Section 404 Application for Department of Army Permit

And

Section 401 Application for Ohio EPA Water Quality Certification

SCI-823-0.00
PID 19415
Phase 1 of the Portsmouth Bypass

Prepared for:
Ohio Department of Transportation
1980 West Broad Street
Columbus OH, 43223

October 4, 2011
Revised – November 17, 2011

By: **ASC Group, Inc.**
800 Freeway Drive North
Suite 101
Columbus OH, 43229
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Scioto County, Ohio

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Section 1: - Section 404 Application for Department of Army Permit

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (*33 CFR 325*)	**OMB APPROVAL NO.** 0710-0003 **Expires:** 31 August 2012

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public may be made available as part of a public notice as part of Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME		8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required)	
First -	Jerry	First -	Adrienne
Middle -		Middle -	E.
Last -	Wray	Last -	Earley
Company	Director – ODOT	Company	Environmental Supervisor - ODOT/OES
E-mail Address -	Tim.Hill@dot.state.oh.us	E-mail Address -	Adrienne.Earley@dot.state.oh.us
6. APPLICANT'S ADDRESS		9. AGENT'S ADDRESS	
Ohio Department of Transportation Office of Environmental Services, Third Floor 1980 West Broad Street Columbus, Ohio 43223		Ohio Department of Transportation Office of Environmental Services, Third Floor 1980 West Broad Street Columbus, Ohio 43223	
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE		10. AGENT'S PHONE NUMBERS WITH AREA CODE	
a. Residence		a. Residence	
b. Business	(614) 644-0377	b. Business	(614) 466-2159
c. Fax	(614) 728-7368	c. Fax	(614) 728-7368

11. **STATEMENT OF AUTHORIZATION**

I hereby authorize Adrienne E. Earley to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Phase 1 of the Portsmouth Bypass SCI 823-0.00 (ODOT PID 19415)

13. NAME OF WATERBODY, IF KNOWN (if applicable)

Unnamed wetlands, ponds and unnamed tributaries to Sweet Run, Long Run, and the Little Scioto River. The proposed project is located within the Little Scioto – Tygarts (05090103) watershed.

15. LOCATION OF PROJECT

Latitude: 38.85044 °N

Longitude: 82.87536 °W

14. PROJECT STREET ADDRESS (if applicable)

Various: Project entails the construction of a new bypass route from Lucasville-Minford Road to SR 335 (Appendix A: Figures 1 and 2).

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID- Various Municipality- Various

Sections - Various Townships- Various Range - Various

17. DIRECTIONS TO THE SITE

From Columbus, Ohio: Take US 23 south approximately 77 miles to Lucasville-Minford Road. Northern terminus of Phase 1 of the Portsmouth Bypass is located approximately 6 miles east along Lucasville-Minford Road, just past Flowers-Ison Road. The proposed Phase 1 Portsmouth Bypass route extends from this point south approximately 3 miles to Shumway Hollow Road (Appendix A: Figure 1, Sheets 1-2; Figure 2, Sheets 1-6).

18. Nature of Activity (Description of project, include all features)

In 1999, ODOT initiated the Portsmouth Transportation Study to investigate alternatives for improving transportation system linkage, safety and capacity in and around and the city of Portsmouth. The study recommended an Airport Bypass alternative from US 52 near Wheelersburg to US 23 near Lucasville along a corridor that would serve the Scioto County Airport and encompass SR 78 and SR 335. No specific alignment was identified; rather a one-mile wide corridor was recommended for more detailed analysis.

The Airport Bypass concept was chosen to improve regional mobility and increase the potential for economic development within the region. The study concluded that a general airport bypass alignment would reduce the travel time between Wheelersburg to Lucasville by approximately 16 minutes. More importantly, the study concluded that a proposed airport alignment would be most likely to increase Scioto County's chances of attracting new business investment.

In the fall of 2001, ODOT began project development by examining the impacts and benefits of multiple alternative alignments to determine the best location for the new roadway. In 2004 ODOT selected the "Hill Alignment", which called for the new roadway to be built primarily along the ridge of the hilltop as opposed to the valley option.

On June 9, 2006 FHWA issued the Record of Decision (ROD) for project *SCI 823-0.00 (PID 19415).* ODOT presented in the final comments to the ROD the same three construction phases as described herein. Upon approval of the ROD, ODOT began advance acquisition to purchase right-of-way parcels in all three phases of construction. Preliminary design was completed in the summer of 2008. The final construction plans for Phase 1 will be complete by September 2011 and right-of-way will be cleared by February 2012 in preparation for construction in summer 2012.

In September 2011, FHWA approved Phase 1 of the Portsmouth Bypass as operational independent of the other two phases (Appendix F). FHWA is currently reviewing the re-evaluation of the FEIS and approval of the document is pending. The construction contract for Phase 1 of the Portsmouth Bypass is anticipated to be awarded to a contractor in July 2012 (SFY 2012), Phase 2 in August 2014 (SFY 2015) and Phase 3 in May 2020 (SFY 2020). The construction schedule for the entire project is approximately 13 years.

Phase 1 of the Portsmouth Bypass is approximately 3.0 miles long and is located between CR 28 (Lucasville-Minford Road) and TR 234 (Shumway Hollow Road). This new section of roadway will be open to traffic between these two roadways when construction is complete. The project includes the construction of two interchanges at TR 234 and CR 28.

To the greatest extent possible, impacts to wetlands and streams have been minimized throughout the design process. Mitigation for unavoidable impacts to streams and wetlands also includes the implementation of best management practices (BMPs) to minimize downstream impacts resulting erosion and sedimentation.

The environmental resources to be impacted as a result of the construction of Phase 1 of the Preferred Alternative for the Portsmouth Bypass are described in detail in the *Level 2 Ecological Survey Report SCI-823-0.00 – Phase 1 (PID 19415)* [ASC Group 2011].

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Purpose and Need

The Portsmouth Bypass is needed because the primary arterial roadways through Portsmouth (US 23/US52) have steep grades, excessive curves, many intersections and numerous direct driveway accesses. These limitations restrict the ability of the roadways to serve their intended function to move through traffic. In addition to US 23 and US 52, traffic throughout Portsmouth is distributed primarily over CR 377, SR 104, CR 28, SR 728 and SR 335. All of these routes suffer from poor alignment. By 2025, 10 intersections within the entire project area are projected to be operating at Level of Service (LOS) D or worse. Safety concerns are also widespread throughout the area. Portions of all six routes mentioned above experience higher than average crash rates for similar facilities in Ohio. The crash rates for some links are more than twice the statewide average for similar roadways.

The primary goals of the bypass are to 1) provide new highway access within the region to make the area more attractive for new business development, and 2) improve the movement of traffic through Portsmouth and reduce the number of crashes in the area by drawing traffic away from congested intersections and high crash rate locations.

Once the corridor was selected, two primary alignments were evaluated as feasible alternatives, namely the Hill and Valley alignments. The Hill and Valley alignments were two completely independent alignments except for a segment in the middle of the project, in which the Hill and Valley alignments shared the same footprint. This segment of common footprint will be constructed as Phase 1 of the Portsmouth Bypass. Phase 1 of the Portsmouth Bypass extends from SR 139 to SR 335 and the Scioto County Airport (Appendix A: Figure 1, Sheets 1-2; Figure 2, Sheets 1-6). Phase 1 also constructs an additional portion of the project extending north from State Route 139 to the Lucasville-Minford Road Interchange. It was determined by FHWA that Phase 1 of the Portsmouth Bypass is operational independent from the other two phases (Appendix F). This determination was made because the construction of Phase 1 does not restrict consideration of alternatives for other reasonably conceivable transportation improvements because a major portion of Phase 1 is common to both of the feasible alternatives that were selected. FHWA is currently reviewing the re-evaluation of the FEIS and approval of the document is pending.

Identified Needs

Safety. In the last three years of accident history on the pertinent segments of CR 28 and SR 335, safety records show a total of 65 crashes of various types ranging from angle, rear-end, overturning and sideswipe to fixed object and animal. Based upon ODOT's relative crash severity index, this represents a cost to society of over $2.25 million, which would likely be significantly reduced if not mostly eliminated by the use of the new highway in lieu of existing roads. This is due to the fact that the new highway is designed per today's roadway design standards, eliminating the need for a user to negotiate the existing substandard roads that were not designed as highways, but simply historically traveled ways that were paved over time and evolved into roads.

Regional Mobility. Appalachian Regional Commission funding of the Appalachian Highway system is intended to provide improved transportation infrastructure to impoverished areas. *Access Ohio*, ODOT's long-range plan, contains similar goals to improve mobility and foster economic development. Within the study area, there exists a "missing link" in the Appalachian corridor from Asheville, North Carolina, to Columbus, Ohio. The goal of the Portsmouth Bypass is to close the gap in a multi-state corridor and provide a nearly controlled access alternative to I-77 and I-75 between Orlando, Florida and Columbus, Ohio.

Economic Issues. Scioto County is economically distressed with above average unemployment rates and below average per capita income compared to the rest of Ohio. This condition results from comparatively low share of manufacturing within the county. Citizens and local economic development officials, supported by surveys of site selection criteria, assert that inadequate transportation infrastructure impedes the area's ability to attract industrial investment. In order to enhance the region's competitive advantage for new and expanding businesses, the goal of the project is to provide improved highway access within the region. While the construction of any Phase of the Portsmouth Bypass does not guarantee that this business investment will occur, the goal is to meet the intent of the Appalachian Highway Development System by providing Scioto County with the necessary transportation infrastructure to help them compete in the marketplace.

Traffic Volumes. Utilizing existing roads, the travel distance would vary from 3.9 to 5.9 miles, depending upon the route, whereas the new highway is 2.9 miles between these endpoints. The travel time for the existing roads (depending upon the route) would vary from 7 to 10 minutes, whereas the new highway travel time will be approximately 3 minutes.

Levels of Service. The Level of Service (LOS) for SR 335 from the entrance to the Portsmouth Regional Airport to the intersection of the CR 28 (Lucasville-Minford Road) is C for both current and design year.

The LOS for SR 139 from Glendale Road to the intersection of the SR 335 is C for both current and design year.

The LOS for CR 28 from the intersection of SR 335 to the location of the future Interchange at CR 28 (Lucasville-Minford Road) is B for both current and design year.

The LOS for the new highway of Phase 1 of the Portsmouth Bypass is A for both current and design year, using the highest volume of traffic on existing routes.

Therefore, Phase 1 will provide an improved LOS above the use of existing roads for both current and design year.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

The proposed Phase 1 of the Portsmouth Bypass (SCI-823-0.00 PID 19415) will result in the permanent discharge of fill material into Waters of the US. Permanent fill material will consist of clean hard fill, earthen material, concrete, and riprap. These materials will be discharged into regulated waters in order to achieve the desired elevations for the new bypass and to provide scour protection at stream crossings throughout the entire length of the project (Appendix A; Figures 3-1 to 3-43). Impacts to aquatic resources have been minimized throughout the entire project development design process.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

The construction of the Portsmouth Bypass will result in the permanent discharge of fill material into Waters of the US. All proposed fill material will consist of clean hard fill, earthen material, concrete and/or rip-rap. The proposed project will result in the discharge of approximately 1,381 cubic yards of material into streams, 5,076 cubic yards into wetlands, and approximately 26,137 cubic yards into ponds.

Only clean hard fill or earthen material will be discharged into ponds and wetlands. Discharges into streams will consist of 1,105 CY of clean hard fill or earthen material, 193 CY of block mat or RCP, and 83 CY of concrete (culverts, wingwalls, etc.).

Detailed drawings of individual impacts to aquatic features are provided in Appendix A: Figures 3-1 through 3-43. Summaries of individual impacts to these aquatic features are detailed in Appendix B: Tables A-C.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Approximately 3.893 acres of jurisdictional wetlands will be permanently filled as part of the project. Approximately 1.465 acres of stream will be permanently filled (9,525 feet of permanent impact) and 0.256 acre will be temporarily filled (300 feet of temporary impact) as a result of Phase 1 of the Portsmouth Bypass. Phase 1 of the Portsmouth Bypass will also permanently impact approximately 2.70 acres of jurisdictional pond.

Figures of the individual impacts to jurisdictional waters are provided in Appendix A. Summaries of individual impacts to Waters of the US are detailed in Appendix B: Tables A - C.

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Avoidance and minimization of impacts to aquatic resources have been incorporated throughout the entire design process for Phase 1 of the Portsmouth Bypass Project. Due to the size and scope of the undertaking of the project, complete avoidance of all Waters of the US was impracticable. The proposed Portsmouth Bypass project will result in the unavoidable permanent impact to 9,525 feet of jurisdictional stream channel (Appendix C). In addition to the

9,525 feet of permanent impact, the Preferred Alternative will also entail 300 feet of temporary stream impact. A summary of impacted streams is provided in Appendix B: Tables A and C and a summary of the proposed mitigation for the project is provided in Tables E and F. Additional information regarding avoidance, minimization, and compensation can be found in Section 10 of the OEPA 401 WQC Application, which is provided in Section 2.

ODOT is currently exploring potential stream mitigation opportunity at the General Electric (GE) Peebles, Ohio Test Operations Facility for the mitigation of the 9,825 feet of jurisdictional stream impacts resulting from the construction of Phase 1 of the Portsmouth Bypass project. The GE Facility encompasses approximately 7,000 acres of undisturbed forested land in Adams County, located in the Scioto Brush Creek Watershed. This property is adjacent to DNAP's Shoemaker and Davis Memorial State Nature Preserves. ODOT is currently conducting title work to determine if any real estate issues exist at the facility.

All potential stream mitigation at the GE Facility would be considered off-site mitigation, as it is located within an adjacent watershed (HUC 05060002) and beyond 1 mile of the proposed project. ODOT proposes to preserve approximately 14,738 feet of stream and their riparian buffers to offset the impact to 9,825 feet of impact (equates to a 1.5 to 1 mitigation ratio). Investigation of the GE facility by representatives of ODOT identified approximately 54,904 feet (approximately 10.40 miles) of potential stream mitigation credit within the southern portion of the GE facility. It is the intent of ODOT to secure as much stream mitigation credit at the facility in order to pool stream mitigation for the future phases of the Portsmouth Bypass and for other ODOT projects that may require mitigation within the surrounding watersheds. Additional mitigation information is provided in Appendix D.

Approximately 3.893 acres of unavoidable jurisdictional wetland impact will result from the construction of the Phase 1 of the Portsmouth Bypass Project (Appendix C). A summary of the wetlands impacted are provided in Appendix B; Tables B and C. At a minimum ODOT will provide 7.107 acres of wetland mitigation in accordance with the off-site mitigation ratios provided in OAC 3745-1-54. All proposed wetland impacts are to emergent wetlands. Category 1 impacts will be mitigated at a 1.5 to 1 ratio and Category 2 impacts will be mitigated at a 2 to 1 ratio.

ODOT is currently exploring wetland mitigation opportunities as close to the project area as possible. Back in 2005, a wetland mitigation inventory was conducted, but yielded limited results for mitigation opportunities within and adjacent to the project area. There are no wetland mitigation banks or ODOT pooled mitigation sites in proximity to the Portsmouth Bypass project. Currently, ODOT is investigating two potential projects:

Wetland restoration in the Symmes Creek floodplain, Jackson County, Ohio: Currently this property is privately owned and a site visit is necessary to determine if conditions are appropriate and the area is large enough. The property owner, Denise Blakeman, has successfully conducted a wetland restoration project for another applicant and it's currently in the monitoring stage. ODOT has spoken with Mr. Blakeman and he has indicated that he is interested in working with ODOT on a wetland mitigation project. ODOT will meet with Mr. Blakeman as soon as possible to review potential areas to construct wetlands and determine if a project can move forward.

Wetland restoration/education at Shawnee State University, Portsmouth, Ohio: ODOT is coordinating with Shawnee State University, Dept of Biology, to determine if a partnering project is possible to satisfy wetland mitigation for the Portsmouth Bypass. A meeting is set for October 28, 2011, in which a determination can be made to proceed with a mitigation project with Shawnee State. Currently, there is a graduate student who seeking a wetland restoration project and is in need of funding. This project would be similar to the Olentangy wetlands at Ohio State, and offer research, educational, and mitigation opportunities.

The Little Scioto Wetland Mitigation Bank still maintains enough credits to mitigate the wetland impacts from the Portsmouth Bypass. If the above opportunities cannot proceed, or can only satisfy a portion of our mitigation needs, then ODOT proposes mitigation for the Category 1 impacts at a minimum.

The proposed wetland mitigation for the project will be coordinated with both the USACE and the OEPA and details of the proposed mitigation plan will be provided to the agencies as it becomes available.

The proposed project will impact five jurisdictional ponds totaling 2.70 acres. Approximately 26,137 CY of clean fill

material will be discharged into the impacted ponds in order to achieve the desired elevations for the new bypass route. A summary of pond impacts is provided in Appendix B: Tables A and C. No formal mitigation is proposed for these pond impacts.

24. Is Any Portion of the Work Already Complete? Yes _____ No X IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

See Appendix E for the List of Adjacent Property Owners for Phase 1 of the Portsmouth Bypass.

26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
Ohio EPA	401 WQC	Not yet assigned	In conjunction with the 404		
Ohio EPA	NPDES	Not yet assigned	Pending		
SHPO	Section 106			SHPO October 28, 2004 and December 3, 2004 and ODOT IOC April 24, 2006	
USFWS/ ODNR	Section 7		8/16/2011 & 11/9/2011	Portions approved 8/25/2004	
USACE	Preliminary Jurisdictional Determination	LRH-2011-00646-OHR-Long Run	8/12/2011	11/17/2011	
FHWA	Operational Independence	SCI-823-0.00 (PID 19415)	9/13/2011	9/15/2011	
FHWA	Re-evaluation of FEIS	SCI-823-0.00 (PID 19415)	Pending		

*Would include but is not restricted to zoning, building and flood plain permits

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up any trick scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Section 2: - Section 401 Application for Ohio EPA Water Quality Certification

APPLICATION FOR OHIO EPA
SECTION 401 WATER QUALITY CERTIFICATION

Effective October 1, 1996
Revised August, 1998

This application must be completed whenever a proposed activity requires an individual Clean Water Act Section 401 Water Quality Certification (Section 401 certification) from Ohio EPA. A Section 401 certification from the State is required to obtain a federal Clean Water Act Section 404 permit from the U.S. Army Corps Engineers, or any other federal permits or licenses for projects that will result in a discharge of dredged or fill material to any waters of the State. To determine whether you need to submit this application to Ohio EPA, contact the U.S. Army Corps of Engineers District Office with jurisdiction over your project, or other federal agencies reviewing your application for a federal permit to discharge dredged or fill material to waters of the State, or an Ohio EPA Section 401 Coordinator at (614) 644-2001.

The Ohio EPA Section 401 Water Quality Certification Program is authorized by Section 401 of the Clean Water Act (33 U.S.C. 1251) and the Ohio Revised Code Section 6111.03(P). Ohio Administrative Code (OAC) Chapter 3745-32 outlines the application process and criteria for decision by the Director of Ohio EPA. In order for Ohio EPA to issue a Section 401 certification, the project must comply with Ohio's Water Quality Standards (OAC 3745-1) and not potentially result in an adverse long-term or short-term impact on water quality. Included in the Water Quality Standards is the Antidegradation Rule (OAC Rule 3745-1-05), effective October 1, 1996, revised October, 1997 and May, 1998. The Rule includes additional application requirements and public participation procedures. Because there is a lowering of water quality associated with every project being reviewed for Section 401 certification, every Section 401 certification applicant must provide the information required in Part 10 (pages 3 and 4) of this application. In addition, applications for projects that will result in discharges of dredged or fill material to wetlands must include a wetland delineation report approved by the Corps of Engineers, a wetland assessment with a proposed assignment of wetland category (ies), official documentation on evaluation of the wetland for threatened or endangered species, and appropriate avoidance, minimization, and mitigation as prescribed in OAC 3745-1-50 to 3745-1-54. Ohio EPA will evaluate the applicant's proposed wetland category assignment and make the final assignment.

Information provided with the application will be used to evaluate the project for certification and is a matter of public record. If the Director determines that the application lacks information necessary to determine whether the applicant has demonstrated the criteria set forth in OAC Rule 3745-32-05(A) and OAC Chapter 3745-1, Ohio EPA will inform the applicant in writing of the additional information that must be submitted. The application will not be accepted until the application is considered complete by the Section 401 Coordinator. An Ohio EPA Section 401 Coordinator will inform you in writing when your application is determined to be complete.

Please submit the following to "Section 401 Supervisor, Ohio EPA/DSW, P.O. Box 1049, Columbus, Ohio 43216-1049:

- Four (4) sets of the completed application form, including the location of the project (preferably on a USGS quadrangle) and 8-1/2 x 11 scaled plan drawings and sections.

- One (1) set of original scaled plan drawings and cross-sections (or good reproducible copies).

(See Application Primer for detailed instructions)

1. The federal permitting agency has determined this project: (check appropriate box and fill in blanks)

   a. X requires an individual 404 permit/401 certification- Public Notice # (if known)

   b. ___ requires a Section 401 certification to be authorized by Nationwide Permit #

   c. ___ requires a modified 404 permit/401 certification for original Public Notice #

   d. ___ requires a federal permit under_____ jurisdiction identified by #

   e. ___ requires a modified federal permit under_____ jurisdiction identified by #

2. Application number (to be assigned by Ohio EPA):

3. Name and address of applicant: Telephone number during business hours:

Mr. Jerry Wray, Director of Transportation (614) 644-0377 (Office of Tim Hill)
Ohio Department of Transportation (614) 728-7368 (Fax)
1980 West Broad Street, Columbus, Ohio 43223

3a. Signature of Applicant: Date:

4. Name, address and title of authorized agent: Telephone number during business hours:

Mrs. Adrienne E. Earley (614) 466-2159 (Office)
Office of Environmental Services (614) 728-7368 (Fax)
Waterway Permits Unit
Ohio Department of Transportation
1980 West Broad Street, Columbus, Ohio 43223

4a. Statement of Authorization: I hereby designate and authorize the above-named agent to act in my behalf in the processing of this permit application, and to furnish, upon request, supplemental information in support of the application.

Signature of Applicant: Date:

5. Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

The Portsmouth Bypass project (SCI-823-0.00) is a proposed limited-access, four-lane divided highway around the city of Portsmouth in central Scioto County. Phase 1 of the proposed bypass extends from just north of Lucasville-Minford Road to just south of Shumway Hollow Road (Appendix A: Figure 1, Sheets 1-2). This phase of the proposed bypass is approximately 3 miles in length.

See Appendix B: Tables A and B for additional location information for impacted wetlands, ponds and streams.

Street, Road, Route, and Coordinates, or other descriptive location

Watershed(s): Little Scioto – Tygarts (05090103) County: Scioto Township(s): Madison and Harrison City: Minford State: Ohio Zip Code: Various

6. Is any portion of the activity for which authorization is sought complete? _____Yes __X__ No
If answer is "yes," give reasons, month and year activity was completed. Indicate the existing work on the drawings.

7. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

Issuing Agency	Type of Approval	Identification No.	Date of Application	Date of Approval	Date of Denial
USACE	Section 404	Not yet assigned	Concurrently with 401		
Ohio EPA	NPDES		Pending		
SHPO	Section 106 – "No Historic Properties Affected"			SHPO October 28, 2004 and December 3, 2004 and ODOT IOC April 24, 2006	
USFWS/ODNR	Section 7		8/16/2011 & 11/9/2011	Portions approved 8/25/2004	

USACE	Preliminary Jurisdictional Determination	LRH-2011-00646-OHR-Long Run	8/12/2011	11/17/2011	
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FHWA	Re-evaluation of FEIS	SCI-823-0.00 (PID 19415)	Pending		

8. **DESCRIPTION OF THE ACTIVITY (fill in information in the following four blocks - 8a, 8b, 8c & 9)**

8a. Activity: Describe the Overall Activity:

Project History and Current Status

In 1999, ODOT initiated the Portsmouth Transportation Study to investigate alternatives for improving transportation system linkage, safety and capacity in and around and the city of Portsmouth. The study recommended an Airport Bypass alternative from US 52 near Wheelersburg to US 23 near Lucasville along a corridor that would serve the Scioto County Airport and encompass SR 78 and SR 335. No specific alignment was identified; rather a one-mile wide corridor was recommended for more detailed analysis.

The Airport Bypass concept was chosen to improve regional mobility and increase the potential for economic development within the region. The study concluded that a general airport bypass alignment would reduce the travel time between Wheelersburg to Lucasville by approximately 16 minutes. More importantly, the study concluded that a proposed airport alignment would be most likely to increase Scioto County's chances of attracting new business investment.

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In September 2011, FHWA approved Phase 1 of the Portsmouth Bypass as operational independent of the other two phases (Appendix F). FHWA is currently reviewing the re-evaluation of the FEIS and approval of the document is pending. The construction contract for Phase 1 of the Portsmouth Bypass is anticipated to be awarded to a contractor in July 2012 (SFY 2012), Phase 2 in August 2014 (SFY 2015) and Phase 3 in May 2020 (SFY 2020). The construction schedule for the entire project is approximately 13 years.

Phase 1 of the Portsmouth Bypass is approximately 3.0 miles long and is located between CR 28 (Lucasville-Minford Road) and TR 234 (Shumway Hollow Road). This new section of roadway will be open to traffic between these two roadways when construction is complete. The project includes the construction of two interchanges at TR 234 and CR 28.

To the greatest extent possible, impacts to wetlands and streams have been minimized throughout the design process. Mitigation for unavoidable impacts to streams and wetlands also includes the implementation of best management practices (BMPs) to minimize downstream impacts resulting erosion and sedimentation.

The environmental resources to be impacted as a result of the construction of Phase 1 of the Preferred Alternative for the Portsmouth Bypass are described in detail in the *Level 2 Ecological Survey Report SCI-823-0.00 – Phase 1 (PID 19415)* [ASC Group 2011].

8b. Purpose: Describe the purpose, need and intended use of the activity:

Purpose and Need

The Portsmouth Bypass is needed because the primary arterial roadways through Portsmouth (US 23/US52) have steep grades, excessive curves, many intersections and numerous direct driveway accesses. These limitations restrict the ability of the roadways to serve their intended function to move through traffic. In addition to US 23 and US 52, traffic throughout Portsmouth is distributed primarily over CR 377, SR 104, CR 28, SR 728 and SR 335. All of these routes suffer from poor alignment. By 2025, 10 intersections within the entire project area are projected to be operating at Level of Service (LOS) D or worse. Safety concerns are also widespread throughout the area. Portions of all six routes mentioned above experience higher than average crash rates for similar facilities in Ohio. The crash rates for some links are more than twice the statewide average for similar roadways.

The primary goals of the bypass are to 1) provide new highway access within the region to make the area more attractive for new business development, and 2) improve the movement of traffic through Portsmouth and reduce the number of crashes in the area by drawing traffic away from congested intersections and high crash rate locations.

Once the corridor was selected, two primary alignments were evaluated as feasible alternatives, namely the Hill and Valley alignments. The Hill and Valley alignments were two completely independent alignments except for a segment in the middle of the project, in which the Hill and Valley alignments shared the same footprint. This segment of common footprint will be constructed as Phase 1 of the Portsmouth Bypass. Phase 1 of the Portsmouth Bypass extends from SR 139 to SR 335 and the Scioto County Airport (Appendix A: Figure 1, Sheets 1-2; Figure 2, Sheets 1-6). Phase 1 also constructs an additional portion of the project extending north from State Route 139 to the Lucasville-Minford Road Interchange. It was determined by FHWA that Phase 1 of the Portsmouth Bypass is operational independent from the other two phases (Appendix F). This determination was made because the construction of Phase 1 does not restrict consideration of alternatives for other reasonably conceivable transportation improvements because a major portion of Phase 1 is common to both of the feasible alternatives that were selected. FHWA is currently reviewing the re-evaluation of the FEIS and approval of the document is pending.

Identified Needs

Safety. In the last three years of accident history on the pertinent segments of CR 28 and SR 335, safety records show a total of 65 crashes of various types ranging from angle, rear-end, overturning and sideswipe to fixed object and animal. Based upon ODOT's relative crash severity index, this represents a cost to society of over $2.25 million, which would likely be significantly reduced if not mostly eliminated by the use of the new highway in lieu of existing roads. This is due to the fact that the new highway is designed per today's roadway design standards, eliminating the need for a user to negotiate the existing substandard roads that were not designed as highways, but simply historically traveled ways that were paved over time and evolved into roads.

Regional Mobility. Appalachian Regional Commission funding of the Appalachian Highway system is intended to provide improved transportation infrastructure to impoverished areas. *Access Ohio*, ODOT's long-range plan, contains similar goals to improve mobility and foster economic development. Within the study area, there exists a "missing link" in the Appalachian corridor from Asheville, North Carolina, to Columbus, Ohio. The goal of the Portsmouth Bypass is to close the gap in a multi-state corridor and provide a nearly controlled access alternative to I-77 and I-75 between Orlando, Florida and Columbus, Ohio.

Economic Issues. Scioto County is economically distressed with above average unemployment rates and below average per capita income compared to the rest of Ohio. This condition results from comparatively low share of manufacturing within the county. Citizens and local economic development officials, supported by surveys of site selection criteria, assert that inadequate transportation infrastructure impedes the area's ability to attract industrial investment. In order to enhance the region's competitive advantage for new and expanding businesses, the goal of the project is to provide improved highway access within the region. While the construction of any Phase of the Portsmouth Bypass does not guarantee that this business investment will occur, the goal is to meet the intent of the Appalachian Highway Development

System by providing Scioto County with the necessary transportation infrastructure to help them compete in the marketplace.

Traffic Volumes. Utilizing existing roads, the travel distance would vary from 3.9 to 5.9 miles, depending upon the route, whereas the new highway is 2.9 miles between these endpoints. The travel time for the existing roads (depending upon the route) would vary from 7 to 10 minutes, whereas the new highway travel time will be approximately 3 minutes.

Levels of Service. The Level of Service (LOS) for SR 335 from the entrance to the Portsmouth Regional Airport to the intersection of the CR 28 (Lucasville-Minford Road) is C for both current and design year.

The LOS for SR 139 from Glendale Road to the intersection of the SR 335 is C for both current and design year.

The LOS for CR 28 from the intersection of SR 335 to the location of the future Interchange at CR 28 (Lucasville-Minford Road) is B for both current and design year.

The LOS for the new highway of Phase 1 of the Portsmouth Bypass is A for both current and design year, using the highest volume of traffic on existing routes.

Therefore, Phase 1 will provide an improved LOS above the use of existing roads for both current and design year.

8c. Discharge of dredged or fill material: Describe type, quantity of dredged material (in cubic yards), and quantity of fill material (in cubic yards). **(OAC 3745-1-05(B)(2)(a))**

Five ponds, 19 jurisdictional stream channels, and 31 jurisdictional wetlands will be impacted by Construction Phase 1 of the Preferred Alternative of the SCI 823-0.00 Portsmouth Bypass.

Nineteen jurisdictional streams will be impacted as a result of the construction of Phase 1of the Preferred Alternative for the Portsmouth Bypass. The total length of unavoidable permanent impacts for jurisdictional streams is approximately 9,825 feet (9,525 feet of permanent and 300 feet of temporary). These impacts require the discharge of 1,381 cubic yards of clean fill material and the excavation of approximately 976 cubic yards of material. Impacts to jurisdictional stream channel total approximately 1.465 acres and include approximately 0.249 acre of excavation and approximately 1.216 acres of fill. Detailed information of impacts to individual streams is provided in Appendix B: Table C.

Thirty-one jurisdictional wetlands will be impacted by the construction of Phase 1 of the Preferred Alternative of the Portsmouth Bypass. Unavoidable impacts to wetlands result from the filling and excavation of the wetlands to establish the proper elevations to facilitate the construction of the bypass route and to maintain positive drainage along the proposed bypass. Unavoidable wetland impacts total approximately 3.893 acres. The project requires 5,076 cubic yards of clean fill material to be permanently discharged into wetlands as a result of this project. Impacts to individual wetlands are detailed in Appendix B: Table C.

Five ponds will be impacted by the construction of Phase 1 of the Portsmouth Bypass project. Impacts to the ponds are a direct result from the filling of the ponds to establish the proper elevations for the construction of the new roadway. Approximately 26,137 cubic yards of clean fill material will discharged into these ponds for a proposed impact of 2.70 acres. Impacts as they relate to individual ponds are detailed in Appendix B: Table C.

9. Waterbody and location of water body or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

The proposed construction of Phase 1 of the SCI 823-0.00 Portsmouth Bypass project will result in the unavoidable impact to 19 streams, five ponds, and 31 jurisdictional wetlands.

Tables A and B (Appendix B) provide detailed information regarding these features including location, narrative descriptions, drainage conditions, and other details regarding these impacted features. Field data collected for each of the impacted features and photographs of these resources are included in the *Level 2 Ecological Survey Report SCI-823-0.00 – Phase 1 (PID 19415)* [ASC Group 2011].

10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:

- o Preferred Design (your project) and Mitigative Techniques
- o Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques
- o Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions). (Application and review requirements appear at **OAC 3745-1-05(B)(2), OAC 3745-1-05(C)(6), OAC 3745-1-05(C)(1) and OAC 3745-1-54).**

10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water. **(OAC 3745-1-05(B)(2)(b))**

10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation. **(OAC 3745-1-05(C)(6)(a, b) and OAC 3745-1-54)**

10c) Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.) **(OAC 3745-1-05(C)(6)(h, j-k) and OAC 3745-1-54)**

10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents. **(OAC 3745-1-05(C)(6)(i))**

10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource. **(OAC 3745-1-05(B)(2)(g))**

10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project. **(OAC 3745-01-05(C)(6)(g))**

10g) Describe any impacts on human health and the overall quality and value of the water resource. **(OAC 3745-1-05(C)(6)(c) and OAC 3745-1-54)**

10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy. **(OAC 3745-1-5(B)(2)(e), and OAC 3745-1-05(C)(6)(i))**

10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans. **(OAC 3745-1-05(B)(2)(e,f), and OAC 3745-1-05(C)(6)(e))**

10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species. **(OAC 3745-1-05 (B)(2)(e,f), OAC 3745-1-05 (C)(6)(b) and OAC 3745-1-54)**

10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative):

- o Describe proposed Wetland Mitigation (see OAC 3745-1-54 and Primer)
- o Describe proposed Stream, Lake, Pond Mitigation (see Primer)

11. Application is hereby made for a Section 401 Water Quality Certification. I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

_____	_____	_____
Signature of Applicant	Date	Signature of Agent

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

Do not send a certification processing fee with this application. The appropriate fee will be assessed when a certification is issued.

10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:

- **Preferred Design (your project) and Mitigative Techniques**
- **Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques**
- **Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)**

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions). (Application and review requirements appear at OAC 3745-1-05(B)(2), OAC 3745-1-05(C)(6), OAC 3745-1-05(C)(1) and OAC 3745-1-54).

10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water. (OAC 3745-1-05(B)(2)(b))

Preferred Alternative:

Phase 1 of the Preferred Alternative for the Portsmouth Bypass consists of approximately 3 miles of a new four-lane, limited-access highway along a new alignment. The typical roadway section for the Preferred Alternative consists of four lanes (two in each direction) that are 12 feet wide, with a 22-foot wide median with concrete barrier and 10-foot shoulders.

The Preferred Alternative is a modified version of the Selected Alternative or "Hill Alignment" from the 2005 Final Environmental Impact Statement (FEIS). The Hill Alignment was selected as the Preferred Alternative based on consideration of the project's overall impacts to the environment, including wetlands and streams, while still meeting the goals of the Appalachian Highway Program by providing an improved transportation system that could spur economic development within the surrounding community.

The Preferred Alternative was selected in 2005, after the evaluation of eight Feasible Alternatives for the project. In order to develop the eight Feasible Alternatives, the proposed bypass was broken down into four sections. There were two alternatives considered in three of the four sections and only one in the remaining section. Different combinations of the seven segments were ultimately arranged to develop the eight Feasible Alternatives. The selection of the "Hill Alignment" as the Preferred Alternative was done after careful evaluation of the environmental impacts for each of the Feasible Alternatives.

After the selection of the Preferred Alternative, the Portsmouth Bypass was divided into three separate design and construction phases. This application seeks authorization for the impacts to regulated waters that will occur during Phase 1 of the Portsmouth Bypass. Figures depicting the impacts to individual resources are provided in Appendix A: Figures 3-1 to 3-43.

Minimization of potential impacts to jurisdictional waterways was incorporated throughout the entire Preferred Alternative selection process. Early in the project development process, the initial study area boundaries were revised to allow for the design of perpendicular stream

crossings and to allow for additional opportunities for avoidance of lateral encroachments or channel modifications during the final design of the roadway. During the design phase of the project, the bridges over Stream 18 (Long Run) and Stream 20 were incorporated into the design and this has eliminated all but 78 feet of direct construction impacts to these waterways, as the bridge abutments/piers have been located above the ordinary high water mark (OHWM) of these waterways. Other roadway design elements utilized to minimize impacts included the reduction of the proposed median width within the Preferred Alternative from 60 feet to 22 feet.

All stream crossings proposed in the Preferred Alternative were designed using Optimum Culvert Design and adhered to the methods and standards outlined in ODOT's *Location and Design Manual: Volume Two Drainage Design* and the *Bridge Design Manual*. Each crossing was designed using sound engineering judgment and life cycle cost analysis to develop feasible crossings of each jurisdictional waterway.

During the development of the Preferred Alternative, additional alignment shifts and adjustments were made to avoid and/or minimize impacts to resources. Construction of the Preferred Alternative for the Portsmouth Bypass will result in the unavoidable impact to 19 jurisdictional stream channels. Permanent stream impacts total 9,525 feet and temporary stream impacts total 300 feet. Permanent stream impacts can be further refined as:

- 78 feet of Warmwater Habitat (WWH)
- 8,999 feet of Class II PHWH
- 448 feet of Class I PHWH

Temporary stream impacts can be further refined as:

- 300 feet of WWH.

Detailed stream impacts are presented in Appendix B: Tables A and C.

Thirty-one jurisdictional wetlands will be impacted during the construction of Phase 1 of the Preferred Alternative. A total of 3.893 acres of wetland will be impacted as a result of the project. Specifically these wetland impacts include:

- 2.527 acres of ORAM Category 2, non-forested wetland
- 1.366 acres of ORAM Category 1, non-forested wetland

Detailed wetland impacts are presented in Appendix B: Tables B and C.

Five jurisdictional ponds are located within the right-of-way for the construction of the Preferred Alternative. Unavoidable impacts to ponds for Phase 1 of the Preferred Alternative total 2.70 acres. A summary of the pond impacts is provided in Appendix B: Tables A and C.

A summary of the proposed impacts are provided in Table 1 below.

Table 1. Summary of Proposed Fill Areas and Volumes SCI 823-0.00 Portsmouth Bypass for Phase 1 of the Preferred Alternative.

Feature ID	Quality (ORAM or QHEI/HHEI)	Proposed Impact Amount	Volume of Fill Required (Cubic Yards)
Stream 17-1-1	Class I PHWH/ HHEI 22	73 feet	0
Stream 17a/b	Modified Class II PHWH/ HHEI 55	898 feet	228
Stream 17c	Modified Class II PHWH/ HHEI 47	960 feet	60
Stream 17c-1	Modified Class II PHWH/ HHEI 43	394 feet	9
Stream 17d	Modified Class II PHWH/ HHEI 59	294 feet	111
Stream 18 (Long Run)	WWH/ QHEI 78.5	55 feet (150 temporary)	37 (914 temporary)
Stream 18-1	Modified Class II PHWH/ HHEI 39	417 feet	32
Stream 18b	Modified Class II PHWH/ HHEI 39	244 feet	56
Stream 19	Modified Class II PHWH/ HHEI 69	530 feet	151
Stream 19-1	Modified Class II PHWH/ HHEI 52	662 feet	59
Stream 20	Modified WWH/ QHEI 58.5	23 feet (150 temporary)	0 (261 temporary)
Stream 20-1	Class II PHWH/ HHEI 47	720 feet	30
Stream 20-2	Modified Class I PHWH/ HHEI 23	375 feet	7
Stream 21	Modified Class II PHWH/ HHEI 49	802 feet	263
Stream 21a	Modified Class II PHWH/ HHEI 36	745 feet	30
Stream 22a/b	Modified Class II PHWH/ HHEI 67	1,267 feet	186
Stream 22a-1	Modified Class II PHWH/ HHEI 43	318 feet	15
Stream 23/k	Class II PHWH/ HHEI 53	415 feet	75
Stream 24-1	Modified Class II PHWH/ HHEI 36	333 feet	32
Stream 18-2	Modified Class II PHWH/ HHEI 53	0 feet	0
Stream 18-2-1	Modified Class II PHWH/ HHEI 37	0 feet	0
Wetland 1	Category 1/ ORAM 23.5	0.141 acre	115
Wetland 2/3	Modified Category 2/ ORAM 31.5	0.517 acre	834
Wetland 4	Modified Category 2/ ORAM 30.5	0.089 acre	3
Wetland W8WL6	Modified Category 2/ ORAM 32.5	0.221 acre	334
Wetland W8WL8	Category 1/ ORAM 28.5	0.020 acre	32
Wetland 5/W8WL7	Modified Category 2/ ORAM 39.5	0.066 acre	107
Wetland 6	Modified Category 2/ ORAM 30.5	0.018 acre	3
Wetland 7	Category 1/ ORAM 21	0.108 acre	174
Wetland 8	Modified Category 2/ ORAM 30.5	0.028 acre	45
Wetland 9	Modified Category 2/ ORAM 35.5	0.073 acre	102
Wetland 12	Modified Category 2/ ORAM 39	0.811 acre	852
Wetland 13	Modified Category 2/ ORAM 35	0.233 acre	8
Wetland 14	Category 1/ ORAM 19.5	0.010 acre	0
Wetland 15	Modified Category 2/ ORAM 33.5	0.041 acre	65
Wetland 16	Category 1/ ORAM 26	0.036 acre	58
Wetland 17	Modified Category 2/ ORAM 35.5	0.001 acre	0
Wetland 18/W9WL2	Modified Category 2/ORAM 35.5	0.038 acre	58
Wetland 19	Category 2/ ORAM 49	0.180 acre	290
Wetland 20	Modified Category 2/ ORAM 37	0.062 acre	93
Wetland 21	Category 1/ ORAM 28	0.082 acre	130
Wetland W9WL4	Modified Category 2/ ORAM 34	0.029 acre	47
Wetland 22	Category 1/ ORAM 28	0.344 acre	555
Wetland 24	Category 1/ ORAM 29	0.069 acre	112
Wetland 26	Category 1/ ORAM 29	0.483 acre	780
Wetland 28	Modified Category 2/ ORAM 34	0.101 acre	162
Wetland 29	Category 1/ ORAM 12.5	0.001 acre	0

Table 1. Summary of Proposed Fill Areas and Volumes SCI 823-0.00 Portsmouth Bypass for Phase 1 of the Preferred Alternative.

Feature ID	Quality (ORAM or QHEI/HHEI)	Proposed Impact Amount	Volume of Fill Required (Cubic Yards)
Wetland 30	Category 1/ ORAM 12.5	0.011 acre	18
Wetland 31	Category 1/ ORAM 12.5	0.027 acre	44
Wetland 32	Category 2/ ORAM 53	0.019 acre	0
Wetland 33	Category 1/ ORAM 26	0.021 acre	34
Wetland 34	Category 1/ ORAM 13	0.013 acre	21
Wetland 35	Modified Category 2/ ORAM 37	0.000 acre	0
Railroad Ditch 1	N/A	0.000 feet	0
Railroad Ditch 2	N/A	0.000 feet	0
Pond 4	N/A	1.418 acres	13,726
Pond 5	N/A	0.034 acre	329
Pond 6	N/A	0.189 acre	1,830
Pond 7	N/A	0.592 acre	5,731
Pond 8	N/A	0.467 acre	4,521

*QHEI – Qualitative Habitat Evaluation Index, HHEI – Headwater Habitat Evaluation Index

Minimal Degradation Alternative:

As with the Preferred Alternative, the Minimal Degradation Alternative for Phase 1 of the SCI-823 Portsmouth Bypass entails the construction of approximately 3 miles of new four-lane, limited-access highway along the same alignment. The typical roadway section for the Minimal Degradation Alternative is the same as in the Preferred Alternative and consists of four lanes (two in each direction) that are 12 feet wide, a 22-foot wide median with concrete barrier and 10-foot wide shoulders.

The goal of the Minimal Degradation Alternative is to reduce impacts to Waters of the US. During the design stages of the project it was ODOT's intention to avoid and minimize impacts to Waters of the U.S. The design of the Portsmouth Bypass has already incorporated the use of oversized culverts at every stream crossing throughout the design process. Comments generated during the Agency Review of the Draft Environmental Impact Statement (DEIS) requested that ODOT investigate the feasibility of bridging additional water resources.

The Minimal Degradation Alternative is essentially on the same alignment as the Preferred Alternative with seven additional bridge structures incorporated into the design. These seven bridges have been added at various locations along the mainline and at some interchange ramps. The cost of the additional bridges would increase the overall cost of the Portsmouth Bypass Project by approximately $71.75 million. The substantial increase in cost of the Minimal Degradation Alternative is due to the expense associated with design and construction of the structure and the substantial earthwork required to construct the bridge approaches at the desired elevation. The total cost of the Minimal Degradation Alternative is double the cost of the Preferred Alternative with an approximate cost of approximately $143.25 million. A summary of the proposed bridges is included in Table 2.

Table 2. Summary of Bridges for Minimal Degradation Alternative.

Bridge ID (Figure)	Location	Cost
Bridge 1 (4-1)	STA 530+00 to 543+00	$27,000,000
Bridge 2 (4-2)	Ramp A/B STA 534+50 to 537+00	$4,600,000
Bridge 3 (4-3)	Ramp C/D STA 514+00 to 519+00	$1,800,000
Bridge 4 (4-4)	STA 509+00 to 505+00	$3,000,000
Bridge 5 (4-5)	STA 402+00 to 413+00	$28,600,000
Bridge 6 (4-6)	STA 363+00 to 365+00	$4,350,000
Bridge 7 (4-7)	STA 353+00 to 355+00	$2,400,000
Additional Cost of Minimal Degradation Bridges		**$71,750,000**

Because the Minimal Degradation Alternative is on essentially the same alignment as the Preferred Alternative, the Minimal Degradation Alternative will also cross 19 jurisdictional stream channels, impacting approximately 7,316 feet, which is 2,209 feet less than the Preferred Alternative. The 7,316 feet of stream impact also includes 1,200 feet of temporary impact needed to construct the bridges in the Minimal Degradation Alternative. Impacts result from the discharge of approximately 799 cubic yards of clean fill material. Stream impacts can be further refined as:

- 78 feet of WWH (same as Preferred Alternative)
- 6,790 feet of Class II PHWH (2,209 feet less than the Preferred Alternative)
- 448 feet of Class I PHWH (same as Preferred Alternative)

Twenty-six jurisdictional wetlands would be impacted during the construction of the Minimal Degradation Alternative for Phase 1 of the Portsmouth Bypass Project. A total of 1.904 acres of wetland would be directly impacted as a result of the project. This is a reduction of 1.989 acres of impact compared with the Preferred Alternative. Impacts result from the discharge of approximately 3,024 cubic yards of clean fill material. As part of the Minimal Degradation Alternative, those areas of wetland that are located beyond the construction limits but within the ROW limits (included as indirect impacts in the Preferred Alternative) can be avoided during the construction of the proposed bridges as part of the Minimal Degradation Alternative. Specifically, these wetland impacts include:

- 0.770 acre of ORAM Category 2, non-forested wetland (1.757 acres less than the Preferred Alternative)
- 1.134 acres of ORAM Category 1, non-forested wetland (0.232 acre less than the Preferred Alternative)

Four ponds would be impacted during the construction of the Minimal Degradation Alternative for Phase 1 of the Portsmouth Bypass Project. This Alternative completely avoids Pond 6 and is a reduction in impacts of 0.189 acre compared with the Preferred Alternative. A total of 2.551 acres of jurisdictional pond would be impacted as a result of the project.

A summary of the impacts for Minimal Degradation Alternative are provided in Table 3 below.

Table 3. Summary of Reduced Fill and Areal Impacts to Waters of the U.S.
Minimal Degradation Alternative for
SCI 823-0.00 Portsmouth Bypass.

Feature ID	Quality (ORAM or QHEI/HHEI)	Proposed Impact Amount	Volume of Fill Required (Cubic Yards)
Stream 17-1-1*	Class I PHWH/ HHEI 22	73 feet	0
Stream 17a/b*	Modified Class II PHWH/ HHEI 55	460 feet (150 temporary)	95
Stream 17c*	Modified Class II PHWH/ HHEI 47	743 feet (150 temporary)	44
Stream 17c-1	Modified Class II PHWH/ HHEI 43	394 feet	9
Stream 17d	Modified Class II PHWH/ HHEI 59	294 feet	111
Stream 18 (Long Run)	WWH/ QHEI 78.5	55 feet (150 temporary)	37
Stream 18-1	Modified Class II PHWH/ HHEI 39	417 feet	32
Stream 18b	Modified Class II PHWH/ HHEI 39	244 feet	56
Stream 19	Modified Class II PHWH/ HHEI 69	530 feet	151
Stream 19-1*	Modified Class II PHWH/ HHEI 52	143 feet (150 temporary)	17
Stream 20	Modified WWH/ QHEI 58.5	23 feet (150 temporary)	0
Stream 20-1	Class II PHWH/ HHEI 47	720 feet	30
Stream 20-2	Modified Class I PHWH/ HHEI 23	375 feet	7
Stream 21*	Modified Class II PHWH/ HHEI 49	36 feet (150 temporary)	7
Stream 21a*	Modified Class II PHWH/ HHEI 36	24 feet	2
Stream 22a/b	Modified Class II PHWH/ HHEI 67	1,267 feet	186
Stream 22a-1	Modified Class II PHWH/ HHEI 43	318 feet	15
Stream 23/k*	Class II PHWH/ HHEI 53	0 feet (150 temporary)	0
Stream 24-1*	Modified Class II PHWH/ HHEI 36	0 feet (150 temporary)	0
Stream 18-2	Modified Class II PHWH/ HHEI 53	0 feet	0
Stream 18-2-1	Modified Class II PHWH/ HHEI 37	0 feet	0
Wetland 1*	Category 1/ ORAM 23.5	0.011 acre	18
Wetland 2/3*	Modified Category 2/ ORAM 31.5	0.092 acre	148
Wetland 4*	Modified Category 2/ ORAM 30.5	0.002 acre	3
Wetland W8WL6*	Modified Category 2/ ORAM 32.5	0.040 acre	64
Wetland W8WL8*	Category 1/ ORAM 28.5	0.010 acre	17
Wetland 5/W8WL7*	Modified Category 2/ ORAM 39.5	0.051 acre	83
Wetland 6*	Modified Category 2/ ORAM 30.5	0.000 acre	0
Wetland 7*	Category 1/ ORAM 21	0.108 acre	174
Wetland 8	Modified Category 2/ ORAM 30.5	0.028 acre	45
Wetland 9	Modified Category 2/ ORAM 35.5	0.073 acre	102
Wetland 12*	Modified Category 2/ ORAM 39	0.246 acre	396
Wetland 13*	Modified Category 2/ ORAM 35	0.005 acre	8
Wetland 14*	Category 1/ ORAM 19.5	0.000 acre	0
Wetland 15	Modified Category 2/ ORAM 33.5	0.041 acre	65
Wetland 16	Category 1/ ORAM 26	0.036 acre	58
Wetland 17*	Modified Category 2/ ORAM 35.5	0.000 acre	0
Wetland 18/W9WL2*	Modified Category 2/ ORAM 35.5	0.000 acre	0
Wetland 19*	Category 2/ ORAM 49	0.072 acre	117
Wetland 20*	Modified Category 2/ ORAM 37	0.000 acre	0
Wetland 21*	Category 1/ ORAM 28	0.000 acre	0
Wetland W9WL4*	Modified Category 2/ ORAM 34	0.000 acre	0
Wetland 22	Category 1/ ORAM 28	0.344 acre	555
Wetland 24	Category 1/ ORAM 29	0.069 acre	112
Wetland 26	Category 1/ ORAM 29	0.483 acre	780
Wetland 28	Modified Category 2/ ORAM 34	0.101 acre	162
Wetland 29	Category 1/ ORAM 12.5	0.001 acre	0

Table 3. Summary of Reduced Fill and Areal Impacts to Waters of the U.S. Minimal Degradation Alternative for SCI 823-0.00 Portsmouth Bypass.

Feature ID	Quality (ORAM or QHEI/HHEI)	Proposed Impact Amount	Volume of Fill Required (Cubic Yards)
Wetland 30	Category 1/ ORAM 12.5	0.011 acre	18
Wetland 31	Category 1/ ORAM 12.5	0.027 acre	44
Wetland 32	Category 2/ ORAM 53	0.019 acre	0
Wetland 33	Category 1/ ORAM 26	0.021 acre	34
Wetland 34	Category 1/ ORAM 13	0.013 acre	21
Wetland 35	Modified Category 2/ ORAM 37	0.000 acre	0
Railroad Ditch 1	N/A	0 feet	0
Railroad Ditch 2	N/A	0 feet	0
Pond 4	N/A	1.418 acre	13,726
Pond 5	N/A	0.034 acre	329
Pond 6*	N/A	0.000 acre	0
Pond 7	N/A	0.592 acre	5,731
Pond 8	N/A	0.467 acre	4,521

*Impacts have been reduced compared to the Preferred Alternative.

Non-Degradation Alternative:

The No-Build Alternative is the Non-Degradation Alternative for the SCI 823-0.00 Portsmouth Bypass Project. This alternative is not a viable alternative to avoid impacts to Waters of the US because it fails to meet the Purpose and Need of the project. The No-Build Alternative does not correct any of the existing deficiencies of the existing transportation network. Implementation of the Non-Degradation Alternative would not improve regional mobility or increase the potential for economic development and would continue to put the motoring public's safety at risk within the community.

10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation. (OAC 3745-1-05(C)(6)(a, b) and OAC 3745-1-54)

Preferred Alternative:

During the refinement of the Preferred Alternative, attempts to avoid and minimize impacts to Waters of the US were incorporated into the overall design of the project. As part of the project development, representatives of ODOT assessed the functions and values of the aquatic resources within Phase 1 of the Preferred Alternative. These assessments were conducted using methods developed by the Ohio EPA and included the ORAM v. 5.0. Streams were assessed using either the QHEI or the HHEI. Copies of the field data forms including routine wetland delineation forms, ORAM, QHEI, and HHEI are provided in the *Level 2 Ecological Survey Report SCI-823-0.00 – Phase 1 (PID 19415)* [ASC Group 2011].

Phase 1 of the Preferred Alternative will impact Waters of the US, which will result in the lowering of water quality and may possibly affect aquatic life and wildlife. Impacts include the

placement of culverts, permanent erosion control, bridging, and the relocation of existing channels within Phase 1. During the installation of these culverts, aquatic organisms at the impact site and downstream of the impacts could be adversely affected by the temporary increase in sediments in the water column from the construction activities. These impacts are expected to be minor and localized around the area of impact. Impacts will be minimized through the use of construction best management practices (BMPs) for sediment and erosion controls that include the installation of silt fencing and adherence to the project's Stormwater Pollution Prevention Plan (SWPPP). Culverts have been designed so as not to impede flow or alter the stream's ability to transport sediment. All proposed bridge structures were designed using BMPs and will be installed above the OHWM of the streams when feasible, so as not to impact these features. In addition, ODOT and the FHWA believe that the standard ODOT design procedures provide culverts that are wide enough to accommodate the connection of ecological systems, as the proposed culverts were designed using culverts 1 foot diameter larger than what is typically specified. In addition, the proposed culverts have been designed for a 50-year flood, but will allow the conveyance of a 100-year flood without causing any significant damage.

Threatened/Endangered Species:

Threatened and endangered species for the Portsmouth Bypass were originally coordinated with the USFWS and ODNR in 2004. Due to the time elapsed between the original species coordination and the submittal of this application, the USFWS required additional species coordination for some of the federally listed species. During the summer of 2011, representatives of ODOT conducted additional species surveys for all listed mussels, the Indiana bat (Myotis sodalis), the small whorled pogonia (*Isotria medeoloides*), running buffalo clover (*Trifolium stoloniferum*), and the eastern hellbender (*Cryptobranchus alleganiensis*). Additional threatened and endangered species information is provided in Appendix F.

In a letter dated July 7, 2011, from the ODNR Division of Wildlife, two state-listed species are located within 1 mile of Phase 1 of the Portsmouth bypass. A search of the Ohio Biodiversity Database returned two records of state-listed species located within 1 mile of Phase 1 of the Portsmouth Bypass (Appendix F). Records were returned for the state-endangered southern monkshood (*Aconitum uncinatum*) and the state-threatened Spanish oak (*Quercus falcata*).

Surveys for listed species were completed in conjunction with the aquatic and terrestrial surveys completed on various occasions by ODOT and /or their representatives. No federally listed species were identified within the limits of the Phase 1 of the Portsmouth Bypass. During the threatened and endangered species surveys representatives of ODOT identified populations of the state-endangered southern monkshood, the state-endangered primrose-leaved violet (*Viola primulifolia*), and an individual state potentially threatened American chestnut (*Castanea dentata*). A summary of the federal- and state-listed species is provided in Table 4.

Table 4. Listed Species with Ranges Overlapping the Limits of the Preferred and Minimal Degradation Alternatives.

Species		Group	Federal Status	State Status
Scientific Name	**Common Name**			
Aconitum uncinatum	Southern Monkshood	Plant	Not Listed	Endangered
Castanea dentata	American Chestnut	Plant	Not Listed	Potentially Threatened
Crotalus horridus	Timber Rattlesnake	Reptile	Species of Concern	Endangered

Table 4. Listed Species with Ranges Overlapping the Limits of the Preferred and Minimal Degradation Alternatives.

Species		Group	Federal Status	State Status
Scientific Name	**Common Name**			
Cryptobranchus a. alleganiensis	Eastern Hellbender	Amphibian	Species of Concern	Endangered
Cyprogenia stegaria	Fanshell	Mollusk	Endangered	Endangered
Epioblasma torulosa rangiana	Northern Riffleshell	Mollusk	Endangered	Endangered
Epioblasma triquetra	Snuffbox	Mollusk	Proposed Endangered	Endangered
Haliaeetus leucocephalus	Bald Eagle	Bird	Species of Concern	Threatened
Isotria medeoloides	Small Whorled Pogonia	Plant	Threatened	Endangered
Lampsilis orbiculata (=l. abrupta)	Pink Mucket Pearly Mussel	Mollusk	Endangered	Endangered
Myotis sodalis	Indiana Bat	Mammal	Endangered	Endangered
Plethobasus cyphyus	Sheepnose	Mollusk	Proposed Endangered	Endangered
Pleurobema clava	Clubshell	Mollusk	Endangered	Endangered
Quercus falcata	Spanish Oak	Plant	Not Listed	Threatened
Spiraea virginiana	Virginia Spiraea	Plant	Threatened	Endangered
Terrapene carolina carolina	Eastern Box Turtle	Reptile	Not Listed	Concern
Trifolium stoloniferum	Running Buffalo Clover	Plant	Endangered	Endangered
Villosa fabalis	Rayed Bean	Mollusk	Proposed Endangered	Endangered
Viola primulifolia	Primrose-leaved violet	Plant	Not Listed	Endangered

During the Ecological Survey, completed August 12, 2011, surveys for both state- and federally listed species were conducted in and around the limits of Phase 1 of the Portsmouth Bypass. Individual studies were performed for five listed species: the federally endangered Indiana bat; federally listed species of concern/state-listed endangered eastern hellbender; federally threatened small whorled pogonia; federally endangered running buffalo clover and for various listed mussel species. Copies of the current threatened and endangered species coordination letters are included in Appendix F.

Indiana Bat (*Myotis sodalis*)

Mist net surveys for the Indiana bat were conducted between July 1 and August 15, 2011. No Indiana bats were captured during the survey. Due to the forested nature of the project area, potential roosting habitat is prevalent throughout the limits of the project corridor. Potentially suitable habitat for this species will be impacted as part of this project. A species specific report has been provided to the USFWS for Section 7 coordination.

Eastern Hellbender (*Cryptobranchus a. alleganiensis*)

On August 16, 2011, the area near the proposed bridge over the Little Scioto River was investigated for potentially suitable eastern hellbender habitat. No impacts to the eastern

hellbender are anticipated as a result of Phase 1 of the Portsmouth Bypass, as this phase does not contain any streams large enough to support the eastern hellbender.

Running Buffalo Clover (*Trifolium stoloniferum*)
During the ecological surveys, running buffalo clover was not identified within the Preferred Alternative project area. No direct impacts to running buffalo clover are anticipated as a result of this project. Potentially suitable habitat for this species will likely be impacted as part of the construction of Phase 1 of the Portsmouth Bypass. A species specific report has been provided to the USFWS for Section 7 coordination.

Mussels
In August 2011, a mussel survey was conducted in the Little Scioto River, which is located in Phase 3 of the Portsmouth Bypass Project. No evidence of mussels was encountered in any of the investigated streams during the ecological survey for Phase 1 of the Portsmouth Bypass. It appears that Phase 1 of the Portsmouth bypass does not contain streams large enough to support mussels. The mussel report has been provided to the USFWS for Section 7 coordination.

Bald Eagle (*Haliaeetus leucocephalus*)
The nearest bald eagle nest is approximately seven miles west-southwest of the project area. Therefore, no impacts to bald eagles are anticipated as a result of Phase 1 of the Portsmouth Bypass project.

Small Whorled Pogonia (*Isotria medeoloides*)
During the ecological surveys, small whorled pogonia was not identified within the Preferred Alternative project area. No direct impacts to small whorled pogonia are anticipated as a result of this project. Potentially suitable habitat for this species will likely be impacted as part of the construction of Phase 1 of the Portsmouth Bypass. A species specific report has been provided to the USFWS for Section 7 coordination.

Virginia Spirea (*Spiraea virginiana*)
The original survey for the Virginia spirea did not identify any individuals within the survey area. The USFWS agreed that this species is not likely found within the project area and an additional species survey was not requested.

Timber Rattlesnake (*Crotalus horridus*)
Although, it was noted during the original survey that habitat for the timber rattlesnake is present within the project area, the resource agencies (USFWS and ODNR) agreed with the 2003 findings that the timber rattlesnake were very unlikely to inhabit the project area due to human disturbances. Therefore, no additional survey for this species was requested.

Southern Monkshood (*Aconitum uncinatum*)
During the ecological survey of Phase 1 of the Portsmouth Bypass, several individuals of southern monkshood were identified along Long Run (Stream 18). A subsequent visit to this area during the JD field meeting revealed that the area where the southern monkshood was identified has been logged and is completely void of vegetation. It is unlikely that the species remains due to the impacts from logging activities completed before ODOT could acquire this property for right-of-way.

American Chestnut (*Castanea dentata*)
During the ecological surveys, one young American chestnut tree was found within the project area on the east side of Swauger Valley Road. This individual will likely be impacted as a result

of this project as it is located within the construction limits of Phase 1 of the Portsmouth Bypass. However, suitable habitat for the American chestnut is prevalent throughout the vicinity of the project area and permanent impacts to this species are unlikely.

Spanish Oak (*Quercus falcata*)
A record for the state-threatened Spanish oak was returned within 1 mile of the Phase 1 of the Portsmoth Bypass Project Area (Appendix F). During the ecological survey no Spanish oaks were identified within the proposed project area. Suitable habitat for the Spanish oak will be impacted as s a result of this project; however, this project should not have an adverse affect on this species due to the potential habitat located in the vicinity of the project area.

Eastern Box Turtle (*Terrapene carolina carolina*)
During the ecological surveys, several individuals of the eastern box turtle were identified. It is likely impacts will occur to this species as a result of the project; however, the impact is negligible since the eastern box turtle is abundant throughout the project area and southern Ohio.

Primrose-leaved violet (*Viola primulifolia*)
During the ecological surveys, several individuals of the primrose-leaved violet were identified along the edges of several logging roads. It was also identified in adjacent areas outside of the project area. It is likely impacts will occur to this species as a result of this project.

Minimal Degradation Alternative:

The impacts and the resulting effects to water quality would be less as fewer streams and wetlands will be impacted. Impacts to wildlife associated with the construction of the Minimal Degradation Alternative are similar to the effects of the Preferred Alternative as the two alternatives are on the same alignment.

Non-Degradation Alternative:

Because the Non-Degradation is a No-Build Alternative, there would be no impacts to water quality resulting from construction.

10c) Include a discussion of the technical feasibility, cost effectiveness and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.) (OAC 3745-1-05(C)(6)(h, j-k) and OAC 3745-1-54)

Preferred Alternative:

The Preferred Alternative is available, cost effective, and technically feasible. The construction techniques and associated BMPs that will be used to construct the Preferred Alternative have been used on numerous ODOT projects. The techniques to construct culverts and embankments have been proven to be both reliable and cost effective. There are no foreseeable operational or maintenance difficulties that would have a detrimental impact to water quality within the project area. Any possible impacts to water quality during the construction phase of the Preferred Alternative will be minimized through implementation of the BMPs specified in the Contractor's SWPPP.

The estimated cost to construct the Preferred Alternative is approximately $71.5 million. This includes approximately $56.5 million for construction and approximately $6 million for right-of-

way acquisition. The remaining $9 million will be spent on utilities relocation, design, and construction engineering services.

Minimal Degradation Alternative:

The Minimal Degradation Alternative is also available and technically feasible. This Alternative is not feasible as to the cost effectiveness compared to the ecological benefit. The cost of adding the seven bridges essentially doubles the cost of the project from $71.5 million to approximately $143.25 million. The seven additional bridges have been included in the Minimal Degradation Alternative even though the hydrologic calculations at these locations do not warrant bridge structures to be constructed. The use of standard culverts at these locations provide an efficient means of crossing the streams and wetlands while meeting or exceeding current ODOT design standards for hydraulic design. In addition, replacing the standard culverts with bridges also increases the maintenance costs associated with the project over the life span of the structures. While the construction techniques and associated BMPs that would be used to construct the Minimal Degradation Alternative have been successfully used on numerous occasions on other ODOT projects, the substantial increase in cost (approximately $71.75 million) is not the most efficient way to construct a project of this magnitude.

The primary difference between the Preferred Alternative and the Minimal-Degradation Alternative is the construction of bridges in lieu of standard culverts. The difference in the project costs between the Preferred Alternative and the Minimal Degradation Alternative is approximately $71.75 million. The use of bridge structures at these locations is neither cost effective nor feasible when factoring in the recurring costs associated with the operation and maintenance of bridge structures. Using bridges at these crossings is even less appropriate from a design standpoint when the replacement expenditures and the installation costs are included over the entire life of the project.

The estimated cost to construct the Minimal Degradation Alternative is approximately $143.25 million. This includes approximately $125 million for construction and approximately $6 million for right-of-way acquisition. The remaining $12.25 million will be spent on utilities relocation, design, and construction engineering services.

Non-Degradation Alternative:

Since the Non-Degradation Alternative is the No-Build Alternative, there are no construction costs associated with this alternative.

10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents. (OAC 3745-1-05(C)(6)(i))

The proposed project does not involve regional sewage collection or treatment facilities.

10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource. (OAC 3745-1-05(B)(2)(g))

According to the list of active watershed groups provided by the Ohio Watershed Network (available at http://ohiowatersheds.osu.edu/groups), only one watershed group, the Scenic Salt Creek Valley Association**,** is reported in the Lower Scioto (HUC 05060002) watershed. An internet search did not find any additional information on this watershed group. Salt Creek is located upstream of the proposed project and its confluence with the Scioto River is located in Ross County. No additional watershed groups currently exist within Scioto County or within the Little Scioto – Tygarts (HUC 05090103) watershed.

The proposed Portsmouth Bypass Project is located within the target area of the **Scioto River Watershed Conservation Reserve Enhancement Program (CREP)**, which is a voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water. This program is a partnership between the Ohio Department of Natural Resources, the United States Department of Agriculture, and local Soil and Water Conservation Districts. The goal of this program is to enroll 70,000 acres of crop land to be converted for use as filter strips, riparian buffers, wildlife habitat, wetlands, and tree plantings in order to prevent and reduce the amount of nutrient-laden sediment runoff from entering the Scioto River and its tributaries. It is anticipated that as a result of this program the biodiversity and the water quality of the entire watershed will benefit.

Friends of Scioto Brush Creek is an organization whose mission includes "Helping maintain and improve the water quality of Scioto Brush Creek through education, awareness and the involvement of local residents." Scioto Brush Creek is recognized as one of the highest quality streams in Ohio, which is due to the stream's ability to support much of the original fish fauna and also because the watershed surrounding this stream is home to more than 30 rare plants and animals, including federally threatened and endangered species. To help preserve this natural resource, the Friends of Scioto Brush Creek has in recent years has increased its involvement in the community as the group has worked to inform residents of the significance of the stream.

10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project. (OAC 3745-01-05(C)(6)(g))

Preferred Alternative:

BMPs to control run-off and erosion will be implemented during project development and construction in accordance with ODOT's *Construction Materials and Specifications*. More than $1.8 million will be spent on protection of water quality during construction of the Preferred Alternative. These water pollution controls include but are not limited to diversion structures, silt fence, and retention structures. Additional water pollution controls may be implemented on an as needed basis during the construction of the project. These BMPs are generally temporary in nature and will be used during the construction phases of the project. Table 5 provides a breakdown of the estimated costs for water pollution control during construction of the Preferred Alternative.

Table 5. Cost Estimate for Water Pollution Controls for the Preferred Alternative for Phase 1 of the Portsmouth Bypass.

Item	Quantity	Unit	Unit Cost	Total Cost
Sediment Basins	7,677	Cubic Yard	$10.00	$76,769
Sediment Removal	3,838	Cubic Yard	$4.50	$17,271
Construction Seeding and Mulching (For 2 Construction Seasons)	788,555	Square Yard	$0.96	$1,514,026
Perimeter Filter Fabric Fence	26,050	Linear Foot	$3.00	$78,150
Filter Fabric Ditch Check	1,250	Linear Foot	$10.00	$12,500
Rock Channel Protection with Filter	46	Cubic Yard	$83.00	$3,818
Existing Stream Protection	14	Each	$4,500.00	$63,000
Inlet Protection Catch Basins	896	Linear Foot	$10.00	$8,960
Construction Entrance	15	Each	$5,000.00	$75,000
			Total Cost	**$1,849,494**

In addition to the water pollution controls listed in Table 5, the Preferred Alternative for the Portsmouth Bypass also includes three Extended Detention Basins as part of the Post Construction BMPs. Post Construction Stormwater BMPs are provided for the perpetual management of stormwater runoff quality and quantity so that a receiving stream's physical, chemical, and biological characteristics are protected and stream functions are maintained. Post Construction BMPs remove pollutants from runoff (water quality treatment) and protect streams by attempting to maintain existing stream conditions or by reducing runoff volumes through structural BMP (water quantity treatment). These Extended Detention Basins captures the first ¾ inch of stormwater during rain events and slowly meters the captured volume over minimum 48-hour period, with no more than 50 percent of the volume released during the first 16 hours.

Minimal Degradation Alternative:

The cost of water pollution controls for the Minimal Degradation Alternative is approximately $2.86 million. The increase in cost over the Preferred Alternative is based due the greater amount of labor and materials required to avoid resources as part of the Minimal Degradation Alternative. Table 6 provides a breakdown of the estimated costs for water pollution control during construction of the Minimal Degradation Alternative.

Table 6. Cost Estimate for Water Pollution Controls for the Minimal Degradation Alternative for Phase 1 of the Portsmouth Bypass.

Item	Quantity	Unit	Unit Cost	Total Cost
Sediment Basins	4,951	Cubic Yard	$10.00	$49,510
Sediment Removal	6,037	Cubic Yard	$4.50	$27,167
Construction Seeding and Mulching (For 2 Construction Seasons)	994,526	Square Yard	$0.96	$1,909,490
Perimeter Filter Fabric Fence	82,364	Linear Foot	$3.00	$247,092
Filter Fabric Ditch Check	13,250	Linear Foot	$10.00	$132,500
Rock Channel Protection with Filter	324	Cubic Yard	$83.00	$26,892
Existing Stream Protection	23	Each	$4,500.00	$103,500
Inlet Protection Catch Basins	5,885	Linear Foot	$10.00	$58,850
Construction Entrance	61	Each	$5,000.00	$305,000
			Total Cost	**$2,860,000**

Non-Degradation Alternative:

Since the Non-Degradation Alternative is the No-Build, there are no water pollution costs associated with construction.

10g) Describe any impacts on human health and the overall quality and value of the water resource. (OAC 3745-1-05(C)(6)(c) and OAC 3745-1-54)

Preferred Alternative:

Overall, impacts to human health are expected to be positive as a result of the construction of the Portsmouth Bypass Project. The main purposes of the proposed project are to improve transportation system linkage, safety, and the current and future capacity through Portsmouth, Ohio for the efficient movement of people and goods. The widespread nature of the safety deficiencies inherent in the existing transportation system will be improved by diverting traffic from substandard local roads to the new phases of the bypass route, thereby decreasing the accident rate of the overall system and improving the safety of the motoring public. In addition, the construction of the Preferred Alternative will reduce the amount of fuel used when making the trip along the bypass when compared to the traditional route. A reduction in fuel use would also reduce the amount of methane (CH_4), carbon monoxide (CO), non-methane volatile organic compounds (NMVOC), and nitrogen oxides (NO_x) that are generated from the incomplete combustion of fossil fuels. These compounds are all ozone precursors, and any reduction in the amount of ground level ozone and air pollutants would be a benefit to human health.

The overall quality and value of the stream resources impacted by this project will largely be temporary in nature, and associated with the construction of the project. Since Phase 1 of the Preferred Alternative has been designed in accordance with the guidance provided in ODOTs *Location and Design Manual: Volume Two Drainage Design*, impacts to regulated waterways have been minimized and designed using construction BMPs. Proposed stream crossings have been designed using the methods described in this manual and should therefore have only a negligible effect on the value of the impacted water resource. In addition, all waterway impacts associated with the construction of Phase 1 of the Portsmouth Bypass will be permitted and constructed in accordance with all federal, state and local regulations intended to protect human health and water quality. In addition, the construction BMPs identified in the project's SWPPP will be implemented during the construction of Phase 1 of the Preferred Alternative, further minimizing potential impacts to human health resulting from the lowering of water quality.

Minimal Degradation Alternative:

Impacts to human health would be similar to the impacts associated with the Preferred Alternative, as this alternative is built on essentially the same alignment and would require the same construction activities. Therefore, any impacts to human health resulting from the lowering of water quality would be similar.

Non-Degradation Alternative:

The No-Build Alternative would have a negative effect on human health by not addressing the safety issues associated with the deficiencies associated with the existing transportation network. The No-Build Alternative would not address the safety deficiencies and would continue to jeopardize the motoring public's safety. Water resources would likely not be adversely affected by this alternative.

10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy. (OAC 3745-1-5(B)(2)(e), and OAC 3745-1-05(C)(6)(i))

Scioto Countys economy has come and gone with the success and failures of Portsmouth's economy. Until the 1970s, heavy industry such as steel mills and shoe factories drove the county's economy. Since the closure of these factories, Scioto County has suffered a loss of jobs and revenue. Today, the service industry, such as the Southern Ohio Medical Center (SOMC), is the largest employer in the county. The new Portsmouth Bypass will facilitate the continued growth of the service industry as a result of the overall improvement of the community's transportation system.

Scioto County has also been the benefactor of SunCoke (coke fuel production) and Duke Energy (electricity) facilities near Franklin Furnace. Mitchellace, Inc., the largest manufacturer of shoelaces in the world, is located in Scioto County. Graf Brothers Flooring and Lumber, the world's largest manufacturer of rift and quartered oak products, has two satellite log yards in Scioto County, with the company's main office located across the Ohio River in South Shore, Kentucky. The new Portsmouth Bypass will facilitate the continued growth of these industries due to the overall improvement of the community's transportation system.

One of the main goals of the Portsmouth Bypass is to provide access to potential development areas and increase Scioto County's opportunity for attracting new businesses. Local officials and the Scioto County Economic Development Office support the proposed bypass project because of the economic development potential it will bring to the area, which may help alleviate the high unemployment and poverty rates within Scioto County and the surrounding communities. Building the Portsmouth Bypass will bring this area in line with the goals of the Appalachian Regional Commission, which is to provide "the physical infrastructure necessary for self-sustaining economic development and improved quality of life."

Construction of Phase 1 of the Portsmouth Bypass with its access points on SR 335 and SR 278 will provide access to the area surrounding this portion of the proposed Portsmouth Bypass for potential commercial and industrial development. Once this area has access to the regional transportation system the site will be well suited for development as these areas are located outside of the floodplain, have access to public and private water supplies, have utility access, and have access to a main CSX line. Proposed infrastructure improvements in these areas include a new $29,750,000 sanitary sewage treatment plant and sewer line project planned by Scioto County in the Minford area where Phase 1 of the Portsmouth Bypass is located, along with the Greater Portsmouth Regional Airport. The project will be funded by USDA Rural Development Stimulus dollars and other public funds. The county has been told that the funding outlook is favorable. The proposed sanitary sewer system is designed to handle new industrial commercial/industrial park growth as well as serving surrounding communities.

The Portsmouth Bypass holds the economic future for Scioto County, as the county only has several hundred acres left that is out of the floodplain, which is suitable for development. The bypass will open up thousands of new acres for development, creating job opportunities for thousands of citizens in a very depressed area of the state. Local developers and local government have proven capacity to take advantage of infrastructure development and transportation improvements in attracting new industry and in assisting the expansion of existing commercial/industrial businesses.

The 2010 population of Scioto County was 79,499. In 2008, Scioto County's median household income was $31,445 and the per capita personal income was $27,561. In 2010, the total numbers of families living below the poverty line was 17.9 percent or 3,713 families. In July 2011, Scioto County had an unemployment rate of 12.6 percent while the Ohio statewide average was 9.2 percent (Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information).

The median home value in Scioto County is $82,600. According to the information provided in the Environmental Reevaluation for the 2006 Record of Decision (ROD), the construction of Phase 1 of the Portsmouth Bypass will result in 13 residential relocations. These relocations consist of 10 single-family homes and three mobile homes. There are no commercial relocations associated with Phase 1 of the Portsmouth Bypass. Despite these relocations, it was determined in the Environmental Reevaluation, that the Preferred Alternative for the Portsmouth Bypass minimizes the social impacts to the communities in and around the new alignment.

Preferred Alternative:

Since the primary difference between the Preferred and Minimal Degradation Alternatives is the construction of seven bridges in lieu of standard culverts, it is likely that the economic benefits would be similar in nature between the two alternatives. The cost of the Preferred Alternatives is approximately $71.5 million and the cost of the Minimal Degradation Alternative is $143.25 million. The area surrounding the project area is generally rural in nature. As designed, the Preferred Alternative will cost approximately $71.5 million to complete. Based on the findings in a 1999 FHWA report entitled *Highway Infrastructure Investment and Job Generation: A Look at the Positive Employment Impacts of Highway Investment*, for every $1 billion of federal highway investment, approximately 42,100 employment opportunities are generated. The employment opportunities are not limited to the highway construction but also to the industrial sectors that supply materials for the project. The report provides information on three types of employment effects in the general economy resulting from federally funded highway projects. These three types of employment opportunities include:

- Direct Jobs – includes those jobs held by workers employed at the highway construction site. This includes on-site laborers, specialists, engineers, and managers.
- Indirect Jobs – are those jobs held by workers who supply materials used in highway construction projects and the off-site construction industry workers. These jobs would include administrative, managerial, mining and quarrying, petroleum refining, lumber, steel, and the concrete and cement industry.
- Induced Jobs – are jobs throughout the general economy resulting from on-site and off-site employees spending their earnings within the surrounding community.

Based on the employment projections provided in the report, the Portsmouth Bypass Project would help provide employment opportunities for approximately 3,011 individuals. This assumption of employment opportunities is based upon the following factors:

- Direct Jobs: 7,900 jobs per $1 billion invested
- Indirect Jobs: 19,700 jobs per $1 billion invested
- Induced Jobs: 14,500 jobs per $1 billion invested

The Portsmouth Bypass project will generate approximately 565 direct employment opportunities, approximately 1,409 indirect employment opportunities and approximately 1,037 induced employment opportunities. These new or continued employment opportunities would also provide an additional increase in state and local tax revenues. The economy of Scioto County generates the following tax revenues:

- 5.5 percent State Sales Tax
- 1.5 percent County Sales Tax
- 0.587 – 5.925 percent State Income Tax (varies based on income)

According to the 2008 U.S. Department of Labor, Bureau of Labor Statistics, the education and health service sector is the largest private employment sector within Scioto County, making up approximately 34 percent, or approximately 6,351 jobs within the county. In terms of total jobs, the education and health service sector, the trade, transportation, and utilities sector, local government and the leisure and hospitality sectors provide the top four employers in Scioto County. Undoubtedly employers and their employees will gain some benefit from the construction of Phase 1 of the Portsmouth Bypass, either directly benefiting from more efficient travel or indirectly as consumers from the efficient movement of goods and services. The major employers in Scioto County are listed in Table 7.

Table 7. Major Employers in Scioto County, Ohio[1].

Employer	Type
G & J Pepsi-Cola Bottlers, Inc.	Manufacturing
Mitchellace, Inc.	Manufacturing
OSCO Industries	Manufacturing
Portsmouth City Schools	Government
Scioto County Government	Government
Shawnee State University	Government
Southern Ohio Medical Center	Service
State of Ohio	Government
Sunoco Inc./ SunCoke	Manufacturing
Taylor Lumber, Inc.	Manufacturing
Wal-Mart Stores, Inc.	Trade

[1] Information Obtained from the Ohio Department of Development.

The construction of Phase 1 is anticipated to take four years to construct and is slated to begin construction sometime in 2012. Assuming that the project will result in the hiring or continued employment of approximately 3,011 individuals at average hourly rate of $15.00, the proposed project is estimated to generate approximately $4.5 million annually in state and local revenue. Table 8 presents an estimate of the total state and local revenues that are expected to be generated as a result of this project.

Table 8. Estimated State and Local Tax Revenues Generated by Preferred and Minimal-Degradation Alternatives.

Category	Dollars Generated From Construction Project	
	Preferred Alternative	Minimal Degradation Alternative
Total annual income, before taxes	$93,943,200	$188,167,200
Annual state income tax receipts[1]	$2,357,613	$4,722,273
Annual state and local tax income from sales[2]	$2,192,008	$4,390,568

[1] Figure based on 2010 1040 State Income Tax Tables.
[2] Figure based on 7.00% State and local sales tax on 33.3% of salary.

Minimal Degradation Alternative:

Since the Minimal Degradation is approximately twice the cost of the Preferred Alternative ($143.25M vs. $71.5M) the economic impact of the Minimal Degradation Alternative is expected to generate as much revenue during the construction of this alternative (Table 5). Approximately 6,031 jobs would be created or retained based on the formulas above. This includes approximately 1,132 direct employment opportunities, 2,822 indirect employment opportunities, and approximately 2,077 induced employment opportunities. The Minimal Degradation Alternative would generate approximately $94.2 million more in wages. The Minimal Degradation Alternative would generate approximately $2.4 million in income tax and approximately $2.2 million more in state and local sales tax.

Non-Degradation Alternative:

The Non-Degradation alternative will not create any new jobs or provide increased revenues within the community.

10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans. (OAC 3745-1-05(B)(2)(e,f), and OAC 3745-1-05(C)(6)(e)).

Preferred Alternative:

No important social or economic benefits are expected to be lost as a result of the construction of the Preferred Alternative for the Portsmouth Bypass Project.

The construction of the Preferred Alternative will require the acquisition of additional permanent right-of-way. Some of the right-of-way takes require total takes and the relocation of 13 residential properties. The acquisition of the additional right-of-way will reduce the amount of land that generates property tax in Scioto County. Any loss of tax revenue and economic activity due to the conversion of farmland and residential properties to right-of-way will likely be offset by the improved transportation infrastructure. It is anticipated the improved transportation system will encourage industrial and commercial development in the immediate vicinity of the bypass. The taxes generated from these new commercial and industrial developments should offset any taxes lost by the county from the impacted relocated properties.

The proposed construction of the Portsmouth Bypass will not acquire any property open to public use. Therefore, public access to the impacted waterways will likely have no effect on recreation, tourism, or enjoyment by humans. Any streams that are large enough to support recreation activities have been bridged and should be available for continued use by anyone currently using these streams for recreation.

Minimal Degradation Alternative:

No important social or economic benefits are expected to be lost as a result of the construction of the Minimal Degradation Alternative for the Portsmouth Bypass Project.

The Minimal Degradation Alternative would likely result in similar social and economic impacts as the Preferred Alternative. Since the Minimal Degradation Alternative differs from the Preferred Alternative with the inclusion of an additional seven bridges, fewer waterways will be impacted. Most of these additional bridges are located over smaller perennial and intermittent streams that are not located on public property and are therefore not open for public recreation activities. Any of the larger perennial streams that can support recreational activities will likely continue to do so.

Non-Degradation Alternative:

No social or economic benefits would be lost by the construction of the Non-Degradation Alternative. Conversely, no social or economic benefits would be gained by selecting the Non-Degradation Alternative. A new bypass route through Scioto County would open up several development opportunities within the county. While the construction of either of the Preferred or Minimal Degradation Alternatives for the Portsmouth Bypass does not guarantee that business investment will occur, the goal is to meet the intent of the Appalachian Highway Development System by providing Scioto County with the necessary transportation infrastructure to help them compete in the marketplace. In addition, the selection of the Non-Degradation Alternative would do nothing to correct the existing deficiencies of existing infrastructure and the motoring public would still be exposed to the various safety issues that are the direct result of the congestion and poor LOS along the existing routes.

10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species. (OAC 3745-1-05 (B)(2)(e, f), OAC 3745-1-05 (C)(6)(b) and OAC 3745-1-54)

Preferred Alternative:

The Preferred Alternative will be constructed in accordance with all federal, state and local regulations that are designed to protect the environment, including regulations applicable to water quality, aquatic life, wildlife, and threatened and endangered species. All stream crossings have been designed based on the guidance provided in ODOT's *Location and Design Manual: Volume Two Drainage Design*. Proposed stream crossings have been designed using the methods described in this manual and should therefore not have an impact on the stream's ability to move sediment downstream.

The Preferred Alternative for the Portsmouth Bypass will impact 31 wetlands. Fourteen of these wetlands are emergent ORAM Category 1 Wetlands that exhibit varying degrees of degraded quality. All of the remaining 17 wetlands are emergent ORAM Category 2 Wetlands. All of these Category 2 Wetlands are of marginal quality. The unimpacted portions of the wetlands that

remain will continue to provide pollutant filtering prior to discharging into adjacent drainages. The pollutant filtering capacity of the impacted wetlands will be compensated for through the inclusion of sediment basins, as required by ODOT's *Location and Design Manual: Volume Two Drainage Design*. It is anticipated that any effects to wildlife will be mitigated as part of the proposed wetland mitigation plan.

Impacts during construction will likely impact aquatic life from filling of streams and increased sedimentation; however, any lowering of water quality will likely be temporary and have no significant impact to populations of aquatic organisms. Also, the majority of the wildlife present on the site will have the ability to migrate to undisturbed areas.

The construction of the Preferred Alternative is not expected to have an adverse impact on any state- or federally listed species (Appendix F). While several state-listed species were identified within the project vicinity, it does not appear that the construction of this project will have any permanent adverse impact to these species, as potential habitat for these species is common throughout the surrounding area. See Section 10b for details regarding threatened and endangered species impacts.

Minimal Degradation Alternative:

As in the Preferred Alternative, the Minimal Degradation Alternative will be constructed in accordance with all federal, state and local regulations that are designed to protect the environment, including regulations applicable to water quality, aquatic life, wildlife, and threatened and endangered species. The Minimal Degradation Alternative differs slightly from the Preferred Alternative with inclusion of an additional seven bridges over several streams and wetlands (Appendix A: Figures 4-1 to 4-7). Therefore, the impacts to bridged streams, wetlands, and ponds in the Minimal Degradation Alternative are significantly reduced when compared to the impacts of the Preferred Alternative. All of the additional bridge structures have been designed using the methods described in ODOT's *Location and Design Manual: Volume Two Drainage Design* and as such should not have an impact on the bridged resources ability to move sediment downstream.

As in the Preferred Alternative, the construction of the Minimal Degradation Alternative could impact aquatic life from filling of streams and increased sedimentation; however, any lowering of water quality will likely be temporary and have no significant impact to populations of aquatic organisms. Also, the majority of the wildlife present on the site will have the ability to migrate to undisturbed areas.

The Minimal Degradation Alternative for the Portsmouth Bypass will impact 25 wetlands. Twelve of these wetlands are emergent ORAM Category 1 Wetlands that exhibit varying degrees of degraded quality. All of the remaining 13 wetlands are emergent ORAM Category 2 Wetlands. All of these Category 2 Wetlands are of marginal quality. The unimpacted portions of the wetlands that remain will continue to provide pollutant filtering prior to discharging into adjacent drainages. The pollutant filtering capacity of the impacted wetlands will be compensated for through the inclusion of sediment basins, as required by ODOT's *Location and Design Manual: Volume Two Drainage Design*. Effects to wildlife will be mitigated as part of the proposed wetland mitigation plan.

The construction of the Minimal-Degradation Alternative is also not expected to have an adverse impact on any state- or federally listed species (Appendix F). While several state-listed species were identified within the project vicinity, none are located in the area adjacent to the Portsmouth

Bypass. In addition, the field investigation of this area did not identify any federally listed species within the project area. See Section 10b for details regarding threatened and endangered species impacts.

Mitigation for the unavoidable impacts associated with the Minimal Degradation Alternative are the same as with the Preferred Alternative with respect to location. Details of the proposed mitigation for the Portsmouth Bypass are provided in Section 10k and Appendix D of this Waterway Permit Package.

Non-Degradation Alternative:

The Non-Degradation will not result in any environmental benefits lost or gained.

10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative):

- **Describe proposed Wetland Mitigation (see OAC 3745-1-54 and Primer)**
- **Describe proposed Stream, Lake, Pond Mitigation (see Primer)**

Avoidance and minimization of impacts to aquatic resources have been incorporated throughout the entire design process for Phase 1 of the Portsmouth Bypass Project. Due to the size and scope of the undertaking of the project, complete avoidance of all Waters of the US was impracticable. The proposed Portsmouth Bypass project will result in the unavoidable permanent impact to 9,525 feet of jurisdictional stream channel (Appendix C). In addition to the 9,525 feet of permanent impact, the Preferred Alternative will also entail 300 feet of temporary stream impact. A summary of impacted streams is provided in Appendix B: Tables A and C and a summary of the proposed mitigation for the project is provided in Tables E and F. Additional information regarding avoidance, minimization, and compensation can be found in Section 10 of the OEPA 401 WQC Application, which is provided in Section 2.

ODOT is currently exploring potential stream mitigation opportunity at the General Electric (GE) Peebles, Ohio Test Operations Facility for the mitigation of the 9,825 feet of jurisdictional stream impacts resulting from the construction of Phase 1 of the Portsmouth Bypass project. The GE Facility encompasses approximately 7,000 acres of undisturbed forested land in Adams County, located in the Scioto Brush Creek Watershed. This property is adjacent to DNAP's Shoemaker and Davis Memorial State Nature Preserves. ODOT is currently conducting title work to determine if any real estate issues exist at the facility.

All potential stream mitigation at the GE Facility would be considered off-site mitigation, as it is located within an adjacent watershed (HUC 05060002) and beyond 1 mile of the proposed project. ODOT proposes to preserve approximately 14,738 feet of stream and their riparian buffers to offset the impact to 9,825 feet of impact (equates to a 1.5 to 1 mitigation ratio). Investigation of the GE facility by representatives of ODOT identified approximately 54,904 feet (approximately 10.40 miles) of potential stream mitigation credit within the southern portion of the GE facility. It is the intent of ODOT to secure as much stream mitigation credit at the facility in order to pool stream mitigation for the future phases of the Portsmouth Bypass and for other ODOT projects that may require mitigation within the surrounding watersheds. Additional mitigation information is provided in Appendix D.

Approximately 3.893 acres of unavoidable jurisdictional wetland impact will result from the construction of the Phase 1 of the Portsmouth Bypass Project (Appendix C). A summary of the wetlands impacted are provided in Appendix B; Tables B and C. At a minimum ODOT will

provide 7.107 acres of wetland mitigation in accordance with the off-site mitigation ratios provided in OAC 3745-1-54. All proposed wetland impacts are to emergent wetlands. Category 1 impacts will be mitigated at a 1.5 to 1 ratio and Category 2 impacts will be mitigated at a 2 to 1 ratio.

ODOT is currently exploring wetland mitigation opportunities as close to the project area as possible. Back in 2005, a wetland mitigation inventory was conducted, but yielded limited results for mitigation opportunities within and adjacent to the project area. There are no wetland mitigation banks or ODOT pooled mitigation sites in proximity to the Portsmouth Bypass project. Currently, ODOT is investigating two potential projects:

Wetland restoration in the Symmes Creek floodplain, Jackson County, Ohio: Currently this property is privately owned and a site visit is necessary to determine if conditions are appropriate and the area is large enough. The property owner, Denise Blakeman, has successfully conducted a wetland restoration project for another applicant and it's currently in the monitoring stage. ODOT has spoken with Mr. Blakeman and he has indicated that he is interested in working with ODOT on a wetland mitigation project. ODOT will meet with Mr. Blakeman as soon as possible to review potential areas to construct wetlands and determine if a project can move forward.

Wetland restoration/education at Shawnee State University, Portsmouth, Ohio: ODOT is coordinating with Shawnee State University, Dept of Biology, to determine if a partnering project is possible to satisfy wetland mitigation for the Portsmouth Bypass. A meeting is set for October 28, 2011, in which a determination can be made to proceed with a mitigation project with Shawnee State. Currently, there is a graduate student who seeking a wetland restoration project and is in need of funding. This project would be similar to the Olentangy wetlands at Ohio State, and offer research, educational, and mitigation opportunities.

The Little Scioto Wetland Mitigation Bank still maintains enough credits to mitigate the wetland impacts from the Portsmouth Bypass. If the above opportunities cannot proceed, or can only satisfy a portion of our mitigation needs, then ODOT proposes mitigation for the Category 1 impacts at a minimum.

The proposed wetland mitigation for the project will be coordinated with both the USACE and the OEPA and details of the proposed mitigation plan will be provided to the agencies as it becomes available.

The proposed project will impact five jurisdictional ponds totaling 2.70 acres. Approximately 26,137 CY of clean fill material will be discharged into the impacted ponds in order to achieve the desired elevations for the new bypass route. A summary of pond impacts is provided in Appendix B: Tables A and C. No formal mitigation is proposed for these pond impacts.

Appendix A: Figures

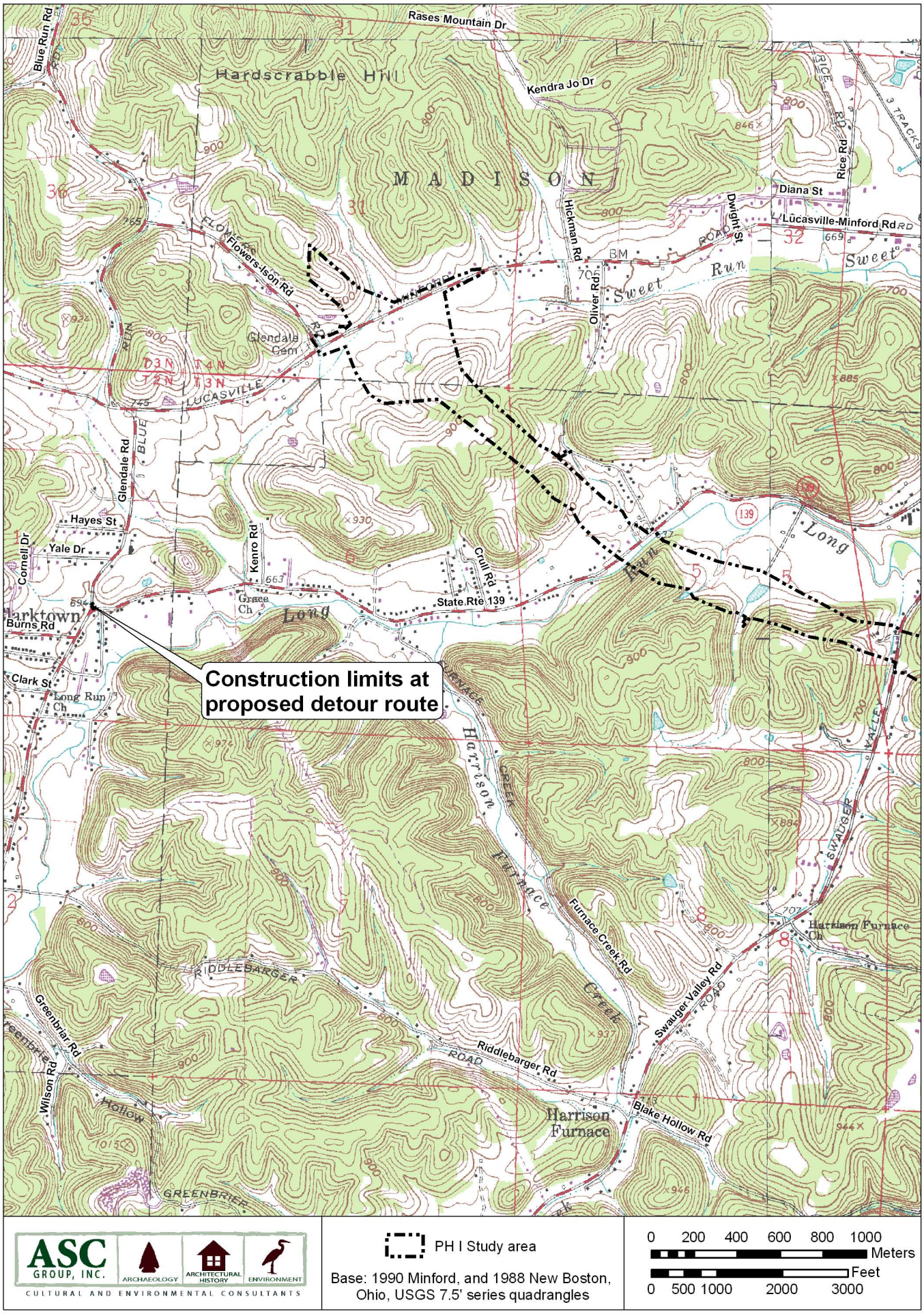

Figure 1. USGS 7.5' topographic maps. (2 sheets)

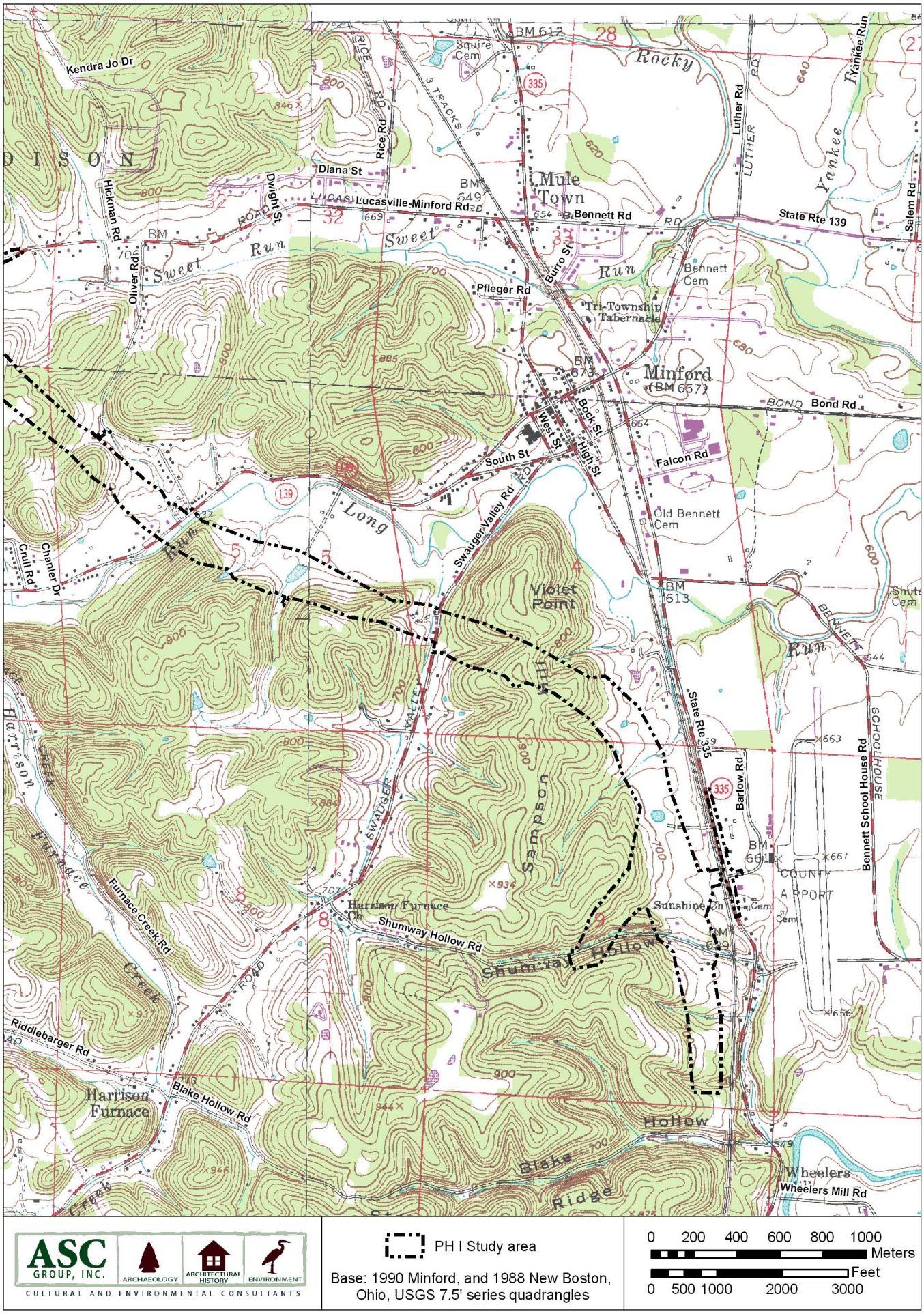

Figure 1. USGS 7.5' topographic maps. (2 sheets)

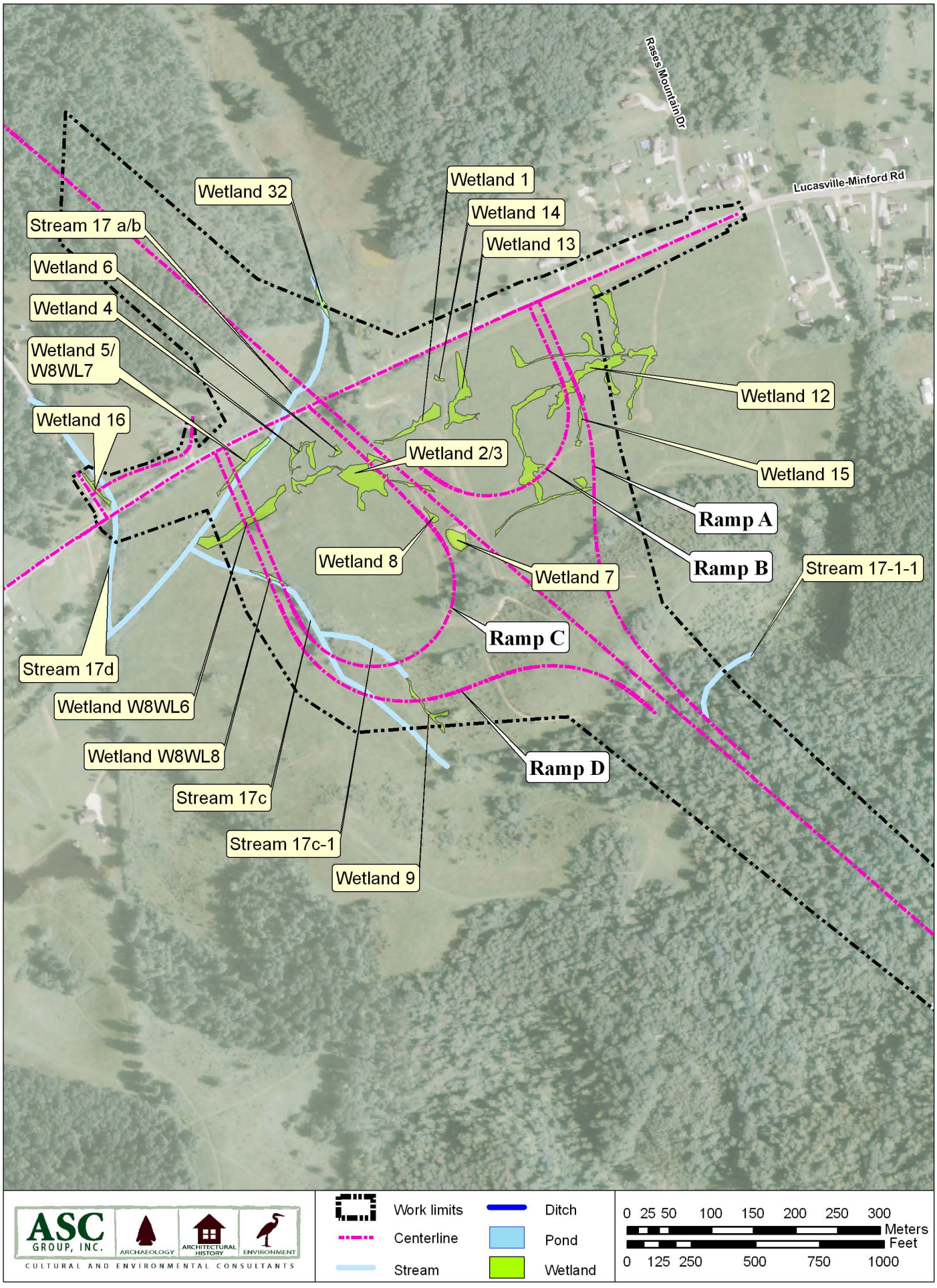

Figure 2. Survey results.

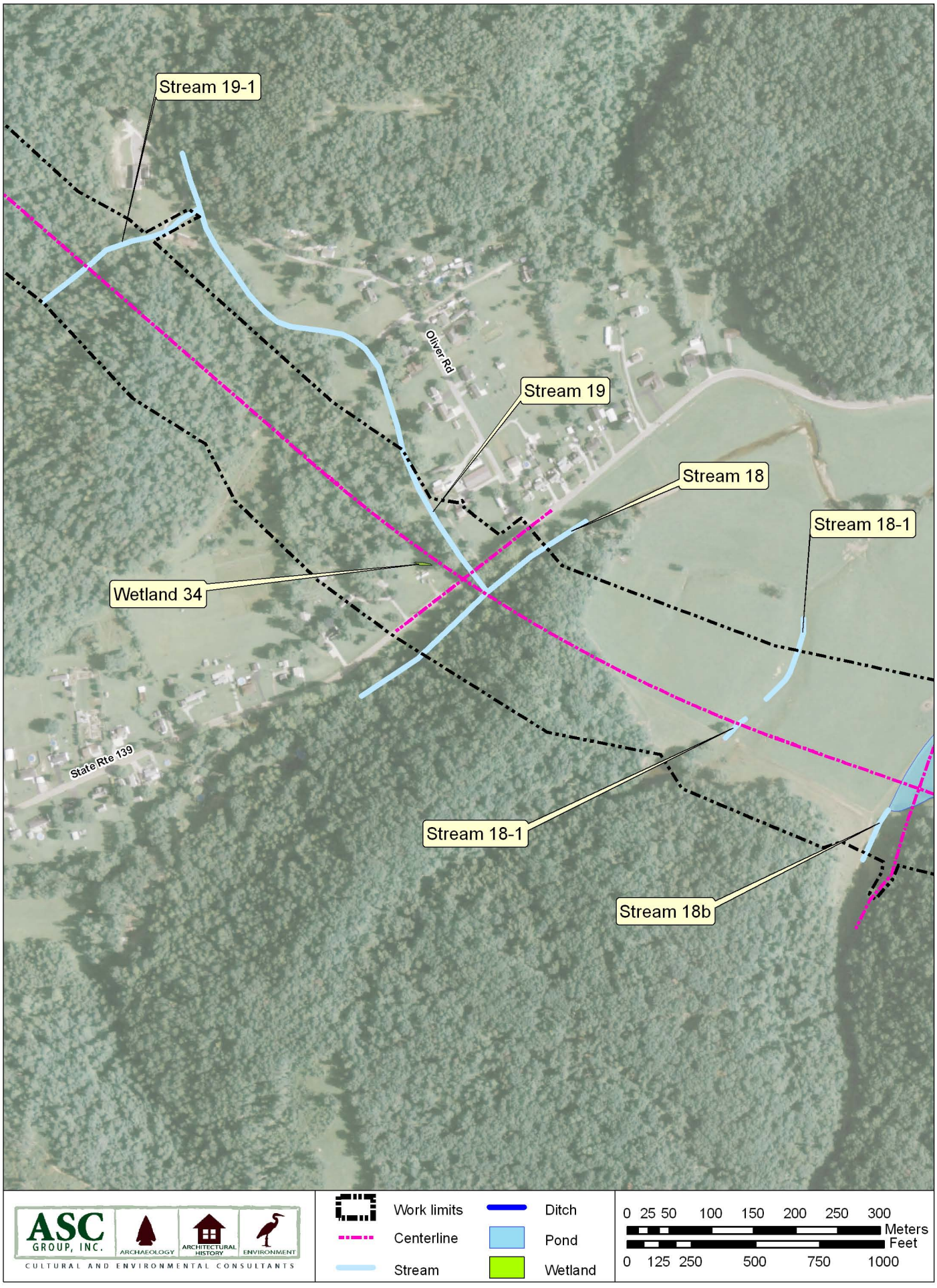

Figure 2. Survey results.

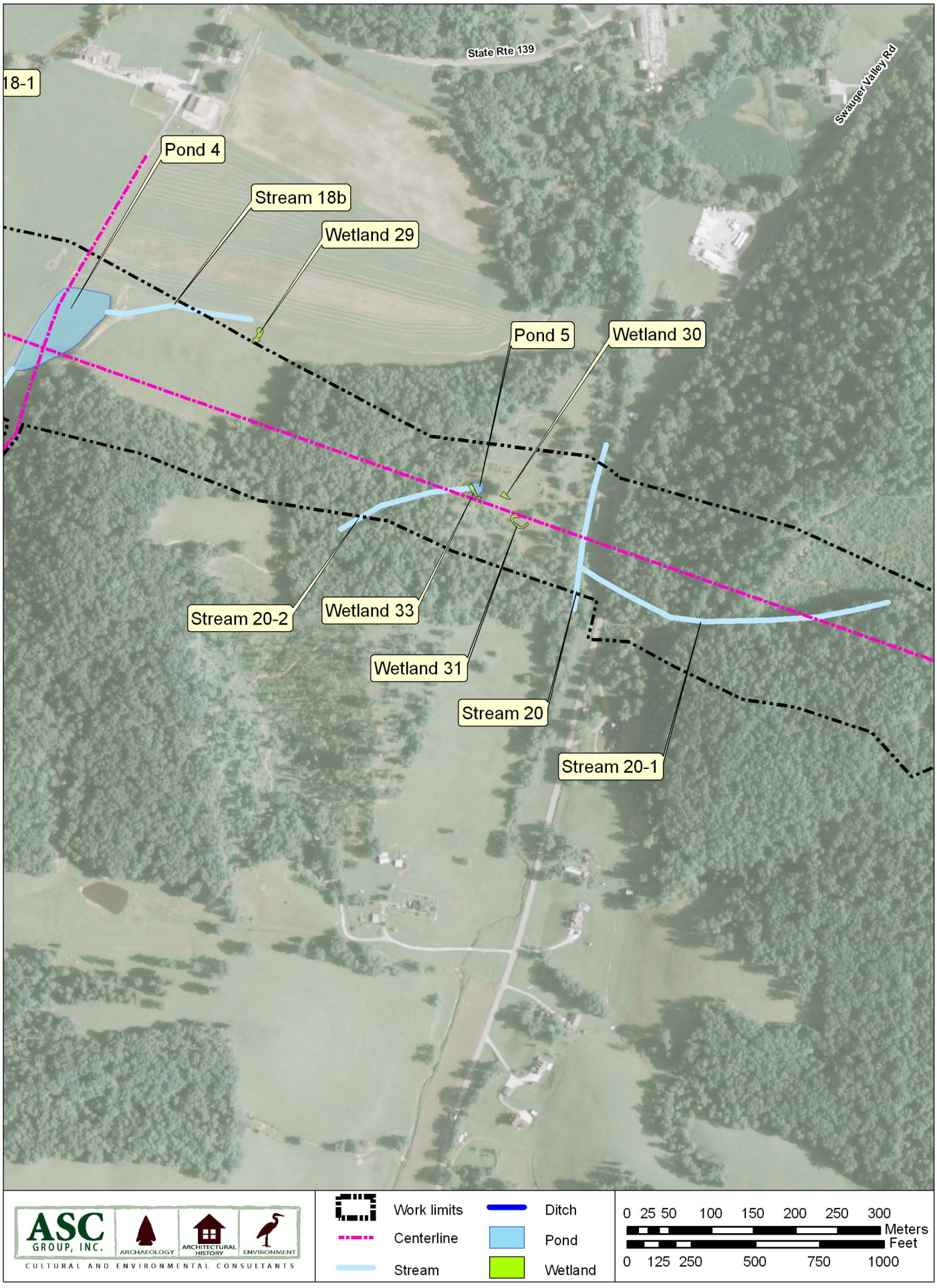

Figure 2. Survey results.

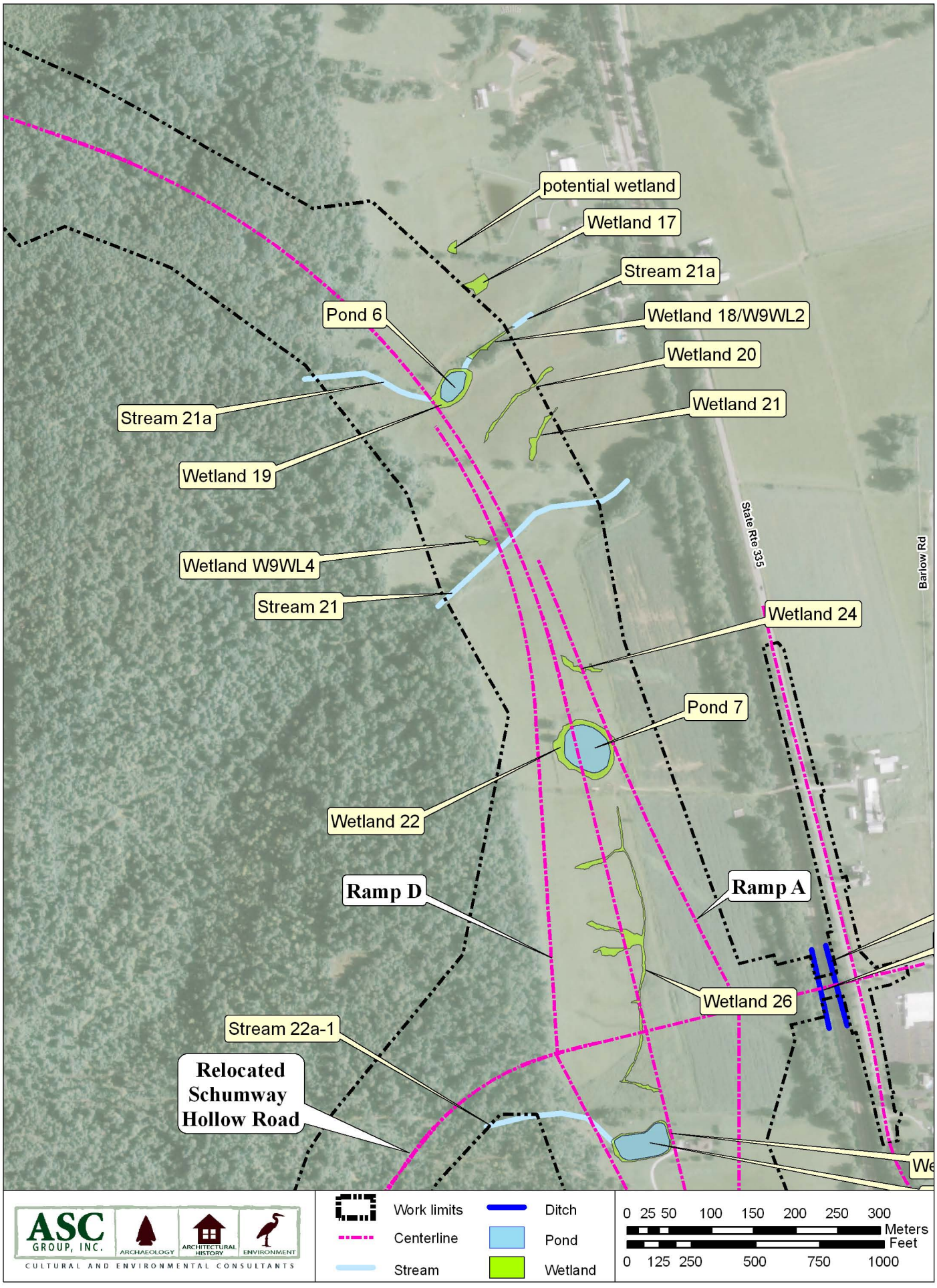

Figure 2. Survey results.

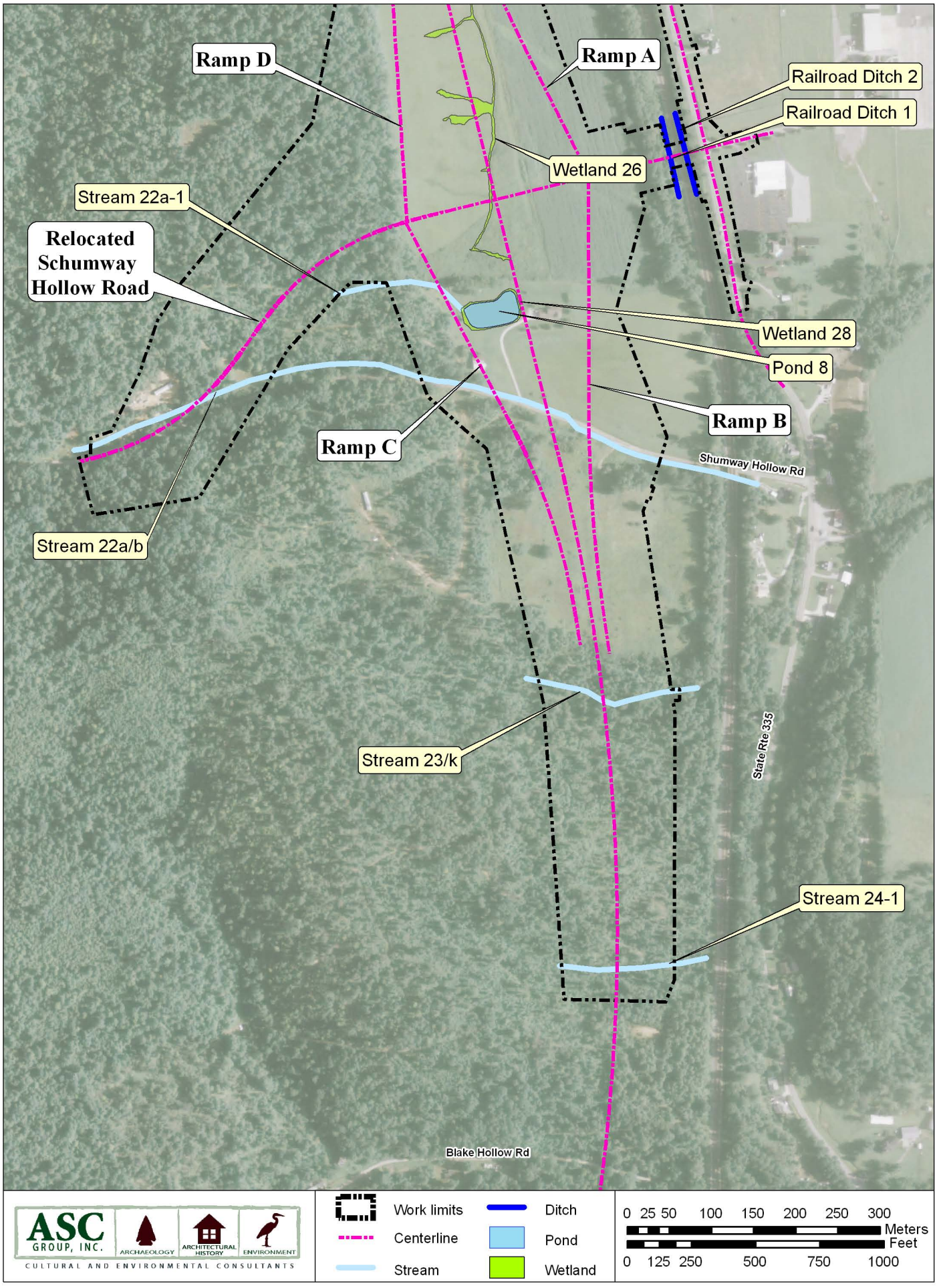

Figure 2. Survey results.

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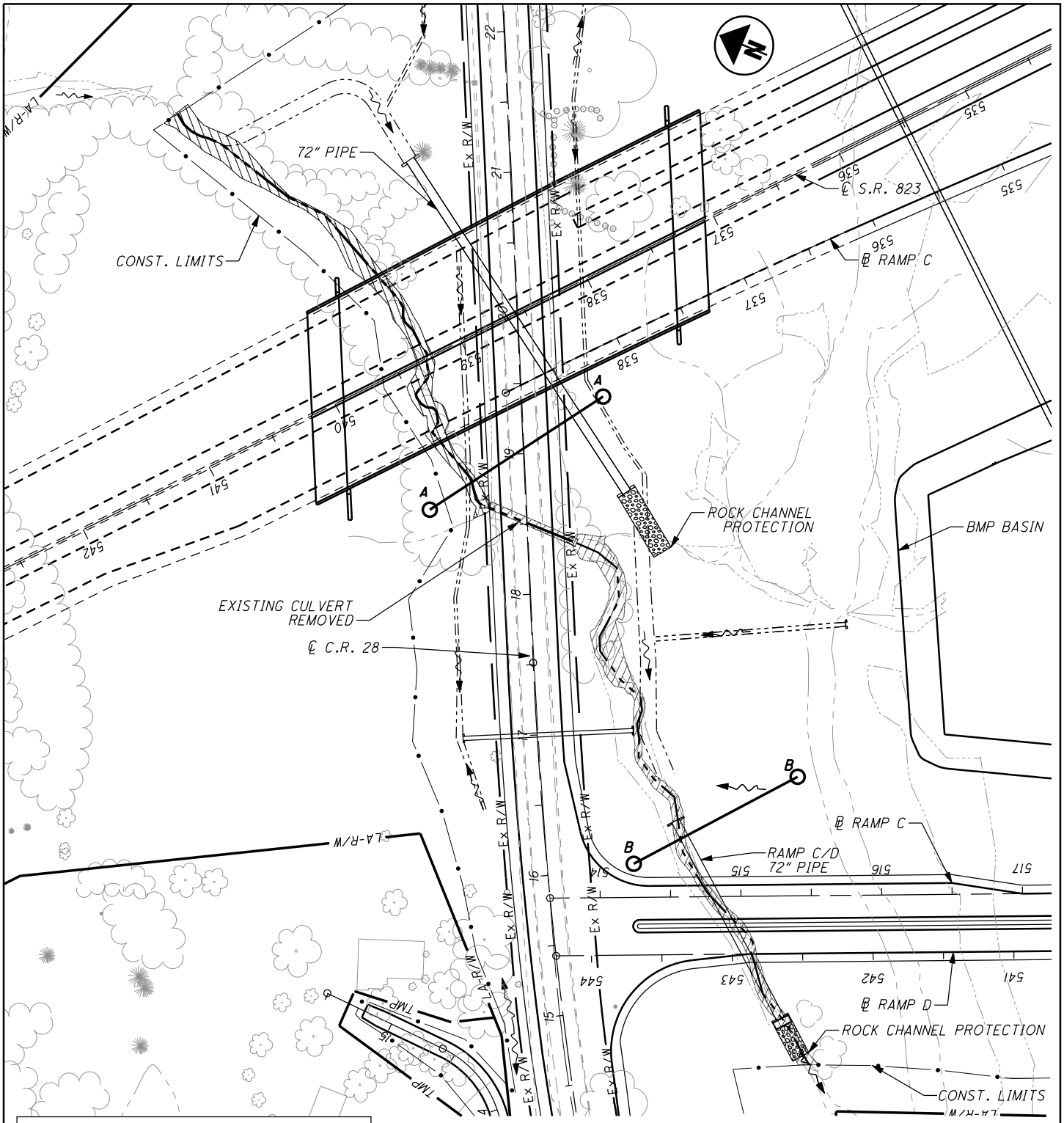


PLAN

LENGTH OF IMPACT:	831 LF
AREA EXCAVATED OR FILLED:	0.188 ACRES
EXCAVATION BELOW OHW:	64 CY
FILL BELOW OHW:	220 CY
EXISTING CULVERT	
LENGTH OF IMPACT:	67 LF
AREA FILLED:	0.008 ACRES
FILL BELOW OHW:	8 CY

PROPERTY OWNERS:
STATE OF OHIO

LEGEND
PROPOSED DITCH
STREAM IMPACT LENGTH
OHWM

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100'
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

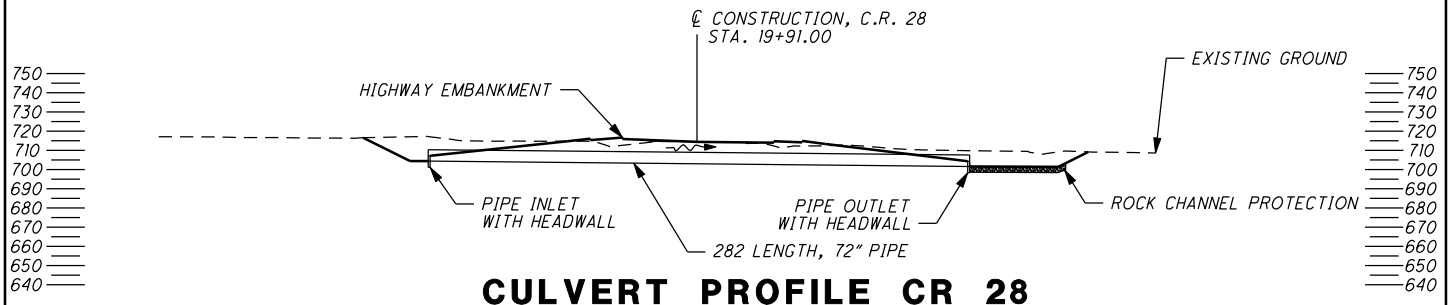
IMPACTS AT STREAM 17A/B

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

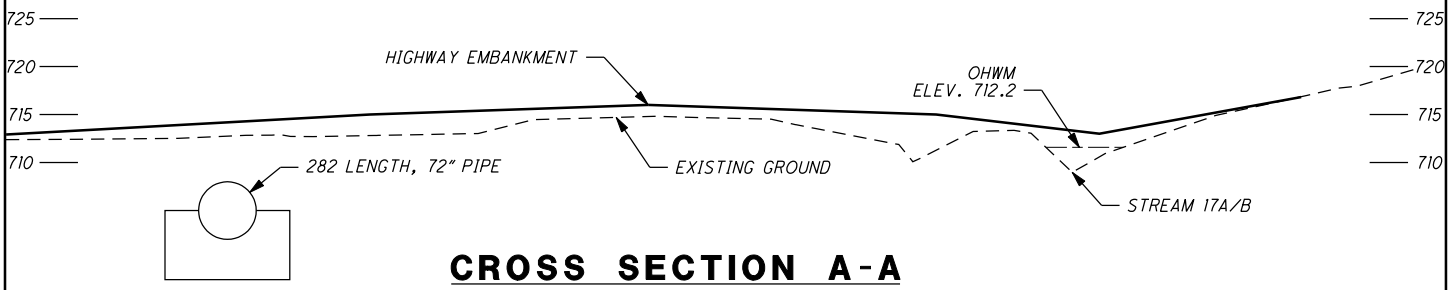
U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

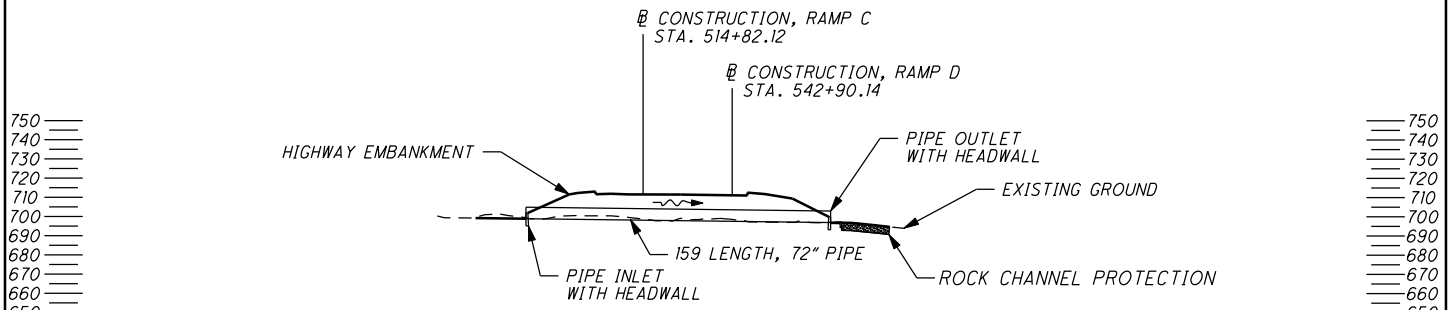
FIGURE 3-1



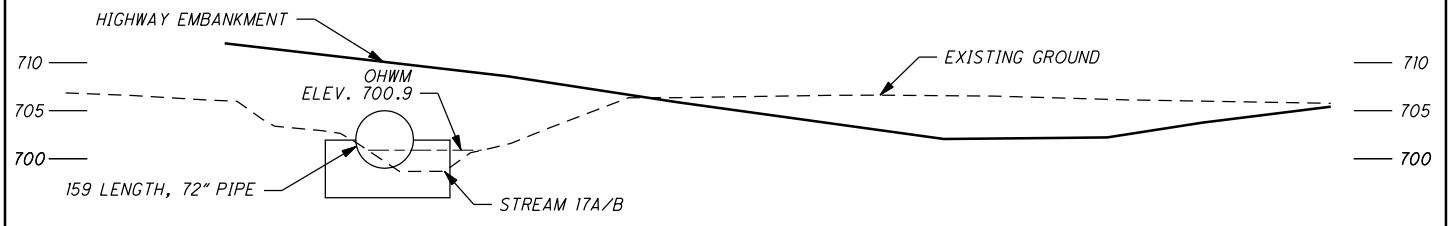
CULVERT PROFILE CR 28



CROSS SECTION A-A



CULVERT PROFILE RAMP C/D



CROSS SECTION B-B

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 17A/B

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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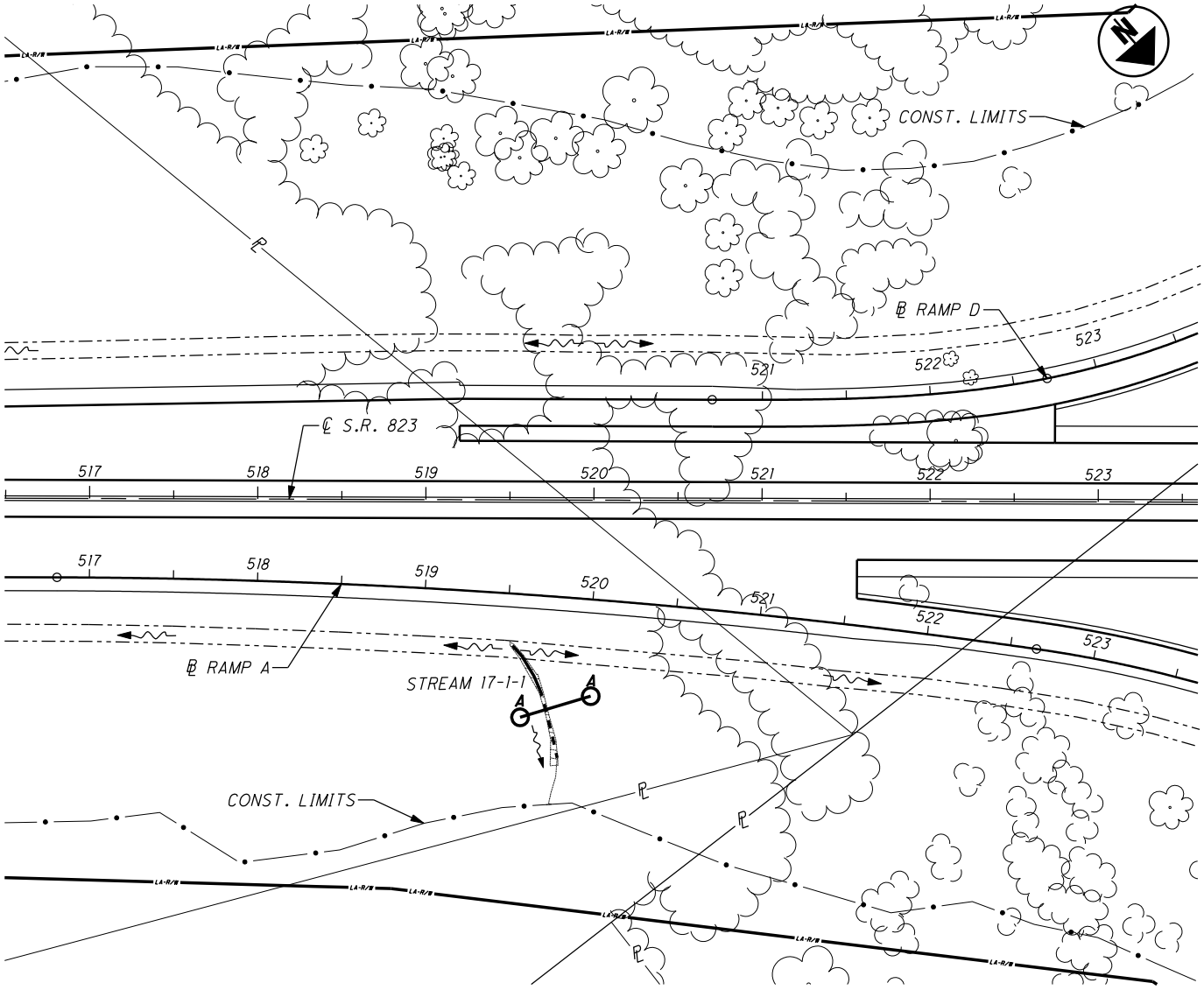
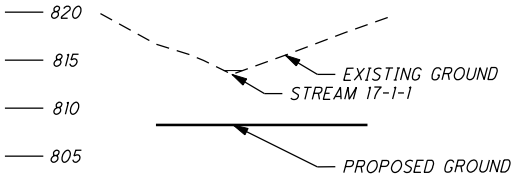
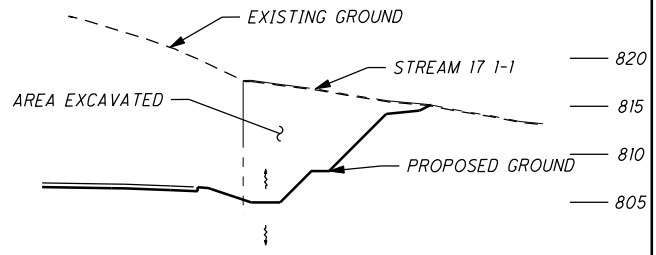
FIGURE 3-1A



PLAN



CROSS SECTION



STREAM PROFILE

CROSS SECTION SR 823

LENGTH OF IMPACT:	73 LF
AREA EXCAVATED OR FILLED:	0.005
EXCAVATION BELOW OHW:	183 CY
FILL BELOW OHW:	0 CY

PROPERTY OWNERS:
STATE OF OHIO

PROPOSED DITCH
STREAM IMPACT LENGTH
OHWM

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 17-1-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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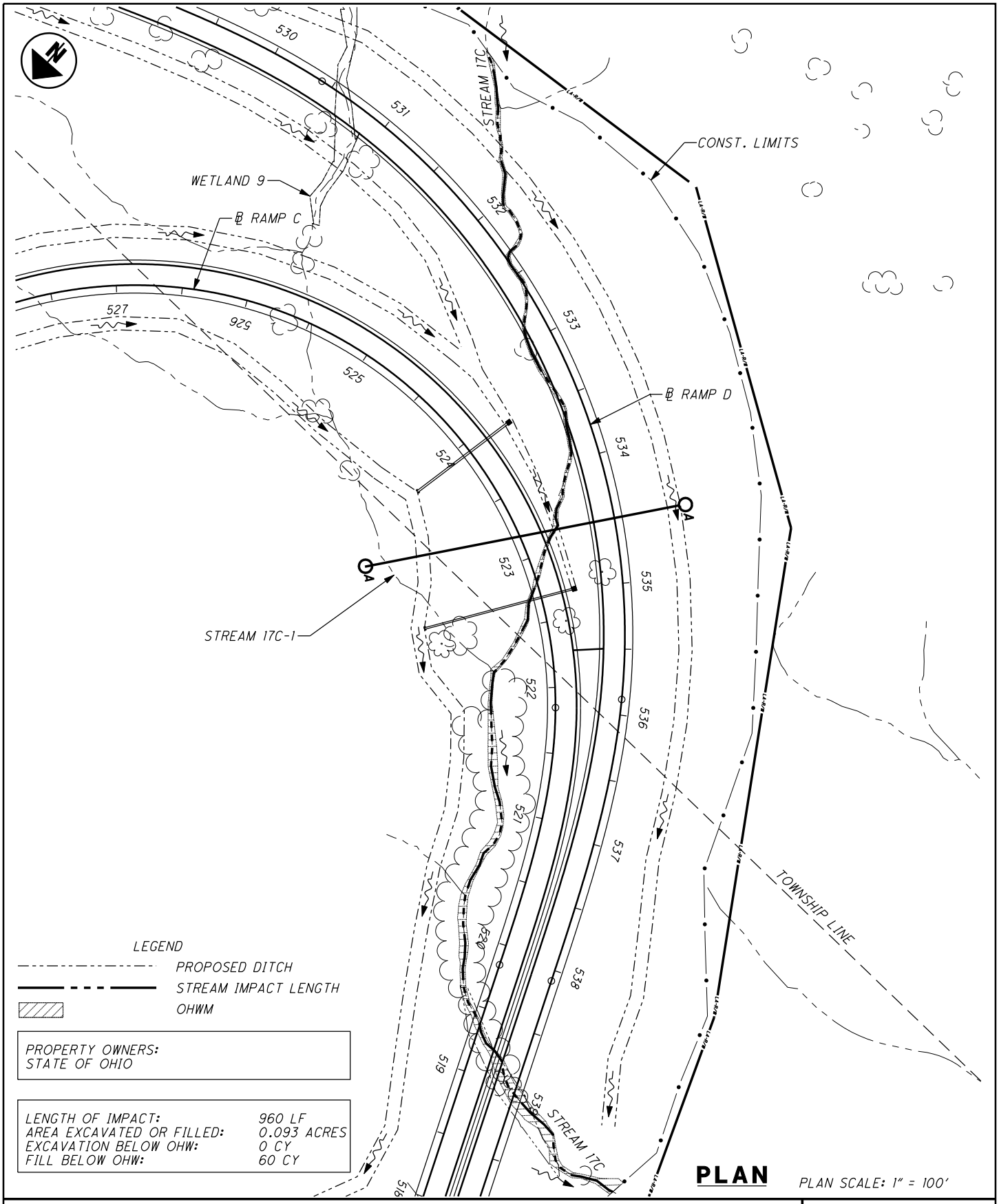
FIGURE 3-2



PLAN PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

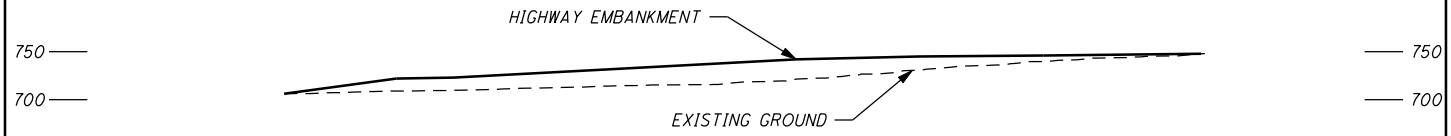
IMPACTS AT STREAM 17C

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

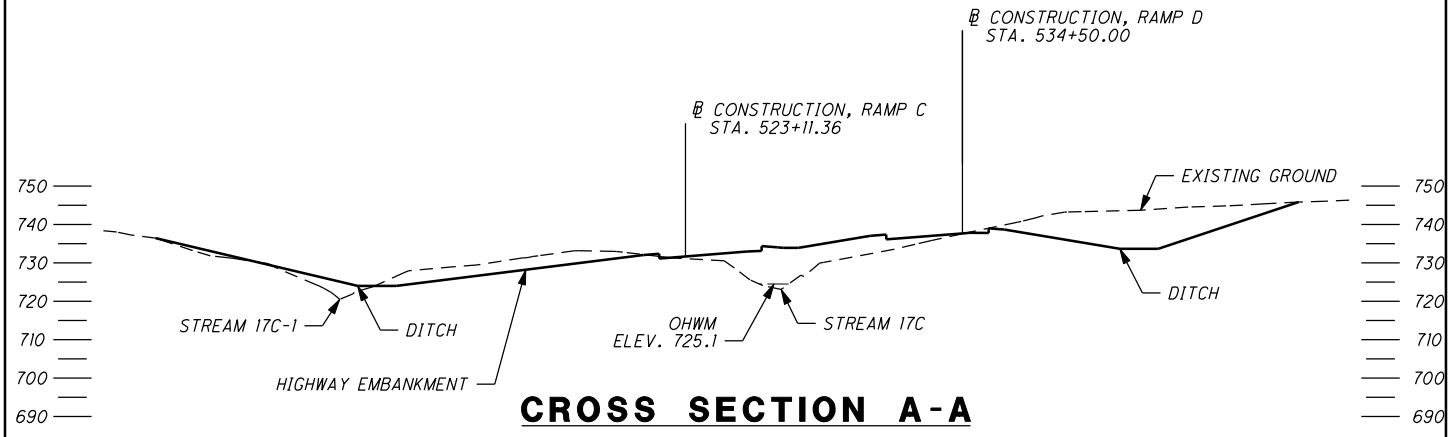
U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-3



STREAM17C PROFILE



CROSS SECTION A-A

STREAM 17C PROFILE: 1" = 200'
CROSS SECTION: 1" = 50'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

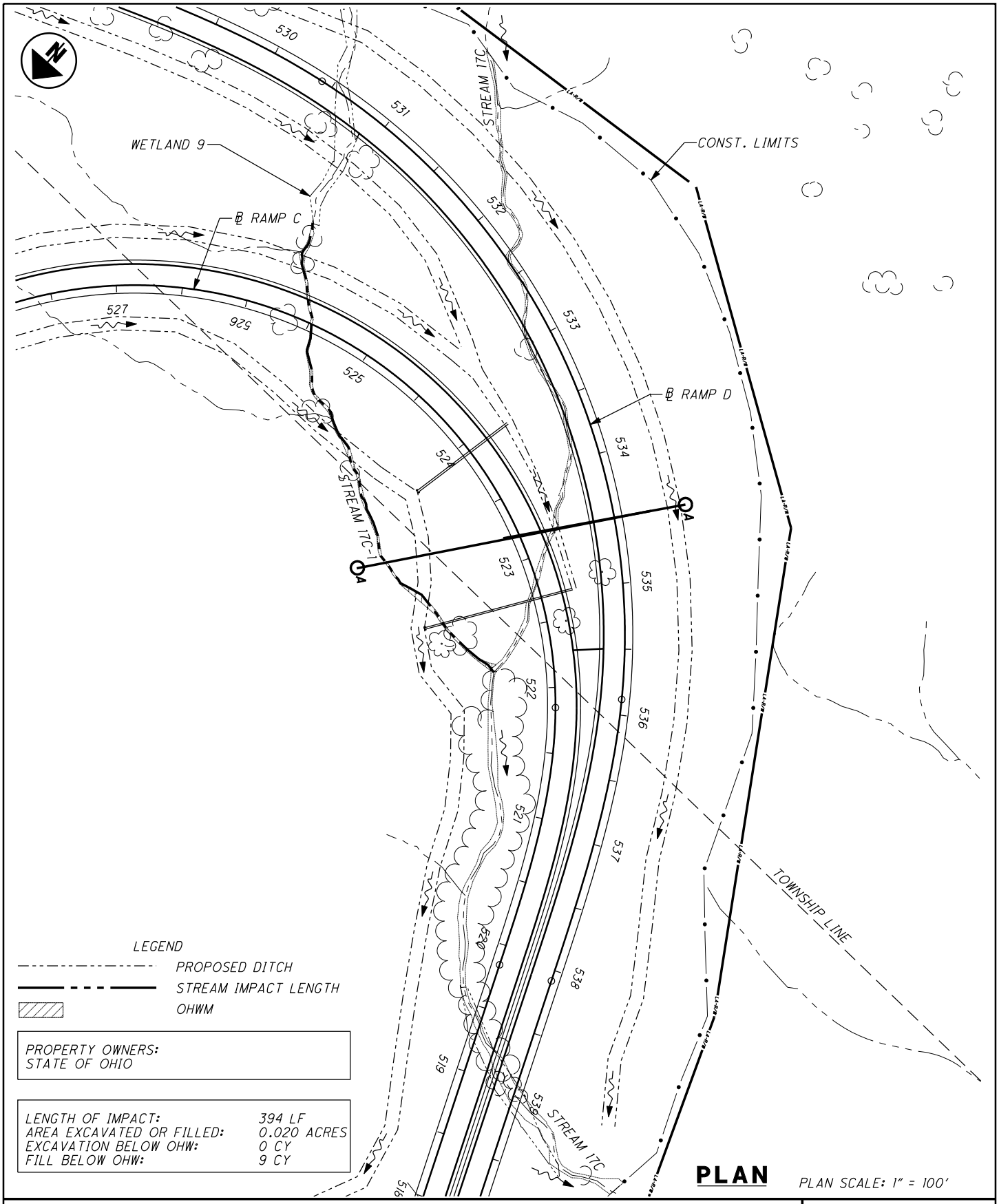
IMPACTS AT STREAM 17C

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-3A



PLAN PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

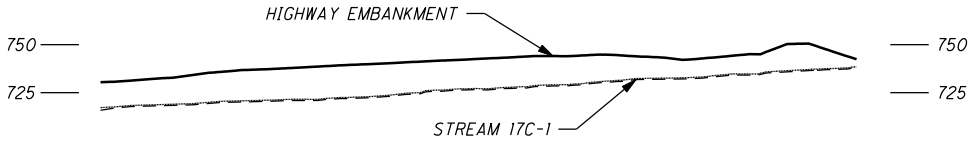
IMPACTS AT STREAM 17C-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

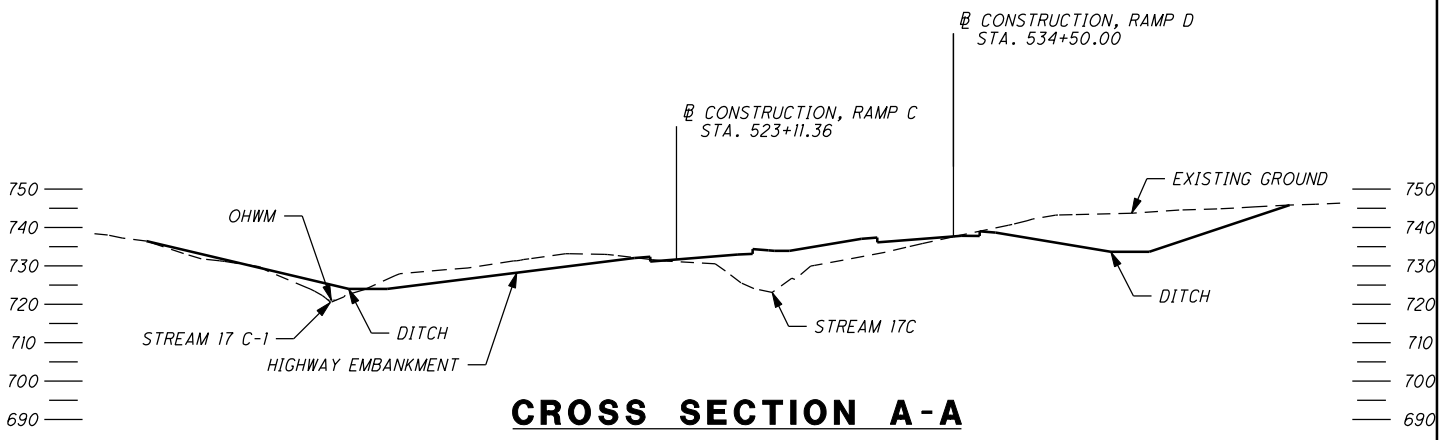
U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-4



STREAM17C-1 PROFILE



CROSS SECTION A-A

STREAM 17C PROFILE: 1" = 100'
CROSS SECTION: 1" = 50'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

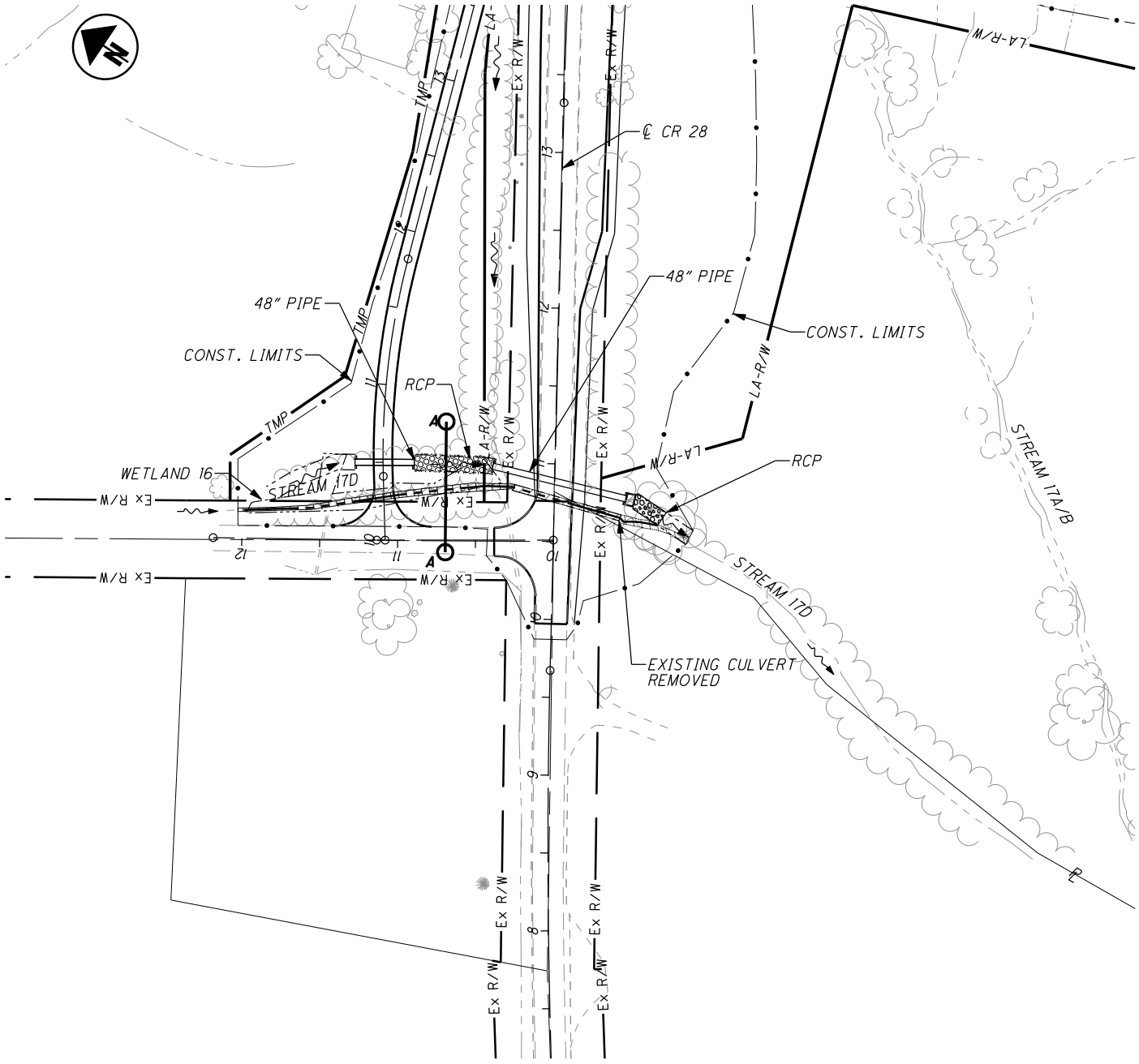
IMPACTS AT STREAM 17C-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-4A



PLAN

LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

STREAM 17D

PROPERTY OWNERS: ANGELA S YEAGLE STATE OF OHIO

LENGTH OF IMPACT:	223 LF	EXISTING CULVERT LENGTH OF IMPACT:	71 LF
AREA EXCAVATED OR FILLED:	0.097 ACRES	AREA FILLED:	0.008 ACRES
EXCAVATION BELOW OHW:	123 CY	FILL BELOW OHW:	6 CY

PLAN SCALE: 1" = 100'

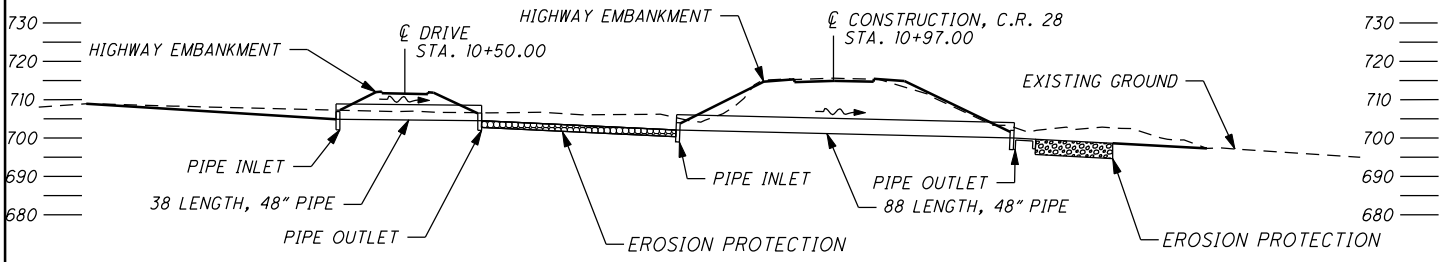
IMPACTS AT STREAM 17D

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

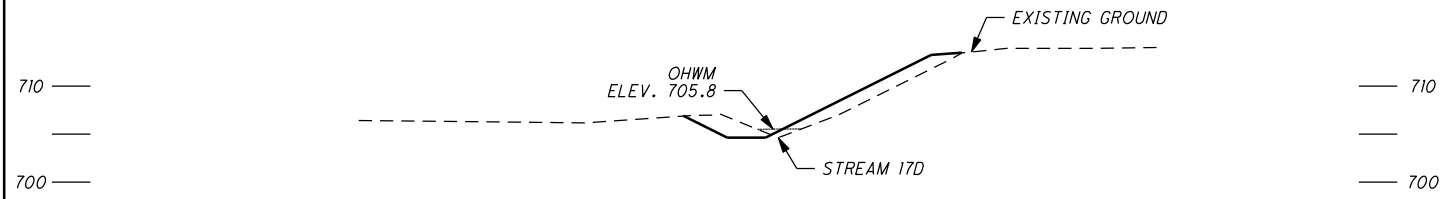
U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-5



CULVERT PROFILE



CROSS SECTION A-A STREAM 17D

CULVERT PROFILE: 1" = 50'
CROSS SECTION: 1" = 20'

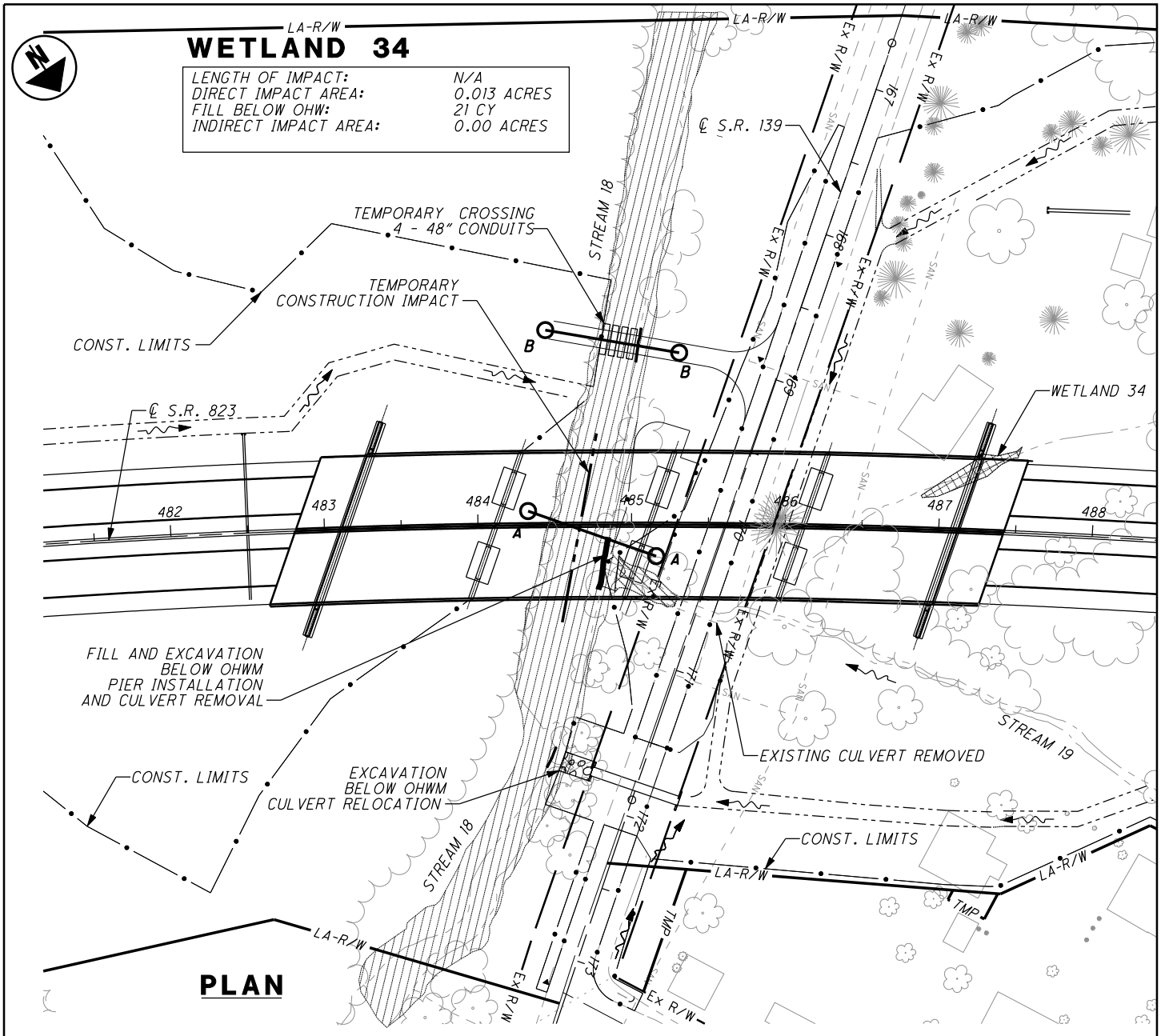
IMPACTS AT STREAM 17D

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-5A

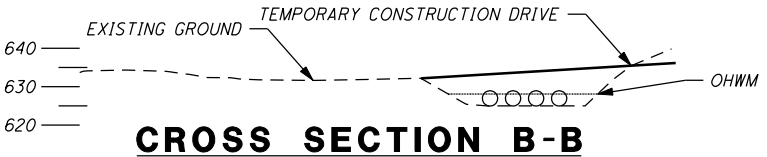


LEGEND

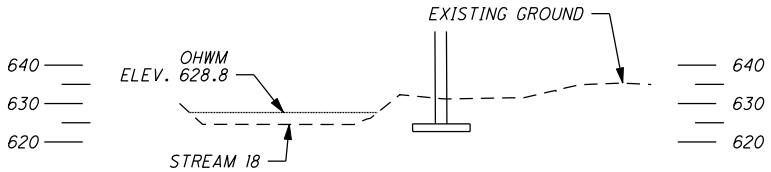
PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM



CROSS SECTION B-B



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 50'

PROPERTY OWNERS: JOSEPH AND CRYSTAL PRESTON J/S ROBERT TROWBRIDGE	
LENGTH OF IMPACT:	55 LF
AREA EXCAVATED OR FILLED:	0.019 ACRES
EXCAVATION BELOW OHW:	10 CY
FILL BELOW OHW:	37 CY
TEMPORARY IMPACT LENGTH:	150 LF
AREA EXCAVATED OR FILLED:	0.146 ACRES
FILL BELOW OHW:	914 CY

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 18 WETLAND 34

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

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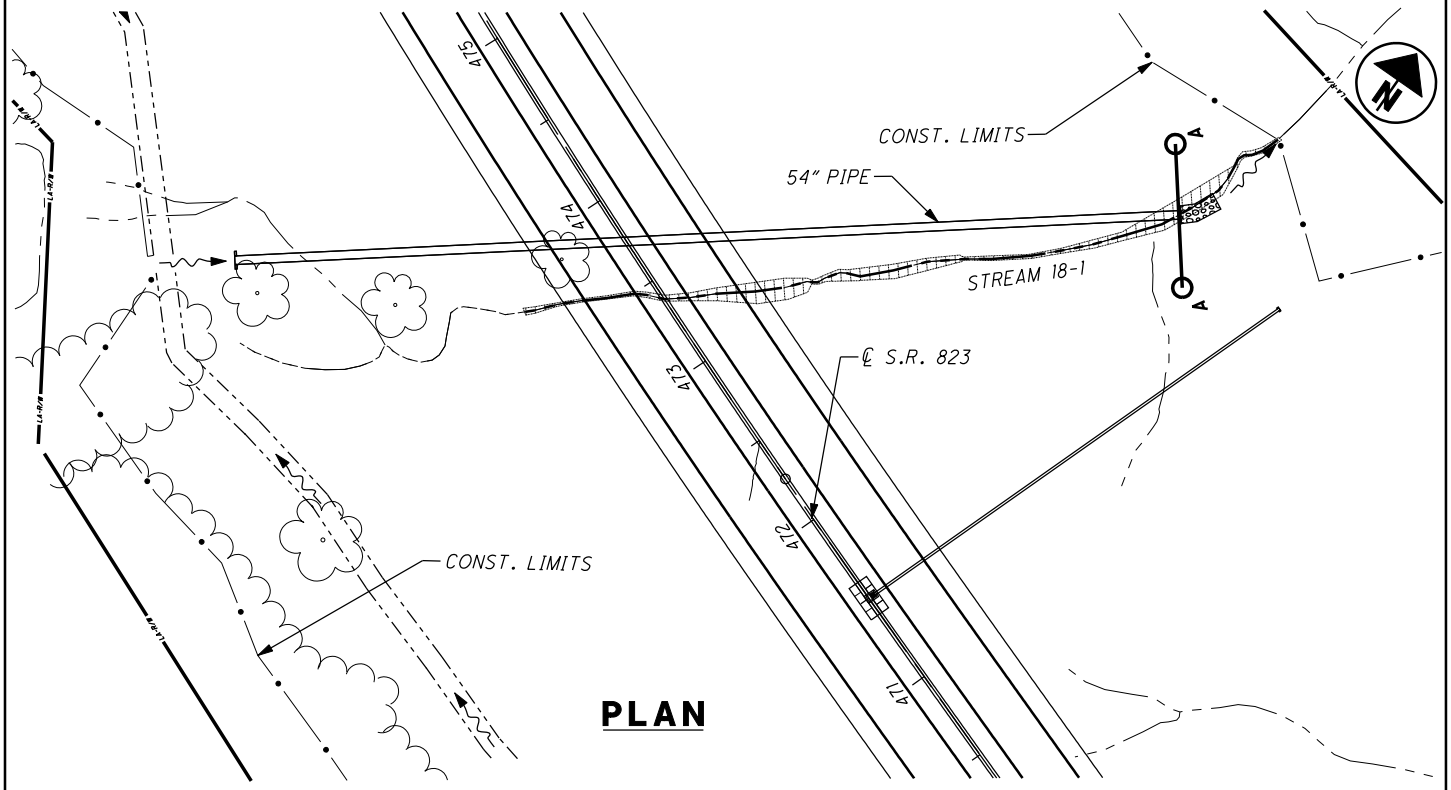
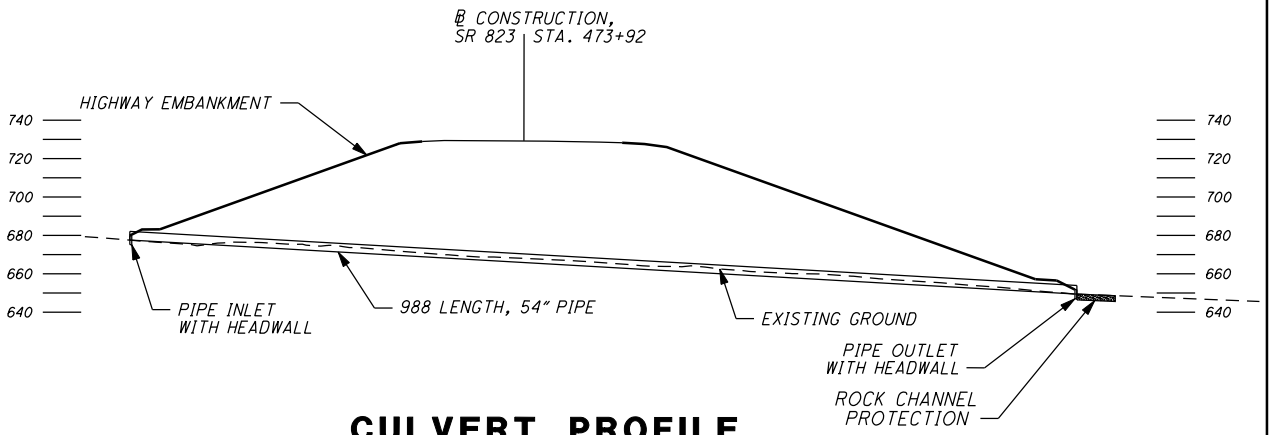
FIGURE 3-6



PLAN



CULVERT PROFILE

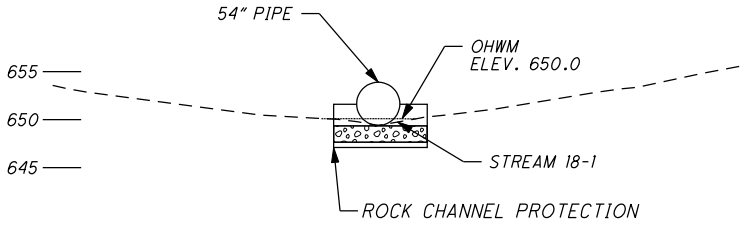
LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS: STATE OF OHIO KENNETH R RASE	
LENGTH OF IMPACT:	417 LF
AREA EXCAVATED OR FILLED:	0.051 ACRES
EXCAVATION BELOW OHW:	12 CY
FILL BELOW OHW:	32 CY



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100'
CROSS SECTION: 1" = 20'

IMPACTS AT STREAM 18-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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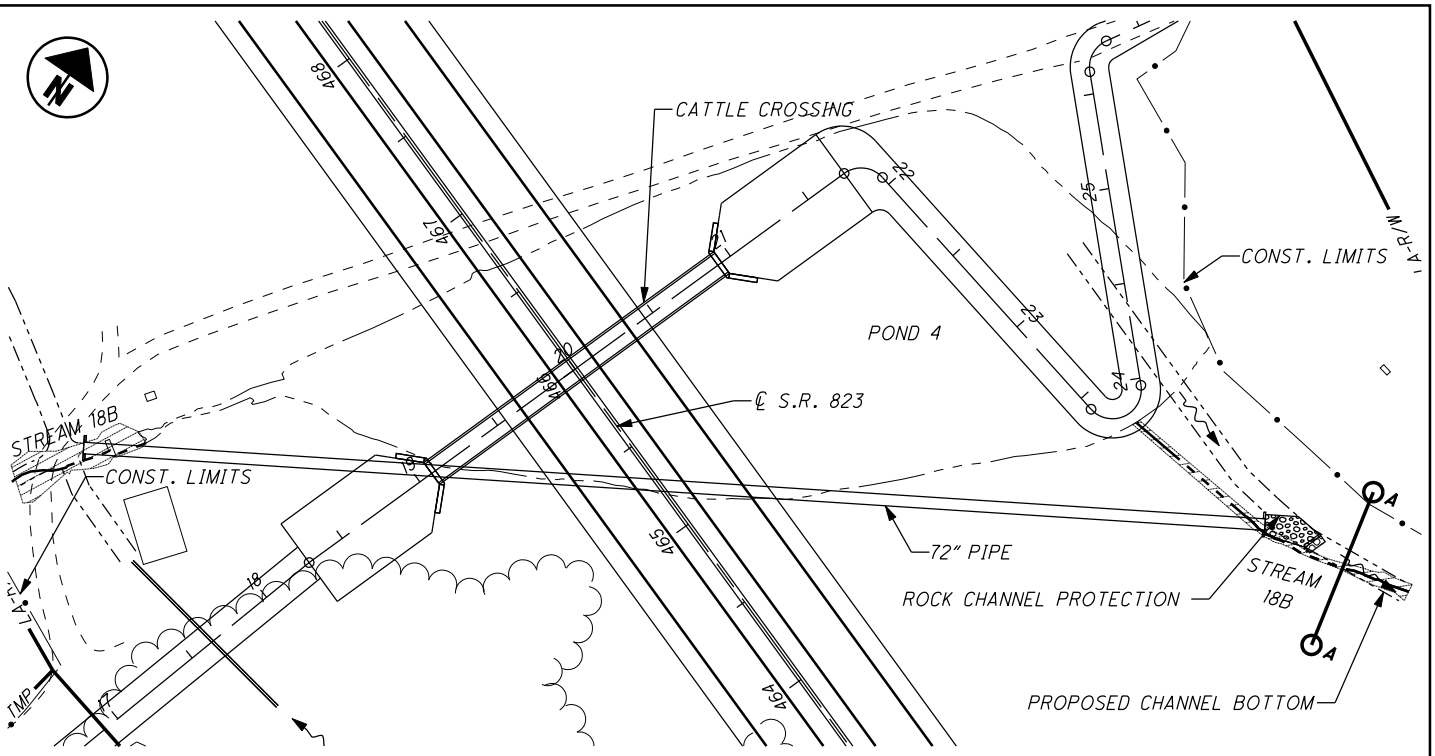
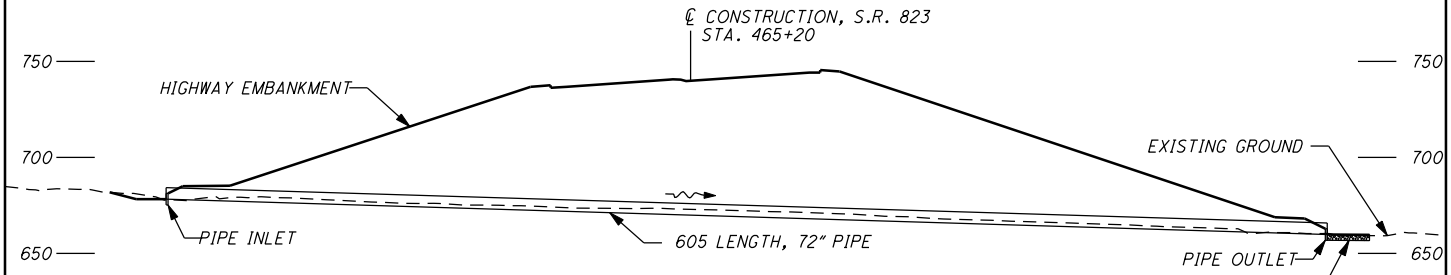
DATE: 09/13/2011

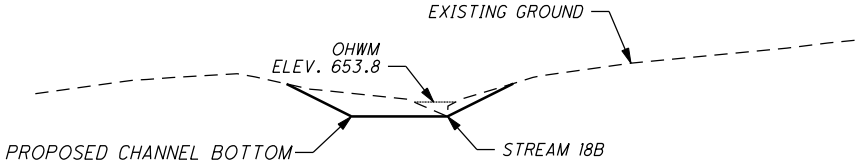
FIGURE 3-7



PLAN



CULVERT PROFILE



CROSS SECTION A-A

LEGEND

- PROPOSED DITCH
- STREAM IMPACT LENGTH
- OHWM

PROPERTY OWNERS:
KENNETH R RASE

LENGTH OF IMPACT:	244 LF
AREA EXCAVATED OR FILLED:	0.052 ACRES
EXCAVATION BELOW OHW:	60 CY
FILL BELOW OHW:	56 CY

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 18B

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

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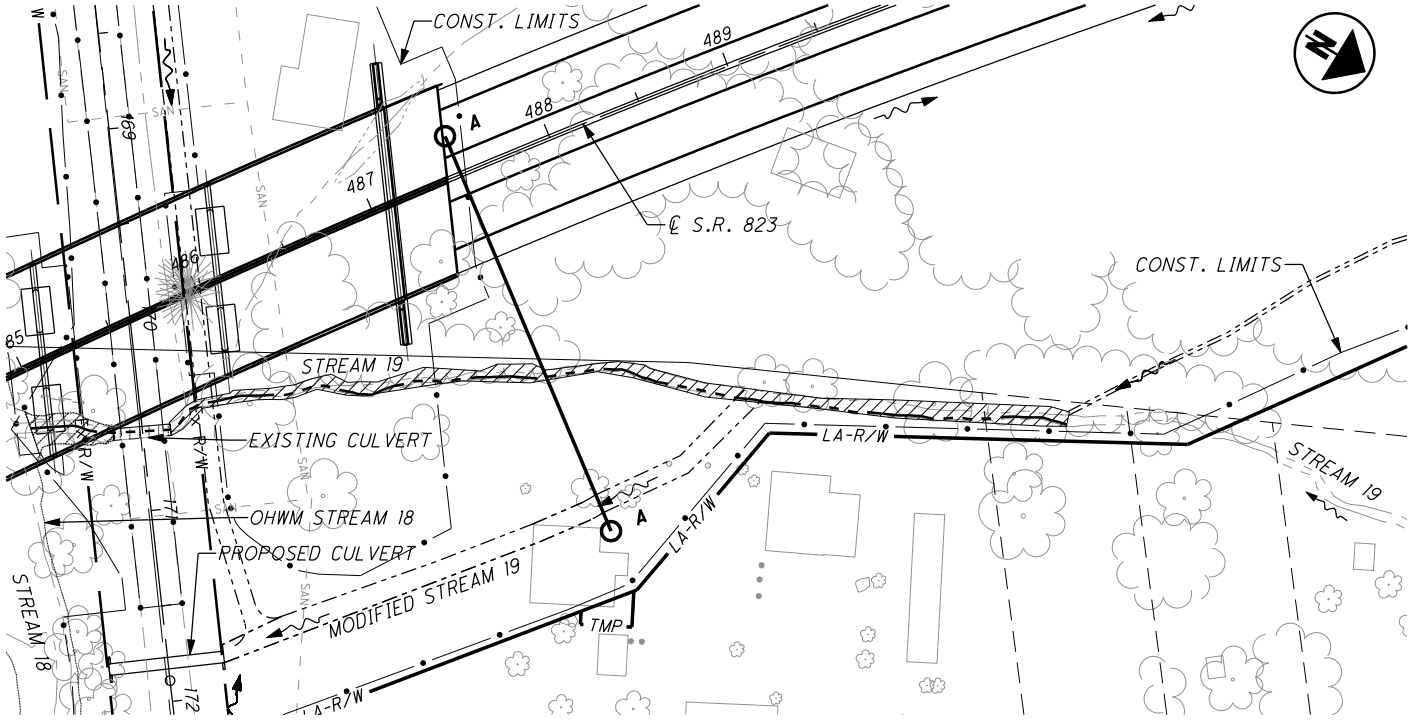
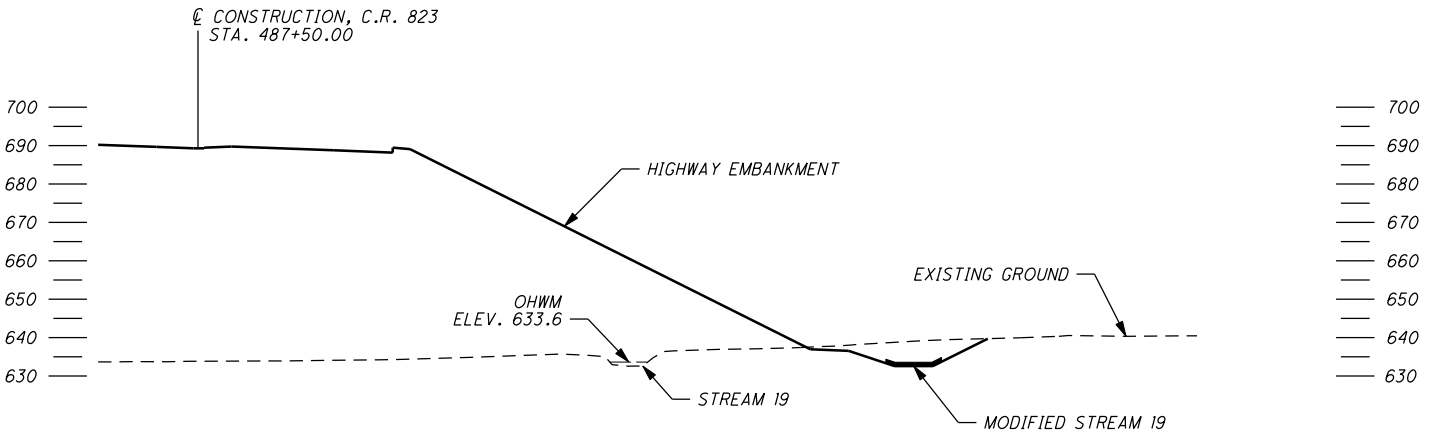
FIGURE 3-8



PLAN



CROSS SECTION A-A

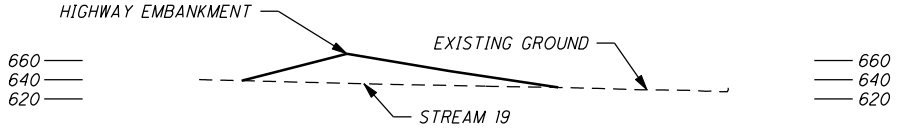
LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS: JOSEPH AND CRYSTAL PRESTON J/S JOSEPH D AND BETH A WEEKLY J/S
LENGTH OF IMPACT: 500 LF AREA EXCAVATED OR FILLED: 0.110 ACRES EXCAVATION BELOW OHW: 121 CY FILL BELOW OHW: 143 CY
EXISTING CULVERT LENGTH OF IMPACT: 30 LF AREA FILLED: 0.004 ACRES FILL BELOW OHW: 8 CY



STREAM 19 PROFILE

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 50'
STREAM PROFILE: 1" = 200'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 19

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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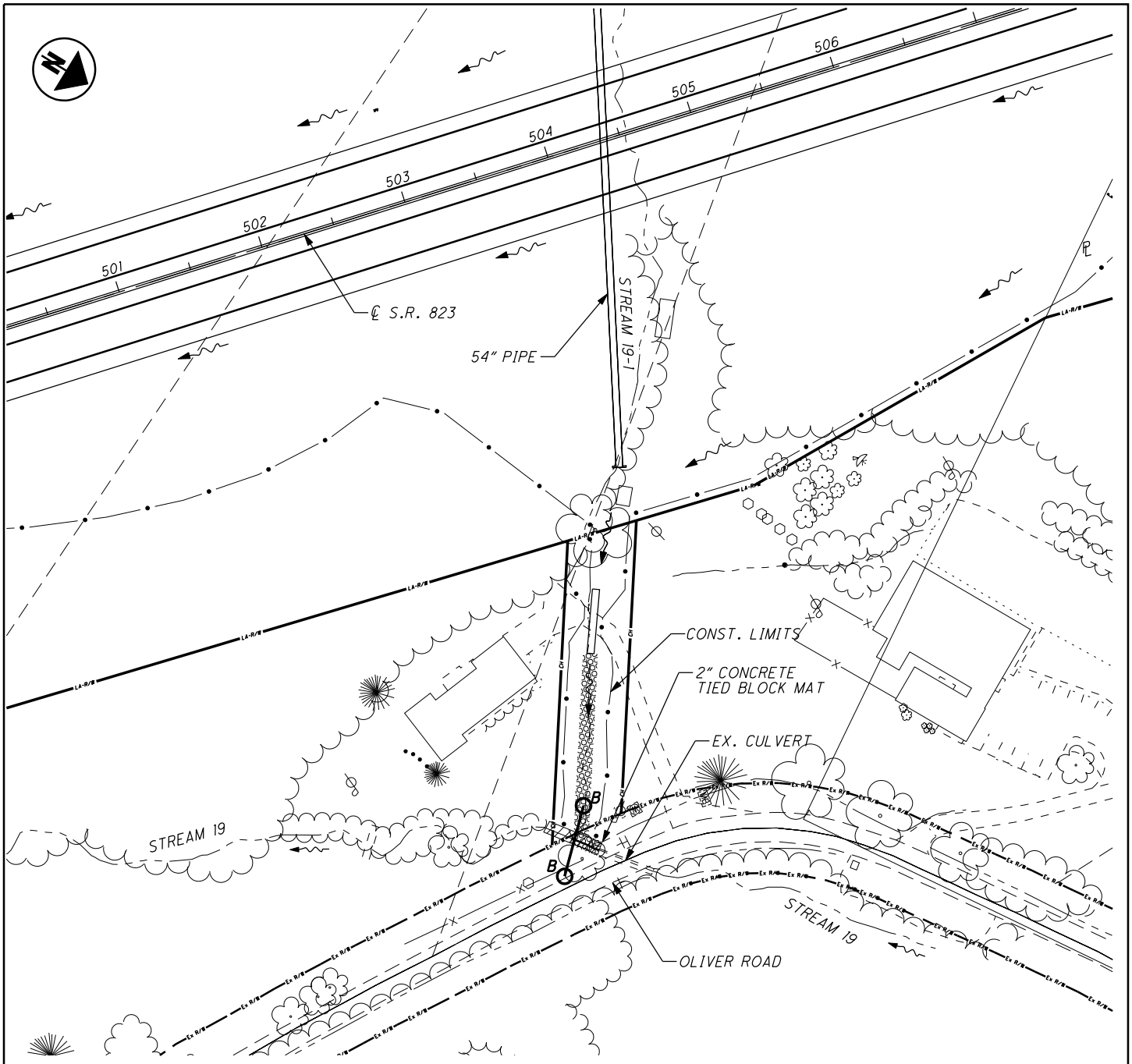
FIGURE 3-9

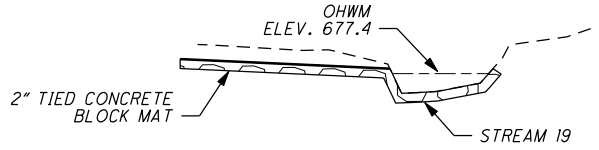


LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM



PROPERTY OWNERS:
ELMER JR AND VIRGINIA L. OLIVER

STREAM 19 CROSS SECTION

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 50'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 19

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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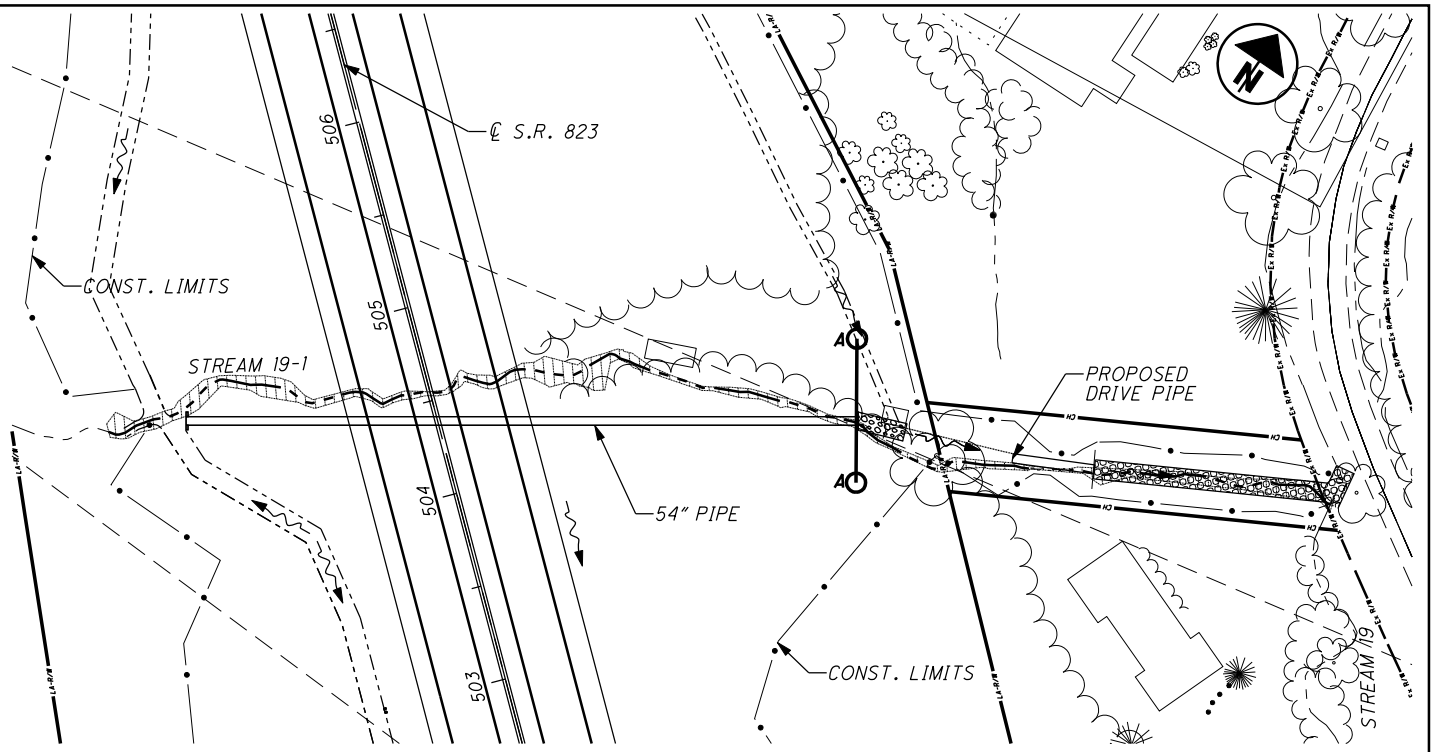
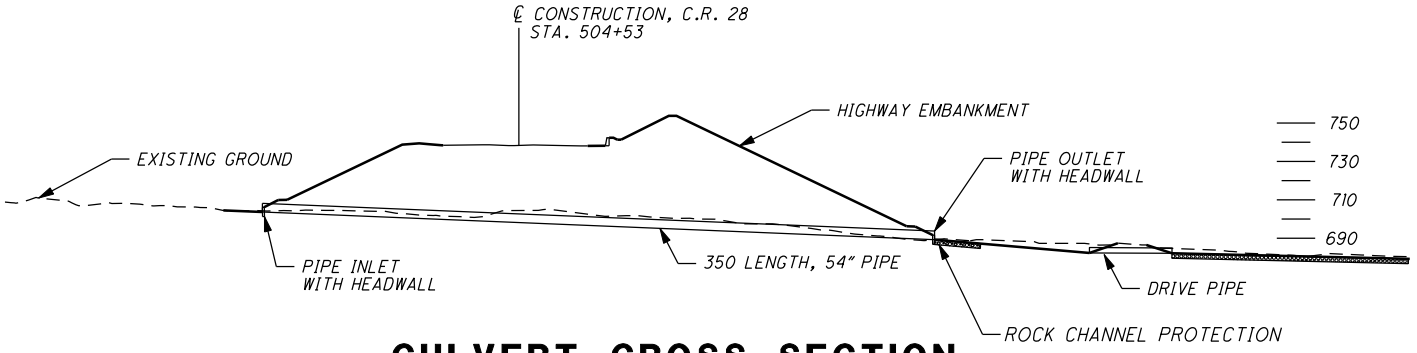
FIGURE 3-9A



PLAN



CULVERT CROSS SECTION

LEGEND

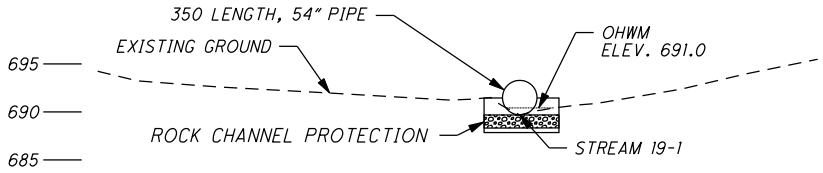
PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS:
JOSEPH AND CRYSTAL PRESTON J/S
JOSEPH D AND BETH A WEEKLY J/S

LENGTH OF IMPACT:	662 LF
AREA EXCAVATED OR FILLED:	0.105 ACRES
EXCAVATION BELOW OHW:	84 CY
FILL BELOW OHW:	59 CY



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 50'
CULVERT PROFILE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 19-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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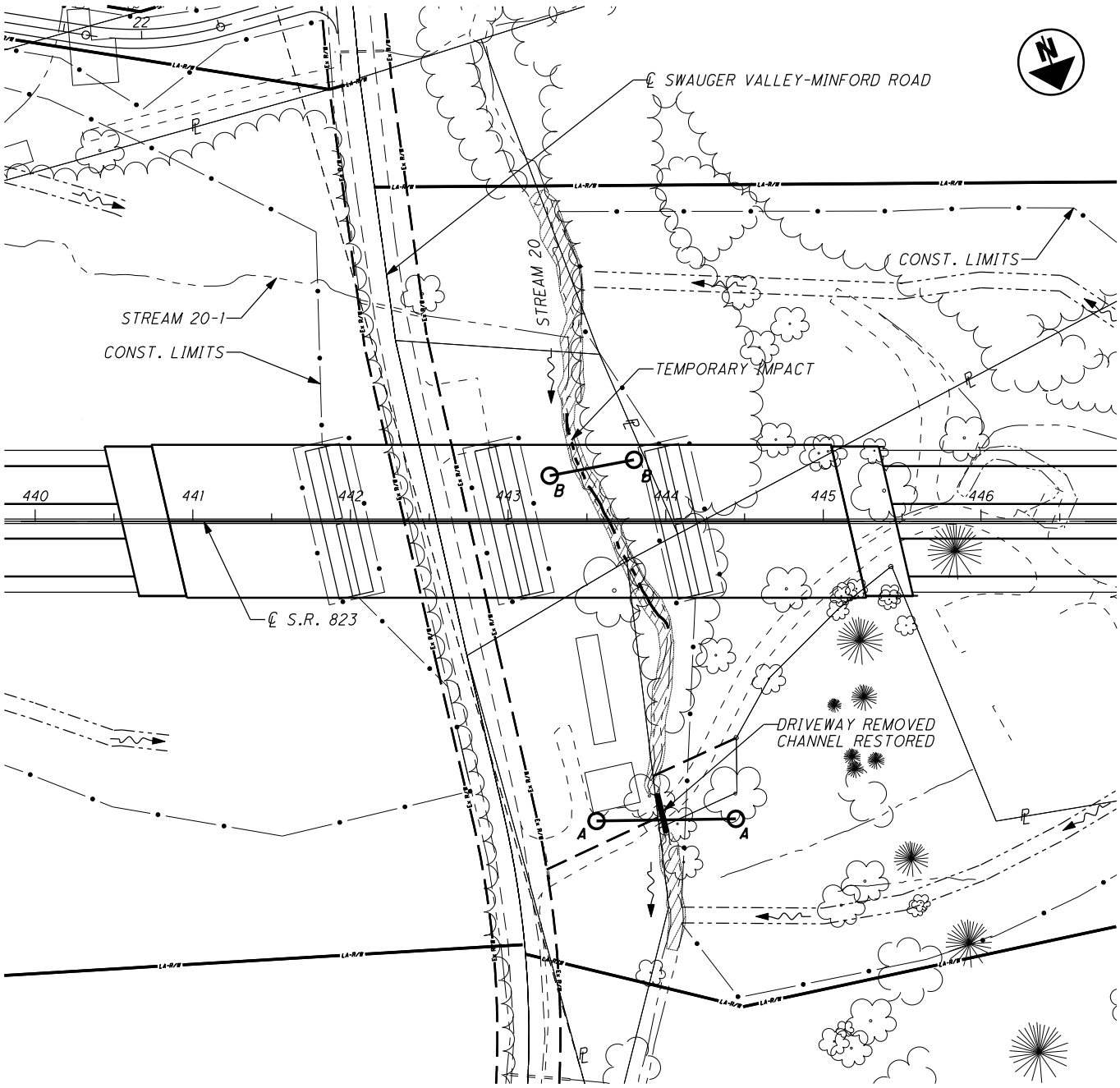
FIGURE 3-10



PLAN

LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS:
STATE OF OHIO
CHARLES SMITH, JOAN SMITH AND MICHAEL CONKEL

LENGTH OF IMPACT:	23 LF	TEMPORARY	
AREA EXCAVATED OR FILLED:	0.004 ACRES	LENGTH OF IMPACT:	150 LF
EXCAVATION BELOW OHW:	10 CY	AREA EXCAVATED OR FILLED:	0.110 ACRES
FILL BELOW OHW:	0 CY	FILL BELOW OHW:	261 CY

PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 20

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

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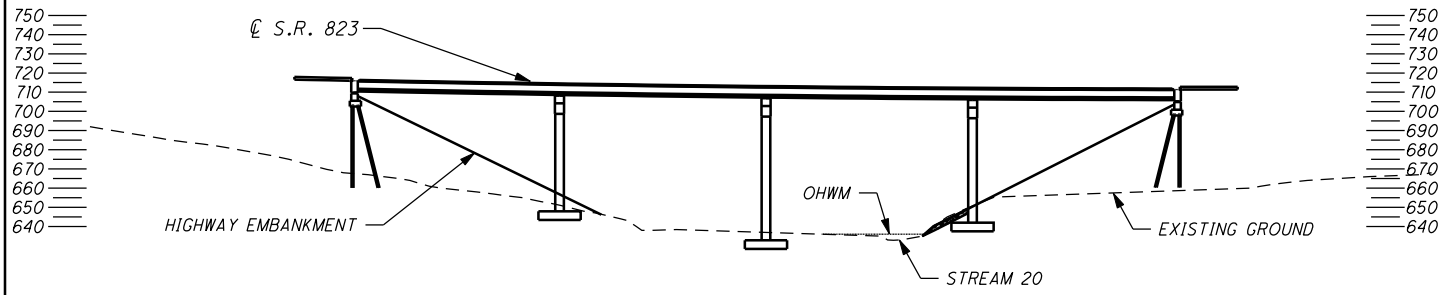
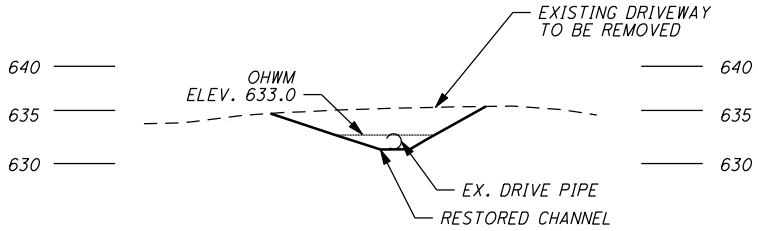
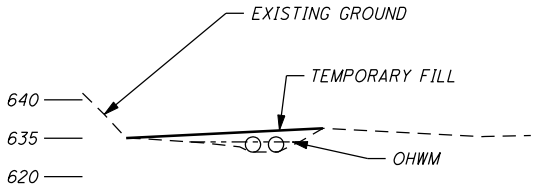
FIGURE 3-11



BRIDGE PROFILE



CROSS SECTION A-A
DRIVEWAY PROFILE



CROSS SECTION B-B

BRIDGE PROFILE: 1" = 100' H
BRIDGE PROFILE: 1" = 20' V
DRIVEWAY PROFILE: 1" = 20'

IMPACTS AT STREAM 20

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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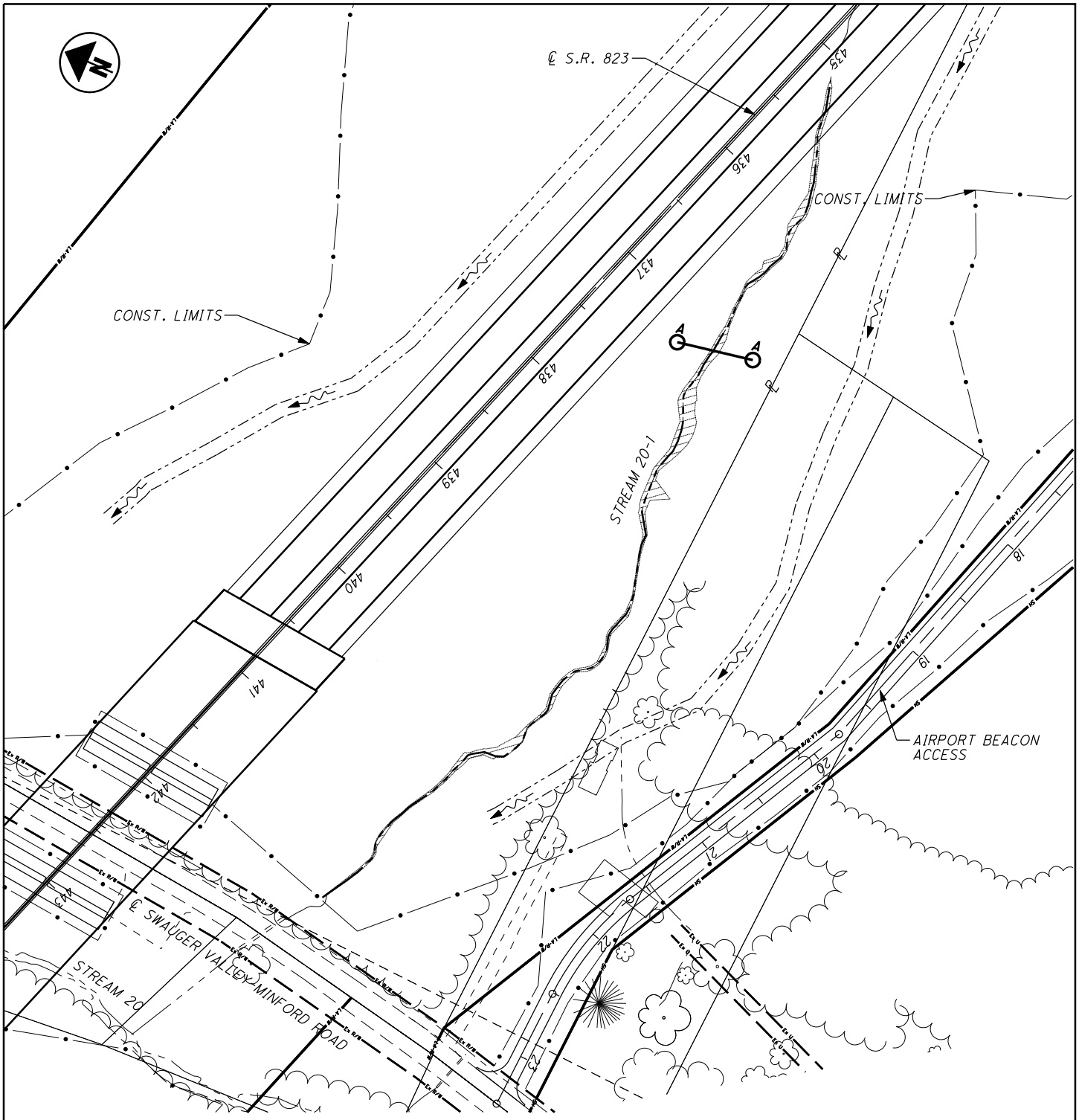
FIGURE 3-11A



PLAN

PROPERTY OWNERS:	
STATE OF OHIO	
TIMOTHY AND AMBER SPARKS	
PATRICIA ADAMS	
DAVID SAMSON	
LENGTH OF IMPACT:	720 LF
AREA EXCAVATED OR FILLED:	0.068 ACRES
EXCAVATION BELOW OHW:	0 CY
FILL BELOW OHW:	30 CY

LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PLAN SCALE: 1" = 100'

IMPACTS AT STREAM 20-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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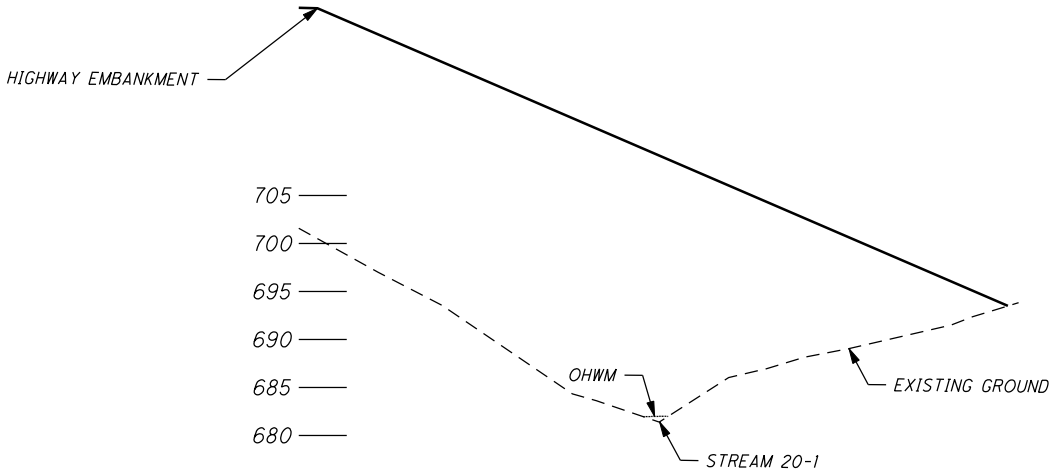
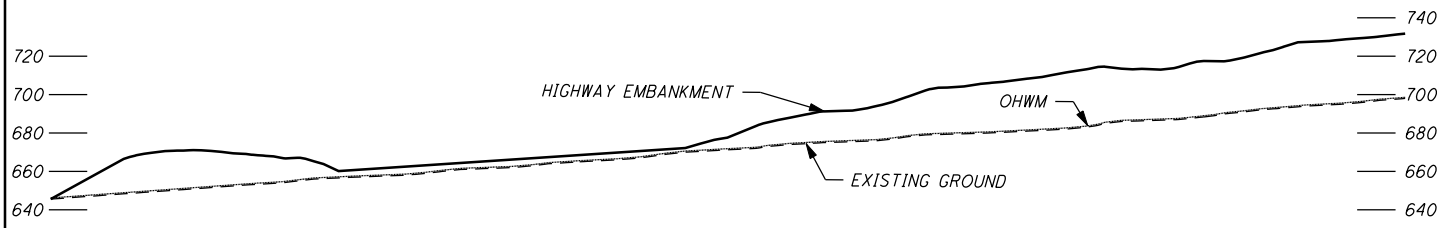
FIGURE 3-12



CROSS SECTION A-A



STREAM 20-1 PROFILE

STREAM PROFILE: 1" = 100' H
STREAM PROFILE: 1" = 100' V
STREAM CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 20-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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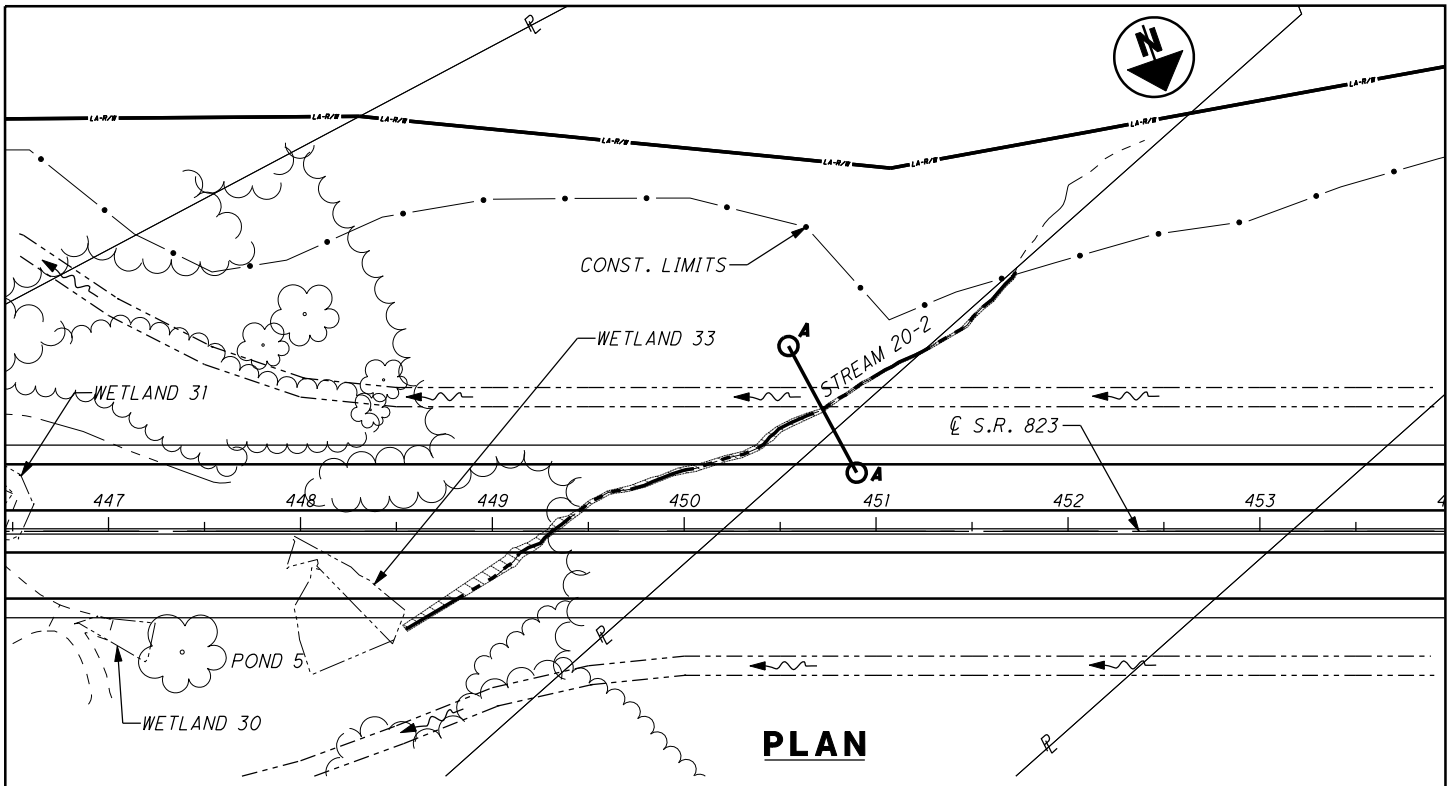
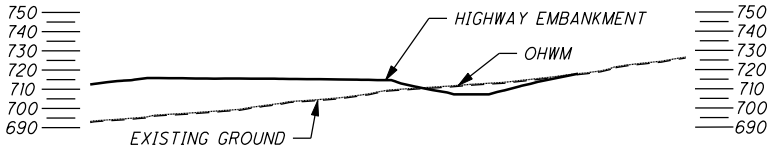
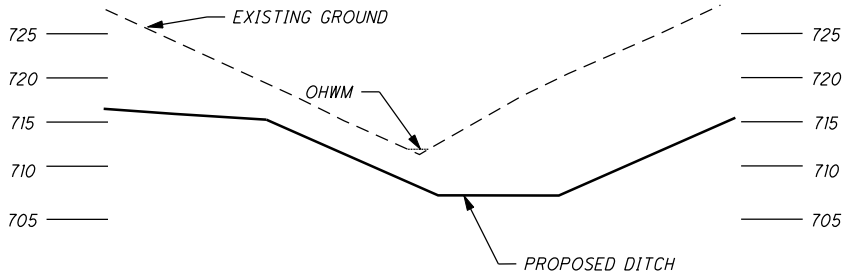
FIGURE 3-12A



PLAN



STREAM 20-2 PROFILE



CROSS SECTION A-A

PROPERTY OWNERS: STATE OF OHIO	
LENGTH OF IMPACT:	375 LF
AREA EXCAVATED OR FILLED:	0.027 ACRES
EXCAVATION BELOW OHW:	17 CY
FILL BELOW OHW:	7 CY

LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PLAN SCALE: 1" = 100'
PROFILE SCALE: 1" = 100'
CROSS SECTION SCALE: 1" = 20'

IMPACTS AT STREAM 20-2

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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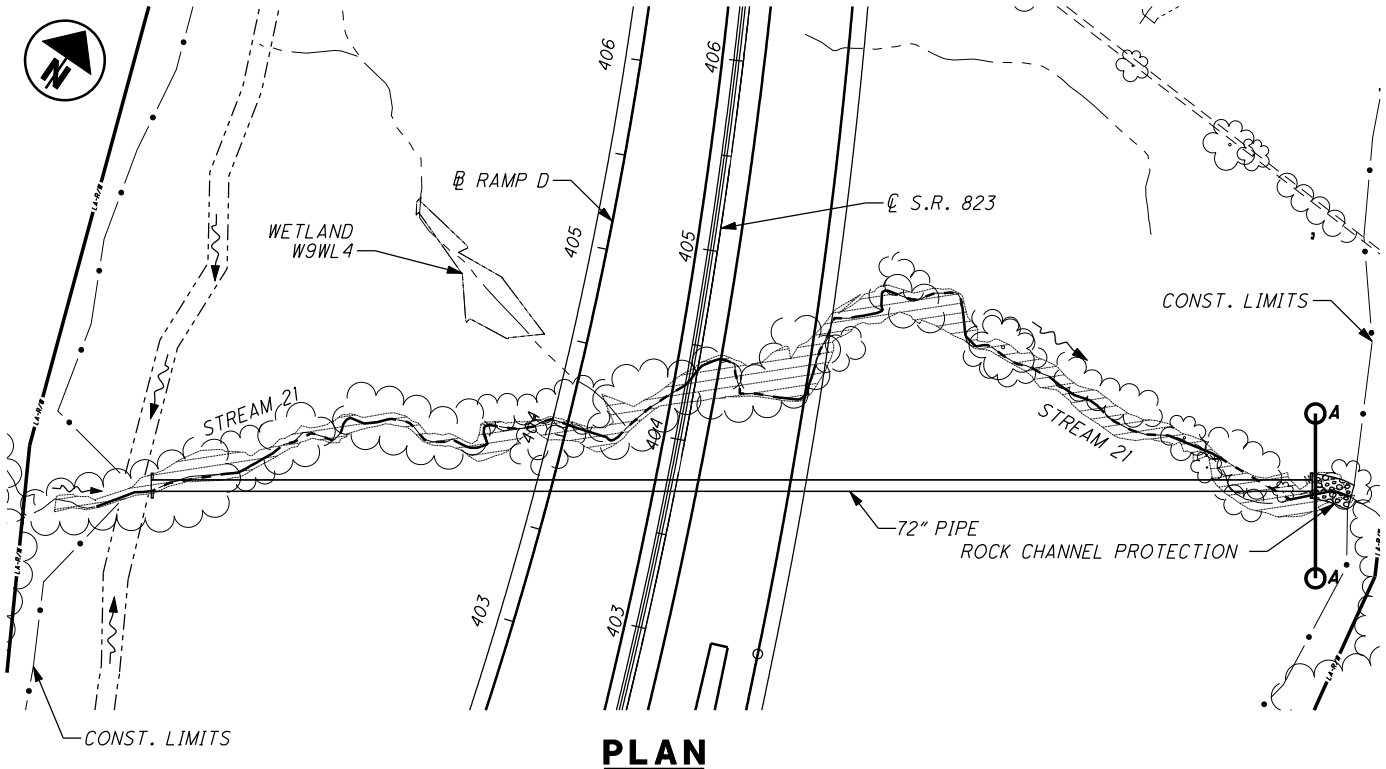
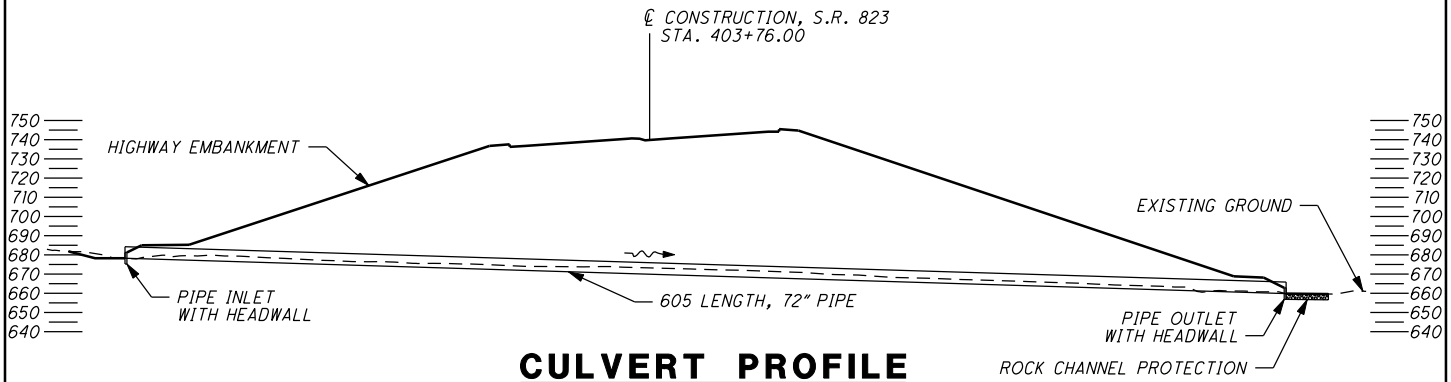
FIGURE 3-13



PLAN



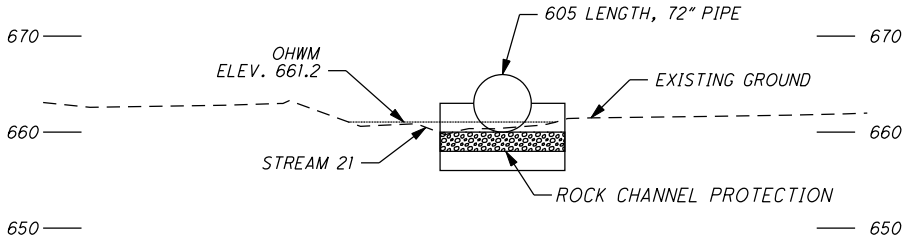
CULVERT PROFILE

LEGEND

- PROPOSED DITCH
- STREAM IMPACT LENGTH
- OHWM

PROPERTY OWNERS:
MCKENZIE GERTRUDE B TRUSTEE
GERTRUDEB MCKENZIE REVOCABLE TRUST

LENGTH OF IMPACT:	802 LF
AREA EXCAVATED OR FILLED:	0.218 ACRES
EXCAVATION BELOW OHW:	20 CY
FILL BELOW OHW:	263 CY



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100' H
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 21

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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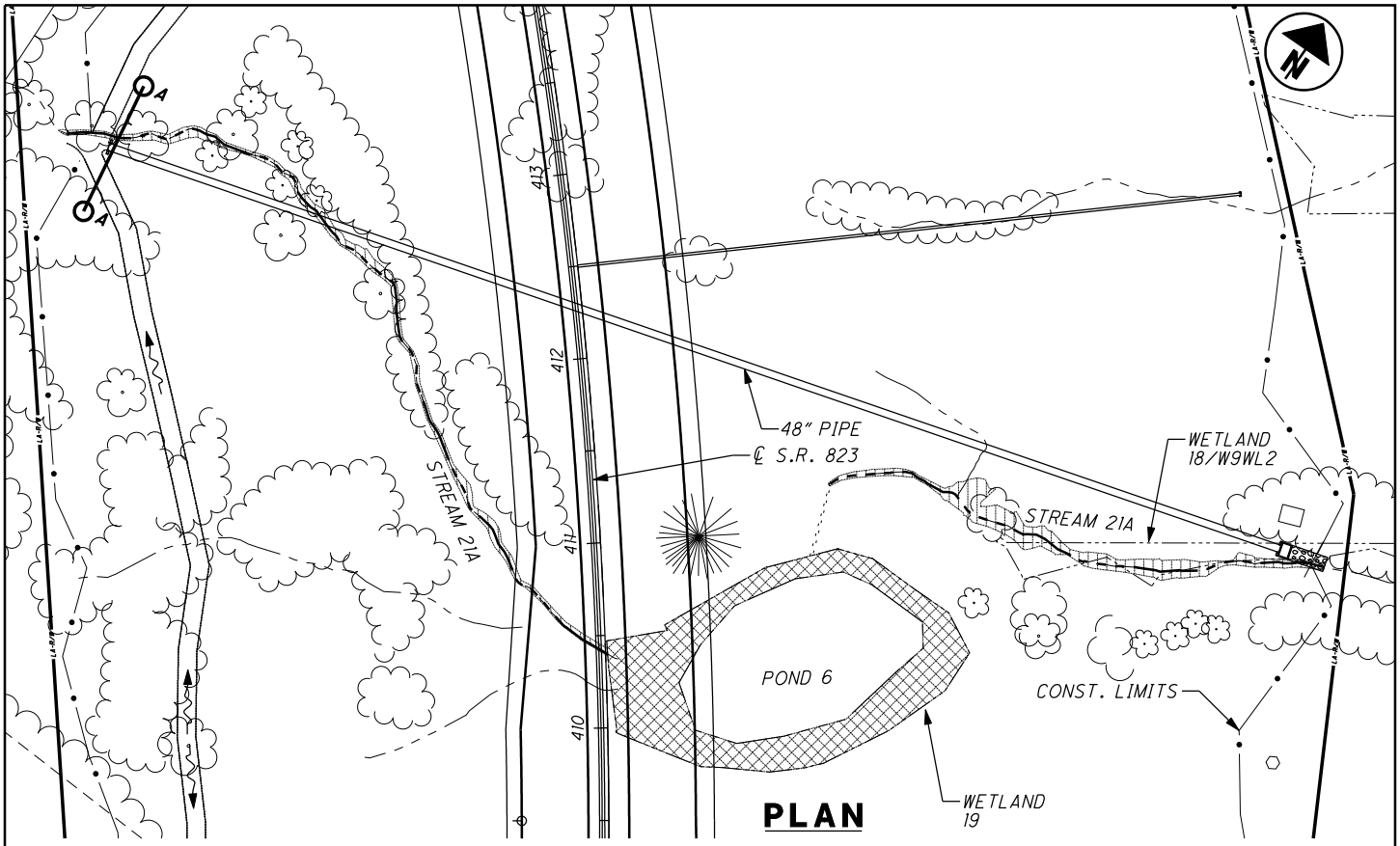
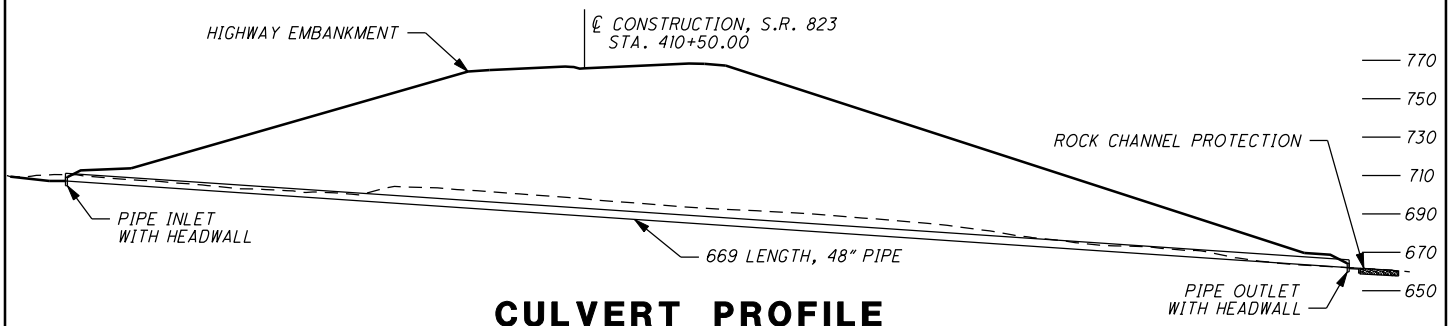
DATE: 09/13/2011

FIGURE 3-14



PLAN



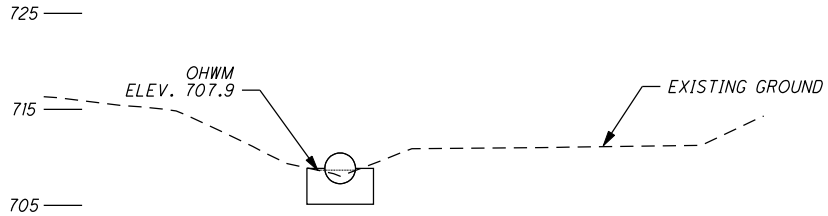
CULVERT PROFILE

LEGEND

- PROPOSED DITCH
- STREAM IMPACT LENGTH
- OHWM

PROPERTY OWNERS:
MCKENZIE GERTRUDE B TRUSTEE
GERTRUDEB MCKENZIE REVOCABLE TRUST

LENGTH OF IMPACT:	745 LF
AREA EXCAVATED OR FILLED:	0.043 ACRES
EXCAVATION BELOW OHW:	45 CY
FILL BELOW OHW:	30 CY



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100' H
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 21A

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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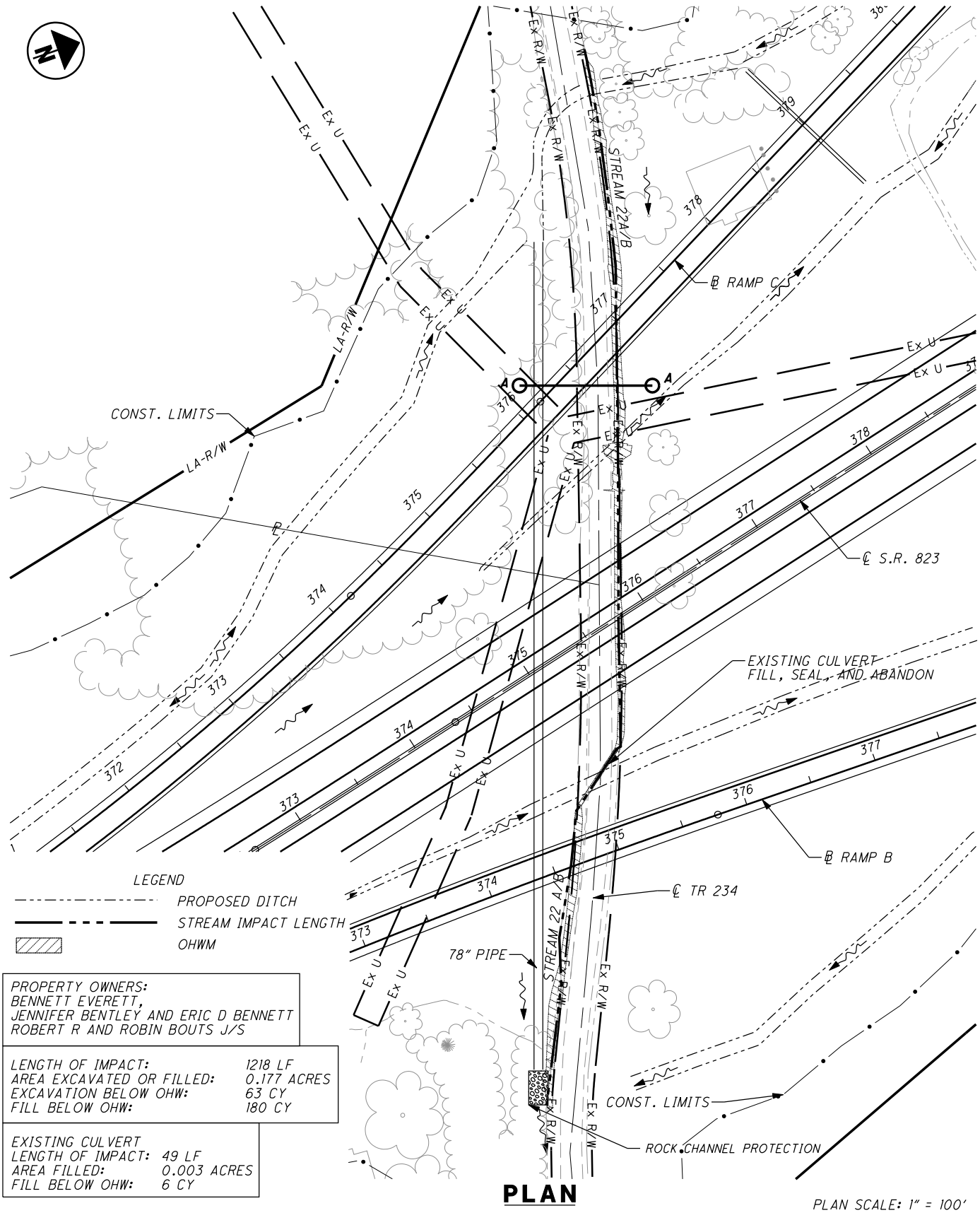
FIGURE 3-15



PROPERTY OWNERS:
BENNETT EVERETT,
JENNIFER BENTLEY AND ERIC D BENNETT
ROBERT R AND ROBIN BOUTS J/S

LENGTH OF IMPACT:	1218 LF
AREA EXCAVATED OR FILLED:	0.177 ACRES
EXCAVATION BELOW OHW:	63 CY
FILL BELOW OHW:	180 CY

EXISTING CULVERT

LENGTH OF IMPACT:	49 LF
AREA FILLED:	0.003 ACRES
FILL BELOW OHW:	6 CY

PLAN

PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 22 A/B DOWNSTREAM

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

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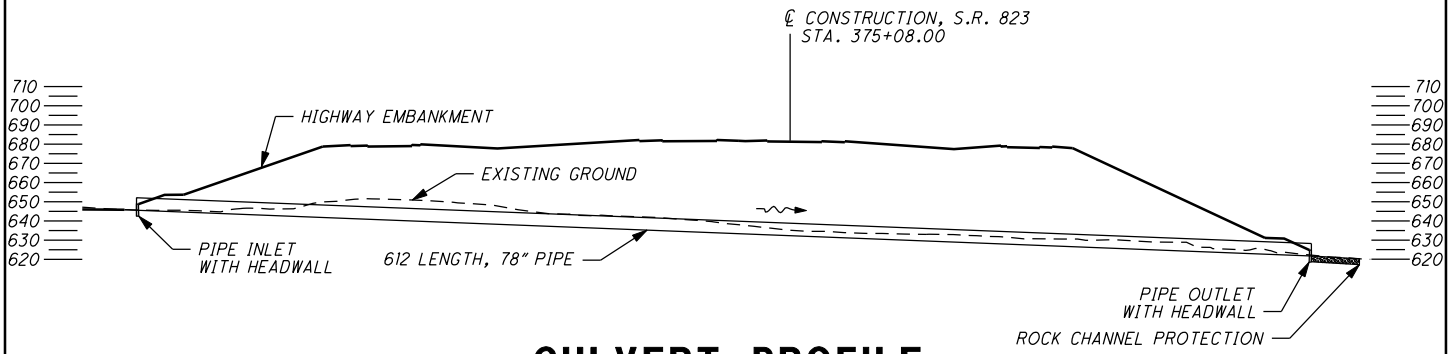
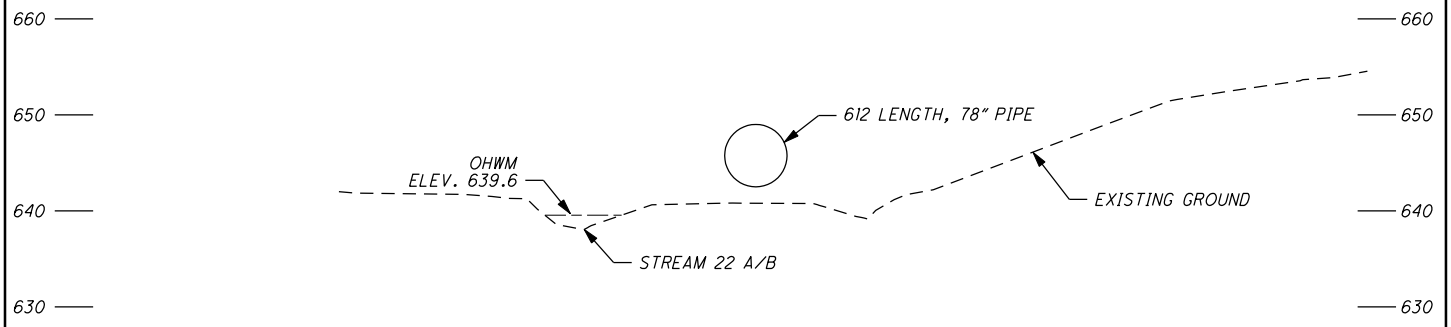
FIGURE 3-16



CULVERT PROFILE



CROSS SECTION A-A

CULVERT PROFILE: 1" = 100'
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 22A/B

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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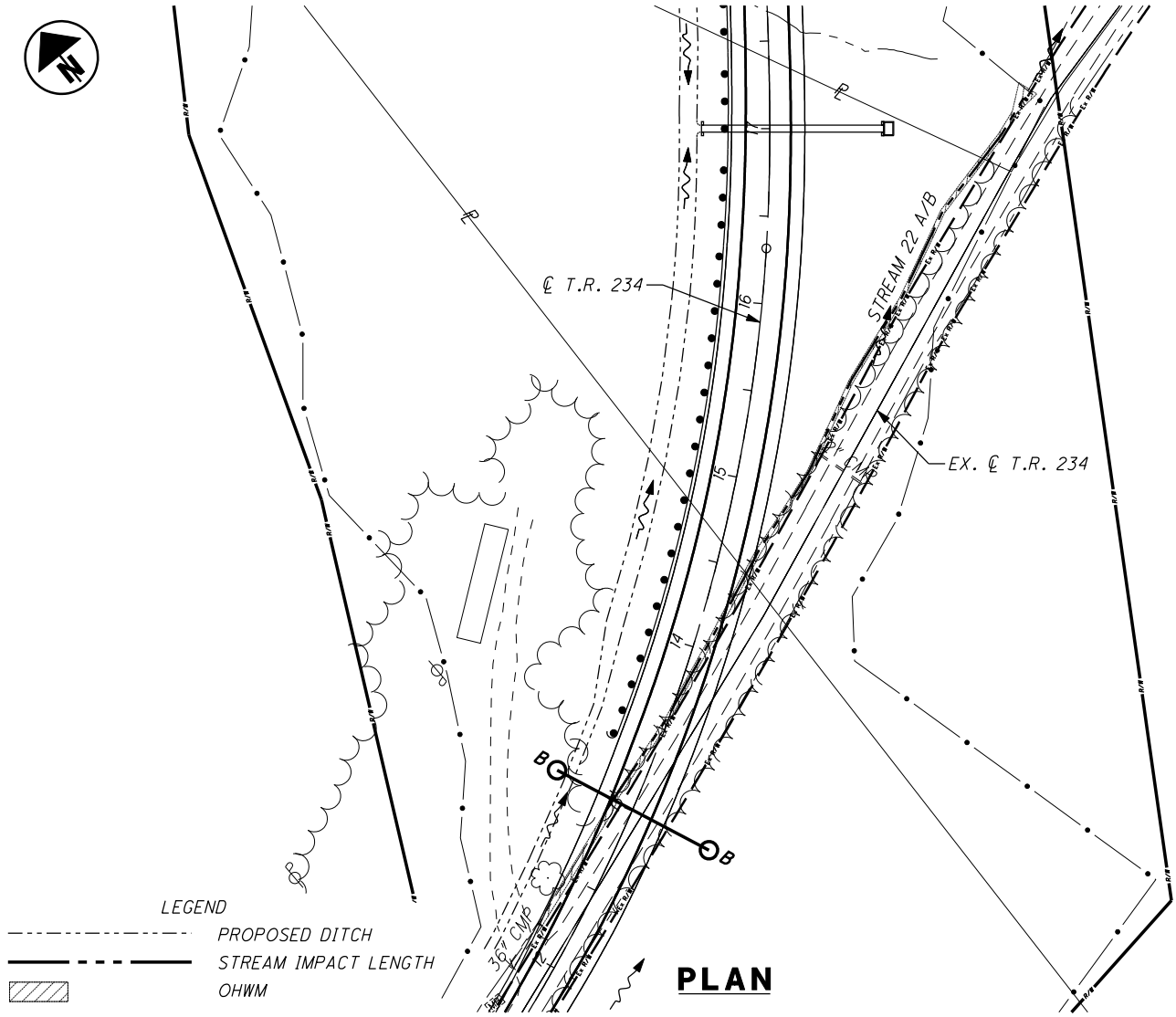
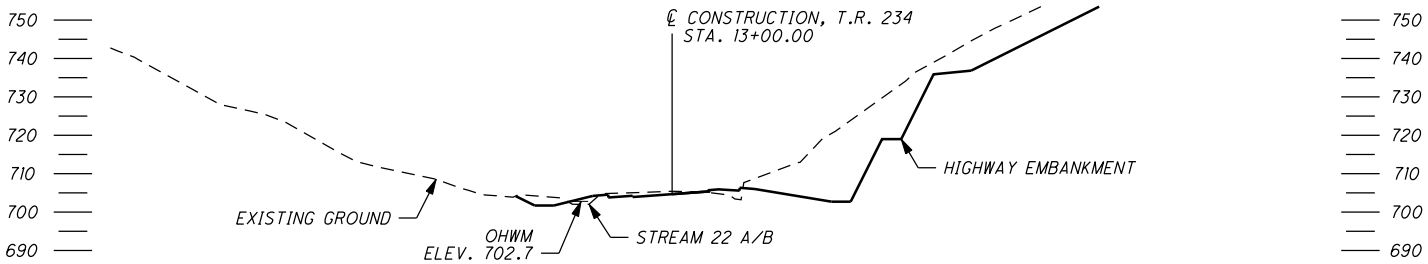
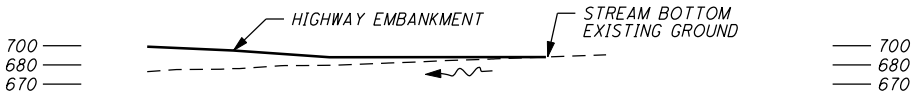
FIGURE 3-16A



PLAN



CROSS SECTION B-B



STREAM 22 A/B PROFILE

PROPERTY OWNERS:
ROBERT LEE AND STELLA FAULKNER J/S
ROBERT R AND ROBIN BOUTS J/S

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 50'
STREAM PROFILE: 1" = 100'

IMPACTS AT STREAM 22 A/B UPSTREAM

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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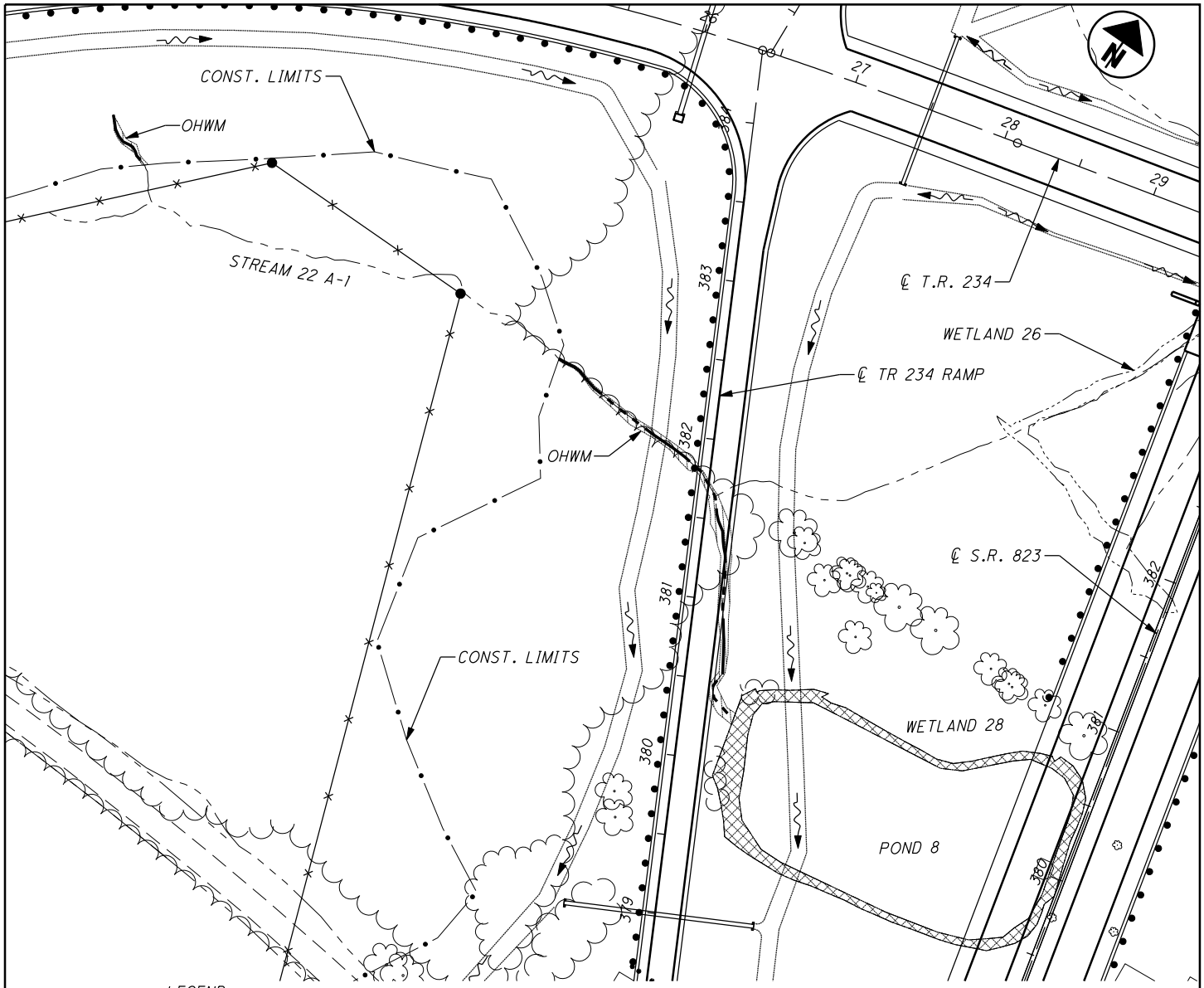
FIGURE 3-16B

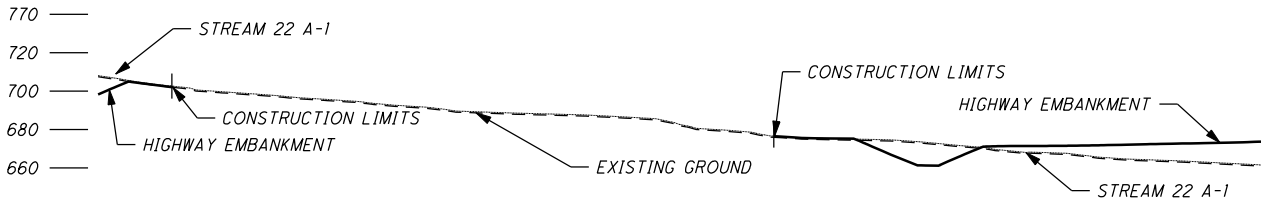


LEGEND

PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM



STREAM PROFILE

LENGTH OF IMPACT:	318 LF
AREA EXCAVATED OR FILLED:	0.036 ACRES
EXCAVATION BELOW OHW:	94 CY
FILL BELOW OHW:	15 CY

PROPERTY OWNERS:
STATE OF OHIO
ROBERT R AND ROBIN BOUTS

PLAN SCALE: 1" = 100'
STREAM PROFILE: 1" = 50'

IMPACTS AT STREAM 22 A-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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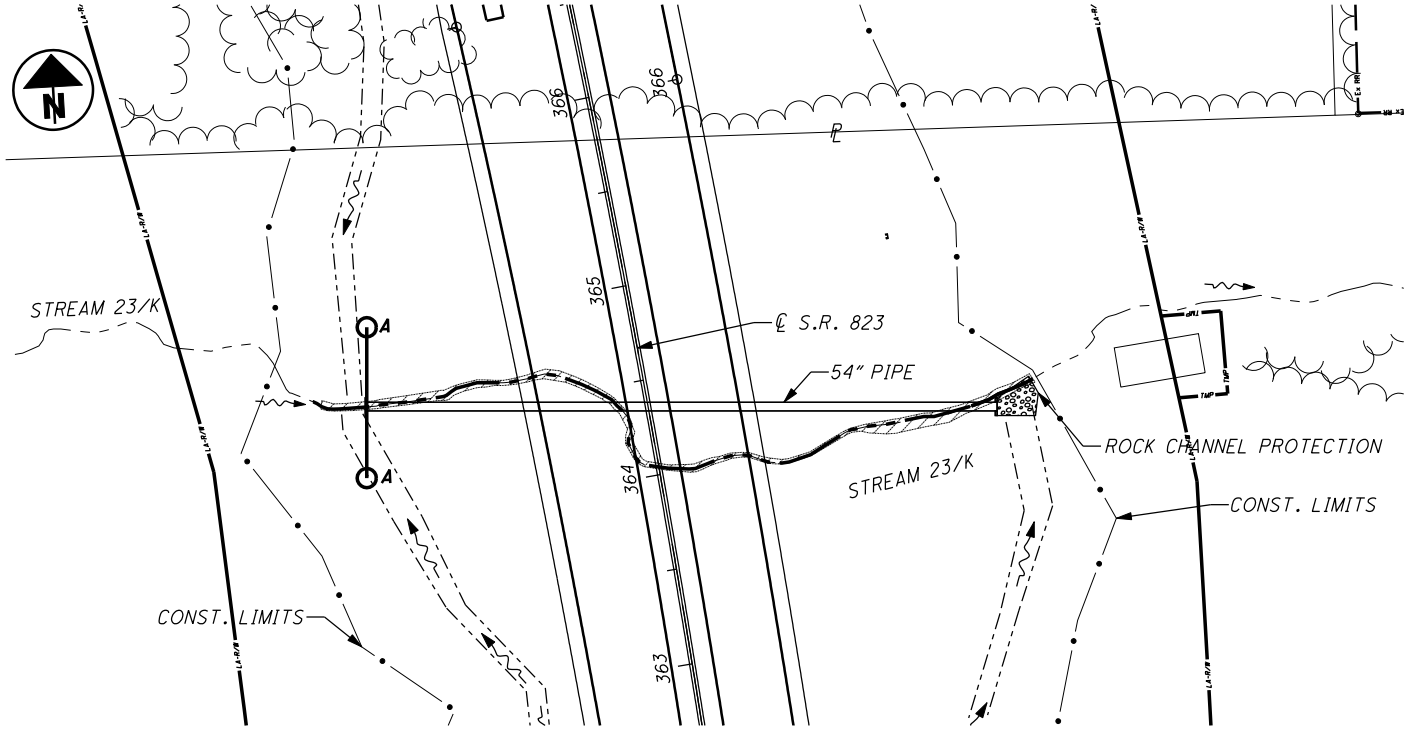
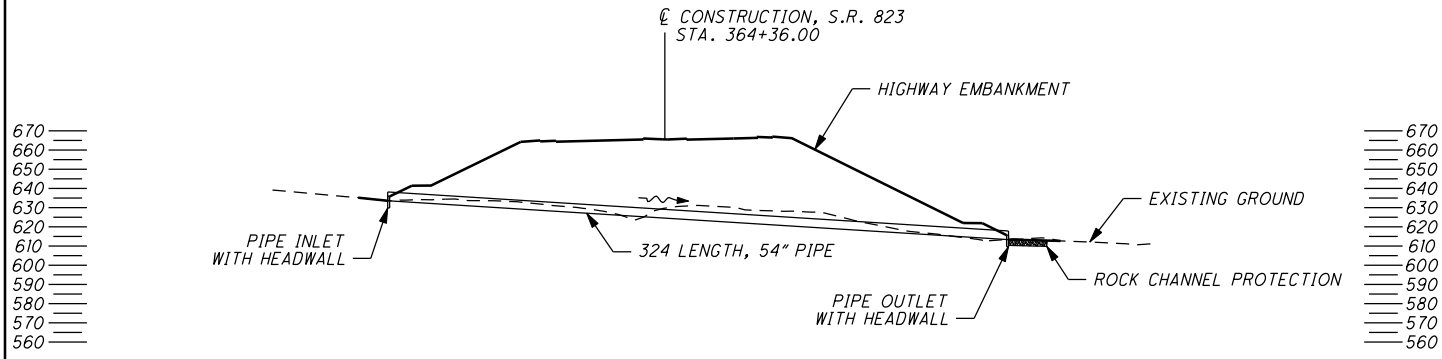
FIGURE 3-17



PLAN



CULVERT PROFILE

LEGEND

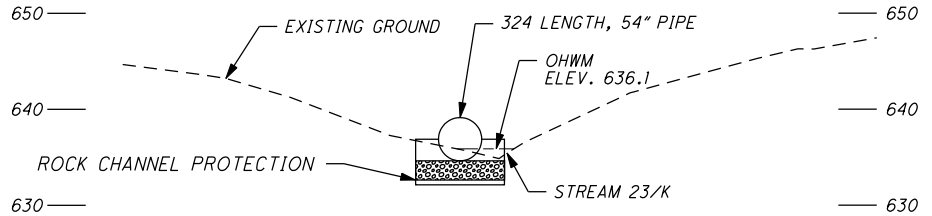
PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS:
MARY ANNETTE CORIELL

LENGTH OF IMPACT:	415 LF
AREA EXCAVATED OR FILLED:	0.048 ACRES
EXCAVATION BELOW OHW:	23 CY
FILL BELOW OHW:	75 CY



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100'
CROSS SECTION: 1" = 20'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT STREAM 23/K

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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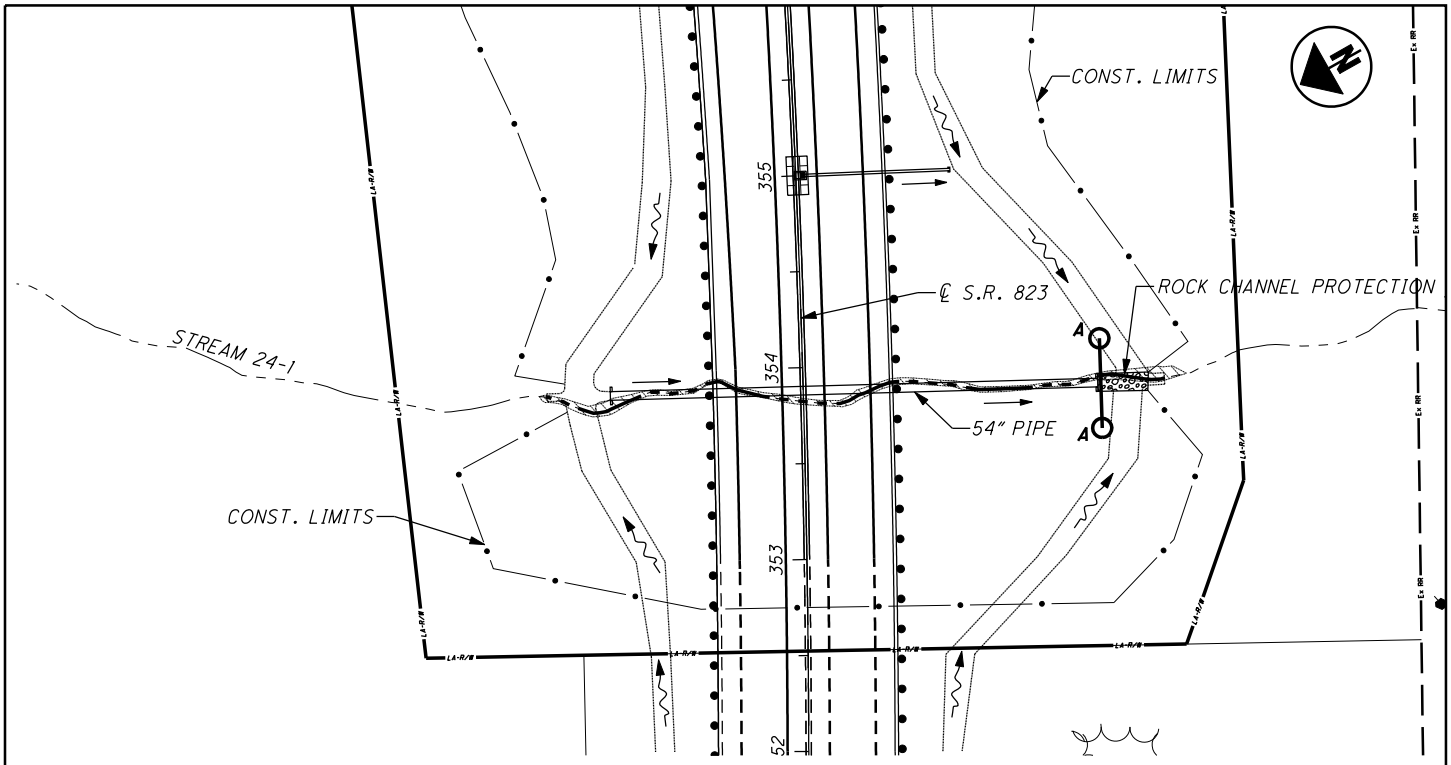
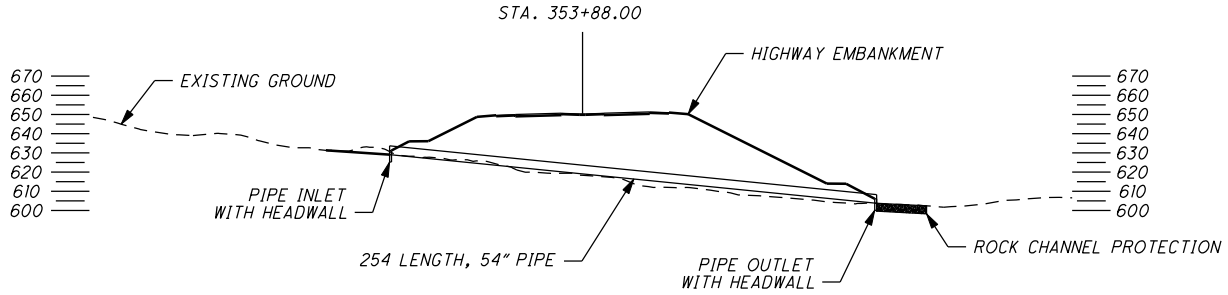
FIGURE 3-18



PLAN



CULVERT PROFILE

LEGEND

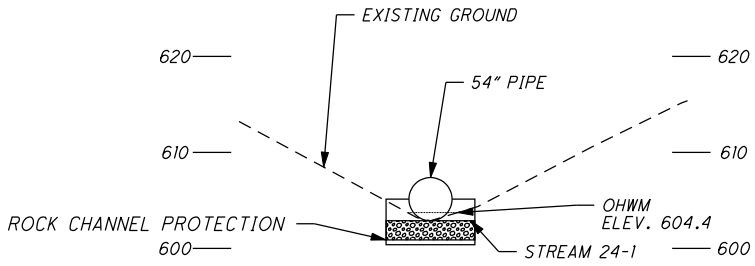
PROPOSED DITCH

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS:
VICTOR D AND ELSIE A KNORE J/S

LENGTH OF IMPACT:	333 LF
AREA EXCAVATED OR FILLED:	0.081 ACRES
EXCAVATION BELOW OHW:	47 CY
FILL BELOW OHW:	32 CY



CROSS SECTION A-A

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100'
CROSS SECTION: 1" = 20'

IMPACTS AT STREAM 24-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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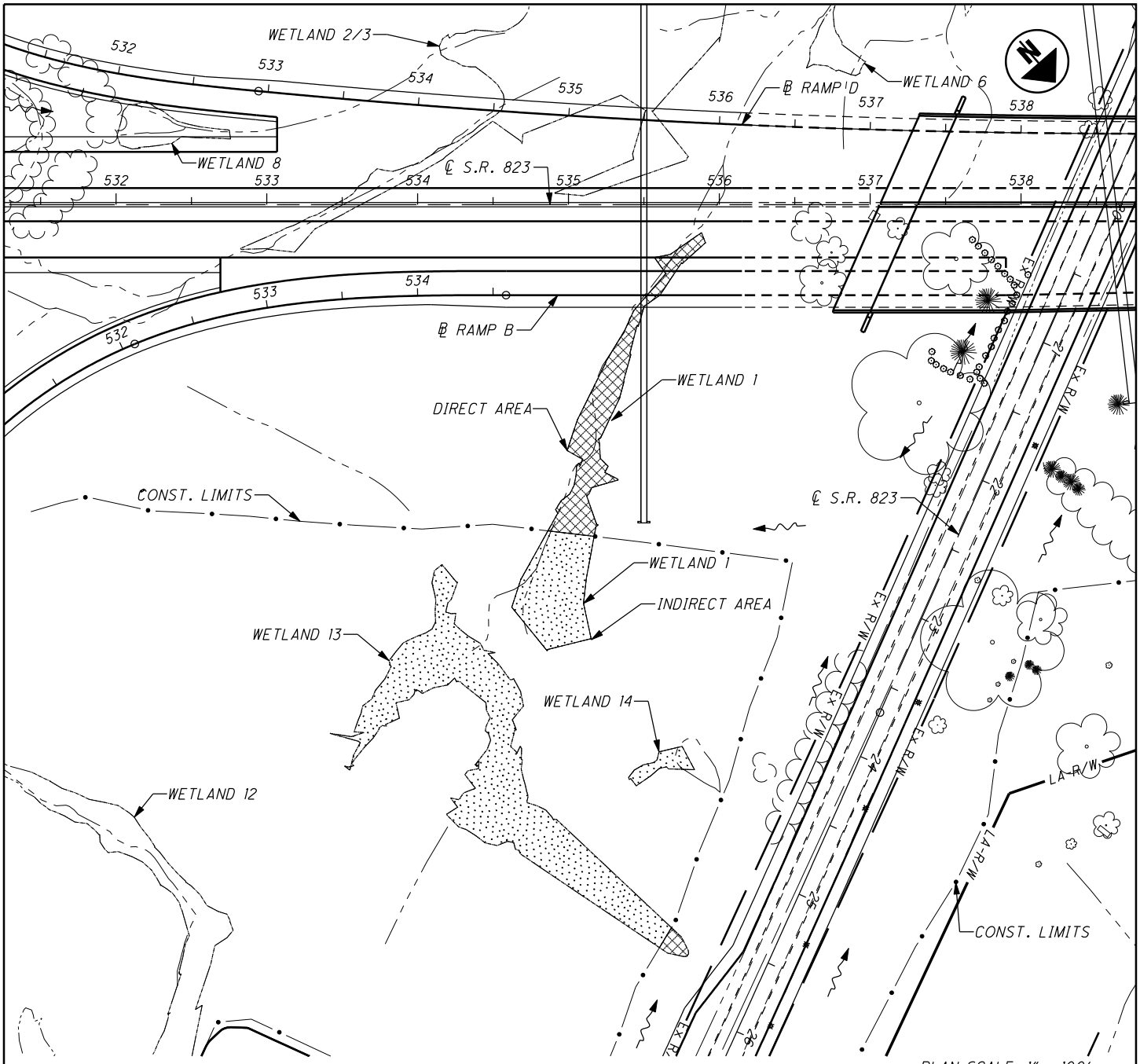
FIGURE 3-19



PLAN

PLAN SCALE: 1" = 100'

LEGEND

DIRECT AREA

INDIRECT AREA

PROPERTY OWNERS:
STATE OF OHIO

WETLAND 1

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.072 ACRES
FILL BELOW OHW:	115 CY
INDIRECT IMPACT AREA:	0.069 ACRES

WETLAND 13

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.005 ACRES
FILL BELOW OHW:	8 CY
INDIRECT IMPACT AREA:	0.228 ACRES

WETLAND 14

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.000 ACRES
FILL BELOW OHW:	0 CY
INDIRECT IMPACT AREA:	0.010 ACRES

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACT AT WETLANDS 1, 13 AND 14

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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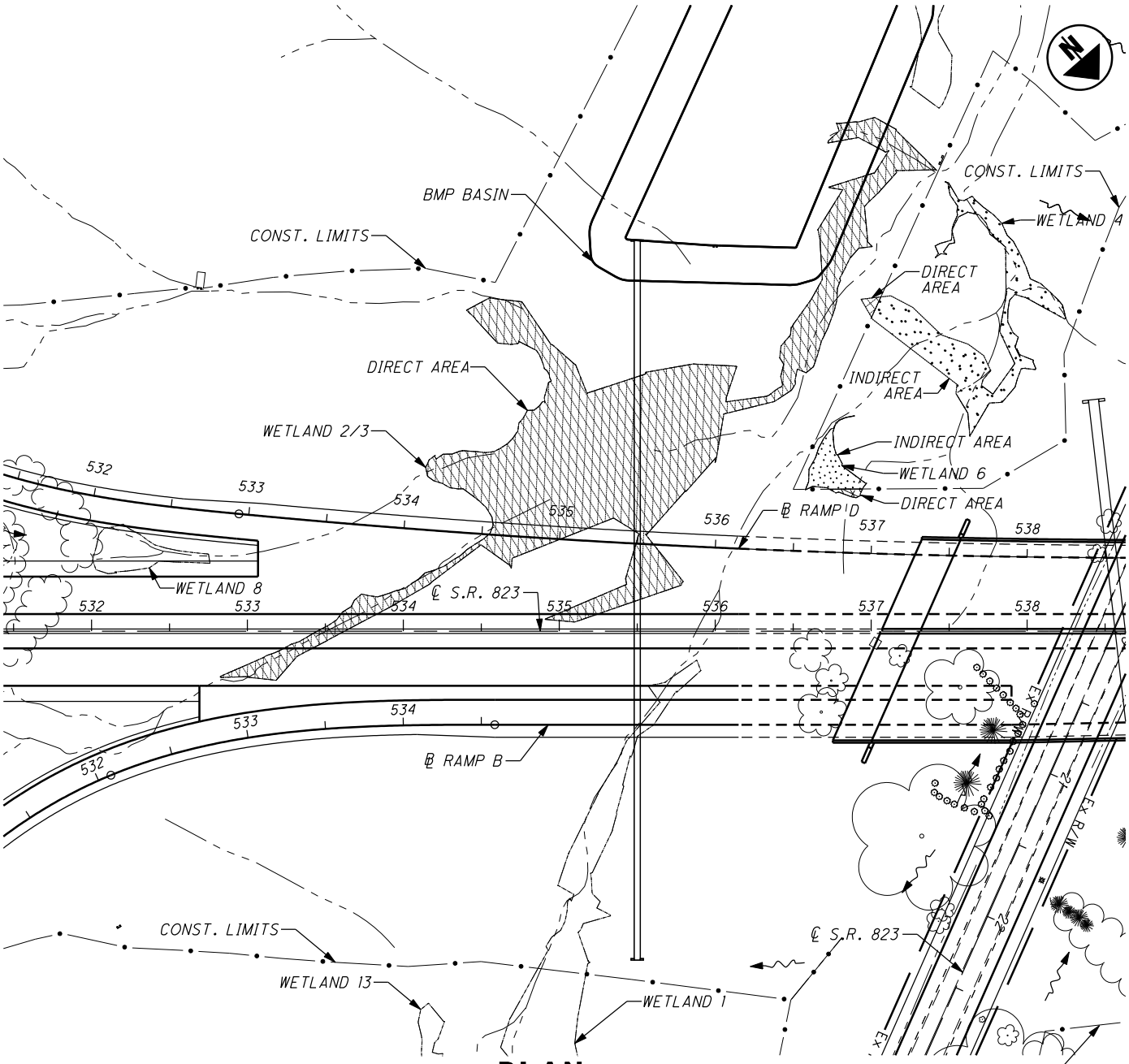
FIGURE 3-20



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO

WETLAND 6

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.002 ACRES
FILL BELOW OHW:	3 CY
INDIRECT IMPACT AREA:	0.016 ACRES

WETLAND 2/3

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.517 ACRES
FILL BELOW OHW:	834 CY
INDIRECT IMPACT AREA:	0.00 ACRES

WETLAND 4

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.002 ACRES
FILL BELOW OHW:	3 CY
INDIRECT IMPACT AREA:	0.087 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLANDS 2/3, 4 AND 6

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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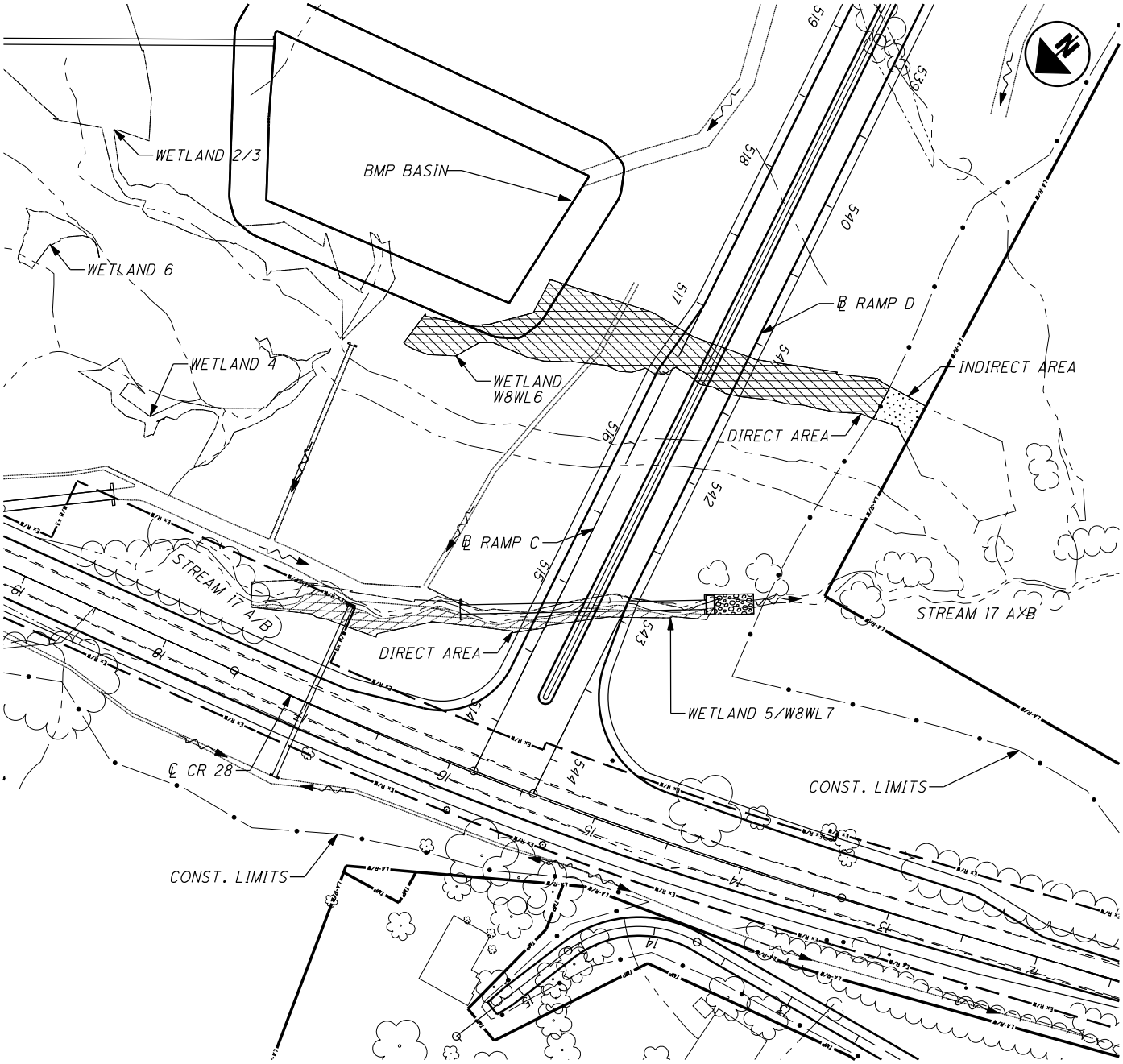
FIGURE 3-21



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO

W8WL6

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.207 ACRES
FILL BELOW OHW:	334 CY
INDIRECT IMPACT AREA:	0.014 ACRES

WETLAND 5 / W8WL7

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.066 ACRES
FILL BELOW OHW:	107 CY
INDIRECT IMPACT AREA:	0.0 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 5 / W8WL7 AND W8WL6

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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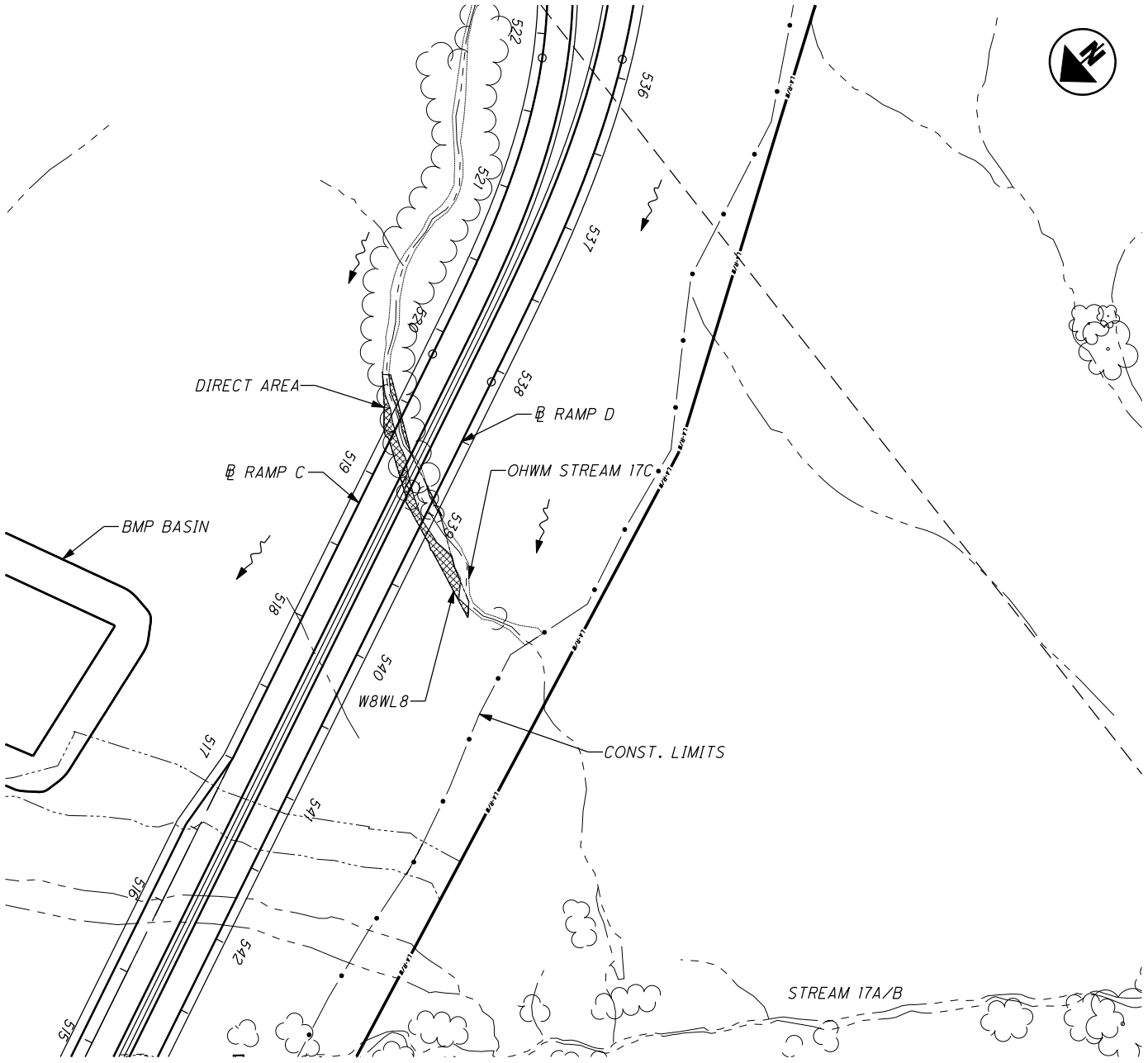
FIGURE 3-22



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.020 ACRES
FILL BELOW OHW:	32 CY
INDIRECT IMPACT AREA:	0.000 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND W8WL8

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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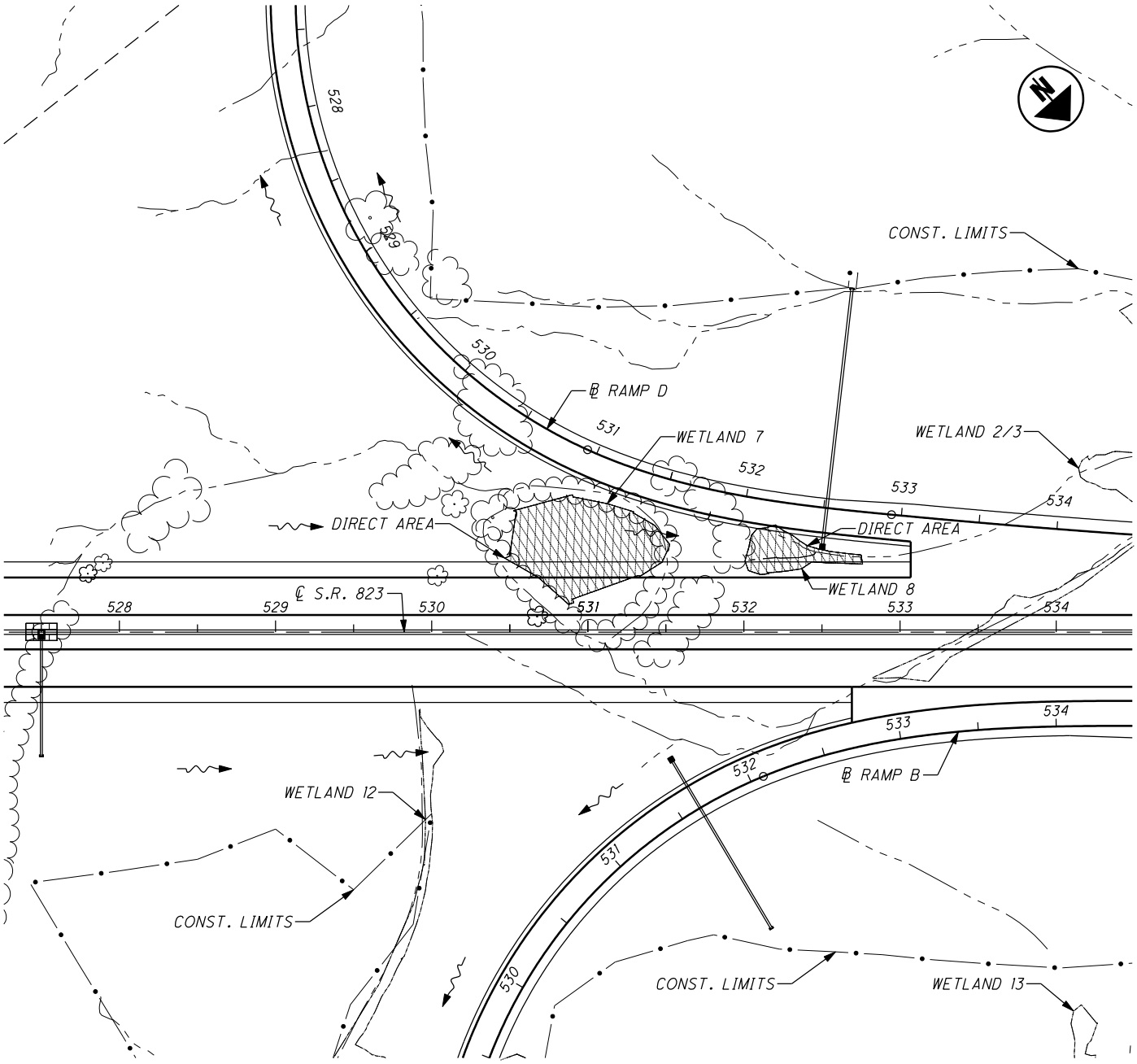
FIGURE 3-23



PLAN

PLAN SCALE: 1" = 100'

WETLAND 7

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.108 ACRES
FILL BELOW OHW:	174 CY
INDIRECT IMPACT AREA:	0.00 ACRES

WETLAND 8

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.028 ACRES
FILL BELOW OHW:	45 CY
INDIRECT IMPACT AREA:	0.00 ACRES

PROPERTY OWNERS:
STATE OF OHIO

LEGEND

DIRECT AREA

INDIRECT AREA

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT WETLANDS 7 AND 8

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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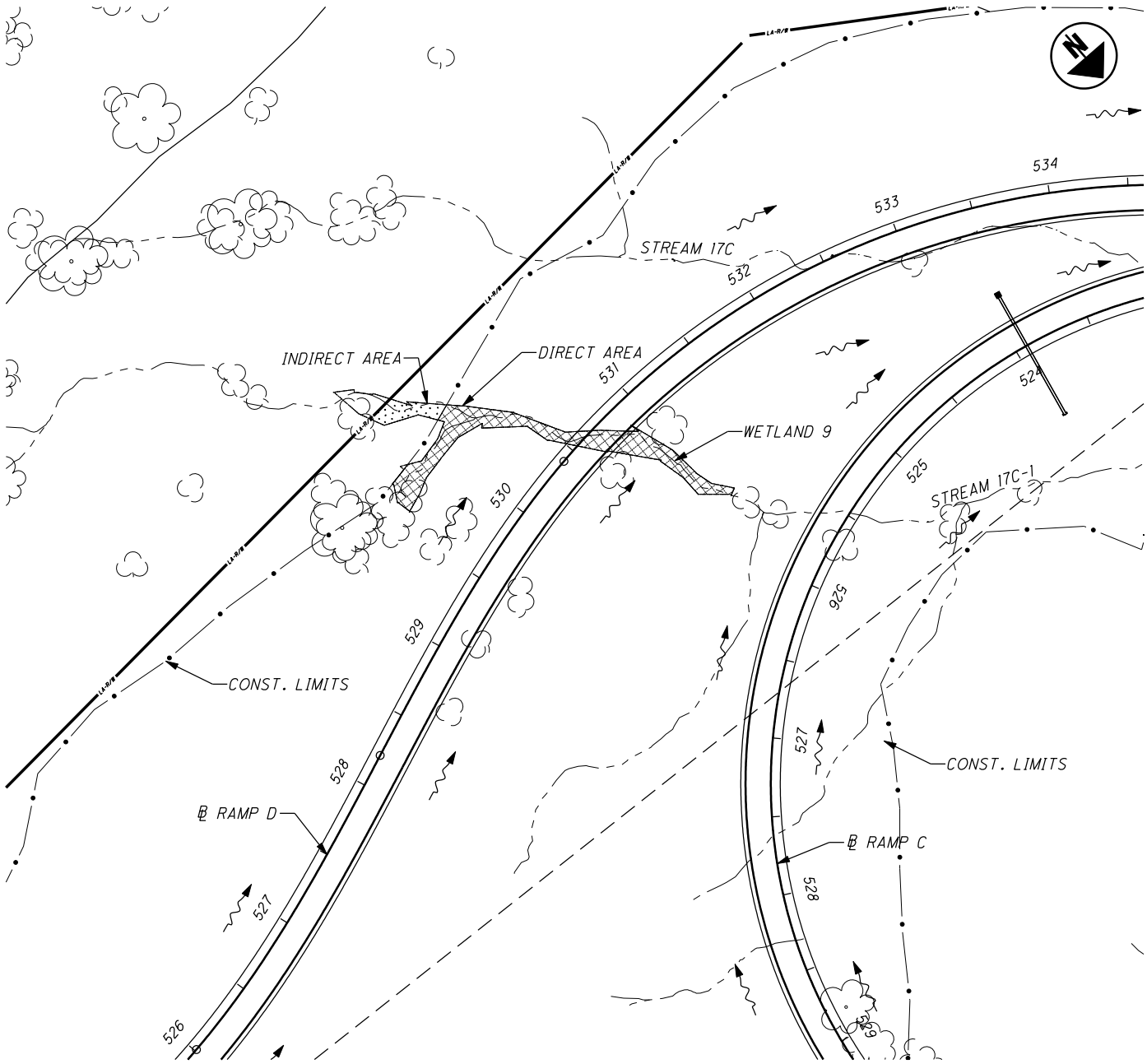
FIGURE 3-24



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.063 ACRES
FILL BELOW OHW:	102 CY
INDIRECT IMPACT AREA:	0.010 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 9

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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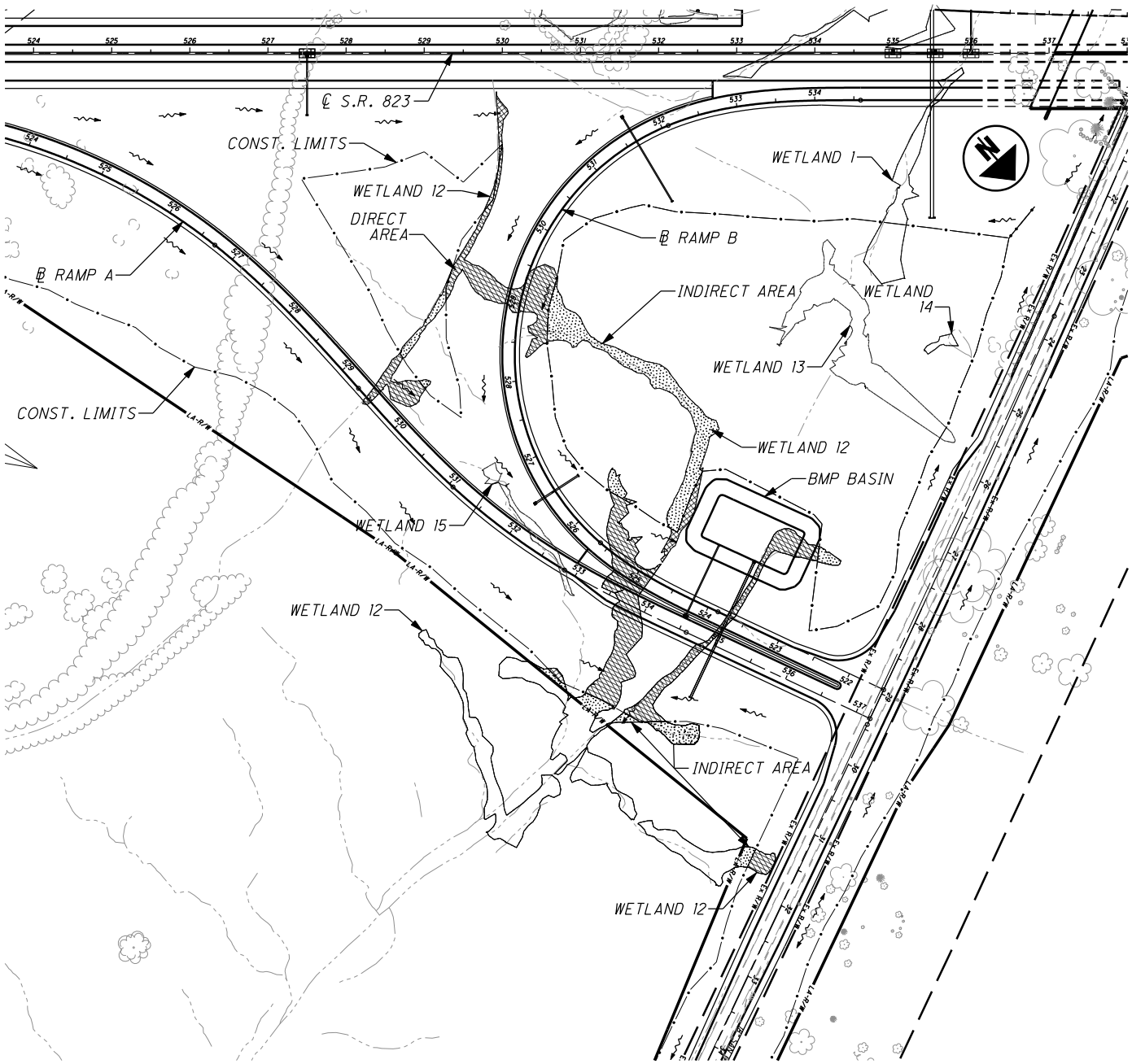
FIGURE 3-25



PLAN

PLAN SCALE: 1" = 200'

PROPERTY OWNERS:
STATE OF OHIO

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.528 ACRES
FILL BELOW OHW:	852 CY
INDIRECT IMPACT AREA:	0.283 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 12

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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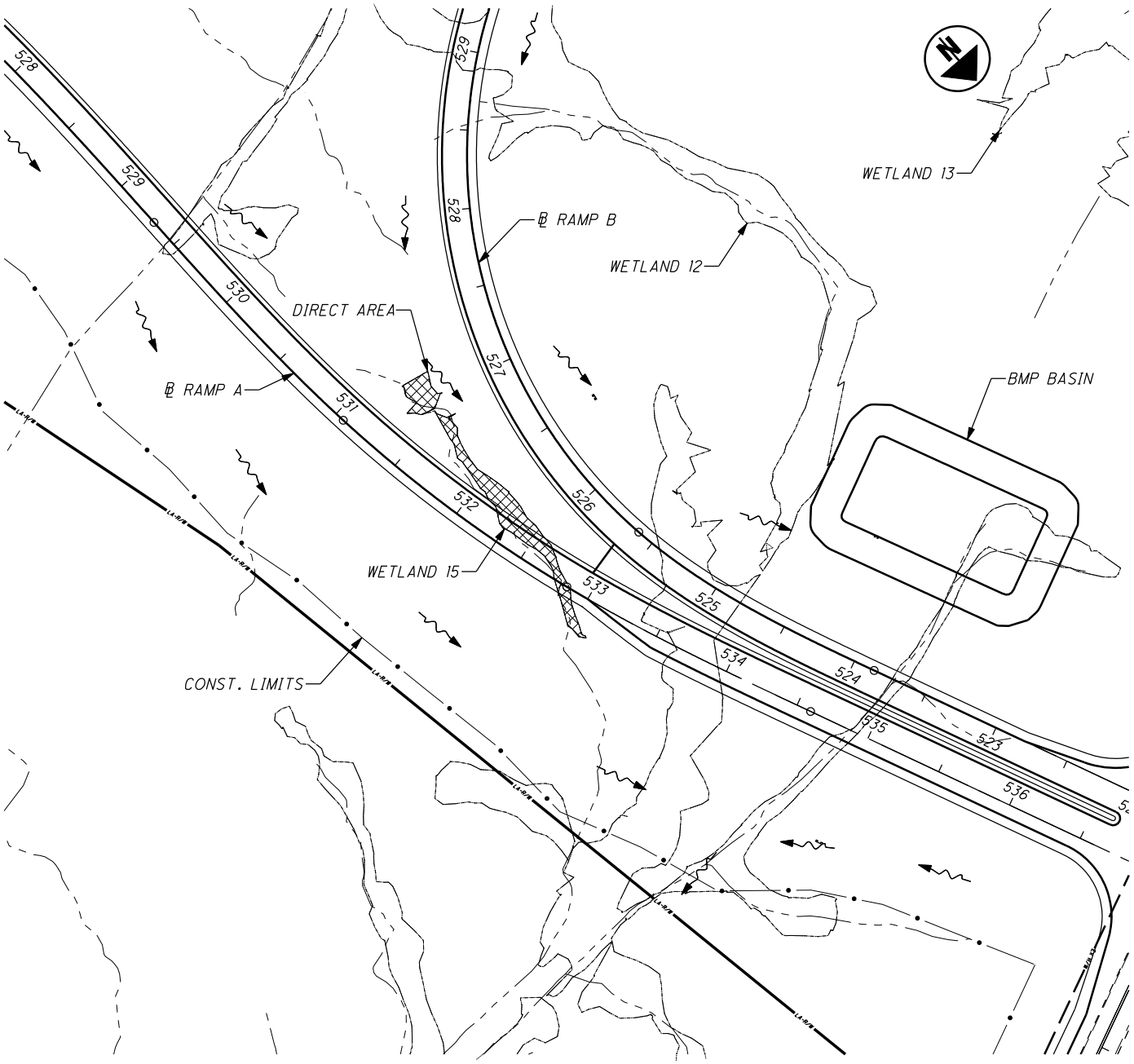
FIGURE 3-26



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.041 ACRES
FILL BELOW OHW:	65 CY
INDIRECT IMPACT AREA:	0.00 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 15

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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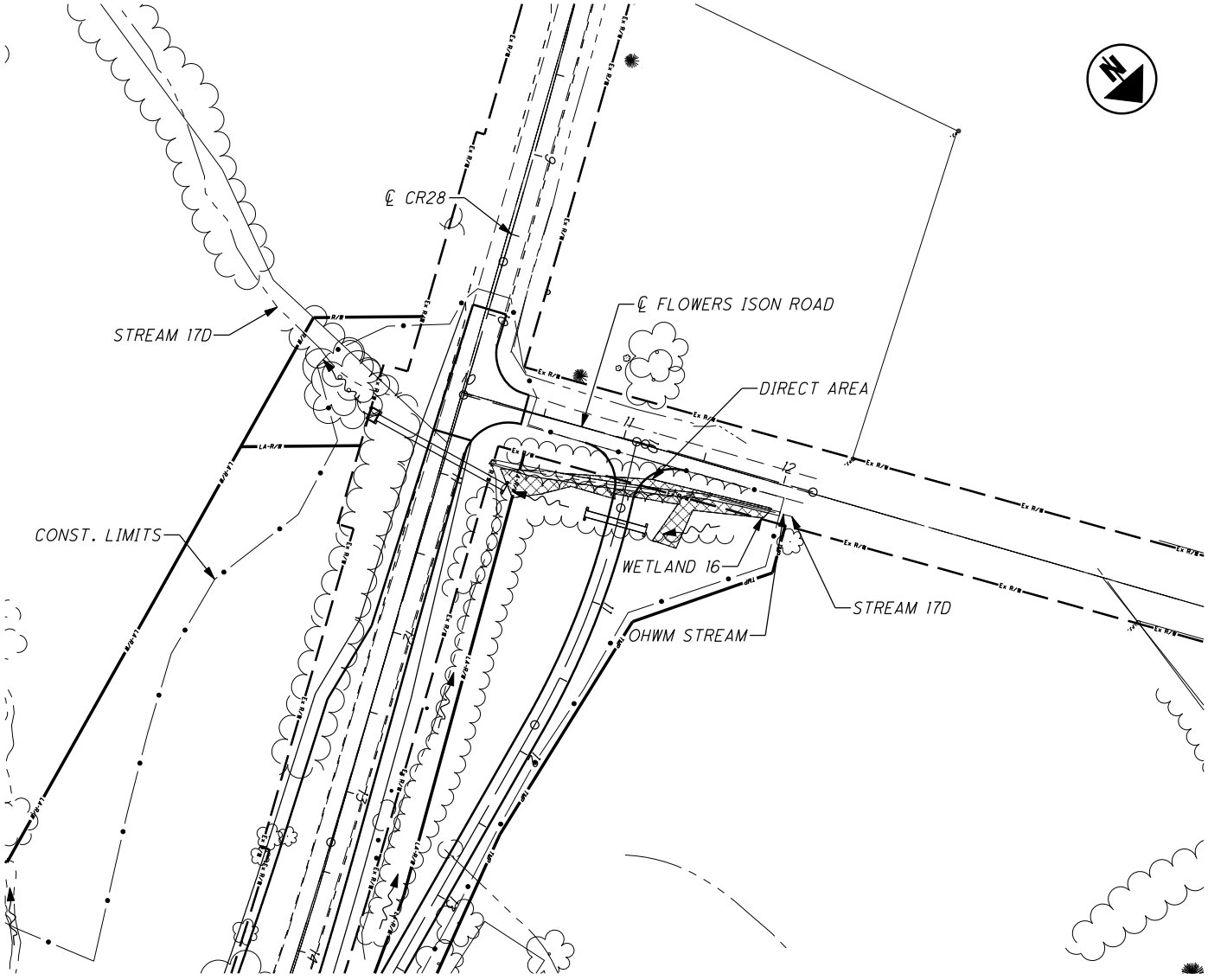
FIGURE 3-27



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO
ANGELA SUE YEAGLE

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.036 ACRES
FILL BELOW OHW:	58 CY
CUT BELOW OHW:	22 CY
INDIRECT IMPACT AREA:	0.00 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 16

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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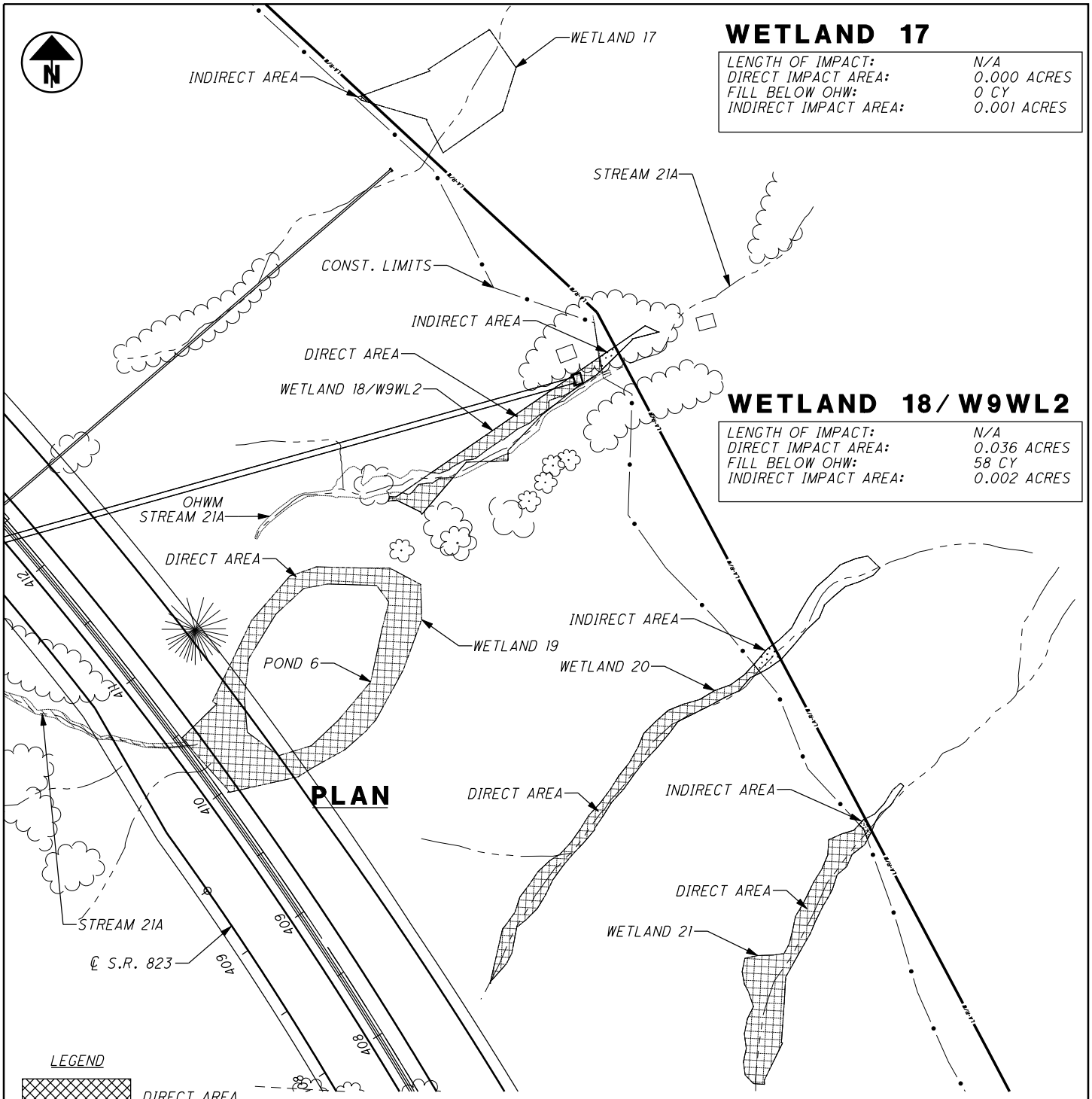
FIGURE 3-28



WETLAND 17

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.000 ACRES
FILL BELOW OHW:	0 CY
INDIRECT IMPACT AREA:	0.001 ACRES

WETLAND 18/W9WL2

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.036 ACRES
FILL BELOW OHW:	58 CY
INDIRECT IMPACT AREA:	0.002 ACRES

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO
DARREN AND KIMBERLY JENNINGS

WETLAND 19

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.180 ACRES
FILL BELOW OHW:	290 CY
INDIRECT IMPACT AREA:	0.000 ACRES

WETLAND 20

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.058 ACRES
FILL BELOW OHW:	93 CY
INDIRECT IMPACT AREA:	0.004 ACRES

WETLAND 21

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.081 ACRES
FILL BELOW OHW:	130 CY
INDIRECT IMPACT AREA:	0.001 ACRES

IMPACTS AT WETLAND 17, 18/W9WL2, 19, 20 AND 21

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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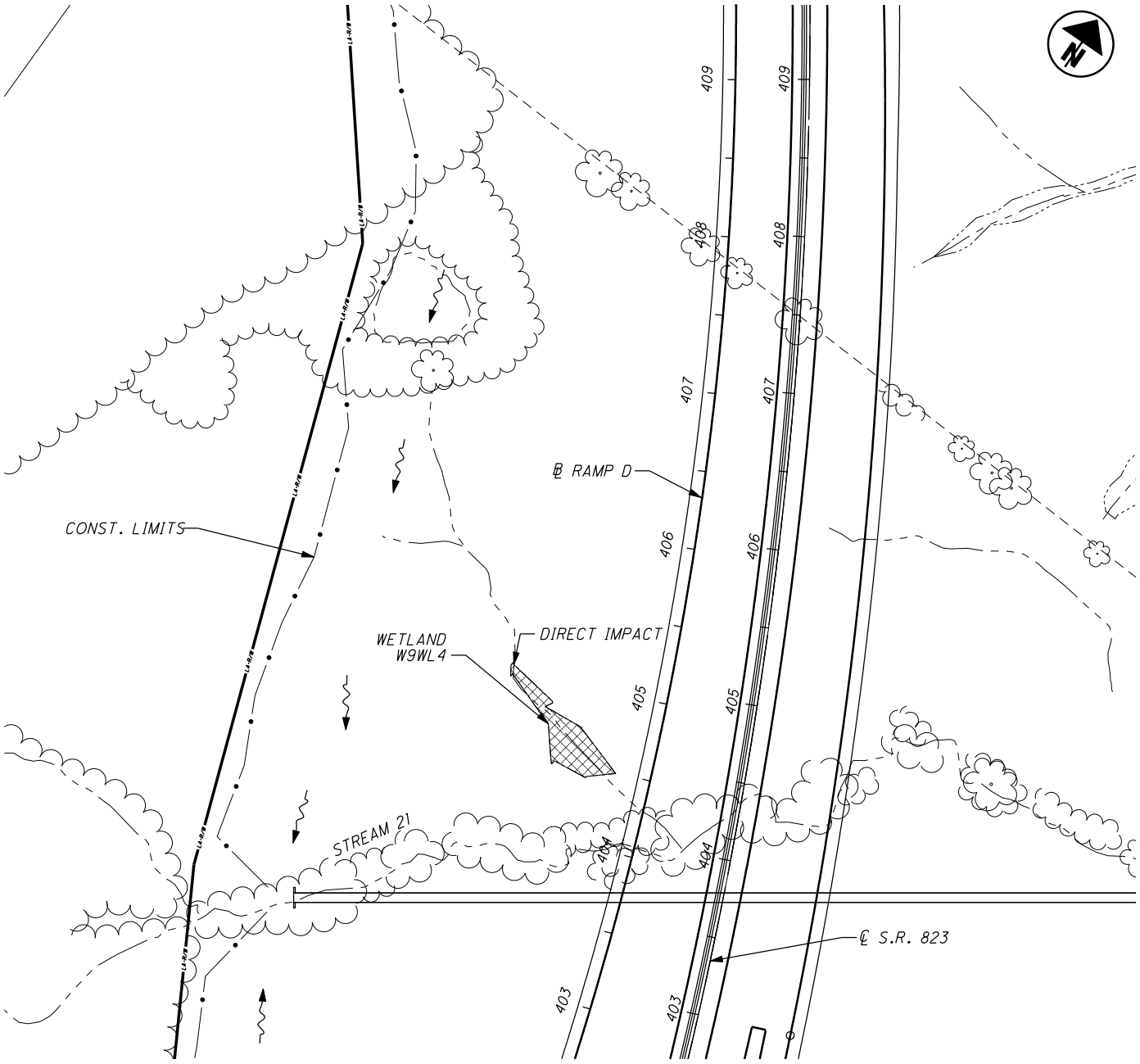
FIGURE 3-29



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
MCKENZIE GERTRUDE B TRUSTEE
GERTRUDE B MCKENZIE REVOCABLE TRUST

LEGEND

DIRECT AREA

INDIRECT AREA

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.029 ACRES
FILL BELOW OHW:	47 CY
INDIRECT IMPACT AREA:	0.00 ACRES

IMPACTS AT WETLAND W9WL4

OHIO DEPARTMENT OF TRANSPORTATION
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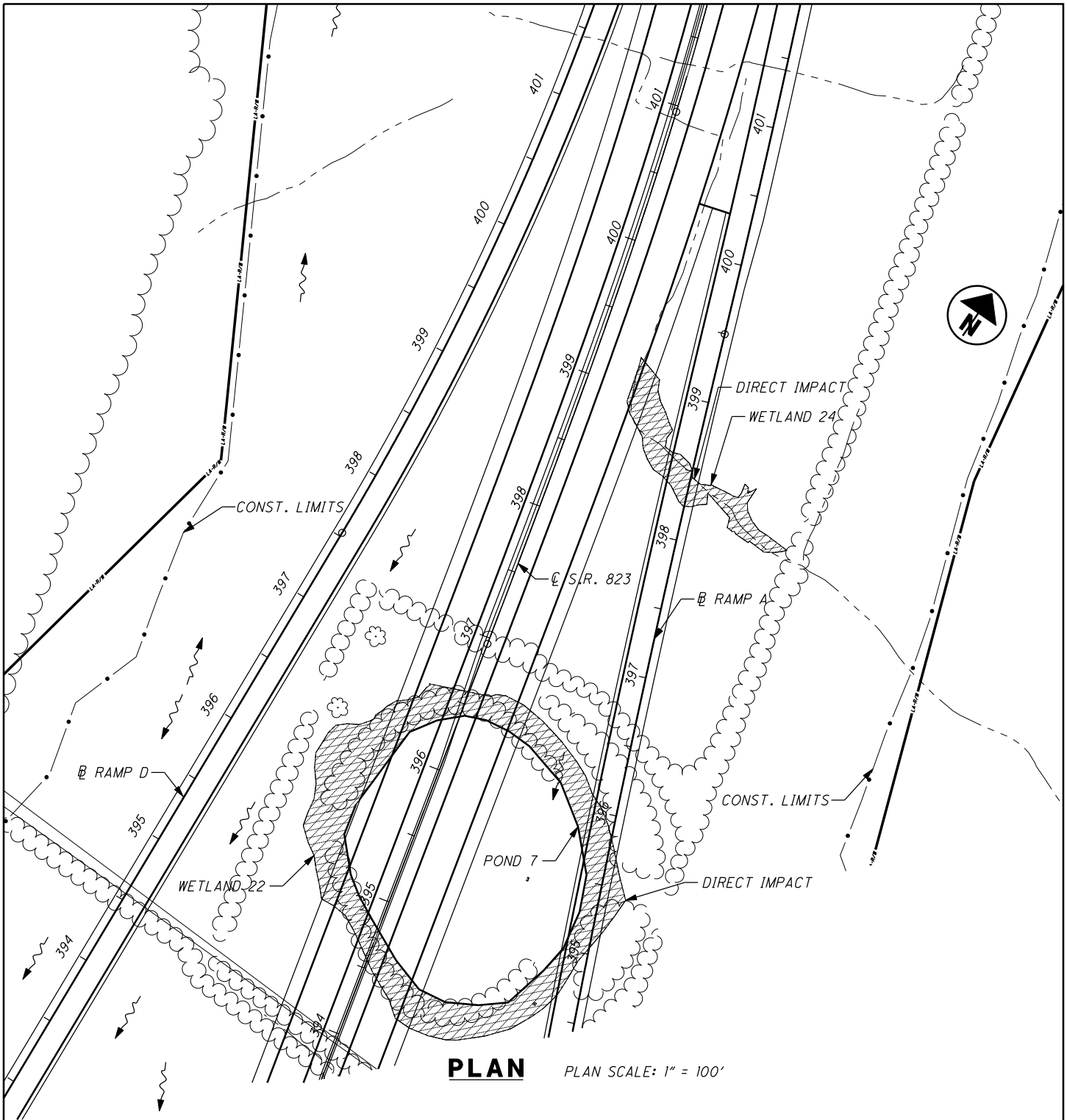
FIGURE 3-30



PLAN PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
GERTRUDE B McKENZIE

WETLAND 22

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.344 ACRES
FILL BELOW OHW:	555 CY
INDIRECT IMPACT AREA:	0.00 ACRES

WETLAND 24

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.069 ACRES
FILL BELOW OHW:	112 CY
INDIRECT IMPACT AREA:	0.00 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACT AT WETLANDS 22 AND 24

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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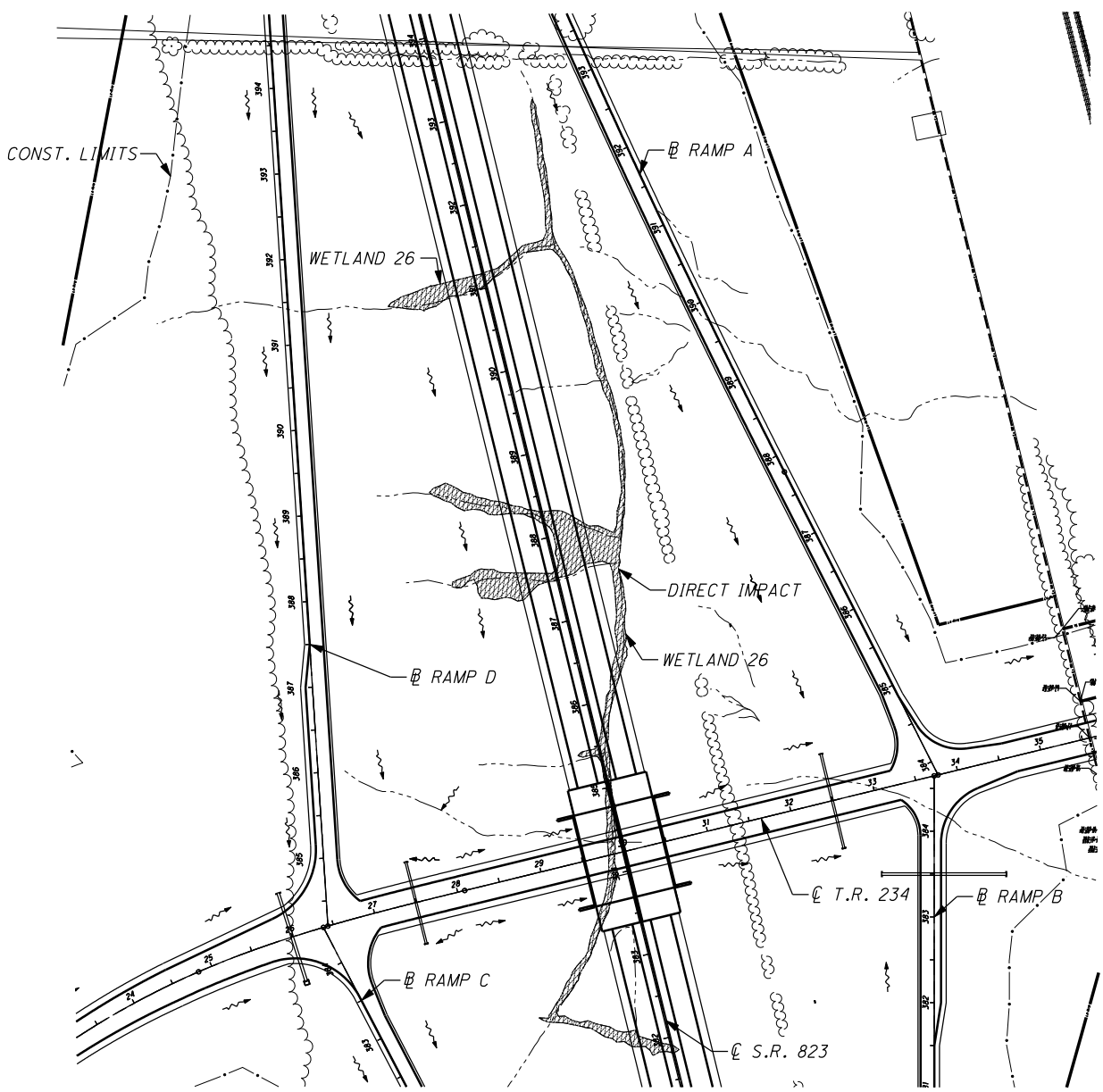
FIGURE 3-31



PLAN

PLAN SCALE: 1" = 200'

PROPERTY OWNERS:
DARREN C AND KIMBERLY JENKINS

WETLAND 26

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.483 ACRES
FILL BELOW OHW:	780 CY
INDIRECT IMPACT AREA:	0.00 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT WETLAND 26

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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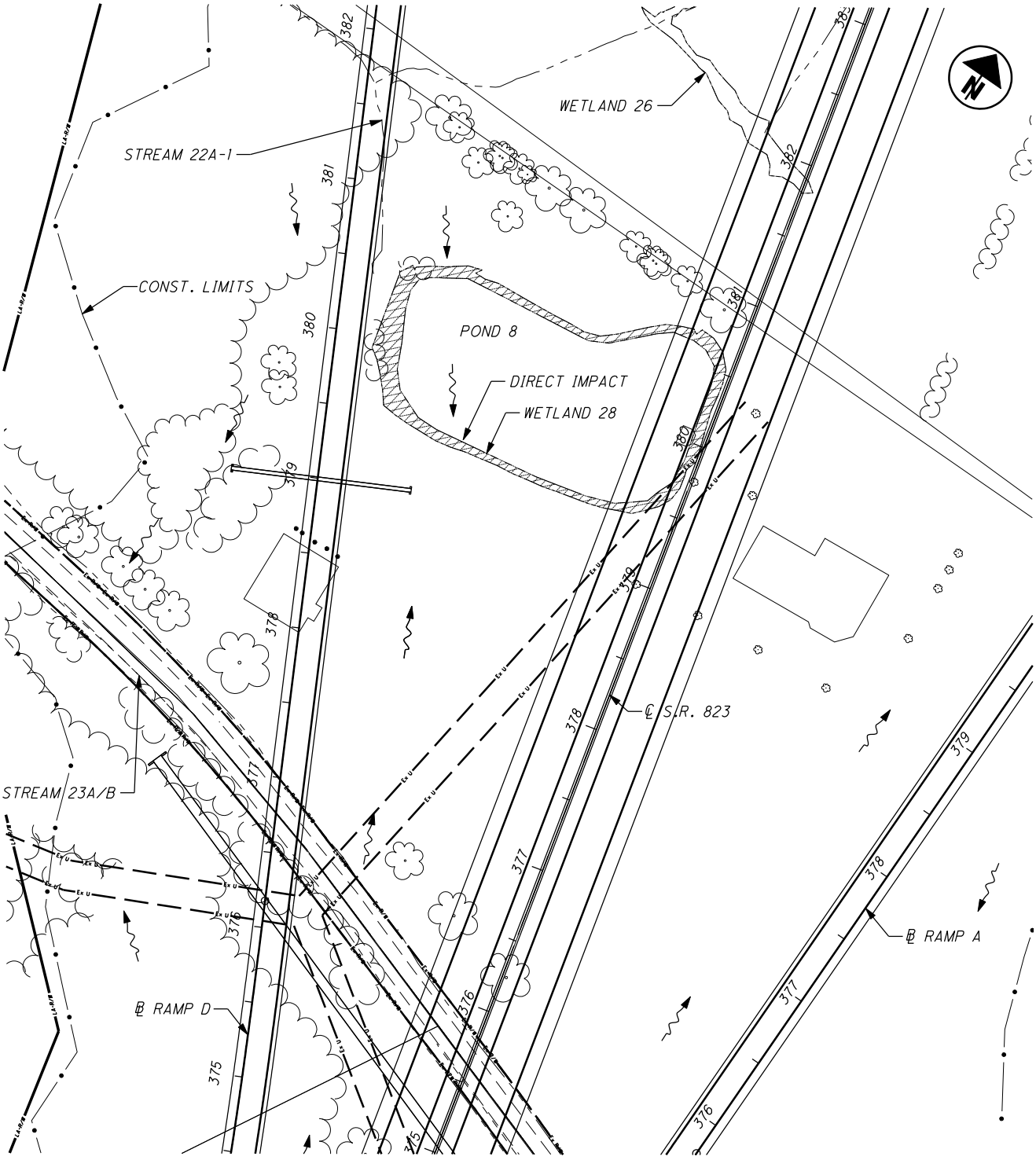
FIGURE 3-32



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
DARREN C AND KIMBERLY JENKINS

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.101 ACRES
FILL BELOW OHW:	162 CY
INDIRECT IMPACT AREA:	0.00 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 28

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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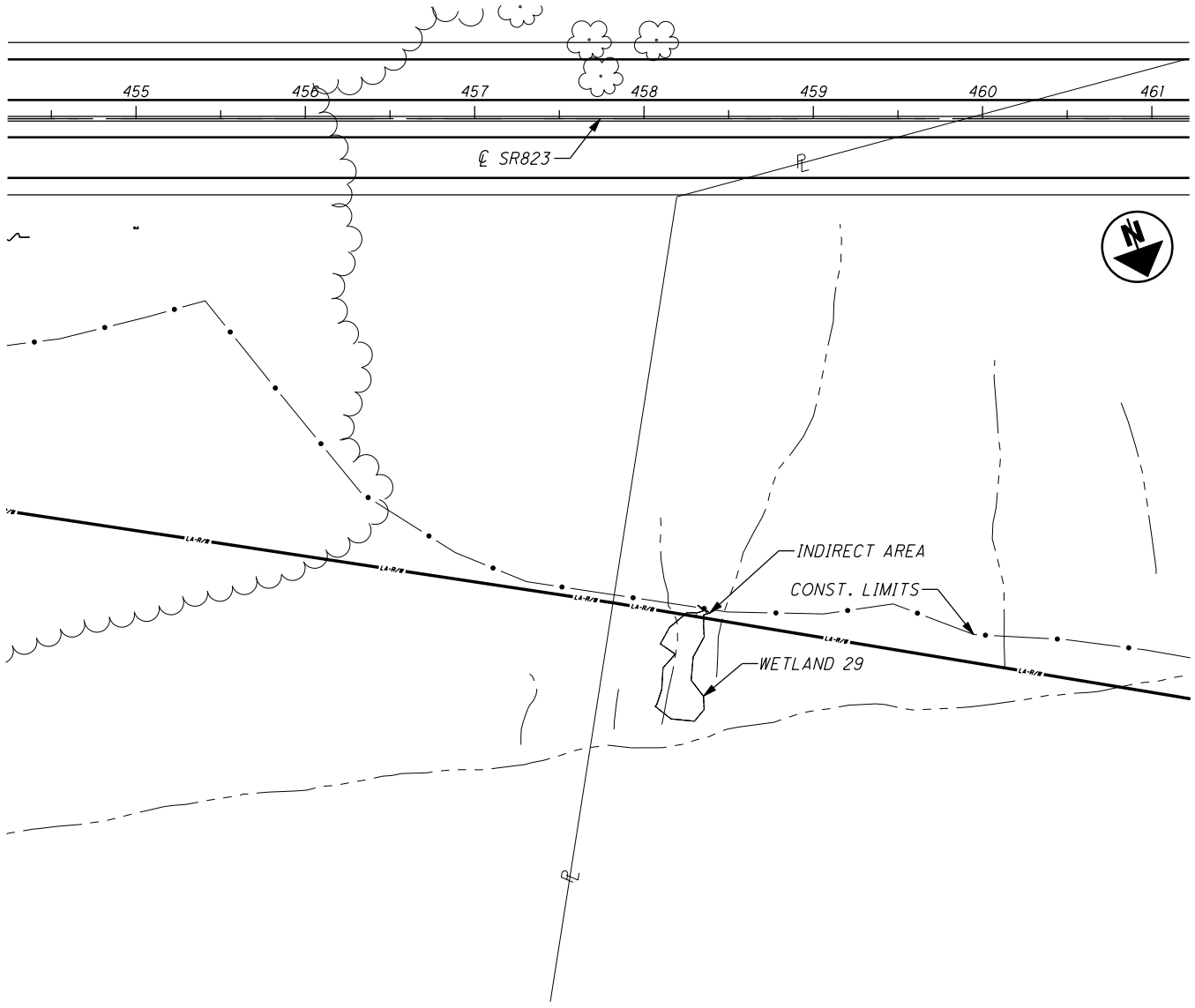
FIGURE 3-33



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO
ANGELA SUE YEAGLE

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.00 ACRES
FILL BELOW OHW:	0 CY
INDIRECT IMPACT AREA:	0.001 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

IMPACTS AT WETLAND 29

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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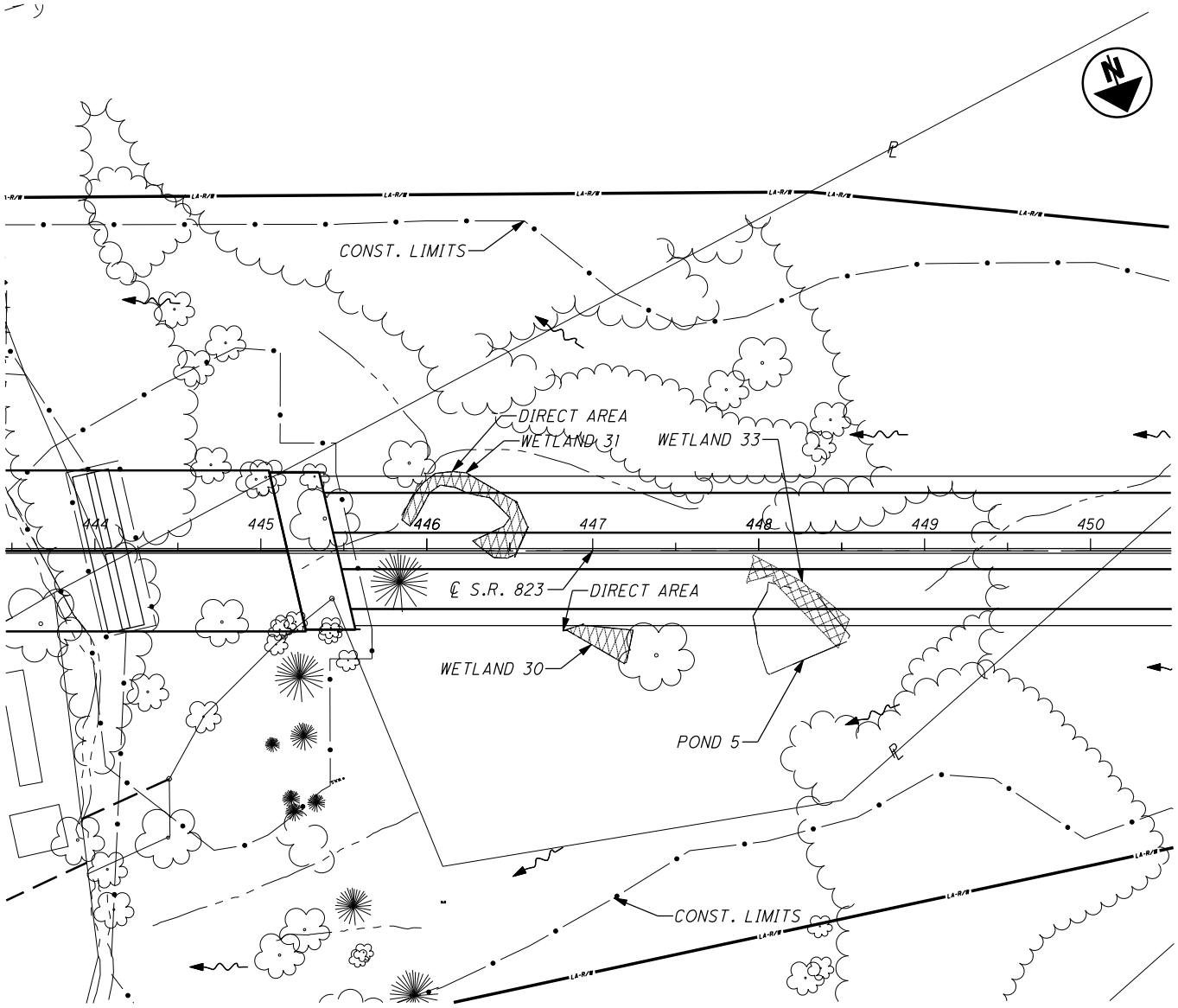
FIGURE 3-34



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO
ANGELA SUE YEAGLE

LEGEND

DIRECT AREA

INDIRECT AREA

WETLAND 30		WETLAND 31		WETLAND 33	
LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.011 ACRES	DIRECT IMPACT AREA:	0.027 ACRES	DIRECT IMPACT AREA:	0.021 ACRES
FILL BELOW OHW:	18 CY	FILL BELOW OHW:	44 CY	FILL BELOW OHW:	34 CY
INDIRECT IMPACT AREA:	0.00 ACRES	INDIRECT IMPACT AREA:	0.00 ACRES	INDIRECT IMPACT AREA:	0.00 ACRES

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT WETLANDS WETLAND 30, 31, AND 33

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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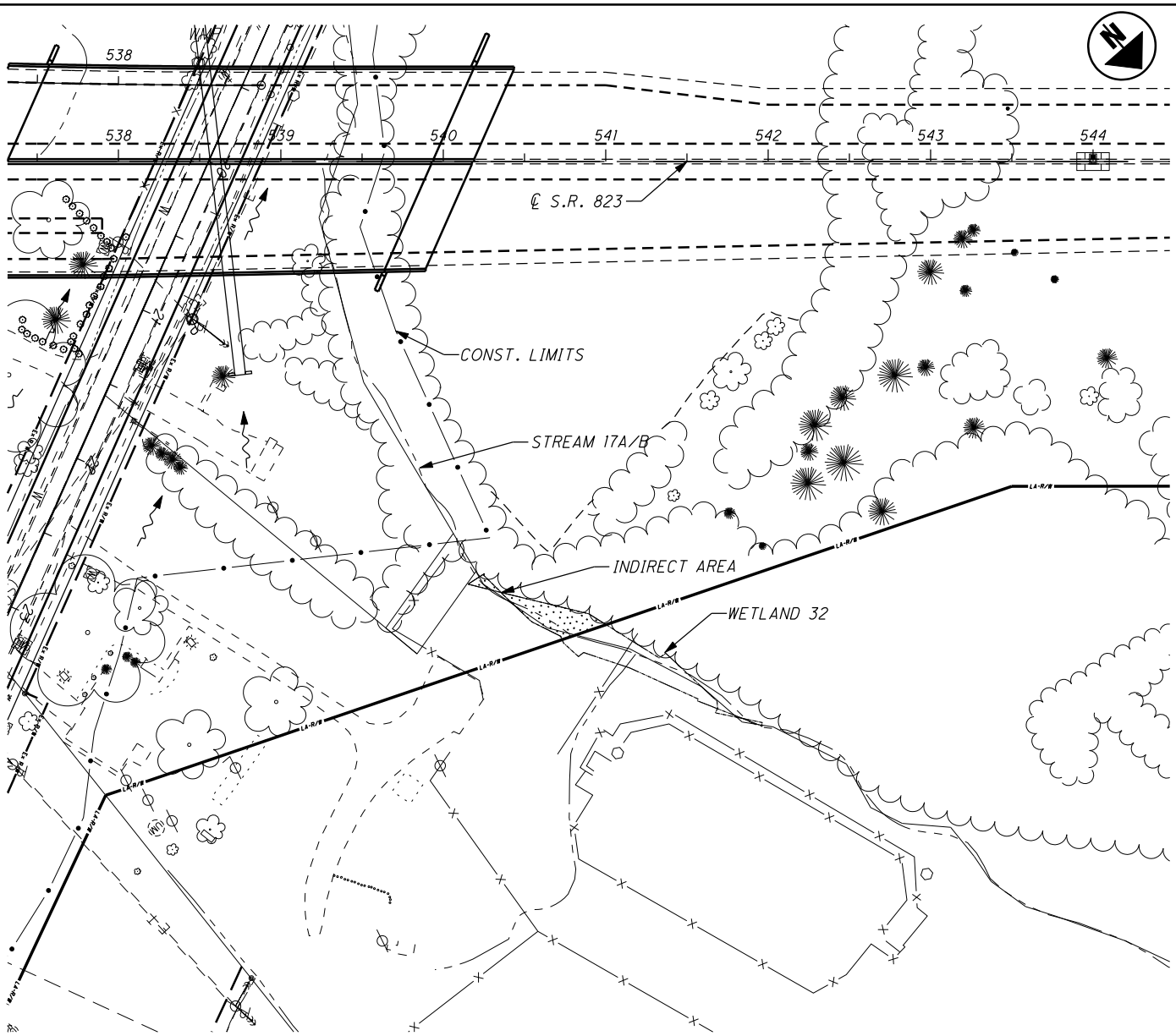
FIGURE 3-35



PLAN

PLAN SCALE: 1" = 100'

PROPERTY OWNERS:
STATE OF OHIO

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.00 ACRES
FILL BELOW OHW:	0 CY
INDIRECT IMPACT AREA:	0.019 ACRES

LEGEND

DIRECT AREA

INDIRECT AREA

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

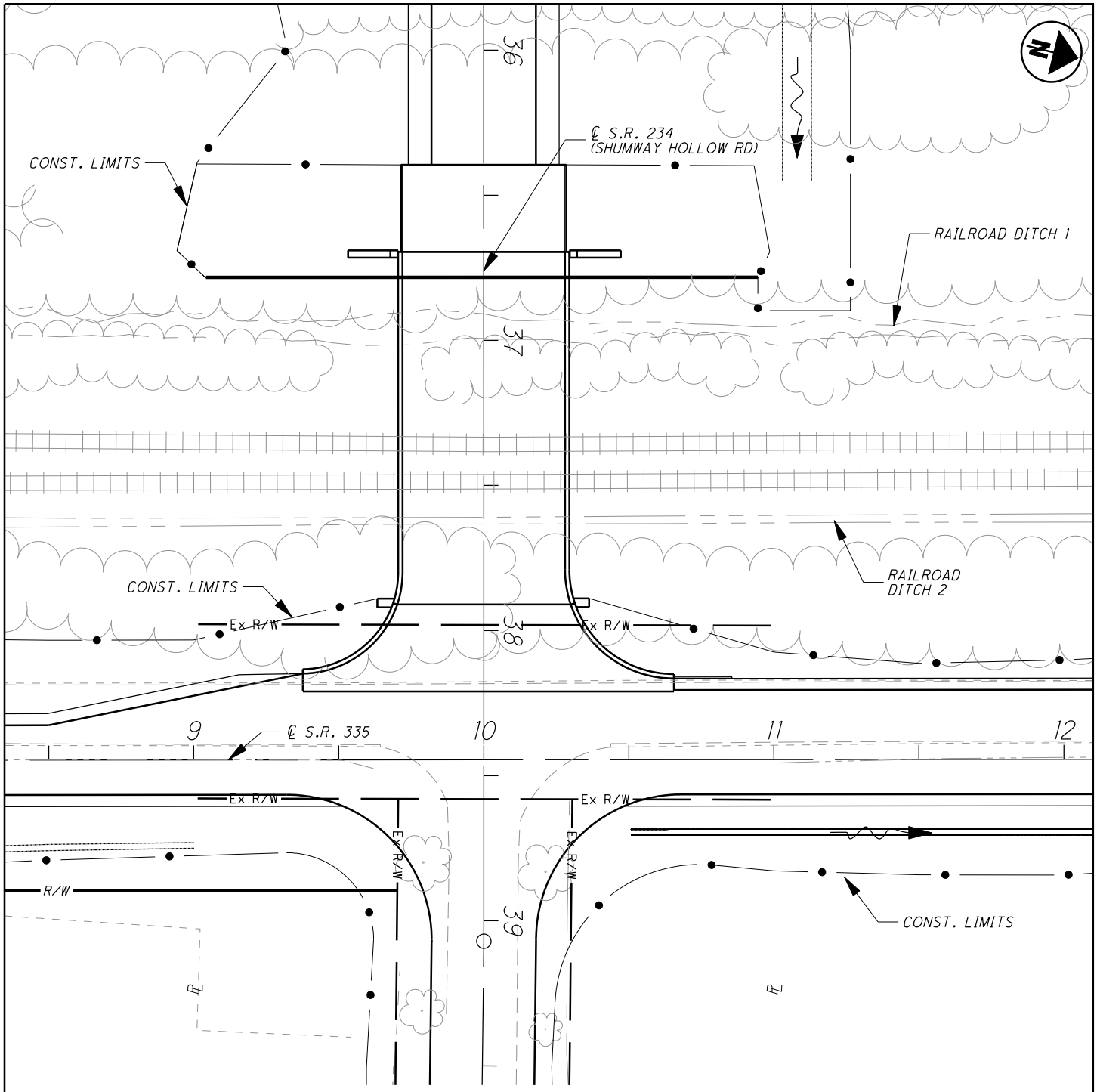
IMPACTS AT WETLAND 32

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

DATE: 09/13/2011

FIGURE 3-36



PROPERTY OWNERS:

CSX TRANSPORTATION

LENGTH OF IMPACT:	0.0 LF
AREA EXCAVATED OR FILLED:	0.00 ACRES
EXCAVATION BELOW OHW:	0.0 CY
FILL BELOW OHW:	0.0 CY

PLAN

PLAN SCALE: 1" = 50'

IMPACTS AT RR DITCHES 1 AND 2

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

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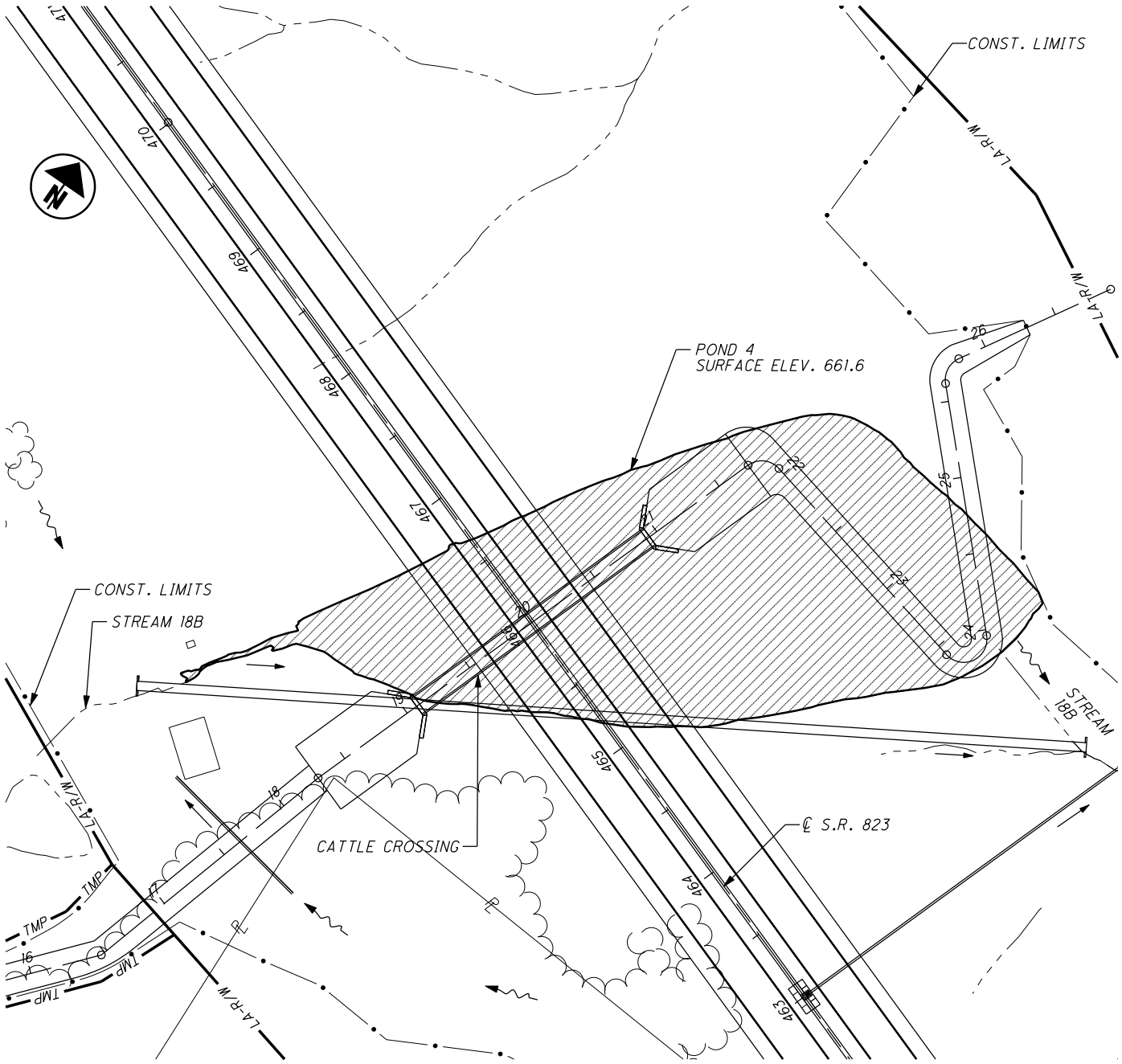
FIGURE 3-37



PLAN

PROPERTY OWNERS: KENNETH R RASE

LENGTH OF IMPACT:	N/A
AREA FILLED:	1.418 ACRES
FILL BELOW OHW:	13,726 CY

LEGEND

FILLED AREA

PLAN SCALE: 1" = 100'

IMPACTS AT POND 4

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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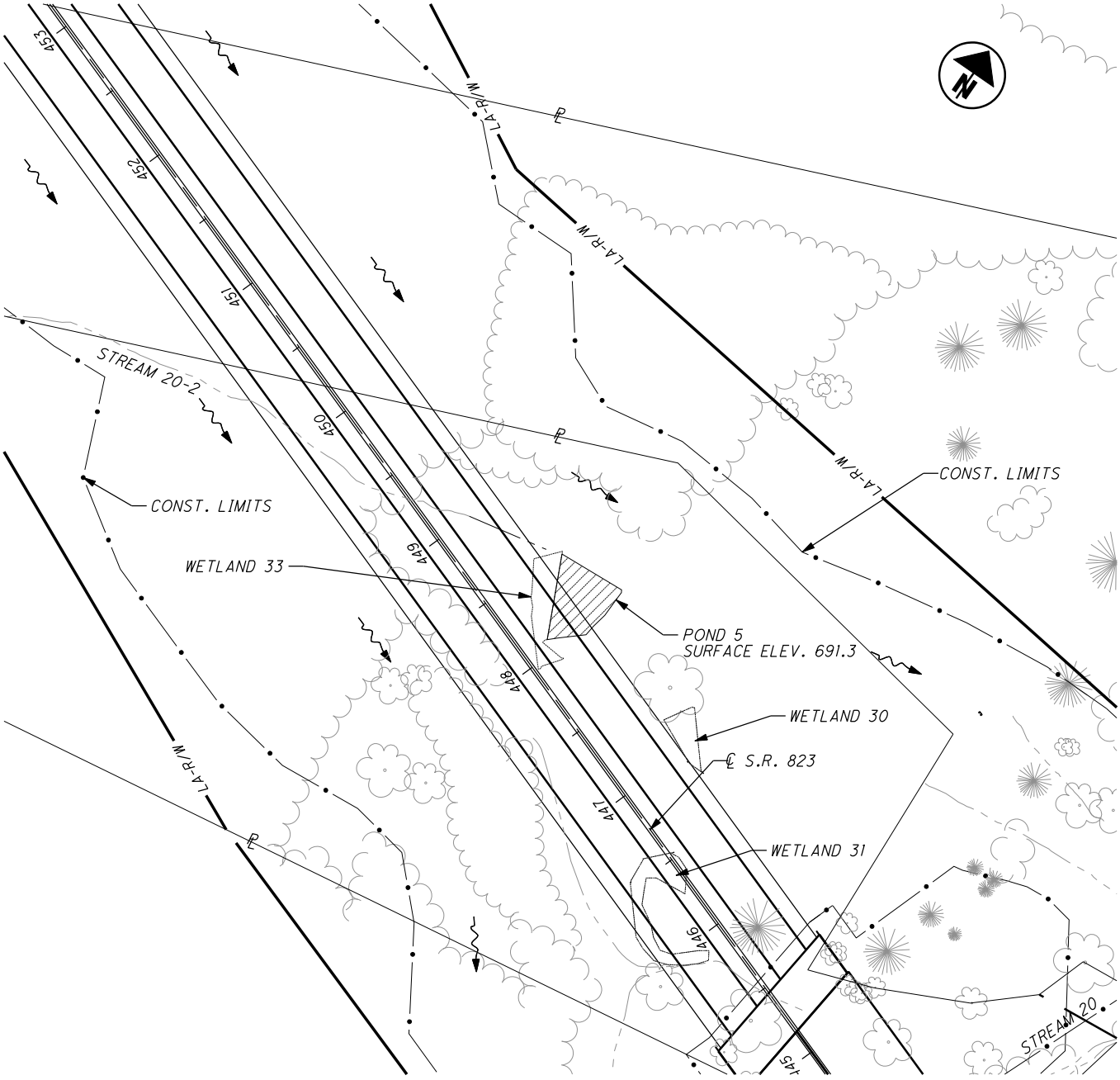
FIGURE 3-38



PLAN

PROPERTY OWNERS:
STATE OF OHIO

LENGTH OF IMPACT:	N/A
AREA FILLED:	0.034 ACRES
FILL BELOW OHW:	329 CY

LEGEND
FILLED AREA

PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT POND 5

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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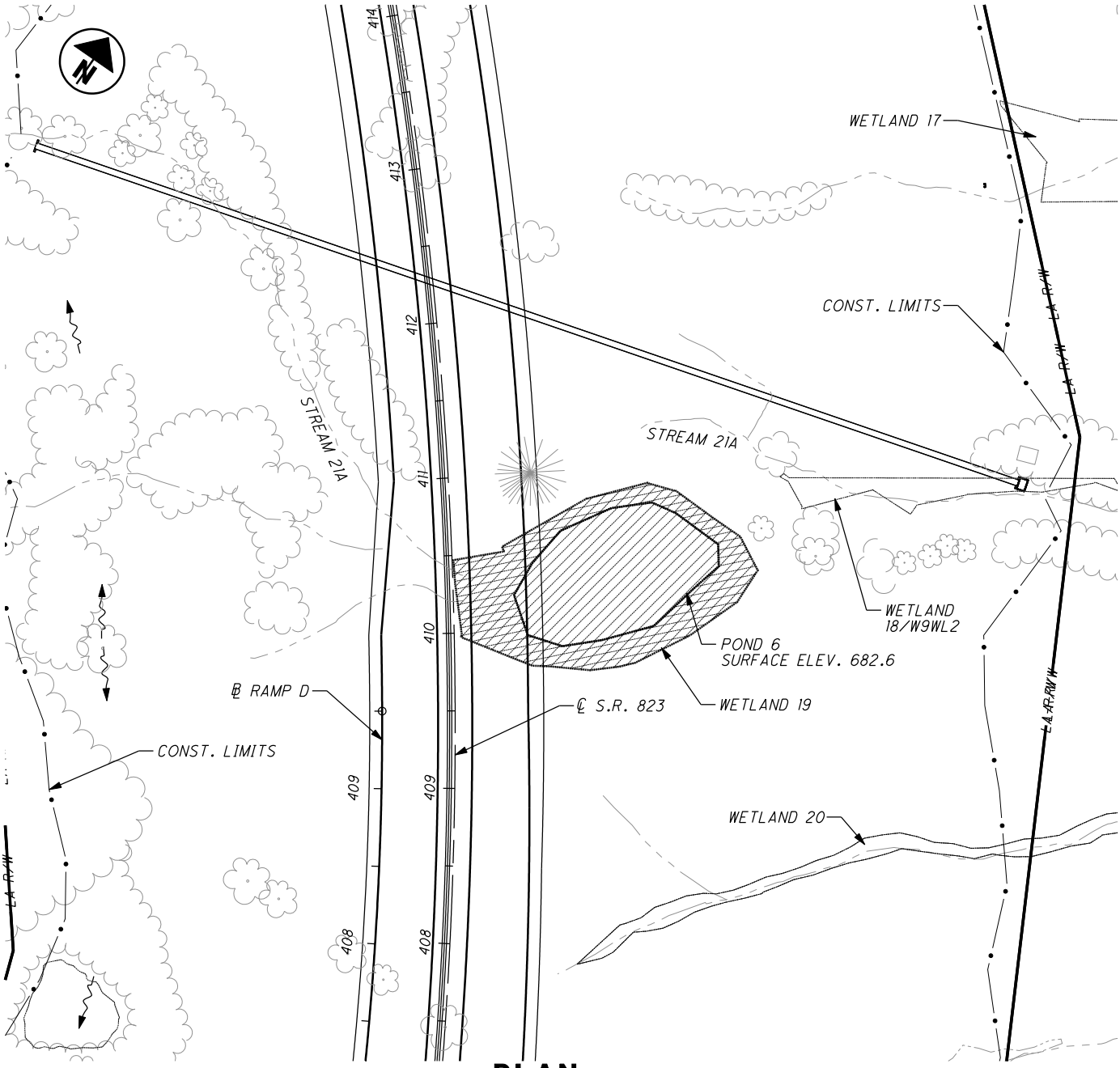
FIGURE 3-39



PLAN

PROPERTY OWNERS:
DARREN C AND KIMBERLY JENKINS

LENGTH OF IMPACT:	N/A
AREA FILLED:	0.189 ACRES
FILL BELOW OHW:	1,830 CY

LEGEND
FILLED AREA

PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT POND 6

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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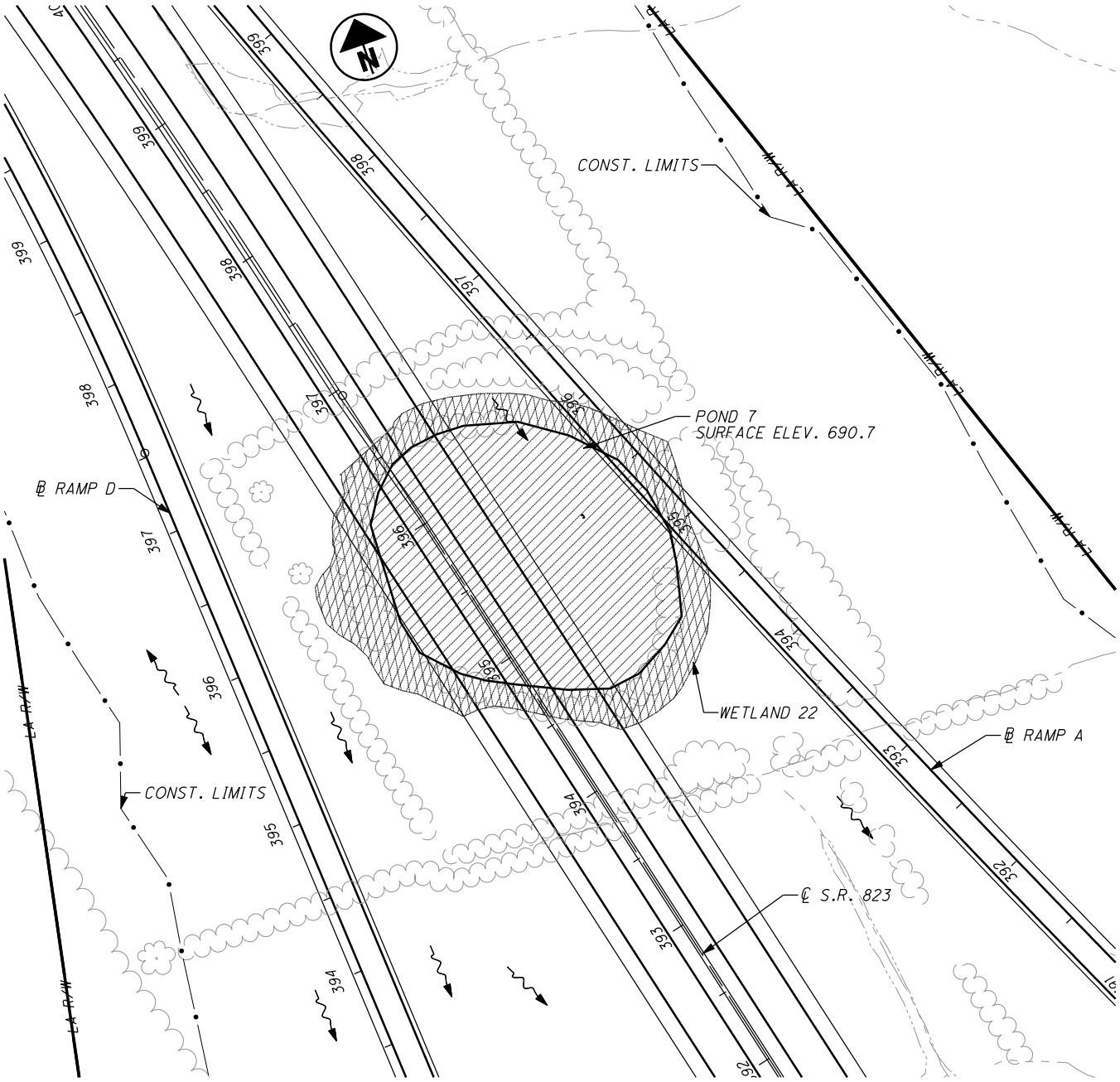
FIGURE 3-40



PLAN

PROPERTY OWNERS:
MCKENZIE GERTRUDE B TRUSTEE
GERTRUDE B MCKENZIE REVOCABLE TRUST

LENGTH OF IMPACT:	N/A
AREA EXCAVATED OR FILLED:	0.592 ACRES
FILL BELOW OHW:	5,731 CY

LEGEND
FILLED AREA

PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT POND 7

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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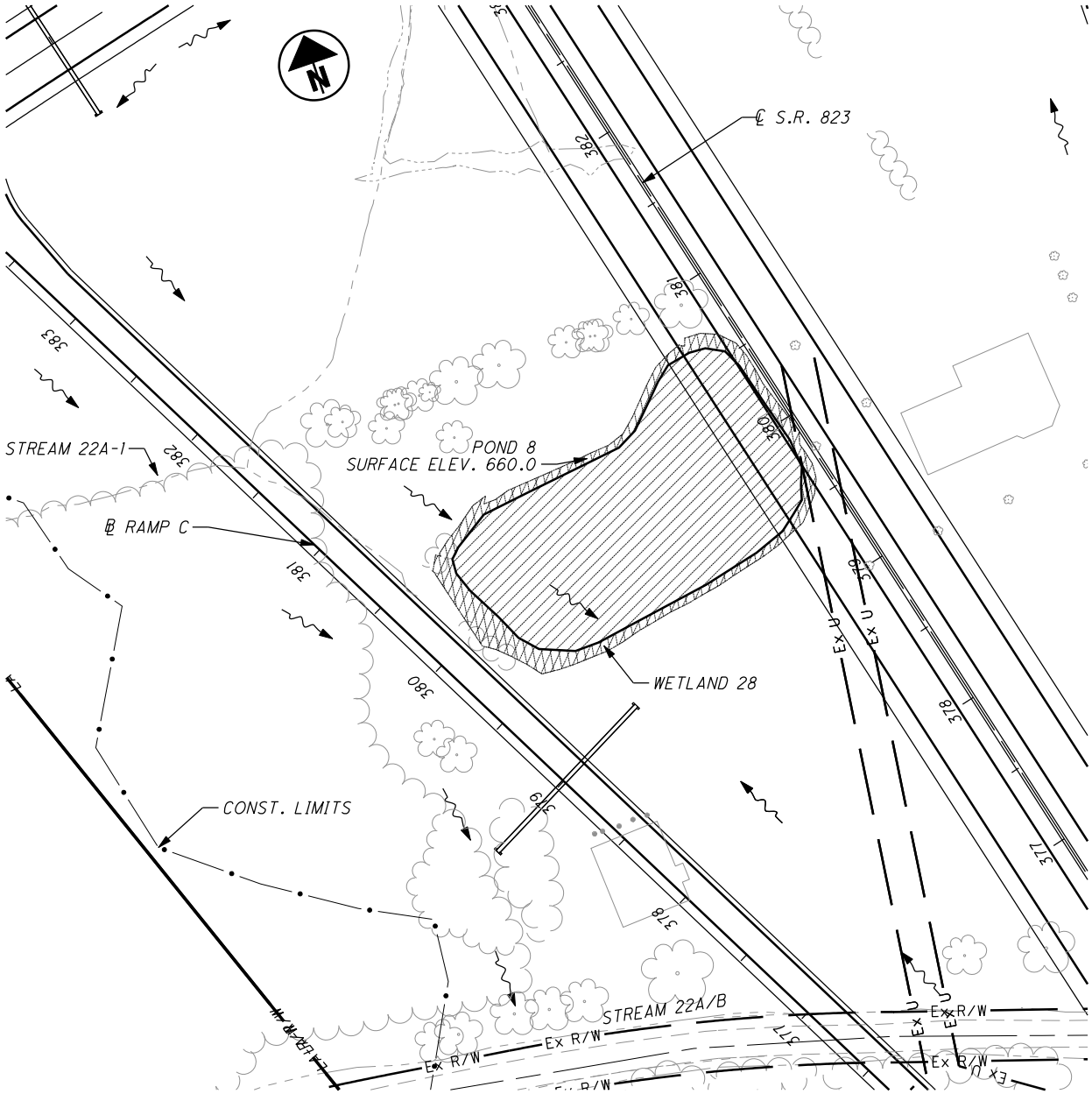
FIGURE 3-41



PLAN

PROPERTY OWNERS:
ROBERT R AND ROBIN BOUTS J/S

LENGTH OF IMPACT:	N/A
AREA EXCAVATED OR FILLED:	0.467 ACRES
FILL BELOW OHW:	4,521 CY

LEGEND
FILLED AREA

PLAN SCALE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

IMPACTS AT POND 8

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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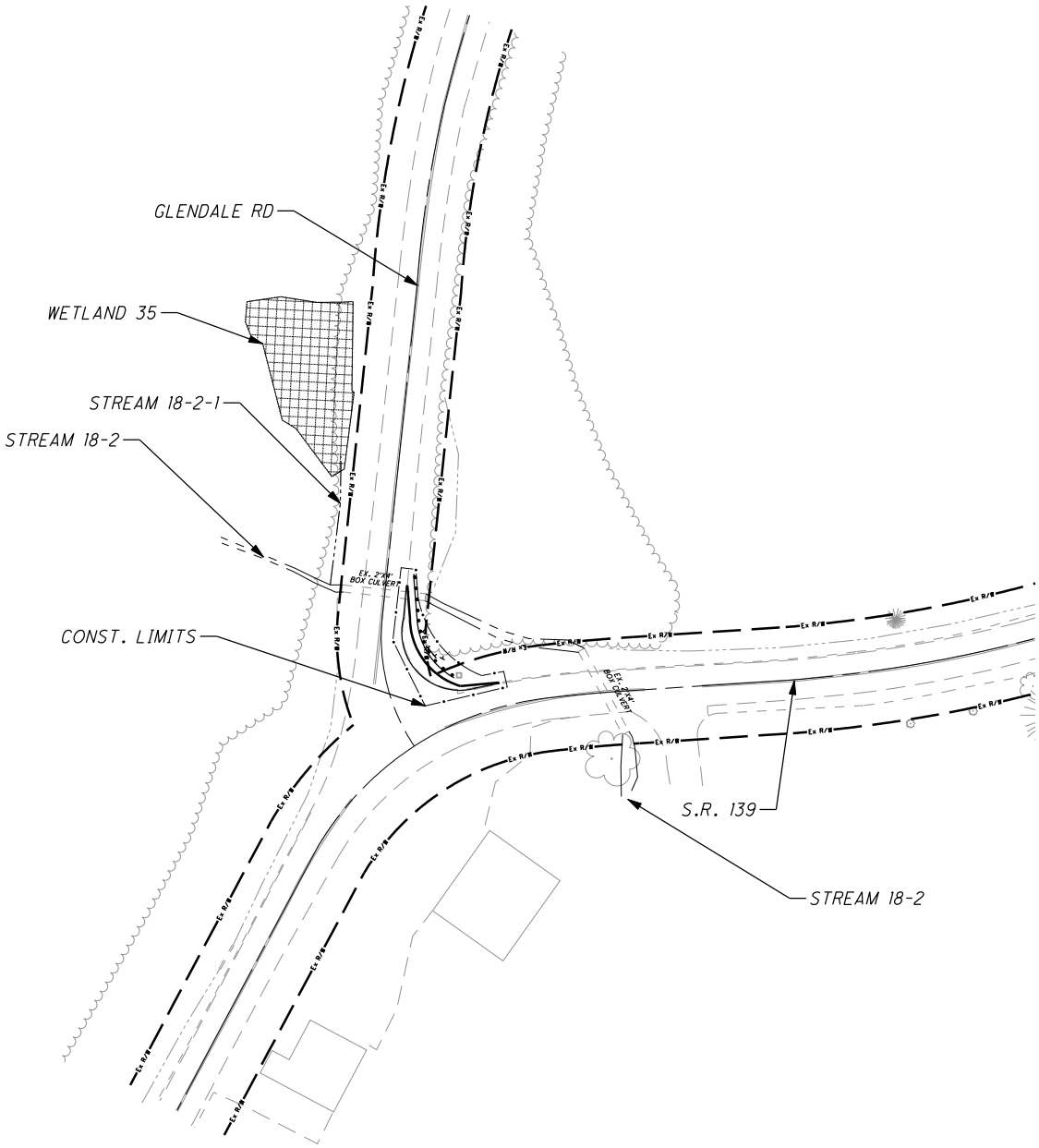
FIGURE 3-42



PLAN

STREAM IMPACT LENGTH

OHWM

PLAN SCALE: 1" = 100'
CROSS SECTION: 1" = 20'

NO IMPACTS AT STREAM 18-2 AND 18-2-1 WETLAND 35

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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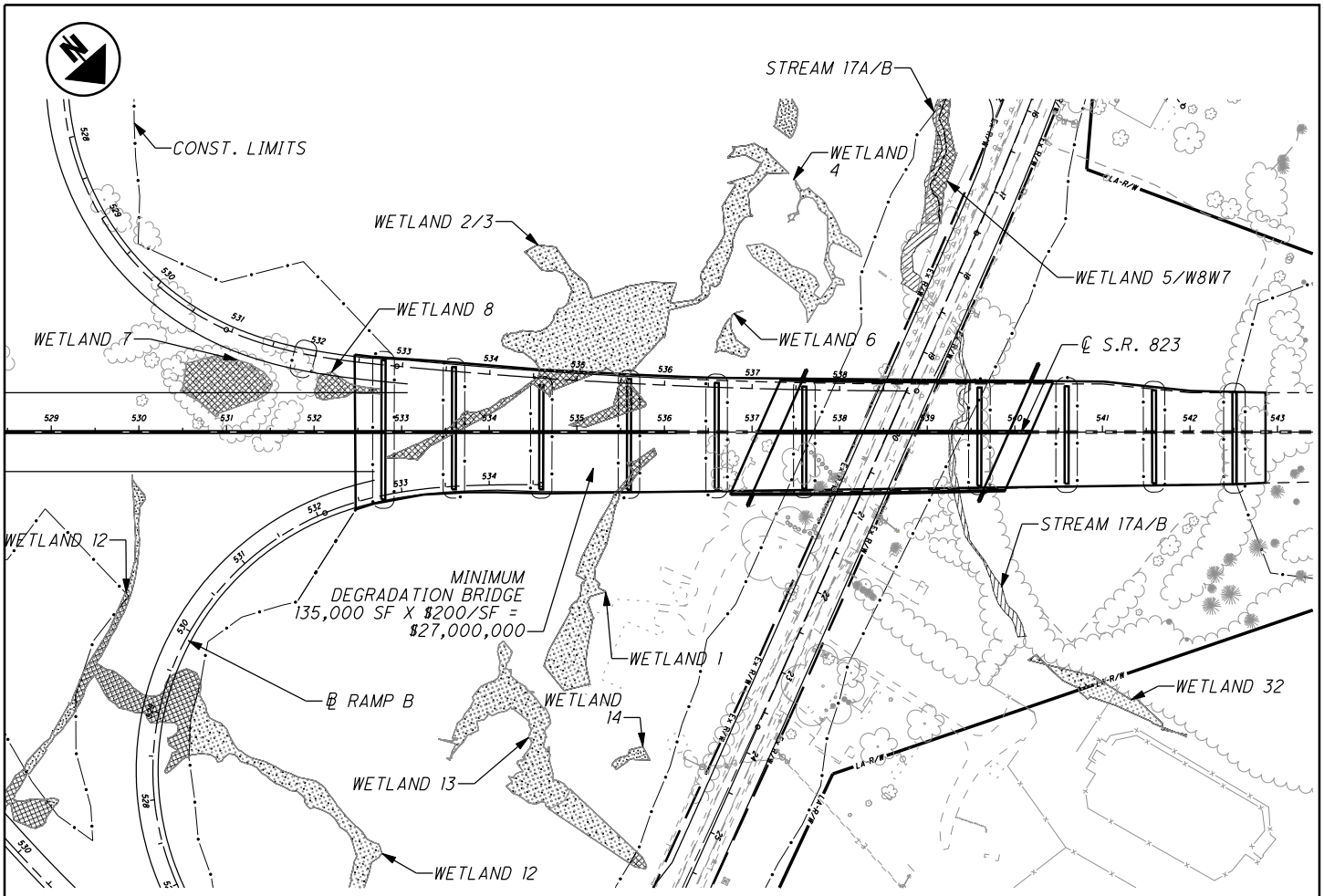
FIGURE 3-43



PLAN

PROPERTY OWNERS:
STATE OF OHIO

PLAN SCALE: 1" = 200'

WETLAND 1		WETLAND 2/3		WETLAND 4	
LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.011 ACRES	DIRECT IMPACT AREA:	0.092 ACRES	DIRECT IMPACT AREA:	0.002 ACRES
WETLAND AREA WITHIN ROW:	0.129 ACRES	WETLAND AREA WITHIN ROW:	0.425 ACRES	WETLAND AREA WITHIN ROW:	0.087 ACRES

WETLAND 6		WETLAND 13		WETLAND 14	
LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES	DIRECT IMPACT AREA:	0.005 ACRES	DIRECT IMPACT AREA:	0.000 ACRES
WETLAND AREA WITHIN ROW:	0.016 ACRES	WETLAND AREA WITHIN ROW:	0.228 ACRES	WETLAND AREA WITHIN ROW:	0.010 ACRES

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

MINIMUM DEGRADATION WETLAND 1, 2/3, 4, 6, 13 AND 14

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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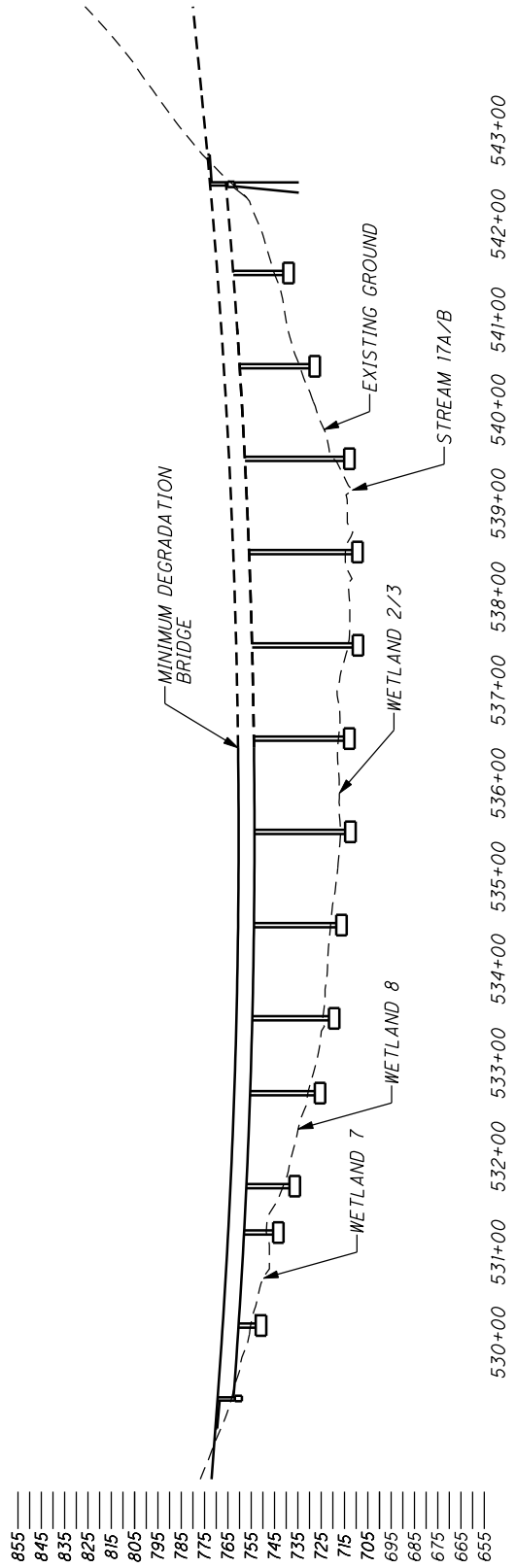
FIGURE 4-1



S.R.823 PROFILE

PROFILE

PLAN SCALE: 1" = 200'

MINIMUM DEGRADATION WETLAND 1, 2/3, 4, 6, 13 AND 14

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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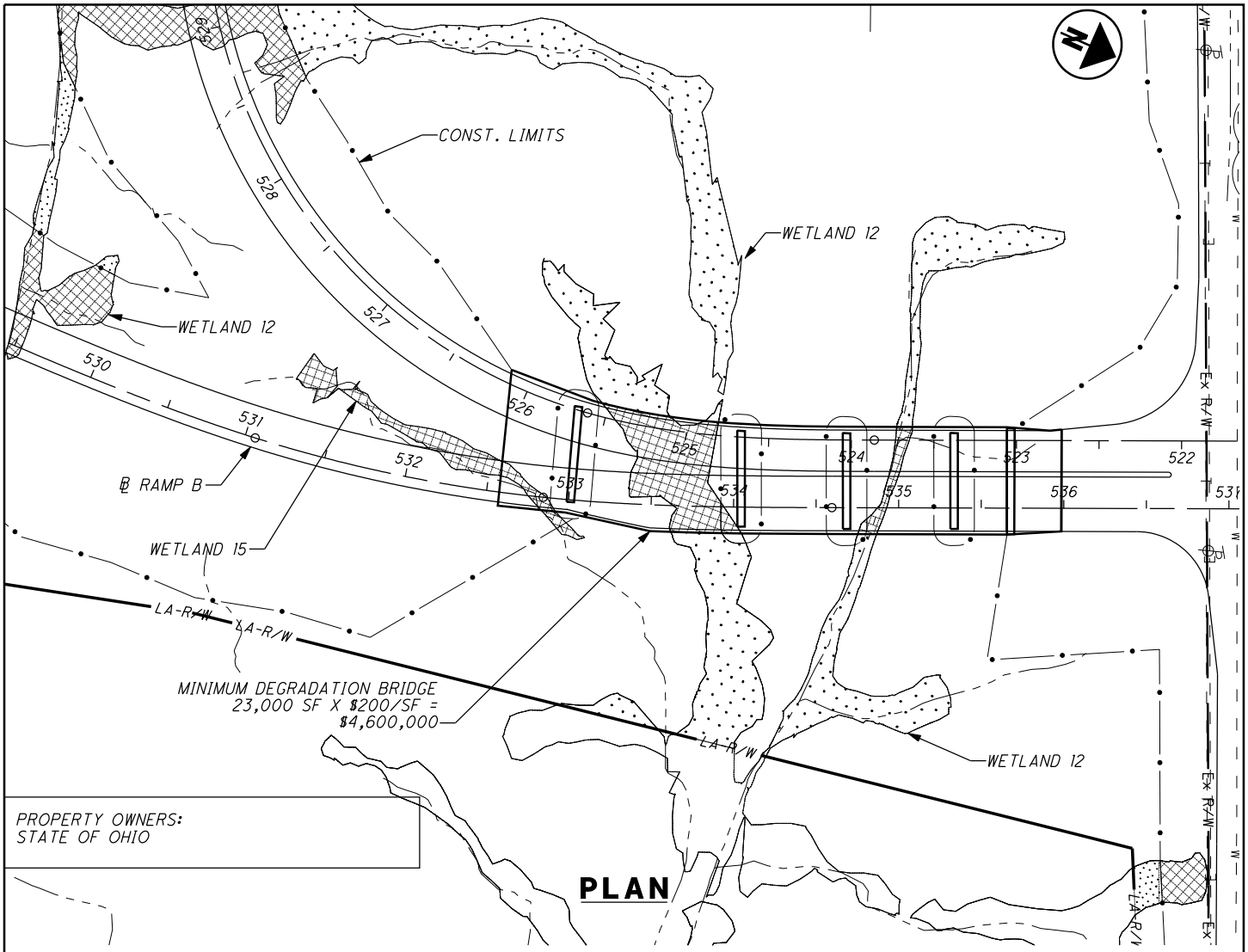
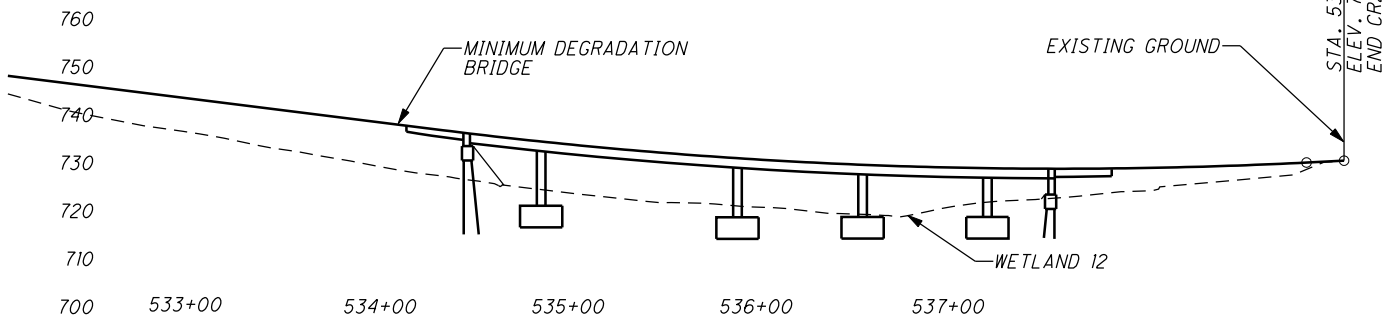
FIGURE 4-1A





PROFILE CR 28 RAMP A/B

WETLAND 12

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.246 ACRES
WETLAND AREA WITHIN ROW	0.559 ACRES

LEGEND

DIRECT AREA

AREA WITHIN ROW

PLAN SCALE: 1" = 100'

MINIMUM DEGRADATION

WETLAND 12

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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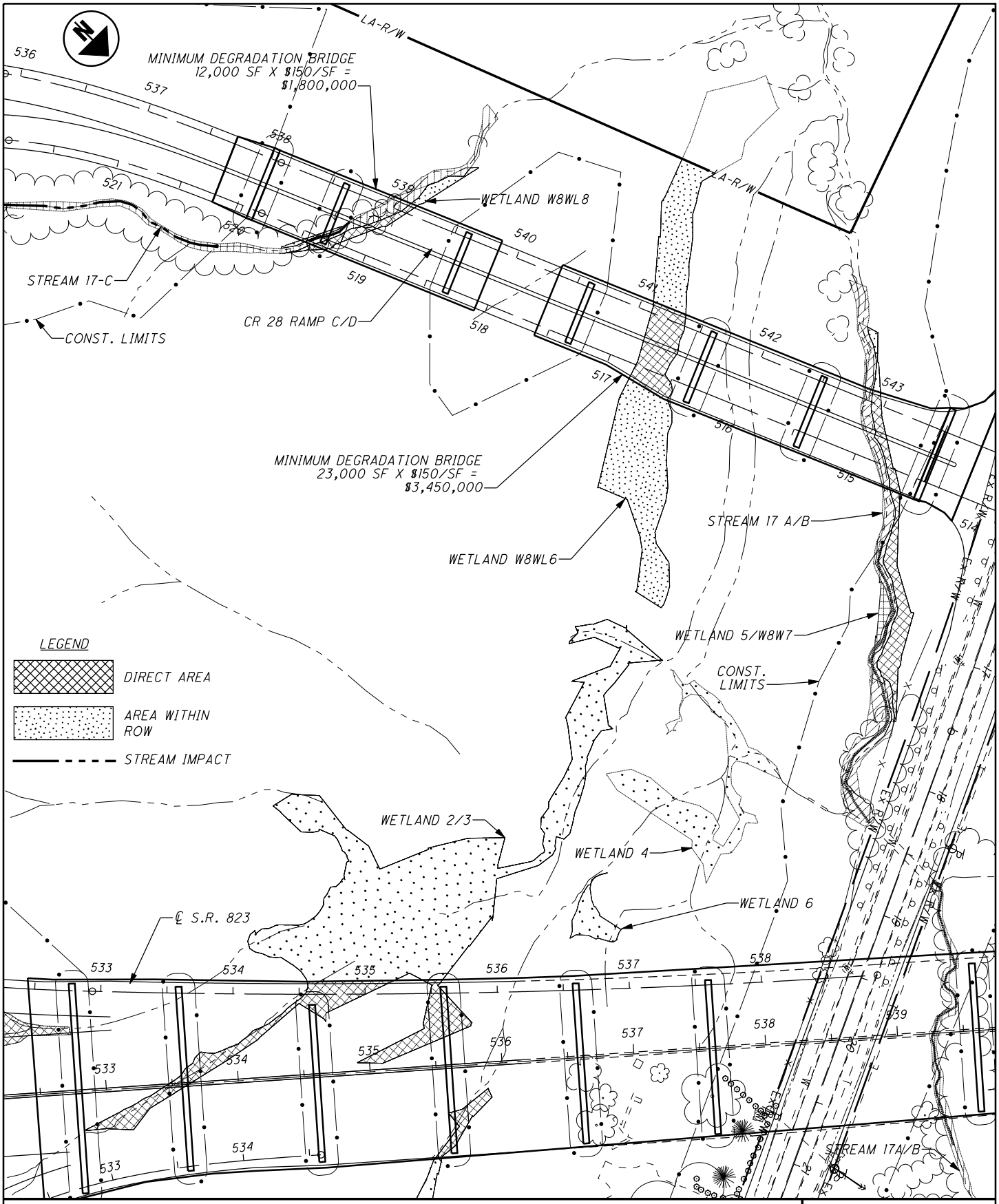
FIGURE 4-2



MINIMUM DEGRADATION STREAM 17 A/B AND 17C WETLAND 5/W8WL7 WETLAND W8WL6 AND WETLAND W8WL8

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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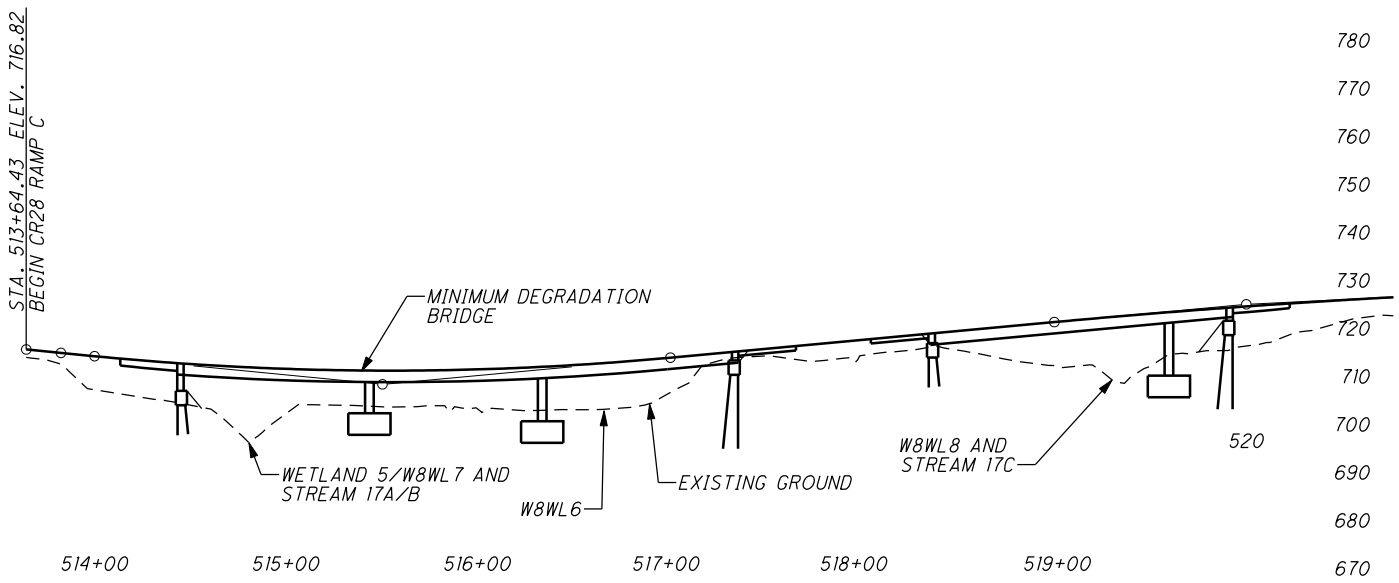
FIGURE 4-3



RAMP D AND C PROFILE

STREAM 17A/B		STREAM 17C	
LENGTH OF IMPACT:	460 LF	LENGTH OF IMPACT:	743 LF
AREA OF IMPACT	0.062 ACRES	AREA OF IMPACT	0.057 ACRES
FILL BELOW OHW:	95 CY	FILL BELOW OHW:	44 CY
EXCAVATION BELOW OHW:	11 CY	EXCAVATION BELOW OHW:	5 CY

WETLAND W8WL6		WETLAND W8WL8		WETLAND 5/W8WL7	
LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A	LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.040 ACRES	DIRECT IMPACT AREA:	0.010 ACRES	DIRECT IMPACT AREA:	0.051 ACRES
WETLAND AREA WITHIN ROW	0.181 ACRES	WETLAND AREA WITHIN ROW	0.010 ACRES	WETLAND AREA WITHIN ROW	0.004 ACRES

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

MINIMUM DEGRADATION STREAM 17 A/B AND 17C WETLAND 5/W8WL7 WETLAND W8WL6 AND WETLAND W8WL8

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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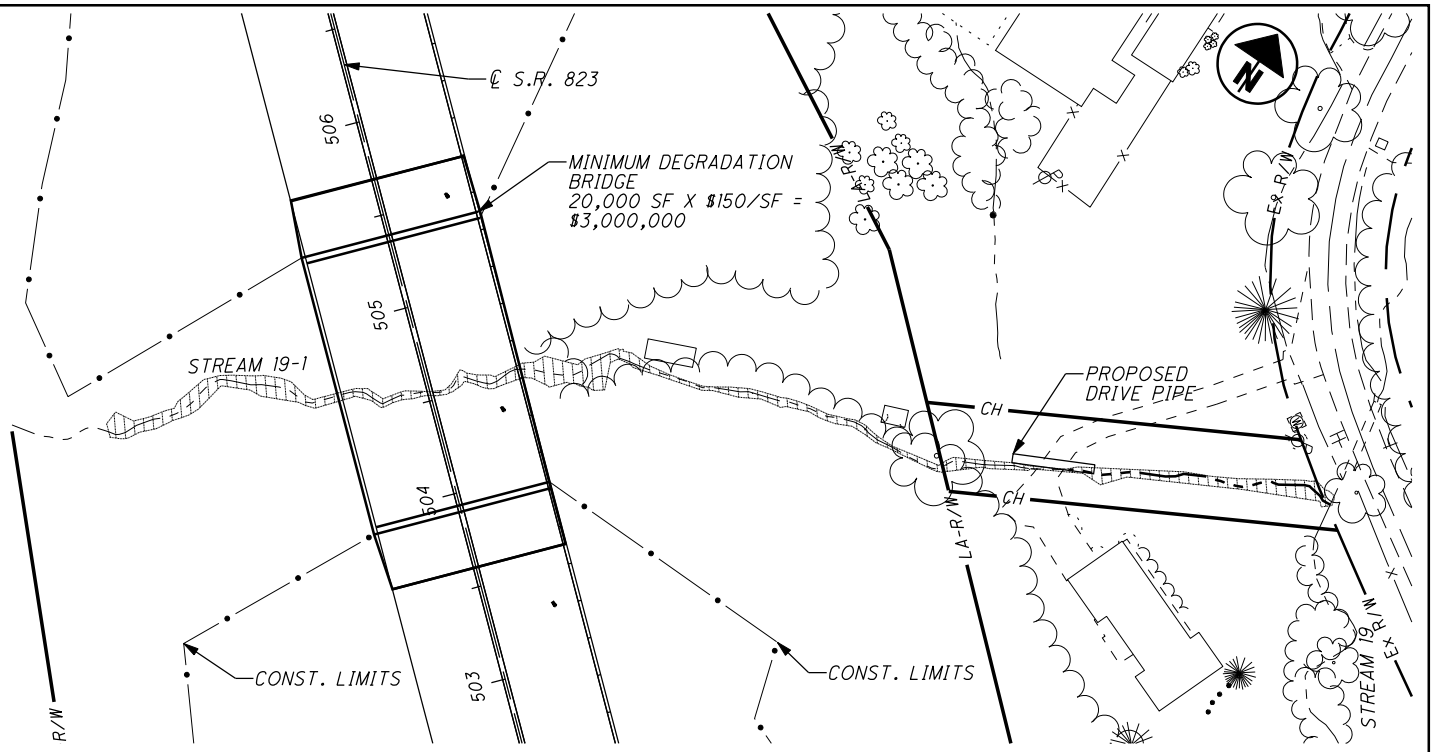
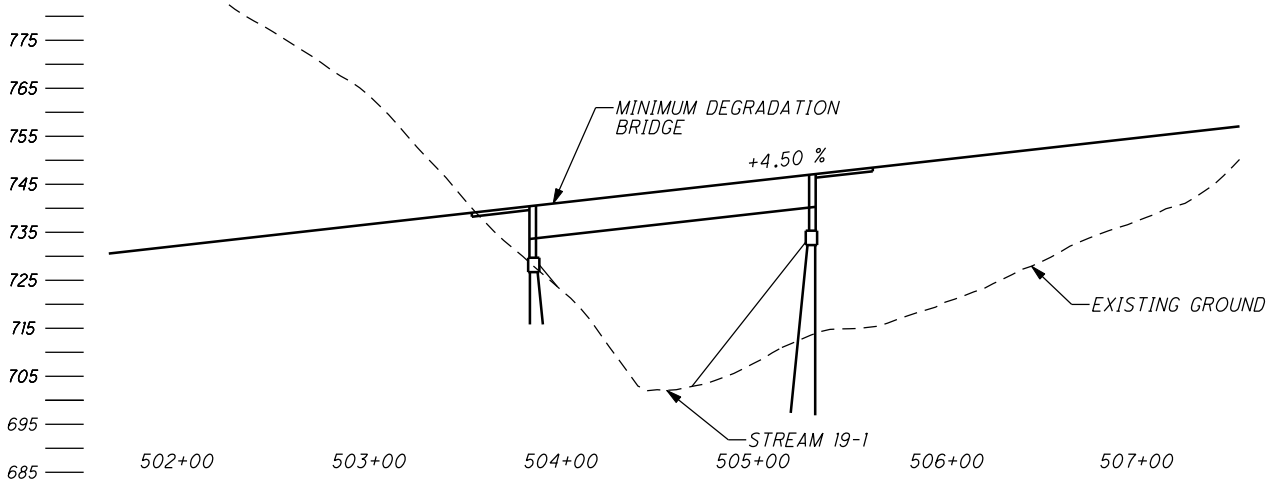
FIGURE 4-3A



PLAN



PROFILE

LEGEND

STREAM IMPACT LENGTH

OHWM

LENGTH OF IMPACT:	143 LF
AREA EXCAVATED OR FILLED:	0.020 ACRES
EXCAVATION BELOW OHW:	32 CY
FILL BELOW OHW:	17 CY

PROPERTY OWNERS:
JOSEPH AND CRYSTAL PRESTON J/S
JOSEPH D AND BETH A WEEKLY J/S

PLAN SCALE: 1" = 100'
PROFILE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

MINIMUM DEGRADATION

STREAM 19-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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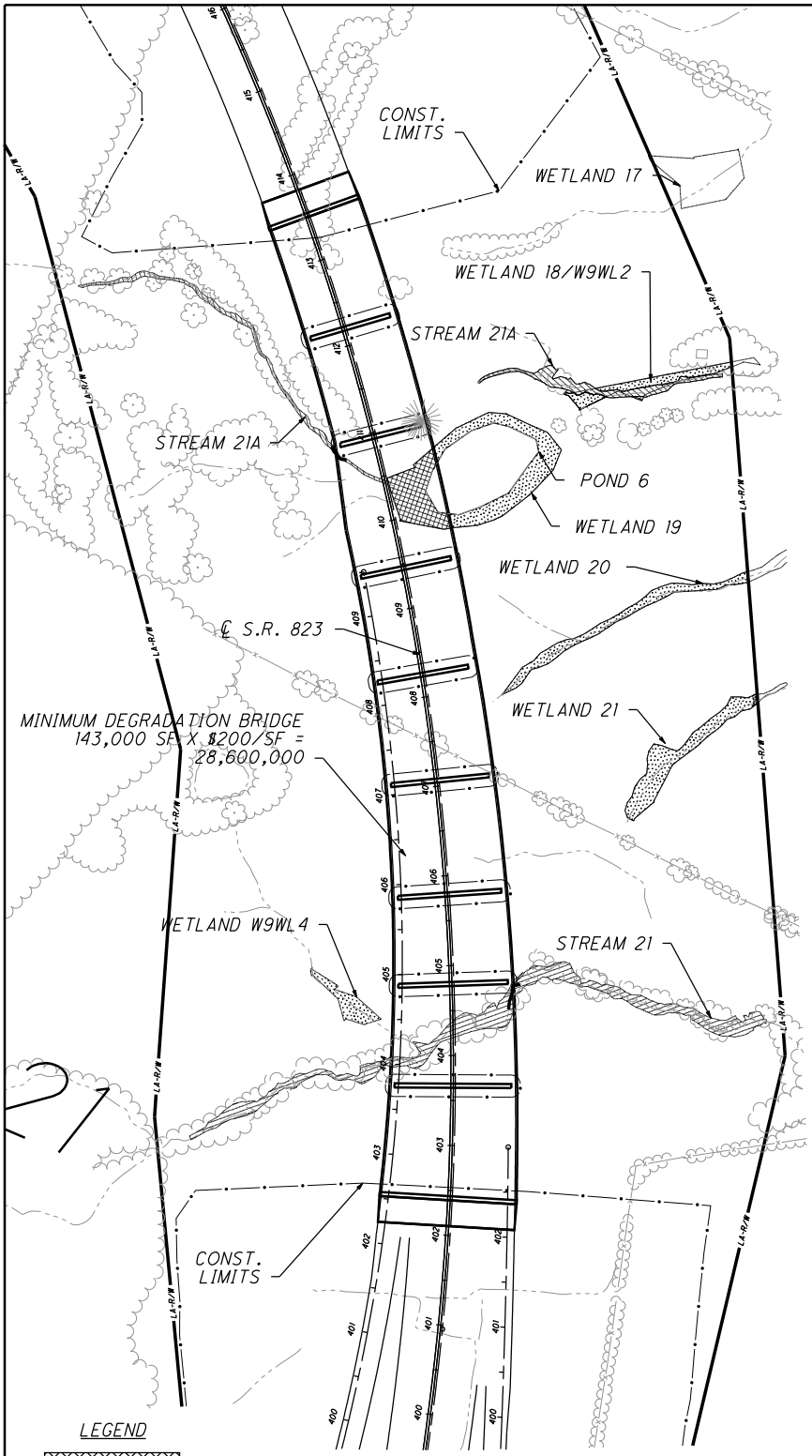
FIGURE 4-4



PLAN

PROPERTY OWNERS:
STATE OF OHIO
DARREN AND KIMBERLY JENNINGS

WETLAND 17

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES
WETLAND AREA WITHIN ROW:	0.001 ACRES

WETLAND 18/W9WL2

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES
WETLAND AREA WITHIN ROW:	0.038 ACRES

STREAM 21A

LENGTH OF IMPACT:	24 LF
AREA OF IMPACT:	0.004 ACRES
FILL BELOW OHW:	2 CY
EXCAVATION BELOW OHW:	4 CY

WETLAND 19

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.072 ACRES
WETLAND AREA WITHIN ROW:	0.108 ACRES

WETLAND 20

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES
WETLAND AREA WITHIN ROW:	0.062 ACRES

POND 6

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES
FILL BELOW OHW:	0 CY

STREAM 21

LENGTH OF IMPACT:	36 LF
AREA OF IMPACT:	0.018 ACRES
FILL BELOW OHW:	7 CY
EXCAVATION BELOW OHW:	7 CY

WETLAND W9WL4

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES
WETLAND AREA WITHIN ROW:	0.029 ACRES

WETLAND 21

LENGTH OF IMPACT:	N/A
DIRECT IMPACT AREA:	0.0 ACRES
WETLAND AREA WITHIN ROW:	0.082 ACRES

PLAN SCALE: 1" = 200'

MINIMUM DEGRADATION STREAM 21 AND 21-1 WETLAND 17, 18/W9WL2, 19, 20 AND 21 POND 6

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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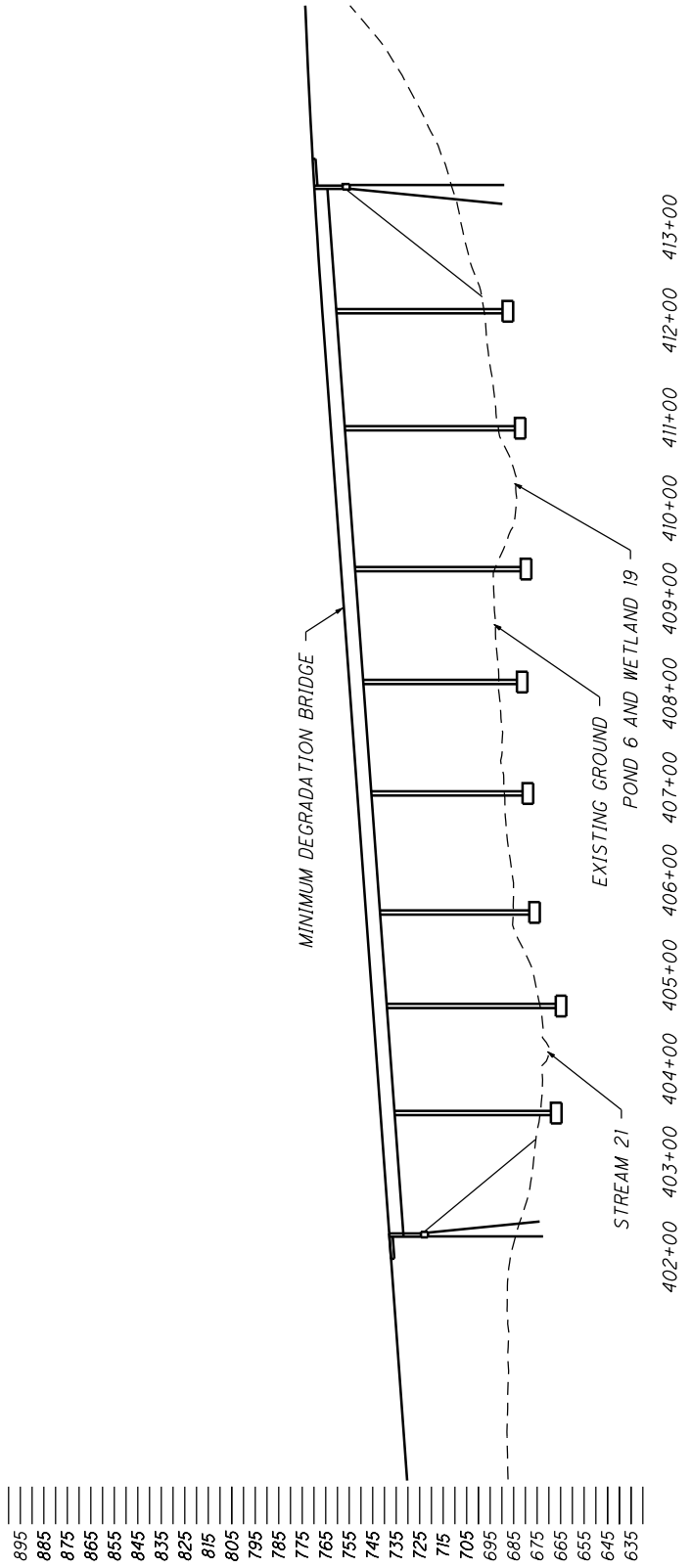
FIGURE 4-5



PROFILE

PLAN SCALE: 1" = 200'

MINIMUM DEGRADATION STREAM 21 AND 21-1 WETLAND 17, 18/W9WL2, 19, 20 AND 21 POND 6

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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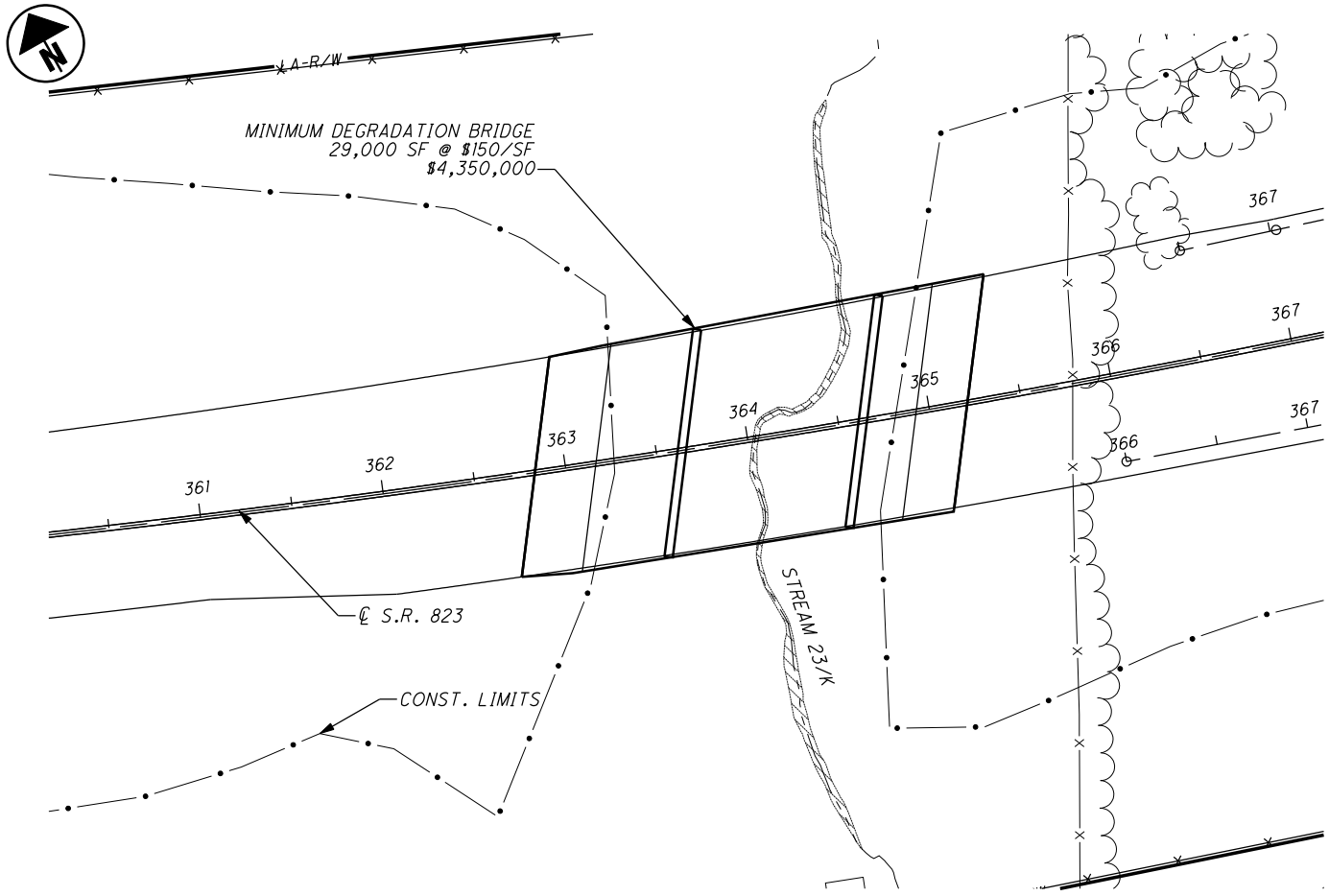
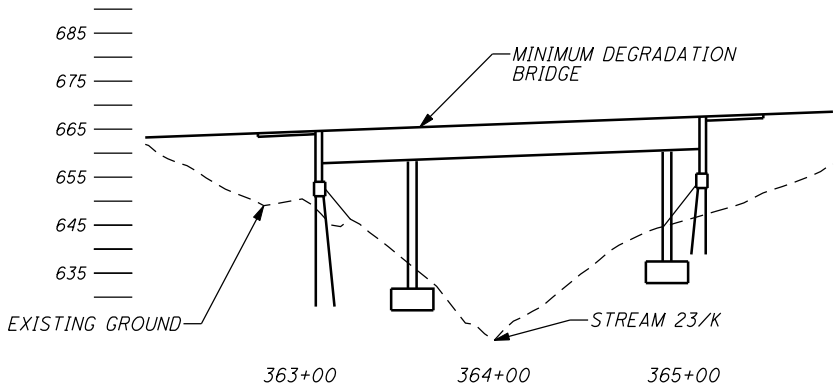
FIGURE 4-5A



PLAN



PROFILE

LENGTH OF IMPACT:	0 LF
AREA EXCAVATED OR FILLED:	0.0 ACRES
EXCAVATION BELOW OHW:	0 CY
FILL BELOW OHW:	0 CY

LEGEND

STREAM IMPACT LENGTH

OHWM

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100'

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

MINIMUM DEGRADATION

STREAM 23/K

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

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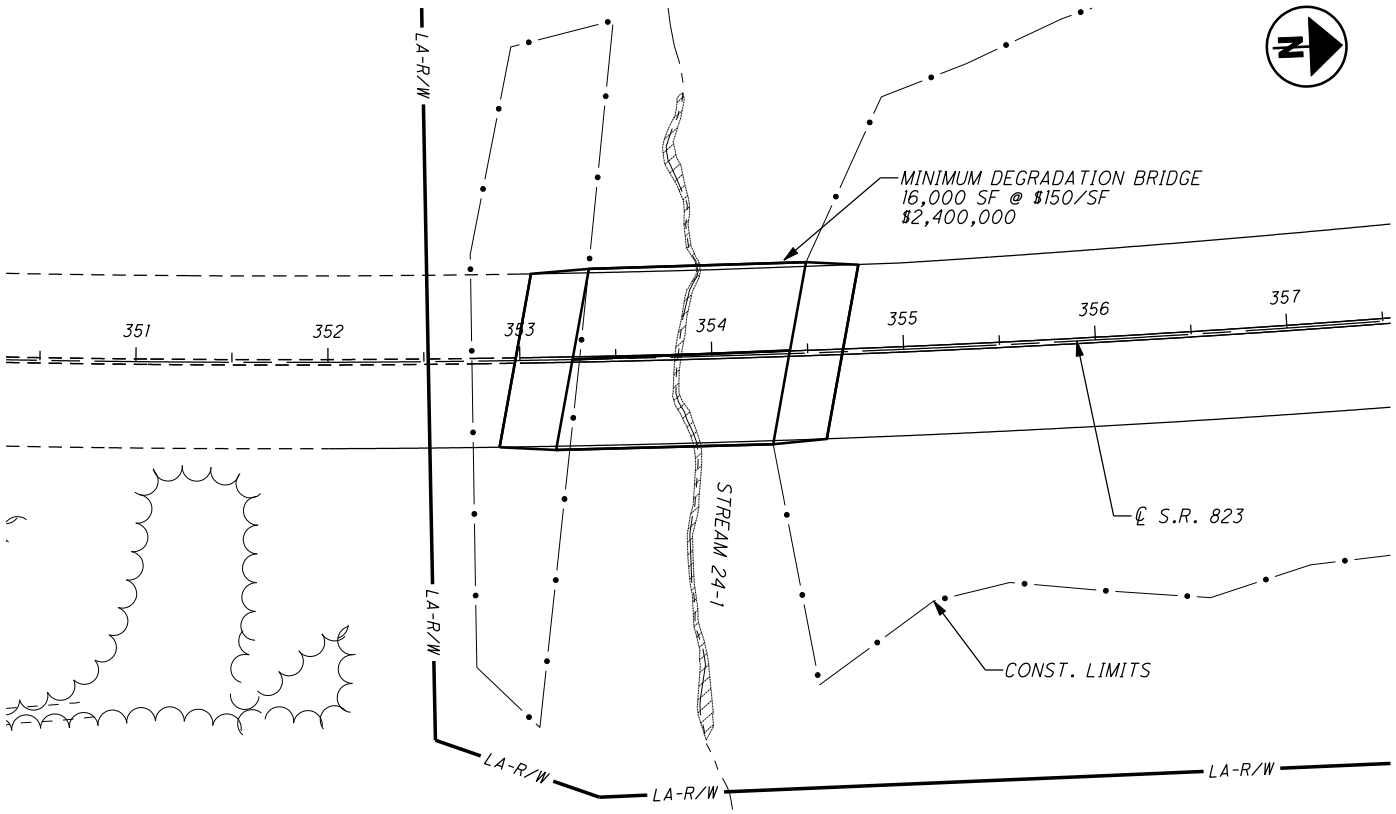
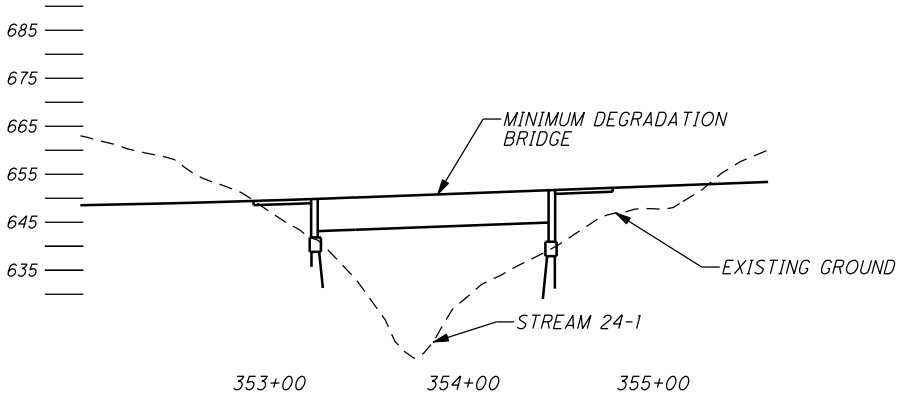
FIGURE 4-6



PLAN



PROFILE

LEGEND

STREAM IMPACT LENGTH

OHWM

PROPERTY OWNERS:
VICTOR D AND ELSIE A KNORE J/S

LENGTH OF IMPACT:	0 LF
AREA EXCAVATED OR FILLED:	0.0 ACRES
EXCAVATION BELOW OHW:	0 CY
FILL BELOW OHW:	0 CY

PLAN SCALE: 1" = 100'
CULVERT PROFILE: 1" = 100'

MINIMUM DEGRADATION

STREAM 24-1

OHIO DEPARTMENT OF TRANSPORTATION
S.R. 823 BYPASS IN SCIOTO COUNTY

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

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FIGURE 4-7

Appendix B: Tables

404 / 401 TABLE A

Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	Location (NAD 83 State Plane Ohio South)	Description and Length Impacted	Drainage Basin	Total Length/ Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	QHEI Score / OEPA Use Designation	Riparian Corridor and Adj. Habitats
Stream 17-1-1; UNT to Sweet Run; STA 519+50	N 313472 USft E 1857199 USft	Cut Section 73 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	1,700 ft	Sweet Run	1,700 ft	0.017	Class I/HHEI 22	Mature Forest
Stream 17a/b; UNT[1] to Long Run; STA 539+00	N 314758 USft E 1855634 USft	Culvert and Fill Section 898 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	9,090 ft	Long Run	5,690 ft	0.540	Modified Class II/ HHEI 55	Immature Forest/ Shrub/Scrub/ Old Field
Stream 17c; UNT[1] to Long Run; CR 28 Ramp C-D	N 313918 USft E1855618 USft	Modification 960 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	1,362 ft	Long Run	5,250 ft	0.047	Modified Class II/ HHEI 47	Old Field
Stream 17c-1; UNT[1] to Long Run; CR 28 Ramp C-D	N 313751 USft E 1855889 USft	Fill Section 394 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	390 ft	Long Run	5,560 ft	0.010	Modified Class II/ HHEI 43	Immature forest/ Shrub or Old Field

404 / 401 TABLE A

Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	Location (NAD 83 State Plane Ohio South)	Description and Length Impacted	Drainage Basin	Total Length/ Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	QHEI Score / OEPA Use Designation	Riparian Corridor and Adj. Habitats
Stream 17d; UNT[1] to Long Run; CR 28 STA 10+75	N 314267USft E 1854896 USft	Culvert and Fill Section 294 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	2,590 ft	Long Run	4,930 ft	0.110	Modified Class II/ HHEI 59	Residential/ Park/ New Field
Stream 18; Long Run; STA 484+50	N 311206 USft E 1859803 USft	Bridge 55 ft, Temporary 150 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	55, 320 ft	Little Scioto River	41,850 ft	14.20	WWH/ QHEI 78.5	Forest/ Urban Industrial
Stream 18-1; UNT UNT[1] to Long Run; STA 473+50	N 310698 USft E 1860787 USft	Culvert 417 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	2,725 ft	Long Run	1,100 ft	0.072	Modified Class II/ HHEI 39	Open Pasture/ Row Crop
Stream 18b; UNT[1] to Long Run; STA 465+25	N 310363 USft E 1861371 USft	Modification 244 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	5,540 ft	Long Run	2,170 ft	0.180	Modified Class II/ HHEI 39	None Fenced Pasture

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Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	Location (NAD 83 State Plane Ohio South)	Description and Length Impacted	Drainage Basin	Total Length/ Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	QHEI Score / OEPA Use Designation	Riparian Corridor and Adj. Habitats
Stream 19; UNT[1] to Long Run; STA 485+50 to 490+50	N 311212 USft E 1859809 USft	Modification 530 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	3,040 ft	Long Run	170 ft	0.207	Modified Class II/ HHEI 69	Residential
Stream 19-1; UNT[1] to Long Run; STA 504+53	N 312480 USft E 1858249 USft	Culvert 662 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	720 ft	Long Run	2,490 ft	0.047	Modified Class II/ 52	Mature Forest
Stream 20; UNT[1] to Long Run; STA 443+50	N 309706 USft E 1863595 USft	Bridge 23 ft, Temporary 150 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	8,960 ft	Long Run	1,350 ft	0.880	Modified WWH/ QHEI 58.5	Immature Forest/ Shrub/Scrub/ Old field/ Residential
Stream 20-1; UNT[1] to Long Run; STA 434+00	N 309393 USft E 1864485 USft	Bridge Fill 720 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	1,260 ft	Long Run	2,420 ft	0.036	Class II/ HHEI 47	Mature Forest

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Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	Location (NAD 83 State Plane Ohio South)	Description and Length Impacted	Drainage Basin	Total Length/ Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	QHEI Score / OEPA Use Designation	Riparian Corridor and Adj. Habitats
Stream 20-2; UNT[1] to Long Run; STA 449+25	N 309890 USft E 1863071 USft	Culvert 375 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	545 ft	Long Run	1,815 ft	0.013	Modified Class I/ HHEI 23	Immature Forest, Shrub or Old Field
Stream 21; UNT[1] to Long Run; STA 404+00	N 307637 USft E 1866793 USft	Culvert 802 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	5,390 ft	Long Run	3,020 ft	0.139	Modified Class II/ HHEI 49	Fenced Pasture/ Hayfield
Stream 21a; UNT[1] to Long Run; STA 410+50	N 308176 USft E 1866473 USft	Culvert 745 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	640 ft	Long Run	1,050 ft	0.039	Modified Class II/ HHEI 36	Mature Forest, Immature Forest, Shrub or Old Field
Stream 22a/b; UNT[1] to Little Scioto River; STA 375+00	N 304895 USft E 1867515 USft	Culvert and modification, 1,267 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	7,140 ft	Little Scioto River	4,395 ft	0.172	Modified Class II/ HHEI 67	Mature Forest/ Logged Forest/ Shrub/Scrub/Urban

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Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	Location (NAD 83 State Plane Ohio South)	Description and Length Impacted	Drainage Basin	Total Length/ Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	QHEI Score / OEPA Use Designation	Riparian Corridor and Adj. Habitats
Stream 22a-1; UNT[1] to Little Scioto River; TR 234 R C STA 381+70	N 305360 USft E 1867101 USft	Cut Section 318 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	530 ft	Little Scioto River	5,430 ft	0.030	Modified Class II/ HHEI 43	Mature Forest, Immature Forest
Stream 23k; UNT[1] to Little Scioto River; STA 364+50	N 303757 USft E 1867735 USft	Culvert 415 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	1,520 ft	Little Scioto River	3,100 ft	0.045	Class II/ HHEI 53	Immature forest/ shrub/scrub, old field
Stream 24-1; UNT[1] to Little Scioto River; STA 353+88	N 302711 USft E 1867788 USft	Culvert 333 ft	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	920 ft	Little Scioto River	2,050 ft	0.030	Modified Class II/ HHEI 36	Mature Forest
Stream 18-2; UNT[1] to Long Run SR 139 Detour	N 310337 USft E 1851389 USft	0 ft – Not Impacted	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	200 ft	Long Run	985 ft	0.054	Modified Class II/ HHEI 53	Shrub/scrub

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Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	Location (NAD 83 State Plane Ohio South)	Description and Length Impacted	Drainage Basin	Total Length/ Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	QHEI Score / OEPA Use Designation	Riparian Corridor and Adj. Habitats
Stream 18-2-1; UNT[1] to Long Run SR 139 Detour	N 310385 USft E 1851344 USft	0 ft – Not Impacted	050 90103 040; Little Scioto River (above Rocky Fork to Ohio River), and Ohio River (below Pine Creek to above 8-digit divide [except Scioto River])	70 ft	Long Run	1,080 ft	0.010	Modified Class II/ HHEI 37	Shrub/scrub

[1] Unnamed Tributary

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Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	USGS Coord.	Area Impacted*	Drainage Basin	Total Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	Riparian Corridor and Adj. Habitats
Pond – 4; STA 466+00	N 310479 USft E 1861510 USft	1.418 acres	Little Scioto – Tygarts Creek 05090103	1.418 acres	Stream 18b	0 ft	0.180	Pasture
Pond – 5; STA 448+00	N 309888 USft E 1863180 USft	0.046 acre	Little Scioto – Tygarts Creek 05090103	0.034 acre	Stream 20	410 ft	0.880	Old Field/ Pasture
Pond – 6; STA 410+00	N 308211 USft E1866534 USft	0.189 acre	Little Scioto – Tygarts Creek 05090103	0.189 acre	Stream 21a	640 ft	0.039	Old Field, Pasture
Pond – 7; STA 396+00	N 306796 USft E1867065 USft	0.592 acre	Little Scioto – Tygarts Creek 05090103	0.592 acre	Assumed RR Ditch 1 via Farm Tile	1,050 ft	0.050	Old Field, Pasture
Pond – 8; STA 380+00	N 305262 USft E 1867283 USft	0.467 acre	Little Scioto – Tygarts Creek 05090103	0.467 acre	Stream 22a/b	290 ft	0.030	Residential

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Streams, Ponds, and Other Waters Affected by the Proposed Project

Site # / Feature	USGS Coord.	Area Impacted*	Drainage Basin	Total Area	Receiving Stream	Distance to Receiving Stream	Drainage Area mi^2/ Area at Impact Site	Riparian Corridor and Adj. Habitats
Railroad Ditch 1	N 305878 USft E 1867995 USft	0 acre	Little Scioto – Tygarts Creek 05090103	Undetermined	Stream 22a/b	1,250 ft	Undetermined	Shrub/scrub
Railroad Ditch 2	N 305892 USft E 1868056 USft	0 acre	Little Scioto – Tygarts Creek 05090103	Undetermined	Stream 22a/b	1,250 ft	Undetermined	Shrub/scrub

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Wetlands Affected by the Proposed Project

Wetland ID	USGS Coordinate	Drainage Basin	Wetland Description	Cowardin et al., 1979 Classification	ORAM v5.0 Score	OEPA Category	Total Size	Area Impacted	Adjacent Habitats	Proximity to Other Surface Waters
Wetland 1	N 314624 USft E 1856081 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	23.5	1	0.141 acre	0.141 acre	Old Field	Stream 17a/b, 460 ft
Wetland 2/3	N 314399 USft E 1855845 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	31.5	Modified 2	0.517 acre	0.517 acre	Old Field	Stream 17a/b, 210 ft
Wetland 4	N 314503 USft E 1855611 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	30.5	Modified 2	0.047 acre	0.089 acre	Old Field	Stream 17a/b, 140 ft
W8WL6	N 314232 USft E 1855398 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	32.5	Modified 2	0.290 acre	0.221 acre	Old Field	Stream 17a/b, 0 ft
W8WL8	N 314016 USft E 1855498 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	28.5	1	0.020 acre	0.020 acre	Old Field	Stream 17c, 0 ft
Wetland 5/ W8WL7	N 314469 USft E 1855406 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	39.5	Modified 2	0.104 acre	0.066 acre	Old Field	Stream 17a/b, 0 ft
Wetland 6	N 314509 USft E 1855760 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	30.5	Modified 2	0.018	0.018 acre	Old Field	Stream 17a/b, 285 ft
Wetland 7	N 314164 USft E 1856226 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	21.0	1	0.108 acre	0.108 acre	Old Field	Stream 17a/b, 810 ft
Wetland 8	N 314254 USft E 1856131 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	30.5	Modified 2	0.028 acre	0.028 acre	Old Field	Stream 17a/b, 675 ft
Wetland 9	N 313504 USft E 1856117 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	R	35.5	Modified 2	0.081 acre	0.073 acre	Old Field	Stream 17c-1, 0 ft

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Wetlands Affected by the Proposed Project

Wetland ID	USGS Coordinate	Drainage Basin	Wetland Description	Cowardin et al., 1979 Classification	ORAM v5.0 Score	OEPA Category	Total Size	Area Impacted	Adjacent Habitats	Proximity to Other Surface Waters
Wetland 12	N 314728 USft E 1856690 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	39.0	Modified 2	1.233 acres	0.811 acre	Old Field	Sweet Run, 960 ft
Wetland 13	N 314686 USft E 1856237 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	35.0	Modified 2	0.233 acre	0.233 acre	Old Field	Stream 17a/b, 820 ft
Wetland 14	N 314792 USft E 1856156 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	19.5	1	0.010 acre	0.010 acre	Old Field	Stream 17a/b, 660 ft
Wetland 15	N 314619 USft E 1856707 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	33.5	Modified 2	0.041 acre	0.041 acre	Old Field	Sweet Run, 1,180 ft
Wetland 16	N 314361 USft E 1854824 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM/R	26	1	0.048 acre	0.036 acre	Old Field	Stream 17d, 0 ft
Wetland 17	N 308623 USft E 1866661 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	35.5	Modified 2	0.094 acre	0.001 acre	Old Field	RR Ditch East of Project Area, 580 ft
Wetland 18/ W9WL2	N 308386 USft E 1866696 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	35.5	Modified 2	0.054 acre	0.038 acre	Old Field	Stream 21a, 0 ft
Wetland 19	N 308212 USft E 1866558 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM/OW	49.0	2	0.180 acre	0.180 acre	Old Field	Stream 21a, 0 ft
Wetland 20	N 308173 USft E 1866816 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	37.0	Modified 2	0.089 acre	0.062 acre	Old Field	Stream 21a, 245 ft
Wetland 21	N 308025 USft 18E 66895 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	28.0	1	0.085 acre	0.082 acre	Old Field	Stream 21a, 550 ft

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Wetlands Affected by the Proposed Project

Wetland ID	USGS Coordinate	Drainage Basin	Wetland Description	Cowardin et al., 1979 Classification	ORAM v5.0 Score	OEPA Category	Total Size	Area Impacted	Adjacent Habitats	Proximity to Other Surface Waters
W9WL4	N 307624 USft E 1866666 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	21.0	1	0.029 acre	0.029 acre	Old Field	Stream 21, 55 ft
Wetland 22	N 306811 USft E1867073 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM/OW	28.0	1	0.344 acre	0.344 acre	Old Field	RR Ditch 1 via farm tiles, 600 ft
Wetland 24	N 307133 USft E 1867052 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	29.0	1	0.069 acre	0.069 acre	Old Field	RR Ditch 1, 550 ft
Wetland 26	N 306044 USft E 1867232 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	29.0	1	0.483 acre	0.483 acre	Old Field	Stream 22a/b, 560 ft
Wetland 28	N 305272 USft E 1867288 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM/OW	34.0	Modified 2	0.101 acre	0.101 acre	Old Field	Stream 22a/b, 340 ft
Wetland 29	N 310494 USft E 1862328 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	12.5	1	0.029	0.001 acre	Old field	Stream 18b, 40 ft
Wetland 30	N 309868 USft E 1863289 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	12.5	1	0.011 acre	0.011 acre	Old Field	Stream 20, 330 ft
Wetland 31	N 309770 USft E 1863337 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	12.5	1	0.027 acre	0.027 acre	Old Field	Stream 20, 265 ft
Wetland 32	N 315087 USft E 1855703 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	53	2	0.049 acre	0.019 acre	Old Field	Stream 17a/b, 0 ft
Wetland 33	N 309885 USft E 1863169 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	26	1	0.021 acre	0.021 acre	Old Field	Pond 5, 0 ft

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Wetlands Affected by the Proposed Project

Wetland ID	USGS Coordinate	Drainage Basin	Wetland Description	Cowardin et al., 1979 Classification	ORAM v5.0 Score	OEPA Category	Total Size	Area Impacted	Adjacent Habitats	Proximity to Other Surface Waters
Wetland 34	N 311322 USft E 1859559 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	13	1	0.013 acre	0.013 acre	Old Field	Stream 19, 125 ft
Wetland 35	N 310471 USft E 1851330 USft	Little Scioto River and other Ohio River tributaries (05090103)	Non-Isolated	PEM	37	Modified 2	0.092 acre	0.000 acre	Old Field	Stream 18-2-1, 0 ft

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Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

A. Streams

Site/Feature	Approximate Station Location	Proposed Structure or Action	Existing Channel Disturbed Due to Permanent Placement of Proposed Structure, Highway Fill, Channel Change or Channel Protection											Existing Channel Disturbed Due to Temporary Crossing				
			Length of Channel Disturbed (feet)	Excavation below OHWM				Fill Below OHWM					Total Area Impact (acre)	Length of Channel Disturbed (feet)	Excavation below OHWM		Fill Below OHWM	
				Roadway cut (CY)	Block Mat or RCP (CY)	Total Volume (CY)	Area (acre)	Roadway fill (CY)	Block Mat or RCP (CY)	Conduit (CY)	Total Volume (CY)	Area (acre)			Volume (CY)	Area (acre)	Volume (CY)	Area (acre)
Stream 17a/b; UNT[1] to Long Run	539+00	Culvert and Fill Section	898	16	48	64	0.034	157	48	23	228	0.162	0.196	0	0	0	0	0
Stream 17-1-1; UNT[1] to Long Run	519+50	Cut Section	73	183	0	183	0.005	0	0	0	0	0.000	0.005	0	0	0	0	0
Stream 17c; UNT[1] to Long Run	CR 28 Ramp C-D	Modification	960	0	0	0	0.000	60	0	0	60	0.093	0.093	0	0	0	0	0
Stream 17c-1; UNT[1] to Long Run	CR 28 Ramp C-D	Fill section	394	0	0	0	0.000	9	0	0	9	0.020	0.020	0	0	0	0	0
Stream 17d; UNT[1] to Long Run	CR 28 10+75	Culvert and Fill Section	294	82	41	123	0.032	70	41	0	111	0.073	0.105	0	0	0	0	0
Stream 18; Long Run	484+50	Bridge	55	0	10	10	0.005	27	10	0	37	0.014	0.019	150	0	0	914	0.146
Stream 18-1; to Long Run	473+50	Culvert	417	0	12	12	0.002	18	12	2	32	0.049	0.051	0	0	0	0	0
Stream 18b; UNT[1] to Long Run	465+25	Modification	244	40	20	60	0.016	26	20	10	56	0.036	0.052	0	0	0	0	0
Stream 19; UNT[1] to Long Run	485+50 to 490+50	Modification and Pier	530	118	3	121	0.054	148	3	0	151	0.060	0.114	0	0	0	0	0
Stream 19-1; UNT[1] to Long Run	504+53	Culvert	662	67	17	84	0.037	42	17	0	59	0.068	0.105	0	0	0	0	0
Stream 20; UNT[1] to Long Run	443+50	Bridge	23	10	0	10	0.004	0	0	0	0	0.000	0.004	150	0	0	261	0.110
Stream 20-1; UNT[1] to Long Run	434+00	Bridge Fill	720	0	0	0	0.000	30	0	0	30	0.068	0.068	0	0	0	0	0
Stream 20-2; UNT[1] to Long Run	449+25	Culvert and Modification	375	17	0	17	0.004	7	0	0	7	0.023	0.027	0	0	0	0	0
Stream 21; UNT[1] to Long Run	404+00	Culvert	802	4	16	20	0.013	226	16	21	263	0.205	0.218	0	0	0	0	0
Stream 21a; UNT[1] to Long Run	410+50	Culvert	745	41	4	45	0.003	21	4	5	30	0.040	0.043	0	0	0	0	0

404 / 401 TABLE C
Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

A. Streams

Site/Feature	Approximate Station Location	Proposed Structure or Action	Existing Channel Disturbed Due to Permanent Placement of Proposed Structure, Highway Fill, Channel Change or Channel Protection											Existing Channel Disturbed Due to Temporary Crossing				
			Length of Channel Disturbed (feet)	Excavation below OHWM				Fill Below OHWM					Total Area Impact (acre)	Length of Channel Disturbed (feet)	Excavation below OHWM		Fill Below OHWM	
				Roadway cut (CY)	Block Mat or RCP (CY)	Total Volume (CY)	Area (acre)	Roadway fill (CY)	Block Mat or RCP (CY)	Conduit (CY)	Total Volume (CY)	Area (acre)			Volume (CY)	Area (acre)	Volume (CY)	Area (acre)
Stream 22a/b; UNT[1] to Little Scioto River	375+00	Culvert and Modification	1,267	57	6	63	0.015	180	6	0	186	0.165	0.180	0	0	0	0	0
Stream 22a-1; UNT[1] to Little Scioto River	TR 234 R C STA 381+70	Cut Section	318	94	0	94	0.012	15	0	0	15	0.024	0.036	0	0	0	0	0
Stream 23/K; UNT[1] to Little Scioto River	364+50	Culvert	415	18	5	23	0.007	57	5	13	75	0.041	0.048	0	0	0	0	0
Stream 24-1; UNT[1] to Little Scioto River	353+88	Culvert	333	36	11	47	0.006	12	11	9	32	0.075	0.081	0	0	0	0	0

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Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

B. PONDS

Site / Feature	Approx. Station Location	Proposed Structure or Action	Existing Channel Disturbed Due to Placement of Proposed Structure, Highway Fill, Channel Change or Channel Protection					Existing Channel Disturbed Due to Temporary Crossing		
			Length of Channel Disturbed (feet)	Excavation Below OHWM		Fill Below OHWM		Length of Channel Disturbed (feet)	Excavation / Fill Below OHWM	
				Volume (CY)	Area (acre)	Volume (CY)	Area (acre)		Volume (CY)	Area (acre)
Pond – 4	466+00	Embankment Fill	N/A	0	0	13,726	1.418	N/A	0	0
Pond – 5	448+00	Embankment Fill	N/A	0	0	329	0.034	N/A	0	0
Pond – 6	410+00	Embankment Fill	N/A	0	0	1,830	0.189	N/A	0	0
Pond – 7	396+00	Embankment Fill	N/A	0	0	5,731	0.592	N/A	0	0
Pond – 8	380+00	Embankment Fill	N/A	0	0	4,521	0.467	N/A	0	0

404 / 401 TABLE C
Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

C. WETLANDS

Feature(s)	Approx. Station Location	Description	Total Area Impacted (acre)	Proposed Action	Direct Impacts (within construction limits)*			Indirect Impact Area (outside construction limits)
					Volume Excavated (CY)	Volume Filled (CY)	Area Excavated and/or Filled	
Wetland 1	SR 823 535+10	Non-Isolated	0.141	Embankment Fill	0	115	0.072	0.069
Wetland 2/3	SR 823 535+40	Non-Isolated	0.517	Embankment Fill	0	834	0.517	0.000
Wetland 4	CR 28R C/D	Non-Isolated	0.089	Embankment Fill	0	3	0.002	0.087
W8WL6	CR 28 R C 516+60/ R D 541+40	Non-Isolated	0.221	Embankment Fill	0	334	0.207	0.014
W8WL8	CR 28R C 519+00/ R D 539+00	Non-Isolated	0.020	Embankment Fill	0	32	0.020	0.000
Wetland 5/ W8WL7	CR 28R C 514+50/ R D 543+40	Non-Isolated	0.066	Embankment Fill and Concrete	0	107 (101 CY embankment fill and 6 CY concrete)	0.066	0.000
Wetland 6	CR 28R C/D	Non-Isolated	0.018	Embankment Fill	0	3	0.002	0.016
Wetland 7	CR 28R C 532+25	Non-Isolated	0.108	Embankment Fill	0	174	0.108	0.000
Wetland 8	CR 28R C/D	Non-Isolated	0.028	Embankment Fill	0	45	0.028	0.000
Wetland 9	CR 28R C/D	Non-Isolated	0.073	Embankment Fill	0	102	0.063	0.010

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Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

C. WETLANDS

Feature(s)	Approx. Station Location	Description	Total Area Impacted (acre)	Proposed Action	Direct Impacts (within construction limits)*			Indirect Impact Area (outside construction limits)
					Volume Excavated (CY)	Volume Filled (CY)	Area Excavated and/or Filled	
Wetland 12	CR 28R A/B	Non-Isolated	0.811	Embankment Fill	0	852	0.528	0.283
Wetland 13	CR 28R A/B	Non-Isolated	0.233	Embankment Fill	0	8	0.005	0.228
Wetland 14	CR 28R A/B	Non-Isolated	0.010	Embankment Fill	0	0	0.000	0.010
Wetland 15	CR 28R A/B	Non-Isolated	0.041	Embankment Fill	0	65	0.041	0.000
Wetland 16	Flowers-Ison Road	Non-Isolated	0.036	Embankment Fill	22	58	0.036	0.000
Wetland 17	412+50	Non-Isolated	0.001	Embankment Fill	0	0	0.000	0.001
Wetland 18/ W9WL2	411+11	Non-Isolated	0.038	Embankment Fill and Concrete	0	58 (52 CY embankment fill and 6 CY concrete)	0.036	0.002
Wetland 19	410+00	Non-Isolated	0.180	Embankment Fill	0	290	0.180	0.000
Wetland 20	409+00	Non-Isolated	0.062	Embankment Fill	0	93	0.058	0.004
Wetland 21	408+00	Non-Isolated	0.082	Embankment Fill	0	130	0.081	0.001
W9WL4	405+00	Non-Isolated	0.029	Embankment Fill	0	47	0.029	0.000

404 / 401 TABLE C
Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

C. WETLANDS

Feature(s)	Approx. Station Location	Description	Total Area Impacted (acre)	Proposed Action	Direct Impacts (within construction limits)*			Indirect Impact Area (outside construction limits)
					Volume Excavated (CY)	Volume Filled (CY)	Area Excavated and/or Filled	
Wetland 22	395+50	Non-Isolated	0.344	Embankment Fill	0	555	0.344	0.000
Wetland 24	380+00/ TR 234R A	Non-Isolated	0.069	Embankment Fill	0	112	0.069	0.000
Wetland 26	388+00	Non-Isolated	0.483	Embankment Fill	0	780	0.483	0.000
Wetland 28	380+00	Non-Isolated	0.101	Embankment Fill	0	162	0.101	0.000
Wetland 29	458+00	Non-Isolated	0.001	Embankment Fill	0	0	0.000	0.001
Wetland 30	447+00	Non-Isolated	0.011	Embankment Fill	0	18	0.011	0.000
Wetland 31	446+00	Non-Isolated	0.027	Embankment Fill	0	44	0.027	0.000
Wetland 32	541+00	Non-Isolated	0.019	Embankment Fill	0	0	0.000	0.019
Wetland 33	541+00	Non-Isolated	0.021	Embankment Fill	0	34	0.021	0.000
Wetland 34	541+00	Non-Isolated	0.013	Embankment Fill	0	21	0.013	0.000

404 / 401 TABLE C
Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

C. WHOLE PROJECT SUMMARY OF ACTIVITIES

Total Project Lineal Stream Disturbances			Total Project Excavation (No pond excavation proposed)						Total Project Fill							
Total Length Disturbed due to Proposed Structures, Highway Fill, Channel Change or Channel Protection	Length Disturbed due to Temporary Crossing	Net Length Disturbed	Stream Excavated		Wetland Excavated		Total Excavation		Stream Filled (standard roadfill, channel protection, temporary crossings & other materials)		Wetland Filled		Pond Filled		Total Filled	
			Volume (CY)	Area (acre)	Volume (CY)	Area (acre)	Volume (CY)	Area (acre)	Volume (CY)	Area (acre)	Volume (CY)	Area (acre)	Volume (CY)	Area (acre)	Volume (CY)	Area (acre)
9,825 feet	300 feet	9,525 feet	976	0.249	22	0.007	998	0.256	2,556	1.472	5,076	3.148	26,137	2.700	33,768	7.320

404 / 401 TABLE D
Proposed Lowering of Water Quality by the Preferred and Antidegradation Alternatives

Alternative	Expected Impacts by Alternative						
	Direct Stream Impacts	Aquatic Hab. (QHEI)/ Use Designation/ Stream Flow	Aquatic Biota	T & E Species [1]	Terrestrial Plant/Animals (Riparian Area)	Wetlands	Summary for Alternative
Preferred	9,825 feet	Yes	Yes	No	Yes	Yes	9,525 feet of Stream Impact 300 feet of Temporary Stream Impact 3.893 acres Wetland Impact 2.70 acres Pond Impact
Minimal Degradation	7,166 feet	Yes	Yes	No	Yes	Yes	5,966 feet of Stream Impact 1,200 feet Temporary Stream Impact 1.904 acres of Wetland Impact 2.51 acres of Pond Impact
Non-degradation	0 feet	Yes	No	No	No	No	No Impacts to Waters of the US

[1] Impact footprint of the Preferred Alternative includes areas upstream and/or downstream of proposed structures where energy and erosion control components (channel protection) are required to achieve pre-construction stream velocity, water surface elevation and channel stability conditions; no impact to stream flow patterns are expected.

404/401 TABLE E
Proposed Stream Mitigation for the Preferred and Antidegradation Alternatives

Stream Name	Impacted Length (feet)	Type of Mitigation	Watershed (8 Digit HUC)		QHEI Score	HHEI Score	Mitigated Length (feet)*	
			Impacted	Mitigated			On-site	Off-site
Stream 17-1-1	73 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	22	N/A	109.5
Stream 17a/b	898 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	55	N/A	1,347.0
Stream 17c	960 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	47	N/A	1,440.0
Stream 17c-1	394 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	43	N/A	591.0
Stream 17d	294 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	59	N/A	441.0
Stream 18 (Long Run)	55 feet (150 temporary)	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	78.5	N/A	N/A	307.5
Stream 18-1	417 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	39	N/A	625.5
Stream 18b	244 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	39	N/A	366.0

404/401 TABLE E
Proposed Stream Mitigation for the Preferred and Antidegradation Alternatives

Stream Name	Impacted Length (feet)	Type of Mitigation	Watershed (8 Digit HUC)		QHEI Score	HHEI Score	Mitigated Length (feet)*	
			Impacted	Mitigated			On-site	Off-site
Stream 19	530 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	69	N/A	795.0
Stream 19-1	662 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	52	N/A	993.0
Stream 20	23 feet (150 temporary)	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	58.5	N/A	N/A	259.5
Stream 20-1	720 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	47	N/A	1,080.0
Stream 20-2	375 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	23	N/A	562.5
Stream 21	802 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	49	N/A	1,203.0
Stream 21a	745 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	36	N/A	1,117.5
Stream 22a/b	1,267 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	67	N/A	1,900.5
Stream 22a-1	318 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	43	N/A	477.0

404/401 TABLE E
Proposed Stream Mitigation for the Preferred and Antidegradation Alternatives

Stream Name	Impacted Length (feet)	Type of Mitigation	Watershed (8 Digit HUC)		QHEI Score	HHEI Score	Mitigated Length (feet)*	
			Impacted	Mitigated			On-site	Off-site
Stream 23/k	415 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	53	N/A	622.5
Stream 24-1	333 feet	Preservation	Little Scioto – Tygarts Creek 05090103	GE Facility – Lower Scioto 05060002	N/A	36	N/A	499.5

* Currently no on-site stream mitigation options are being considered. All off-site stream mitigation will be completed at a 1.5 to 1 ratio.

404/401 TABLE F
Proposed Wetland Mitigation for the Preferred and Antidegradation Alternative

Wetland ID Number	Impacted Area (acre)	Type of Wetland (Isolated/Non-Isolated)	Watershed (8 Digit HUC)		ORAM v. 5.0 Score	OEPA Category	Wetland Type	Mitigated Area* (acres)	
			Impacted	Mitigated				On-site	Off-site
Wetland 1	0.141 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	23.5	1	Emergent	0.0	0.212
Wetland 2/3	0.517 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	31.5	Modified 2	Emergent	0.0	1.034
Wetland 4	0.089 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	30.5	Modified 2	Emergent	0.0	0.178
W8WL6	0.221 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	32.5	Modified 2	Emergent	0.0	0.442
W8WL8	0.020 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	28.5	1	Emergent	0.0	0.030
Wetland 5/ W8WL7	0.066 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	39.5	Modified 2	Emergent	0.0	0.132
Wetland 6	0.018 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	30.5	Modified 2	Emergent	0.0	0.036
Wetland 7	0.108 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	21.0	1	Emergent	0.0	0.162
Wetland 8	0.028 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	30.5	Modified 2	Emergent	0.0	0.056
Wetland 9	0.073 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	35.5	Modified 2	Emergent	0.0	0.146
Wetland 12	0.811 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	39.0	Modified 2	Emergent	0.0	1.622
Wetland 13	0.233 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	35.0	Modified 2	Emergent	0.0	0.466
Wetland 14	0.010 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	19.5	1	Emergent	0.0	0.015

Wetland ID Number	Impacted Area (acre)	Type of Wetland (Isolated/Non-Isolated)	Watershed (8 Digit HUC)		ORAM v. 5.0 Score	OEPA Category	Wetland Type	Mitigated Area* (acres)	
			Impacted	Mitigated				On-site	Off-site
Wetland 15	0.041 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	33.5	Modified 2	Emergent	0.0	0.082
Wetland 16	0.036 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	26	1	Emergent	0.0	0.054
Wetland 17	0.001 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	35.5	Modified 2	Emergent	0.0	0.002
Wetland 18/ W9WL2	0.038 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	35.5	Modified 2	Emergent	0.0	0.076
Wetland 19	0.180 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	49.0	2	Emergent	0.0	0.360
Wetland 20	0.062 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	37.0	Modified 2	Emergent	0.0	0.124
Wetland 21	0.082 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	28.0	1	Emergent	0.0	0.123
W9WL4	0.029 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	21.0	1	Emergent	0.0	0.058
Wetland 22	0.344 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	28.0	1	Emergent	0.0	0.516
Wetland 24	0.069 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	29.0	1	Emergent	0.0	0.104
Wetland 26	0.483 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	29.0	1	Emergent	0.0	0.725
Wetland 28	0.101 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	34.0	Modified 2	Emergent	0.0	0.202
Wetland 29	0.001 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	12.5	1	Emergent	0.0	0.002
Wetland 30	0.011 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	12.5	1	Emergent	0.0	0.017
Wetland 31	0.027 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	12.5	1	Emergent	0.0	0.041

Wetland ID Number	Impacted Area (acre)	Type of Wetland (Isolated/Non-Isolated)	Watershed (8 Digit HUC)		ORAM v. 5.0 Score	OEPA Category	Wetland Type	Mitigated Area* (acres)	
			Impacted	Mitigated				On-site	Off-site
Wetland 32	0.019 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	53	2	Emergent	0.0	0.038
Wetland 33	0.021 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	26	1	Emergent	0.0	0.032
Wetland 34	0.013 acre	Non-Isolated	Little Scioto – Tygarts Creek 05090103	TBD	13	1	Emergent	0.0	0.020

*Proposed off-site wetland mitigation ratios in accordance with OAC 3745-1-54.

Appendix C: Provisional Jurisdictional Determination Information

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO ATTENTION OF

November 17, 2011

Operations and Readiness Division
Regulatory Branch
LRH-2011-00646-OHR – Long Run
SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415)

Mr. Timothy M. Hill
Ohio Department of Transportation
Office of Environmental Services
1980 West Broad Street
Columbus, Ohio 43223

Dear Mr. Hill:

I refer to the Level 2 Ecological Survey Report (ESR) prepared by ASC Group, Inc. dated August 12, 2011 and received in this office on August 17, 2011, and supplemental information received via e-mail on September 21, 2011. Based on a review of the information provided and a field review conducted September 7, 2011, twenty-one (21) streams which total 12,459 linear feet, thirty-two wetlands (32) which total 3.985 acres, five (5) ponds which total 2.70 acres, and two (2) ditches which total 0.014 acre are located within the approximate 310-acre review area for Phase 1 of the proposed Portsmouth Bypass Project located in Madison and Harrison Townships in Scioto County, Ohio. Under this proposal, a 3.32-mile segment of new four-lane, limited access highway would be constructed between Ohio State Route (SR) 335 and SR 728. Waters in the review area drain into the Little Scioto River, which is a Section 10 navigable waterway from the mouth to River Mile 7.0.

The United States Army Corps of Engineers (USACE) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to placing dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for any work in, on, over or under a navigable water.

Based on a review of the information provided, a site visit conducted on September 7, 2011, and other information available to us, this office has determined the identified streams, wetlands, ponds, and ditches **may** be jurisdictional waters of the United States. This determination has been made in accordance with the Regulatory Guidance Letter for Jurisdictional Determinations issued by the USACE on June 26, 2008 (RGL No. 08-02). As indicated in the guidance, this preliminary jurisdictional determination (PJD) is non-binding and cannot be appealed (33 C.F.R. 331.2) and only provides a written indication that waters of the United States, including wetlands, may be present on-site.

You have declined to exercise the option to obtain an approved jurisdictional determination in this instance and at this time. For the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the streams, wetlands, ponds, and ditches described in the attached PJD will be evaluated as if they are waters of the United States.

Attached please find two copies of the PJD. If you agree with the findings of this PJD and understand your options regarding the same, please sign and date one copy of the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:

Mr. Brett C. Latta, CPG (LRH-2011-00646-OHR)
United States Army Corps of Engineers
DSCC, Building 10, Section 10
3990 East Broad Street
Columbus, OH 43218

Please be advised if your proposed project is unable to avoid waters of the United States, you must obtain written authorization from this office for any discharge of dredged and/or fill material into these aquatic resources prior to impact. If you have any questions concerning the above information, please contact Brett Latta at (614) 692-4672 or by e-mail at Brett.C.Latta@usace.army.mil.

Sincerely,

LuAnne S. Conley, P.E.
Chief, South/Transportation Section

Enclosures

Copy Furnished w/enclosure via email:
Art.Coleman@epa.state.oh.us
Ric.Queen@epa.state.oh.us
Adrienne.Smith@dot.state.oh.us
Mike.Pettegrew@dot.state.oh.us

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 17 November 2011

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Ohio Department of Transportation
1980 West Broad Street
Columbus, Ohio 43223

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Huntington District, SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), LRH-2011-00646-OHR

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

State: Ohio
County: Scioto
City: Madison and Harrison Townships
Center coordinates of site: 38.85020 North, 82.86886 West
Name of nearest waterbody: Long Run

Identify (estimate) amount of waters in the review area:

Non-wetland waters: Twenty-one (21) streams with a cumulative total of 12,459 linear feet (lf) are located in the review area – 4,549 lf with perennial flow, 4,486 lf with intermittent flow, and 3,424 lf with ephemeral flow. Five (5) ponds or impoundments of streams which cumulatively total 2.70 acres are located in the review area. Two (2) constructed railroad ditches which cumulatively total 0.014 acre are located in the review area. Refer to the attached tables and maps of this *Preliminary Jurisdictional Determination Form* for a detailed summary of non-wetland waters.

Wetlands: There are thirty-two (32) wetlands with a cumulative total of 3.985 acres in the review area. These are mostly palustrine or riverine emergent wetlands. Wetland 18/W9WL2 is palustrine emergent/scrub-shrub. Each wetland appears to have a continuous surface or subsurface connection to a water of the United States (US). Refer to the attached tables and maps for a detailed wetland summary.

Name of any water bodies on the site that have been identified as Section 10 waters:

None

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination: Date: 11 October 2011

☒ Field Determination: Date(s): 12 May 2011 and 7 September 2011

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Refer to "Level 2 Ecological Survey Report (ESR) SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415)" dated 17 August 2011 with revisions received 21 September 2011.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

- ☒ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps:

☐ Corps navigable waters' study:

☐ U.S. Geological Survey Hydrologic Atlas:

- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s): New Boston, OH-KY and Minford, OH 7.5-minute

☒ USDA Natural Resources Conservation Service Soil Survey. Refer to SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), Appendix 1, Figure 9.

☒ National wetlands inventory map(s): Refer to SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), Appendix 1, Figure 7.

☒ State/Local wetland inventory map(s): Refer to SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), Appendix 1, Figure 7.

☒ FEMA/FIRM maps: Refer to SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), Appendix 1, Figure 4.

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): Refer to Level 2 ESR for SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), Appendix 1, Figure 11 (date unknown).
or ☒ Other (Name & Date): Refer to Level 2 ESR for SCI-823-0.00 Portsmouth Bypass Project Phase 1 (PID 19415), Appendix 2 (dates: Spring/Summer 2011); Combined USACE photographic log (12 May 2011 and 7 September 2011).

☒ Previous determination(s). File no. and date of response letter: 2000-01321-OHR (8 April 2005)

☒ Other information (please specify): **See Attached Tables 1-4 and Level 2 ESR - Figure 11 Survey Results for maps of potential waters of the US within the review area.**

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Brett Lott 17 NOV 2011

Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the
signature is impracticable)

Table 1 – Streams Summary
2011-00646-OHR: SCI-823-0.00 Portsmouth Bypass Project Phase 1, PID 19415

Stream ID	HHEI* / QHEI*	Flow Regime	Linear Feet
Stream 17-1-1 (UT Sweet Run)	22 / --	Ephemeral	210
Stream 17a/b (UT Long Run)	55 / --	Perennial	983
Stream 17c (UT Long Run)	47 / --	Intermittent-Seasonal	985
Stream 17c-1 (UT Long Run)	43 / --	Ephemeral	390
Stream 17d (UT Long Run)	59 / --	Intermittent-Seasonal	320
Stream 18 (Long Run)	-- / 78.5	Perennial	638
Stream 18-1 (UT Long Run)	39 / --	Ephemeral	335
Stream 18-2 (UT Long Run)	53 / --	Intermittent-Seasonal	98
Stream 18-2-1 (UT Long Run)	37 / --	Intermittent-Seasonal	30
Stream 18b (UT Long Run)	39 / --	Intermittent-Seasonal	539
Stream 19 (UT Long Run)	69 / --	Perennial	649
Stream 19-1 (UT Long Run)	52 / --	Intermittent-Seasonal	691
Stream 20 (UT Long Run)	-- / 58.5	Perennial	515
Stream 20-1 (UT Long Run)	47 / --	Ephemeral	1,261
Stream 20-2 (UT Long Run)	23 / --	Ephemeral	445
Stream 21 (UT Long Run)	49 / --	Intermittent-Seasonal	734
Stream 21a (UT Long Run)	36 / --	Intermittent-Seasonal	518
Stream 22a/b (UT Little Scioto River)	67 / --	Perennial	1,764
Stream 22a-1 (UT Little Scioto River)	43 / --	Ephemeral	342
Stream 23/k (UT Little Scioto River)	53 / --	Intermittent-Seasonal	571
Stream 24-1 (UT Little Scioto River)	36 / --	Ephemeral	441
		Total	**12,459**

* Ohio EPA Headwater Habitat Evaluation Index (HHEI) and Qualitative Habitat Evaluation Index (QHEI)

Table 2 – Wetlands Summary
2011-00646-OHR: SCI-823-0.00 Portsmouth Bypass Project Phase 1, PID 19415

Wetland ID	ORAM* Category / Score	Cowardin Class	Size in Acre(s)
1	1 / 23.5	PEM	0.141
2/3	Modified 2 / 31.5	PEM	0.517
4	Modified 2 / 30.5	PEM	0.089
W8WL6	Modified 2 / 32.5	PEM	0.221**
5/W8WL7	Modified 2 / 39.5	R4SB7	0.066
W8WL8	1 / 28.5	PEM	0.020
6	Modified 2 / 30.5	PEM	0.018
7	1 / 21	PEM	0.108
8	Modified 2 / 30.5	PEM	0.028
9	Modified 2 / 35.5	R6	0.073**
12	Modified 2 / 39	PEM	0.811**
13	Modified 2 / 35	PEM	0.233
14	1 / 19.5	PEM	0.010
15	Modified 2 / 33.5	PEM	0.041
16	1 / 26	PEM	0.036
17	Modified 2 / 35.5	PEM	0.001**
18/W9WL2	Modified 2 / 35.5	PEM	0.038**
19	2 / 49	PEM	0.180
20	Modified 2 / 37	PEM	0.062**
21	1 / 28	PEM	0.082**
W9WL4	Modified 2 / 34	PEM	0.029
22	1 / 28	PEM	0.344
24	1 / 29	PEM	0.069
26	1 / 29	PEM	0.483
28	Modified 2 / 34	PEM	0.101
29	1 / 12.5	PEM	0.001**
30	1 / 12.5	PEM	0.011
31	1 / 12.5	PEM	0.027
32	2 / 53	R2EM2	0.019**
33	1 / 26	PEM	0.021
34	1 / 13	PEM	0.013
35	Modified 2 / 37	PEM	0.092^
		Total	**3.985**

* Ohio EPA Ohio Rapid Assessment Method for Wetlands (ORAM)
** Total reflects acreage within Phase 1 construction limits only; boundaries extend beyond review area
^ Wetland 35 is within the "review area" but outside Phase 1 construction limits (proposed traffic detour at SR 139 and Glendale Road – wetland acreage extends beyond that which was surveyed using GPS)

Table 3 – Ponds Summary
2011-00646-OHR: SCI-823-0.00 Portsmouth Bypass Project Phase 1, PID 19415

Pond ID	Impoundment of Stream?	Type	Function	Jurisdictional?	Size in Acre(s)
4	Yes – Stream 18b	Constructed	Agriculture	Yes	1.42
5	Yes – Stream 20-2	Constructed	Agriculture	Yes	0.03
6	Yes – Stream 21a	Constructed	Agriculture	Yes	0.19
7	Historical – tiled to RR ditches	Constructed	Agriculture	Yes	0.59
8	Yes – Stream 22a-1	Constructed	Aesthetics	Yes	0.47
				Total	**2.70**

Table 4 – Ditches Summary
2011-00646-OHR: SCI-823-0.00 Portsmouth Bypass Project Phase 1, PID 19415

Ditch ID	Flow Regime	Type	OHWM Present?	Jurisdictional?	Size in Acre(s)
Railroad Ditch 1	Intermittent-Seasonal	Constructed	Yes	Yes	0.008
Railroad Ditch 2	Intermittent-Seasonal	Constructed	Yes	Yes	0.006
				Total	**0.014**

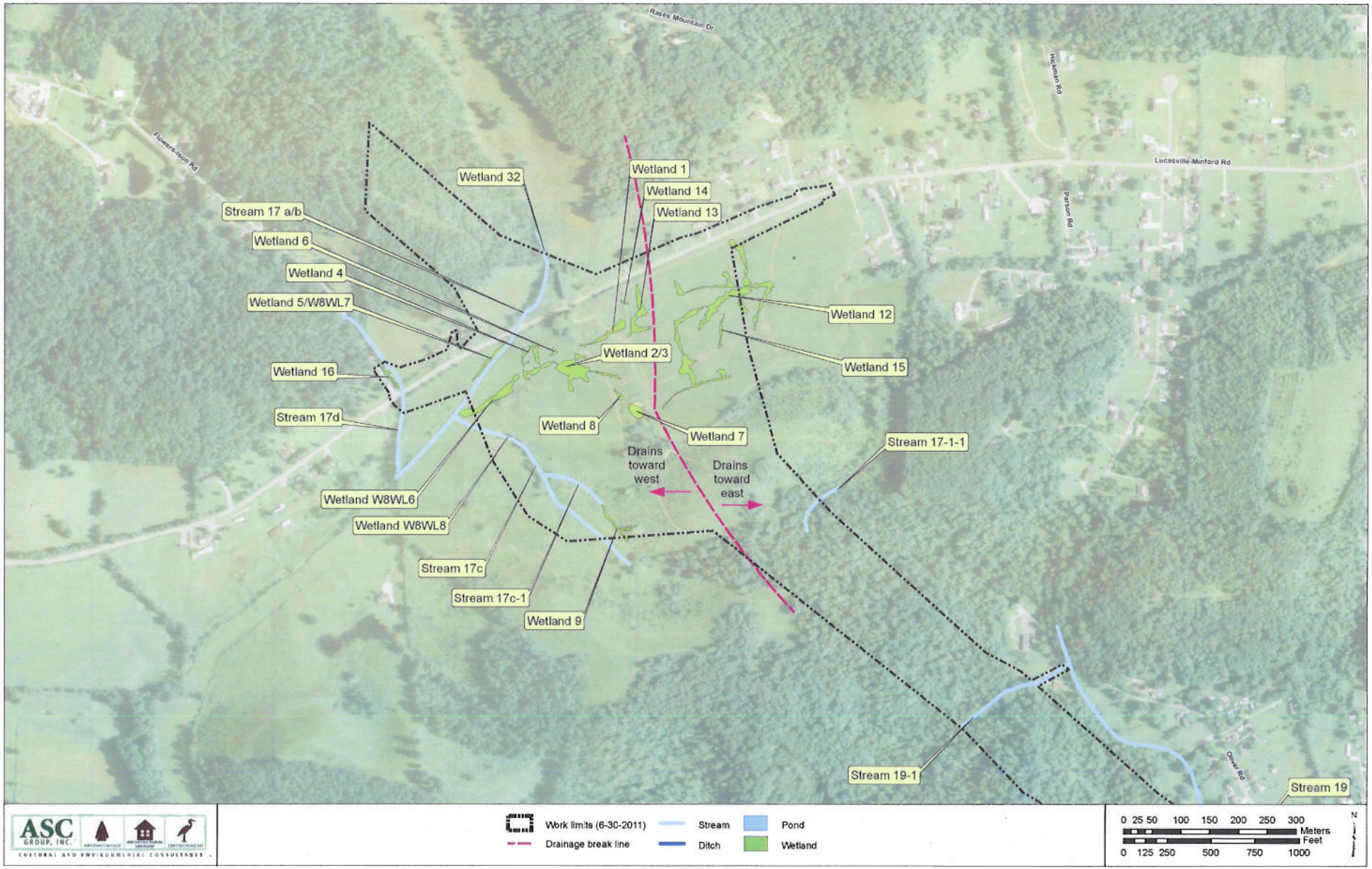


Figure 11. Survey results.

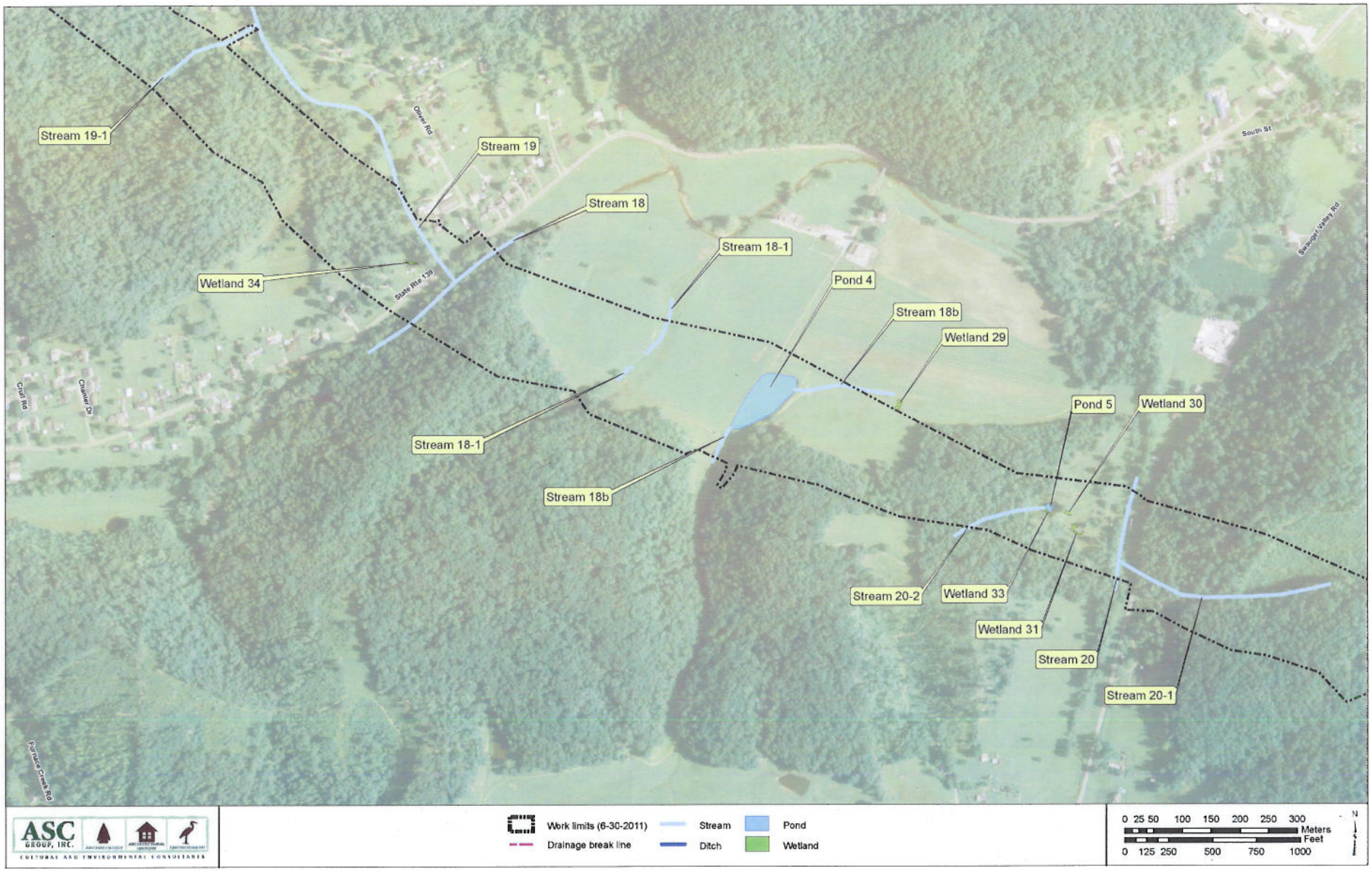


Figure 11. Survey results.

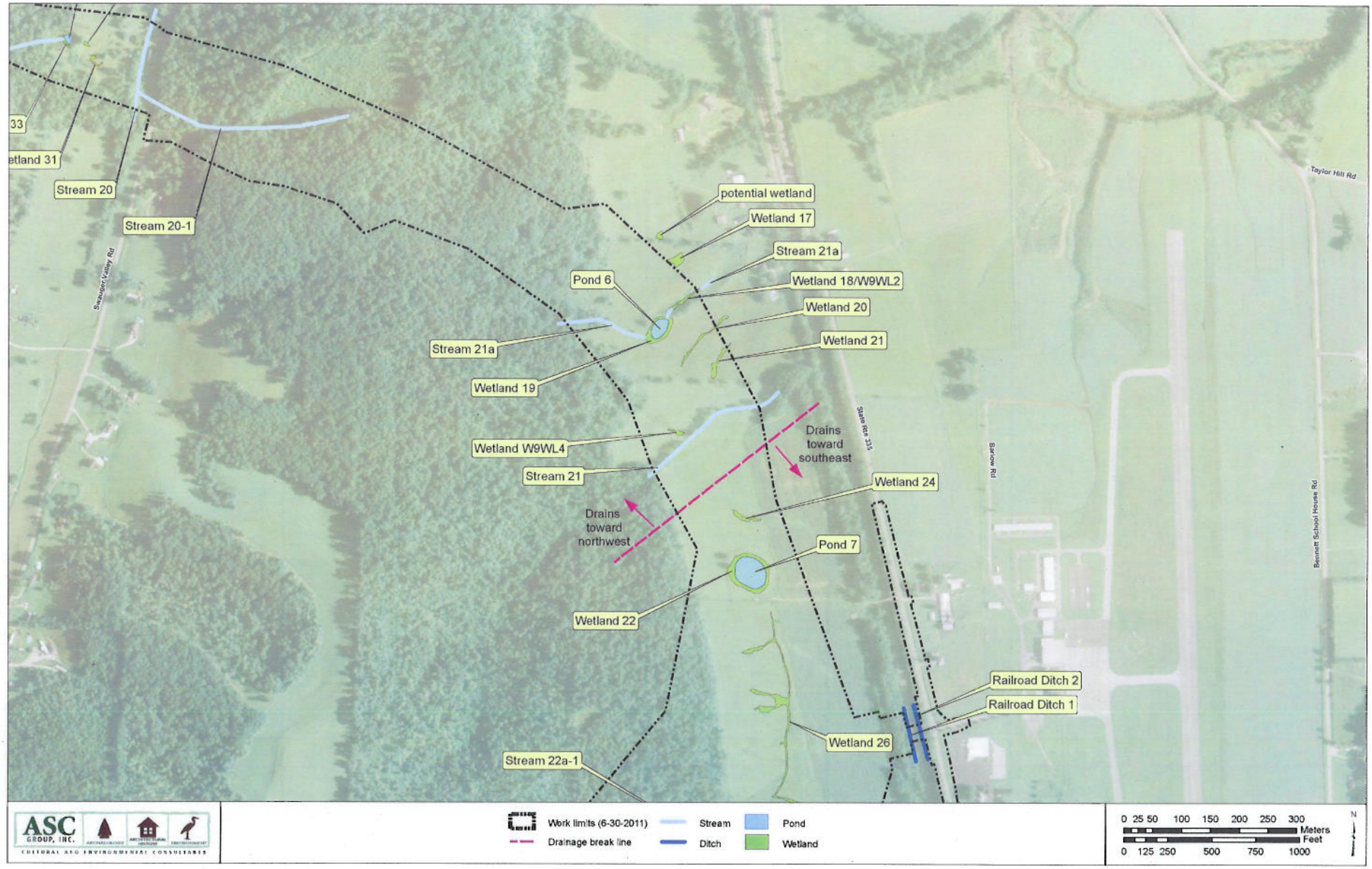


Figure 11. Survey results.

Figure 11. Survey results.

Figure 11. Survey results.

Appendix D: Mitigation Information

Stream Summary Table
Potential Stream Mitigation GE Facility.

Stream ID	Provisional Stream Class	QHEI Score	HHEI Score	Receiving Waters	Drainage Area (sq. mi.)	14-Digit HUC	Total Length within GE Property (ft)	Date Evaluated	Photograph(s)	Notes
Dunlap Creek	WWH	70.5*	N/A	Scioto-Brush Creek	4.30	05060002-150-050	3,162	12/6/2010	1, 2	*WWH in OAC 3745-1-09. QHEI Score form OEPA Scioto Brush Creek 2006 Biological Study.
2	Class II	N/A	62	Dunlap Creek	<0.10	05060002-150-050	430	4/6/2011	12	Stream originates in meadow area associated with an abandoned beaver pond.
3	Class II	N/A	46	Dunlap Creek	<0.10	05060002-150-050	780	12/6/2010	13	Stream originates in meadow area associated with an abandoned beaver pond.
4	Class II	N/A	55	Dunlap Creek	<0.10	05060002-150-050	97	12/7/2010	14	Stream originates in meadow area associated with an abandoned beaver pond.
1	Class III	N/A	73	Dunlap Creek	0.80	05060002-150-050	7,514	12/6/2010	3, 4	Appears to be an interstitial perennial stream.
1A	Class II	N/A	65	Dunlap Creek	0.08	05060002-150-050	482	12/6/2010	5	
1B	Class II	N/A	51	Dunlap Creek	0.07	05060002-150-050	501	12/6/2010	6	
1C	Class III	N/A	82	Dunlap Creek	0.17	05060002-150-050	2,418	12/6/2010	7, 8	Headwaters originate from impoundment, likely providing a perennial headwater source.
1D	Class II	N/A	49	Dunlap Creek	<0.10	05060002-150-050	333	12/8/2010	9	
1E	Class II	N/A	38	Dunlap Creek	<0.10	05060002-150-050	619	12/8/2010	10, 11	
5	Class II	N/A	46	Dunlap Creek	0.26	05060002-150-050	3,146	12/8/2010	15, 16	
5A	Class II	N/A	37	Dunlap Creek	<0.10	05060002-150-050	625	12/8/2010	17, 18	
5B	Class II	N/A	48	Dunlap Creek	<0.10	05060002-150-050	523	12/8/2010	19, 20	
6	Class III	N/A	77	Dunlap Creek	0.27	05060002-150-050	3,754	3/29/2011	21 - 24	Three adult southern 2-lined salamanders and one cranefly larvae found within the channel. Likely perennial.
6A	Class II	N/A	50	Dunlap Creek	<0.10	05060002-150-050	724	3/29/2011	26, 27	
6B	Class I	N/A	22	Dunlap Creek	<0.10	05060002-150-050	194	3/29/2011	28, 29	Red backed lead phase salamander found in wetted stream width.
6C	Class II	N/A	66	Dunlap Creek	<0.10	05060002-150-050	259	3/29/2011	30, 31	
7	Class III	N/A	75/72	Dunlap Creek	0.20	05060002-150-050	3,926	4/6/2011	32 - 36	Likely a perennial stream.
7A	Class III	N/A	77	Dunlap Creek	0.09	05060002-150-050	1,708	4/6/2011	38, 42, 43	Two unidentified adult frogs. May or may not be perennial.
7B	Class III	N/A	71	Dunlap Creek	<0.10	05060002-150-050	1,281	4/6/2011	37, 39 - 41	Pickerel frogs, red spotted newts, tadpoles found in impounded portion of the stream. Likely perennial due to impoundment.
7C	Class II	N/A	67	Dunlap Creek	<0.10	05060002-150-050	3,492	4/6/2011	44, 45	
7D	Class II	N/A	35	Dunlap Creek	<0.10	05060002-150-050	162	4/7/2011	47, 48	
7E	Class II	N/A	47	Dunlap Creek	<0.10	05060002-150-050	197	4/7/2011	46, 49, 50	
7F	Class II	N/A	68	Dunlap Creek	0.14	05060002-150-050	3,540	4/7/2011	51, 52	Unidentified adult frog observed.
8	Class III	N/A	77	Dry Fork	0.16	05060002-140-040	1,916	4/7/2011	53, 54	Not likely a perennial stream, green frog observed.
8A	Class II	N/A	59	Dry Fork	<0.10	05060002-140-040	681	4/7/2011	55, 56	
9	WWH	75.5	N/A	Beech Fork	0.33	05060002-140-050	4,207	4/13/2011	57, 58	Deep pools warranted a QHEI evaluation. Unidentified adult frogs observed in stream.
9A	Class II	N/A	45	Beech Fork	<0.10	05060002-140-050	418	4/13/2011	59, 60	
9B	Class II	N/A	53	Beech Fork	<0.10	05060002-140-050	1,369	4/13/2011	61, 62	
9B2	Class II	N/A	53*	Beech Fork	<0.10	05060002-140-050	236	4/13/2011	N/A	*Included with Stream 9B HHEI assessment.
9C	Class II	N/A	38	Beech Fork	<0.10	05060002-140-050	188	4/13/2011	63, 64	
9D	Class II	N/A	48	Beech Fork	<0.10	05060002-140-050	191	4/13/2011	65, 66	
9E	Class II	N/A	59	Beech Fork	<0.10	05060002-140-050	1,070	4/13/2011	67, 68	
9F	Class III	N/A	71	Beech Fork	0.07	05060002-140-050	1,667	4/13/2011	69, 70	Not likely a perennial stream.
9G	Class II	N/A	68	Beech Fork	<0.10	05060002-140-050	611	4/13/2011	71, 72	
9H	Class II	N/A	67	Beech Fork	<0.10	05060002-140-050	1,253	4/13/2011	73, 74	
9I	Class II	N/A	63	Beech Fork	<0.10	05060002-140-050	961	4/13/2011	75, 76	
9J	Class II	N/A	67	Beech Fork	<0.10	05060002-140-050	269	4/13/2011	77, 78	

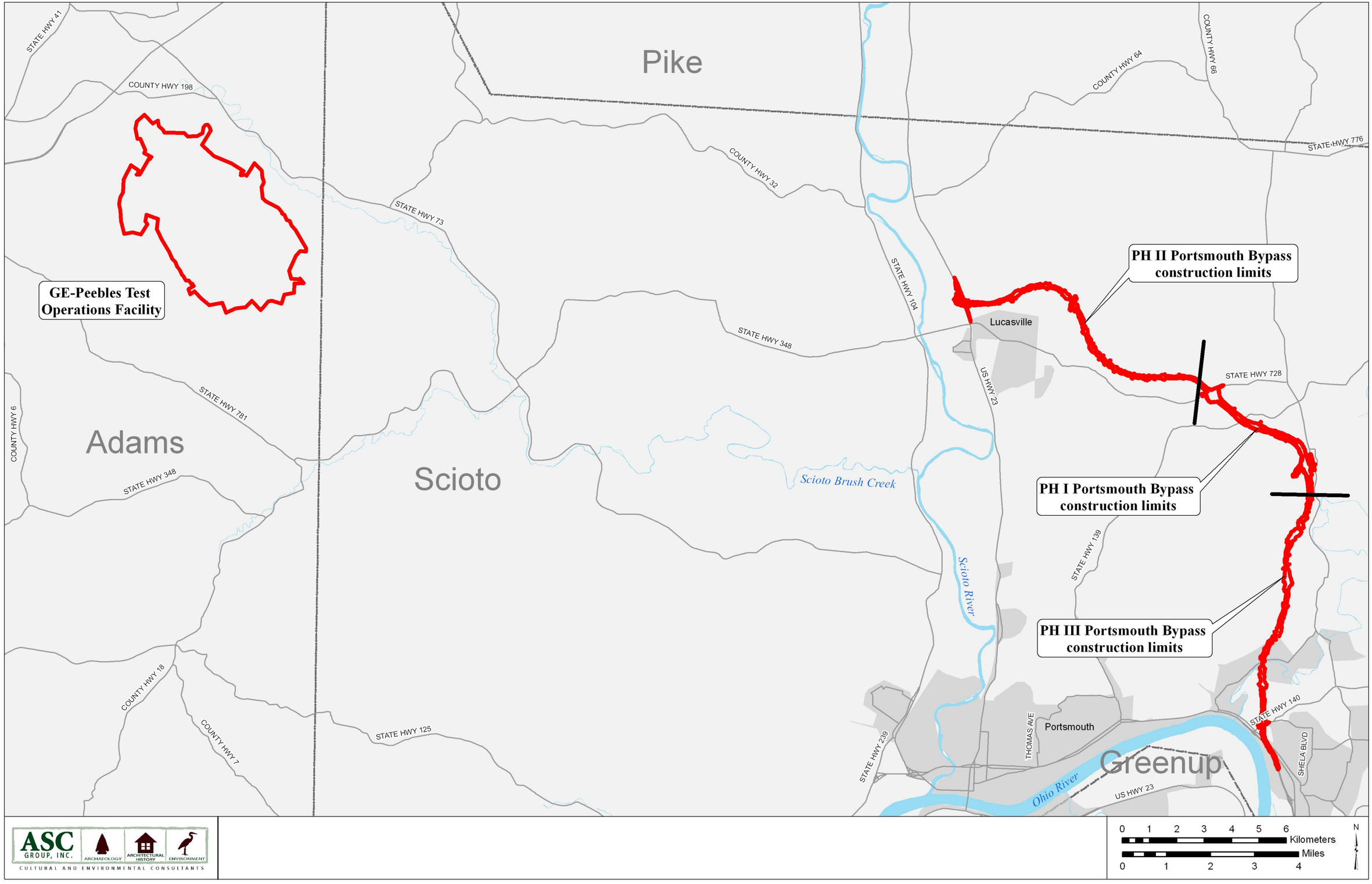


Figure 1. Overview.

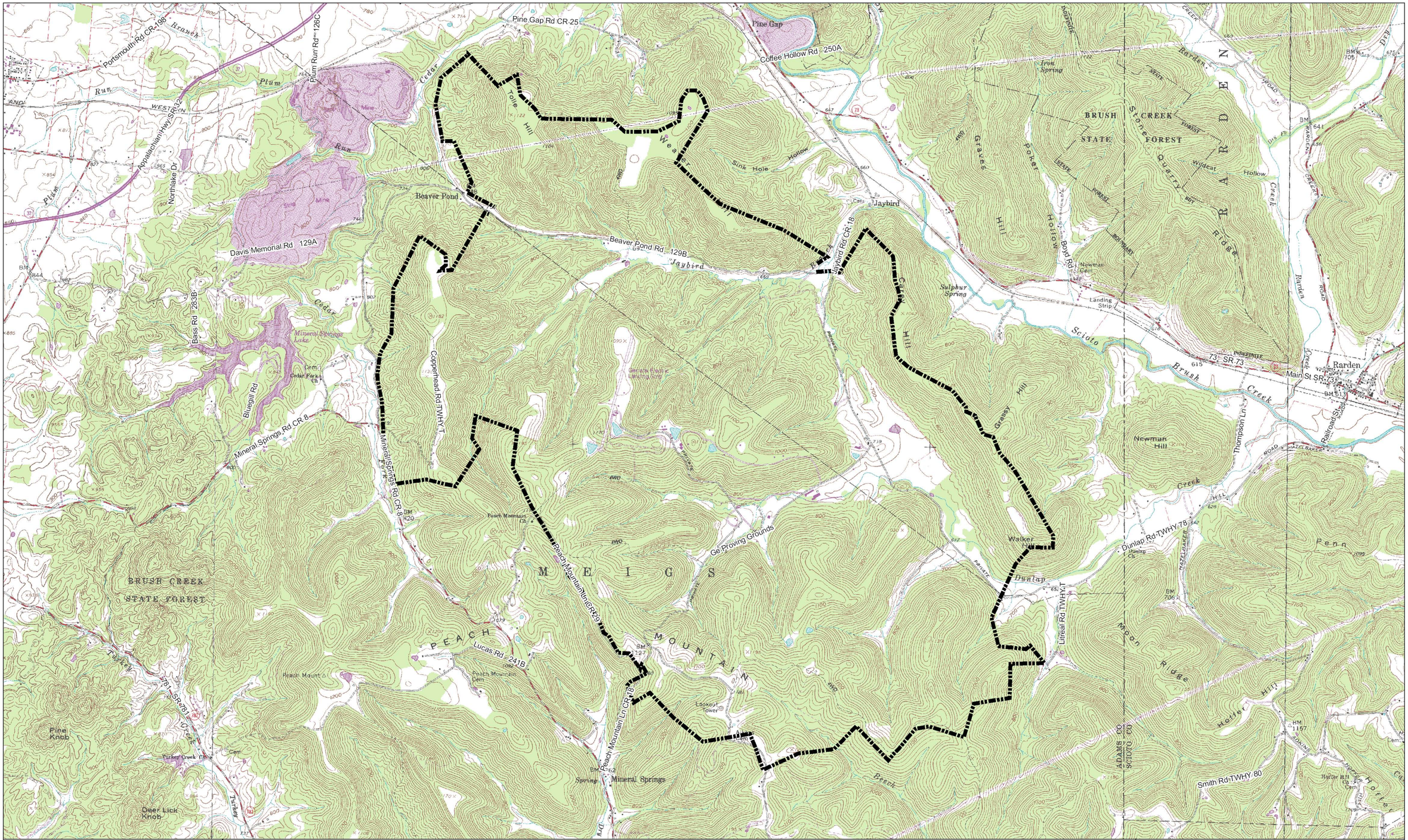
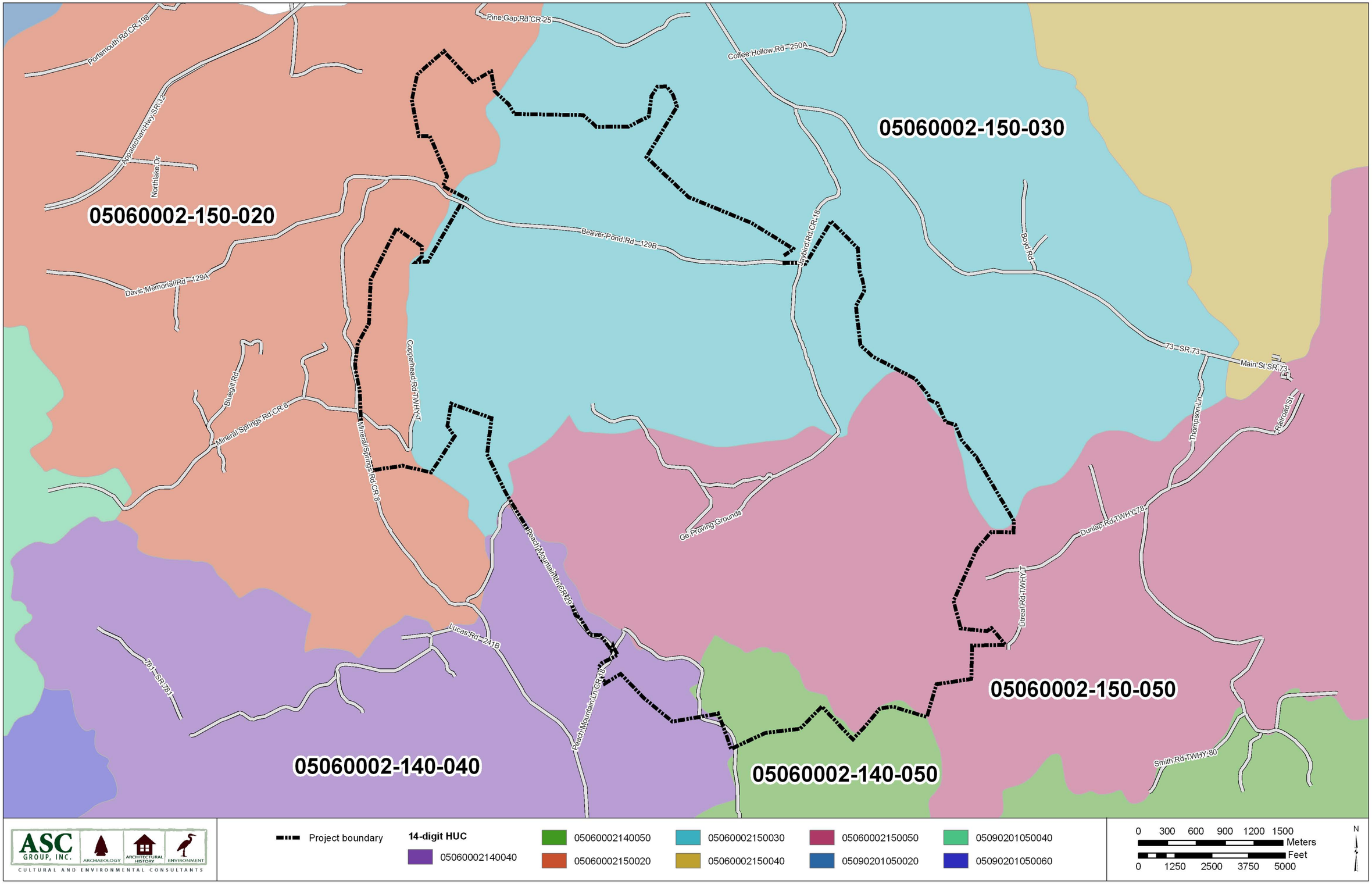


Figure 2. USGS 7.5' topographic map.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Pine Gap Rd CR-25
Coffee Hollow Rd 250A
Appalachian Hwy SR-32
Northlake Dr
05060002-150-020
05060002-150-030
Beaver Pond Rd 129B
Davis Memorial Rd 129A
Boyd Rd
Hybird Rd CR-18
73 SR 73
Main St SR 73
Bluegill Rd
Mineral Springs Rd CR 8
Copperhead Rd TWHY 1
Mineral Springs Rd CR 8
Thompson Ln
Railroad St
Ge Proving Grounds
Dunlap Rd TWHY 78
Peach Mountain Ln CR 26
Litreal Rd TWHY 1
Lucas Rd 241B
781 SR 781
Peach Mountain Ln CR 26
05060002-150-050
Smith Rd TWHY 80
05060002-140-040
05060002-140-050
ASC GROUP, INC.
ARCHAEOLOGY
ARCHITECTURAL HISTORY
ENVIRONMENT
CULTURAL AND ENVIRONMENTAL CONSULTANTS
Project boundary
14-digit HUC
05060002140040
05060002140050
05060002150020
05060002150030
05060002150040
05060002150050
05090201050020
05090201050040
05090201050060
0 300 600 900 1200 1500
Meters
0 1250 2500 3750 5000
Feet
N

Figure 3. HUC.

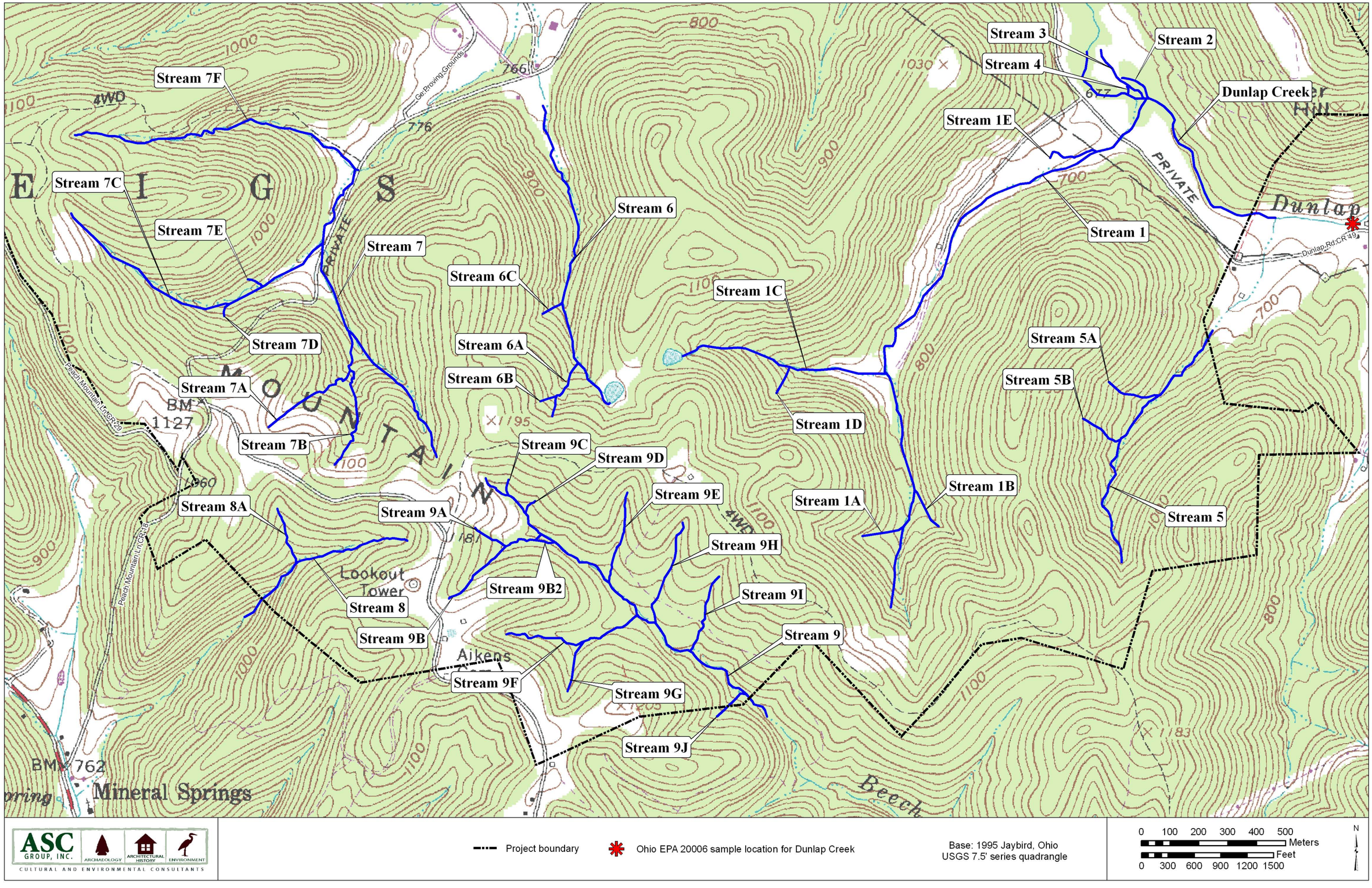


Figure 4. USGS 7.5' topographic map.

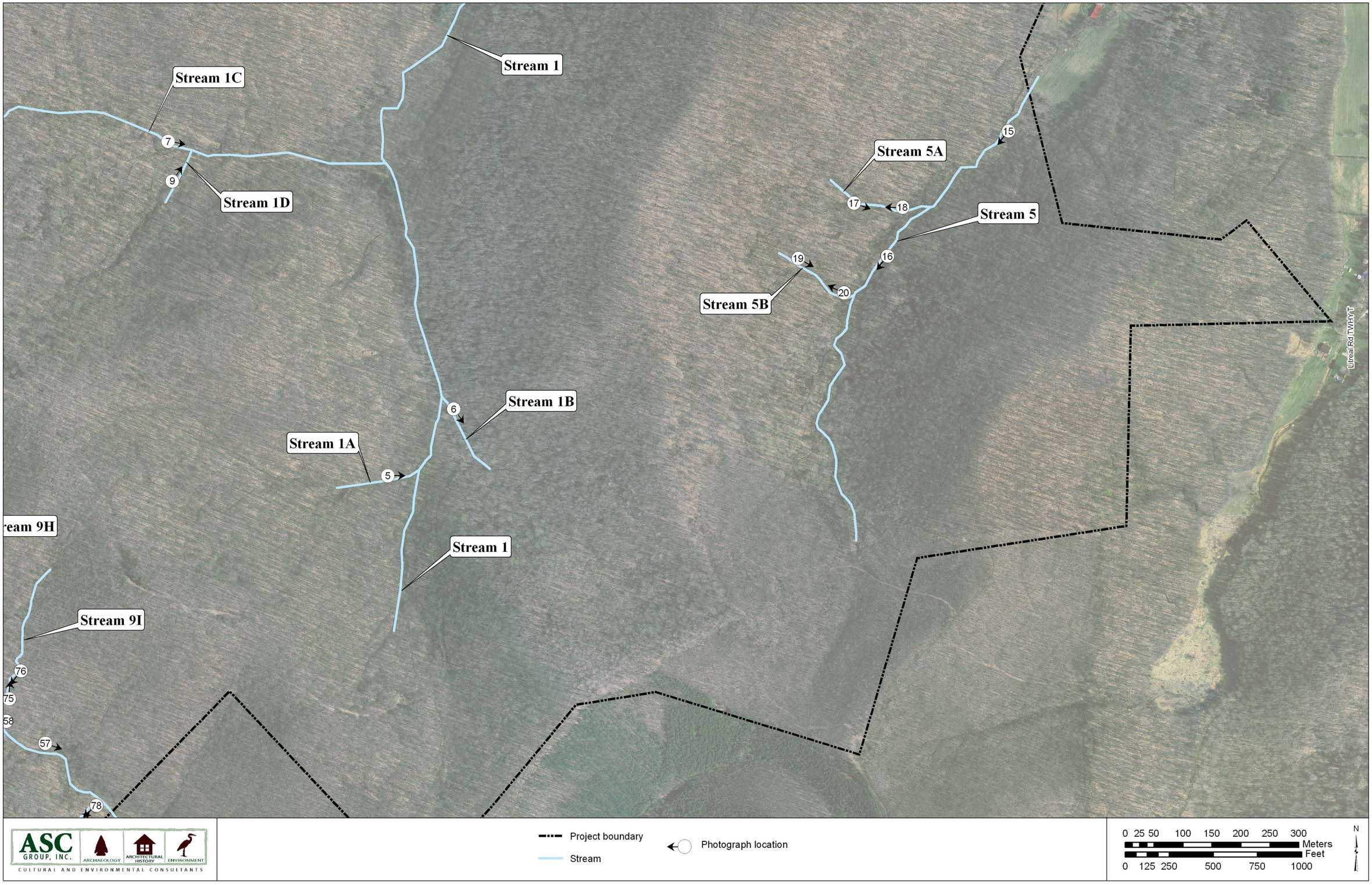
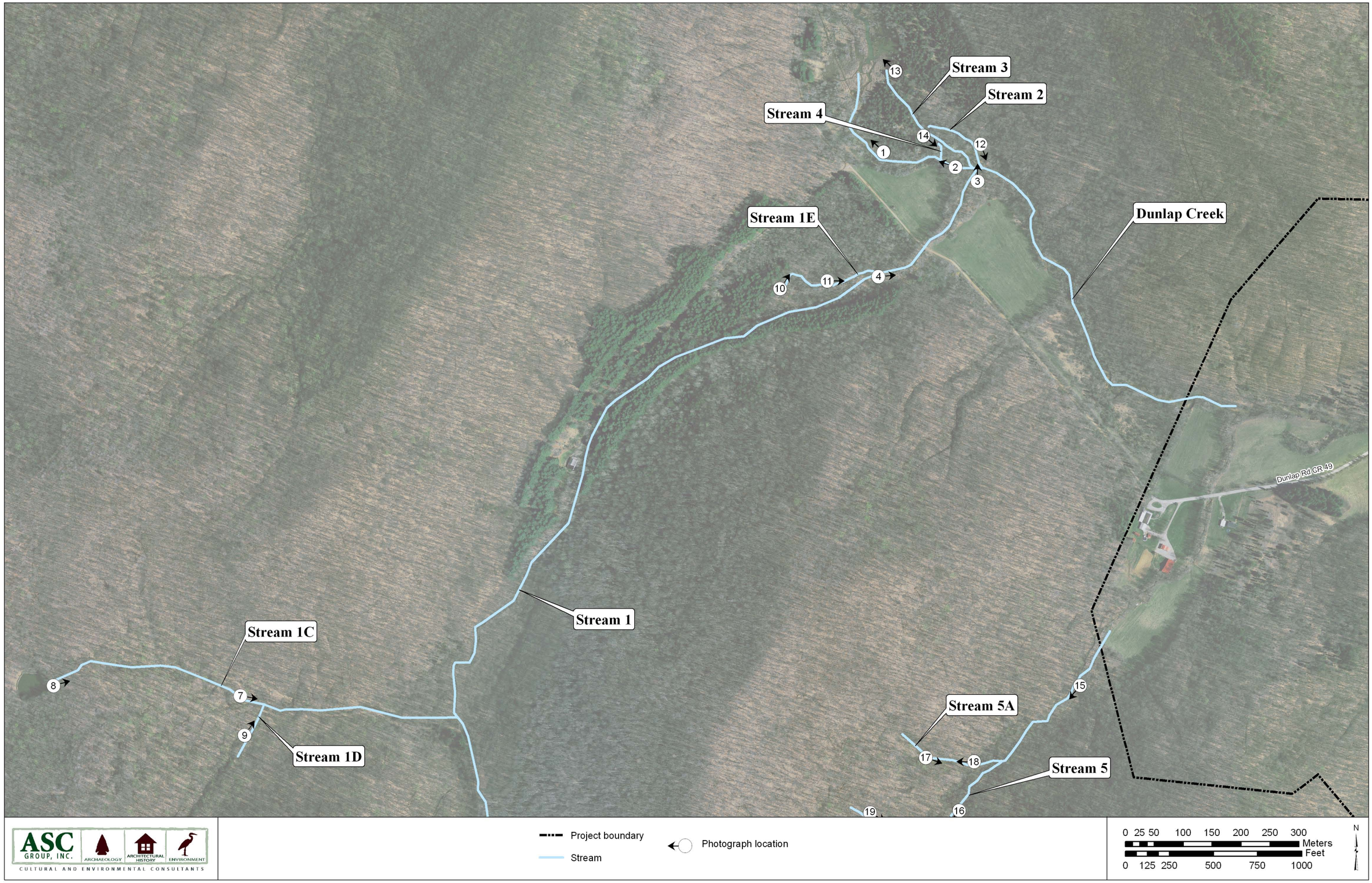


Figure 5. Survey results.



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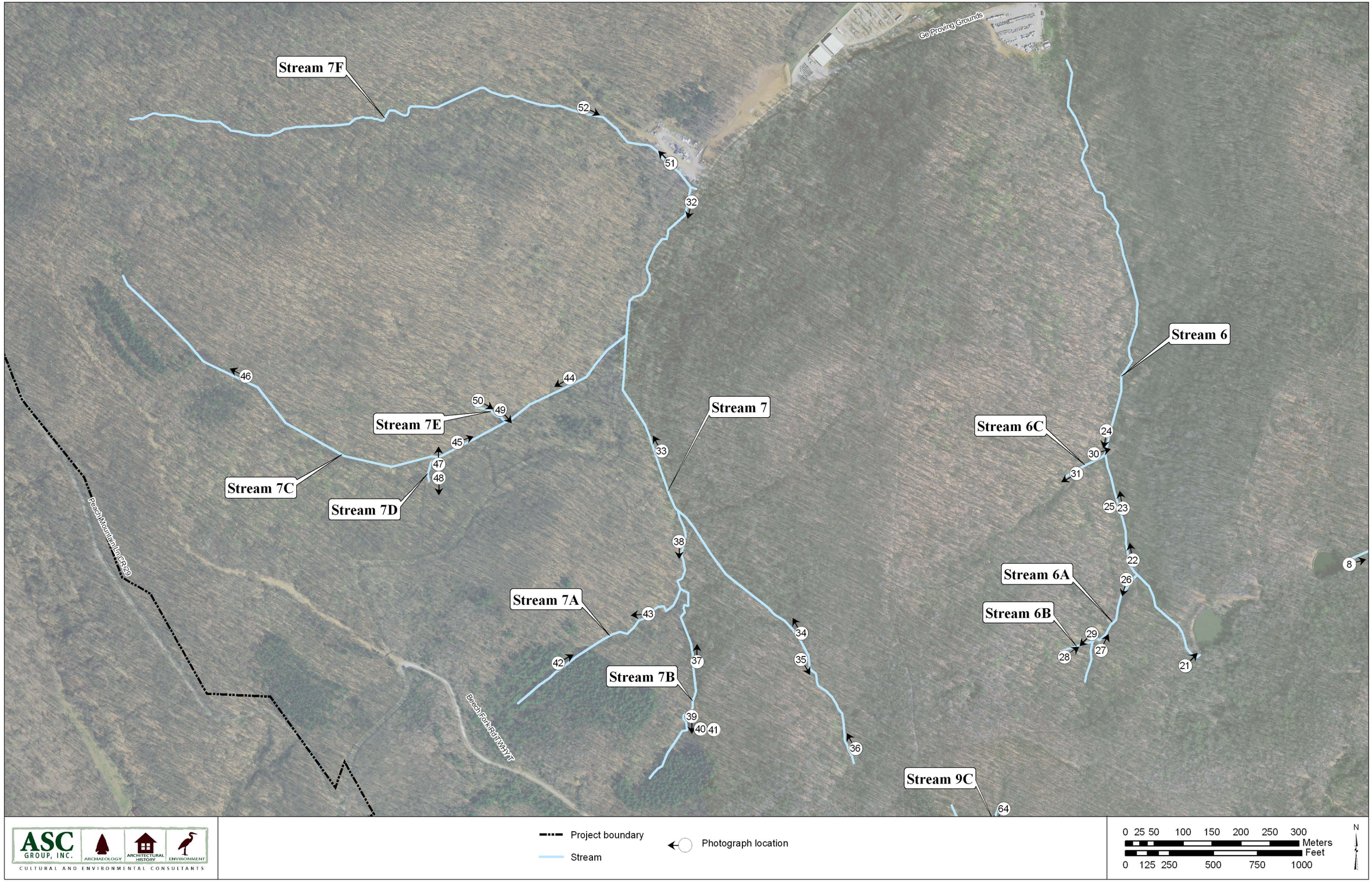

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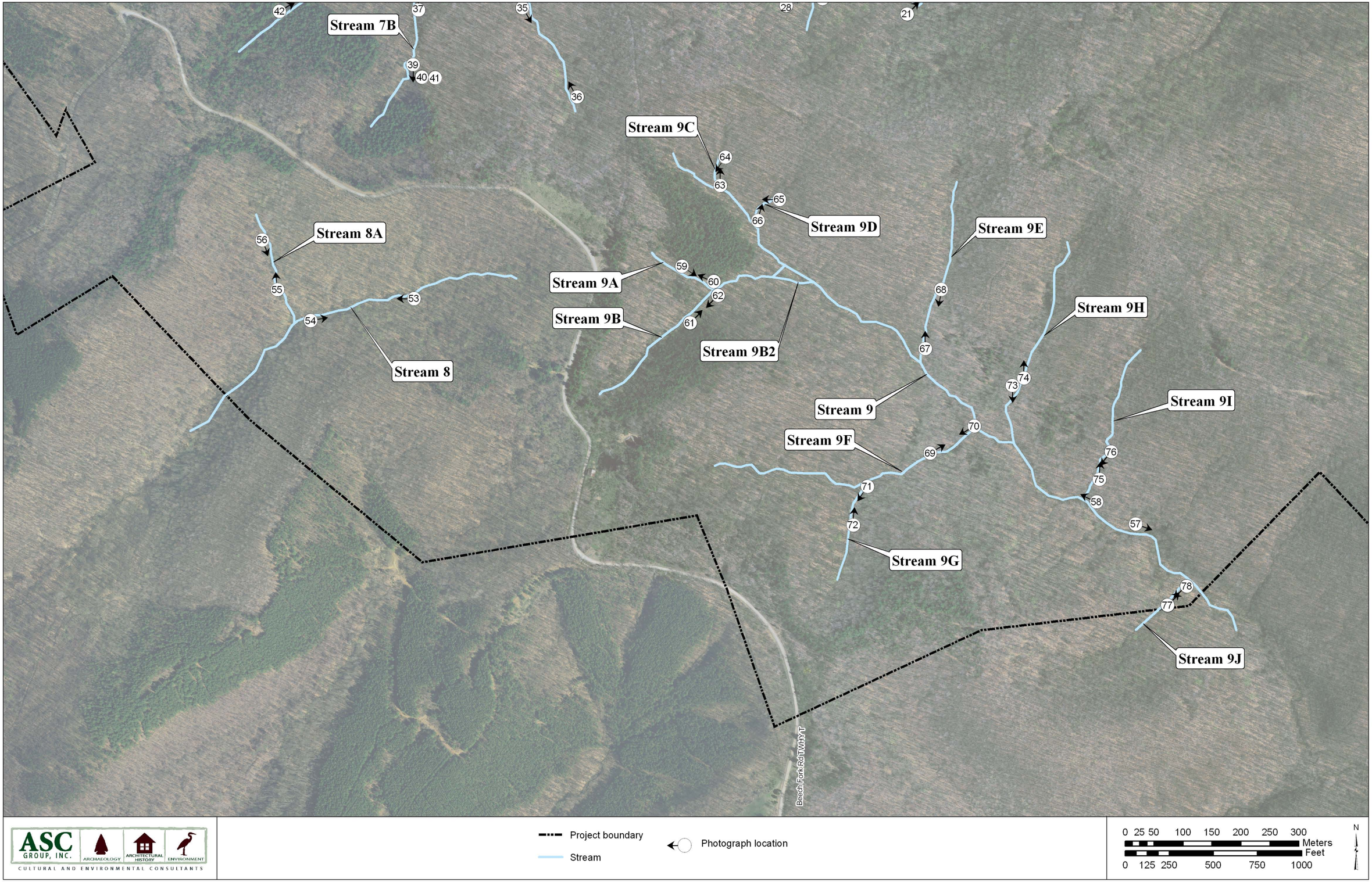


Figure 5. Survey results.

BALANCE SHEET-REMAINING ODOT WETLAND MITIGATION CREDITS

LITTLE SCIOTO POOLED WETLAND MITIGATION AREA
(WETLANDS RESOURCE CENTER)
MARION COUNTY, OHIO

LATEST REVISION - 05/20/11 (*ORIGINAL PURCHASE = 50 ACRES WETLAND CREDITS, SIGNED AGREEMENT ON JULY 31,2006)

Project (CRS) PID	USACE ID NO. OEPA ID NO.	Wetland Impact (ac)	Mitigation Required (ac)	Balance (ac)
UNI-739-0.61 (PID 81482)	LRH-2007-482 073234	0.33 ac adj. 0.07 ac isol.	0.815	49.185
TUS-212-6.90 (PID 76010)	2009-00744-TUS	0.09	0.14	49.045
FRA-270-24.14 (PID 81737)	2009-003100-OLR 093529	0.012	0.018	49.027
MAR-13B-1.63 (PID 81143)	2008-00894-SCR	0.174	0.33	48.697
FRA-3-24.48 (PID 76279)	SWIMS 113745	0.04 (isol.)	0.08	48.617

PID 8149

Wetlands Resource Center
3970 Bowen Road
Canal Winchester, Ohio 43110

October 9, 2006

Mr. Mike Pettegrew
Ohio Department of Transportation
Office of Environmental Services
P.O. Box 899
Columbus, Ohio 43216

Dear Mr. Pettigrew:

Please allow this letter to serve as confirmation that the Ohio Department of Transportation has purchased 50 wetland mitigation credits from Wetlands Resource Center's Little Scioto wetland mitigation bank.

We have subtracted the 50 credits from our available credit list and will show this sale in our accounting table which is scheduled to be submitted to the Ohio EPA and the U.S. Army Corp of Engineers in December of this year.

After your review should you have any questions please feel free to give me a call at (614)864-7511.

Thank you,

Cal Miller
Managing Member

PID 81489

OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

BOB TAFT, OHIO GOVERNOR • GORDON PROCTOR, ODOT DIRECTOR

PID: 81489

August 1, 2006

Mr. Cal Miller
Wetlands Resource Center
3970 Bowen Road
Canal Winchester, Ohio 43110

Dear Mr. Miller:

Enclosed is a signed copy of the Wetland Mitigation Agreement for you to provide 50 wetland mitigation credits for transportation projects throughout the state. Please work directly with Mike Pettegrew with the Office of Environmental Services regarding the use of these mitigation credits.

ODOT will process a purchase order for $800,000 and send you a copy for your files. Once you receive the purchase order, you may invoice us for the entire amount. If you have any questions regarding this transaction, please contact me at 614-466-1484.

Respectfully,

Valerie Norris

Valerie Norris
Administrative Assistant
Office of Environmental Services

ven
c: M. Pettegrew w/attachment

WETLAND MITIGATION AGREEMENT

Agreement #14049

This agreement is entered into by and between the WETLANDS RESOURCE CENTER LLC (WRC), having its principal place of business at 3970 Bowen Road, Canal Winchester, Ohio 43110 and the State of Ohio, Department of Transportation (ODOT), having its principal place of business at 1980 West Broad Street, Columbus, Ohio 43223.

1. PURPOSE

1.1 The discharge of dredged or fill material into waters of the United States, including wetlands, is regulated pursuant to Sections 404 and 401 of the Clean Water Act and by Ohio's Isolated Wetland Law. Entities planning to place dredged or fill material into waters of the United States, including wetlands, must comply with standards and conditions imposed by the Army Corps of Engineers (the "Corps") and Ohio EPA (OEPA) including, in many cases, the mitigation of wetland impacts. Efforts to restore and/or enhance wetlands are often most successful when directed toward the establishment of large, varied wetland ecosystems rather than small, isolated wetlands which are often threatened by urban encroachment.

1.2 WRC has applied to, and received approval from, the Corps and other regulatory agency members of the Mitigation Banking Review Team ("MBRT") to preserve, restore, and enhance wetland ecosystems at its Little Scioto Wetlands Mitigation Bank ("Little Scioto"),located in Marion County, Ohio. WRC will, at its cost, design, build, and maintain a wetland habitat in accordance with the Final Mitigation Plan as approved by the Corps and the MBRT. WRC is willing to provide mitigation credit opportunities to entities to fulfill their obligations to mitigate wetland impacts as required under Section 404 of the Clean Water Act, and Section 401 of the Clean Water Act (including Ohio EPA's Wetland Water Quality Standards), and Ohio's Isolated Wetland Law.

1.3 ODOT is required under Section 404 of the Clean Water Act, Section 401 of the Clean Water Act (including Ohio EPA's Wetland Water Quality Standards), and Ohio's Isolated Wetland Law to mitigate wetland impacts for its projects located within the Corps' Ohio jurisdictional area.

1.4 Section 5501.31 of the Ohio Revised Code authorizes ODOT to purchase property to replace wetlands impacted by its highway projects, and in lieu of the direct purchase of land, ODOT desires to utilize WRC's program by purchasing mitigation credits, which would not require ODOT to hold any interest in real property yet otherwise would fulfill its legal obligations to mitigate wetlands impacts. WRC is willing to cooperate with ODOT in the purchase of necessary mitigation credits from its available site in order to fulfill ODOT's wetland mitigation requirements.

1.5 ODOT has offered to purchase mitigation credits at the Little Scioto bank from WRC and WRC has agreed to sell to ODOT a certain number of mitigation credits to be used toward the mitigation of future wetland impacts from ODOT projects. This agreement shall set forth the terms and conditions of this purchase.

2. OBLIGATIONS OF ODOT

2.1 ODOT agrees to purchase a total of 50 mitigation credits at the Little Scioto bank from WRC and to pay WRC the amount of Eight Hundred Thousand Dollars ($800,000) for such credits. Payment shall be made within thirty (30) days of the execution of this Agreement by all parties, pending approval of expenditure of funds by the Controlling Board of the State of Ohio as outlined is Section 4.2. Upon such payment, WRC shall reserve the number of credits for ODOT's use.

2.2 ODOT anticipates utilizing the credits on current and future projects which require wetland mitigation on a case by case basis with Corps and OEPA approval through the permitting process. ODOT will utilize the 50 credits as mitigation until there is a zero balance, for as many years as that may take. For each project, ODOT shall submit a Section 404 Permit application indicating the number of credits needed to mitigate wetland impacts as appropriate to its project. ODOT will notify WRC of the minimum number of wetland mitigation credits needed for each project in order to mitigate for the impact on wetland resources in order to meet the requirements of Sections 404/401 of the Clean Water Act, and the regulations promulgated thereunder. WRC shall deduct that number of credits from ODOT's total purchase.

2.3 ODOT and WRC are aware that the Section 404, 401, and/or isolated wetland permit process must be completed by the CORPS and/or OEPA and that this Wetland Mitigation Agreement will be used by the respective agencies to document ODOT's mitigation plan. Upon issuance of appropriate permit approval(s) to proceed with the wetland impacts, ODOT will provide WRC with a copy of the permit approval(s) to proceed and/or a balance sheet indicating the credits utilized as mitigation for a respective project. Upon receipt of the permit, WRC will issue a "Certificate of Withdrawal" indicating the actual number of credits withdrawn, in order for ODOT to commence its regulated activity.

2.4 ODOT may submit the executed copy of this agreement to the CORPS and Ohio EPA to document its commitment to mitigate anticipated wetland impacts.

2.5 ODOT shall have no other obligation or responsibility for future payments for maintenance of the restored, enhanced, or preserved wetland areas.

3. OBLIGATIONS OF WETLANDS RESOURCE CENTER

3.1 WRC has entered into a Mitigation Bank Review Team Agreement ("MBRT Agreement") dated 10/19/98, which documents the approval of the design and operation of the Little Scioto. WRC will implement and operate the Little Scioto in accordance with the MBRT Agreement.

3.2 In consideration of the payment by ODOT to reserve the wetland mitigation credits, WRC hereby agrees to reserve said credits from the Little Scioto for ODOT's use in perpetuity. Upon notice of the issuance of the permit, WRC shall have sole responsibility to provide for the restoration, enhancement, or preservation, and the monitoring and maintenance of the wetlands as provided herein and in the MBRT Agreement.

3.3 WRC will provide confirmation to the CORPS and other regulatory agency members of the MBRT on the restoration, enhancement, or preservation of the wetlands created on behalf of ODOT. The confirmation will identify the acres of wetlands restored, enhanced, or preserved pursuant to this Agreement. In addition, the CORPS will be supplied with acceptable annual monitoring reports for a minimum of five (5) years, unless the MBRT reduces this period, documenting the continued viability of these wetlands.

4. GENERAL PROVISIONS

4.1 All fiscal obligations of ODOT shall commence on the date of the last signature hereto and shall expire on June 30, 2007. However, all obligations regarding ODOT's use of the mitigation credits and WRC's obligations set forth in Sections 2 and 3 of this Agreement and the MBRT Agreement shall survive the expiration of the fiscal obligations and shall remain in effect until terminated by mutual agreement of both parties.

4.2 It is expressly understood by the parties that none of the rights, duties, and obligations described

in this Agreement shall be binding on either party until all statutory provisions under the Ohio Revised Code, including but not limited to Section 126.07, have been complied with and until such time as all necessary funds are made available and forthcoming from the appropriate state agencies, and, when required, such expenditure of funds is approved by the General Assembly and by the Controlling Board of the State of Ohio or, in the event that federal funds are used, until such time that the State gives WRC written notice that such funds have been made available to the State, by the State's funding source.

4.3 WRC affirms that, as applicable, no party listed in Division (I) or (J) of Section 3517.13 of the Revised Code or spouse of such party has made, as an individual, within the two previous years, one or more contributions totaling in excess of $1,000.00 to the Governor of Ohio or to the Governor's campaign committees.

4.4 WRC agrees to adhere to the requirements of Ohio Ethics Law as provided by Chapter 102 of the Ohio Revised Code.

4.5 Either party may, at any time during the term of this Agreement, request amendments or modifications. Requests for amendments or modifications shall be in writing and shall specify the requested changes and the justifications of such changes. Should the parties consent to modification of the Agreement, then an amendment shall be drawn, approved, and executed in the same manner as the original Agreement.

4.6 Neither this Agreement nor any rights, duties, or obligations described herein shall be assigned by either party hereto without the prior express written consent of the other party.

4.7 This Agreement and any claims arising out of this Agreement shall be governed by the laws of the State of Ohio. Any provision of this Agreement prohibited by the law of Ohio shall be deemed void and of no effect. Any litigation arising out of or relating in any way to this Agreement or the performance thereunder shall be brought only in the courts of Ohio, and WPL hereby irrevocably consents to such jurisdiction. To the extent that the State is a party to any litigation arising out of or relating in any way to this Agreement or the performance thereunder, such an action shall be brought only in a court of competent jurisdiction in Franklin County, Ohio.

4.8 All notices under this Agreement must be in writing and shall be deemed validly given if sent by overnight delivery or regular certified mail, return receipt requested, effective the third day following the date the notice is postmarked. Notices should be addressed as follows:

ODOT: Ohio Department of Transportation
Office of Environmental Services
1980 West Broad Street
Columbus, Ohio 43215
Attention: Michael Pettegrew
Telephone: 614-466-7102

WRC: Wetlands Resource Center
3970 Bowen Road
Canal Winchester, Ohio 43110
Attention: Cal Miller
Telephone: 614 327-7034

Either party may change the designated recipient of notices and the address by so notifying the other party in writing.

4.9 WRC shall indemnify and hold harmless ODOT for any and all claims, damages, lawsuits, costs, judgments, expenses or any other liabilities which arise as a result of the services performed by

the WRC or its employees or agents which is in any way connected with, or based upon the creation/ restoration/ enhancement and the monitoring and maintenance of its wetlands.

4.10 This Agreement entered into hereunder constitute the entire agreement of the parties and shall supersede any prior or contemporaneous agreements or negotiations, whether written or oral, between the parties, regarding the subject matter herein.

4.11 Nothing in this Agreement entered into hereunder is intended to create any rights in any third parties.

4.12 Any person executing this Agreement in a representative capacity hereby warrants that he/she has been duly authorized by his/her principal to execute this Agreement on such principal's behalf.

WETLANDS RESOURCE CENTER LLC

By: _____

Its: Managing Member

Date 4/24/06

STATE OF OHIO,
Department of Transportation

By: Gordon Proctor/cp
GORDON PROCTOR
Director

Date July 31, 2006

Appendix E: Land Owner Information

Adjacent Property Owners
Phase 1 of the Portsmouth Bypass
SCI-823-0.00 (PID 19415)

Auditor's Parcel No.	Property Owner	Property Owner Mailing Address
07-0017.000	Patricia Adams	6000 Swauger Valley Rd., Portsmouth, OH 45662
07-0098.000	Mechanical Construction Co Inc	2302 8th St, Portsmouth, Oh 45662
07-0098.002	Paul Faulkner	769 Shumway Hollow Rd, Portsmouth, OH 45662
07-0164.000	Adam & Donafaye Brigner, Trustees of the Brigner Family Trust	6209 Swauger Valley Rd., Portsmouth, OH 45662
07-0212.000	Daniel and Donna Caudill	10260 St Rt 139, Minford, OH 45653
07-0276.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-0296.000	Dorothy Janice Pfeifer	5715 County Rd 28, Edison, OH 43320
07-0324.000	Della Adkins	204 Crull Rd, Minford, OH 45653
07-0361.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-0401.000	Kenneth Wymer	8832 St Rt 139, Minford, OH 45653
07-0484.000	Timothy Burton	625 Hillcrest Ct, Whellersburg, OH 45694
07-0506.000	Wayne G. & Irmalee Gampp	7338 S.R. 335, Portsmouth, OH 45662
07-0507.000	Wayne G. & Irmalee Gampp	7338 S.R. 335, Portsmouth, OH 45662
07-0614.001	Sarah and Jeffery Johnson	6303 Swauger Valley, Portsmouth, OH 45662
07-0749.000	ODOT	PO Box 899, Columbus, OH 43216
07-0750.000	ODOT	PO Box 899, Columbus, OH 43216
07-0798.000	Gertrude B. McKenzie, Trustee of Gertrude B. McKenzie Revocable Trust	7570 S.R. 335, Portsmouth, OH 45662
07-0800.000	Gwen Lester	7956 State Route 335, Portsmouth, OH 45662
07-0801.000	Gertrude B. McKenzie, Trustee of Gertrude B. McKenzie Revocable Trust	7570 S.R. 335, Portsmouth, OH 45662
07-0802.000	Donna and Jack Lester	7956 S.R. 335, Portsmouth, OH 45662
07-0803.000	Gertrude B. McKenzie, Trustee of Gertrude B. McKenzie Revocable Trust	7570 S.R. 335, Portsmouth, OH 45662
07-0804.000	Gertrude B. McKenzie, Trustee of Gertrude B. McKenzie Revocable Trust	7570 S.R. 335, Portsmouth, OH 45662
07-0873.000	Richard Bobst	6703 S.R. 335, Portsmouth, OH 45662

Auditor's Parcel No.	Property Owner	Property Owner Mailing Address
07-0893.000	Everett A. Bennett, Jennifer Bentley, & Eric D. Bennett	680 Birch Hollow Rd., Portsmouth, OH 45662
07-0893.001	ODOT	505 S. State St, Lebanon, OH 45036
07-0893.002	Ohio Recreational Property	P.O. Box 160, Latham, OH 45646
07-0893.003	ODOT	505 S. State St, Lebanon, OH 45036
07-0969.000	Joseph & Crystal Preston	41 Oliver Rd., Minford, OH 45653
07-1055.000	Richard & Barbara Trowbridge	9309 S.R. 139, Minford, OH 45653
07-1056.000	Richard & Barbara Trowbridge	9309 S.R. 139, Minford, OH 45653
07-1057.000	Richard & Barbara Trowbridge	9309 S.R. 139, Minford, OH 45653
07-1062.000	Kevin Mark Powell	9251 S.R. 139, Minford, OH 45653
07-1063.000	Richard W. & Barbara J. Trowbridge	9309 S.R. 139, Minford, OH 45653
07-1063.001	Randall Powell	9225 St RT 139, Minford OH 45653
07-1063.002	Kenneth and Rhonda Powell	9189 St RT 139, Minford OH 45653
07-1064.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
07-1065.000	State of Ohio	1981 W. Broad St., Columbus, OH 43223
07-1065.001	State of Ohio	1980 W. Broad St., Columbus, OH 43223
07-1212.000	Carl and Phyliss Seidel	5471 Swauger Valley Rd, Portsmouth, OH 45662
07-1220.000	Carl and Sharon Shepherd	9224 St RT 139, Minford, OH 45653
07-1116.000	Ken Rase Real Estate, Inc.	612 6th St, Suite C, Portsmouth, OH 45662
07-1116.001	State of Ohio	1980 W. Broad St., Columbus, OH 43223
07-1166.000	David R. Samson	1336 Astoria Parkway, Catawba, NC 28609-884
07-1244.000	Macie Shumway	7322 S.R. 335, Portsmouth, OH 45662
07-1264.000	Charles Smith, Josh and Michael Conkel	6149 Swauger Valley Rd, Portsmouth, OH 45662
07-1334.000	Darren C. & Kimberly S. Jenkins	P.O. Box 16, Minford, OH 45653
07-1335.000	Darren C. & Kimberly S. Jenkins	P.O. Box 16, Minford, OH 45653
07-1338.000	Ruth Stone	96C Salem Road, Minford, OH 45653
07-1339.000	Wilbert and Ruth Stone	96C Salem Road, Minford, OH 45653
07-1374.000	Robert Trowbridge	9395 S.R. 139, Minford, OH 45653
07-1374.002	Richard & Barbara Trowbridge	9309 S.R. 139, Minford, OH 45653
07-1374.003	Richard W. & Barbara J. Trowbridge	9309 S.R. 139, Minford, OH 45653

Auditor's Parcel No.	Property Owner	Property Owner Mailing Address
07-1395.000	John and Patricia Ann Lester	293 Ridgeland Dr., Minford, OH 45653
07-1396.000	John and Patricia Ann Lester	293 Ridgeland Dr., Minford, OH 45653
07-1507.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1510.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1511.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1512.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1513.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1514.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1516.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1517.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1518.000	Kenneth R. Rase	612 6th St, Suite C, Portsmouth, OH 45662
07-1807.000	Joseph D. & Beth A. Weekly	97 Oliver Rd., Minford, OH 45653
07-2228.000	David and Sandra Shonkwiler	115 Oliver Rd, Minford, OH 45653
07-2125.000	Larry and Agnes Roush	193 Oliver Rd, Minford OH 45653
07-2137.000	Joseph D. & Beth A. Weekly	97 Oliver Rd., Minford, OH 45653
07-2194.000	Virginia Oliver	371 Oliver Rd., Minford, OH 45653
07-2195.000	Virginia Oliver	371 Oliver Rd., Minford, OH 45653
07-2196.000	Virginia Oliver	371 Oliver Rd., Minford, OH 45653
07-2280.000	Eunice Schroeder and Pamela Closson	155 Oliver Rd., Minford, OH 45653
07-2302.000	Timothy Allen Shockwiler	215 Oliver Rd., Minford, OH 45653
07-2462.000	Church of Christ, Sunshine Congregation, Inc.	7330 S.R. 335, Portsmouth, OH 45662
07-2467.000	Church of Christ, Sunshine Congregation, Inc.	7330 S.R. 335, Portsmouth, OH 45662
07-2477.001	Board of County Commissioners	602 7th St., Portsmouth, OH 45662
07-2592.000	Harold and Mary Conklin	5819 Swauger Valley Rd., Portsmouth, OH 45662
07-2651.000	Greg & Angie Tackett	7220 S.R. 335, Portsmouth, OH 45662
07-2653.000	Scott D. & Janice M. Oliver	395 Oliver Rd., Minford, OH 45653
07-2705.000	Carl and Phyliss Seidel	5471 Swauger Valley Rd, Portsmouth, OH 45662
07-2718.000	Greg & Angie Tackett	7220 S.R. 335, Portsmouth, OH 45662
07-4040.000	CSX Transportation	500 Water Street, Jacksonville, FL 32202
10-0146.000	Richard & June Book	3803 Lucasville Minford Rd., Minford, OH 45653

Auditor's Parcel No.	Property Owner	Property Owner Mailing Address
10-0396.000	State of Ohio	1978 W. Broad St., Columbus, OH 43223
10-0397.000	State of Ohio	1979 W. Broad St., Columbus, OH 43223
10-0395.000	Paul Colegrove	4492 Lucasville Minford Rd, OH 45653
10-0937.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-0975.000	Angela S. Yeagle	4009 Lucasville Minford Rd., Minford, OH 45653
10-0979.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-0980.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1035.000	Randall D. & Sherry L. Dodridge	3914 Lucasville Minford Rd., Minford, OH 45653
10-1254.000	ODOT	505 S. State St, Lebanon, OH 45036
10-1263.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1264.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1265.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1266.000	Larry & Caroline Sue Veach	2468 Posey Ridge Road, Beaver, OH 45613
10-1355.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1356.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1357.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1358.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1359.000	State of Ohio	505 S. State St, Lebanon, OH 45036
10-1360.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
10-1361.000	Marlene Kelly	21 Rase's Mountain Rd., Minford, OH 45653
10-1362.000	Randall J. & Brenda K. Thacker	4461 Lucasville Minford Rd., Minford, OH 45653
10-1403.000	State of Ohio	1980 W. Broad St., Columbus, OH 43223
07-0098.001	Lee and Stella Faulkner	453 Shumway Hollow Rd, Portsmouth, OH 45662
07-0098.001	Robert Lee & Stella Faulkner	453 Shumway Hollow Rd., Portsmouth, OH 45662
07-0472.000	Johnie and Nina Ruby	8051B State Rt 335 Portsmouth, OH 45662
07-0770.000	Logan Family Trust	8051 State Rt 335 Portsmouth, OH 45662
07-0833.000	Michael E and Tammy Fisher	406 Sycamore Ave, Portsmouth, OH 45662

Appendix F: Agency Coordination Letters

OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

November 9, 2011

Mary Knapp, Supervisor
U.S. Fish and Wildlife Service
4625 Morse Road, Suite 104
Columbus, Ohio 43230

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415) , Phase 2, and Phase 3 Consultation on Federally Listed Species

Dr. Knapp:

Enclosed for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), are five survey reports discussing potential impacts to federally listed species that may result from the construction of all three phases of the Portsmouth Bypass project. The purpose of the project is to establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Ecological and Endangered Species impacts associated with the project were previously coordinated with the U.S. Fish and Wildlife Service (Service) for the entire bypass project area (all three phases) in 2004. The Service provided concurrence (attached correspondence dated August 25, 2004) that the project may affect but is unlikely to adversely affect the three federally listed species that were known from Scioto County at that time (the Indiana bat- *Myotis sodalis*, Virginina Spirea - *Spirea virginiana*, and Small Whorled Pogonia- *Isotria medeoloides*), and that the project would have no effect on the timber rattlesnake (*Crotalus horridus horridus*). The Final Environmental Impact Statement (FEIS) for the project was completed in August 2005, and the Record of Decision was received for the project in June 2006. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources, including endangered species, within the project area. Since more than seven years have passed since ecological surveys were conducted for the project, and additional listed species and species records are now known from Scioto County, the Ohio Department of Transportation (ODOT) committed to update the inventory of ecological resources and to conduct additional surveys for selected federally listed species.

Scioto County is now known to be within the range of the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered running buffalo clover (*Trifolium stoloniferum*), the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis abrupta*), the proposed endangered rayed bean mussel (*Villosa fabalis*), the proposed endangered sheepnose mussel (*Plethobasus cyphyus*), the proposed endangered snuffbox mussel (*Epioblasma triquetra*), the federally threatened small whorled pogonia (*Isotria medeoloides*), the federally threatened Virginia spiraea (*Spiraea virginiana*), the federal species of concern bald eagle (*Haliaeetus leucocephalus*), the federal species of concern eastern hellbender (*Cryptobranchus alleghaniensis*), and the federal species of concern timber rattlesnake (*Crotalus horridus horridus*).

During an interagency meeting held on February 10, 2011 between the Service, the Federal Highway Administration, the U.S. Army Corps of Engineers (USACE), and ODOT, the Service indicated that additional survey work would be needed in suitable habitats to determine the presence and possible effects that the project may have on the rayed bean and clubshell mussels, the small whorled pogonia, the running buffalo clover, the eastern hellbender, and the Indiana bat. It was also determined that no additional survey work would be needed for the timber rattlesnake or Virginia spiraea (as the previous surveys conducted were still valid), or for the sheepnose mussel, pink mucket pearly mussel, fanshell Mussel, snuffbox mussel and northern rifflesheIl mussel (as suitable habitat streams for these species are not known to be within the project area). An ecological survey report that updated the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project was coordinated with the Service on August 16, 2011. While federally listed species were briefly discussed within the revised ecological survey report, the discussion did not provide a detailed description of the habitats or additional survey work conducted for these species.

The enclosed species specific reports detail the survey results for the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat. The following effect determinations for species known from Scioto County are based on the contents of the enclosed reports, previous consultation and coordination efforts, and the suitability of the habitats found within the proposed project area. These effect determinations are applicable to the Portsmouth Bypass project in its entirety (all three phases).

Bald eagle (*Haliaeetus leucocephalus*) - The bald eagle is protected under the Bald and Golden Eagle Protection Act which prohibits taking bald eagles, including disturbance. The preferred habitat includes mature forests adjacent to open water for nesting and foraging. No nests for this species were encountered during any of the ecological surveys. Additionally, the preferred habitat of the bald eagle does not occur within the study area; therefore, this bird is not likely to be encountered within study limits. The nearest active bald eagle nest location is located approximately 3.9 miles from the northwestern project terminus along the Scioto River. As such, the project is expected to have **no effect** on this species.

Clubshell mussel (*Pleurobema clava*) – The clubshell mussel prefers clean, loose sand and gravel in medium to small rivers and streams. This mussel will bury itself in the bottom substrate to depths of up to four inches. Within Scioto County the species is known from the Ohio River. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area, including the survey of the Little Scioto River (see enclosed report). As a result, the proposed project should have **no effect** on the species.

Eastern hellbender (*Cryptobranchus alleghaniensis*) – The eastern hellbender inhabits well-oxygenated flowing waters where large rocks are available for shelter and nesting. Within the proposed project area it was determined that the only stream with potentially suitable habitat for the species was the Little Scioto River. Additionally, the eastern hellbender is known from the Little Scioto River, with capture records for the species as recent as 2009. During 2011, Ohio herpetologist Gregory Lipps conducted a survey for the eastern hellbender and its habitat within the Little Scioto River at the location of the proposed bridge crossing for the project (see enclosed report). The survey did not find any individuals of the species, and determined that this segment of the Little Scioto River did not contain suitable habitat for the species. Due to the lack of suitable habitat for the species within the proposed project area, it is anticipated that the project will have **no effect** on the species.

Fanshell mussel (*Cyprogenia stegaria*) – The fanshell mussel is found in shallow to deep water living on a coarse sand and gravel substrate in swift currents. The species appears to be restricted to free flowing

reaches of medium to large rivers. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

Indiana bat (*Myotis sodalis*) – The Indiana bat life cycle requires suitable summer roosting and brood rearing habitat (which includes living or standing dead trees or snags with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities) and suitable hibernacula during the winter months (typically caves, or abandoned mines that provide cool, humid, stable conditions for hibernation). The nearest known record for the Indiana bat was a suspected hibernacula located approximately 5.75 miles from the project area. No caves, mine portals, or other features that could be acting as potential Indiana bat hibernacula were found within the project area. Approximately 493 acres of successional, second growth, and mature forested habitats will be impacted by the proposed project (all three phases). Mist net surveys for Indiana bats were conducted in 2003 within the preliminary project alternatives (21 net sites), and again in 2011 (enclosed report) within the selected alternative for the project (19 net sites). No Indiana bats were captured during either survey. Although the proposed project will result in the removal of multiple acres of trees possessing potential Indiana bat roost and maternity roost habitat characteristics, the results of the surveys suggest that Indiana bats were not present in the project area, or were present in very low numbers. To avoid direct take of bats, trees will be cleared for the project only between 30 September and 1 April. Based on the results of the survey, and the commitment to avoid the direct take of Indiana bats by implementing seasonal cutting restrictions, it is reasonable to conclude this project **may affect, but is not likely to adversely affect** the Indiana bat.

Northern riffleshell mussel (*Epioblasma torulosa rangiana*) – This species prefers riffles composed of firmly packed fine gravel in swift flowing shallow water. Within Scioto County the species is only known from the Scioto River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

Pink mucket pearly mussel (*Lampsilis abrupta*) - The pink mucket pearly mussel is a moderate to large river species that is generally found in gravel-cobble-boulder substrates associated with riffle and run habitats. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

Rayed bean mussel (*Villosa fabalis*) –The rayed bean generally lives in smaller, headwater creeks, but they are sometimes found in large rivers and wave-washed areas of glacial lakes, including Lake Erie. They prefer gravel or sand substrates, and are often found in and around roots of aquatic vegetation. Within Scioto County the species is known from the Scioto River and the Scioto Brush Creek. However, the species is considered potentially present within any streams in the County that possess its preferred habitat, including the Little Scioto River. Although suitable habitat for the species was present, no specimens of rayed bean were found during the survey of the Little Scioto River (see enclosed report) or any other mussel surveys conducted during the ecological surveys of the project area. It is unlikely that the species is present within the proposed project area and that it will be impacted by proposed construction activities. As a result, the proposed project **may affect, but is not likely to adversely affect** the species.

Running buffalo clover (*Trifolium stoloniferum*) – Running buffalo requires periodic disturbance and a somewhat open habitat to successfully flourish, but it cannot tolerate full-sun, full-shade, or severe

disturbance. Potential areas of running buffalo clover habitat include partially shaded woodlots, periodically mown areas (lawns, parks, cemeteries), and partially shaded woods along streams and trails. The nearest record for the running buffalo clover is located approximately 11 miles from the project area within Lawrence County. A survey for this species was conducted in 2011(see enclosed report). Although this species was not identified within the project study area during any of the survey, suitable habitats for the species, partially shaded woodlots along streams and maintained lawns and trails, were present within the project area. Due to the absence of the species, but the presence of potentially suitable habitat within the project area, ODOT believes that the project **may affect but is not likely to adversely affect the species**.

Sheepnose mussel (*Plethobasus cyphyus*) – The sheepnose mussel lives in larger rivers and streams where they are usually found in shallow areas with moderate to swift currents flowing over coarse sand and gravel. Sheepnose have also been found in mud, cobble, and boulders. In larger rivers they may be found in deep runs. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

Small whorled pogonia (*Isotria medeoloides*) –The small whorled pogonia prefers "upland sites in mixed-deciduous or mixed deciduous/coniferous forests that are generally in second- or third-growth successional stages," in areas that "include sparse to moderate ground cover in the species' microhabitat, a relatively open understory canopy, and proximity to features that create long persisting breaks in the forest canopy" (*Small Whorled Pogonia Recover Plan,* von Oettingen, 1992). This species typically flowers from mid-May through mid-June, however, flowering occurs only for a period of about one week, and the plant may not flower on an annual basis. In addition, it is believed that this species may be capable of extended periods of dormancy, and that it may not emerge within a given year. The inconsistent, sporadic, nature of this species, as well as the similarity in morphological appearance to large-whorled pogonia (*I. verticillata*) and sterile individuals of the abundant Indian cucumber–root (*Medeola virginiana*), makes it difficult to survey for within the project area. Records for the small whorled pogonia within Scioto County are located approximately 17.5 miles west of the proposed project study area. Surveys for this species were conducted in 2003, 2004, and 2011(see enclosed report). While the species was not found within the project study area during any of the field surveys, suitable habitats for *I. medeoloides* were observed. Due to the presence of potentially suitable habitat for the species, the proximity to a known location for the plant, and the potential difficulties associated with surveying for this species (short flowering period, similarity in appearance to sterile plants of Indian cucumber-root, and potential periods of dormancy) the species cannot be completely discounted from being present within the study area. As a result, ODOT believes that the project **may affect, but is not likely to adversely affect** the species.

Snuffbox mussel (*Epioblasma triquetra*) - The snuffbox mussel is usually found in small to medium-sized creeks in areas with a swift current, although it is also found in Lake Erie and some larger rivers. Adults often burrow deep in sand, gravel or cobble substrates, except when they are spawning or the females are attempting to attract host fish. Within Scioto County the species is known from the Ohio River, Scioto Brush Creek, and the South Fork Scioto Brush Creek. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area. As a result, the proposed project should have **no effect** on the species.

Timber rattlesnake (*Crotalus horridus horridus*) - These snakes are a woodland species. In addition to using wooded areas, timber rattlesnakes also utilize sunlit gaps in the canopy for basking and deep rock crevices for overwintering (den sites). Individuals may make larger movements between various sites in

the summer. A survey for this species was conducted by herpetologist Doug Wynn during 2003. The Service and Doug Wynn both concurred that updated surveys for this species were unnecessary to make an effect determination for this species. The 2003 survey found that suitable habitat for this species is present within the proposed project area, however, signs of major human disturbance were common, and it was determined to be very unlikely that the species inhabits or utilizes the surveyed area. This species was not encountered during the species specific survey (conducted in 2003) or during any of the previous or updated ecological surveys. Due to the presence of suitable habitat for the species, but the lack of evidence of timber rattlesnakes using the habitat, the proposed project **may affect, but is not likely to adversely affect** the species.

Virginia spiraea (*Spiraea virginiana*) – Habitat for the Virginia spiraea is usually rocky, flood scoured banks of high energy (high gradient) streams or rivers. This species is currently only known in Scioto County along Scioto Brush Creek, west of the Scioto River. During the 2003 ecological survey (as well as the 2011 ecological survey on Phase 1) each perennial stream located within the proposed project area was reviewed for habitat for the Virginia spiraea. The conditions along the Little Scioto River at the proposed crossing did not appear suitable for the plant. While several of the other perennial streams within the project area appeared to have satisfactory habitat conditions for this shrub species, none of the plants were found. Due to the presence of suitable habitat for the species, but the lack of evidence that the plant is within the proposed project area, the proposed project **may affect, but is not likely to adversely affect** the species.

If a listed or proposed species is subsequently found to occur in the project area, the Federal Highway Administration will initiate coordination with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended.

The Service's concurrence and/or comments on the effect determinations for listed species would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns, please call Matt Raymond, Environmental Specialist, at (614) 466-5129.

Respectfully,

Timothy M. Hill
Administrator
Office of Environmental Services

Enclosure
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Ron Garczewski, FHWA - File

U.S. Department
of Transportation
**Federal Highway
Administration**

Ohio Division

200 North High Street
Room 328
Columbus, OH 43215
614-280-6896
614-280-6876 fax

September 15, 2011

In Reply Refer To:
HDA-OH

Jerry Wray
Director
Ohio Department of Transportation
1980 West Broad Street
Columbus, OH 43223

Dear Director Wray:

This letter is in response to a request dated September 13, 2011 for review and approval of operational independence for Phase 1 of the Portsmouth Bypass Project.

Based on the data presented, our knowledge of the project and in conjunction with the information presented in this request, FHWA approves Phase 1 of the Portsmouth Bypass to be operational independent of the other two phases.

If you have any questions or comments, please contact Jason P. Spilak, PE, Technical Programs Team Leader at (614) 280-6853 of Jason.Spilak@dot.gov.

Sincerely,

Jason P. Spilak

For: Laura S. Leffler
Division Administrator

Ecc: Mr. Timothy M. Hill, ODOT – Administrator, Office of Environmental Sciences
Ms. Carmen Stemen, ODOT – Office of Environmental Sciences
Mr. David Snyder, PE, FHWA, Director of Eng. & Ops.
Mr. Peter Clingan, ORTO Team Leader

File: SCI-19415/Operational Independence

OHIO DEPARTMENT OF TRANSPORTATION
INTEROFFICE COMMUNICATION
Office of Environmental Services

DATE: August 16, 2010

TO: Brian Mitch, Division of Engineering, ODNR

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Ecological Coordination

PROJECT: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and ODNR for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS) and an Ecological Survey Report to ODNR in June 2004 and January 2005, and comments provided to ODOT from ODNR in December 2003, August 2004, and February 2005 (attached). These comments were addressed in the Final Environmental Impact Statement (FEIS) and the attached Record of Decision (ROD) for the project, which were completed in August 2005 and June 2006, respectively. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches. Additionally, Phase 1 of the project will disturb approximately 328.10 acres of land, including 123.28 acres of forested habitats and 3.46 acres of scrub/shrub habitats.

The ecological survey of Phase 1 of the project area identified the presence of the state endangered southern monkshood (*Aconitum uncinatum*), the state endangered primrose-leaved violet (*Viola*

primulifolia), the state potentially threatened American chestnut (*Castanea dentata*), and the state species of concern eastern box turtle (*Terrapene carolina carolina*)

- Several individuals of southern monkshood were identified along Stream 18 (Long Run). All of the identified individuals are located within the project limits and will be impacted as a result of this project. No other individuals were identified in the vicinity of the project during the ecological survey of the project area.

- Several individuals of the primrose-leaved violet were identified during the ecological investigation for the proposed project. The violet was found along the edges of several logging roads that are prevalent throughout the project area. This species was also found in areas adjacent to the project area that will not be impacted by this project.

- One young American chestnut tree was found within the project area in the forested area located along the east side of Swauger Valley Road. The tree is located within the project area and will be impacted as a result of this project. Suitable habitat for the American chestnut is prevalent throughout the vicinity of the project.

- Several individuals of the eastern box turtle were encountered throughout the project area. Impacts to individuals will likely occur as a result of this project. However, impacts to the overall population of this species would likely be negligible as they are abundant throughout the project area and southern Ohio.

In addition to the state listed species encountered during the survey of Phase 1, several other federal and state listed species have the potential to be within the project area. These species included the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat. Specific surveys for these species have been conducted, or are in the process of being conducted, for the entire Portsmouth Bypass project area. Reports detailing the survey results and any potential impacts to these species will be coordinated in a future submission.

No additional survey work would was conducted for the timber rattlesnake or Virginia spiraea, as the previous surveys conducted were considered still valid by the USFWS and the approved herpetologist that conducted the original timber rattlesnake survey (Doug Wynn).

ODNR's concurrence and/or comments on Phase 1 of the Portsmouth Bypass project would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr
Enclosure
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File

OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

August 16, 2011

Mary Knapp, Supervisor
U.S. Fish and Wildlife Service
4625 Morse Road, Suite 104
Columbus, Ohio 43230

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)
Ecological Coordination

Dr. Knapp:

Enclosed for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Ecological and Endangered Species impacts associated with the project were previously coordinated with the U.S. Fish and Wildlife Service (Service) for the entire bypass project area (all three phases) in 2004. The Service provided concurrence (attached correspondence dated August 25, 2004) that the project may affect but is unlikely to adversely affect the three federally listed species that were known from Scioto County at that time (the Indiana bat- *Myotis sodalis*, Virginina Spirea - *Spirea virginiana*, and Small Whorled Pogonia- *Isotria medeoloides*), and that the project would have no effect on the timber rattlesnake (*Crotalus horridus horridus*). The Final Environmental Impact Statement (FEIS) for the project was completed in August 2005, and the Record of Decision was received on for the project on June 2006. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. Since more than seven years have passed since ecological surveys were conducted for the project, and additional listed species and species records are now known from Scioto County, the Ohio Department of Transportation (ODOT) has committed to update the inventory of ecological resources and to conduct additional surveys for selected federally listed species.

The enclosed ecological survey report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335.

Scioto County is now known to be within the range of the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered running buffalo clover (*Trifolium stoloniferum*), the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis orbiculata*), the proposed endangered rayed bean mussel (*Villosa fabalis*), the proposed endangered sheepnose mussel (*Plethobasus cyphyus*), the proposed endangered snuffbox mussel (*Epioblasma triquetra*), the federally threatened small whorled

pogonia (*Isotria medeoloides*), the federally threatened Virginia spiraea (*Spiraea virginiana*), the federal species of concern bald eagle (*Haliaeetus leucocephalus*), the federal species of concern eastern hellbender (*Cryptobranchus alleghaniensis*), the federal species of concern timber rattlesnake (*Crotalus horridus horridus*).

During an interagency meeting held on February 10, 2011 between the Service, the Federal Highway Administration, the U.S. Army Corps of Engineers (USACE), and ODOT, the Service indicated that additional survey work would be needed in suitable habitats to determine the presence and possible effects that the project may have on the rayed bean and clubshell mussels, the small whorled pogonia, the running buffalo clover, the eastern hellbender, and the Indiana bat. It was also determined that no additional survey work would be needed for the timber rattlesnake or Virginia spiraea (as the previous surveys conducted were still valid), or for the sheepnose mussel, pink mucket pearly mussel, fanshell Mussel, snuffbox mussel and northern riffleshell mussel (as suitable habitat streams for these species are not known to be within the project area). Additionally, a field review of the project site on May 12, 2011 attended by the Service, USACE, and ODOT resulted in the commitment for ODOT to update the inventory of the water resources (stream and wetlands) and terrestrial habitats.

The enclosed report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches. Additionally, Phase 1 of the project will disturb approximately 328.10 acres of land, including 123.28 acres of forested habitats and 3.46 acres of scrub/shrub habitats.

While federally listed species are briefly discussed within the enclosed revised ecological survey report, the discussion does not provide a detailed description of the habitats or additional survey work conducted for these species. Species specific reports detailing the survey results for the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat will be coordinated in a future submission. This future submission will also include updated affect determinations for all federally listed species known to be within the rage of the entire proposed project (all three phases).

The enclosed updated ecological survey report for Phase 1 of the Portsmouth Bypass project has been provided for the Service's review. If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

for

Timothy M. Hill
Administrator
Office of Environmental Services

Enclosure
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File

Ohio Department of Transportation
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Ric Queen, OEPA - DSW **DATE:** August 16, 2011

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Pre-application Coordination

PROJECT: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and OEPA for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS) and an Ecological Survey Report to OEPA in June 2004 and January 2005, and comments provided to ODOT from OEPA in June 2004 and February 2005 (attached). These comments were addressed in the Final Environmental Impact Statement (FEIS) and the attached Record of Decision (ROD) for the project, which were completed in August 2005 and June 2006, respectively. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr
Enclosure
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File

OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS. OH 43223
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

August 16, 2011

U.S. Army Corps of Engineers
Ohio Regulatory Transportation Office
DSCC Building 10, Section 10
3990 East Broad Street
Columbus, Ohio 43218

Attention: Mr. Peter Clingan, Team Leader
Ohio Regulatory Transportation Office

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)
Pre-application Coordination

Dear Mr. Clingan:

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and USACE for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS), an Ecological Survey Report, and an Impact Addendum Report to the USACE in June 2004 and January 2005, and comments provided to ODOT from USACE in January 2005 and February 2005 (attached). Additionally, the USACE provided a jurisdictional verification of Water of the U.S. for the entire project area in April 2005 (attached), which was valid for a period of five years. The USACE's comments on the project were addressed in the Final Environmental Impact Statement (FEIS), which was completed in August 2005. The Record of Decision for the project was received in June 2006.

A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. Additionally, a field review of the project site on May 12, 2011 attended by the USACE, USFWS, and ODOT resulted in the commitment for ODOT to update the inventory of the water resources (stream and wetlands) and terrestrial habitats. It was determined that the updated water resources inventory would be used by the USACE to prepare a new jurisdictional determination on Water of the U.S. located within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project.

Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments, including a jurisdictional determination of Waters of the U.S. within Phase 1 of the project area, would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

Timothy M. Hill
Administrator
Office of Environmental Services

Enclosure
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File

OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

August 16, 2011

U.S. Environmental Protection Agency
NEPA Implementation Section, Mail Code E-19J
77 W. Jackson Blvd.
Chicago, IL 60604

Attention: Mr. Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Science, Ecosystems, and Communities

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)

Dear Mr. Westlake:

Enclosed for your information is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

This project had been previously coordinated with your agency as a Draft EIS in 2004 and a Final EIS in 2005. The 2006 Record of Decision documented the Preferred Alternative and addressed USEPA's final comments (attached).

A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Additional endangered species coordination remains ongoing with the U.S. Fish and Wildlife Service.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

Timothy M. Hill
Administrator
Office of Environmental Services

Enclosure
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR DAVID MUSTINE, DIRECTOR

Ohio Division of Wildlife
David B. Lane, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

July 7, 2011

Jason Earley
ASC Group, Inc.
800 Freeway Dr. North, Suite 101
Columbus, OH 43229

Dear Mr. Earley:

Per your request, I have e-mailed you a set of ArcView shape files for the SCI-823-0.00 Portsmouth Bypass (PID 19415) project, including a one mile radius, in Scioto County, and on the Minford and New Boston Quads. The files are projected in NAD83 Ohio State Plane South. The units are feet. This data will not be published or distributed beyond the scope of the project description on the data request form without prior written permission of the Biodiversity Database Program.

Our standard search covers the project area you indicated in your request plus a one mile radius. Every feature in the database is included in this search, so you may receive as many as five layers of data: "data" with rare species and significant natural features records, "ma" with managed areas boundaries, "sr" showing scenic rivers, "sites" for conservation sites, and "ib" for an extended Indiana Bat search beyond the standard one mile radius (and which is only provided upon your specific request). If you do not receive some of these layers it is because none of those features were found in the search performed for your project. Only the layers that are pertinent to your search results will be addressed further below.

Records included in the "data" layer 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 statuses, as well as managed area and date of the most recent observation. State and federal statuses are defined as: E = endangered, T = threatened, P = potentially threatened, SC = species of concern, SI = special interest, FE = federal endangered, FT = federal threatened and A=recently added to inventory, status not yet determined.

I have performed a search for Indiana Bat (*Myotis sodalis*, state endangered, federal endangered) capture sites within a five mile radius and hibernacula within a ten mile radius. If any records were found, this layer will be included and labeled "ib". If the layer is not included it means no records were found.

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. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke, Ecological Analyst
Ohio Biodiversity Database Program

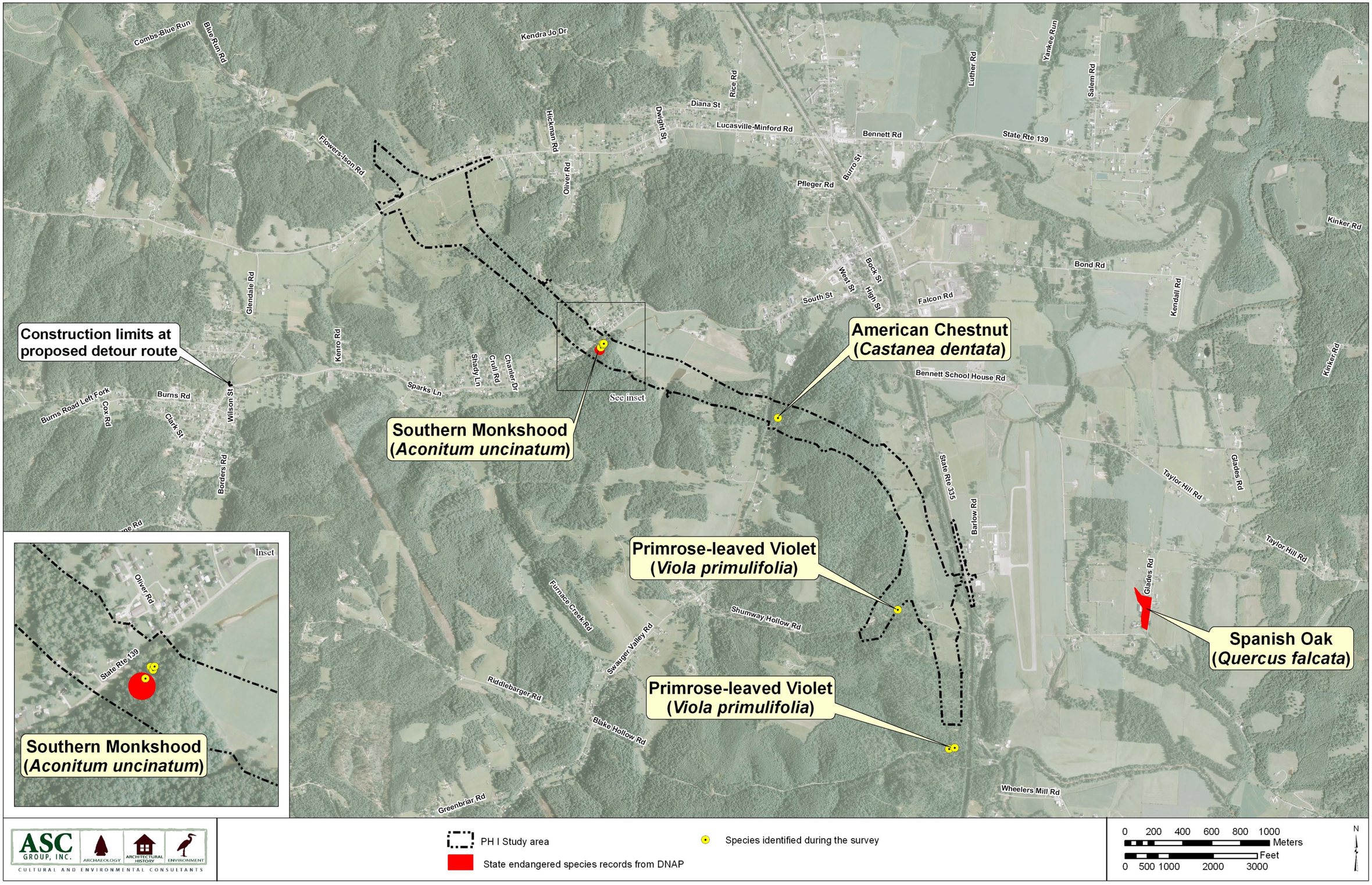


Figure 2

State endangered species map from DNAP GIS shapefiles and ecological survey.

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

Federally Listed Species by Ohio Counties
September 30, 2011

COUNTY	SPECIES
ADAMS	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
ALLEN	Indiana bat (E), rayed bean (PE), bald eagle (SC)
ASHLAND	Indiana bat (E), bald eagle (SC), eastern hellbender (SC)
ASHTABULA	Indiana bat (E), Kirtland's warbler (E), piping plover (E), clubshell (E), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
ATHENS	Indiana bat (E), American burying beetle (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
AUGLAIZE	Indiana bat (E), rayed bean (PE)
BELMONT	Indiana bat (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC)
BROWN	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), bald eagle (SC)
BUTLER	Indiana bat (E), rayed bean (PE), bald eagle (SC)
CARROLL	Indiana bat (E)
CHAMPAIGN	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
CLARK	Indiana bat (E), rayed bean (PE), eastern prairie fringed orchid (T), eastern massasauga (C)
CLERMONT	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), bald eagle (SC)
CLINTON	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
COLUMBIANA	Indiana bat (E), sheepnose (PE), snuffbox (PE), eastern massasauga (C), bald eagle (SC), eastern hellbender (SC)
COSHOCTON	Indiana bat (E), clubshell (E), fanshell (E), purple cat's paw pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC), eastern hellbender (SC)
CRAWFORD	Indiana bat (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)
CUYAHOGA	Indiana bat (E), Kirtland's warbler (E), piping plover (E), bald eagle (SC)

DARKE	Indiana bat (E), rayed bean (PE)
DEFIANCE	Indiana bat (E), clubshell (E), northern riffleshell (E), white cat's paw pearly mussel (E), rayed bean (PE), copperbelly water snake (T), bald eagle (SC)
DELAWARE	Indiana bat (E), clubshell (E), rayed bean (PE), snuffbox (PE), bald eagle (SC)
ERIE	Indiana bat (E), Kirtland's warbler (E), piping plover (E/CH), Lakeside daisy (T), eastern massasauga (C), bald eagle (SC), Lake Erie watersnake (SC)
FAIRFIELD	Indiana bat (E), clubshell (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)
FAYETTE	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
FRANKLIN	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC)
FULTON	Indiana bat (E), rayed bean (PE)
GALLIA	Indiana bat (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
GEAUGA	Indiana bat (E), bald eagle (SC)
GREENE	Indiana bat (E), clubshell (E), rayed bean (PE), snuffbox (PE), eastern massasauga (C)
GUERNSEY	Indiana bat (E), bald eagle (SC)
HAMILTON	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), bald eagle (SC)
HANCOCK	Indiana bat (E), clubshell (E), rayed bean (PE), bald eagle (SC)
HARDIN	Indiana bat (E), clubshell (E), rayed bean (PE), copperbelly water snake (T), eastern massasauga (C), bald eagle (SC)
HARRISON	Indiana bat (E), bald eagle (SC)
HENRY	Indiana bat (E), rayed bean (PE), bald eagle (SC)
HIGHLAND	Indiana bat (E), rayed bean (PE), bald eagle (SC), timber rattlesnake (SC)
HOCKING	Indiana bat (E), American burying beetle (E), running buffalo clover (E), northern monkshood (T), small whorled pogonia (T), timber rattlesnake (SC), bald eagle (SC)
HOLMES	Indiana bat (E), eastern prairie fringed orchid (T), bald eagle (SC), eastern hellbender (SC)
HURON	Indiana bat (E), eastern massasauga (C), bald eagle (SC)
JACKSON	Indiana bat (E), timber rattlesnake (SC)
JEFFERSON	Indiana bat (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC)
KNOX	Indiana bat (E), bald eagle (SC), eastern hellbender (SC)
LAKE	Indiana bat (E), Kirtland's warbler (E), piping plover (E/CH), snuffbox (PE), bald eagle (SC)

LAWRENCE	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
LICKING	Indiana bat (E), eastern massasauga (C), bald eagle (SC)
LOGAN	Indiana bat (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)
LORAIN	Indiana bat (E), Kirtland's warbler (E), piping plover (E), bald eagle (SC)
LUCAS	Indiana bat (E), Karner blue butterfly (E), Kirtland's warbler (E), piping plover (E), rayed bean (PE), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC)
MADISON	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C)
MAHONING	Indiana bat (E), eastern massasauga (C), bald eagle (SC)
MARION	Indiana bat (E), clubshell (E), rayed bean (PE), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
MEDINA	Indiana bat (E), bald eagle (SC)
MEIGS	Indiana bat (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE)
MERCER	Indiana bat (E), rayed bean (PE), bald eagle (SC)
MIAMI	Indiana bat (E), rayed bean (PE), snuffbox (PE)
MONROE	Indiana bat (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC)
MONTGOMERY	Indiana bat (E), rayed bean (PE), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
MORGAN	Indiana bat (E), American burying beetle (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), bald eagle (SC)
MORROW	Indiana bat (E), rayed bean (PE), bald eagle (SC)
MUSKINGUM	Indiana bat (E), fanshell (E), sheepnose (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC), eastern hellbender (SC)
NOBLE	Indiana bat (E), bald eagle (SC)
OTTAWA	Indiana bat (E), Kirtland's warbler (E), piping plover (E), rayed bean (PE), Lakeside daisy (T), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC), Lake Erie watersnake (SC)
PAULDING	Indiana bat (E), rayed bean (PE), bald eagle (SC)
PERRY	Indiana bat (E), American burying beetle (E)
PICKAWAY	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC)
PIKE	Indiana bat (E), clubshell (E), northern riffleshell (E), rayed bean (PE), bald eagle (SC), timber rattlesnake (SC)
PORTAGE	Indiana bat (E), Mitchell's satyr (E), northern monkshood (T), eastern massasauga (C), bald eagle (SC)

PREBLE	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
PUTNAM	Indiana bat (E), rayed bean (PE), bald eagle (SC)
RICHLAND	Indiana bat (E), eastern massasauga (C), bald eagle (SC), eastern hellbender (SC)
ROSS	Indiana bat (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC), timber rattlesnake (SC)
SANDUSKY	Indiana bat (E), Kirtland's warbler (E), piping plover (E), rayed bean (PE), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC)
SCIOTO	Indiana bat (E), running buffalo clover (E), clubshell (E), fanshell (E), northern riffleshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), small whorled pogonia (T), Virginia spiraea (T), bald eagle (SC), eastern hellbender (SC) timber rattlesnake (SC)
SENECA	Indiana bat (E), rayed bean (PE), bald eagle (SC)
SHELBY	Indiana bat (E), rayed bean (PE)
STARK	Indiana bat (E), bald eagle (SC)
SUMMIT	Indiana bat (E), northern monkshood (T), bald eagle (SC)
TRUMBULL	Indiana bat (E), clubshell (E), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
TUSCARAWAS	Indiana bat (E), bald eagle (SC), eastern hellbender (SC)
UNION	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC)
VAN WERT	Indiana bat (E), rayed bean (PE)
VINTON	Indiana bat (E), American burying beetle (E), bald eagle (SC), eastern hellbender (SC), timber rattlesnake (SC)
WARREN	Indiana bat (E), running buffalo clover (E), rayed bean (PE), eastern massasauga (C)
WASHINGTON	Indiana bat (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC), timber rattlesnake (SC)
WAYNE	Indiana bat (E), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC)
WILLIAMS	Indiana bat (E), clubshell (E), northern riffleshell (E), white cat's paw pearly mussel (E), rayed bean (PE), copperbelly water snake (T), rabbitsfoot (C), bald eagle (SC)
WOOD	Indiana bat (E), rayed bean (PE), bald eagle (SC)
WYANDOT	Indiana bat (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)

IMPORTANT NOTE: This list reflects data available as of September 30, 2011, and will change as new data become available. For this reason, searches for listed species should not necessarily be limited to the counties noted above. Any decisions in that regard should be made only after calling the USFWS (614/416-8993) for guidance.

E = Endangered C = Candidate
PE = Proposed Endangered SC = Species of Concern
T = Threatened CH = Critical Habitat

OHIO DEPARTMENT OF TRANSPORTATION

District 9, 650 Eastern Avenue, P.O. Box 467, Chillicothe, Ohio 45601-0467

HDR–CINCINNATI

MAR 15 2011

RECEIVED

March 14, 2011

HDR Engineering, Inc.
9987 Carver Road
Suite 200
Cincinnati, Ohio 45242-5710
Attn: J. Bradford Hyre, P.E.

Re: SCI-823-0.00/6.81
PID: 19415
Agreement Number: 13702

Dear Mr. Hyre:

Please provide a cost proposal for the above project as follows:

Services Requested
Update the Federally Endangered Species coordination for the SCI-823-0.00 Portsmouth Bypass Project. This coordination update with USFWS is needed because many of these species were not listed from Scioto County during the original round of coordination, and USACE need effect calls made for all of the species by ODOT/FHWA, and concurrence from USFWS to complete the 404 permit.

The following describes what new or updated surveys will be required to update endangered species coordination with USFWS:

Mussel Survey -- A quantitative mussel survey will be performed during the summer 2011 by a professional malacologist (federally permitted) to determine presence or probable absence and numbers/distribution of federally listed mussel species (and other mussel species) in the Little Scioto River at the proposed crossing. USFWS must be contacted, and must approve the survey protocol prior to performing the survey.

Small Whorled Pogonia -- This survey will need to be redone due to the dormancy period of the plant. Surveys will need to be conducted during the bloom time of the species (General bloom time is mid to late May, but consultant must contact USFWS for appropriate survey period and protocol). Surveys can concentrate on known areas of good habitat identified during the original surveys. Surveys must be conducted by personnel that have experience in identifying this species

Running Buffalo Clover -- A survey of all suitable habitat within the alignment must be performed during the last two weeks in May during this species bloom time. Surveys must be conducted by personnel that have experience in identifying this species Consultant must get USFWS approval of the protocol prior to performing the survey.

Indiana Bat – Conduct a mist net survey composed of 23 net sites throughout the project area. In addition to the mist net survey, a visual survey of all cave/portals within the project footprint will be conducted to determine the potential suitability for bat use. Should a cave or portal show evidence of bat use notify ODOT-OES immediately for consultation with USFWS. Survey protocols must follow the Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision (April 2007). Prior to netting activities, a study plan must be completed according to USFWS guidelines. The survey study plan must be coordinated with and accepted by USFWS (Reynoldsburg Field Office) prior to performing the survey. Mist netting surveys must be conducted by an appropriate number of federally and state permitted biologists. The federally permitted biologist must be on-site at all times according to the permit guidelines. In addition, no more than two net sites can be operated per permitted biologist.

Should no Indiana bats be found during these surveys, the project will go through Informal Consultation process with USFWS. Should any Indiana bats be captured during these surveys, ODOT will follow the Formal Consultation process with the BA/BO and mitigation.

Eastern Hellbender – A habitat and presence/absence survey must be performed at the proposed crossing of the Little Scioto River. The survey must be performed by an approved herpetologist. ODNR and USFWS has a list of approved surveyors. ODNR, Division of Wildlife must approve the protocols prior to performing the survey.

Completion Time
Upon authorization, please conduct surveys in accordance with the permitted time frames. These studies are weather dependent and /or have specific time frames for surveys. Please prepare reports for each one of these surveys and submit them to ODOT-OES as soon as possible.

Due date for Cost Proposal
Five (5) days from the date of this request

Please submit your proposal to:
Mark Johansen, Consultant Contract Manager
District 9 – Planning & Engineering Department

If you have any questions or comments regarding this request, please contact this office prior to submitting your proposal.

Respectfully,

Tom Barnitz, Administrator
District 9 – Planning & Engineering Department

By:

Mark A. Johansen
Consultant Contract Manager

TMB:MAJ:

c: Greg Manson, D9 – Val Norris, OES – Mike Pettegrew, OES – Consultant Services – Tom Barnitz, D9 - File

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

February 23, 2005

Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
PO Box 899
Columbus, Ohio 43216-0899

Re: SCI-823-0.00, PID 19415 (Portsmouth Bypass)
Draft Environmental Impact Statement (DEIS)
and Addendum

Dear Mr. Hill:

We have completed our review of the above referenced documents that we received in this office on January 24, 2005. The documents are the latest in a series of studies regarding the "Portsmouth Bypass, " a project deemed essential in promoting economic development and improving traffic problems in the area. At this stage in the review process, we understand that the "Hill Alignment" (H1, I lill/Valley 2, H3, H4) has been chosen for further consideration and likely will be announced as the Preferred Alternative, pending assessment of alternatives impacts and comments on the DEIS. We understand that this alternative will impact an estimated 37 streams (20, 881 linear feet), ten ponds (2.93 acres), and ten wetlands (1.27) acres.

We do not have any objections to using the Hill Alignment as the Preferred Alternative. We expressed our acceptance of such an alignment in our June 24, 2004 letter. Of course, we would like to see further project refinements to avoid or lower ecological impacts, especially forested habitat, Category II wetlands, Class III PHWH streams, Little Scioto River, Long Run, and Candy Run. Our brief comments (below) are primarily focused on aquatic resources.

1. **Ponds** - Because ponds serve important ecological functions. we would like like to see more details on pond fauna composition and whether any ponds may be potential amphibian habitat.

2. **Forested/Wooded Habitat** - Although the report stated that the forested habitats in the project area are fragmented and not mature stands, we would appreciate further clarification on the potential impacts the project may have on habitat fragmentation and soil stability.

3. **Roadway Sedimentation and Runoff** - If new roadway is constructed near aquatic resources, we would like priority given to stabilizing embankments with vegetation and BMPs to minimize run-off from pavement and sedimentation into these resources.

4. **Use of Culverts** - Because culverts could have cumulative impacts within the watershed, we would appreciate details on the types of culverts used and the lengths of the culverts, as information becomes available. Where practicable, we encourage the use of oversized culverts.

This completes our comments on your submittal. We look forward to additional information on the project. If you have any issues you would like to discuss, feel free to contact me at (614) 644-2138.

Sincerely,

Arthur L. Coleman, Jr.
Environmental Specialist
Division of Surface Water

cc: Kimberley-Courts-Brown, Army COE, Huntington District
Kenneth Lammers, USFWS
Mary Knapp, USFWS
Wayne Gorski, US EPA/Region V
William Cody, Asst. Administrator, OES/ODOT
Mike Pettegrew, Waterway Permits, OES/ODOT
Noel Alcala, OES/ODOT
Randy Sanders, ODNR/REALM
Marty Kuklis, Ohio EPA/SEDO

"Sanders, Randy"
<Randy.Sanders@dnr.state.oh.us>

02/24/2005 09:16 AM

To <david.snyder@fhwa.dot.gov>

cc "Bill Cody" <Bill.Cody@dot.state.oh.us>, "Noel Alcala" <Noel.Alcala@dot.state.oh.us>

Subject 05-0020; Draft Environmental Impact Statement (DEIS) SCI-823 Portsmouth Bypass PID 19415

David, As mentioned over the phone, here are the Department's final comments on the DEIS for the Portsmouth Bypass project. Randy Sanders

ODNR COMMENTS TO David Snyder, U.S. Department of Transportation, Federal Highway Administration, 200 North High Street, Room 328, Columbus Ohio 432215 for ODOT, Draft Environmental Impact Statement (DEIS) SCI-823 Portsmouth Bypass PID 19415

Location: Portsmouth Bypass, Scioto County, Ohio

Project: Construction of a four lane limited access freeway in Scioto County.

The Ohio Department of Natural Resources (ODNR) has completed an additional 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.

Rare and Endangered Species: The ODNR Division of Natural Areas and Preserves (DNAP) has no additional comments on this project as it appears our previous concerns have been addressed. DNAP will defer to the ODNR Division of Wildlife to make any additional comments on listed animals.

Fish and Wildlife: The Draft Environmental Impact Statement indicates wetland and stream mitigation will be provided for unavoidable impacts, work will be done to avoid impacts to freshwater mussels, and no instream work will be occur from April 15 to June 15. It appears wetlands and streams have been avoided where possible. Therefore, the ODNR, Division of Wildlife has no additional comments regarding the DEIS.

ODNR appreciates the opportunity to provide these comments. Please contact Randy Sanders at 614.265.6344 if you have questions about these comments or need additional information.

Randall E. Sanders

Environmental Administrator

Division of Real Estate & Land Management

Ohio Department of Natural Resources

2045 Morse Rd, C4

Columbus, Ohio 43229-6693

614.265.6344

Fax 614.267.4764

randy.sanders@dnr.state.oh.us

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

February 18, 2005

REPLY TO
ATTENTION OF:
Operations and Readiness Division
Regulatory Branch
UN Trib Ohio River-200001321

Timothy Hill
Office of Environmental Services
Ohio Department of Transportation
Post Office Box 899
Columbus, Ohio 43216-0899

Dear Mr. Hill:

I refer to Draft Environmental Impact Statement (DEIS) and Impact Addendum Report (IAR) of the Ecological Survey Report (ESR) received in this office on January 21, 2005 concerning the proposed Portsmouth Bypass project in Scioto County, Ohio. You have requested our comments on the DEIS and IAR in accordance with Concurrence Point 3 of the NEPA 404/401 Merger Implementation Agreement. The CRS and PID numbers for this project are SCI-823-0.00 (PID 19415).

The DEIS incorporates all of our recommendations of July 5, 2004. The document is extremely well prepared, well organized, and clearly defines all of the ecological, socio-economic, logistical, and financial issues surrounding each alternative. The document clearly describes the ecological impacts associated with the project as a whole and concisely illustrates the ecological impacts associated with each Feasible Alternative. The comparative impact tables included in the DEIS provides a clear basis for selecting a preferred alternative. The IAR more clearly defines the affected waters of the United States within the preferred alternative and provides a strong basis to determine where impacts can be minimized. The IAR also provides excellent baseline information that can be used to determine mitigation requirements for the proposal.

As you are aware, this office's main priority is to review the environmental impacts associated with each alternative. We concur that the Hill Alignment (H1/HV2/H3/H4) is the least environmentally damaging practicable alternative. You have indicated you will continue to take steps to further minimize impacts to waters of the United States and to provide adequate mitigation for all environmental and social impacts associated with proposal.

Thank you for allowing this office the opportunity to review and provide comments on the proposal. If you have any questions concerning the above, please contact Kimberly Courts-Brown at 304-399-5210.

Sincerely,

Ginger Mullins

Ginger Mullins, Chief
Regulatory Branch

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

March 11, 2005

ER 05/82

Mr. Dennis Decker
Division Administrator
Federal Highway Administration
Ohio Division
200 North High Street, Room 328
Columbus, Ohio 43215-2408

Dear Mr. Decker

The Department of the Interior (Department) has reviewed the January 2005 Draft Environmental Impact Statement (DEIS) for SR-823, Portsmouth Bypass Project PID 19415, Scioto County, Ohio. The Department offers the following comments and recommendations for your consideration.

GENERAL COMMENTS

The U.S. Fish and Wildlife Service (Service) has been coordinating with the ODOT on the project, including reviewing the Ecological Survey Report and Preliminary DEIS in the summer of 2004. The Service's review letter of August 25, 2004, is included in Appendix A of the DEIS. The Service's review comments and recommendations are also provided in Chapter 5 of the DEIS along with ODOT responses. Overall, the Department believes that ODOT's responses adequately address the Service's concerns.

The proposed Bypass would connect US 23 near Lucasville with US 52 near Sciotodale by a new limited-access highway northeast of Portsmouth. The preliminary DEIS indicated that depending on the alternative selected, the project would impact 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. Forest habitat impacted would be 362 to 528 acres, depending on the alternative selected. A preferred alternative is identified in the DEIS that would impact 5.55 acres of Category 1 and 2 wetlands; 20,881 linear feet of stream habitat; and 493 acres of woodland habitat, including 47.58 acres of floodplain crossed.

In its letter of August 25, 2004, the Service recommended selection of the Hill segments for Sections 1 and 3 and the Valley segment for Section 4 to minimize overall impacts to fish and wildlife resources. The Department is pleased to note that the recommended segments for Sections 1 and 3 were selected for the Preferred Alternative. However, we note that ODOT selected the Hill segment for Section 4, which would impact much more forest habitat than the Valley segment which was recommended by the Service (183 acres for the Hill segment, versus

41 acres for the Valley segment). We recommend that reconsideration be given to selecting the Valley segment for this section.

The Department appreciates the response provided on pages 5-17 through 5-19 of the DEIS to the Service's concerns regarding potential secondary impacts of the project on natural resources. We also appreciate ODOT's efforts in working with local entities to develop land use planning that would be protective of important natural resources in the project area. We note that measures to minimize direct impacts to forested areas, such as reducing median widths and rights-of-way, will be addressed during the design phase of the project. Likewise, best management practices and erosion control during and after construction will be addressed during design phase to mitigate impacts to important resources such as the Little Scioto River, a State Resource Water.

We believe that all reasonable measures to avoid or minimize impacts to species such as the hellbender and eastern sand darter, whose status is precarious, should be taken. To that end, we support the proposal put forth in the fourth full paragraph on page 3-49 of the DEIS that "no structures will be placed below the ordinary high water mark of the Little Scioto River." The paragraph goes on to indicate that "the river at this location will be spanned with piers," presumably set outside the ordinary high water (OHW) line of the river. The Department understands this to be the present position of ODOT, but notes that a contradictory statement is made in the first full paragraph on page 3-25 of the DEIS, which states that "the bridge would include concrete abutments stabilized with rock channel protection and possibly piers in the river." This apparent discrepancy between the two paragraphs should be addressed in the final EIS. We strongly recommend that no piers or other structures be placed in the river below the OHW line.

SPECIFIC COMMENTS

Page 3-40, 3.4.6 Wildlife, Vegetation and Threatened and Endangered Species

This section summarizes ODOT's efforts to determine presence in the project area of federally listed species, candidate species, and species for which the Service has a conservation plan. As documented in this section and the Ecological Survey Report for this project, extensive surveys were conducted to determine the presence of the above species along all feasible project alternative routes. None were found. We understand that this evaluation will be continued as planning for this project progresses. If any of the listed species for Scioto County are encountered, the Service's Endangered Species Coordinator should be immediately notified. We appreciate these considerable efforts of ODOT to ensure the conservation of threatened and endangered species.

Page 3-50, 3.4.7 Forest Fragmentation

Based on its review of the preliminary DEIS, the Service recommended additional treatment of project impacts to forest habitat, including forest fragmentation. We are pleased that forest fragmentation was addressed further in the subject DEIS. However, reference is made to the fact that the forests to be impacted are not "virgin" or old growth forest and, therefore, are less valuable habitat. We do not believe that second or third growth mature forest is necessarily of

appreciably less value to most wildlife species than is virgin forest. For this reason, in part, we recommend that all possible opportunities for reforestation as mitigation for the significant loss of this habitat be pursued.

In addition to the issues discussed above, we note and appreciate that ODOT has addressed the following subjects in the DEIS for which the Service had included comments and/or recommendations in its letter of August 25, 2004, concerning the preliminary DEIS.

- Corrections in information on the small whorled pogonia.
- Comments regarding the rayed bean and sheepnose mussels added to DEIS.
- Commitment that coordination will continue with State and federal fish and wildlife agencies with regard to the application process for Clean Water Act section 401 and 404 permits.
- The discussion of secondary impacts has been expanded in the DEIS.

Because of the significant impacts to fish and wildlife resources associated with any feasible alternatives for the above project, we anticipate ODOT's continued coordination and consultation with all resource agencies during subsequent planning for the subject project. The Department has a continuing interest in working with ODOT and the Federal Highway Administration to ensure that impacts to resources of concern to the Department are adequately addressed. For matters related to fish and wildlife resources and threatened and endangered species, please continue to coordinate with the Field Supervisor, U.S. Fish and Wildlife Service, 6950 Americana Parkway, Suite H, Reynoldsburg, Ohio 43068-4127, telephone: (614) 469-6923.

We appreciate the opportunity to provide these comments.

Sincerely,

Michael T. Chezik

Michael T. Chezik
Regional Environmental Officer

cc: G. Proctor, ODOT, Columbus, OH

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

B-19J

MAR 09 2005

Dave Snyder
Federal Highway Administration
200 North High Street, Room 328
Columbus, OH 43215

RE: SR 823 Portsmouth Bypass, Scioto County, Ohio (SCI-823 0.00, PID 19415)

Dear Mr. Snyder:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (U.S. EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the SR 823 Portsmouth Bypass in Scioto County, Ohio. The project involves constructing a 16 mile, 4 lane divided bypass northeast of Portsmouth from Lucasville to Wheelersburg. The project is part of the multi-state Appalachian Development Highway System plan. The document presents the preferred alternative, the Hill Option, and its expected impacts to: 493 woodland acres, 55 acres of actives farmland, 5.5 wetland acres, and relocation of 30 homes, an apartment building and 18 other residences. U.S. EPA previously reviewed the USH-23 Portsmouth Transportation Feasibility Study and concurred with your agency's recommendation to forward the Airport Bypass corridor for further analysis. On July 1, 2004, we contributed comments on the preliminary DEIS.

U.S. EPA rated the DEIS an Environmental Concerns- insufficient information (EC-2). This means that the U.S. EPA has identified environmental impacts that should be avoided and suggests corrective measures which may require changes to the preferred alternative or mitigation measures that can reduce impacts. The rating also means that the DEIS does not contain sufficient information to fully assess environmental impacts of the preferred alternative or other alternatives that are reasonably available to the project. Comments follow below.

River Crossings

The DEIS mentions that temporary increases in sedimentation have the potential to affect two fish species listed as rare (Page 3-49). We recommend that the strictest mitigation measures be added where the fish occur, in Long Run and the Little Scioto River. We also suggest monitoring these fish populations over the duration of construction and for a period of time thereafter, for example one year. The work should be coordinated with Ohio Department of Natural Resources.

Forest Fragmentation/ Loss of Forested Acreage

In general, the DEIS doe not fully address forest fragmentation. In addition, the DEIS should address impacts from the loss of woodland acreage, aside of fragmentation. While we understand that the existing forest acreage is not "virgin" or "old growth" (p. 3-50), we note that several segments of the preferred section appear to cut through wooded areas that appear relatively continuous (in Segments H-1 and HV-2). It is clear that when an overall 493 acres of woodland are impacted for the bypass, habitat will be lost, edge environments will increase, and the potential for invasive species along the edges will increase.

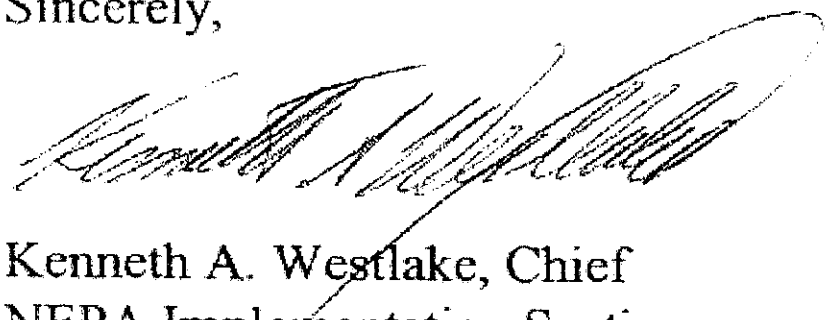
We do not agree with the statement on page 3-51: "Because there are already roads throughout the project area, the addition of the bypass will do little to fragment the forested area more than they have already been fragmented." Since the area has been previously fragmented and logged, additional impacts to woodlands and habitat from the project should be characterized as cumulative impacts. Therefore, we suggest that this section of the DEIS evaluate and discuss the project's cumulative impacts with regard to fragmentation and loss of acreage. Please note that we looked at information in the project's Ecological Survey Report (ESR), or describe cumulative impacts.

We note further that the DEIS claims that secondary impacts due to forest fragmentation are expected to be minor, due to existing conditions (p. 3-51). We suggest removing the statement from the DEIS, since the purpose of the road, in part, is to encourage development. If the road is successful in this aspect of its purpose, it is reasonable to expect the removal of more woodland acreage or further fragmentation. These secondary impacts are not acknowledged or described by the DEIS, and they should be.

The DEIS is not specific about mitigation to replace the use and values provided by woodland acreage that will be removed or fragmented. These values, as described in the DEIS and the ESR, appear to be mainly as habitat for wildlife. We encourage voluntary mitigation of upland forest losses. We realize that mitigation close to the project may not be achievable, given that the project is bordered mainly by private land, some of which is used for timber production or agriculture. It may be difficult to address cumulative forest fragmentation impacts as well. Even under these circumstances, mitigation efforts should be more fully described because removal of woodland acres is one of the largest environmental impacts of the project. For example, we recommend the DEIS identify, or discuss the undertaking to identify, local preservation groups that might be interested in monitoring invasive species and replanting the area with native species. We suggest the Ohio Department of Transportation consider the Shawnee State Forest in its mitigation plans. There may be opportunities to add to contiguous woodland acreage the park or to assist in habitat restoration. While that resource is outside the study area, we suggest that adding to it could at least help preserve the use and values in the region.

If you have any questions, please contact Anna Miller of my staff at (312) 886-7060 or miller.anna@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Science, Ecosystems, and Communities

cc: Tim Hill, Ohio Department of Transportation

OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Harry Fry, District 9 Deputy Director **DATE:** April 24, 2006
Attention: Greg Manson, District Environmental Coordinator

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: **SCI-823-0.00** Summary of Cultural Resources in Scioto County, Ohio Extended Planning Study Footprint

PROJECT: CRS: SCI-823-0.00 PID: 19415 SJN: 491820

On April 14, 2006, ODOT-OES Staff completed a review of the subject project. The proposed project involves the extended Planning Study Footprint for the Portsmouth Bypass (SCI-823).

A Phase I archaeology report entitled *Phase I Archaeological Reconnaissance Survey for the Proposed Portsmouth Bypass (SCI-823-0.00 [PID 19415] in Porter, Harrison, Madison, Jefferson and Valley Townships, Scioto County, Ohio,* was concurred with by SHPO on October 28, 2004 and a Phase II history/architecture report entitled *Phase II History/Architecture Evaluation of 532 Fairground Road (SCI-600-03) for the Proposed Portsmouth Bypass (SCI-823-0.00; PID 19415) in Porter, Harrison, Madison, Jefferson and Valley Townships, Scioto County, Ohio,* was concurred with by SHPO on December 3, 2004. This report presented an evaluation of one property in Valley Township identified during the Phase I history/architecture survey. At that time, the project area consisted of a 16 mile long corridor with construction limits varying between 250 and 1000 feet. For the archaeology survey, a 400 foot wide section of the corridor was surveyed with areas exceeding these limits also investigated. For the history/architecture survey, a one to two mile wide corridor was examined.

Based on the extreme topography in this area of Scioto County, the design team had to make a number of adjustments to the proposed construction limits, consisting of increasing the fill slopes in order to minimize earthwork waste. Changes were made at various station numbers (see attached), and a field visit was made to each of the seven areas on March 14, 2006, by TranSystems' Andrew M. Schneider. Field methods were identical to those described in the original archaeology survey report. History/architecture investigations were unnecessary since the original Phase I survey covered a one to two mile wide corridor. As a result of the additional field survey work, no new archaeological sites were identified and no further work is recommended unless the scope of the project changes.

In view of the above, please note that there is no change in the original 2004 findings by OES and SHPO that "no historic properties affected," is appropriate for this project. No further cultural resources coordination are recommended unless either the funding or the scope of the project changes. The date of this Inter-Office Communication and the dates of the above 2004 SHPO concurrences should be used for cultural resources clearance. The District should also attach a copy of this IOC and the 2004 SHPO concurrences to the appropriate environmental document.

Should you have any questions of concerns, feel free to contact Staff Archaeologist Marilyn Orr, at (614)752-8279.

TMH:

c: OHPO, Thomas Grooms; Noel Alcala, OES: File; Reading File

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127
(614) 469-6923/FAX (614) 469-6919
August 25, 2004

Timothy M. Hill
Ohio Dept. of Transportation
P.O. Box 899
Columbus, OH 43216-0899

Re: SCI-823-0.00 (PID 18415), Portsmouth Bypass

Dear Mr. Hill:

This is in response to your May 28, 2004 letter requesting our review of the Ecological Survey Report and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County, Ohio. The Bypass would connect US 23 near Lucasville with US 52 near Sciotodale by a new limited access highway northeast of Portsmouth. Depending on the alternative selected, the project would impact 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. Forest habitat to be impacted or destroyed due to this project would be 362 to 528 acres, depending on the alternative selected.

We have reviewed the PDEIS and find that it adequately addresses aspects of interest to the U.S. Fish and Wildlife Service, with minor exceptions. The following are comments with our concerns or notations.

Relative to Federally listed species in Scioto County, the PDEIS addresses the three species (Indiana bat-*Miotis sodalis*, Virginia spiraea-*Spiraea virginiana*, and small whorled pogonia-*Isotria medeoloides*) and concludes that the project **may affect but is unlikely to adversely affect** the three listed species. We concur with this determination. We understand that no Indiana bats were found during surveys in the project area. Nevertheless, we recommend adherence to our standard guidance for avoiding or minimizing impacts to Indiana bats and their habitat.

The timber rattlesnake-*Crotalus horridus horridus*-was given consideration relative to a pre-listing conservation plan, and no impacts on this species are expected.

Since the publication of the PDEIS, two mussel species (rayed bean-*Villosa fabalis* and sheepnose-*Plethobasus cyphyus*) have officially been added in Scioto County as Federal candidate species. We recommend that these two species be addressed in the draft EIS.

GENERAL COMMENTS

In addition to significant direct effects of major road construction, such as the Portsmouth Bypass, these projects have many secondary impacts, not only to the environment, but also to the economy and society in the project area. Areas adjacent to the road alignment are frequently changed from basically undeveloped rural settings to residential and commercial developments with large areas of impervious surfaces. Areas near interchanges are particularly vulnerable. Economic development with transportation elements should be pursued which would rejuvenate old, economically dying neighborhoods in cities such as Portsmouth. We are concerned that this project would not only destroy many natural resources in the project area, but also could promote further deterioration of the city's core. Unfortunately, this type of project promotes the so-called urban sprawl. We recommend that Ohio Department of Transportation (ODOT) work with local governments in the project vicinity to initiate local zoning which would result in controlled developments that protect the natural resources rather than destroy them.

We are also concerned with impacts to forest habitat which result in increased fragmentation to large tracts of forests. While the percentage of forest in Ohio has increased during the past decades, the number of large blocks of uninterrupted forest has decreased. To some degree the Portsmouth Bypass would further fragment forest in the Portsmouth area. This is an issue that should be addressed in the draft EIS, along with more attention to project-caused impacts to forest habitat, in general.

Mitigation Measures

As in other bypass projects in southeast Ohio, new roads are commonly routed through forested areas. Also, most of the forested areas are hilly. Therefore, additional terrain is needed to have a cut or fill segment with stable slopes. To minimize those impacts, we recommend that the median and shoulder areas be reduced to that which is necessary for safety and maintenance. If necessary, median width should be reduced with the use of "Jersey" barriers.

SPECIFIC COMMENTS

ECOLOGICAL SURVEY REPORT VOL. I

Page 16, Endangered Species:

In the second paragraph the last sentence should be modified to read, "This species has been confirmed in Hocking County (approximately 50 miles north of the study area, and there is a 1985 record in Scioto County (approximately 5 miles from the study area)."

The same comment pertains to the second paragraph on page 63, which addresses the small whorled pogonia (SWP).

Page 38, Endangered Species, Small Whorled Pogonia:

In the second paragraph, the second sentence should be modified to read, "The timing of this work will be coordinated with Paul Knoop, a private naturalist, who is monitoring the known population of the SWP in Hocking and Scioto Counties..." The same change should be made in Volume III, Tab K, Page 1 and Appendix A, sixth page, Field visit, Small Whorled Pogonia site, Hocking County.

Pre-DRAFT EIS

Page 3-25, *Mitigation/Additional Coordination Required:*

We note that the Little Scioto River is designated State Resource Waters. As such, the Ohio EPA prohibits authorization of impacts to the river and adjacent wetlands under the Nationwide Permit Program of Section 404 of the Clean Water Act. Therefore, we recommend that established best construction and management practices be exceeded in portions of this project that are near this river. In addition to all the standard practices, adequately sized sediment control structures should be constructed, used and maintained during the entire project construction period to prevent project originated silt from entering the stream(s).

Page 3-35, *Mitigation/Additional Coordination Required:*

The second paragraph states that specific stream mitigation measures will be developed during coordination with the Corps and Ohio EPA in the pre-application process for Section 404 and 401 permits. In accordance with the Fish and Wildlife Coordination Act, we ask that the above agencies include both the State and Federal fish and wildlife agencies in the above deliberation. We recommend the same for development of the wetland mitigation plan, as required by the U.S. Army Corps of Engineers Regulatory Guidance and Ohio's Revised Code, primarily in the Little Scioto River watershed.

Page 3-41, 3.4.6 Wildlife, Vegetation and Threatened and Endangered Species: *Existing Conditions*

It should be noted that the eastern sand darter is on a list of species for which status assessments will be done in the next few years. Also, another species, for which a relatively recent record (1988) exists in Little Scioto River, is the eastern hellbender (*Cryptobranchus alleganiensis*). This species is currently under evaluation for possible Federal candidate status. This information should be included in the draft EIS.

Page 3-48, Natural Environment Secondary Impacts:

We note that this section has not been included in the above document but will be in the subsequent draft EIS. We appreciate this heads-up comment, since we understand that a primary purpose of the project is to stimulate economic development in the Bypass corridor. Considering this, habitat impacts beyond the construction of the Portsmouth Bypass could be, and predictably will be, substantial. Your treatment of secondary impacts should include discussions of economic goals by local governments.

Page 3-50, Figure 3-6: Existing Land Use:

This figure should be revised to show a land use for Forest. We assume this is included with "Agricultural" in the current figure. It should be categorized as in Table 3-13 on page 3-53. (Refer to our comments on forest habitat.)

Much emphasis has been placed on impacts to streams, wetlands, and federally listed species; since impacts to such are regulated. Unfortunately, upland forest habitat receives relatively little attention. In recent years we have observed that the ODOT has placed considerable effort on the planting of woody vegetation along constructed roads and adjacent impacted areas. We recommend the same be done for this project to mitigate the significant loss of forest habitat. The general project vicinity should be scanned for possible opportunities to replace the many acres of forest habitat. Furthermore, conservation easements should be used where feasible to protect reforestation efforts in perpetuity. The focus should be made on hillsides, as well as bottomlands and riparian areas.

Page 2-10, 2.2.1.2 Evaluation Process and Criteria:

The second paragraph lists the resources that should be considered during the impact analyses. Among other resources, we noted wetlands, streams, and floodplains. We recommend that you add another very important resource relative to everyone's interest: forest!

Table 3-22, PREMINARY PROJECT IMPACTS BY SECTION:

After careful evaluation of data in this table, based on lower levels of impacts to priority habitats, we recommend that following segments for the three sections of this project where there is a choice.

- Section 1, Segment Hill
- Section 2, no choice
- Section 3, Segment Hill (actually both segments are very similar in terms of impacts to various habitats)
- Section 4, Segment Valley

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U. S. Fish and Wildlife Service's Mitigation Policy.

We appreciate this opportunity to provide the above comments. If you have questions, or if we may be of further assistance in this matter, please contact Ken Lammers at extension 15 in this office.

Sincerely,

Kenneth C Lammers

for Mary Knapp, Ph.D.
Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH
ODNR, Division of Real Estate & Land Management, Columbus, OH
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