Arche Solar Project

Case No. 20-0979-EL-BGN

7X.energy™

Exhibit G

Cultural Resources Survey

Phase IA Cultural Resources Survey

Arche Energy Project

Gorham Township, Fulton County, Ohio

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MANAGEMENT SUMMARY

Involved State and Federal Agencies:	Ohio Power Siting Board (OPSB) Ohio Historic Preservation Office (OHPO)
Phase of Survey:	Phase IA Cultural Resources Survey
Location Information:	Gorham Township, Fulton County, Ohio
Survey Area:	
Project Description:	An up-to 107-megawatt utility-scale solar project consisting of ground-mounted photovoltaic arrays and associated infrastructure.
Project Area:	An approximately 1,067-acre area of leased parcels containing all components of the Project.
Cultural Resources Study Area	The area within two miles of the Project Area, also including portions of Franklin Townships, Fulton County, Ohio
Area of Potential Effects (APE)	The APE for Direct Effects is the area containing all proposed soil disturbance associated with the Project, which will be determined based on the Project design. The APE for Indirect (Visual) Effects represents portions of the Cultural Resources Study Area where there is potential Project visibility.
USGS 7.5-Minute Quadrangle Maps:	*Fort Wayne, Indiana*
Archaeology Resources Overview:	There are no Ohio Archaeological Inventory sites within the APE for Direct Effects.
Historic Resources Overview:	The APE for Indirect Effects includes 136 properties listed on the Ohio Historic Inventory and no properties listed on the National Register of Historic Places. Three OGS designated cemeteries within the Cultural Resources Study Area are located within the APE for Indirect (Visual) Effects, one located within the Project Area.
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Date of Report:	May 2020

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1.0 INTRODUCTION

1.1 Purpose and Goals of the Investigation

7X Energy, Inc. (the Applicant), is proposing to construct the Arche Energy Project, an up-to 107 megawatt (MW) photovoltaic (PV) solar project to be located in Gorham Township in Fulton County (the Project). The Applicant is currently in the process of preparing an Application for a Certificate of Environmental Compatibility and Public Need (the Application), in compliance with Section 4906.06 of the Ohio Revised Code and in accordance with Chapters 4906-4-01 through 4906-4-08 of the Ohio Administrative Code (OAC), with support from Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) of Syracuse, New York.

On behalf of the Applicant, EDR prepared this Phase IA Cultural Resources Survey in support of environmental review and permitting for the Project. The information and recommendations included in this report are intended to assist the Ohio State Historic Preservation Office (OHPO) with their review of the Project. The Phase IA Cultural Resources Survey has been prepared to satisfy the following required portions of Ohio Administrative Code Chapter 4906-04-08(D) for the Ohio Power Siting Board (OPSB):

> The applicant shall provide information on cultural and archaeological resources.
> (1) Landmark mapping… and registered landmarks of historic, religious, archaeological significance. Landmarks to be considered for purposes of paragraph (D) of this rule are those districts, sites, buildings, structures, and objects that are recognized by, registered with, or identified as eligible for registration by… the state historical preservation office.
> (2) Impacts on landmarks. The applicant shall provide an evaluation of the impact of the proposed facility on the preservation and continued meaningfulness of these landmarks.

The purpose of this Phase IA Cultural Resources Survey is to assist the OHPO in the review of this Project. The Phase IA report documents previously identified cultural resources (i.e., archaeological sites and historic properties) located within the Project Area and surrounding two-mile radius Cultural Resources Study Area that could potentially be affected by the construction and/or operation of the proposed Project. The Phase IA report also proposes research designs for proposed subsequent archaeological and historic resources field surveys that the Applicant anticipates will be necessary for the Project. The archaeological survey research design described herein has been prepared by a Registered Professional Archaeologist (RPA) who meets the Secretary of the Interior's Standards for Archaeology (36 C.F.R. Part 61). The historic resources survey design described herein has been prepared by a qualified architectural historian who meets the U.S. Secretary of Interior's Standards for Historic Preservation (36 C.F.R. Part 61). All cultural resources services provided by EDR for the Project will be conducted in accordance with applicable portions of the

OHPO *Archaeology Guidelines* (OHPO,1994) and *Guidelines for Conducting History/Architecture Surveys in Ohio* (OHPO, 2014).

1.2 Project Location and Description

The Project is a proposed up-to 107 MW solar electric generation plant to be located in Gorham Township in Fulton County, Ohio (see Figure 1). The Project will consist of PV panels, a collection substation, an operations and maintenance (O&M) building, a network of racking-mounted and buried cables to collect the electricity, an above-ground transmission line (gen-tie), entrances from public roads, access roads within the facility, meteorological devices, perimeter fencing, and landscaping.

The Project Area will comprise approximately 1,067 acres of leased private land in Fulton County (see Figure 2). It is anticipated that following construction, each section of the Project will be surrounded by fencing and selected sections may include landscape buffering/vegetative screening outside the fence. These landscape drawings will be submitted to the OHPO when available.

The following terms are used throughout this document to describe the proposed action:

Project:	Collectively refers to all components of the Arche Energy Project and associated infrastructure (such as solar panels, collection lines, substations, and equipment) in Gorham Township, Fulton County, Ohio.
Project Area:	Those parcels within a contiguous geographic boundary that contain all components of the Project, associated setbacks, and properties under lease or agreement.
Cultural Resources Study Area:	The area within two miles of the Project Area, which is the appropriate study area for indirect, or visual, effects on cultural resources. The Cultural Resources Study Area also includes portions of Franklin Township, Fulton County, Ohio.
APE for Direct Effects:	The Area of Potential Effects (APE) for Direct Effects is the area containing all proposed soil disturbance associated with the Project, which will be determined based on the Project design.
APE for Indirect Effects:	The APE for Indirect (or Visual) Effects on historic resources represents portions of the Cultural Resources Study Area where there is potential Project visibility.

The Project Area is rural and set in area of generally low topographic relief. The majority of the landscape within the Cultural Resources Study Area is that of flat, open agricultural fields. These fields are bisected by long, straight rural transportation routes bisected by smaller gravel roads. When not interrupted by rare woodlots, the relatively level topography within the Cultural Resources Study Area allows for clear views to historic resources. Views to farmhouses and agricultural buildings within large scale farming landscapes are dependent on their distance from the public rights-

of-way. Developed features in the Project Area include electric transmission lines, communication towers, water towers, public roads, single family homes and agricultural buildings.

1.3 Project Components

Relative to conventional energy generation methods of a similar scale, solar facilities result in minimal impacts to the environment. Impacts from the construction and operation of solar generation are largely the result of the fact that utility-scale solar energy facilities require large continuous areas for the collection and distribution of energy. The Applicant is committed to minimizing impacts to cultural and natural resources. The Project is sited in a rural, agricultural region in an effort to minimize the need for land clearing and typical construction processes such as surface grading and soil compaction.

The Applicant is also selecting minimally intrusive PV panel mounting systems to minimize soil disturbance so that the land can return to its current agricultural use following the decommissioning of the Project. The solar panel racking will consist of piles that will be driven, or screws that will be rotated, into the ground in long rows or arrays. Only some minimal grading may be required in certain locations, although in most cases, the arrays will follow the natural topography. Following construction, any disturbed areas will be restored with topsoil, and a cover of native grass species will be established underneath and around the solar panels. This section includes a description of the components of the proposed Project and the proposed construction/installation methods associated with each component. These methods will minimize potential direct impacts to archaeological resources within the Project Area.

As presently envisioned, it is anticipated that the Project will include the following components (see Figure 3):

PV Panels

The Project will generate electricity with conventional solar panels, which will be affixed to metal racking. The racking will include piles that will be driven, or screws that will be rotated, into the ground in long rows, or arrays (see Insets 1 and 2, below). The arrays will generally follow the existing topography of the Project Area, although some rough grading may occur. Arrays will be grouped in several large clusters (Solar Fields), each of which will be fenced, with locked gates, for equipment security and public safety. PV panels are not expected to be taller than 15 feet above grade.

Inset 1. Typical steel support beams for photovoltaic panels and pile-driver during construction (Photo: Clean Energy Collective).

Electrical Inverters and Collection System

Within each Solar Field, a network of electric lines and associated communication lines will collect the electric power from different groups of arrays and transmit it to a central location. PV panels will be grouped into series of circuits that are routed, through cable trays on the racking, to combiner boxes. Power from one or more of the combiner boxes will then be transmitted to a DC-to-AC inverter. The equipment comprising each inverter will be mounted on a pre-fabricated foundation such as a metal skid or a concrete block.

Each Inverter will deliver AC power to a single, fenced, Project substation. The Inverters will be connected to the substation through a buried system of electric lines and associated communication lines. All portions of the AC power collection system will be buried to at least 36 inches below grade.

Inset 2. Installation of photovoltaic panel array on steel support beams (Photo: PV Magazine).

Project Substation and Gen-Tie

The equipment for the Project Substation will be constructed on a concrete foundation that is expected to be approximately 1 acre in size (see Inset 3). For equipment security and public safety, a fence with a locked access gate will be installed around the perimeter.

An above ground transmission line will connect the Project substation to a transmission line. A self-supporting, steel structure (dead-end structure) will be used where the circuit enters the substation. Typical heights for these dead-end structures range from 20 to 25 feet.

Inset 3. Substation surrounded by photovoltaic panels (Photo: Greentech Media).

Access Roads and Staging Areas

The Project will include several unpaved access roads comprised of aggregate material and/or grass used for accessing each Solar Field (Inset 4). Short driveways will connect access roads to public roads at one or more points for each Solar Field. Access roads are used for the operations, maintenance, repair, and replacement of equipment in addition to providing sufficient access for emergency response. Access roads will only be as long and wide as necessary to accommodate construction and operational activities. All permanent access roads will be a maximum of 20-feet wide, though a number of roads may temporarily be up to 25-feet wide to accommodate construction activities.

Temporary staging areas will be used for the storage of construction equipment and supplies, as well as parking for workers. Staging areas will be constructed by adding crushed stone/gravel to the existing ground surface with minimal, if any, modification. The staging areas are temporary features associated with construction of the Project and will be subject to restoration upon completion of construction activities.

Inset 4. Access road along solar array (Photo: Open Road Renewables).

Pyranometers and Operations & Maintenance Building

The Project will include up to five pyranometers which will be mounted to the PV racking system. Pyranometers are supported on towers with steel pile embedment up to 10 feet. The Facility will include an O&M building, along County Road 23 and US-20. The O&M building will be approximately 2,000 square feet, located on privately-owned land, and will serve as a workspace for operations personnel.

2.0 BACKGROUND

Background research for the proposed Project was conducted according to the methodology described below, using numerous source materials and datasets. The information described below was used to develop the archaeological and historic resources survey research designs, presented in Sections 3 & 4, below, respectively.

2.1 Background Research Methods

EDR reviewed numerous sources for information relating to archaeological and historic resources located within the Cultural Resources Study Area. Archives and repositories consulted during EDR's research for the Project included the OHPO online Geographic Information Systems (GIS) mapping system (Ohio History Connection, 2020a), the David Rumsey map collection (Cartography Associates, 2020), topoView (USGS, 2020) and EDR's in-house collection of historic and archaeological reference materials. Background research included the following records available from the Ohio State Historic Preservation Office:

- National Register of Historic Places (NRHP)
- NRHP Determination of Eligibility (DOE)
- National Historic Landmarks (NHL)
- Ohio Historic Inventory (OHI)
- Ohio Department of Transportation (ODOT) Historic Bridge Inventory
- Ohio Archaeological Inventory (OAI)
- Ohio Genealogical Society (OGS) cemetery files
- Mills *Archaeological Atlas of Ohio* (1914)
- OHPO previous cultural resources surveys

2.2 OHPO Previously Reported Cultural Resources

Previously reported cultural resources included in the OHPO online GIS mapping system (OHC, 2020a) are described below and depicted in Figure 4.

National Register of Historic Places (NRHP)

The review of the OHPO online GIS mapping system indicates that there are no NRHP-listed properties within the Project Area or the Cultural Resources Study Area.

NRHP Determination of Eligibility (DOE)

The review of the OHPO online GIS mapping system indicates there are no resources previously determined eligible for the NRHP within the Project Area or the Cultural Resources Study Area.

National Historic Landmarks (NHL)

No designated NHLs are located within the Project Area or the Cultural Resources Study Area (NPS, 2020).

Ohio Historic Inventory (OHI)

The review of the OHPO online GIS mapping system indicates there are no OHI-designated resources located within the Project Area. One hundred thirty-six OHI-designated properties have been previously recorded within the Cultural Resources Study Area (see Figure 4 and Appendix A).

Ohio Department of Transportation (ODOT) Historic Bridge Inventory

No historic bridges listed on the ODOT Historic Bridge Inventory are located within the Project Area or the Cultural Resources Study Area (ODOT, 2020).

Ohio Archaeological Inventory (OAI)

The review of the OHPO online GIS mapping system indicates there are no OAI sites within the Project Area or the Cultural Resources Study Area.

Ohio Genealogical Society (OGS) Cemeteries

The review of the OHPO online GIS mapping system identified one OGS cemetery within the Project Area, Coffin Cemetery. Two additional OGS cemeteries have been recorded within the Cultural Resources Study Area (see Table 1 and Figure 4).

Table 1. Ohio Genealogical Society Cemeteries within 2 miles of the Project Area

OGS ID	Cemetery Name	Township	County	Distance from Project Area (miles)
3771	Coffin Cemetery	Gorham	Fulton	0 (within Project Area)
3773	Snow-Union Cemetery	Gorham	Fulton	1.0
3772	Pleasant View Cemetery	Gorham	Fulton	1.3

Mills Archaeological Atlas of Ohio (1914)

No sites recorded in Mills' *Archaeological Atlas of Ohio* (1914) are located in the Project Area. One archaeological resource is located just east of the Project Area. Two pre-contact Native American mound sites are noted along the southern edge of the Cultural Resources Study Area (Mills 1914). Information from the Mills Atlas is discussed in greater detail in Section 2.3, below.

Previous Cultural Resources Surveys

One previous cultural resource survey has been conducted within the Project Area. *The Phase I Cultural Resources Survey Report for the Allen Junction-East Fayette Transmission Line Rebuild Project (Richfield Township) Lucas and (Amboy, Chesterfield, Gorham and Royalton Townships) Fulton County, Ohio*, is located within the Project Area along US Highway 20. Four additional cultural resource surveys have been completed within the Cultural Resources Study Area (see Table 2 and Figure 4).

Table 2. Previous Cultural Resources Surveys within 2 miles of the Project Area

National Archeological Database (NADB) ID	Title	Author	Year	Distance from Project Area (miles)
19537	Phase I Cultural Resources Survey Report for the Allen Junction-East Fayette Transmission Line Rebuild Project (Ritchfield Township) Lucas and (Amoy, Chesterfield, Gorham, and Royalton Townships) Fulton County, Ohio	Harris, Brandy	2014	0 (within Project Area)
16089	Phase I Cultural Resource Management Survey of a Proposed 4.4 ha (11a.) Well Field Near the Village of Fayette, Gorham Township, Fulton County, Ohio	Keener, Craig S.	2003	1.1
19537	Phase I Cultural Resource Investigation of Proposed OH-Fayette Telecommunications Tower Project Area, Fayette, Gorham Township, Fulton County, Ohio	Payette, Jacquie	2007	1.1
12925	Clearfield Village Archaeological Survey, Fayette (Fulton County), Ohio	Morse, David R.	1981	1.1
12930	Clearfield Village- 1982 Archaeological Survey, Fayette (Fulton County), Ohio	Morse, David R.	1982	1.2

2.3 Pre-Contact Context for the Cultural Resources Study Area

The *Archaeological Atlas of Ohio* (Mills,1914) and information retrieved from the OHPO online database indicate that numerous pre-contact Native American earthworks (e.g.: burial mounds and enclosures) and interments are found in Ohio. Earthwork sites are often clustered together in large numbers and usually located in close proximity to streams. In his 1914 *Archaeological Atlas of Ohio,* Mills notes that there are more pre-contact works in Fulton County than any other northwestern Ohio counties despite fewer streams due to the greater elevation than that of adjacent counties. The more level areas of Fulton County contain a great deal of pre-contact remains; there are 45 mounds, 6 enclosures, 2 village sites and 11 burials with an overall total of 64 pre-contact works. None of these archaeological resources are located in the Project Area. Two mounds and one internment were found to be within the Cultural Resources Study Area (Mills, 1914; see Figure 5)

In his analysis of Late Paleoindian and Early Archaic settlement in Ohio, Chidester (2011) discusses an apparent boom in settlement in northwestern and north-central Ohio as the regional climate became warmer and drier during the Early Holocene. Settlement in Ohio during this period (approximately 11,500 to 7,750 years ago) clustered along the northern shore of Lake Erie and the lake plains of northwestern and north-central Ohio (Chidester, 2011; Stothers, 1996). To the south, Paleoindian sites are also found along the terraces of the Ohio River and adjacent saline springs, which proved attractive to Paleoindian peoples and game alike (Cunningham, 1973). Seeman and Prufer (1982) also note the presence of higher density Paleoindian artifacts along major rivers in central and southern Ohio, particularly the Ohio, Miami, Scioto, and upper Muskingum valleys. Sites along these major river valleys, which are theorized to have provided easily traversed routes for large game animals, are concentrated on elevated landforms such as terraces (Cunningham, 1973; Seeman and Prufer, 1982). More specifically, Paleoindian sites along river valleys tend to concentrate near confluences (Seeman and Prufer, 1982). In his overview of Ohio Archaic sites, Purtill (2009) notes that Late Archaic semi-annual to year-round settlements are located along major rivers, including the Ohio, particularly on terraces and near confluences with other streams.

In Late Archaic and Early Woodland settlement patterns in the western Lake Erie region, Stothers and Abel (1993) note that in the lower Maumee River and its tributaries, clusters of sites are known at virtually every major rapid. This pattern reflects seasonal congregations to fish at these locations. They further note that large settlement sites in this area (which typically contain cemeteries) are always located close to the river, whereas smaller “nuclear family hunting and collecting camps” are located both along rivers and in upland settings (Stothers and Abel, 1993).

In his analysis of Late Woodland settlement in the Hocking River Valley of southeastern Ohio, Wakeman (2003) argued that foraging Late Woodland populations appeared to place higher value on areas suitable for resource extraction;

whereas, Late Prehistoric farmers appeared to place higher value on extensive flat areas with well-drained soils suitable for growing crops. This is reflected in the archaeological record with Late Woodland sites evenly spread across the landscape on a variety of different landforms and with major Late Prehistoric sites concentrated along the bottoms of major river valleys.

For settlement patterns in an eight-county study area in central Ohio, Nolan (2014), found a preference for well-drained soils across all pre-contact time periods. He also found that streams proved to be a better predictor of archaeological site location than wetlands (i.e., sites were more consistently located in close proximity to streams than wetlands) across all time periods (Nolan, 2014).

2.4 Historic Context for the Cultural Resources Study Area

Archives and repositories consulted during research included EDR's in-house collection of reference materials, online digital collections of the Library of Congress, and the David Rumsey Historical Map Collection (Cartography Associates, 2010). Historic maps reviewed included the 1872 *Topographical Atlas of Ohio* (Gray, Lloyd, and Walling, 1872) and the 1899 *Ohio Indian Land Cessions in the United States* (Royce and Thomas, 1899).

Sources reviewed included the *History of Henry and Fulton Counties, Ohio with Illustrations and Biographical Sketches of Some of Its Prominent Men and Pioneers* (Aldrich, 1888), *The County of Fulton: A History of Fulton County, Ohio, from the Earliest Days, with Special chapters on Various Subjects, Including Each of the Different Townships; Also a Biographical Department* (Mikesell, 1905), and *A Standard History of Fulton County, Ohio: An Authentic Narrative of the Past, with an Extended Survey of Modern Developments in the Progress of Town and County* (Reighard, 1920). In addition, documentary research included review of the OHPO OHI forms and NRHP nomination forms. Historic maps reviewed included the 1872 *Topographical Atlas of Ohio* (Gray, Lloyd, and Walling, 1872) and the 1899 *Ohio Indian Land Cessions in the United States* (Royce and Thomas, 1899).

In the mid-eighteenth-century, Virginia, New York, Massachusetts, and Connecticut each laid claim to sections of the Northwest Territory based on seventeenth- and early eighteenth-century charters. These lands encompassed parts of present-day Ohio, Illinois, Indiana, Michigan, Minnesota, and Wisconsin; however, land companies' and speculators' efforts to survey and sell these lands were hindered by the French and Indian War (1754-1763), Pontiac's War (1763-1766), and the American Revolutionary War (1775-1783). By 1786, the aforementioned states and colony ceded the Northwest Territory to the burgeoning United States federal government. This territory was augmented by Native land cessions, most notably in the treaties of Fort Stanwix (1784), Fort McIntosh (1785), Fort Finney (1786), Fort Harmer (1789), and Greenville (1795) (Perrin and Battle, 1880; Beers, 1881). Military conflicts as well as controversies surrounding Native and settler land titles continued into the nineteenth century (see Inset 5).

Inset 5.1899 Royce and Thomas Ohio Indian Land Cessions in the United States.
This map indicates the number and location of each cession by, or reservation for, the Native nations in present-day Ohio (Royce and Thomas, 1899, Collections of the Library of Congress, Geography and Map Division).

In the 1780s, these newly acquired lands in Ohio were divided and reclassified as Congress lands, US Military lands, Virginia Military District, Western or Connecticut Reserve, Fire lands, Ohio Company's Purchase, Donation Tract, Symme's Purchase, Refugee Tract, French Grant, Dolerman's Grant, Zanes Grant, Canal lands, Turnpike lands,

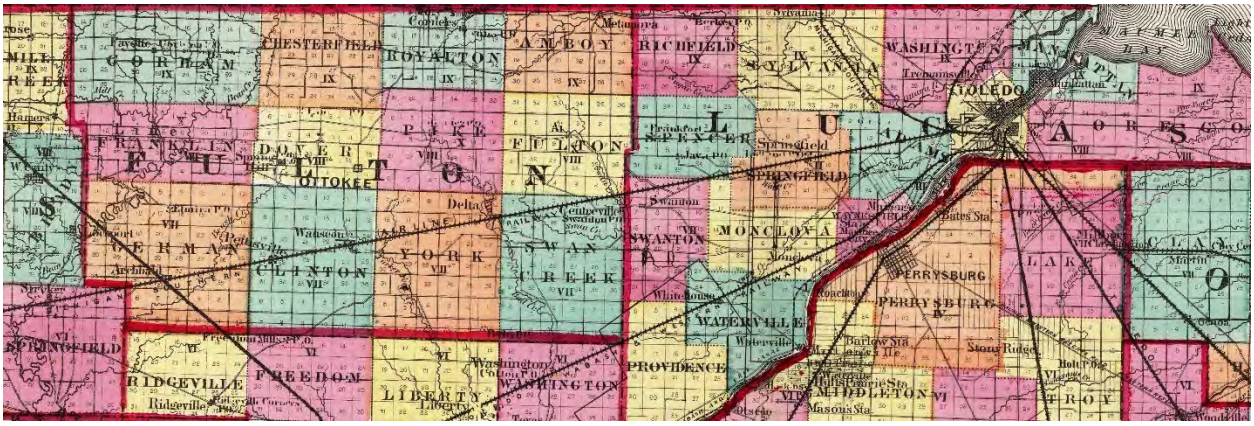
Maumee Road lands, School lands, College lands, Ministerial lands, Moravian Grants, and Salt Sections. A portion of Fulton County was included in the Congress lands. Congress lands were named in reference to the legislation that governed their sale. The US government's agents surveyed the land into north-south ranges of 6-mile square townships; the townships were later subdivided into 1-mile square sections, then 160-acre quarters, and lastly into 80-acre parcels. In the years following Ohio's statehood, the territory within present-day Fulton County was highly disputed. While some of this territory was contained in several of the state's earliest counties, the remaining land comprised a highly contested tract that overlapped the Harris Line (Ohio's northern border) and the Fulton Line (the Territory of Michigan's southern border). Both entities argued over which line was the true boundary and staked claims to the tract. This internal boundary debate escalated during the early nineteenth-century and was not resolved until 1837 when Michigan gained statehood and forfeited its claims to Ohio (Aldrich, 1888; Mikesell, 1905; Reighard, 1920).

Fulton County was formed from Lucas, Henry, and Williams Counties in 1850 and named in honor of Robert Fulton, the celebrated steamboat inventor. The original county seat was established at the Village of Ottokee in Dover Township; it was later relocated to the Village of Wauseon in Clinton Township in 1871. Although it never became a commercial hub, Wauseon was home to several small-to-mid-scale manufacturing industries and served as the rural county's political and economic center. Settlement and initial population growth in Fulton County proceeded quickly, with 7,780 residents in 1850 and 14,043 residents in 1860; however, by the end of the nineteenth-century, population growth plateaued (Aldrich, 1888; Mikesell, 1905; Reighard, 1920).

Gorham Township was formed in 1838, primarily from Chesterfield Township with additional territory later annexed from Logan, Median, and Millcreek (also Mill Creek) Townships. During the 1840s and 1850s, its boundaries fluctuated to accommodate the formation of neighboring townships. Gorham was named in honor of Elisha Gorham, one of the area's first settlers and a leading advocate for the township's creation. The Village of Fayette was established in the 1850s and incorporated in 1872. Although small, Fayette was hailed as "one of the best grain markets in northwestern Ohio" for its location along the Chicago and Canada Southern Railroad. Gorham Township exhibited limited population growth, with 1,055 residents in 1870 and 2,076 residents in 1920 (Aldrich, 1888; Mikesell, 1905; Reighard, 1920).

Throughout the nineteenth-century, much of the state was occupied by small farms. Shortly after Fulton County was established, local and county roads were laid out. "Vistula Road," or the "Old Territorial Road," preceded the county and served as a main thoroughfare. In the 1870s, residents clamored for improved road conditions, which included the construction of corduroy (log lined), plank, and gravel roads. During this period, rail lines traversed the southern half of the county; the Lake Shore & Michigan Southern, the Wabash, and the Detroit Southern & Fayette railroads and

subsequent branches connected the townships to neighboring counties and states (see Inset 6). By the late 1890s, two local electric railways were constructed in Fulton County (Aldrich, 1888; Mikesell, 1905; Reighard, 1920).



Inset 6. 1872 Gray, Lloyd, Walling Topographical Atlas of Ohio: Allen, Crawford, Deviance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Van Wert, Williams, Wood and Wyandot Counties
Although the rail lines greatly improved regional mobility for Fulton County access to Toledo and onwards, many remote farmers and residents County continued to rely on local roads and turnpikes for transportation until tracks were extended to northwest Fulton County (Gray, Lloyd, Walling, 1872, Collections of the David Rumsey Historical Map Collection).

Fulton County contained thousands of acres of wetlands due to its proximity to the Great Black Swamp in northwestern Ohio. These unfavorable conditions hindered settlers' initial attempts at agriculture. In 1859, the county commissioners commenced a drainage system project which included the construction of roads, drainage ditches of clay tile or pipe, and canals. Neighboring counties throughout northwestern Ohio undertook similar drainage projects. The drained lands provided fertile soil well suited to corn, wheat, buckwheat, and potatoes as well as pastureland for livestock. Fulton County developed a prominent dairy industry, eventually producing more than 300,000 pounds of milk per day. During the early twentieth-century, several milk-evaporating and processing plants were constructed throughout the county and neighboring counties to accommodate this rate of production (Aldrich, 1888; Mikesell, 1905; Reighard, 1920).

Oliver H. Kelley, a Minnesota farmer and a clerk in the Department of Agriculture, recognized the challenges and needs of American farmers. His interviews with farmers in the South and his own membership in the Masons inspired his concept of a fraternal farmers' organization. Kelley developed his idea with colleagues and acquaintances in Washington, D.C., many of whom are credited as co-founders, including Aaron B. Grosh, John R. Thompson, John Trimble, William Saunders, William M. Ireland, Francis McDowell, and Caroline Hall (honorary founder). The founders settled on the name "the Order of the Patrons of Husbandry," and assigned to it the worthy goal of assisting farmers with their many challenges. Kelley selected the title of "grange" (antiquated term for "farmhouse") for the state and local

chapters. Thus, the Patrons of Husbandry also became known as the National Grange movement (Atkeson, 1916; The National Grange, 2016; Ohio History Central, 2019d).

The first Grange in Fulton County was established in York Township in 1873, followed by Gorham Township in 1874. In 1876, the Fulton County Pomona Grange formed in Wauseon and subordinate granges were organized in the townships. By the end of the nineteenth-century, the influence of the Grange diminished as the newly formed Farmers' Institute and the Fulton County Farm Bureau represented farmers' interests (Mikesell, 1905; Reighard, 1920).

In addition to the establishment of the National Grange, the American agricultural tradition concurrently established a social component: the agricultural fair. In 1845, the Ohio Board of Agriculture (renamed the Ohio State Board of Agriculture in 1846 and later replaced by the Ohio Department of Agriculture in 1920) was created to support and celebrate Ohio farmers through the establishment of farmers' institutes and county fairs. To achieve this, agricultural boards were created in each county to identify the county's needs and lead the planning process. Concurrently, the Ohio State Board of Agriculture also established the Ohio State Fair in 1849. Due to a cholera epidemic, the fair was postponed until 1850 and held in Cincinnati (Ohio History Central, 2019b, 2019c).

Agricultural societies and fairs provided opportunities for farmers to share information with each other as well as with the public. Fulton County held its first county fair in 1858 at the farm of Dr. Robinson in Dover Township. The Fulton County Agricultural Society leased ten acres of land from Dr. Robinson for nearly a decade. The early popularity of the society prompted its officers to purchase forty acres along a road between the Villages of Wauseon and Ottokee for its permanent fairgrounds in 1865. The Fulton County Agricultural Society constructed buildings, tracks, and other amenities for the horticulture and stock displays. The county was widely recognized for its superior exhibitions of Holstein cattle (Mikesell, 1905; Reighard, 1920).

By the late-nineteenth century, farms struggled to remain viable as they faced competition from farms in western states, large local farms, increased mechanization, and the prohibitive cost of machinery. In the early-twentieth century, Governor James M. Cox directed state funds to support agricultural experiments and education for rural regions. Shortly after, Ohio farmers faced the economic impacts of the Great Depression along with severe droughts and crop failures. President Franklin D. Roosevelt instituted Depression-era programs to alleviate the financial strain and soil depletion. Rural areas gradually gained access to electricity, which increased efficiency. By the 1940s, agricultural production rebounded during World War II as farmers supplied food for United States and Allied forces. This period of prosperity immediately following WWII enabled Ohio farmers to invest in modern machinery. The number of farmers in Ohio and

size of farms steadily decreased during the latter half of the twentieth century; however, industrial agriculture remains a key economic driver of Ohio's modern economy (Ohio History Central, 2019a).

2.5 Historic Maps Review

Historic maps depict nineteenth- and twentieth-century settlement and development within the Cultural Resources Study Area. Maps reviewed for the Study Area included the 1858 Skinner's *Fulton County, Ohio* (see Figure 6); the 1888 Griffing's *Atlas of Fulton County, Ohio* (See Figure 7)*;* the 1914 Mills *Archaeological Atlas of Ohio* (see Figure 5), and the 1953 *Fort Wayne, Indiana* USGS Topographic Quadrangle (see Figure 8).

1858 Skinner's *Fulton County, Ohio* and the 1888 Griffing's *Atlas of Fulton County*

Figures 6 and 7 show the primarily agricultural land use in the mid/late-nineteenth century within the vicinity of the Project between the years of 1858 and 1888. The grid pattern is subdivided into square-mile agricultural lots bounded by roads, occasionally with a farmhouse structure shown within agricultural property lines and multiple divisions of lots in the more densely populated areas in the northern half of the Study Area. One of these such areas is the village of Fayette, located directly west of the Project Area. This is even more apparent in the 1888 Griffing's *Atlas,* which shows the new railway systems running through Gorham. Two railroads run northeast/southwest through the northwestern corner of the township, with the Canada Southern Railway passing directly through Fayette and the Detroit & Butler Railroad running parallel and north of that line.

1914 Mills *Archaeological Atlas of Ohio*

The 1914 Mills *Archaeological Atlas of Ohio* (see Figure 5) was also reviewed during background research for the current project, and precontact archaeological sites depicted in the atlas were discussed in Section 2.3 of this report. In addition to archaeological sites, the Mills *Atlas* also depicts the state of development throughout Ohio in 1914. The Mills *Atlas* also depicts the state of development throughout Fulton County, Ohio in 1914. The Mills *Atlas* depicts the grid pattern and transportation routes including the Wabash Railroad, the Toledo & Western Railroad as well as a series of throughway roads and rail lines pikes crossing Fulton County.

1953 *Fort Wayne, Indiana* USGS topographic quadrangle

Figure 8 depicts little change in the pattern of land use the mid-twentieth century within the Project Area. The railways in the area had changed hands by this time, with the Canada Southern Railway joining the Central New York Railroad and becoming an underground pipeline railroad. The Detroit & Butler Railroad became the Wabash Railroad. The most prominent vehicular thoroughfare, U.S. Route 20, ran east/west through Fayette. Also notable on the *Fort Wayne, Indiana* topographic quadrangle are the multiple streams and creeks in the general vicinity of the Study Area.

3.0 ARCHAEOLOGY SURVEY RESEARCH DESIGN

The archaeological research design described below was prepared in accordance with the OHPO Ar*chaeology Guidelines* (1994). It includes a description of the APE for Direct Effects and the potential impact on archaeological resources for the proposed Project. In addition to conducting a literature review and background research for the proposed Project, EDR created a GIS-based archaeological sensitivity model in order to assess the probability of encountering archaeological resources based on variables described below. This assessment evaluates the relative potential for the presence of archaeological resources based on elevated and reduced sensitivity for either pre-contact or historic-period resources.

Project components will be constructed entirely on relatively level ground and within areas presently or historically used as agricultural fields. Due to the relatively flat relief, very little to no grading is expected to be necessary for the Project, except for the Project substation which may require significant grading and excavation. In general, no large areas of excavation or soil removal/disturbance are anticipated. Construction of the Project will be accomplished via use of machines that are consistent in terms of size, weight, and tread with the agricultural machines that are currently used on these properties.

Only very minimal, on-site ground disturbance will be required by the design of the Project. Installation of the solar panels will not include disturbance of large surface areas. Instead, the solar panels will be installed by driving or rotating a series of relatively narrow posts into the ground, to a depth of no more than eight feet. However, the Project will include on-site access roads, and laydown areas for construction activities. These access roads, as well as parking areas for maintenance vehicles within the Project, will be constructed with compacted gravel but are not anticipated to require significant excavation or grading.

3.1 APE for Direct Effects

The APE for Direct Effects for the Project is defined as all areas of potential soil disturbance (or other direct, physical impacts) during Project construction. Preliminary design of the Project was discussed above in Section 1.3, and the APE for Direct Effects will occupy less than the Project Area. It is currently expected to encompass approximately 688 acres within the Project Area. The solar panels will be mounted on racks with a relatively small footprint (in terms of soil disturbance), typically consisting of small I-beam posts driven into the ground. In addition, relatively minor ground disturbance will occur during installation and construction of the Project's electrical collection cables (which will be buried in trenches), the substation, access roads, and other components. The Project Area is located in an area with

flat topography, which will require minimal (if any) grading during construction. Therefore, the total ground disturbance during construction is anticipated to be minimal relative to the overall size of the Project Area.

3.2 Archaeological Sensitivity Assessment

The Project will not directly (physically) impact any previously recorded archaeological resources. As described in Section 2.2, above, no OAI resources or previous cultural resource surveys are recorded within the Project Area. As part of the research design, EDR assessed the probability of encountering archaeological resources within the APE for Direct Effects based on review of the OHPO's online database, the results of background research and historical map analysis, and GIS-based landscape/environmental analysis. The results of this assessment for pre-contact Native American and historic-period archaeological resources is presented below and represented in Figure 9.

3.2.1 Pre-Contact Archaeological Sensitivity

EDR prepared a GIS-based landscape analysis to identify areas of elevated archaeological sensitivity. The analysis included review of publicly available data sets for environmental variables, such as proximity to water resources and ground slope. In addition to the environmental variables examined, the model also takes into account proximity to previously recorded pre-contact Native American archaeological sites.

Per the National Wetlands Inventory (NWI) mapping, aquatic resources are organized by type, and include riverine, pond, lake, emergent wetland, forested/shrub wetland, and "other," waterways/bodies. In line with Nolan's (2014) research, this analysis revealed that riverine aquatic resources are a much stronger predictor of pre-contact site location than wetlands. Regardless, the Ohio History Connection (2020b) describes wetlands as some "of the most archaeologically sensitive areas in Ohio." During this analysis, several ponds were noted in close proximity to sites, but almost always appeared to be of artificial origin. As such, ponds were largely excluded from this analysis.

Data sources used for streams and wetlands include the NWI mapped streams and wetlands as well as streams and wetlands delineated during the stream and wetland survey conducted for the Arche Energy Project. In order to eliminate as many artificial waterways or waterbodies from consideration, any mapped streams with Canal, Ditch, or Cutoff in the name were eliminated from consideration. Additionally, any unnamed mapped streams occurring in straight lines, containing right angles, and/or aligned with the road-grid were also eliminated from consideration. Any ponds which appeared to be man-made were also excluded. It is important to note that additional artificial streams or waterbodies may be identified in the field by archaeological survey crews and, therefore, the archaeological sensitivity model may be adjusted slightly following Phase I fieldwork.

EDR has also examined the relationship between pre-contact sites and soil drainage and found that a majority of sites occur in soil areas that are moderately well drained. Soil drainage characteristics are derived from Soil Survey Geographic Database (SSURGO) data. In addition, least-cost pathways represent the shortest travel distance between archaeological sites, taking into consideration avoidance of steep topography and proximity to water resources. Least cost pathways between previously recorded archaeological sites containing earthworks are considered areas of elevated archaeological sensitivity. Our analysis indicates that the 1000-foot buffer used for elevated sensitivity near water resources already reflects the least cost pathways between the mounds indicated in the Mills Atlas and OAI inventory sites.

Proximity to streams and wetlands appears to be the most powerful environmental factor influencing pre-contact settlement in this area. Based on the analysis of similar sites and contexts—EDR has found that a majority of pre-contact Native American sites are located within 1,000 feet (305 meters) of a mapped stream or wetland. EDR's experience with two recent archaeological projects in Paulding County and Brown County, Ohio respectively (EDR, 2019a & 2019b), show positive results for the use of the sensitivity model summarized in Table 3, below. The Phase I archaeological survey for the Timber Road IV Wind Farm (EDR, 2019a) identified or revisited 37 archaeological resources, 32 (86%) of which were located partially or wholly within archaeologically sensitive areas, as defined by the model. In the Hillcrest Solar Project Phase I archaeological survey (EDR, 2018b), the sensitivity model strongly predicted the locations of archaeological resources. The survey identified 22 total archaeological resources (sites and isolated finds), 21 (96%) of which were located partially or wholly within archaeologically sensitive areas, as defined by the model. Only one historic-period site was in an area identified as having low archaeological sensitivity by the model. This site was located just beyond the 200-foot perimeter of elevated historic-period sensitivity, a discrepancy possibly due to cartographic inaccuracies in the historic maps.

From on this correlation, portions of the Project Area within 1,000 feet of naturally occurring streams and wetlands are considered to have an elevated sensitivity for containing pre-contact archaeological material (see Figure 9), while areas more than 1,000 feet from naturally occurring streams and wetlands are considered to have a reduced sensitivity for containing such material.

3.2.2 Historic-Period Archaeological Sensitivity

Historic maps depict nineteenth-century settlement and twentieth-century expansion within the vicinity of the Project Area. There are no previously recorded historic-period archaeological sites within the Project Area. As described above in Section 2.5, EDR reviewed the following maps to identify the locations of former structures within and surrounding the Project Area:

- 1858 Skinner's *Atlas of Fulton County*
- 1888 Griffing's *Atlas of Fulton County*
- 1914 Mills *Archaeological Atlas of Ohio*
- 1953 USGS *Fort Wayne, Indiana* 1:24000 scale Topographic Quadrangle (USGS, 1953)

Map-documented structures (MDS) in the vicinity of the Project are generally located adjacent to existing roadways. In some instances, MDS represent existing buildings and/or farms. In other instances, they are abandoned structures that may now be represented only by archaeological remains. Potential archaeological resources associated with these MDS locations could include abandoned residential, municipal (i.e., school), and/or farmstead sites, where the complete residential, municipal, and/or agricultural complex consisting of foundations, structural remains, artifact scatters, and other features, would constitute an archaeological site. In other locations, more limited remains of these sites, perhaps represented by only a foundation or an artifact scatter, may be present.

Areas located in the immediate vicinity (within approximately 200 feet) of MDS locations are considered to have high potential for the presence of historic-period archaeological resources. Early historic-period occupation in the vicinity of the Project, however, may not always be map-documented. Early historic-period sites not appearing on early maps would likely be located within close proximity to the water resources. As such, the 1000-foot buffer for pre-contact Native American archaeological resources would encompass early historic-period resources. The remaining (non-MDS) portions of the Project Area are considered to have reduced sensitivity to contain historic-period archaeological resources.

3.3 Phase I Archaeological Survey Methodology

It is proposed that the Phase I survey will include archaeological investigation within all areas of the APE for Direct Effects, in accordance with the archaeological sensitivity model described above in Section 3.2. The Phase I survey methodology proposed in this survey strategy was designed in accordance with the *Archaeology Guidelines* (OHPO, 1994). The archaeological research design and sensitivity model are summarized below in Table 3 and depicted in Figure 9. It is proposed that Phase I archaeological investigations will be conducted in 100% of all areas that show an elevated sensitivity for pre-contact and historic-period archaeological sensitivity. Those areas that are not considered to have elevated sensitivity for archaeological resources will be subjected to Phase I archaeological survey at a 50% sample.

Table 3. Archaeological Sensitivity Model

Archaeological Sensitivity	Criteria	Acreage of the Archaeological Survey Area	Recommended Phase I Survey Intensity
Elevated Sensitivity for Historic-Period Archaeological Material	<200 feet from historically map-documented structure	35-acres	100% Phase I survey
Elevated Sensitivity for Pre-Contact Archaeological Material	<1,000 feet from naturally occurring stream/wetland	622-acres	100% Phase I survey
Elevated Sensitivity for both Historic-Period and Pre-Contact Archaeological Material	<200 feet from historically map-documented structure and <1,000 feet from naturally occurring stream/wetland	33-acres	100% Phase I survey
Reduced Sensitivity for Pre-Contact and Historic-Period Archaeological Material	>200 feet from historically map-documented structure and >1,000 feet from naturally occurring stream/wetland	55-acres	50% sample Phase I survey with specific areas selected on a judgmental basis under the supervision of an archaeologist meeting the Secretary of the Interior's Standards (36 CR 61)

Within the areas of reduced sensitivity for archaeological resources, 50% of the area will be selected for archaeological survey at the same sample rate as the elevated sensitivity areas, as opposed to increasing the pedestrian survey interval to 20-meter transects from the standard 10-meter, and/or conducting 8 shovel tests per acre rather than the normal 16. Selection of the reduced sensitivity areas to be sampled by Phase I survey will prioritize areas of potential pre-contact occupation not identified during the archaeological sensitivity assessment presented above. These could include small wetlands not identified in the wetlands mapping available for the area, or micro-variations in topography. Surveying 50% of the reduced sensitivity areas at the normal survey interval, per the *Archaeology Guidelines* (OHPO, 1994), is preferable to surveying 100% of reduced sensitivity areas at a wider survey interval.

It should be noted that the APE for Direct Effects may change from the current acreages presented herein, as the Project layout may be modified following submission of this research design. However, any changes in the extent of the survey will be consistent with the archaeological sensitivity model and research design presented herein. The approach and level of effort proposed for the archaeological survey is expected to generate an adequate testing sample to evaluate the Project's potential effect on archaeological resources.

3.3.1 Pedestrian Surface Survey

In existing agricultural fields with greater than 50% ground surface visibility within the APE for Direct Effects, EDR personnel will conduct pedestrian surface survey to determine whether archaeological sites are present. In these areas, archaeologists will traverse the APE for Direct Effects along transects spaced at 30-foot (10-meter) intervals while inspecting the ground surface for artifacts and/or archaeological features. The timing for this work is critical as surface survey needs to be conducted after a field has been freshly plowed and disked, preferably following a rain event. If any artifacts or other indications of an archaeological site are observed on the ground surface, then the location will be recorded using professional-grade Global Positioning System (GPS) equipment. After recording the horizontal extent of artifacts and the locations of any features present at a given site, archaeologists assess whether the artifacts present on the ground surface warrant collection. In most instances, a sample of diagnostic or especially significant artifacts will be collected, with most artifacts being noted but left *in situ*. All diagnostic pre-contact artifacts will be collected for further analysis. Collected artifact's will be subjected to subsequent laboratory identification and analysis, in accordance with standard archaeological methods. At least one 50 x 50-cm shovel test will be excavated at each archaeological site or isolated find to assess the subsurface stratigraphy and the potential for buried artifacts and features. It is anticipated that the majority of the APE for Direct Effects will be investigated using pedestrian surface survey. These pedestrian survey methods will be used in both elevated and reduced areas for probability of archaeological resources, with the caveat that, as discussed above, only 50% of reduced probability areas will be surveyed.

3.3.2 Shovel Testing

In addition to the pedestrian surface survey described above, archaeologists will excavate shovel tests in any portions of the APE for Direct Effects with less than 50% ground surface visibility in order to determine whether archaeological sites are present per the *Archaeology Guidelines* (OHPO, 1994). Where conditions warrant, shovel tests will be excavated throughout the APE for Direct Effects at 100% of elevated probability areas and 50% of reduced probability areas, at the same sampling strategy described above.

Additionally, at least one shovel test will be excavated at each archaeological site or isolated find identified during the pedestrian surface survey in order to assess the subsurface stratigraphy and the potential for buried artifacts and features. Shovel tests will be 50 x 50 cm squares, excavated to a depth of at least 10 cm into the "B" horizon subsoil stratum. Shovel tests will be excavated in 10-cm arbitrary levels and/or by natural stratigraphic levels, depending on the stratigraphy encountered. Archaeologists will record the locations of shovel tests with professional-grade GPS equipment with real-time reported sub-meter accuracy (with all field data post-processed), while also noting shovel test locations on field maps. All soils excavated from shovel tests will be screened through 0.25-inch hardware cloth to

ensure uniform recovery of cultural material. Archaeologists will record shovel test stratigraphic profile data on standardized field record sheets that include strata depth, Munsell soil colors, soil texture and inclusions, and any cultural materials (these data will be included in the final Phase I report).

3.3.3 Artifact Collection and Analysis

In the event that artifacts are collected during the Phase I archaeological survey, standard provenance information will be recorded in the field and the locations of all finds will be recorded using professional-grade GPS equipment and documented with field notes. All artifacts will be placed in temporary sealed plastic field bags labeled with provenance data. All collected artifacts will be returned to EDR's Syracuse office for processing and placement in archival-grade polyethylene artifact bags. Typically, diagnostic, unique, or unusual artifacts, or samples thereof, from shovel tests will be collected during the Phase I survey. Clearly modern materials (i.e., less than 50 years old) and commonplace twentieth-century materials will not be collected as part of the Phase I survey (however, the presence of these materials will be recorded in field notes and representative photos taken in the field, as appropriate).

Following the completion of fieldwork, all recovered materials will be washed, dried, and cataloged per standard archaeological laboratory procedures. Artifacts will be described (to the extent possible) according to their count, material, type, metric attributes, decorative motif, form, function, and cultural/temporal association. Artifact identification will be conducted according to standard references for pre-contact and historic-period artifacts. A complete listing of all recovered artifacts will be included as an appendix of the final Phase I report. Artifacts will be curated in accordance with Section V of the *Archaeology Guidelines* (OHPO, 1994).

3.4 Archaeological Site Avoidance/Minimization

It is anticipated that potentially significant (i.e., potentially NRHP-eligible) archaeological sites identified during the Phase I survey will be avoided or minimized by Project design. Because the Project Area includes large tracts of mostly open agricultural land, and the flexible nature of solar energy project components (in terms of siting requirements), it should be possible to avoid or minimize impacts to any potentially significant archaeological sites identified within the APE for Direct Effects through relatively minor modifications to the Project layout. In the event that a potentially NRHP-eligible archaeological site cannot be avoided by the proposed Project, then additional Phase II site investigations and, potentially, Phase III data recovery/mitigation would be conducted at the site. The nature of the additional investigations needed would be determined based on consultation with the OHPO.

In most instances, the types of finds noted below will not be considered NRHP-eligible. As such they will not require avoidance or additional archaeological investigations:

- isolated pre-contact finds,
- isolated historic-period finds,
- small low-density lithic scatters that lack diagnostic artifacts and/or indications of intact subsurface features,
- low-density scatters of historic-period artifacts (particularly in agricultural fields, which likely represent artifacts associated with manuring practices that cannot be associated with specific households or contexts), and
- artifacts/deposits of clearly modern origin.

4.0 HISTORIC RESOURCES SURVEY RESEARCH DESIGN

The historic resources survey research design was prepared in accordance with the *Guidelines for Conducting History/Architecture Surveys in Ohio* (OHPO, 2014; hereafter called the *OHPO Guidelines*). It defines the APE for Indirect Effects on historic resources for the Project. To accurately determine the Project's APE, the viewshed analysis was based on a digital elevation model (DEM), which only considers the screening effects of topography. Buildings and vegetation were not considered. Additional detail about the APE for Indirect Effects is provided in Section 4.1.

The goal of this Historic Resources Survey Research Design is to:

- Define the APE for Indirect Effects on historic resources for the Project (see Section 4.1);
- Establish the criteria by which historic resources will be evaluated (see Section 4.2);
- Propose a methodology for reconnaissance survey of historic resources (see Section 4.3);
- Establish expectations regarding resource typologies and survey results (see Section 4.4); and
- Define the deliverables for the historic resources survey (see Section 4.5).

4.1 APE for Indirect Effects

The APE for Indirect Effects on historic resources includes those areas where the Project may result in indirect effects on cultural resources, such as visual or auditory impacts. The Project's potential indirect effect on historic resources would be a change (resulting from the introduction of solar panels or other Project components) in the historic resource's setting. This could theoretically consist of auditory and/or visual impacts; however, utility-scale solar facilities produce minimal noise, so auditory impacts resulting from the Project are not considered a significant type of impact to the setting of historic resources. Therefore, potential visual impacts associated with the Project are the most significant consideration for defining an APE for Indirect Effects.

In order to accurately determine the Project's APE for Indirect Effects, a preliminary viewshed analysis for the proposed PV panel arrays was prepared using Environmental Systems Research Institute (ESRI) ArcGIS® software with the Spatial Analyst extension . The viewshed analysis was based on a digital elevation model (DEM), which only considers the screening effects of topography. Buildings and vegetation were not considered. The DEM used in this analysis was downloaded from the Ohio Geographically Referenced Information Program (OGRIP) for Fulton County.

Through simulations prepared for several previous Ohio solar projects, EDR had determined that the practical limits of PV panel visibility end at approximately two miles due to the relatively low height (estimated at 15 feet). Furthermore, the visual effect of substations and their associated interconnections are anticipated to be insignificant because the equipment will be screened by vegetation and structures and/or blend into the existing landscape from any open views beyond two miles. The generally flat topography in the area and absence of elevated vantage points further contributes to the lack of distant Project views more than two miles away. See Figure 10.

The potential visual effects that could result from construction and operation of the Project's taller components associated with the electrical system (see Section 1.3) will be minimal. This is due to intentional project siting, combined with design, and visual character of the proposed equipment, they avoid visual impacts. The collection system will be buried underground and have no above ground components outside of the fence line, which is typical for solar projects. The gen-tie will be installed as a short overhead line, no more than 100 feet long, with limited visually prominent features including a single approximately 20-25-foot tall dead-end structure. These components are typically located directly adjacent to an existing transmission line and the proposed substation. Located as such, the dead-end structure will blend with the existing structures and the proposed substation equipment, thus minimizing any visual impact. From distances beyond two miles these overhead structures will be hard to discern from the landscape because of their low height.

The project substation will have an approximate size of 1 acre, as typical for project substations associated with these size projects. The tallest structure in the substation will be the lightning mast with an approximate height of 60 feet, with most other parts remaining well below that maximum. The lightning mast is very thin and will typically fall within the mature canopy of nearby hedgerows and forest stands. During leaf-off conditions the scale of the mast tip is similar in scale to the branching structure of the mature canopy allowing for the minimalization of impact throughout all seasons. The lower, more visually dominant components of the substation remain below the height of adjacent vegetation and will benefit from additional screening due to understory vegetation. Therefore, visibility and visual impact of the proposed substations is anticipated to be localized and minor and are not anticipated to result in significant visual impacts.

For equipment security and public safety, a fence with a locked access gate will be installed around the perimeter of the substations. The substation is located in an active crop field, with a 480-foot setback distance from the adjacent road surface and takes advantage of any intervening vegetation, topography and the existing substation, which provides screening from adjacent residences public roads, where the majority of users will view the site from. This

placement minimizes the change in landscape character and, in turn, the visual impact and blend into the existing environment at distances of over two miles.

Therefore, an appropriate APE for Indirect Effects for the Project includes those areas within the Cultural Resources Study Area with potential visibility of the Project as defined by the DEM viewshed results, for its various components considering all maximum heights (see Figure 10). For previous solar projects in the state of Ohio, EDR has received approval to define the APE for Indirect Effects using the above methodologies[1].

4.2 Criteria for Evaluating the Significance for Historic Resources

Historically significant properties are defined herein to include buildings, districts, objects, structures and/or sites that have been listed on, or determined eligible to the NRHP, as well as those properties that have been recorded in the OHI, OGS, and ODOT historic resource inventories. Criteria set forth by the National Park Service for evaluating historic properties (36 CFR 60.4) state that a historic building, district, object, structure or site is significant (i.e., eligible for listing on the NRHP) if the property conveys (per CFR, 2004; NPS, 1990):

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (B) that are associated with the lives of persons significant in our past; or
>
> (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (D) that have yielded, or may be likely to yield, information important in prehistory or history.

Historic resources surveys undertaken by EDR in association with the Project will be conducted by architectural historians who satisfy the professional qualifications criteria per the Secretary of the Interior's Standards for Historic Preservation (36 CFR 61).

[1] On April 6, 2020, EDR submitted a memo to the OHPO relating to two solar projects, addressing potential visibility of components over 15 feet in height, such as gen-tie dead end structures and substations. EDR proposed a reduction the OHPO's requested 5-mile study area for assessing potential impacts to historic properties associated with these taller project components (EDR, 2020). A response from OHPO was received on May 5, 2020, acknowledging that a 2-mile Cultural Resources Study Area was appropriate for all components of solar projects (Koehlinger, 2020).

EDR staff are thoroughly familiar with vernacular architectural styles and agricultural traditions, historic settlement and agrarian land use patterns, and relevant historic contexts for the Cultural Resources Study Area. Expectations about the kind, number, location, character and conditions of historic properties within the APE for Indirect Effects is discussed in Section 4.4.

4.3 Historic Resources Survey Methodology

EDR will conduct a historic resources survey for the Arche Energy Project to fulfill the requirements of the Application. The historic resources survey will be conducted in accordance with the 2014 *OHPO Guidelines*. Field observations and photographs, in conjunction with viewshed mapping, will provide the basis for evaluating the Project's potential effect on historic resources including buildings, structures, objects, sites and districts.

In addition to the historic context and historic maps review (Sections 2.4 and 2.5 above), additional research will be conducted during fieldwork such as visits to history rooms at local libraries, the Fulton County Historical Society Museum and the county auditor's office to further inform the historic resources survey.

EDR will conduct a reconnaissance-level historic resources survey of the Project's APE for Indirect Effects (i.e., areas within 2 miles of the Project where viewshed analysis indicates potential visibility). The historic resources survey will identify and document those buildings, sites, structures, objects, and/or districts within the APE that, in the opinion of EDR's architectural historian, appear to satisfy NRHP eligibility criteria. In addition, the survey will also be conducted for the purpose of providing updated photographs and recommendations of eligibility for NRHP-listed and eligible resources, as well as previously designated OHI, ODOT and OGS sites within the APE whose NRHP eligibility has not formally been determined. EDR will photo-document previously unidentified historic properties within the APE for Indirect Effects, that, in the opinion of EDR's architectural historians, do not meet NRHP-eligibility criteria. The purpose is to assist the OHPO with its determination regarding "which resources warrant further investigation and which resources, due to a lack of integrity, architectural significance, etc., do not" (OHPO, 2018).

Historic resources survey fieldwork will include systematically driving all public roads within the APE for Indirect Effects to evaluate historic resources within the Project viewshed. When those resources are identified, the existing conditions of the property will be documented. This includes photographs of the building(s) and property, a photograph of each outbuilding, a brief description of the setting, estimated construction date(s), and field notes describing the style, physical characteristics and materials (e.g., number of stories, plan, external siding, roof, foundation, and sash), condition, and physical integrity for each resource. Other known criteria aside from architecture which may contribute to a property's NRHP eligibility will be noted and evaluated as well.

Evaluation of historic resources within the APE will focus on the integrity (with respect to design, materials, feeling, and association) to assess the potential architectural significance of each resource. However, physical condition will not be the primary determinant of inclusion, per the 2014 *OHPO Guidelines* which instruct that surveys are to include "vernacular and high style examples, paying attention to regional and repeated building types as they often reflect important patterns in regional or statewide development." If deemed appropriate, individual buildings located within clusters will not be documented as individual properties, but instead will be described collectively as potential districts. EDR will document through field notes the extent to which the visual setting associated with these properties could be affected by the proposed project.

All properties included in the historic resources survey will be photographed and assessed from public rights of way and evaluated based solely on the visible exterior of the structures. No inspections or evaluations requiring access to the interior of buildings, or any portion of private property, will be conducted as part of this assessment. Although the survey will focus on buildings that are over 50 years old with high architectural integrity, buildings that are less than 50 years in age with a distinctive architectural style, representing a physical expression of the modern period, or having historical significance through a historic theme as evaluated by EDR's architectural historian will also be documented per the 2014 *OHPO Guidelines.*

4.4 Expected Survey Results

One hundred thirty-six previously identified OHI-recorded buildings and three OGS-designated cemeteries within the Cultural Resources Study Area suggests likeliness that additional historic buildings and cemeteries will be identified within the APE for Indirect Effects. Buildings may include those typical of agricultural landscapes such as farmhouses, barns and agricultural support buildings. Based on desktop research, it is not expected that any OGS-identified cemetery would be eligible for NRHP listing based on Criterion Consideration D.

The Project Area itself does not include any population centers or major industries. West of the Project Area is the village of Fayette (approximately 0.5-miles north of the proposed Project). It is expected that additional historic residential resources will be newly identified within village boundaries.

In addition, consultation with local historic societies and/or historians will continue to identify properties that may be NRHP-eligible due to non-architectural associations (i.e. their significance is derived from associations with significant events or persons per National Register Criteria A and B).

4.5 Historic Resources Survey Report and Inventory Forms

EDR will prepare a stand-alone historic resources survey report following the format outlined in the 2014 *OHPO Guidelines* and updated *Survey Report Submission Requirements* (OHPO, 2018). Special attention will be paid to the viability of farmsteads and agricultural structures associated with the historic context of the Cultural Resources Study Area.

Per the OHPO *Survey Report Submission Requirements* (OHPO, 2018), the historic resources survey report will also include completion of Ohio Historic Inventory Forms (I-Forms) for newly identified historic properties that, in the opinion of EDR's architectural historians, meet or exceed the NRHP eligibility criteria, as well as updating existing I-Forms for existing OHI designated properties, using the OHPO I-Form Application Database, as required by the 2014 *OHPO Guidelines*. Information included will be appropriate to a reconnaissance-level survey. Prior to submitting the forms, EDR will contact the OHPO with a list of surveyed resources and addresses for each property so that OHI numbers can be assigned.

Per the *Survey Report Submission Requirements*, one color hard copy and one digital PDF copy of the survey report (including GIS data), will be submitted to the OHPO for project review.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The proposed Project will not directly (physically) impact any known cultural resources. It is currently proposed that 100% of the APE for Direct Effects identified as having elevated archaeological sensitivity (for either pre-contact or historic-period archaeology) will be subjected to Phase IB archaeological survey, and 50% of the APE for Direct Effects identified as having reduced sensitivity for archaeological resources (for either pre-contact or historic-period archaeology).

The Project has the potential to cause indirect visual impacts to aboveground historic resources within the Cultural Resources Study Area where there are 136 OHI buildings, and 3 OGS cemeteries. Based on review of historic maps, there may be several nineteenth century and/or early-twentieth century map-documented structures within the APE for Indirect Effects. To determine if there are extant or additional historic resources that could be affected by the Project, a reconnaissance survey for architectural resources would need to be conducted throughout the APE for Indirect Effects.

The records review and research designs presented herein is provided to OHPO for approval in advance of cultural resource surveys, to evaluate the proposed sampling strategy, field methodologies, as well as to ensure that the proposed scope of the survey is consistent with OHPO's standards. Please provide a formal response indicating OHPO's concurrence with and/or comments on the research design described herein.

6.0 REFERENCES

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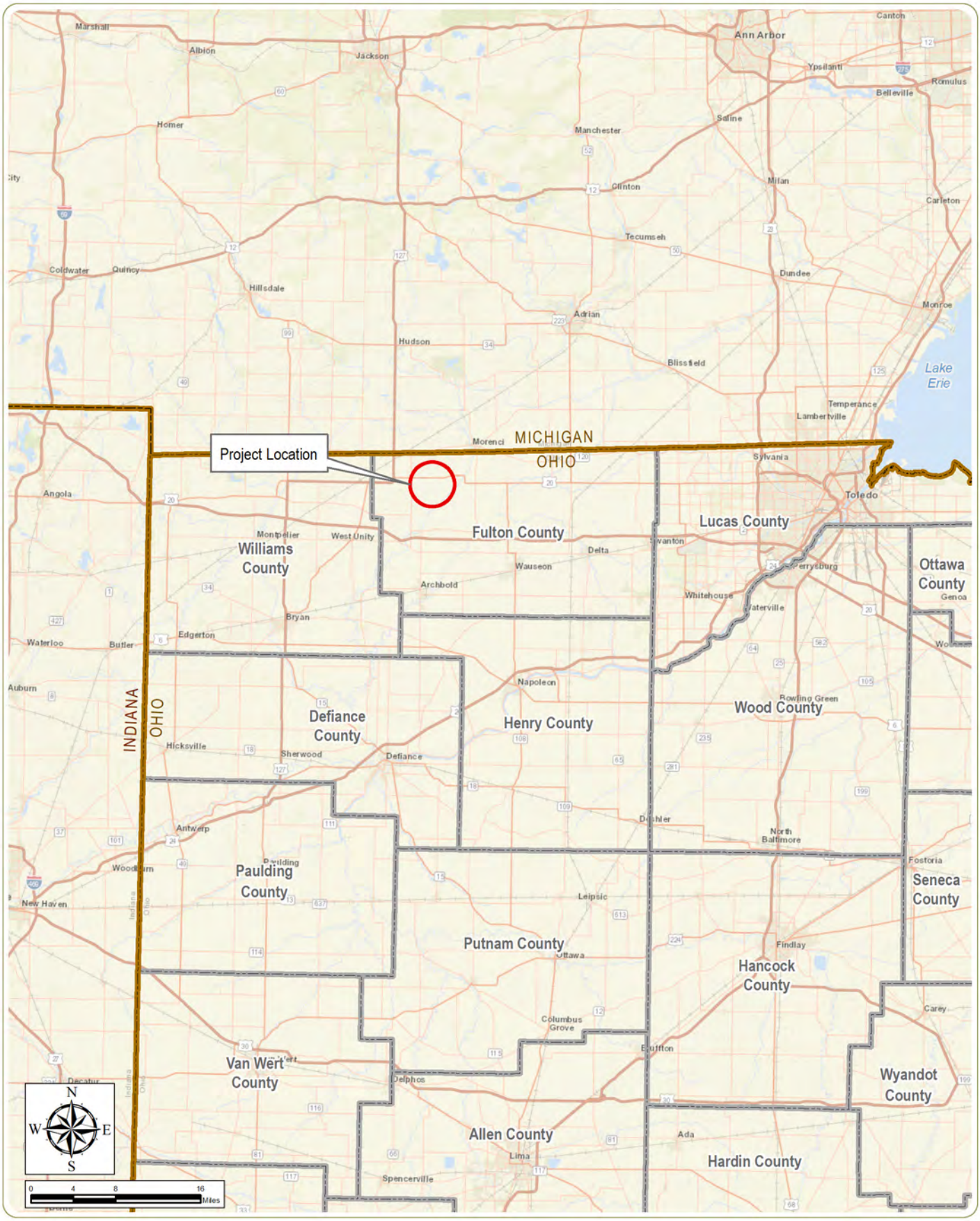
Figures



Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 1: Regional Project Location

Notes: 1. Basemap: ESRI ArcGIS Online "World Street Map" map service..
2. This map was generated in ArcMap on May 11, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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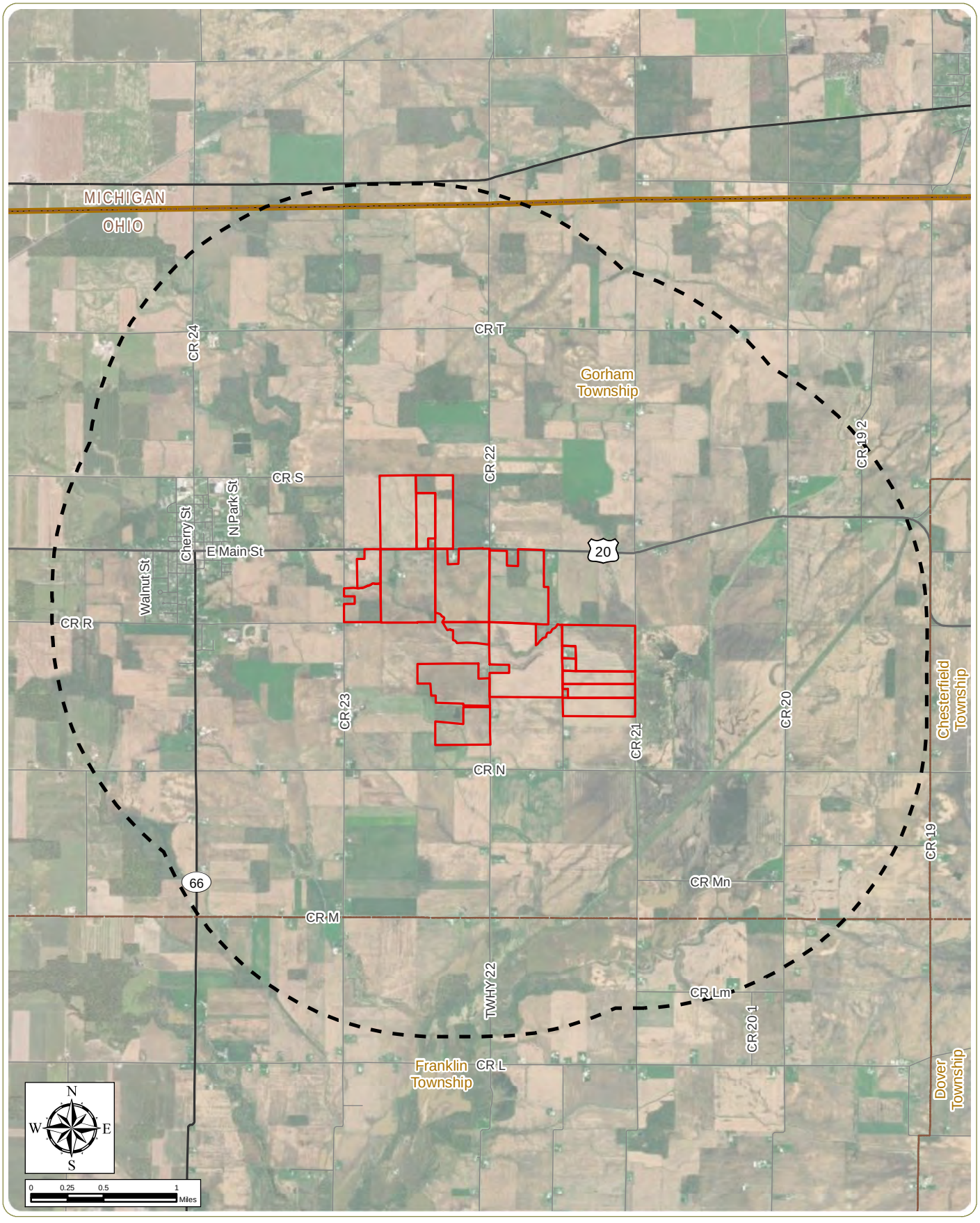

Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 2: Project Area and Cultural Resources Study Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Imagery" map service.
2. This map was generated in ArcMap on May 13, 2020.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Project Area
- Cultural Resources Study Area
- Township Boundary
- State Boundary

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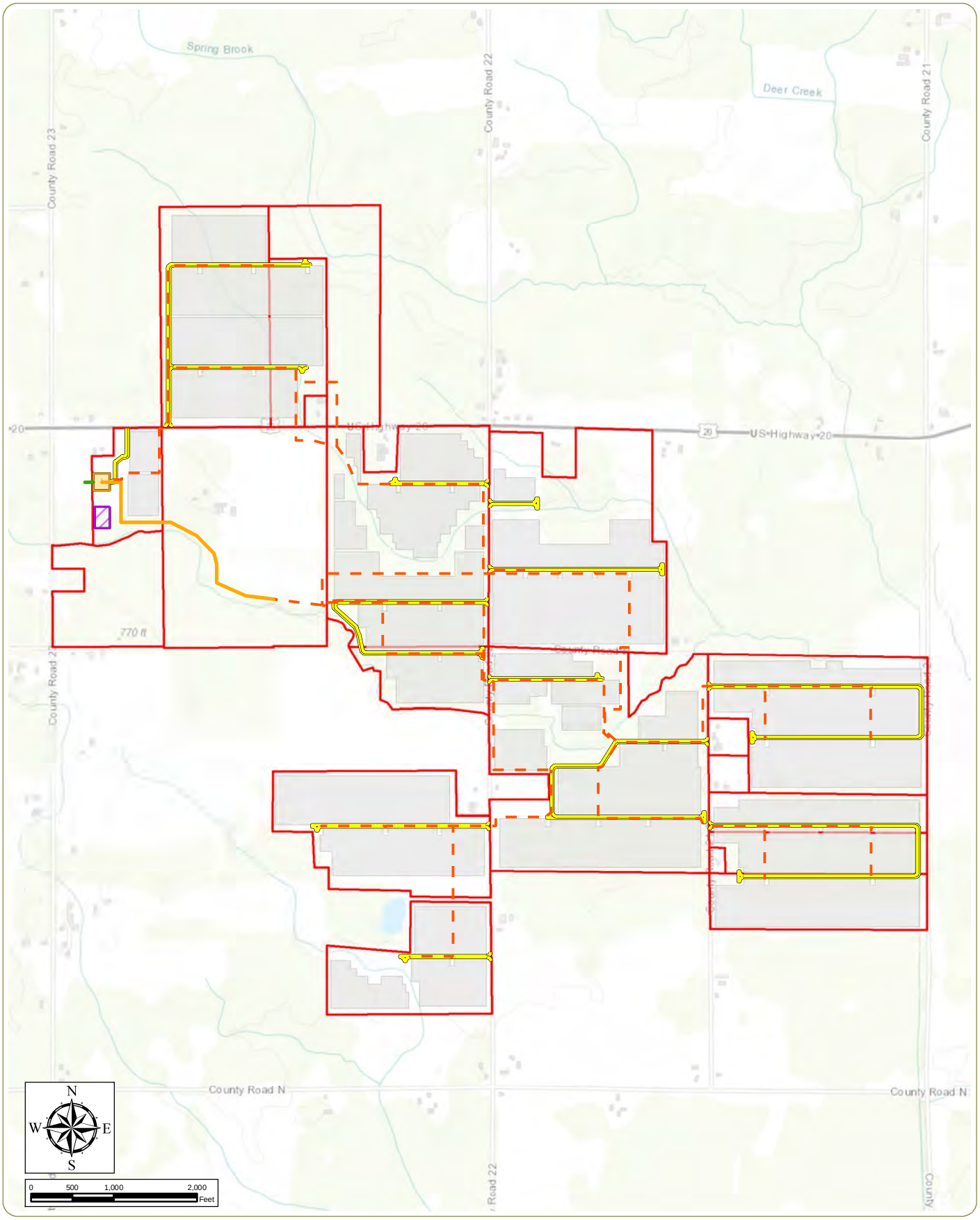

Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 3: Project Components

- Access Road
- Collection Line
- Overhead Collection Line
- Transmission Line
- Collection Substation
- Laydown Yard
- PV Panel Area
- Project Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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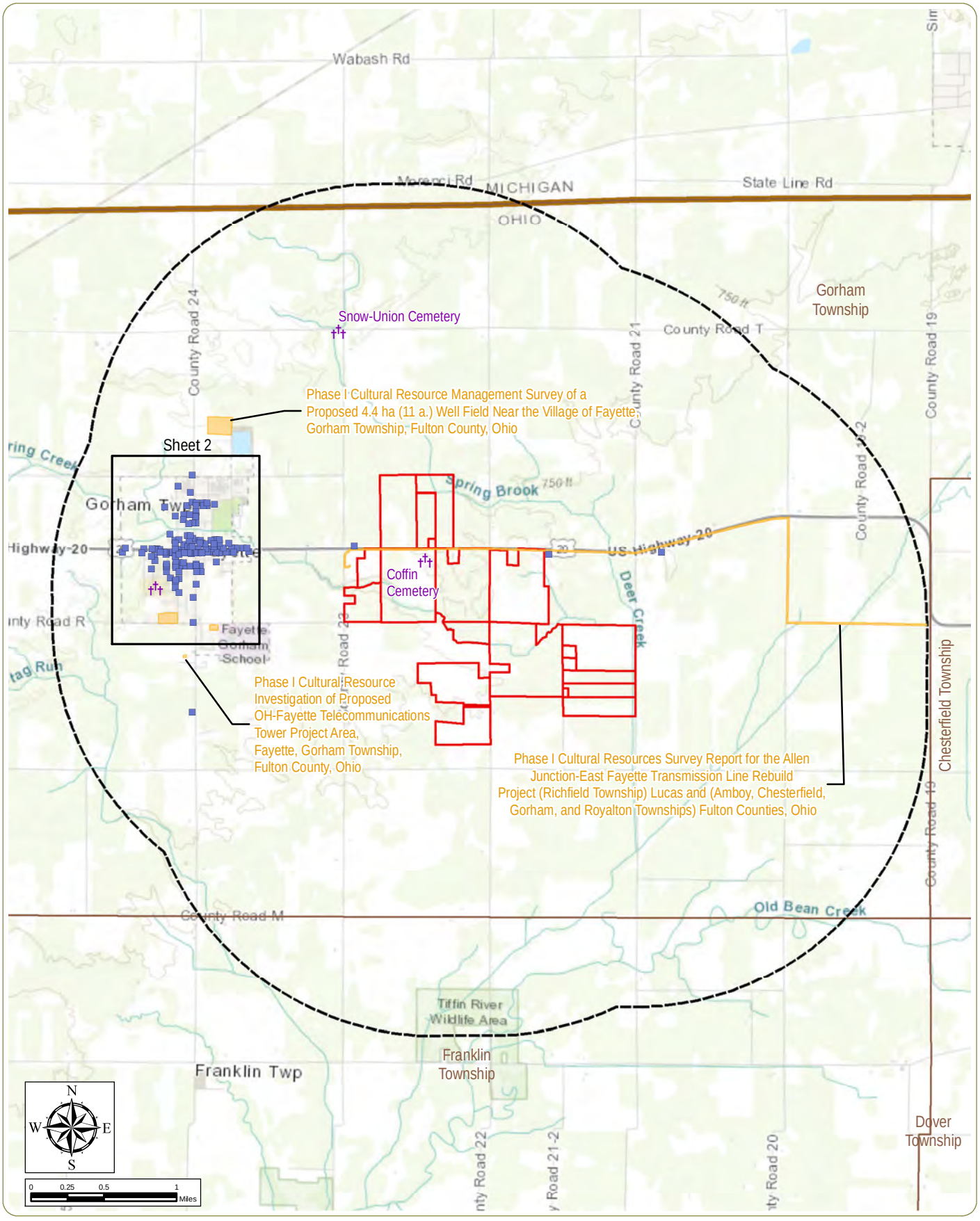

Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 4: Previously Indentified Cultural Resources

Sheet 1 of 2

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- OHI Historic Structure
- OGS Cemetery
- Previous Archaeological Survey
- Project Area
- Cultural Resources Study Area

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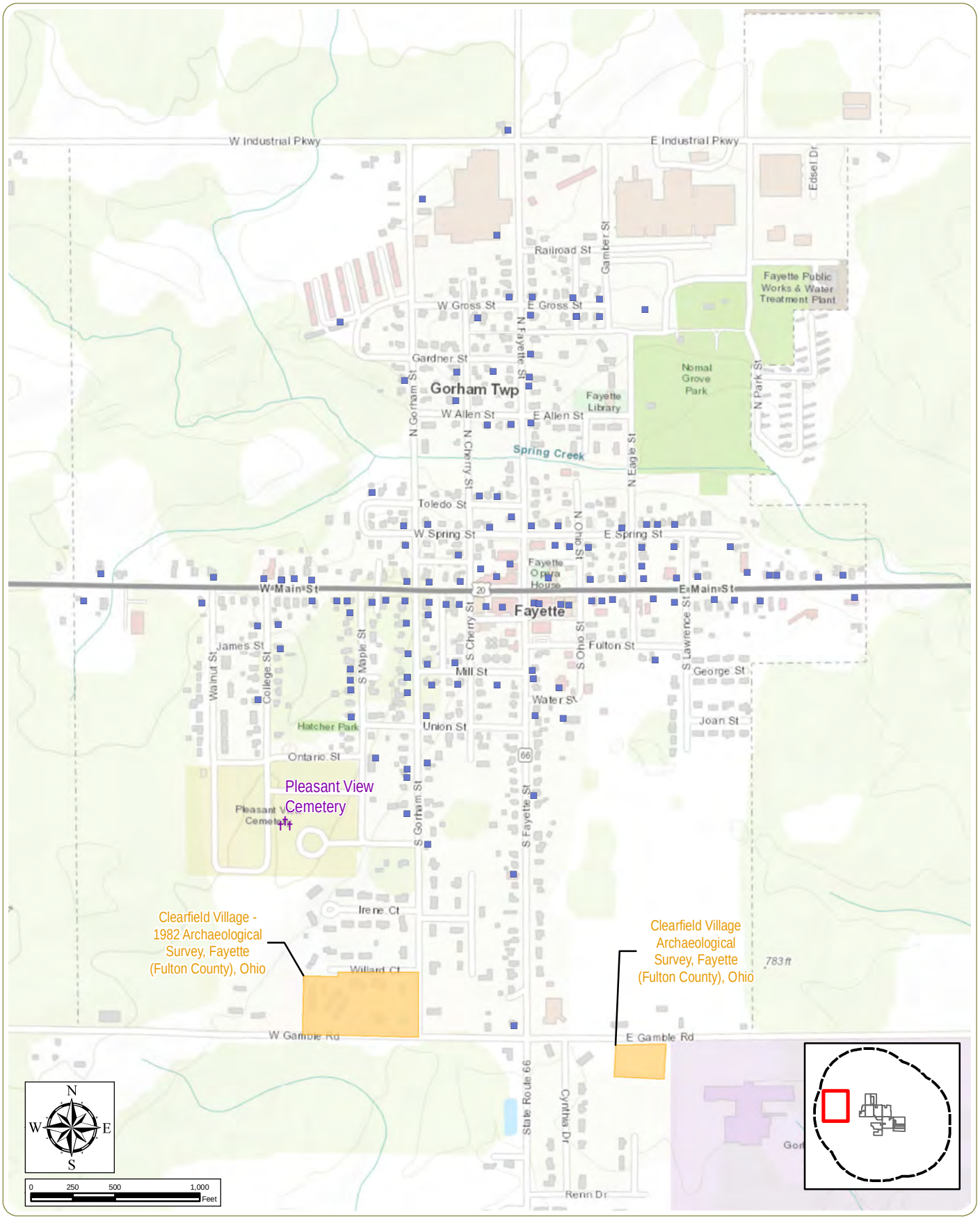

Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 4: Previously Indentified Cultural Resources

Sheet 2 of 2

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- OHI Historic Structure
- OGS Cemetery
- Previous Archaeological Survey
- Project Area
- Cultural Resources Study Area

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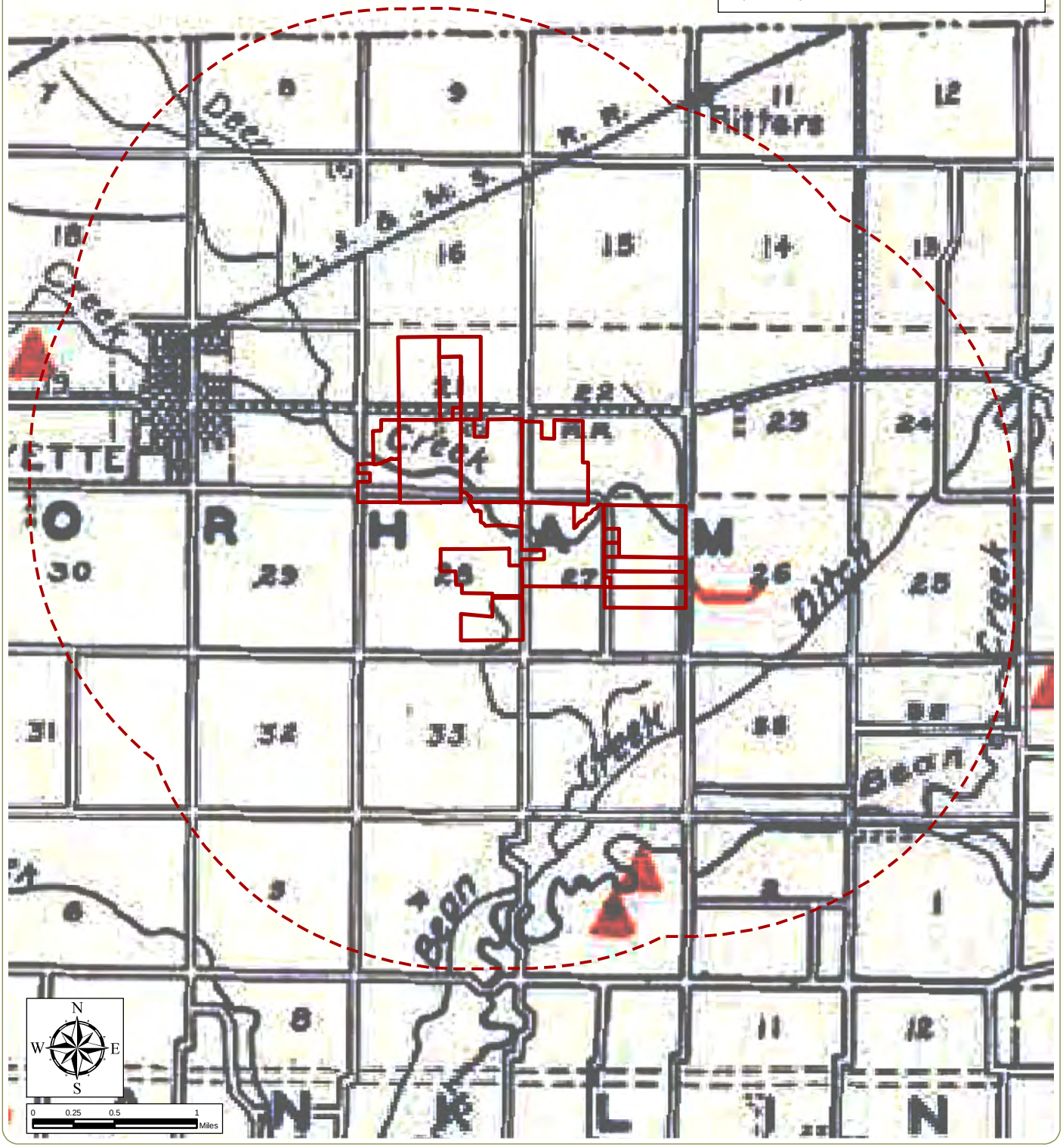
This historic map has been geo-referenced with modern map features. Potential sources of error inherent in this process include cartographic inaccuracies, differences in scale, and changes in the modern landscape. The geo-referenced map therefore presents approximate locations of historic map-documented features, and is not intended to depict survey-accurate information.



Arche Energy Solar Project

Franklin and Gorham Township, Fulton County, Ohio

Figure 5. 1914 Mills *Archaeological Atlas of Ohio*

Project Area

Cultural Resources Study Area

Notes: 1. Basemap: 1914 Mills *Archaeological Atlas of Ohio*. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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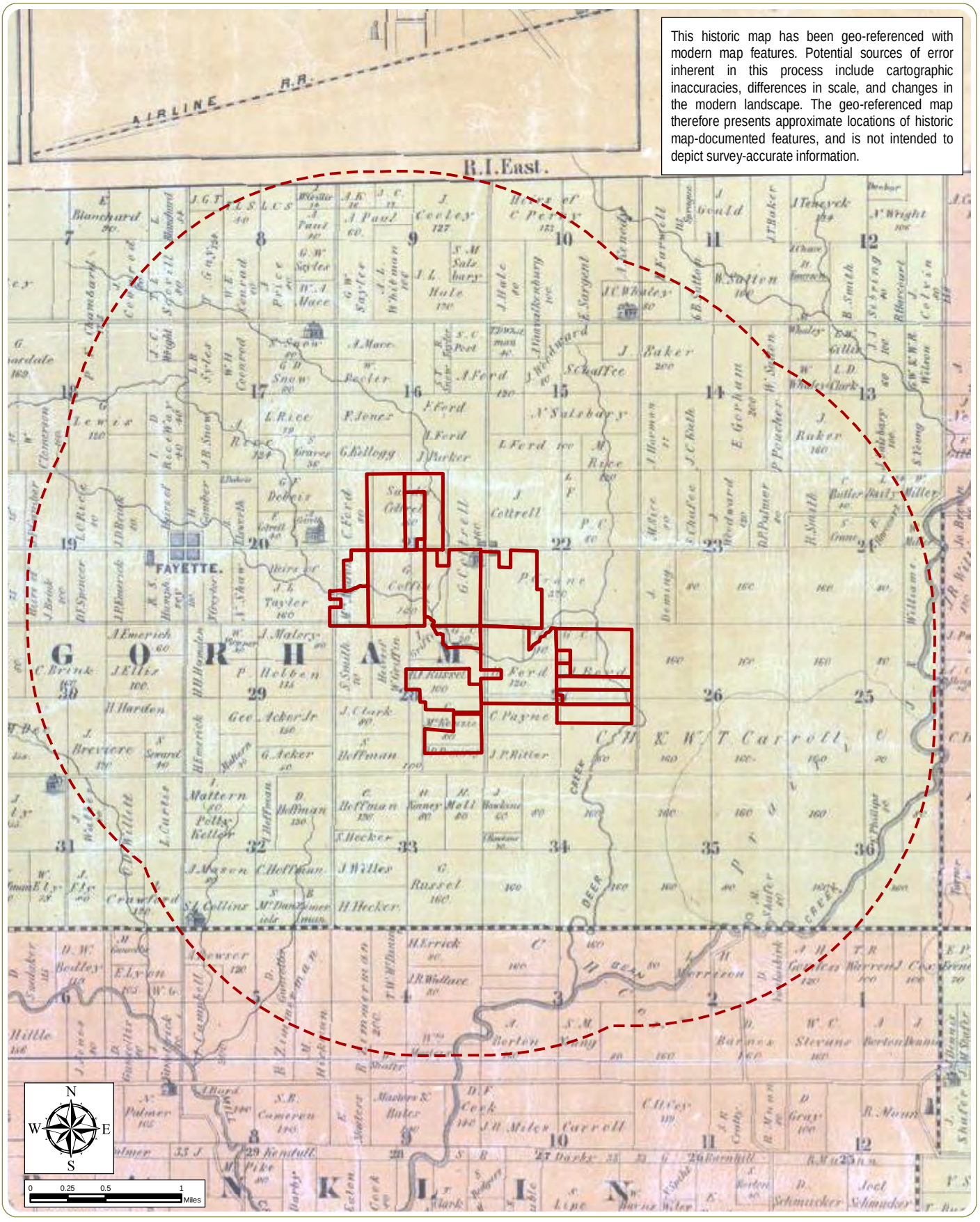

Arche Energy Solar Project

Franklin and Gorham Township, Fulton County, Ohio

Figure 6. 1858 Skinner's *Atlas of Fulton County*

Project Area

Cultural Resources Study Area

Notes: 1. Basemap: 1858 Skinner's *Atlas of Fulton County*. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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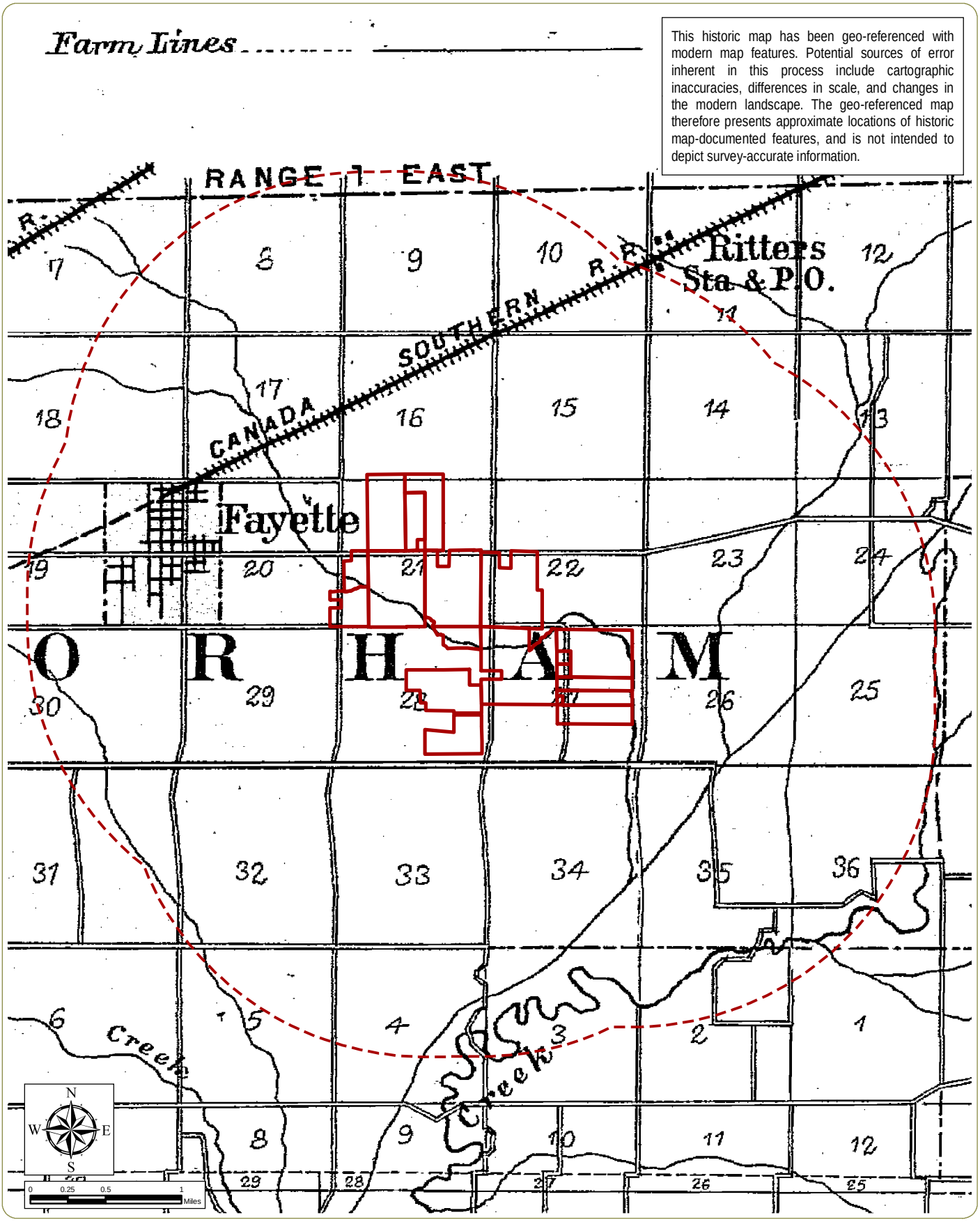

Arche Energy Solar Project

Franklin and Gorham Township, Fulton County, Ohio

Figure 7. 1888 Griffing's *Atlas of Fulton County*

Project Area

Cultural Resources Study Area

Notes: 1. Basemap: 1888 Grifting's *Atlas of Fulton County*. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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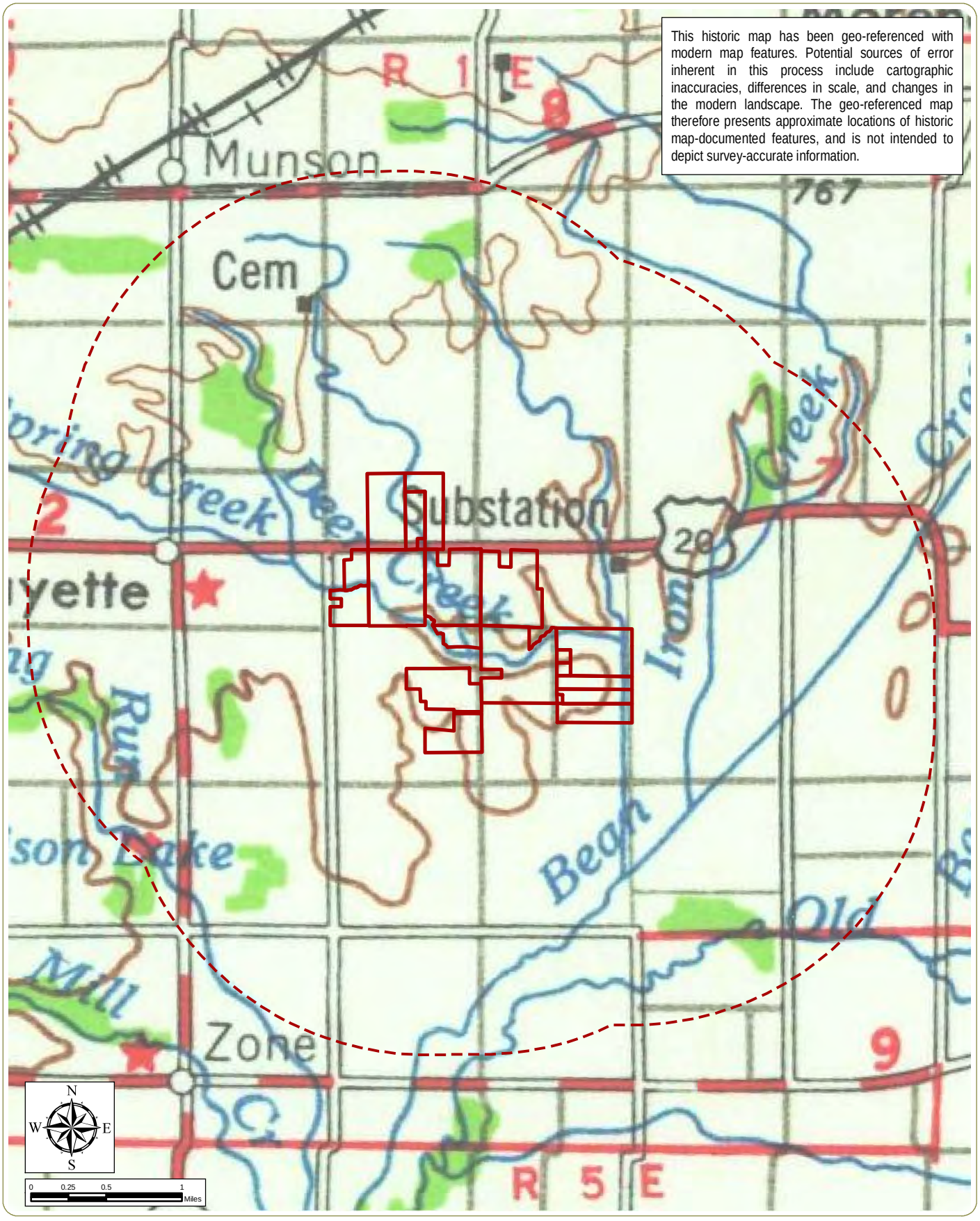

Arche Energy Solar Project

Franklin and Gorham Township, Fulton County, Ohio

Figure 8. 1953 *Fort Wayne, Indiana USGS Topographic Quadrangles*

Project Area

Cultural Resources Study Area

Notes: 1. Basemap: 1953 *Fort Wayne, Indiana USGS Topographic Quadrangles*. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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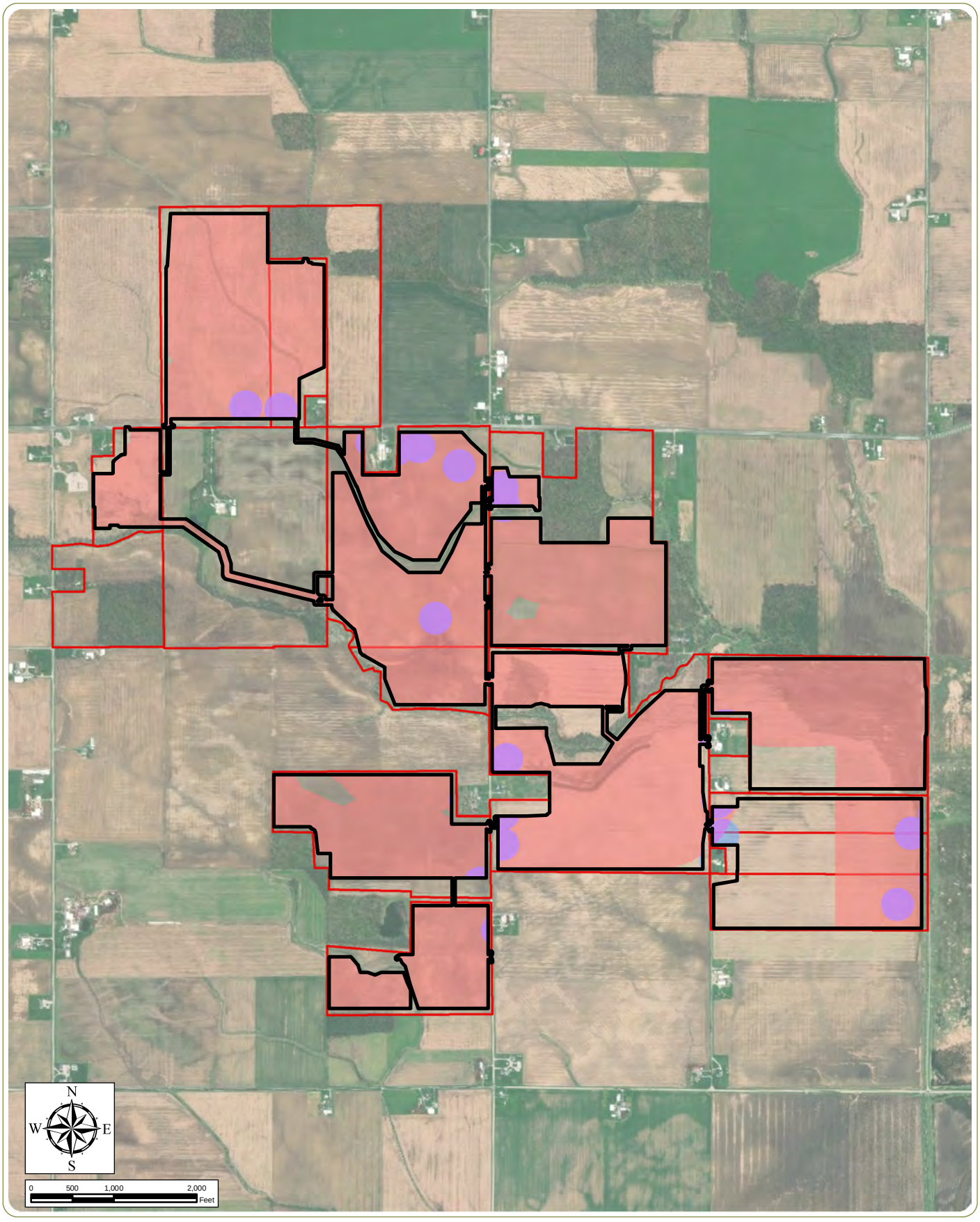

Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 9: Archaeological Sensitivity Model

Notes: 1. Basemap: ESRI ArcGIS Online "World Imagery" map service. 2. This map was generated in ArcMap on May 13, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Areas of Elevated Sensitivity for Pre-Contact Archaeological Material
- Areas of Elevated Sensitivity for Historic-Period Archaeological Material
- Areas of Elevated Sensitivity for Pre-Contact and Historic-Period Archaeological Material
- APE for Direct Effects
- Project Area

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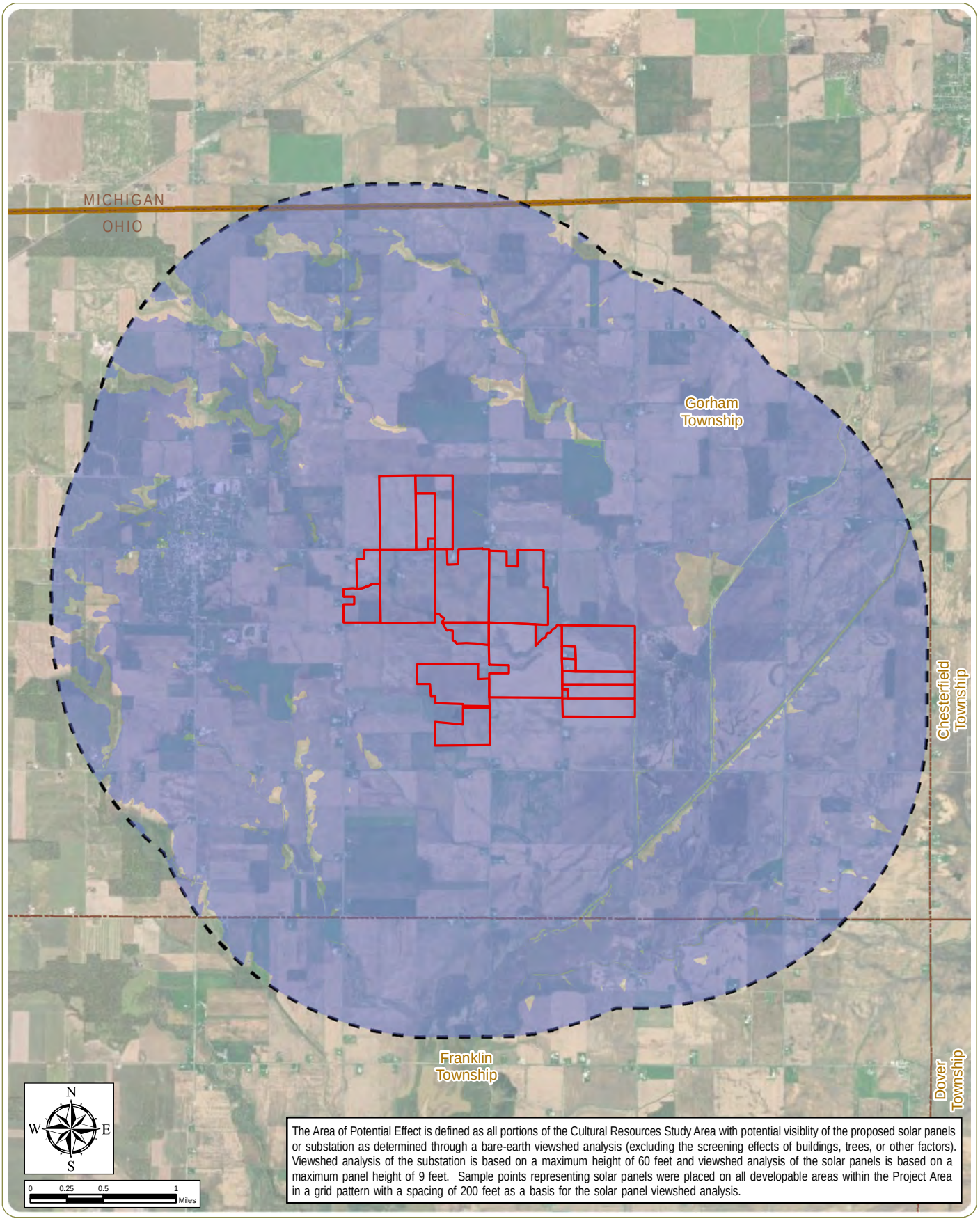

The Area of Potential Effect is defined as all portions of the Cultural Resources Study Area with potential visiblity of the proposed solar panels or substation as determined through a bare-earth viewshed analysis (excluding the screening effects of buildings, trees, or other factors). Viewshed analysis of the substation is based on a maximum height of 60 feet and viewshed analysis of the solar panels is based on a maximum panel height of 9 feet. Sample points representing solar panels were placed on all developable areas within the Project Area in a grid pattern with a spacing of 200 feet as a basis for the solar panel viewshed analysis.

Arche Energy Project

Gorham Township, Fulton County, Ohio

Figure 10: APE for Indirect Effects

Notes: 1. Basemap: ESRI ArcGIS Online "World Imagery" map service. 2. This map was generated in ArcMap on May 13, 2020.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Area of Potential Effect for Indirect (Visual) Effects
- Project Area
- Cultural Resources Study Area

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Appendix A

Ohio Historic Inventory Structures within Cultural Resources Study Area

OHI Number	Address	Municipality	County	Date
FUL0008001	413 E Main St	Fayette	Fulton	1904
FUL0008101	421 Main St	Fayette	Fulton	1910
FUL0008201	415 E Main St	Fayette	Fulton	1910
FUL0008301	406 E Main St	Fayette	Fulton	1890
FUL0008401	E Main St	Fayette	Fulton	1952
FUL0008501	NWC E Main St & Lawrence St	Fayette	Fulton	1906
FUL0008601	Gamber St	Fayette	Fulton	1929
FUL0008701	402 E Main St	Fayette	Fulton	1890
FUL0008801	SWC Lawrence & Main	Fayette	Fulton	1870
FUL0008901	200 Cherry St	Fayette	Fulton	1898
FUL0009001	103 Mill St	Fayette	Fulton	1870
FUL0009101	424 E Main St	Fayette	Fulton	1870
FUL0009201	410 E Main St	Fayette	Fulton	1895
FUL0009301	401 E Main St	Fayette	Fulton	1935
FUL0009401	200 Gross St	Fayette	Fulton	1900
FUL0009501	Fulton St btw Eagle & Lawrence	Fayette	Fulton	1890
FUL0009601	E Main St	Fayette	Fulton	1945
FUL0009701	302 E Main St	Fayette	Fulton	1880
FUL0009801	SWC Gamber & Gross	Fayette	Fulton	1880
FUL0009901	200 E Main St	Fayette	Fulton	1900
FUL0010001	204 E Main St	Fayette	Fulton	1903
FUL0010101	NWC N Fayette & Indust Pkwy	Fayette	Fulton	1890
FUL0010201	603 Ohio St	Fayette	Fulton	1900
FUL0010301	207 E Main St	Fayette	Fulton	1902
FUL0010401	202 E Main St	Fayette	Fulton	1890
FUL0010501	SEC N Cherry & Gross	Fayette	Fulton	1875
FUL0010601	105 E Water St	Fayette	Fulton	1950
FUL0010701	Cor Gross & Maple	Fayette	Fulton	1875
FUL0010801	105 E Gross St	Fayette	Fulton	1890
FUL0010901	106 E Gross St	Fayette	Fulton	1895
FUL0011001	202 S Gorham St	Fayette	Fulton	1890
FUL0011101	307 Maple St	Fayette	Fulton	1880
FUL0011201	305 W Main St	Fayette	Fulton	1910
FUL0011301	206 W Main St	Fayette	Fulton	1870
FUL0011401	W Main St	Fayette	Fulton	1908
FUL0011501	200 W Main St	Fayette	Fulton	1901
FUL0011601	201 S Gorham St	Fayette	Fulton	1883
FUL0011701	107 S Gorham St	Fayette	Fulton	1870
FUL0011801	200 S Gorham St	Fayette	Fulton	1875
FUL0011901	204 S Gorham St	Fayette	Fulton	1852
FUL0012001	206 Union	Fayette	Fulton	1900
FUL0012101	303 W Main St	Fayette	Fulton	1880
FUL0012201	106 S Gorham St	Fayette	Fulton	1870
FUL0012301	301 W Main St	Fayette	Fulton	1912
FUL0012401	207 W Main St	Fayette	Fulton	1915
FUL0012501	208 Maple St	Fayette	Fulton	1880

OHI Number	Address	Municipality	County	Date
FUL0012601	204 Maple St	Fayette	Fulton	1880
FUL0012701	112 Maple St	Fayette	Fulton	1880
FUL0012801	110 Maple St	Fayette	Fulton	1878
FUL0012901	102 Maple St	Fayette	Fulton	1883
FUL0013001	100 Maple St	Fayette	Fulton	1880
FUL0013101	105 E Main St	Fayette	Fulton	1890
FUL0013201	NWC Gorham & Main	Fayette	Fulton	1885
FUL0013301	NWC Gross & Gamber	Fayette	Fulton	1883
FUL0013401	NWC Railroad & Fayette	Fayette	Fulton	1915
FUL0013501	W Main St	Fayette	Fulton	1885
FUL0000301	310 N Fayette St	Fayette	Fulton	1890
FUL0000401	500 N Fayette St	Fayette	Fulton	1899
FUL0000501	413 S Fayette St	Fayette	Fulton	1890
FUL0000601	115 S Fayette St	Fayette	Fulton	1896
FUL0000701	404 N Fayette St	Fayette	Fulton	1880
FUL0000801	601 N Fayette St	Fayette	Fulton	1880
FUL0000901	201 S Fayette St	Fayette	Fulton	1888
FUL0001001	301 S Fayette St	Fayette	Fulton	1900
FUL0001101	424 S Fayette St	Fayette	Fulton	1925
FUL0001201	402 N Fayette St	Fayette	Fulton	1880
FUL0001301	NWC S Fayette St & CR R	Fayette	Fulton	1870
FUL0001401	200 N Fayette St	Fayette	Fulton	1888
FUL0001501	600 N Fayette St	Fayette	Fulton	1918
FUL0001601	CR 24 S of CR R	Gorham (Township of)	Fulton	1890
FUL0001701	203 N Fayette St	Fayette	Fulton	1885
FUL0001801	309 N Fayette St	Fayette	Fulton	1888
FUL0001901	506 N Fayette St	Fayette	Fulton	1900
FUL0002001	103 N Cherry St	Fayette	Fulton	1870
FUL0002101	306 W Spring St	Fayette	Fulton	1890
FUL0002201	407 S Gorham St	Fayette	Fulton	1885
FUL0002301	102 Eagle St	Fayette	Fulton	1900
FUL0002401	102 N Cherry St	Fayette	Fulton	1925
FUL0002501	201 N Gorham St	Fayette	Fulton	1880
FUL0002601	606 N Gorham St	Fayette	Fulton	1914
FUL0002701	NEC Spring & Eagle	Fayette	Fulton	1879
FUL0002801	414 S Gorham St	Fayette	Fulton	1914
FUL0002901	SWC Cherry & Gardner	Fayette	Fulton	1885
FUL0003001	405 N Gorham St	Fayette	Fulton	1902
FUL0003101	108 S Cherry St	Fayette	Fulton	1867
FUL0003201	408 S Gorham St	Fayette	Fulton	1870
FUL0003301	304 S Gorham St	Fayette	Fulton	1870
FUL0003401	200 W Spring St	Fayette	Fulton	1876
FUL0003501	106 W Spring St	Fayette	Fulton	1876
FUL0003601	501 S Gorham St	Fayette	Fulton	1860
FUL0003701	613 W Main St	Fayette	Fulton	1886
FUL0003801	408 W Main St	Fayette	Fulton	1888

OHI Number	Address	Municipality	County	Date
FUL0003901	406 W Main St	Fayette	Fulton	1890
FUL0004001	410 W Main St	Fayette	Fulton	1875
FUL0004101	412 W Main St	Fayette	Fulton	1885
FUL0004201	502 W Main St	Fayette	Fulton	1885
FUL0004301	403 W Main St	Fayette	Fulton	1910
FUL0004401	612 W Main St	Fayette	Fulton	1900
FUL0004501	SWC W Main & Walnut	Fayette	Fulton	1883
FUL0004601	208 College St	Fayette	Fulton	1886
FUL0004701	103 College St	Fayette	Fulton	1880
FUL0004801	407 W Main St	Fayette	Fulton	1910
FUL0004901	105 College St	Fayette	Fulton	1875
FUL0005001	102 College St	Fayette	Fulton	1880
FUL0005101	110-118 W Main St	Fayette	Fulton	1890
FUL0005201	102 S Gorham St	Fayette	Fulton	1888
FUL0005301	SWC N Gorham & W Spring	Fayette	Fulton	1890
FUL0005901	101-113 W Main St	Fayette	Fulton	1880
FUL0006001	119-123 W Main St	Fayette	Fulton	1890
FUL0006101	SEC Main & Fayette	Fayette	Fulton	1900
FUL0006201	E Main St	Fayette	Fulton	1890
FUL0006301	E Main St	Fayette	Fulton	1910
FUL0006401	104 E Spring St	Fayette	Fulton	1885
FUL0006501	200 Allen St	Fayette	Fulton	1887
FUL0006601	101 S Gorham St	Fayette	Fulton	1880
FUL0006701	408 E Spring St	Fayette	Fulton	1855
FUL0006801	306 Toledo	Fayette	Fulton	1890
FUL0006901	NEC Toledo & Cherry St	Fayette	Fulton	1903
FUL0007001	303 E Spring St	Fayette	Fulton	1890
FUL0007101	207 E Spring St	Fayette	Fulton	1890
FUL0007201	201 E Spring St	Fayette	Fulton	1880
FUL0007301	SEC Ohio & Spring St	Fayette	Fulton	1885
FUL0007401	105 E Spring St	Fayette	Fulton	1900
FUL0007501	307 E Spring St	Fayette	Fulton	1880
FUL0007601	103 Gardner St	Fayette	Fulton	1874
FUL0005801	103 N Fayette St	Fayette	Fulton	1890
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FUL0046405	8393 CR 20	Franklin (Township of)	Fulton	ca. 1870–1885
FUL0046501	19430 CR L	Franklin (Township of)	Fulton	ca. 1870–1885
FUL0046801	20867 US 20	Gorham (Township of)	Fulton	ca. 1880–1885
FUL0046901	21589 US 20	Gorham (Township of)	Fulton	ca. 1870–1885
FUL0047001	22944 US 20	Gorham (Township of)	Fulton	1888
FUL0005401	106 N Eagle St	Fayette	Fulton	1868
FUL0005501	106 E Spring St	Fayette	Fulton	1870
FUL0005601	SWC Main & Cherry	Fayette	Fulton	1880
FUL0005701	SWC Ohio & Main	Fayette	Fulton	1902

OHI Number	Address	Municipality	County	Date
FUL0007701	103 Allen St	Fayette	Fulton	1915
FUL0007801	102 Toledo	Fayette	Fulton	1875
FUL0007901	425 E Main St	Fayette	Fulton	1867

Appendix B

SHPO Review Letter

In reply, refer to
2020-FUL-48738

June 26, 2020

Ryan Peterson
Cardno
3901 Industrial Blvd.
Indianapolis, IN 46254
Ryan.peterson@cardno.com

RE: Arche Energy Project, Gorham Township, Fulton County, Ohio

Dear Mr. Peterson:

This letter is in response to the correspondence received on June 5, 2020 regarding 7X Energy, Inc.'s proposed Arche Energy Project, Gorham Township, Fulton County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4 and 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

Our office has reviewed the *Phase IA Cultural Resources Survey, Arche Energy Project, Gorham Township, Fulton County, Ohio* and work plan, prepared by Environmental Design & Research (EDR, 2020). The Archaeological Sensitivity Model includes Elevated Sensitivity for Historic-Period Archaeological Material (<200 feet from historically map-documented structure), Elevated Sensitivity for Pre-Contact Archaeological Material (<1,000 feet from naturally occurring stream/wetland), Elevated Sensitivity for both Historic-Period and Pre-Contact Archaeological Material (<200 feet from historically map-documented structure and <1,000 feet from naturally occurring stream/wetland) and Reduced Sensitivity for Pre-Contact and Historic-Period Archaeological Material (>200 feet from historically map-documented structure and >1,000 feet from naturally occurring stream/wetland). All Elevated Sensitivity areas will be 100% Phase I surveyed. The Reduced Sensitivity areas will be 50% Phase I survey with specific areas selected on a judgmental basis under the supervision of an archaeologist meeting the Secretary of the Interior's Standards (36 CR 61). Our office accepts the proposed sensitivity model. We also accept the proposed Historic Resources Survey Research Design detailed in the document.

Our office looks forward to additional coordination for the Arche Energy Project. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org or Kristen Koehlinger at kkoehlinger@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1084391