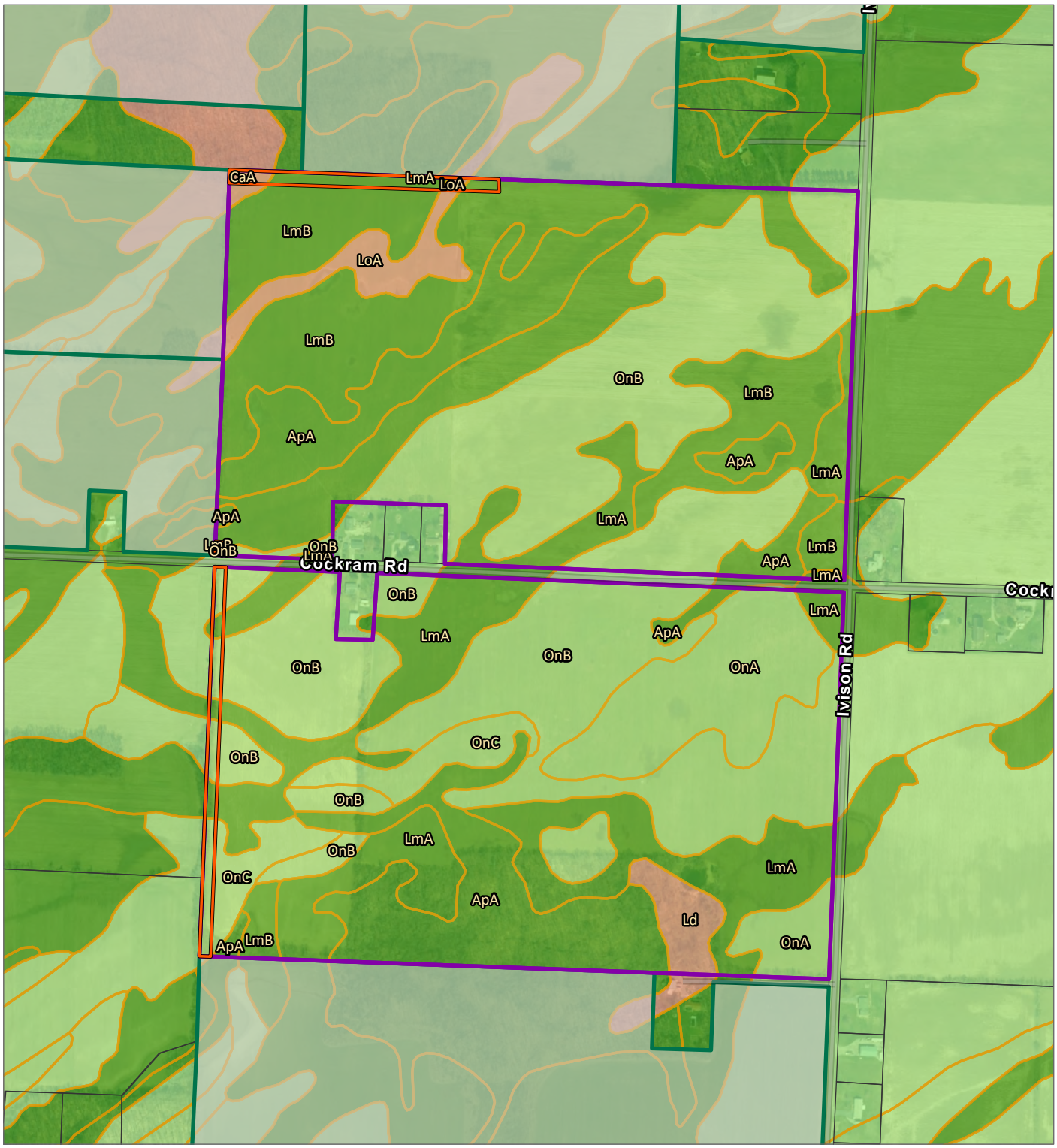

SURVEY AREA BOUNDARY
- SURVEY AREA
- 2024 SUPPLEMENTAL SURVEY PARCEL
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BASE MAP: NAIP IMAGERY
DATA SOURCES: USGS, ESRI, NRCS, TRC, LSR

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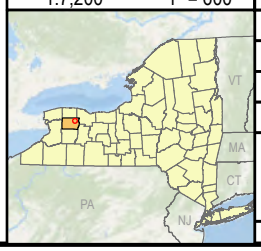
FEET
1:7,200 1" = 600'



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EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 2
SOILS MAP

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APPROVED BY:	J. DICKEY		**PAGE 1.4**
DATE:	FEBRUARY 2025		

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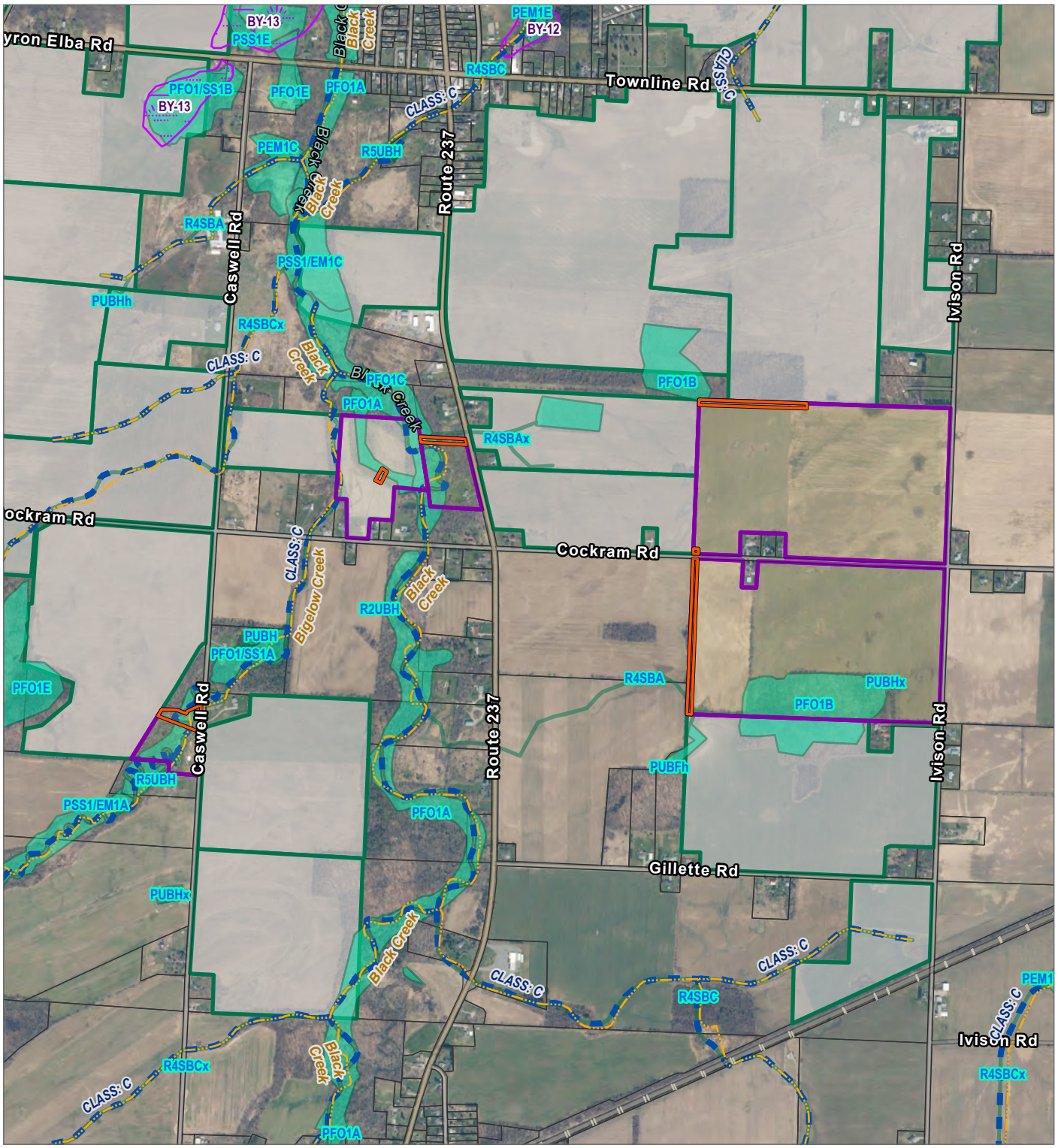

- NHD WATERBODIES
- NYSDEC WATERBODIES
- FEMA 100-YEAR FLOODPLAIN
- NYSDEC WETLANDS
- NWI WETLANDS
- SURVEY AREA
- 2024 SUPPLEMENTAL SURVEY PARCEL
- PROJECT PARCEL
- PARCEL BOUNDARY

BASE MAP: ESRI WORLD IMAGERY SERVICE
DATA SOURCES: ESRI, USGS, USFWS, NYSDEC, FEMA, LSR

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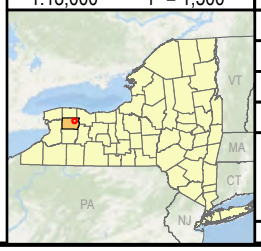
0 750 1,500
FEET
1:18,000 1" = 1,500'



PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 3
FEDERAL & STATE MAPPED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
CHECKED BY:	A. KAILAS		
APPROVED BY:	J. DICKEY		**PAGE 1.1**
DATE:	FEBRUARY 2025		

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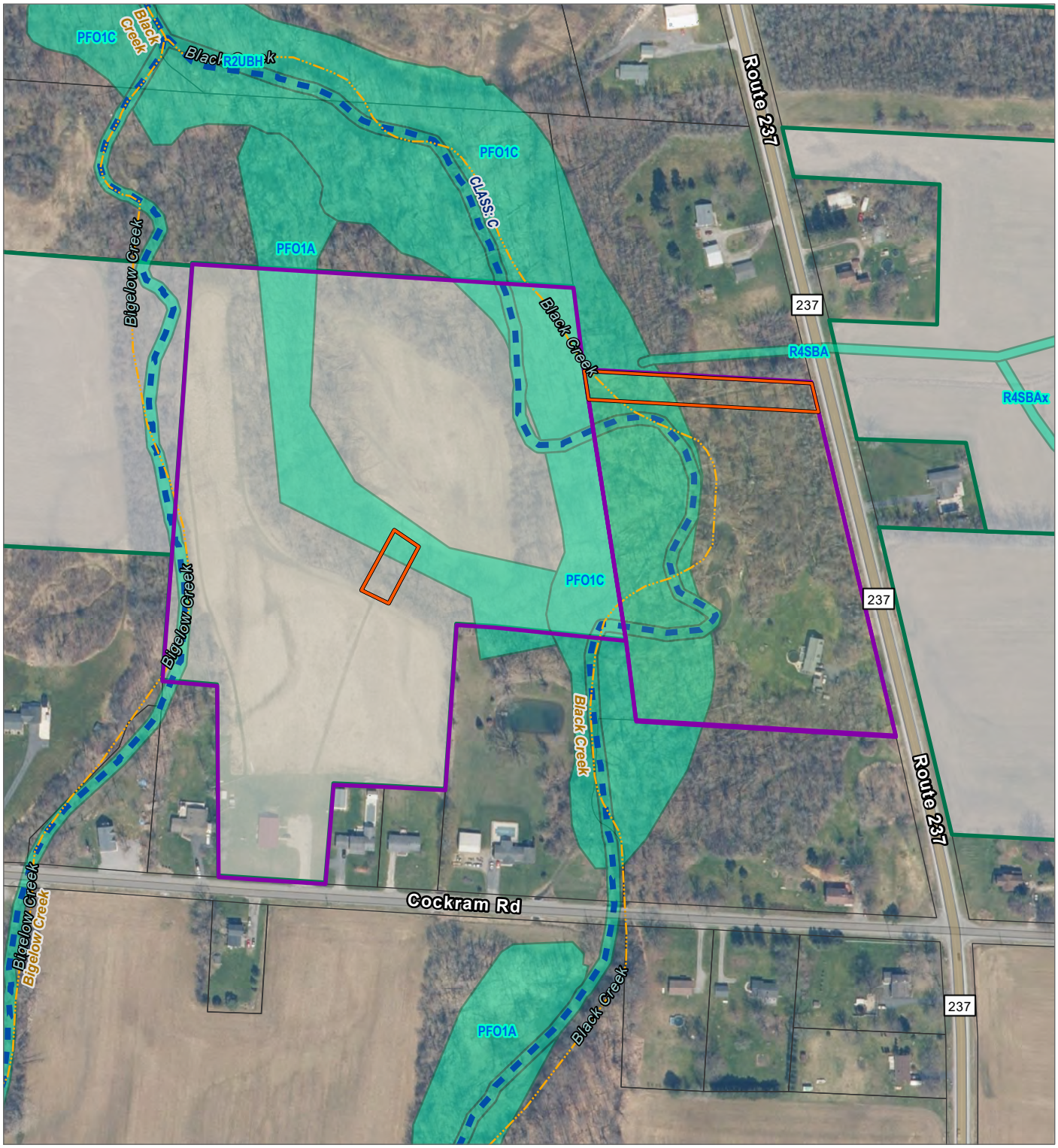
FILE: EXCELSIOR_NEER_2024



NHD WATERBODIES
NYSDEC WATERBODIES
FEMA 100-YEAR FLOODPLAIN
NYSDEC WETLANDS
NWI WETLANDS
SURVEY AREA
2024 SUPPLEMENTAL SURVEY PARCEL
PROJECT PARCEL
PARCEL BOUNDARY

BASE MAP: ESRI WORLD IMAGERY SERVICE
DATA SOURCES: ESRI, USGS, USFWS, NYSDEC, FEMA, LSR

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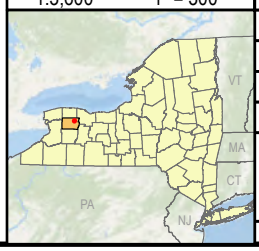

PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 3
FEDERAL & STATE MAPPED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
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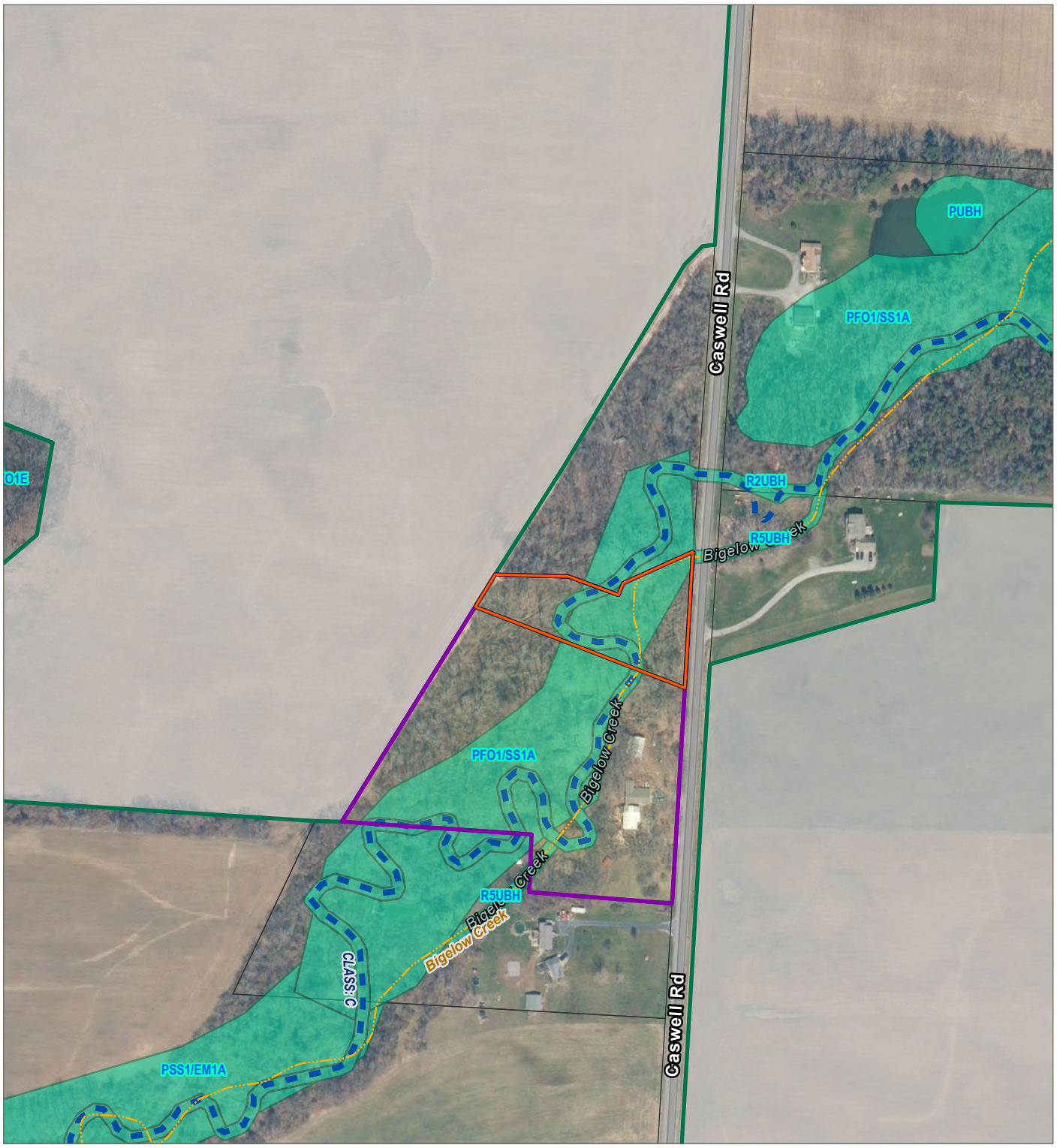

NHD WATERBODIES
NYSDEC WATERBODIES
FEMA 100-YEAR FLOODPLAIN
NYSDEC WETLANDS
NWI WETLANDS
SURVEY AREA
2024 SUPPLEMENTAL SURVEY PARCEL
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N

0 150 300
FEET
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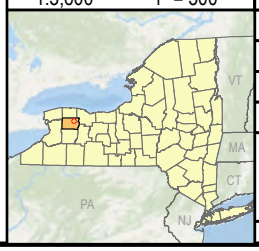

PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 3
FEDERAL & STATE MAPPED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
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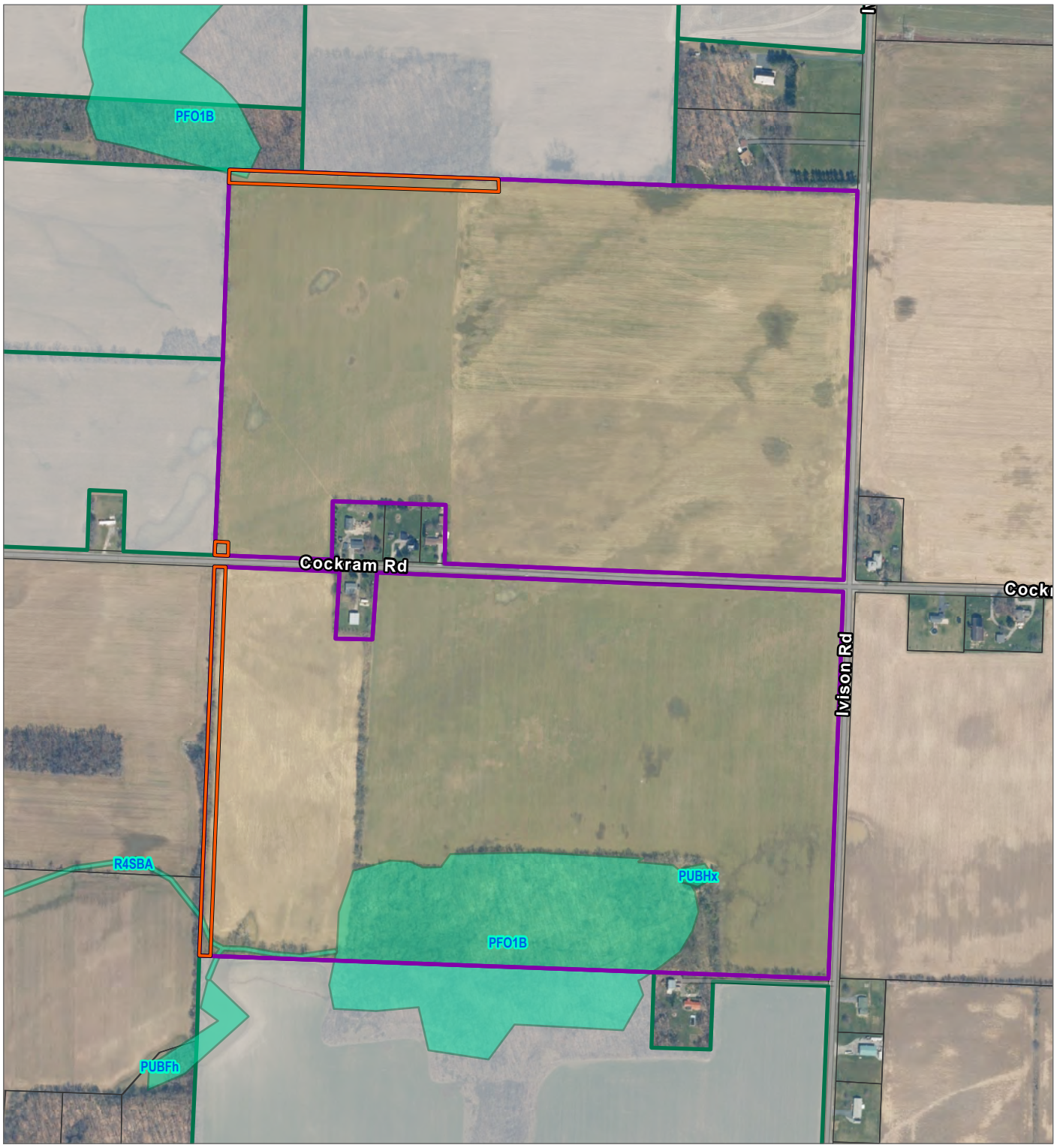

NHD WATERBODIES
NYSDEC WATERBODIES
FEMA 100-YEAR FLOODPLAIN
NYSDEC WETLANDS
NWI WETLANDS
SURVEY AREA
2024 SUPPLEMENTAL SURVEY PARCEL
PROJECT PARCEL
PARCEL BOUNDARY

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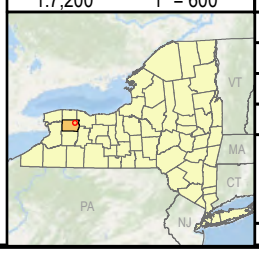
DATA SOURCES: ESRI, USGS, USFWS, NYSDEC, FEMA, LSR

N

0 150 300 450 600
FEET
1:7,200 1" = 600'



PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 3
FEDERAL & STATE MAPPED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
CHECKED BY:	A. KAILAS		
APPROVED BY:	J. DICKEY		**PAGE 1.4**
DATE:	FEBRUARY 2025		

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COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE NEW YORK CENTRAL FIPS 3102 FT US; MAP ROTATION: 0
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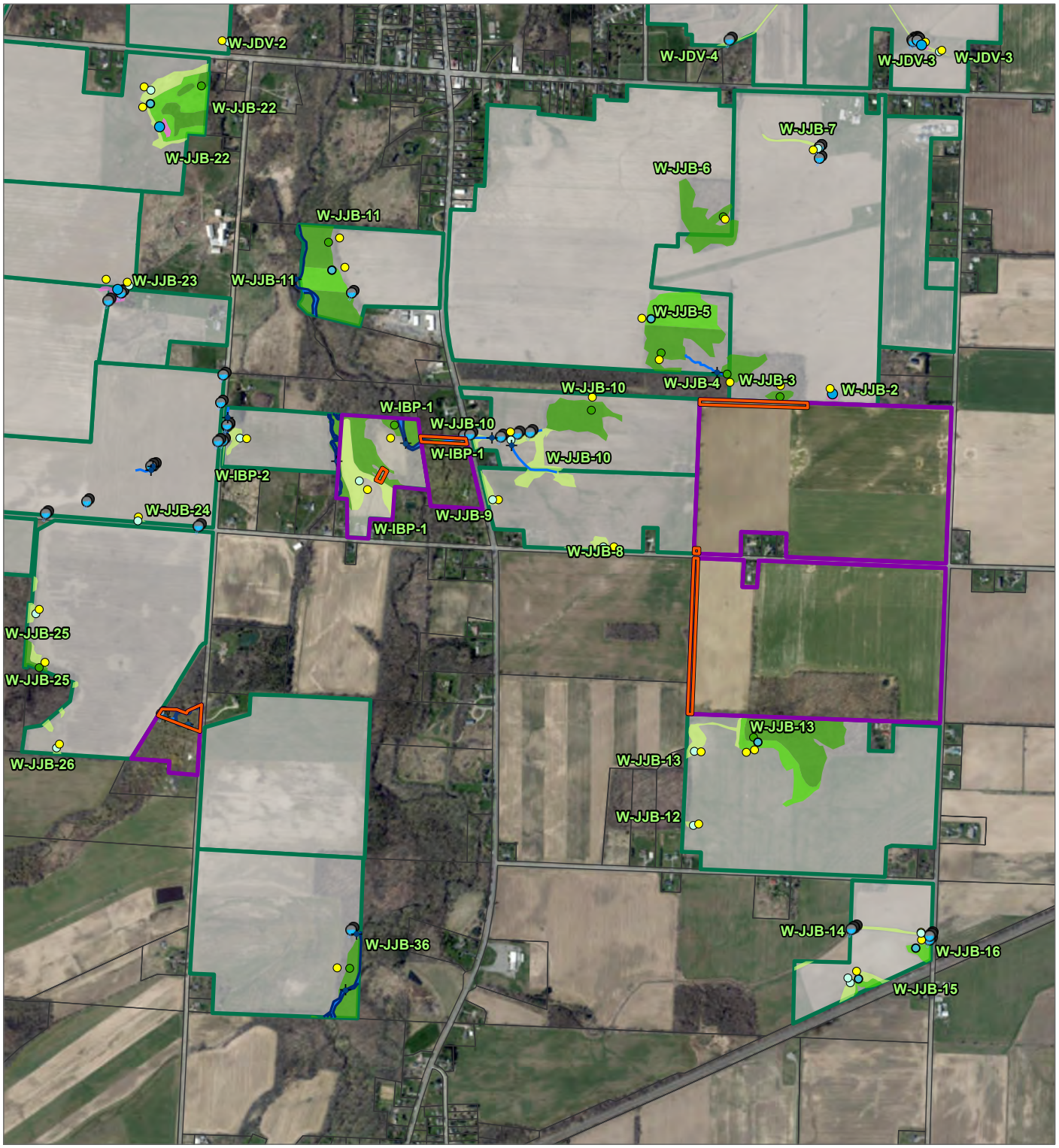

- STREAM PLOT
- USACE PLOT - PEM
- USACE PLOT - PFO
- USACE PLOT - PSS
- USACE PLOT - PUB
- UPLAND PLOT
- CULVERT
- STREAM CENTERLINE
- STREAM BANK/EDGE
- PFO
- PSS
- PEM
- PUB
- SURFACE WATER
- SURVEY AREA
- 2024 SUPPLEMENTAL SURVEY PARCEL
- PROJECT PARCEL
- PARCEL BOUNDARY

BASE MAP: ESRI WORLD IMAGERY SERVICE
DATA SOURCES: USGS, ESRI, TRC

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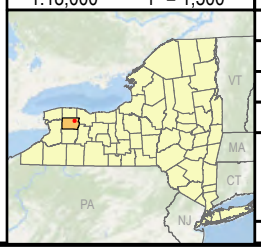

PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 4
DELINEATED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
CHECKED BY:	A. KAILAS		
APPROVED BY:	J. DICKEY		**PAGE 1.1**
DATE:	FEBRUARY 2025		

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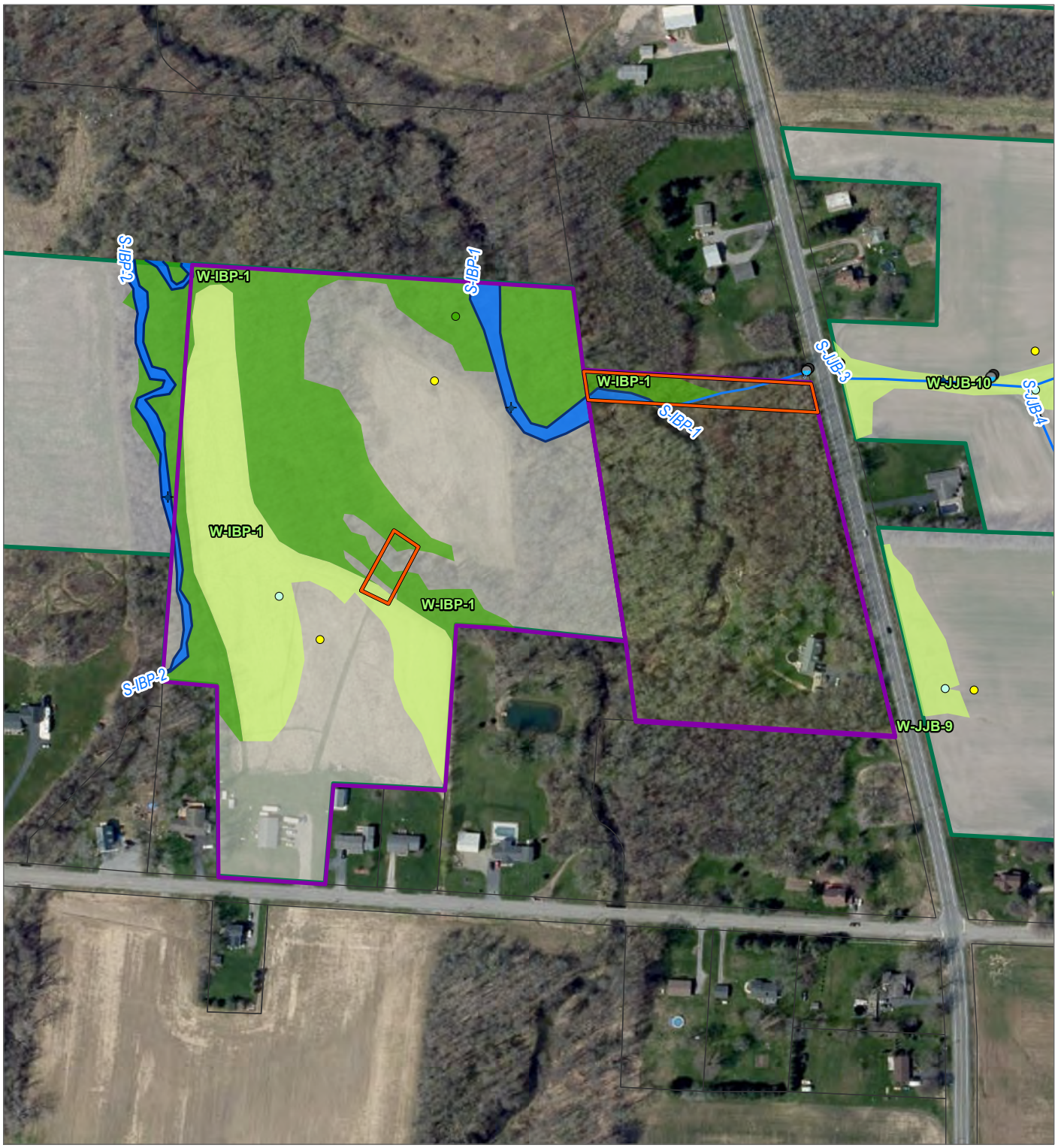

STREAM PLOT
USACE PLOT - PEM
USACE PLOT - PFO
UPLAND PLOT
CULVERT
STREAM CENTERLINE
STREAM BANK/EDGE
PFO
PEM
SURFACE WATER
SURVEY AREA
2024 SUPPLEMENTAL SURVEY PARCEL
PROJECT PARCEL
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BASE MAP: ESRI WORLD IMAGERY SERVICE
DATA SOURCES: USGS, ESRI, TRC

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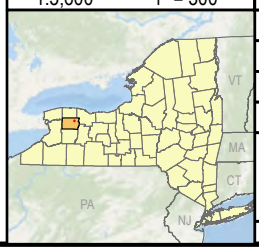
1:3,600 1" = 300'



PROJECT:
EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

TITLE:
FIGURE 4
DELINEATED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
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STREAM PLOT
CULVERT
STREAM CENTERLINE
STREAM BANK/EDGE
PEM
SURFACE WATER
SURVEY AREA
2024 SUPPLEMENTAL SURVEY PARCEL
PROJECT PARCEL
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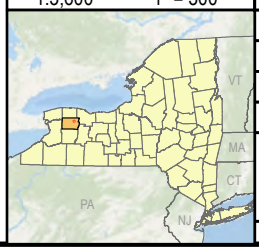

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FIGURE 4
DELINEATED RESOURCES

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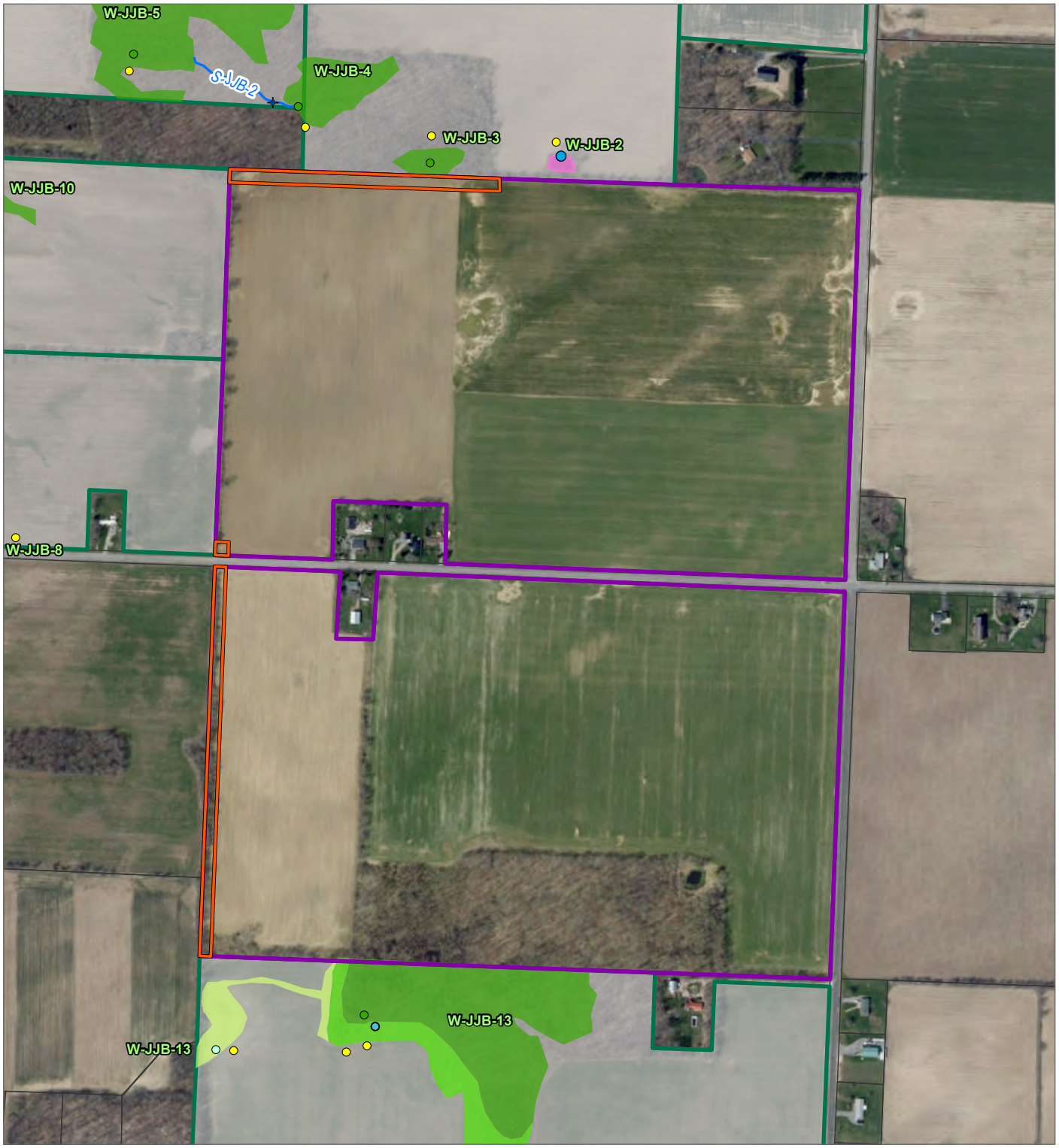

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- USACE PLOT - PSS
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BASE MAP: ESRI WORLD IMAGERY SERVICE
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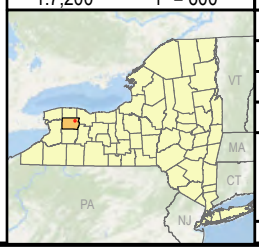
1:7,200 1" = 600'



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EXCELSIOR ENERGY CENTER, LLC
TOWN OF BYRON, GENESEE COUNTY, NY

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FIGURE 4
DELINEATED RESOURCES

DRAWN BY:	J. THOMAS	PROJ. NO.:	328808
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ATTACHMENT B

Photographic Log

Appendix B: Photo Log – Wetland Delineation Report
Excelsior Energy Center

Photograph 1: Upland field in northeast portion of Survey Area, facing east, taken on 11/26/2024.

Photograph 2: Upland field in southeast portion of Survey Area, facing south, taken on 11/26/2024.

Appendix B: Photo Log – Wetland Delineation Report
Excelsior Energy Center

Photograph 3: Upland woods in southwest portion of Survey Area, facing southeast, taken on 11/26/2024.

Photograph 4: PFO wetland W-IBP-01, facing southeast, taken on 11/26/2024.

Photograph 5: PEM/PFO wetland W-IBP-01, facing north, taken on 11/26/2024.

Photograph 6: Downstream of perennial stream S-MWG-1, facing west, taken on 11/26/2024.

Appendix B: Photo Log – Wetland Delineation Report
Excelsior Energy Center

Photograph 7: Downstream of intermittent stream S-JJB-3, facing southwest, taken on 12/3/2024.

Photograph 8: Upstream of perennial stream S-IBP-1, facing northeast, taken on 6/1/2020.

ATTACHMENT C

Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Excelsior **City/County:** Byron, Genesee County **Sampling Date:** 2020-June-01
Applicant/Owner: NextEra **State:** New York **Sampling Point:** W-IBP-01; UPL-1
Investigator(s): Isaac Pallant, Casey Pearce **Section, Township, Range:**
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope (%):** 0-1
Subregion (LRR or MLRA): LRR R **Lat:** 43.0692347 **Long:** -78.0664124 **Datum:** WGS84
Soil Map Unit Name: Fredon gravelly loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ 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 ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)

TRC covertype is UPL. Area is upland, not all three wetland parameters are present. Successional old field

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 ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-01; UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa annua*	85	Yes	FACU
2. *Asclepias syriaca*	65	Yes	UPL
3. *Phalaris arundinacea*	45	Yes	FACW
4. *Solidago canadensis*	20	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	215	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33.3	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	105	x 4 =	420
UPL species	65	x 5 =	325
Column Totals	215	(A)	835 (B)
Prevalence Index = B/A =	3.9		

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 ✓

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

Successional old field

SOIL

Sampling Point: W-IBP-01; UPL-1

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
10 - 16	10YR 4/2	100					Silty Clay Loam	
16 - 20	7.5YR 5/4	100					Sandy Clay Loam	

[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) **(LRR R, MLRA 149B)**
___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
___ 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)

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)**
___ Dark Surface (S7) **(LRR K, L)**
___ 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 (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

Soil Photos

Photo of Sample Plot

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Excelsior **City/County:** Byron, Genesee County **Sampling Date:** 2020-June-01
Applicant/Owner: NextEra **State:** New York **Sampling Point:** W-IBP-01; PFO-1
Investigator(s): Isaac Pallant, Casey Pearce **Section, Township, Range:**
Landform (hillslope, terrace, etc.): Flood Plain **Local relief (concave, convex, none):** Flat **Slope (%):** 0-1
Subregion (LRR or MLRA): LRR R **Lat:** 43.0696578 **Long:** -78.0662023 **Datum:** WGS84
Soil Map Unit Name: Wakeville silt loam **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ 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 ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-01

Remarks: (Explain alternative procedures here or in a separate report)

TRC covertype is PFO. Area is wetland, all three wetland parameters are present. Active floodplain associated with Black Creek

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 _✓_	Depth (inches):		
Water Table Present?	Yes _✓_ No ____	Depth (inches):	18	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	16	

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

Remarks:

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-01; PFO-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	35	Yes	OBL
2. *Acer negundo*	15	Yes	FAC
3. *Crataegus crus-galli*	10	No	FAC
4.			
5.			
6.			
7.			
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Impatiens capensis*	35	Yes	FACW
2. *Symplocarpus foetidus*	15	Yes	OBL
3. *Phalaris arundinacea*	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
1. *Vitis riparia*	5	Yes	FAC
2.			
3.			
4.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	50	x 1 =	50
FACW species	45	x 2 =	90
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	125 (A)		230 (B)

Prevalence Index = B/A = 1.8

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 ____

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

SOIL

Sampling Point: W-IBP-01; PFO-1

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	10YR 3/1	95	10YR 3/6	5	C	M/PL	Mucky Silty Clay Loam	

[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) **(LRR R, MLRA 149B)**
___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
___ 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)

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)**
___ Dark Surface (S7) **(LRR K, L)**
___ 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 (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ____

Remarks:

Hydrology Photos

Soil Photos

Photo of Sample Plot

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Excelsior **City/County:** Byron, Genesee County **Sampling Date:** 2020-June-01
Applicant/Owner: NextEra **State:** New York **Sampling Point:** W-IBP-01; PEM-2
Investigator(s): Isaac Pallant, Casey Pearce **Section, Township, Range:**
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope (%):** 0-1
Subregion (LRR or MLRA): LRR R **Lat:** 43.0678977 **Long:** -78.0673683 **Datum:** WGS84
Soil Map Unit Name: Wakeville silt loam **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ 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 ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-01

Remarks: (Explain alternative procedures here or in a separate report)

TRC covertype is PEM. Area is wetland, all three wetland parameters are present.

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 _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	18

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:

Aerial photography depicts a darker signature (i.e. potential depression or relic scar) at this location, which suggests the potential for this area to be a wetland.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-01; PEM-2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	85	Yes	FACW
2. *Calystegia sepium*	25	No	FAC
3. *Poa pratensis*	20	No	FACU
4. *Galium asprellum*	15	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	145	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	15	x 1 =	15
FACW species	85	x 2 =	170
FAC species	25	x 3 =	75
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals	145	(A)	340 (B)
Prevalence Index = B/A =	2.3		

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 ____

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

Succesional old field; appears to be periodically mowed by; adjacent to residential areas of the parcel.

SOIL

Sampling Point: W-IBP-01; PEM-2

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 4/2	90	10YR 4/4	10	C	M/PL	Silty Clay	

[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) **(LRR R, MLRA 149B)**
___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
___ 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)

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)**
___ Dark Surface (S7) **(LRR K, L)**
___ 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 (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed.

Soil Photos

Photo of Sample Plot

Stream Inventory Data Form

Project Name: Excelsior
Date: 05/31/2019
Project Number: 328808
Evaluated By: JJB
Address:
USGS Quadrangle(s): Byron, NY

Stream Delineation ID: S-JJB-03
Stream Name: N/A
Stream Location
(e.g. nearest road, structure)

Presumed Regulatory Authority
☒ U.S. Army Corps ☐ State
Rationale: INT, NWI

Stream Class
☐ Perennial
☒ Intermittent
☐ Ephemeral
☐ Undetermined

Observed Hydrology
Flow Stage ☐ Dry ☒ Low ☐ Moderate ☐ High ☐ Flood
Flow Direction: West
Average Depth: 2

Width (ft.) across Existing Water: 3
Flood Plain Present? ☐ Yes, Measure Bankfull Width (ft.)
☐ No, Measure Top of Bank Width (ft.): 6
Width (ft.) across Ordinary High Water Mark*: 4

Ordinary High Water Mark Indicators
☐ Natural Line Impressed on Bank ☐ Scour ☐ Wrack
☐ Matted, bent, or Absent Vegetation ☐ Water Staining
☒ Soil Character Change ☐ Shelving
☐ Terrestrial Vegetation Destroyed ☐ Bed & Banks
☐ Disturbed/Washed-away Leaf Litter ☐ Litter & Debris
☐ Plant Community Change ☐ Sediment Sorting
☐ Multiple Observed Flow Events ☐ Deposition

Streambed Substrate
☐ Shale ☐ Sand
☐ Bedrock ☐ Organic
☐ Boulders ☐ Cobble/Gravel
☒ Silt ☒ Clay
☐ Other

Channel Gradient
☒ <2% (<1°) Gentle
☐ 2 - 4% (1 - 2°) Moderate
☐ 4 - 10% (2 - 6°) Steep
☐ >10% (>6°) Very Steep

Observed Use
☐ Boating ☐ Shellfishing ☐ Swimming ☐ Irrigation
☐ Fishing ☒ Drainage ☐ Drinking ☐ Aquaculture
☐ Other: Ditch

Water Quality
☐ Clear ☐ Turbid ☒ Slightly Turbid ☐ Very Turbid
Comments:

Bank Slope

	Left*	Right*
0 - 8% (0 - 5°) Nearly Level - Gently Sloping		
8 - 15% (5 - 9°) Moderately Sloping		
15 - 25% (9 - 14°) Steeply Sloping	☒	☒
25 - 35% (14 - 20°) Steep		
>35% (>20°) Very Steep		

Bank Height (ft.)
Left*: 3
Right*: 3
** Direction when facing downstream*

Bank Erosion Potential

	Left*	Right*
Low		
Moderate		
High	☒	☒

Bank Substrate
☐ Shale ☐ Gravel ☒ Silt/Clay ☐ Cobble
☐ Bedrock ☐ Sand ☐ Riprap ☐ Organic
☐ Other: recently dug
Comments:

Aquatic Habitat
☐ Aquatic Vegetation ☐ Mud Bar
☐ Overhanging Vegetation ☐ Sand Bar
☐ Undercut Banks ☐ Riffle - Pool
☐ Gravel Bar ☐ Plunge Pools
☐ Other

Estimated Canopy Closure
☒ 0 - 10% ☐ 50 - 60%
☐ 10 - 20% ☐ 60 - 70%
☐ 20 - 30% ☐ 70 - 80%
☐ 30 - 40% ☐ 80 - 90%
☐ 40 - 50% ☐ 90 - 100%

Stream Inventory Data Form

Stream Delineation ID S-JJB-15

Adjacent Community Type	Ag Field		
Percent Cover		Dominant Species	
Trees			
Shrubs			
Herbaceous	5	Cattail	
Woody Vines			
Bare Soil/Rock		*Type*	
Impervious		*Type*	

Observed Fauna

☐ Waterfowl	☐ Fish	☐ Salamanders	☐ Mink	☐ Other
☐ Snakes	☐Frogs	☐ Beaver	☐ Otter	
☐ Turtles	☐ Toads	☐ Muskrat	☐ Invertebrates	

Presence of Rare, Threatened, or Endangered Species

☒ No ☐ Yes *Species & Evidence*

☐ Undetermined

Notes (include weather, site access issues, culverts, etc.)

Recently dug drainage ditch in active ag field mapped on NWI, fringed by PEM portion of W-JJB-10, S-JJB-04 (also NWI ditch) flows into feature.

Sketch (Optional)