AMERICAN TRANSMISSION SYSTEMS, INCORPORATED
A FIRSTENERGY COMPANY

CONSTRUCTION NOTICE

ALLEN JUNCTION-WESTGATE 138kV TRANSMISSION LINE STRUCTURE RELOCATION-ODOT PROJECT

Case No.: 25-0111-EL-BNR

April 15, 2025

American Transmission Systems, Incorporated
341 White Pond Drive
Akron, Ohio 44320

CONSTRUCTION NOTICE
ALLEN JUNCTION-WESTGATE 138 kV TRANSMISSION LINE STRUCTURE RELOCATION ODOT PROJECT

The following information is being provided in accordance with the procedures in the Ohio Administrative Code ("Adm.Code") Chapter 4906-6 for the application and review of Accelerated Certificate Applications. Based upon the requirements found in Appendix A to Adm.Code 4906-1-01, this Project qualifies for submittal to the Ohio Power Siting Board ("OPSB") as a Construction Notice application. Pursuant to Adm.Code 4906-6-03(A) and 4906-6-04, for coordination with the Ohio Department of Transportation's schedule, Applicant is requesting 78-day expedited review of this Application.

4906-6-05(B): CONSTRUCTION NOTICE REQUIREMENTS

4906-6-05(B)(1): Name and Reference Number

Name of Project: Allen Junction-Westgate 138 kV Transmission Line Structure Relocation ODOT Project ("Project")

FE Line Reference Number: 3003

4906-6-05(B)(1): Brief Description of Project

American Transmission Systems, Incorporated, ("ATSI"), a FirstEnergy company, is proposing to relocate an approximately 1,404 feet (0.3 mile) long section of the existing Allen Junction-Westgate 138 kV Transmission Line. To facilitate this, ATSI will relocate seven existing 138 kV transmission line structures along this section of transmission line. ATSI needs to shift the centerline and structures approximately 5'-12' from their current location except for structure #TS-2, which requires an approximate 27' centerline and structure shift. The project is necessary to support the Ohio Department of Transportation ("ODOT") reconstruction and reconfiguration project for the SR 51 Interchange at US 23.

The Project is in the city of Sylvania in Lucas County, Ohio. The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey

("USGS") Topographic Map, Lucas County, Ohio Quad Map. Exhibit 2 is a partial copy of ESRI aerial imagery. The general layout of the Project is shown in Exhibit 3.

4906-6-05(B)(1): Construction Notice Requirement

The Project meets the requirements for a Construction Notice application because the Project is within the types of projects defined by Item (5) of the Application Requirement Matrix for Electric Power Transmission Lines. Appendix A of Adm.Code 4906-1-01. This item states:

> *(5) Replacement or relocation of an electric power transmission line and associated facilities where the project is required by publicly funded entities and is located on or adjacent to right-of-way or land owned by the public entity requiring the project.*

The proposed Project is within the requirements of Item (5) as it involves the relocation of a section of transmission line due to a road widening project by ODOT and will be relocated within ODOT's right-of-way ("ROW").

4906-6-05(B)(2): Need for the Project

The Project is needed to allow for ODOT's reconstruction and reconfiguration of the State Route 51 interchange at US 23 in the city of Sylvania, Lucas County, Ohio. The road work to be done, reference ODOT LUC-023-11.75, includes bridge replacements, ramp reconstruction, and resurfacing.

4906-6-05(B)(3): Location of the Project Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed transmission lines is shown in the ATSI Transmission Network Map, included as part of the confidential portion of the FirstEnergy Corp. 2024 Long-Term Forecast Report ("LTFR"). This map was submitted to the Public Utilities Commission of Ohio ("PUCO") in Case No. 24-0504-EL-FOR under Adm.Code 4901:5-5:04(C)(2)(b). The map is incorporated by reference only. This Project is not included in the 2024 LTFR because the Project

does not entail any topology or rating change. The general location and layout of the Project area are shown in Exhibits 1 and 2.

4906-6-05(B)(4): Alternatives Considered

As this Project is solely needed to allow for ODOT's road project, no other alternatives were considered.

4906-6-05(B)(5): Public Information Program

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project as necessary. ATSI will maintain a copy of this Construction Notice along with other Project information, on FirstEnergy's website: https://www.firstenergycorp.com/about/transmission_projects/ohio.html.

Finally, during all phases of this Project, the public may contact ATSI through the transmission projects hotline at 1-888-311-4737 or via email at: transmissionprojects@firstenergycorp.com where the public may ask questions or leave comments on the Project for ATSI.

4906-6-05(B)(6): Construction Schedule

Construction on the Project is expected to begin as early as July 2, 2025, and be completed/in-service by August 29, 2025.

4906-6-05(B)(7): Area Map

Exhibit 1 provides a partial copy of the USGS Topographic Map, Lucas County OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area.

4906-6-05(B)(8): Properties List

This Project is located entirely within ODOT ROW. No new easements will be required.

4906-6-05(B)(9): Technical Features of the Project

4906-6-05(B)(9)(a): Operating Characteristics

The transmission line construction will have the following characteristics:

Voltage:	138 kV
Conductor:	954 KCMIL 37 Strand AAC
Static Wire:	3#7 Alumoweld
Insulators:	Porcelain
ROW Width:	60 feet
Structure Types:	Exhibit 4A: Single Circuit Steel Pole Vertical Suspension Structure (Qty. 1) Exhibit 4B: Single Circuit Steel Pole Vertical Dead-End Structure (Qty. 1) Exhibit 4C: Single Circuit Steel Pole Delta Suspension Structure (Qty.5)

4906-6-05 (B)(9)(b): Electric and Magnetic Fields

There is one (1) occupied residence and one (1) institution adjacent to the edge of right-of-way containing the single circuit Allen Junction-Westgate 138 kV Transmission Line. Therefore, Electric and Magnetic Field ("EMF") calculations are provided below.

4906-6-05 (B)(9)(b)(i): Calculated Electric and Magnetic Fields Strength Levels

Table 1 itemizes the line loading of the Allen Junction-Westgate 138 kV Transmission Line. The normal line loading represents FirstEnergy's peak system load for the transmission lines. The emergency line loading represents the maximum line loading under contingency operation. The winter rating is based on the continuous maximum conductor rating ("MCR") of the circuits for the single conductors per phase and an ambient temperature of 0 °C (32 °F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 °C (212 °F).

Table 1: Transmission Line Loading

Line Name	Normal Loading Amps	Emergency Loading Amps	Winter Rating Amps
Allen Junction-Westgate 138 kV Transmission Line	222.20	306.70	1200.80

Table 2 provides an approximation of the magnetic and electric fields strengths within the right-of-way containing the Allen Junction-Westgate 138 kV Transmission Line for the structural configuration found in the Project. The configuration is tangent structure to tangent structure. The configuration is calculated in a 60-foot-wide right-of-way average. The calculations provide an approximation of the electric and magnetic fields levels based on specific assumptions utilizing the EPRI EMF Workstation 2015 program software. This program software assumes the input transmission line configuration is located on flat terrain. Also, a balanced, three-phase circuit loading is assumed for the transmission circuit. The model utilizes the normal, emergency, and winter rating of the transmission lines.

Table 2: EMF Calculations for Allen Junction-Westgate 138 kV Transmission Line:

Allen Junction-Westgate 138 kV Transmission Line: Tangent Structure to Tangent Structure		**Electric Field (kV/m)**	**Magnetic Field (mG)**
Normal Loading	Under Lowest Conductors	0.808	13.11
	At Right-of-Way Edges	0.298 / 0.438	7.88 / 8.98
Emergency Loading	Under Lowest Conductors	0.808	18.00
	At Right-of-Way Edges	0.298 / 0.438	11.01 / 12.28
Winter Rating	Under Lowest Conductors	0.808	70.47
	At Right-of-Way Edges	0.298 / 0.438	43.12 / 47.65

4906-6-05 (B)(9)(b)(ii): Alternative Design Consideration for Electric and Magnetic Fields

The strength of EMFs can potentially be reduced by installing the transmission line conductors in a compact configuration by selecting conductor phasing that reduces the field strengths. ATSI designs its facilities according to the requirements of the National Electrical Safety Code ("NESC"). The pole heights and configuration were chosen based on NESC specifications, engineering parameters, and cost. In this Project, ATSI proposes to install a compact configuration of single circuit steel monopole structures.

4906-6-05(B)(9)(c): Estimated Cost

The estimated cost for the proposed Project is $1,787,567.00.

Although not statutorily required for approval, at the request of OPSB Staff, ATSI confirms that ATSI's costs will be captured and allocated via FERC formula rates for the ATSI Transmission Zone, Attachment H-21 in the PJM OATT.

4906-6-05(B)(10): Social and Ecological Impacts

4906-6-05(B)(10)(a): Land Uses

The Project is located in the city of Sylvania in Lucas County, Ohio. The land use in the vicinity of the Project area is a combination of commercial and light residential.

4906-6-05(B)(10)(b): Agricultural Land

Agricultural land does not exist within the Project's Area of Potential Effect ("APE").

4906-6-05(B)(10)(c): Archaeological or Cultural Resources

As part of this compliance documentation, TRC Companies, Inc. ("TRC") reviewed documents provided by ODOT for the proposed Study Area (Area of Potential Effects or APE). The Project involves the reconstruction and reconfiguration of the State Route 51/Monroe Street interchange along US Route 23. The results of the coordination are attached as Exhibit 5.

For archaeological resources, ODOT staff completed a literature and field review of the proposed Project in the City of Sylvania, Lucas County, Ohio. The literature review involved a review of the Ohio Historic Preservation Office ("OHPO") online database, which includes a catalog of all historic properties listed in or eligible for listing in the National Register of Historic Places ("NRHP"), including districts, sites, building, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The literature review completed by the ODOT staff resulted in no archaeological resources identified within or adjacent to the proposed Project. The nearest recorded archaeological sites were Site33LU323,

situated nearly 1,000 feet (ft) to the north, and Sites 33LU389 and 33LU390, located 2,500 ft to the north. All three (3) sites were pre-contact.

The literature research also included a review of archived aerial photographs of the Project Study Area. The results of the photograph review indicated that construction of US 23 between 1960 and 1962 heavily altered the Study Area landscape as both infield areas were modified by ramp construction, borrowing for elevated roadways, stream channelization, the removal of previously extant residences, and grading.

An archaeological field review was completed for ODOT on February 28, 2023. The field review confirmed the disturbances and that all work for the proposed Project will be completed within previously disturbed landscapes or in low-lying, wet hydric locations. It was ODOT's determination that based on those factors, no significant archaeological sites will be affected by the proposed Project and no further archaeological investigations were recommended.

For above-ground historic resources, the literature review identified an Ohio Historic Marker for the Harroun Family Barn (Marker #55-48), two (2) inventoried cultural resources within the Toledo Memorial Park: *Swan Lake Mausoleum* and the *Soldiers and Sailors Monumen*t, four (4) US 23 roadway bridges, and two (2) history/architecture resources that were built 50 or more years ago.

The Project will have no effect on the Ohio Historic Marker or the two (2) inventoried cultural resources within the Memorial Park. Both resources are at least 100 ft north of the northern edge of the APE. The four (4) bridges were determined not eligible for the National Register of Historic Places based on the *Ohio DOT Historic Bridge Inventory Summary and Table Survey Forms for Eligible/National Register Listed Bridges* prepared by TranSystems Corporation in December of 2009 (accepted April 29, 2010), and ODOT affirms that this determination remains valid. Additionally, neither of the history/architecture resources were determined to be significant examples of any distinctive architectural style, building material, or construction

method or material. The buildings were not known to have been associated with persons or events that were important to our past and neither is part of a group of buildings that would be eligible as a historic district. Therefore, both resources were recommended not eligible for listing in the NRHP and no further investigations were warranted.

Based on the ODOT correspondence, OHPO had no concerns or objections with the cultural resource review or with the Section 106 effect determination (36 CFR 800.4(d)) for the historical/architectural resources. No additional cultural resources studies were warranted. No further coordination is required for this Project unless the scope of work changes or archaeological remains are discovered during the course of the Project. To date, TRC has not conducted any on-site cultural resources surveys.

4906-6-05(B)(10)(d): Construction Filings with Local, State, and Federal Governmental Agencies

Coordination with ODOT and the City of Sylvania to obtain ROW permits, for work within the ROW of Monroe Street will be required. If an overweight hauling permit is required for this Project, coordination with the City of Sylvania and Lucas County will be initiated to confirm the need for any special hauling permits and/or Road Use Maintenance Agreements ("RUMA"). Less than 1 acre of earth disturbance is proposed based on review of the preliminary construction plans. Therefore, the submittal of a Notice of Intent application with the Ohio Environmental Protection Agency ("Ohio EPA") is not required for coverage under the general construction stormwater permit (OHC000006). A Storm Water Pollution Prevention Plan ("SWPPP") is not required to be submitted for review by Lucas County Engineer's Office unless 1 acre of disturbance is exceeded. The Project as proposed is not located within a 100-year floodplain; therefore, coordination is not required with the local floodplain administrator. All permitting and/or coordination necessary to comply with local, state, and federal agencies with jurisdiction regarding this Project will be completed prior to the commencement of construction.

Table 3. List of Government Agency Requirements

Ohio EPA	General National Pollution Discharge Elimination System ("NPDES") Construction Storm Water Permit OHC000006 (Not required unless 1 acre is exceeded)
ODOT City of Sylvania	ROW Permit
Lucas County Engineer's Office	SWPPP Review (Not required unless 1 acre is exceeded)
City of Sylvania and Lucas County	Special Hauling Permit and RUMA (Coordination)

4906-6-05 (B)(10)(e): Endangered, Threatened, and Rare Species Investigation

As part of the investigation, ATSI retained TRC to conduct necessary surveys. TRC submitted a request to the Ohio Department of Natural Resources ("ODNR") Office of Real Estate to conduct an Environmental Review. As part of the Environmental Review, the ODNR Office of Real Estate conducted a search of the ODNR Division of Wildlife's ("ODNR-DOW") Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project Study Area. The ODNR's Office of Real Estate's response on February 27, 2025, stated that there are 8 records of state or federally listed plants and animals within one mile of the specified Project area; prairie thimbleweed (Anemone cylindrica), a state threatened species; southern hairy rock cress (Arabis pycnocarpa var. adpressipilis), a state potentially threatened species; rough pennyroyal (hedeoma hispida), a state potentially threatened species; plains puccoon (lithospermum caroliniense), a state endangered species; wild lupine (lupinus perennis), a state potentially threatened species; slender knotweed (polygonum tenure), a state status under review species; least darter (etheostoma microperca), a state species of concern and the eastern foxsnake (pantherophis vulpinus), a state species of concern. Of these species, Wild

Lupine is recorded within the boundaries of the specified Project Area. The ODNR's Office of Real Estate's response is included as Exhibit 6.

In addition to the ODNR Office of Real Estate's response, the ODNR-DOW stated that the Project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species; the Northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species; the little brown bat (*Myotis lucifugus*), a state endangered species; the tricolored bat (*Perimyotis subflavus*), a state endangered species. An on-site field assessment was performed by TRC and field observations did not identify suitable habitat for these species identified in the immediate vicinity of the Project area. The DOW recommended a desktop bat hibernaculum assessment be completed which TRC completed for ATSI and submitted to ODNR for concurrence on February 28, 2025. ODNR responded on March 12, 2025 attached as Exhibit 6A, concurring that no caves, cliffs, or mine openings occur in the Project Area. In addition, due to the type, size, and location, the proposed Project is not likely to impact these species.

Minimal ornamental tree removal is necessary to complete this Project; therefore, this Project is not likely to impact these species.

The ODNR-DOW also identified the Project as within the range of the cisco (*Coregonus artedi*), a state endangered fish; the lake sturgeon (*Acipenser fulvescens*), a state endangered fish; the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish; the American eel (*Anguilla rostrata*), a state threatened species; the channel darter (*Percina copelandi*), a state threatened fish; the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish; the Blanding's turtle (*Emydoidae blandingii*), a state threatened species; the spotted turtle (*Clemmys guttata*), a state threatened species; the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species; the blue-spotted salamander (*Ambystoma laterale*), a state endangered species; the lark sparrow (Chondestes grammacus), a state endangered bird; the pondhorn (*Uniomerus tetralasmus)*, a state threatened mussel; the eastern

pondmussel (*Ligumia nasuta*), a state endangered species; the rayed bean (*Villosa fabalis*), a federally endangered mussel; and the snuffbox (*Epioblasma triquestra*), a federally endangered mussel; Due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact these species.

As part of the investigation, TRC submitted a request to the US Fish and Wildlife Service ("USFWS") for an Ecological Review within one (1) mile of the Project Area. A copy of USFWS's Ecological Review response, dated January 29, 2025, is included as Exhibit 7. The response indicated that due to the project type, size, location, and the proposed implementation of seasonal tree cutting, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.

A list of all endangered, threatened, and rare species, is summarized in Table 4.

Table 4. List of Endangered, Threatened, and Rare Species

Common Name	Scientific Name	Federal and State Listing Status	Affected Habitat
Indiana bat	*Myotis sodalis*	Endangered	Trees and forests
Northern long-eared bat	*Myotis septentrionalis*	Endangered	Trees and forests
Little Brown Bat	*Myotis lucifugus*	State Endangered	Trees and forests
Tricolored Bat	*Perimyotis subflavus*	State Endangered	Trees and forests
Pondhorn	*Uniomerus tetralasmus*	State Threatened	Perennial streams
Eastern Pondmussel	*Ligumia nasuta*	State endangered	Perennial streams
Rayed bean	*Villosa fabalis*	Federally endangered	Perennial streams
Snuffbox	*Epioblasma triquetra*	Federally endangered	Perennial streams
Cisco	*Coregonus artedi*	State endangered	Perennial streams
Lake Sturgeon	*Acipenser fulvescens*	State endangered	Perennial streams
Western Banded Killfish	*Fundulus diaphanous menona*	State endangered	Perennial streams

Common Name	Scientific Name	Federal and State Listing Status	Affected Habitat
American Eel	*Anguilla rostrata*	State threatened	Perennial streams
Channel Darter	*Percina copelandi*	State threatened	Perennial streams
Greater Redhorse	*Maxostoma valenciennesi*	State threatened	Perennial streams
Blandings Turtle	*Emydoidae blandingii*	State threatened	Marshy shorelines
Spotted Turtle	*Clemmys guttata*	State threatened	Marshy shorelines
Kirtland's Snake	*Clonophis kirtlandii*	State threatened	Opened Wetlands
Blue-Spotted Salamander	*Ambystoma laterale*	State endangered	Deciduous hardwood forests, swampy woodlands
Prairie Thimbleweed	*Anemone cylindrica*	State threatened	Prairies and along roadsides
Southern Hairy Rock Cress	*Arabis pycnocarpa* var. *adpressipilis*	State potentially endangered	Open woods, stream banks, cliffs, and rocky slopes
Rough Pennyroyal	*Hedeoma hispida*	State potentially endangered	Rocks and ledges in high-pH areas, dry fields and banks, and disturbed sites like railroads and waste areas
Plains Puccoon	*Lithospermum caroliniense*	State endangered	In open sun in well-drained, sandy situations; beach ridges, barrens, fields, roadsides
Wild Lupine	*Lupinus perennis*	State potentially endangered	Dry, open places such as oak savannas, prairies, sand barrens, and less frequent in upland woods; sandy, well-drained soils
Slender Knotweed	*Polygonum tenue*	State status under review	Moist, disturbed areas like riverbanks, wetlands, stream corridors, and other riparian zones
Least Darter	*Etheostoma microperca*	State species of concern (fish)	Clear, quiet waters of overflow ponds, pools, lakes, and streams over substrates of gravel, silt, sand, boulders, mud, or

Common Name	Scientific Name	Federal and State Listing Status	Affected Habitat
			clay with dense vegetation or filamentous algal beds
Eastern Foxsnake	*Pantherophis vulpinus*	State species of concern (reptile)	Wetland habitats, along Great Lakes shorelines, and coastal marshes

4906-6-05(B)(10)(f): Areas of Ecological Concern

The Project Study Area for Allen Junction Westgate Relocation Project is 2.45 acres and located entirely within ODOT's LUC US 23 11.75 Inter-change Project (PID 105889) Study Area. The Project Study Area consists mainly of existing, maintained, utility ROW, ODOT ROW, and is located in an urban roadway setting. A surface water delineation was completed by the ODOT's consultant on February 16, 2023, and May 15, 2023, as part of their Ecological Survey Report for fieldwork for ODOT's LUC US 23 11.75 Inter-change Project (PID 105889) and is shown in Exhibit 8. The Ecological Survey Report confirms the absence of any streams or wetlands within the Project Study Area. During this investigation, ODOT's consultant did not observe the presence of any ODNR listed species due to the highly maintained nature of the utility ROW and surrounding land use.

The Limit of Disturbance for this Project will be completely within ODOT's LUC US 23 11.75 Inter-change Project Study Area and involves the relocation of seven (7) structures along the existing Allen Junction-Westgate 138kV line to accommodate the ODOT proposed interchange modification at US-23 and Monroe Street (SR-51) in the City of Sylvania.

Nationwide Permit ("NWP") 57 - Electric Utility Line and Telecommunications Activities (effective March 15, 2021, valid through March 14, 2026) authorizes the construction of access roads for the construction and maintenance of electric utility lines or telecommunication lines, including overhead lines and substations, in nontidal waters of the United States, provided the activity does not cause the loss of greater than 0.5-acre of waters of the United States. Nationwide Permit Regional General Conditions were reviewed regarding this Project.

It is anticipated that due to the nature of the Project, jurisdictional resources will not be impacted by the proposed Project activities. If the scope of the Project changes to impact potentially jurisdictional features, it is TRC's understanding that this Project would fall under NWP 57. This Project is located within the USACE Buffalo Regulatory District, in the city of Sylvania, Lucas County, Ohio. All townships in Lucas County are listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species), which triggers the need for a Section 404 Pre-Construction Notification ("PCN"). Additional triggers for a PCN may occur if NWP 57 conditions are not met and/or thresholds are exceeded. Furthermore, the Project is located within "Eligible" areas according to Ohio EPA's Stream Eligibility for the Nationwide Permit Program; however, Ohio EPA's 401 Water Quality Certification for NWP 57 is currently waived. No additional screening procedures are required for the Project regarding compliance with Ohio EPA's 401 Water Quality Certification. ODOT's Ecological Survey Report and Appendices are included in Exhibit 8. In addition, a review of the National Conservation Easement Database (www.conservationeasement.us) revealed no conservation easements within the Project Study Area.

A review of the National Conservation Easement Database (www.conservationeasement.us) revealed no conservation easements in the Project Study Area.

4906-6-05(B)(10)(g): Other Information

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code ("NESC") as adopted by the PUCO and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

No other or unusual conditions are expected that will result in significant environmental, social, health or safety impacts.

4906-6-07: Documentation of Construction Notice Transmittal and Availability for Public Review

This Construction Notice application is being provided concurrently with its docketing with the Board to the following officials.

Lucas County

Mr. Pete Gerken
Lucas County Commissioner
1 Government Center
Toledo, Ohio 43604
email: pgerken@co.lucas.oh.us

Ms. Lindsay M. Webb
Lucas County Treasurer
1 Government Center, Suite 500
Toledo, Ohio 43604
email: treasurer@co.lucas.oh.us

Ms. Lisa A. Sobecki
Lucas County Commissioner
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email: lasobecki@co.lucas.oh.us

Mr. Mike Pniewski, P.E., P.S.
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City of Sylvania

Mr. Mark Frye, Mayor
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Mr. Timothy Burns
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Mr. Toby Schroyer
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Ms. Leslie Brinning
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Mr. Eric Barnes
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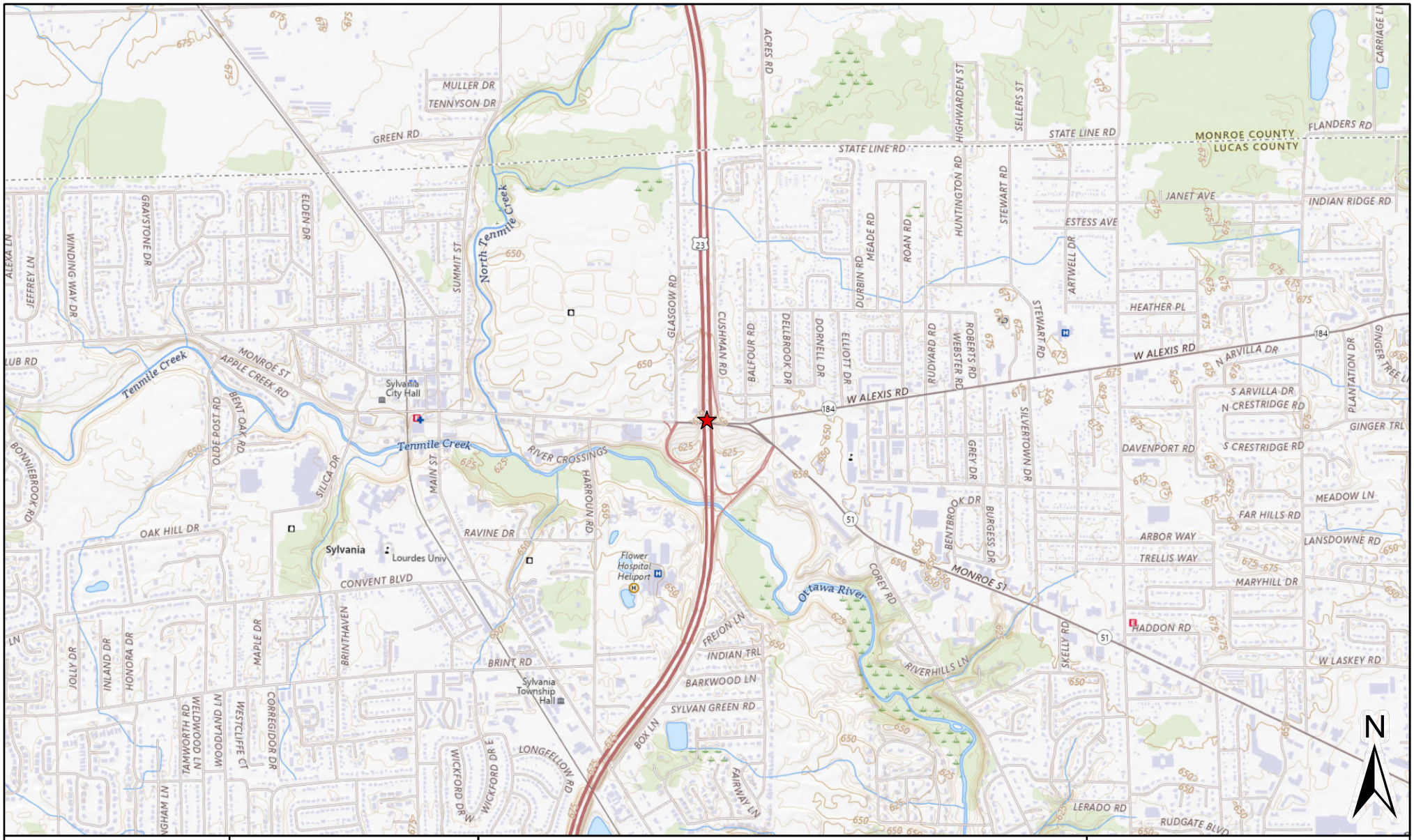
email: ebarnes@cityofsylvania.com

Libraries

Ms. Erin Connolly
Sylvania Branch Manager
Toledo Lucas County
Public Library
6749 Monroe Street
Sylvania, OH 43560
email:
erin.connolly@toledolibrary.org

Copies of the transmittal letters to these officials have been included with this application as proof of compliance under Adm.Code 4906-6-07(B) to provide the Board with proof of notice to local officials as required by Adm.Code 4906-6-07(A)(1) and to libraries per Adm.Code 4906-6-07(A)(2).

Information is posted at:
www.firstenergycorp.com/about/transmission_project/ohio.html on how to request an electronic or paper copy of this Construction Notice application. The link to this website is being provided to meet the requirements of Adm.Code 4906-6-07(B) and to provide the Board with proof of compliance with the notice requirements in Adm.Code 4906-6-07(A)(3).



Legend

- Project Location
- County

0 1,000 2,000 4,000

Feet

Reference Scale: 1:24,000

References:
ESRI Aerial Imagery, USGS National Map, ODOT

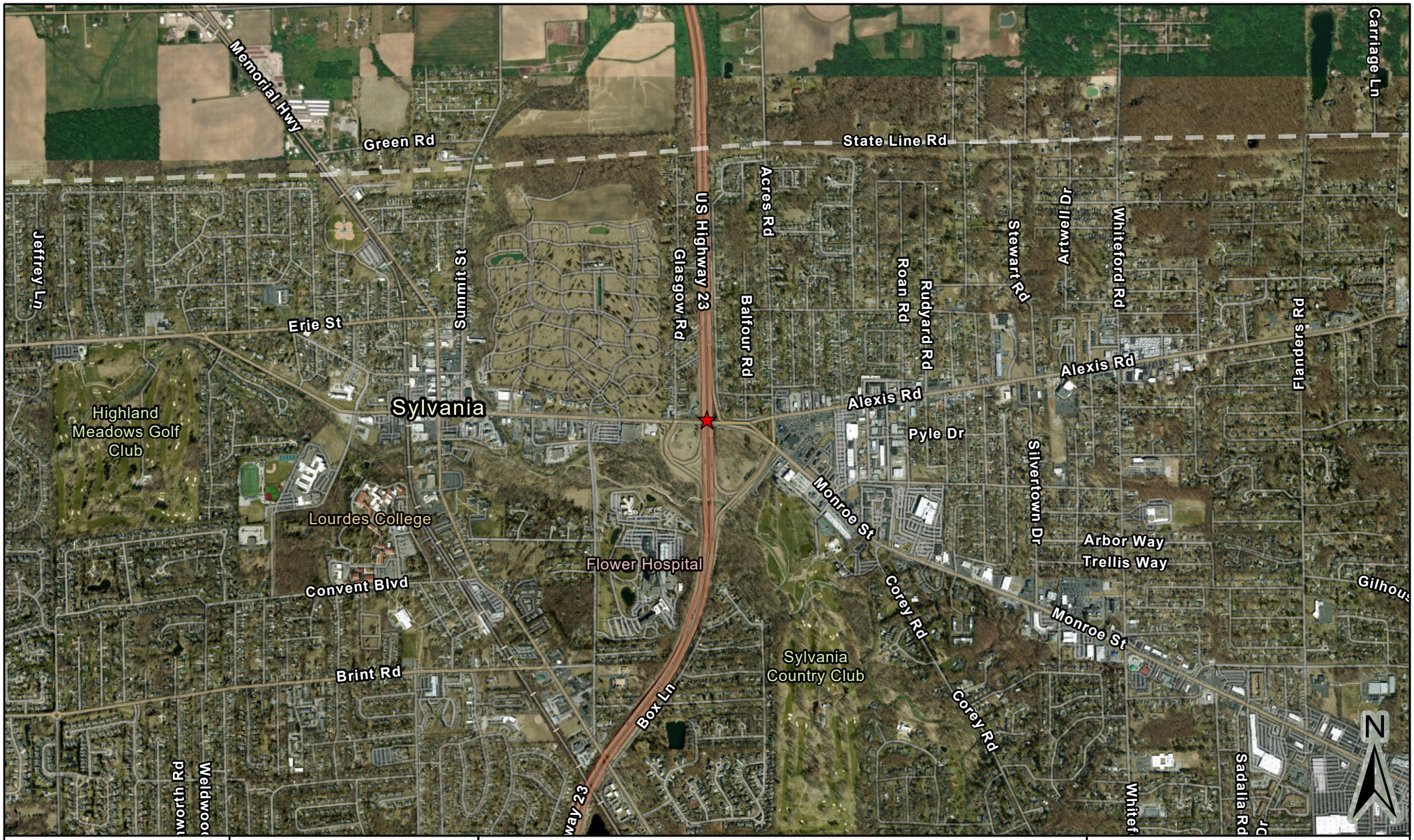
Coordinate System:
NAD 1983 2011 StatePlane Ohio North FIPS 3401 Ft US

ATSI®

American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

Allen Junction - Westgate 138kV Relocation Project

EXHIBIT 1



Legend

- Project Location
- County

0 1,000 2,000 4,000

Feet

Reference Scale: 1:24,000

References:
ESRI Aerial Imagery, USGS National Map, ODOT

Coordinate System:
NAD 1983 2011 StatePlane Ohio North FIPS 3401 Ft US

ATSI®

American Transmission Systems, Inc.
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Allen Junction - Westgate 138kV Relocation Project

EXHIBIT 2

LUCAS COUNTY, OH

GLASGOW RD

US-23

CUSHMAN RD

BALFOUR RD

RANDALL DR

ALEXIS RD

MONROE ST

ALLEN JUNCTION-WESTGATE 138kV
NEW TRANSMISSION LINE PATH

ALLEN JUNCTION-WESTGATE 138kV
EXISTING TRANSMISSION LINE PATH

#313207 — 3.5' — 18.3'

#313206 — 12.0' — 7.0'

#313204 — 8.1' — 5.9'

#313203 — 5.1' — 5.0'

#313145 — 10.1'

#313104 — 7.5'

35.1' — #TS-2 — 27.1'

ALLEN JUNCTION SUBSTATION

TO WESTGATE SUBSTATION

LEGEND

- ● - NEW OR REPLACED STRUCTURE
- ⊙ - EXISTING STRUCTURE
- ⊠ - EXISTING STR TO BE REMOVED
- — — — — - EXISTING TRANSMISSION LINE TO BE RELOCATED
- ——— - TRANSMISSION CENTERLINE
- ——— - ROAD CENTERLINE
- —— – – —— - PROPERTY LINE
- ▨ - BUILDING

PAPER SIZE: 17X11

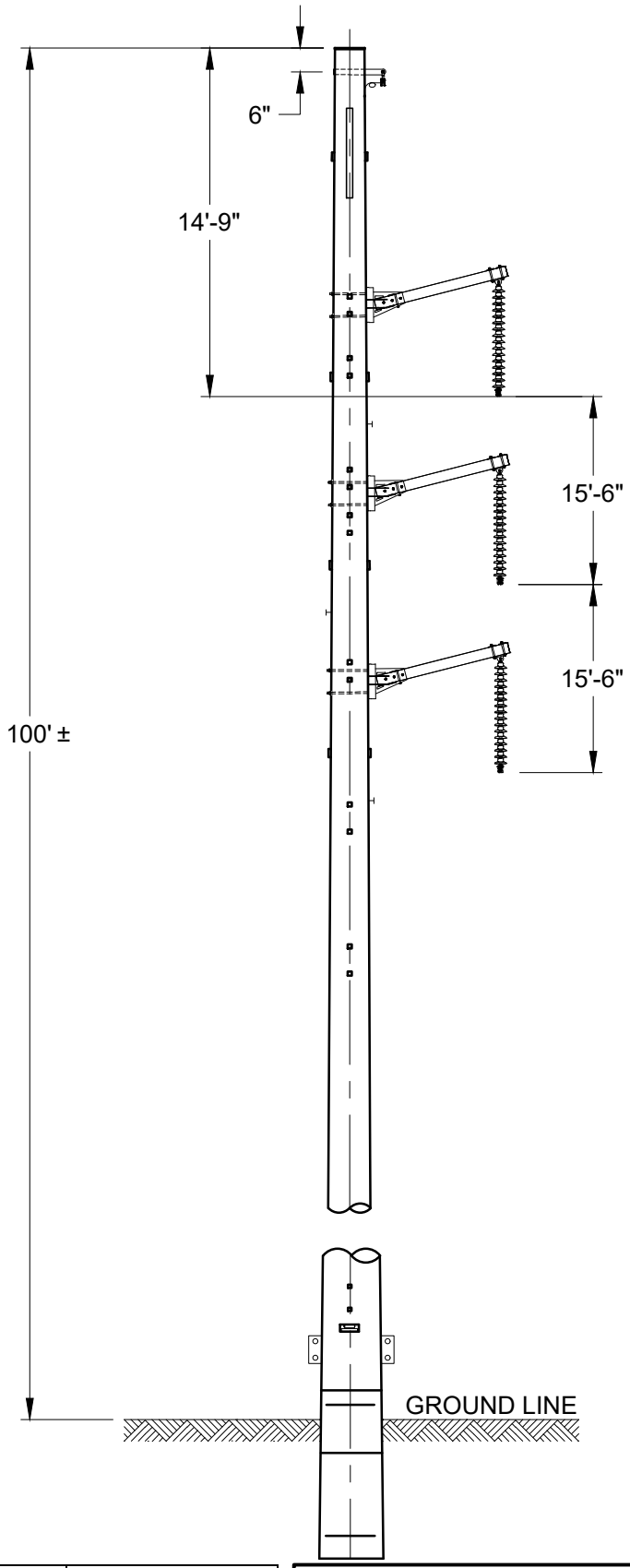
SCALE: NTS

ATSI. American Transmission Systems, Inc. a subsidiary of FirstEnergy Corp.

ALLEN JUNCTION–WESTGATE 138kV
TRANSMISSION LINE RELOCATION PROJECT

GENERAL LAYOUT

EXHIBIT 3



LINE	STRUCTURE(S)
ALLEN JUNCTION - WESTGATE 138kV	313104

ATSI
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

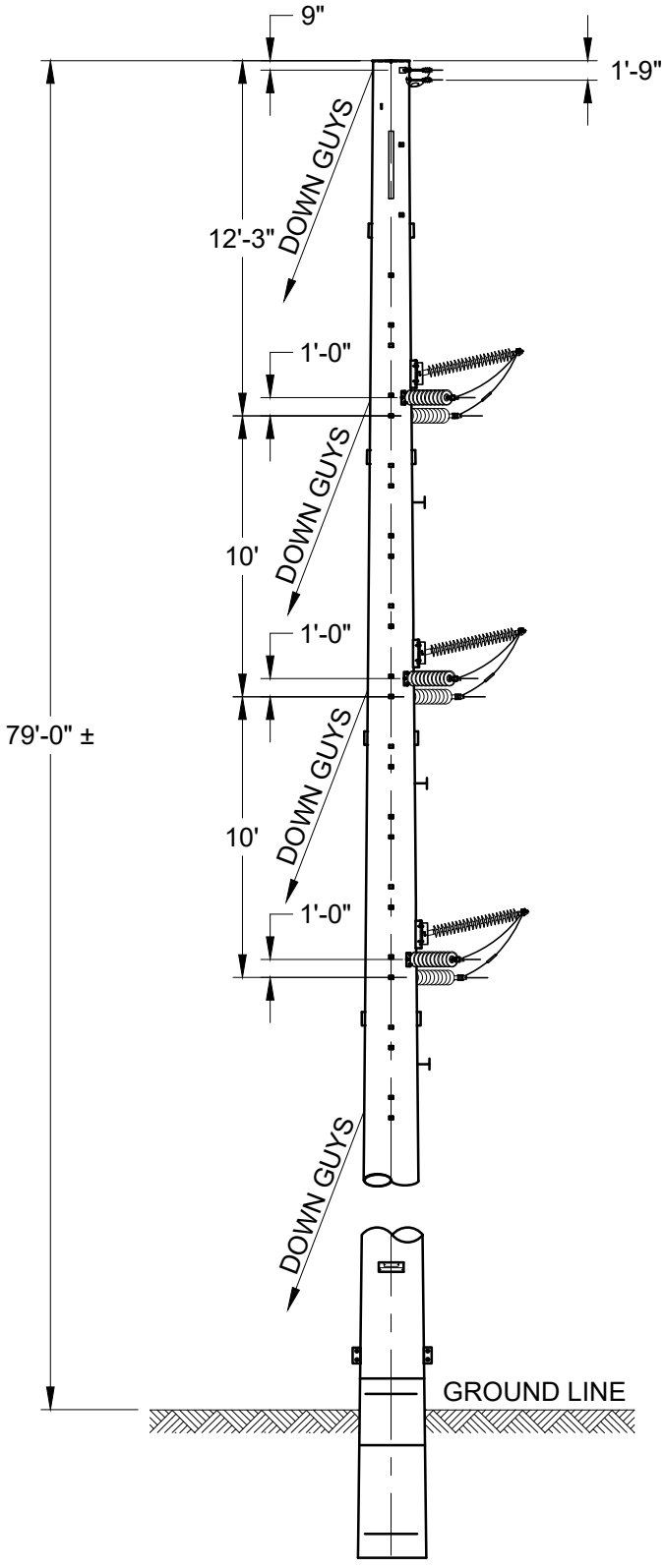
ALLEN JUNCTION–WESTGATE 138kV
TRANSMISSION LINE RELOCATION PROJECT

138kV SINGLE CIRCUIT POLE VERTICAL SUSPENSION

SCALE: NTS

EXHIBIT 4A

PAPER SIZE: 8.5X11



LINE	STRUCTURE(S)
ALLEN JUNCTION - WESTGATE 138kV	TS-2

ATSI American Transmission Systems, Inc. a subsidiary of FirstEnergy Corp.

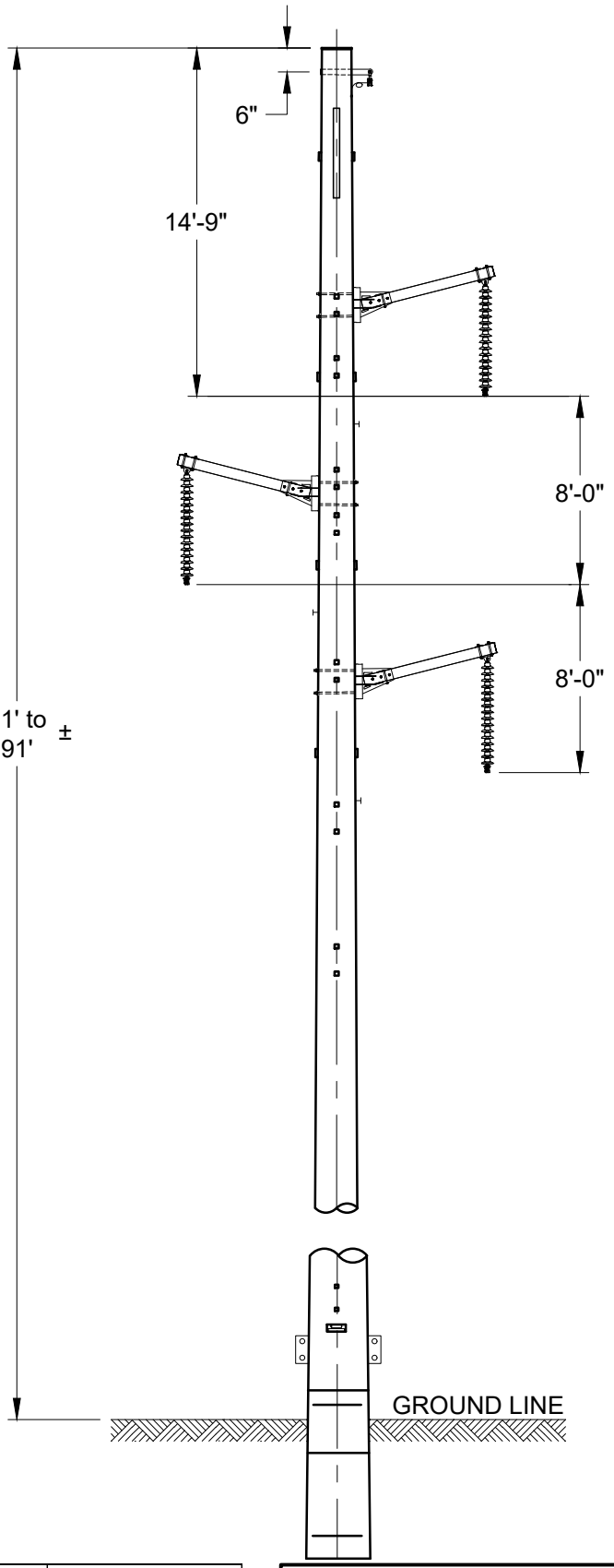
ALLEN JUNCTION–WESTGATE 138kV
TRANSMISSION LINE RELOCATION PROJECT

138kV SINGLE CIRCUIT POLE VERTICAL DEADEND

EXHIBIT 4B

PAPER SIZE: 8.5X11

SCALE: NTS



LINE	STRUCTURE(S)
ALLEN JUNCTION - WESTGATE 138kV	313207, 313206, 313204, 313203, 313145

ATSI
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

ALLEN JUNCTION–WESTGATE 138kV
TRANSMISSION LINE RELOCATION PROJECT

138kV SINGLE CIRCUIT POLE DELTA SUSPENSION

EXHIBIT 4C

PAPER SIZE: 8.5X11

SCALE: NTS

OHIO DEPARTMENT OF TRANSPORTATION

MEMO-TO-FILE

Office of Environmental Services

TO: Erica Schneider, Assistant Environmental Administrator **DATE:** March 27, 2023

FROM: Jason Watkins, Staff Archaeologist, Office of Environmental Services

SUBJECT: **Summary of an Archaeological Field Review in the City of Sylvania, Lucas County, Ohio.**

PROJECT: LUC-23-11.75 (PID 105889)

On February 28, 2023, ODOT-OES staff completed an archaeological resources field review for the proposed LUC-23-11.75 interchange improvement project located in the City of Sylvania, Lucas County, Ohio (Figures 1 and 2). The project involves the reconstruction and reconfiguration of the State Route 51/Monroe Street interchange along US Route 23 (see attached preliminary plan sheets). The ramps east of US 23 will be significantly reconfigured as the current US 23 northbound off-ramp, US 23 northbound on-ramp from State Route 51/Monroe Street, and the US 23 northbound on-ramp from State Route 184/Alexis Road will all be eliminated. While the new on and off ramp configuration will be substantially different than the existing configuration, the new ramps will be constructed inside the current infield area and within the existing right-of-way. State Route 184/Alexis Road will be reconfigured to intersect with State Route 51 opposite the new northbound on and off ramps. The ramps on the west side of US 23 will be slightly modified to increase the length of the US 23 southbound on-ramp, giving motorists more distance to increase speed and merge with US 23 southbound traffic. The majority of this work will be within the existing right-of-way for the US 23 interchange and State Routes 51 and 184. However, a minor amount of temporary and permanent right-of-way are required from areas along State Route 184 (east of the interchange) and State Route 51 (west of the interchange) [see page 3/13 of the plan sheets]. The preliminary archaeological resource survey involved a literature search and field reconnaissance which focused on an area measuring approximately 0.25 acre just beyond the existing State Route 51, State Route 184, and US 23 rights-of-way, an area slightly larger than the proposed project's footprint.

Literature Review

A literature review was performed to identify known archaeological resources in the project vicinity and help to determine the amount of cultural resource coordination required. A review of the Ohio SHPO's online mapping system failed to identify any known archaeological deposits within or adjacent to the project's proposed work limits (Figure 3). The closest known archaeological sites lie well north of the proposed construction limits: site 33LU323 (two projectile points recovered from a residential lawn in a heavily developed neighborhood) located nearly 1000 feet to the north and sites 33LU389 and 33LU390 (lithic scatters) located over 2500 feet to the north, on the north side of the Toledo Memorial Park situated at the western end of the project area. Based on this information, no known archaeological sites will be affected by the interchange improvement project.

The LUC-23-11.75 interchange improvement project is situated in a semi-urban area with some open/undeveloped space at the southern end of the project. Physiographically, the area is in the Maumee Sand Plains portion of the Lake Plains physiographic region. Brockman (1998) describes this area as a lacustrine plain mantled by late Wisconsin-age sand and includes low dunes, inter-dunal pans, beach ridges, and sand sheets of glacial lakeshores. The area also has very low relief (10 feet). The USDA/NRCS web soil survey reports that a large portion of the project area is made up of udorthents and urban land (approximately 73%) [see Figure 4]. However, the infield area east of US 23 contains well drained Sisson loam. This soil is found on lake plains in northwest Ohio and was formed in glaciolacustrine

deposits. Sloan soils are also reported in the project area, along the US 23 southbound on-ramp and near the Ottawa River. These soils are very poorly drained and occupy floodplains. Sloan soils are designated as a hydric soil and are occasionally flooded, as was the case during the field review (Figure 5).

Background research also included a review of archived aerial photos of the area, particularly aerials taken during US 23 construction. Prior to US 23, a number of residences line State Route 51/Monroe Street where the interchange sits today (Figure 6). Construction on US 23 between 1960 and 1962 heavily altered the project area (Figures 7 through 9). Both infields were thoroughly modified by ramp construction, borrowing for elevated roadways, stream channelization, the removal of the once extant residences, and grading. Today, vegetation in portions of the eastern infield has recovered with mature trees scattered across the northern side of the infield. However, modern aerials still show evidence of previous disturbance with exposed subsoil obvious across the surface (Figure 10).

Predictively, certain Lucas County landforms have a moderate potential for scattered lithic deposits and habitation sites, particularly atop better drained landforms near permanent streams. Recorded archaeological sites north of the project are examples of such land-use patterns. Therefore, short-term, single-use occupations like isolated find sites and low-density lithic scatters, may be found across the LUC-23 interchange improvement project area if relatively undisturbed soil deposits were encountered. Archived aerial photographs, however, suggest the entire area has been modified and disturbed by modern development. An archaeological field review was necessary to document the environment and confirm disturbances.

Field Review

ODOT's Office of Environmental Services completed an archaeological field review for the LUC-23-11.75 interchange improvement project on February 28, 2023. Disturbance across the eastern infield area was obvious immediately upon arrival (Figures 11 through 14). A walkover survey also observed push piles of concrete, stumps and mixed soils indicative of bulldozing and tree removal across the area (Figure 15). Disturbance was also observed along State Route 51/Monroe Street relating to a channelized drainage and a graded area where residences once stood prior to US 23 construction (Figure 16).

Areas along the State Route 51 and State Route 184 intersection, where the roadways will be modified to accommodate the new ramps east of US 23, have been heavily modified by residential, roadway, and underground utility development (Figure 17). Proposed temporary and permanent right-of-way west of US 23 is confined to urban land (along State Route 51/Monroe Street) and land previously modified by US 23 construction and/or in hydric Sloan soils (which were flooded at the time of the field review). The extent of modern disturbances across the entire LUC-23 project area preclude the presence of significant and intact archaeological deposits.

Summary

Background research indicated that no archaeological sites are found in the immediate vicinity of the proposed LUC-23-11.75 interchange improvement project. A field review confirmed that all work is confined to previously disturbed areas or low, wet hydric settings. Based on this information, no significant archaeological sites will be affected by the proposed interchange improvement project and no further archaeological investigations are recommended.

References

Brockman, C. S.
1998 Physiographic Regions of Ohio (map). Division of Geological Survey, Ohio Department of Natural Resources, Columbus.

JAW: jaw
c: EnviroNet Project File w/attachments

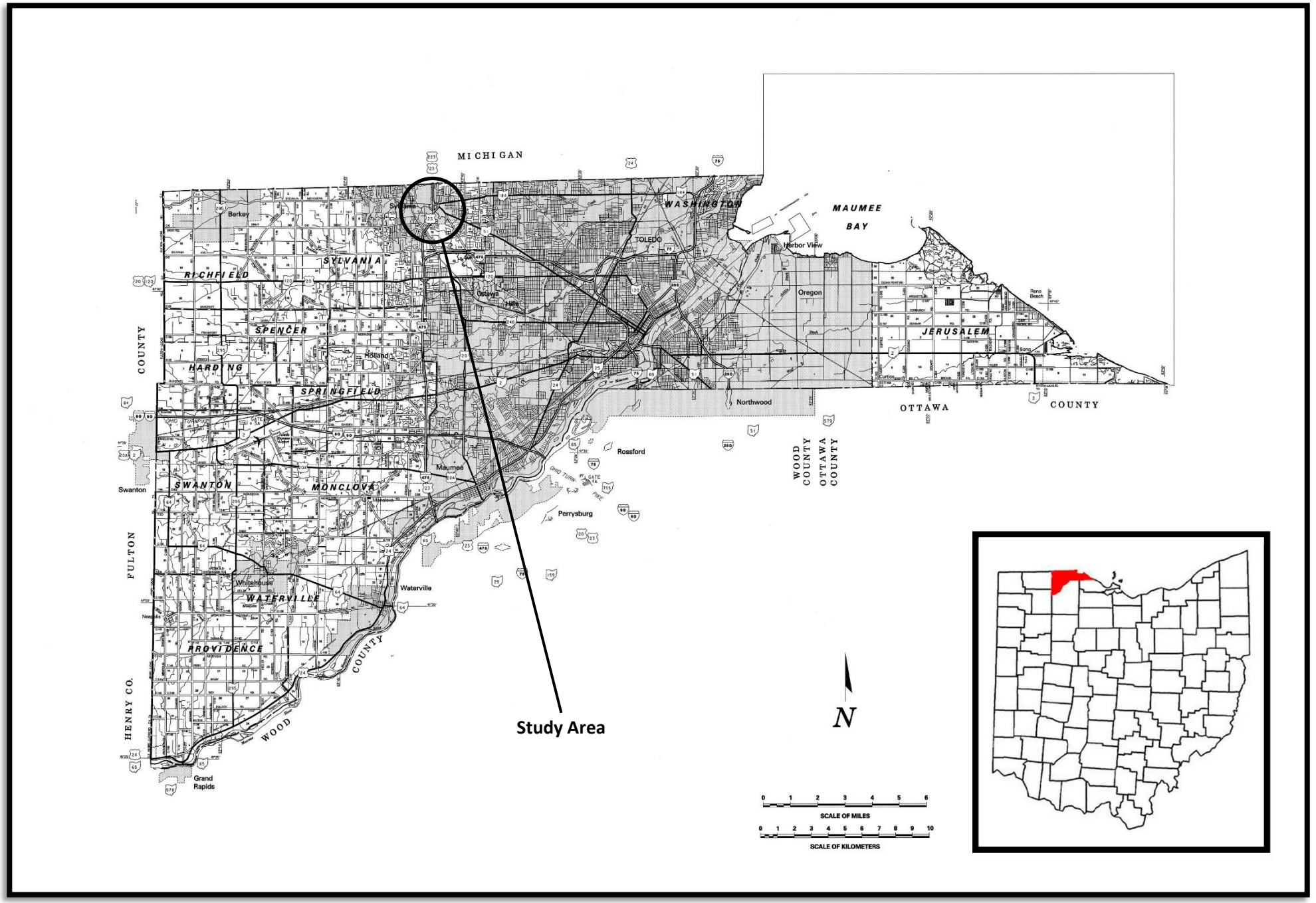
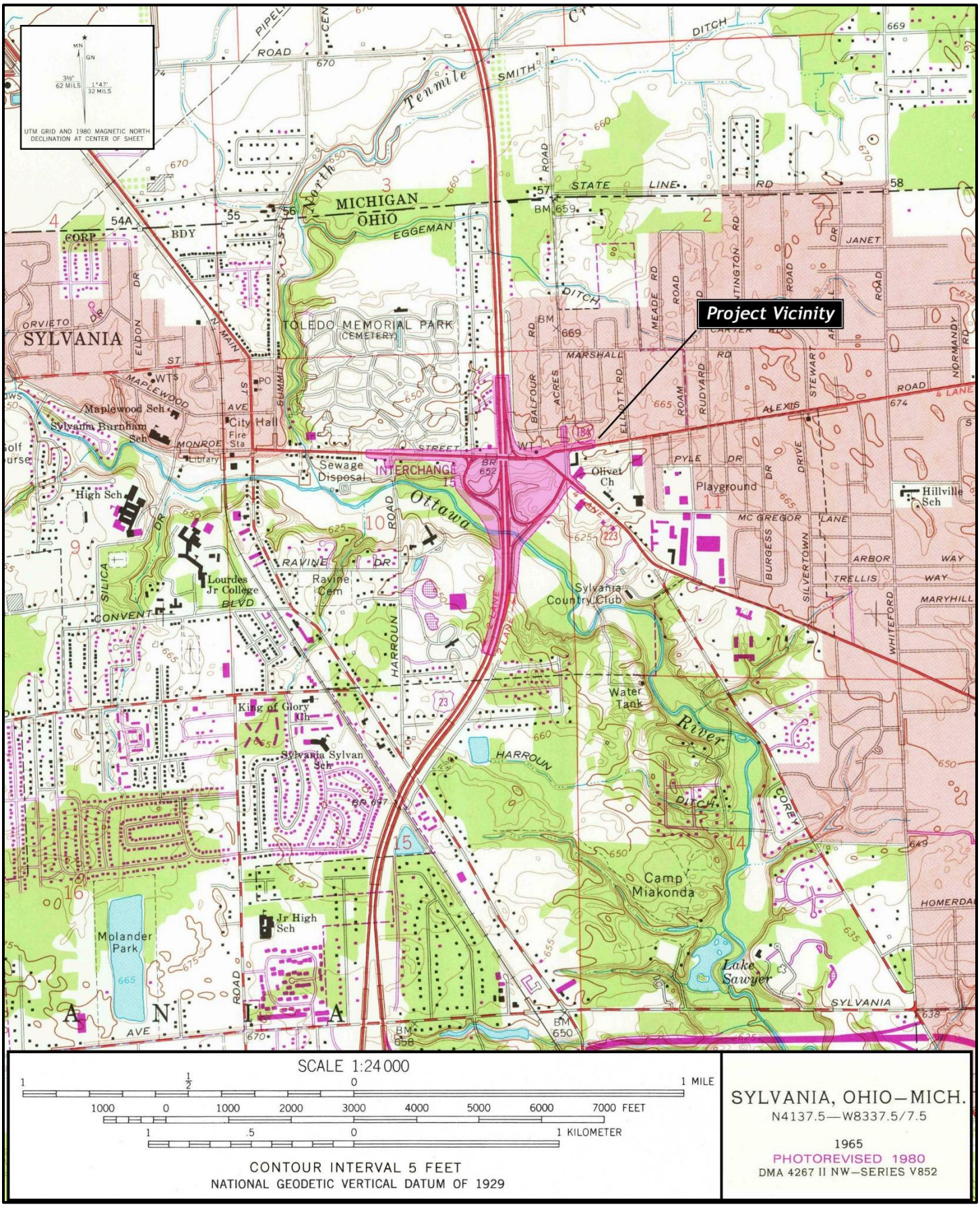


Figure 1. Lucas County map showing the study area.

Figure 2. Portion of the Sylvania, Ohio – Michigan (1965; photorevised 1980), Ohio 7.5' USGS topographic map showing the project vicinity.



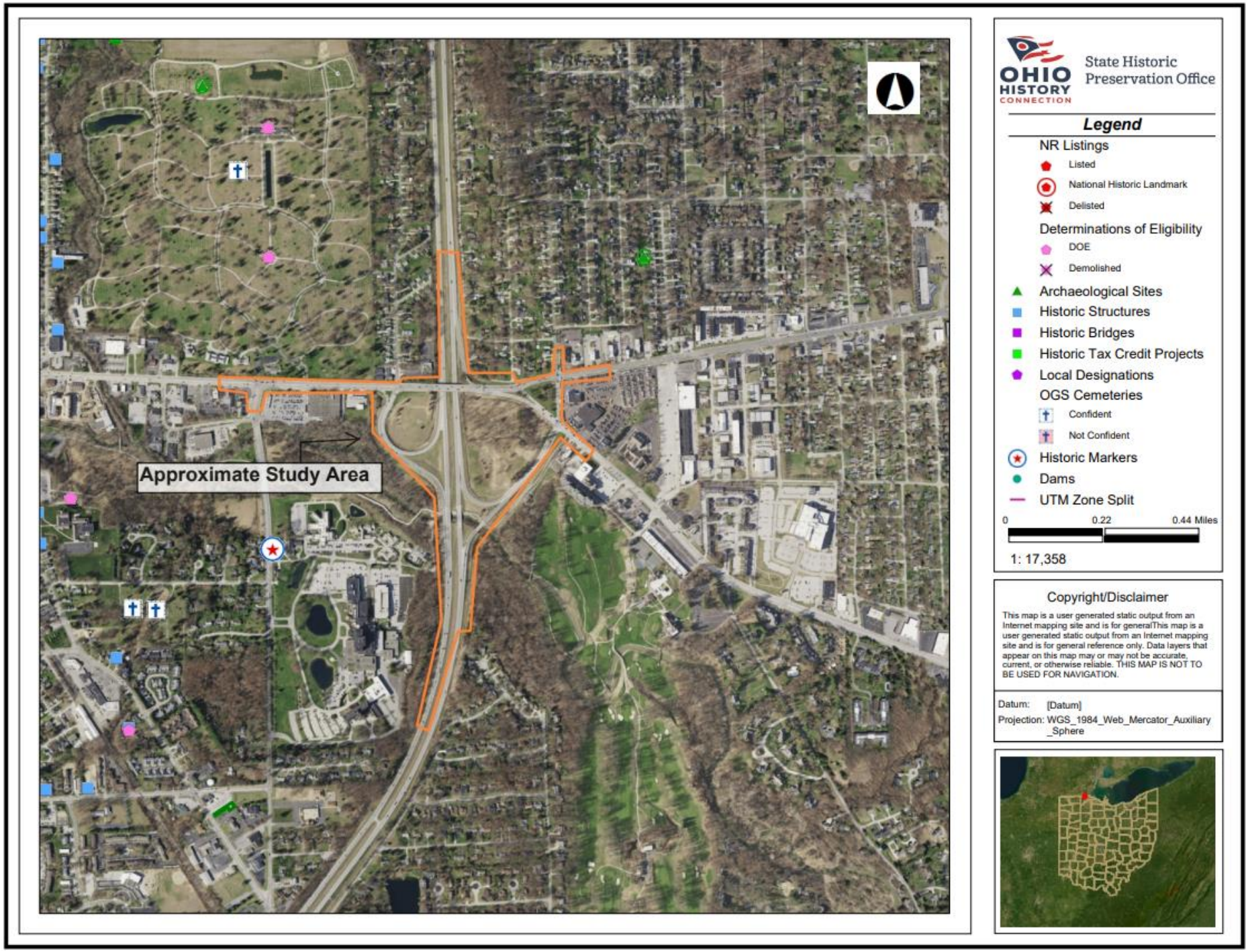


Figure 3. Ohio State Historic Preservation Office's online GIS map showing the previously recorded cultural resources and cultural resource surveys around the LUC-23-11.75 interchange improvement project.

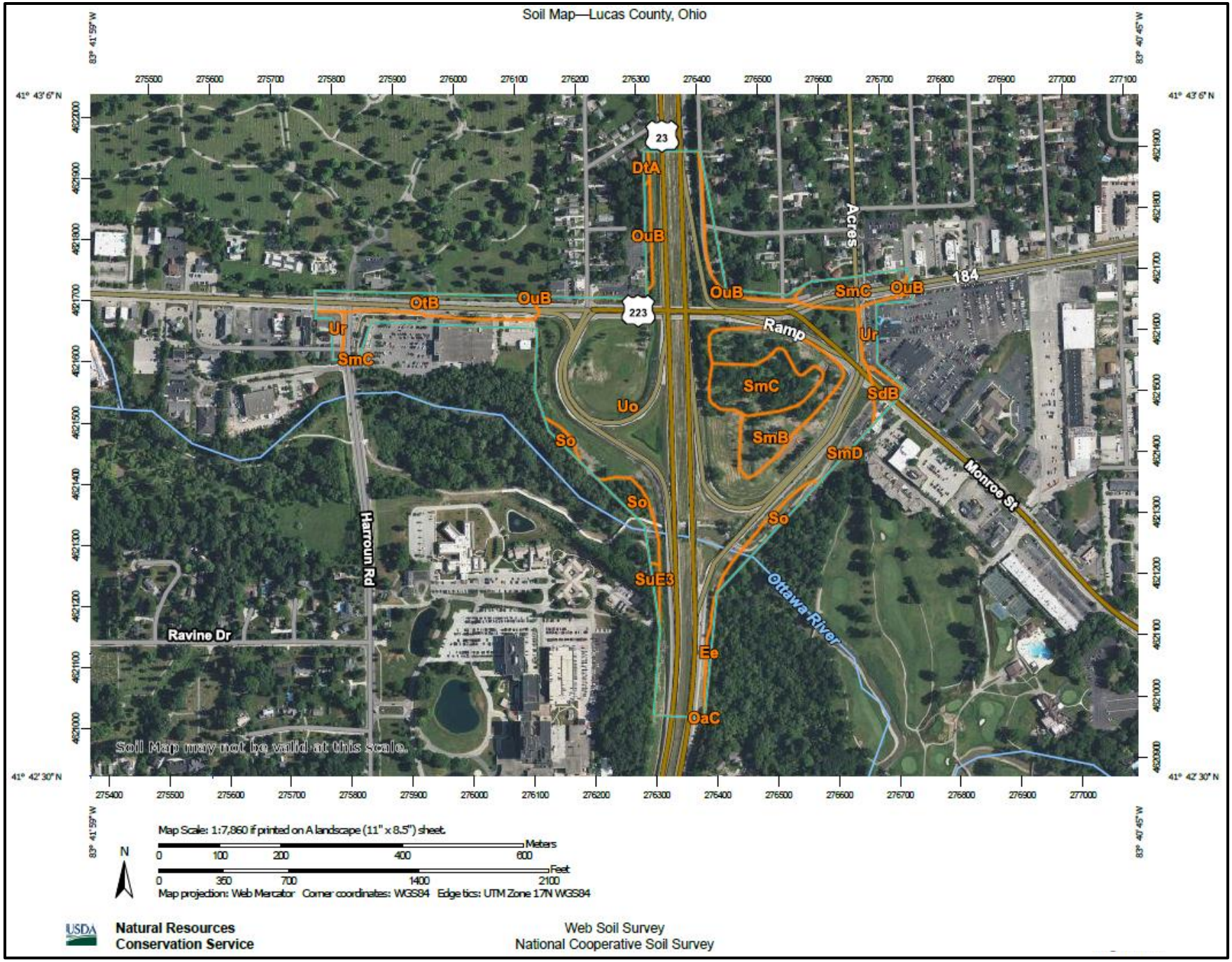


Figure 4. Soil map from the USDA/NRCS Web Soil Survey showing the widespread occurrence of Udorthents (Uo) and Urban Land (Ur) across the project area. Sisson soils (SmB and SmC) are also reported in the infield area east of US 23 and south of Monroe Street/State Route 51/State Route 184.

Figure 5. View looking northwest along the US 23 southbound on ramp from State Route 51/Monroe Street showing areas in hydric Sloan soils flooded at the time of the field review.

Figure 6. 1955 aerial photo showing the project footprint and a detail of the residences that once occupied the area where the interstate and ramps are today.

Figure 7. 1960 aerial showing a partially constructed US Route 23. Although snow covered, graded areas are clearly visible along the interstate and ramp areas.

Figure 8. 1961 aerial showing a partially constructed US Route 23. Grading and clearing is evident across the area, particularly in the infield on the east side of the interstate.

Figure 9. 1962 aerial photo taken during the construction of US Route 23 south of the State Route 51/Monroe Street interchange.

Figure 10. 1990 aerial photo showing denuded ground and exposed subsoil in the infield areas, a result of heavy modifications when the interstate and ramps were constructed.

Figure 11. View looking north across the infield east of US 23 showing contoured and modified ground.

Figure 12. View looking north across the infield east of US 23 showing a flat area used for borrow.

Figure 13. Representative photo of the ground surface and conditions (thin vegetation and exposed subsoil) in the infield area east of US 23.

Figure 14. View looking west toward US 23 and across the eastern infield showing the ground surface and conditions (thin vegetation and exposed subsoil).

Figure 15. View looking southeast showing stumps, concrete and other bulldozed material in the eastern infield area.

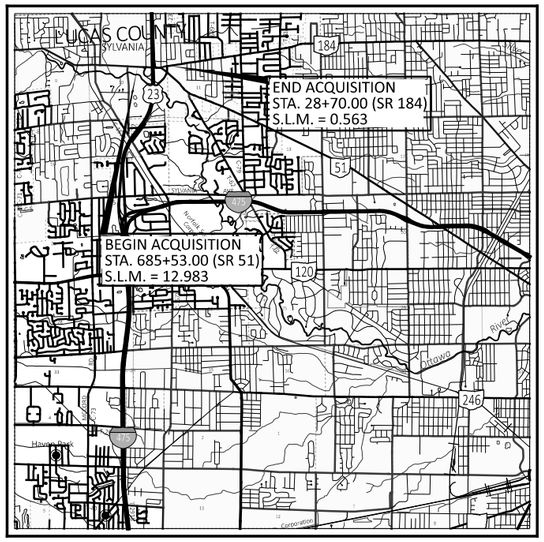
Figure 16. View looking west along State Route 51/Monroe Street showing the graded area where residences once stood prior to the construction of US 23.

Figure 17. View looking east across the triangular-shaped grassy area between State Route 51 and State Route 184. The intersection will be modified through this area to allow the new intersection to line up with the new ramp configuration.

RIGHT OF WAY LEGEND SHEET

LUC-023-(11.75)

COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11



LOCATION MAP

LATITUDE: 41°42'55" N LONGITUDE: 83°41'18" W

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2
PROPERTY MAP	3 - 4
SUMMARY OF ADDITIONAL R/W	5
R/W DETAIL SHEETS	6 - 13

PROJECT DESCRIPTION

RECONSTRUCTION AND RECONFIGURATION OF THE SR 51 INTERCHANGE OVER US 23 IN THE CUTY OF SYLVANIA, LUCAS COUNTY. NECESSARY WORK INCLUDES BRIDGE REPLACEMENTS, RAMP RECONSTRUCTION, SECONDARY STREET UPGRADES AND RESURFACING

PLANS PREPARED BY:

FIRM NAME : ARCADIS, U.S. , INC.
R/W DESIGNER: BRIAN WALLACE
R/W REVIEWER: ROBERT HOY
FIELD REVIEWER: ROBERT HOY
PRELIMINARY FIELD REVIEW DATE: 12/15/22
TRACINGS FIELD REVIEW DATE: _____
OWNERSHIP UPDATED BY: _____
DATE COMPLETED: _____
PLAN COMPLETION DATE: _____

UTILITY OWNERS

COLUMBIA GAS OF OHIO (TOLEDO)
2901 EAST MANHATTAN BLVD
TOLEDO, OH 43611
LEE ANN TYRELL
419-539-6258
LTYRELL@NISOURCE.COM

TOLEDO EDISON
6099 ANGOLA ROAD
HOLLAND, OH 43528
419-249-5218
RANDY SWOPE
RRSWOPE@FIRSTENERGYCORP.COM

BUCKEYE CABLE
2700 OREGON ROAD
NORTHWOOD, OH 43619
419-724-3713
MICHAEL SHEAHAN
MSHEAHAN@SHAREDSVCS.COM

CHARTER COMMUNICATIONS
3760 INTERCHANGE DR
COLUMBUS, OH 43204
614-255-6340

FRONTIER
1300 COLUMBUS-SANDUSKY RD
MARION, OH 43302
740-383-0686

NORTHERN BUCKEYE EDUCATION COUNCIL
209 NOLAN PARKWAY
ARCHBOLD, OH 43502
419-267-2515

CITY OF SYLVANIA
6730 MONROE ST
SYLVANIA, OH 43560
419-885-8965

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Standard Highway Ease.(Pr) SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) Tree (Ex) Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) MB , Mailbox (Pr) MB
Light (Ex) , Telephone Marker (Ex) TEL
Fire Hydrant (Ex) , Water Meter (Ex) W
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

TYPES OF TITLE LEGEND:

WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
T = TEMPORARY EASEMENT

A PORTION OF THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

PRELIMINARY R/W SUBMITTAL
JANUARY 6TH, 2023

SURVEYORS SEAL

I, ANTHONY A. GARCIA, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation on JULY 2021. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, NORTH Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey feet) are relative to State Plane Grid Coordinates (US Survey feet) by a Project Adjustment Factor multiplier of 0.99997466. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

_____
ANTHONY A. GARCIA, Professional Land Surveyor No. 8112, Date:

SURVEYORS SEAL

I, Robert G. Hoy, P.S. have established the proposed property lines, calculated the Gross Take, present road occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein.

All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 Standards for Boundary Surveys unless so noted. The words "I" as used herein are to mean either myself or someone working under my direct supervision.

Arcadis U.S., Inc.
Robert G. Hoy, Ohio Professional Surveyor No. 8142

RIGHT OF WAY
LEGEND SHEET

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER
BLW

REVIEWER
RGH 01/06/23

PROJECT ID
105889

SUBSET 1 | TOTAL 13

SHEET 194 | TOTAL

LUC-023-11.75

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OWNERSHIP NAME & NUMBER		# - PARCEL NO.
1	THE KROGER CO., AN OHIO CORPORATION	
2	BARNEY'S REAL ESTATE INVESTMENT, LLC, AN OHIO LIMITED LIABILITY COMPANY	
3	PROMEDICA FOUNDATION, AN OHIO NONPROFIT CORORATION	
4	VINCE J. & ELIZABETH IPPOLITO	8210401
5	DJF PROPERTIES, LTD., AN OHIO LIMITED LIABILITY COMPANY	8207384
6	SMILE DEVELOPMENT, LTD., AN OHIO LIMITED LIABILITY COMPANY	8204378
7	TACO BELL OF AMERICA, INC., A DELAWARE CORPORATION	8204378

LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

HORIZONTAL SCALE IN FEET
0 75 150 300

PROPERTY MAP (1 OF 2)

Temporary R/W
Temporary R/W
Permenant R/W
Temporary R/W
15' WATERLINE EASEMENT
BEGIN ACQUISITION STA. 685+53.00
END ACQUISITION STA. 28+70.00
HAVERFORD VOL. 31, PG. 37. L.C.R.
REVISED PLAT OF SYLVANSIDE VOL. 32, PG. 26. L.C.R.
LUC-CR4-9.77 R/W PLANS DATED MAY 2020
LUC-12.28 R/W PLANS DATED
LUC-CR4-9.77 R/W PLANS DATED MAY 1973
SR 51 (MONROE ST.)
SR 184 (ALEXIS RD.)
HARROUND RD.
GLASGOW RD.
BALFOUR RD.
ACRES RD.
US 23
SECTION 10
SECTION 11
#8203354
#8203349
#8203347
#8203385
#8203386
#8210381
MATCH LINE STA. 951+50
SEE SHEET 4

DESIGN AGENCY	
ARCADIS	1111 SUPERIOR AVENUE SUITE 1300 CLEVELAND, OHIO 44114 (216) 781-6177 www.arcadis.com
DESIGNER	BLW
REVIEWER	RGH 01/06/23
PROJECT ID	105889
SUBSET	3
TOTAL	13
SHEET	196
TOTAL	

LUC-023-11.75

LUC-023-11.75

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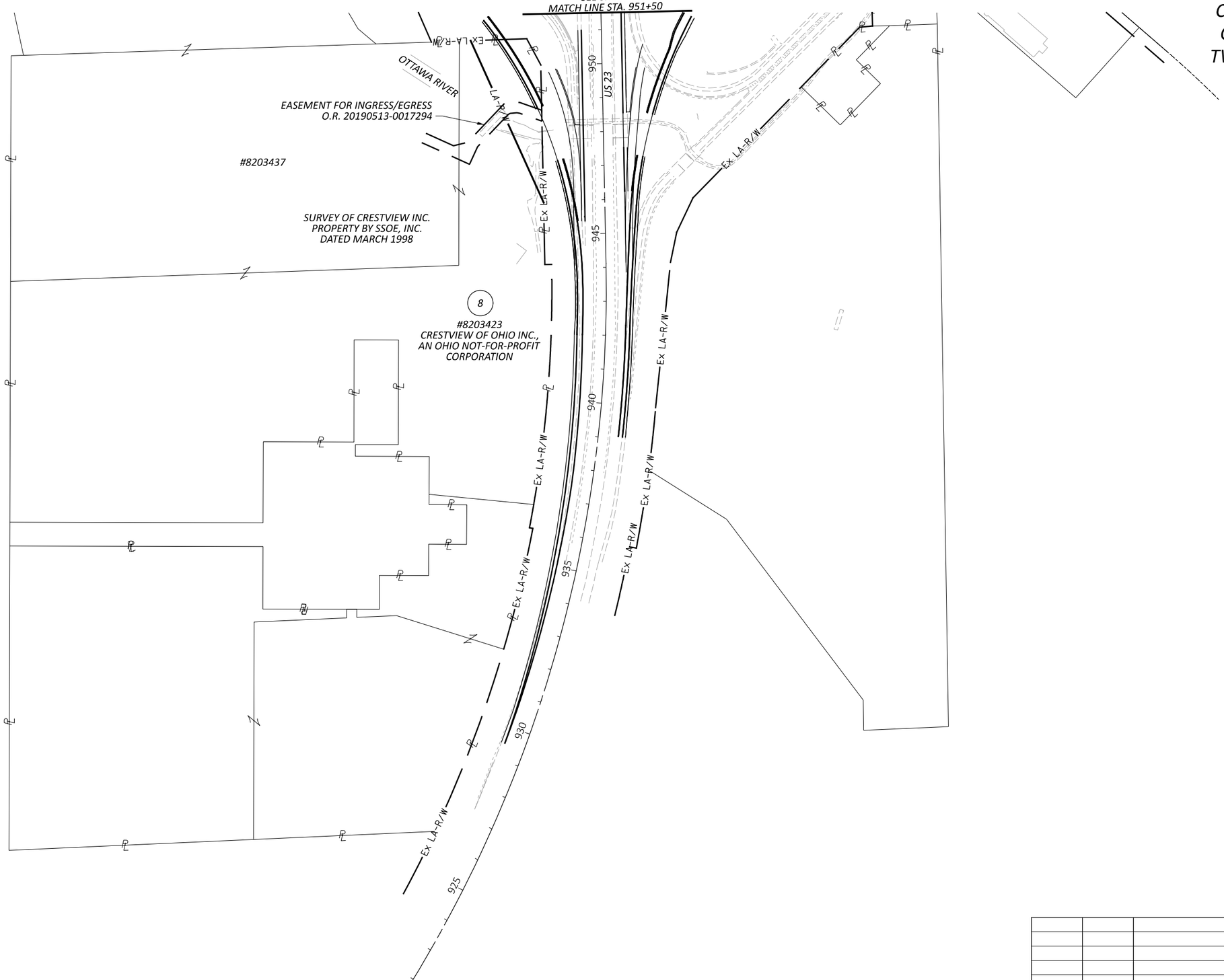

LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11

HORIZONTAL SCALE IN FEET
0 75 150 300

PROPERTY MAP (2 OF 2)

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER BLW
REVIEWER RGH 01/06/23
PROJECT ID 105889
SUBSET 4 TOTAL 13
SHEET 197 TOTAL

LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11

HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - SR-51 (MONROE ST.)
BEGIN PROJECT TO STA. 686+71.89

TOLEDO MEMORIAL PARK CEMETERY
6383 MONROE ST
PID 8200698
O.R. 20060703-0043788
COMMERCIAL

BEGIN ACQUISITION
STA. 685+53.00

MATCH LINE STA. 686+71.89
SEE SHEET 7

SR 51 (MONROE ST.)

℄ R/W & CONST. SR 51

℄ RW STA. = 682+27.31
℄ CONST. STA. = 164+55.42

855.42'
S86°41'31"E

1,967.79'
S87°59'01"E

CONST. LIMITS

PI STA. 682+27.31

685+53.00
52.62' RT

685+53.00
64.50' RT

+47.85 ASPH.
COMM. DRIVE

PROP 8" WATER MAIN
12" TYPE B

12" TYPE B

12" TYPE B

TMP

THE KROGER COMPANY
6175 & 6261 MONROE ST
PID 8203350 & 8203349
O.R. 20050225-0012772
COMMERCIAL

1 THE KROGER COMPANY
6235 MONROE ST
PID 8203354
O.R. 20050614-0042166
COMMERCIAL

1-T

1 THE KROGER COMPANY
6261 MONROE ST
PID 8203349
COMMERCIAL

1 Story Brick Comm.

2 Story Brick

Asphalt
Grass
Conc.
Stone Pillar
Stone Wall
Gate
Sign
Bushes (DND)
(DND)
Ex R/W
12" RCP
15" RCP
36" RCP
48" RCP
12" CONC
15" CONC
10"G
6" CLAY SAN
6" PVC
12" CLAY
6" CPP
CONC PLUGGED

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER BLW
REVIEWER RGH 01/06/23
PROJECT ID 105889
SUBSET 6 TOTAL 13
SHEET 199 TOTAL

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

LUC-023-11.75

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LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11

HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - SR-51 (MONROE ST.)
STA. 686+71.89 TO STA. 691+71.89

TOLEDO MEMORIAL PARK CEMETERY
6383 MONROE ST
PID 8200698
O.R. 20060703-0043788
COMMERCIAL

LUC-CR4-9.77 R/W PLANS
DATED MAY 2020

MONROE ST. (SR 51)

SEE SHEET 6
MATCH LINE STA. 686+71.89

SEE SHEET 8
MATCH LINE STA. 691+71.89

℄ R/W & CONST. SR 51

1,967.79'
S87°59'01"E

CONST. LIMITS

*(T) 2 BOLLARDS**

(T) BP SIGN

12" TYPE B

12" TYPE C

PROP. 8" WATER MAIN

PR OVERHEAD SIGN TRUSS

HALF HEIGHT HEADWALL

DITCH EROSION PROTECTION

688+86.26
55.00' RT

688+86.26
56.00' RT

689+75.00
56.00' RT

688+48.67
64.50' RT

688+48.66
67.50' RT

688+86.27
67.50' RT

688+86.28
85.00' RT

689+86.00
65.00' RT

689+61.50
85.00' RT

690+96.91
80.00' RT

690+97.58
85.00' RT

+87.92 ASPH. COMM DRIVE

+70.26 CONC. COMM DRIVE

+95.80 CONC. COMM DRIVE (R)

93.48'

1-T

2-T

2-WD

1 Story Brick Comm.

1 Story Brick Comm.

1
THE KROGER COMPANY
6175 & 6261 MONROE ST
PID 8203350 & 8203349
O.R. 20050225-0012772
COMMERCIAL

1
THE KROGER COMPANY
6131 MONROE ST
PID 8203347
M.F. 95 032B06
COMMERCIAL

2
BARNEY'S REAL ESTATE INVESTMENT, LLC
6111 MONROE ST
PID 8203385
O.R. 20160229-0007876
COMMERCIAL

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER: BLW
REVIEWER: RGH 01/06/23
PROJECT ID: 105889
SUBSET: 7 TOTAL: 13
SHEET: 200 TOTAL:

LUC-023-11.75

MODEL: CLP_MONROE - Monroe St Plan 2 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 1/6/2023 TIME: 10:13:01 AM USER: SMaag
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LUC-023-11.75

LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11

HAVERFORD
VOL. 31, PG. 37. L.C.R.

LOT 78 | LOT 76 | LOT 77 | LOT 75 | LOT 74 | LOT 73 | LOT 72 | LOT 71

THREE STOOGES LTD
6110 MONROE ST
PID 8207384
O.R. 20060703-0043788
COMMERCIAL

NORTHWEST CLAWS
REAL ESTATE LLC
6100 MONROE ST
PID 8207379
O.R. 20191018-0042605
COMMERCIAL

GSP REALTY LLC
6064 MONROE ST
PID 82027334, 8207337, 8207361,
8207364, 8207367, 8207371, 8207374
O.R. 20150303-0008074
COMMERCIAL

1 Story Fr/Brick/Stone Comm.
1½ Story Frame Comm.
2 Story Apartment Brick
Fr. Shed

GLASGOW RD.
℄ EX. R/W GLASGOW RD.
Ex R/W
Ex SH
Ex LA-R/W
CONST. LIMITS
* 4 PRIVATE SIGNS (DND)
PROP. 12" WATER MAIN
PROP. MULTI-USE PATH
℄ R/W SR 51 STA. 693+64.81 =
℄ R/W GLASGOW RD STA. 4+10.47
2,237.88'
S87°59'01"E
℄ R/W & CONST. SR 51
SR 51 (MONROE ST.)
℄ CONST. US 23
SB OFF RAMP
℄ R/W SR 51 STA. 693+66.46 =
℄ CONST. RAMP C-D STA. 10+00.00
PR OVERHEAD
SIGN TRUSS
PROP. 12" STM.
US 23 SB ON RAMP
US 23 SB OFF RAMP
LUC-CR4-9.77 R/W PLANS
DATED MAY 1973
CONST. LIMITS
NOTE - * = R/W ENCROACHMENT
SEE SHEET 7
MATCH LINE STA. 691+71.89
MATCH LINE STA. 12+00.00
SEE SHEET 11
SEE SHEET 9

HORIZONTAL
SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - SR-51 (MONROE ST.)
STA. 691+71.89 TO STA. 696+71.89

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 696-2777
www.arcadis.com

DESIGNER
BLW

REVIEWER
RGH 01/06/23

PROJECT ID
105889

SUBSET 8 | TOTAL 13

SHEET 201 | TOTAL

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LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11

REVISED PLAT OF SYLVANSIDE
VOL. 32, PG. 26. L.C.R.

WILLIAM G. EVERS II, ETAL
5610 BALFOUR RD
PID 8210414
M.F. 98 634C09
RESIDENTIAL

LOT 2
4
VINCE J. & ELIZABETH IPPOLITO
5918 W. ALEXIS RD
PID 8210401
O.R. 20050630-0046796
RESIDENTIAL

LOT 1
4-WD
5-WD
1 Story Frame
1 Story Frame

5
DJF PROPERTIES LTD.,
AN OHIO LIMITED LIABILITY COMPANY
5904 W. ALEXIS RD
PID 8210381
O.R. 20100708-0027672
RESIDENTIAL

6
SMILE DEVELOPMENT LTD.
5860 W. ALEXIS RD
PID 8204378
O.R. 20080701-0033105
COMMERCIAL

CITY OF SYLVANIA
5925 W. ALEXIS RD
PID 8203211
PARK

ALEXIS RD (SR 184)
MONROE ST. (SR 51)
ACRES RD
ACRES RD

℄ CONST. SR 184 STA. 33+43.12 =
℄ CONST. SR 51 STA. 187+54.49

℄ R/W SR 184 STA. 26+92.78 =
℄ R/W ACRES RD STA. 64+37.61

MATCH LINE STA. 27+71.54
SEE SHEET 10

24+65.00
30.00' LT
25+19.16
53.00' LT
25+70.00
65.00' LT
26+57.69
60.00' LT
62+12.59
42.00' LT.
68+63.16
40.00' RT.
27+38.12
42.00' LT
27+37.94
40.50' LT

PI STA. 704+69.19
PI STA. 64+37.61
S87°59'04"E
2,237.88'
S49°02'37"E
1,412.24'
N81°31'40"E
1,546.18'
N01°37'02"W
63.54'
63 ΔN01°39'18"W

PROP. DITCH
PROP. WALK
CONST. LIMITS
PROP. 12" STM.
PROP. 12" WATER
PR OVERHEAD SIGN STRUCTURE
STEPS
* Light Pole
* Asphalt Parking Lot

HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - SR-184 (ALEXIS RD.)
STA. 23+50 TO STA. 27+71.54

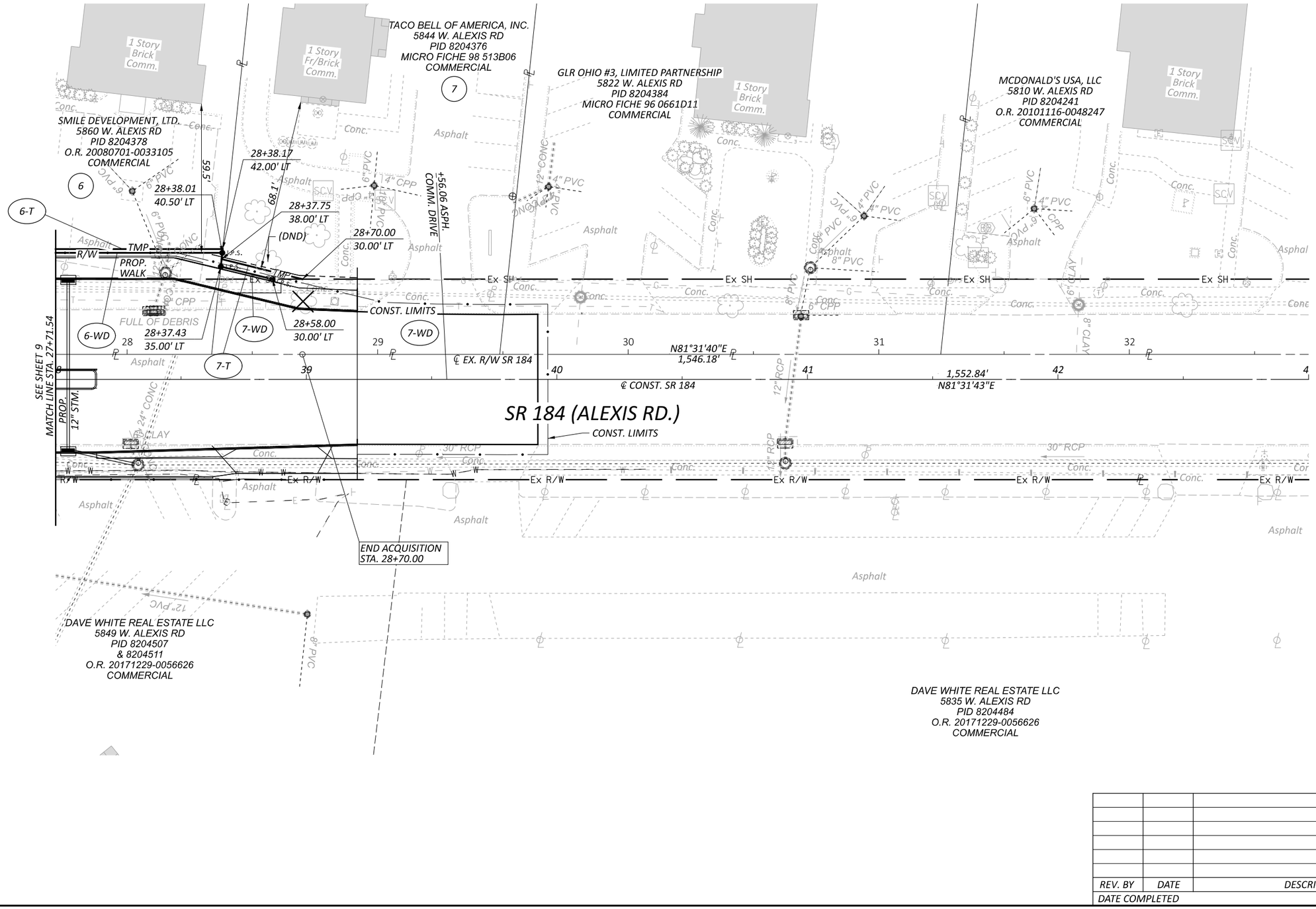
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE, SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-5477
www.arcadis.com

DESIGNER BLW
REVIEWER RGH 01/06/23
PROJECT ID 105889
SUBSET 9 TOTAL 13
SHEET 202 TOTAL

LUC-023-11.75

LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11



HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - SR-184 (ALEXIS RD.)
STA. 27+71.54 TO END OF PROJECT

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7400
www.arcadis.com

DESIGNER: BLW
REVIEWER: RGH 01/06/23
PROJECT ID: 105889
SUBSET: 10 TOTAL: 13
SHEET: 203 TOTAL:

LUC-023-11.75

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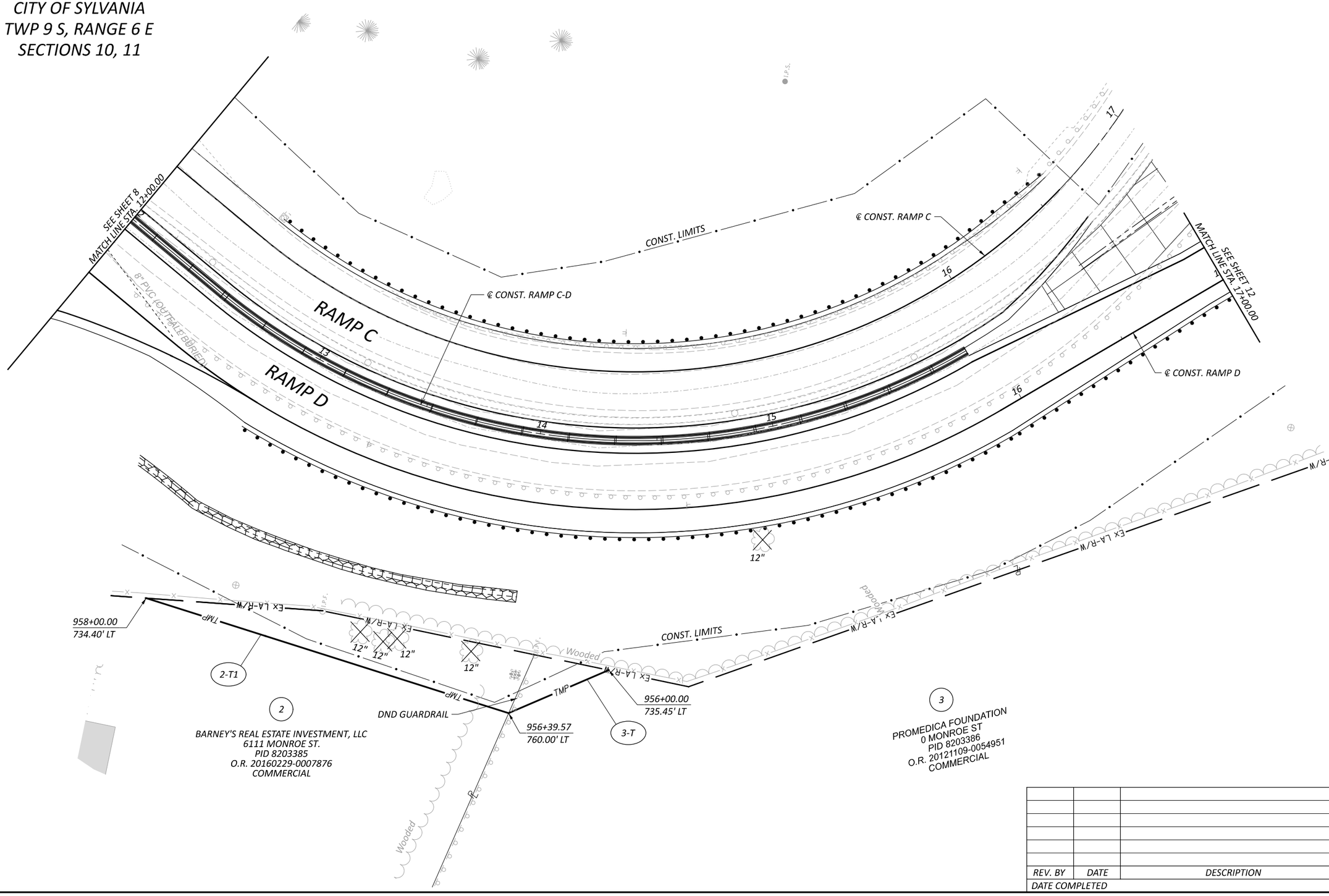
LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11



HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - RAMP C-D
STA. 12+00 TO STA. 17+00

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7544
www.arcadis.com

DESIGNER: BLW
REVIEWER: RGH 01/06/23
PROJECT ID: 105889
SUBSET: 11 TOTAL: 13
SHEET: 204 TOTAL:

LUC-023-11.75

MODEL: CLP_SB - RAMP C-D [Sheet] PAPERSIZE: 17x11 (in.) DATE: 1/6/2023 TIME: 10:14:01 AM USER: SMaag
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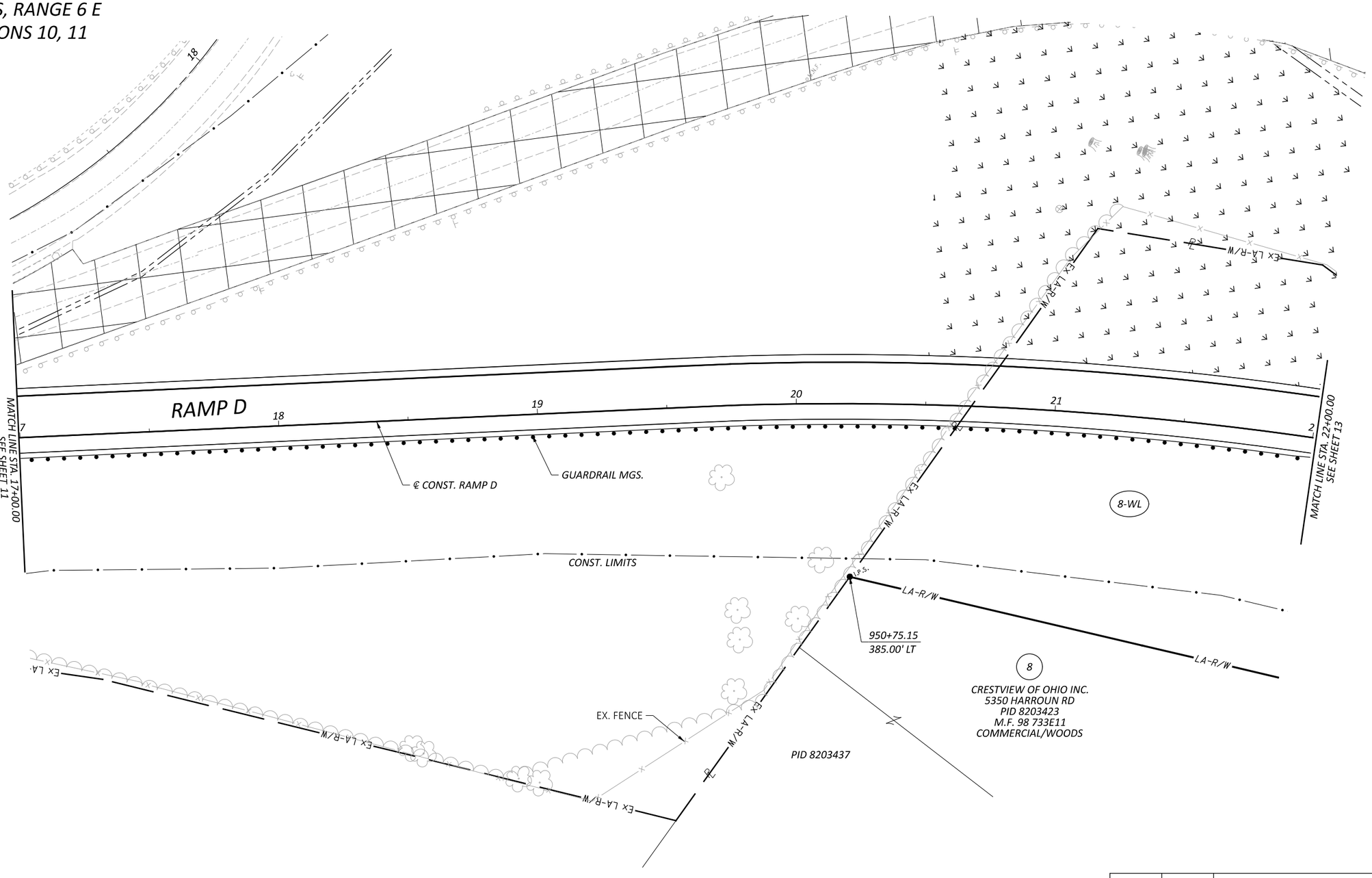
LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11



HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - RAMP D
STA. 17+00 TO STA. 22+00

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER: BLW
REVIEWER: RGH 01/06/23
PROJECT ID: 105889
SUBSET: 12 TOTAL: 13
SHEET: 205 TOTAL:

LUC-023-11.75

MODEL: CLP_SB_ENT - RAMP D [Sheet] PAPERSIZE: 17x11 (in.) DATE: 1/6/2023 TIME: 10:14:19 AM USER: SMaag
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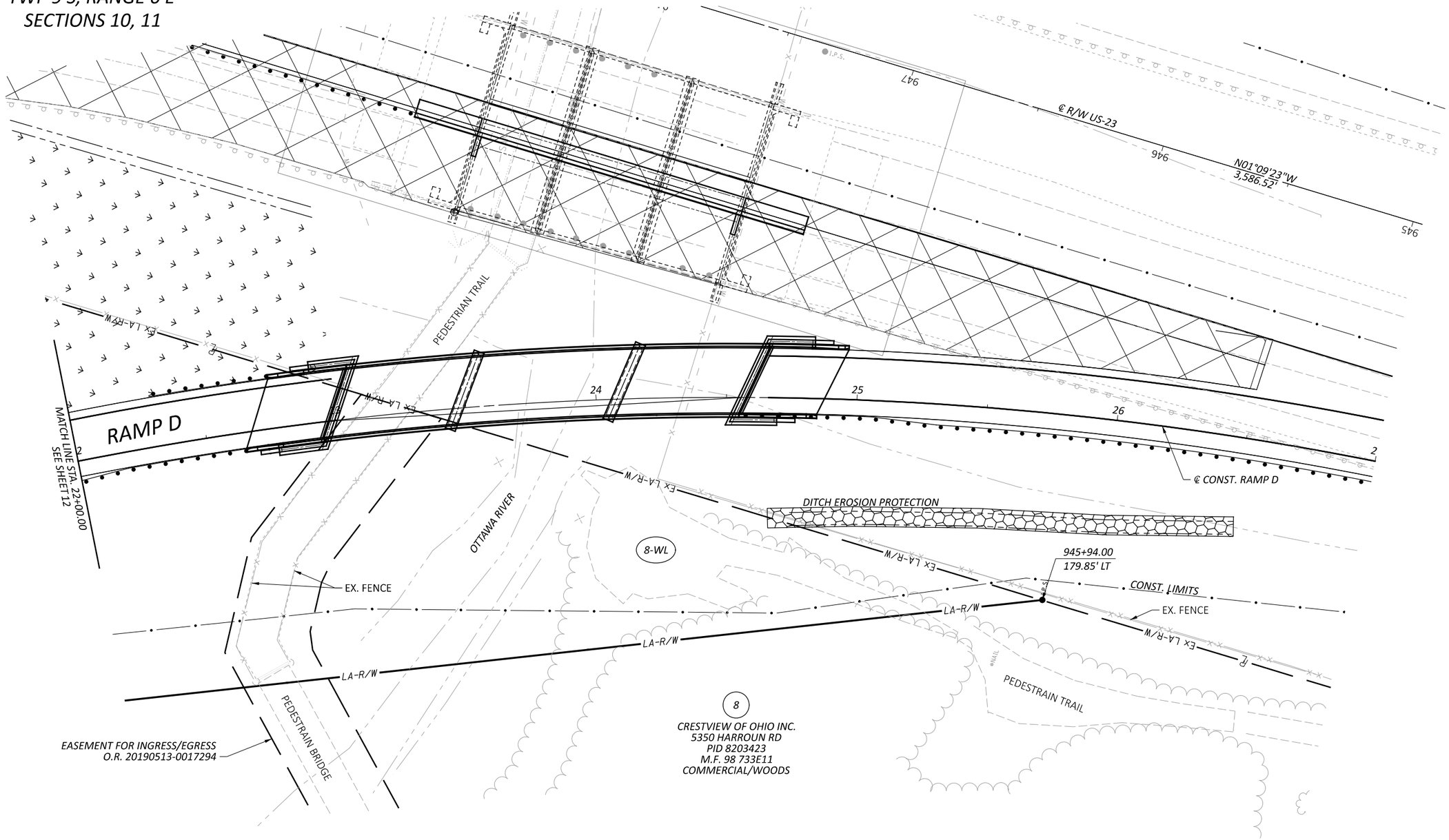
LUC-023-11.75
COUNTY OF LUCAS
CITY OF SYLVANIA
TWP 9 S, RANGE 6 E
SECTIONS 10, 11



HORIZONTAL SCALE IN FEET
0 10 20 40

R/W DETAIL SHEET - RAMP D
STA. 22+00 TO STA. 27+00

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER: BLW
REVIEWER: RGH 01/06/23
PROJECT ID: 105889
SUBSET: 13 TOTAL: 13
SHEET: 206 TOTAL:

LUC-023-11.75

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OHIO DEPARTMENT OF TRANSPORTATION

INTER-OFFICE COMMUNICATION

Office of Environmental Services

To:	Erica Schneider, Assistant Environmental Administrator	Date: April 13, 2023
From:	Monica Bruns, Staff Historian	
Subject:	History/Architecture NRHP Eligibility	
Project:	LUC-US 23-11.75 Interchange, PID: 105889	

The LUC-23-11.75 project involves the reconstruction and reconfiguration of the State Route 51/Monroe Street interchange along US Route 23. The ramps east of US 23 will be significantly reconfigured as the current US 23 northbound off-ramp, US 23 northbound on-ramp from State Route 51/Monroe Street, and the US 23 northbound on-ramp from State Route 184/Alexis Road will all be eliminated. New on and off ramps will be constructed inside the current infield area. State Route 184/Alexis Road will be reconfigured to intersect with State Route 51 opposite the new northbound on and off ramps. The ramps on the west side of US 23 will be slightly modified to increase the length of the US 23 southbound on-ramp, giving motorists more distance to increase speed and merge with US 23 southbound traffic. The majority of the proposed work is within the existing right-of-way for the US 23 interchange and State Routes 51 and 184. However, minor areas of temporary and permanent right-of-way are required to complete the proposed improvement. Table 1, below, summarizes which properties have right-of-way takes; the table includes a description of the work at each property. Right-of-Way project plans referenced in Table 1 are in the EnviroNet project file: General>Project Information>Right of Way Plan Sheets.pdf. They were saved to the project file on January 31, 2023.

The setting of the project is suburban, with commercial properties, modern apartment complexes and residential subdivisions nearby. The interchange is in the City of Sylvania, northwest of the City of Toledo, and immediately south of the border with Michigan. The location within Lucas County is shown in **Figure 1**, below.

Section 106 Records Check

A Section 106 records check was performed to identify known cultural resources in the project vicinity and help to determine the amount of cultural resource coordination required. The map from the Ohio SHPO's web site is shown in **Figure 2**, below.

The Ohio Historic Marker shown on the mapping is on the east side of Harroun Road, south of Monroe Street and outside of the APE. The marker is Lucas County, Marker #55-48, "*Harroun Family Barn*". The two previously inventoried cultural resources within the Toledo Memorial Park, the *Swan Lake Mausoleum* and the *Soldiers and Sailors Monument*, are both at least one hundred feet north of the northern edge of the APE along Monroe Street in the western part of the APE.

There are four US 23 roadway bridges in the APE, as follows:

- 4805135, a three-span continuous concrete beam bridge that was built in 1962
- 4801261, a three-span continuous concrete beam bridge that was built in 1962

- 4801296, a three-span continuous concrete beam bridge that was built in 1962
- 4805224, a four-span steel continuous beam bridge that was built in 1960

These bridges are all types and ages of bridges that were determined not eligible for the National Register of Historic Places as a result of the *Ohio DOT Historic Bridge Inventory Summary and Table Survey Forms for Eligible/National Register Listed Bridges* prepared by TranSystems Corporation, December 2009 (accepted April 29, 2010), and ODOT affirms that this determination is still valid.

Description of the Area of Potential Effects (APE)

Based on the scope of the project, the results of the literature review, and the setting of the project, the Area of Potential Effects (APE) considered for History/Architecture investigations includes the construction limits; the APE also includes two houses on the north side of Alexis, near the intersection with Acres Road. A modern Kroger store and a modern BP gas station are along the south side of the western end of the APE. **Figure 3** below shows the APE limits overlaid on an aerial photograph. No work is taking place on the modern bike path bridge in photograph 4 below, but an easement is needed there for ingress/egress for maintenance and/or during construction.

Summary of History/Architecture Investigations

There are two History/Architecture resources in the APE that were built 50 or more years ago (see Table 1 and referenced photographs below):

The house at **5918 W. Alexis** was built in 1917. It is a single-story frame cross gabled house that faces West Alexis Road just west of Acres Road. The roadway in front of the house is being realigned as part of this undertaking, the new alignment will be closer to the house, but still south of the small modern low masonry retaining wall in the front yard.

The house at **5904 W. Alexis** was built in 1953. It is a single-story frame side gabled hipped roof cottage that sits at the northwest corner of Alexis and Acres Road, at the southeastern edge of the current limits of the Sylvanside subdivision. The roadway in front of the house will be realigned as part of this undertaking. This house belonged to members of the Apple family throughout the Twentieth Century; an additional house to the north of this one is on the same legal parcel, but no work is taking place within the yard of the house at 5623 Acres Road.

The two houses in the APE described above are located at the southeastern edge of the Sylvanside Subdivision; streetscape photos are included with the numbered photographs below. More houses from a variety of locations within the subdivision are in the lettered photographs below; they which are keyed to an aerial photograph overlaid with street names and the present boundaries of the subdivision.

The subdivision includes approximately 129 single family houses on 156 parcels on the following streets: Cushman Road, Balfour Street, and Acres Road, which are north/south oriented roads that extend from Alexis Road north to the state line with Michigan. Marshall Road and Randall Street are short east/west roads, and Alexis Road forms the southern boundary. A summary table showing the numbers of houses built in each decade are as follows, based on the Lucas County Auditor's GIS data:

Sylvanside Subdivision, house construction dates summary:

decade of construction	**number of houses built:**
1890s	1
1910s	6
1920s	8
1930s	4
1940s	38
1950s	42
1960s	17
1970s	3
1980s	2
1990s	6
2000s (2001)	1

Construction dates range from the late Nineteenth century to 2001; most of the houses were built between 1940 and 1969, when there was a general nationwide boom after World War 2 in construction of middle-class single-family homes. Sylvanside Subdivision features a variety of house types and styles based on the date range and the representative photographs below. There was no focus of house designs or a narrow date range for construction that one sees in significant designed suburban subdivisions.

To summarize, neither of these two H/A resources in the APE are significant examples of any distinctive architectural styles, building materials or construction methods or materials. The buildings are not known to have been associated with persons or events that are important in our past. Neither one is part of a group of buildings that would be eligible for the NRHP as an historic district. Therefore, the houses at 5904 West Alexis Road and 5918 West Alexis Road in the City of Sylvania are not eligible for listing in the National Register of Historic Places, and no further investigations are warranted.

Conclusion

There are no History/Architecture resources in the Area of Potential Effects that are listed in or eligible for the National Register of Historic Places, and no further investigations are warranted.

Erica Schneider
LUC-US 23- 11.75 Interchange,
PID:105889 Figures

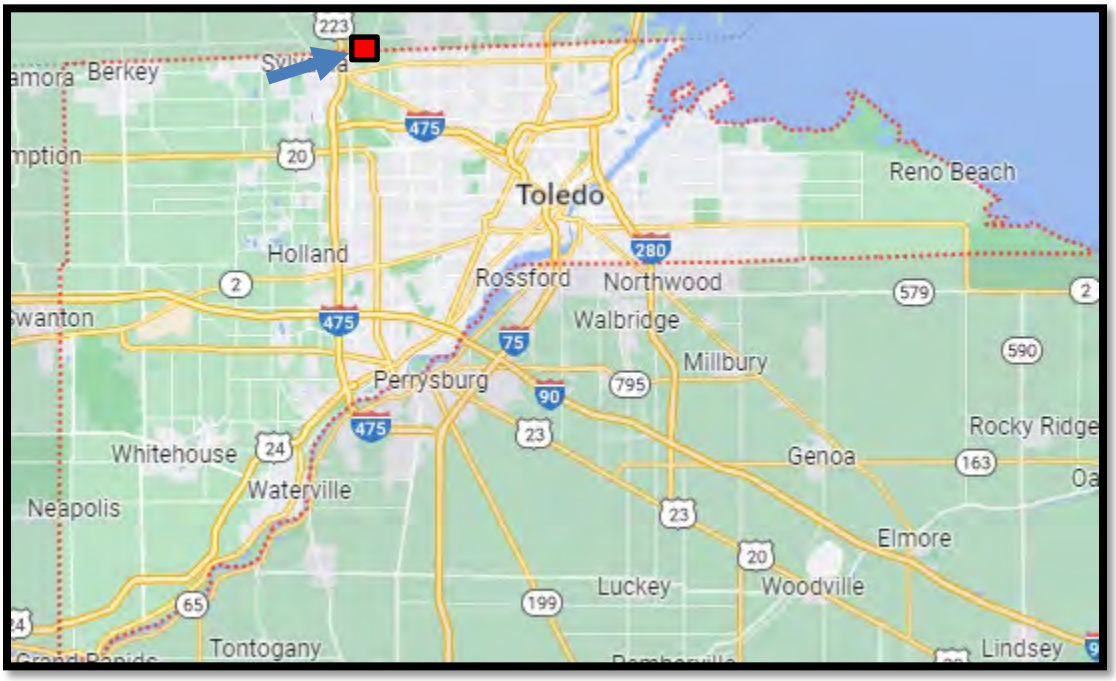


Figure 1: Project location within Lucas County

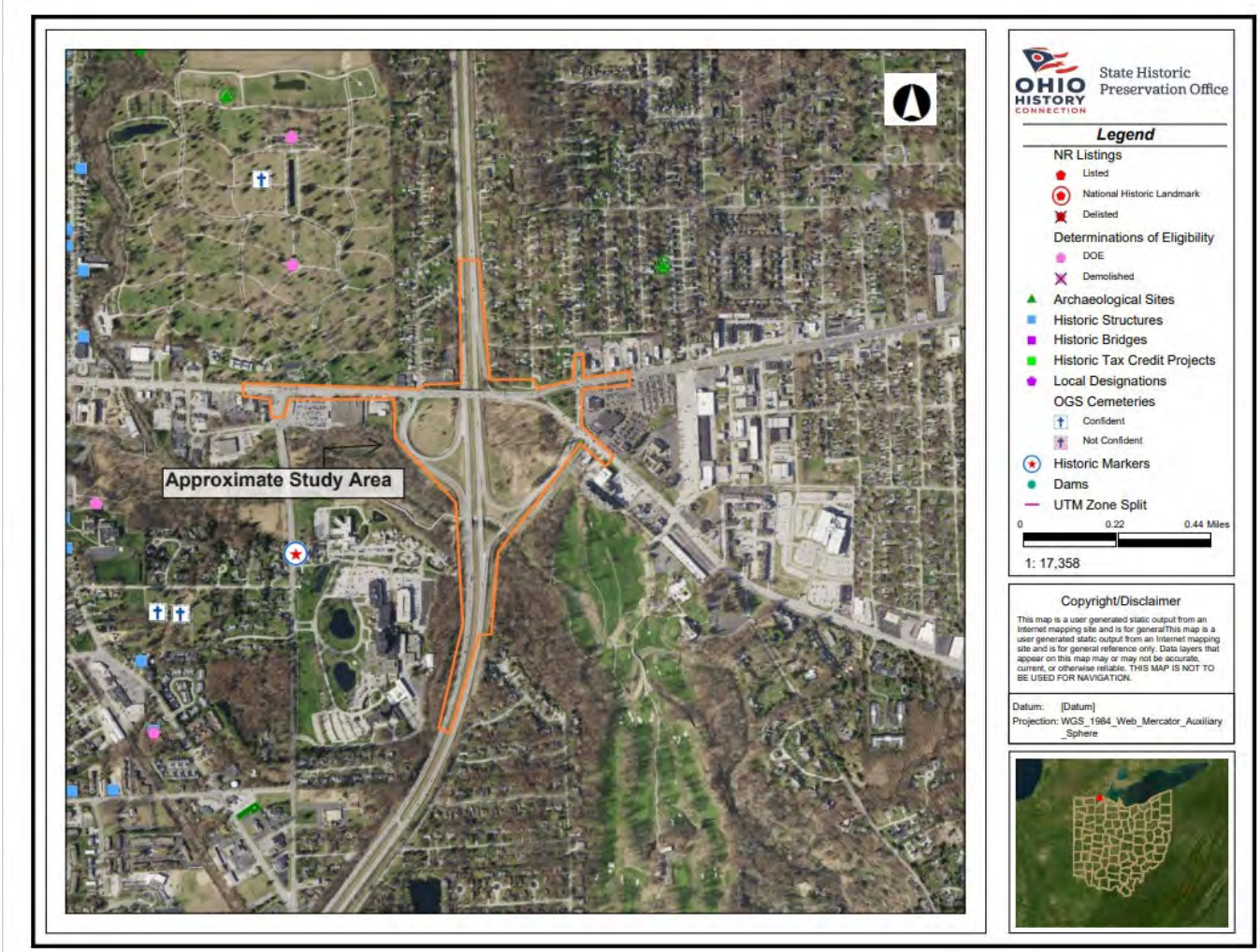


Figure 2: Section 106 Records Check. An inset of this map is used for an APE boundary map in the following figure. None of the previously inventoried H/A resources shown are within the APE for the subject undertaking. The bridges in the APE are addressed in the memo, above.

Erica Schneider
LUC-US 23- 11.75 Interchange,
PID:105889 Figures

Figure 3: Area of Potential Effects is in orange with an additional area of APE added in yellow.

Table 1

LUC-US 23-11.75 Interchange H/A Table PID: 105889									
r/w plans parcel #	page in plans	picture number	Description	address	location notes	Year Built (Lucas County Auditor, accessed 2/13/2023)	In the APE	R/W	Work at this location:
1	page 6/13	n/a	Modern brick clad Kroger grocery store		south of Monroe Street, west of US 23	1982	yes	Temporary R/W	Removing some trees and bushes
2	page 7/13 and 11/13	n/a	Barney's- a modern BP gas station	6111 Monroe Street	south of Monroe Street, west of US 23	1996	yes	Permanent and Temporary R/W	moving/removing sign, removing 4 trees, a rock and a flower bed
4	**page 9/13**	**1**	**vernacular single story frame cross gabled cottage**	**5918 West Alexis Road**	**Sylvanside Subdivision**	**1917**	**yes**	**P. R/W (0.014 acres= 610 square feet)**	**The roadway is being widened in front of the house. The existing driveway will not be affected/altered.**
5	**page 9/13**	**2**	**vernacular single story frame hipped roof cottage**	**5904 West Alexis Road**	**NW Corner of Alexis and Acres-Sylvanside Subdivision**	**1953**	**yes**	**P. R/W (0.016 acres = 697 square feet)**	**The roadway is being widened in front of the house. The existing driveway will not be affected/altered.**
5	**page 9/13**	**3**	**vernacular frame side gabled house**	**5623 Acres Road**	**same parcel as 5904 West Alexis Road**	**XXX**	**no**	**no R/W**	**none**
6	**page 9/13**	n/a	Commercial- modern dentist office	5860 W. Alexis Road	west end of commercial strip on the east side of Sylvania	1987	**yes**	P R/W	regrading to align driveways to new roadway
7	**page 10/13**	n/a	Taco Bell	5844 West Alexis Road	west end of commercial strip on the east side of Sylvania	1985	**yes**	P R/W	regrading to align driveways to new roadway
n/a	**page 8/13**	n/a	Ciao Restaurant (GSP Realty)	6064 Monroe Street	west of US 23	1969	no	no R/W	Removing some trees and bushes. They are in the publicly owned right of way in front of the restaurant.
3 and 8	pages 11, 12, and 13/13	4	Crestview, hospital property [ProMedica Flower Hospital Campus]		west of US 23, near new ramp on southwestern edge of the project	multiple (bike path bridge is modern)	no	Buying a permanent maintenace easement-at or near an existing bike path bridge, and Temporary r/w for grading	
n/a	**page 3/13 (Subdivision North of Alexis Road, East of US 23)**	5	streetscape Sylvanside Subdivision, Balfour Road	n/a	streetscape **Sylvanside Subdivision**, Balfour Road (houses in the photo are not in the APE)	early 20th Century	no		none- for context for subdivision
n/a	**page 3/13 (Subdivision North of Alexis Road, East of US 23)**	6	streetscape Sylvanside Subdivision	n/a	streetscape **Sylvanside Subdivision**	early/mid 20th Century	no		none- for context for subdivision

Figure 4: Photo Key for Photographs 1-3 and 5-6, City of Sylvania, Lucas County. The thin orange lines are parcel boundaries, overlaid on a 2021 aerial photograph. Image from the Lucas County Auditor's web page (https://icare.co.lucas.oh.us/LucasCare/maps/mapadv.aspx) retrieved 4/4/23.

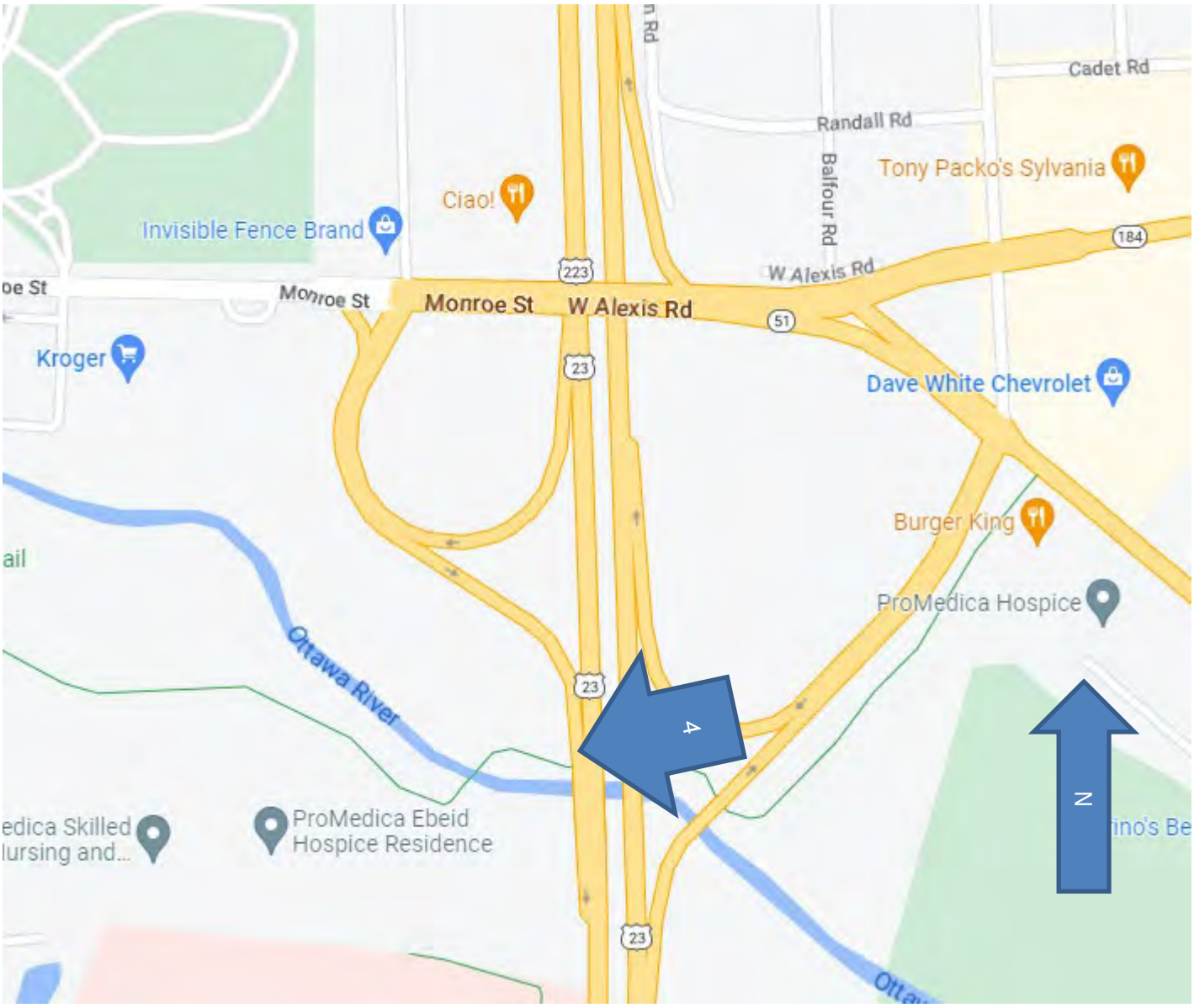


Figure 5: Photograph location for Photograph 4, below

Erica Schneider
LUC-US 23- 11.75 Interchange,
PID:105889
Photographs

Photograph 1- 5918 West Alexis Road looking north, Google Street View August 2022. Access to the driveway of the house will remain the same.

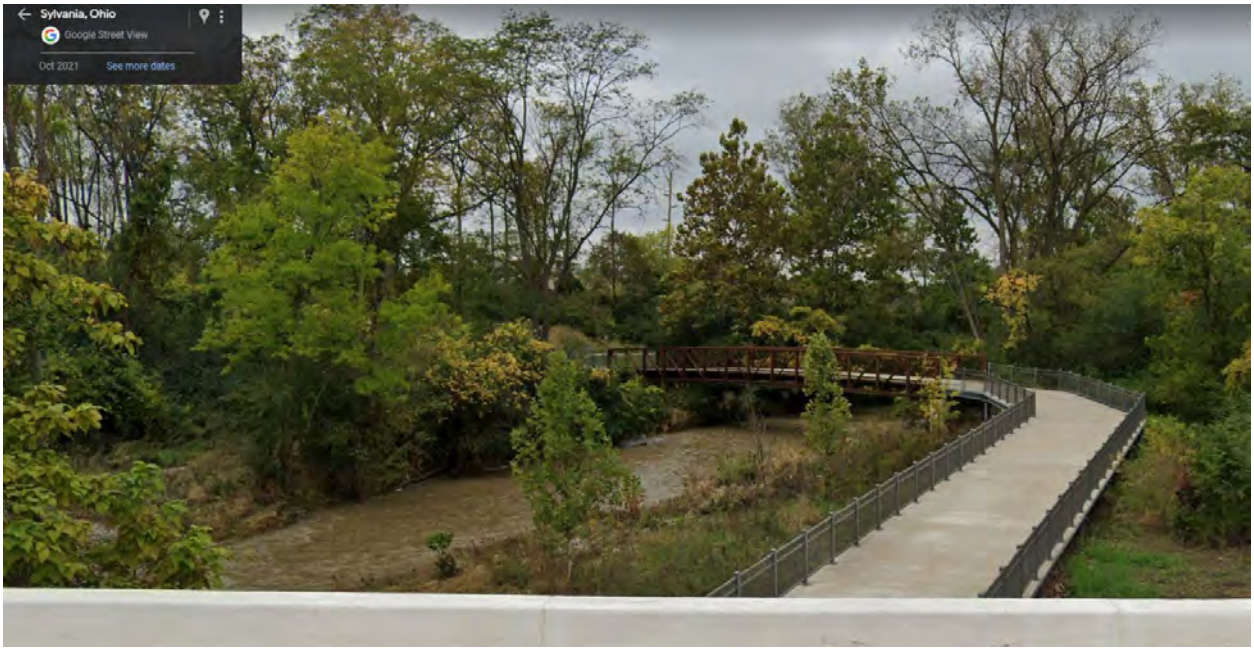
Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/photographs Historic period
maps/aerial photographs

Photograph 2- 5904 West Alexis Road, looking north, Google Street View October 2021

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs

Photograph 3- The house on the left, 5623 Acres is on the same parcel as the house at 5904 West Alexis Road. No work is planned near this house, and the house will not be removed or altered by the project.

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs



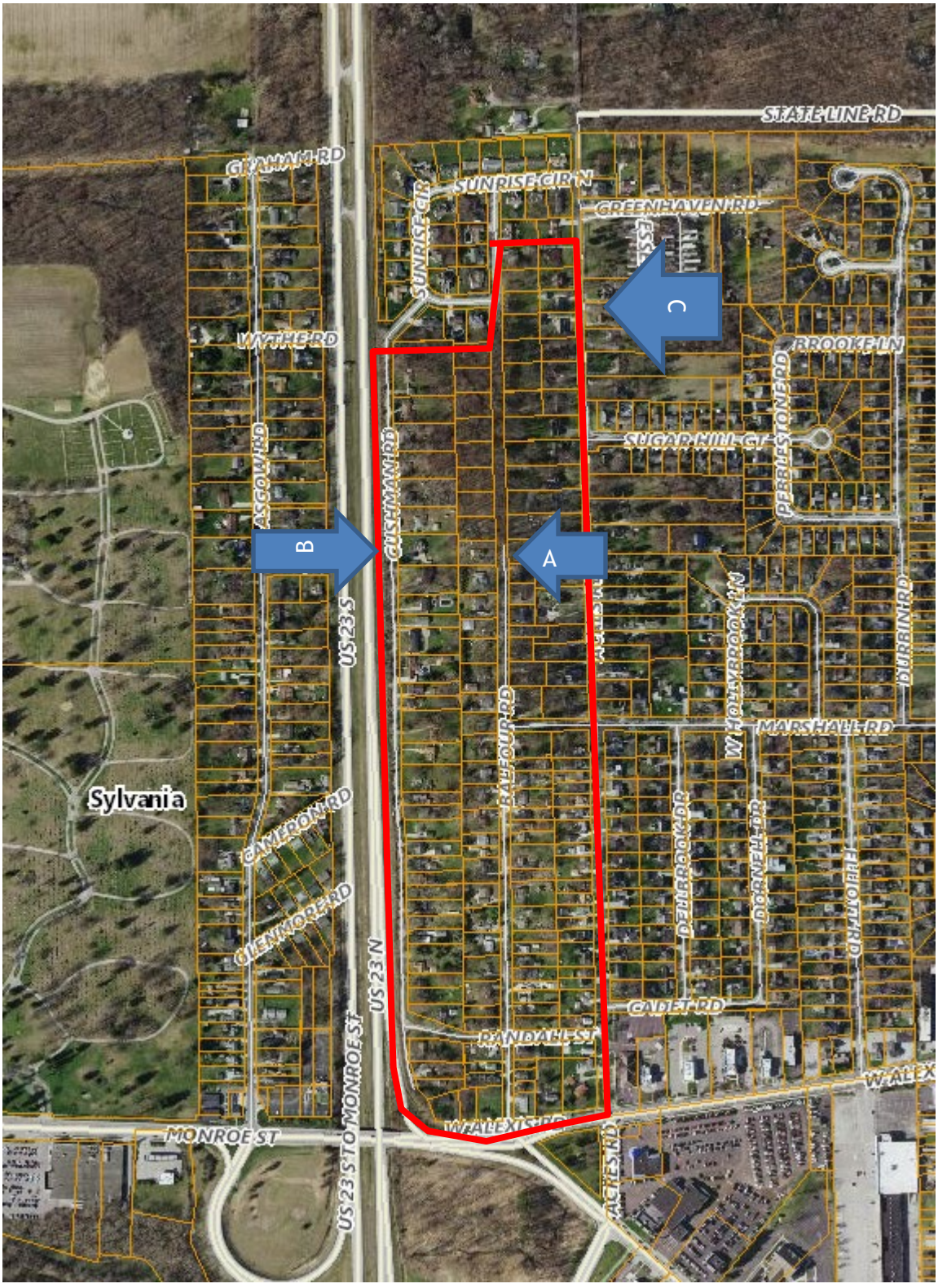
Photograph 4 View of the easement area on the ProMedica Flower Hospital property, looking west from US 23. The far side of the bridge is on the ProMedica Flower Hospital property. An easement will be needed here for access during construction and perhaps for roadway maintenance; the modern bridge is not being altered or removed. Google Street View, October 2021

Photograph 5, Streetscape photograph of west side of the south end of Balfour Road, looking northwest, showing a representative of the Sylvanside subdivision. Google Street View October 2020

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs

Photograph 6: Acres Road, looking northwest, Sylvanside subdivision, Google Street View October 2020

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
H/A Memo
Additional information Sylvanside
Subdivision, Sylvania



Sylvanside subdivision boundary, overlaid on the Lucas County Auditor's Parcel map

This image, and all of the lettered images are from: - Address Search (lucas.oh.us) (the Lucas County Auditor)

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
H/A Memo
Sylvanside photographs keyed to above aerial.

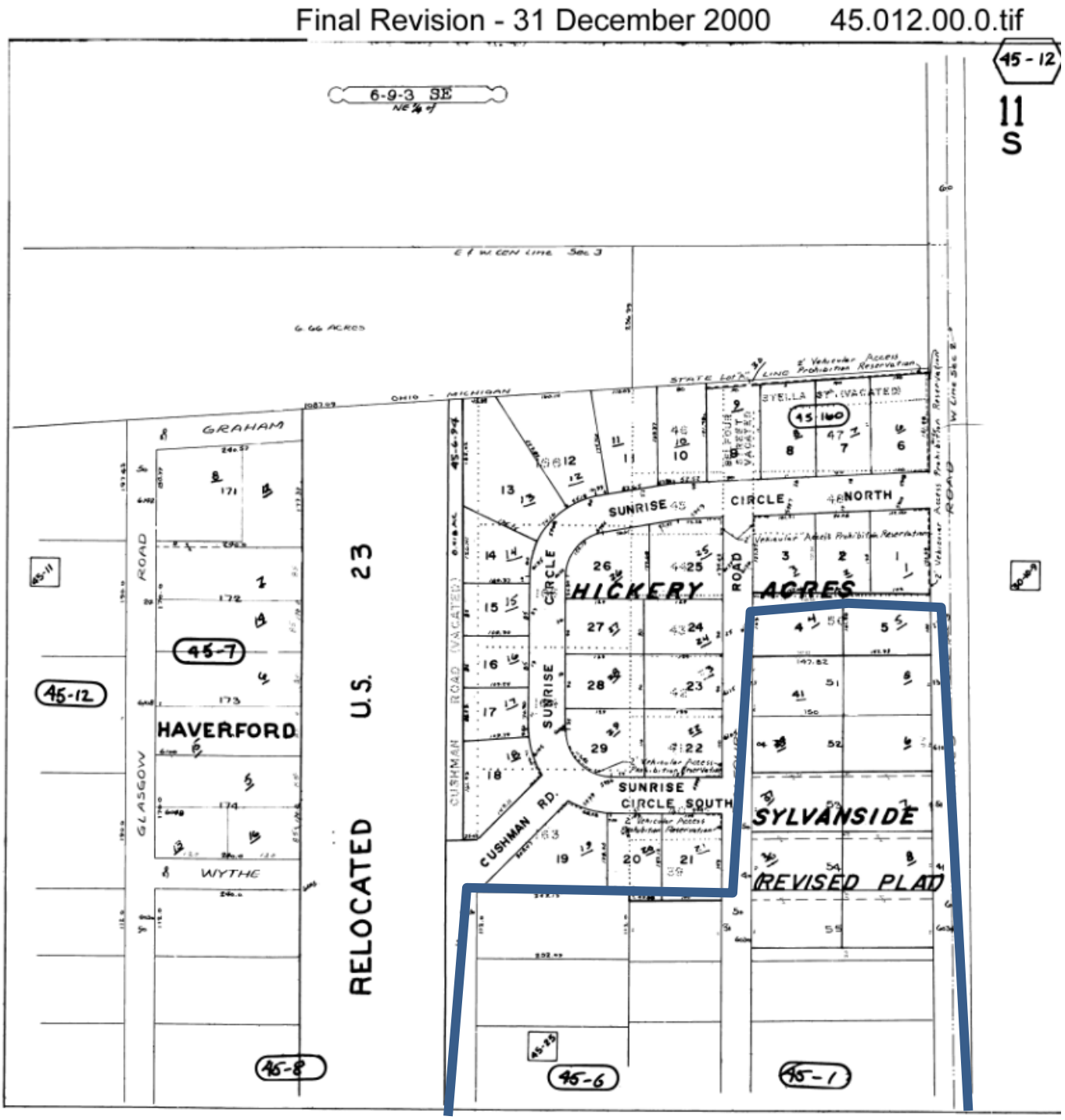
Photograph A: 5911 Balfour, lot 30, built in 1964 (Lucas County Auditor's photograph, undated)

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889

Photograph B: 5906 Cushman, lot 155, built in 1950

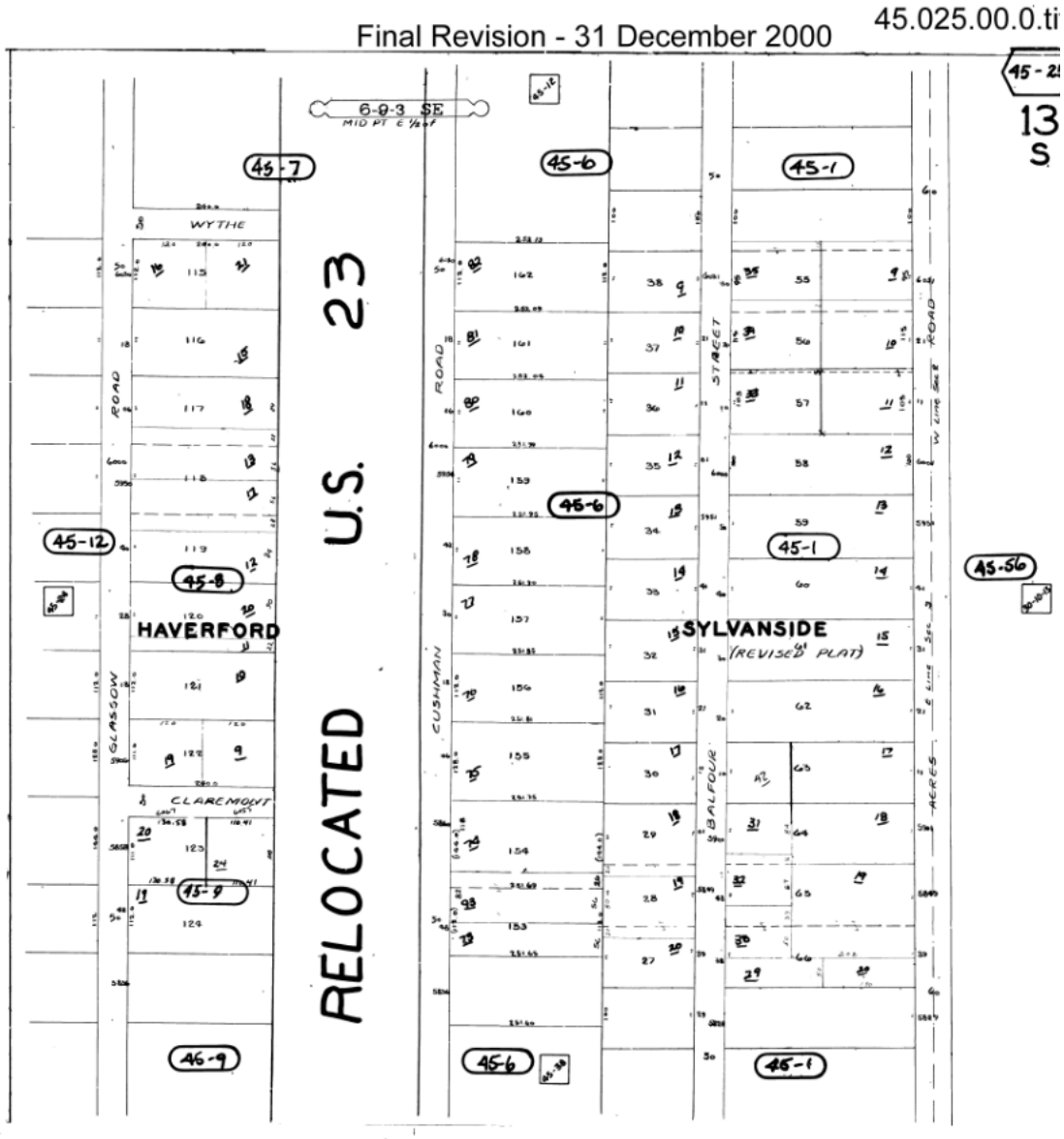
Photograph C: 6061 Acres, lot 52, built in 1955

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Sylvanside Plat Map (Lucas County
Auditor's Office) part 1 of 3 (north end)



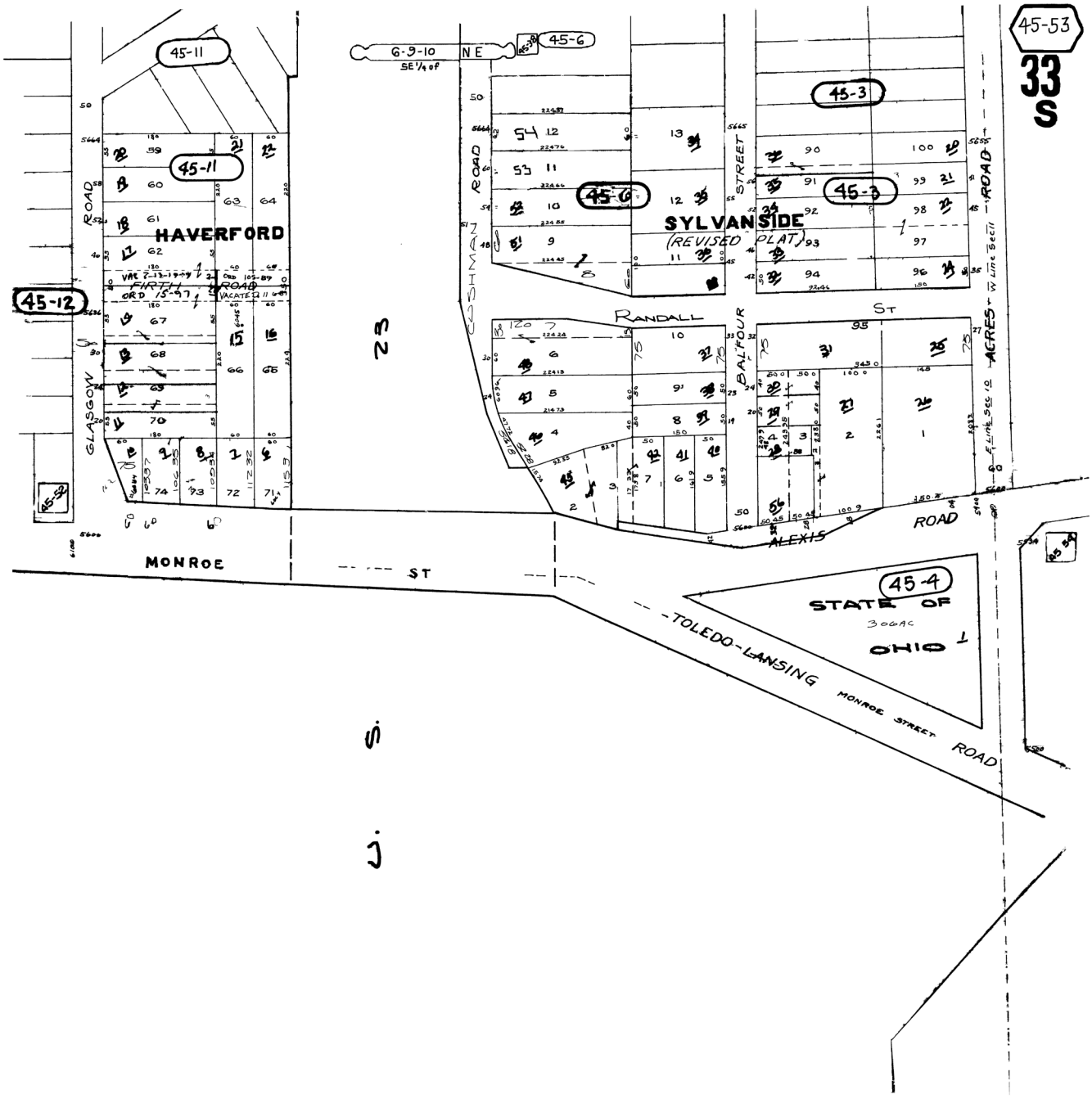
Northern end of Sylvanside Subdivision

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Middle section of Sylvanside plat map

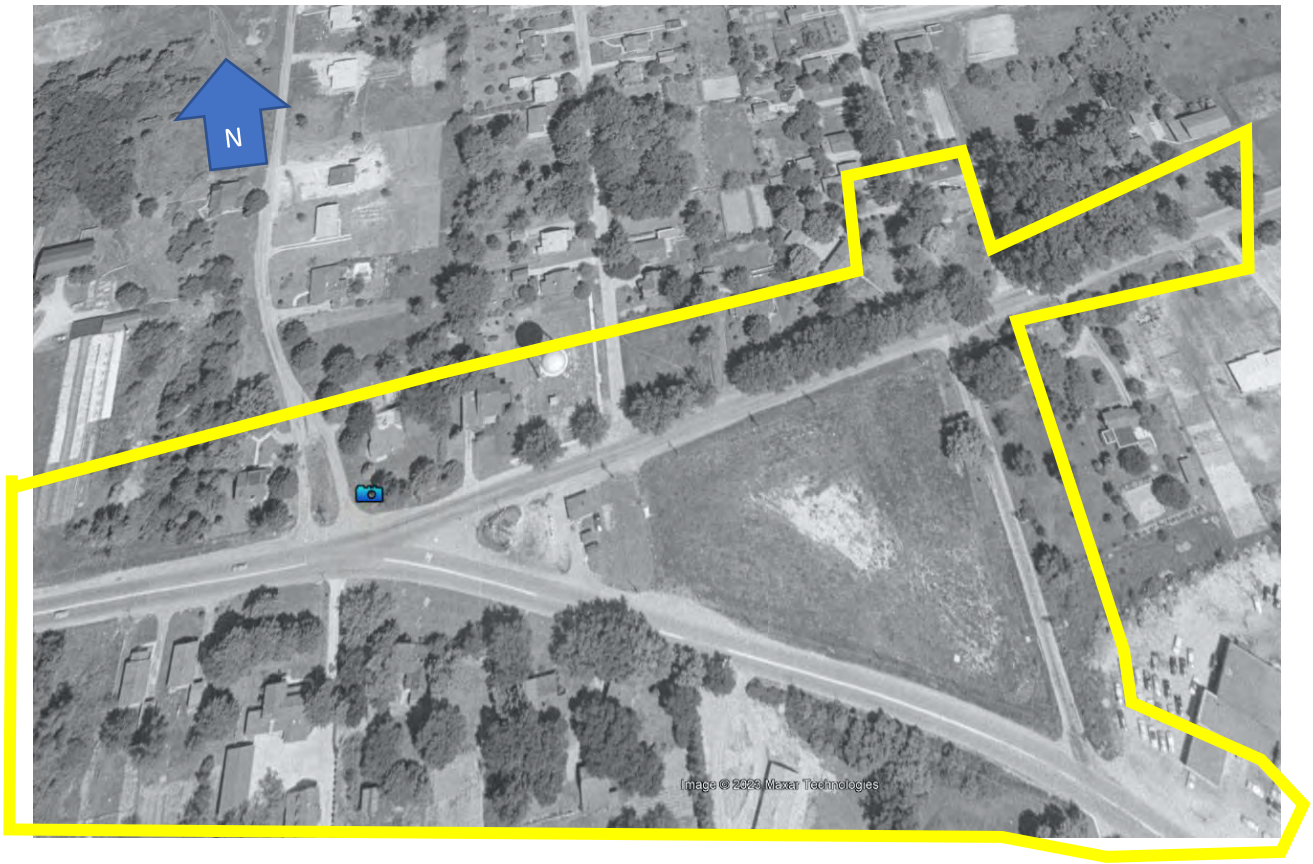


Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Southern end of Sylvanside plat map

Final Revision - 31 December 2000 45.053.00.0.tif



Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs

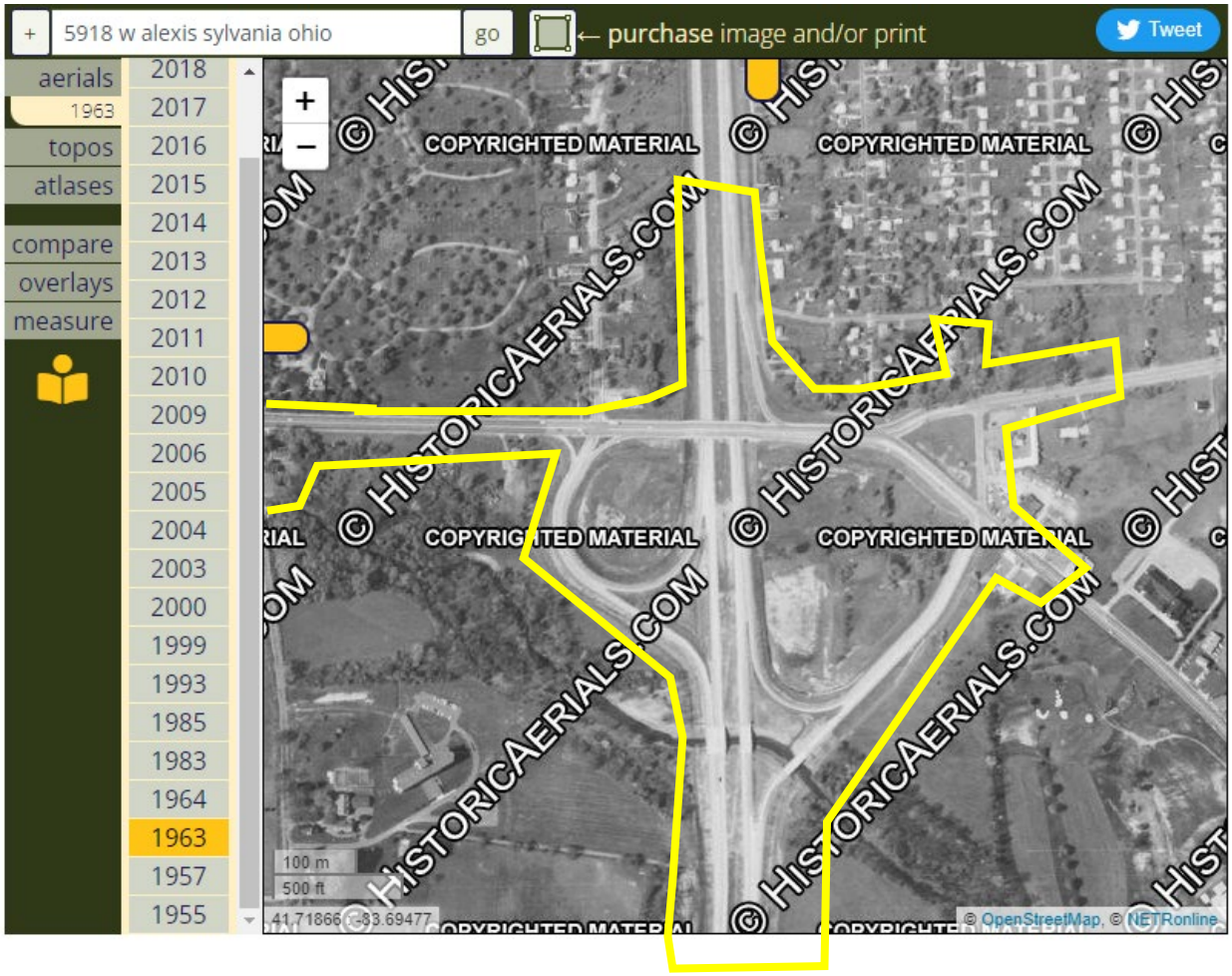


1955 ODOT Aerial (#625-3-65.tif) Alexis Road/Northeastern part of the APE before US 23 was constructed.

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs

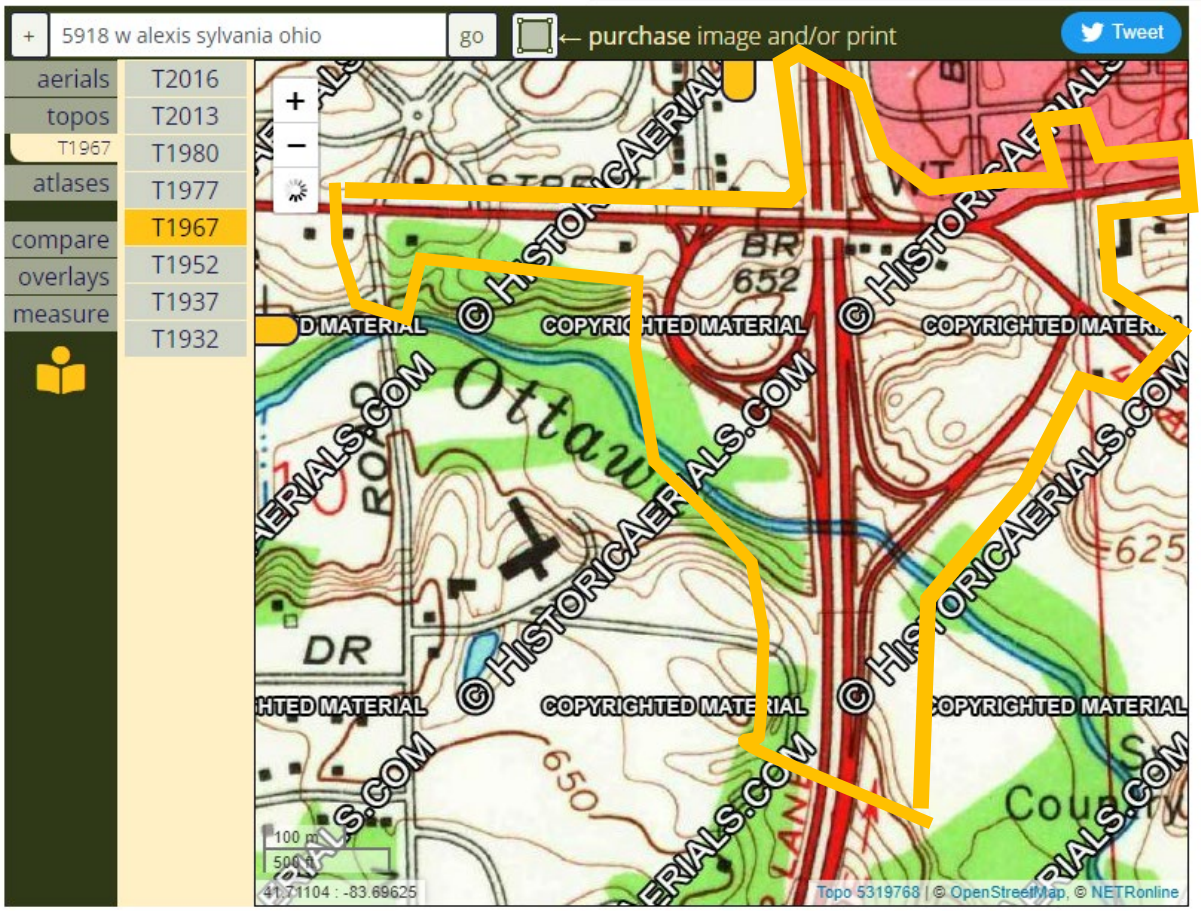
Part of a 1955 ODOT Aerial (same as above) zoomed out to show the Sylvanside Subdivision. The buildings on the west side of Cushman Road (shown in red) were removed for the construction of US 23 in 1961/62. This photograph shows very few houses on the west side of Cushman Road.

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs



1963 aerial image of the project area (www.historicaerials.com , accessed 3/28/2023)

Erica Schneider
LUC-US 23- 11.75 Interchange, PID:105889
Figures/Historic period maps/aerial photographs



1967 USGS Quadrangle Map, showing residences on the south side of Alexis/Monroe Street that are no longer present.

EXHIBIT 6

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

February 27, 2025

Maggie Molnar
TRC Companies, Inc.
781 Science Boulevard, Suite 200
Gahanna, Ohio 43230

Re: 25-0206 - Allen Junction-Westgate Relocation

Project: The proposed project involves the relocation of six and replacement of three poles along the existing Allen Junction-Westgate 138kV line.

Location: The proposed project is located in Sylvania Township, Lucas County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data at or within one mile of the project area:

Prairie Thimbleweed (*Anemone cylindrica*), T
Southern Hairy Rock Cress (*Arabis pycnocarpa* var. *adpressipilis*), P
Rough Pennyroyal (*Hedeoma hispida*), P
Plains Puccoon (*Lithospermum caroliniense*), E
Wild Lupine (*Lupinus perennis*), P
Slender Knotweed (*Polygonum tenue*), U
Least Darter (*Etheostoma microperca*), SC
Eastern Foxsnake (*Pantherophis vulpinus*), SC

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and

animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

Of the species listed above, Wild Lupine is recorded within the boundaries of the specified project area. Please note that Ohio has not been completely surveyed, and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES*." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.
Federally Endangered
rayed bean (*Villosa fabalis*)
snuffbox (*Epioblasma triquetra*)

State Endangered
eastern pondmussel *(Ligumia nasuta*)

State Threatened
pondhorn (*Uniomerus tetralasmus*)

Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the of the following listed fish species.
State Endangered
cisco (*Coregonus artedi*)
lake sturgeon (*Acipenser fulvescens*)
western banded killifish (*Fundulus diaphanus menona*)

State Threatened
American eel (*Anguilla rostrata*)
channel darter (*Percina copelandi*)
greater redhorse (*Moxostoma valenciennesi*)

Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the Blanding's turtle (*Emydoidea blandingii*), a state threatened species. This species inhabits marshes, ponds, lakes, streams, wet meadows, and swampy forests. Although essentially aquatic, the Blanding's turtle will travel over land as it moves from one wetland to the next. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the blue-spotted salamander (*Ambystoma laterale)*, a state endangered species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this

habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Division of Natural Areas and Preserves: The Division of Natural Areas and Preserves has the following comments.

The Division of Natural Areas and Preserves (DNAP) staff have reviewed the proposed Allen Junction-Westgate relocation project. One rare plant species, wild lupine (*Lupinus perennis*, state potentially threatened) has been recorded within the project footprint. Due to the possible disruption of this species, a pre-construction survey of the proposed project site should be conducted to ensure that this plant and any other rare species within the proposed construction limits are avoided and not impacted. Long term protection of rare flora species should also be considered and should include limiting the use of herbicidal spraying in their vicinity. For survey coordination or further discussion, please contact the Division of Natural Areas and Preserves' Chief Botanist, Rick Gardner. Mr. Gardner can be contacted directly at richard.gardner@dnr.ohio.gov or (614) 265-6419.

Water Resources: The Division of Water Resources has the following comment.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer website can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew (Environmental Services Administrator) at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

EXHIBIT 6A

From: Eileen.Wyza@dnr.ohio.gov
To: Molnar, Maggie
Cc: Falkinburg, Brad M (Ruszala, Amy M)
Subject: RE: [EXTERNAL] 25-0206_TRC - Allen Junction-Westgate Relocation - ODNR Comments
Date: Wednesday, March 12, 2025 1:17:45 PM
Attachments: image003.png
image006.png
image007.png
image008.png
image009.png
image010.png
image002.png

Hello Maggie,

Per review of the desktop survey provided for the Allen Junction-Westgate Relocation Project, the Ohio Division of Wildlife concurs with your assessment that no caves, cliffs, or mine openings occur in the project area. Therefore, the project is not likely to impact hibernating bats.

Should any reported conditions change before or during construction, please contact me for additional guidance.

Thank you,

Eileen Wyza, Ph.D.
(she/her/hers)
Wildlife Biologist
Ohio Division of Wildlife
Phone: 614-265-6764
Email: Eileen.Wyza@dnr.ohio.gov

Support Ohio's wildlife. Buy a license or stamp at wildohio.gov.

From: Molnar, Maggie <MMolnar@trccompanies.com>
Sent: Tuesday, March 4, 2025 1:43 PM
To: Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: FW: [EXTERNAL] 25-0206_TRC - Allen Junction-Westgate Relocation - ODNR Comments

Good afternoon, Eileen,

In response to ODNR's DOW recommendations (attached), TRC completed a desktop habitat assessment to determine if potential hibernaculum is present within FirstEnergy's proposed Allen Junction-Westgate Relocation Project located in City of Sylvania, Lucas County, Ohio.

Please let us know if you have any questions on the provided desktop assessment.

Thank you,

Maggie Molnar, PWS
Ecologist

781 Science Boulevard, Suite 200, Gahanna, Ohio 43230
D 614.423.6342| **C** 614.949.2437
LinkedIn | Twitter | Blog | TRCcompanies.com

From: EnvironmentalReviewRequest@dnr.ohio.gov <EnvironmentalReviewRequest@dnr.ohio.gov>
Sent: Thursday, February 27, 2025 2:16 PM
To: Molnar, Maggie <MMolnar@trccompanies.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: [EXTERNAL] 25-0206_TRC - Allen Junction-Westgate Relocation - ODNR Comments

Please see the attached ODNR Environmental Review comment letter for your Environmental Review request.

Any questions regarding the letter should be directed to Mike Pettegrew at mike.pettegrew@dnr.ohio.gov.

Thank you,

Mike Pettegrew
Environmental Services Administrator
Ohio Department of Natural Resources, Office of Real Estate & Land Management
2045 Morse Road, Building E-2
Columbus, Ohio 43229
Office: (614) 265-6387
mike.pettegrew@dnr.ohio.gov
https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/real-estate/environmental-review/

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994

January 29, 2025

Project Code: 2025-0044529

Dear Ms.Molnar:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to the endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus*) we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant

species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

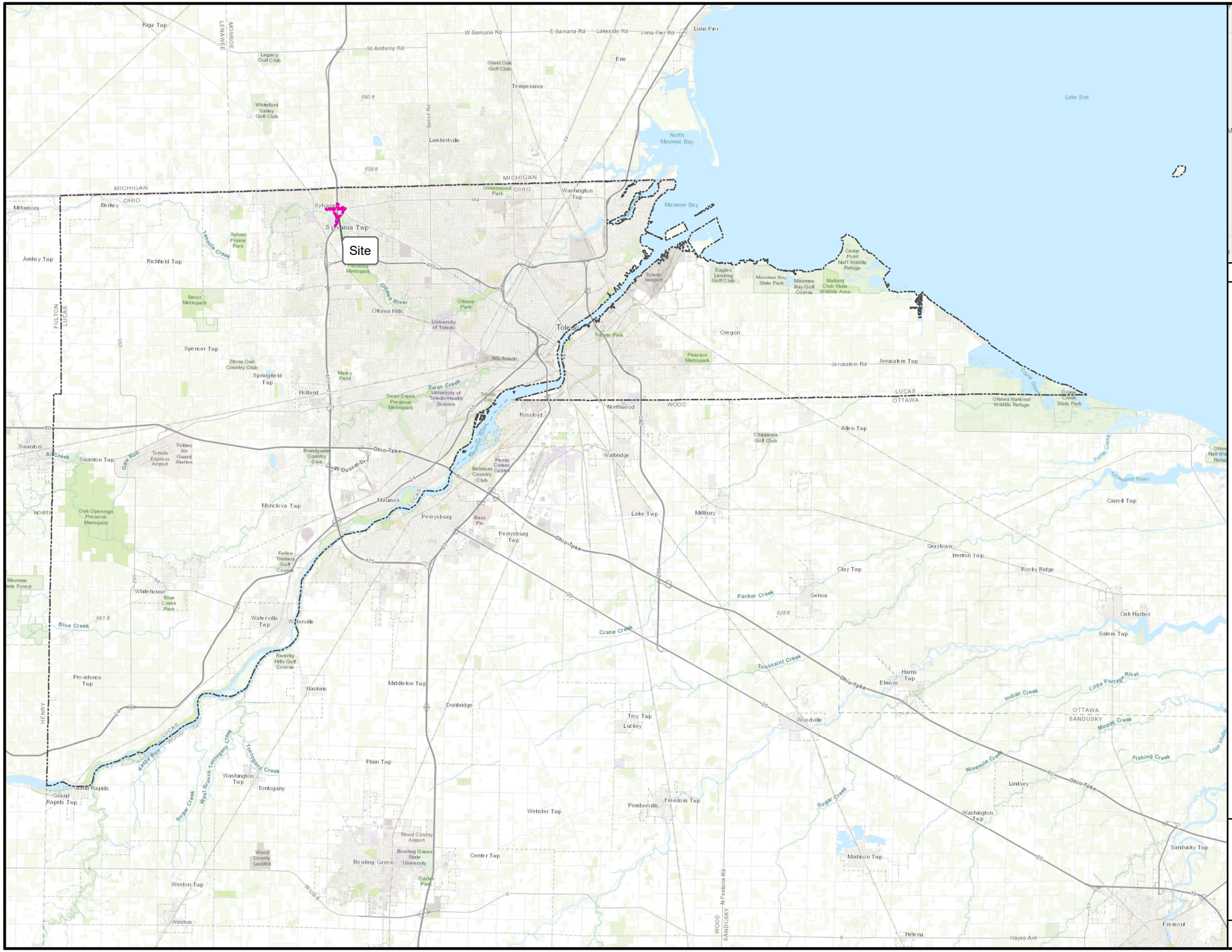
Sincerely,

Erin Knoll
Field Office Supervisor

EXHIBIT 8

Environmental Survey Report

Appendix 1 – Mapping



Legend

Lucas County

Study Area

LUC-23-1.75
PID: 105889

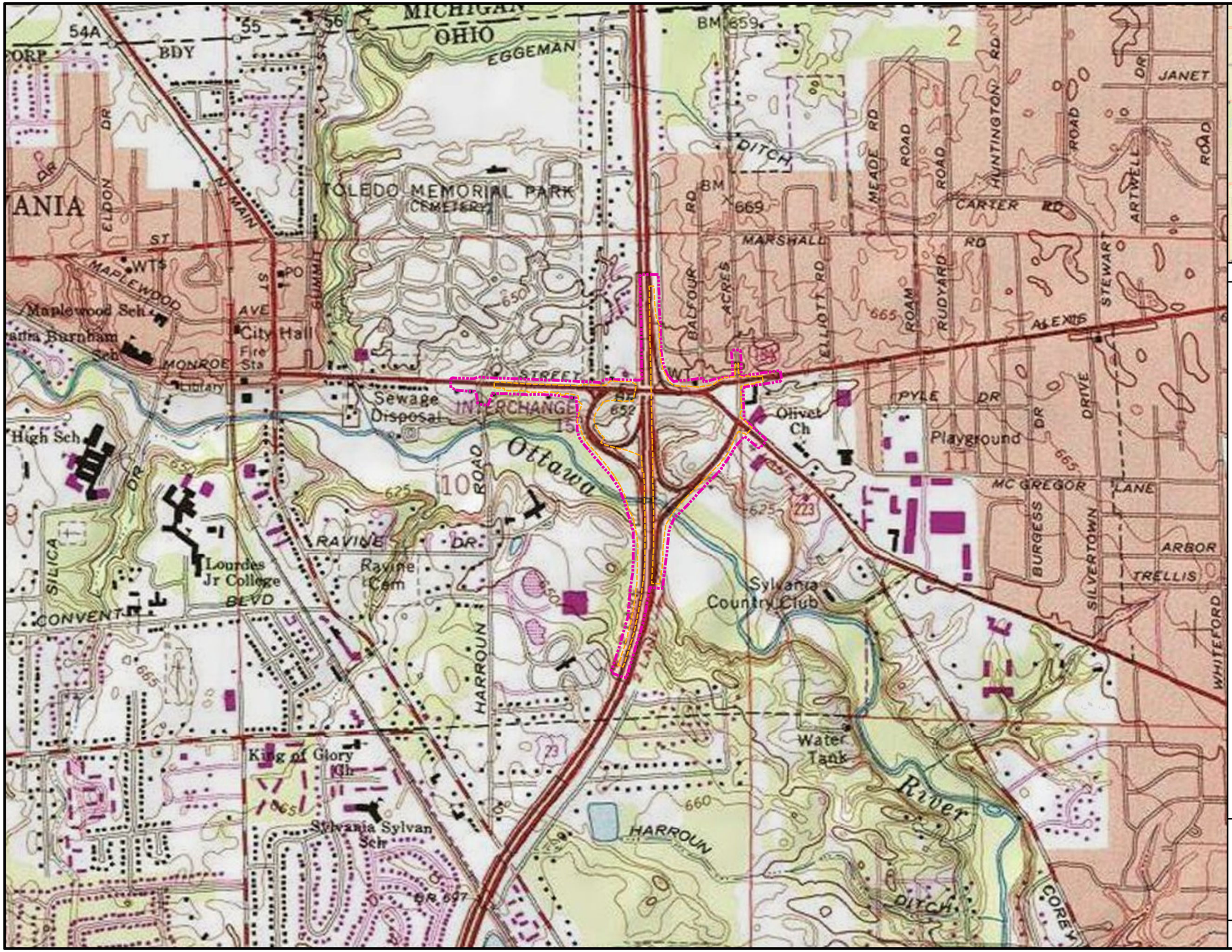
Lucas County Map
with an Overview of Ohio

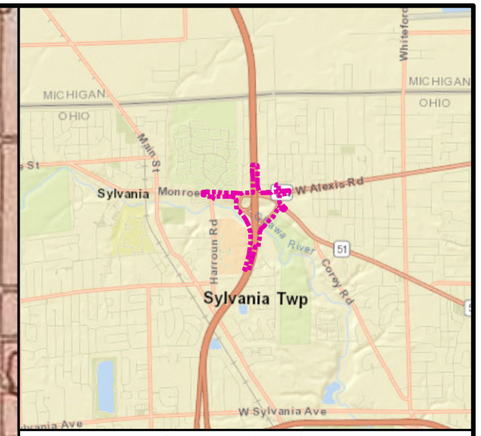
Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	1

Source: Esri World Topo

File Name: 01-County.mxd Edited: 3/21/2023 By: dwilliams





Site Location Map

Legend

- Study Area
- Construction Limits

N

0 500 1,000 2,000 Feet

LUC-23-1.75
PID: 105889

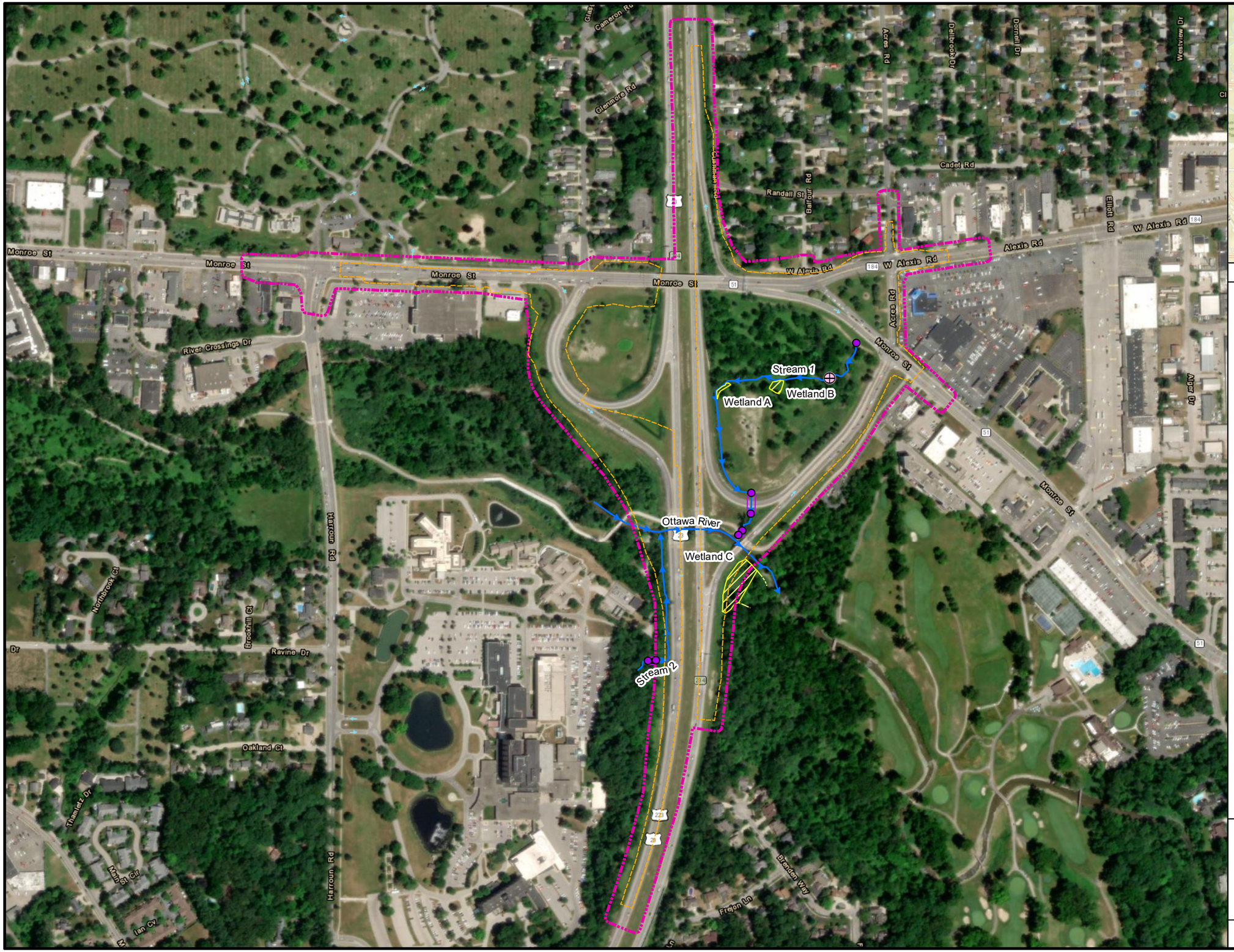
USGS Topographic Map
Sylvania Quad

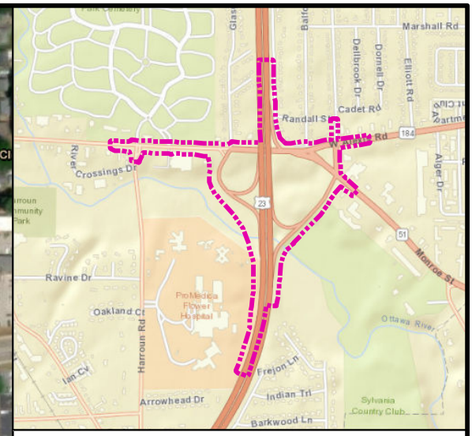
Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	2

Source: Esri USA Topo

File Name: 02-Topo.mxd Edited: 3/21/2023 By: dwilliams





Site Location Map

Legend

N

- Study Area
- Construction Limits
- Bat PMRT
- Stream
- Culverted Stream
- Culvert
- Wetland

0 250 500 1,000 Feet

LUC-23-1.75
PID: 105889

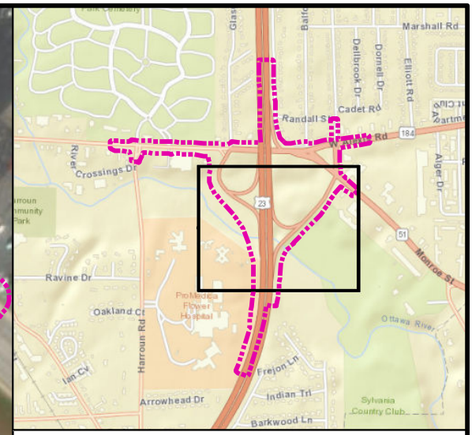
Ecological Resources Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	3-a

Source: Esri World Imagery

File Name: 03-Eco_Overview.mxd Edited: 3/28/2023 By: dwilliams



Site Location Map

Legend

N

- Study Area
- Construction Limits
- Bat PMRT
- Stream
- Culverted Stream
- Culvert
- Wetland
- Sample Point

0 50 100 200 300 Feet

LUC-23-1.75
PID: 105889

Ecological Resources Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	3-b

Source: Esri World Imagery

File Name: 03-Eco.mxd Edited: 3/28/2023 By: dwilliams


Monroe St
Monroe St
Monroe St
Monroe St
Monroe St
Monroe St
W Alexis Rd
W Alexis Rd
Alexis Rd
W Alexis Rd
Cadet Rd
Randall St
Balfour Rd
Acres Rd
Elliott Rd
Dellbrook Dr
Dornell Dr
Westview Dr
Glenmore Rd
Cameron Rd
River Crossings Dr
Harroun Rd
Ravine Dr
Oakland Ct
Brookhill Ct
Northbrook Ct
Thamlet Dr
Nanci Cir
Ian Cv
Algar Dr
Frejon Ln
Brantley Way
Arrowhead Dr
Indian Trl
Barkwood Ln
Ottawa River
Sylvania Country Club
ProMedica Flower Hospital
Marshall Rd
Crossings Dr
Ravine Dr
Oakland Ct
Harroun Rd
Frejon Ln
Indian Trl
Arrowhead Dr
Barkwood Ln
Algar Dr
Monroe St
Randall St
Cadet Rd
W Alexis Rd
Site Location Map
Legend
N
Study Area
Construction Limits
Bat PMRT
Bat SWH
within 100' EOP
outside 100' EOP
outside 100' EOP and within 50' perennial stream
outside 300' EOP
0
250
500
1,000
Feet
LUC-23-1.75
PID: 105889
Suitable Wooded Habitat Map
Lawhon & Associates, Inc.
Date: May 2023
Approved by: CM
L&A No. 21-0314
Figure 4-a
Source: Esri World Imagery
File Name: 04-Bat_Overview.mxd
Edited: 5/18/2023
By: dwilliams

Site Location Map

Legend

N

- Study Area
- Construction Limits
- Bat PMRT

Bat SWH

- within 100' EOP
- outside 100' EOP
- outside 100' EOP and within 50' perennial stream
- outside 300' EOP

0 100 200 400 Feet

LUC-23-1.75
PID: 105889

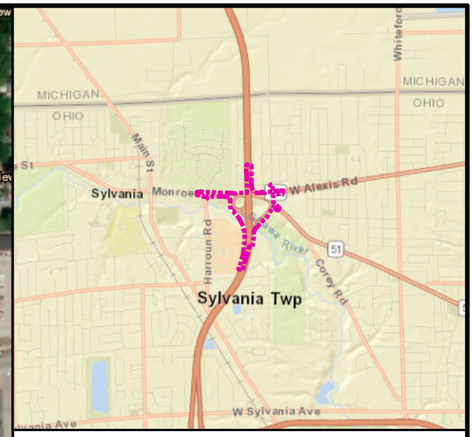
Suitable Wooded Habitat Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
May 2023	CM	21-0314	4-b

Source: Esri World Imagery

File Name: 04-Bat.mxd Edited: 5/18/2023 By: dwilliams



Site Location Map

Legend

N

Study Area

Construction Limits

Plant Habitat

Suitable Habitat for Listed Plant Species

Marginally Suitable Habitat for Listed Plant Species

0 250 500 1,000 Feet

LUC-23-1.75
PID: 105889

State Listed Plant Species Habitat Map

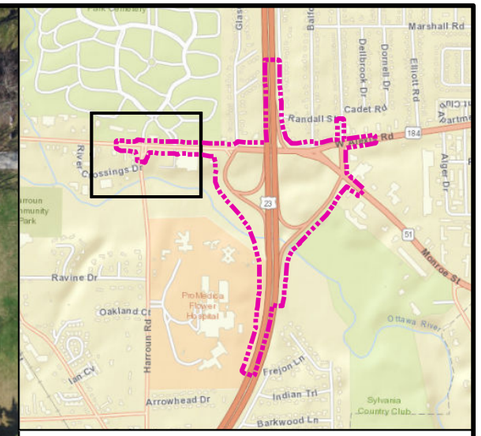
Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
May 2023	CM	21-0314	7

Source: Esri World Imagery

File Name: 07-Plant survey.mxd Edited: 5/16/2023 By: dwilliams

Appendix 2 – Photo Log



Site Location Map

Legend

- Study Area
- Construction Limits
- Photo Location

N

0 50 100 200 Feet

LUC-23-1.75
PID: 105889

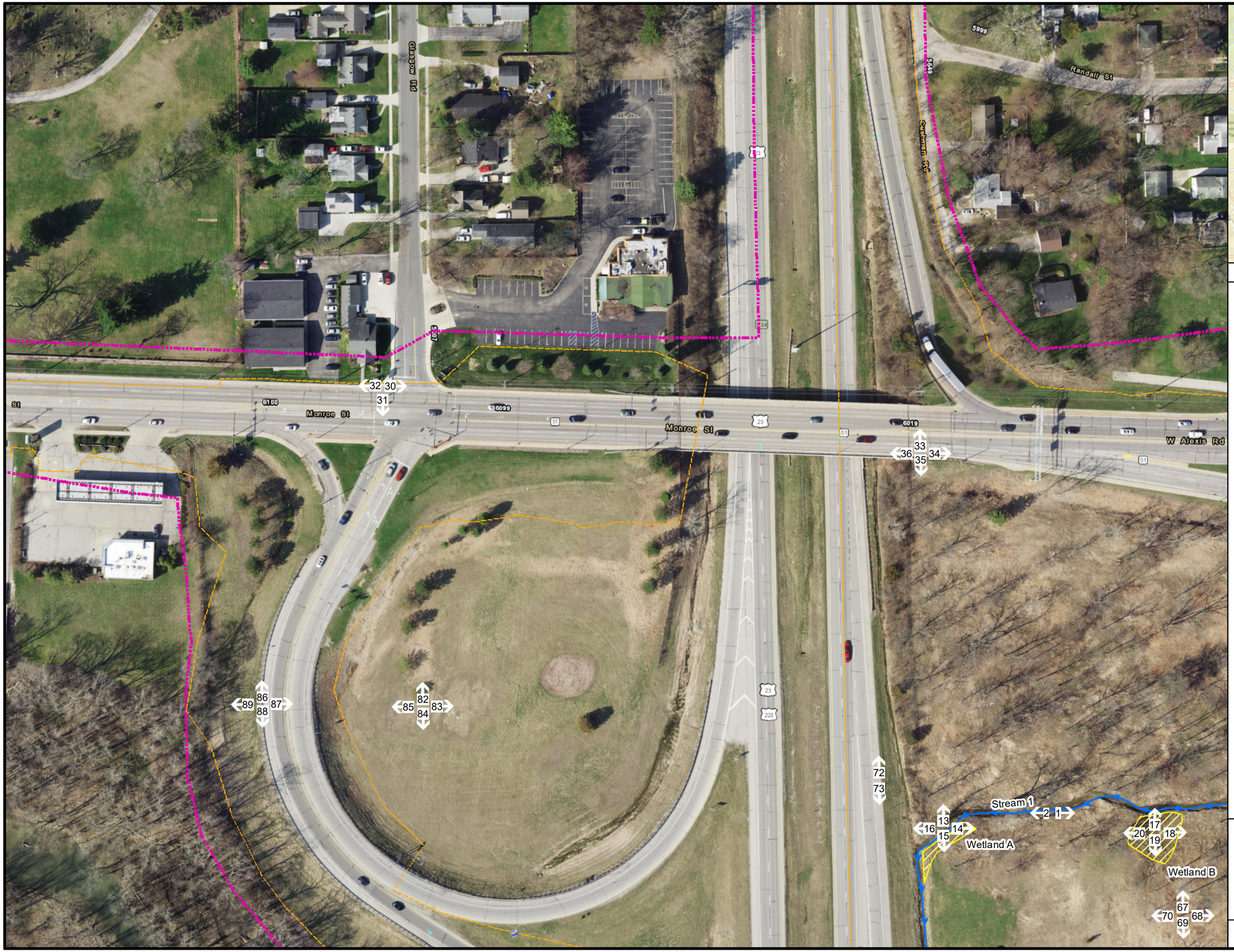
Photograph Location Map

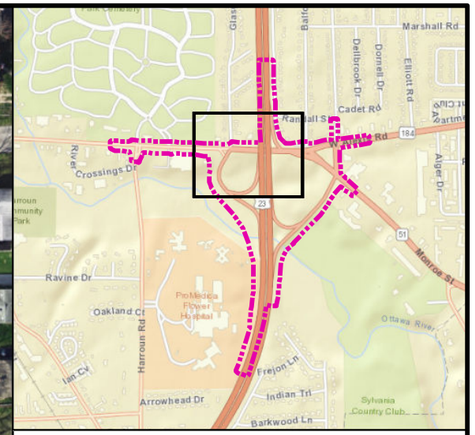
Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	5-a

Source: Esri World Imagery

File Name: 05-Photos.mxd Edited: 3/23/2023 By: dwilliams





Site Location Map

Legend

- Study Area
- Construction Limits
- Stream
- Wetland
- Photo Location

N

0 50 100 200 Feet

LUC-23-1.75
PID: 105889

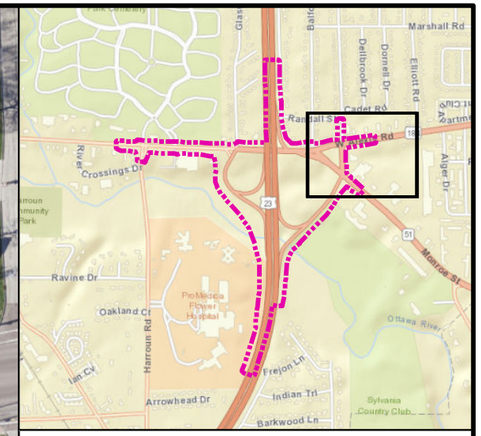
Photograph Location Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	5-b

Source: Esri World Imagery

File Name: 05-Photos.mxd Edited: 3/23/2023 By: dwilliams



Site Location Map

Legend

- Study Area
- Construction Limits
- Bat PMRT
- Stream
- Culvert
- Photo Location

N

0 50 100 200 Feet

LUC-23-1.75
PID: 105889

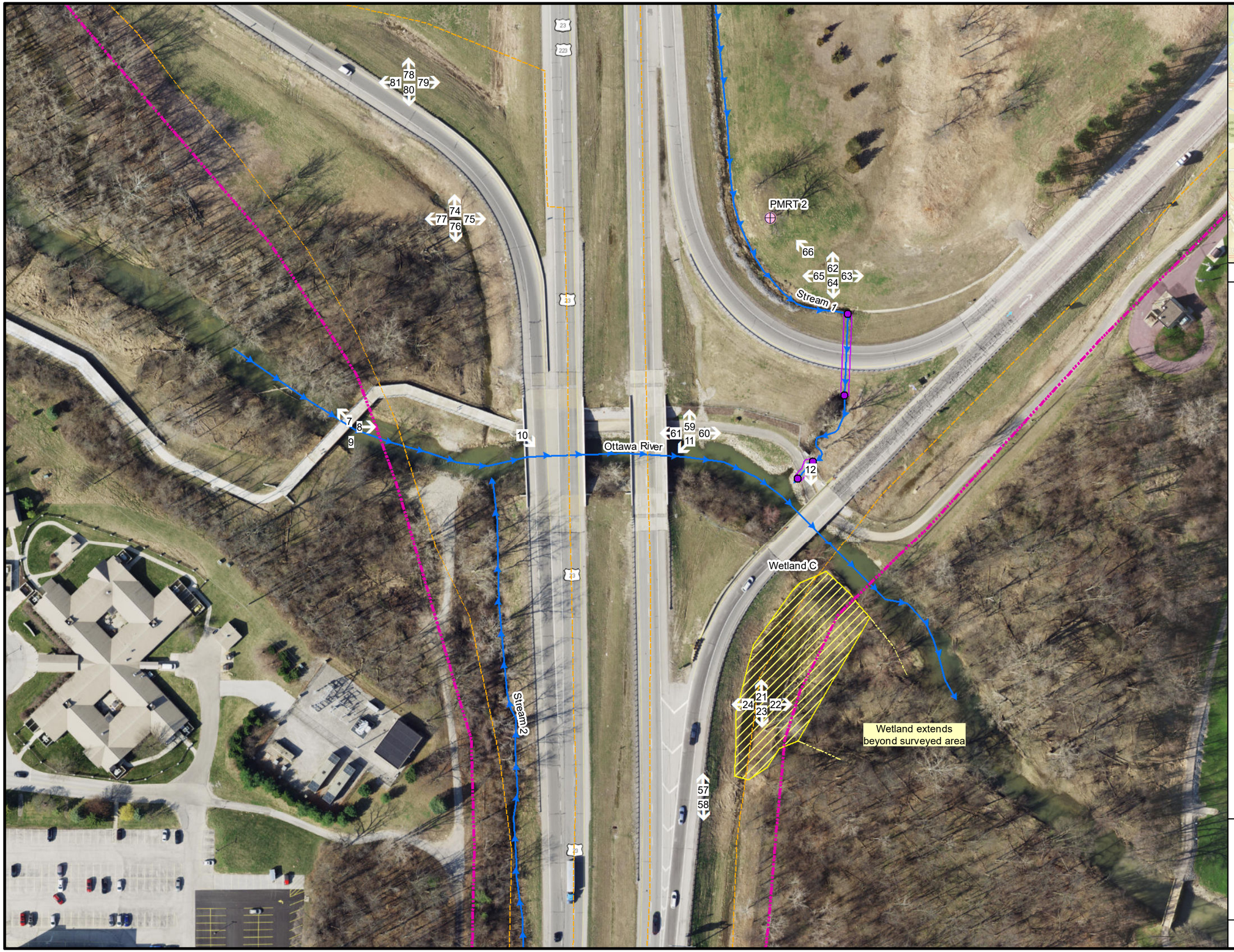
Photograph Location Map

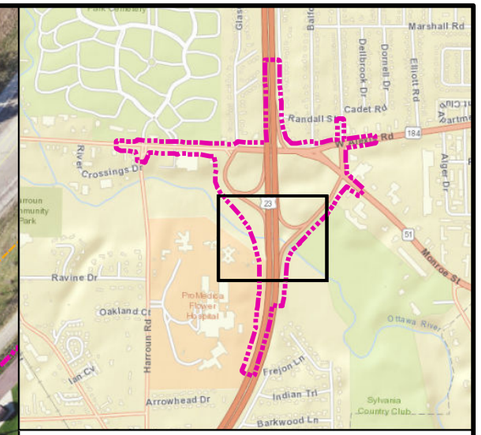
Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	5-c

Source: Esri World Imagery

File Name: 05-Photos.mxd Edited: 3/23/2023 By: dwilliams





Site Location Map

Legend

- Study Area
- Construction Limits
- Bat PMRT
- Stream
- Culverted Stream
- Culvert
- Wetland
- Photo Location

N

0 50 100 200 Feet

LUC-23-1.75
PID: 105889

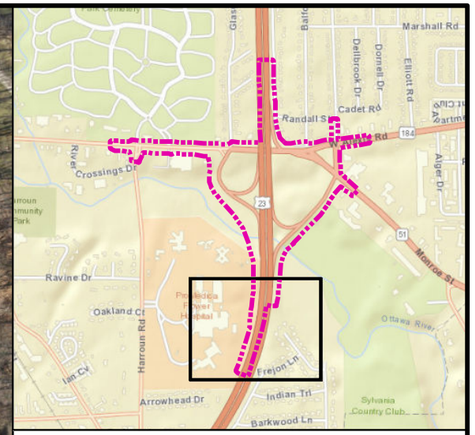
Photograph Location Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	5-d

Source: Esri World Imagery

File Name: 05-Photos.mxd Edited: 3/23/2023 By: dwilliams



Site Location Map

Legend

- Study Area
- Construction Limits
- Stream
- Culverted Stream
- Culvert
- Photo Location

N

0 50 100 200 300 Feet

LUC-23-1.75
PID: 105889

Photograph Location Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	5-e

Source: Esri World Imagery

File Name: 05-Photos.mxd Edited: 3/23/2023 By: dwilliams

Photo 1: Upstream view of Stream 1, showing a representative view of SWH. Direction: East	
Photo 2: Downstream view of Stream 1. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 3: Representative view of Stream 1's substrate. Direction: Substrate	
Photo 4: Upstream view of Stream 2. Direction: Southwest	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 5: Downstream view of Stream 2. Direction: Northeast	
Photo 6: Representative view of Stream 2's substrate. Direction: Substrate	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 7: Upstream view of the Ottawa River. Direction: Northwest	
Photo 8: Downstream view of the Ottawa River. Direction: East	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 9: Representative view of the Ottawa River's substrate. Direction: Substrate	
Photo 10: View of the underside of the bridge conveying OH-23S over the Ottawa River. Direction: Southeast	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 11: View of the underside of the bridge conveying OH-23N over the Ottawa River. Direction: Southwest	
Photo 12: View of the underside of the bridge conveying the OH-23N exit ramp over the Ottawa River. Direction: South	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 13: View of Wetland A. Direction: North	
Photo 14: View of Wetland A. Direction: East	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 15: View of Wetland A. Direction: South	
Photo 16: View of Wetland A. Direction: West	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 17: View of Wetland B. Direction: North	
Photo 18: View of Wetland B. Direction: East	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 19: View of Wetland B. Direction: South	
Photo 20: View of Wetland B. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 21: View of Wetland C. Direction: North	
Photo 22: View of Wetland C. Direction: East	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 23: View of Wetland C. Direction: South	
Photo 24: View of Wetland C. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 25: View from Monroe St. Direction: East	
Photo 26: View from Monroe St. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 27: View from Monroe St. Direction: North	
Photo 28: View from Monroe St. Direction: East	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 29: View from Monroe St. Direction: West	
Photo 30: View from the intersection of Monroe St and Glasgow Rd. Direction: East	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 31: View from the intersection of Monroe St and Glasgow Rd. Direction: South	
Photo 32: View from the intersection of Monroe St and Glasgow Rd. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 33: View from Monroe St. Direction: North	
Photo 34: View from Monroe St. Direction: East	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 35: View from Monroe St, showing a representative view of SWH. Direction: South	
Photo 36: View from Monroe St. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 37: View from the intersection of W Alexis Rd and Acres Rd. Direction: North	
Photo 38: View from the intersection of W Alexis Rd and Acres Rd. Direction: East	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 39: View from the intersection of W Alexis Rd and Acres Rd. Direction: South	
Photo 40: View from the intersection of W Alexis Rd and Acres Rd. Direction: West	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 41: View from W Alexis Rd. Direction: East	
Photo 42: View from W Alexis Rd. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 43: View from green space. Direction: North	
Photo 44: View from green space. Direction: East	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 45: View from green space. Direction: South	
Photo 46: View from green space. Direction: West	

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Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 47: View from the intersection of Monroe St and the OH-23N entrance/exit ramp. Direction: North	
Photo 48: View from the intersection of Monroe St and the OH-23N entrance/exit ramp. Direction: East	

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Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 49: View from the intersection of Monroe St and the OH-23N entrance/exit ramp. Direction: South	
Photo 50: View from the intersection of Monroe St and the OH-23N entrance/exit ramp, showing a representative view of SWH. Direction: West	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 51: View from along OH-23S. Direction: North	
Photo 52: View from along OH-23S. Direction: South	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 53: View from along OH-23N. Direction: North	
Photo 54: View from along OH-23N, showing a representative view of SWH. Direction: South	

Lawhon & Associates, Inc.

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Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 55: View from along OH-23S. Direction: North	
Photo 56: View from along OH-23S. Direction: South	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 57: View from along OH-23N. Direction: North	
Photo 58: View from along OH-23N, showing a representative view of SWH. Direction: South	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 59: View from trail. Direction: North	
Photo 60: View from trail. Direction: East	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 61: View from trail. Direction: West	
Photo 62: View from infield. Direction: North	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 63: View from infield. Direction: East	
Photo 64: View from infield, showing Stream 1. Direction: South	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 65: View from infield. Direction: West	
Photo 66: View of tree to be removed. Direction: Northwest	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 67: View from infield, showing a representative view of SWH. Direction: North	
Photo 68: View from infield. Direction: East	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 69: View from infield. Direction: South	
Photo 70: View from infield, showing a representative view of SWH. Direction: West	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 71: View of PMRT 1, showing a representative view of SWH. Direction: Northwest	
Photo 72: View from along OH-23N. Direction: North	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 73: View from along OH-23N. Direction: South	
Photo 74: View from right-of-way. Direction: North	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 75: View from right-of-way. Direction: East	
Photo 76: View from right-of-way. Direction: South	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 77: View from right-of-way, showing a representative view of SWH. Direction: West	
Photo 78: View from infield. Direction: North	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 79: View from infield. Direction: East	
Photo 80: View from infield. Direction: South	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 81: View from infield, showing a representative view of SWH. Direction: West	
Photo 82: View from infield. Direction: North	

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LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 83: View from infield. Direction: East	
Photo 84: View from infield. Direction: South	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 85: View from infield, showing a representative view of SWH. Direction: West	
Photo 86: View from right-of-way. Direction: North	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 87: View from right-of-way. Direction: East	
Photo 88: View from right-of-way. Direction: South	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

Photo 89: View from right-of-way, showing a representative view of SWH. Direction: West	

Lawhon & Associates, Inc.

LUC-23-11.75 PID 105889
Lucas County, Ohio
Project Number 21-0314

Photographs taken by Lawhon & Associates, Inc.
2/16/2023

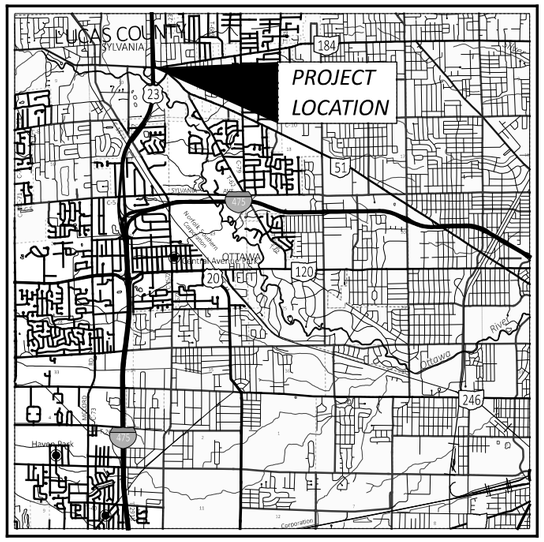
Appendix 3 – Plans

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LUC-023-11.75

CITY OF SYLVANIA

LUCAS COUNTY



LOCATION MAP

LATITUDE: 41°42'55" N LONGITUDE: 83°41'18" W

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

	US 23	SR 51 (WEST OF US 23)	SR 51 (EAST OF US 23)
CURRENT ADT (2026)	68,030	45,650	27,430
DESIGN YEAR ADT (2046)	72,790	46,920	28,460
DESIGN HOURLY VOLUME (2046)	4030	4,880	3,040
DIRECTIONAL DISTRIBUTION	0.50	0.54	0.62
TRUCKS (24 HOUR B&C)	21%	3%	3%
DESIGN SPEED	70 MPH	40 MPH	40 MPH
LEGAL SPEED	65 MPH	35 MPH	35 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
US-23: URBAN FREEWAY SR 51: URBAN PRINCIPAL ARTERIAL
NHS PROJECT — *YES*

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
ARCADIS

INDEX OF SHEETS:

TITLE SHEET	*1*
SCHEMATIC PLAN	*2*
TYPICAL SECTIONS	*3 - 13A*
GENERAL NOTES	*14*
PLAN AND PROFILE - US 23	*15 - 16A*
PLAN AND PROFILE - SR 51	*17 - 24*
PLAN AND PROFILE - ALEXIS	*25 - 29*
PLAN AND PROFILE - US 23 RAMPS	*30 - 42*
CROSS SECTIONS - US 23	*43 - 60*
CROSS SECTIONS - SR 51	*61 - 89*
CROSS SECTIONS - US 23 RAMPS	*90 - 144*
SUPERELEVATION TABLES	*145 - 146*
INTERCHANGE DETAILS	*147 - 149*
INTERSECTION DETAILS	*150 - 151*
DRIVE DETAILS	*152*
CULVERT DETAILS	*153 - 154*
TRAFFIC CONTROL	*155 - 179*
WATERWORK	
STRUCTURES	

FEDERAL PROJECT NUMBER

E210244

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RECONSTRUCTION AND RECONFIGURATION OF THE SR 51 INTERCHANGE OVER US 23 IN THE CITY OF SYLVANIA, LUCAS COUNTY. NECESSARY WORK INCLUDES BRIDGE REPLACEMENTS, RAMP RECONSTRUCTION, SECONDARY STREET UPGRADES AND RESURFACING.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	*30.07 ACRES*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	*1 ACRE*
NOTICE OF INTENT EARTH DISTURBED AREA:	*31.07 ACRES*

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET , AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ENGINEER'S SEAL:

SIGNED:
DATE:

ENGINEER'S SEAL:

SIGNED:
DATE:

STANDARD CONSTRUCTION DRAWINGS					*SUPPLEMENTAL SPECIFICATIONS*	*SPECIAL PROVISIONS*

APPROVED _____

DATE _____ *DISTRICT DEPUTY DIRECTOR*

APPROVED _____

DATE _____ *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

TITLE SHEET

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET SUITE 200
AKRON, OHIO 44308
(330) 434-4400
www.arcadis.com

DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 1 TOTAL 179

LUC-023-11.75

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:35:21 PM USER: SMaag
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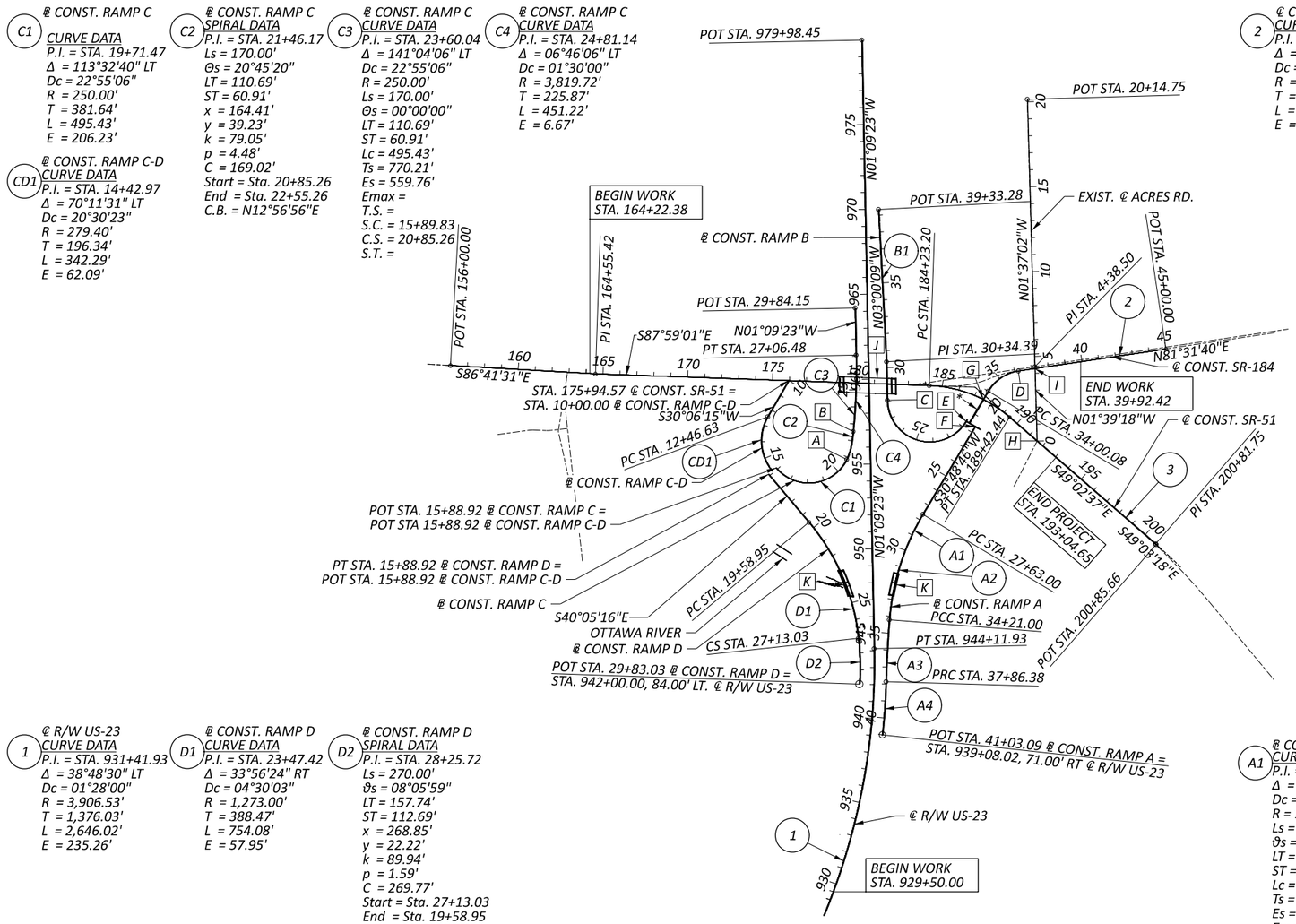

C1 ℄ CONST. RAMP C
CURVE DATA
P.I. = STA. 19+71.47
Δ = 113°32'40" LT
Dc = 22°55'06"
R = 250.00'
T = 381.64'
L = 495.43'
E = 206.23'

CD1 ℄ CONST. RAMP C-D
CURVE DATA
P.I. = STA. 14+42.97
Δ = 70°11'31" LT
Dc = 20°30'23"
R = 279.40'
T = 196.34'
L = 342.29'
E = 62.09'

C2 ℄ CONST. RAMP C
SPIRAL DATA
P.I. = STA. 21+46.17
Ls = 170.00'
Θs = 20°45'20"
LT = 110.69'
ST = 60.91'
x = 164.41'
y = 39.23'
k = 79.05'
p = 4.48'
C = 169.02'
Start = Sta. 20+85.26
End = Sta. 22+55.26
C.B. = N12°56'56"E

C3 ℄ CONST. RAMP C
CURVE DATA
P.I. = STA. 23+60.04
Δ = 141°04'06" LT
Dc = 22°55'06"
R = 250.00'
Ls = 170.00'
Θs = 00°00'00"
LT = 110.69'
ST = 60.91'
Lc = 495.43'
Ts = 770.21'
Es = 559.76'
Emax =
T.S. =
S.C. = 15+89.83
C.S. = 20+85.26
S.T. =

C4 ℄ CONST. RAMP C
CURVE DATA
P.I. = STA. 24+81.14
Δ = 06°46'06" LT
Dc = 01°30'00"
R = 3,819.72'
T = 225.87'
L = 451.22'
E = 6.67'

2 ℄ CONST. SR-184
CURVE DATA
P.I. = STA. 35+18.56
Δ = 50°42'55" RT
Dc = 22°55'06"
R = 250.00'
T = 118.48'
L = 221.29'
E = 26.65'

B1 ℄ CONST. RAMP B
CURVE DATA
P.I. = STA. 30+34.59
Δ = 148°01'53" RT
Dc = 22°55'06"
R = 250.00'
T = 872.76'
L = 645.91'
E = 657.86'

3 ℄ CONST. SR-51
CURVE DATA
P.I. = STA. 186+93.30
Δ = 38°56'24" RT
Dc = 07°29'58"
R = 764.00'
T = 270.1'
L = 519.24'
E = 46.34'

* - ℄ CONST. RAMP A-B
S30°48'46"E

A - CS STA. 20+85.26

B - SC STA. 22+55.26

C - PT STA. 28+07.74

D - PT STA. 36+21.36

E - PC STA. 21+61.83 ℄ CONST. RAMP B =
POT STA. 21+61.83 ℄ CONST. RAMP A-B

F - POT STA. 21+61.83 ℄ CONST. RAMP A =
POT STA. 21+61.83 ℄ CONST. RAMP A-B

G - STA. 20+00.00 ℄ CONST. RAMP A-B =
STA. 33+43.12 ℄ CONST. SR-184

H - STA. 0+00.00 EXIST. ℄ ACRES RD =
STA. 191+56.18 ℄ CONST. SR-51

I - STA. 4+28.43 EXIST. ℄ ACRES RD =
STA. 37+20.05 ℄ CONST. SR-184

J - STRCUTURE NO. LUC-51-1285

K - STRCUTURE NO. LUC-00023-11.750

1 ℄ R/W US-23
CURVE DATA
P.I. = STA. 931+41.93
Δ = 38°48'30" LT
Dc = 01°28'00"
R = 3,906.53'
T = 1,376.03'
L = 2,646.02'
E = 235.26'

D1 ℄ CONST. RAMP D
CURVE DATA
P.I. = STA. 23+47.42
Δ = 33°56'24" RT
Dc = 04°30'03"
R = 1,273.00'
T = 388.47'
L = 754.08'
E = 57.95'

D2 ℄ CONST. RAMP D
SPIRAL DATA
P.I. = STA. 28+25.72
Ls = 270.00'
Θs = 08°05'59"
LT = 157.74'
ST = 112.69'
x = 268.85'
y = 22.22'
k = 89.94'
p = 1.59'
C = 269.77'
Start = Sta. 27+13.03
End = Sta. 19+58.95
C.B. = S01°25'20"E

A1 ℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 29+94.70
Δ = 33°42'09" LT
Dc = 04°00'04"
R = 1,432.00'
Ls = 0.00'
Θs = 00°00'00"
LT = 0.00'
ST = 0.00'
Lc = 658.00'
Ts = 231.69'
Es = 18.62'
Emax =
T.S. =
S.C. = 27+63.00
C.S. = 34+21.00
S.T. =

A2 ℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 30+97.91
Δ = 26°19'37" LT
Dc = 04°00'04"
R = 1,432.00'
T = 334.91'
L = 658.00'
E = 38.64'

A3 ℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 36+03.73
Δ = 02°48'48" LT
Dc = 00°46'12"
R = 7,441.21'
T = 182.73'
L = 365.39'
E = 2.24'

A4 ℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 39+44.82
Δ = 04°33'43" RT
Dc = 01°26'26"
R = 3,977.53'
T = 158.44'
L = 316.7'
E = 3.15'

HORIZONTAL
SCALE IN FEET
0 200 400 800

SCHEMATIC PLAN

LUC-23-11.75

MODEL: Schematic Plan [Sheet] PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:35:40 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GB101.dgn

DESIGN AGENCY
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CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER
TB

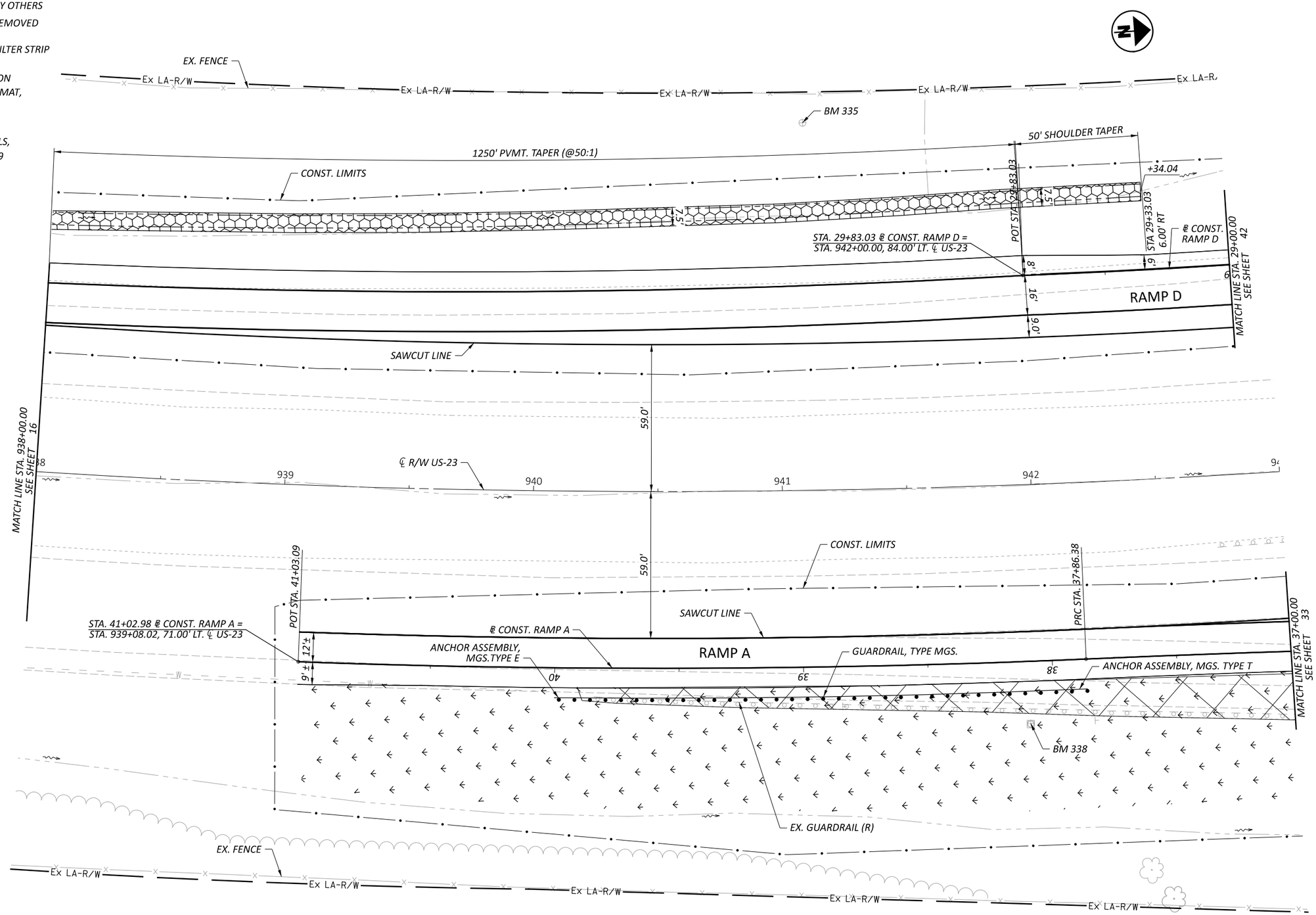
REVIEWER
SMG 11-02-22

PROJECT ID
105889

SHEET 2 TOTAL 179

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- PAVEMENT REMOVED
- VEGETATED FILTER STRIP
- DITCH EROSION PROTECTION MAT, TYPE A

FOR ADDITIONAL INTERCHANGE DETAILS, SEE SHEETS 147- 149



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN SHEET - US-23
STA. 943+00 TO STA. 948+00

LUC-023-11.75

MODEL: CLX_us23 - Plan 4 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:36:50 PM USER: SMaag
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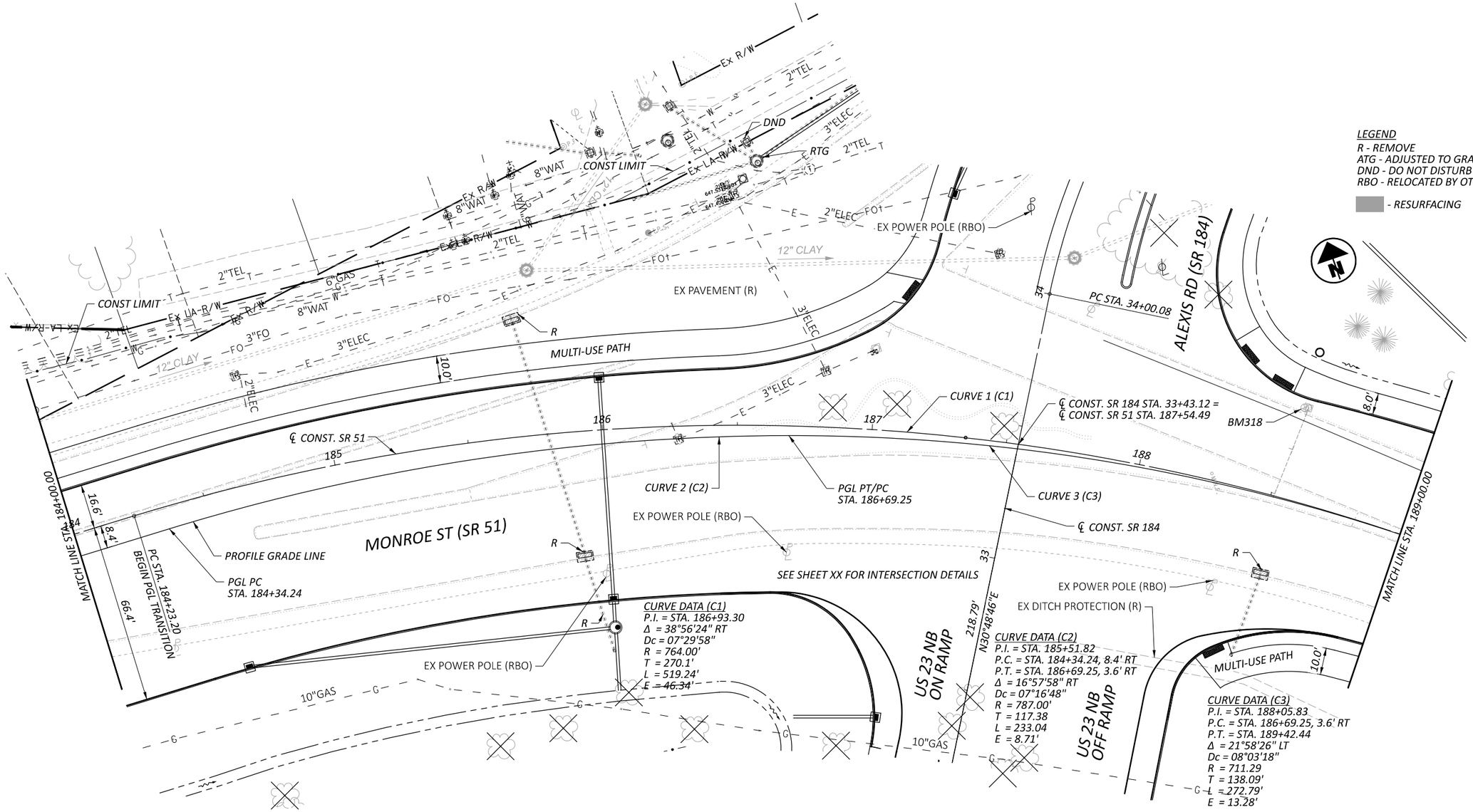
DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 16A TOTAL 179



HORIZONTAL SCALE IN FEET
0 10 20 40

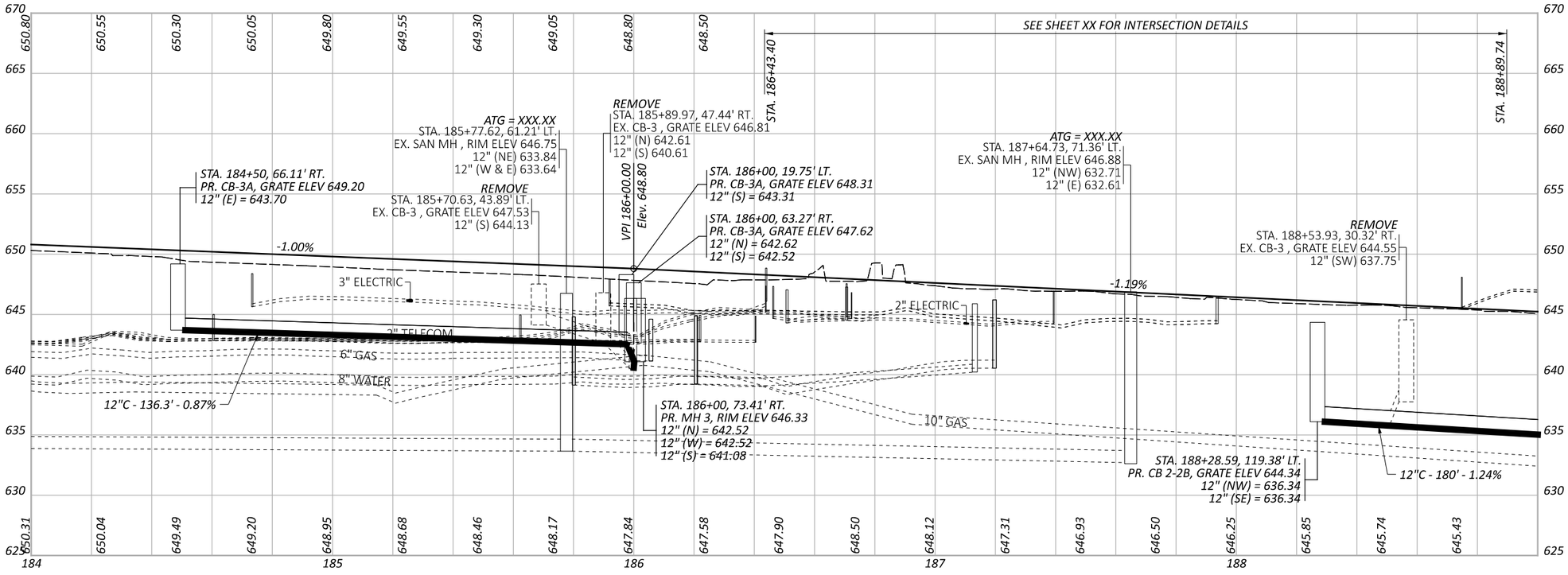
PLAN - MONROE ST
STA. 184+00 TO STA. 189+00

LUC-023-11.75

MODEL: CLP_MONROE - Plan 3:1 PAPERSIZE: 17x11 (in.) DATE: 11/3/2022 TIME: 4:05:55 PM USER: mstoltzfus
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\300933321400_CAD\404-Engineering_Bergmann\Roadway\Sheets\105889_GP403

DESIGN AGENCY
BERGMANN
ARCHITECTS ENGINEERS PLANNERS
3415 BRIARFIELD BLVD., STE C,
MAUMEE, OH 43537

DESIGNER DTB
REVIEWER XF 10/21/22
PROJECT ID 105889
SHEET 22 TOTAL



HORIZONTAL SCALE IN FEET
0 10 20 40

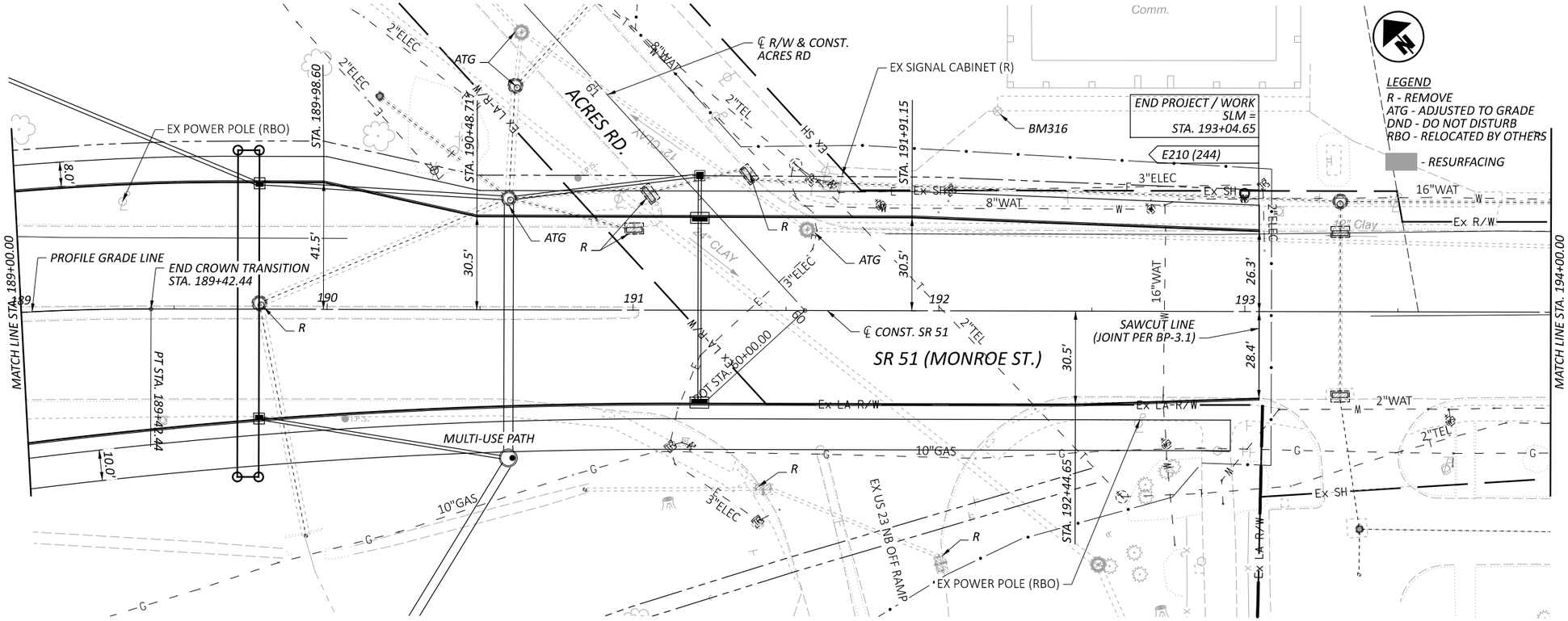
PROFILE - MONROE ST
STA. 184+00 TO STA. 189+00

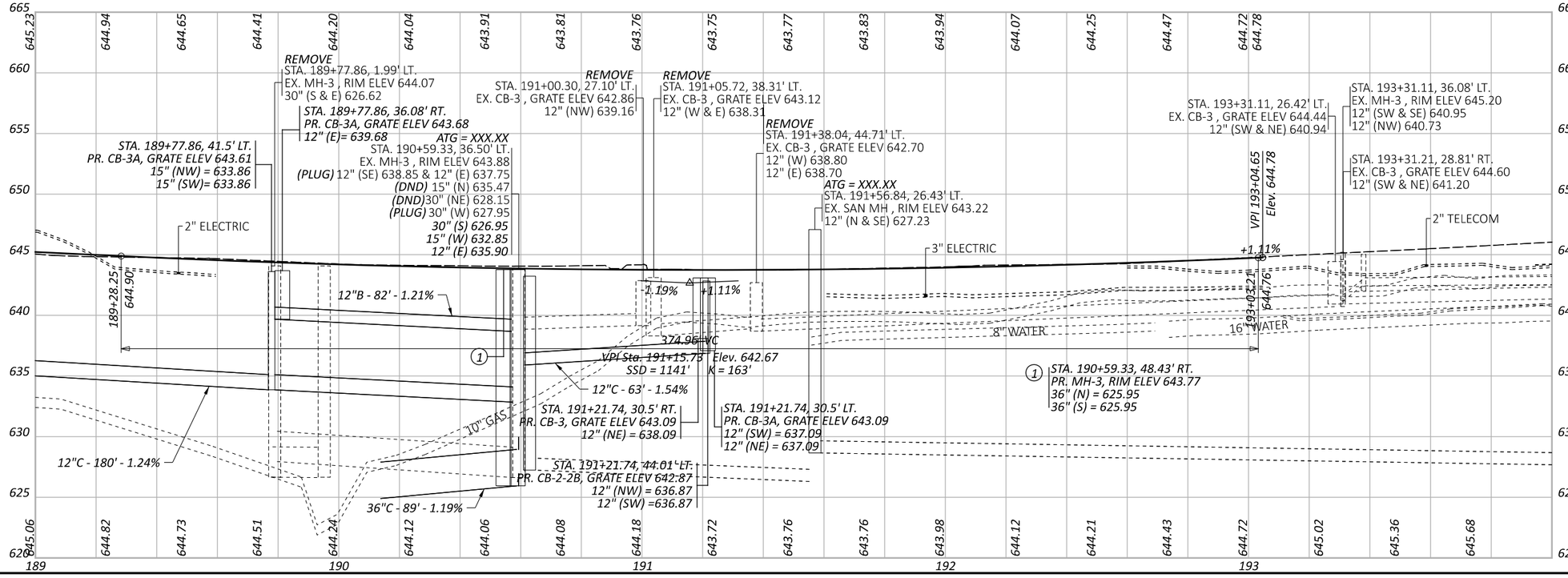
LUC-023-11.75

MODEL: CLP_MONROE-1 - Plan 3 PAPERSIZE: 17x11 (in.) DATE: 11/3/2022 TIME: 4:06:09 PM USER: mstoltzfus
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\404-Engineering_Bergmann\Roadway\Sheets\105889_GP403A

DESIGN AGENCY
BERGMANN
ARCHITECTS ENGINEERS PLANNERS
340 BRADFIELD BLVD., STE C,
MAUMEE, OH 43537

DESIGNER DTB
REVIEWER XF 10/21/22
PROJECT ID 105889
SHEET 23 TOTAL



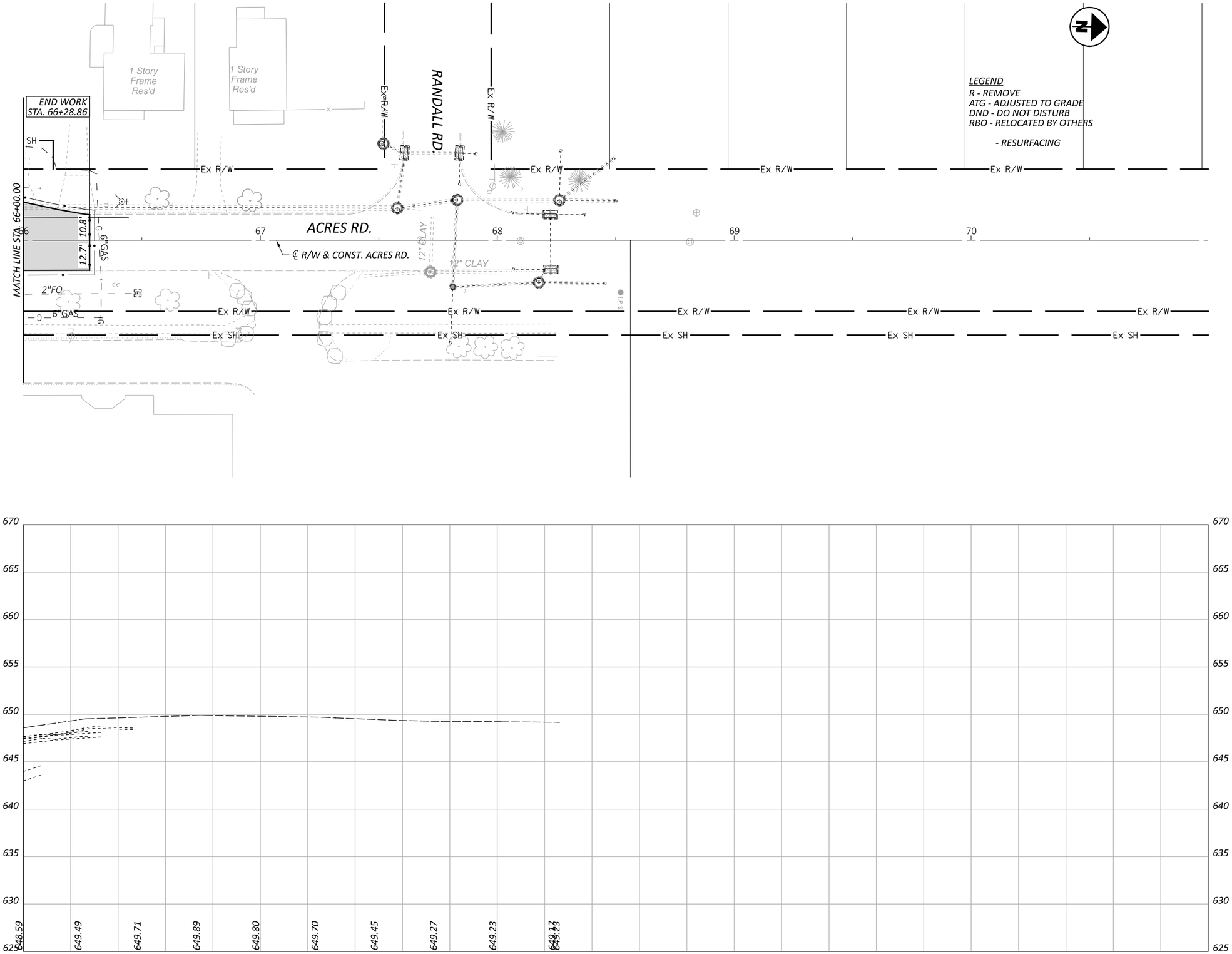


PLAN AND PROFILE - MONROE ST STA. 184+00 TO STA. 194+00

DESIGN AGENCY	BERGMANN ARCHITECTS ENGINEERS PLANNERS 3410 BRIARFIELD BLVD., STE C, MAUMEE, OH 43537
DESIGNER	DTB
REVIEWER	XF 10/21/22
PROJECT ID	105889
SHEET	24
TOTAL	

LUC-023-11.75

MODEL: CLP_MONROE-1 - Plan 4 PAPERSIZE: 17x11 (in.) DATE: 11/3/2022 TIME: 4:06:29 PM USER: nstoltzfus
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\404-Engineering_Bergmann\Roadway\Sheets\105889_GP404



HORIZONTAL
SCALE IN FEET
0 10 20 40

PLAN AND PROFILE - ACRES RD
STA. 66+00 TO STA. 71+00

LUC-023-11.75

MODEL: CLX_RW_ACRES - Plan 7 PAPERSIZE: 17x11 (in.) DATE: 11/3/2022 TIME: 4:08:06 PM USER: mstoltzfus
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30099332\400_CAD\04-Engineering_Bergmann\Roadway\Sheets\105889_GP409

DESIGN AGENCY
BERGMANN
ARCHITECTS ENGINEERS PLANNERS
340 SMAMFIELD BLVD, STE C,
MAINEE, OH 43537

DESIGNER
DTB

REVIEWER
XF 10/21/22

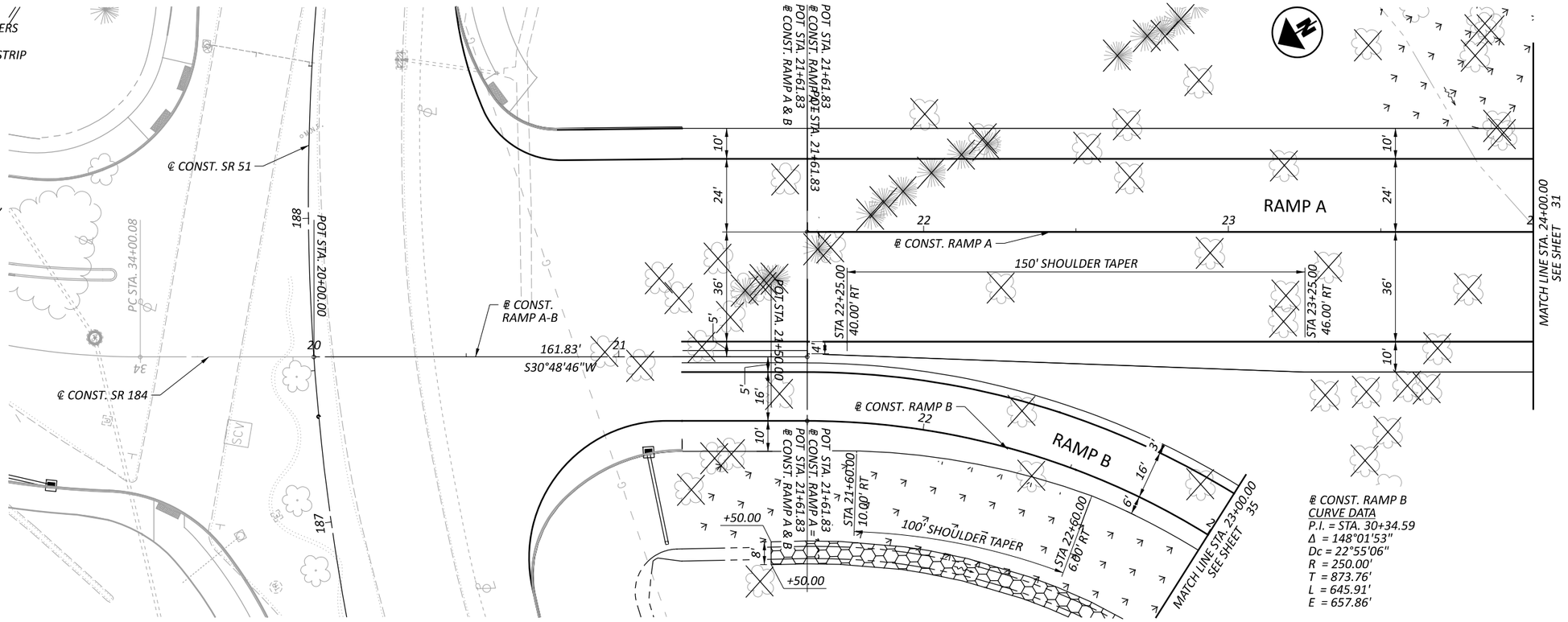
PROJECT ID
105889

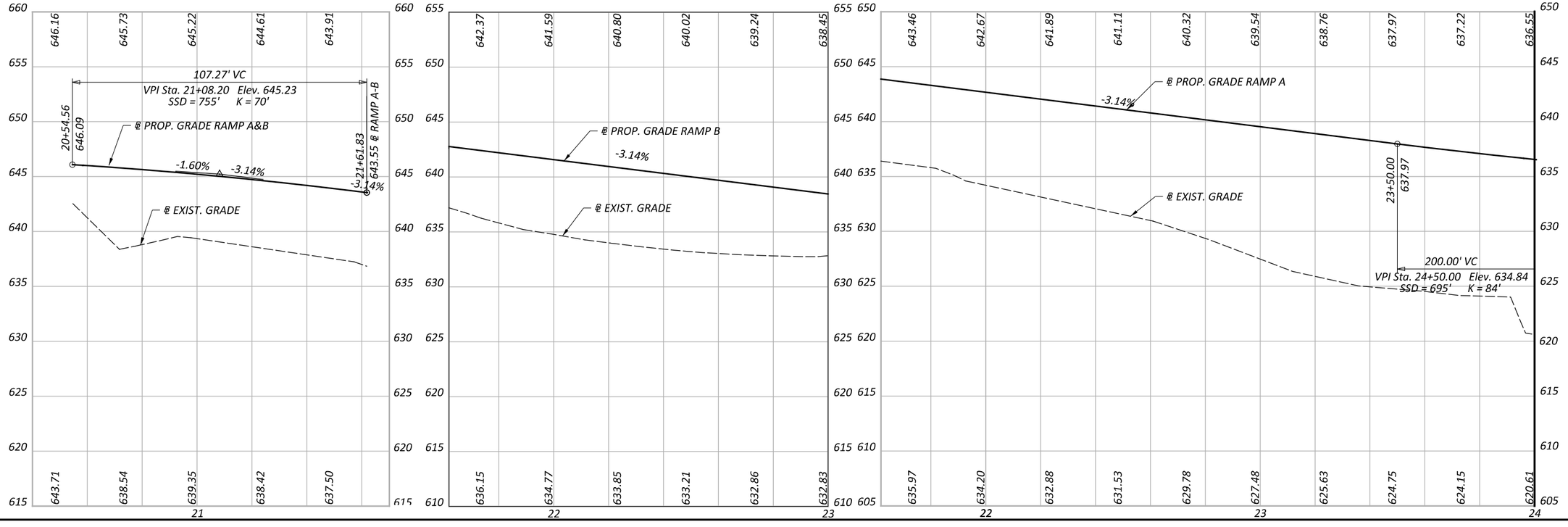
SHEET 29 TOTAL

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- VEGETATED FILTER STRIP
- DITCH EROSION PROTECTION MAT, TYPE A

FOR ADDITIONAL INTERSECTION DETAILS, SEE SHEETS 151

FOR ADDITIONALS DETAILS, SEE MONROE ST. PLAN & PROFILE SHEETS 17 - 19





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP A & B
STA. 20+00 TO STA. 24+00

LUC-023-11.75

MODEL: CLP_NB - Plan 1 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:37:03 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GP108.dgn

DESIGN AGENCY
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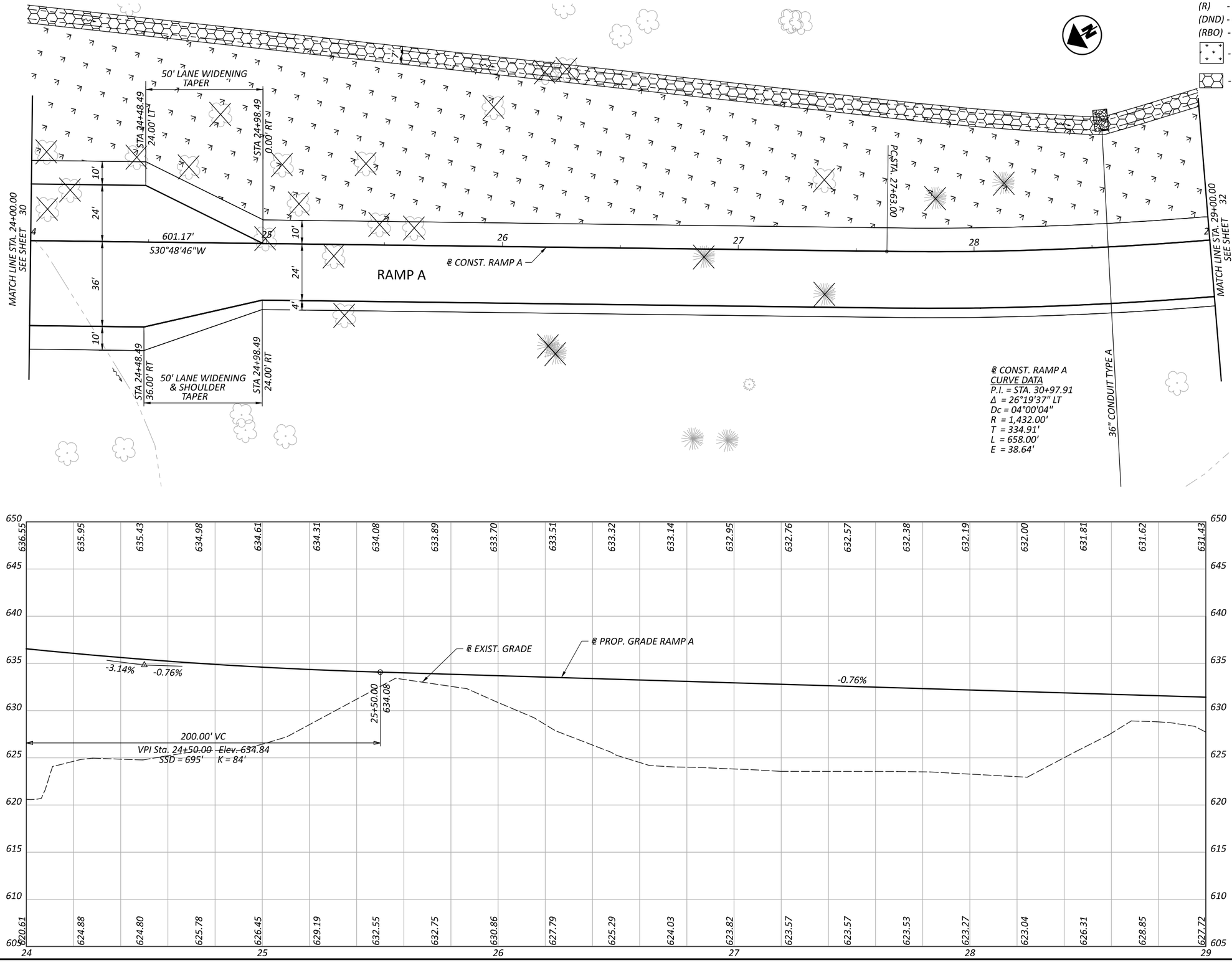
DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 30 TOTAL 179



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP A
STA, 24+00 TO STA. 29+00

LUC-023-11.75

MODEL: CLP_NB_EXT - Plan 5 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:37:17 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GP109.dgn

DESIGN AGENCY
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CLEVELAND, OHIO 44114
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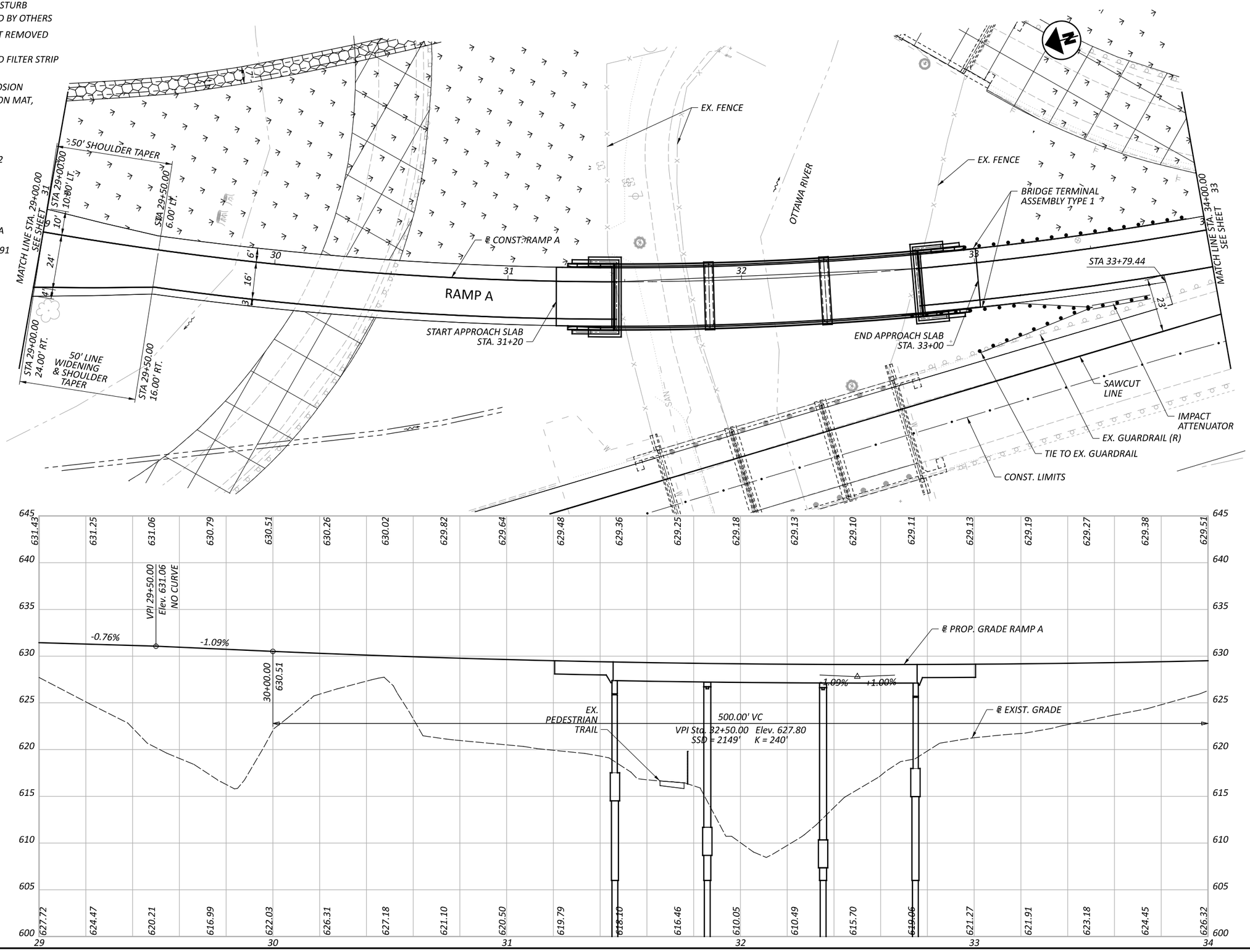
DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 31 TOTAL 179

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- PAVEMENT REMOVED
- VEGETATED FILTER STRIP
- DITCH EROSION PROTECTION MAT, TYPE A

FOR ADDITIONAL BRIDGE DETAILS, SEE SHEET $SP302

℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 30+97.91
Δ = 26°19'37" LT
Dc = 04°00'04"
R = 1,432.00'
T = 334.91'
L = 658.00'
E = 38.64'



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP A
STA. 29+00 TO STA. 34+00

LUC-023-11.75

MODEL: CLP_NB_EXT - Plan 6 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:37:31 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\000_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GP110.dgn

DESIGN AGENCY
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DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 32 TOTAL 179

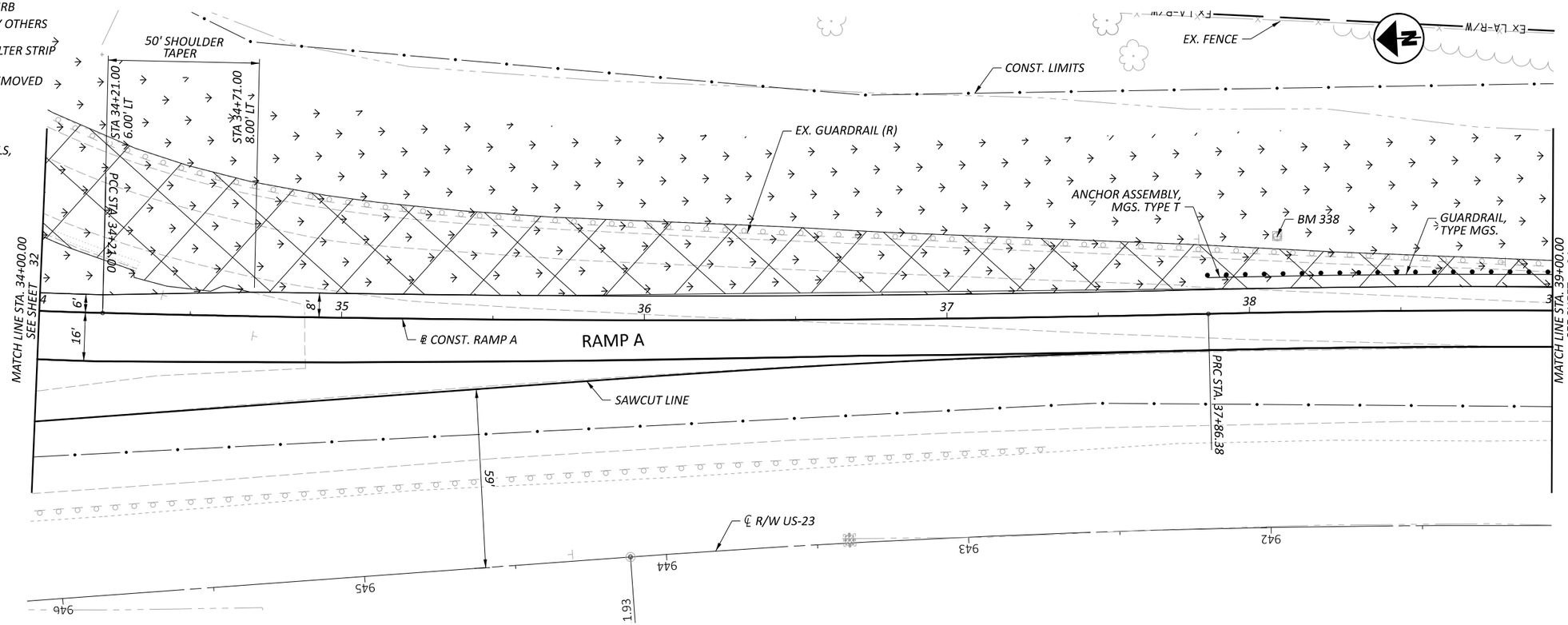
LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- VEGETATED FILTER STRIP
- PAVEMENT REMOVED

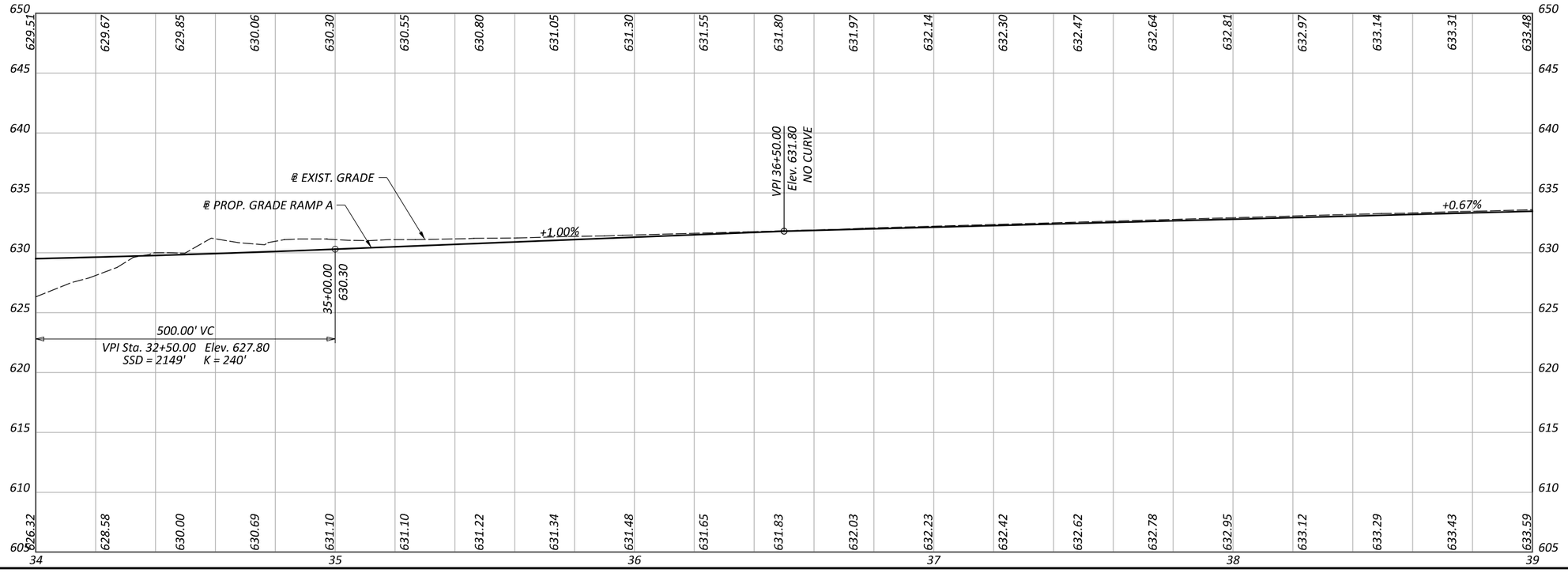
FOR ADDITIONAL INTERCHANGE DETAILS, SEE SHEET 147

℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 30+97.91
Δ = 26°19'37" LT
Dc = 04°00'04"
R = 1,432.00'
T = 334.91'
L = 658.00'
E = 38.64'

℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 36+03.73
Δ = 02°48'48" LT
Dc = 00°46'12"
R = 7,441.21'
T = 182.73'
L = 365.39'
E = 2.24'

℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 39+44.82
Δ = 04°33'43"
Dc = 01°26'26"
R = 3,977.53'
T = 158.44'
L = 316.7'
E = 3.15'





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP A
STA. 34+00 TO STA. 39+00

LUC-023-11.75

MODEL: CLP_NB_EXT - Plan 7 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:37:45 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GP111.dgn

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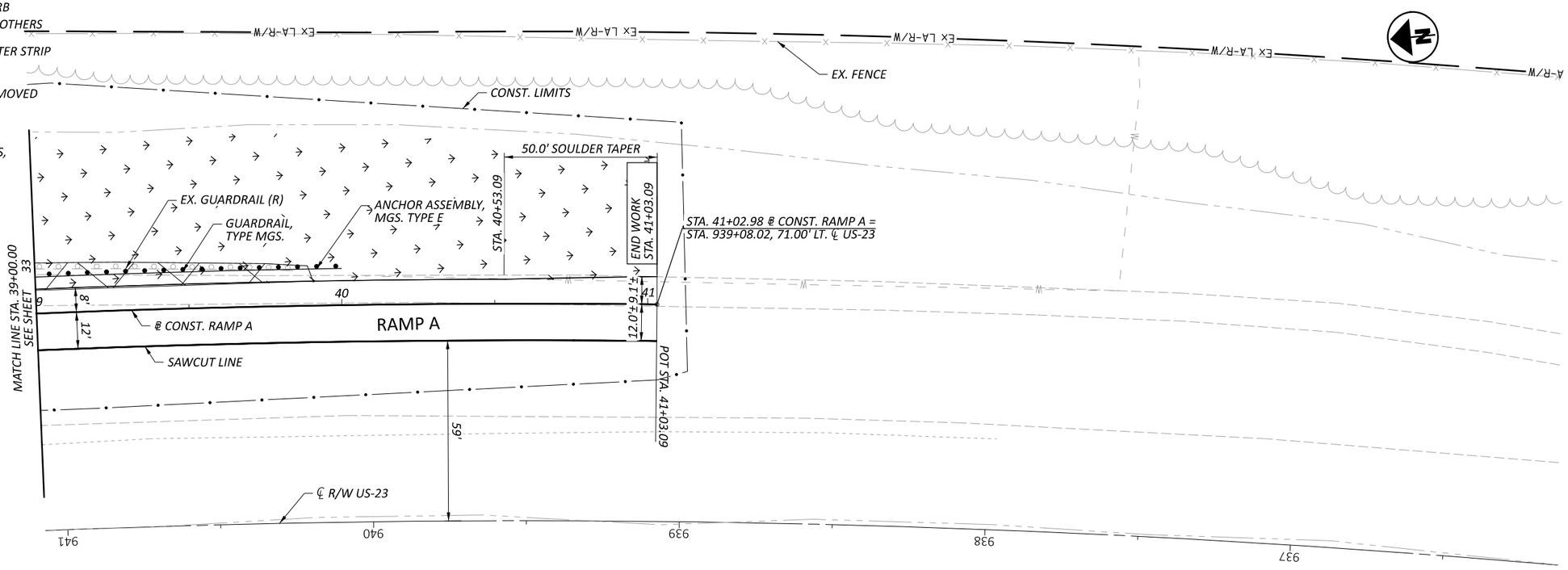
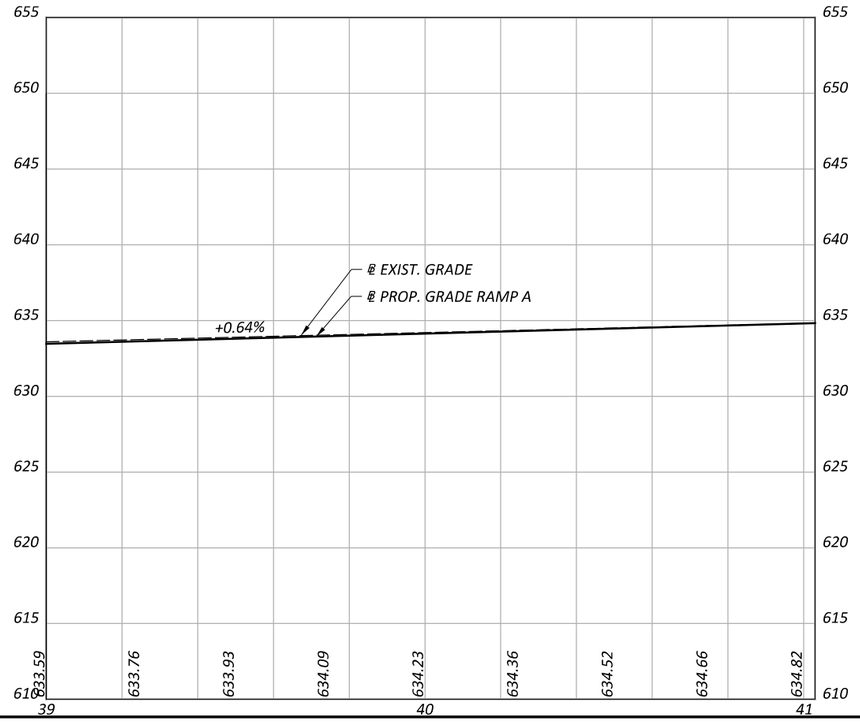
DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 33 TOTAL 179

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- VEGETATED FILTER STRIP
- PAVEMENT REMOVED

FOR ADDITIONAL INTERCHANGE DETAILS, SEE SHEET 147



℄ CONST. RAMP A
CURVE DATA
P.I. = STA. 39+44.82
Δ = 04°33'43"
Dc = 01°26'26"
R = 3,977.53'
T = 158.44'
L = 316.7'
E = 3.15'



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP A
STA. 39+00 TO END

LUC-023-11.75

MODEL: CLP_NB_EXT - Plan B PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:37:58 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\v400_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GP112.dgn

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DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 34 TOTAL 179

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- PAVEMENT REMOVED
- VEGETATED FILTER STRIP
- DITCH EROSION PROTECTION MAT, TYPE A

HORIZONTAL SCALE IN FEET
0 10 20 40

36" CONDUIT TYPE A
EX. FENCE (R)
℄ CONST. RAMP B
RAMP B
25
26
27
24
16'
6'
+75.00
EX. GUARDRAIL (R)
CONST. LIMITS
IMPACT ATTENUATOR
ANCHORASSEMBLY, MGS. TYPE E
GUARDRAIL, TYPE MGS.
24" STM.
24" STM.
PROP. ROCK CHANNEL PROTECTION, TYPE C
MATCH LINE STA. 23+00.00 SEE SHEET 34
MATCH LINE STA. 28+00.00 SEE SHEET 36

℄ CONST. RAMP B
CURVE DATA
P.I. = STA. 30+34.59
Δ = 148°01'53"
Dc = 22°55'06"
R = 250.00'
T = 873.76'
L = 645.91'
E = 657.86'

℄ EXIST. GRADE
PROP. MH-3
STA. 27+50.00, 8.00' LT.
RIM ELEV. = 630.22
℄ 24" (N) = 624.86
℄ 24" (E) = 624.86
℄ PROP. GRADE RAMP B
-3.14%
+1.43%
24+59.73
633.44
36" CONDUIT TYPE A
356.53' VC
VPI Sta. 26+38.00 Elev. 627.85
SSD = 360' K = 78'
202' - 24" TYPE B @ 0.55%

638.45 637.67 636.88 636.10 635.32 634.53 633.75 632.98 632.28 631.67 631.13 630.68 630.31 630.01 629.80 629.66 629.61 629.63 629.74 629.93 630.19
632.83 633.35 633.43 633.69 634.19 634.68 635.03 635.22 636.16 637.14 638.50 639.07 638.19 638.19 638.59 638.45 638.61 636.21 633.91 632.40 631.89
655 650 645 640 635 630 625 620 615 610
23 24 25 26 27 28

PLAN & PROFILE - RAMP B
STA. 23+00 TO STA. 28+00

DESIGN AGENCY
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1111 SUPERIOR AVENUE, SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-4777
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DESIGNER SMG
REVIEWER TB 10/01/22
PROJECT ID 105889
SHEET 35 TOTAL 179

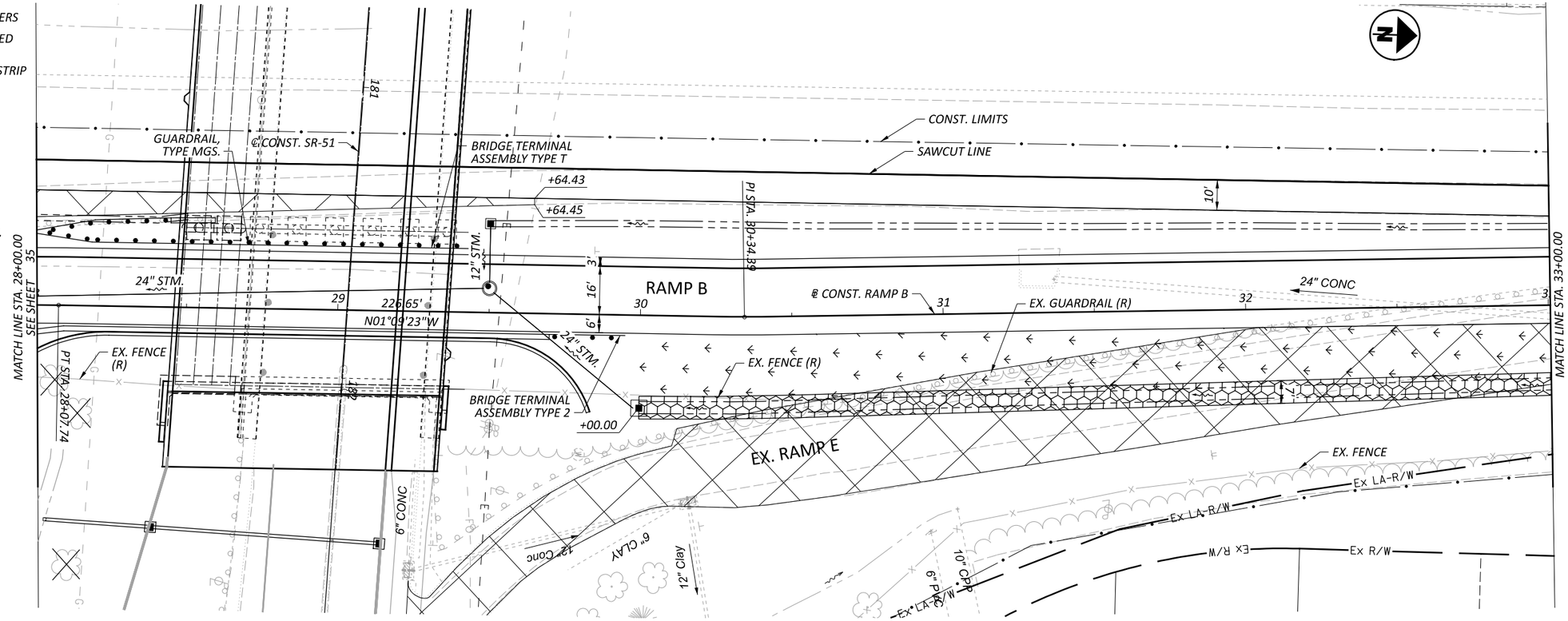
LUC-023-11.75

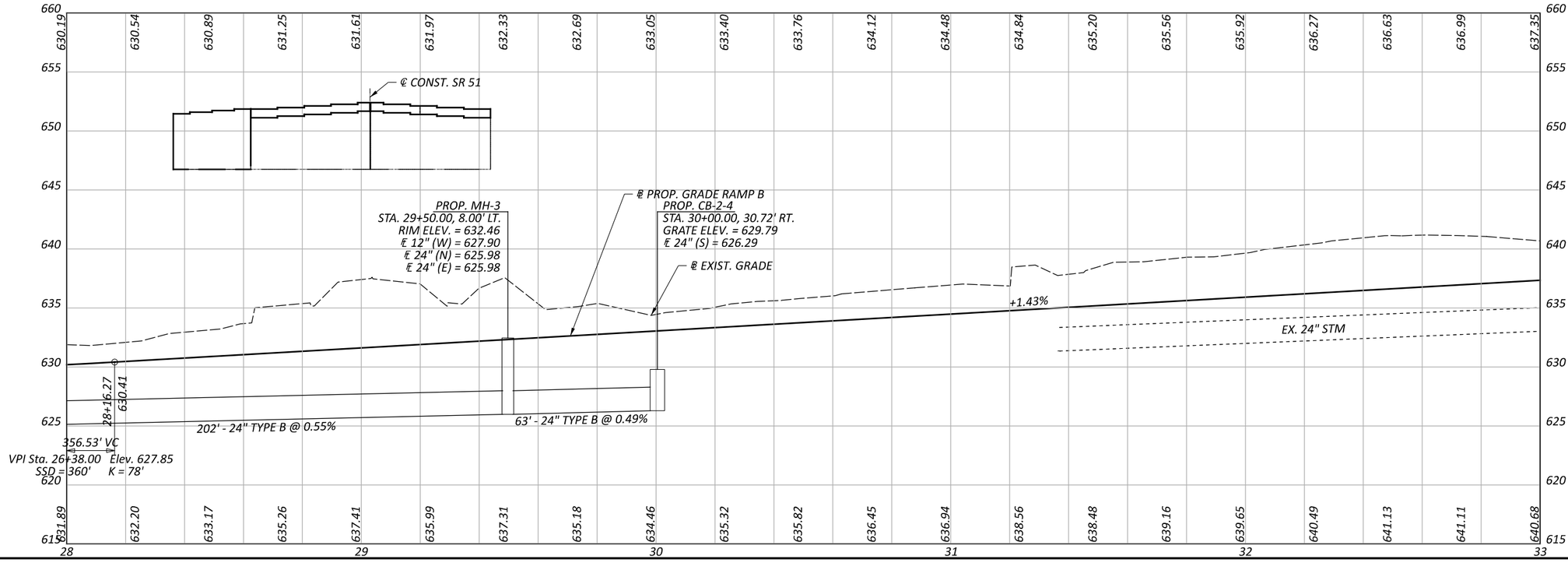
MODEL: CLP_NB_ENT - Plan 9 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:38:11 PM USER: SMaag
pw:\\arcadis-us-pw.bentley.com:arcadis-us-01\Documents\01 Active Projects\30093332\400_CAD\401-Engineering_Arcadis\Roadway\Sheets\105889_GP113.dgn

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- PAVEMENT REMOVED
- VEGETATED FILTER STRIP
- DITCH EROSION PROTECTION MAT, TYPE A

FOR ADDITIONAL BRIDGE DETAILS, SEE SHEET $SP101

FOR ADDITIONALS DETAILS, SEE MONROE ST. PLAN & PROFILE SHEETS 17 - 19





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP B
STA. 28+00 TO STA. 33+00

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 36 TOTAL 179

LUC-023-11.75

MODEL: CLP_NB_ENT - Plan 10 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:38:24 PM USER: SMaag
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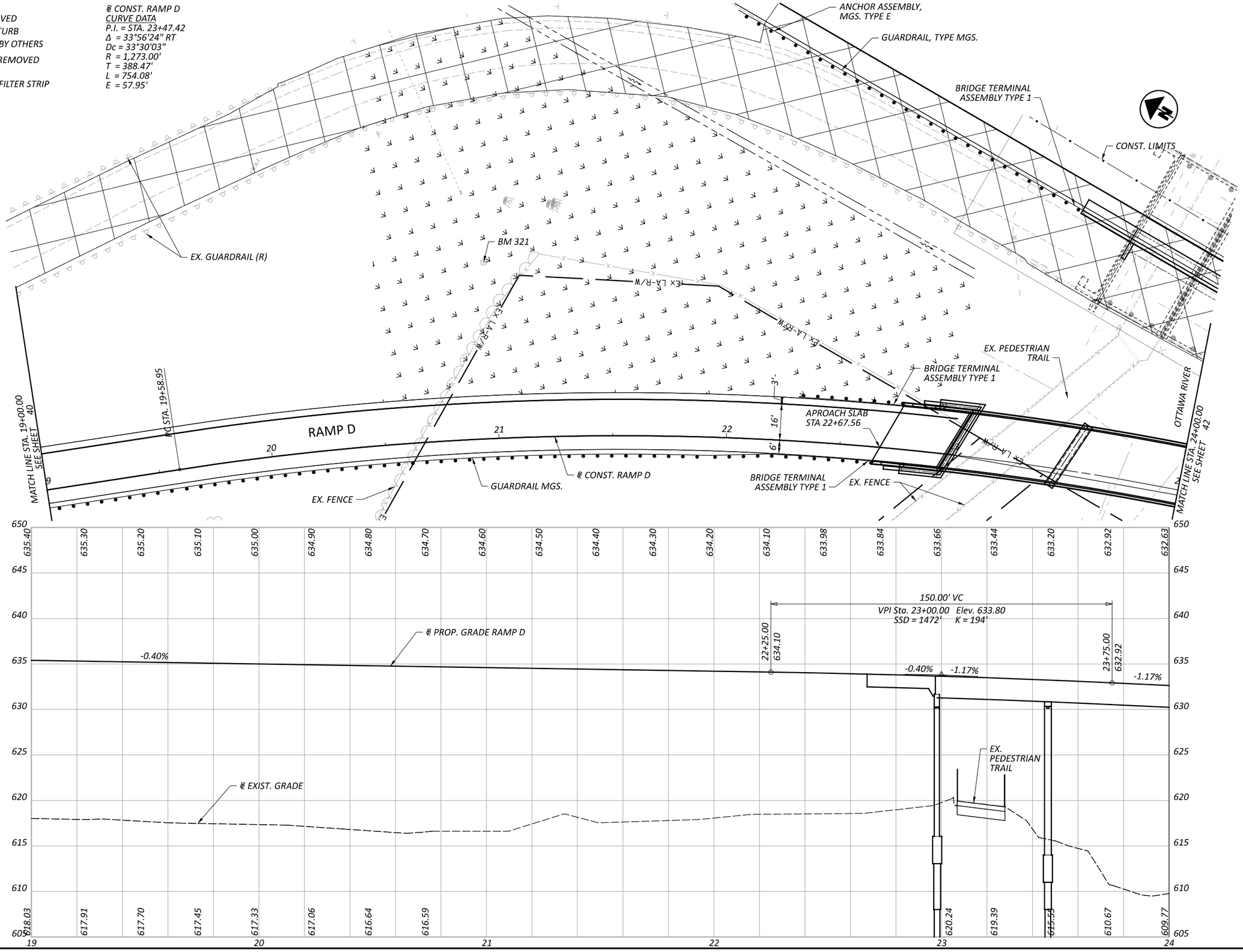
LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- PAVEMENT REMOVED
- VEGETATED FILTER STRIP

FOR ADDITIONAL BRIDGE DETAILS, SEE SHEET $SP301

℄ CONST. RAMP D
CURVE DATA
P.I. = STA. 23+47.42
Δ = 33°56'24" RT
Dc = 33°30'03"
R = 1,273.00'
T = 388.47'
L = 754.08'
E = 57.95'



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - RAMP D
STA. 19+00 TO STA. 24+00

LUC-023-11.75

MODEL: 105889_CLP_SB_ENT - Plan 3 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:39:32 PM USER: SMaag
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DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-7377
www.arcadis.com

DESIGNER TB
REVIEWER SMG 10/01/22
PROJECT ID 105889
SHEET 41 TOTAL 179

LEGEND
(R) - TO BE REMOVED
(DND) - DO NOT DISTURB
(RBO) - RELOCATED BY OTHERS
- PAVEMENT REMOVED
- DITCH EROSION PROTECTION MAT, TYPE A

HORIZONTAL SCALE IN FEET
0 10 20 40

℄ R/W US-23
945
944
943
PT STA. 944+11.93
59'
+51.50
SAWCUT LINE
23'
3'
+48.41
APPROACH SLAB STA 24+87.52
RAMP D
16'
9'
26
27
28
25
MATCH LINE STA. 24+00.00 SEE SHEET 41
MATCH LINE STA. 24+00.00 SEE SHEET 16A
℄ CONST. RAMP D
GUARDRAIL, TYPE MGS.
EX. GUARDRAIL (R)
CS STA. 27+13.03
BRIDGE TERMINAL ASSEMBLY TYPE 2
+50.30
ANCHOR ASSEMBLY, MGS. TYPE T
CONST. LIMITS
+66.23
EX LA-R/W
EX. FENCE

FOR ADDITIONAL INTERCHANGE DETAILS, SEE SHEETS $GI101

FOR ADDITIONAL BRIDGE DETAILS, SEE SHEET $SP301

℄ CONST. RAMP D
CURVE DATA
P.I. = STA. 23+47.42
Δ = 33°56'24" RT
Dc = 33°30'03"
R = 1,273.00'
T = 388.47'
L = 754.08'
E = 57.95'

℄ CONST. RAMP D
SPIRAL DATA
P.I. = STA. 28+25.72
Ls = 270.00'
ϑs = 08°05'59"
LT = 157.74'
ST = 112.69'
x = 268.85'
y = 22.22'
k = 89.94'
p = 1.59'
C = 269.77'
Start = Sta. 27+13.03
End = Sta. 19.58.95
C.B. = S01°25'20"E

632.63 632.33 632.04 631.75 631.46 631.16 630.87 630.58 630.28 629.99 629.73 629.54 629.41 629.34 629.35 629.41 629.51 629.61 629.72 629.82 629.92
609.77 612.46 612.24 615.43 617.26 619.04 621.69 622.52 625.41 626.74 627.95 628.77 629.35 629.53 629.55 629.52 629.44 629.40 629.34 629.34 629.36
645 640 635 630 625 620 615 610 605
24 25 26 27 28 29

℄ PROP. GRADE RAMP D
-1.17%
+0.40%
℄ EXIST. GRADE
26+25.00 629.99
27+75.00 629.41
150.00' VC
VPI Sta. 27+00.00 Elev. 629.11
SSD = INF' K = 95'

PLAN & PROFILE - RAMP D
STA. 24+00 TO STA. 29+00

DESIGN AGENCY
ARCADIS
1111 SUPERIOR AVENUE, SUITE 1300
CLEVELAND, OHIO 44114
(216) 781-4477
www.arcadis.com

DESIGNER	TB
REVIEWER	SMG 10/01/22
PROJECT ID	105889
SHEET	42
TOTAL	179

LUC-023-11.75

MODEL: 105889_CLP_SB_ENT - Plan 4 PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 3:39:45 PM USER: SMaag
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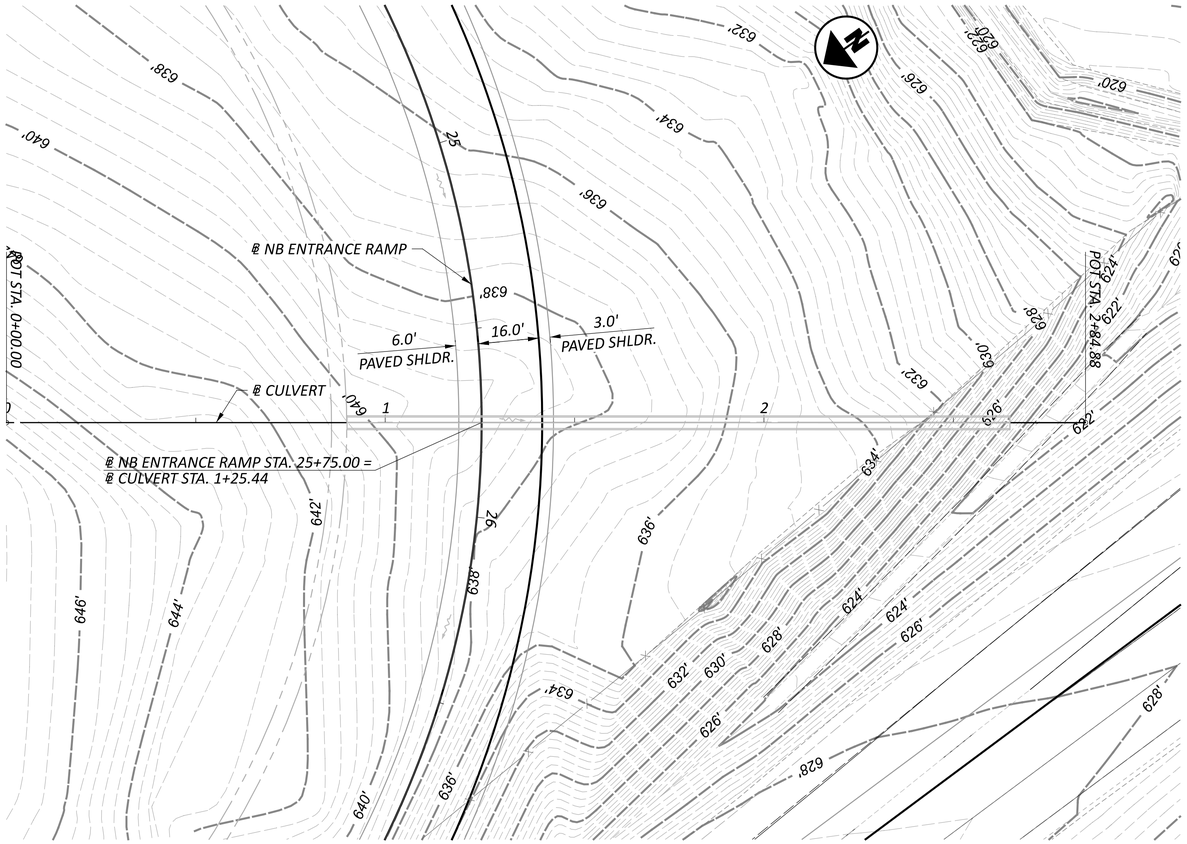
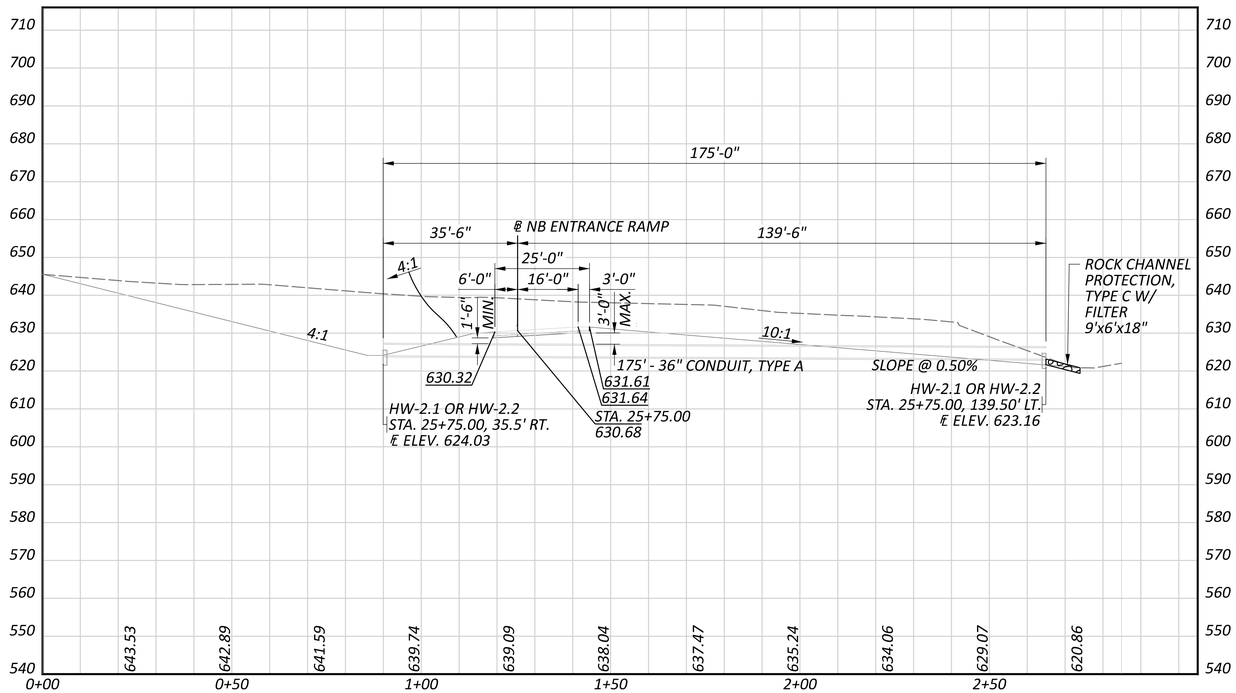




ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
611		FT	36" CONDUIT, TYPE A
601		CY	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER
602		CY	CONCRETE MASONRY

HYDRAULIC DATA

DRAINAGE AREA = 9.36 ACRES

Q (25) = 35.92 CFS V (25) = 5.08 FT/S HW ( ) = FT

Q (100) = 40.76 CFS V (100) = 5.77 FT/S HW ( ) = FT

ORDINARY HIGH WATER MARK: FT

DESIGN SERVICE LIFE: 75 YEARS

ABRASION LEVEL: 1

pH: 8.2

PROPOSED STRUCTURE

TYPE: 175' - 36" TYPE A @ 0.50%

SKEW: 0°

ALIGNMENT: CURVED

CFN:

HORIZONTAL SCALE IN FEET

0 10 20 40

CULVERT DETAILS
NB ENTRANCE RAMP TO US 23 FROM SR 51

LUC-23-11.75

DESIGN AGENCY
2LMN

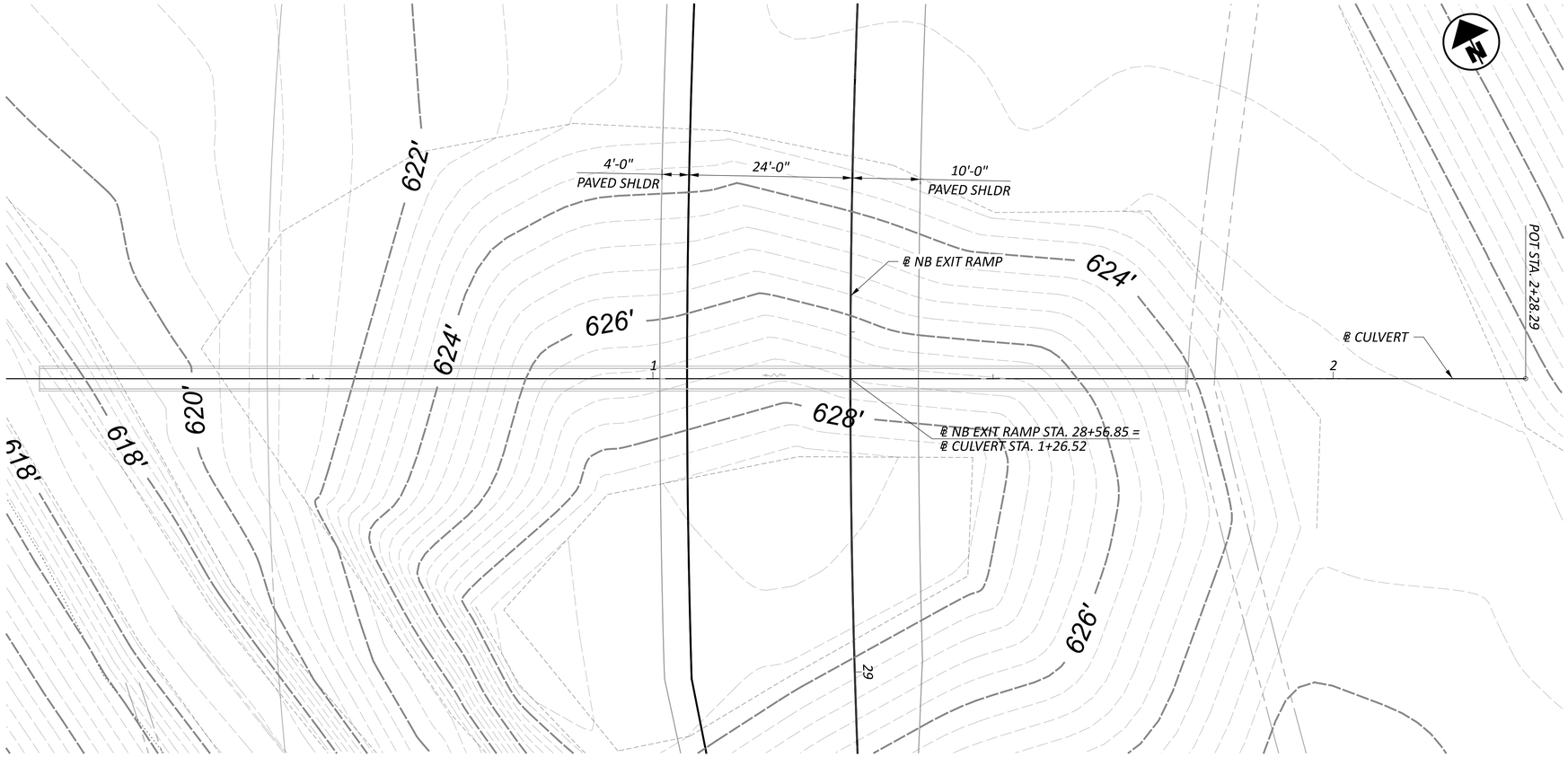
DESIGNER MAK

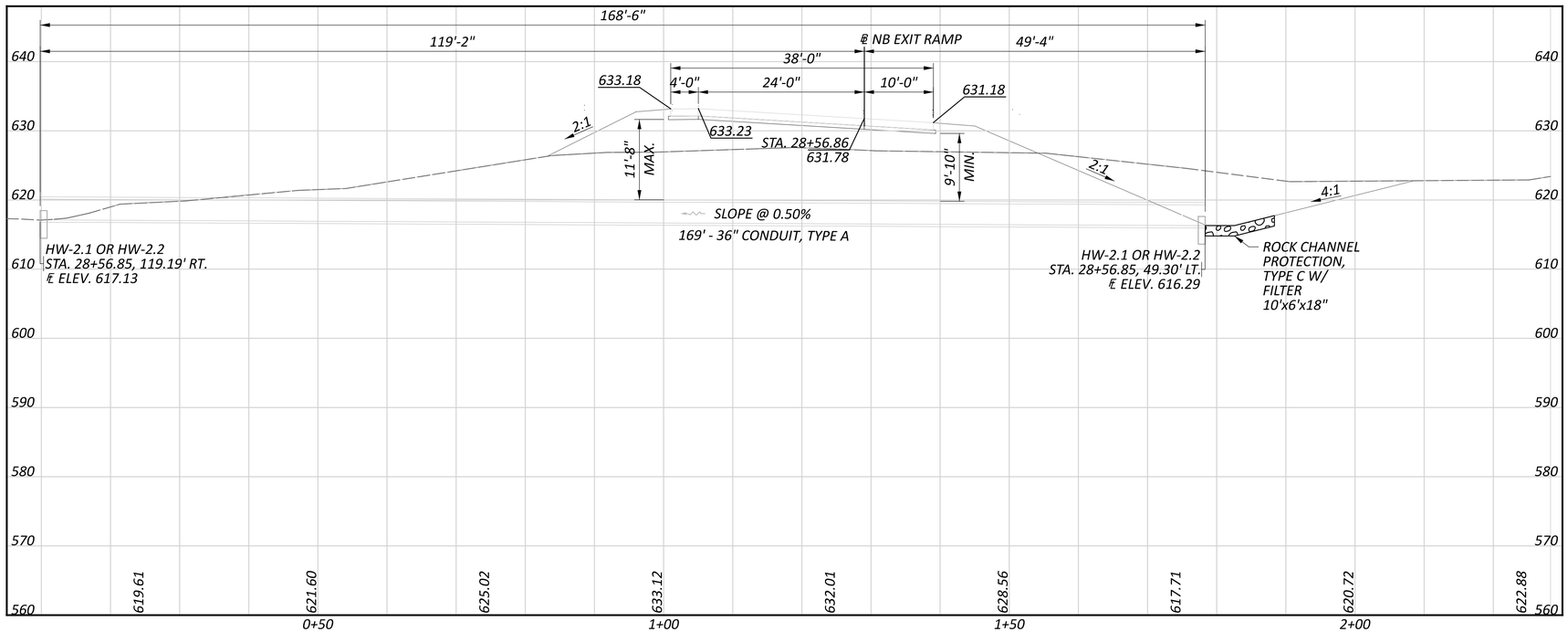
REVIEWER JJR 10-24-22

PROJECT ID 105889

SUBSET 0 TOTAL 0

SHEET P.153 TOTAL 0





HORIZONTAL SCALE IN FEET
0 5 10 20

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
611		FT	36" CONDUIT, TYPE A
601		CY	ROCK CHANNEL PROTECTION, TYPC C, WITH FILTER
602		CY	CONCRETE MASONRY

HYDRAULIC DATA

DRAINAGE AREA = 15.26 ACRES

Q (25) = 47.07 CFS V (25) = 8.59 FT/S HW ( ) = FT

Q (100) = 54.51 CFS V (100) = 9.53 FT/S HW ( ) = FT

ORDINARY HIGH WATER MARK: FT

DESIGN SERVICE LIFE: 75 YEARS

ABRASION LEVEL: 1

pH: 8.2

PROPOSED STRUCTURE

TYPE: 169' - 36" TYPE A @ 0.50%

SKEW: 0°

ALIGNMENT: CURVED

CFN:

CULVERT DETAILS
NB EXIT RAMP FROM US 23 TO SR 51

LUC-23-11.75

DESIGN AGENCY
2LMN

DESIGNER MAK

REVIEWER JJR 10-24-22

PROJECT ID 105889

SUBSET 0 TOTAL 0

SHEET P.154 TOTAL 0

LUC-023-11.75

MODEL: CLP_US23 - Plan 1 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 11/3/2022 TIME: 4:17:24 PM USER: mstoltzfus
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SIGNING PLAN - US 23

HORIZONTAL SCALE IN FEET
0 100 200 400

DESIGN AGENCY
BERGMANN
ARCHITECTS ENGINEERS PLANNERS
340 WHITFIELD BLVD., STE C,
MARIEL, OH 43537

DESIGNER XF
REVIEWER MTG 10/21/22
PROJECT ID 105889
SHEET 179 TOTAL

MODEL: CLP_US23 - Plan 2 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 11/3/2022 TIME: 4:17:42 PM USER: mstoltzfus
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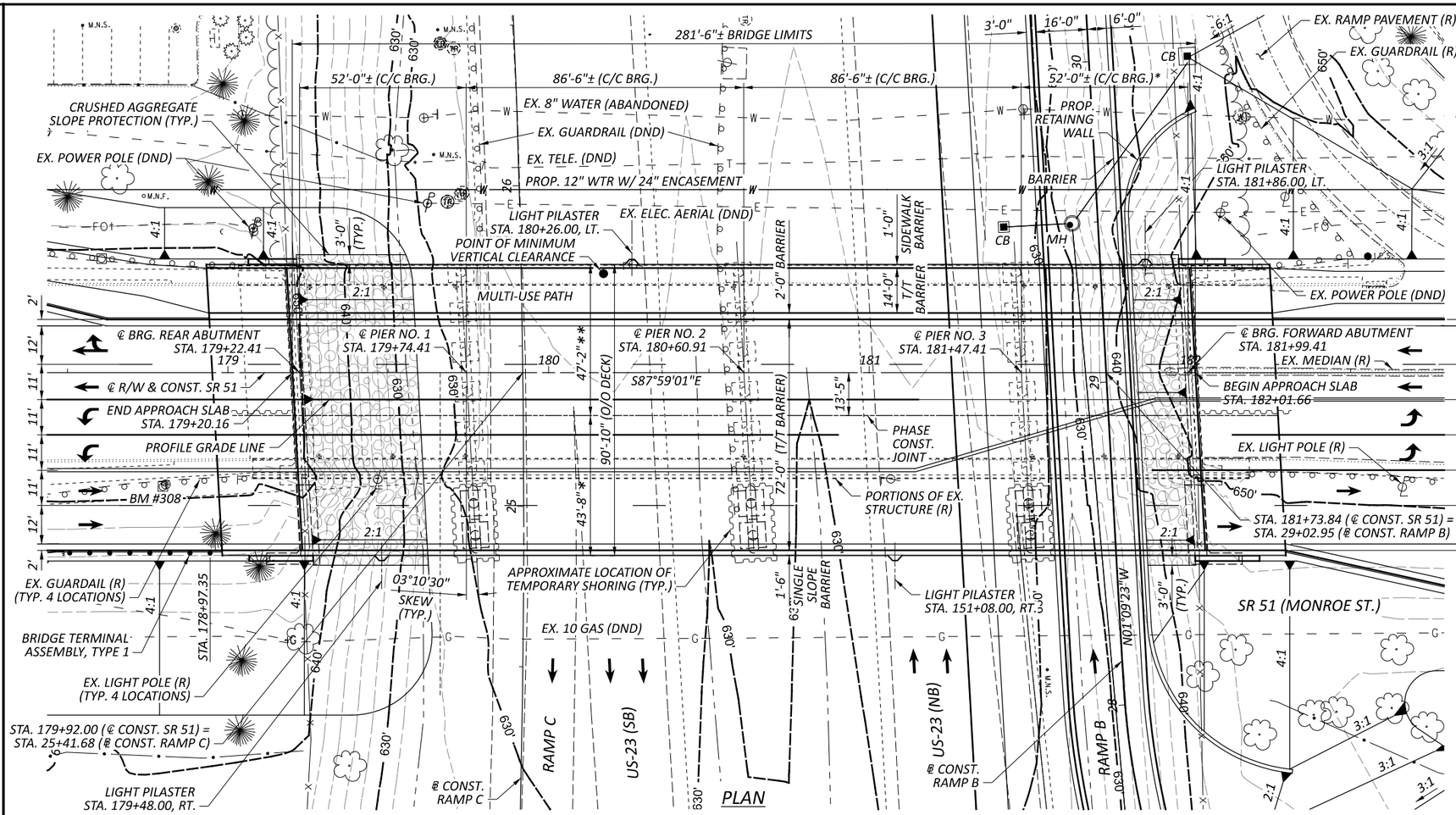
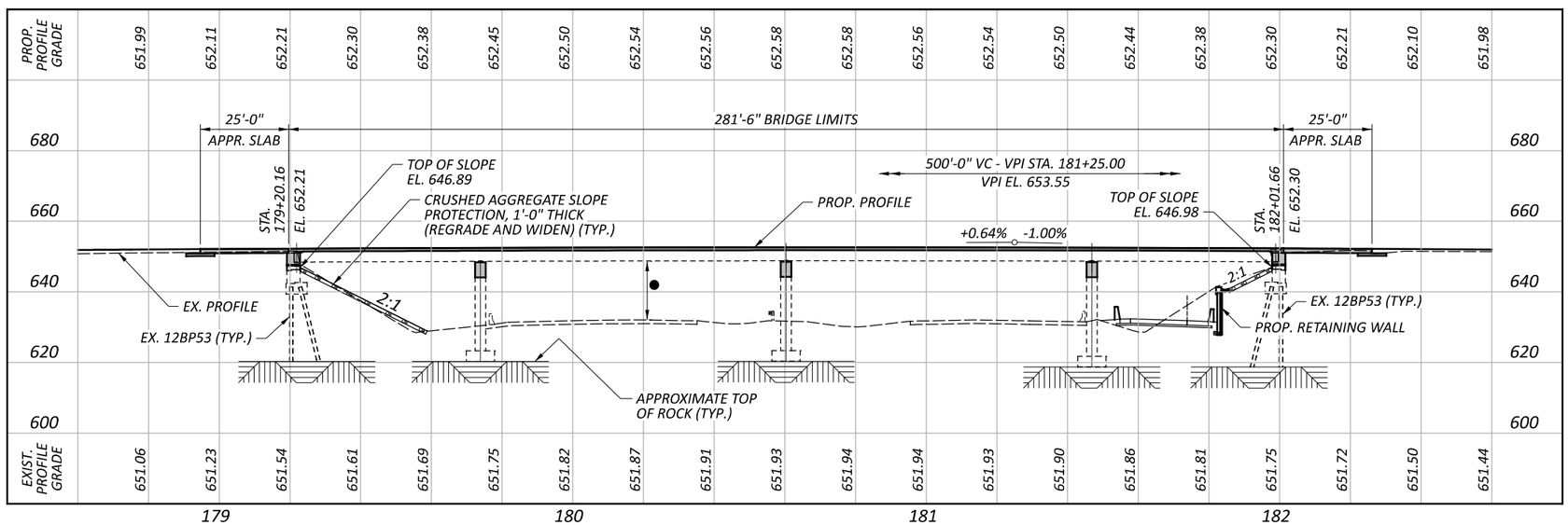
MATCH LINE STA. 950+00.00

SHEET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
179A TOTAL	105889	MTG 10/21/22	XF	BERGMANN

SIGNING PLAN - US 23

HORIZONTAL SCALE IN FEET
0 200
100 400





PROFILE ALONG PROFILE GRADE LINE

BENCHMARK DATA

STA. 179+00 (℄ CONST. SR 51) = STA. 29+71.93 (℄ R/W SR 51)

BM #308	STA. 30+53	ELEV.	651.83	OFFSET	35.0' RT.
BM #309	STA. 35+24	ELEV.	650.31	OFFSET	53.0' RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2026 ADT = 41,650
2046 ADT = 42,770
DIRECTIONAL DISTRIBUTION = 59/41

LEGEND

- BORING LOCATION
- * - PHASE 1 CONSTRUCTION
- ** - PHASE 2 CONSTRUCTION
- ● 15'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 15'-8¾" ACTUAL MINIMUM VERTICAL CLEARANCE
- (DND) - DO NOT REMOVE
- (R) - REMOVE
- (RBO) - RELOCATED BY OTHERS

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH NONCOMPOSITE REINFORCED CONCRETE DECK ON REINFORCED CONCRETE CAP AND COLUMN PIERS ON SPREAD FOOTINGS AND SPILL-THRU STUB ABUTMENTS ON PILES

SPANS: 52'-0", 86'-6", 86'-6", 52'-0" C/CBRG.

ROADWAY: 54'-0" F/F SIDEWALKS

LOADING: CF-400

SKEW: 3° 10' 30" R.F.

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-54 (25' LONG) WITH CURBS (T=13")

ALIGNMENT: TANGENT

CROWN: 0.016

STRUCTURE FILE NUMBER: 4805224

DATE BUILT: 1960

DISPOSITION: TO BE REHABILITATED AND WIDENED

PROPOSED STRUCTURE

TYPE: WIDENED CONTINUOUS STEEL BEAM WITH COMPOSITE REINFORCED CONCRETE DECK ON MODIFIED/WIDENED REINFORCED CONCRETE CAP AND COLUMN PIERS ON SPREAD FOOTINGS AND SEMI-INTEGRAL ABUTMENTS ON PILE

SPANS: 52'-0", 86'-6", 86'-6", 52'-0" C/CBRG.

ROADWAY: 72'-0" T/T BARRIER (ROADWAY)
14'-0" T/T BARRIER (MULTI-USE PATH)

LOADING: HL93

SKEW: 3° 10' 30" R.F.

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG 15" THICK (AS-1-15, AS-2-15)

ALIGNMENT: TANGENT

CROWN: 0.016 FT/FT

DECK AREA: 25,579 SF

COORDINATES: LATITUDE N 41° 42' 54.9"
LONGITUDE W 83° 41' 20.0"

SITE PLAN
BRIDGE NO. LUC-51-1285
OVER US 23

SFN 4805224

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET SUITE 200
AKRON, OHIO 44308
(330) 434-4856
www.arcadis.com

DESIGNER	CHECKER
NES	FJG

REVIEWER CMD 11-04-22

PROJECT ID 105889

SUBSET	TOTAL
1	7

SHEET	TOTAL
1	7

CTY-RTE-SECTION

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/4/2022 TIME: 10:37:21 AM USER: mbechter
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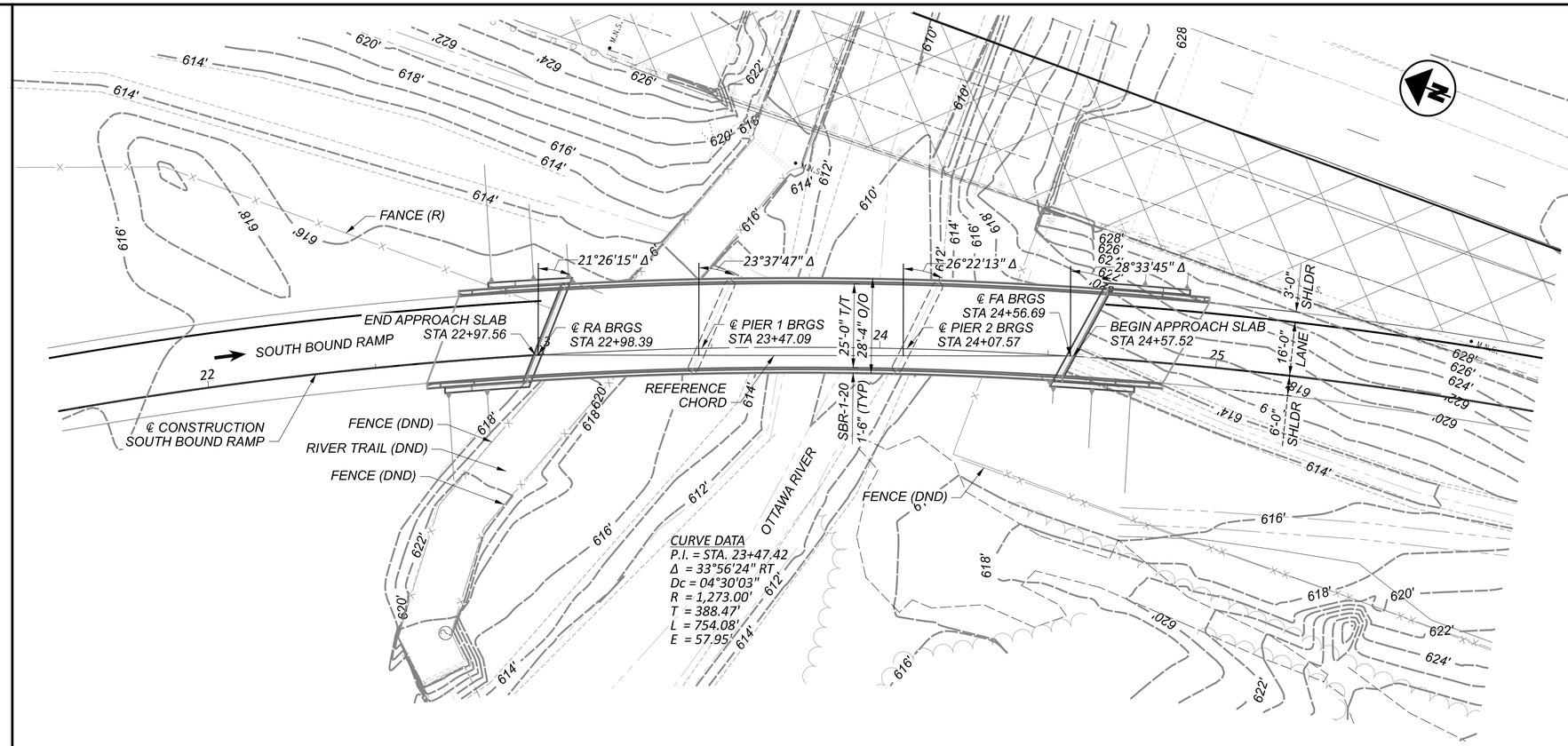
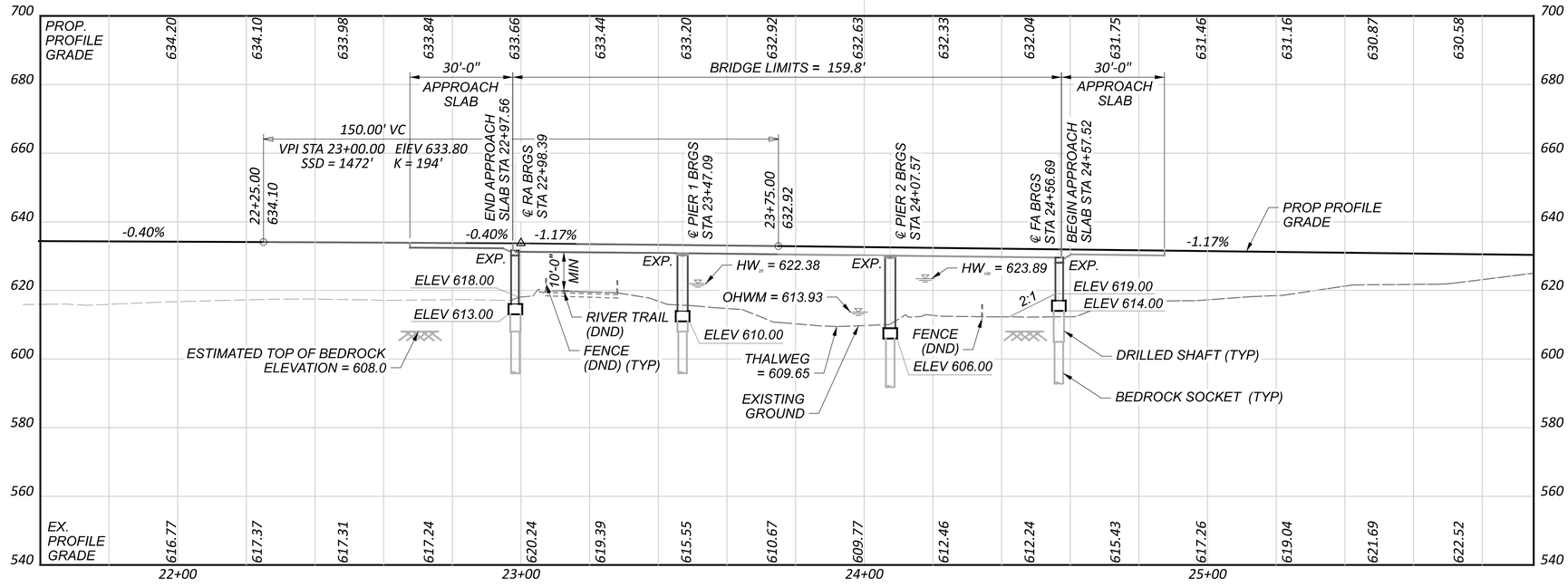


PLAN



PROFILE ALONG ℄ CONSTRUCTION SOUTHBOUND RAMP

BENCHMARK DATA

BM #1 STA.	17+75.39,	ELEV.	618.44,	OFFSET	203.45',	LT
BM #2 STA.	23+51.47,	ELEV.	627.76,	OFFSET	75.01',	LT
BM #3 STA.	25+93.55,	ELEV.	629.62,	OFFSET	315.29',	LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. GEOTECHNICAL INFORMATION WAS NOT AVAILABLE YET.

LEGEND

- ● 10'-0" REQUIRED MINIMUM VERTICAL CLEARANCE AT RIVER TRAIL
- Δ TO REFERENCE CHORD
- EXISTING STRUCTURE TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 125 SQ. MILES

Q (25) =	4840 CFS	V (25) =	4.11 FT/S
Q (100) =	6190 CFS	V (100) =	4.37 FT/S

STRUCTURE CLEARS THE 25 YEAR DESIGN HW BY 7.20 FEET.

PROPOSED STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB WITH SEMI-INTEGRAL ABUTMENTS AND SOLID WALL PIERS ON DRILLED SHAFTS.

SPANS: 47'-8 7/8", 60'-9 1/8", 49'-8 3/8" C/C BEARINGS ALONG REFERENCE CHORD

ROADWAY: 25'-0" TOE/TOE PARAPET

LOADING: HL93 AND 60PSF FUTURE WEARING SURFACE

SKEW: VARIES

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 30'-0" LONG (AS-1-15, AS-2-15)

ALIGNMENT: 4°-30'-03" CURVE RT

CROWN: VARIES FT/FT

DECK AREA: 4555 SF

COORDINATES: LATITUDE 41° 42' 44.04" N

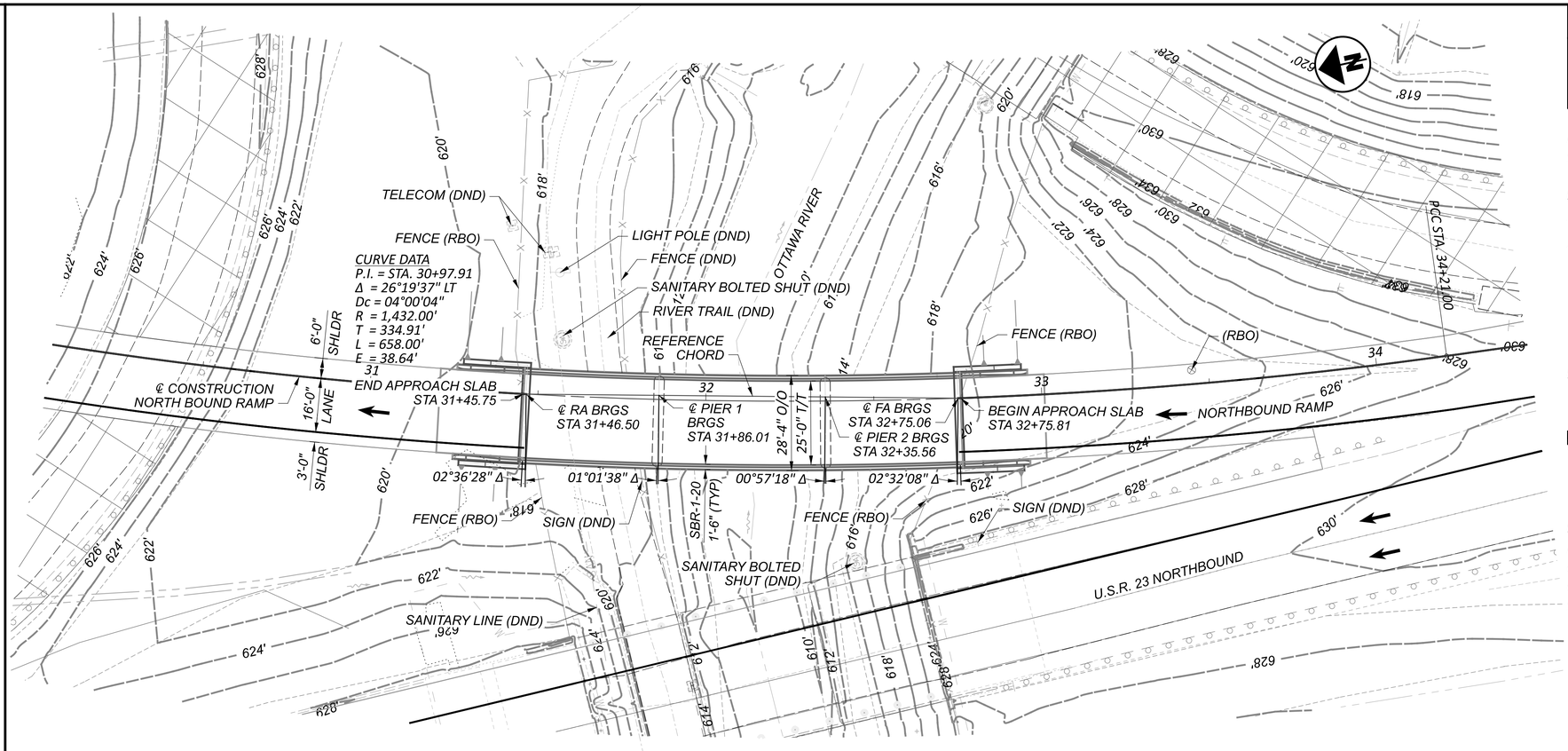
LONGITUDE 83° 41' 19.58" W

HORIZONTAL SCALE IN FEET
0 10 20 40

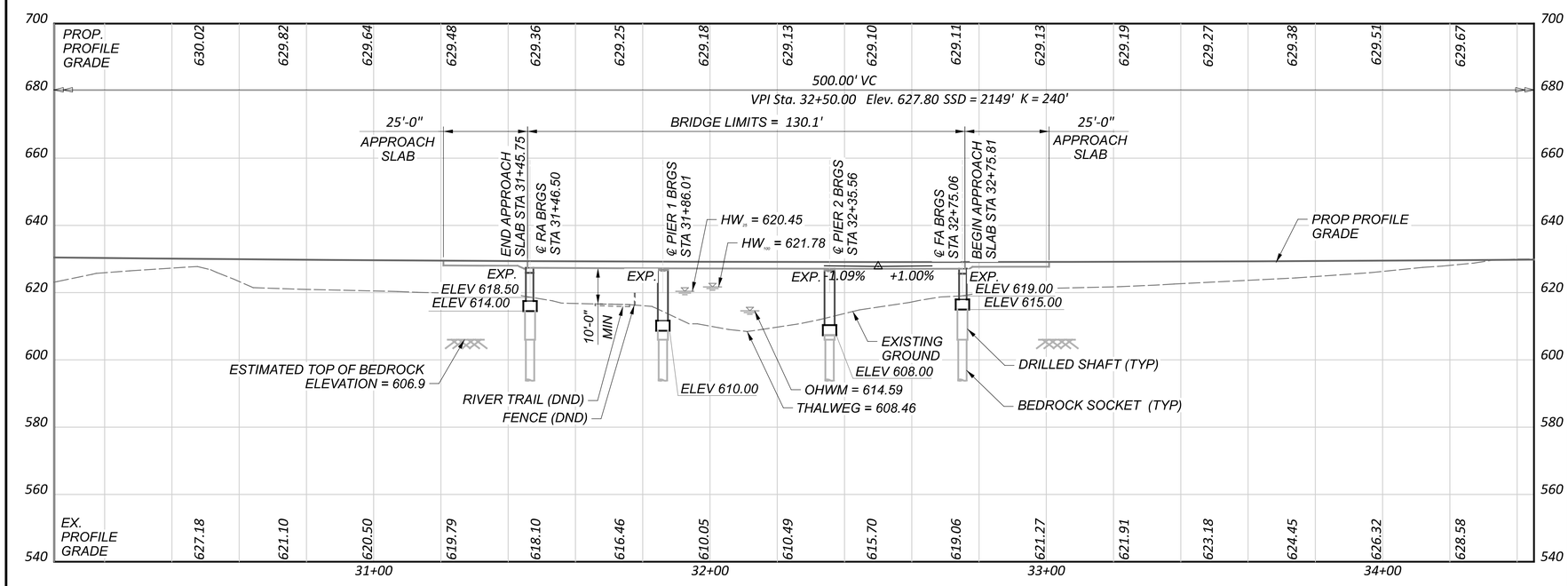
SITE PLAN
BRIDGE NO. LUC-00184-00.180 SOUTHBOUND RAMP OVER OTTAWA RIVER

SFN	4805137
DESIGN AGENCY	2LMN
DESIGNER	HHH
CHECKER	JAH
REVIEWER	XXX MM-DD-YY
PROJECT ID	105889
SUBSET	1
TOTAL	3
SHEET	P.0
TOTAL	0

LUC-184-00.18



PLAN



PROFILE ALONG ℄ CONSTRUCTION NORTHBOUND RAMP

BENCHMARK DATA

BM #1 STA.	29+80.84,	ELEV.	620.40,	OFFSET	106.60',	LT
BM #2 STA.	33+34.87,	ELEV.	629.62,	OFFSET	100.39',	LT
BM #3 STA.	38+09.55,	ELEV.	631.27,	OFFSET	25.02',	LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. GEOTECHNICAL INFORMATION WAS NOT AVAILABLE YET.

LEGEND

- ● 10'-0" REQUIRED MINIMUM VERTICAL CLEARANCE AT RIVER TRAIL Δ TO REFERENCE CHORD
- ⊠ EXISTING STRUCTURE TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 125 SQ. MILES

Q (25) =	4840 CFS	V (25) =	6.23 FT/S
Q (100) =	6190 CFS	V (100) =	6.60 FT/S

STRUCTURE CLEARS THE 25 YEAR DESIGN HW BY 6.65 FEET.

PROPOSED STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB WITH SEMI-INTEGRAL ABUTMENTS AND SOLID WALL PIERS ON DRILLED SHAFTS.

SPANS: 49'-6", 49'-6", 49'-6" C/C BEARINGS ALONG REFERENCE CHORD

ROADWAY: 25'-0" TOE/TOE PARAPET

LOADING: HL93 AND 60PSF FUTURE WEARING SURFACE

SKEW: VARIES

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG (AS-1-15, AS-2-15)

ALIGNMENT: 4°-00'-04" CURVE LT

CROWN: VARIES FT/FT

DECK AREA: 3702 SF

COORDINATES: LATITUDE 41° 42' 43.90" N

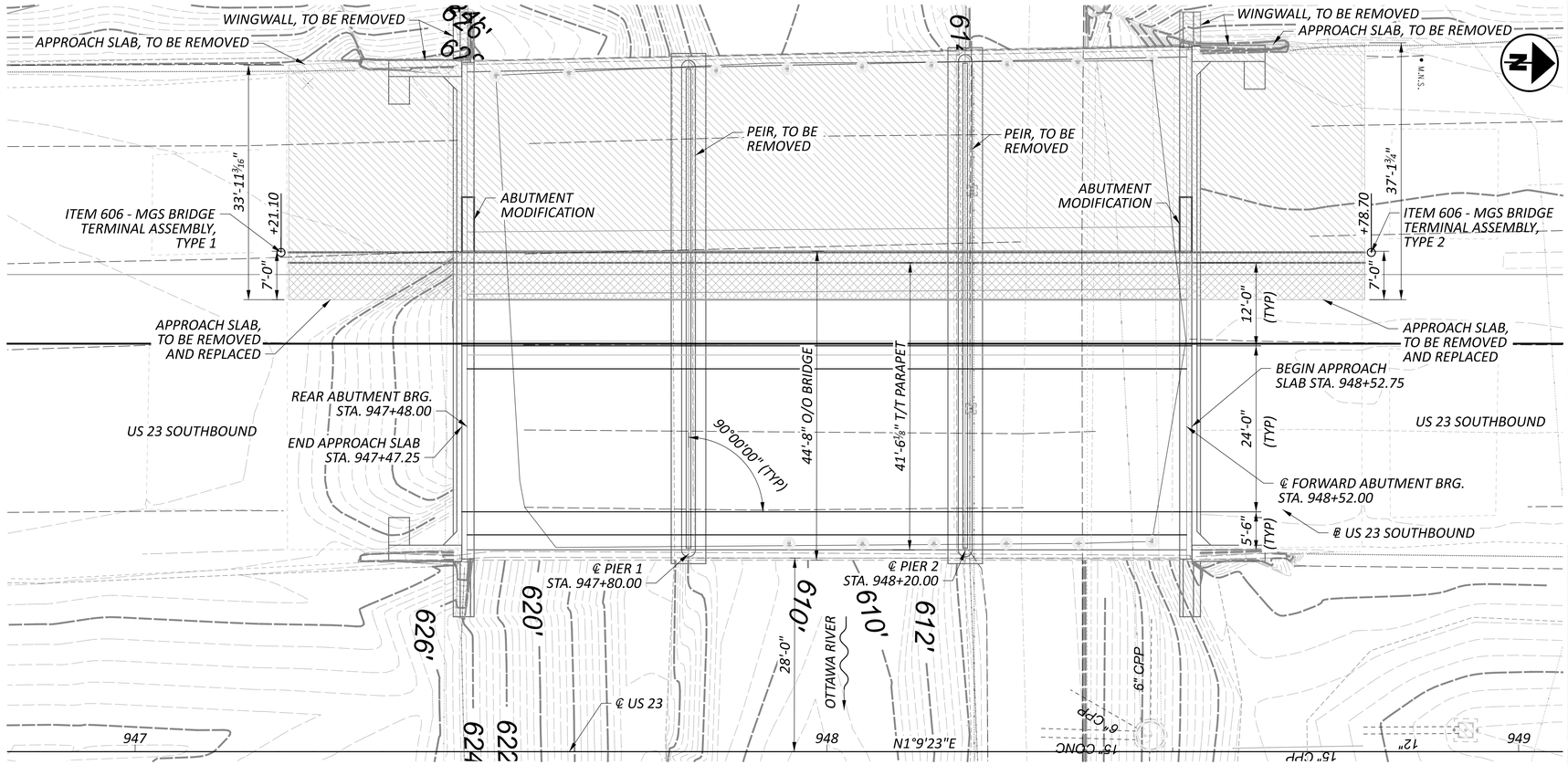
LONGITUDE 83° 41' 15.10" W

HORIZONTAL SCALE IN FEET 0 10 20 40

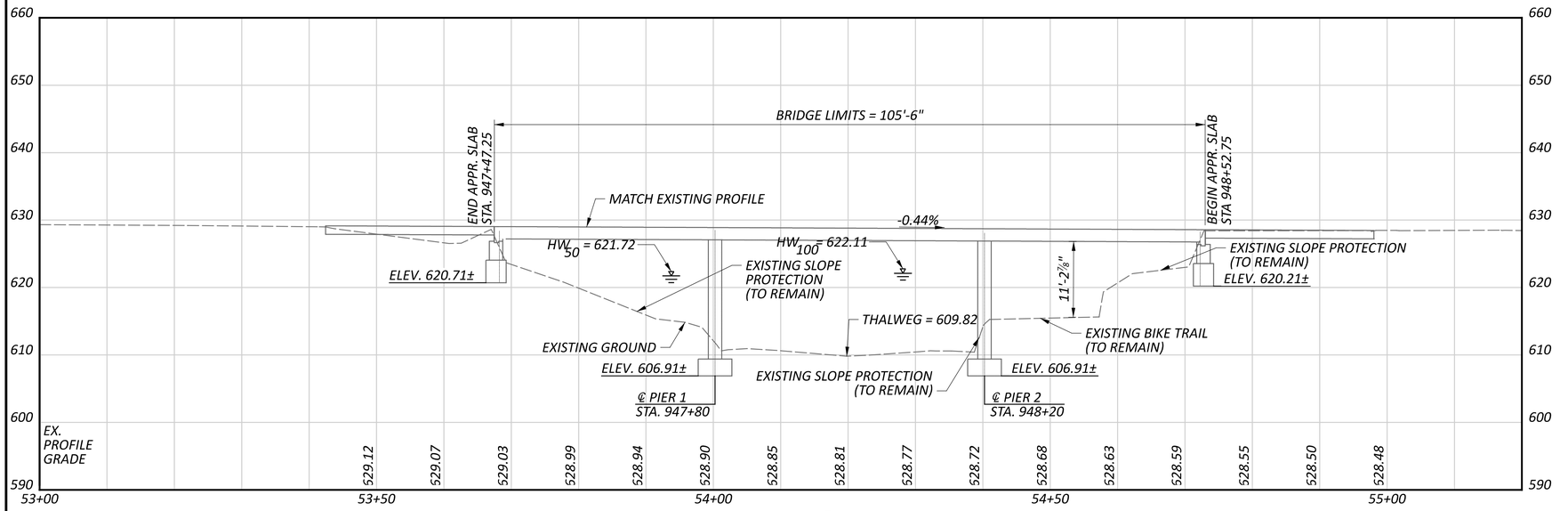
SITE PLAN
BRIDGE NO. LUC-00023-11.750 NORTHBOUND RAMP OVER OTTAWA RIVER

SFN	4805136
DESIGN AGENCY	2LMN
DESIGNER	HHH
CHECKER	JAH
REVIEWER	XXX MM-DD-YY
PROJECT ID	105889
SUBSET	1
TOTAL	3
SHEET	P.0
TOTAL	0

LUC-23-11.75



PLAN



PROFILE ALONG ℄ US 23 SOUTHBOUND

CTY-RTE-SECTION

BENCHMARK DATA

BM #1 STA.	946+49.55,	ELEV.	629.62 ,	OFFSET	203.30,	RT.
BM #2 STA.	948+52.57,	ELEV.	627.76 ,	OFFSET	102.82,	LT.
BM #3 STA.	949+62.69,	ELEV.	620.40 ,	OFFSET	299.97,	RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2026 ADT = 68,030 20XX ADTT = 13,236
2046 ADT = 72,790 20XX ADTT = 15,286
DIRECTIONAL DISTRIBUTION = 0.50

LEGEND

- TO BE REMOVED
- TO BE REMOVED AND REPLACED

HYDRAULIC DATA

DRAINAGE AREA = 125 SQ. MILES
Q (50) = 5510 CFS V (50) = 8.3 FT/S
Q (100) = 6190 CFS V (100) = 8.6 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 5.04 FEET.

PROPOSED WORK

REHABILITATION OF EXISTING STRUCTURE:

1. PARTIAL REMOVAL OF DECK CARRYING EXISTING SB ENTRANCE RAMP
2. RECONSTRUCTION OF 7'-0" OF CONCRETE DECK SLAB TO PROVIDE 44'-8" O/O
3. MODIFICATION TO ABUTMENTS AND PIERS TO MATCH NEW DECK WIDTH
4. CONSTRUCT NEW WINGWALLS
5. PARTIAL APPROACH SLAB REMOVAL TO MATCH NEW BRIDGE DECK WIDTH
6. REPLACE EXTERIOR BRIDGE TERMAL ASSEMBLIES
7. REGRADE SLOPES IN AREAS OF ABUTMENT AND PIER REMOVAL

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTRURES
SPANS: 32.0', 40.0', 32.0' C/C BRGS
ROADWAY: VARIES
LOADING: CF=2000
SKEW: NONE
WEARING SURFACE: MICROSILICA MODIFIED CONCRETE
APPROACH SLABS: AS-1-81, 25'-0" LONG
ALIGNMENT: TANGENT
CROWN: 0.016
STRUCTURE FILE NUMBER: 4801261
DATE BUILT: 1960/2010

PROPOSED STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURES
SPANS: 32.0'±, 40.0'±, 32.0'± C/C BRGS
ROADWAY: 41'-6" TOE/TOE PARAPET
LOADING: HL93 AND 0.060-KSF FUTURE WEARING SURFACE
SKEW: NONE
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" LONG (AS-1-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DECK AREA: 4695 SF
COORDINATES: LATITUDE 41°42'42.67"
LONGITUDE 83°41'18.18"

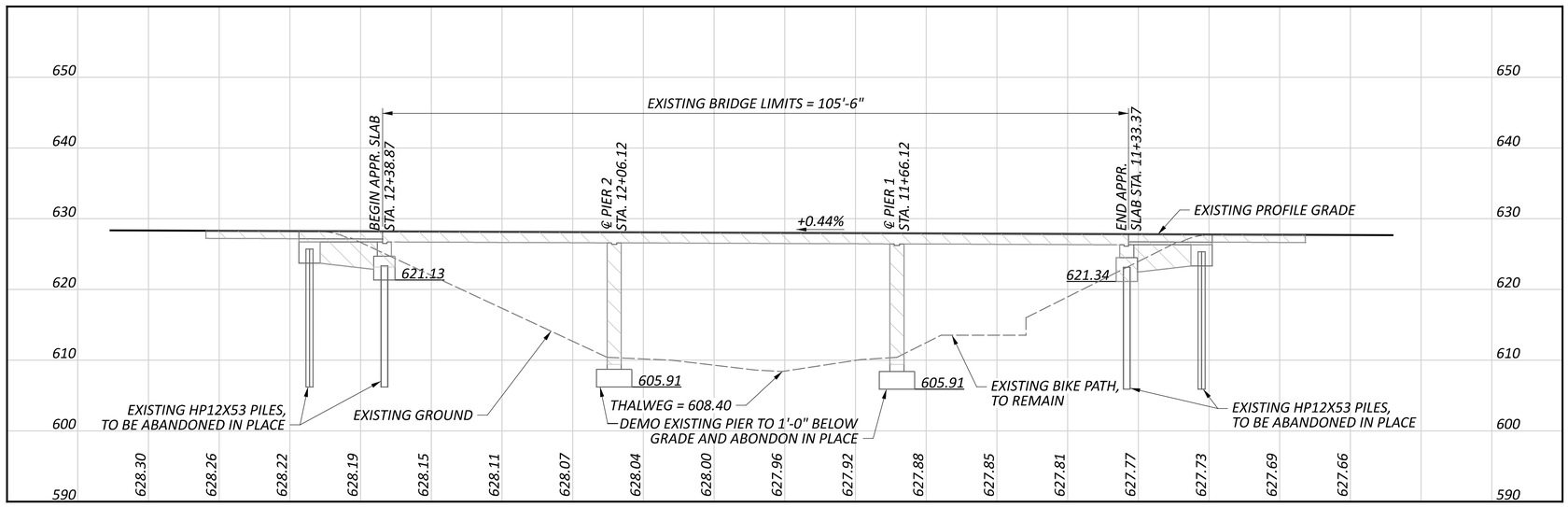
HORIZONTAL SCALE IN FEET
0 5 10 20

SITE PLAN
BRIDGE NO. LUC-00023-11.650 L
OVER OTTAWA RIVER

SFN 4801261
DESIGN AGENCY 2LMN
DESIGNER RFS | CHECKER JAH
REVIEWER XXX MM-DD-YY
PROJECT ID 105889
SUBSET 1 | TOTAL 3
SHEET P.0 | TOTAL 0

PLAN

NOTES:
1. BRIDGE PARAPETS, DECK, AND APPROACH SLABS SHALL BE REMOVED IN THEIR ENTIERITY.
2. BRIDGE ABUTMENTS, PIERS, AND WINGWALLS SHALL BE REMOVED TO 1'-0" BELOW GRADE.
3. AREAS OF STRUCTURAL REMOVAL SHALL BE REGRADED TO MATCH SURROUNDING TERRAIN.



PROFILE ALONG BL OF US 23 NORTHBOUND OFF RAMP (RAMP A)

BENCHMARK DATA

BM #1 STA.	946+49.55,	ELEV.	629.62 ,	OFFSET	203.30,	RT.
BM #2 STA.	948+52.57,	ELEV.	627.76 ,	OFFSET	102.82,	LT.
BM #3 STA.	949+62.69,	ELEV.	620.40 ,	OFFSET	299.97,	RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

LEGEND

- STRUCTURE REMOVAL

PROPOSED WORK

REMOVE EXISTING STRUCTURE
1. REMOVAL OF EXISTING BRIDGE DECK
2. REMOVAL OF EXISTING ABUTMENTS AND PEIRS TO 1'-0" BELOW GRADE
3. REMOVAL OF EXISTING APPOACH SLABS
4. REGRADE EXISTING GROUND

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURES
SPANS: 32.0', 40.0', 32.0' C/C BRGS
ROADWAY: 29'-8" F/F SAFETY CURB
LOADING:
SKEW: NONE
WEARING SURFACE:
APPROACH SLABS: AS-1-XX (25'-0" LONG)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
STRUCTURE FILE NUMBER: 4805135
DATE BUILT: 1960
DISPOSITION: REMOVE TO 1' BELOW GRADE

HORIZONTAL SCALE IN FEET
0 5 10 20

SITE PLAN
EXIT TERMINAL RAMP A OVER OTTAWA RIVER

SFN 4805135
DESIGN AGENCY 2LMN
DESIGNER RFS | CHECKER JAH
REVIEWER XXX MM-DD-YY
PROJECT ID 105889
SUBSET 1 | TOTAL 1
SHEET P.0 | TOTAL 0

CTY-RTE-SECTION

Appendix 4 – Forms

Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3) 66

SITE NAME/LOCATION LUC-23-11.75 Stream 1

SITE NUMBER - RIVER BASIN Ottawa-Stony RIVER CODE - DRAINAGE AREA (mi²) 0.41

LENGTH OF STREAM REACH (ft) 1200 LAT 41.713964 LONG -83.687111 RIVER MILE -

DATE 2/16/2023 SCORER JB & CA COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check *ONLY* two predominant substrate *TYPE* boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☐	SILT [3 pt]	20
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	10
☐	BEDROCK [16 pts]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]		☑	CLAY or HARDPAN [0 pt]	30
☐	GRAVEL (2-64 mm) [9 pts]	10	☐	MUCK [0 pts]	
☑	SAND (<2 mm) [6 pts]	30	☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 (A)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5 (B)

HHEI Metric Points

Substrate Max = 40: 11

A + B

2. Maximum Pool Depth (*Measure the maximum pool depth within the 61 meter (200 feet)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☐	5 cm - 10 cm [15 pts]
☑	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0pts]

COMMENTS OHWM Elev.: 16 in from Monroe outlet bttm MAXIMUM POOL DEPTH (centimeters): 30

Pool Depth Max = 30: 30

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check *ONLY* one box):

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☑	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☐	≤ 1.0 m (≤ 3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]		

COMMENTS OHWM Width: 63 in AVERAGE BANKFULL WIDTH (meters) 3.7

Bankfull Width Max=30: 25

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream★

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☑	☑	Urban or Industrial
☑	☑	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑	Stream Flowing	☐	Moist Channel, isolated pools, no flow (intermittent)
☐	Subsurface flow with isolated pools (interstitial)	☐	Dry channel, no water (ephemeral)

COMMENTS Perennial

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☐	None	☑	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☐	2.5	☐	>3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score No (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: Ottawa River Distance from Evaluated Stream 1000 ft
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Sylvania NRCS Soil Map Page: - NRCS Soil Map Stream Order: -

County: Lucas Township/City: Sylvania

MISCELLANEOUS

Base Flow Conditions? (Y/N): Yes Date of last precipitation: 2/15/2023 Quantity: 0.02 in

Photo-documentation Notes: -

Elevated Turbidity? (Y/N): No Canopy (% open): 25

Were samples collected for water chemistry? (Y/N): No Lab Sample # or ID (attach results): -

Field Measures: Temp (°C) 8.3 Dissolved Oxygen (mg/l) - pH (S.U.) 9.7 Conductivity (umhos/cm) -

Is the sampling reach representative of the stream (Y/N) Yes If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) No Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) No Species observed (if known): _____

Salamanders Observed? (Y/N) No Species observed (if known): _____

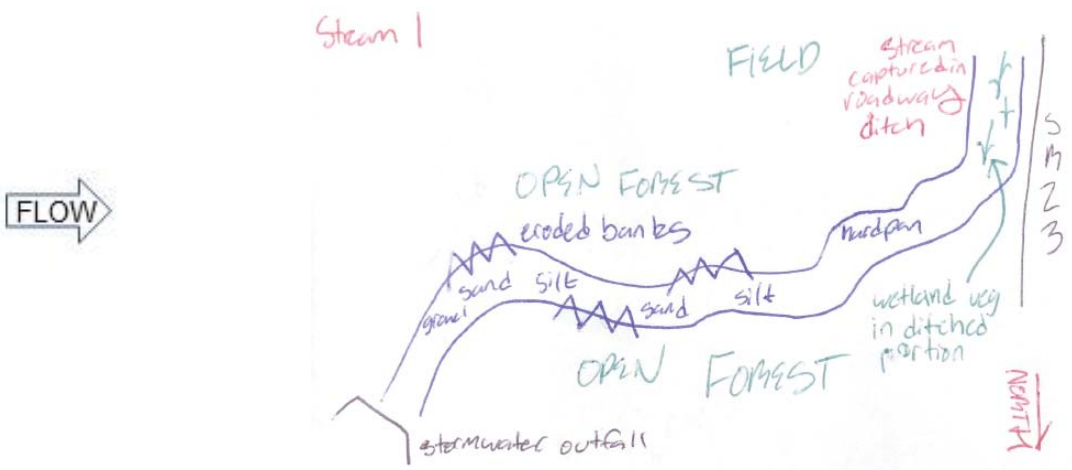
Aquatic Macroinvertebrates Observed? (Y/N) No Species observed (if known): _____

Comments Regarding Biology: Additional OHWM Elev.: 21 in above OH-23N entrance ramp culvert inlet

Additional OHWM Width: 37 in at OH-23N entrance ramp culvert inlet

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3) 62

SITE NAME/LOCATION LUC-23-11.75 Stream 2

SITE NUMBER - RIVER BASIN Ottawa-Stony RIVER CODE - DRAINAGE AREA (mi²) 0.07

LENGTH OF STREAM REACH (ft) 400 LAT 41.710201 LONG -83.689010 RIVER MILE -

DATE 2/16/2023 SCORER JB & CA COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check *ONLY* two predominant substrate *TYPE* boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☑	SILT [3 pt]	30
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	10
☐	BEDROCK [16 pts]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]		☐	CLAY or HARDPAN [0 pt]	
☐	GRAVEL (2-64 mm) [9 pts]		☐	MUCK [0 pts]	
☑	SAND (<2 mm) [6 pts]	60	☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 (A)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9

(B) TOTAL NUMBER OF SUBSTRATE TYPES: 3

HHEI Metric Points

Substrate Max = 40: 12

A + B

2. Maximum Pool Depth (*Measure the maximum pool depth within the 61 meter (200 feet)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☐	5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5pts]
☑	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0pts]

COMMENTS OHWM Elev.: 7 in above bottom of channel MAXIMUM POOL DEPTH (centimeters): 25

Pool Depth Max = 30: 30

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check *ONLY* one box):

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☐	≤ 1.0 m (≤ 3' 3") [5 pts]
☑	> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]		

COMMENTS OHWM Width: 56 in AVERAGE BANKFULL WIDTH (meters) 1.6

Bankfull Width Max=30: 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream★

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☑	☑	Urban or Industrial
☑	☑	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑	Stream Flowing	☐	Moist Channel, isolated pools, no flow (intermittent)
☐	Subsurface flow with isolated pools (interstitial)	☐	Dry channel, no water (ephemeral)

COMMENTS Intermittent

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☐	None	☑	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☐	2.5	☐	>3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score No (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: Ottawa River Distance from Evaluated Stream 1000 ft

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Sylvania NRCS Soil Map Page: - NRCS Soil Map Stream Order: -

County: Lucas Township/City: Sylvania

MISCELLANEOUS

Base Flow Conditions? (Y/N): Yes Date of last precipitation: 2/15/2023 Quantity: 0.02 in

Photo-documentation Notes: -

Elevated Turbidity? (Y/N): No Canopy (% open): 10

Were samples collected for water chemistry? (Y/N): No Lab Sample # or ID (attach results): -

Field Measures: Temp (°C) 6.1 Dissolved Oxygen (mg/l) - pH (S.U.) 8.4 Conductivity (umhos/cm) -

Is the sampling reach representative of the stream (Y/N) Yes If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) No Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) No Species observed (if known): _____

Salamanders Observed? (Y/N) No Species observed (if known): _____

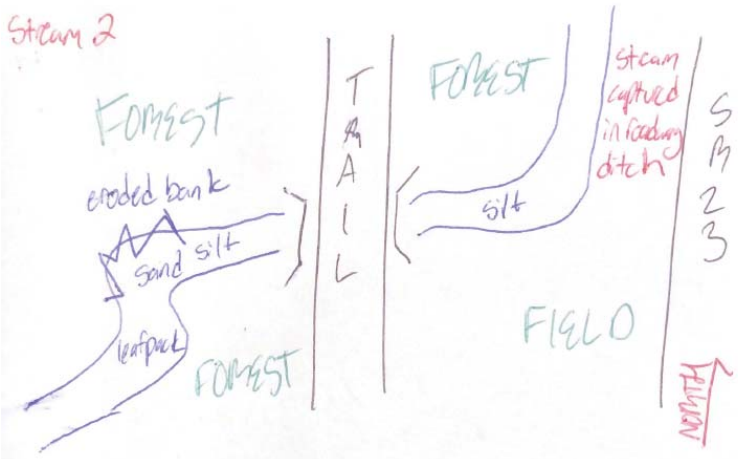
Aquatic Macroinvertebrates Observed? (Y/N) No Species observed (if known): _____

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW



U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: LUC-23-11.75 City/County: Sylvania / Lucas Co. Sampling Date: 2/16/2023

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 1

Investigator(s): John Ballas, Cassie Austin Section, Township, Range: S10 T9S R6E

Landform (hillside, terrace, etc.): bench Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.713818 Long: -83.687735 Datum: WGS 84

Soil Map Unit Name: Uo: Udorthents, loamy NWI classification: none

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	60	Yes	FACW
2. *Phragmites australis*	30	Yes	FACW
3. *Allium schoenoprasum*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
7-16	10YR 6/3	80	10YR 6/8	20	C	M	Sandy	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: LUC-23-11.75 City/County: Sylvania / Lucas Co. Sampling Date: 2/16/2023

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 2

Investigator(s): John Ballas, Cassie Austin Section, Township, Range: S10 T9S R6E

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

Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.713858 Long: -83.687505 Datum: WGS 84

Soil Map Unit Name: SmC: Sisson loam, 6 to 12 percent slopes NWI classification: none

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Setaria viridis*	5	No	UPL
2. *Galium triflorum*	45	Yes	FACU
3. *Juniperus virginiana*	5	No	FACU
4. *Allium schoenoprasum*	10	No	FACU
5. *Digitaria ischaemum*	20	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 2

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: LUC-23-11.75 City/County: Sylvania / Lucas Co. Sampling Date: 2/16/2023

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 3

Investigator(s): John Ballas, Cassie Austin Section, Township, Range: S10 T9S R6E

Landform (hillside, terrace, etc.): bench Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.713922 Long: -83.686794 Datum: WGS 84

Soil Map Unit Name: SmC: Sisson loam, 6 to 12 percent slopes NWI classification: none

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	80	Yes	FACW
2. *Lysimachia nummularia*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
9-15	10YR 3/2	93	10YR 6/8	7	C	M	Loamy/Clayey	Prominent redox concentrations
15-16	10YR 5/6	90	10YR 6/8	10	C	M	Sandy	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: LUC-23-11.75 City/County: Sylvania / Lucas Co. Sampling Date: 2/16/2023

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 4

Investigator(s): John Ballas, Cassie Austin Section, Township, Range: S10 T9S R6E

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope %: 3-5

Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.710332 Long: -83.688660 Datum: WGS 84

Soil Map Unit Name: SuE3: St. Clair silty clay loam, 12 to 25 percent slopes, severely eroded NWI classification: none

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 4

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Phragmites australis*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: LUC-23-11.75 City/County: Sylvania / Lucas Co. Sampling Date: 2/16/2023

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 5

Investigator(s): John Ballas, Cassie Austin Section, Township, Range: S10 T9S R6E

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-15

Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.711068 Long: -83.687570 Datum: WGS 84

Soil Map Unit Name: Uo: Udorthents, loamy NWI classification: none

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

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

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

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

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

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)

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 3
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 5

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Phragmites australis*	95	Yes	FACW
2. *Verbena hastata*	5	No	FACW
3. *Lysimachia nummularia*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 5

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
5-12	10YR 5/3	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
12-16	10YR 5/6	90	10YR 6/8	10	C	M	Sandy	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: LUC-23-11.75 City/County: Sylvania / Lucas Co. Sampling Date: 2/16/2023

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 6

Investigator(s): John Ballas, Cassie Austin Section, Township, Range: S10 T9S R6E

Landform (hillside, terrace, etc.): hilslope Local relief (concave, convex, none): none Slope %: 25

Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.710896 Long: -83.687657 Datum: WGS 84

Soil Map Unit Name: Uo: Udorthents, loamy NWI classification: none

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 6

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Daucus carota*	5	No	UPL
2. *Elymus canadensis*	30	Yes	FACU
3. *Plantago lanceolata*	40	Yes	FACU
4. *Festuca rubra*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	80	x 4 =	320
UPL species	5	x 5 =	25
Column Totals:	85 (A)		345 (B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 6

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Background Information

Name: John Ballas
Date: 2/16/2023
Affiliation: Lawhon & Associates, Inc.
Address: 1441 King Avenue, Columbus, Ohio 43212
Phone Number: (614) 481-8600
e-mail address: jballas@lawhon-assoc.com
Name of Wetland: Wetland A and Wetland B
Vegetation Communit(ies): PEM
HGM Class(es): III(B)(1)
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Please refer to the associated ESR available on Environet (PID 105889).

Lat/Long or UTM Coordinate	WGS 1984	41.713818	-83.687735
USGS Quad Name			Sylvania
County			Lucas
Township			Sylvania
Section and Subsection			S10 T9S R6E
Hydrologic Unit Code			041000010307
Site Visit			2/16/2023
National Wetland Inventory Map			none
Ohio Wetland Inventory Map			none
Soil Survey			Uo
Delineation report/map			Yes

Name of Wetland:	Wetland A and Wetland B
Wetland Size (acres, hectares):	A: 0.024 ac, B: 0.066 ac

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

Please refer to the associated ESR available on Environet (PID 105889).

Comments, Narrative Discussion, Justification of Category Changes:

Given the close proximity and similarities between Wetland A and Wetland B, they have been evaluated on the same ORAM form.

Final score : 19	**Category:**	Category 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	☑	☐
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	☑	☐
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	☑	☐
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	☑	☐
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	☐	☑
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	☑	☐

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	(NO) Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	(NO) Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	(NO) Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	(NO) Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	(NO) Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	(NO) Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	(NO) Go to Question 8a
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	(NO) Go to Question 8b

8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	(NO) Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	(NO) Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	(NO) Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	(NO) Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: LUC-23-11.75	**Rater(s):** John Ballas	**Date:** 2/16/2023

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

Wetland A and Wetland B

A: 0.024 ac, B: 0.066 ac

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

5 (max 14 pts.) | 5 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [x] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

13 (max 30 pts.) | 18 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [x] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [x] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [x] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

4 (max 20 pts.) | 22 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [x] clearcutting
- [x] selective cutting
- [x] woody debris removal
- [ ] toxic pollutants
- [x] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [x] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

22 (subtotal this page)

last revised 1 February 2001 jjm

Site: LUC-23-11.75	**Rater(s):** John Ballas	**Date:** 2/16/2023

22
subtotal first page

Metric 5. Special Wetlands.

Wetland A and Wetland B

0 max 10 pts. | 22 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-3 max 20 pts. | 19 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [✓] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [✓] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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End of Quantitative Rating. Complete Categorization Worksheets.

Wetland A and Wetland B

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	13	
	Metric 4. Habitat	4	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE	19	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland A and Wetland B **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	(NO)	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	(NO) Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	(Category 1)	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: John Ballas	
Date: 2/16/2023	
Affiliation: Lawhon & Associates, Inc.	
Address: 1441 King Avenue, Columbus, Ohio 43212	
Phone Number: (614) 481-8600	
e-mail address: jballas@lawhon-assoc.com	
Name of Wetland: Wetland C	
Vegetation Communit(ies): PEM	
HGM Class(es): III(B)(1)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Please refer to the associated ESR available on Environet (PID 105889).	

Lat/Long or UTM Coordinate	WGS 1984	41.711068	-83.687570
USGS Quad Name			Sylvania
County			Lucas
Township			Sylvania
Section and Subsection			S10 T9S R6E
Hydrologic Unit Code			041000010307
Site Visit			2/16/2023
National Wetland Inventory Map			none
Ohio Wetland Inventory Map			none
Soil Survey			Uo
Delineation report/map			Yes

Background Information

Name: John Ballas
Date: 2/16/2023
Affiliation: Lawhon & Associates, Inc.
Address: 1441 King Avenue, Columbus, Ohio 43212
Phone Number: (614) 481-8600
e-mail address: jballas@lawhon-assoc.com
Wetland C
Vegetation Communit(ies): PEM, PFO
HGM Class(es): III(B)(1)
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Please refer to the associated ESR available on Environet (PID 105889).

Lat/Long or UTM Coordinate	WGS 1984	41.711068	-83.687570
USGS Quad Name			Sylvania
County			Lucas
Township			Sylvania
Section and Subsection			S10 T9S R6E
Hydrologic Unit Code			041000010307
Site Visit			2/16/2023
National Wetland Inventory Map			none
Ohio Wetland Inventory Map			none
Soil Survey			Uo
Delineation report/map			Yes

Name of Wetland:	Wetland C
Wetland Size (acres, hectares):	1.310 ac.

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

Please refer to the associated ESR available on Environet (PID 105889).

Comments, Narrative Discussion, Justification of Category Changes:

Final score : 26	**Category:**	Category 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	☑	☐
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	☑	☐
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	☑	☐
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	☑	☐
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	☐	☑
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	☑	☐

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Wetland C

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b

8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: LUC-23-11.75	**Rater(s):** John Ballas	**Date:** 2/16/2023

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Wetland C

1.310 ac.

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [x] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 6 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [x] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

17 (max 30 pts.) | 23 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [x] 100 year floodplain (1)
- [x] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [x] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [ ] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [x] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

6 (max 20 pts.) | 29 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [x] clearcutting
- [x] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [x] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [x] sedimentation
- [ ] dredging
- [x] farming
- [x] nutrient enrichment

29 (subtotal this page)

last revised 1 February 2001 jjm

Site: LUC-23-11.75	Rater(s): John Ballas	Date: 2/16/2023

29
subtotal first page

0 (max 10 pts.) | 29 (subtotal)

Metric 5. Special Wetlands.

Wetland C

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

-3 (max 20 pts.) | 26 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [0] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [✓] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [✓] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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End of Quantitative Rating. Complete Categorization Worksheets.

Wetland C

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	17	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE	26	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland C **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

	Final Category		
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Name of Wetland:	Wetland C
Wetland Size (acres, hectares):	1.310 ac.

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

Please refer to the associated ESR available on Environet (PID 105889).

Comments, Narrative Discussion, Justification of Category Changes:

Final score : 29	**Category:**	Category 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	☑	☐
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	☑	☐
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	☑	☐
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	☑	☐
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	☐	☑
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	☑	☐

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Wetland C

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	(NO) Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	(NO) Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	(NO) Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	(NO) Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	(NO) Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	(NO) Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	(NO) Go to Question 8a
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	(NO) Go to Question 8b

8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	(NO) Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	(NO) Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	(NO) Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	(NO) Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: LUC-23-11.75	**Rater(s):** John Ballas	**Date:** 2/16/2023

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Wetland C

1.310 ac.

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [x] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 6 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [x] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

17 (max 30 pts.) | 23 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [x] 100 year floodplain (1)
- [x] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [x] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [ ] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [x] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

6 (max 20 pts.) | 29 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [x] clearcutting
- [x] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [x] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [x] sedimentation
- [ ] dredging
- [x] farming
- [x] nutrient enrichment

29 subtotal this page

last revised 1 February 2001 jjm

Site: LUC-23-11.75	**Rater(s):** John Ballas	**Date:** 2/16/2023

29
subtotal first page

Metric 5. Special Wetlands.

Wetland C

0 max 10 pts. | 29 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

0 max 20 pts. | 29 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [✓] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [✓] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

29

End of Quantitative Rating. Complete Categorization Worksheets.

Wetland C

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	17	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	29	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland C **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	(NO)	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	(NO) Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	(Category 1)	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Appendix 5 – Agency Data Request Results

Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR MARY MERTZ, DIRECTOR

Jeff Johnson, Chief
Division of Natural Areas & Preserves
2045 Morse Rd, Building H
Columbus, Ohio 43229

January 27, 2023

Levi Webster
Lawhon & Associates, Inc.
1441 King Ave.
Columbus, Ohio 43212

Dear Levi,

Per your request, I have e-mailed you a shapefile with our Natural Heritage Program data for the LUC-23-11.75 (PID 105889) project, including a one-mile radius, in the City of Sylvania, Lucas County, Ohio. These data will not be published or distributed beyond the scope of the project description on the data request form.

Records included in the shapefile may be for rare and endangered plants and animals, geologic features, high quality plant communities and animal assemblages. Fields included are scientific and common names, state and federal status, and the date of the most recent observation. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened.

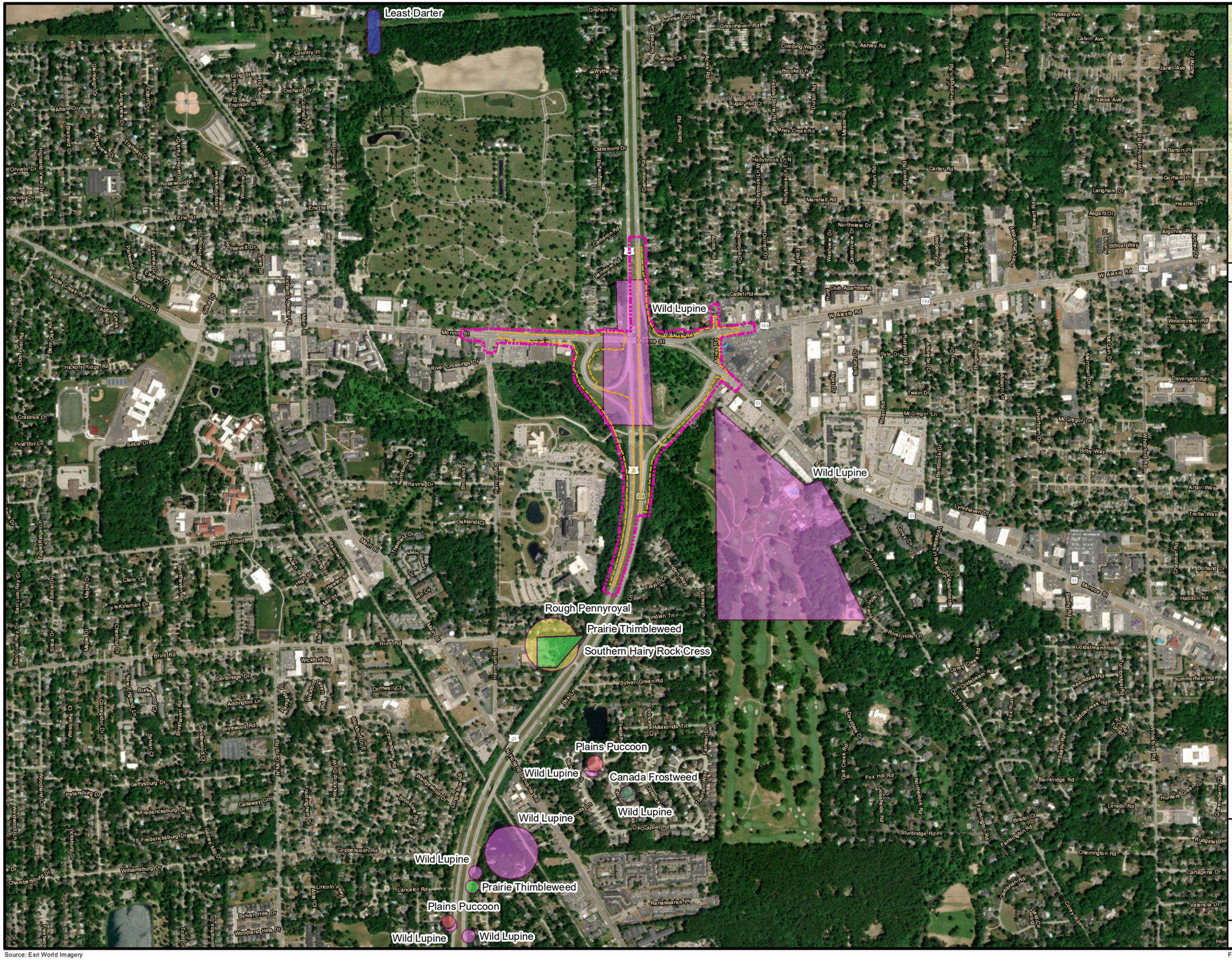
Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

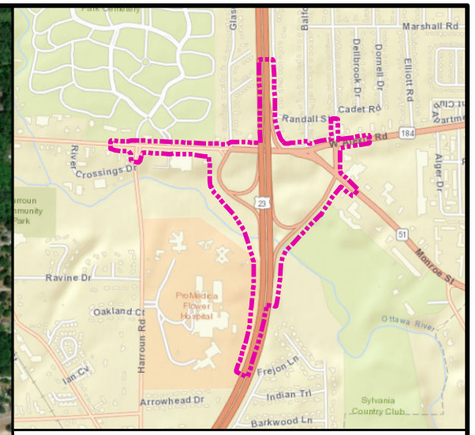
This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me via email or voicemail at 614-265-6818 if I can be of further assistance.

Sincerely,

Kendra Millam
Ohio Natural Heritage Program





Site Location Map

Legend

- Study Area
- Construction Limits

ODNR Species

- Canada Frostweed
- Least Darter
- Plains Puccoon
- Prairie Thimbleweed
- Rough Pennyroyal
- Southern Hairy Rock Cress
- Wild Lupine

N

0 500 1,000 2,000 Feet

LUC-23-1.75
PID: 105889

ODNR NHD Map

Lawhon & Associates, Inc.

Date:	Approved by:	L&A No.	Figure
Mar 2023	CM	21-0314	6

Source: Esri World Imagery

File Name: 06-Odnr.mxd Edited: 3/21/2023 By: dwilliams

John Ballas

From: Korfel, Lindsey M <lindsey_korfel@fws.gov>
Sent: Wednesday, February 22, 2023 1:33 PM
To: John Ballas; Hallberg, Karen I
Subject: Re: [External] Bat Buffer Request for LUC-23-11.75 (PID 105889)

Hi John,

Please see my response below. Have a great day!

Best,

Lindsey Korfel (*She/her*)
Wildlife Biologist
Transportation Liaison

| U.S. Fish and Wildlife Service Ohio Ecological Services Field Office |
| 4625 Morse Road Suite 104 | Columbus, OH 43230 | direct line 614-528-9707 |

From: John Ballas <jballas@lawhon-assoc.com>
Sent: Tuesday, February 21, 2023 7:46 AM
To: Korfel, Lindsey M <lindsey_korfel@fws.gov>; Hallberg, Karen I <Karen_Hallberg@fws.gov>
Subject: FW: [External] Bat Buffer Request for LUC-23-11.75 (PID 105889)

Hi Lindsey and Karen!

Per the December 2022 ODOT EUM, I would like to also request the location of any known bald eagle nests near the study area.

This project is located near a bald eagle nest:
_____ Yes
___X__ No- We have no record of a BAEG nest within 0.5 miles of this project. However, neither the Service nor the Ohio Division of Wildlife maintains a complete database of current BAEG nest locations. Therefore, the project sponsor (or representative acting on their behalf) is responsible for surveying the project area and consulting further with this office, prior to commencement of any project activity, if a nest is identified within a 0.5-mile radius of the project site.

Location(s) of known nearby nest(s), if applicable:

See below for the original bat buffer email.

Thank you!

John Ballas, M.Sc. (he/they)
Ecologist/Botanist
Lawhon & Associates, Inc.
P: 614.481.8600 Ext. 163
C: 614.551.0252

From: Levi Webster <lwebster@lawhon-assoc.com>
Sent: Monday, February 20, 2023 6:43 PM
To: John Ballas <jballas@lawhon-assoc.com>
Subject: Fwd: [External] Bat Buffer Request for LUC-23-11.75 (PID 105889)

Get Outlook for iOS

From: Hallberg, Karen I <Karen_Hallberg@fws.gov>
Sent: Thursday, January 5, 2023 11:26:13 AM
To: Levi Webster <lwebster@lawhon-assoc.com>; Korfel, Lindsey M <lindsey_korfel@fws.gov>
Cc: John Ballas <jballas@lawhon-assoc.com>
Subject: Re: [External] Bat Buffer Request for LUC-23-11.75 (PID 105889)

Levi,

Please see our response below.

Thank you,
Karen

The project is located within the following bat buffer:
____ BLUE (IBAT hibernaculum)
____ PURPLE (NLEB hibernaculum)
____ RED (IBAT swarming location)
____ YELLOW (Acoustic IBAT detection)
____ GOLD (IBAT maternity colony)
____ BROWN (NLEB maternity roost)
____ GREEN (Male/Non-repro female IBAT)
__X_ Project is not located within a bat buffer

This project is located within an eastern massasauga range polygon:
_____ Yes
__X__ No

Karen I. Hallberg, Ph.D. (she/her)
Wildlife Biologist / Transportation Liaison
U.S. Fish & Wildlife Service
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230
karen_hallberg@fws.gov
Direct Line: (614) 528-9697
Main Office Phone: (614) 416-8993 *ext. 123*
Please note I am working on a telework schedule and am normally in the office two days per week.

Contacting me via email is usually best to ensure your questions/concerns are brought to my immediate attention.

From: Levi Webster <lwebster@lawhon-assoc.com>
Sent: Thursday, January 5, 2023 10:09 AM
To: Korfel, Lindsey M <lindsey_korfel@fws.gov>
Cc: Hallberg, Karen I <Karen_Hallberg@fws.gov>; John Ballas <jballas@lawhon-assoc.com>
Subject: [EXTERNAL] Bat Buffer Request for LUC-23-11.75 (PID 105889)

This project is a federal aid highway project and will be coordinated with your office (if coordination is required) through the ODOT-OES Ecological MOA process and 2016 PBO. This is a request for bat buffer information only, and a technical guidance letter is not required.

Northern Terminus Project coordinates:
Lat.: 41.718401°
Long.: -83.688432°
Southern Terminus Project coordinates:
Lat.: 41.706489°
Long.: -83.689194°
Eastern Terminus Project coordinates:
Lat.: 41.715481°
Long.: -83.683171°
Western Terminus Project coordinates:
Lat.: 41.715117°
Long.: -83.696205°

The project is located within the following bat buffer:
_____ BLUE (IBAT hibernaculum)
_____ PURPLE (NLEB hibernaculum)
_____ RED (IBAT swarming location)
_____ YELLOW (Acoustic IBAT detection)
_____ GOLD (IBAT maternity colony)
_____ BROWN (NLEB maternity roost)
_____ GREEN (Male/Non-repro female IBAT)
_____ Project is not located within a bat buffer

This project is located within an eastern massasauga range polygon:
_____ Yes
_____ No

Levi L. Webster
Ecologist
Lawhon & Associates, Inc.
P: 614.481.8600 ext. 189 | C: 614.632.5376
www.lawhon-assoc.com