



Legal Department

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

June 26, 2017

Chairman Asim Z. Haque
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

Hector Garcia
Senior Counsel –
Regulatory Services
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hgarcia1@aep.com

**Re: Case No. 17-0804-EL-BLN Request for Expedited Treatment:
In the Matter of the Letter of Notification for the
Ironman Station Project**

Dear Chairman Haque,

Attached please find a copy of the Letter of Notification (LON) for the above-referenced project by AEP Ohio Transmission Company, Inc. (AEP Ohio Transco). This filing and notice is in accordance with O.A.C. 4906-6-05.

A copy of this filing will also be submitted to the executive director or the executive director's designee. A copy will be provided to the Board Staff via electronic message. The Company will also submit a check in the amount of \$2,000 to the Treasurer, State of Ohio, for Fund 5610 for the expedited fees.

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/ Hector Garcia

Hector Garcia
Counsel for AEP Ohio Transmission Company, Inc.

cc. John Jones, Counsel OPSB Staff
Jon Pawley, OPSB Staff

Letter of Notification for Ironman Station Project



PUCO Case No. 17-0804-EL-BLN

Submitted to:
The Ohio Power Siting Board
Pursuant to Ohio Administrative Code
Section 4906-6-05

Submitted by:
AEP Ohio Transmission Company, Inc.

June 26, 2017

LETTER OF NOTIFICATION FOR IRONMAN STATION PROJECT

June 26, 2017

Letter of Notification Ironman Station Project

4906-6-05

AEP Ohio Transmission Company, Inc. (“AEP Ohio Transco”) is providing the following information to the Ohio Power Siting Board (“OPSB”) in accordance with the accelerated application requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-5(B) General Information

B(1) Project Description

The name of the project and applicant's reference number, names, and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Letter of Notification.

AEP Ohio Transco has identified the need to construct the Ironman Station Project (the “Project”) in the City of Jackson, Jackson County, Ohio. The Project consists of constructing a new 138 kV insulated 69 kV operated Box Bay Switchyard. An existing 69kV line will be permanently relocated (rerouted) and upgraded to 138 kV for approximately 0.25 miles during the switching station construction in preparation for when construction is complete.

The Project will be constructed on a property currently owned by the City of Jackson located along Fairmont Street near its intersection with East Broadway Street (County Road 10 E). The location of the property (the “Project Area”) is shown on Figure 1.1 in Appendix A. This undeveloped, non-forested property is approximately 18.8 acres in size. The City of Jackson will donate an approximately 1.7 acre portion of this property to AEP Ohio Transco for the construction of the new switching station, a transmission line reroute, and an access road easement. Figures 1.2 and 1.3 in Appendix A show the general location of the proposed Ironman Station within the Project Area.

The Project meets the requirements for a Letter of Notification (“LON”) because it is within the types of projects defined by Item (1)(b) and (3) of 4906-1-01 *Appendix A Application Requirement Matrix For Electric Power Transmission Lines*. This item states:

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distributions line(s) for operation at a higher transmission voltage as follows:

(b) Line(s) greater than 0.2 miles in length but not greater than two miles in length.

(3) Constructing a new electric power transmission substation.

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B(2) Statement of Need

If the proposed project is an electric power transmission line or natural gas transmission line, a statement explaining the need for the proposed facility.

The City of Jackson “the City” has requested a new 69 kV delivery point capable of carrying the entire load of the City, which will be approximately 37 MW upon completion of the project due to a 4 MW load increase by the City. This delivery point will be redundant with the existing 138 kV delivery point out of AEP Ohio Transco’s Lick Station and will carry 19 MW of load under normal operating conditions, leaving 18 MW for the 138kV delivery point under normal conditions.

Due to the need for the new 69 kV delivery point (Ironman Switching Station) to be capable of carrying the City’s full load of 37 MW, the voltage at the new 69 kV delivery point would drop to approximately 65% (PJM criteria allows between 92% and 105%) and overload AEP Ohio Transco’s Lick-Ross 69 kV circuit to 130% of its rating (PJM criteria does not allow reaching 100% of a circuit’s rating) after a single negative system event (contingency). To mitigate this contingency, a new 138/69 kV station (Rhodes Station) will be installed, injecting a third 69 kV source into the Lick-Ross 69 kV circuit at the new Heppner Switching Station. Letters of Notification will be filed with the OPSB separately for the Rhodes Station Project and the Heppner Switching Station Project. Following the mitigation, there are no single or secondary contingencies that cause voltage or overloading issues across the Lick-Ross 69 kV circuit. This project will be submitted to PJM as a Supplemental Project under PJM reference number b28885.1.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the project area.

Figures 1.2, 1.3, and 1.4 in Appendix A show the location of the Project in relation to other existing AEP Ohio Transco transmission lines.

B(4) Alternatives Considered

The applicant shall describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

The proposed Project is located on property to be donated by the City of Jackson to AEP Ohio Transco which is currently undeveloped and non-forested, and does not contain any streams or wetlands. Surrounding land use consists of Developed (Low Intensity, Medium Intensity, and Open Space), Herbaceous (maintained lawn), and Deciduous Forest. This location minimizes impacts to the community and the environment, while taking into account the engineering and construction needs of the Project. The Project

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property will be donated by the City of Jackson and has no socioeconomic, ecological, construction, or engineering flaws. Therefore, no significant alternatives were considered as part of the Project.

B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.

AEP Ohio Transco informs affected property owners and tenants about its projects through several different mediums. Within seven days of filing this LON, AEP Ohio Transco will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements under O.A.C. Section 4906-6-08(A)(1-6). Further, AEP Ohio Transco mailed a letter, via first class mail, to affected landowners, tenants, contiguous owners, and any other landowner AEP Ohio Transco approached for an easement necessary for the construction, operation, or maintenance of the facility. The letter complies with all the requirements of O.A.C. Section 4906-6-08(B). AEP Ohio Transco also maintains a website (<http://aeptransmission.com/ohio/>) which provides the public access to an electronic copy of this LON and the public notice for this LON. A paper copy of the LON will be served to Jackson County Board of Commissioners, the Jackson County Engineer, Jackson County Soil and Water Conservation District, Lick Township Board of Trustees, City of Jackson Mayor Randy Heath, and City of Jackson Councilman Eric Brown concurrently with submittal to OPSB. A paper copy of the LON will be provided to the Jackson City Library. Lastly, AEP Ohio Transco retains ROW land agents who discuss project timelines, construction and restoration activities with affected owners and tenants.

B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

AEP Ohio Transco anticipates that construction of the Project will begin in August 2017, and the in-service date (completion date) of the Project will be approximately April 2018.

B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Figure 1.1 included in Appendix A identifies the location of the Project Area on a USGS 1:24,000 quadrangle map. Figure 1.2 in Appendix A is an aerial map of the Project Area. To visit the Project from Columbus, take US-23S/US-35E south to the County Rd 10 E/Pattonsville Rd interchange in Jackson, Ohio. Turn right on to County Road 10 E then turn right (north) onto Fairmont St. Follow Fairmont St. approximately 500 feet. The Project Area is located on the west side of the road.

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B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

Construction of the new Ironman Station will occur on property to be donated by the City of Jackson to AEP Ohio Transco (Parcel ID: H140070004800). AEP Ohio Transco will obtain approximately 1.7 acres of the 18.8-acre parcel for construction of the station and access roads. No other property acquisition or easements are required to construct and operate Ironman Station. The permanent reroute of the Coalton SW-Lick 69 kV Line will also be on property to be donated by the City of Jackson.

B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the Project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The proposed Ironman Station will be constructed on a 1.7 acre portion of an 18.8 acre property obtained by AEP Ohio Transco from the City of Jackson. The equipment and facilities described below will be installed within the fenced area of the proposed Ironman Station facility and the associated transmission line reroute.

Ironman Station: Construct a new 138 kV insulated 69 kV operated Box Bay Switchyard

- a. (13) Arresters – Station class, 60kV, MOV type, 48kV MCOV, Polymer Housed – ABB, manufacturer's part number Q060SA048AAEP – CID 0710054762
- b. (10) CCVTs – 69kV/138kV, 2-Windings, 12500PF/6250PF, 350/600:1 & 700/1200:1, w/ Carrier Accessories – Alstom, manufacturer's part number OTCF-72/145.SI – CID 0079212420
- c. (2) Circuit Breakers – 3000A, SF6 Dead Tank, 145/170kV, 40 kA, 3ph, 3 Cycle, 750kV BIL, BM-1 Spring Mech 125VDC/120VAC. (2) 2000:5 BCT, C800 @ 1200:5 Per Bushing, TRF=2, Mitsubishi Electric Power, manufacturer's part number 140SFMT40GE-1 – CID 0500080854
- d. (6) Station Disconnect Switches – 3P, GOAB 138kV, 3000A, 100kA, 550kV BIL, VEE-CB, Vertical Mounting – Royal Switchgear Manufacturing, manufacturer's part number AV13830AEP100BK – CID 0072383018

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- e. (12) Deadend Suspension Insulators – 138kV, 88-inch height, 25000 pound SML – Ohio Brass/Hubbell, manufacturer's part number 511008-1201 – CID 0049854010
- f. (1) Capacitor Switcher – 420A, SF6 Live Tank, 72.5kV, 18kA, 3ph, 5 Cycle, 350kV BIL, 125VDC/120VAC, 40 Ohm Closing Resistor – Southern States, manufacturer's part number M0002751 – CID 0072418216
- g. (3) Current Transformers – 145kV, Outdoor, Freestanding, 650kV BIL, 4 Cores, Multi-Ratio, Cores 1 & 2 1200:5 C800 @ 800:5 RF=1.5, Cores 3 & 4 3000:5 C800@2000:5 RF=1.5 – Trench Group, manufacturer's part number IOSK 145 – CID 0500081711
- h. (1) Capacitor Bank – 69kV, Fuseless, Wye-Ungrounded, 3ph, 14.4/28.8MVAR Initial/Final, 600KVAR 9.96kV Units, 3 Racks, 16 units total, Bracket for Neutral Potential Device – Cooper Power Systems, manufacturer's part number CEB07059F0316F2 – CID 0067386615
- i. (1) Switch – Vertical break, 3ph, Loop Splitting/Load Breaking/Line Dropping, GOAB, 138kV, 3000A, 100kA, 550kV BIL, Slanted-V, Vertical Mounting, SF6 Interrupter, TR-287 high strength porcelain – Pascor Atlantic Corp, manufacturer's part number TTR8V-123-3000-287-WG-LLS-AEPA – CID 0710054448
- j. (1) Motor Operator, Switch – 125VDC, 6.8 second per 190 degrees' rotation, F/2-inch IPS rod, with type A coupling, 10 second delay, CCW operation on opening – Pascor Atlantic Corporation, manufacturer's part number MO-10A-AEP-97 – CID 0072194521
- k. (1) Station Service Transformer – 25kVA, 1ph, 69kV, 125/250VAC – Kuhlman Electric – CID
- l. (1) Resistive Potential Device – 34.5kV Primary, 115/66.4V Secondary, 200kV BIL – S&C Electric Company, manufacturer's part number 81574R1-G – CID 0079225600
- m. (1) 138kV Box Bay Initial Steel Structure, Expandable, Mark: BX138-4 – CID 0074383801
- n. (3) 138kV CCVT Steel Structure, three-phase, Mark: CC-2 – CID 0074380851
- o. (1) 138kV Arrester Support Steel Structure, three-phase, Mark: SA138-1 – CID 0074383460
- p. (1) 138kV CT Support Steel Structure, three-phase, Mark: CT138LO3-1CW – CID 0074382000
- q. (1) 138kV CCVT Steel Structure, single-phase, Mark: CC-3 – CID 0074380852
- r. (1) 138/161kV PT & Surge Arrester Support Steel Structure, single-phase, Mark: PT/SA161/138-1CW – CID 0074340010
- s. (1) Panel, electrical power, AC panelboard, outdoor, 56 in h x 30 in wd x 10-3/4 in d, 120/240VAC, alum NEMA 3R weatherproof enclosure, custom 225A main breaker 42 position, SS b/m item#

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B2602 filled with BQD single and two breakers bkr size arrangement drawing to be submitted at time of order – CID 0500077738

t. (1) Switch, safety, 240VAC, 200A, 2pst, fusible, NEMA 3R enclosure, 3 wire, 2 blades, fuse holder, cu lug equipment ground lug w/ 2-1/2 in hub, w/o fuses SS b/m item #SS-200 – CID 0040862700

u. (1) Building, no modifier, drop-in control module, 16 ft x 27 ft, steel, base module (non-mirrored), control building, DICM (GEN 3.5) SS b/m item #CM-27 – CID 0500082096

v. (80) feet of 20" Plastibeton Cable Trench – CID 0500081566B(9)(b) Electric and Magnetic Fields

Ironman Station: Install Metering equipment

a. (3) Arrester, electrical, 60kV, station class, MOV type, polymer housed, 48kV MCOV, 4 hole NEMA pad, 3-hole mount, SS b/m item #SA-12, ABB – CID 0710054762

b. (3) Transformer, instrument, metering VT, 69kV, 350kV BIL, oil-filled, corrosive environment 350/600:1:1 VT ratio, VT primary=40250V, VT secondary=115/67.08V (2), thermal rating 6000VA, VT accuracy 0.15%, 0.3 %, special requirements. all stainless steel construction, extra creep bushing per AEP SS-491102 (heavy contaminant) – CID 0078233045

c. (3) Transformer, instrument, metering CT, 500:5 CT, RF 1.5, 69kV, 350kV BIL, oil-filled, corrosive environment CT accuracy 0.15% 1.8 from 0.25A – 750A, primary one second thermal rating 40 kA, special requirements. all stainless steel construction, extra creep bushing per AEP SS-491102 (heavy contaminant) – CID 007823305

Coalton SW-Lick 69 kV (Existing), Ironman Station Cut-In (New)

a. The reroute around the new substations will consist of five steel deadend poles on concrete pier foundations and one temporary direct embedded guyed wood pole.

b. A temporary guyed wood pole will be used to keep the alignment from interfering with the construction area of the new station and then will be removed once the Ironman Station is constructed and the cut-in connections are made into Ironman station.

c. A new direct embedded pre-engineered steel pole tangent structure will also be installed on the east alignment between the new Ironman Station deadend and the existing deadend structure 276.

d. The Coalton SW-Lick 69 kV line cut-in will have new 1033.5 kcmil ACSR 54/7 "Curlew" conductor and a 7#10 Alumoweld AW 7 shield wire strung from the new deadends into the Ironman Station bays. A 1033.5 kcmil ACSR 54/7 "Curlew" conductor and a 7#10 Alumoweld AW 7 shield wire will be utilized for the re-route around the construction area.

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For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line. The discussion shall include:

B(9)(b)(i) Calculated Electric and Magnetic Field Strength Levels

Not applicable. The proposed Project is an electric transmission switching station and there are no occupied residences or institutions located within 100 feet of the Project. Additionally, the transmission line reroute is located beyond 100 feet from any residence.

B(9)(b)(ii) Design Alternatives

A discussion of the applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right-of-way width.

Not applicable. The proposed Project is an electric transmission switching station with a transmission line reroute and there are no occupied residences or institutions located within 100 feet of the Project.

B(9)(b)(ii)(c) Project Costs

The estimated capital cost of the project.

The capital costs estimate for the proposed Project, comprised of applicable tangible and capital costs, is approximately \$4,500,000.

B(10) Social and Economic Impacts

The applicant shall describe the social and ecological impacts of the project.

B(10)(a) Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

The Project is located within the City of Jackson, Jackson County, Ohio. Figure 1.3 in Appendix A shows U.S. Department of Agriculture ("USDA") land use categories for the Project Area. According to this map, land uses in the Project Area consists of maintained lawn (herbaceous) and developed, open space. No streams or wetlands are located in the Project Area.

The Project Area is located within the city limits of the City of Jackson. Urban land use, including several businesses and residences are located to the south and open recreational soccer fields on City property are to the north. The closest residence is located approximately 160-feet to the southeast of the proposed

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Station. A City-owned cemetery (Fairmont Cemetery) is located approximately 0.25 miles north of the Project Area (See Figure 1.3).

No wildlife management areas or nature preserve lands are located within 1,000 feet of the Project. The determination of any Critical Habitat locations, to be reported by the Ohio Department of Natural Resources (ODNR) Ohio Natural Heritage Program (ONHP) Environmental Review process, occurring within one mile of the Project Area (see Appendix C) is pending. Once a response has been received from ODNR, any pertinent information will be forwarded to the OPSB.

B(10)(b) Agricultural Land Information

Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.

The Project is not located within registered agricultural district lands, based on June 13, 2017 coordination with the Jackson County Auditor's Office. Additionally, the Project Area does not contain any active agricultural row crop land (see Figure 1.3 in Appendix A and Figure 3 in Appendix C).

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

In March 2017, AEP Ohio Transco's consultant completed Phase I cultural resource investigations for the Project (see Appendix B). The field investigations were conducted on a 1.7 acre portion of the Project Area. AEP Ohio Transco's consultant will be surveying a small additional portion of the Project Area the week of June 26, 2017. Additional information regarding this survey will be provided to OPSB.

The literature review conducted for the Project Area identified no previously recorded archaeological sites within a 1,000-foot radius of the center of the Project Area, and one previously recorded site - the James Cemetery Mound Group (33JA0022), which is located adjacent to the Project Area. This site will not be impacted by the planned project.

The archaeological field reconnaissance determined that the majority of the Project Area has been severely altered and disturbed. However, testing in the northwestern and southeastern portions of the cultural resources study area identified two historic period sites (33JA03094 and 33JA03093, respectively). However, it was concluded that these findings are not regarded as significant and a finding of "no historic properties affected" is considered to be appropriate for this project. No further archaeological work, beyond the additional survey being conducted the week of June 26, 2017, is anticipated for this Project. For more information, see the Phase I Cultural Resource Management Investigations Report included in Appendix B.

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B(10)(d) Local, State, and Federal Agency Correspondence

Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000004, and AEP Ohio Transco will implement and maintain best management practices (BMPs), as outlined in the project-specific Storm Water Pollution Prevention Plan (SWPPP), to minimize erosion and control sediment to protect surface water quality during storm events. The Project will not impact any streams or wetlands, and no tree clearing will be required in any forested wetlands (see Appendix C). In addition, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers or Pre-Construction Notification to the U.S. Army Corps of Engineers.

The Project is not located within a Federal Emergency Management Agency ("FEMA") 100-year floodplain area. Therefore, no floodplain permitting is required for the Project. There are no other known local, state or federal requirements that must be met prior to commencement of the Project. No local permits are expected to be required as indicated under 4906.13 No local jurisdiction.

B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The United States Fish and Wildlife Service ("USFWS") *Federally Listed Species by Ohio Counties October 2015* (available at www.fws.gov/midwest/ohio/pdf/OhioTEListByCountyOct2015.pdf) was reviewed to determine the threatened and endangered species currently known to occur in Jackson County. This USFWS publication listed the following threatened or endangered species as occurring in Jackson County: Indiana bat (*Myotis sodalis*; federally endangered), northern long-eared bat (*Myotis septentrionalis*; federally threatened), and running buffalo clover (*Trifolium stoloniferum*; federally endangered). As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The May 16, 2017 response letter from USFWS (see Appendix C) indicated that the proposed Project is within the range of the Indiana bat and northern long-eared bat in Ohio, but if tree clearing occurs between October 1 and March 31, they do not anticipate the Project having any adverse effects to these species or any other federally listed endangered, threatened, proposed, or candidate species. The proposed Project may require minimal tree clearing. Any tree clearing performed

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associated with the Project will occur between October 1 and March 31. The USFWS letter did not include any comments specific to the other federally listed species.

Several state-listed threatened species, endangered species, and species of concern are listed by the Ohio Department of Natural Resources (available at <http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/species%20and%20habitats/state-listed%20species/jackson.pdf>) as occurring, or potentially occurring in Jackson County. These state-listed species are addressed in detail in the Ecological Survey Report included in Appendix C.

Coordination letters were submitted via email to the Ohio Department of Natural Resources (“ODNR”) Division of Wildlife (“DOW”) Ohio Natural Heritage Program (“ONHP”) and the ODNR Office of Real Estate in May 2017, seeking an environmental review of the proposed Project for potential impacts on state-listed and federally-listed threatened or endangered species. A response from ODNR’s DOW/OHNP is currently pending. To date, no response from ODNR Office of Real Estate has been received. Once a response has been received from ODNR, any pertinent information will be forwarded to the OPSB.

B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The ODNR DOW/OHNP response is currently pending. Correspondence received from the USFWS (see Appendix C) indicated that there are no federal wilderness areas, wildlife refuges, or designated critical habitat in the Project vicinity. No properties identified in the National Conservation Easement Database (<http://www.conservationeasement.us>) were identified in the Project vicinity.

The FEMA Flood Insurance Rate Map (“FIRM”) was consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area (specifically, map numbers 390709C0142K and 39079C0161K). Based on this mapping, no mapped FEMA floodplains are located in the Project Area. Therefore, no floodplain permits will be required for this Project.

A review of the National Wetlands Inventory (“NWI”) database indicated that there were no NWI-mapped wetlands identified within the Project Area. Wetland and stream delineation field surveys were completed within the Project Area by AEP Ohio Transco’s consultant in May 2017. The results of the wetland and stream delineations are presented in the Ecological Survey Report included in Appendix C. No wetlands or streams were identified in the Project Area. Therefore, no impacts are anticipated during Project construction activities.

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B(10)(g) Unusual Conditions

Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

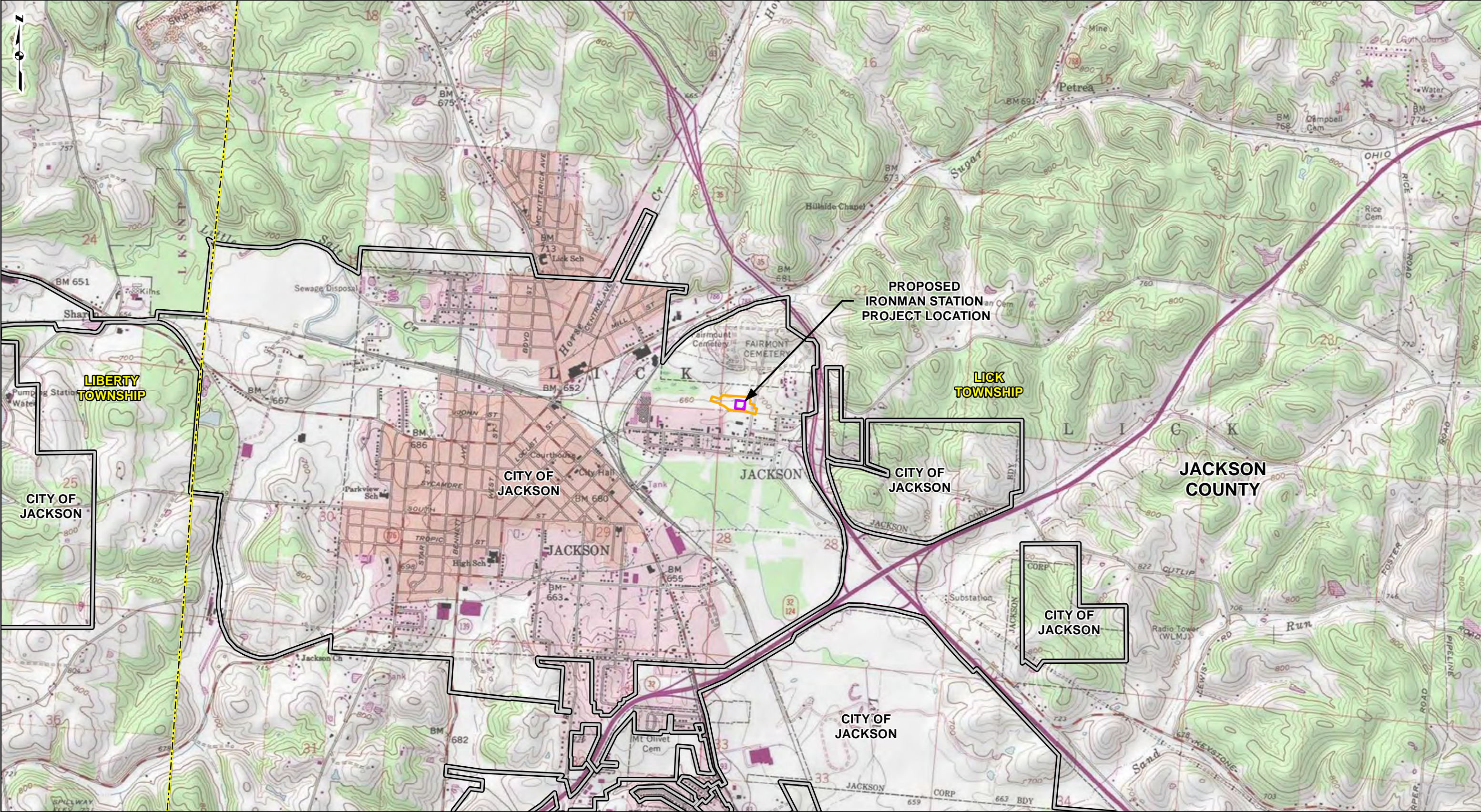
To the best of AEP Ohio Transco's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

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Appendix A Project Maps
June 26, 2017

Appendix A Project Maps

Figures 1.1, 1.2, 1.3, and 1.4



PROJECT LOCATION

JACKSON COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: JACKSON (1978) AND WELLSTON (1977), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 06/2017.

LEGEND

PROJECT AREA	TOWNSHIP BOUNDARY
PROPOSED IRONMAN STATION	CITY BOUNDARY
COUNTY BOUNDARY	

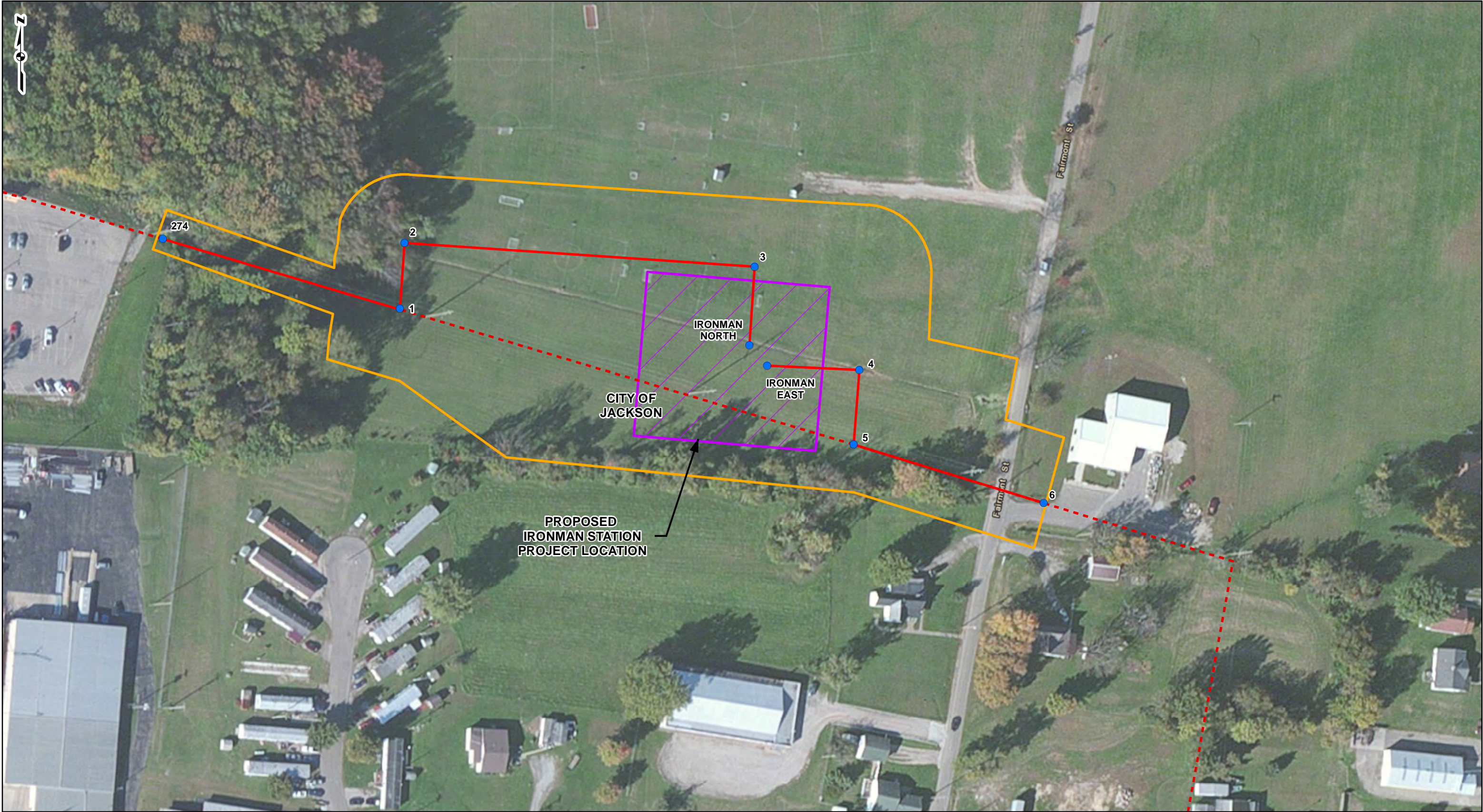
0 1,000 2,000 4,000 Feet

FIGURE 1.1
PROJECT LOCATION MAP

IRONMAN STATION PROJECT
AEP OHIO TRANSMISSION COMPANY, INC.

DRAWN BY: AKW
CHECKED: MDO

DATE: 6/19/2017
APPROVED: MRW



PROJECT LOCATION



JACKSON COUNTY, OHIO

REFERENCES: ESRI WORLD IMAGERY, MICROSOFT, UC - G, 2011, ACCESSED 06/2017. WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI ARCGIS ONLINE, ACCESSED 06/2017.

LEGEND

- PROPOSED STRUCTURE
- - - EXISTING COALTON SW-LICK 69 kV LINE
- PROPOSED COALTON SW-LICK 69 kV LINE REROUTE
- ▭ PROJECT AREA
- ▭ PROPOSED IRONMAN STATION
- ▭ CITY BOUNDARY
- ▭ TOWNSHIP BOUNDARY
- ▭ COUNTY BOUNDARY

0 50 100 200 Feet

FIGURE 1.2
PROJECT LAYOUT MAP



IRONMAN STATION PROJECT
AEP OHIO TRANSMISSION COMPANY, INC.

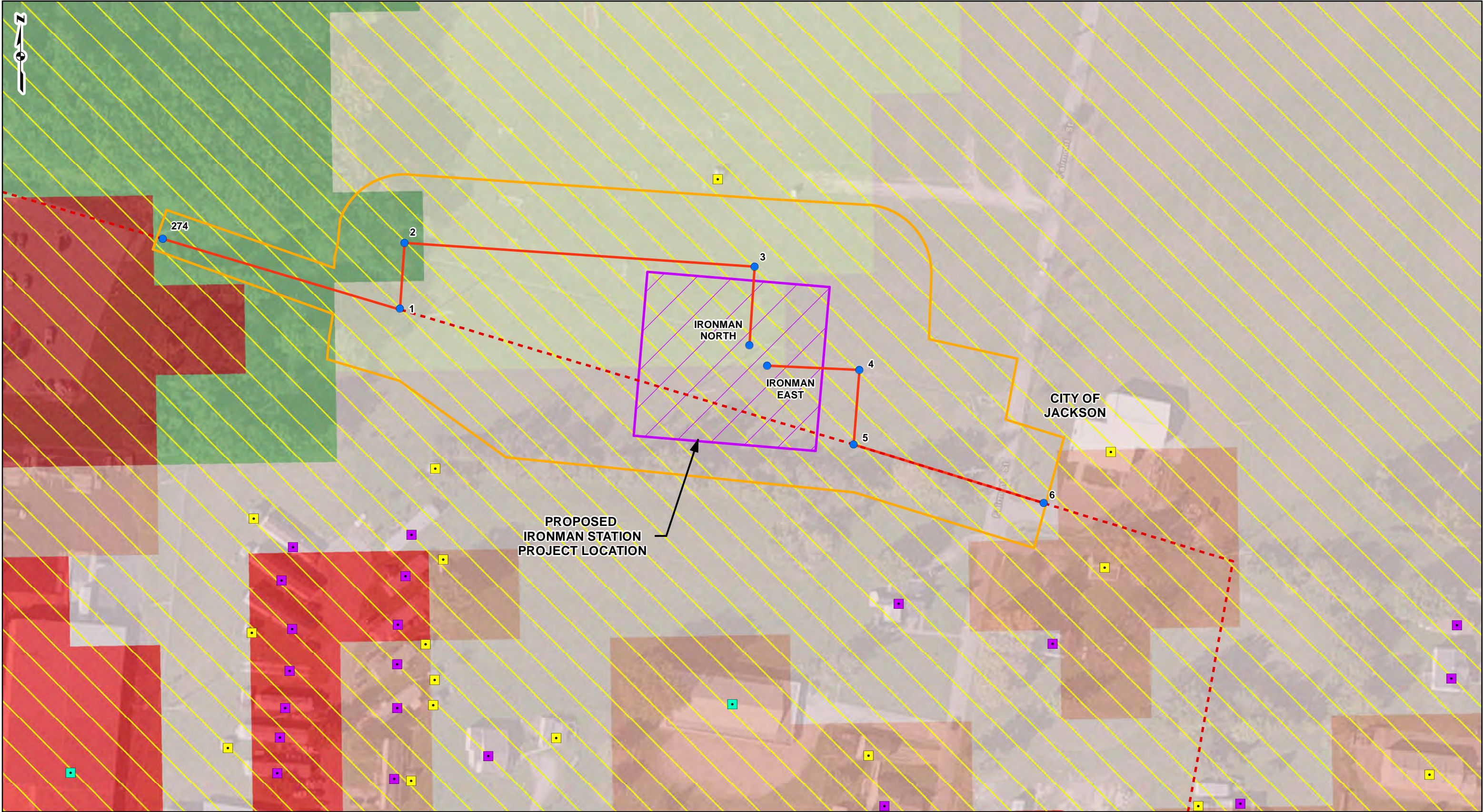


DRAWN BY: AKW

CHECKED: MDO

DATE: 6/20/2017

APPROVED: MRW



PROJECT LOCATION



JACKSON COUNTY, OHIO

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- LEGEND**
- PROPOSED STRUCTURE
 - STRUCTURE
 - COMMERCIAL BUILDING
 - RESIDENCE
 - OTHER
 - PROPOSED COALTON SW-LICK 69 kV LINE REROUTE
 - EXISTING COALTON SW-LICK 69 kV LINE
 - ABANDONED MINE
 - PROJECT AREA
 - TOWNSHIP BOUNDARY
 - COUNTY BOUNDARY
 - CITY BOUNDARY
 - PROPOSED IRONMAN STATION
 - NATIONAL LAND COVER DATABASE
 - HERBACEOUS
 - DEVELOPED, OPEN SPACE
 - DEVELOPED, MEDIUM INTENSITY
 - DEVELOPED, LOW INTENSITY
 - DEVELOPED, HIGH INTENSITY
 - DECIDUOUS FOREST

0 50 100 200 Feet

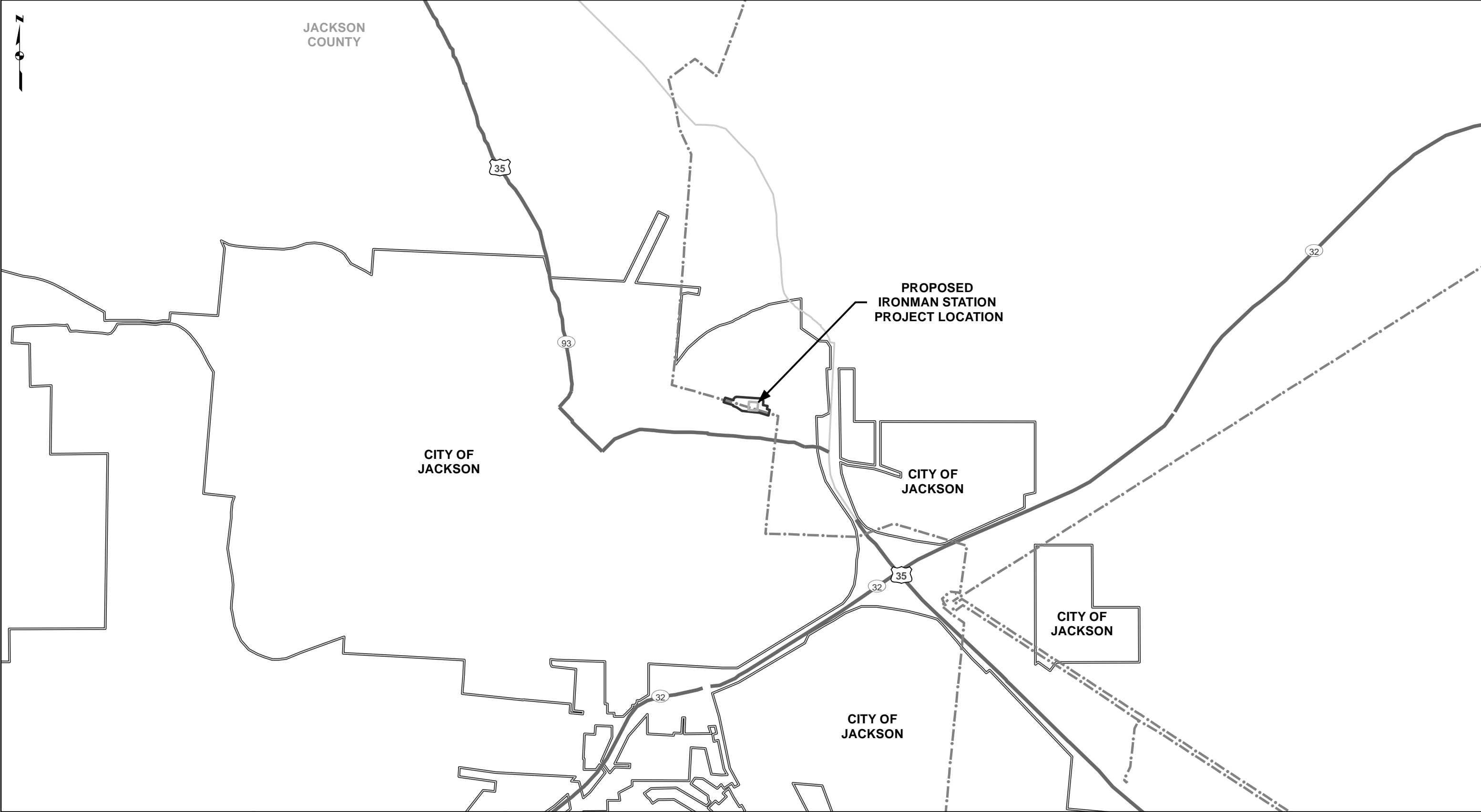
FIGURE 1.3
LAND USE MAP



IRONMAN STATION PROJECT
AEP OHIO TRANSMISSION COMPANY, INC.

DRAWN BY: AKW
CHECKED: MDO

DATE: 6/20/2017
APPROVED: MRW



PROJECT LOCATION



JACKSON COUNTY, OHIO

REFERENCES:

LEGEND

- | | |
|------------------------------|----------------------------|
| — EXISTING TRANSMISSION LINE | ▮ COUNTY BOUNDARY |
| MAJOR HIGHWAYS | ▮ CITY BOUNDARY |
| — LIMITED ACCESS | ▮ PROJECT AREA |
| — HIGHWAY | ▮ PROPOSED IRONMAN STATION |

0 1,000 2,000 4,000 Feet

FIGURE 1.4
CONCEPT MAP



IRONMAN STATION PROJECT
AEP OHIO TRANSMISSION COMPANY, INC.



DRAWN BY: AKW
CHECKED: MDO

DATE: 6/19/2017
APPROVED: MRW

LETTER OF NOTIFICATION FOR IRONMAN STATION PROJECT

Appendix B Phase I Cultural Resource Management Investigations Report
June 26, 2017

Appendix B Phase I Cultural Resource Management Investigations Report



**Phase I Cultural Resource Management Investigations for the Proposed
0.7 ha (1.7 ac) Ironman Switch Project in Lick Township, Jackson
County, Ohio**

Ryan J. Weller

March 16, 2017

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**Phase I Cultural Resource Management Investigations for the Proposed
0.7 ha (1.7 ac) Ironman Switch Project in
Lick Township, Jackson County, Ohio**

By

Ryan J. Weller

Submitted By:

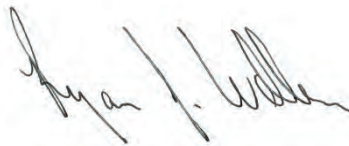
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Prepared for:

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Lead Agency:

Ohio Power Siting Board

A handwritten signature in black ink, appearing to read "Ryan J. Weller", is positioned above a horizontal line.

Ryan J. Weller, M.A., P.I.

March 16, 2017

Abstract

In March of 2017, Weller & Associates, Inc. conducted Phase I Cultural Resource Management Investigations for the Proposed 0.7 ha (1.7 ac) Ironman Switch Project in Lick Township, Jackson County, Ohio. The work was conducted for American Electric Power for submittal to the Ohio Power Siting Board. This document is suitable for submission to the Ohio History Connection for their review and the work was completed in accordance with their guidelines. This work included a literature review, visual inspection, and subsurface testing as part of the field investigations. The project area includes areas where construction is planned, a small nearly rectangular area. These investigations identified two previously unrecorded archaeological sites including 33JA393-394.

The project will include the construction of an electric switch facility within the City of Jackson. The facility will be located to the west of Fairmont Street, which is in the northeastern part of the city. The surrounding setting is a mixture of open recreational fields, business/commercial development, and single-family residences. The majority of the setting is associated with modern constructions. The project is located in an open, manicured lawn area. It is within an ancient valley setting that is bordered by comparably higher and unglaciated uplands.

The literature review for this project did not indicate that there were any directly involved sites or surveys within or adjacent to it. There are no architectural resources indicated within or near it. There are mounds and a cemetery (at same location) positioned at the southwestern edge of the study area. The planned construction activity will not involve these resources.

These investigations identified two previously unrecorded archaeological sites, 33JA0393-394. This includes a prehistoric isolated find spot and historic period artifact scatter; they are not regarded as being significant. It is the opinion of Weller that neither of these sites are significant or a landmark. A finding of 'no historic properties affected' is considered to be appropriate for this project. No further archaeological work is considered to be necessary.

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Introduction

In March of 2017, Weller & Associates, Inc. conducted Phase I Cultural Resource Management Investigations for the Proposed 0.7 ha (1.7 ac) Ironman Switch Project in Lick Township, Jackson County, Ohio (Figures 1-3). A cultural resources management (CRM) survey was appropriate to identify any sites or properties that might be regarded as historically significant and to evaluate the effects of this project on such properties. Significance is reflective to evaluation that is consistent with the National Register of Historic Places (NRHP) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]). AEP Ohio Transco requested the survey pursuant to Ohio Power Siting Board (OPSB) regulations; OPSB is the lead agency. This report summarizes the results of the fieldwork and literature review. The report format and design is similar to that established in *Archaeology Guidelines* (Ohio Historic Preservation Office [OHPO] 1994).

The literature review was conducted on March 15, 2017. The survey for this project was conducted in March by Brittany Vance, Justin Fryer, and Dakota Martinez. Alex Thomas and Chad Porter completed the figures for the report. Ryan J. Weller was responsible for the text and he served as the Principal Investigator.

Project Description

The project will involve the construction of the Ironman Switch Station, a new electric facility that is located in Jackson, Ohio. The project area is located on the west side of Fairmont Street and in an area that consists of manicured lawn and a ditch. This is part of an overall larger project involving the Ross-Heppner 138kV electric line project that stems from Chillicothe in Ross County to Jackson in Jackson County. A limited architectural survey will be conducted to verify the absence of any significant relative resources in the viewshed of this expansion. The work will be conducted in a manner that meets with the Ohio Power Siting Board guidelines and is being completed for eventual review and submittal to the Ohio History Connection.

Environmental Setting

Climate

Jackson County, like all of Ohio, has a continental climate with hot and humid summers and cold winters. About 104 cm (41 in) of precipitation falls annually on the county with over half (55 percent) falling from April through September (United States Department of Agriculture, Soil Conservation Service [USDA, SCS] 1985).

Physiography, Relief and Drainage

Jackson County is located within the unglaciated plateau of southeastern Ohio; however, the terrain containing the project area has been affected by Kansan-age lacustrine deposition (Brockman 1998; Pavey et al. 1999). The terrain through the

surrounding region is rugged upland with narrow ridge tops and steep side slopes. The stream valleys tend to be entrenched; however, low terraces tend to be present within the Kansan-age valley train. The project area is located within the Ironton Plateau physiographic region which is described as “Moderately high relief (300’) dissected plateau; coarser grained coal-bearing rock sequence more common than in other regions of the Allegheny Plateau; common lacustrine clay-filled Teays Valley remnants” (Brockman 1998). The project area is drained by an unnamed tributary of Little Salt Creek, which is part of the Scioto-Ohio River watershed.

Geology

The underlying bedrock of most of Jackson County is associated with Pennsylvanian-age formations. The bedrock in the extreme northwestern corner is Mississippian-age formation. The project is contained within an area of Pennsylvanian-age carbonate rocks (Brockman 1998) as it is centrally positioned within the county.

Soils

The project area is located within the Omulga-Piopolis soil association. These are soils that are characteristically valley and ancient terrace systems in the Allegheny Plateau Region. The soils in these valleys tend to be from nearly level to gently rolling landforms and from silty terraces. There are four soil series types present within the project area (Table 1; USDA, SCS 1985 [2017]).

Table 1. Soil in the Project.			
Soil Symbol	Soil Name	Slope	Location
Omu1B1	Omulga silt loam	2-6	Ancient terraces
Dol1A1	Doles silt loam	0-2	Terraces
Wya1B1	Wyatt silt loam	2-6	Terraces
Wya3C2	Wyatt silty clay loam	6-12	Terraces and treads

Flora

There is, or at least was, great floral diversity in Ohio. This diversity is relative to the soils and the terrain that generally includes the till plain, lake plain, terminal glacial margins, and unglaciated plateau (Forsyth 1970). Three major glacial advances, including the Kansan, Illinoian, and Wisconsinan, have affected the landscape of Ohio. The effects of the Wisconsin glaciation are most pronounced and have affected more than half of the state (Pavey et al. 1999).

The least diverse part of Ohio extends in a belt from the northeast below the lake-affected areas through most of western Ohio (Gordon 1966). These areas are part of the late Wisconsin ground moraine and lateral end moraines. It is positioned between the lake plains region and the terminal glacial moraines. This area included broad forested areas of beech maple forests interspersed with mixed oak forests in elevated terrain or

where relief is greater (Forsyth 1970; Gordon 1966). Prairie environments such as those in Wyandot and Marion County areas would contain islands of forests, but were mostly expansive open terrain dominated by grasses.

The northwestern Ohio terrain is nearly flat because of ancient glacial lakes and glaciation, which affected the flora. However, the vegetation was more diverse than the till plain to the south and east because of the variety of factors that contributed to its terrain. Forests within the Black Swamp were generally comprised of elm/ash stands; however, dissected areas along drainages and drier, elevated areas from beach deposits would contain mixed forests of oak and hickory (Gordon 1966, 1969). There was little upland floral diversity in the lake plains (Black Swamp region) except for the occasional patches of oak and hickory. Floral variety was most evident in narrow sleeves along larger stream valleys where there is relief.

The most biological diversity in Ohio is contained within the Allegheny Plateau, which encompasses the southeastern two-thirds of the state (Sheaffer and Rose 1998). Because this area is higher and has drier conditions, it is dominated by mixed oak forests. Some locations within the central part of this area contain beech and mixed mesophytic forests. There are large patches of oak and sugar maple forests to the south of the terminal moraine from Richland to Mahoning County (Gordon 1966).

Southwestern Ohio from about Cincinnati to Bellefontaine east to the Scioto River historically contained a very diverse floral landscape. This is an area where moraines from three glacial episodes are prevalent (Pavey et al. 1999). Forests in this area include elm-ash swamp, beech, oak-sugar maple, mixed mesophytic, prairie grasslands, mixed oak, and bottomland hardwoods (Core 1966; Gordon 1966, 1969). These forest types are intermingled with prairies being limited to the northern limits of this area mostly in Clark and Madison Counties.

Generally, beech forests are the most common variety through Ohio and could be found in all regions. Oak and hickory forests dominated the southeastern Ohio terrain and were found with patchy frequency across most of northern Ohio. Areas that were formerly open prairies and grasslands are in glacial areas, but are still patchy. These are in the west central part of the state. Oak and sugar maple forests occur predominantly along the glacial terminal moraine. Elm-ash swamp forests are prevalent in glaciated areas including the northern and western parts of Ohio (Gordon 1966; Pavey et al. 1999).

The project area and most of Jackson County is generally within what is considered to be a general mixed oak forest (Gordon 1966).

Fauna

The upland forest zone offered a diversity of mammals to the prehistoric diet. This food source consisted of white-tailed deer, black bear, Eastern cottontail rabbit, opossum, a variety of squirrels, as well as other less economically important mammals.

Several avian species were a part of the upland prehistoric diet as well (i.e. wild turkey, quail, ruffed grouse, passenger pigeon, etc.). The lowland zone offered significant species as well. Raccoon, beaver, and muskrat were a few of the mammals, while wood duck and wild goose were the economically important birds. Fishes and shellfish were also an integral part of the prehistoric diet. Ohio muskellunge, yellow perch, white crappie, long nose gar, channel catfish, pike, and sturgeon were several of the fish, whereas, the Ohio naiad mollusc, butterfly's shell, long solid, common bullhead, knob rockshell, and cod shell were the major varieties of shellfish. Reptiles and amphibians, such as several varieties of snakes, frogs, and turtles, were also part of the prehistoric diet (Trautman 1981; Lafferty 1979; Mahr 1949).

Cultural Setting

The first inhabitants of Ohio were probably unable to enter this land until the ice sheets of the Wisconsin glacier melted around 14,000 B.C. Paleoindian sites are considered rare due to the age of the sites and the effects of land altering activities such as erosion. Such sites were mostly used temporarily and thus lack the accumulation of human occupational deposits that would have been created by frequent visitation. Paleoindian artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. In Ohio, major Paleoindian sites have been documented along large river systems and near flint outcrops in the Unglaciaded Plateau (Cunningham 1973). Otherwise, Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds or open air scatters.

The Paleoindian period is characterized by tool kits and gear utilized in hunting Late Pleistocene megafauna and other herding animals including but not limited to short-faced bear, barren ground caribou, flat-headed peccary, bison, mastodon, giant beaver (Bamforth 1988; Brose 1994; McDonald 1994). Groups have been depicted as being mobile and nomadic (Tankersley 1989); artifacts include projectile points, multi-purpose unifacial tools, burins, gravers, and spokeshaves (Tankersley 1994). The most diagnostic artifacts associated with this period are fluted points that exhibit a groove or channel positioned at the base to facilitate hafting. The projectiles dating from the late Paleoindian period generally lack this trait; however, the lance form of the blade is retained and is often distinctive from the following Early Archaic period (Justice 1987).

The Archaic period has been broken down into three sub-categories, including the Early, Middle, and Late Archaic. During the Early Archaic period (ca. 10,000-8000 B.P.), the environment was becoming increasingly arid as indicated by the canopy (Shane 1987). This period of dryness allowed for the exploitation of areas that were previously inaccessible or undesirable. The Early Archaic period does not diverge greatly from the Paleoindian regarding the type of settlement. Societies still appear to be largely mobile with reliance on herding animals (Fitting 1963). For these reasons, Early Archaic artifacts can be encountered in nearly all settings throughout Ohio. Tool diversity increased at this time including hafted knives that are often re-sharpened by the process of beveling the utilized blade edge and intense basal grinding (Justice 1987). There is a basic transition from lance-shaped points to those with blades that are triangular.

Notching becomes a common hafting trait. Another characteristic trait occurring almost exclusively in the Early and Middle Archaic periods is basal bifurcation and large blade serrations. Tool forms begin to vary more and may be a reflection of differential resource exploitation. Finished tools from this period can include bifacial knives, points, drills/perforators, utilized flakes, and scrapers.

The Middle Archaic period (8000-6000 B.P.) is poorly known or understood in archaeological contexts within Ohio. Some (e.g., Justice 1987) regard small bifurcate points as being indicative of this period. Ground stone artifacts become more prevalent at this time. Other hafted bifaces exhibit large side notches with squared bases, but this same trait can extend back to the Paleoindian period. The climate at this time is much like that of the modern era. Middle Archaic period subsistence tended to be associated with small patch foraging that involved a consistent need for mobility with a shift towards stream valleys (Stafford 1994). Sites encountered from this time period throughout most of Ohio tend to be lithic scatters or isolated finds. The initial appearance of regional traits may be apparent at this time.

The Late Archaic period in Ohio (ca 6000-3000 B.P.) diverges from the previous periods in many ways. Preferred locations within a regional setting appear to have been repeatedly occupied. The more intensive and repeated occupations often resulted in the creation of greater social and material culture complexity. The environment at this time is warmer and drier. Most elevated landforms in northeastern Ohio have yielded Archaic artifacts (Prufer and Long 1986: 7), and the same can be stated for the remainder of Ohio.

Various artifacts are diagnostic of the Late Archaic period. Often, burial goods provide evidence that there was some long-distance movement of materials, while lithic materials used in utilitarian assemblages are often from a local chert outcrop. There is increased variation in projectile point styles that may reflect regionalism. Slate was often used in the production of ornamental artifacts. Ground and polished stone artifacts reached a high level of development. This is evident in such artifacts as grooved axes, celts, bannerstones, and other slate artifacts.

It is during the Terminal Archaic period (ca 3500-2500 B.P.) that extensive and deep burials are encountered. Cultural regionalism within Ohio is evident in the presence of Crab Orchard (southwest), Glacial Kame (northern), and Meadowood (central to Northeastern). Along the Ohio River, intensive occupations have been placed within the Riverton phase. Pottery makes its first appearance during the Terminal Late Archaic.

The Early Woodland period (ca 3000-2100 B.P.) in Ohio is often associated with the Adena culture and the early mound builders (Dragoo 1976). Early and comparably simple geometric earthworks first appear with mounds more spread across the landscape. Pottery at this time is thick and tempered with grit, grog, or limestone; however, it becomes noticeably thinner towards the end of the period. There is increased emphasis on gathered plant resources, including maygrass, chenopodium, sunflower, and squash. Habitation sites have been documented that include structural evidence. Houses that were constructed during this period were circular, having a diameter of up to 18.3 m

(Webb and Baby 1963) and often with paired posts (Cramer 1989). Artifacts dating from this period include leaf-shaped blades with parallel to lobate hafting elements, drilled slate pieces, ground stone, thick pottery, and increased use of copper. Early Woodland artifacts can be recovered from every region of Ohio.

The Middle Woodland period (ca 2200-1600 B.P.) is often considered to be equivalent with the Hopewell culture. The largest earthworks in Ohio date from this period. There is dramatic increase in the appearance of exotic materials that appear most often in association with earthworks and burials. Artifacts representative of this period include thinner, grit-tempered pottery, dart-sized projectile points (Lowe Flared, Steuben, Snyders, and Chessier) [Justice 1987], exotic materials (mica, obsidian, and marine shell, etc.). The points are often thin, bifacially beveled, and have flat cross sections. There seems to have been a marked increase in the population as well as increased levels of social organization. Middle Woodland sites seem to reflect a seasonal exploitation of the environment. There is a notable increase in the amount of Eastern Agricultural Complex plant cultigens, including chenopodium, knotweed, sumpweed, and little barley. This seasonal exploitation may have followed a scheduled resource extraction year in which the populations moved camp several times per year, stopping at known resource extraction loci. Middle Woodland land use appears to center on the regions surrounding earthworks (Dancey 1992; Pacheco 1996); however, there is evidence of repeated occupation away from earthworks (Weller 2005a). Household structures at this time vary with many of them being squares with rounded corners (Weller 2005a). Exotic goods are often attributed to funerary activities associated with mounds and earthworks. Utilitarian items are more frequently encountered outside of funerary/ritual contexts. The artifact most diagnostic of this period is the bladelet, a prismatic and thin razor-like tool, and bladelet cores. Middle Woodland remains are more commonly recovered from central Ohio south and lacking from most areas in the northern and southeastern part of the state.

The Late Woodland period (ca A.D. 400-900) is distinct from the previous period in several ways. There appears to be a population increase and a more noticeable aggregation of groups into formative villages. The villages are often positioned along large streams, on terraces, and were likely seasonally occupied (Cowan 1987). This increased sedentism was due in part to a greater reliance on horticultural garden plots, much more so than in the preceding Middle Woodland period. The early Late Woodland groups were growing a wide variety of crop plants that are collectively referred to as the Eastern Agricultural Complex. These crops included maygrass, sunflower, and domesticated forms of goosefoot and sumpweed. This starch and protein diet was supplemented with wild plants and animals. Circa A.D. 800 to 1000, populations adopted maize agriculture, and around this same time, shell-tempered ceramics appear. Other technological innovations and changes during this period included the bow and arrow and changes in ceramic vessel forms.

The Late Prehistoric period (ca A.D. 1000-1550) is distinctive from former periods. The Cole complex (ca A.D. 1000-1300) has been identified in central and south central Ohio. Sites that have been used to define the Cole complex include the W.S. Cole (33DL11), Ufferman (33DL12), and Decco (33DL28) sites along the Olentangy; the

Zencor Village site, located along the Scioto River in southern Franklin County; and the Voss Mound site (33FR52), located along the Big Darby Creek in southwestern Franklin County. It has been suggested that this cultural manifestation developed out of the local Middle Woodland cultures and may have lasted to be contemporaneous with the Late Prehistoric period (Barkes 1982; Baby and Potter 1965; Potter 1966). Cole is a poorly defined cultural complex as its attributes are a piecemeal collection gathered from various sites. Some have suggested that it may be associated with the Fort Ancient period (Pratt and Bush 1981). Artifacts recovered from sites considered as Cole include plain and cordmarked pottery, triangular points, Raccoon Notched points, chipped slate discs, rectangular gorgets, and chipped stone celts. The vessels often have a globular form with highly variable attributes and rim treatment. There have been few structures encountered from this period, but those that have are typically rounded or circular (Pratt and Bush 1981; Weller 2005b).

Monongahela phase sites date to the Late Prehistoric to Contact period in eastern Ohio. Monongahela sites are typically located on high bottomlands near major streams, on saddles between hills, and on hilltops, sometimes a considerable distance from water sources. Most of these sites possessed an oval palisade, which surrounded circular house patterns. Burials of adults are usually flexed and burial goods are typically ornamental. A large variety of stone and bone tools are found associated with Monongahela sites. Monongahela pottery typically is plain or cordmarked with a rounded base and a gradually in-sloping shoulder area. Few Euro-American trade items have been found at Monongahela sites (Drooker 1997).

Protohistoric to Settlement

By the mid-1600s, French explorers traveled through the Ohio country as trappers, traders, and missionaries. They kept journals about their encounters and details of their travels. These journals are often the only resource historians have regarding the early occupants of seventeenth century Ohio. The earliest village encountered by the explorers in 1652 was a Tionontati village located along the banks of Lake Erie and the Maumee River. Around 1670, it is known that three Shawnee villages were located along the confluence of the Ohio River and the Little Miami River. Because of the Iroquois Wars, which continued from 1641-1701, explorers did not spend much time in the Ohio region, and little else is known about the natives of Ohio during the 1600s. Although the Native American tribes of Ohio may have been affected by the outcome of the Iroquois Wars, no battles occurred in Ohio (Tanner 1987).

French explorers traveled extensively through the Ohio region from 1720-1761. During these expeditions, the locations of many Native American villages were documented. In 1751, a Delaware village known as Maguck existed near present-day Chillicothe. In 1758, a Shawnee town known as 'Lower Shawnee 2' existed at the same location. The French also documented the locations of trading posts and forts, which were typically established along the banks of Lake Erie or the Ohio River (Tanner 1987).

While the French were establishing a claim to the Ohio country, many Native

Americans were also entering new claims to the region. The Shawnee were being forced out of Pennsylvania because of English settlement along the eastern coast. The Shawnee created a new headquarters at Shawnee Town, which was located at the mouth of the Scioto River. This headquarters served as a way to pull together many of the tribes which had been dispersed because of the Iroquois Wars (Tanner 1987).

Warfare was bound to break out as the British also began to stake claims in the Ohio region by the mid-1700s. The French and Indian War (1754-1760) affected many Ohio Native Americans; however, no battles were recorded in Ohio (Tanner 1987). Although the French and Indian War ended in 1760, the Native Americans continued to fight against the British explorers. In 1764, Colonel Henry Bouquet led a British troop from Fort Pitt, Pennsylvania to near Zanesville, Ohio.

In 1763, the Seven Years' War fought between France and Britain, also known as the French and Indian War ended with The Treaty of Paris. In this Peace of Paris, the French ceded their claims in the entire Ohio region to the British. When the American Revolution ended with the Second Treaty of Paris in 1783, the Americans gained the entire Ohio region from the British; however, they designated Ohio as Indian Territory. Native Americans were not to move south of the Ohio River but Americans were encouraged to head west into the newly acquired land to occupy and govern it (Tanner 1987).

By 1783, Native Americans had established fairly distinct boundaries throughout Ohio. The Shawnee tribes generally occupied southwest Ohio, while the Delaware tribes stayed in the eastern half of the state. Wyandot tribes were located in north-central Ohio, and Ottawa tribes were restricted to northeast Ohio. There was also a small band of Mingo tribes in eastern Ohio along the Ohio River, and there was a band of Mississauga tribes in northeastern Ohio along Lake Erie. The Shawnee people had several villages within Ross County along the Scioto River (Tanner 1987). Although warfare between tribes continued, it was not as intense as it had been in previous years. Conflicts were contained because boundaries and provisions had been created by earlier treaties.

In 1795, the Treaty of Greenville was signed as a result of the American forces defeat of the Native American forces at the Battle of Fallen Timbers. This allocated the northern portion of Ohio to the Native Americans, while the southern portion was opened for Euro-American settlement. Although most of the battles which led up to this treaty did not occur in Ohio, the outcome resulted in dramatic fluctuations in the Ohio region. The Greenville Treaty line was established, confining all Ohio Native Americans to northern Ohio, west of the Tuscarawas River (Tanner 1987).

Ohio Native Americans were again involved with the Americans and the British in the War of 1812. Unlike the previous wars, many battles were fought in the Ohio country during the War of 1812. By 1815, peace treaties began to be established between the Americans, British, and Native Americans. The Native Americans lost more and more of their territory in Ohio. By 1830, the Shawnee, Ottawa, Wyandot, and Seneca were the only tribes remaining in Ohio. These tribes were contained on reservations in

northwest Ohio. By the middle 1800s, the last of the Ohio Native Americans signed treaties and were removed from the Ohio region.

Jackson County History

The major draw to the area that would become Jackson County was undeniably the salt licks that outcropped there. The Shawnee Indians knew of them as did the moundbuilding cultures before them. Daniel Boone and Jonathan Alder visited the salt works with their Indian captors in the 1770s and 1780s. Europeans knew of the salt there as evidenced by their placement on a map as early as 1755 (Howe 1888; Jones and Jenkins 1953; Morrow 1956; Williams 1900; Willard 1916).

With the secession of the Indian claims on the Ohio Territory in 1795, the land was properly owned by the Federal Government. When Washington County was established in 1788, most of the area of modern Jackson County fell into what was then called Lick Township. During this period, squatters at the licks controlled the area as a rowdy bunch of saltmakers. With the influx of legal settlement around the licks, beginning in 1795, an attempt to dispel these troublemakers became an obvious necessity for progress. A new county, with local law was the conclusion of the local landowners. They petitioned the state through Senator Robert Lucas, who had lived and worked at the licks, and the petition became law in 1816 (Howe 1888; Jones and Jenkins 1953; Morrow 1956; Williams 1900; Willard 1916). The time between saw little progress because of the lawlessness of the squatters at the salt mines. With little organization, there was little care for the benefit of the whole. John Knight built a grist mill about 1799, but no other commercial business existed in the region save the salt business which was run by crude individuals. There were legal farmers and squatting saltminers. One group of the salt renderers were well know counterfeiters as well, operating there until the time of county organization; then were forced out of Jackson, fleeing west (Willard 1916).

Some progress did take place at the settlement known as Poplar Row. The area's first two roads had been newly built in 1804 and a post office established the same year. The post office was named Salt Lick until it was changed in 1817 to Jackson Court House. That year, the village of Jackson was platted. Sometime around 1806, George L. Crookham taught the only school in the area, and in 1819, the Baptists built the first church. Under the organization of the county, all lands at the salt licks were gathered from Federal control to that of Jackson, and the sale of which to be opened up. The proceeds were specifically to be used for the erection of county buildings and schools (Howe 1888; Morrow 1956; Willard 1916).

As mining salt was the industry of the county, it was inevitable that the other raw materials of Jackson would also be discovered with the increasing population of the 1820s and 1830s. There was a great migration of Welsh who arrived in the 1820s. Coal outcropped and was used personally since the earliest occupation of the county. George Riegel opened the first coal mine in 1823. Iron was discovered in the 1830s and Rogers, Hurd, & Co. built the first furnace in Jackson County in 1836, the Jackson Furnace. Jackson's Iron industry would last almost as long as her coal. These industries, of course,

were catapulted to the forefront of county significance with the addition of railroad shipping, which began with the Scioto and Hocking Valley Railroad in 1853. Pit mining for coal originated here in 1861 (Morrow 1956; Willard 1916).

During the Civil War, Jackson was visited by Morgan's Raiders, but the skirmish was slight and little more than hoof prints were left to bear witness. One man was killed and a mill burnt, but as they passed through in the night, there was little resistance and then they were gone (Jones and Jenkins 1953; Willard 1916).

The towns of Wellston, Oak Hill, and Coalton were each established after the Civil War; Wellston in 1874, Oak Hill in 1880, and Coalton near that later date. Wellston became a city, but the other two remain villages. The rest of the county is rural (Howe 1888; Morrow 1956; Willard 1916).

By 1888, Jackson was the largest coal producing county in Ohio, but by 1907, the Wellston seam began to show exhaustion. As ever, mining continued, but in another way. Firebrick clay and cement manufacture gained in importance, subsidizing the recession of the county's coal industry. However nothing could replace it and the county slipped into decline. The population has changed very little over the past hundred years (Morrow 1956; Willard 1916).

Lick Township History

The history of Lick Township is so interwoven with the history of Jackson County and Jackson City that it would be redundant to rewrite it here. The township was formed in 1803 while a part of Ross County and at that time included all of present Coal, Jackson, Liberty, Lick, Scioto, and Washington Townships of Jackson County. It has been trimmed with the erection of each of these other townships. It is in this township that the City of Jackson is located, and as such it has lost that portion of its land. The remaining township is almost entirely privately owned rural residential land (Williams 1900; Willard 1916).

Research Design

The purpose of a Phase I survey is to locate and identify cultural resources that will be affected by the planned Ironman Switch Station expansion. This includes archaeological deposits as well as architectural properties that are older than 50 years. Once these resources are identified and sampled, they are evaluated for their eligibility or potential eligibility to the NRHP. These investigations are directed to answer or address the following questions:

- 1) Did the literature review reveal anything that suggests the project had been previously surveyed, and what is the relationship of previously recorded properties to the project?
- 2) Are cultural resources likely to be identified in the project?

Archaeological Field Methods

The survey conducted within the project area included shovel test units, shovel probes, and visual inspection to identify and evaluate the subject area for cultural resources. The following text describes these methods.

Shovel test unit excavation. Shovel test units were placed at 15-m intervals where adequate surface visibility was lacking. These measure 50 cm on a side and are excavated to 5 cm below the topsoil/subsoil interface. Individual shovel test units are documented regarding their depth, content and color (Munsell). Wherever sites are identified during this testing method, Munsell color readings are taken per shovel test unit. All of the undisturbed soil matrices from shovel test units are screened using .6 cm hardware mesh. When sites are identified, additional shovel test units will be excavated at 7.5 m intervals extending on grid and in the four cardinal directions from the positive locations.

Shovel probe excavation. Shovel probes were excavated during these investigations to document the extent of the disturbances. These probes were excavated similarly to shovel test units or to the point that disturbance could be clearly determined. They typically have the dimensions of 50 cm on a side, but are not screened. They were excavated at 15-m intervals and to a depth of 15-20 cm or deep enough to establish lack of soil integrity.

Visual inspection. Locations where cultural resources were not expected, such as disturbed areas, streams, and steep slope were walked over and visually inspected. This method was used to verify the absence or likelihood of any cultural resources as well as rockshelters being located in these areas. This method was also utilized to document the general terrain and the surrounding area.

The application of the resulting field survey methods was documented in field notes, field maps, and project plan maps.

Prehistoric Artifact Analysis

An artifact inventory was accomplished upon completion of the fieldwork. This involved identifying the functional attributes of individual artifacts, as well as the artifact cluster(s) or site assemblage collectively. The prehistoric artifact types and material were identified during the inventory process. The lithic artifact categories are modeled after Flenniken and Garrison (1975) and include the following:

Secondary Thinning Flake. These flake types represent a reduction mode that is a direct result of the previous reduction activities (i.e., primary thinning). Soft, antler billet percussion and pressure flaking are used for this mode of reduction. At this point, the chert artifact being reduced or thinned is a biface rather than a core. The striking platform for this flake

type is commonly represented by the edge of the biface. The platform angle is typically acute but can range from 30° to 65°. Previously removed flake scars are common on the dorsal side.

Identification of the material type of individual artifacts is based on several attributes, including color, inclusions, and luster. Several resources were used to aid in the inventory of the material types, including Converse (1994), DeRegnaucourt and Georgiady (1998), and Stout and Schoenlaub (1945).

Historic Period Artifact Analysis

The artifacts recovered during these investigations will be inventoried and analyzed. The inventory will be specific to type and age if the artifact is temporally diagnostic. The functional inventory of the site will be similar to that of South (1977) where artifacts are segregated into categories such as kitchen, arms, architecture, and etcetera. South's (1977) theoretical approach also emphasizes the development and interpretation of artifact patterns found at sites. This method can be used to understand depositional patterning on the intra- and inter-site level. Ball (1984) modified this approach, making it applicable for use in the Ohio Valley.

Artifacts recovered from the subsurface testing will be inventoried and the results analyzed to identify differential patterning of functionally specific artifact groups within areas of high and low artifact density. The specific historic period temporal affiliation of the artifacts will be determined by relative dating. The identification of historic artifacts for purposes of determining age is guided by ceramic/artifact analyses or source books by Carskadden et al. (1985); Cushion (1980); Dalrymple (1989); Deiss (1981); Esary (1982); Ewins (1997); Greer (1981); Hughes and Lester (1981); Hume (1991); Lang (1995); Majewski and O'Brien (1987); Mansberger (1981); Manson and Snyder (1997); McConnell (1992); McCorvie (1987); Miller (1987); Newman (1970); Ramsay (1976); Sonderman (1979); Spargo (1926); Sprague (2002); Stelle (2001); Sunbury (1979); Sussman (1977); Visser (1997); and Zimler (1987).

Curation

The property owner is AEP and the artifacts that were identified from this site during these investigations will be offered to the curation facility along with associated field notes and documents. Notes and maps affiliated with this project will be maintained at Weller & Associates, Inc. files.

Literature Review

The literature review study area is defined as a 305 m (1,000 ft) radius from the center of the project (Figure 2). In conducting the literature review, the following resources were consulted at OHPO and the State Library of Ohio:

- 1) *An Archaeological Atlas of Ohio* (Mills 1914);

- 2) OHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- 3) Ohio Archaeological Inventory (OAI) files;
- 4) Ohio Historic Inventory (OHI) files;
- 5) National Register of Historic Places (NRHP) files;
- 6) Determinations of Eligibility (DOE) files;
- 7) OHPO CRM/contract archaeology files; and
- 8) Jackson County atlases, histories, historic USGS 15' series topographic map(s), and current USGS 7.5' series topographic map(s);
- 9) Online Genealogical and Cemetery mapping.

The *Archeological Atlas of Ohio* (Mills 1914) did not indicate any resources that were located within the project area or its vicinity.

A review of the OHPO topographic maps indicated no sites located in the project area. There is one site, 33JA0022 (James Cemetery Mound Group), that is located within the study area. This resource will not be impacted by the planned project.

The Ohio Historic Inventory (OHI) files indicated no previously recorded OHIs located within or adjacent the project area or within the study area.

There were no NRHP or DOE properties located within the project area or study area.

There have not been any professional surveys completed within the project or its study area.

Cartographic/atlas resources were reviewed for the project. The USGS 1913 *Jackson, Ohio 15 Minute Series (Topographic)* map does not indicate that there are structures within the project; there is a residence indicated that is immediately to the south and along the road (Figure 4). The USGS 1995 *Jackson and 1995 Wellston, Ohio 7.5 Minute Series (Topographic)* maps do not indicate that there are structures within the project (Figure 2). There are two cemeteries located within the study area. One is the James-Jamestown-Long Cemetery and is not within or next to the project area, it is to the southwest. The Fairmont Cemetery is located to the north of the project and is not adjacent to it.

Evaluation of Research Questions 1 and 2

There were two questions presented in the research design that will be addressed at this point. These are:

- 1) Did the literature review reveal anything that suggests the project had been previously surveyed, and what is the relationship of previously recorded properties to the project?
- 2) Are cultural resources likely to be identified in the project?

The literature review did not indicate that there were any buildings, previously recorded sites, or structures within the project area. The project area is located in a valley setting, but appears to be above any floodplain situations. There are expectedly many prehistoric period sites located on valley terraces throughout Jackson County and identifying sites in this setting would not be unexpected.

Fieldwork Results

The field investigations for this project were conducted on March 15th, 2017 (Figures 5-12). The climatic conditions at the time of survey involved partly cloudy, cold, and dry conditions. At the time of survey, the conditions within the project area included manicured lawn conditions with a shallow ditch extending in an east-west manner through it. The surrounding setting is mostly associated with business and commercial development with occasional single-family residences. A recreational field is to the north. The terrain within the project area is nearly level. Subsurface testing in the form of shovel test units/shovel probes was conducted throughout the project (Figure 5-12). The field investigations resulted in the identification of two archaeological sites, 33JA0393-394.

The datum for these investigations was established in the southeastern corner of the parcel where the property line meets the road right-of-way. The dense ground cover that was experienced in this area necessitated the excavation of shovel test units. There were 38 shovel test unit and five shovel probes excavated during the testing. The project area gently slants to the north and appears to have been at least partially altered by grading activity. The shovel testing identified deep topsoil deposits of brown silt loam (10YR4/3) that extended to a depth of about 35 cm below ground surface. The underlying subsoil had an increased amount of clay content and was dark yellowish brown (10YR4/6) silt loam (Figure 10). The interface between these two soils levels was wavy and irregular. The soils were generally free of any gravels or rocky materials.

There were disturbances identified in the project area. As previously mentioned, there area appears to be graded to the north for drainage purposes. Inspection of the Fairmont Street area noted it was graded above the surrounding terrain to get above a lower lying landform, which is the project area. There is an east-west oriented ditch that cuts through the project area and separates it from soccer fields. Still, cultural materials were identified during these investigations.

Archaeological Site Descriptions

There were two archaeological sites identified during these investigations, 33JA0393-394. These include a historic period artifact scatter and a prehistoric period isolated find spot. The following text describes the sites that were identified in greater detail.

33JA0393

This site is a historic period artifact scatter that was identified during shovel test unit excavation in a manicured lawn situation (Figure 5). The site is located to the south of soccer/recreational fields, north of a treed fence line (Section 21/28 line), and is west of Fairmont Road. The artifacts were identified from plowzone contexts and the excavation of radial shovel test units failed to identify any additional materials. The site is located on a low-lying terrace-like landform that is drained by an unnamed tributary of Little Salt Creek; this is part of the Scioto River watershed. The site size is considered to be 1 sq m as the artifacts were identified from a single shovel test unit.

Inspection of atlas/cartographic information indicated that there were no buildings or residences located in the project area; however, there is one noted that is immediately to the south of the site. This is indicated circa 1913 and the artifacts that were identified from this site are reflective of this era. The artifacts that were identified within the project area are likely discard from the abutting property to the south.

None of the artifacts identified from this site are distinctly or specifically associated with a specific temporal period (Figure 11). However, they are materials and artifact types that were common around 1900 and into the latter part of the nineteenth century (Table 2). Plain whiteware was common throughout this era and into the modern period (Majewski and O'Brien 1987; Miller 1980).

Table 2. Site 33JA0393 artifact inventory.							
Provenience	Group	Class	Attribute 1	Attribute 2	Min. Date	Max Date	Quantity
T1, U1	Domestic	Ceramic Tableware	Whiteware	Plain	1820	-	4
	Domestic	Misc.	Porcelain	thin			1
	Domestic	Misc. glass	Bottle glass	Clear			1
	Domestic	Misc. glass	Bottle glass	Brown			2
	Architectural	Misc. glass	Bottle glass	Blue-green			1

This site was evaluated for its eligibility for the NRHP. This site lacks integrity (Little et al. 2000:39-43; U.S. Department of the Interior, National Park Service [USDI, NPS] 1997:44-45) and the ability to yield further and important information regarding the history of the area. The site has is a spatially-limited scatter of artifacts that are further limited to a single shovel test unit and within the plowzone/topsoil context. The materials are interpreted as being from a secondary discard context. This site is not considered to be eligible for inclusion into the NRHP, and further work is not deemed necessary.

33JA0394

This site is a prehistoric period isolated find that was identified during shovel test unit excavation in a manicured lawn situation (Figure 5). The site is located to the south of soccer/recreational fields, north of a treed fence line (Section 21/28 line), and is west of Fairmont Road. The artifact was identified from plowzone contexts and the excavation of four radial shovel test units failed to identify any additional materials. The site is located on a low-lying terrace-like landform that is drained by an unnamed

tributary of Little Salt Creek; this is part of the Scioto River watershed. By definition, the site size is considered to be 1 sq m.

The artifact that was identified from this site is a secondary thinning flake of Flint Ridge chert. This is functionally indicative of bifacial thinning. This artifact is not regarded as being temporally diagnostic.

This site was evaluated for its eligibility for the NRHP. This site lacks integrity (Little et al. 2000:39-43; U.S. Department of the Interior, National Park Service [USDI, NPS] 1997:44-45) and the ability to yield further and important information regarding prehistory. The site has a numerically and functionally limited, diffuse artifact assemblage and lacks temporally diagnostic materials. This site is not considered to be eligible for inclusion into the NRHP, and further work is not deemed necessary.

Fieldwork Summary

The field investigations for this project were limited as this is a small area to investigate. The testing involved subsurface methods of sampling and there were two archaeological sites identified. Site 33JA0393 is a historic period artifact scatter that was identified from a single shovel test unit. The materials were further identified just north of a fence line/property line. There was no residence indicated within the project area, but there was one depicted from the early twentieth century immediately south of the fence. It appears, or is conceivable, that the materials identified at this site were the result of discard from the residence that was to the south. This secondary deposit of material is not considered to be significant.

The other site, 33JA0394, is a prehistoric period isolated find spot. The site, its material, and its location are all common traits of prehistoric deposits in this region. The slight rises throughout these valleys are littered with debitage. These findings are consistent with what would be anticipated from this setting/region. However, this is not a significant type of site or deposit.

APE Definition and NRHP Determination

The APE is a term that must be applied on an individual project basis. The nature of the project or undertaking is considered in determining the APE. This may include areas that are off the property or outside of the actual project's boundaries to account for possible visual impacts. When construction is limited to underground activity, the APE may be contained within the footprint of the project. The APE includes the footprint of the project and a limited area surrounding it. The APE accounts for both architecture and archaeology. The archaeological aspect of the APE can be regarded as the footprint of the proposed construction for the Ironman Switch Station.

The project plans involve the construction of an electric switch facility and totals 0.7 ha (1.7 ac) in size. The surrounding landscape is semi-urban as it is on the fringe of the City of Jackson. There are several soccer fields and a cemetery to the north and there

are mostly business/commercial developments within view in all other directions. However, these do not appear to be older buildings. The archaeological investigations for the project did not identify any significant cultural materials. The planned construction is not considered to effect any historic properties in regards to the APE.

Recommendations

In March of 2017, Weller & Associates, Inc. conducted Phase I Cultural Resource Management Investigations for the Proposed 0.7 ha (1.7 ac) Ironman Switch Project in Lick Township, Jackson County, Ohio. These investigations involved visual inspection and subsurface methods of archaeological sampling. These investigations resulted in the identification of two previously unrecorded archaeological sites, 33JA0393-394. These sites are not considered to be significant, they are not landmarks. If this project is subject to Section 106 of the National Historic Preservation Act, a finding of no historic properties affected as outlined by 36 CFR § 800.4 and 36 CFR § 800.5 is considered appropriate. No further work is deemed necessary for this project.

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6/26/2017 3:41:00 PM

in

Case No(s). 17-0804-EL-BLN

Summary: Letter of Notification electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company