Wetland and Waterbodies Delineation Report

for

RIPLEY INTERSTATE DEVELOPMENT PROJECT

Town of Ripley

Chautauqua County, New York

for

Chautauqua County Industrial Development Agency

EARTH DIMENSIONS, INC.

Soils Investigations • Wetland Delineations

November 30, 2021
EDI Project Code: **W32K07f**

REPORT SUMMARIZING
THE RESULTS OF
A WETLAND DELINEATION SURVEY OF

RIPLEY INTERSTATE DEVELOPMENT PROJECT

Prepared for Submission to:

U.S. ARMY CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207

Prepared By:

EARTH DIMENSIONS, INC.
1091 JAMISON ROAD
ELMA, NEW YORK 14059

Prepared For:

CHAUTAUQUA COUNTY INDEUSTRIAL DEVELOPMENT AGENCY
BWB CENTER, 201 WEST THIRD STREET, SUITE 115
JAMESTOWN, NEW YORK 14701

REPORT DATE: November 30, 2021

EDI PROJECT CODE: W32K07f

PROJECT INFORMATION

Project Name	Ripley Interstate Development Project
Street Address	Shortman Road, West Main Road & I-90 East Bound Lane
SBL Numbers	240.00-2-2-21, 240.00-2-22, 240.00-2-26. 240.00-2-27, 240.00-2-32, 240.00-2-31, 240.00-2-34, 240.00-2-36
Town	Ripley
County	Chautauqua
State	New York
Latitude/Longitude (NAD83)	42.26185°N, 79.73576°W
Investigation Area	177.55± Acres
USGS 7.5 Minute Topographical Map	Ripley Quadrangle
Waterway	Unnamed tributary to Lake Erie
Hydrologic Unit Code	04120101
Date of Delineation	October 18 & November 9, 2021
Consultant	Earth Dimensions, Inc. 1091 Jamison Road Elma, New York 14059
Point of Contact	Scott Livingstone (716)655-1717 slivingstone@earthdimensions.com
Engineer	NA
Property Owner	Cochrane Farms, Inc., Knight Family LLC & Regal Warehouse Properties, LLC
Authority	Section 404
Permit/Letter Being Requested	Jurisdictional Determination

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Chautauqua County Industrial Development Agency (CCIDA) has proposed the development of 177.55± acres consisting of several parcels located along the north side of West Main Road (U.S. Route 20) and east of Shortman Road in the Town of Ripley, County of Chautauqua, and State of New York. CCIDA has retained Earth Dimensions, Inc. (EDI) to complete a wetland delineation report that would allow the U.S. Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) to determine their jurisdictional authority over the investigation area, pursuant to Section 404 of the Clean Water Act and Articles 15 (Protection of Waters) and 24 (Freshwater Wetlands) of the New York State Environmental Conservation Law.

A preliminary review of available information pertaining to vegetation, soils, and hydrology in the project area was implemented prior to conducting a field investigation at the site. Sources of information included the United States Geological Survey (USGS), Natural Resources Conservation Service (NRCS), National Wetland Inventory (NWI), and NYSDEC Freshwater Wetland maps. The USGS, NRCS and NWI maps indicate the potential for wetlands under federal jurisdiction.

EDI applied methodology specified by the Corps of Engineers Wetlands Delineation Manual (January 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012) to perform a delineation of Federal jurisdictional wetlands within the site. EDI identified nine (9) wetland areas totaling 8.222± acres within the investigation area. The identification number of the wetlands, their acreage and boundary flags are as follows:

TABLE 1: WETLAND SUMMARY

Wetland Identification #	Geographic Center (NAD83)		Boundary Flag #	Total Acreage On-site	Wetland Type (Cowardin)	Wetland Type (Reschke)	Jurisdictional Determination
	Latitude	Longitude					
Wetland 1	42.26179	79.73022	W1-1 through W1-66	7.538±	PEM	Shallow Emergent Marsh	Jurisdictional
Wetland 2	42.26458	79.73565	W2-1 through W2-5	0.035±	PFO	Hardwood Swamp	Jurisdictional
Wetland 3	42.26482	79.73577	W3-1 through W3-8	0.115±	PFO	Hardwood Swamp	Jurisdictional
Wetland 4	42.26479	79.73513	W4-1 through W4-7	0.080±	PEM	Shallow Emergent Marsh	Jurisdictional

Wetland 5	42.26541	79.73559	W5-1 through W5-4	0.032±	PEM	Shallow Emergent Marsh	Jurisdictional
Wetland 6	42.26363	79.73960	W6-1 through W6-8	0.056±	PEM	Shallow Emergent Marsh	Jurisdictional
Wetland 7	42.26215	79.73711	W7-1 through W7-12	0.167±	PEM	Shallow Emergent Marsh	Jurisdictional
Wetland 8	42.25924	79.73804	W8-1 through W8-4	0.031±	PEM	Shallow Emergent Marsh	Non-Jurisdictional
Wetland 9	42.25931	79.73928	W9-1 through W9-5	0.168±	PEM	Wet Meadow	Non-Jurisdictional
Total Wetland Acreage:				8.222±			

TABLE 2: STREAM & DRAINAGE SUMMARY

Stream Identification #	Waterway	DEC Class	Linear Feet On-site	Highwater Width (Ft)	Flow Regime	Substrate	Classification (Cowardin)	Jurisdictional Determination
Stream Complex 1	UNT to Lake Erie	NA	1318.7 feet	4 to 6	Intermittent	Organic, silt	R5UBH	Jurisdictional
Stream 2	UNT to Lake Erie	C	2224.2 feet	4 to 6	Intermittent	Organic, silt	R5UBH	Jurisdictional
Stream Complex 3	UNT to Lake Erie	NA	805.8 feet	6 to 10	Intermittent	Organic, silt	R5UBH	Jurisdictional

TABLE 3: WATERBODY SUMMARY

Identification #	Flag #	Geographic Center (NAD83)		Acreage On-site	Classification (Cowardin)	Type (Reschke)	Jurisdictional Determination
		Latitude	Longitude				
Pond 1	NA	42.25923	79.73853	0.233±	POW	Farm Pond	Non-Jurisdictional

SECTION I: INTRODUCTION

CCIDA has proposed the development of 177.55± acres, consisting of several parcels on the east side of Shortman Road, north of West Main Road (U.S. Route 20) in the Town of Ripley, County of Chautauqua, and State of New York. The project has been given the name Ripley Interstate Development Project and is located on USGS 7.5 minute quadrangle map indexed as Ripley (Figure 1). The field work was completed on October 18 & November 9, 2021 using a handheld Garmin GPSmap 62s to locate wetland and drainage boundaries.

CCIDA has retained Earth Dimensions, Inc. (EDI) to complete a wetland delineation study at this site. The investigation was designed to facilitate a determination of the extent of USACE and NYSDEC jurisdiction over the project area pursuant to Section 404 of the Clean Water Act and Articles 15 (Protection of Waters) and 24 (Freshwater Wetlands) of the New York State Environmental Conservation Law.

EDI has performed a wetland delineation study at the site under guidelines specified by the *Corps of Engineers Wetlands Delineation Manual*, dated January 1987 (referred to hereafter as the Corps Manual) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region version 2.0* (January 2012) (referred to hereafter as the Northcentral and Northeast Regional Supplement). The purpose of this report is to present EDI's methods, results, conclusions and recommendations with respect to the Ripley Interstate Development Project site.

SECTION II: SITE DESCRIPTION

The Ripley Interstate Development Project area is comprised of a 177.55± acre irregular shaped investigation area on the north side of West Main Road (U.S. Route 20) and on the east side of Shortman Road which is outlined on Figure 1 and depicted on the Wetland Delineation Map included in Appendix A (Figure 6).

The natural topography of the Ripley Interstate Development Project site is flat to gently sloping. The upland within the investigation area consisted of successional shrubland (hedgerows), successional old field, agricultural field (vineyard and row crops/corn) communities. The wetland areas were found to consist of shallow emergent marsh and hardwood swamp communities. The vegetative communities of the investigation area are described according to *Ecological Communities of New York State* (Edinger et al. 2014).

SECTION III: PRELIMINARY DATA REVIEW

A. SUMMARY OF FINDINGS

Several sources of information may be reviewed to facilitate the completion of a wetland delineation study. In some cases, it is even possible to make a preliminary office wetland determination based upon available vegetation, soils, and hydrologic information for a project area. EDI completed a preliminary review of several data sources at the onset of this study. The results of the review are summarized as follows:

1. USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Figure 1 depicts the Ripley Interstate Development Project site on the Ripley quadrangle map. The figure depicts the flat to gently sloping topography of the site. A tributary to Lake Erie flows through the investigation area.

2. USFWS NATIONAL WETLANDS INVENTORY MAP

The National Wetlands Inventory (NWI) map obtained from the USFWS Wetland Mapper http://www.fws.gov/wetlands/Data/Mapper.html displays no wetlands and one (1) stream type, R5UBH within the investigation area. The stream can be decoded as:
[R] Riverine, [5] Unknown Perennial, [UB] Unconsolidated Bottom, [H] Permanently flooded

3. NATURAL RESOURCES CONSERVATION SERVICE SOILS MAP

Figure 3 presents the project area outlined on a copy of the Chautauqua County Soil Survey map from the National Cooperative Soil Survey. As shown on that figure, the site has the following soil types:

Soil Conservation Service Legend

Map Unit Symbol	Map Unit Name	Hydric Rating
Cb	Canandaigua silt loam, loamy substratum	96
CnB	Chenango gravelly loam, 3 to 8 percent slopes	0
CnC	Chenango gravelly loam, 8 to 15 percent slopes	0
DaA	Dalton silt loam, 0 to 3% slopes	4
Fe	Fluvaquents-Udifluvents complex, frequently flooded	60

Mn	Minoa fine sandy loam	15
NgA	Niagara silt loam, 0 to 3% slopes, loamy substratum	4
RaA	Raynham silt loam, 0 to 3% slopes	5
SoB	Scio silt loam, 0 to 3% slopes	0
Sw	Swormville silt loam	8
W	water	0

Canandaigua: The Canandaigua series consists of very deep, poorly and very poorly drained soils formed in silty glacio-lacustrine sediments. These soils are on lowland lake plains and in depressional areas on glaciated uplands. Slope ranges from 0 to 3 percent. Mean annual temperature is 49 degrees F. and mean annual precipitation is 39 inches.

Chenango: The Chenango series consists of very deep, well and somewhat excessively drained soils formed in water-sorted material on outwash plains, kames, eskers, terraces, and alluvial fans. Slope ranges from 0 through 60 percent. Mean annual temperature is 47 degrees F, and mean annual precipitation is 36 inches.

Dalton: The Dalton series consists of very deep, somewhat poorly drained soils that are mainly along lower valley sides. These soils formed in loamy till that has a silty mantle. A dense fragipan layer starts at a depth of 12 to 22 inches below the soil surface. Permeability is moderate above the fragipan, and slow or very slow in the fragipan and substratum. Slope ranges from 0 to 15 percent. The mean annual air temperature is 48 degrees F., and mean annual precipitation is 38 inches.

Fluvaquents-Udifluvents: very poorly drained areas of unconsolidated alluvium, generally stratified and varying widely in texture and drainage over short distances. The alluvium has been recently deposited by streams and is subject to frequent changes through stream overflow.

Minoa: The Minoa series consists of very deep, somewhat poorly drained soils formed in deltaic sediments. They are nearly level or gently sloping soils on lowland lake plains. Permeability is moderate in the solum, and moderate or moderately rapid in the substratum. Slope ranges from 0 to 8 percent, mean annual temperature is about 49 degrees F., and mean annual precipitation is about 39 inches.

Niagara: The Niagara series consists of very deep, somewhat poorly drained soils formed in silty glacio-lacustrine deposits. These soils are in level to slightly concave areas on lake plains and in valleys. Slope ranges from 0 to 15 percent. The mean annual air temperature is 48°F and mean annual precipitation is 37 inches.

Raynham: The Raynham series consists of very deep, poorly drained soils that formed in silty estuarine or glaciolacustrine deposits on glacial lake plains and marine terraces. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the substratum. Slope ranges from 0 through 12 percent. Mean annual precipitation is about 34 inches and mean annual temperature is about 48°F.

Scio: The Scio series consists of very deep, moderately well drained soils formed in eolian, lacustrine, or alluvial sediments dominated by silt and very fine sand. They are on terraces, old alluvial fans, lake plains, outwash plains and lakebeds. Saturated hydraulic conductivity is moderately high or high to a depth of 100 centimeters and ranges from moderately low through very high below 100 centimeters. Slope ranges from 0 through 25 percent. Mean annual temperature is 9 degrees C., and mean annual precipitation is 940 millimeters.

Swormville: The Swormville series consists of very deep, somewhat poorly drained soils formed in silty glacio-lacustrine sediments overlying sandy glacio-lacustrine deposits. These soils are in moderately low areas on lake plains. Permeability is moderately slow or slow in the surface layer and upper part of the subsoil and moderately rapid in the underlying horizons. Slope ranges from 0 to 3 percent. Mean annual temperature is 49°F and mean annual precipitation is 38 inches.

The U.S. Department of Agriculture's National Technical Committee for Hydric Soils Criteria has developed a list of soils that often display hydric soil characteristics. Hydric soil typically forms in places of the landscape where surface water periodically collects for some time and/or where groundwater discharges sufficient to create waterlogged or anaerobic soils. Such anaerobic soils can support the growth and survival of hydrophytic vegetation that is tolerant of such conditions. The Hydric Rating indicates the proportion of map units that meets the criteria for hydric soils. Soil units are designated as "hydric," "predominantly hydric," "partially hydric," "predominantly nonhydric," or "nonhydric" depending on the hydric rating of its respective components. "Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly nonhydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Nonhydric" means that none of the components are rated as hydric. Wetland hydrologic conditions, hydric soils, and hydrophytic vegetation are the three criteria of a wetland.

4. NYSDEC FRESHWATER WETLANDS MAP

The NYSDEC Freshwater Wetlands map obtained from the online NYSDEC Environmental Resource Mapper displays no state jurisdictional Freshwater Wetland within or adjacent to the investigation area.

B. RESULTS OF AGENCY INFORMATION REVIEW

The preliminary data review revealed that the Corps may have jurisdiction over wetlands at the project location. The evidence consisted of potential federally regulated stream on the NWI map (Figure 2) and hydric soils and soils with possible inclusions depicted within the project area as shown on the NRCS map (Figure 3). Therefore, it was considered necessary to perform a field investigation at the site in order to determine the presence of federal and state protected wetlands. The methods specified in the Corps of Engineers Wetlands Delineation Manual (January 1987) and Northcentral and Northeast Regional Supplement Version 2.0 (January 2012) were employed during the field investigation. Procedures, results, and conclusions of the wetland delineation study are presented in the remainder of this report.

SECTION IV: FIELD INVESTIGATION PROCEDURES

WETLANDS:

Step 1

EDI applied methodology specified by the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region to perform a delineation of Federal jurisdictional wetlands within the site. EDI used the Level 2 Routine Determination method (on-site inspection necessary) since insufficient information was available for making a determination for the entire project area. This methodology is consistent with Part IV, Section D of the Corps Manual.

Step 2

EDI's initial evaluation of the project area revealed that no atypical situations existed. If an atypical situation had existed, EDI would have used methodology outlined in Part IV, Section F of the Corps manual and/or Section 5 of the Northcentral and Northeast Supplement.

Step 3

EDI made the determination that normal environmental conditions were present, as the area was not lacking hydrophytic vegetation or hydrologic indicators due to annual, seasonal or long-term fluctuations in precipitation, surface water, or groundwater levels. The Northcentral and Northeast Supplement defines the growing season as beginning when one of the following indicators of biological activity are evident in a given year: (1) above-ground growth and development of vascular plants and/or (2) soil temperature measured at 12" below ground surface reaches 41ºF. The end of the growing season is defined as the point at which deciduous species lose their leaves or the last herbaceous plants cease flowering and their leaves become dry or brown, whichever comes latest.

Step 4

In order to accurately identify the limits of various vegetative communities and extent of wetlands on-site, a routine determination method was used. As depicted in Appendix A and included in Appendix B, thirteen (13) data points were used to characterize the site.

Step 5

The plant community inhabiting each observation point was characterized in accordance with methods specified in the Northcentral and Northeast Regional Supplement. Dominant plant species were identified within four vegetative strata (i.e. herb, sapling/shrub, tree and liana (woody vines) at each sampling point. The Northcentral and Northeast Regional Supplement defines the vegetative strata in the following manner:

Herb – A non-woody individual of a macrophytic species. Seedlings of woody plants (including vines) that are less than 3.28 feet in height are considered to be herbs.

Sapling/Shrub – A layer of vegetation composed of woody plants < 3.0 inches in diameter at breast height but greater than 3.28 feet in height, exclusive of woody vines.

Tree – A woody plant > 3.0 inches in diameter at breast height, regardless of height (exclusive of woody vines)

Liana – A layer of vegetation in forested plant communities that consist of woody vines greater than 3.28 feet in height.

As outlined in the manual, the quadrant sizes used for the vegetative strata were (i) a 3.28-foot radius for herbs; (ii) a ten-foot radius for saplings/shrubs and woody vines; and (iii) a 30-foot radius for trees. Dominant plant species were estimated using aerial coverage methods. Dominant species are defined in the Corps Manual as the most abundant plant species that when ranked in descending order of abundance and cumulatively totaled immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure.

The wetland indicator status (OBL, FACW, FAC, FACU, or UPL) listed for each identified species by the U.S. Fish and Wildlife Service in the National List of Plant Species that Occur in Wetlands: Northeast (Region 1) was recorded. The U.S. Fish and Wildlife wetland indicator status listings are defined as follows:

OBL – Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability < 1 percent) in nonwetlands.

FACW – Plants that occur usually (estimated probability >67 percent to 99 percent) in wetlands, but also occur (estimated probability 1 percent to 33 percent) in nonwetlands.

FAC – Plants with a similar likelihood (estimated probability 33 percent to 67 percent) of occurring in both wetlands and nonwetlands.

FACU – Plants that occur sometimes (estimated probability 1 percent to <33 percent) in wetlands but occur more often (estimated probability >67 percent to 99 percent) in nonwetlands.

UPL – Plants that occur rarely (estimated probability < 1 percent) in wetlands but occur almost always (estimated probability >99 percent) in nonwetlands under natural conditions.

The plant community data was summarized on the data forms provided in the Northcentral and Northeast Regional Supplement included in this report as Appendix B.

Step 6

Plant data from each observation point were tested against the hydrophytic vegetation criterion specified in the Corps Manual and Northcentral and Northeast Regional Supplement. The Northcentral and Northeast Regional Supplement identifies a four-tiered approach for making a determination of whether or not the hydrophytic vegetation criteria is met for a sample plot. Indicator 1 (Rapid Test for Hydrophytic Vegetation) was first applied to determine if all dominant species across all strata are rated OBL and/or FACW. If Indicator 1 did not meet the hydrophytic vegetation criteria, Indicator 2 was then applied (dominance test); if greater than 50% of all plant species across all strata were rated OBL, FACW, or FAC, the hydrophytic vegetation criteria was considered met. In rare cases, when Indicators 1 and 2 did not meet the hydrophytic vegetation criteria but soils and hydrology criteria were met, Indicators 3 (Prevalence Index) and 4 (Morphological Adaptations) were used to make a final determination. All observation points that met the hydrophytic vegetation criterion were considered potential wetlands. Soils were then characterized.

Step 7

The Corps Manual specifies that soils need not be characterized (and are assumed hydric soils) at sampling points meeting the hydrophytic vegetation criterion if: (i) all dominant plant species have an indicator status of OBL, or (ii) all dominant species have an indicator status of OBL and/or FACW, and the wetland boundary is abrupt (at least one dominant OBL species must be present). All observation points sampled during this field investigation were examined directly for soil and hydrologic characteristics.

Step 8

At observation points requiring a soil evaluation, soil borings were performed by an EDI Soil Scientist using methods specified in the Northcentral and Northeast Regional Supplement. Soil pits were dug using a tile spade. Testpits were generally dug to a depth of 20 inches below ground surface. Soils were examined for any of the hydric soil indicators, as outlined in the Field Indicators of Hydric Soils in the United States. A determination was made as to whether or not the hydric soil criterion was met. Soils data was recorded on the data forms included in Appendix B of this report.

Step 9

EDI's Soil Scientist examined hydrologic indicators using methods specified by the Northcentral and Northeast Regional Supplement at each observation point. The wetland hydrology criterion was met if: (i) one or more primary field indicators was materially present, (ii) available hydrologic records provided necessary evidence, or (iii) two or more secondary indicators were present. Results were recorded on data forms taken from the Corps Manual and are included in this report as Appendix B.

Step 10

A wetland determination was made for every observation point. If a sample plot met the hydrophytic vegetation, hydric soil, and wetland hydrology criteria, the area was considered to be wetland.

Step 11

Based on the results of the transected data, wetland boundaries were established for each identified wetland using survey ribbon labeled “wetland delineation” and numbered consecutively along each wetland boundary. As outlined in the Corps Manual, the placement of flags was based on the limits of areas where all three parameters were met. Wetland flags were labeled W1-1 through W1-66, W2-1 through W2-5, W3-1 through W3-8, W4-1 through W4-7, W5-1 through W5-4, W6-1 through W6-8, W7-1 through W7-12, W8-1 through W8-4 and W9-1 through W9-5.

STREAMS & DRAINAGES:

The federally regulated Ordinary High Water (OHW) mark of streams within the Project

area were delineated utilizing the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328, and the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary High Water Mark Identification. Each stream is categorized in regard to its flow regime as perennial, intermittent, or ephemeral, as defined by the USACE. The Ordinary High Water (OHW) mark for each stream is surveyed using the handheld Garmin GPSmap 62s. Each stream is assigned a letter designation, and survey points are numbered consecutively. Substrate characteristics and water depth are noted. Streams classified as AA, A, B, C, C(t), C(ts) and D in the State of New York are regulated by NYSDEC under Article 15 Use and Protection of Waters. Streams are given classifications which designate the level of protection afforded to each waterbody. Class AA and A are assigned to sources of drinking water. Class B streams are best suited for swimming and other contact recreation, but not drinking water. Class C streams identify waters that support fishing and non-contact activities. A classification with (t) designated a stream with the potential to support trout populations. A classification of (ts) identifies waters that may support trout spawning. Class D waters are the lowest classification and are often highly imperiled.

SECTION V: RESULTS AND CONCLUSIONS

Earth Dimensions, Inc. (EDI) has completed a wetland delineation study at the Ripley Interstate Development Project site located in the Town of Ripley, County of Chautauqua, and State of New York. A field investigation was conducted by a Soil Scientist and a Wetland Ecologist from EDI. The wetland delineation study identified nine (9) wetlands totaling 8.222± acres present within the Ripley Interstate Development Project site. In addition, three (3) streams and one (1) pond were identified within the investigation area.

Figure 5 depicts the vegetative communities as they existed at the time of the investigation. The uplands within the investigation area were comprised of successional shrubland (hedgerows), successional old field, agricultural field (vineyard and row crops/corn) communities. The wetland areas were found to consist of shallow emergent marsh and hardwood swamp communities. The vegetative communities of the investigation area are described according to Ecological Communities of New York State (Edinger et al. 2014).

The successional shrubland (mostly hedgerows) community was dominated by the following species: staghorn sumac (*Rhus typhina),* climbing nightshade (*Solanum dulcamara),* common black raspberry (*Rubus occidentalis),* yellow foxtail (*Setaria pumila),* common burdock (*Arctium minus),* wrinkled goldenrod (*Solidago rugosa),* summer grape (*Vitis aestivalis),* common pear (*Pyrus communis),* grey dogwood (*Cornus racemosa),* Allegheny blackberry (*Rubus allegheniensis),* silky dogwood (*Cornus amomum),* flat topped goldenrod (*Euthamia graminifolia),* timothy (*Phleum pratensis),* Canada goldenrod (*Solidago canadensis),* reed canary grass (*Phalaris arundinacea),* hedge bindweed (*Convolvulus sepium),* common wild onion (*Allium canadense),* multiflora rose (*Rosa multiflora),* calico aster (*Symphyotrichum lateriflorum*), Queen Anne's lace (*Daucus carota*), tatarian honeysuckle (*Lonicera tatarica*), frost aster (*Symphyotrichum pilosum*) and annual wormweed (*Artemisia annua).*

The successional old field community also included edges of vineyard and agricultural fields (corn). This community was dominated by the following species: yellow foxtail (*Setaria pumila),* red clover (*Trifolium pratense),* calico aster (*Symphyotrichum lateriflorum*), orchard grass (*Dactylis glomerata),* climbing nightshade (*Solanum dulcamara),* common black raspberry (*Rubus occidentalis),* common ragweed (*Ambrosia artemisifolia),* hybrid clover (*Trifolium hybridum),* black mustard

(*Brassica nigra),* English plantain (*Plantago lanceolata),* large leaf plantain (*Plantago major),* common dandelion (*Taraxacum officinale),* corn (*Zea mays),* rye grass (*Lolium perenne),* red fescue (*Festuca rubra),* daisy fleabane (*Erigeron philadelphicus),* frost aster (*Symphyotrichum pilosum*), American burnweed (*Erecthites hieracifolia),* Canada goldenrod (*Solidago canadensis),* Queen Anne's lace (*Daucus carota*) and curly dock (*Rumex crispus).*

Wetland W1 is a 7.538± acre shallow emergent marsh dominated by narrow leaf cattail (*Typha angustifolia),* reed canary grass (*Phalaris arundinacea),* spotted touch me not (*Impatiens capensis)* and tear thumb (*Polygonum sagitattum).* Soils within wetland W1 are mapped as Niagara silt loam and had a topsoil color of 10YR2/1 with no mottles. The texture is muck. This soil fits the NRCS A1 indicator (Histosol). Hydrology indicators present in Wetland W1 included Surface Water (A1), High Water Table (A2), Saturation (A3) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W1 is Federally jurisdictional under the currently applicable Rapanos Guidance due to the significant nexus to a traditionally navigable water.

Wetland W2 is a 0.035± acre hardwood swamp dominated by white willow (*Salix alba),* black willow (*Salix nigra),* multiflora rose (*Rosa multiflora),* tatarian honeysuckle (*Lonicera tatarica*), large leaf avens (*Geum macrophyllum),* summer grape (*Vitis aestivalis)* and reed canary grass (*Phalaris arundinacea).* Soils within wetland W2 are mapped as Fluvaquents-Udifluvents complex and had a topsoil color of 10YR4/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 10% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W2 included High Water Table (A2), Saturation (A3) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W2 is Federally jurisdictional under the currently applicable Rapanos Guidance due to the significant nexus to a traditionally navigable water.

Wetland W3 is a 0.115± acre hardwood swamp dominated by white willow (*Salix alba),* black walnut (*Juglans nigra),* multiflora rose (*Rosa multiflora),* box elder (*Acer negundo),* yellow avens (*Geum aleppicum),* summer grape (*Vitis aestivalis)* spotted touch me not (*Impatiens capensis)* and calico aster (*Symphyotrichum lateriflorum*). Soils within wetland W3 are mapped as Fluvaquents-Udifluvents complex and had a topsoil color of 10YR4/1 with 3% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 15% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W3 included Water-Stained Leaves (B9).

It is EDI's professional opinion that Wetland W3 is Federally jurisdictional under the currently applicable Rapanos Guidance due to a significant nexus to a traditionally navigable water.

Wetland W4 is 0.080± acre and Wetland W5 is 0.032± acre, both are shallow emergent marshes dominated by red osier dogwood (*Cornus stolonifera),* white willow (*Salix alba),* reed canary grass (*Phalaris arundinacea),* purple leaf willowherb (*Epilobium coloratum),* devil's beggar ticks (*Bidens frondosa),* Pennsylvania smartweed (*Polygonum pensylvanicum),* Canada goldenrod (*Solidago canadensis),* and spotted touch me not (*Impatiens capensis).* Soils within wetland W4 and W5 are mapped as Fluvaquents-Udifluvents complex and had a topsoil color of 10YR4/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/6 with 7% 10YR5/8 mottles. The texture is silt loam and gravelly silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W4 & W5 included Saturation (A3) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetlands W4 and W5 are Federally jurisdictional under the currently applicable Rapanos Guidance due to a significant nexus to a traditionally navigable water.

Wetland W6 (0.056± acre) and W7 (0.167±acre) are sections of farm ditches. No data was collected in these features. It is EDI's professional opinion that Wetlands W6 & 7 are Federally jurisdictional under the currently applicable Rapanos Guidance due to the significant nexus to a traditionally navigable water. Please refer to photo 19 of Appendix 3 for the current conditions.

Wetland W8 is a 0.031± acre shallow emergent marsh dominated by silver maple (*Acer saccharinum),* multiflora rose (*Rosa multiflora),* tatarian honeysuckle (*Lonicera tatarica*), common black raspberry (*Rubus occidentalis),* hedge bindweed (*convolvulus sepium),* reed canary grass (*Phalaris arundinacea)* and fox sedge (*Carex vulpinoidea).* Soils within wetland W8 are mapped as Niagara silt loam and had a topsoil color of 10YR4/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR6/1 with 10% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W8 included Saturation (A3). It is EDI's professional opinion that Wetland W8 is not Federally jurisdictional under the currently applicable Rapanos Guidance due to the lack of significant nexus to a traditionally navigable water.

Wetland W9 is a 0.168± acre wet meadow dominated by broad leaf cattail (*Typha latifolia),* reed canary grass (*Phalaris arundinacea),* Pennsylvania smartweed (*Polygonum pensylvanicum),* flat

topped goldenrod (*Euthamia graminifolia),* calico aster (*Symphyotrichum lateriflorum),* New England aster (*Symphyotrichum novae-angliae),* soft rush (*Juncus effusus),* and fox sedge (*Carex vulpinoidea).* Soils within wetland W9 are mapped as Niagara silt loam and had a topsoil color of 10YR4/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 7% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W9 included Surface Water (A1), High Water Table (A2) and Saturation (A3). It is EDI's professional opinion that Wetland W9 is not Federally jurisdictional under the currently applicable Rapanos Guidance due to the lack of significant nexus to a traditionally navigable water.

Stream 1 is identified as an unnamed tributary to Lake Erie and flows northerly through the eastern portion of the site. This intermittent channel is not identified by NYSDEC standards. The substrate consists of silt and gravel, with sparse vegetation along the banks. Wetland W1is hydrologically connected to Stream 1. Within the project area, Stream 1 is approximately 4 to 6 feet wide with an average water depth of 0-12 inches.

Stream 2 is identified as an unnamed tributary to Lake Erie and flows northwesterly through the eastern portion of the site. This unknown perennial channel is identified as a Class ”C” channel by NYSDEC standards. The substrate consists of silt and gravel, with sparse vegetation along the banks. Within the project area, Stream 2 is approximately 4 to 6 feet wide with an average water depth of 0-12 inches.

Stream 3 is identified as an unnamed tributary to Lake Erie and flows northwesterly through the northwestern portion of the site. This intermittent channel is not identified by NYSDEC standards. The substrate consists of silt and gravel, with sparse vegetation along the banks. Within the project area, Stream 3 is approximately 6 to 10 feet wide with an average water depth of 0-12 inches.

A map which depicts the site boundaries and the location of all observation points established during the field survey is included as Figure 6 in Appendix A of this report. Data forms are included as Appendix B. Appendix C includes representative photographs of the project area. Appendix D notes the references used during the preparation of this report and during the field investigation. Appendix E provides the names, addresses and phone numbers of the survey personnel involved in the wetland delineation study.

SECTION VI: RECOMMENDATIONS

Nine (9) wetland areas, three (3) streams and one (1) pond were identified during the course of a field investigation based upon the three parameter technique (vegetation, soils, and hydrology) outlined in the Corps Manual and Northcentral and Northeast Regional Supplement. It is EDI's professional opinion that wetlands W1, W2, W3, W4, W5, W6, W7 and Streams S1, S2 & S3 are regulated by the USACE under Section 404 of the Clean Water Act. It is also EDI's opinion that wetlands W8 & W9 are isolated and have no significant nexus to a Water of the U.S. and should not be regulated under Section 404 under the current Rapanos guidance. USACE approaches their regulatory analyses by first considering avoidance of wetlands and minimization of wetland losses. EDI recommends the following:

(1) Submit this report to USACE with a request for a wetland boundary confirmation and jurisdictional determination.

(2) If no impacts are proposed to federal regulated wetlands or streams based on the outcome of the jurisdictional determination, it is the professional opinion of EDI that the project may proceed without the need for Section 404 Permit.

(3) If any regulated federal jurisdictional wetland or stream impacts are proposed, it is EDI's recommendation that a Joint Application for Permit and supporting documentation be submitted to the USACE and NYSDEC with a request for a Section 404 Permit and Section 401 Water Quality Certification.

RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX A - FIGURES

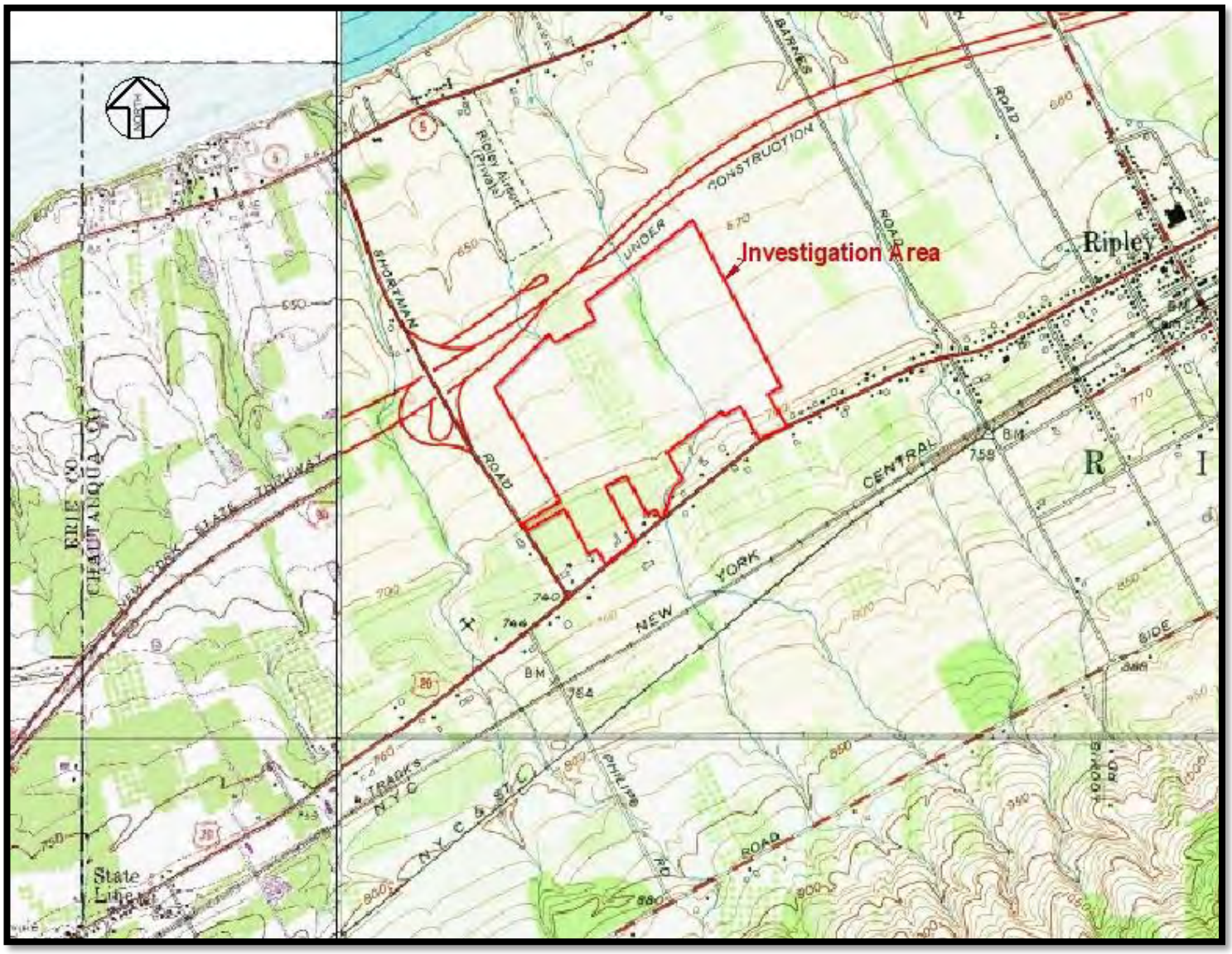


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Ripley Quadrangle / U.S. Geological Survey

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York

FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 11/22/21)

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York

FIGURE 3: NRCS CHAUTAUQUA COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 11/22/21)

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York

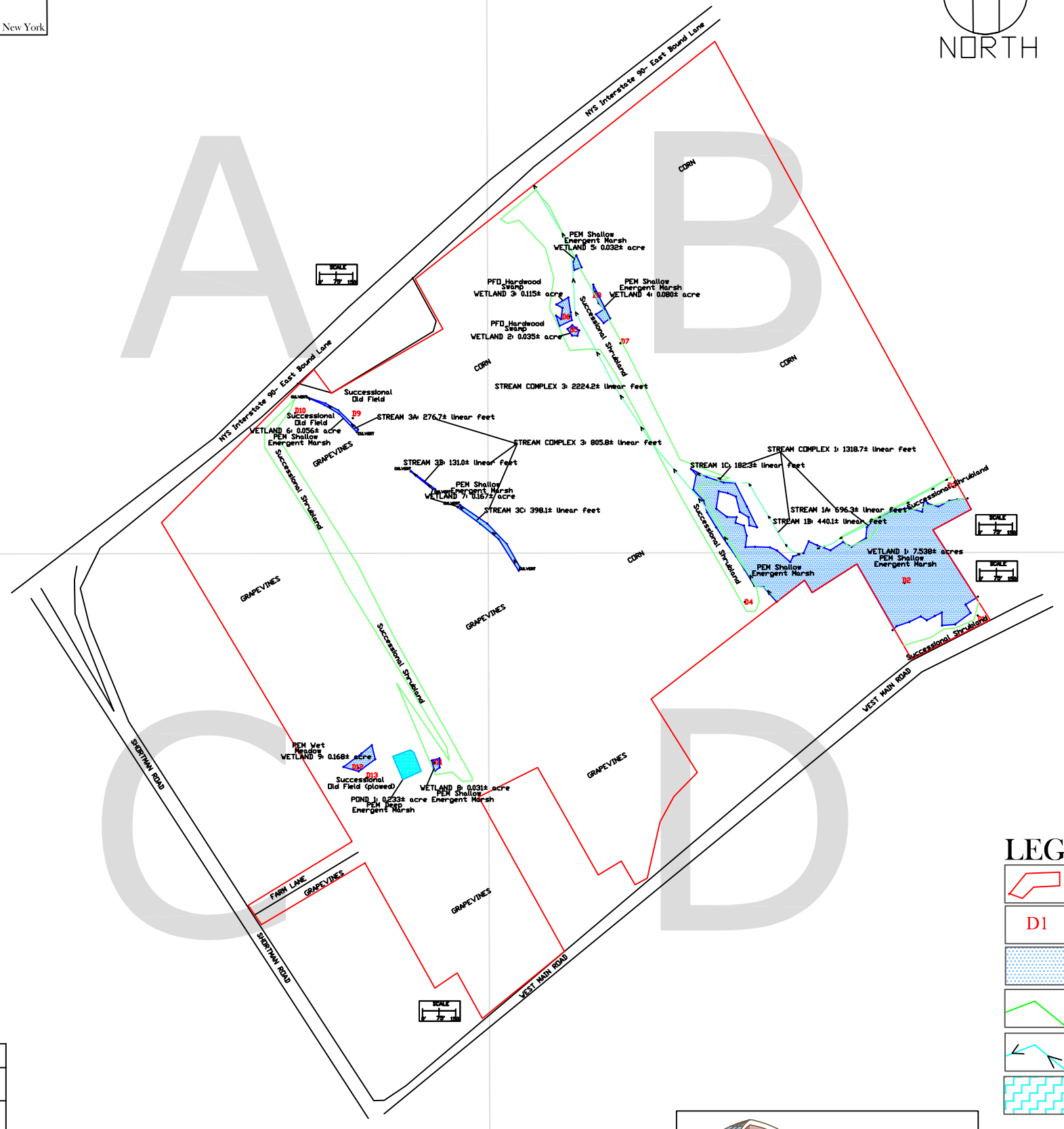
FIGURE 4: NYSDEC ENVIRONMENTAL RESOURCE MAPPER

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm (Visited 11/22/21)

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York

Figure 5: General Vegetation Map
Ripley Interstate Development Project
MAIN MAP
Town of Ripley Chautauqua County, New York



LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- Tree Line
- Stream
- Pond

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: VEG MAP MAIN.DWG
EDI Project Code: W32K07f

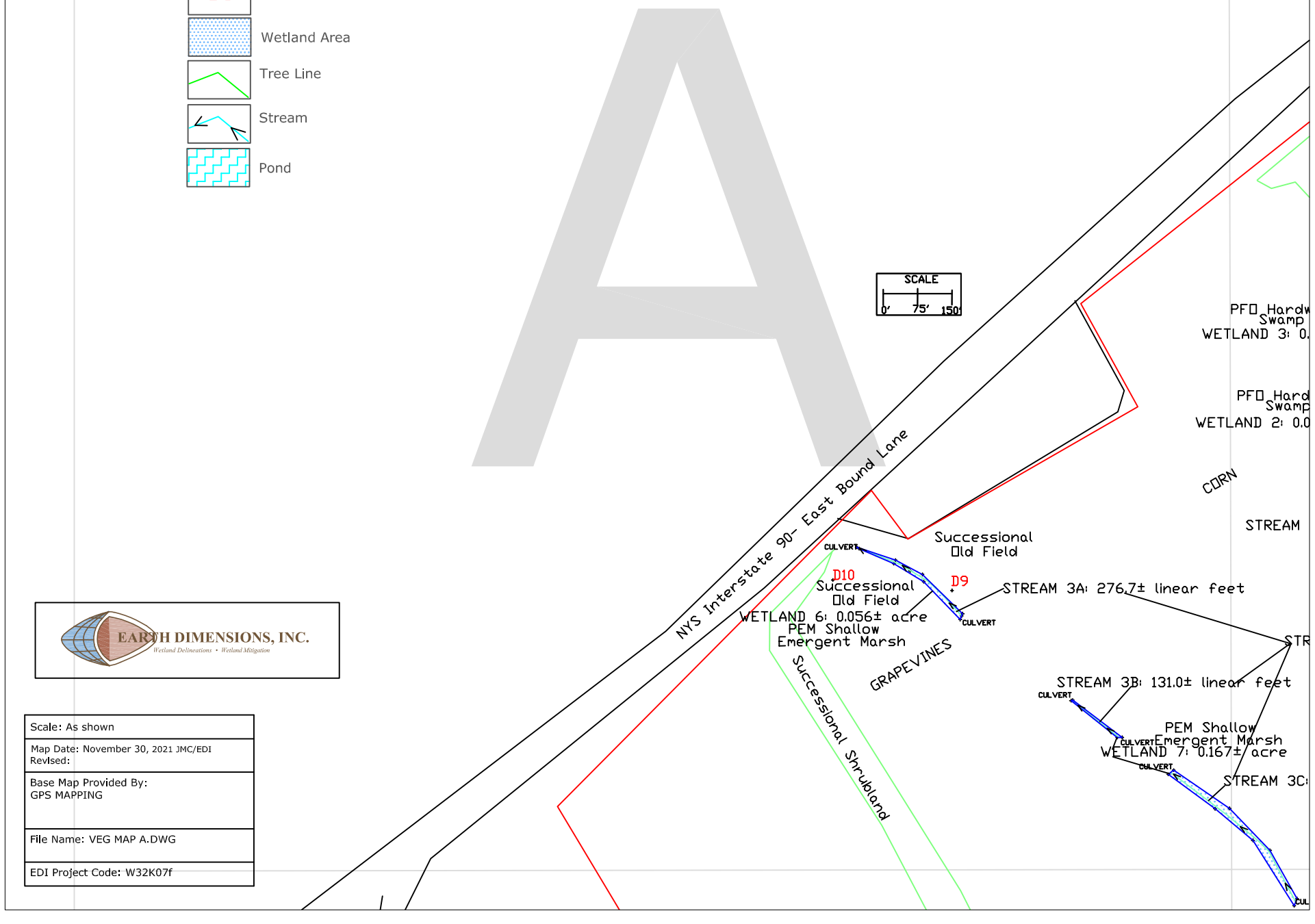
EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Figure 5: General Vegetation Map
Ripley Interstate Development Project
MAP A
Town of Ripley Chautauqua County, New York

NORTH

LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- Tree Line
- Stream
- Pond



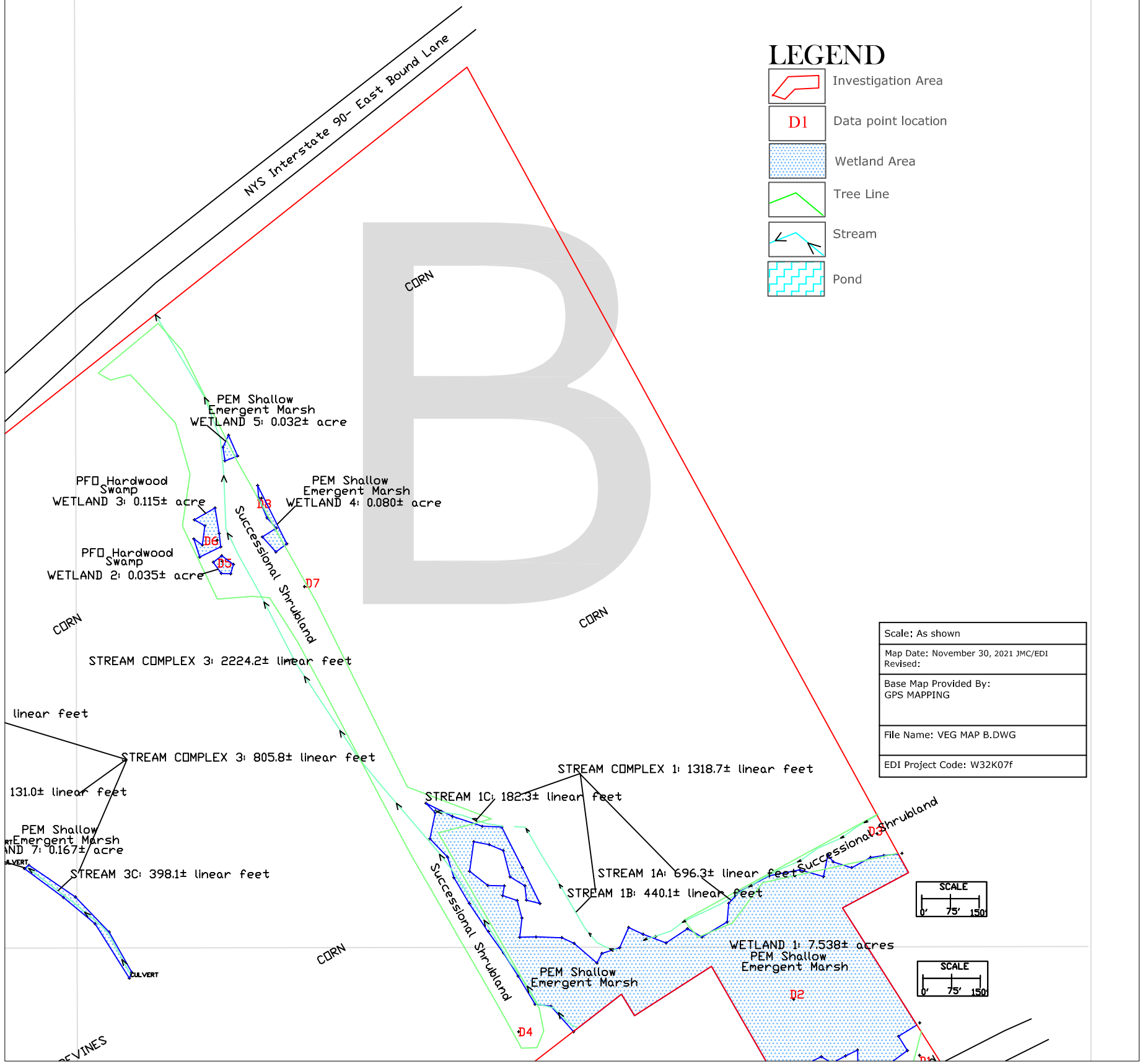
EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: VEG MAP A.DWG
EDI Project Code: W32K07f

Figure 5: General Vegetation Map
Ripley Interstate Development Project
MAP B
Town of Ripley Chautauqua County, New York

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

NORTH



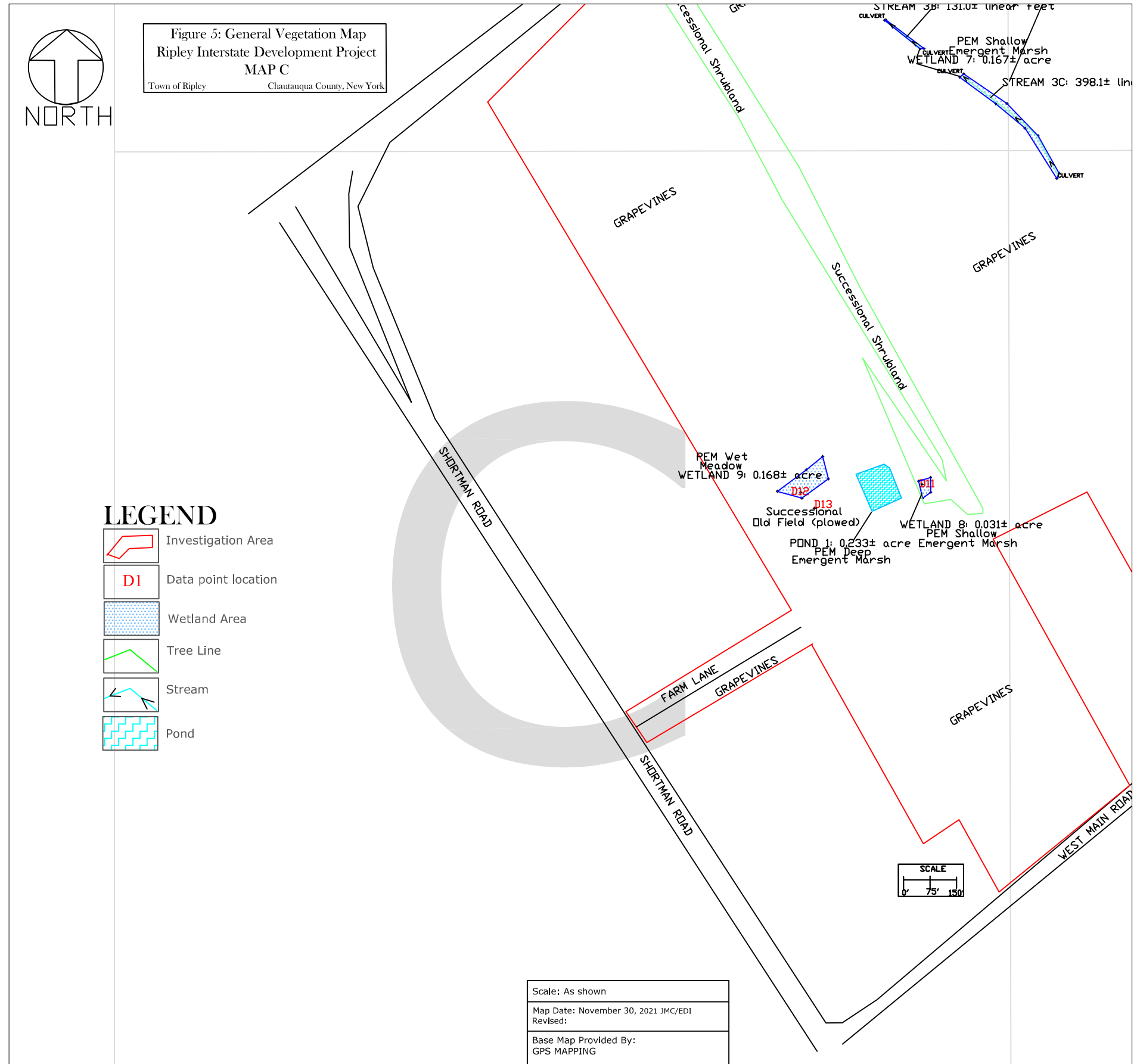
LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- Tree Line
- Stream
- Pond

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: VEG MAP B.DWG
EDI Project Code: W32K07f

Figure 5: General Vegetation Map
Ripley Interstate Development Project
MAP C
Town of Ripley Chautauqua County, New York

NORTH

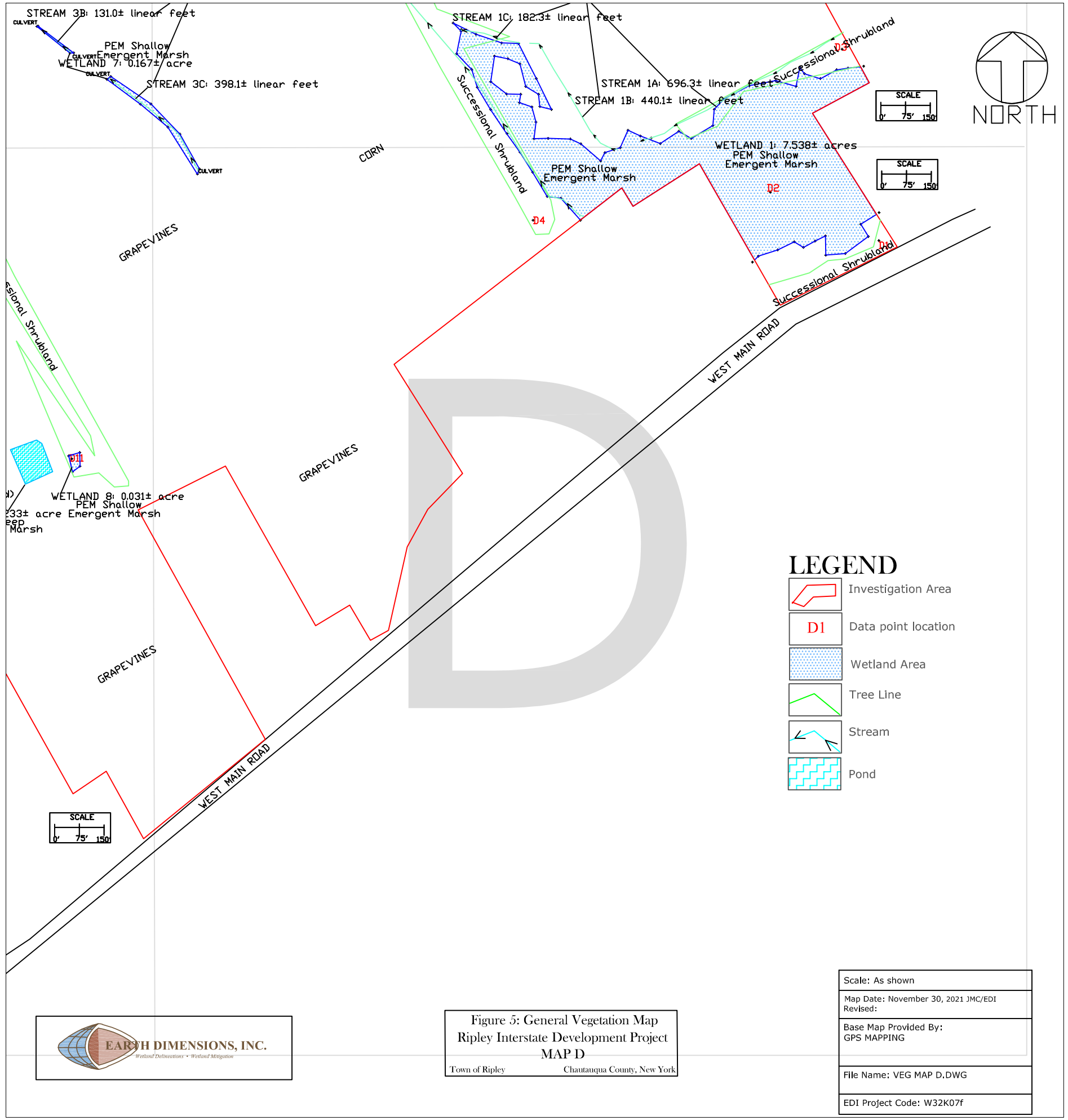


LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- Tree Line
- Stream
- Pond

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: VEG MAP C.DWG
EDI Project Code: W32K07f

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

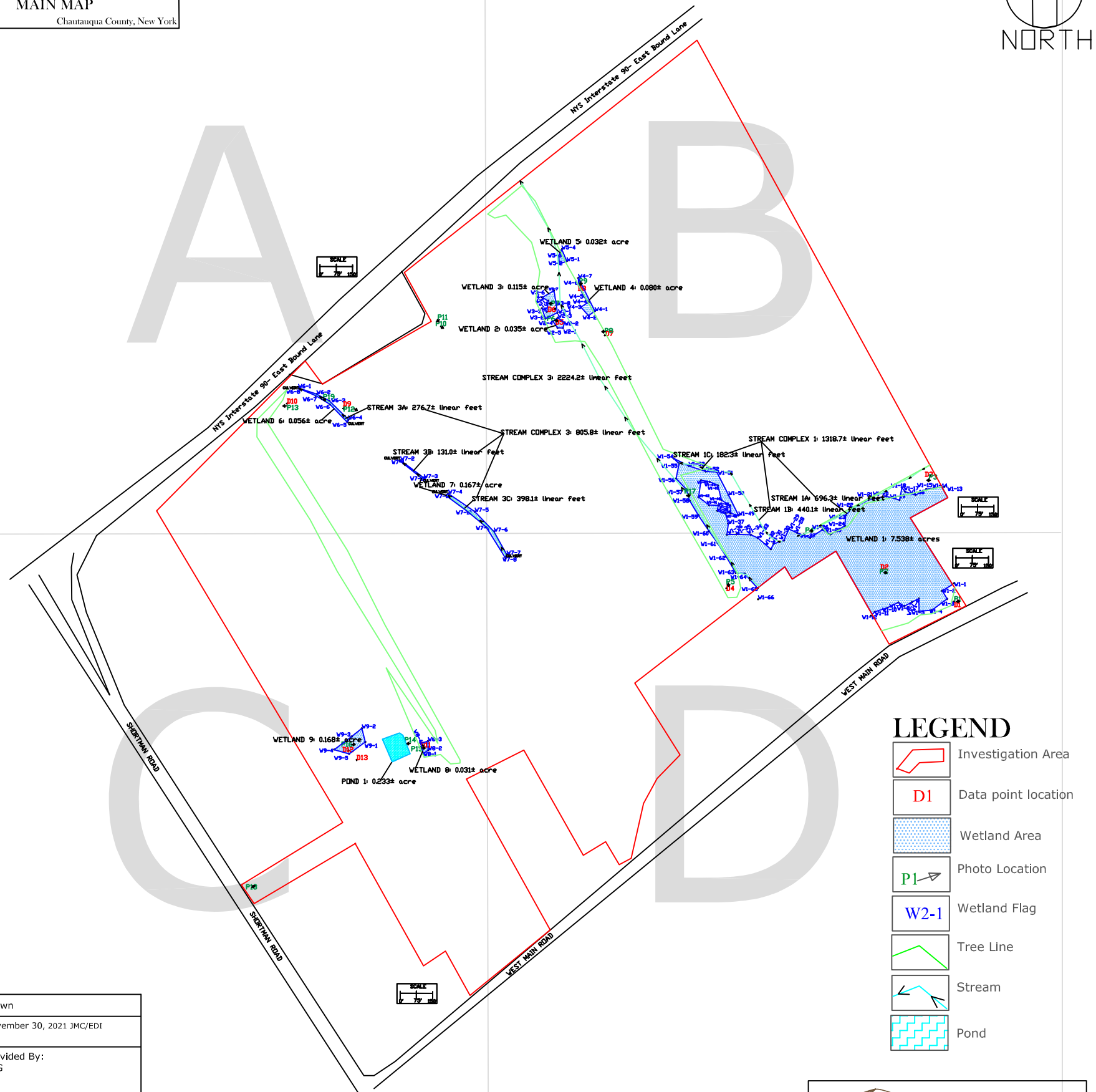


EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Figure 5: General Vegetation Map
Ripley Interstate Development Project
MAP D
Town of Ripley Chautauqua County, New York

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: VEG MAP D.DWG
EDI Project Code: W32K07f

Figure 6: Wetland Delineation Map
Ripley Interstate Development Project
MAIN MAP
Town of Ripley Chautauqua County, New York



LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- P1 — Photo Location
- W2-1 — Wetland Flag
- Tree Line
- Stream
- Pond

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: DDMAP.DWG
EDI Project Code: W32K07f

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Figure 6: Wetland Delineation Map
Ripley Interstate Development Project
MAP A
Town of Ripley Chautauqua County, New York

NORTH

LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- P1 — Photo Location
- W2-1 — Wetland Flag
- Tree Line
- Stream
- Pond

SCALE
0' 75' 150'

NYS Interstate 90- East Bound Lane

WETLAND 3: 0.115

P11
P10

WETLAND 2: 0.035

STREAM CD

CULVERT W6-1 W6-8 W6-2 W6-7 P9 W6-3 W6-6 D9 P12 W6-4 W6-5 CULVERT
D10
P13

WETLAND 6: 0.056± acre

STREAM 3A: 276.7± linear feet

STREA

STREAM 3B: 131.0± linear feet

CULVERT W7-2 W7-3 CULVERT

WETLAND 7: 0.167± acre

CULVERT W7-4 W7-5 W7-6 W7-7 CULVER W7-8

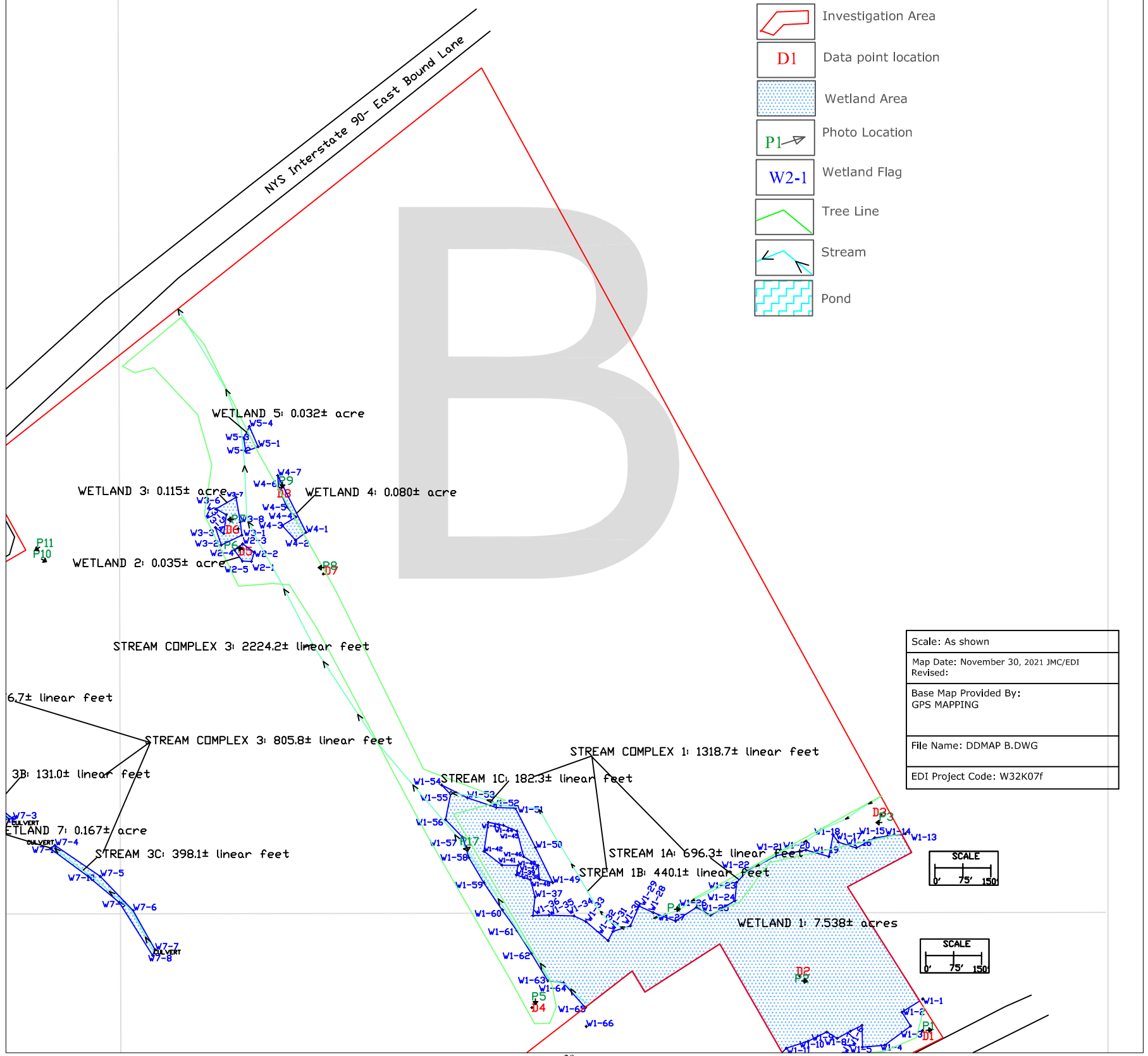
STREAM 3C: 3

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: DDMAP A.DWG
EDI Project Code: W32K07f

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Figure 6: Wetland Delineation Map
Ripley Interstate Development Project
MAP B
Town of Ripley Chautauqua County, New York

NORTH



LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- P1 — Photo Location
- W2-1 — Wetland Flag
- Tree Line
- Stream
- Pond

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: DDMAP B.DWG
EDI Project Code: W32K07f

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

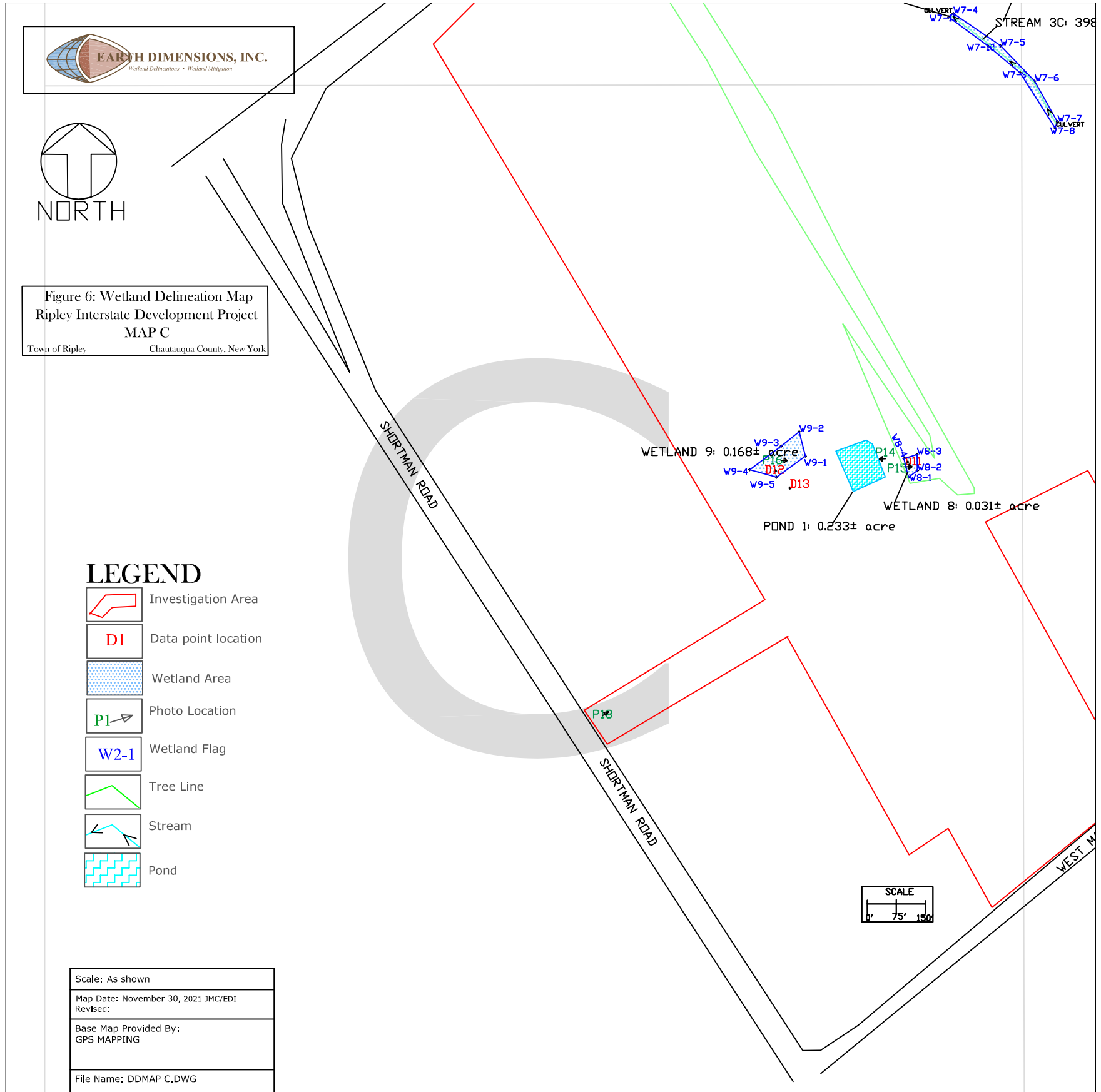
NORTH

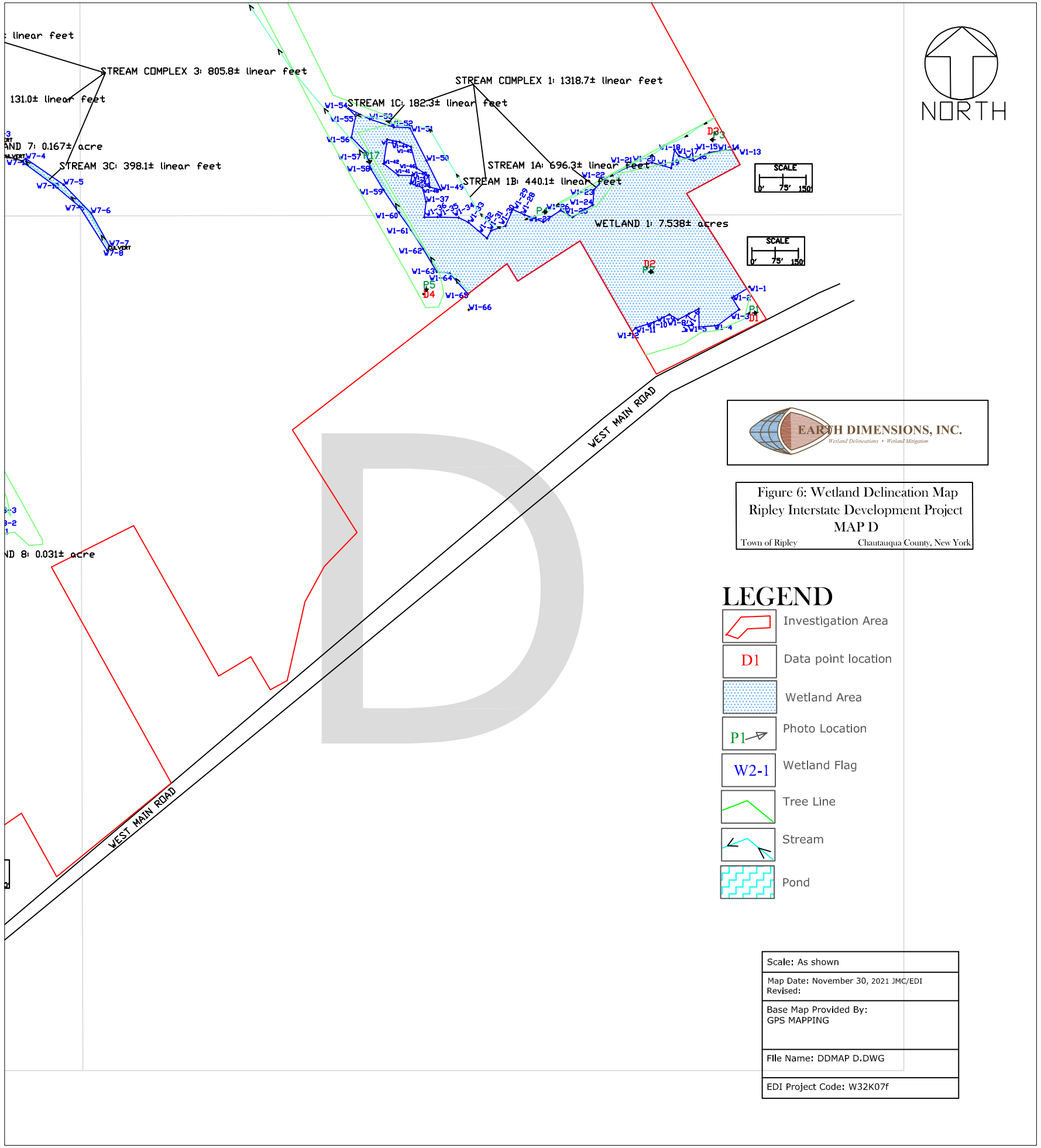
Figure 6: Wetland Delineation Map
Ripley Interstate Development Project
MAP C
Town of Ripley — Chautauqua County, New York

LEGEND

- Investigation Area
- D1 — Data point location
- Wetland Area
- P1 — Photo Location
- W2-1 — Wetland Flag
- Tree Line
- Stream
- Pond

Scale: As shown
Map Date: November 30, 2021 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: DDMAP C.DWG
EDI Project Code: W32K07f




linear feet
STREAM COMPLEX 3: 805.8± linear feet
131.0± linear feet
STREAM 3C: 398.1± linear feet
ND 7: 0.167± acre
ND 8: 0.031± acre
STREAM COMPLEX 1: 1318.7± linear feet
STREAM 1C: 182.3± linear feet
STREAM 1A: 696.3± linear feet
STREAM 1B: 440.1± linear feet
WETLAND 1: 7.538± acres
WEST MAIN ROAD
WEST MAIN ROAD
NORTH
SCALE
0' 75' 150
SCALE
0' 75' 150
EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation
Figure 6: Wetland Delineation Map
Ripley Interstate Development Project
MAP D
Town of Ripley
Chautauqua County, New York
LEGEND
Investigation Area
D1
Data point location
Wetland Area
P1
Photo Location
W2-1
Wetland Flag
Tree Line
Stream
Pond
Scale: As shown
Map Date: November 30, 2021 JMC/EDI
Revised:
Base Map Provided By:
GPS MAPPING
File Name: DDMAP D.DWG
EDI Project Code: W32K07f

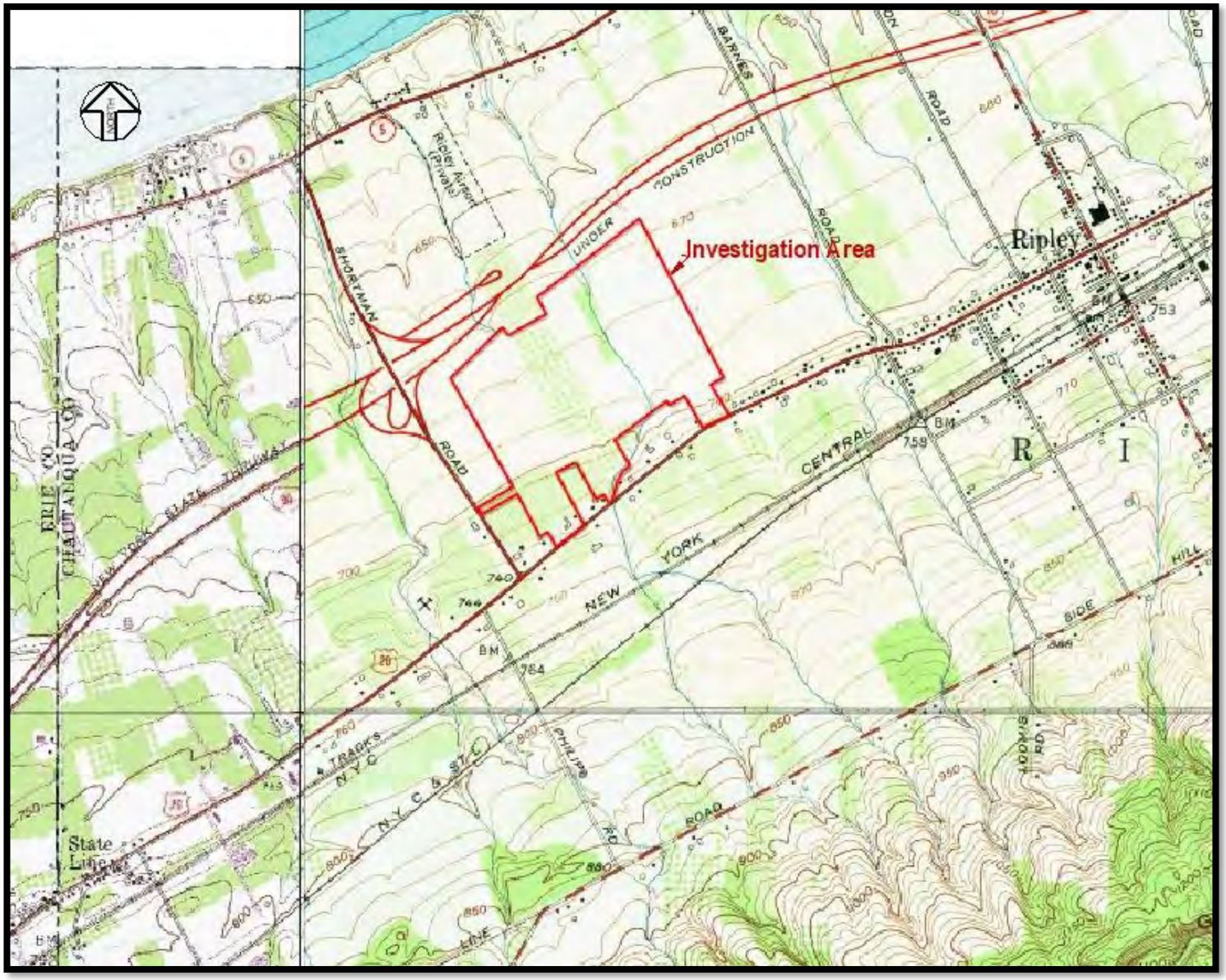


FIGURE 7: DRAINAGE MAP

Ripley Quadrangle / U.S. Geological Survey

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York

FIGURE 8: SITE AERIAL PHOTOGRAPH

https://chautauquacounty.maps.arcgis.com/ (Visited 11/22/21)

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York

RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX B – DATA SHEETS

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.21

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D1

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 10

Subregion (LRR or MLRA) LRRR Lat: 42.26098 Long: 79.72899 Datum: NAD83

Soil Map Unit Name: CHENANGO GRAVELLY LOAM, 3-8% SLOPES NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

UPLAND SCRUB/SHRUB COMMUNITY

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 W ater 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): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Project Code: W32K07f

D1

VEGETATION : Use scientific names of plants. Sampling Point: _____

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Rhus typhina	70	Y	NI
2.			
3.			
4.			
5.			
6.			
7.			
	70 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Rhus typhina	35	Y	NI
2. Artemisia annua	15	Y	FACU
3. Solanum dulcamara	5	N	FAC
4. Rubus occidentalis	15	Y	NI
5. Setaria pumila	10	N	FAC
6. Arctium minus	15	Y	FACU
7. Solidago rugosa	5	N	FAC
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. Vitis aestivalis	10	Y	FACU
2.			
3.			
4.			
	10 = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 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	10	x 3 =	30
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	50 (A)		190 (B)

Prevalence Index = B/A = 3.8

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 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.

Community Type: SUCCESSIONAL SHRUBLAND

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # 1 Direction of Photo EAST

Project Code: W32K07f

SOIL

Sampling Point: D1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					grl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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: BOULDER?

Depth (inches): 6"

Hydric Soil Present? Yes ____ No X

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: DZ

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 4/

Subregion (LRR or MLRA) LRRR Lat: 42.26140 Long: 79.73020 Datum: NAD83

Soil Map Unit Name: NIAGARA SILT LOAM, 0-3% SLOPES NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	If yes, optional Wetland Site ID:	WJ
Wetland Hydrology Present?	Yes X No ____		

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

- WJ-1 – WJ-66 (OPEN)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

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

Herb Stratum (Plot size: 5')			
1. Typha angustifolia	50	Y	OBL
2. Phalaris arundinacea	30	Y	FACW
3. Impatiens capensis	10	N	FACW
4. Polygonum sagittatum	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	0 = 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 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 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.

(W1) **Community Type:** PEM SHALLOW EMERGENT MARSH

Hydrophytic Vegetation Present? Yes X No ____

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

Photo # 2 **Direction of Photo** EAST

OPEN OFF SITE

Project Code: W32K07f

SOIL

Sampling Point: D2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	100					MUCK	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- [X] 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, M)**
- [ ] 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 (TF2)
- [ ] 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): N/A

Hydric Soil Present? Yes X No ____

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D3

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 3

Subregion (LRR or MLRA) LRRR Lat: 42.26259 Long: 79.72937 Datum: NAD83

Soil Map Unit Name: CANANDAIGUA SILT LOAM, LOAMY NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

UPLAND SCRUB/SHRUB COMMUNITY

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 W ater 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): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. PYRUS communis	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Lonicera tatarica	20	Y	FACW
2. Rubus occidentalis	5	N	NI
3. " Allegheniensis	20	Y	FACW
4. Cornus Amomum	5	N	FACW
5. Cornus racemosa	20	Y	FAC
6.			
7.			
	70 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Symphyotrichum lateriflorum	20	Y	FAC
2. " pilosum	10	N	FACW
3. Daucus carota	10	N	↓
4. Solidago rugosa	20	Y	FAC
5. Phleum pratense	10	N	FACW
6. Euthamia graminifolia	10	N	FAC
7. Lonicera tatarica	15	Y	FACW
8. Cornus racemosa	5	N	FAC
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	75	x 3 =	225
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	170 (A)		595 (B)

Prevalence Index = B/A = 3.5

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 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.

Community Type: SUCCESSIONAL SHRUBLAND

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # 3 **Direction of Photo** WEST

p4 OF STREAM

Project Code: W32K07f

SOIL Sampling Point: D3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR4/2	100					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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: BEDROCK?

Depth (inches): 13"

Hydric Soil Present? Yes ____ No X

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D4

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): LAKE PLAIN Local relief (concave, convex, none): CONVEX Slope (%): 3

Subregion (LRR or MLRA) LRRR Lat: 42.26119 Long: 78.73287 Datum: NAD83

Soil Map Unit Name: NIAGARA SILT LOAM, 0-3% SLOPES NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

UPLAND SHRUB/SCRUB COMMUNITY (HEDGE ROW)

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Rhus typhina	50	Y	NI
2. Lonicera tatarica	10	N	FAW
3.			
4.			
5.			
6.			
7.			
	60 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Lonicera tatarica	30	Y	FAW
2. Solidago canadensis	15	N	↓
3. Symphyotrichum lateriflorum	10	N	FAC
4. Rubus occidentalis	20	Y	NI
5. Phalaris arundinacea	5	N	FAW
6. Alliaria petiolata	20	Y	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	0 = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	10	x 3 =	30
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	90 (A)		340 (B)

Prevalence Index = B/A = 3.77

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 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.

Community Type: SUCCESSIONAL SHRUBLAND

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # 5 Direction of Photo SOUTH

Project Code: W32K07f

SOIL

Sampling Point: D4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR4/2	100					Sil-	
9-16	10YR5/4	100					l	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes ____ No X

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D5

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRR Lat: 42.26461 Long: 79.73567 Datum: NAD83

Soil Map Unit Name: Fluvaquents-Udifluvents Complex NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

• W2-1 → W2-5 (CLOSED / ISOLATED)

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)
- X 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): N/A

Water Table Present? Yes X No ____ Depth (inches): N/A

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D5

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. SALIX NIGRA	30	Y	FACW
2. SALIX ALBA	10	Y	FACW
3.			
4.			
5.			
6.			
7.			
	40 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. ROSA multiflora	15	Y	FACU
2. LONICERA TATARICA	10	Y	↓
3.			
4.			
5.			
6.			
7.			
	25 = Total Cover		

Herb Stratum (Plot size: 5')			
1. PHALARIS ARUNDINACEA	5	Y	FACW
2. GEUM MACROPHYLLUM	5	Y	↓
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. VITIS AESTIVALIS	15	Y	FACW
2.			
3.			
4.			
	15 = 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 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.

Community Type: (W2) PFO HARDWOOD SWAMP.

Hydrophytic Vegetation Present? Yes X No __

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

Photo # 6 **Direction of Photo** EAST

ISOLATED

Project Code: W32K07f

SOIL

Sampling Point: D5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR4/1	95	10YR5/8	5	C	M	S, L	
9-16	10YR5/1	90	10YR5/8	10	C	M	S, L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- X 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.202

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D6

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Depress. on Local relief (concave, convex, none): CONCAVE Slope (%): C1

Subregion (LRR or MLRA) LRRR Lat: 42.26476 Long: 79.73570 Datum: NAD83

Soil Map Unit Name: FLUVAQUENTS - UDIFLUVENTS Complex NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____		
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID:	W3

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

- W3-1 - W3-8 (CLOSED/ISOLATED)

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)
- X 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 W ater 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): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D6

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Juglans nigra	5	N	FACU
2. Salix alba	25	Y	FACW
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Rosa multiflora	15	Y	FACU
2. Acer negundo	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Symphyotrichum lateriflorum	20	Y	FAC
2. Impatiens capensis	30	Y	FACW
3. Geum aleppicum	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1. Vitis aestivalis	20	Y	FACW
2.			
3.			
4.			
	20	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 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.

Community Type: (W3) PFO HARDWOOD SWAMP

Hydrophytic Vegetation Present? Yes X No ____

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

Photo # 7 **Direction of Photo** WEST

Isolated

Project Code: W32K07f

SOIL

Sampling Point: D6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR4/1	97	10YR3/6	3	C	M	S.L	
7-16	10YR5/1	85	10YR5/8	15	C	M	S.L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- X 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10/18/2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D7

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): OUTWASH PLAIN Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRR Lat: 42.2643 Long: 79.7383 Datum: NAD83

Soil Map Unit Name: CHENANGO GRAVELLY LOAM, 3-8% SLOPES NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (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 _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: N/A

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

• UPLAND CORN FIELD AT EDGE OF SCRUB/SHRUB HEDGE ROW

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 W ater 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): N/A
Water Table Present?	Yes _____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants.

Sampling Point: D7

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Rhus typhina	10	Y	NI
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Rhus typhina	55	Y	NI
2. Rosa multiflora	5	N	FACU
3. Rubus occidentalis	10	N	↓
4.			
5.			
6.			
7.			
	70 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Convolvulus sepium	15	Y	FACW
2. Solanum dulcamara	10	N	FAC
3. Setaria pumila	20	Y	↓
4. Symphyotrichum pilosum	10	N	FACW
5. " " patriflorum	10	N	FAC
6. Solidago canadensis	15	Y	FACU
7. Arctium minus	5	N	FACU
8.			
9.			
10.			
11.			
12.			
	85 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 40	x 3 = 120
FACU species 100	x 4 = 240
UPL species 0	x 5 = 0
Column Totals: 100 (A)	360 (B)

Prevalence Index = B/A = 3.60

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 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.

Community Type: SUCCESSIONAL SHRUBLAND/FIELD

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # 8 Direction of Photo WEST

Project Code: W32K07f

SOIL

Sampling Point: D7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR4/3	100					grl	
6-16	10YR3/4	100					grl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes ____ No X

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D8

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): NONE Slope (%): <1

Subregion (LRR or MLRA) LRRR Lat: 42.26506 Long: 79.73528 Datum: NAD83

Soil Map Unit Name: Fluvaquents-Udifluvents Complex NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID: W4

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

* W4-1 → W4-7 (CLOSED/ISOLATED)

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)
- X 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): N/A
Water Table Present?	Yes ____ No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes X No ____	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants.

Sampling Point: D8

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. SALIX ALBA	35	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	35 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Cornus stolonifera	15	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	60	Y	FACW
2. Epilobium coloratum	5	N	
3. Impatiens capensis	10	N	
4. Bidens frondosa	10	N	
5. Polygonum pensylvanicum	10	N	
6. Solidago canadensis	5	N	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 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.

Community Type: (W4) PEM Shallow Emergent Marsh

Hydrophytic Vegetation Present? Yes X No ____

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

Photo # 9 **Direction of Photo** SOUTH

Isolated

Project Code: W32K07f

SOIL Sampling Point: D8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR4/1	95	10YR5/6	5	C	M	S.l	
5-16	10YR3/6	93	10YR5/8	7	C	M	grl+	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- X 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D9

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 5

Subregion (LRR or MLRA) LRRR Lat: 42.02354 Long: 79.73936 Datum: NAD83

Soil Map Unit Name: MINOA FINE SANDY LOAM NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

UPLAND MAINTAINED VINEYARD

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Project Code: W32K07f

D9

VEGETATION : Use scientific names of plants. Sampling Point: _____

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

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

Herb Stratum (Plot size: 5')			
1. Trifolium pratense	20	Y	FACU
2. PLANTAGO LANCEOLATA	20	Y	FACU
3. Setaria pumila	20	Y	FAC
4. Taraxacum officinale	10	N	FACU
5. Festuca rubra	5	N	FACU
6. Lolium perenne	10	N	N.I
7. Erigeron philadelphicus	10	N	FAC
8. PLANTAGO MAJOR	5	N	FACU
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	= 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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	90 (A)		330 (B)

Prevalence Index = B/A = 3.667

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 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.

Vineyard / successional old field

Community Type: _____

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # 12 **Direction of Photo** SOUTHEAST

Project Code: W32K07f

SOIL Sampling Point: D9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					Sil	
5-16	10YR 5/4	95	10YR 5/6	5	C	M	Sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes ____ No X

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D10

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 5

Subregion (LRR or MLRA) LRRR Lat: 42.26361 Long: 79.74031 Datum: NAD83

Soil Map Unit Name: MINOA FINE SANDY LOAM NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

UPLAND CORN 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 W ater 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): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D10

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

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

Herb Stratum (Plot size: 5')			
1. Zea MAYS	60	Y	NI
2. Rubus occidentalis	S	N	FACU
3. Ambrosia artemisifolia	S	N	↓
4. Trifolium hybridum	S	N	↓
5. Taraxacum officinale	S	N	FACU
6. Brassica nigra	S	N	NI
7. Setaria pumila	S	N	FAC
8. Solanum dulcamara	S	N	FAC
9.			
10.			
11.			
12.			
	95 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
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: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 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	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	30 (A)		110 (B)

Prevalence Index = B/A = 3.667

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 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.

SUCCESSIONAL OLD FIELD+

Community Type: + AGRICULTURAL FIELD ROW CROP

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # 13 **Direction of Photo** WEST

EDGE of FIELD (CORN FIELD)

Project Code: W32K07f

SOIL

Sampling Point: D10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					grl	
6-16	10YR 5/4	85	10YR 5/6	15	C	m	grl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes ____ No X

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants. Sampling Point: D11

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Rubus occidentalis	10	Y	FACW
2. Rosa multiflora	2	N	FACW
3. Lonicera tatarica	5	Y	FACW
4.			
5.			
6.			
7.			
	17 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	90	Y	FACW
2. Convolvulus sepium	5	N	FACW
3. Carex vulpinoidea	5	N	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	0 = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 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.

(W8) PEM SHALLOW EMERGENT MARSH

Community Type:

Hydrophytic Vegetation Present? Yes X No ____

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

Photo # 15 Direction of Photo N

SOME PARTS MOWN

Project Code: W32K07f

SOIL

Sampling Point: D11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR4/1	95	10YR5/8	5	C	M	S.L	
5-16	10YR6/1	90	10YR3/8	10	C	M	S.L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- X 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D12

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): C1

Subregion (LRR or MLRA) LRRR Lat: Long: Datum: NAD83

Soil Map Unit Name: NIAGARA SILT LOAM, 0-3% SLOPES NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No (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 within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____		
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID:	W9

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

- W9-1 -> W9-5 (CLOSED)

HYDROLOGY

Wetland Hydrology Indicators:

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

- X 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)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X No ____	Depth (inches):	1"
Water Table Present?	Yes X No ____	Depth (inches):	INUNDATED
Saturation Present? (includes capillary fringe)	Yes X No ____	Depth (inches):	INUNDATED

Wetland Hydrology Present? Yes Y No ____

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

Remarks:

Project Code: W32K07f

D12

VEGETATION : Use scientific names of plants. Sampling Point: _____

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

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

Herb Stratum (Plot size: 5')			
1. Polygonum pennsylvanicum	15	Y	FACW
2. Phalaris arundinacea	20	Y	↓
3. Symphyotrichum lateriflorus	15	Y	FAC
4. " novae-angliae	20	Y	FACW
5. Juncus effusus	5	N	OBL
6. Carex vulpinoidea	10	N	↓
7. Euthamia graminifolia	10	N	FAC
8. Typha latifolia	5	N	OBL
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
2.			
3.			
4.			
	0 = 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 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

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 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.

(W9) PEM WET MEADOW

Community Type: _____

Hydrophytic Vegetation Present? Yes X No ____

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

Photo # 16 **Direction of Photo** EAST

Project Code: W32K07f

SOIL

Sampling Point: D12

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1	95	10YR 5/8	5	C	M	S, L	
5-16	10YR 5/1	93	10YR 5/8	7	C	M	S, L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- X 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Project Code: W32K07f

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ripley Interstate Development Project Town/County: Ripley/Chautauqua County Sampling Date: 10.18.2021

Applicant/Owner: Chautauqua County IDA State: New York Sampling Point: D13

Investigator(s): Scott Livingstone & Jody Celeste Section, Township, Range: various

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): NONE Slope (%): 2

Subregion (LRR or MLRA) LRRR Lat: 42.25909 Long: 79.73921 Datum: NAD83

Soil Map Unit Name: NIAGARA SILT LOAM, 0-3% SLOPES NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

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

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 W ater 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): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Project Code: W32K07f

VEGETATION : Use scientific names of plants.

Sampling Point: D13

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

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

Herb Stratum (Plot size: 5')			
1. Ambrosia artemisifolia	15	Y	FACU
2. Symphyotrichum lateriflorus	15	Y	FAC
3. Phleum pratense	5	N	FACU
4. Erechtites hieracifolia	5	N	NI
5. Symphotrichum pilosum	10	Y	FACW
6. DACTYLIS GLOMERATA	5	N	
7. DAUCUS CAROTA	10	Y	
8. SOLIDAGO CANADENSIS	10	Y	
9. TARAXACUM officinale	10	Y	
10. Rumex crispus	5	N	FAC
11. Setaria pumila	10	Y	FAC
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. NA			
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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 30	x 3 = 90
FACU species 65	x 4 = 260
UPL species 0	x 5 = 0
Column Totals: 95 (A)	350 (B)

Prevalence Index = B/A = 3.68

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 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.

Community Type: PLOWED OLD/SUCCESSIONAL FIELD

Hydrophytic Vegetation Present? Yes ____ No X

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

Photo # _____ **Direction of Photo** _____

Project Code: W32K07f

SOIL

Sampling Point: D13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	100					S, L	
8-16	10YR 5/4	90	10YR 5/6	10	C	M	S, L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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, M)**
- ___ 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 (TF2)
- ___ 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): N/A

Hydric Soil Present? Yes ____ No X

Remarks:

RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX C - SITE PHOTOGRAPHS

Photo 1: Facing east. Depicts the successional shrubland community of data point D1.

Photo 2: Facing east. Depicts wetland W1 (shallow emergent marsh community) at data point D2.

Photo 3: Facing west. Depicts the successional shrubland community of data point D3.

Photo 4: Facing east. Depicts stream S1 near wetland flag W1-28.

Photo 5: Facing south. Depicts the successional shrubland community of data point D4.

Photo 6: Facing east. Depicts wetland W2 (hardwood swamp community) at data point D5.

Photo 7: Facing west. Depicts wetland W3 (hardwood swamp community) at data point D6.

Photo 8: Facing west. Depicts the successional shrubland community of data point D7.

Photo 9: Facing south. Depicts wetland W4 (shallow emergent marsh community) at data point D8.

Photo 10: Facing southeast from along the northern property line. Depicts the corn field and vineyard.

Photo 11: Facing southwest from along the northern property line. Depicts the Thruway parking area and the vineyard.

Photo 12: Facing southeast. Depicts the successional old field/ agricultural field (vineyard) community of data point D9.

Photo 13: Facing west. Depicts the agricultural field (corn) community of data point D10.

Photo 14: Facing west. Depicts Pond 1 (farm pond) in the southwestern portion of the site.

Photo 15: Facing east. Depicts wetland W8 (shallow emergent marsh community) at data point D11.

Photo 16: Facing east. Depicts wetland W9 (wet meadow community) at data point D12.

Photo 17: Facing south. Depicts stream S2 near wetland flag W1-58.

Photo 18: Facing northeast from along Shortman Road. Depicts the proposed access into the site from Shortman

Photo 19: Facing southeast. Depicts stream S3 near wetland flag W6-3.

RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX D - REFERENCES

INFORMATIONAL REFERENCES
USED BY EARTH DIMENSIONS INC.

Andrus, R.E. 1980. Sphagnaceae (Peat Moss Family) of New York State. Contributions to a Flora of New York State III, R.S. Mitchell (Ed.), Bulletin No. 442, New York State Museum, Albany, New York. 89 pp.

Benyus, J.M. 1989. The Field Guide to Wildlife Habitats of the Eastern United States. Fireside, Simon & Shuster, Inc., New York. 335 pp.

Britton, N.L., and H.A. Brown. 1970. An Illustrated Flora of the Northern United States and Canada, Volumes 1, 2, and 3. Dover Publications, Inc., New York. 2052 pp.

Brockman, C.F., R. Merrilees, and H.S. Zim. 1968. Trees of North America: A Field Guide to the Major Native and Introduced Species North of Mexico. Western Publishing, Inc. New York, New York. 280 pp.

Brown, L. 1979. Grasses: An Identification Guide. Peterson Nature Library. Houghton Mifflin Co., Boston. 240 pp.

Cobb, B. 1963. A Field Guide to the Ferns and Related Families. Houghton Mifflin Co., Boston. 281 pp.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. Classification of Wetlands and Deep Water Habitats of the United States. U.S. Fish and Wildlife Service, Washington, D.C. FWS/OBS-79-31. 103 pp.

Eggers, S.D., and D.M. Reed. 1997. Wetland Plants and Plant Communities of Minnesota and Wisconsin. Second Edition. U.S. Army Corps of Engineers, St. Paul District, Minnesota. 263 pp.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mass. 100 pp. plus appendices.

Hotchkiss, N. 1970. Common Marsh Plants of the United States and Canada. U.S. Department of the Interior, Bureau of Sport Fisheries and Wildlife, Washington, D.C., Resource Publication 93.

Hurley, L.M. 1990. Field Guide to the Submerged Aquatic Vegetation of Chesapeake Bay. U.S. Fish and Wildlife Service, Chesapeake Bay Estuary Program, Annapolis, Maryland. 51 pp.

Knobel, E. 1977. Field Guide to the Grasses, Sedges, and Rushes of the United States. Dover publications, Inc., New York. 83 pp.

Little, E.L. 1980. The Audubon Society Field Guide to North American Trees (Eastern Region). Alfred A. Knopf, New York. 714 pp.

Magee, D.W. 1981. Freshwater Wetlands. University of Massachusetts Press, Clarence. 245 pp.

.

Mitchell, R.S., and G.C. Tucker. 1997. Revised Checklist of New York State Plants. Contributions to a Flora of New York State IV, R.S. Mitchell (Ed.). Bulletin No. 490, New York State Museum, Albany, New York. 400 pp.

Munsell Color Chart. (Munsell Color 1975).

National Wetland Inventory Maps. U.S. Department of the Interior, Fish and Wildlife Service, National Wetland Inventory, St. Petersburg, Florida. http://wetlandsfws.er.usgs.gov date visited: 2/4/2010

Niering, W.C., and N.C. Olmstead. 1979. The Audubon Society Field Guide to North American Wildflowers (Eastern Region). Alfred A. Knopf, New York. 887 pp.

New York State Code of Rules and Regulations (NYCRR). 1989. Protected Native Plants. NYCRR Part 193.3, June, 1989. New York State Department of Environmental Conservation.

New York Natural Heritage Program. 2002. New York Rare Plant Status List, February, 1989. S.M. Young, (Ed.), New York State Department of Environmental Conservation and The Nature Conservancy publication. 26 pp.

New York State Department of Environmental Conservation Freshwater Wetlands Maps, NYSDEC Environmental Resource Mapper, http://www.dec.ny.gov/imsmaps/ERM/viewer.htm

Newcomb, L. 1977. Newcomb's Wildflower Guide. Little, Brown and Co., Boston. 490 pp.

Ogden, E.C. 1981. Field Guide to Northeastern Ferns. Contributions to a Flora of New York State III, R.S. Mitchell (Ed.), Bulletin No. 444, New York State Museum, Albany, New York. 122 pp.

Peattie, D.C. 1991. A Natural History of Trees of Eastern and North America. Houghton Mifflin Co., Boston. 606 pp.

Peterson, RT., and M. McKenny. 1968. A Field Guide to Wildflowers of Northeastern and Northcentral North America. Houghton Mifflin Co., Boston. 420 pp.

Petrides, G.A. 1972. A Field Guide to Trees and Shrubs. Houghton Mifflin Co., Boston. 428 pp.

Prescott, G.W. 1969. How to Know the Aquatic Plants. Second Edition. William C. Brown Co., Dubuque, Iowa. 171 pp.

Raynal, D.J., and D. J. Leopold. 1999. Landowner's Guide to State-Protected Plants of Forests in New York State. New York Center for Forestry Research and Development, SUNY-ESF, Syracuse, New York. 92pp.

Reed, Porter B. Jr. 1988. National List of Plant Species that Occur in Wetlands: Northeast (Region 1). U.S. Fish and Wildlife Service, Washington, D.C. Biol. Rept. 88 (26.1). 112 pp.

Reschke, C. 2002. Ecological Communities of New York State. New York Natural Heritage Program. NYSDEC, Latham, N.Y. (2nd Ed.) 136 pp.

Soil Conservation Service. 1975. Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys. U.S.D.A., Soil Conservation Service, U.S. Handbook 436.

Soil Conservation Service. 1988. New York Hydric Soils and Soils with Hydric Inclusions, revised July, 1988, Soil Conservation Service, Syracuse, New York, Technical Guide, Section II. 23 pp.

Simonds,R.L., and H.H. Tweedie. 1978. Wildflowers of the Great Lakes Region. Chicago Review Press, Chicago. 96 pp.

Symonds, G.W.D. 1958. The Tree Identification Book. Quill, New York. 272 pp.

Symonds, G.W.D. 1963. The Shrub Identification Book. William Morrow & Co., New York. 379 pp.

Tiner, R. W. Jr. 1988. A Field Guide to Nontidal Wetland Identification. Maryland Department of Natural Resources and U.S. Fish and Wildlife Service Cooperative Publication. Maryland Department of Natural Resources, Annapolis, Maryland. 283 pp. + 198 color plates.

United States Department and Agriculture & the Natural Resources Conservation Service (USDA, NRCS).Soil Conservation Service Soil Survey of Chautauqua County, New York. U.S.D.A., Soil Conservation Service. 1986 http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

USDA, NRCS. 2009. The PLANTS Database (http://plants.usda.gov, 12/14/09). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

United States Geological Survey maps, Denver, Colorado. Ripley Quadrangle.

U.S. Army Corps of Engineers. 2009. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-09-19. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Fish and Wildlife Service, A Wetlands and Deepwater Habitats Classification. May 3, 2002, http: //www.nwi.fws.gov/. June 16, 2002.

Zander, R.H., and G.J. Pierce. 1979. Flora of the Niagara Frontier Region. Bulletin of the Buffalo Society of Natural Sciences, Vol. 16 (Suppl. 2), Buffalo, New York. 110 pp

RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX E - WETLAND INVESTIGATION PERSONNEL

Soils and Hydrology Sampling
Scott Livingstone, Senior Soil Scientist
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717

Vegetation Sampling
Jody Celeste, Ecologist
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717

Report Preparation
Jody Celeste, Ecologist
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717