### **Wetland and Waterbodies Delineation Report**

for

# RIPLEY INTERSTATE DEVELOPMENT PROJECT

Town of Ripley
Chautauqua County, New York

for

**Chautauqua County Industrial Development Agency** 



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:**

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REPORT DATE: November 30, 2021

EDI PROJECT CODE: W32K07f

### PROJECT INFORMATION

Project Name	Ripley Interstate Development Project
Street Address Shortma	n 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	
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 OwnerCochrane Farms, In	c., Knight Family LLC & Regal Warehouse Properties, LLC
Authority	Section 404
Permit/Letter Being Requested	Jurisdictional Determination

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#### **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	Geographic Center		Boundary	Total	Wetland Type	Wetland Type	Jurisdictional
Identification #	(NA)	D83)	Flag#	Acreage	(Cowardin)	(Reschke)	Determination
	Latitude	Longitude		On-site			
Wetland 1	42.26179	79.73022	W1-1 through	7.538±	PEM	Shallow	Jurisdictional
			W1-66			Emergent	
						Marsh	
Wetland 2	42.26458	79.73565	W2-1 through	0.035±	PFO	Hardwood	Jurisdictional
			W2-5			Swamp	
Wetland 3	42.26482	79.73577	W3-1 through	$0.115 \pm$	PFO	Hardwood	Jurisdictional
			W3-8			Swamp	
Wetland 4	42.26479	79.73513	W4-1 through	$0.080 \pm$	PEM	Shallow	
			W4-7			Emergent	Jurisdictional
						Marsh	

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

#### TABLE 2: STREAM & DRAINAGE SUMMARY

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

#### 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 <a href="http://www.fws.gov/wetlands/Data/Mapper.html">http://www.fws.gov/wetlands/Data/Mapper.html</a> 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	Map Unit Name	Hydric Rating
Symbol		
СЪ	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	60
	flooded	

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

<u>Canandaigua:</u> 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.

<u>Chenango</u>: 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.

<u>Fluvaquents-Udifluvents:</u> 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.

<u>Niagara</u>: 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.

<u>Scio</u>: 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. "Predominantly 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 41°F. 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.

#### <u>Step 11</u>

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  $0.080\pm$  acre and Wetland W5 is  $0.032\pm$  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 W1 is 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

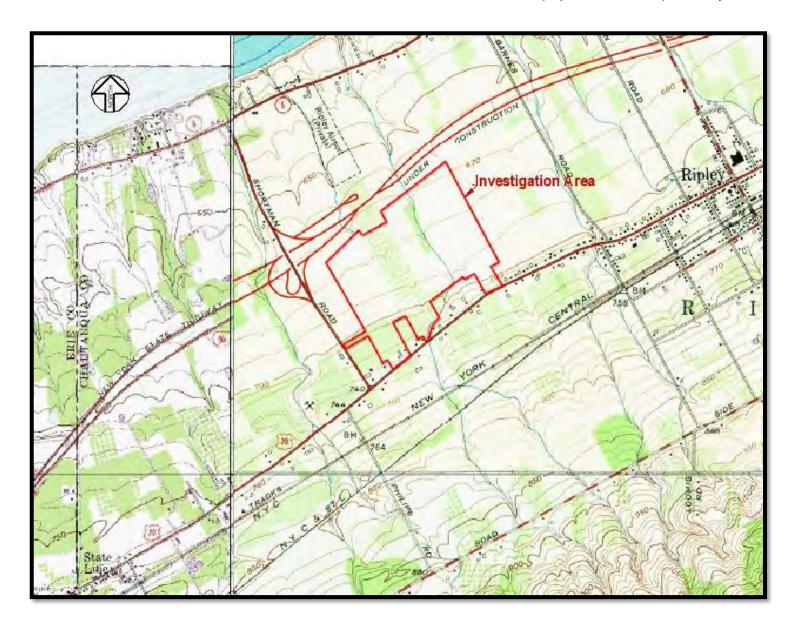


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

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



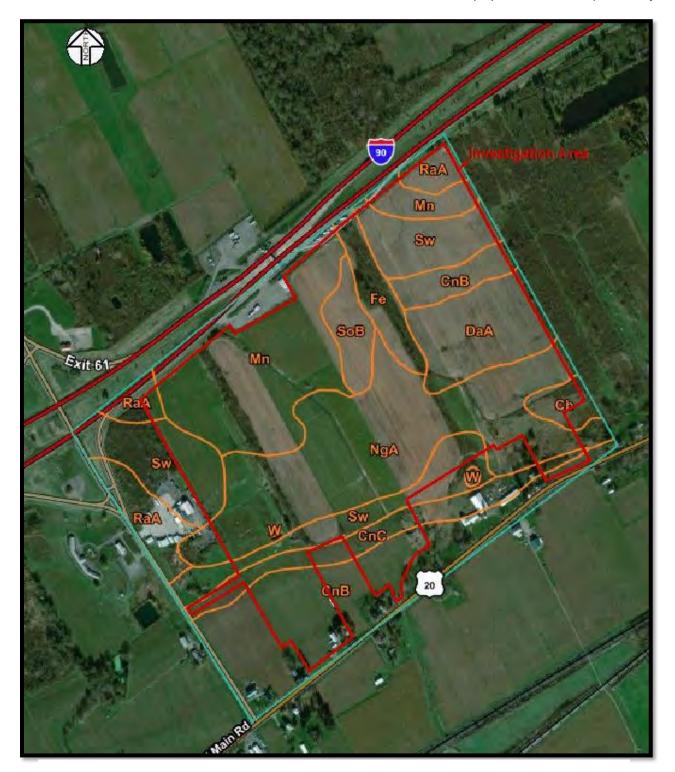


FIGURE 3: NRCS CHAUTAUQUA COUNTY SOIL SURVEY MAP

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

Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York



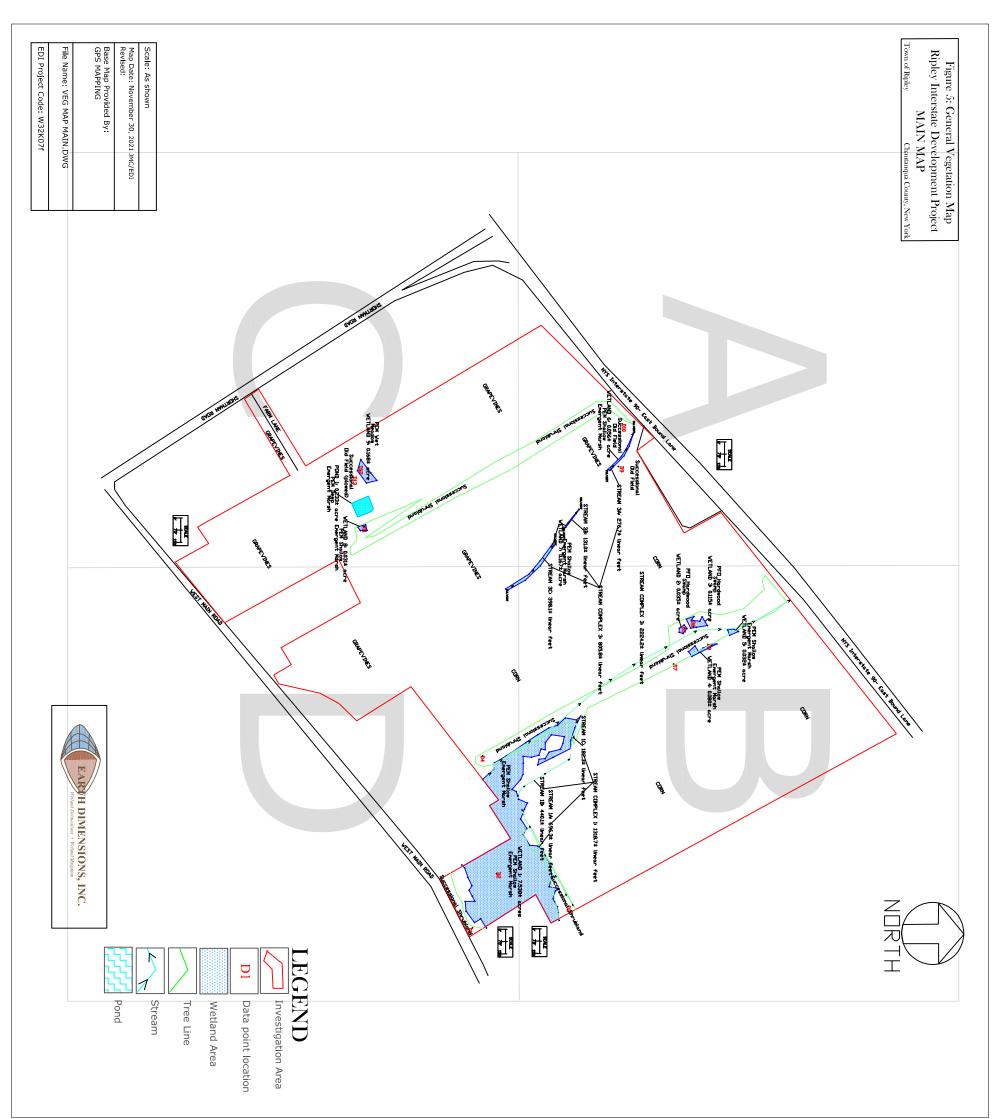


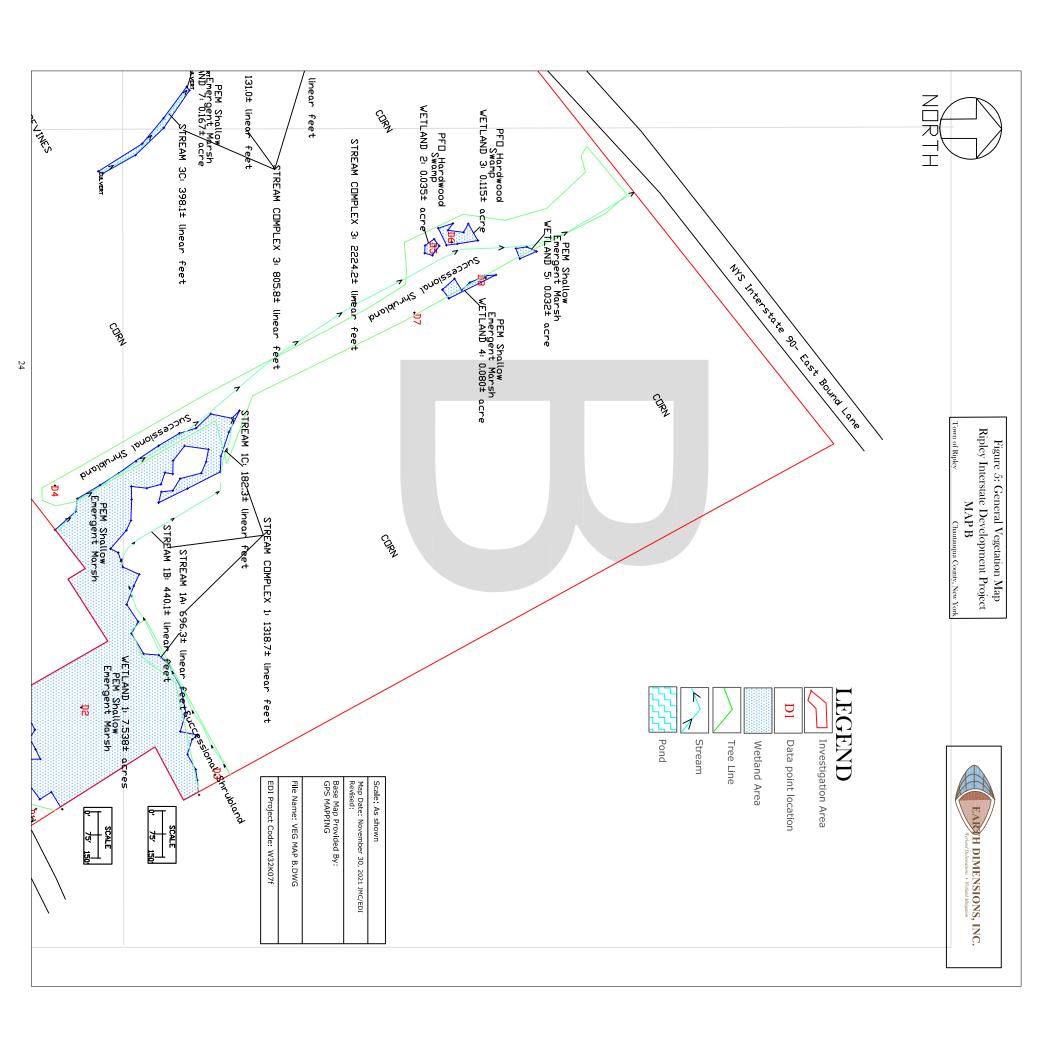
FIGURE 4: NYSDEC ENVIRONMENTAL RESOURCE MAPPER http://www.dec.ny.gov/imsmaps/ERM/viewer.htm (Visited 11/22/21)

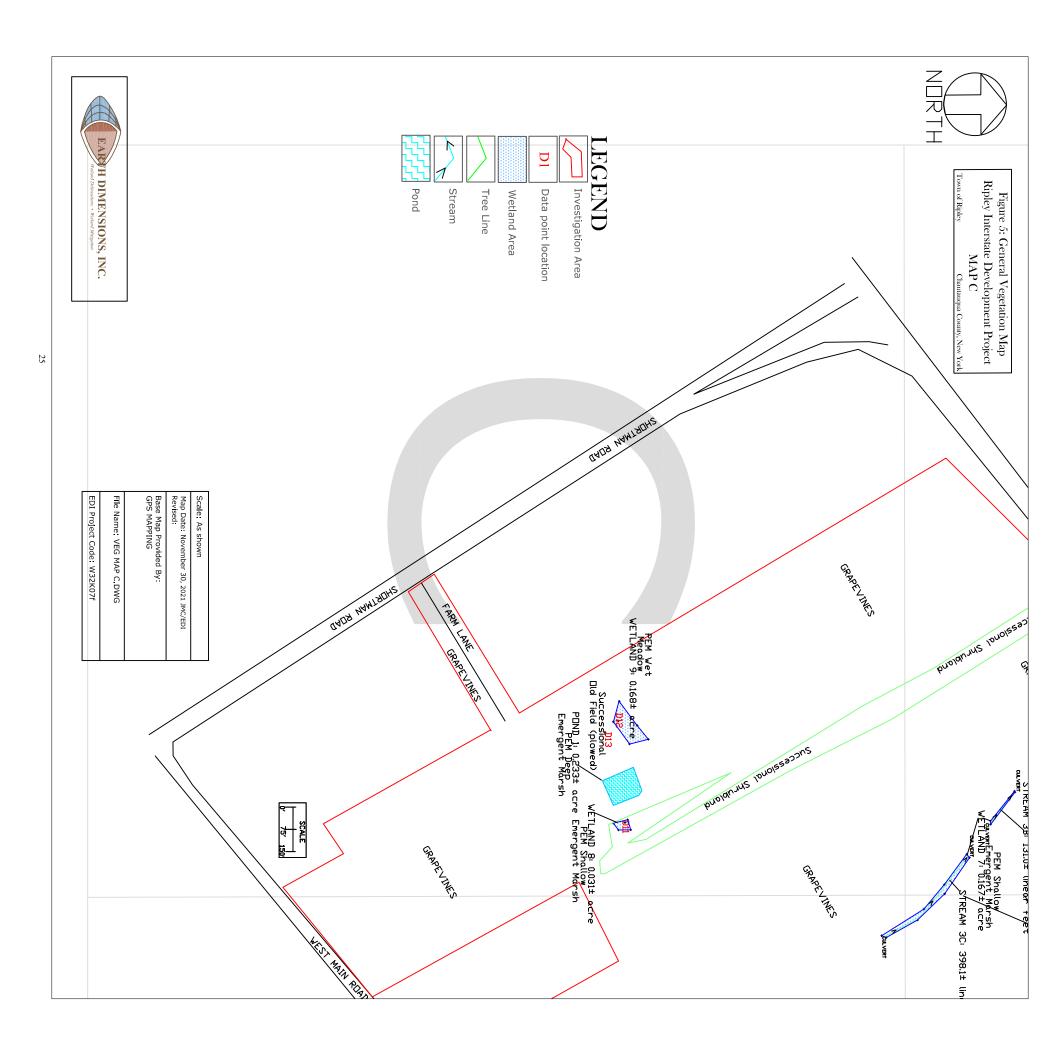
Ripley Interstate Development Project

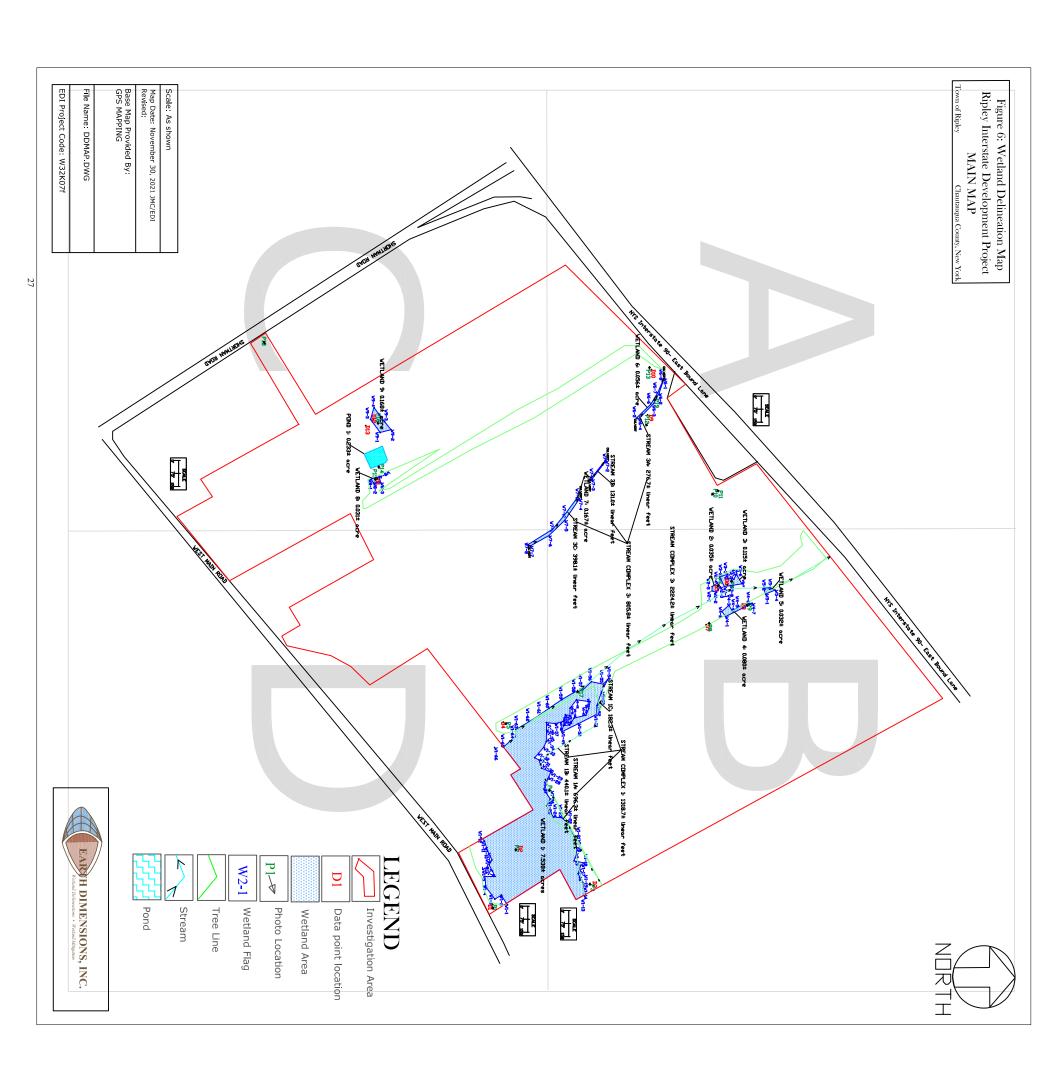
Town of Ripley, Chautauqua County, New York

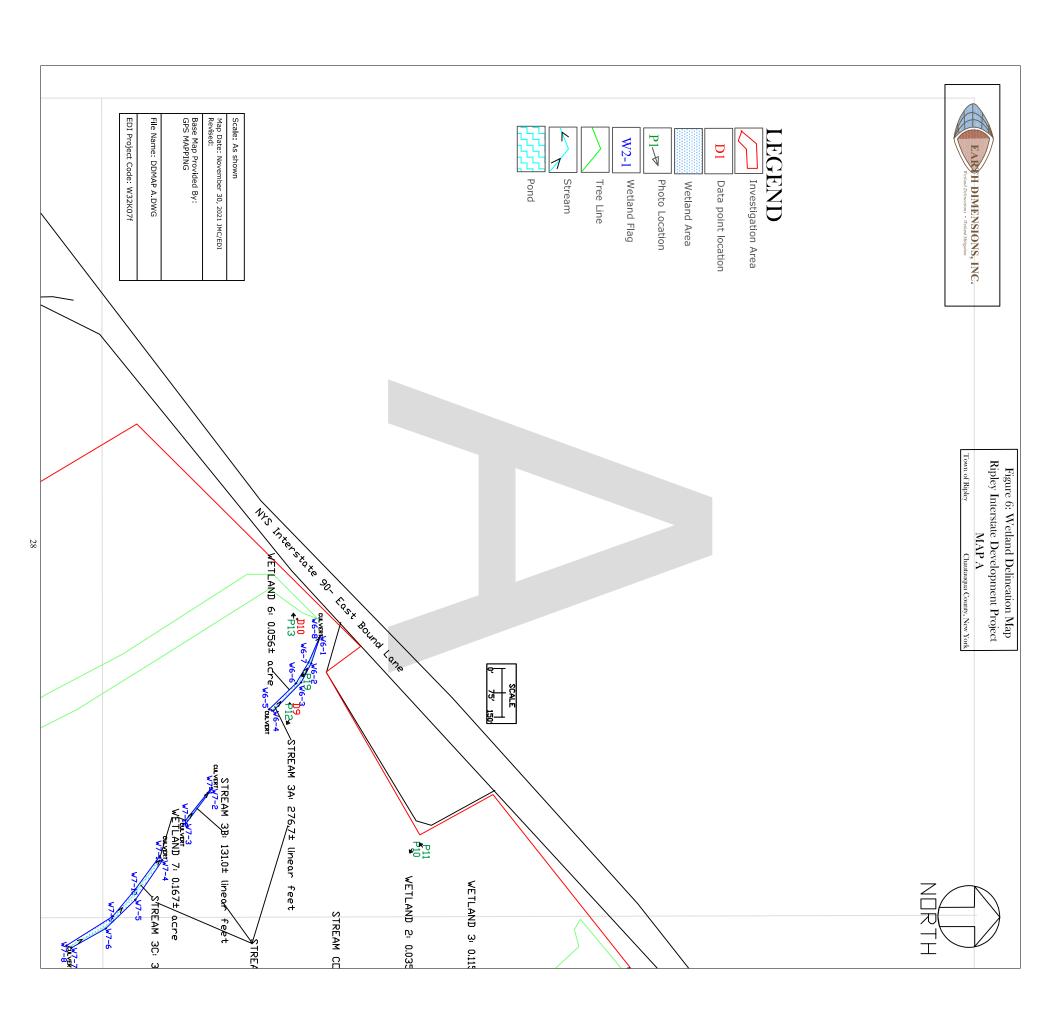


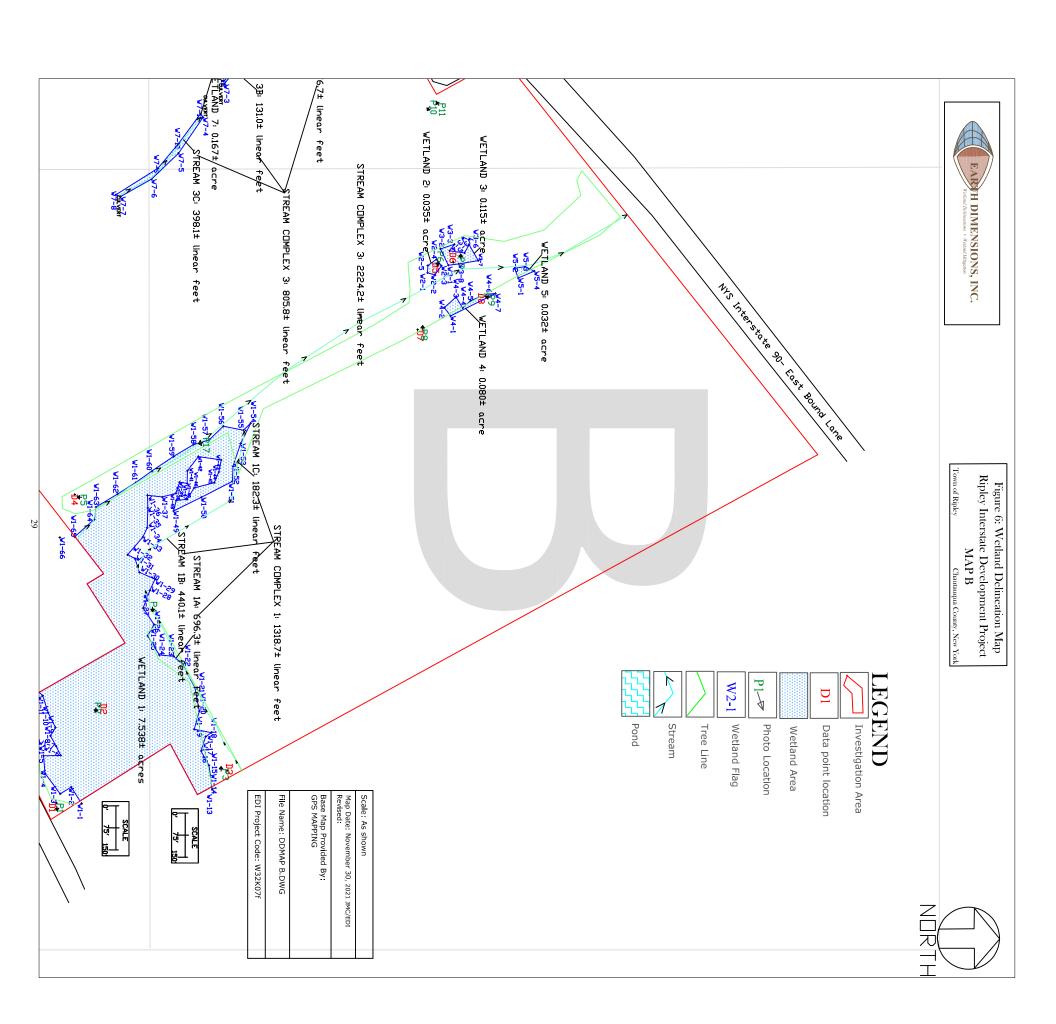


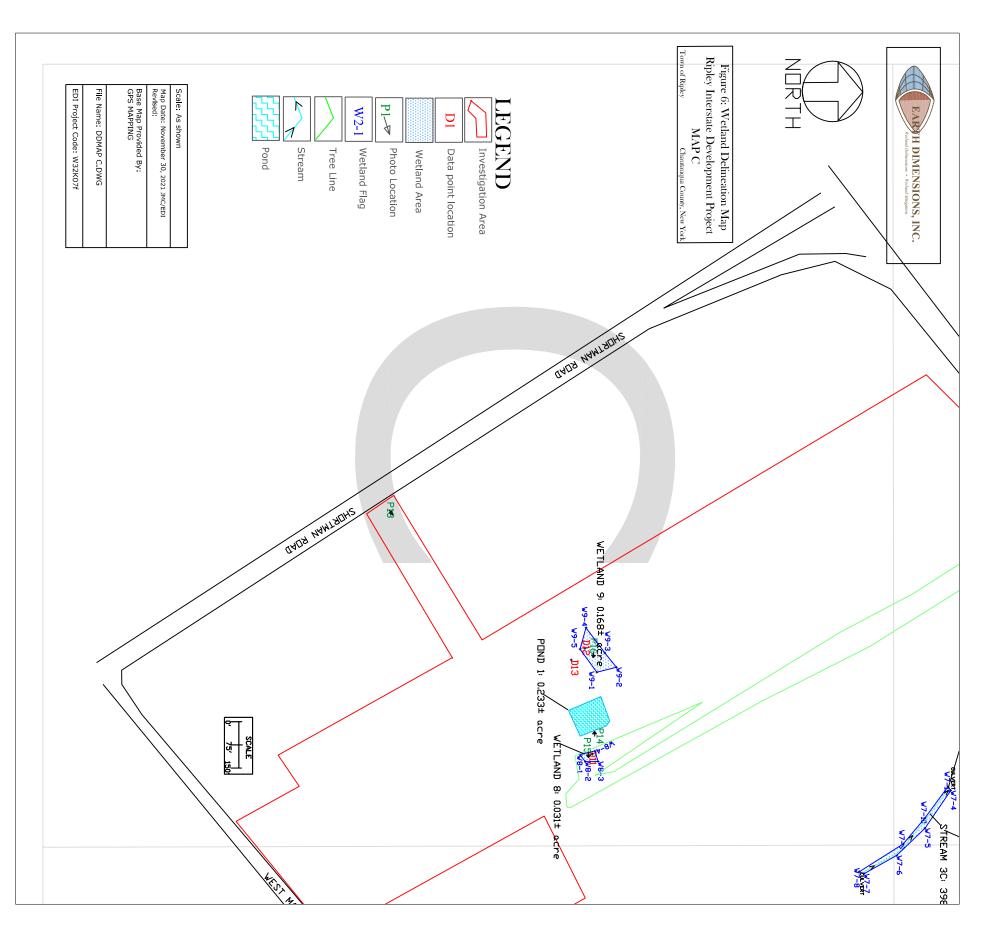


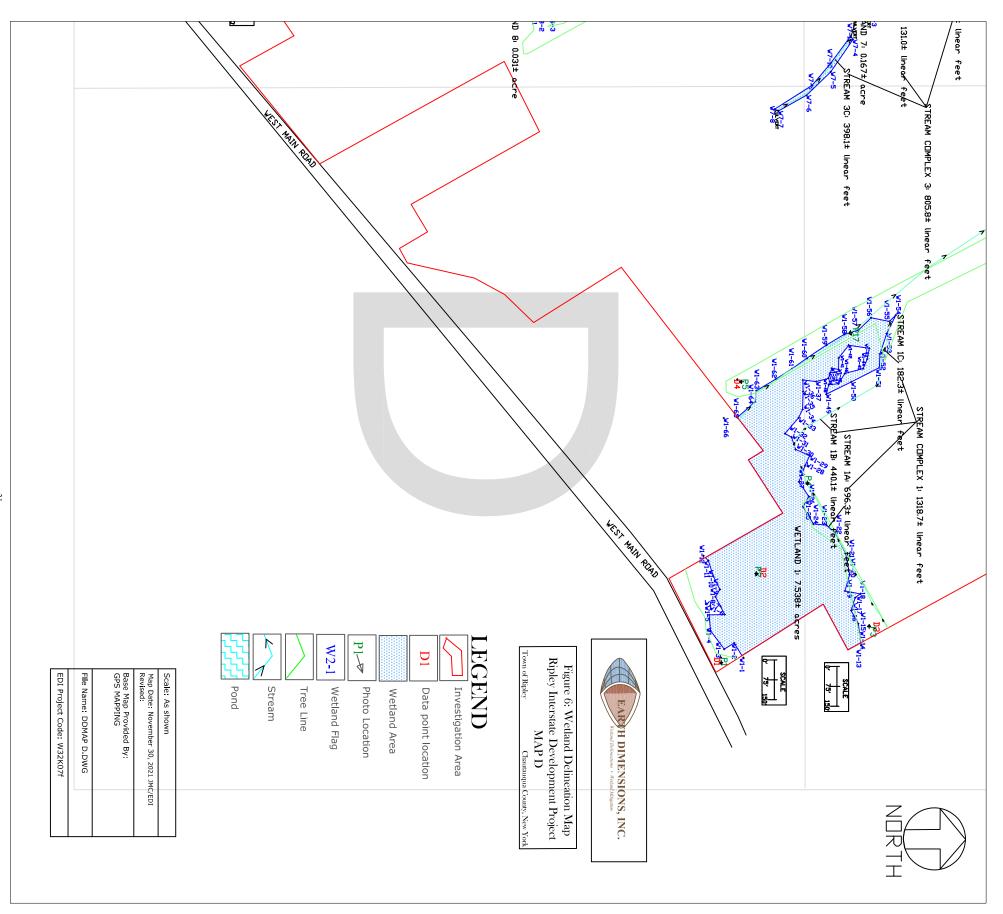












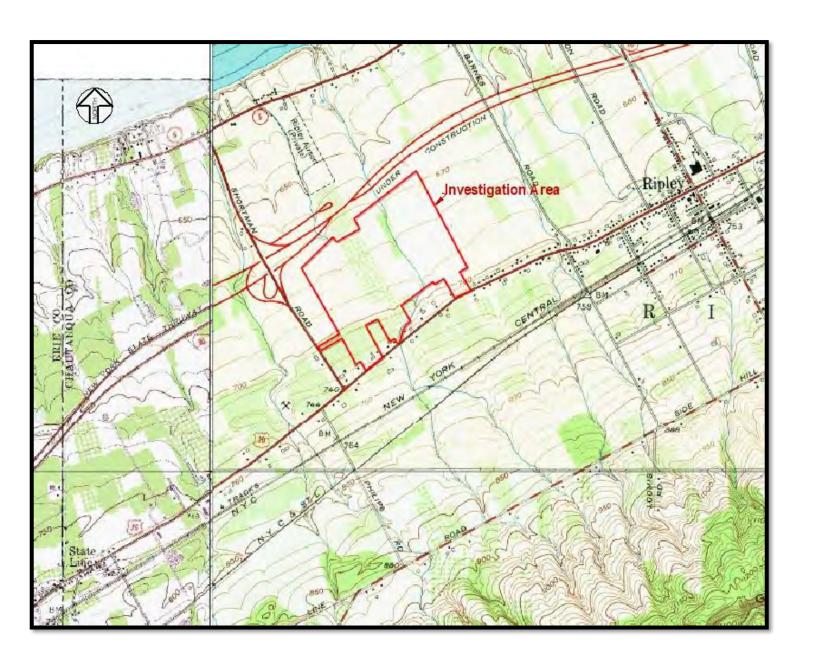


FIGURE 7: DRAINAGE MAP

Ripley Quadrangle / U.S. Geological Survey
Ripley Interstate Development Project
Town of Ripley, Chautauqua County, New York



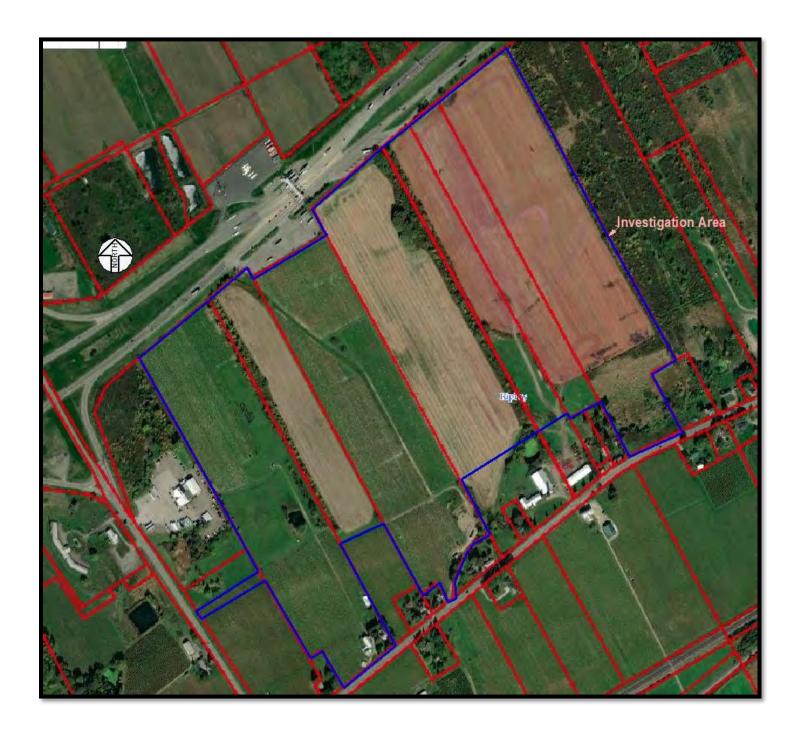


FIGURE 8: SITE AERIAL PHOTOGRAPH
https://chautauquacounty.maps.arcgis.com/ (Visited 11/22/21)
Ripley Interstate Development Project

Town of Ripley, Chautauqua County, New York



# RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX B - DATA SHEETS

Project/Site: Ripley Interstate Development Project	Town/County: Rinley/Chaut	augua County Sampling Date: 10:18 - 21
Applicant/Owner: Chautaugua County IDA	State: New York	Sampling Point:
nvestigator(s): Scott Livingstone & Jody Celeste	Section, Township, Range: _	
andform (hillslope, terrace, etc.): HIIISlope Los Subregion (LRR or MLRA) LRRR Lat: 42,	ocal relief (concave, convex, none):	70 12899 Slope (%): 10
Soil Map Unit Name: CHENIANGO GRAVELL	Y LOAM, 3-8/-51	OPE NW I classification: N/A
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes 🔼 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology s		Are "Normal Circumstances" present? Yes Mo
Are Vegetation, Soil, or Hydrology	(프로스타일이 다른 1500의 보기를 가게 다니다.	(B)
SUMMARY OF FINDINGS: Attach site map showing		
Hydrophytic Vegetation Present? Yes	No X Is the Sam	
Hydric Soil Present? Yes	No X within a W	etland? Yes No No
Hydric Soil Present? Yes	No / If yes, option	nal Wetland Site ID:
Remarks: (Explain alternative procedures here or in a	separate report.)	
HYDROLOGY		
		Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators:	A JULY WAY	
Primary Indicators (minimum of one is required; check		Surface Soil Cracks (B6)
	Water-Stained Leaves (B9)	Drainage Patterns (B10)
	Aquatic Fauna (B13)	Moss Trim Lines (B16) Dry-Season W ater Table (C2)
[Tail 1997] U. 1997 [Tail 1997] [Tail 1997	Marl Deposits (B15) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
<del>                                 </del>	Oxidized Rhizospheres on Living	
	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	Recent Iron Reduction in Tilled So	
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:	.1/2	
Surface Water Present? Yes No X	Depth (inches):	
	Depth (mones).	
	Depth (inches): MA	
Water Table Present?  Saturation Present?  Yes No Yes No		Wetland Hydrology Present? Yes No
Water Table Present?  Saturation Present?  (includes capillary fringe)  Yes No  Yes No	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present?  Saturation Present?  Yes No Yes No	Depth (inches): M/A Depth (inches): M/Pr	THE WAS TON THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present?  Saturation Present?  (includes capillary fringe)  Yes No  Yes No	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE RESERVE OF THE PROPERTY OF
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE PART OF THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAY THE THE PROPERTY OF THE PARTY OF THE
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAS TRANSPORTED TO THE PARTY OF THE PART
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE WAS TRANSPORTED TO THE PARTY OF THE PART
Water Table Present? Yes No X Saturation Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	Depth (inches): M/A Depth (inches): M/Pr	THE PART OF THE PROPERTY OF THE PARTY OF THE

DI

Tree Stratum (Plot size: 30')	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:  Number of Dominant Species
1. NA		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant Species Across All Strata: (B)
4. 5.		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
5.		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
	= Total Cover	OBL species 0 x1 = 0
Sapling/Shrub Stratum (Plot size: 15'	-) 70 V NI	FACW species $\frac{0}{10}$ $x = \frac{0}{30}$
KNUS typhina	10 7 102	FAC species 40 x3 = 30 FACU species 40 x4 = 160
2,		UPL species O x5 = O
3.		Column Totals: 50 (A) 190 (B)
k		20
5.		Prevalence Index = B/A = 3, 8
5.		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
,	70	2 - Dominance Test is >50%
	70 = Total Cover	3 - Prevalence Index is < 3.01
Herb Stratum (Plot size: 5' )	35 Y NI	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Arthmisia Annua	15 Y FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Solanum dulchmara		
Rubus occidentalis	15 Y NI	Indicators of hydric soil and wetland hydrology must
Cata (n = lande		be present, unless disturbed or problematic.
SETTING DOING		Definitions of Vegetation Strata:
Archim mnes	15 Y FAC	Tree - Woody plants 3 in. (7.6 cm) or more in diameter
Sulley rugost	5 N M	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.
0,		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		Woody vines - All woody vines greater than 3.28 ft in
12	100	height.
	100 = Total Cover	
Noody Vine Stratum (Plot size: 30' )  1. VI 17) Oleo 1 Value	10 Y FAC	SUCCESSIONAL SHOUBLANS
2.		Community Type:
3.		Hydrophytic
4		Vegetation
*	/D = Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separa		-
	FAY	
Photo #/ Dire	ection of Photo	₹

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) Color (moist) Remarks <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) 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) Black Histic (A3) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Depleted Dark Surface (F7) Redox Depressions (F8) Red Parent Material (TF2) Sandy Redox (S5) Stripped Matrix (S6)
Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if-observed): Type: Hydric Soil Present? Yes No X Depth (inches): Remarks:

Applicant/Owner: <u>Chautauqua Co</u> nvestigator(s): <u>Scott Livingstone</u> 8	The state of the s	anty. Ripley/Chadauqua County Camping Date. 70
		unty: Ripley/Chautauqua County Sampling Date: 10 · 18 · 2 ew York Sampling Point: DZ
mediation of Destricting Cone (		Township, Range:various
		ave, convex, none): CONCAVE Slope (%): 4
Subregion (LRR or MLRA) <u>LRRR</u>		70 72.70
	CA SILT LOAM, 0-3	
	to the state of th	? Yes No (If no, explain in Remarks.)
	or Hydrology significantly disturb	
re Vegetation, Soil	_, or Hydrology naturally proble	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS : Attac	ch site map showing sampling point	t locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area
Hydric Soil Present?	Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID: W/
	ocedures here or in a separate report.)	
YDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two requ
Primary Indicators (minimum of or	one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)		.eaves (B9) Drainage Patterns (B10)
✓ High Water Table (A2)	Aquatic Fauna (i	B13) Moss Trim Lines (B16)
∑ Saturation (A3)	Marl Deposits (E	
Water Marks (B1)	Hydrogen Sulfide	
Sediment Deposits (B2) Drift Deposits (B3)		spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) duced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Presence of Rec	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surfa	NORTH 10 10 10 10 10 10 10 10 10 10 10 10 10
Inundation Visible on Aerial		5. N. S. N. S. N. S.
Sparsely Vegetated Concav		FAC-Neutral Test (D5)
Field Observations:	Yes No 🔀 Depth (inches):	the state of the s
Field Observations: Surface Water Present?	Yes No Depth (inches):	surface
Surface Water Present?  Water Table Present?		50/1966 Wetland Hydrology Present? Yes No
Surface Water Present? Water Table Present? Saturation Present?	Yes _X_ No Depth (inches):	
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes _X No Depth (inches):	
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)		
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)		

VEGETATION: Use scientific names of plants.

ampling Point: DZ

Tree Stratum (Plot size:30')	Absolute	Dominant Ind		Dominance Test worksheet:
1. NA	-		de la	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
				Total Number of Dominant Species Across All Strata: (B)
			3	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
7			-	Prevalence Index worksheet:
	- har			Total % Cover of: Multiply by:
	10	= Total Cover		OBL species x 1 =
apling/Shrub Stratum (Plot size: 15' )				FACW species x 2 =
NA				FAC species x 3 =
				FACU species x 4 =
			-	UPL species x 5 =
				Column Totals: (A) (B)
111				Prevalence Index = B/A =
	E-10			Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
	b	= Total Cover		2 - Dominance Test is >50%
		_= Total Cover		3 - Prevalence Index is < 3.01
TUPHA ANGUSTIFOLIA	50	Y	BL	4 - Morphological Adaptations (Provide supporting
Dhalans awindinger	30		TALW	data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)
	_		-	Problematic Hydrophytic Vegetation (Explain)
Imposion opposion	10		HEN	Indicators of hydric soil and wetland hydrology must
Polygonun sagitatun	10	N 08	36	be present, unless disturbed or problematic.
19				Definitions of Vegetation Strata:
			4	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
Maria San San San San San San San San San Sa	100 =	otal Cover		height.
oody Vine Stratum (Plot size: 30' )				(IAII) OSAN
MA				(WI) PEM SHALLOW
				Community Type:
				ENCIGENT.
				Hydrophytic Vegetation MATS
Y	2	Label Arter	- 1	Present? Yes No
mades: (Include photo numbers have as a second	T .	_ = Total Cover		
emarks: (Include photo numbers here or on a separate s		EAST	-	NPEN
hoto # Directi	on of Photo	CHUT	_	OF THE
				1 511 E
				* · · · · · · · · · · · · · · · · · · ·

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) Remarks Type<sup>1</sup> Loc2 Texture Color (moist) 10482/1 <sup>2</sup>Location: PL=Pore Lining, M=Matrix. ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5)
Depleted Below Dark Surface (A11) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR K, L, R) Redox Dark Surface (F6) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NONE Type: \_ Hydric Soil Present? Yes \_ M No Depth (inches): Remarks:

Project/Site: Ripley Interstate Development Project	Town/County: Ripley/Chau	tauqua County Sampling Date: 10 • 18 • 2
Applicant/Owner: Chautauqua County IDA	State: New York	Sampling Point: <u>D3</u>
Investigator(s): Scott Livingstone & Jody Celeste	Section, Township, Range:	various
Landform (hillstope, terrace, etc.): ##1/5/ope		
Subregion (LRR or MLRA) LRRR Lat: 42	, 26259 Long:_	79.72937 Datum: NAD83
Soil Map Unit Name: CANAN DATE VA		
Are climatic / hydrologic conditions on the site typical f		
Are Vegetation, Soil, or Hydrology		Are "Normal Circumstances" present? Yes 🗶 No
Are Vegetation, Soil, or Hydrology		
SUMMARY OF FINDINGS: Attach site map showing		
		AN ZACIO DE SOCIETA DE LA CONTRACTOR DE
Hydrophytic Vegetation Present? Yes	No X Is the Sam within a W	
1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_ 100	
Remarks: (Explain alternative procedures here or in		onal Wetland Site ID: N/A
HYDROLOGY		
Wetland Hydrology Indicators:	AN AND AND	Secondary Indicators (minimum of two require
Primary Indicators (minimum of one is required; chec	k all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	_ Water-Stained Leaves (B9)	Drainage Pattems (B10)
High Water Table (A2)	_ Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Water Marks (B1)	_ Marl Deposits (B15)	Dry-Season W ater Table (C2)
Sediment Deposits (B2)	<ul> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living</li> </ul>	Crayfish Burrows (C8)  Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled So	
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:	N/h	
The Control of the Co	Depth (inches):	
	Depth (inches):	W. W
(includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspecti	ons), if available:
Remarks:		
Active Annual Control		

VEGETATION: Use scientific names of plants. Sampling Point: Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: % Cover Species? Status **Number of Dominant Species** PURUL 10mmunus Ma That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: = Total Cover OBL species FACW species Sapling/Shrub Stratum (Plot size: x3= 22-5 FAC species FACU species **UPL** species 20 Column Totals: Prevalence Index = B/A = 20 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 70 = Total Cover 3 - Prevalence Index is < 3.01 Herb Stratum (Plot size: 4 - Morphological Adaptations (Provide supporting Symphotoclan data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) N 10 Indicators of hydric soil and wetland hydrology must 20 CAL 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 10. of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. UV = Total Cover Woody Vine Stratum (Plot size: 30') SUCCESSIONAL SHRVBLAND Community Type: Hydrophytic Vegetation Present? = Total Cover Remarks: (Include photo numbers here or on a separate sheet.) Direction of Photo\_\_\_ Photo #

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) Remarks (inches) Color (moist) 10 MR4/2 100 <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) 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) Black Histic (A3) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Depleted Dark Surface (F7) Redox Depressions (F8) Red Parent Material (TF2) Sandy Redox (S5) Stripped Matrix (S6)
Dark Surface (S7) (LRR R, MLRA 149B) 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): SED ROCK! Type: Hydric Soil Present? Yes\_ No Depth (inches): Remarks:

Subregion (LRR or MLRA) <u>LRRR</u> I Soil Map Unit Name: <u>N JAGAR</u> Are climatic / hydrologic conditions on t Are Vegetation, Soil, or H	A State: New York Celeste Section, Town  KE Pland Local relief (concave, at: 42. 26119  PARTITION LOANS CONTROL OF STATE LOANS CONTROL OF	convex, none): CONVEX Slope (%): 3  Long: 78/73287 Datum: NAD83  3/8/65 NW I classification: N/A  es X No (If no, explain in Remarks.)
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative proced	Yes No	Is the Sampled Area within a Wetland?  If yes, optional Wetland Site ID:  WA  WATTY CHOOSE ROW
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is  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 Ima  Sparsely Vegetated Concave Si	Water-Stained Leave Aquatic Fauna (B13) Marl Deposits (B15) Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( gery (B7)  Water-Stained Leave	Moss Trim Lines (B16) Dry-Season W ater Table (C2) dor (C1) Crayfish Burrows (C8) ares on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) ad Iron (C4) Stunted or Stressed Plants (D1) on in Tilled Soils (C6) Geomorphic Position (D2) (C7) Shallow Aquitard (D3)
Field Observations: Surface Water Present? Water Table Present? Yes Yes	No X Depth (inches): No Depth (i	Wetland Hydrology Present? Yes No X
Remarks:		

VEGETATION: Use scientific names of plants.

Sampling Point:

<u>Tree Stratum</u> (Plot size:) 1)	Absolute % Cover		t Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3.				Total Number of Dominant Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
7.	-6	= Total Co	over	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15'	) -		NI	FACW species x2=
1. Khus typhina	50			FAC species 10 x3= 30 FACU species 75 x4= 300
2. Lonicera tatanina	10	N	FAW	
3				Column Totals: 90 (A) 340 (B)
5,				Prevalence Index = B/A = 3.77
6,				Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation
7,	60	_ = Total C	over	2 - Dominance Test is >50% 3 - Prevalence Index is < 3.01
Herb Stratum (Plot size: 5'  Lonllera Fatarria	30	У	FNW	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
2 Sol Mass cons Dens	, 15	N	V	Problematic Hydrophytic Vegetation¹ (Explain)
8. Symphystrichum latente	00-10	N	FAC	
4. Rusus occidentain	20	Y	NI	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Phalans murdinace	20	N	FAW	Definitions of Vegetation Strata:
A MILLA CANADERS	00		- no	Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3				Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
0				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.				Woody vines - All woody vines greater than 3.28 ft in
	100 =T	otal Cover		height.
Woody Vine Stratum (Plot size:30')  1				SUCLESS LONG SHOUBLAND
3				Hydrophytic Vegetation
	1	= Total C	over	Present? Yes No
Remarks: (Include photo numbers here or on a separate				
Photo # Direct	tion of Photo	Si	UTH	

Project Code: W32K07f SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features (inches) Color (moist) Remarks Color (moist) Texture 100 <sup>2</sup>Location: PL=Pore Lining, M=Matrix. 1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Black Histic (A3) Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Redox Dark Surface (F6) 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) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NONE Type: Hydric Soil Present? Yes No Depth (inches): Remarks:

Project/Site: Riolev Intentate Development Project Town/County: Riolev/Chautauaugus County Sampling Date: 10 18 20. Applicant/Owner_Chautauaugus County DA State: New York Sampling Point	Project/Site: Ripley Interstate Development Project	Town/County: Ripley/Chauta	sugua County Sampling Date: 10 - 18 - 20
Investigator(s): Scott Livingstone & Jody Celeste  Section, Township, Range:			Sampling Point: D5
Landform (hillslope, terrace, etc.): Deptisiz Callocal relief (concave, convex, none): Concave: Slope (%): Colored (%): Co	Investigator(s): Scott Livingstone & Jody Celeste	Section, Township, Range:	
Subregion (LRR or MLRA) LRR Lat: 41, 10461 Long: 79,735 Datum: NAD83  Sold Map Unit Name: FUND QUENTS - Ital Truth of the Sold Map Unit Name: FUND QUENTS - Ital Truth of Sold Map Unit Name: FUND QUENTS - Ital Truth of Sold Map Unit Name: Fund Quents - Ital Truth of Sold Map Unit Name: Fund Quents - Ital Truth of Sold Map (If no, explain in Remarks.)  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?			
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 Within a Wetland? Yes	Subregion (LRR or MLRA) LRRP Lat: 42,	26461 1000 7	9 73567 Datum: NAD83
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Normal Circumstances" present? Yes No Normal Circumstances" present? Yes No Normal Circumstances" present? Yes Normal Circumstances in Remarks.)  Sufface Soil Present? Yes Normal Circumstances in Remarks.)  Sufface Soil Cracks Soil Cracks Circumstances in Remarks (Explain alternative procedures here or in a separate report.)  Water Guard Hydrology Indicators:  Primary Indicators (Explain alternative procedures here or in a separate report.)  Water Captal Hydrology Indicators:  Secondary Indicators (Ininimum of two required)  Primary Indicators (Ininimum of two required)  Water Captal Hydrology Indicators:  Secondary Indicators (Ininimum of two required)  Primary Indicators (Ininimum of two required)  Water Captal Hydrology Indicators:  Secondary Indicators (Ininimum of two required)  Primary Indicators (Ininimum of two required)  Secondary Indicators (Ininimum of two required)  Moss Trim Lines (Sil)  Drintage Patterns (B10)  Secondary Indicators (Ininimum of two required)  Maria Deposits (B15)  Drys-Season Water Table (C2)  Stunted or Stressed Plants (D1)  Secondary Indicators (Ininimum of two required)  Secondary Indicators (Ininimum of two required)  Secondary Indicators (Ini	Soil Map Unit Name: Flu Vaquents-110	ifluvents comp	
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No No North Normal Circumstances" present? Yes No North No	Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X No	(If no, explain in Remarks.)
Summary OF FINDINGS: Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present? Yes No Wetland Hydrology Indicators:  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 Vater (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Water Marks (B1)  Sediment Deposits (B2)  Oxidized Rhicospheres on Living Roots (C3)  Sediment Deposits (B2)  Oxidized Rhicospheres on Living Roots (C3)  Agal Mat or Crust (B4)  Recent Iron Reduction in Tilled Soils (C6)  Iron Deposits (B3)  Agal Mat or Crust (B4)  Recent Iron Reduction in Tilled Soils (C6)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observationes:  Surface Vater (PA1)  Wetland Hydrology Present?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Pre	Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" present? Yes No
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Marl Deposits (B15)  Marl Deposits (B15)  Sediment Deposits (B2)  Ordific Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Inundation Visible on Aerial Imagery (B7)  Wetland Hydrology Indicators:  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 (B7)  Inundation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Metal And Hydrology Present?  Yes No Depth (inches):  Surface Water Present?  Yes No Depth (inches):  Surface Volter Area within a Wetland?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Surface Volter Area within a Wetland?  Yes No Depth (inches):  Surface Volter Area within a Wetland?  Yes No Depth (inches):  Surface Volter Area within a Wetland?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Surface Volter Area within a Wetland?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Surface Volter Area within a Wetland?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Metal Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Metal Hydrology Present? Yes No Depth (inches)			
Hydric Soil Present?  Yes No Within a Wetland?  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Indicators:  Wetland Hydrology Indicators:  Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)  Surface Water (A1)  Water-Stained Leaves (B9)  Surface Water (A1)  Water-Stained Leaves (B9)  Surface Water (A3)  Marl Deposits (B15)  Water Marks (B1)  Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  Sediment Deposits (B3)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Inundation Visible on Aerial Imagery (B7)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Surface Voltager Present?  Yes No Depth (inches):  Wetland Hydrology Present? Present?  Yes No Depth (inches):  Secondary Indicators (minimum of two required)  Surface (B6)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Strinted or Stressed Plants (D1)  Geomorphic Position (D2)  Inundation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Surface Water Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):	SUMMARY OF FINDINGS: Attach site map showing	sampling point locations, transe	cts, important features, etc.
Wetland Hydrology Present?  Remarks: (Explain alternative procedures here or in a separate report.)  WZ-1-> WZ-5 (CUSSED) T30CATED)  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Mand Deposits (B15)  Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  Algal Mat or Crust (B4)  Recent Iron Reduction in Tilled Soils (C6)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Suturation Present?  Yes No Depth (inches):  Surface (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	Hydrophytic Vegetation Present? Yes	No 🔀 Is the Samp	
Remarks: (Explain alternative procedures here or in a separate report.)  ### W2-1-  ### W2-5 (CLASED   TSOLATED)  ### Wetland Hydrology Indicators:    Primary Indicators (minimum of one is required; check all that apply)	Hydric Soil Present? Yes	No 🔀 within a We	etland? Yes No
Wetland Hydrology Indicators:  Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Moss Trim Lines (B16)  Saturation (A3)  Marl Deposits (B15)  Dry-Season W ater Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Iron Deposits (B3)  Presence of Reduced Iron (C4)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  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)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):			nal Wetland Site ID:
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)  Oxidized Rhizospheres on Living Roots (C3)  Agal Mar or Crust (B4)  Iron Deposits (B5)  Iron Deposits (B6)  Thin Muck Surface (C7)  Sparsely Vegetated Concave Surface (B8)  Depth (inches):  Water Table (A2)  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Drainage Patterns (B10)  Moss Trim Lines (B16)  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)  Iron Deposits (B5)  Iron Muck Surface (C7)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Unicludes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			Δ)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Marl Deposits (B15)  Saturation (A3)  Marl Deposits (B15)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Depth (inches):  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Surface (Sil Cracks (B6)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Moss T	102 / / / 102 3 (5	A STATE OF THE STA	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Marl Deposits (B15)  Saturation (A3)  Marl Deposits (B15)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Depth (inches):  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Surface (Sil Cracks (B6)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Moss T			
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Marl Deposits (B15)  Saturation (A3)  Marl Deposits (B15)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Secondary Indicators (minimum of two required)  Surface (B6)  Surface Soil Cracks (B6)  Drainage Patterns (B10)  Moss Trim Lines (B10)  M	WWW.CO.		
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  Moss Trim Lines (B16)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  In Deposits (B5)  In Deposits (B5)  In Indiation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Water Table (A2)  No  Depth (inches):  Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Drainage Patterns (B10)  Moss Trim Lines (B10)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (C9)  Saturation (C4)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Field Observations:  Wetland Hydrology Present? Yes No  Depth (inches):  Wetland Hydrology Present? Yes No  Depth (includes capillary fringe)			8 1 1 1 1 1 1 1 1 1 1 1 1 1
Surface Water (A1)	[H. H. H	-0 d-1 -2 -2 - 1 - 1	
High Water Table (A2)  Aquatic Fauna (B13)  Marl Deposits (B15)  Dry-Season W ater Table (C2)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  No  Depth (inches):  Depth (inches):  Wetland Hydrology Present? Yes  No  Depth (inches):  Wetland Hydrology Present? Yes  No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	and and to show the state of	A series and the series of the	
Saturation (A3)  Water Marks (B1)  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)  Field Observations:  Surface Water Present?  Water Table (C2)  Marl Deposits (B15)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres on Living Roots (C3)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Recent Iron Reduction in Tilled Soils (C6)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Ves No Depth (inches):  Depth (inches):  Depth (inches):  Wetland Hydrology Present? Yes No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Water Marks (B1)	[18] [17] [17] [17] [17] [17] [17] [17] [17		
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)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Sediment Deposits (B3)  Oxidized Rhizospheres on Living Roots (C3)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Saturation Present?  Yes No Depth (inches):  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Feld Observations:  Surface Water Present?  Yes No Depth (inches):  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No  No  No  Depth (inches):  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Stunted or Stressed Plants (D1)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Stunted or Stressed Plants (D1)  Sequence of Reduced Iron (C4)  Shallow (C1)			
Drift Deposits (B3)	- <del> </del>	. (1)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Surface Water Present?		네 보이라 아들아 나는 아이들은 이 그는 사용에게 하면서 그렇게 하지만 하게 되었다.	
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5)  Field Observations: Surface Water Present? Yes No Depth (inches): MA Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Surface Wetland Hydrology Present? Yes No Depth (inches): Surface Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Algal Mat or Crust (B4)	그게 생각하면 어떻게 그게 되고 걱정하게 하다면 하면 하는데 가는데 가능하다.	
Sparsely Vegetated Concave Surface (B8)  FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Ves No Depth (inches): W/A  Water Table Present?  Saturation Present?  Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Iron Deposits (B5)		
Field Observations:  Surface Water Present? Yes No Depth (inches): MA  Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Inundation Visible on Aerial Imagery (B7)	이 사람들은 1 Tune (2010년 1일	
Surface Water Present? Yes No Depth (inches): MA Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		and the same of th	FAC-Neutral Test (D5)
Water Table Present?  Yes No Depth (inches): Wetland Hydrology Present?  Saturation Present?  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	C d W/ D X	N/A	
Saturation Present? Yes No Depth (inches): Sulfact Wetland Hydrology Present? Yes No Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			Westland Underland Process 2 Voc X No
	(includes capillary fringe)		
Remarks:	Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspectio	ns), if available:
Remarks:	- water No.		
	Remarks:		
	Remarks.		



Tree Stratum (Plot size: 30'	Absolute % Cover		nt Indicator ? Status	Dominance Test worksheet:
1 3868 10 1000	30	Y	FACILI	Number of Dominant Species
SATIV AT BA	10	V	FAIN	That Are OBL, FACW, or FAC:(A)
3.012 7.010			1010	Total Number of Dominant
<u></u>			-	Species Across All Strata: (B)
,				Percent of Dominant Species 57
				That Are OBL, FACW, or FAC: (A/B)
<u> </u>			1	Prevalence Index worksheet:
			-	Total % Cover of: Multiply by:
	40	= Total C	Cover	OBL species x1 =
apling/Shrub Stratum (Plot size: 15')		_ rotal c	,over	FACW species x2=
Was multiflora	15	Y	FAL	FAC species x 3 =
		V		FACU species x 4 =
LONICETA TETATICA	_10			UPL species x 5 =
	1000			Column Totals: (A) (B)
				Column rotals (7) (b)
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
<del></del>			-	1 - Rapid Test for Hydrophytic Vegetation
		77.5		2 - Dominance Test is >50%
	25	_ = Total (	Cover	3 - Prevalence Index is < 3.01
PhAIAMS ANNAINACH	4 5	y	FALW	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
GENT MACROPHILLIAM	5	У	1	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
- Frymus			7 -67	
				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.
ó				Herb - All herbaceous (non-woody) plants, regardless
				of size, and woody plants less than 3.28 ft tall.
1				
				Woody vince - All woody vines greater than 3.28 ft in
	75		_	Woody vines - All woody vines greater than 3.28 ft in height.
	/o =1	Fotal Cove	er er	Woody vines - All woody vines greater than 3.28 ft in height.
2	<u>/</u>	Total Cove		height.
2.	15	Fotal Cove	PAW	height.
/oody Vine Stratum (Plot size: 30' ) VI+IJ alsh value	15 =1	Fotal Cove		height.
2	78 =1 15	Fotal Cove		Community Type: PFD HARDWOOD SWAMP.
Voody Vine Stratum (Plot size: 30' ) VITIS also Trans	15	Fotal Cove		Community Type:  Hydrophytic Vegetation
Vitis alst vals	15	Y	PAGU	Community Type:  Hydrophytic  PFD HARDWOOD SWAMP
2	15	Fotal Cove	PAGU	Community Type:  Hydrophytic Vegetation
Remarks: (Include photo numbers here or on a separate	15	= Total	PAGU	Community Type:  Hydrophytic Vegetation

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) Remarks (inches) Texture Color (moist) <sup>2</sup>Location: PL=Pore Lining, M=Matrix. <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) (LRR K, L)
Loamy Gleyed Matrix (F2)
Depleted Matrix (F3) Hydrogen Sulfide (A4) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Thin Dark Surface (S9) (LRR K, L) Fron-Manganese Masses (F12) (LRR K, L, R)
Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Red Parent Material (TF2) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): ONE Type: Hydric Soil Present? No Depth (inches): Remarks:

alega and The Part of the Porte	ment ProjectTown/County	: Ripley/Chautauqua County Sampling Date: 10 - 18 - 20
pplicant/Owner: Chautauqua County		
vestigator(s): Scott Livingstone & Jou	dy Celeste Section, Town	nship, Range: <u>various</u>
indform (hillslope, terrace, etc.):	Dress, on Local relief (concave,	convex, none): CONCAVE Slope (%):
bregion (LRR or MLRA) LRRR L	at 42, 26476	Long: /%. 73576 Datum: NAD83
		ENTS COMPLEXIVICASSIFICATION: PFO
e climatic / hydrologic conditions on ti		
e Vegetation, Soil, or H		
	. No. 1 of M. Tambar & B. H. H. M. H. H. H. H. H.	atic? (If needed, explain any answers in Remarks.)
		cations, transects, important features, etc.
SIMILARY OF THE INCO. ALLACTIST	te map snowing sampling point loc	
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area
Hydric Soil Present?	Yes No	within a Wetland? Yes X No
Wetland Hydrology Present? Remarks: (Explain alternative proced	Yes No	If yes, optional Wetland Site ID:
WAS 2 ST 220		
/DROLOGY		Secondary Indicators (minimum of two required
Vetland Hydrology Indicators: Primary Indicators (minimum of one is	s required; check all that apply)	Secondary Indicators (minimum of two required
Surface Water (A1)	Water-Stained Leave	The state of the s
High Water Table (A2)	Aquatic Fauna (B13	(A) (B) (B) (B) (B) (B) (B) (B) (B) (B) (B
Saturation (A3)	Marl Deposits (B15)	[1]
Water Marks (B1)	Hydrogen Sulfide Od	N 100 N
Sediment Deposits (B2)		eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduce	#1.748 C 1 (2.77 C 1 (3.77
Algal Mat or Crust (B4) Iron Deposits (B5)	######################################	ion in Tilled Soils (C6) Geomorphic Position (D2)
Inundation Visible on Aerial Imag	Thin Muck Surface gery (B7) Other (Explain in R	
Sparsely Vegetated Concave Su		FAC-Neutral Test (D5)
field Observations:	TO SALE OF THE SALE	
Surface Water Present? Yes	No X Depth (inches):/	V/A
	No V Depth (inches):	J/A
Saturation Present? Yes	No 🔀 Depth (inches):/	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:		

06

VEGETATION: Use scientific names of plants.

Tree Stratum (Plot size: 30")  1. JUGI AND NIGOR  2. SALYK ALBA	Absolute Dominant Indicator Species? Status  5 PACU  25 Y FACU	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant  (A)
3		Species Across All Strata: (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
4	30 = Total Cover  15	Prevalence Index worksheet:
5	20 = Total Cover  YN 20 Y FAC  30 Y FAW  5 N FAC	Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is < 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)  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
Woody Vine Stratum (Plot size:30')  4	SS = Total Cover  20 Y FAC  20 = Total Cover	Community Type:
Remarks: (Include photo numbers here or on a separate s  Photo # Directi		150 lated

Project Code: W32K07f SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features (inches) Color (moist) Texture Remarks Color (moist) <sup>2</sup>Location: PL=Pore Lining, M=Matrix. <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) 2 cm Muck (A10) (LRR K, L, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) 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) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (TF2) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NONE Type: Hydric Soil Present? Yes No Depth (inches): Remarks:

roject/Site: Ripley Interstate Development Proj			ua County	Sampling Date:	10.18.20
pplicant/Owner: Chautaugua County IDA	State: New Yo	ork_	Samplir	ng Point: <u>D7</u>	<del>-</del>
vestigator(s): Scott Livingstone & Jody Celest indform (hillslope, terrace, etc.): 10 UTW A3 ibregion (LRR or MLRA) LRRR Lat: 4 iii Map Unit Name; CHEN ANGO 61	D. Local relief (concave, or D. 26443 PAVELLY LOAM, 3	Long: 78 3-87. 5/01	ONVEX  73/83  Pes NW I classifica	ation: Datum:	
e climatic / hydrologic conditions on the site type Vegetation, Soil, or Hydrology e Vegetation, Soil, or Hydrolog	significantly disturbed? y naturally problemati	A c? (If needed, exp	re "Normal Circums olain any answers in	tances" present?	Yes X No
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No ×	Is the Sampled within a Wetlar	Area	No_X	
Remarks: (Explain alternative procedures here  PUPLAND CORN  HEDGE ROW		EDGE	OF 50	RUB/5.	HRUB
YDROLOGY					
Wetland Hydrology Indicators:	es tellerense			ry Indicators (minin	num of two required
Primary Indicators (minimum of one is required		CONT.		e Soil Cracks (B6)	
Surface Water (A1)	Water-Stained Leaves		The state of the s	ge Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (B13)			Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15)	10.11		eason W ater Table	(C2)
Water Marks (B1)	Hydrogen Sulfide Odd			sh Burrows (C8)	al Imagani (CO)
Sediment Deposits (B2)	Oxidized Rhizospher			ation Visible on Aeri	
Drift Deposits (B3) Algal Mat or Crust (B4)	Presence of Reduced			d or Stressed Plant orphic Position (D2)	
	Recent Iron Reduction			(그런 경기는 다음 그는 남자는 것은 점점	
Iron Deposits (B5)	Thin Muck Surface (C		1	w Aquitard (D3)	24)
<ul> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Sparsely Vegetated Concave Surface (Bit</li> </ul>		marks)		opographic Relief (E Neutral Test (D5)	04)
Sparsely vegetated Concave Surface (Br	2)	-7- 16-		vedual rest (D5)	
HTTSTFH HITTHELL 1. 4 4.	A Brest Carbonia A	1/0			
	Depth (inches):	Ila			
	Depth (inches):	1/2	etland Hydrology I	Procent? Voc	No X
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	· // ·	etiand hydrology i	resent res	_ ***
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, prev	rious inspections),	if available:		
Remarks:					

Tree Stratum (Plot size: 30' )	Absolute Dominant Indicator  Cover Species? Status  Dominant Indicator  NI  NI  NI  NI  NI  NI  NI  NI  NI  N	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. 3.		Total Number of Dominant Species Across All Strata: (B)
4. 5.		Percent of Dominant Species That Are OBL, FACW, or FAC:
6.		Prevalence Index worksheet:
7	/b = Total Cover	Total % Cover of: Multiply by:  OBL species
Sapling/Shrub Stratum (Plot size: 15'	ss y NI	FACW species 0 x2= 0 FAC species 40 x3= 120 FACU species 40 x4= 240
3. ROSUN OCCIAENTALO	5 N FACO	UPL species
4		Column Totals: 100 (A) 366 (B)  Prevalence Index = B/A = 3,66
6		Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5' )	= Total Cover	2 - Dominance Test is >50% 3 - Prevalence Index is < 3.01
1. CONVOLVOUS SEPULATE	15 Y FAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
a Set Aria pymila	20 Y V	Indicators of hydric soil and wetland hydrology must
5. 11, haterition		be present, unless disturbed or problematic.  Definitions of Vegetation Strata:
7. Archen minus	S N FAW	Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
9.		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
10		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12	= Total Cover	Woody vines - All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: 30' )  1		SUCCESSIONAL SHRUB CAPP F
3.		Hydrophytic Vegetation
4. 1	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separal	te sheet.)	

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Remarks Color (moist) Color (moist) <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) 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 R, MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Depleted Dark Surface (F7) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (TF2) Stripped Matrix (S6)
Dark Surface (S7) (LRR R, MLRA 149B) 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): NONE Type: \_ Hydric Soil Present? Yes\_ No Depth (inches): Remarks:

Project/Site: Ripley Interstate Development Proje	ctTown/County: Ripley/Chautaugua CountySampling Date:
Applicant/Owner: Chautaugua County IDA	State: New York Sampling Point: D8
Investigator(s): Scott Livingstone & Jody Celeste	
	Local relief (concave, convex, none): NONE Slope (%): </th
Subregion (LRR or MLRA) LRRR Lat: 4 or	Long: 79. 73528 Datum: NAD83
5. ' - [ - ]	TWO TO GO STITLE THE TOTAL
Are climatic / hydrologic conditions on the site typi	ical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology _	significantly disturbed? Are "Normal Circumstances" present? Yes 🛌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS: Attach site map sh	owing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	Is the Sampled Area
Hydrophytic Vegetation Present? Yes_ Hydric Soil Present? Yes	udthin a Wetland? Yes X No
1464-144-1-1-5	
Remarks: (Explain alternative procedures here	
	LOSED/ISOLATED)
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply) Surface Soil Cracks (B6)
Surface Water (A1)	✓ Water-Stained Leaves (B9)
High Water Table (A2)	Aquatic Fauna (B13) Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15) Dry-Season W ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Drift Deposits (B3)	Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)  Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)  Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No	✓ Depth (inches):  ✓A
Water Table Present? Yes No	Depth (inches): NA
Saturation Present? Yes X No	Depth (inches): Wetland Hydrology Present? Yes Mo
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous inspections), if available:
and the state of t	mig men, dental provide, provide inspectionary, a relative
Access to the second se	
Remarks:	

08

Tree Stratum (Plot size: 30' )  1. SATIX AT 5A	Absolute Dominant Indicator  **Species? Status  **The Court of the Cou	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
2		Total Number of Dominant Species Across All Strata: (B)
4		Percent of Dominant Species That Are OBL, FACW, or FAC:
5 7		Prevalence Index worksheet:  Total % Cover of: Multiply by:
	35 = Total Cover	OBL species x 1 =
apling/Shrub Stratum (Plot size: 15')		FACW species x 2 =
Normul Stolonitera	15 Y FAGA	FAC species x 3 =
× tale to the tale tale to the tale tale tale tale tale tale tale tal		FACU species x 4 =
		UPL species x 5 =
		Column Totals: (A) (B)
<u> </u>		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
	= Total Cover	2 - Dominance Test is >50%
lerb Stratum (Plot size:5')	/ V 50/m	3 - Prevalence Index is < 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
Phaloris armainacca	5 N M	data in Remarks or on a separate sheet)
Epilobium ColorATU		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Imparer Corpust		Indicators of hydric soil and wetland hydrology must
BIAMS FrondosA	10 N	be present, unless disturbed or problematic.
Polywon- pennylvani	WO N X	Definitions of Vegetation Strata:
Solighogo CANADENSIS	<u> </u>	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.
0		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
1		
12.	/DD = Total Cover	Woody vines - All woody vines greater than 3.28 ft in height.
A CARLO DE CARLO AND AND A CARLO DE CAR	Total Cover	
Noody Vine Stratum (Plot size: 30' )		Community Type: PEM SHALOW EM PR
		Hydrophytic
		Vegetation
V	= Total Cover	Present? Yes No No
Remarks: (Include photo numbers here or on a separate s	heet.)	
Q	on of Photo_SOUTH	Walched
	200000000000000000000000000000000000000	1 Solated

rix moist) % 23/6 93	Toynes /g	lox Features % Type¹  5 C 7 C	Loc²	5. l grl+	Remarks
24/1 95 23/6 93	104125/8 104125/8	5 C 7 C	M	5.1 gcl+	
23/6 93	10/R5/18	7 c	M	grl+	
			=		
(A4) A5) ark Surface (A11) er (A12) eral (S1) trix (S4) 6) (LRR R, MLRA 14)	Thin Dark S Loamy Muc Loamy Gley Depleted M Redox Dark Depleted D Redox Dep	ourface (S9) (LRR R ky Mineral (F1) (LRI yed Matrix (F2) atrix (F3) a Surface (F6) ark Surface (F7) ressions (F8)	R K, L)	B) 5 cm Muck Dark Surfar Polyvalue B Thin Dark S Iron-Manga Piedmont F Mesic Spor Red Paren Very Shallo Other (Exp	y Peat or Peat (\$3) (LRR K, L, F. ce (\$7) (LRR K, L, M) 3elow Surface (\$8) (LRR K, L) Surface (\$9) (LRR K, L) surface (\$9) (LRR K, L) surface Masses (F12) (LRR K, L, Floodplain Soils (F19) (MLRA 14 dic (TA6) (MLRA 144A, 145, 145 t Material (TF2) sw Dark Surface (TF12) lain in Remarks)
Served): NONE N/A	VIII.			Hydric Soil Prese	nt? Yes <u>×</u> No
	(A4) (A5) Park Surface (A11) Peral (S1) Prix (S4) Prix (S4) Prix (S4, MLRA 14) C vegetation and wellserved):	Polyvalue E MLRA 1498  (A4) A5) Park Surface (A11) Pe (A12) Peral (S1) Peral (S1) Peral (S4) Peral (S1) Polyvalue E MLRA 1498 Polyvalue E Polyvalue E Polyvalue E Polyvalue E MLRA 1498 Polyvalue E	Polyvalue Below Surface (S8) (MLRA 149B) Thin Dark Surface (S9) (LRR R Loamy Mucky Mineral (F1) (LR Loamy Gleyed Matrix (F2) Park Surface (A11) Pe (A12) Peral (S1) Peral (S1) Peral (S4) Polyvalue Below Surface (S8) (LRR R R McRA 149B)  Polyvalue Below Surface (S9) (LRR R R R CP) Peral (S1) Peral (S2) Peral (S2) Polyvalue Below Surface (S8) (S8) Polyvalue Below Surface (S8) (LRR R R McRA 149B)  Polyvalue Below Surface (S8) (McRA 149B)  Thin Dark Surface (S9) (LRR R Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (McRA 149B)  Thin Dark Surface (S9) (LRR R Loamy Gleyed Matrix (F2) Peral (S1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)  (A4) A5) Park Surface (A11) Pe (A12) Peral (S1) Peral (S4) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Peral (S4) Peral (S4	Polyvalue Below Surface (S8) (LRR R, Coast Prair Coast

Applicant/Owner: Chautauqua County ID Investigator(s): Scott Livingstone & Jody ( Landform (hillslope, terrace, etc.): Hill Subregion (LRR or MLRA) LRRR Lat: Soil Map Unit Name: MINOM Are climatic / hydrologic conditions on the Are Vegetation, or Hydrare Vegetation, or Hydrologic conditions on the Summary OF FINDINGS: Attach site of Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedure)	Section, Town Soft Local relief (concave Loc	wnship, Range: various  c, convex, none): CON Long: 79,77  No Yes No (If needed, explain any	W I classification: no, explain in Remarks.) mal Circumstances" presi y answers in Remarks.)	):5 tum:NAD83
Landform (hillslope, terrace, etc.): Hill Subregion (LRR or MLRA) LRRR Lat: Soil Map Unit Name: MINOR  Are climatic / hydrologic conditions on the start Vegetation, Soil, or Hydre Vegetation, Soil, or Hydrophytic Vegetation Present?  Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?	Local relief (concave	Long: 79.73  Yes No (If needed, explain any	Date of the property of the pr	tum: NAD83
Subregion (LRR or MLRA) LRRR Lat: Soil Map Unit Name: MINOR F  Are climatic / hydrologic conditions on the care vegetation, Soil, or Hydra Vegetation, Soil, or Hydrophytic Vegetation Present?  Hydrophytic Vegetation Present?  Wetland Hydrology Present?	SITE SANDY Logisite typical for this time of year? Yorlogy significantly disturbed rology naturally problem map showing sampling point to	Yes No (If needed, explain any	Date of the property of the pr	tum: NAD83
Subregion (LRR or MLRA) LRRR Lat: Soil Map Unit Name: MINOR F  Are climatic / hydrologic conditions on the same Vegetation, Soil, or Hydra Vegetation, Soil, or Hydrophytic Vegetation Present?  Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?	SITE SANDY Logisite typical for this time of year? Yorlogy significantly disturbed rology naturally problem map showing sampling point to	Yes No (If needed, explain any	W I classification: no, explain in Remarks.) mal Circumstances" presi y answers in Remarks.)	N/A
Soil Map Unit Name: MTNOP PARE climatic / hydrologic conditions on the Are Vegetation, Soil, or Hydre Vegetation, Soil, or Hydrophytic Vegetation Present?  Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?	site typical for this time of year? York and year? York and year? York and year? York and year and year.	Yes No (If needed, explain any	W I classification: no, explain in Remarks.) mal Circumstances" preso y answers in Remarks.)	N/A
Are climatic / hydrologic conditions on the Are Vegetation, Soil, or Hydra Are Vegetation, Soil, or Hydromax	site typical for this time of year?  rology significantly disturbe drology naturally problem  map showing sampling point to	Yes No (If no ded? Are "Normatic? (If needed, explain any	no, explain in Remarks.) mal Circumstances" presi y answers in Remarks.)	ent? Yes No
Are Vegetation, Soil, or Hydrophytic Vegetation Present?  Hydroc Soil Present?  Wetland Hydrology Present?	rology significantly disturbed rology naturally problem map showing sampling point to	ed? Are "Normatic? (If needed, explain any	mal Circumstances" preso y answers in Remarks.)	ent? Yes 🔀 No
Are Vegetation, Soil, or Hydrophytic Vegetation Present?  Hydrop Soil Present?  Wetland Hydrology Present?	drology naturally problem	atic? (If needed, explain any	y answers in Remarks.)	ent? res No
SUMMARY OF FINDINGS: Attach site of Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	map showing sampling point lo			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?		ocations, transects, importa	ant features, atc	
Hydric Soil Present? Wetland Hydrology Present?	Yes NoX		ant leatures, etc.	
Hydric Soil Present? Wetland Hydrology Present?	163	Is the Sampled Area		13
7	Yes No 🔀	within a Wetland?	Yes No	X
Remarks: (Explain alternative procedure	Yes No Y	If yes, optional Wetland	Site ID:	J/A
		ii yee, apaonar volana	One is:	
TYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one is re	quired; check all that apply)		_ Surface Soil Cracks	3 (B6)
Surface Water (A1)	Water-Stained Leav	ves (B9)	Drainage Patterns (	(B10)
High Water Table (A2)	Aquatic Fauna (B1:		Moss Trim Lines (B	(16)
Saturation (A3)	Marl Deposits (B15	TO COLUMN THE COLUMN T	Dry-Season W ater	
Water Marks (B1)	Hydrogen Sulfide C		Crayfish Burrows (C	
Sediment Deposits (B2)		heres on Living Roots (C3)		on Aerial Imagery (C9)
Drift Deposits (B3) Algal Mat or Crust (B4)	Presence of Reduc		Stunted or Stressed	
Iron Deposits (B5)	Recent Iron Reduce	ction in Tilled Soils (C6)	<ul> <li>Geomorphic Position</li> <li>Shallow Aquitard (E</li> </ul>	Del 775-74
Inundation Visible on Aerial Imager			Microtopographic R	
Sparsely Vegetated Concave Surfa		. Sertianisy	FAC-Neutral Test (I	
Field Observations:		114		<del></del>
Surface Water Present? Yes	No _X Depth (inches):	NA		
Water Table Present? Yes	No X Depth (inches):	NA		14
Saturation Present? Yes	No X Depth (inches):	N/A Wetland	Hydrology Present? Y	'es No
(includes capillary fringe) Describe Recorded Data (stream gauge,	monitoring well serial photos or	revious inspections) if availa	able:	A
pesonibe recorded para (encarrigange,	monitoring well, aerial priotos, pr	revious mapeonoris), il avano		
Remarks:				

Tree Stratum (Plot size:30')	% Cover Species? Status	Dominance Test worksheet:
1. <u>NA</u>	70 COVET OPECIES! Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2		Total Number of Dominant 3 Species Across All Strata: (B)
4		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6.		Prevalence Index worksheet:
7. 1		Total % Cover of: Multiply by:
	= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' )		FACW species x2=
NP)		FAC species 30 x3= 90
		FACU species 60 x4 = 540
),		UPL species 0 x 5 =
		Column Totals: <u>90</u> (A) <u>330</u> (B)
		Prevalence Index = B/A = 3.667
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
	0/	2 - Dominance Test is >50%
	Total Cover	3 - Prevalence Index is < 3.01
(Plot size:)	7- 11 610	4 - Morphological Adaptations (Provide supporting
Trifolium pralmos	20 Y FACU	data in Remarks or on a separate sheet)
PLANTAGO IANCCOLATA	20 Y FAW	Problematic Hydrophytic Vegetation¹ (Explain)
SETEMIA DUMILA	20 Y FAC	
Taraxacan Efficiente	10 N PACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
FEDTUCA CUBICA	5 N FAW	
1011um perenne	10 N NI	Definitions of Vegetation Strata:
- Eriover on philadelphicus	10 NI FAC	Tree - Woody plants 3 in. (7.6 cm) or more in diameter
PLANTAGO MATOR	5 1 601.1	at breast height (DBH), regardless of height.
PHAILED MAJOR	- p INCO	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
0		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
2	Ov = Total Cover	height.
	= Total Cover	-0/
Voody Vine Stratum (Plot size: 30' )		VIDEURY
. Wi		Community Type: OLD FIEL
		Community Type:
		Hydrophytic
		Vegetation Present? Yes No
	= Total Cover	Present? res No
Remarks: (Include photo numbers here or on a separate she		70.5
Photo # 12 Direction	of PhotoSOUTHER	17

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth (inches) Color (moist) Texture Remarks Color (moist) <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Other (Explain in Remarks) Dark Surface (S7) (LRR R, MLRA 149B) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NONE Type: Hydric Soil Present? Yes No X Depth (inches): Remarks:

pplicant/Owner: Chautauqua	Development Project Town	3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -	County Sampling Date: 10.18.202
	County IDA State	: New York	Sampling Point:D/O_
vestigator(s): Scott Livingstor	ne & Jody Celeste Secti	on, Township, Range: <u>variou</u>	
andform (hillslope, terrace, etc.	:): Hills/SPE Local relief (c	oncave, convex, none):	CONVEX Slope (%): 3
ubregion (LRR or MLRA) _LRI	RR Lat: 42.26361	Long: 79 e	. 79031 Datum: <u>NAD83</u>
oil Map Unit Name: MIN	OA FINE SANDY	LOAM	NW I classification:
	ons on the site typical for this time of		
	, or Hydrology significantly		"Normal Circumstances" present? Yes X No
	, or Hydrology naturally p		
	ttach site map showing sampling p		
Hydrophytic Vegetation Prese	nt? Yes No V	Is the Sampled Are	ea
Hydric Soil Present?	nt? Yes NoX Yes NoX	The state of the s	Yes NoX
Wetland Hydrology Present?	Yes No S	If yes, optional Wet	Yes No _X
	procedures here or in a separate rep		aditi dita ib.
YDROLOGY			
Wetland Hydrology Indicato			Secondary Indicators (minimum of two required)
Primary Indicators (minimum o	of one is required; check all that apply	γ)	Surface Soil Cracks (B6)
Surface Water (A1)		ed Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fau		Moss Trim Lines (B16)
Saturation (A3)	Mari Depos		Dry-Season W ater Table (C2)
Water Marks (B1) Sediment Deposits (B2)		sulfide Odor (C1) hizospheres on Living Roots (0	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		f Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Reduction in Tilled Soils (C6)	
Iron Deposits (B5)		Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aer		lain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Cond	cave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:	- Y	11/1	
Surface Water Present?	Yes No Depth (inch	N. C.A	
Water Table Present?	Yes No Depth (inch		
~	Yes No Depth (inch	es): Wetla	and Hydrology Present? Yes No _X
Saturation Present? (includes capillary fringe)			ivallable:
(includes capillary fringe)	am gauge, monitoring well, aerial ph	otos, previous inspections), if a	valiable:
(includes capillary fringe)	am gauge, monitoring well, aerial ph	otos, previous inspections), if a	valiable:

1. NA. 2.	Absolute Dominant Indicator <u>Cover Species? Status</u>	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
3.		Total Number of Dominant Species Across All Strata:(B)
4		Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)
7.		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)  1NA	= Total Cover	OBL species
2		FACU species 20 x4 = 90  UPL species 0 x5 = 0  Column Totals: 30 (A) 110 (B)
4		Prevalence Index = B/A = 3,667
Herb Stratum (Plot size: 5')  1. Ze A MAYS  2. Rubul occidentaling  3. Ambrusia antonisitalia  4. Trifdium hybridia  5. Tankyalum officialia  6. Brassica ovaila  8. Solanum dulcanara  9.  10.  11.	= Total Cover    60	add in the manual of the department of the second
Woody Vine Stratum (Plot size:		SUCCESSIONAL DIGELDA  Community Type:   Hydrophytic Vegetation  Y  Community Type:   AGRICULTVIAL  RELIDA  REL
V	= Total Cover	Present? Yes No X ROW
Remarks: (Include photo numbers here or on a separate s  Photo #	on of PhotoWEST	EDGE (IMNFIELD

Project Code: W32K07f Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Remarks (inches) Color (moist) Color (moist) <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Thin Dark Surface (S9) (LRR R, MLRA 149B) Dark Surface (S7) (LRR K, L, M)
Polyvalue Below Surface (S8) (LRR K, L) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR K, L) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Depleted Dark Surface (F7) Redox Depressions (F8) Red Parent Material (TF2) Sandy Redox (S5) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Dark Surface (S7) (LRR R, MLRA 149B) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NONE Type: Hydric Soil Present? Yes Depth (inches): Remarks:

Tree Stratum (Plot size:30' )	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')  1. ACLV SACCHAPINA	S Cover	Species?	AW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.				
3.				Total Number of Dominant Species Across All Strata:  (B)
4.				Percent of Dominant Species 57)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)
6.				AND THE PROPERTY OF THE PROPER
				Prevalence Index worksheet:
7	-	120000		Total % Cover of: Multiply by:
	3	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' )	10	1	Tal	FACW species x 2 =
Kubus occidentalis	200	- /	FACU	FAC species x 3 = FACU species x 4 =
2. ROSA multitura	2	_ N_	FAL	UPL species x 5 =
3. LANICLYA TATANICA	S	<u> </u>	FAW	Column Totals: (A) (B)
4				Column Totals (A) (B)
5.				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	17	7.10		2 - Dominance Test is >50%
not south a decision for the		_ = Total Co	over	3 - Prevalence Index is < 3.01
Herb Stratum (Plot size: 5' )  Phalarus ar untinacaa	90	Y	FACW	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- Convolvous septum	5	N	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8. Ofrest vulpinoides	5	N	OBL	
The state of the s			100	Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6 7				Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
9				Herb - All herbaceous (non-woody) plants, regardless
			- 6	of size, and woody plants less than 3.28 ft tall.
11				Woody vines - All woody vines greater than 3.28 ft in
12	100 =1			height.
	=	Total Cover		
Woody Vine Stratum (Plot size: 30' )				(W8) PEM
1. NA				
2				Community Type:
3.				Hydrophytic EMILE MANSA
4. V				Vegetation Present? Yes  No
	4	= Total C	over	resenti res no
Remarks: (Include photo numbers here or on a separate s	heet.)			
Photo # Direction	on of Photo	N		CHOR MANTER MANNEY
m car and a contract				30.12

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) Remarks Color (moist) Type Loc <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) 2 cm Muck (A10) (LRR K, L, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Iron-Manganese Masses (F12) (LRR K, L, R) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (TF2) Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NONE Type: Hydric Soil Present? Yes No Depth (inches): Remarks:

Project Code: W32K07f

### WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Vegetation, Soil, or Hy		atic? (If needed, explain an	
MMARY OF FINDINGS: Attach site of the site	Yes	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes_X No
emarks: (Explain alternative procedure			
DROLOGY			
etland Hydrology Indicators:			Secondary Indicators (minimum of two requi
imary Indicators (minimum of one is re	No. 10 pt 10 lb 10		Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leav		Drainage Patterns (B10)
Saturation (A3)	Aquatic Fauna (B13 Marl Deposits (B15		Moss Trim Lines (B16) Dry-Season W ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide O		Crayfish Burrows (C8)
Sediment Deposits (B2)		neres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
_ Drift Deposits (B3)	Presence of Reduc	그런 강하다가 없는 것 같아요 하나 요네. 1일 소개네.	Stunted or Stressed Plants (D1)
_ Algal Mat or Crust (B4)	Recent Iron Reduct	tion in Tilled Soils (C6)	Geomorphic Position (D2)
_ Iron Deposits (B5)	Thin Muck Surface	A CONTRACTOR OF THE CONTRACTOR	Shallow Aquitard (D3)
_ Inundation Visible on Aerial Imager		Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surfa eld Observations:	ice (B8)	- 4	FAC-Neutral Test (D5)
urface Water Present? Yes	No Depth (inches):/	1"	
/ater Table Present? Yes	No Depth (inches): 3	MUNDATED	
aturation Present? Yes	No Depth (inches):	NUNDATE Wetland	Hydrology Present? Yes No
ncludes capillary fringe) escribe Recorded Data (stream gauge,			
escribe Recorded Data (stream gauge,	, monitoring well, aerial photos, pre	evious inspections), ii availa	able.
emarks:			

Dominant Indicator Absolute Dominance Test worksheet: Tree Stratum (Plot size: \_\_\_\_\_\_\_) % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species \_\_\_\_\_ x 1 = \_\_\_\_ = Total Cover FACW species x2=\_\_\_\_ Sapling/Shrub Stratum (Plot size: 15') 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% = Total Cover 3 - Prevalence Index is < 3.01 Herb Stratum (Plot size: 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) FAC Indicators of hydric soil and wetland hydrology must FACUL be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter PUC 10 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. 100 = Total Cover Woody Vine Stratum (Plot size: 30' ) Community Type: Hydrophytic Vegetation Present? = Total Cover Remarks: (Include photo numbers here or on a separate sheet.) Photo # **Direction of Photo** 

Project Code: W32K07f Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) Texture Remarks Color (moist) <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5)
Depleted Below Dark Surface (A11) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Matrix (F3) Iron-Manganese Masses (F12) (LRR K, L, R) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (TF2) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): NON Type: Hydric Soil Present? Depth (inches): Yes Remarks:

Project Code: W32K07f

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

nvestigator(s): <u>Scott Livingstone &amp; Joo</u> andform (hillslope, terrace, etc.): <u>LK</u>	/ IDA State: Ne	w York Sampling Point: <u>b/3</u>
	CAR AND	ownship, Range: various
andionn (ninstope, terrace, etc.).		
		- 1 0 1.26 - 11
ubregion (LRR or MLRA) <u>LRRR</u> L	La Calle	5019.
oil Map Unit Name: NIPGAR		
re climatic / hydrologic conditions on t	he site typical for this time of year?	Yes No (If no, explain in Remarks.)
re Vegetation, Soil, or H	-lydrology significantly disturf	rbed? Are "Normal Circumstances" present? Yes X No
re Vegetation, Soil, or	Hydrology naturally proble	ematic? (If needed, explain any answers in Remarks.)
		locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area
Hydric Soil Present?	Yes No Y	within a Wetland? Yes No
Wetland Hydrology Present?	Yes No 😾	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced		
YDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is	s required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Le	eaves (B9) Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B	Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B	115) Dry-Season W ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide	e Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2)		spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Red	[ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [
Algal Mat or Crust (B4)		luction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Inundation Visible on Aerial Imag	Thin Muck Surface gery (B7) Other (Explain in	
Sparsely Vegetated Concave St		FAC-Neutral Test (D5)
Field Observations:	arrace (bo)	
Surface Water Present? Yes	No X Depth (inches):	11/0
Water Table Present? Yes		N/A
Saturation Present? Yes		N/A Wetland Hydrology Present? Yes No 🔀
(includes capillary fringe)		
Describe Recorded Data (stream gau	ige, monitoring well, aerial photos,	previous inspections), if available:
Remarks:		

VEGETATION: Use scientific names of plants.

Sampling Point: D13

Tree Stratum (Plot size: 30' )	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant Species Across All Strata: (B)
4. 5.			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/E
6			Prevalence Index worksheet:  Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15' )   1.   N A     2.       3.		_= Total Cover	OBL species       0       x1 =         FACW species       0       x2 =         FAC species       30       x3 =         FACU species       65       x4 =         UPL species       0       x5 =         Column Totals:       95       (A)         350       (B)
5.			Prevalence Index = B/A = 3.68
Herb Stratum (Plot size: 5'  4. Ambrusia artenistalia  2. Symphystrichem laderifier  3. Meymporatures  4. Erechtitis heracituia  5. Symphetrichem pilosum  6. Mictylly Glomerata  7. Daylus Carata  8. Soli Mago Carata  9. Traxacum afficinale  10. Runex cropm  11. Setarm pumila  12.	5 10 5 10 10 10 10	= Total Cover  Y FALU Y FAC N FAC N N I Y FAC Y FAC Y FAC Y FAC Y FAC Y FAC	Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is < 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)  **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.
Woody Vine Stratum (Plot size:30')			PLOWED OLD/ SUCCESSION PIECO
3. 4.		= Total Cover	Hydrophytic Vegetation Present?  Yes No
	sheet.)	Total Cover	
Remarks: (Include photo numbers here or on a separate s	THE ECO.		

Project Code: W32K07f

epth nches)			Dada	x Featur	rac		ne absence of ir				
	Matrix Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rema	rks	
0-0	10484/2	100					5,2				
0 11	10425/4		104125/6	10	1.5	-					_
8-16.	104102/4	90	1041216	10	<u>c</u>	300	71				_
				_	-						-
											_
											_
					_	-	-	-			
pe: C=Con	centration, D=Deplet	ion, RM=R	educed Matrix, CS=	Covered	or Coated	Sand Grai	ns. <sup>2</sup> Locatio			M=Matrix.	
dric Soil In	idicators:						Indicators	for Pro	blematic F	lydric Soils <sup>3</sup> :	:
Histosol			Polyvalue Be		ace (S8) (L	RR R,	2 cm N	luck (A10	(LRR K, L	, MLRA 149B	5)
Histic Ep	pipedon (A2) istic (A3)		MLRA 149B Thin Dark Su		// PP P	MI RA 1491	Coast I	Prairie Re	dox (A16) (	LRR K, L, R) 3) (LRR K, L,	R
Hydroge	en Sulfide (A4)		Loamy Muck	y Mineral	(F1) (LRF	K, L)	Dark S	urface (S'	7) (LRR K,	L, M)	
Stratified Depleted	d Layers (A5) d Below Dark Surface	(A11)	Loamy Gleye Depleted Ma	ed Matrix trix (F3)	(F2)		— Polyva	lue Below ark Surfac	Surface (S >e (S9) (LR	8) (LRR K, L) R K. L)	f)
Thick Da	ark Surface (A12)	V-1.17	Redox Dark	Surface (	F6)		Iron-Ma	anganese	Masses (F	12) (LRR K, L	., R)
Sandy M Sandy G	Mucky Mineral (S1) Bleyed Matrix (S4)		Depleted Day Redox Depre	rk Surface	e (F7) F8)		Piedmo	ont Flood; Spodic (T	olain Soils ( A6) (MLRA	F19) (MLRA 1 144A, 145, 14	149E 49B
Sandy R	Redox (S5)			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,		Red Pa	erent Mate	erial (TF2)		100
Stripped Dark Sur	Matrix (S6) rface (S7) (LRR R, ML	RA 149B)					Other (	Explain ir	rk Surface Remarks)	(11-12)	
dicators of h	ydrophytic vegetation	and wetland	hydrology must be p	resent, ur	less distur	bed or prob	lematic.				
strictive La	yer (if observed):	_					T				
Type:	NON	-					S 2 1 1 1 1				
Depth (inch	es):	A					Hydric Soil Pr	esent?	Yes	_ No 🔀	1
							an age and a series of a		W. Co.	and the state of	

# RIPLEY INTERSTATE DEVELOPMENT PROJECT

APPENDIX C - SITE PHOTOGRAPHS



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



**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

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## Vegetation Sampling

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## **Report Preparation**

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