

PHASE I CULTURAL RESOURCES SURVEY AT THE PROPOSED NEW MARKET II SOLAR FARM

Highland County, Ohio

Terracon Project No. 73197284

August 2020



Prepared for:

Hecate Energy Highland 2, LLC
Chicago, Illinois

Prepared by:

Terracon Consultants, Inc.
Columbia, South Carolina

**PHASE I CULTURAL RESOURCES SURVEY AT THE
PROPOSED NEW MARKET II SOLAR FARM
HIGHLAND COUNTY, OHIO**

OHPO PROJECT NO. 2019-HIG-48665

DRAFT REPORT

Lead Public Agency: Ohio Power Siting Board

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William Green, M.A., RPA #10387
Principal Investigator

August 2020

MANAGEMENT SUMMARY

Terracon Consultants, Inc. (Terracon), on behalf of Hecate Energy Highland 2, LLC (Client), has completed a Phase I Cultural Resources Survey (CRS) of approximately 292 acres and a 4.98-mile long transmission line at the proposed New Market II 35 Megawatt (MW) Solar Farm located approximately 4.5 miles east of Buford in Highland County, Ohio (Figures 1 and 2). This report recounts and summarizes previous cultural resource investigations that were conducted during a survey of the Highland 300 MW project, which included this 292-acre parcel (OHPO Project No. 2018-HIG-40877).

Table 1. Cultural Resources within the Area of Potential Effects.

Resource ID	Description	NRHP Eligibility	Recommendations
33HI466	Mid-19 th /mid-20th c.; Unknown Prehistoric	Not Eligible	No additional work
33HI471	Prehistoric lithic scatter; Historic artifact scatter	Not Eligible	No additional work
33HI474	Prehistoric lithic scatter	Not Eligible	No additional work
33HI475	Isolated find - chert debitage	Not Eligible	No additional work
33HI476	Isolated find - chert debitage	Not Eligible	No additional work
HIG0036813	ca. 1920 Wisconsin Dairy Barn	Not Eligible	No additional work
HIG0036913	ca. 1920 Two-Story Vernacular House	Not Eligible	No additional work
HIG0037013	ca. 1962 Ranch House	Not Eligible	No additional work
HIG0037113	ca. 1860 Flat Barn	Eligible	No Effect
HIG0037313	ca. 1880 I-house	Not Eligible	No additional work
HIG0037413	ca. 1860 Two-Story Vernacular House	Not Eligible	No additional work
HIG0037513	ca. 1860 Hall-and-Parlor House	Not Eligible	No additional work
HIG0037613	ca. 1965 Ranch House	Not Eligible	No additional work
HIG0040314	ca. 1890s Farm Complex	Not Eligible	No additional work
HIG0040414	ca. 1870 Two-Story Vernacular House	Not Eligible	No additional work
HIG0040514	ca. 1900 Residential	Not Eligible	No additional work
HIG0041114	ca. 1890 Residential Complex	Not Eligible	No additional work
HIG0041214	ca. 1900 Residential	Not Eligible	No additional work
HIG0041314	ca. 1900 Residential/Agricultural Complex	Not Eligible	No additional work
HIG0041414	ca. 1836 Roberts Cemetery	Eligible	No Effect
HIG0041514	ca. 1920 Residential/Agricultural Complex	Not Eligible	No additional work
HIG0041614	ca. 1860 Residential/Agricultural Complex	Eligible	No Effect
HIG0041714	ca. 1920 Flat Barn	Unevaluated	No Effect
HIG0041814	ca. 1921 Residential	Not Eligible	No additional work
HIG0042014	ca. 1870 Residential	Not Eligible	No additional work
HIG0042114	ca. 1920 Flat barn	Not Eligible	No additional work
HIG0042214	ca. 1870 Residential, Sheds	Not Eligible	No additional work
HIG0042414	ca. 1880 Residential	Not Eligible	No additional work
HIG0042514	ca. 1860 Residential, Pole Barn	Not Eligible	No additional work
HIG0042614	ca. 1890 Residential/Agricultural Complex	Not Eligible	No additional work
HIG0045714	ca. 1910 Front Gable Bungalow	Not Eligible	No additional work
HIG0045814	ca. 1900s English Barn	Not Eligible	No additional work
HIG0046014	ca. 1940 Quonset Barn	Not Eligible	No additional work
HIG0046114	ca. 1920s Unknown Barn	Not Eligible	No additional work
HIG0046214	ca. 1920s Bungalow House	Not Eligible	No additional work
HIG0046409	ca. 1920s Eri Shore Barn	Not Eligible	No additional work
HIG0046509	ca. 1920s Bungalow House	Not Eligible	No additional work

Phase I Cultural Resource Investigations

New Market II Solar Farm ■ Highland Co, Ohio

August 2020 ■ Terracon Project No. 73197284



The cultural resource investigations were conducted for the Ohio Power Siting Board (OPSB) to fulfill the requirements of Ohio Administrative Code (OAC) § 4906-4-08(B). This project was conducted under contract to Hecate Energy Highland 2, LLC (Client) under the terms and conditions of the Consulting Services Agreement (CSA) between Hecate Energy, LLC, and Terracon dated November 21, 2014.

Fieldwork for the archaeological survey was conducted from December 3–5, 2018, and from May 1–2, and May 5–6, 2019. As a result of the investigations, three archaeological sites, 33HI466, 33HI471 and 33HI474, and two isolated finds, 33HI475 and 33HI476, were identified that fall within the current project area (Figures 1 and 2, Table 1). All of the archaeological resources were recommended as being ineligible for inclusion in the NRHP and the Ohio State Historic Preservation Office (OHPO) concurred with this recommendation.

In addition to the archaeological survey, a historic resources survey was also conducted during the same project. As a result of that survey, 30 aboveground resources were identified that fall within the current 0.5-mile APE (Figures 3 and 4, Table 1). Three resources, HIG0037113, HIG0041414, and HIG0041614, were recommended as being eligible for inclusion in the NRHP, and one resource located on private property, HIG0041714, was unevaluated as it could not be thoroughly examined from a public right-of-way. Due to distance and/or existing vegetative buffers, there will be no effect on resources HIG0041414 and HIG0041614. Resource HIG0037113 is located within the APE of the proposed transmission line. The distribution line will be located underground and therefore will not impact this historic property. The remaining 26 resources are recommended as being ineligible for inclusion in the NRHP. Based on this evaluation, it is Terracon's opinion that no historic properties will be affected by the proposed undertaking.

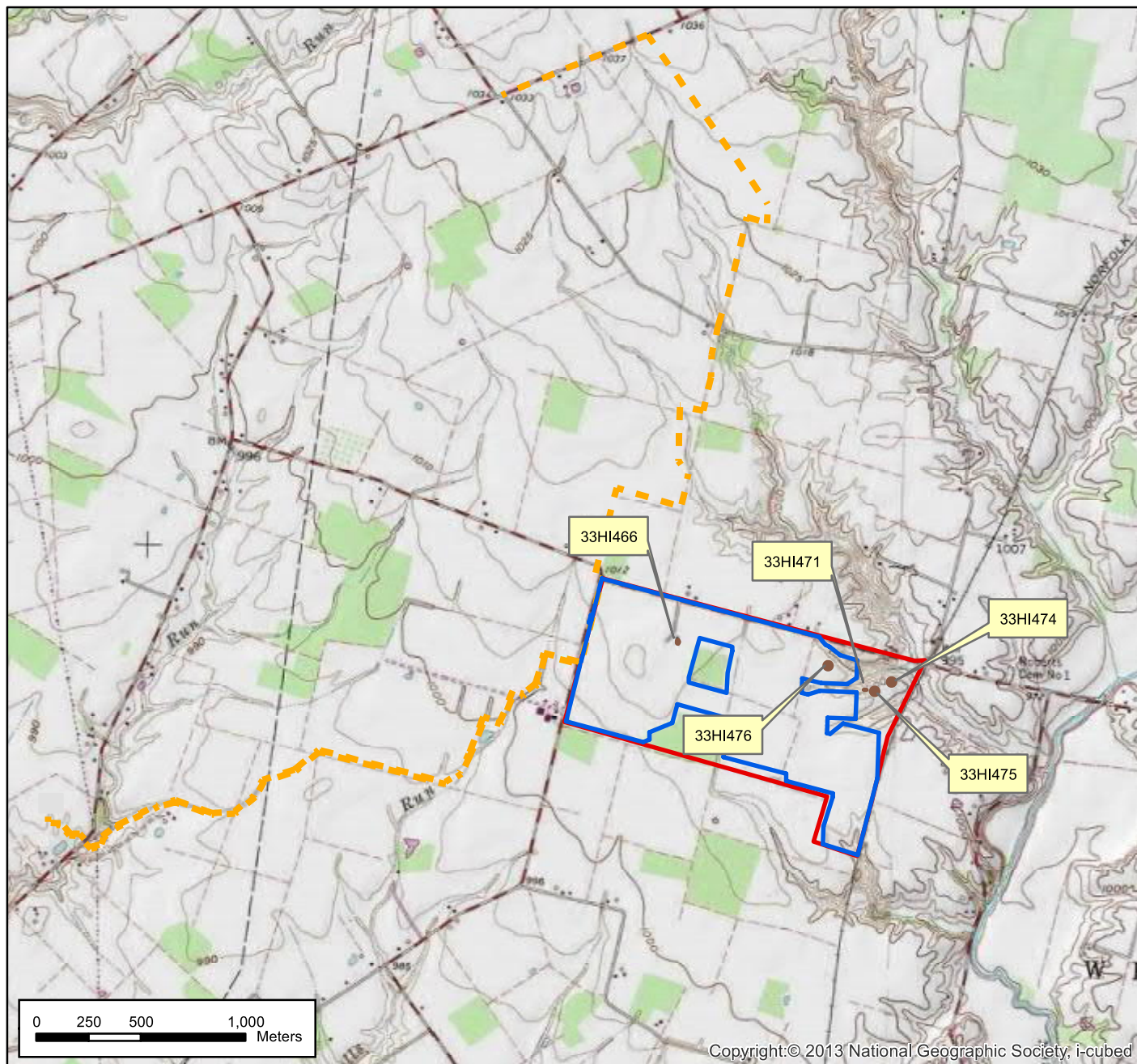
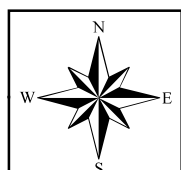
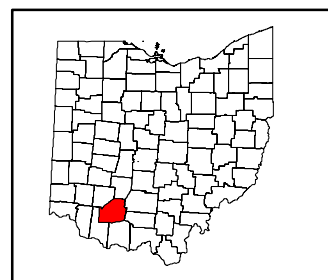
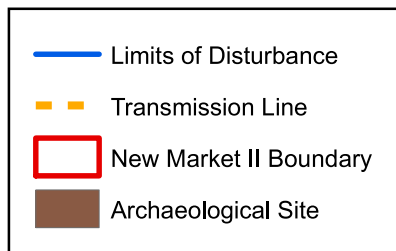


Figure 1. Archaeological sites in the project area.
Base Maps: Sardinia (1979) and Sugar Tree Ridge (1974) USGS 7.5' topographic maps.



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ARCHAEOLOGICAL SITES
NEW MARKET II SOLAR HIGHLAND CO., OHIO

Figure
1

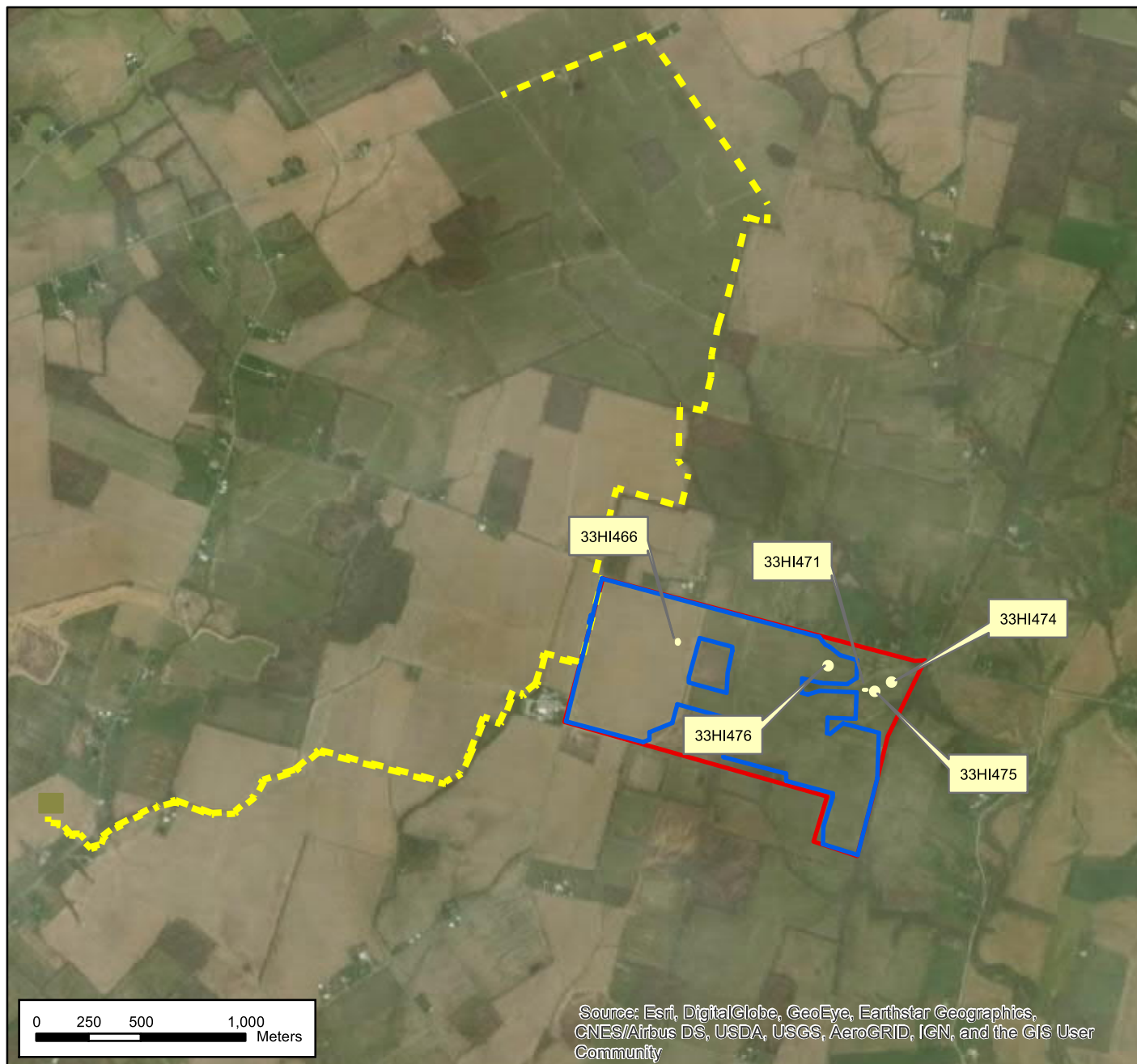
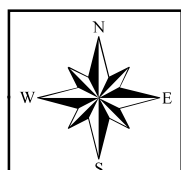
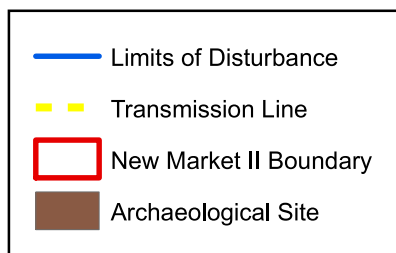


Figure 2. Aerial imagery depicting archaeological sites in the project area.
Base Map: ESRI World Imagery.



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ARCHAEOLOGICAL SITES
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Figure
2

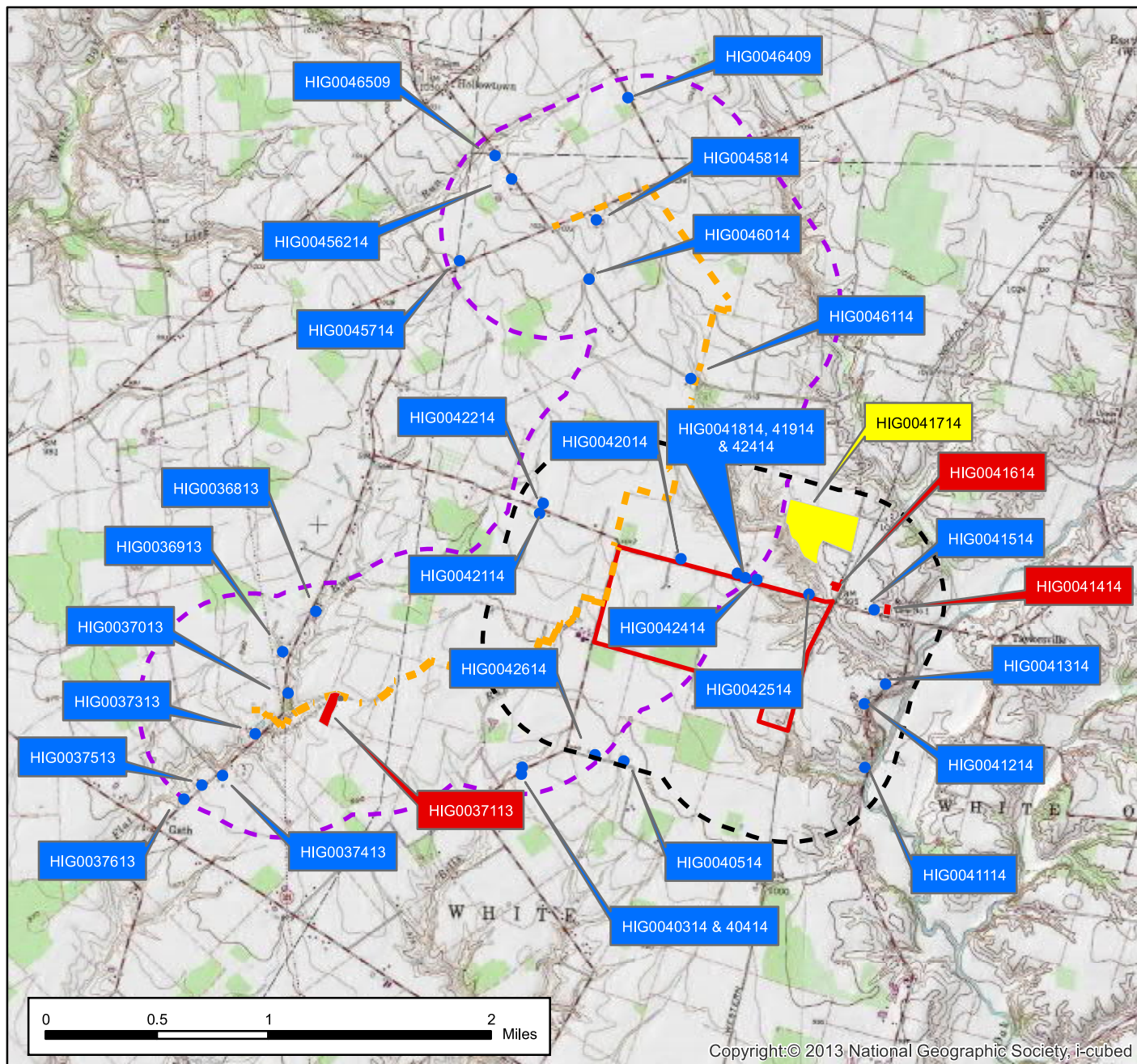
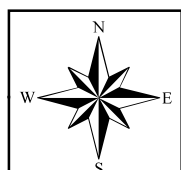
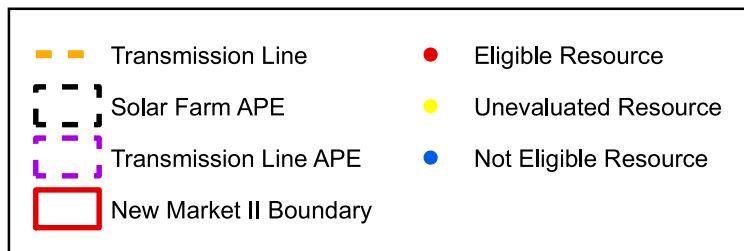


Figure 3. Surveyed historic resources within the APE.
Base Maps: Sardinia (1979) and Sugar Tree Ridge (1974) USGS 7.5' topographic maps.



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HISTORIC RESOURCES
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Figure
3

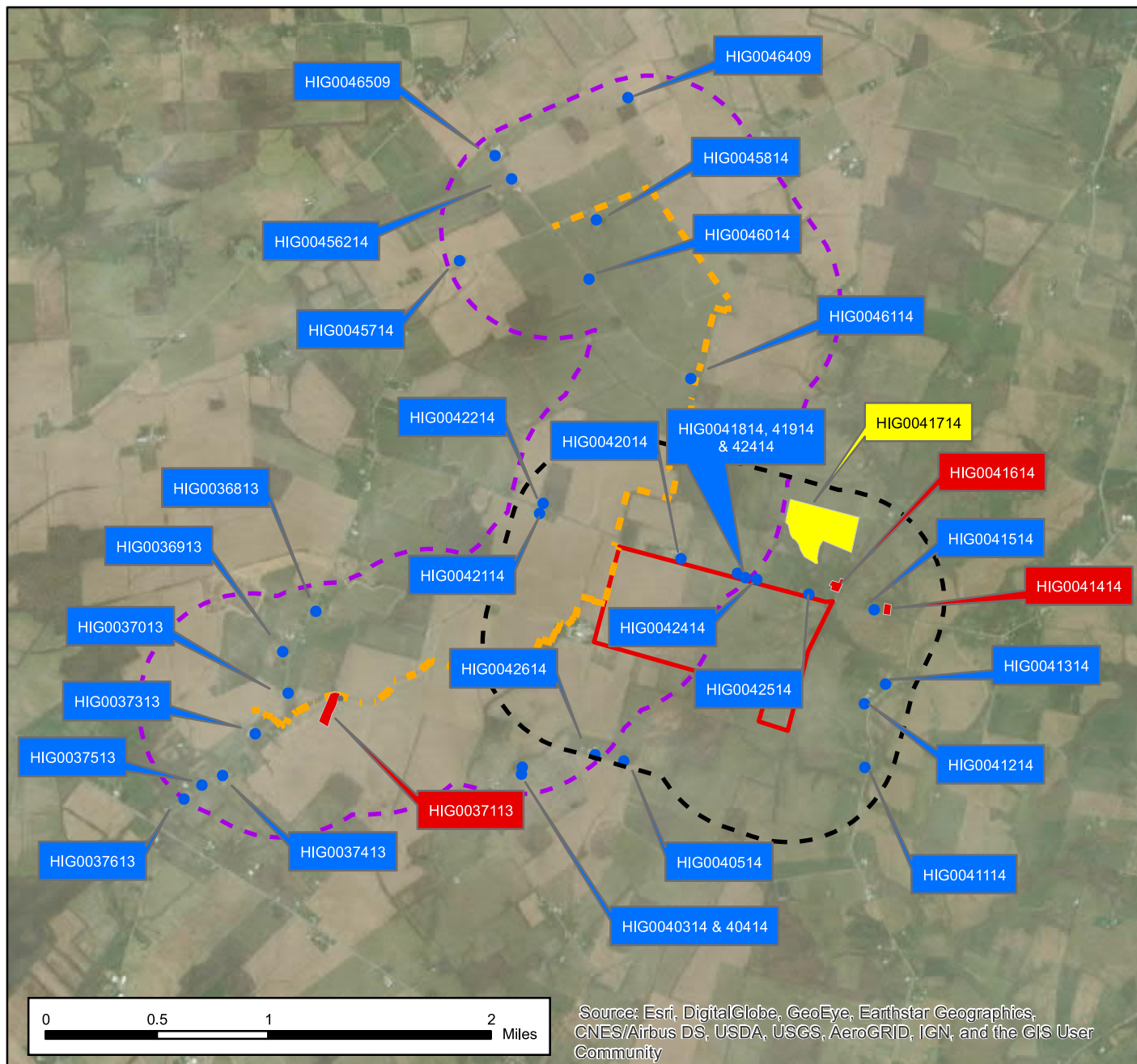
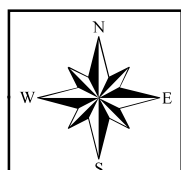
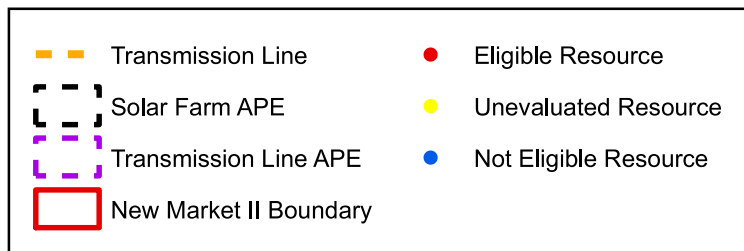


Figure 4. Aerial imagery depicting surveyed historic resources within the APE.
Base Map: ESRI World Imagery.



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HISTORIC RESOURCES
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1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon), on behalf of Hecate Energy Highland 2, LLC (Client), has completed a Phase I Cultural Resources Survey (CRS) of approximately 292 acres and a 4.98-mile long transmission line at the proposed New Market II 35 Megawatt (MW) Solar Farm located approximately 4.5 miles east of Buford in Highland County, Ohio (Figures 1 and 2). This report recounts and summarizes previous cultural resource investigations that were conducted during a survey of the Highland 300 MW project, which included this 292-acre parcel (OHPO Project No. 2018-HIG-40877). The cultural resource investigations were conducted for the Ohio Power Siting Board (OPSB) to fulfill the requirements of Ohio Administrative Code (OAC) § 4906-4-08(B). This project was conducted under contract to Hecate Energy Highland 2, LLC (Client) under the terms and conditions of the Consulting Services Agreement (CSA) between Hecate Energy, LLC, and Terracon dated November 21, 2014.

Hecate Energy Highland 2, LLC is proposing to construct a 35 MW photovoltaic facility on private land in Highland County, Ohio. This area was originally surveyed as part of cultural resources investigations at the Highland 300 MW Solar Farm (OHPO Project No. 2018-HIG-40877) (Sain et al. 2020). The project area is roughly rectangular in shape and is bounded by private property to the south and east, by Edwards Road to the north, and by Stringtown Road to the west (Figures 1–4). The project area consists primarily of agricultural fields, with several small stands of mixed hardwoods. Based on the nature of the proposed undertaking, the APE for direct effects is considered to be the limits of disturbance (Figures 1 and 2). The APE for indirect effects is considered to be a 0.5-mile radius around the project area (Figures 3 and 4).

Fieldwork for the Phase I archaeological survey was conducted from December 3–5, 2018, May 1–2, and May 5–6, 2019 by Principal Investigator William Green, M.A., RPA, Archaeologists Douglas Sain, Ph.D., RPA, and Kelly Higgins, M.A., Crew Chiefs Samantha Hunt and Matt Kinsey, Architectural Historian Mills Dorn, M.H.P., and Field Technicians Katie Guttman, Brandon Jewett, Olivia Johnson, Aileen Kelly, Danielle Linder, Tim Mayer, Crystal Reedy, and Paige Reimers. The historic resources survey was conducted by Mills Dorn. The report was prepared by Douglas Sain, Mills Dorn, and William Green. Artifact analysis was conducted by Cristy Abbott and Samantha Hunt with assistance from William Green and Archaeologist Mara Daleen, M.S.

This report has been prepared in compliance with the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.); the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.); procedures for the Protection of Historic Properties (36 CFR Part 800); and 36 CFR Parts 60 through 79, as appropriate. The investigation and report meet the qualifications outlined in the Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation (Federal Register 48:44716–44742), and the Ohio Historic Preservation Office's (OHPO) *Archaeology Guidelines* (1994). The Principal Investigator for the project meets

Phase I Cultural Resource Investigations

New Market Solar II Solar Farm ■ Highland Co, Ohio

August 2020 ■ Terracon Project No. 73197284



the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) and is a Registered Professional Archaeologist (RPA).

2.0 ENVIRONMENTAL CONTEXT

2.1 PHYSICAL LOCATION AND SETTING

The proposed New Market II Solar Farm is located in Highland County, approximately 4.5 miles east of the unincorporated community of Buford. Highland County is located in southwest Ohio, approximately 20 miles north of the Ohio River. Highland County covers an area of approximately 558 square miles and is bordered by Fayette County to the north, Ross County to the northeast, Pike County to the east, Adams County to the southeast, and Brown and Clinton counties to the southwest. The area surrounding the project tract is rural and primarily consists of farmland and single-family residential properties.

2.2 GEOLOGY AND TOPOGRAPHY

The project area is located within the Illinoian Till Plains portion of the Till Plains physiographic region of western Ohio. This fertile region, covering over one-third of Ohio, is characterized by gently rolling moraines composed of glacial deposits of moderate (100–200 feet) to moderately low (25–60 feet) relief. The Illinoian Till Plains is composed of narrow ridgetops with steep slopes and numerous valleys that alternate between broad floodplains and bedrock gorges. Local relief ranges from a few feet to tens of feet on ridgetops with stream valleys one to several hundred feet below adjoining uplands (Antilla and Tobin 1978). Topography in the project area is primarily flat, with moderate slopes around several small drainages in the eastern portion of the project area. Elevations range from approximately 1,000 feet above mean sea level (AMSL) near a small drainage in the northeastern portion of the project area to 1,015 ft AMSL in the northwestern portion of the project tract near Stringtown Road (Figures 1 and 3).

2.3 HYDROLOGY

The project area lies within the White Oak Creek portion of the Ohio River watershed. The Ohio River is formed by the confluence of the Allegheny and Monongahela Rivers in Pittsburgh, Pennsylvania, and flows 981 miles through or along the border of six states. The White Oak Creek watershed covers 150,621 acres in Brown and Highland counties and has 89 miles of tributaries (Ohio Watershed Network <https://ohiowatersheds.osu.edu>). White Oak Creek originates immediately southwest of the intersection of West New Market Road and U.S. Highway 62 in New Market and flows for approximately 49 miles before emptying into the Ohio River at Higginsport. The closest water source to the project area is a small tributary of White Oak Creek located in the eastern portion of the project area. This tributary joins White Oak Creek approximately 750 meters southeast of the project area.

2.4 SOILS

Soils in the project area are composed of silty, clayey, or loamy alluvium and residuum derived from loess and till (Web soil survey <https://websoilsurvey.sc.egov.usda.gov>). Soil types include well drained Genesee silt loam; moderately well drained Jonesboro-Rossmoyne silt loam; somewhat poorly drained Atlas and Westboro-Schaffer silt loam; poorly drained Clermont silt loam, and very poorly drained Sloan silty loam. (Table 2, Figure 5). Approximately 88 percent (n=251 acres) of the soils within the project area are somewhat poor to very poorly drained, while only 12 percent (n=35 acres) are moderately well to well drained.

Table 2. Soils in the project area.

Series	Texture	Slopes	Drainage Class
Algiers	Silty loam	2-12%	Somewhat poorly drained
Clermont	Silty loam	0-1%	Poorly drained
Hickory	Clayey loam	6-12%	Well drained, eroded
Jonesboro/Rossmoyne	Silty loams	2-6%	Moderately well drained
Westboro-Schaffer	Silty loams	2-4%	Somewhat poorly drained

2.5 CLIMATE

The climate in Highland County is classified as humid-continental with warm to hot summers and cold winters. The mean daily temperature in winter is approximately 30° F with a daily low temperature of 22° F (www.wcc.nrcs.usda.gov). The average daily temperature in summer is 72° F, with the average high temperature being 82° F. The lowest temperature recorded was -23° F in January 1985, while the highest recorded temperature was 103° F in August 1940. Precipitation in Ohio varies greatly across the state, with heavier amounts occurring in the southeast and drier conditions to the northwest. The average annual precipitation in Highland County is among the highest in the state at 44 inches of rain and 18 inches of snow per year. The growing season coincides with higher rainfall, lasting from April to September on average.

2.6 VEGETATION

Throughout the latter half of the twentieth century, forests of the eastern United States were typically categorized according to the classification system based on the groundbreaking work of Lucy Braun (1950), which placed the project area at the boundary between the Mesophytic and Western Mesophytic regions. In 2006, Dyer revised these forest regions, with the project area now being categorized as being in the Beech-Maple-Basswood forest region (Dyer 2006: Figure 3; ArcGIS shapefile available at https://people.ohio.edu/dyer/forest_regions.html). While this region is named for the American beech, sugar maple, and American basswood, they are not the dominant species in this region. Dominant species in the region include American elm, black cherry, white ash, northern red oak, and white oak. Vegetation in the project area consists primarily of agricultural fields, with intermittent stands of mixed hardwoods located along field boundaries, on slopes, and in low-lying areas (Figures 6 and 7).

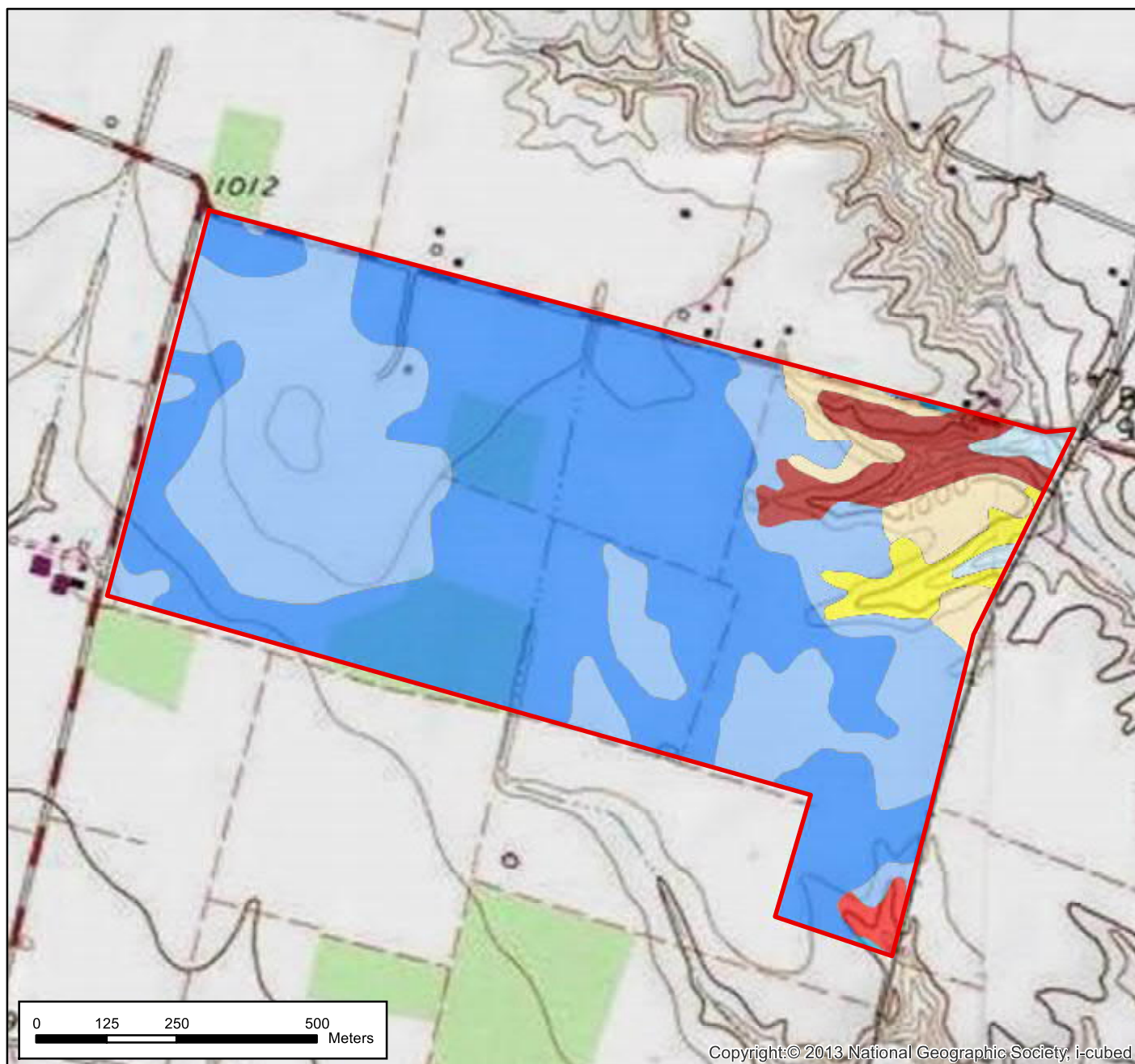
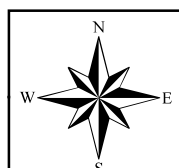


Figure 5. Soil types in the project area. Data obtained from NRCS Web Soil Survey (SSURGO). Soils depicted in yellow are well drained, soils in red are well drained and eroded, and soils in blue are poorly drained. Base Maps: Sardinia (1979) and Sugar Tree Ridge (1974) USGS 7.5' topographic maps.

Soil Types	
	Algiers silt loam
	Clermont silt loam, 0-1% slopes
	Hickory silt loam, 6-12% slopes, mod. eroded
	Hickory clay loam, 6-12% slopes, severely eroded
	Hickory clay loam, 12-18% slopes, severely eroded
	Jonesboro-Rossmoyne silt loams, 2-6% slopes
	Jonesboro-Rossmoyne silt loams, 2-6% slopes, eroded
	Westboro-Schaffer silt loams, 0-2% slopes
	Westboro-Schaffer silt loams, 2-4% slopes



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SOIL TYPES
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Figure
5

Phase I Cultural Resource Investigations

New Market Solar II Solar Farm ■ Highland Co, Ohio

August 2020 ■ Terracon Project No. 73197284



Figure 6. Field in the central portion of the project area, facing east.



Figure 7. Field in the eastern portion of the project area, facing east.

3.0 CULTURAL CONTEXT

Highland County has a long and varied history spanning more than 13 millennia. The following is a brief overview of that history.

3.1 PREHISTORIC CONTEXT

Since the late twentieth century there has been growing debate over when humans first arrived in North America. The traditional interpretation is that people first arrived in the New World via the Bering land bridge that connected Alaska to Siberia at the end of the Pleistocene, approximately 13,500 years ago. From Alaska and northwestern Canada, these people moved southward through an ice-free corridor separating the Cordilleran and Laurentide ice sheets to eventually settle in North and South America. A variation of this theme is that humans travelled along the Pacific Coast of North America from northeast Asia during this time rather than going through an ice-free corridor (Erlandson et al. 2007; Fladmark 1979).

Recently these interpretations have been called into question, with several sites providing possible evidence for earlier (Pre-Clovis) occupations. These sites include Monte Verde in southern Chile (Dillehay 1989; Meltzer et al. 1997), Meadowcroft Rockshelter in Pennsylvania (Adovasio et al. 1979, 1980a, 1980b, 1990), Paisley Caves in south central Oregon (Gilbert et al. 2008), the Buttermilk Creek Complex and Debra L. Friedkin Site in Texas (Waters et al. 2018), Miles Point in Maryland (Lowery et al. 2010), Burnham in Oklahoma (Wyckoff et al. 2003), Cactus Hill (McAvoy and McAvoy 1997) in Virginia, and the Topper Site in South Carolina (Goodyear 2005; Goodyear and Sain 2018). Suggested dates for some of these sites (e.g., Topper) go back more than 50,000 years, although the evidence for this is hotly contested. More recently, a number of sites providing possible evidence for a presence in the New World between 13,500 and 15,000 years ago have been discovered. Although far from numerous, these sites are scattered across North and South America, including the Page-Ladson site in Florida, as well as sites in Alaska, Oregon, Wisconsin, and southern Chile. Thus, it does appear that humans may have been in the New World as far back as 15,000 years ago, although more research is needed to validate this claim.

3.1.1 Paleoindian Period (ca. 13,500–10,000 B.P.)

The Paleoindian Period can be tentatively dated from about 13,500–10,000 B.P, possibly extending as far back as 15,000 years ago (Lillis-Warwick et al. 2010). At the beginning of this period, most of Ohio was covered by the Wisconsin Glacier. As temperatures warmed, and the glacier receded, large megaherbivores moved into the area, followed by Paleoindians who relied on these animals for subsistence (Blank 1970; Potter 1968; Prufer and Baby 1963). The Paleoindians followed a semi-nomadic lifeway that included a subsistence strategy based on generalized foraging that was supplemented by the hunting of megafauna (Walker et al. 2001; Walker 2007; Hollenbach 2007). Shortly after this time, the megafauna, which include mammoth,

mastodon, giant sloth and bison became extinct (Winters 1964). It is still not clear whether humans or the climate played a more prevalent role in the extinction of these large animals, although it is likely that both contributed to their extinction. Another recent hypothesis is that a meteor impact occurred roughly 12,900 years ago that may have led to the extinction of both the megafauna and some Clovis populations (West and Goodyear 2008). This hypothesis, however, is still highly controversial.

Most knowledge about the Paleoindian Period in Ohio is based on surface collections and from inference rather than controlled subsurface excavations. The archaeological record of Ohio's Paleoindian period is primarily characterized by small lithic scatters and isolated finds of diagnostic, fluted projectile points rather than larger scatters and habitation sites. The limited information we do have suggests that the earliest Native Americans employed a mixed subsistence strategy based on the hunting (or scavenging) of megafauna and smaller game combined with the foraging of wild plants. Groups are thought to have consisted of small, highly transient bands made up of several nuclear/and or extended families.

Fluted point surveys have produced high densities of Clovis and Late Paleoindian Cumberland and Gainey points throughout much of Ohio (Prufer and Baby 1963; Seeman and Prufer 1982; Lepper 1986; Tankersley 1989; Metin et al. 2004). Prufer and Baby (1963) have provided one of the earliest systematic studies on Paleoindian settlement patterns in Ohio by analyzing the distribution of diagnostic fluted projectile point types across the state. They found that most fluted points recovered in Ohio are isolated surface scatters associated with the main river valleys, and that artifact distributions follow a diagonal line across Ohio which corresponds roughly to the maximum Wisconsinian glacial boundary (Prufer and Baby 1963). In a later study that focused on a larger sample of artifacts, Seeman and Prufer (1982) concluded that fluted points most frequently occur in major stream valleys and at their confluences, near high quality raw material sources, and in areas with little topographic relief. Moreover, they suggest that sites associated with fluted points are rarely found in lowlands, swamps, or in rugged highlands, such as unglaciated portions of southeastern Ohio. By contrast, Lepper (1986) suggests that modern cultivation and population biases could also explain the artifact distributions used to construct models of Paleoindian settlement. Accordingly, distributions based on reported finds may be artificially skewed towards locations that have been heavily collected or those that are in highly visible landscapes.

Notable Paleoindian sites in Ohio include the Paleo Crossing Site in Medina County (Brose 1994) and the Sandy Springs Site in the Adams County Paleoindian District. Paleo Crossing contains the remnants of structural features, whereas more than 70 fluted points have been recovered in the Adams County Paleoindian District (Seeman and Prufer 1982). In Highland County, Cumberland, Gainey, and other fluted points have been recovered from surface contexts. These have been recovered along the East Fork of White Oak Creek near Mowrystown, near the little Miami River in Lynchburg, and from agricultural fields near the intersection of two creeks approximately 0.5 mile west of East Monroe (Cross 1983:4). These discoveries are thought to be

among the earliest artifacts recovered from the region. Nearby, buried Paleoindian artifacts have been found at the Manning Site (33CT476), a Late Paleoindian site located on a high terrace in Clermont County to the west of the project area (Cantley et al. 1986). Excavations at the site have revealed three stratigraphically intact deposits that have been radiocarbon dated to between ca. 9800 and 9000 B.P. (Lepper 1986).

Tools of the Paleoindian Period were typically well-made and manufactured from high quality cryptocrystalline rock. Paleoindians traveled long distances to acquire these desirable raw materials, and it is likely that particularly favored quarries were included in seasonal rounds, allowing them to replenish their stock of raw material on an annual basis. Prufer and Baby (1963), however, note that the majority of Paleoindian projectile points found across the state were made from locally available chert and flint, suggesting that Paleoindian groups did not range widely, contrary to the image of highly mobile bands (Prufer and Baby 1963).

Paleoindian artifact assemblages consist of diagnostic lanceolate fluted projectile points, scrapers, graters, unifacial and bifacial knives, gouges, and burins. In addition to the above-mentioned tools, other artifact types such as unifacial blades for scraping, wood tools, and bone tools were likely used as well, although wood and bone tools tend to not preserve in the archeological record and are underrepresented. The Dalton culture is considered transitional between the Paleoindian and Archaic periods, and archaeological evidence in Ohio supports the likelihood of a wide-ranging Dalton population with a diversified subsistence base that became more intensified and varied into the Archaic Period.

3.1.2 Archaic Period (ca. 10,000–3000 B.P.)

Environmental changes at the end of the Pleistocene led to changes in settlement patterns, subsistence strategies, and technology. As the climate warmed and the Laurentide glacier retreated northward, megafauna became extinct and coniferous forests were replaced by a more temperate deciduous forest biome. Human population size increased during this time, while territory size and settlement range decreased. Artifact assemblages from Archaic sites display a broad range of tool types in comparison to those from the Paleoindian Period, some of which have specialized functions for processing a larger variety of plant and animal resources (Griffin 1977). Other changes at this time included changes in human social organization in response to expanded food procurement strategies. Among these included restricted group mobility, larger population aggregations, development of ritual behavior and inter-regional exchange systems, and initial attempts at plant domestication (Ford 1974). Other adaptations during the Archaic included restricted group territories, longer duration of site occupation, and more frequent intervals of site use.

The Archaic Period has typically been divided into three subperiods, Early Archaic (ca. 10,000–8000 B.P.), Middle Archaic (8000–5500 B.P.), and Late Archaic (5500–3000 B.P.), based on changes in projectile point morphology, settlement patterns, and subsistence practices. Each of

the Archaic subperiods appears to have been lengthy and successful in adapting technology to prevailing climatic and environmental conditions of the time.

3.1.2.1 Early Archaic (10,000–8000 B.P.)

The Early Archaic Period reflects a continuation of the semi-nomadic hunting and gathering lifestyle seen during the preceding Paleoindian Period; however, focus shifted to hunting modern animals after the megafauna became extinct. During the Early Archaic there appears to be a gradual increase in population, albeit geographically restricted, as seasonally oriented hunting and gathering activities focused more on smaller, repeatedly used territories. During this time there was also a shift in settlement patterns that focused more on forest-riverine resources. This was a time of changing environment, with biotic communities of the early Holocene (10,000–7300 B.P.) shifting from coniferous/spruce forests to a mesic deciduous woodland throughout much of central Kentucky and southern Ohio (Wilkins et al. 1991). Increased sedentism during the Early Archaic reflects the expansion of deciduous forests throughout the region, which yielded more favorable habitat for exploitable species (Chapman 1975).

Current information suggests that Early Archaic groups intensively occupied the Till and Lake Plain regions of Ohio, with very limited use of the rolling Glaciated Plateau (Purtill 2009). In southwest Ohio, Early Archaic artifacts have been recovered almost exclusively from upland river terraces (Vickery 1980). Based on the wide distribution of a very small number of preferred chert sources, Early Archaic groups of Ohio are viewed as highly mobile but tethered to a limited number of stone outcrops. These trends are most evident from the sudden increase in the number of bifaces and projectile points across the region. For example, Theler and Dalbey (1974) report on over 50 Palmer corner-notched points that have been recovered from the Ferris Site (33CT31) and 30 Thebes points from the Dallas Burton Site (33CT58), both in southwestern Ohio. Based on this data, Vickery (1980) has noted at least two distinct Early Archaic complexes that occupied this region. It is not known, however, if these two sites represent temporal variability, different social groups, or just functional variability of the tools (Cantley et al. 1986).

Very little is known about Early Archaic settlement or subsistence in Ohio, primarily because of the limited number of identified single component sites (Purtill 2009). From the available evidence, sites tend to be small and scattered, typically located in upland settings near secondary stream valleys. During most of the year, small kin groups are thought to have roamed the landscape occupying short-term base camps and utilizing resource extraction camps. Once resources became more plentiful in the fall, groups gathered together and settlements were composed of larger base camps (Bense 1994). It is generally thought that the Early Archaic Period reflects a reliance on forest communities similar to those found in the Eastern Woodland today (Cantley et al. 1986). Faunal remains found at Early Archaic sites include white-tailed deer, raccoon, squirrel, and turkey (Lewis and Lewis 1961). Botanical remains indicate a dependence on hickory and oak, as hickory nuts and acorns were increasingly relied upon as the period progressed (Chapman and Adovasio 1977).

During the Early Archaic, hunters switched from using lanceolate spear points, ideal for hunting larger game, to a series of smaller, more diversified notched and stemmed points, along with scrapers, knives, drills, and ovoid blades. Diagnostic artifacts of the Early Archaic Period in Ohio include a variety of corner-notched, side-notched, and bifurcated projectile points that are frequently serrated and have beveled blades and ground bases. Diagnostic point types of southern Ohio include Kirk, Palmer, Taylor, Thebes, LeCroy, Kanawha, and Lake Erie (Ebright 1986; Justice 1987). Woodworking and food preparation tools that first appear in the archaeological record during the Early Archaic period include axes, adzes, mortars and pestles, awls, gouges, and grinding stones (Chapman 1975; Jennings 1968). Other tools of this period include hafted and non-hafted unifacial scrapers, perforators, drills, gravers, hammerstones, and choppers (Coe 1964; Daniel 1992:74).

3.1.2.2 Middle Archaic (8000–5000 B.P.)

The Middle Archaic subperiod coincides with the start of the Hypsithermal, a significant warming trend when oak-dominated forests declined as species variability increased resulting in an increase in non-arboreal plants (Shane et al. 2001:30). During the Middle Archaic the environment became more stabilized, leading to increased diversification of floral communities, exploitable resources, and to the use of a more varied tool kit that facilitated the use of a much broader selection of food and other resources (Lillis-Warwick et al. 2010).

Archaeological evidence indicates more permanent settlements and increased sedentism during the Middle Archaic, which is represented at sites such as Carrier Mills District (Jeffries and Butler 1982), Koster (Brown and Vierra 1983), Modoc Rock shelter (Fowler 1959; Styles et al. 1981), and the Falls of the Ohio (Janzen 1977). Archaeological excavations at these sites have revealed evidence of thick middens that contain a variety of tools representing maintenance and extractive activities. A variety of woodworking and groundstone tools were also used indicating an increase in base camp permanence. In southwestern Ohio, small Middle Archaic sites are found primarily in stream valleys or on floodplain terraces; large Middle Archaic assemblages are absent from this region (Genheimer 1980).

Middle Archaic material cultural also reflects a change in economy. During this time Early Archaic point types were replaced by slender, side-notched and stemmed lanceolates. Middle Archaic tool kits are primarily characterized by two hafted biface types: medium to large side-notched points that include Raddatz, Otter Creek, Big Sandy, and Newton Falls; and medium-sized stemmed/triangular-bladed points such as Stanly Stemmed (Purtill 2009). Other point types that occur with lesser frequency in the region include Sykes, Crawford Creek, White Springs, Eva, and Morrow Mountain points (Purtill 2009). Plant processing tools such as grooved axes, grinding stones, axes, metates, and nutting stones were also common during the Middle Archaic, as were pendants, and bannerstones. Atlatl weights and bone tools also first appear in the archaeological record during this period (Broyles 1971; Lewis and Lewis 1961).

3.1.2.3 Late Archaic (5000–3000 B.P.)

The Late Archaic subperiod saw a number of important developments, including population growth, increasing sedentism, the use of pit storage, and possibly the beginnings of small-scale horticulture and regional exchange systems (Wyckoff 1984). Modern climate and environmental conditions were established in Ohio during the Late Archaic subperiod (Shane et al. 2001). During this time the expansion of deciduous forests reached its northernmost limit (Cleland 1966). Oak and hickory forests again dominated, although the western Till and Lake Plains of south-central Ohio likely had prairie-like conditions at this time.

Late Archaic artifact assemblages include evidence for increased sedentism. These artifact assemblages include drills, retouched flakes, scrapers, cores, hafted bifaces and bifacial knives, blanks, and preforms. More intensive use of nutting stones and mortars and pestles are thought to reflect an increased reliance on plant resources during the Late Archaic (Dragoo 1976). A well-developed micro-tool industry consisting of gravers, perforators, and drills produced on flakes has been documented in southwestern Ohio (Vickery 1980). These artifacts are thought to have been used for cutting, engraving, and perforating various types of organic materials. Diagnostic Late Archaic projectile point types from Ohio include McWhinney Heavy Stemmed, Brewerton, Vosburg, Motley, Robeson Constricting Stem, Lamoka, Normanskill, Snook Kill, and Ashtabula points (Vickery 1980). In the southeastern Unglaciaded Plateau region of Ohio, lithic assemblages seem to indicate “multidirectional cultural relationships” as different groups along the Ohio River would have had easy access to different regions and thus chances for interaction with other areas (Purtill 2009:573). Lithic assemblages identified at sites in the region reflect increased use of locally available cherts for tool manufacture; however, other evidence suggests that lithic procurement strategies were not the same across all sites, and at some sites raw material variability was more significant (Purtill 2009). For example, sites in Clermont County appear to have unexpectedly high frequencies of non-local Kentucky cherts such as Flint Ridge. The use of Kentucky cherts is thought by some to reflect a “continuation of earlier procurement strategies” whereby cultural ties with southern groups could be maintained (Purtill 2009:574).

Seasonal use of the landscape during the Late Archaic was likely predicated on the distribution of resources. Accordingly, aquatic resources were likely exploited along major rivers during the spring and summer, while during the fall and winter subsistence likely shifted to the harvesting and storing nuts and the hunting of game at base camps situated above the valleys (Lillis-Warwick et al. 2010). In areas along the Ohio River, the presence of shell middens indicates a reliance on freshwater aquatic resources. Where site integrity has been preserved, Late Archaic components of southern Ohio often yield extensive bone and shell assemblages that consist of a variety of polished, perforated, ground, or pecked tools such as awls, fishhooks, shuttles, flakers, and punches (Purtill 2009; Vickery 1980). A wide array of specialized objects was manufactured and used during the Late Archaic, including steatite and sandstone bowls, stone tubes and beads, polished plummets, net sinkers, whistles and rattles, birdstones, boatstones, bone awls, needles,

and perforators (Chapman 1975:6). Moreover, ceremonialism became increasingly important as evidenced through more elaborate, formalized mortuary practices and the presence of exotic burial goods that were procured through emerging trade networks (Chapman and Otto 1976:20, Bergman 2011).

It was also during the Late Archaic Period that incipient horticulture developed. This period marks the first appearance of cultigens in the archaeological record as indicated by the presence of domesticated seeds and fruits such as chenopodium, goosefoot, gourd, sunflower, and squash (Gremillion 1996; Watson 1985). Most data suggest that cultigens did not become a major part of the diet until after ca. 4000 B.P., with the earliest use of gourds and squash being for containers rather than food. The presence of Late Archaic archaeobotanical remains and other cultigens from the County Home Site (33AT40) in southern Ohio which date to 3600 B.P. are good indicators for the timing of the arrival of an “initial crop complex” into the Ohio Valley (Patton and Curran 2016). Fruit also became an important food resource as demonstrated by the diversity of fruit seeds such as wild grape, blueberry, raspberry, and strawberry in archaeobotanical assemblages (Dye 1977; Yarnell 1974). Overall, settlement patterns indicate increased sedentism coinciding with an increase in territorial permanence of regionally distinct cultural groups in Ohio (e.g., Glacial Kame, Red Ochre, Old Copper Culture) (Cleland 1966).

3.1.3 Woodland Period (ca. 3000–1000 B.P.)

The first description of the Woodland Period was by W.C. McKern, who distinguished the Woodland from early periods based on the introduction of pottery and the construction of earthworks and ceremonial mounds (McKern 1939). Subsequent work by Griffin (1952) led to the division of the Woodland into three subperiods: Early, Middle, and Late.

The Woodland Period is known for a variety of important cultural developments throughout the Ohio River Valley. Increased population and sedentism, long term habitation of sites, the intensification of horticultural activities, the widespread adoption of ceramic vessel technology, increase in burial ceremonialism, the introduction of the bow and arrow technology, and the elaboration of artistic expression are among the important developments of the Woodland Period (Lillis Warwick et al. 2010; Anderson and Mainfort 2002). Projectile points that mark the transition into the Woodland Period include Perkiomen, Lehigh, and Ashtabula, as well as a variety of large well-made contracting stemmed points (Justice 1987).

A significant number of ceremonial earthworks and mound centers have been identified in southwest Ohio, with at least 45 identified in Highland County (Mills 1914). Of these 45 earthworks, eight are located within five miles of the project area. Additional mounds have been identified in the adjoining counties of Adams (n=58), Brown (n=41), Clermont (n=45), and Hamilton (n=132). These mounds span the Woodland Period and are associated with the Adena, Hopewell, and Fort Ancient cultures.

Like the preceding Archaic Period, the Woodland Period is traditionally divided into three subperiods: Early Woodland (3000–2200 B.P.), Middle Woodland (2200–1500 B.P.), and Late Woodland (1500–1000 B.P.). Each of these subperiods is discussed below.

3.1.3.1 Early Woodland (3000–2200 B.P.)

The Early Woodland subperiod in the Ohio River Valley is represented by the Adena Culture, which spread from this region into what is now Indiana, Kentucky, Virginia, Pennsylvania, West Virginia and as far as upstate New York. The Adena are known for the construction of accretional earthworks, conical mounds and elaborate burials with ornamental grave goods, the erection of circular paired-post structures, the use of exotic materials such as copper, mica, and marine shell to make ornaments and jewelry, and increased social stratification and territoriality. Adena mounds were typically small, ranging in size from 20 to 300 feet in diameter, and were often located on bluffs overlooking major tributaries. By contrast, village sites were primarily situated along low terraces and floodplains (Webb and Baby 1973).

Unlike the mortuary practices of the Archaic Period when people were buried near activity centers such as short-term habitation sites, the burial practices of the Early Woodland include a shift to the use of mounds for burial. Although Early Woodland people often used conical mounds for mortuary purposes, some mounds lacking burials may have served as territorial markers instead, or as a focus for seasonal gatherings (Yerkes 1988:317). Interments occurred within the mounds in shallow pits adjacent to sub-mound structures that were ritual rather than domestic in nature (Seeman 1986). In addition to these interments, evidence for cremations and cremation platforms has been also identified at a number of Adena sites (Schlarb et al. 2007).

The Adena culture may have developed as early as 2500 B.P., based on the dating of burial mounds in the central Ohio River Valley region (Seeman 1992:25). The first formal investigation into what would become known as the Adena Culture was W.C. Mills' excavation at the Adena Mound in the Scioto River Valley (Mills 1902). A subsequent study would attribute more than 70 additional mounds to Adena based on the presence of 59 cultural traits (Greenman 1932). Webb and Snow (1945) used the data from these and other excavations to expand the list to 218 traits and increased the list of Adena sites to 173. Dragoo would later refine the list of Adena traits based on variations among 10 artifact groups that consisted of projectile points, pottery, stone tablets, gorgets, pendants, pipes, copper and mica objects, burial types, and construction methods (Dragoo 1963:176–178). Artifacts diagnostic of the Adena culture include Adena projectile points, copper and shell ornaments, pottery, gorgets, and pipes. Subsistence practices consisted of the hunting of game such as deer, elk, bear, wild turkey, rabbits, squirrels, and other animals, the gathering of wild plants, fishing, and plant cultivation (Seeman 1986).

Serpent Mound, located along Brush Creek in north central Adams County approximately 20 miles southeast of the project area, is the world's largest serpentine effigy mound. Serpent Mound was first reported from surveys by Squier and Davis (1848:277) who suggest that the serpent likely

“entered widely into the superstitions” of prehistoric populations. In the late nineteenth century, Harvard University archaeologist Frederic Ward Putnam excavated Serpent Mound, but found no diagnostic artifacts at the site that would allow archaeologists to assign it to a particular age. Since the late twentieth century archaeologists have attributed construction of the mound to two different cultures, Early Woodland Adena and Late Prehistoric Fort Ancient (Fletcher et al. 1996; Herman et al. 2014; Romain et al. 2017). Site investigations in 1991 produced radiocarbon dates indicating that the mound was approximately 900 years old, and that the builders of the mound belonged to the Fort Ancient culture (1000–500 B.P.); however, a 2014 study presented a series of older radiocarbon dates suggesting that the mound was built by the Adena culture (ca. 2300 B.P.) (Fletcher et al. 1996; Herman et al. 2014). According to Herman et al. (2014), as well as a more recent study by Romain et al. (2017:1), the effigy mound is Adena in age, but was repaired or restored later by peoples of the Fort Ancient culture. Given its age and relationship to Adena, Serpent Mound is likely a precursor to the traditions of the Hopewell culture of Southern Ohio. Lepper et al. (2019:42) in a critique of these findings, suggests that the construction of Serpent Mound may be historically linked to droughts in the Mississippi Valley that began at around 900 B.P. Four other large Early Woodland Adena mound sites have been identified in Hamilton County, approximately 30 miles west of the project area. These include Conrad Mound, Sentinel Mound (33HA310), Spearhead Mound (33HA24), and Saylor Park Mound (33HA243) (Lillis-Warwick 2010).

Evidence suggests there was an increase in population from the Late Archaic through Early Woodland Period in the Ohio River Valley, likely attributed to contact with the Hopewell culture emerging from Illinois (Dragoo 1976). However, the most significant aspect of this transition does not appear to be population increase but rather the adoption of horticulture, which provided a predictable subsistence base and led to increased sedentism (Seeman 1986:576). Settlement patterns consisted of large summer base camps in the floodplains and upland resource extraction camps occupied throughout the fall and winter (Yerkes 1988:319). The construction of mounds served as territorial markers and areas of social integration and were both a part of the gradual move towards sedentism (Mink et al. 2005; Seeman 1986; Waldron and Abrams 1999). Diagnostic projectile point types that define the Early Woodland Period include Adena and Cresap Stemmed (Converse 2007; Dragoo 1963). Pottery types associated with the Early Woodland Period include Fayette Thick, Adena Plain, Dominion Thick, and Leimbach Thick types (Purtill 2008).

3.1.3.2 Middle Woodland (2200–1500 B.P.)

The Middle Woodland subperiod was a time of general expansion and is characterized by elaborate burials, distinct ceremonialism, increased and more complex mound construction, more precise earthwork construction, and the continued use of exotic materials (e.g. copper, mica, obsidian) for the manufacture of goods. In southern Ohio, the Middle Woodland is represented by the Hopewell culture. The Hopewell culture is named for the Hopewell Mound Group of Ross County Ohio, which was initially explored by archaeologist Warren K. Moorehead in the early

1890s. The Hopewell culture is known for its burial ceremonialism, the development of extensive trading networks, and the widespread construction of earthen mounds. Evidence for the establishment of elaborate trade networks comes in the form of finely crafted artifacts produced from exotic raw materials that are frequently found interred with the dead. Artifacts were traded over long distances ranging from as far away as the Rocky Mountains to the North Carolina coast, and from Lake Superior to the Gulf of Mexico. Among the items traded were turtle shell, shark and alligator teeth, mica, chlorite, meteoric iron, native copper, silver, and obsidian. This elaborate trade network involved the exchange of exotic goods that have been sourced to various places, and the resulting interactions have commonly been referred to by archaeologists as the Hopewell Interaction Sphere (Caldwell 1964). Hopewell is thought to reflect an overarching, dynamic social network with increased social complexity.

Our understanding of the settlement and subsistence practices of the Hopewell and other Middle Woodland populations has varied over time, with a diversity of hypotheses that have been formulated to help explain the data (Prufer 1964; Ford 1979; Dancey and Pacheco 1997). Prufer interprets Ohio Hopewell settlement patterns as consisting of a series of semi-permanent agricultural farmsteads and hamlets centered around much larger ceremonial centers (Prufer 1964). Prufer termed the model the Vacant Ceremonial Center-Dispersed Agricultural Hamlet pattern (Prufer 1964:71, Prufer et al. 1965:137). Ford (1979) views Hopewell settlement and subsistence as a basic hunting-and-gathering economy with limited horticulture. Ford suggests that although the Hopewell had a diverse diet, animal foods were of primary importance and plant resources such as maize were grown for seasonal security rather than as a primary dietary staple. Expanding on Prufer's work, Dancey and Pacheco (1997) developed the Dispersed Sedentary Community model to explain Hopewell settlement patterns. The model is based on a three-tiered system of settlement types that included the hamlet, the earthwork, and the specialized camp. Accordingly, hamlets represented permanent year-round settlements occupied by sedentary farmers that were mostly situated in terrace settings. Earthworks served as community-based gathering locations to conduct political, economic, social, and ceremonial activities, but were not a place for permanent settlement (Dancey and Pacheco 1997). Specialized camps served as temporary settlements associated with ceremonial activities at the nearby earthworks, although they could occur in other areas of the territory as well (Dancey and Pacheco 1997). The model leaves space to accommodate other special purpose sites such as quarries and resource extraction sites.

Overall, the models by Prufer (1964) and Dancey and Pacheco (1997) pose that Ohio Hopewell settlements were organized such that groups lived in dispersed households consisting of a small number of individuals rather than in larger villages, and that members of these scattered hamlets met as a community around a single earthwork at various times for ceremonial purposes. Settlement dispersal resulted from the need for agriculture land whereas ceremonial gatherings at earthworks helped "integrate isolated kin" (Carr and Case 2005:79).

In Ohio, the Hopewell Interaction Sphere was strongest in the southern part of the state, including the Ohio, Scioto, and Miami river valleys. Hopewell sites were typically placed near major waterways and at the confluence of subsistence resources that were required to support increased regional population and complex social networks. Hopewell settlements were generally small in size and consisted of short-term occupations where groups resided in one area for a period of time prior to relocating in search of new resources and trading routes. Groups likely moved between upland rock shelters, floodplain camps, and large earthwork complexes throughout the year (Yerkes 2002:239). Settlement systems included tribal networks that consisted of small hamlets containing rectangular homes with thatched roofs and daub walls. One of the more notable Hopewell earthworks of the region is Fort Hill, a Hopewell site located in the Brush Creek Township of Highland County, approximately 20 miles east of the project area. The earthwork at Fort Hill consists of a walled enclosure constructed of earth and stone ranging from six to 15 feet high and 30 feet wide at its base. Constructed around 2,000 years ago, Fort Hill sits atop a flat summit overlooking nearby portions of Ohio Brush Creek and encloses a total of 35 acres. Squier and Davis (1848) conducted investigations at Fort Hill in 1846 and suggested that the construction likely served as a defensive fortification. Today, the debate continues as to whether Fort Hill and other hilltop enclosures were built for secular or ceremonial functions (or both) (Connolly 1998; Riordan 1998).

Hopewell subsistence practices included the hunting of game, fishing, the gathering of wild plants, nuts, and seeds, and the planting of seeds that were abundant in the fertile areas where villages were settled. Plants cultivated by Hopewell communities included sunflower, squash, and maygrass. During the Middle Woodland Period, a more stratified social structure was established, based primarily on settlement hierarchy. Around 1600 B.P. Hopewell culture began to decline. The cause of the collapse of the Hopewell Interaction Sphere is unknown, although archaeologists hypothesize that some combination of social unrest, warfare, and/or environmental pressures that affected the subsistence base were to blame (Brose 1979).

Diagnostic artifacts associated with the Middle Woodland Period in southern Ohio include corner-notched points such as Snyders, Norton, and Jacks Reef projectile points (Bell 1958). Other artifacts recovered from Middle Woodland assemblages include bifaces, blades, bladelets, bladelet cores, unifaces, and bone and shell tools (Cantley et al. 1986). Pottery included cordmarked and stamped styles.

3.1.3.3 Late Woodland (1500–1100 B.P.)

The Late Woodland in Ohio represents a period of complex social change between the decline of the Hopewell Interaction Sphere and the development of the Fort Ancient culture. The Late Woodland Period is not well-defined and is characterized by a decrease in elaborate burials and mortuary goods, and in general the development of a “more egalitarian social structure.” During this period people appear to have abruptly halted the construction of elaborate mounds as well as the mortuary traditions indicative of the preceding Hopewell culture. Settlement patterns of the

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Late Woodland transitioned from the tribal networks of small hamlets characteristic of Hopewell and Adena to more permanent villages situated along major river valleys and floodplains with rich alluvial soils.

Research has shown that Late Woodland settlements typically fall under one of three types: permanent nucleated settlements; smaller nucleated settlements that were occupied for only brief durations; and small open sites that appear to represent homesteads or small camps where task related activities were carried out (Seeman and Dancey 2000). Additional site types that complement these include remote camps and rockshelters. Nucleated settlements were often organized around a central plaza, and were surrounded by ditches, earthen embankments, or stockades (Seeman and Dancey 2000).

For the Scioto Valley, Church and Nass (2002) have noted enough temporal differences in settlement patterning to warrant dividing the Late Woodland into two additional superperiods: the Early Late Woodland (ELW) (1500–1300 B.P.) and the Late Woodland (LLW) (1300–1000 B.P.). During the ELW, a nucleated settlement strategy appears for the first time in the archaeological record in Ohio. Large settlements approximately 1–3 ha. In size are thought to have contained multiple households that were situated along the bluffs of major rivers or streams and which often are surrounded by earthworks (Church and Nass 2002:16). Temporal trends indicate a preference for larger settlements prior to 1300 B.P., with a shift to smaller, more variable open settlements along stream terraces and floodplains during the LLW.

The Late Woodland period in Ohio is defined by the “intensification of subsistence and food procuring strategies” (Seeman and Dancey 2000:601). Throughout the region, Late Woodland populations became increasingly reliant on the gathering of nuts and the growing of cultigens (Munson 1988; Seeman and Dancey 2000). Cultivated plants in particular occur in higher frequencies at Late Woodland sites. Subsistence practices during the period included growing crops such as beans, sunflowers, and squash, and by around 1200 B.P. it also included maize. Large nucleated villages of the Late Woodland Period developed as maize agriculture became more prominent and hunting lost some of its dietary importance. The development of agriculture corresponds with an increase in warfare during the Late Woodland Period. Many communities were surrounded by a palisade and ditch suggesting that warfare had become a major threat. One of the most important innovations introduced during the Late Woodland Period was the bow and arrow. This allowed for increased efficiency in hunting, but it also was a more effective weapon of war.

Occupying central and southern Ohio during the Late Woodland Period were the people of the Cole Complex, named after excavations conducted in 1948 at the Walter S. Cole Site in Delaware County in central Ohio (Potter 1968:56–57). Archaeological evidence suggests that these Late Woodland inhabitants occupied semi-permanent villages as well as temporary camp sites. Subsistence practices consisted of the hunting of game and the collection and cultivation of wild plants. Projectile points associated with the Cole Complex vary in size and thickness but tend to

be side notched. Additional lithic artifacts include large chipped triangular bifaces and chipped slate disks for skinning and hide working (Potter 1968:57). Ceramic vessels of the Cole Complex are generally large, grit-tempered cordmarked vessels (Potter 1968:59). It is important to note that Peters Phase ceramics, primarily found at sites located in the Scioto River Valley to the east, have attributes that are often indistinguishable from those that occur in Cole complex assemblages. Moreover, it is unclear whether the people of the Cole Complex were related to the Hopewell who preceded them, or to the Fort Ancient people who followed them (Potter 1968:61-62). Technological adaptations of the Late Woodland Period in southern Ohio include the simplification of the chipped stone industry and the production of ceramics that could withstand higher cooking temperatures and repetitive use. Diagnostic artifacts include small triangular projectile points associated with the Lowe Cluster, and well-made plain or cordmarked grit-tempered ceramics. Sites that date to the Late Woodland in southwestern Ohio are associated with the Newtown Phase, which dates from 1600–1100 B.P. The type site for the Newtown phase is the Turpin Site, (33HA28), which is located in the lower Little Miami River Valley near the town of Newtown in Hamilton County (Theler and Harris 1988). Other regional sites with Late Woodland components include the Sand Ridge Site (33HA17) in southern Hamilton County, and the Enos Holmes Mound (33HI6) and Robert McMullen Site (33HI7) in Highland County (Baby et al. 1968).

3.1.4 Mississippian Period (ca. 1000–400 B.P.)

The Mississippian Period is the final period of the prehistoric era in Ohio. Primary areas where Mississippian culture developed include the Illinois and Upper Mississippi River valleys and west along the Missouri River, with populations in southern Ohio, northern Kentucky, and West Virginia only later adopting many of the conventional Mississippian cultural traits (Peregrine 1996:xii). In parts of central and northern Ohio, the Late Woodland Period continues until European Contact, and is often referred to as the Late Prehistoric Period. However, southwestern Ohio and portions of the Ohio River Valley were populated by a culture that were more closely aligned with Mississippian cultures of the southeastern United States. In terms of social structure, these communities reflect the highest level of complexity in North America prior to European contact. southern Ohio at this time was populated by a culture referred to as Fort Ancient.

The Fort Ancient culture is a village-based agricultural society that inhabited portions of the middle Ohio River valley of Indiana, Kentucky, Ohio, and West Virginia from ca. 1000–250 B.P. The Culture takes its name for the Fort Ancient site in Warren County, Ohio, although Fort Ancient peoples lived near the earthworks complex long after it was originally constructed by Hopewell peoples. Our current knowledge of Fort Ancient indicates that the tradition likely developed locally from other earlier Woodland populations such as Newtown, although the processes that led to the origins of this cultural complex remain to be fully understood (Riggs 1986, 1998; Tankersley and Haines 2010). From investigations that have been undertaken, archaeologists believe that conflict may have arisen with groups in adjacent regions as the boundaries of the Fort Ancient culture area are typically marked by sites consisting of palisaded villages. During this time settlements contained about 100–500 residents. Villages were comprised of large circular or

rectangular houses encircled by palisades and open plazas (Cantley et al. 1986). By the end of Fort Ancient, territorial boundaries are thought to have once again contracted (Moore 2014:184). What we do know is that the peoples of the Fort Ancient Culture are notable for their intensive reliance on maize agriculture, the construction of effigy mounds at ceremonial sites, and large, densely occupied villages. The Fort Ancient Culture can be subdivided into three subperiods: Early Fort Ancient (750–1000 B.P.), Middle Fort Ancient (750–550 B.P.), and Late Fort Ancient (550–250 B.P.). Although transitional, Early Fort Ancient is distinguished from earlier Late Woodland populations by a marked increase in the dietary consumption of maize and beans and a decrease in the consumption of native domesticates (Rossen 1992). The reliance on maize agriculture was supplemented by hunting, fishing, and gathering. Early Fort ancient settlements consisted of small farming communities composed of scattered households of single family units (Sharp 1996; Turnbow and Sharp 1988). Evidence of reduced mobility is indicated by the presence of more substantial dwellings (Moore 2014:186; Pollack and Henderson 2000). Mortuary practices included the burial of the dead in mounds.

The Middle Fort Ancient subperiod is characterized by a variety of changes in settlement behavior. These include the nucleation of populations into greater numbers of larger villages, the appearance of thicker midden deposits indicating village occupations for longer durations, the construction of dwellings that were partially subterranean for warmth in winter and to stay cool in the summer, and a shift in mortuary practices whereby the dead were buried in graves rather than mounds. Mound construction at this time included effigies such as Alligator Mound near Granville, Ohio. Villages were composed of 20 and 30 dwellings each large enough to support up to 10 individuals (Sharp 1996). However, stresses resulting from close quarter habitation may have led to community instability with some groups prone to fragmentation (Henderson 1998, 2008; Pollack and Henderson 1992). During the Late Fort Ancient Period, dwellings consisted of structures built for much larger multi-family units that appear to have been more intensively occupied. The Late Fort Ancient subperiod is characterized by an increase in village size and the replacement of circular and semi-circular villages in some areas by large clusters of 30 to 40 structures, with houses capable of accommodating as many as 26 individuals. Some suggest that the larger size of Late Fort Ancient villages may indicate the “coalescence of two or more communities” (Moore 2014:188). Late Fort Ancient sites are also characterized by continued adaptations in mortuary practices, with the burial of individuals in cemeteries or under house floors being standard (Griffin 1977).

There is evidence for increased interaction between Late Fort Ancient and Mississippian peoples after 600 B.P. (Pollack 2008). The increase in population size and establishment of exchange networks among Late Fort Ancient peoples points to the existence of more complex social and political organization. Increased interaction with Mississippian groups to the south is indicated by the presence of weeping eye and rattlesnake engraved marine shell gorgets among other trade goods, the appearance of Mississippian pottery, and the construction of some wall trench houses (Pollack and Henderson 1992). Important sites with Fort Ancient components include the Turpin, Sand Ridge, and State Line sites in Hamilton County; the Hobson Site in Meigs County; and the

Fuert Mound complex in Scioto County (Mills 1917; Murphy 1968; Owen 1999). Diagnostic artifacts of the Fort Ancient culture include Mississippian Triangular and Nodena projectile points (Justice 1987:230–232). Other projectile point types include Madison and Levanna types that indicate widespread adoption of bow-and-arrow technology. Early Fort Ancient projectile points include those with flared bases and triangular points with straight sides (Railey 1992). Projectile points of the Middle Fort Ancient Period include styles that are coarsely serrated while those of the Late Fort Ancient subperiod include finely serrated, short triangular points with concave bases. In addition, unifacial and bifacial teardrop-shaped end scrapers are found in Fort Ancient assemblages (Henderson 1998, 2008; Pollack and Henderson 2000; Railey 1992). After contact, metal tools began replacing those produced from stone at sites such as Bentley in Kentucky (Pollack and Henderson 1984).

Early Fort Ancient ceramic vessels consisted primarily of cordmarked conoidal jars. During the Middle Fort Ancient Period the use of shell tempering and vessel decoration became more popular and some vessels included lugs and strap handles. After 600 B.P. new vessel forms were added to the inventory including bowls, pans, and globular jars (Pollack 2008). Other artifacts commonly found at Fort Ancient sites include chipped limestone discs, chipped stone drills, knives, scrapers, and adzes; bone and antler fish hooks, beamers, needles, and awls; and groundstone tools including sandstone abraders, manos, and nutting stones (Griffin 1977; Pollack 2008). People of the Fort Ancient culture began trading goods with Europeans as they began settling North America, and European trade items such as beads have been found at a number of sites in direct association with articles of indigenous manufacture (Pollack 2008:751). However, by 350 B.P. archaeological sites attributed to the Fort Ancient culture had largely disappeared, possibly succumbing to disease introduced by European settlers (Pollack and Henderson 2000). It is unclear what relationship, if any, Fort Ancient people may have had with historic tribes encountered by later European explorers. It is possible that the Fort Ancient people were forced out of the area through conflict with neighboring groups. Other evidence suggests that they may have joined several different ethnically affiliated groups such as the Shawnee and Tutelo (Graybill 1988:30; Griffin 1977; Pollack and Henderson 1992: 277-278).

3.2 HISTORIC CONTEXT

Ohio was claimed by both the English and the French and was subject to the rivalry between these two countries. Dissatisfied in the success of their trade with other European countries, England declared war on Spain in 1739, to halt their trade with France. However, the War of the Austrian Succession began in Europe as Maria Theresa assumed the Austrian throne in 1740. Britain and France took opposite sides in the conflict and while Britain was successful in blockading France's trade routes to the New World, they suffered significant losses in Belgium. The war extended to their colonies in the New World, where it was known as King George's War. While the Treaty of Aix-la-Chapelle brought an end to fighting, it did not settle the question of land ownership in the colonies. This left the ownership of Ohio Country, as the region between the Great Lakes and the Ohio River was known, in dispute (Eccles 2006).

Because of the success of the blockade during King George's War, England was able to assume interior trade routes previously held by the French with the American Indians. Without European manufactured goods to offer in trade, the French fur trade suffered a significant decline. The Ohio Company of Virginia was formed in 1748 by a group of investors from the British colony of Virginia. The company hoped to expand colonization efforts into the Ohio Country and establish their presence in the disputed territory. King George II granted the company 200,000 acres near the headwaters of the Ohio River in western Pennsylvania. The company was tasked with constructing a fort to protect the colonists and to distribute the land among 100 families. Christopher Gist was selected to survey the land along both sides of the Ohio River to help the company select an area for settlement. The notes taken by Gist during his survey provided the earliest descriptions of the land within southern Ohio and northeastern Kentucky. As a result of his survey, the Ohio Company selected land in modern-day Pennsylvania and West Virginia. (OHS 2005b).

Roland-Michel Barrin de la Galissonnière, the French governor of New France (1747–1749) ordered Pierre-Joseph Celeron de Bienville to conduct a military expedition into the Ohio Country to re-establish their presence in the region after King George's War (Busch 1896). Together with 250 French soldiers and Jesuit priests, Joseph Pierre de Bonnecamps, Bienville departed from Montreal in 1748 and traveled down the Allegheny River to the headwaters of the Ohio River. Bonnecamps kept a journal and map of the journey, documenting the route and interactions with American Indians and British traders along the way. To assert France's claim to the Ohio Country, Bienville traveled with lead plates that proclaimed France's title to the land. He buried at least six plates at the intersection of major rivers and the Ohio River, as illustrated on Bonnecamps map (Figure 8). The map also notes the location of settlements, including villages at the Scioto River and the "River Blanche le Baril," south of present-day Highland County. Bienville ordered British traders to the Ohio Country when they encountered them during their travels. Most ignored the orders and continued their trade with the American Indians. Largely unsuccessful in renewing previous relationships with the American Indians and driving out British traders, the expedition traveled north from the Miami River, portaged to Fort Miami and continued to Montreal (OHS 2005c). French traders returned to the area, but tensions between the two countries escalated to the point of war.

Trade continued in the Ohio Country, as illustrated by a trader's map from 1753. The map (Figure 9) illustrates a route across modern-day Highland County, beginning at a camp at the point the Scioto River meets the Ohio River, and continuing northwest to "Maade Creek," intersecting an east–west route to the Miami River (LOC 1753). Prompted by growing tensions with the English, the French built forts along the upper Ohio River to emphasize their presence in Ohio Country. In 1753, with the support of 1,500 soldiers, France established Fort Le Bouef (Waterford, Pennsylvania) and Fort Machault (Franklin, Pennsylvania) in the disputed area within Ohio Country. In response, Robert Dinwiddie, the lieutenant-governor of Virginia, sent Major George Washington and Christopher Gist to Fort Le Boeuf to persuade the French to release their claims on the Ohio Country. The French commander at Fort Le Boeuf refused and added that he would

arrest all English colonists who entered Ohio Country. The French continued their aggression in the region by capturing a British trading post, Logstown in 1754. There they constructed Fort Duquesne near present-day Pittsburgh. Dinwiddie again sent Washington, this time with a force of Virginia militiamen, to the disputed area. Washington built Fort Necessity to counter the French presence at Fort Duquesne. It did not deter the French, and together with a group of American Indian allies, the soldiers attacked Fort Necessity. Over the next seven years, the two countries battled for control of North America in the French and Indian War (OHS 2005b).

3.2.1 The Treaty of Paris, Northwest Indian War, and Statehood (1763–1803)

Similar to King George's War, the French and Indian War in North America occurred as the Seven Years War began in Europe in an effort for major European countries to gain land and exert their dominance. After seven years, the French and Indian War came to an end in North America once the British were able to overtake Fort Carillon and Quebec—the main fortress of New France in Canada. The Treaty of Paris (1763) was signed between Great Britain, France, Spain, and Portugal, with France yielding territory in New France to the British. This decision worried American Indians in the Ohio Country who feared British control would lead to a significant colonization effort on their native lands. An attempt to drive back British colonists, known as Pontiac's Rebellion, initially deterred the westward expansion of British colonies, even though the uprising was stopped by British authorities. To avoid continued military engagements after a lengthy and costly series of wars, Britain issued the Proclamation of 1763. The proclamation prohibited colonists from occupying land west of the Appalachian Mountains from Hudson Bay to the area north of Florida. This land would be reserved as American Indian territory. While effective against conflicts with the American Indians of Ohio Country, the expansion of British colonies into this region was the impetus for the French and Indian War. Lands claimed by the Ohio Company of Virginia could not be settled under the Proclamation. Combined with higher taxes levied to pay for the expense of the French and Indian War, many colonists became resentful of British rule (OHS 2005d).

Settlers continued to occupy land west of the colonial divide established in the Proclamation of 1763, which led to conflicts with the American Indians of the Ohio Country. In 1768, representatives from a confederation of six Iroquoian tribes met with the British at Fort Stanwix in New York to establish a new demarcation line. In the Treaty of Fort Stanwix (1768), the Iroquois abandoned their claim to land in the Ohio Country. The Cherokee negotiated a similar treaty in 1770 and ceded land south of the Ohio River in the Treaty of Lochaber. As a result of the two treaties, prairie land was opened to settlement by the British colonists. However, the treaties were not recognized by the Shawnee and Delaware. The land relinquished in the treaties included their hunting grounds and they claimed the Iroquois did not have the right to negotiate on their behalf (Perkins 1998).

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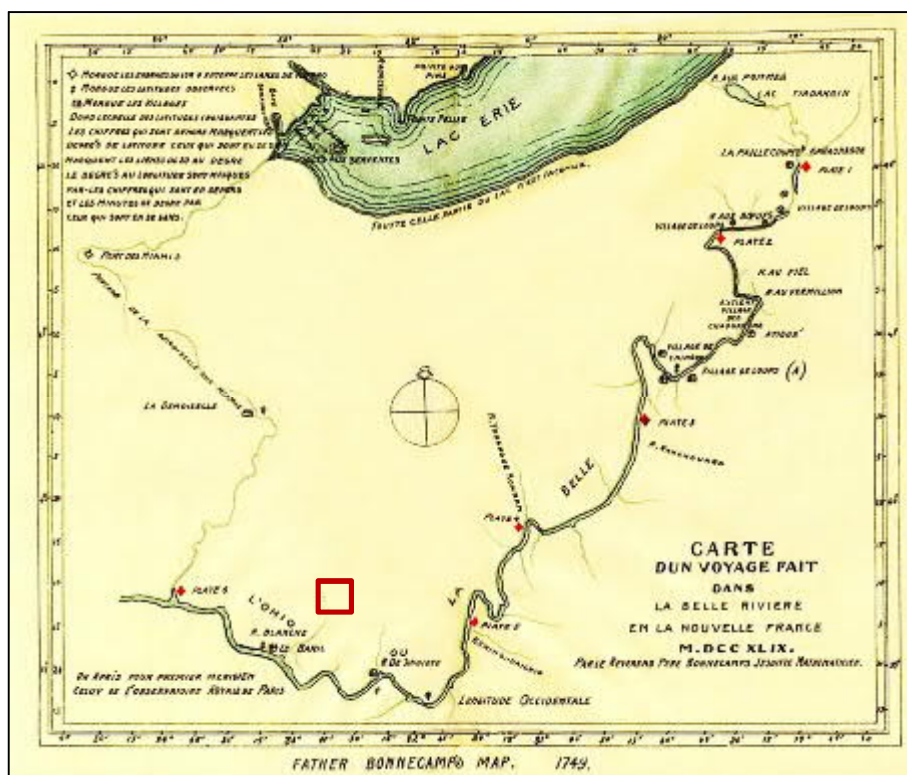


Figure 8. Father Bonsecamp's Map (1749).



Figure 9. A trader's map of Ohio Country (1753), with the location of the project area.

Tensions heightened between British colonists and the American Indians of the Ohio Country. The Northwest Indian Wars (1774–1795) encompassed a lengthy military campaign against the American Indians in a continued dispute over the Ohio River as a boundary for settlement. After British colonists killed 11 Seneca and Cayuga in 1774 in what they viewed a pre-emptive strike, the tribes retaliated by killing 13 colonists living south and east of the Ohio River. British regulars at Fort Pitt and Virginia militiamen sent by Lord Dunmore, the royal governor of Virginia, clashed with American Indians in the Battle of Point Pleasant on October 10, 1774. The war (Lord Dunmore's War) moved north of the Ohio River onto American Indian lands, where the British and Virginia military destroyed Shawnee villages on the Pickaway Plains, north of present-day Chillicothe, Ohio, and northeast of present-day Highland County. As a result, the Shawnee agreed to a peace treaty (Treaty of Camp Charlotte, 1774) and conceded the loss of access to their hunting lands east and south of the Ohio River (OHC 2005f).

The American Revolution began in the colonies with the Declaration of Independence on July 4, 1776. American Indians generally sided with the British, who had worked to prevent settlement of the Ohio Country by American settlers. During the war, the American Indians carried out raids of settlements along the Ohio River. At the conclusion of the war, the territory within the Ohio Country was ceded by the British government to the United States. With competing land claims, ownership of the land was debated among the state and national governments. Compromise led to the control of the land by the federal government, with land grants given to Virginia and Connecticut (Figure 10). Virginia reserved 3.7 million acres near the rapids of the Ohio River (included present-day Ohio counties of Adams, Brown, Clermont, Highland, Clinton, Fayette, Madison, and Union counties; and portions of Scioto, Pike, Ross, Pickaway, Franklin, Delaware, Marion, Hardin, Logan, Clark, Champaign, Green, and Warren). Connecticut reserved 3.6 million acres near Lake Erie. Virginia then sold small tracts of lands to settlers. Land grants between the Miami and Scioto rivers were reserved for veterans of the American Revolution. Thus, the area became known as the Virginia Military District and evolved into the first area of survey and settlement (Hardesty 1882).

The Northwest Ordinance, adopted by Confederation Congress on July 13, 1787, established a territorial government for the Northwest Territory and formalized the process by which it could become a state. The ordinance guaranteed that new states within the territory would be admitted to the union on an equal basis as the original 13 states once they met certain requirements—established a territorial government, reached a voting population of 60,000 (free adult males), and drafted a state constitution. The constitution was required to include basic rights to its citizens, such as religious freedom, freedom of speech, and a trial by jury. An emphasis was placed on public support of education and the abolition of slavery (OHC 2005g). General Arthur St. Clair was selected as governor of the Northwest Territory. The settlement at Losantiville became the territorial capitol in 1788; the name of the town was changed to Cincinnati in 1790 to honor an organization of Revolutionary War veterans, the Society of the Cincinnati (Wills 1996).

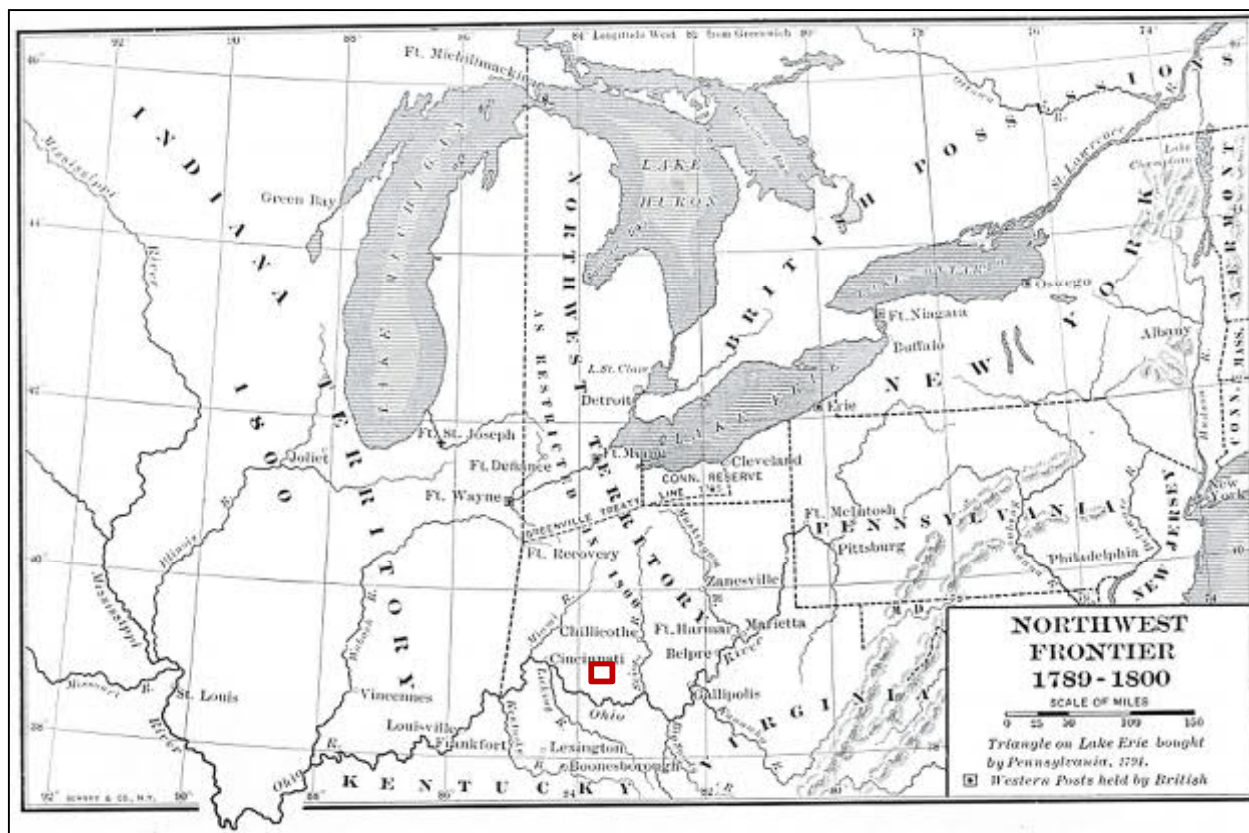


Figure 10. Northwest Frontier, 1789–1800 with the approximate location of the project area.

In 1786, the Ohio Company of Associates was formed and two years later the group became the first to purchase land for settlement in the Northwest Territory. The group of land speculators purchased about 1.5 million acres from the U.S. government; the U.S. gave an additional 100,000 acres of land, known as a “Donation Tract,” to serve as a buffer between their settlements and land occupied by American Indian tribes in the region (OHC 2005f). The first group of settlers, which consisted of 48 men and their families, departed from New England during the spring of 1788. They founded the fortified town of Adelphi at the junction of the Ohio and Muskingum rivers within the lands of the Ohio Company of Associates. The town was soon renamed Marietta in honor of the French Queen, Marie Antoinette. Over the next two years, about 10,000 New Englanders migrated to the Northwest Territory and established communities that reflected those they had left in the East (Wills 1996). Settlement of the Northwest Territory along its southern border with Kentucky increased significantly in the 1790s. Kentucky surveyor Nathaniel Massie established the town of Massie’s Station during the winter of 1790–1791. It was the first settlement within the Virginia Military District. He constructed cabins enclosed with pickets and built a blockhouse at each corner for defense. Eventually renamed Manchester, the town was the fourth to be settled within the present boundaries of the state of Ohio (Klise 1902). He continued to survey lands along Brushcreek and then west along the Little Miami River (Scott 1890).

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Figure 11. Map of the State of Ohio (1805) showing the location of Highland County.

As settlement increased within the Ohio Country, hostility between settlers and the American Indians increased. Prior to 1790, the United States suffered many defeats, but in an effort to bring an end to the war, President George Washington appointed General Anthony Wayne to reorganize the state militia to create a professional army. Their ultimate goal was to conduct aggressive military campaigns against the American Indians that would lead to a negotiated peace. The United States eventually defeated the western Indian Confederacy near the shores of Lake Erie in 1794 at the Battle of Fallen Timbers. The defeat resulted in the negotiation of the Treaty of Greenville (1795) in which 12 American Indian tribes of Ohio Country (Wyandots, Delawares, Shawnees, Ottawas, Chippewas, Pattawatimas, Miamis, Eel Rivers, Weas, Kickapoos, Piankeshaws, and Kaskaskias) relinquished control of their native lands to the U.S. government and relocated to northwestern Ohio. The treaty also outlined that Americans would be allowed free passage by land and water through the country by way of a chain of frontier posts (Perkins 1998).

With the Treaty of Greenville, emigration to the Northwest Territory was renewed. One of the earliest settlers within Highland County was John Wilcoxon from Kentucky. In the spring of 1795, together with his wife and child, he traveled to the lands to the west of the Scioto River. He eventually settled in the area of Sinking Spring. Nathaniel Massie continued his work in the Virginia Military District, laying out the town of Chillicothe on the Scioto River in 1796. The settlement would become an economic and political center within the Northwest Territory and was selected as the site of the first state capitol of Ohio. Nathaniel's brother, Henry Massie, together with Joseph Kerr, laid out the town of New Market in Highland County in 1797, at the midpoint of a road connecting Chillicothe to the northeast with Williamsburg to the southwest (Klise 1902). The road, constructed by William Lytle in 1790, crossed the Whiteoak River north of Williamsburg and is one of the first recorded activities in Clay Township (Martin 1955).

In 1800, the Northwest Territory had reached the first threshold for statehood and Congress organized the eastern part as the Ohio Territory and the western part became the Indiana Territory. By 1802, the Ohio Territory had reached the second threshold as its voting population had reached 60,000. A territorial legislature convened at Chillicothe to draft a state constitution and on March 3, 1803, Ohio was admitted as the 17th state and the first state formed from the Northwest Territory (Wills 1996). The state boundaries (Figure 11) were defined by Lake Erie to the north and a line directly to the southern tip of Lake Michigan, Pennsylvania and Virginia to the east, the Ohio River to the south (and east), and to the west by the Indiana Territory from the mouth of the Great Miami River to the Michigan line (Hardesty 1882).

3.2.2 Early Statehood (1803–1846)

During the first decade of statehood, the population grew by 200,000 persons. After the War of 1812, British support to American Indian tribes against American settlers within the state ended and they were forced to abandon military posts within the Northwest Territory along the Great

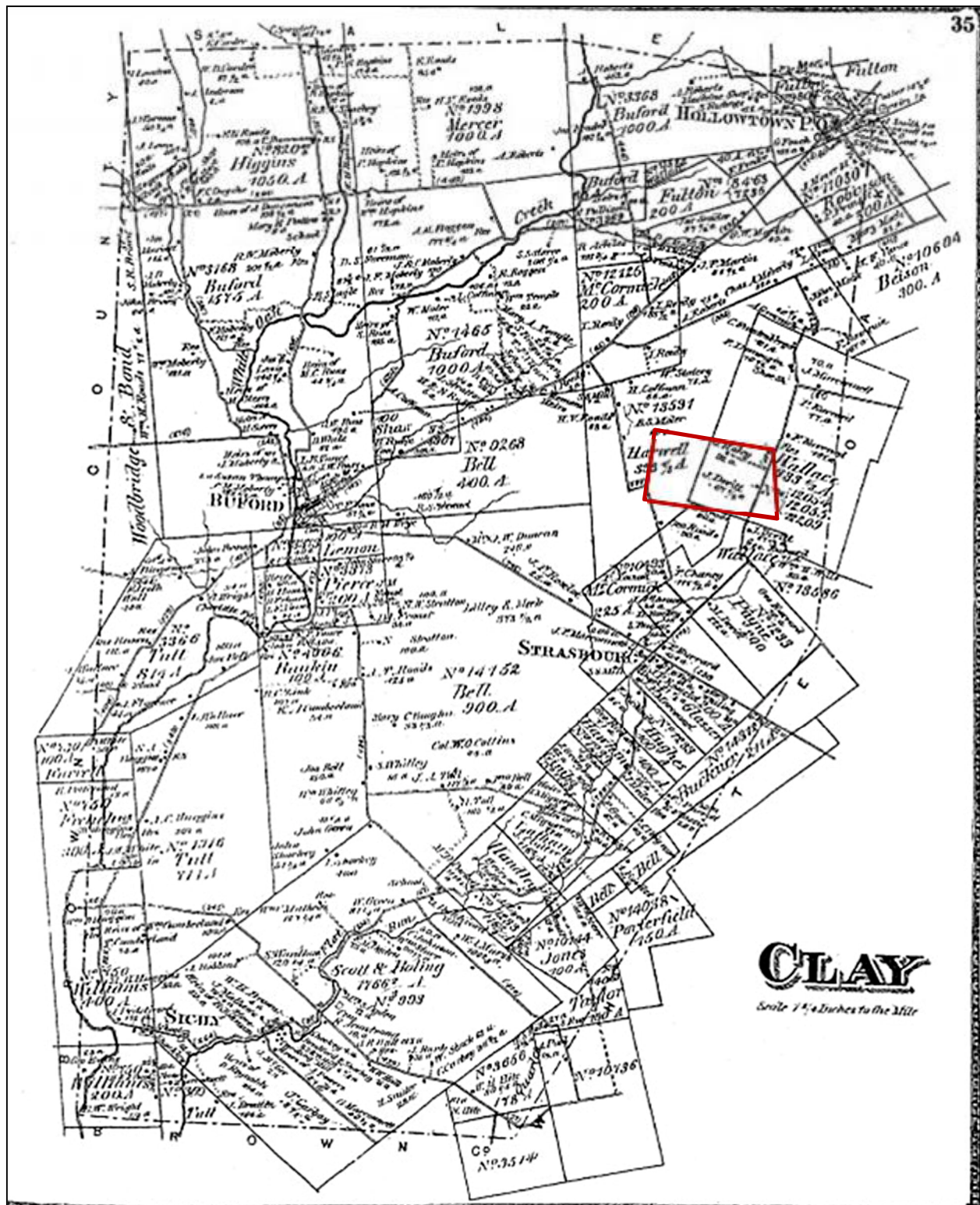


Figure 12. Clay Township (1876) with the approximate location of the project area in red.

Lakes (Wills 1996). Without opposition, the settlement of the state increased dramatically over the next 30 years. By 1830, population had increased to almost 950,000 persons (Forstall 1996). Most of the state's growth was focused in central and southern Ohio. The Scioto River, which begins in Auglaize County and flows south to the Ohio River, was a major waterway located in this region of the state and offered transportation and fertile farmland in its drainage basin. With the increase of settlement along the river, the state capitol was moved from Chillicothe to Columbus in 1816. While eastern Ohio was settled primarily by those migrating from New England, the Scioto River Valley was settled by Virginians and southwestern Ohio was settled by Kentuckians (Wills 1996).

Five counties were established within the Ohio Territory prior to statehood, according to the provisions of the Northwest Ordinance. The first county created by declaration of the territorial governor was Washington County in 1788. Washington County encompassed all land east of the Scioto River, to the line of the Greenville Treaty (1795) to the north. Hamilton County was created next and covered all the land west of the Scioto River to the Indiana Territory boundary to the west and north to the line of present-day Michigan. The two counties were subsequently divided into three portions: Adams County (1797), Jefferson County (1797) and Ross County (1798). An additional county, Wayne County, was created to the north, but that land was ultimately included within the state boundaries of Michigan (Downes 1970). Adams County, created on July 10, 1797, included both sides of the Scioto River and extended northwest to Wayne County. As discussed previously, Nathaniel Massie founded the first permanent settlement in Adams County, Manchester, in 1795 (Scott 1890). Ross County was created out of Adams County on August 20, 1798, and the county seat was established at the territorial capitol town of Chillicothe (Downes 1970).

3.2.3 Highland County

After statehood, the number of counties in Ohio increased by 25 for a total of 42 in 1810. The reason for the significant increase was likely the difficulty in traveling within the state to local seats of government. Highland County was created out of Ross, Adams, and Clermont (1800) counties on May 1, 1805, and the county seat was established as New Market (Downes 1970). The county was named for its topography that included rolling forested hills within the watershed of the Miami and Scioto rivers. When it was organized, less than 2,000 acres of land had been cleared and were tillable. Its boundaries originally contained portions of Fayette and Clinton counties, both created in 1810 (Klise 1902). The town of Hillsboro was founded in 1807 to serve as the permanent county seat and is located at the approximate center of the county. A requirement of the Northwest Ordinance outlined that counties would be organized according to the New England Township–County Plan. Townships were delineated to include 36 square miles with a township center located at its middle. The township center served both the economic center and the first form of local government for the state (Downes 1970).

The four townships—Paint, Union, Madison, and Concord—that had formed prior to the creation of Highland County were “collected into one view” by county commissioners on April 14, 1825, and four new townships were established: Brush Creek, Fairfield, Liberty, and New Market (Thompson 1878) (Table 3).

One of the first acts of the county government was the construction of roads leading to the county seat. Planned roads led from major Ohio towns to New Market or connected with a major road that led to the county seat. The Anderson State Road from Chillicothe to Cincinnati was surveyed and constructed under the leadership of Col Richard C. Anderson beginning in 1804. Along with the initiation of road construction, the first year of Highland County was a prosperous one and ended with successful crops and increased settlement (Klise 1902). Reverend John W. Klise provides a description of the early residences of Highland County in his history of the county:

The people lived in log cabins, without perhaps a single exception even in the towns. Some of these cabins had lap shingle roof, and possibly a four-glass window, which was regarded by some as an undue waste of means and decidedly aristocratic in tendency which out not to be encouraged. Furniture was not plentiful and what they had was rude and clumsy. The absence of roads and the great distance to be traveled through an unbroken forest made the transportation of this class of goods impossible, and few, if any, of the emigrants thought of making the effort. After reaching their new home it required but a few hours to make the needed supply for their one-room cabin (Klise 1902:116).

Stephen Clark established one of the first settlements near the project area, located on Flat Run. George Campbell, Philip Noland, Levin Wheeler, William Paris and their families joined Clark and established a community on the creek ca. 1798. James B. Finley moved with his wife in the spring of 1801 to land purchased by his father on nearby Whiteoak Creek. Robert W. Finley joined the couple in the fall; James Davidson also settled with his family on Whiteoak and the community quickly grew to 15 people within the year (Scott 1890).

3.2.4 Clay and Whiteoak Townships

As noted, Concord Township was organized prior to the establishment of Highland County and included land within present-day Whiteoak and Clay townships. Whiteoak Township was created from Concord in 1821 and Clay Township was divided from land within Whiteoak on December 5, 1831, containing 17,760 acres (Thompson 1878). Located in the southwestern corner of Highland County, the land was initially viewed as too swampy for settlement and farming; however, once the forest had been cleared and ditches constructed, the land became one of the most fertile in the county. Lands drained to two principal streams—the Whiteoak Creek and Flat Run. One branch of the Whiteoak begins in Dodson Township to the north and the other begins in Danville (Hamer Township) to the northeast. The two branches join just south of Buford (Martin 1955).

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Table 3. History of Highland Townships (Thompson 1878).

Highland County Township	Date Organized	Created from Townships	Total Acreage (1875)	
			Acres Improved	Woodland
Brush Creek	1825	—	25,563	
			16,860	8,703
Clay	December 5, 1831	Whiteoak, Salem	17,670	
			11,127	6,543
Concord	pre-1805	—	20,508	
			15,658	4,850
Dodson	June 7, 1830	Union, Salem, New Market	16,859	
			11,994	4,865
Fairfield	1825	—	26,305	
			19,777	6,528
Hamer	June 5, 1849	Salem, New Market, Union, Dodson	12,392	
			8,134	4,258
Jackson	September 24, 1816	Brush Creek, Concord	20,164	
			11,461	8,703
Liberty	1825	—	29,588	
			21,488	8,100
Madison	pre-1805	—	20,506	
			13,717	6,789
Marshall	January 15, 1844	Liberty, Jackson, Brush Creek, Paint	14,104	
			10,595	3,509
New Market	1825	—	14,092	
			9,988	4,104
Paint	pre-1805	—	32,608	
			23,290	9,318
Penn	March 2, 1852	Liberty, Fairfield, Union	18,952	
			14,389	4,563
Salem	August 19, 1819	New Market, Union	10,927	
			7,352	3,575
Union	pre-1805	—	16,578	
			11,713	4,865
Washington	June 6, 1850	Liberty, Concord, Jackson, Marshall	13,881	
			9,552	4,329
Whiteoak	1821	New Market, Salem	15,255	

The settlement of the area that would become the Clay and Whiteoak townships began after the creation of Highland County around 1805. Boyd (first name not known) constructed a log cabin west of the north fork of the Whiteoak Creek near present-day Buford, where he lived with his family for less than a year. John Florence began residence in the Boyd cabin by 1807 and was the first permanent settler in Clay Township. His land was remote—the nearest settlement was over 20 miles away and his nearest neighbor, James Ball, lived 10 miles away. In Daniel Scott's history of Highland County, the region is described as, "the wildest and most uncompromising in the county (Scott 1890:143)." He constructed a two-story house and opened a tavern on Lytle's Williamsburg Road, on which operated a regular stage coach line from Chillicothe to Cincinnati (Martin 1955).

3.2.5 Community Histories

Buford, located west of the project area, was platted in 1834 by Robert Lindsey and named for his wife, Mary. Mary was the daughter of Colonel Thomas Abraham Buford of Lexington, Kentucky. Although it does not appear Col. Buford ever lived in Clay Township, the U.S. government granted him 3,660 acres in 1790 for his service in the American Revolutionary War. His land was located north and northeast of present-day Buford, along the north fork of Whiteoak Creek and Ruble Run. The New Market–Williamsburg Road bisected his land holdings and made parcels attractive to early settlers (Figure 12). As noted, the first settlement and store opened near Buford in 1832, operated by John Florence. He supplied goods for settlers traveling by wagon "through the wilderness" from Cincinnati (Martin 1955).

Strausbourg (Gath), located south of the project area, was a settlement of French immigrants on Flat Run in the eastern portion of Clay Township, at the point where Flat Run Road crosses Buford–Mowrystown Road. The area was first settled by John P. Marconett in 1845 and named for his home town of Strausburg in northern France. Marconett opened a store on Flat Run in 1850 and built a two-story house nearby in 1851. A 1955 historical account of Clay Township indicates the two-story house was extant in the 1950s, and it appears that Resource No. HIG0038313, although altered, is the original 1851 Marconett House. Marconett opened a sawmill and flour mill in 1857, but both burned in 1861. He rebuilt the sawmill and installed the first circular saw in the township. A letter to the editor of the Highland Weekly News in 1869 provides additional information on the settlement and its inhabitants, "at present (Strausburg) looks quite beautiful, as nature is decorating field and grove with Summer glories." Residents were described as, "healthy, industrious, and enterprising." The article noted that the town offered a cooper shop, blacksmith shop, saddler shop, carpenter shop, and a dram shop, with a school house under the direction of Miss Elma Lyle. Sabbath School was held at the school house every Sunday afternoon with about 70 people in regular attendance (Highland Weekly News 1869). A post office was established, and the town name was changed to Gath sometime after 1917 (Martin 1955).

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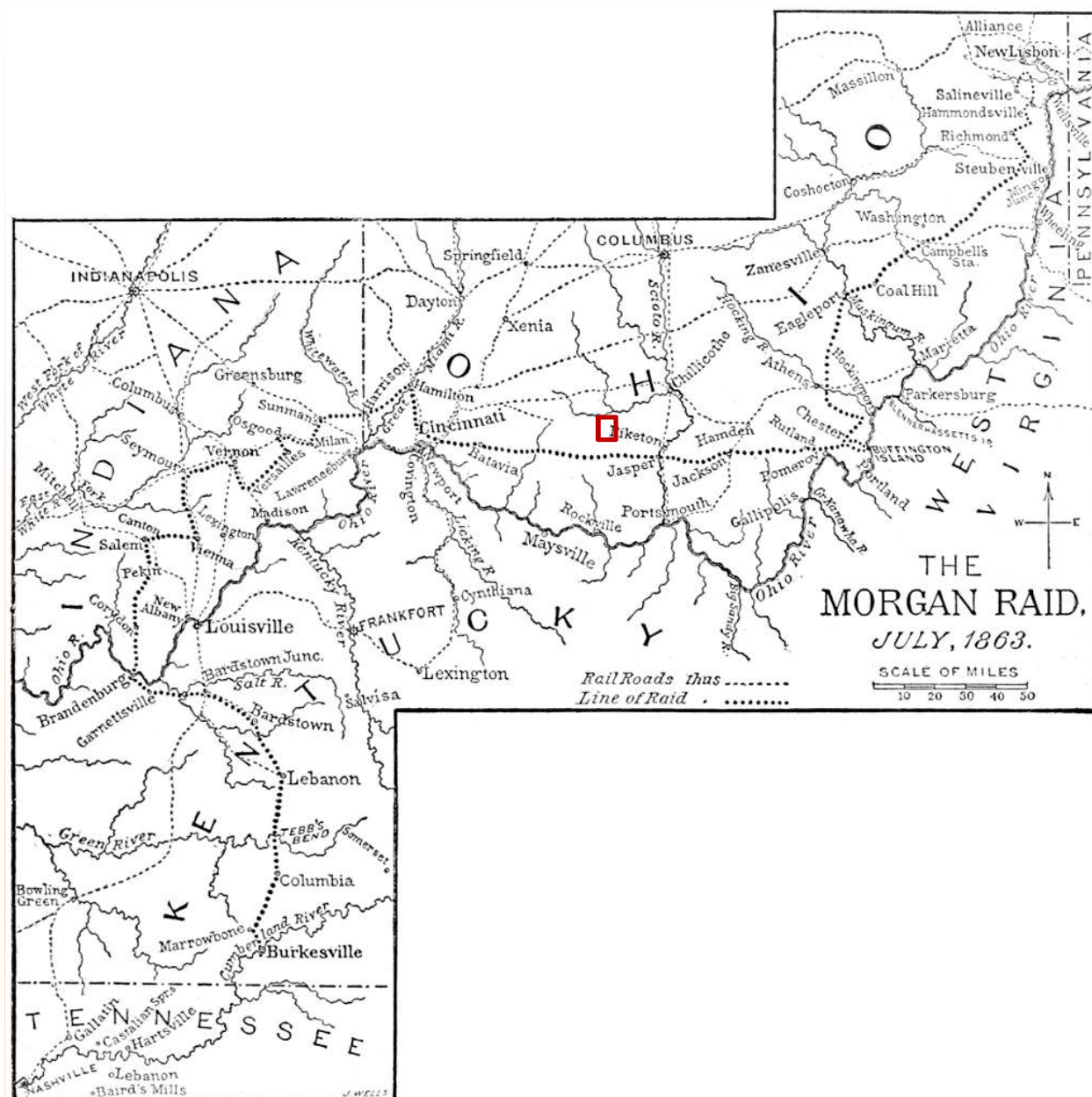


Figure 13. Battles and Leaders of the Civil War, Volume 3 (1887), with Highland County.

Hollowtown, located northeast of the project area, was situated in the northeast corner of Clay Township at the intersection of Pricetown Road and the Buford–Danville Road. Anthony Hollow owned a candy store and a saloon at this location in the early 1800s, and the Dunkard Church (a religious sect of German immigrants who originally resided in Ephrata, Pennsylvania [Green et al. 2009:13]) was constructed in Hollowtown in 1857 (Martin 1955). An 1866 article describes Hollowtown and notes it maintains two dry goods and grocery stores operated by German

immigrants, Stazel & Heller; a harness shop and a shoe shop; and a saloon (Highland Weekly News 1866). On July 4, 1920, the last store and the church were destroyed by fire (Martin 1955).

Mowrystown, located southeast of the project area, is situated on the east fork of Whiteoak Creek in southwestern Whiteoak Township. A mill was first erected on what would become the townsite in 1812 by George Barngrover. Mowrystown was settled by French Huguenots in the early 1830s and served as their first permanent settlement in the United States. Barngrover's land was purchased by Samuel Bell, who platted the town with 42 in-lots and several large outlots. The town was named after Abraham Mowry who held large landholdings in the area. John N. Bell served as the first postmaster when the post office was established on April 6, 1832. Within a few years, over 100 families had joined the original group of French settlers and by 1880, of the 1,052 residents of Whiteoak Township, 414 lived in Mowrystown. At the turn-of-the-nineteenth century, the town had a general store, blacksmith, tinner, carpenter, and two doctors. Hotels and manufacturing plants were also located within its town limits (The Press-Gazette 1966).

Taylorville, located east of the project area, was established on land owned by Isaiah Roberts. Mr. Roberts was a brick mason and in ca. 1813, he constructed the first brick house in Highland County. He purchased 300 acres of land upon arrival from Pennsylvania and his son, Isaiah Jr. platted the town of Taylorville in November 1846. By 1856, the town had a sawmill operated by J. Frank Fender of the firm of Fender and Son, a blacksmith, wagon maker and dealer, and farming implements supplier (Noah Gayman), and several general merchandise stores (Klise 1902).

3.2.6 American Civil War (1860–1865)

Although the Northwest Ordinance outlined the process for states to be added to the Union, tensions between northern and southern states over the expansion of slavery, state's rights, and the fair market escalated as new states petitioned for admittance to the United States. Abraham Lincoln spoke of ending slavery and once he was elected president, 11 southern states seceded from the Union between December 1860 and June 1861. Once war was declared, Ohio supported the Union with its regular enlistments of artillery, cavalry, and infantry men. Over 260 regiments (a total of 310,654 Ohioans) served in the Union army during the American Civil War. Ohioans helped to secure Kentucky and West Virginia, and volunteer companies helped the Union win the only fighting seen along Ohio's southern boundary (OHC 2005g).

Morgan's Raid was the only major attack by Confederate forces to occur on Ohio soil. Confederate cavalry leader Brigadier General John Hunt Morgan was ordered to divert pressure from attacking Union forces in Tennessee by drawing them into southern Ohio from its border with Indiana to West Virginia. On July 8, 1863, Morgan and 2,100 soldiers crossed over the Ohio River into southern Indiana. After gathering supplies and feeding false stories regarding their location of attack in Indiana, Morgan moved instead into Ohio at Harrison, 20 miles northwest of Cincinnati. His goal was to evade, not engage with Union forces. Over 60,000 militiamen responded to a

proclamation of Ohio Governor David Tod to defend Ohio's southern border from Morgan's Raiders. Volunteer companies mustered into service enlisted for 100 days of service. One company, known as the Eagle Creek Expedition, were armed and equipped to assist General Hobson in pursuit of Morgan (Johnson 1887). After skirmishes at Camp Dennison, located 16 miles northeast of Cincinnati, Morgan divided his men into two lines: one traveling southeast from Georgetown to Ripley and the main force headed north of the first, from Mt. Orab to Sardinia, following the Highland–Brown County line east to Winchester in Adams County. While traveling just south of the project area, a review of maps documenting the raid (Figure 13) indicates that Morgan likely did not engage with Union forces or Ohio militiamen within Highland County (OHC 2005g).

The two lines regrouped northeast of Cherry Fork in Adams County and continued east across the Scioto River to Jackson. There, the cavalry split again, and Morgan's men engaged with 1,500 Ohio militiamen at the Berlin Crossroads in Jackson County. The two lines met again at Hanesville in Meigs County and then began their search to find a crossing of the Ohio River into West Virginia and Confederate territory. However, they met with heavy resistance from both Ohio militiamen and Union soldiers near Middleport and Pomeroy on their way to the low-water ford at Buffington Island. Ohio militiamen defended a small earthwork at the Buffington Island ford and combined with flooding of the Ohio River, made the crossing impassable. Union forces engaged with Morgan at Buffington Island and on the run to West Point in Columbiana County, where Morgan and 364 of his command were captured (OHC 2005g).

Almost 4,400 Ohioans filed claims for compensation resulting from damages incurred during Morgan's Raid, for a total of \$678,915 (OHC 2005g). The Ohio militiamen that had assisted in the capture of Morgan disbanded (Johnson 1887), but Highland County kept and sustained its éclat in the militia system after the Civil War. The militiamen organized as the Ohio National Guard as the Noble Light Guards, after David Noble of Hillsboro and the Scott Dragoons, in honor of William Scott of Hillsboro (Thompson 1878).

3.2.7 Agriculture to Industrialization (1866–1900)

Prior to statehood, the economy of the Ohio region was based primarily on agriculture. Wheat, corn, and other grains served as the staple crops for the state and by 1849, Ohio produced more corn than any other state in the Union. Corn continued as the main crop into the late nineteenth century, but farmers also diversified into oats, potatoes, barley, rye, and buckwheat. Southern Ohio farmers raised tobacco and hemp, while orchards were predominant along the Ohio River. Livestock such as cattle, sheep, and pigs were raised throughout the state (OHC 2005h).

The layout of farmsteads remained consistent throughout the nineteenth and early twentieth centuries. The farmer's residence was located along a main road that passed in front of, or through, the farm, and associated agricultural and domestic outbuildings (e.g., springhouses, cisterns, smokehouses, woodsheds, utility sheds, and root cellars) were located nearby. Livestock

shelters were located away from the main house and storage sheds for crops (corn cribs and granaries) were sited near livestock barns. Agricultural fields and pasture land surrounded the domestic core of the farmstead (Gray & Pape 2010).

With the lack of reliable trade routes across the Appalachian Mountains, Ohioans produced and sold their goods locally, without reliance on European manufactured goods (Wills 1996). The Tariff of 1816 was implemented to generate funds for capital loans to industrialists and to bring costs for American goods in line with their European counterparts. As a result, the transition to an industrial economy in Ohio began as early as the 1810s when textile factories, distilleries and breweries, cotton mills, and glass manufacturers opened in larger cities such as Cincinnati (OHC 2005i). Factories naturally grew out of the production needs of the agricultural industry and grew to include the processing of Ohio's abundance of raw materials (OHC 2005h).

Improvements to transportation infrastructure connected farmers and industry to markets in the east. Paved roads and turnpikes provided access through the Appalachian Mountains, steamboats improved river transportation, and canals constructed in the 1820s and 1830s opened both the Ohio River and Lake Erie to increased traffic. Products could be sent via the Erie Canal from Lake Erie to the Hudson River and eastern New York. The Ohio and Erie Canal connected northern Ohio to the Ohio River. Railroads constructed in the 1840s and 1850s connected Ohio to other states and allowed products to be shipped cheaply and quickly to market. By the late nineteenth century, the Ohio economy shifted away from agriculture, as competition from western states for farm products increased and the manufacturing industry in Ohio grew more successful (OHC 2005h).

3.2.8 Growth and Development of Highland County

Although the state of Ohio began to move away from an agrarian economy, Highland County remained focused on agriculture for most of the nineteenth century. The county benefitted from improved transportation infrastructure and by the 1890s, the western portion of Whiteoak Township also had a branch line of the Norfolk and Western Railroad. Beginning as early as 1820, Ohioans had looked for construction of a railroad system through the state. They looked to the railroad as a more reliable and efficient means of travel across the state from east to west. Although companies had located in the state by 1840, progress was hindered by the Panic of 1837, a financial crisis that saw 10 percent unemployment and closed approximately 800 banks in the U.S, and the success of the canal system (OHC 2005j). The Norfolk and Western Railway (originally the Scioto Valley Railroad) began in 1876 and connected Cincinnati to Portsmouth to the east along the Ohio River. A branch line from Sardinia to Mowrystown, Taylorsville, and Hillsboro was extended by the 1890s and lineside industries prospered (Norfolk & Western 1916).

In Highland County, agriculture continued as the primary occupation for residents into the late nineteenth century. Corn was the major crop, followed by wheat. Orchard crops were also successful—apple was the primary crop, while peaches, pears, grapes, and wine were also

cultivated. Hogs, cattle, and sheep were all raised within Highland County during this time period. In 1870, Clay Township had a total population of 1,345 people; Whiteoak Township had slightly less with 1,052 persons (Thompson 1878). The following table summarizes the population and industry in the three towns (Strausbourg/Gath, Buford, and Taylorsville) adjacent to the project area at the end of the nineteenth century (Table 4).

Table 4. Demographics, Clay and Whiteoak Townships, 1870 (Thompson 1879).

Township	Population	Churches	Mills	Hotels	Schools	Teachers	Students
Clay	1,345	4	3	1	9	9	457
Whiteoak	1,052	6	4	1	7	7	334

The first schools within Highland County were pay or subscription schools and were taught at intervals dictated by the agricultural seasons. Sicily was home to the first school of Clay Township. Constructed in 1829, John Shelladay taught a three-month school for area children. The 1917 USGS topographic map indicates at least six schools were once located near the project area. Reedy School (HIG0034613), Maple Grove School (HIG0036313), and Bell Run School are still extant. However only Maple Grove School (HIG0036313) is located within the APE. (Martin 1955).

3.2.9 Urbanization, the Great Depression, and War (1900–1945)

With the shift of the economy from agriculture to industry, the population of Ohio and throughout the United States moved from rural farms to industrial cities. Immigrants and rural residents moved to cities for the promise of work in factories and manufacturing plants, and cities like Columbus and Cincinnati experienced a significant increase in population. The population of rural Highland County grew from 29,048 in 1890 to a high of 30,982 in 1900. Less than one percent of the county's land was considered urban and the industry at the turn-of-the century was still largely agriculturally focused. However, over the next 30 years the population decreased by 18 percent to a low of 25,416 in 1930, likely representing a move from the rural farm to industrial centers. During this same time period, industrialized counties like Hamilton County (Cincinnati) grew significantly from 374,573 in 1890, steadily increasing to a high of 924,018 in 1970. The biggest increase over a decade was 116 percent from 1920 to 1930 and again from 1950 to 1960 (Forstall 1996). Cincinnati was the largest city in Ohio by 1890 and had the densest population of any city in the U.S. The city benefitted from the railroad as it was connected by rail to cities across the United States. Its primary industry in the early twentieth century was iron production, but also had meatpacking, cloth production, and woodworking factories. Iron was shipped to Cincinnati from all parts of Ohio and manufactured into finished products (OHC 2005k).

While cities continued to grow, especially as industry increased production to meet wartime needs, they struggled to keep pace with required infrastructure improvements and combat political corruption that followed the success of industry. There were also problems with disease that accompanied overcrowded conditions, and employment primarily consisted of low-paying factory

jobs. Ohio Progressives worked to advance legislation and project to improve urban conditions (OHC 2005l).

The Great Depression had a profound effect on both rural farmers and industrial cities in Ohio. The overall unemployment rate in Ohio in 1932 had reached 37.3 percent and by 1933, almost half of all factory workers were unemployed. Just as industrialization shifted population from rural to urban areas, the Great Depression witnessed the reverse—population moved away from cities to rural farms to produce the food necessary to support themselves and their families (OHC 2005m). While the programs initiated under President Roosevelt's New Deal did not bring an end to the Great Depression, the government aid Ohioans sought through its programs did help support them until the economy recovered as a result of the United States' entrance into World War II (OHC 2005n).

Ohio supported the United States during World War II through its participation in the U.S. armed services and the production of equipment and materials for the war effort. Over 800,000 Ohio residents served in the U.S. military during the war. The defense industry boomed during the war. Manufacturing plants such as Willys-Overland Company in Toledo produced jeeps and the Goodyear Aircraft Corporation in Akron produced airplanes for the U.S. military. Ohio cities again saw an increase in population as workers from Appalachia found job opportunities in defense plants in urban centers (OHC 2005o).

3.2.10 Ohio and Highland County in the Mid-Twentieth Century (1946–1975)

The prosperity experienced during World War II continued into the next several decades. Farmers had cash reserves to invest in land and machinery and to pay down debts incurred in previous years. Transportation improvements during the mid-twentieth century forever changed Ohio's rural landscape and impacted future development patterns. Industry that supported the war effort transitioned to providing domestic products.

Remaining focused on agriculture, Highland County contributed to the state's overall success in the postwar years. A high demand for agricultural products after World War II helped to maintain food prices in the short term; but, as modern agricultural techniques boosted crop yields earlier issues of crop surpluses and price fluctuations returned. The Highland County Soil and Water Conservation District was formed on April 18, 1942, to help develop processes and provide educational opportunities for local farmers to practice conservation techniques (such as water erosion across cultivated fields). Federal price support programs helped to stabilize the farm economy and farmers continued to advance their efforts through mechanization, technological innovation, and scientific research. The Rural Electrification Act of 1936 provided federal loans for the installation of electrical distribution systems to rural communities of Ohio. After World War II, Ohio had a higher percentage of electrified farms than any other U.S. state—97.6 percent of Ohio farms had electricity by 1948 (Hurt 1984).

The methods of production and the overall landscape of a typical farmstead in Ohio experienced significant change in the postwar years. Indoor plumbing made some earlier outbuildings fall into disuse and eventual abandonment (e.g., privies, cisterns, and springhouses). The design of equipment sheds changed to accommodate larger farm equipment and machinery. Advances in pre-fabricated buildings allowed farmers to construct agricultural outbuildings quickly and economically, using “kit” structures. Pre-fabricated silos and barns became commonplace on the agricultural landscape and represented a distinct departure from the character of earlier farmsteads built of vernacular designs using locally available materials (Gray & Pape 2010). During the 1960s and 1970s, farmers worked to increase crop yields on fewer acres through technological advances, farm management practices, and scientific research. This inevitably led to reduced needs for outside labor and favored large agri-business models rather than the small farmer. By 1970, farmers represented only three percent of the population of Ohio, but the average farm size had increased from 93.7 acres in 1940 to 165 acres in 1975 (Hurt 1984). This trend has continued for farms within Highland County. Review of historic and current aerials (1959–2015) indicates that while the land dedicated to crops remains constant, cultivated tracts within the project area have been combined to form larger fields.

3.3 BACKGROUND RESEARCH

3.3.1 Previously Recorded Archaeological Sites

Background research for the project included a map and records search using the Ohio Historic Preservation Office’s (OHPO) Online Mapping System (OMS), a searchable GIS-based program depicting previously recorded archaeological and historic resources in Ohio. Also examined were prior cultural resource reports available through OHPO. The results of the background research are a compilation of previously recorded cultural resources within a 2.0-mile radius of the project area (Figure 14; Tables 5 and 6).

Based on the background research, there are 12 archaeological sites and three Isolated finds within a 2.0-mile radius of the project area (Figure 14, Table 5). Three of these sites, 33HI466, 33HI471, 33HI474, and two isolated finds, 33HI475 and 33HI476, are within the current project area and are discussed in detail in Section 5. One additional prior cultural resources survey was conducted within two miles of the project area (Nye and Keener 2013).

3.3.2 Previously Recorded Historical Resources

Background research for the project area was conducted using resources available from the OHPO OMS. The database included review of the Ohio History Inventory, National Register of Historic Places (NRHP) files, the Historic Bridge Inventory, and information on cemeteries maintained by the Ohio Genealogical Society (OGS). The area examined was a 2.0-mile radius around the project area. The records review of OMS identified no previously recorded NRHP-listed or eligible properties or surveyed architectural resources within the project boundaries or

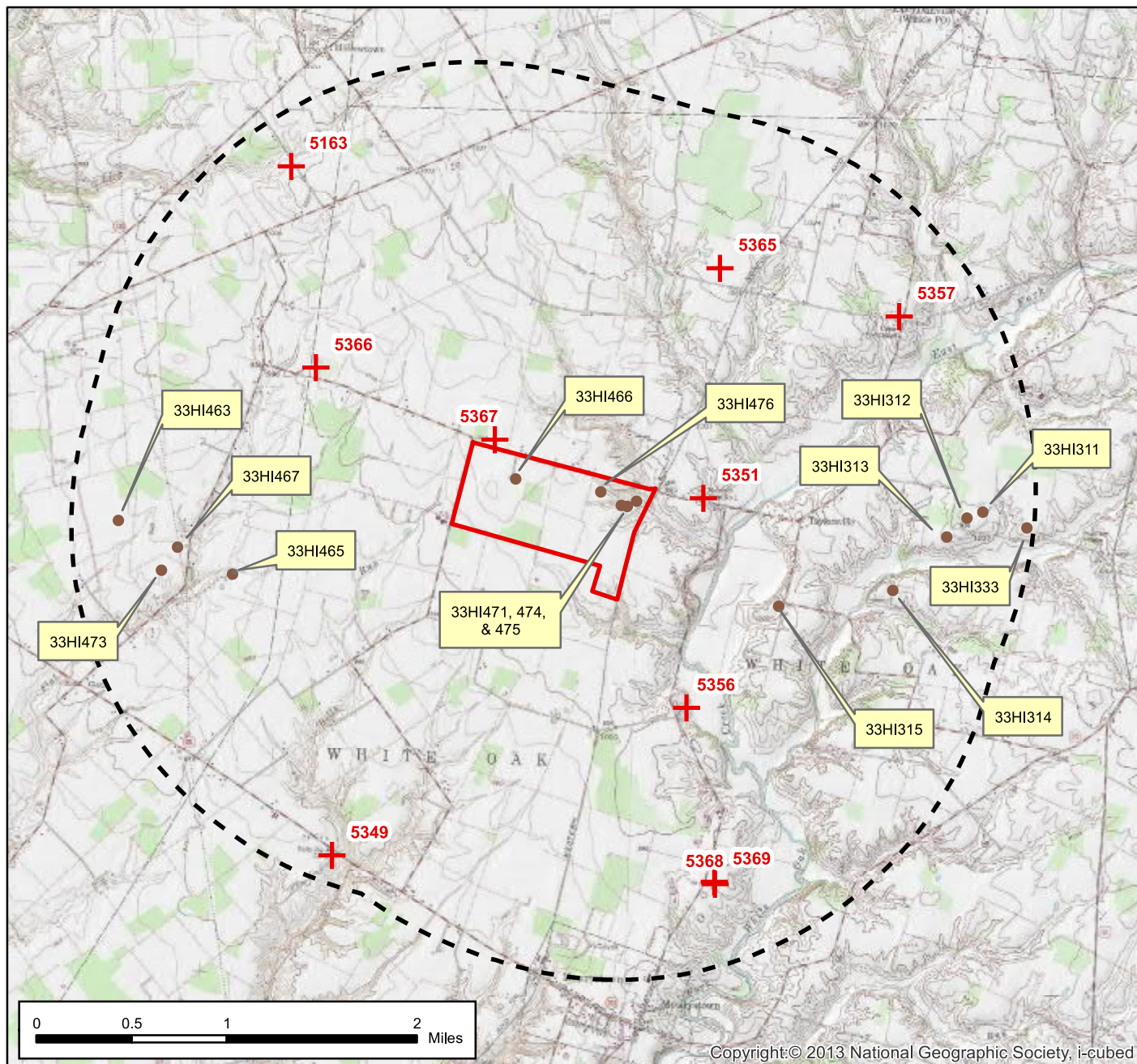
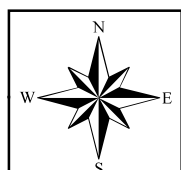
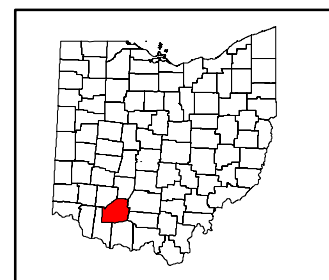
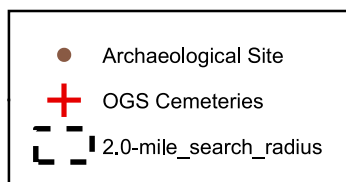


Figure 14. Previously recorded cultural resources within a 2.0-mile radius of the project.
Base Maps: Sardinia (1979) and Sugar Tree Ridge (1974) USGS 7.5' topographic maps.



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PREVIOUS SITES
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within the 2.0-mile search radius. Furthermore, there are no NRHP-listed properties, NRHP-eligible properties, National Historic Landmarks (NHL), bridges, or historic structures within two miles. The background research did identify nine Ohio Genealogical Society (OGS) cemeteries within the two-mile search radius (Table 6). None of the OGS cemeteries have been evaluated for NRHP eligibility and none are located within the current project area (Figure 14).

Table 5. Previously recorded cultural resources within a 2.0-mile radius of the project area.

Resource ID	Description	NRHP Eligibility	Reference
33HI311	Late Archaic artifact scatter	Not Available	OHPO
33HI312	Prehistoric lithic scatter	Not Available	OHPO
33HI313	Prehistoric lithic scatter	Not Available	OHPO
33HI314	Prehistoric earthen mound	Not Available	OHPO
33HI315	Late Archaic artifact scatter	Not Available	OHPO
33HI333	Prehistoric lithic scatter	Not Available	OHPO
33HI463	Mid-19th-early 20th c. house site; lithic scatter	Not Eligible	Sain et al. 2020
33HI465	Mid-19th/20th c. house site; Prehistoric lithic scatter	Not Eligible	Sain et al. 2020
33HI466	Mid-19th/20th c. house site; Prehistoric lithic scatter	Not Eligible	Sain et al. 2020
33HI467	Late Archaic, Early Woodland lithic scatter; 19th/20th c. house site	Not Eligible	Sain et al. 2020
33HI471	Prehistoric lithic scatter; Historic artifact scatter	Not Eligible	Sain et al. 2020
33HI473	Historic Isolate – 19th c. tobacco pipe	Not Eligible	Sain et al. 2020
33HI474	Prehistoric lithic scatter	Not Eligible	Sain et al. 2020
33HI475	Prehistoric Isolate - chert debitage	Not Eligible	Sain et al. 2020
33HI476	Prehistoric Isolate - chert debitage	Not Eligible	Sain et al. 2020

Table 6. OGS Cemeteries within a 2.0-mile radius of the project area.

OGS ID	Cemetery Name	Location	Location Confidence
5163	Unnamed #3 (Clay)	In bed of TR 401A	No
5349	Bells Run	SR 321 between TR 141A and TR 143A	Yes
5351	Dunn-Roberts	North side of CR 56A, west of CR20B	Yes
5356	Kibler	East side of CR 20B, just north of TR 145A	No
5357	Kibler Union-Union Chapel	North of CR 24C and CR 20C	Yes
5365	Unnamed #1 (White Oak)	East side of TR 146B. North of CR 24C	No
5366	Unnamed #2 (White Oak)	Near Clay Township, north of CR 56A	No
5367	Unnamed #3 (White Oak)	North side of CR 56A, just east of CR 60A	No
5368	UNNAMED #4	1 mile south of TR 145A. East side of CR 20B	No

3.4 HISTORIC MAP RESEARCH

In addition to the records review, eighteenth through twentieth century maps of the property were examined to determine whether the remains of historic buildings or other historic resources were likely to be present within the project area. Colton's 1851 Map of the State of Ohio places the project area in a rural setting to the east of Buford. The map depicts the project area between two unnamed streams, likely North Fork of White Oak Creek and White Oak Creek, and an unnamed road, likely West New Market Road (Figure 15). The 1914 Mills Archaeological Atlas of Ohio

Responsive ■ Resourceful ■ Reliable

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Figure 15. Colton's (1851) Map of Ohio showing the approximate location of the project area in red.

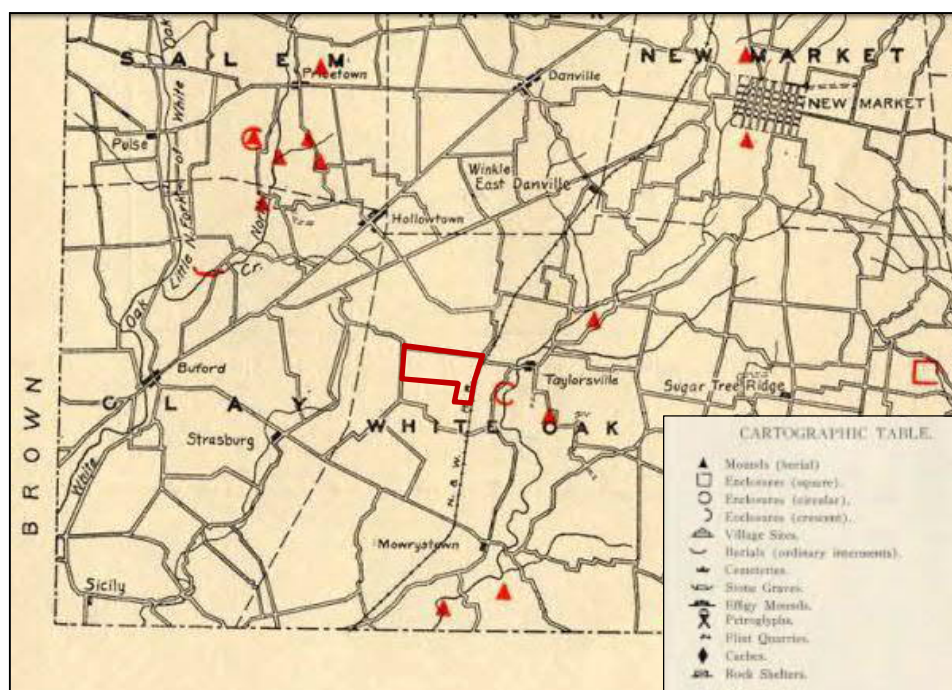


Figure 16. Mills Archaeological Atlas (1914) showing the project area in red.

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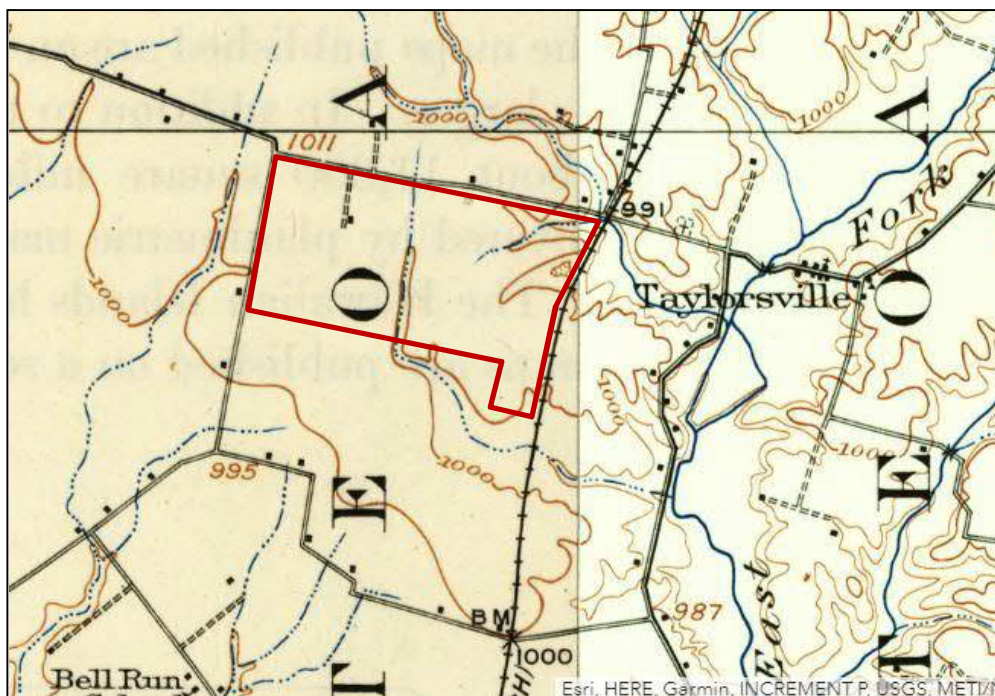


Figure 17. Sardinia (1917) and Hillsboro (1917) USGS topographic maps showing the project area in red.

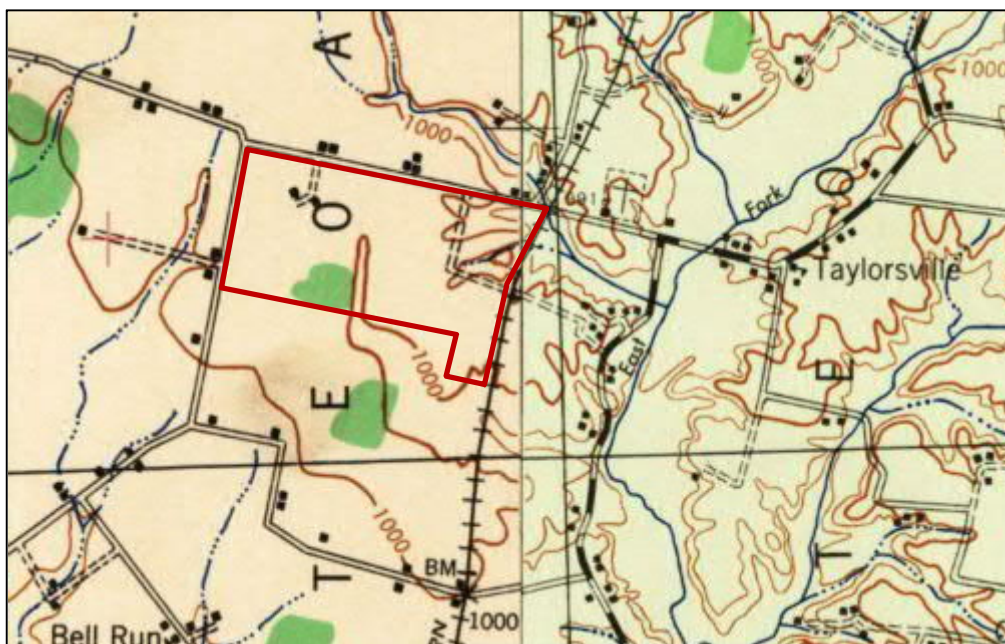


Figure 18. Sardinia (1944) and Hillsboro (1944) USGS topographic maps showing the project area in red.

shows the project area as being sparsely populated and located southwest of New Market, between Buford, Mowrystown, and Hollowtown (Figure 16). The map depicts 10 prehistoric mounds, two earthen enclosures, and one burial in the general area. None of these are within or adjacent to the project area. The 1917 Sardinia and Hillsboro USGS topographic maps show the project area as still being sparsely populated. One residence is indicated as being within the project area at this time (Figure 17). The 1944 Sardinia USGS topographic map also shows this residence within the project area (Figure 18). There is also a new dirt road in the eastern portion of the project tract that skirts around a tributary of White Oak Creek.

3.5 RESEARCH DESIGN AND EXPECTED RESULTS

The goal of the investigation was to identify and evaluate archaeological and historic resources within the project APE. A prior Phase I cultural resources survey of the Highland Solar Project used a predictive model to help determine areas with the highest potential for containing significant prehistoric and historic archaeological sites (Sain et al. 2020). Variables used in the model included distance to a permanent water source or wetland, slope, and soil drainage characteristics. Prehistoric sites tend to occur on low slope areas with well drained soils that are within 200 meters of a permanent water source or wetland. Historic sites tend to be located within 100 meters of old roads. During the archaeological survey the project area was stratified into areas of high, moderate, and low probability. Prehistoric high probability areas were defined as low slope (i.e., 10% slope) areas containing well drained soils that fell within 100 meters of a water source. Prehistoric moderate probability areas were low slope areas within 200 meters of a water source, regardless of soil drainage. Historic high probability areas were defined as areas within 100 meters of old roads.

Using the above predictive model, the proposed New Market Solar II project was also divided into areas of high, moderate, and low probability (Figure 19). Based on this model approximately 5 percent (16 acres) has a high potential for containing prehistoric archaeological resources and another 18 percent (54 acres) has a moderate probability. Approximately 23 percent (66 acres) of the project area has a high probability for containing historic period archaeological sites, although about 28 acres overlap with the prehistoric high and moderate probability areas. Approximately 63 percent (184 acres) of the project area has a low potential for containing any archaeological resources.

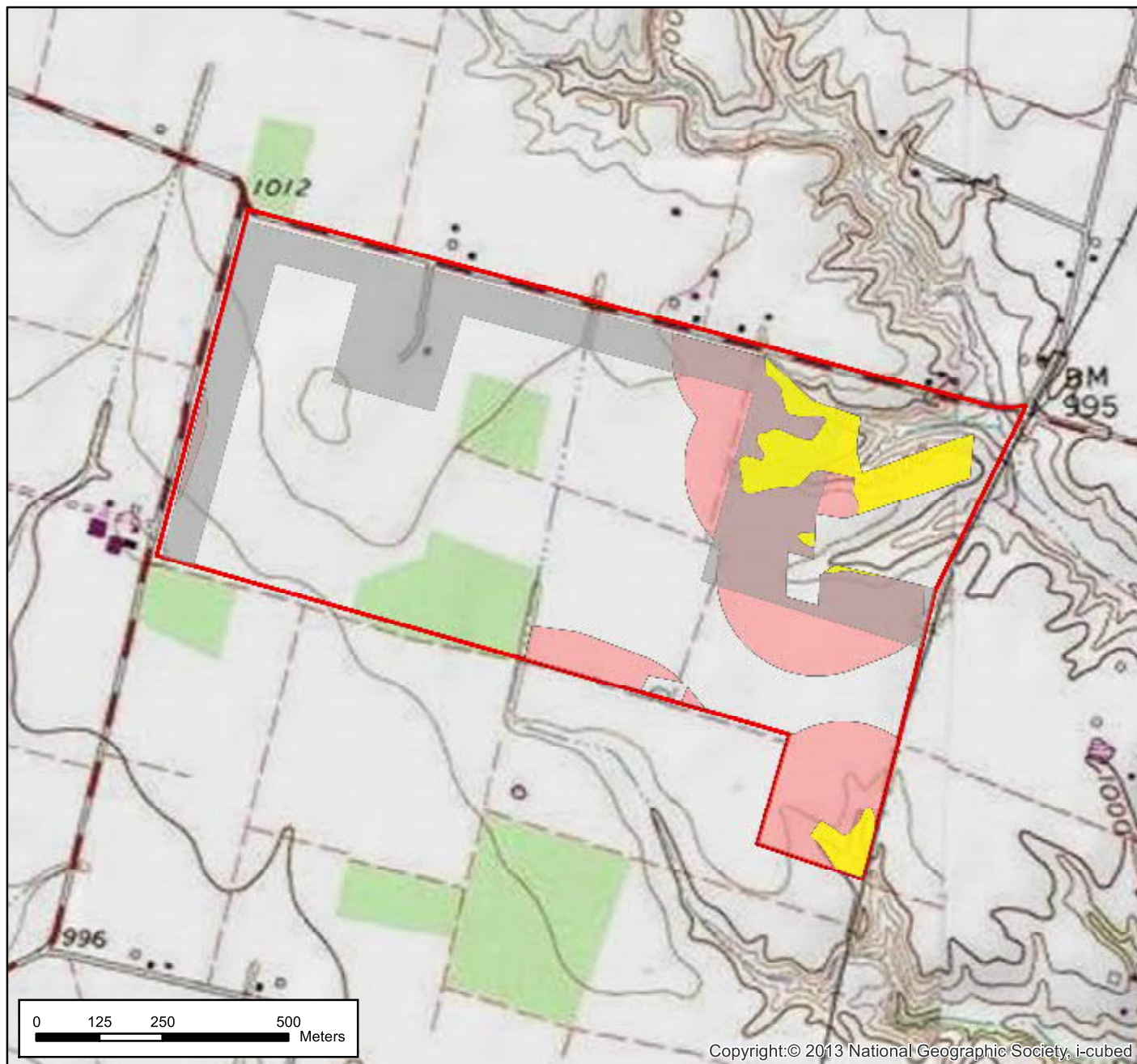
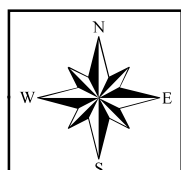
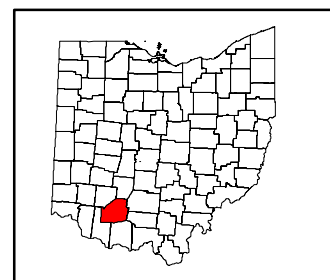
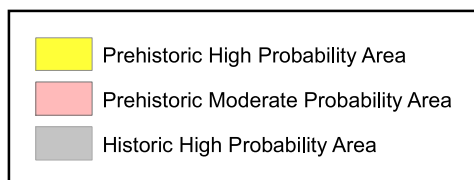


Figure 19. Archaeological predictive model.
Base Maps: Sardinia (1979) and Sugar Tree Ridge (1974) USGS 7.5' topographic maps.



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PREDICTIVE MODEL
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Figure
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4.0 FIELD AND LABORATORY METHODS

4.1 ARCHAEOLOGICAL FIELD METHODS

Based on the predictive model discussed in Section 3.4, high probability areas having good surface visibility (i.e., greater than 50 percent) were surveyed by pedestrian survey using transects spaced 10 meters apart. In high probability areas with poor surface visibility shovel testing was conducted at 15-meter intervals. In areas of moderate probability having good surface visibility, a surface inspection was performed along transects spaced 15 meters apart. In moderate probability areas having poor surface visibility, shovel testing was conducted at 25-meter intervals. In areas having a low archaeological potential with good surface visibility, a surface inspection along transects spaced 30 meters apart was conducted. In low probability areas with poor surface visibility, shovel testing was conducted at intervals spaced 30-meters apart.

In addition to the surface collection, four shovel tests were excavated across each site to help determine its stratigraphic integrity. Shovel tests were placed in cardinal directions either 10 or 15 meters from the center of the site. Each shovel test was approximately 50-x-50-cm in size and excavated to 50 cm below the ground surface (cmbs) or until culturally sterile subsoil, the water table, or an impenetrable obstacle was encountered. Soil from the shovel tests was screened through 1/4-inch wire mesh and artifacts, if encountered, were placed in plastic bags containing the appropriate provenience information. Information for each shovel test regarding artifact content, shovel test depth, soil texture and color (using the Munsell soil color chart), and other relevant environmental factors was kept in a field journal.

Sites were recorded in the field using field journals, detailed site maps, Terracon site forms, and photographed using a high-resolution digital camera (10 megapixel or higher). Sites were located using a Garmin GPSMAP 78 receiver (using UTM Zone 17, NAD 27) and plotted on USGS 7.5-minute topographic maps. State archaeological site forms were completed and submitted to OHPO at the completion of the fieldwork.

4.2 LABORATORY METHODS AND CURATION

Artifacts recovered during the survey were cleaned, identified, and analyzed using the methods summarized below. Following the completion of the analyses, artifacts were bagged according to site, provenience, and catalog number and the information was entered into an Excel spreadsheet (Appendix A). Acid-free plastic bags and artifact tags were used for the curation purposes.

Lithic artifacts were initially identified as either debitage (flakes and shatter) or tools. Debitage was sorted by raw material type, presence/absence of cortex, and size graded using a modified form of the mass analysis method described by Ahler (1989). Tools were classified as either being

flaked or ground stone, with flake tools being subdivided into bifaces, unifaces, or expedient tools (i.e., retouched or utilized flakes). Where possible, formal tools were classified by type, and the length, width, and thickness was recorded for each unbroken tool. Projectile point typology generally followed those contained in Coe (1964), Justice (1987), and Ritchie (1961).

Historic artifacts were first sorted by material (e.g., ceramics, glass, and metal), and then into classes (e.g., earthenware, container glass, nails) and types (e.g., whiteware, amethyst, hand wrought). Technological attributes, decorations, maker's marks, and other chronologically sensitive indicators were then used to help establish a temporal framework for the artifacts using such references Miller (1991), South (1977), and Noel Hume (1970) for historic ceramics, and Madden and Hardison (2015), Deiss (1981), Ketchum (1975), and Munsey (1970) for glass. In addition, the Florida Museum of Natural History's on-line digital type collection (http://www.flmnh.ufl.edu/histarch/gallery_types/) was also used to help identify historic ceramics.

The artifacts, notes, maps, photographs, and other materials generated as a result of this project will be temporarily curated at the Terracon office in Columbia, South Carolina. After conclusion of the project, these materials will either be returned to the landowners (if requested) or delivered to a facility meeting the curation standards set forth in 36 CFR Part 79, *Curation of Federally-Owned and Administered Archaeological Collections*.

4.3 ARCHITECTURAL SURVEY METHODS

An architectural survey was conducted to determine whether the proposed project would affect any above-ground historic resources within the proposed 0.5-mile APE. All land within the project tract was examined during a pedestrian survey and all publicly-accessible roads within the surrounding APE were driven to record structures more than 50 years that retained at least a modest degree of integrity. Each identified resource was photographed using a high resolution digital camera (10 megapixel or greater), marked on applicable USGS topographic maps, recorded regarding its historical value, appearance, and integrity in a field journal, and assessed for National Register eligibility using the Criteria established by the National Park Service (36 CFR Part 60.4).

Photographs were also taken from each resource toward the project area to help assess possible visual effects caused by the undertaking. Structures whose integrity was highly compromised were excluded from the survey. Historic structures recorded during the field survey were assessed for National of Historic Places (NRHP) eligibility by a Secretary of Interior-qualified Architectural Historian. Corresponding Ohio Historic Inventory (OHI) survey forms were also prepared for each historic resource. If any of the structures identified were determined to be eligible for the NRHP, Terracon provided an assessment of potential effects the project would have on these resources.

4.4 NATIONAL REGISTER ELIGIBILITY ASSESSMENT

For a property to be considered eligible for the NRHP it must retain integrity of location, design, setting, materials, workmanship, feeling and association (National Register Bulletin 15:2). In addition, a property must meet one or more of the criteria below:

- A. are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. are associated with the lives of persons significant in our past; or
- C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded or may be likely to yield information important in history or prehistory.

A resource may be eligible under one or more these criteria. Criteria A, B, and C are most frequently applied to historic buildings, structures, objects, non-archaeological sites (e.g., battlefields, cemeteries, natural features, and designated landscapes), or districts. Also, a general guide of 50 years of age is used to define “historic” in the NRHP evaluation process. A resource may, however, be eligible for the National Register even if it is less than 50 years of age but has exceptional significance.

The most frequently used criterion for assessing the significance of an archaeological site is Criterion D, although other criteria were considered where appropriate. For an archaeological site to be considered eligible, it must have the potential to add to the understanding of the area’s history or prehistory. A commonly used standard to determine a site’s research potential is based on a number of physical characteristics including variety, quantity, integrity, clarity, and environmental context (Glassow 1977). Another important factor is the uniqueness of the site. Sites that are commonly found such as twentieth century home sites should exhibit exceptional integrity and research potential to be eligible for inclusion in the NRHP. Site types that are rarely found (e.g., Clovis Period sites), or those that have strong cultural significance to descendant populations (e.g., burial mounds), may have lesser requirements for inclusion in the NRHP.

5.0 RESULTS

5.1 ARCHAEOLOGICAL RESULTS

A Phase I archaeological survey was conducted from December 3–5, 2018, May 1–2, and May 5–6, 2019. Ground surface visibility varied across the project tract and influenced the methodology employed. In areas with greater than 50 percent visibility a pedestrian survey was conducted, which included 110 transects placed at 10–30-meter intervals (depending on the archaeological probability). In areas with less than 50 percent surface visibility, shovel tests, raging in depth from 10–60 cmbs, were excavated, spaced 15–30 meters apart from one another.

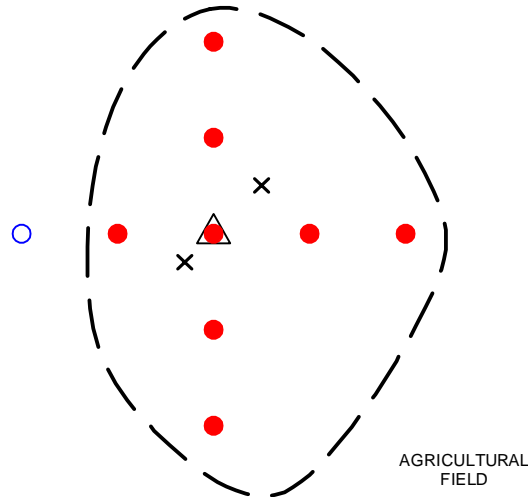
In general, two soil profiles were observed within the project area. The first consisted of approximately 10 cm of dark grayish brown (10YR 4/2) loam (Ap horizon), followed by 10+ cm (10–20+ cmbs) of brownish yellow (10YR 6/8) loamy clay subsoil (Bt horizon). The second consisted of approximately 20 cm of dark yellowish brown (10YR 4/6) loamy clay (Ap horizon), followed by 10+ cm (20–30+ cmbs) of yellowish brown (10YR 5/6) clay subsoil (Bt horizon). As a result of the archaeological survey, three archaeological sites, 33HI466, 33HI471, and 33HI474, and two isolated finds, 33HI475 and 33HI476, were identified (Figures 1 and 2).

5.1.1 Site 33HI466

Site Number: 33HI466	NRHP Recommendation: Not Eligible
Site Type: House site, Lithic scatter	Elevation: 1010 ft. AMSL
Components: Mid-19 th to mid-20 th c.; Unknown Prehistoric	Landform: Slight rise
UTM coordinates: E2561066, N4329061 (NAD 27)	Soil Types: Westboro Schafer silty loams; Clermont silty loam
Site Dimensions: 20 m N/S x 22 m E/W	Vegetation: Agricultural Field
Artifact Depth: 0–20 cmbs	No. of STPs/Positive STPs: 9/7

Site 33HI466 is a mid-nineteenth to mid-twentieth century house site and prehistoric lithic scatter located in an agricultural field approximately 450 meters southeast of the intersection of Stringtown Road and Edwards Road in the western portion of the project area (Figures 1 and 20). Although there are currently no standing structures in the immediate vicinity of the site, this area corresponds to the location of a structure on the 1917 Hillsboro USGS topographic map (see Figure 17). The site is in a plowed agricultural field and surface visibility across the site was 75 percent (Figures 20 and 21). Based on shovel testing and surface inspection, the site measures approximately 20 meters north/south by 22 meters east/west and is bounded by the extent of the surface scatter (Figure 22).

During the investigation four brick fragments were found on the surface; however, these were not collected. Nine judgmentally placed shovel tests were excavated in and around the site. These included a datum shovel test and a total of eight shovel tests excavated around the datum. A total of 117 artifacts were recovered from 0–20 cmbs in seven positive shovel tests. A typical soil



EXPLANATION

- POSITIVE STP
- NEGATIVE STP
- △ SITE DATUM
- × SURFACE ARTIFACT
- [] SITE BOUNDARY

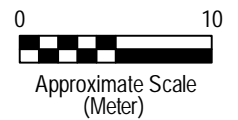


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IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mng:	DAS	Project No.	73187213
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Checked By:	DAS	File No.	73187213
Approved By:		Date:	11/19/2019

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Consulting Engineers and Scientists

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SITE DIAGRAM
NEW MARKET II SOLAR PHASE I 33H466 HIGHLAND COUNTY, OHIO

Figure
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Figure 21. Site 33HI466, facing south.



Figure 22. Site 33HI466, facing north

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profile consisted of approximately 20 cm of dark grayish brown (10YR 4/2) loam (Ap horizon) overlying 10+ cm (20–30+ cmbs) of brownish yellow (10YR 6/8) loamy clay subsoil (Bt horizon).

The artifacts recovered from the site include 34 pieces of historic ceramics including 22 pieces of whiteware, four pieces of Bristol type slip stoneware, three pieces of unidentified stoneware, two pieces of Albany slip stoneware, and three pieces of soft paste porcelain. There were also 38 pieces of container glass including clear (n=21), aqua (n=8), amber (n=4), cobalt blue (n=4), and light green (n=1); seven pieces of clear window glass, nine pieces of brick, 22 nails (two cut, five wire, and 15 unidentified), four pieces of iron, and one aluminum game piece stamped with a date of 1969. These artifacts date from the mid-nineteenth to mid-twentieth centuries. The prehistoric component of the site consists of two pieces of chert debitage (Appendix A).

Site 33HI466 is a mid-nineteenth to mid-twentieth century house site and prehistoric lithic scatter located in the northeast portion of the project area. All of the artifacts were recovered from the surface or in the plowzone and the site does not retain archaeological integrity. Although the site contains a large number of historic artifacts, all of the artifacts (except the 1969 game piece) are common artifact types and would not contribute to our knowledge of the history of the area. The prehistoric component of the site contains only two artifacts, neither of which are temporally diagnostic. In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – The site has no known association with events that have made a significant contribution to the broad patterns of our history.

Criterion B – The site has no known association with the lives of significant persons in our past.

Criterion C – The site contains no architectural or other aboveground remains. It does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value.

Criterion D – The site contains a low number of historic artifact groups and is a common site type, while the prehistoric component of the site has a low artifact diversity and density. Both components lack stratigraphic integrity and all of the artifacts were recovered from the surface or from the plowzone. Based on these factors, the site is unlikely to yield significant information about the prehistory of the area.

The historic and prehistoric components of site 33HI466 have low artifact density and diversity and lack archaeological integrity. Based on these factors, site 33HI466 does not meet any of the criteria necessary for inclusion in the National Register and was recommended as being ineligible for the NRHP. The OHPO concurred with this recommendation.

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5.1.2 Site 33HI471

Site Number: 33HI471

Site Type: Lithic scatter; Historic artifact scatter

Components: Unknown Prehistoric; Unknown Historic

UTM coordinates: E261958, N4328834 (NAD 27)

Site Dimensions: 10 m N/S x 20 m E/W

Artifact Depth: 0–55 cm

NRHP Recommendation: Not Eligible

Elevation: 1000 ft. AMSL

Landform: Rise/Hill

Soil Type: Westboro-Schaffer silt loams

Vegetation: Grassy Field

No. of STPs/Positive STPs: 9/2

Site 33HI471 is a small prehistoric lithic scatter and historic artifact scatter located on a grassy hill approximately 175 meters south of Edwards Road in the northeast portion of the project area (Figure 1). Vegetation at the site consists of a grassy field and surface visibility was approximately 15 percent (Figures 23 and 24). The 1944 Hillsboro USGS topographic map shows a road near the location of the site, although no evidence for this road exists today. The site consisted of a high probability area with poor surface visibility. Shovel testing was conducted at 15-meter intervals with delineation shovel tests excavated at 7.5-meter intervals around the initial positive datum shovel test. Based on shovel testing, the site measures approximately 10 meters north/south by 20 meters east/west and is bounded by two negative shovel tests to the east, west, and south, and one negative shovel test and steep slope to the north (Figure 25).

During the investigation, nine shovel tests were excavated in and around the site. These included a datum shovel test and eight shovel tests excavated around the datum. A second delineation shovel test was not excavated to the north of the site due to the presence of a steep slope. A total of seven artifacts was recovered from two positive shovel tests between 0–55 cmbs. A typical soil profile consisted of approximately 30 cm of brown (10YR 4/3) clayey loam (Ap horizon), overlying 10+ cm (30–40+ cmbs) of yellowish brown (10YR 5/8) clay subsoil (Bt horizon). In all, seven artifacts were recovered from the site. These consisted of two pieces of chert debitage, two unidentified nails, and three iron fragments (Appendix A). None of these artifacts is temporally diagnostic.

Site 33HI471 is a small prehistoric lithic scatter and historic artifact scatter located in the northeast portion of the project area. The prehistoric component of the site has few artifacts, no artifact diversity, and contains no temporally diagnostic artifacts. The historic component contains only two unidentified nails and three corroded metal fragments, all found in the same shovel test. In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – The site has no known association with events that have made a significant contribution to the broad patterns of our history.

Criterion B – The site has no known association with the lives of significant persons in our past.

Phase I Cultural Resource Investigations

New Market Solar II Solar Farm ■ Highland Co, Ohio

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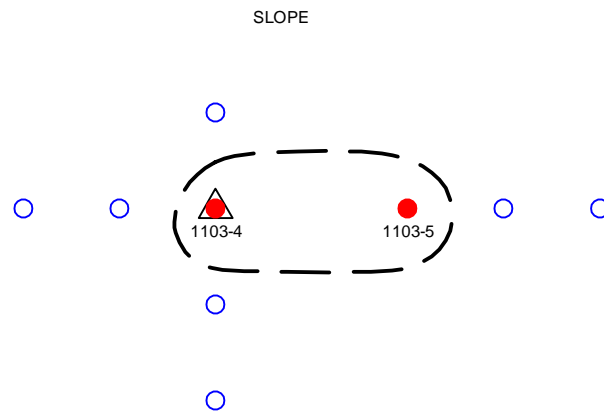


Figure 23. Site 33HI471, facing south.



Figure 24. Site 33HI471, facing west.

Responsive ■ Resourceful ■ Reliable



EXPLANATION

- POSITIVE STP
- NEGATIVE STP
- △ SITE DATUM
- SITE BOUNDARY

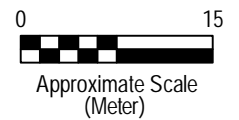



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IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr:	DAS	Project No.	73187213	 Consulting Engineers and Scientists 521 CLEMSON ROAD COLUMBIA, SC 29229 PH. (803) 741-9000 FAX. (803) 741-9900	SITE DIAGRAM NEW MARKET SOLAR II PHASE I 33HI471 HIGHLAND COUNTY, OHIO	Figure 25
Drawn By:	PTK	Scale:	AS SHOWN			
Checked By:	DAS	File No.	73187213			
Approved By:		Date:	JUNE 2019			
Siting Board Application						

Criterion C – The site contains no architectural or other aboveground remains. It does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value.

Criterion D – The prehistoric component of the site has few artifacts, no artifact diversity, and contains no temporally diagnostic artifacts. The historic component contains only two unidentified nails and three corroded metal fragments, all found in the same shovel test. Based on these factors, the site is unlikely to yield significant information about the prehistory or history of the area.

Site 33HI471 is a small lithic scatter and historic artifact scatter situated on a grassy hill in the northeast portion of the project area. The site contains a small number of temporally non-diagnostic artifacts and has no artifact diversity. Based on these factors, site 33HI471 does not meet any of the criteria necessary for inclusion in the National Register. The site was recommended as being ineligible for the NRHP and OHPO concurred with this recommendation.

5.1.3 Site 33HI474

Site Number: 33HI474	NRHP Recommendation: Not Eligible
Site Type: Lithic scatter	Elevation: 1000 ft. AMSL
Components: Unknown Prehistoric	Landform: Small Rise
UTM coordinates: E262089, N4328872 (NAD 27)	Soil Type: Westboro-Schaffer silt loams
Site Dimensions: 5 m N/S x 5 m E/W	Vegetation: Grassy Field
Artifact Depth: 10–20 cm	No. of STPs/Positive STPs: 9/1

Site 33HI474 is a small prehistoric lithic scatter located in a grassy agricultural with no surface visibility at UTM coordinates E262089, N4328872 (NAD 27) (Figure 1). The site consisted of a high probability area with poor surface visibility (Figures 26 and 27). Shovel testing was conducted in a cruciform pattern at 15-meter intervals with delineation shovel tests excavated at 7.5-meter intervals. Based on shovel testing, the site measures approximately 5 meters north/south by 5 meters east/west and is bounded by two negative shovel tests in each cardinal direction (Figure 28).

During the investigation, eight shovel tests were excavated around an initial positive shovel test that contained one utilized chert flake and one chert flake. Neither of these artifacts is temporally diagnostic. Apart from the initial positive shovel test, no other artifacts were recovered from the site. A typical soil profile at the site consisted of approximately 30 cm of brown (10YR 4/3) clayey loam (Ap horizon), overlying 10+ cm (30–40+ cmbs) of yellowish brown (10YR 5/8) clay subsoil (Bt horizon).

Site 33HI474 is a small prehistoric lithic scatter located in the northeast portion of the project area. The site has few artifacts, little artifact diversity, and contains no temporally diagnostic artifacts.

All of the artifacts were found in the plowzone from the same shovel test. In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – The site has no known association with events that have made a significant contribution to the broad patterns of our history.

Criterion B – The site has no known association with the lives of significant persons in our past.

Criterion C – The site contains no architectural or other aboveground remains. It does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value.

Criterion D – The site has few artifacts, no artifact diversity, and contains no temporally diagnostic artifacts. Based on these factors, the site is unlikely to yield significant information about the prehistory of the area.

Site 33HI474 is a small prehistoric lithic scatter situated in a grassy field in the northeast portion of the project area. The site contains a small number of temporally non-diagnostic artifacts and has little artifact diversity. Based on these factors, site 33HI474 does not meet any of the criteria necessary for inclusion in the National Register and was recommended as being ineligible for inclusion in the NRHP. The OHPO concurred with this recommendation.

5.1.4 Isolated Finds

33HI475 consists of a single piece of chert debitage recovered from STP 1101–7 between 0 and 10 cmbs. The isolated find was found on a grassy hill located in the easternmost portion of the project area at UTM coordinates E262009, N4328828 (NAD 27) (Figure 1). Eight additional shovel tests were excavated in cardinal directions around the initial positive; however, no other artifacts were found. Previously recorded Isolated Find 31HI475 has little research potential and was recommended ineligible for inclusion in the NRHP. The OHPO concurred with this recommendation.

33HI476 consists of a single piece of chert debitage recovered from STP 1057–14 between 0 and 25 cmbs. The isolated find was found on a grassy hill in the easternmost portion of the project area at UTM coordinates E261786, N4328950 (NAD 27) (Figure 1). Eight additional shovel tests were excavated in cardinal directions around the location of the initial positive shovel test; however, no other artifacts were found. This isolated find has little research potential and was recommended ineligible for inclusion in the NRHP. The OHPO concurred with this recommendation.

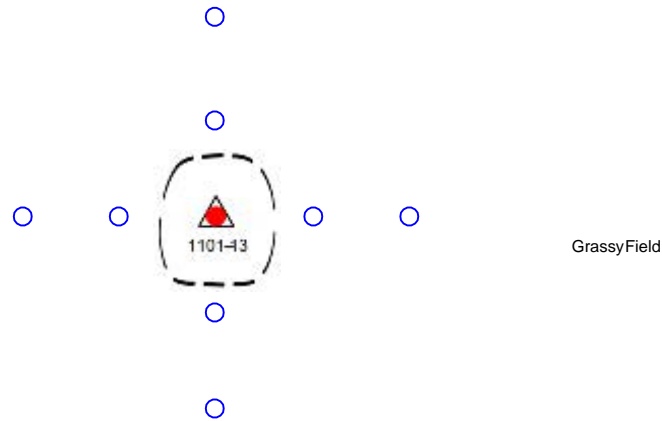


Figure 26. Site 33HI474, facing east.



Figure 27. Site 33HI474, facing west.

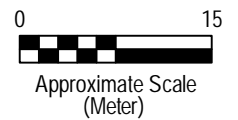
Responsive ■ Resourceful ■ Reliable



EXPLANATION

- POSITIVE STP
- NEGATIVE STP
- SITE DATUM
- SITE BOUNDARY

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Project Mng:	DAS	Project No.	73187213
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Checked By:	DAS	File No.	73187213
Approved By:		Date:E 2019

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SITE DIAGRAM
NEW MARKET SOLAR II PHASE I 33HI474 HIGHLAND COUNTY, OHIO

Figure
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5.2 HISTORIC RESOURCE RESULTS

Twenty-five historic resources located in the APE were previously identified during a survey of the Highland Solar 300 MW project (OHPO Project No. 2018-HIG-40877) (Table 7). These resources include HIG0036813, HIG0036913, HIG0037113, HIG0037013, HIG0037113, HIG0037313, HIG0037413, HIG0037513, HIG0037613, HIG0040314, HIG0040414, HIG0040514, HIG0041114, HIG0041214, HIG0041314, HIG0041414, HIG0041514, HIG0041614, HIG0041714, HIG0041814, HIG0042014, HIG0042114, HIG0042214, HIG0042414, HIG0042514, and HIG0042614. Of these resources, HIG0041414 (the Roberts Cemetery), HIG0037113, and HIG0041614, were determined to be eligible for inclusion in the NRHP, and one, HIG0041714, was unevaluated. The remaining 21 resources were determined to be ineligible for inclusion in the NRHP (Sain et al. 2020). Additionally, seven newly recorded resources, located in the APE were evaluated. The four previously recorded eligible and unevaluated historic properties, as well as newly recorded resources, are discussed below.

Table 7. Previously Surveyed Cultural Resources within the Area of Potential Effects.

Resource ID	Description	NRHP Eligibility	Recommendations
HIG0036813	ca. 1920 Wisconsin Dairy Barn	Not Eligible	No additional work
HIG0036913	ca. 1920 Two-Story Vernacular House	Not Eligible	No additional work
HIG0037113	ca. 1860 Flat Barn	Eligible	No Effect
HIG0037013	ca. 1962 Ranch House	Not Eligible	No additional work
HIG0037313	ca. 1880 I-house	Not Eligible	No additional work
HIG0037413	ca. 1860 Two-Story Vernacular House	Not Eligible	No additional work
HIG0037513	ca. 1860 Hall-Parlor House	Not Eligible	No additional work
HIG0037613	ca. 1965 Ranch House	Not Eligible	No additional work
HIG0040314	ca. 1890s Farm Complex	Not Eligible	No additional work
HIG0040414	ca. 1870 Two-Story Vernacular House	Not Eligible	No additional work
HIG0040514	ca. 1900 Unknown House	Not Eligible	No additional work
HIG0041114	ca. 1890 Gabled-El house	Not Eligible	No additional work
HIG0041214	ca. 1920s Two-Story Vernacular House	Not Eligible	No additional work
HIG0041314	ca. 1920s Vernacular House	Not Eligible	No additional work
HIG0041414	ca. 1836 Roberts Cemetery	Eligible	No Effect
HIG0041514	ca. 1920 English/Three Bay Barn	Not Eligible	No additional work
HIG0041614	ca. 1860 New England One and a Half House	Eligible	No Effect
HIG0041714	ca. 1920 Flat Barn	Unevaluated	No Effect
HIG0041814	ca. 1921 Hipped Roof Bungalow House	Not Eligible	No additional work
HIG0042014	ca. 1870 I-House	Not Eligible	No additional work
HIG0042114	ca. 1920 Vernacular Barn	Not Eligible	No additional work
HIG0042214	ca. 1870 New England One and a Half House	Not Eligible	No additional work
HIG0042414	ca. 1880 Hall and Parlor House	Not Eligible	No additional work
HIG0042514	ca. 1860 Hall and Parlor House	Not Eligible	No additional work
HIG0042614	ca. 1890 Gabled-El House	Not Eligible	No additional work

5.2.1 Resource ID No. HIG0041414 – Roberts Cemetery

Roberts Cemetery is an approximately 35,000 square foot burial ground located one mile west of

the town of Taylorsville (Figures 29–31). The perimeter of the cemetery is bordered in a wrought iron fence, which allows access through an archway with decorative ironwork and the letters ROBERTS CEMETERY. The entire cemetery plot is currently slightly more than half occupied with approximately 250 burials and contains both historic and more contemporary grave markers. The historic markers are aligned in rows, but no typical type or style is evident, though they appear to be constructed exclusively of stone. The modern markers are generally upright rectangular horizontal granite monuments, which sit on a granite base and reach several feet in height. Notable monuments include obelisks and early examples carved stone markers (1836) illustrating patterns of iconography that provide information related to the cultural and religious affiliations of the interred.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This property is likely associated with the community of Taylorsville and its earliest settlers, the Isaiah Roberts family, and may represent the early settlement of the town and its designation of a burial ground.

Criterion B – With its status as the area’s single cemetery, it is possible that this resource has an association with the lives of significant persons in our past, including the Isaiah Roberts family.

Criterion C – Cemeteries do not qualify for listing under NRHP Criterion C unless they possess distinctive features, monuments of high artistic merit, or noteworthy site planning design. The design of the Roberts Cemetery, including its monuments, rise to the level of significance required for Criterion C.

Criterion D – These resources are likely to yield significant information about the history of Whiteoak Township.

Cemeteries and graves do not qualify for NRHP listing unless they are associated with persons of exceptional significance (and is the only or best physical representation associated with that person); of outstanding age within its geographic and cultural context; feature distinctive design features; or were part of noteworthy historic events. The Roberts Cemetery appears to be a community cemetery associated with the early nineteenth century town of Taylorsville. The town was settled on land owned by Isaiah Roberts, so it is likely the cemetery is associated with the earliest settlers of Whiteoak Township. The earliest known burials date from the early settlement period (ca. 1830). Some of the extant grave markers do possess noteworthy design characteristics and are high-style examples of monuments created during this time period. Elements that may historically marked the boundaries of the cemetery, such as fencing or ornamental plantings, are still extant. The entrance gate is an outstanding example of wrought iron work and dates from the historical period. Therefore, the Roberts Cemetery is recommended eligible for listing to the NRHP under Criteria A and B for its association with the Roberts family



Figure 29. Resource ID No. HIG0041414 – Roberts Cemetery, facing north.



Figure 30. Resource ID No. HIG0041414 – Roberts Cemetery, facing northwest.

Responsive ■ Resourceful ■ Reliable

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Figure 31. Resource ID No. HIG0041414 view towards the project area, facing west.

and the community of Taylorsville. It is also recommended eligible under Criterion C for the artistic merit of its monuments and decorative iron fencing and gate. The boundary for Resource ID No. HIG0041414 follows the current legal boundaries that encompass the eligible resource and is consistent with the historic boundaries and significance (National Register Bulletin 21:3).

5.2.2 Resource ID No HIG0041614

Resource ID No. HIG0041614 is a farmstead located on the west side of Fender Road. The complex consists of single-family residence and a large collection of smaller historic agricultural outbuildings including a barn, sheds, a carport, and a privy (Figures 32–34). The house is a one and a half story frame building, built in approximately 1860 with Gothic Revival elements including a steeply-pitched side gable roof and tall, narrow windows. The east façade facing the street has three bays with a central single door flanked on each side by a single 4/4 window; a similar 4/4 window is located in each gable end. A one-story open less-than-full-width hip roof porch spans the center of the façade. The porch, which appears to be an 1880s addition with elements of the Eastlake style, is decorated with spindlework, and includes flared brackets, dropped finials, sunburst corners, and sawtooth courses. The porch is supported by turned wood posts, set atop small brick piers. It is clad entirely in horizontal wood drop lap siding, which may be a historic material. At the south and rear elevations of the building, two additions are visible: a one-and-a-

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Figure 32. Resource ID No. HIG0041614, facing southwest.



Figure 33. Resource ID No. HIG0041614, facing west.

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Figure 34. Resource ID No. HIG0041614 view toward the project area, facing southwest.

half story side-gabled extension, and a shorter, one-story gabled volume.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource has no known association with events that have made a significant contribution to the broad patterns of American history.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – The residence at this location was built in approximately. Its Gothic Revival style, extant siding, original wood sash windows, porch post detailing, and lack of detracting additions are all notable qualities. Its remarkable integrity of materials, design, workmanship, location, feeling, and association render it eligible for the NRHP.

Criterion D – These resources are unlikely to yield significant information about the history of Whiteoak Township

Resource ID No. HIG0041614 is an excellent and rare example of a ca. 1860 Gothic Revival style farm house in rural Whiteoak Township. It retains a high degree of physical integrity and is able

to clearly convey its architectural significance. Based on this evaluation, Resource ID No. HIG0041614 is recommended NRHP eligible under Criterion C for Architecture. The boundary for Resource ID No. HIG0035913 follows the distribution of the historic resources (National Register Bulletin 21:3) that contribute to the significance of the resource under Criterion C.

5.2.3 Resource ID No. HIG0041714

Resource ID No. HIG0041714 is located on the west side of Fender Road, approximately 0.75 miles west of the community of Taylorsville (Figure 35 and 36). It is set back from the road approximately a quarter mile and is therefore not easily visible from the right-of-way. It is a small wood-framed barn, with a steep broken gable roof clad in standing seam metal sheeting. Due to the distance from the public right-of-way, review of building materials, form, and overall physical integrity was not possible. Therefore, because the resource cannot be fully evaluated from the right of way given the distance, Resource ID No. HIG0041714 is recommended unevaluated, pending further investigation. The boundary for Resource ID No. HIG0041714 follows the distribution of the historic resources (National Register Bulletin 21:3).

5.2.4 Resource ID HIG0045714

Resource ID HIG0045714 is located within the boundaries of the project area at 2659 West New Market Road on land parcel number 47-18-000-490.01 (Figures 37 and 38). Resource ID HIG0045714 is a ca. 1910, one and a half-story, cross gable Bungalow, single family residence with no academic style. The resource consists of a symmetrical rectangular plan facing the southeast. Located on the southeast façade of the resource is a partial veranda covered by a half hip roof supported by tapered wooden porch supports over brick piers. Beneath the veranda is a central entry door flanked by single non-historic one-over-one double hung sash windows. Directly above the veranda is a single one-over-one double hung sash window and a small rectangular gable vent within the front facing gable. A small gabled addition is located on the northeast elevation of the house with a secondary entry door. The exterior wall of the house consist of non-historic vinyl siding and the roof is covered in pressed sheet metal.

A ca. 1950 pyramidal roof garage is located on this land parcel and is positioned southeast of the house. The exterior walls are composed of concrete block and the roof of the garage is covered in pressed sheet metal. Double sliding doors are featured on the south façade and composed of corrugated metal. Two sliding windows are featured on both the east and west facades and set in one-by-one configuration.

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Figure 35. Resource ID No. HIG0041714, facing west.



Figure 36. Resource ID No. HIG0041714 view toward the project area, facing southwest.

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Resource ID HIG0045714 has been significantly altered as a result of the addition, the inclusion of modern vinyl siding, and the windows added to the southeast facade. The resource has remained on its original site of construction, is still located in a rural residential setting, and still evokes an early-twentieth century rural feeling. Therefore, it has retained integrity in location, setting, and feeling, but does not retain integrity in design, materials, and workmanship style.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource has no association with significant events or periods in our history's past.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of its type or style in the area.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people or events, and is unlikely to yield significant information about the history of the surrounding area. Additionally, the addition has significantly altered the original form and massing of the building. Based on this assessment, Resource ID HIG0045714 is recommended not eligible for inclusion in the NRHP.

5.2.5 Resource ID HIG0045814

Resource ID HIG0045814 is located within the boundaries of the project area off West New Market Road on land parcel number 47-19-000-378.00 (Figures 39 and 40). Resource ID HIG0045814 is a ca. 1900s farm complex consisting of a ca. 1900s three-bay barn, a ca. 1900s pole barn, and a ca. 1950s corrugated metal grain bin. Both barns on the property consist of vertical board siding and pressed sheet metal roofing. Entry bays are located on the north facing gables. On the three-bay barn the foundation consists of concrete block and a small gable vent is located within the front facing gable.

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Figure 37. Resource ID HIG0045714, facing northwest.



Figure 38. Resource ID HIG0045714, facing northwest.

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Figure 39. Resource ID HIG0045814, facing south.



Figure 40. Resource ID HIG0045814, facing southeast.

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The three-bay barn and pole barn appear to be in disrepair as evidenced by missing, rotted, and warped siding and missing or decayed roofing materials. At least one other building appears on the *Sardinia, Ohio* (1961) USGS topographic map but this building has since been razed.

The buildings associated with Resource ID HIG0045814 retain many of their original materials. However, the current condition of the buildings has compromised their historic integrity. The resource has remained on its original site of construction, is still located in a rural agricultural setting, and still evokes an early twentieth century rural feeling. Therefore, it has retained integrity in location, setting, feeling, and materials but does not retain its integrity in design or workmanship style.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource is not a noteworthy example of a farm complex and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale. Additionally, the removal of one building has disrupted its historical association as a farm complex.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of a ca. early twentieth century agricultural types or styles.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people, and is not a significant example of its type or style. Additionally, this resource is not a noteworthy example of a working farmstead and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale. Based on this assessment, Resource ID HIG0045814 is recommended not eligible for inclusion in the NRHP.

5.2.6 Resource ID HIG0046014

Resource ID HIG0046014 is located within the boundaries of the project area off Hollowtown Road on land parcel number 47-18-000-484.00 (Figures 41 and 52). Resource ID HIG0046014 is a ca. 1940 Quonset barn and consists of a rectangular plan facing the east. Located on the east façade of the resource is large entry bay with two sliding doors. The exterior walls consist of a poured concrete foundation and wooden siding and the roof is covered in corrugated metal sheeting. One other building appears on the *Sardinia, Ohio* (1961) USGS topographic map but this building has since been razed.

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Resource ID HIG0046014 retains much of its original design and materials. The resource has remained on its original site of construction, is still located in a rural agricultural setting, and still evokes an mid-twentieth century rural feeling. Therefore, it has retained integrity in location, setting, feeling, design, materials, and workmanship style.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource has no association with significant events or periods in our history's past.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of a ca. 1940 Quonset barn type.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people or events, and is unlikely to yield significant information about the history of the surrounding area. Based on this assessment, Resource ID HIG0046014 is recommended not eligible for inclusion in the NRHP.

5.2.7 Resource ID HIG0046114

Resource ID HIG0046114 is located within the project area off Hollowtown Road on land parcel number 45-19-000-373.00 (Figures 43 and 54). Resource ID HIG0046114 is a ca. 1920s one-story, gabled barn with no academic style. The gabled barn consists of a rectangular plan facing the northeast. Two large open bays are located on the northwest and southeast elevations of the resource. The northwest bay features a modern corrugated metal sliding door. The exterior walls are composed of vertical board siding with pressed sheet metal siding in the southeast gable and the roof is covered in pressed sheet metal. The barn is in a state of decay due to neglect as evidenced by decaying exterior materials.

Resource ID HIG0046114 retains much of its original design and has remained on its original site of construction, is still located in a rural agricultural setting, and still evokes an early-twentieth century rural feeling. Therefore, it has retained integrity in location, setting, feeling, and design but does not retain its integrity in materials or workmanship style.

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Figure 41. Resource ID HIG0046014, facing southwest.



Figure 42. Resource ID HIG0046014 , facing northwest.

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Figure 43. Resource ID HIG0046114, facing west.



Figure 44. Resource ID HIG0046114, facing southeast.

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In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource has no association with significant events or periods in our history's past.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of its type or style.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people, and is unlikely to yield significant information about the history of the surrounding area. Based on this assessment, Resource ID HIG0046114 is recommended not eligible for inclusion in the NRHP.

5.2.8 Resource ID HIG0046214

Resource ID HIG0046214 is located adjacent to the project area at 2784 Hollowtown Road on land parcel number 47-18-000-487.00 (Figures 45–48). Resource ID HIG0046214 is a ca. 1920s farmstead consisting of a ca. 1920s residence, a ca. 1920 Erie Shore barn, three ca. 1930s grain silos, and several non-historic garages and sheds. The house is one-story, single family, side gabled bungalow type with no academic style. It consists of an asymmetrical rectangular plan facing the east. Located on the east façade of the resource is a single-entry door offset to the south. Flanking the front entry door are one-over-one double hung sash windows. Located on the north elevation of the house is a small gabled addition with non-historic two-over-two double hung sash windows. The exterior walls are covered in vinyl siding and the roof is covered in pressed sheet metal.

Ancillary buildings associated with Resource ID HIG0046214 include three grain silos, several non-historic garages and sheds, and an Erie Shore barn. The grain silos are ca. 1930s and are of common design and constructed with corrugated metal. The Erie Shore barn features a gambrel roof and is two stories tall. The exterior walls are composed of clapboard and the roof is covered in pressed sheet metal. Several additions have been appended to the Erie Shore barn including an extended shed roof addition on its southwest elevation and a shed roof lean-to

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Figure 45. View of buildings associated with Resource ID HIG0046214, facing northwest.



Figure 46. View of barn associated with Resource ID HIG0046214, facing south.

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Figure 47. View of house associated with Resource ID HIG0046214, facing southwest.



Figure 48. View of house associated with Resource ID HIG0046214, facing south.

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appended to the southeast elevation. Additionally, a front gable, open sided shed was adjoined to the lean-to.

Resource ID HIG0046214 has remained on its original site of construction, is still located in a rural agricultural setting, and still evokes an early-twentieth century rural feeling. However, the house has had some of its historic materials replaced with modern materials and the alterations to the house and the ancillary buildings have altered the original designs. Therefore, it has retained integrity in location, setting, and feeling but does not retain its integrity in materials, design, or workmanship style.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource maintains its associations with agriculture but is not a noteworthy example of a working farmstead and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of its type or style. Additionally, multiple additions and alterations have altered the historic integrity of the original design.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people, and is not a significant example of its type or style. Additionally, the house has had some of its historic materials replaced with modern materials and the alterations to the house and the ancillary buildings have altered the original designs. Finally, this resource is not a noteworthy example of a working farmstead and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale. Based on this assessment, Resource ID HIG0046214 is recommended not eligible for inclusion in the NRHP.

5.2.9 Resource ID HIG0046409

Resource ID HIG0046409 is located approximately 1,050 feet north of the project area off Landess Road on land parcel number 19-19-000-104.00. Resource ID HIG0046409 is a ca. 1920s farm complex featuring a ca. 1920s Erie Shore barn, a ca. 1930s gabled barn, and a ca. 1930s garage (Figures 49–51). The Erie Shore barn features a gambrel roof covered in standing metal seam. The exterior walls are covered in aluminum siding. The east façade features two bays; the central bay features double sliding doors and the other bay, located on the north end of the east façade, is covered by a single panel. Two six over six, double hung sash windows are featured in the gambrel end on the second story on the east façade. The north façade features

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Figure 49. Resource ID HIG0046409, facing southwest.



Figure 50. Resource ID HIG0046409, facing northwest.



Figure 51. Resource ID HIG0046409, facing northwest.

two more bays similar to the smaller bay on the east façade. Included on this façade are five six by six casement windows located on the ground level.

Additionally, a ca. 1930s, one-story, gabled barn with no academic style is located to the northwest. The resource consists of a symmetrical rectangular plan facing the east. Located on the east façade are two double door entry ways. Directly above the entry doors is a single six-over-six double hung sash window. On the south façade of the resource is a second double door entry flanked to the east by paired six-over-six double hung sash windows. The resource is clad in vertical board siding and standing seam metal roofing. A single interior brick chimney is located on the slope of the roof.

A garage, located southwest of the barn, is also associated with this land parcel. The exterior walls are composed of vertical board and the roof is covered in standing seam metal. Located on the east façade of the garage is a single-entry way that features a standard hinged door. The garage is in disrepair due to neglect as evidenced by the removal of all exterior wall materials on the south façade.

Another building is associated with this land parcel and is located immediately southwest of the garage. This building is noted in land parcel records as being a frame poultry house. It appears that this building has been demolished and only the roof remains.

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Resource ID HIG0046409 retains much of its original design, has remained on its original site of construction, is still located in a rural agricultural setting, and still evokes an early-twentieth century rural feeling. However, original building materials have been substituted for modern building materials on the Erie Shore barn. Therefore, it has retained integrity in location, setting, feeling, design, and workmanship style but does not retain its integrity in materials.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource maintains its associations with agriculture but is not a noteworthy example of a working farm complex and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale. Additionally, one of the original buildings has been razed.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of its type or style in the area. Additionally, the inclusion of modern materials has significantly altered the historic integrity of the Erie Shore barn.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people, and is unlikely to yield significant information about the history of the surrounding area. Additionally, this resource is not a noteworthy example of a working farmstead and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale. Based on this assessment, Resource ID HIG0046409 is recommended not eligible for inclusion in the NRHP.

5.2.10 Resource ID HIG0046509

Resource ID HIG0046509 is located approximately 1,100 feet northwest of the project area at 2730 Hollowtown Road on land parcel number 19-18-000-221.00. Resource ID HIG0046509 is a ca. 1920s farmstead featuring a house, two ca. 1940s pole barns, five non-historic garages, and six non-historic grain silos (Figures 52–55). The house associated with this farmstead is a ca. 1920s one-story, single family, side gabled Bungalow house type with Craftsman style elements. The house consists of an asymmetrical rectangular plan facing the east. Located on the east façade is a full veranda with a shed roof supported by tapered wood columns over cast concrete piers. Between the columns is a concrete screen wall serving as porch railings. Beneath the veranda offset to the south is a single-entry door with decorative side lights. Flanking the entry door to the north is a tripartite one over one double hung sash window. Centrally located within the roof surface facing the east is a shed roof dormer with four one-over-one double hung sash

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windows. Located on the south elevation of the resource is non-historic gabled carport. The north elevation consists of one exterior brick chimney and a non-historic bay window. A rear shed roof addition is located on the rear of the resource. The exterior walls are covered non-historic vinyl siding and the house sits on a concrete block foundation. The roof is covered in asphalt shingles.

Included on this land parcel are several ancillary outbuildings including six grain silos, two pole barns, and five garages. The pole barns and garages all feature gable roofs covered in standing seam metal. The ca. 1940s pole barns feature vertical board exterior walls while the garages feature corrugated metal exterior walls.

Resource ID HIG0046509 has remained on its original site of construction, is still located in a rural agricultural setting, and still evokes an early-twentieth century rural feeling. Therefore, it has retained integrity in location, setting, and feeling but does not retain integrity in design, materials, and workmanship style.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource maintains its associations with agriculture but is not a noteworthy example of a working farmstead and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale.



Figure 52. Resource ID HIG0046509, facing southwest.

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Figure 55. Resource ID HIG0046509, facing south.



Figure 56. Pole barn associated with Resource ID HIG0046509, facing north.



Figure 57. Pole barn associated with Resource ID HIG0046509, facing northwest.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource is not a significant example of its type or style in the area.

Criterion D – This resource is unlikely to yield significant information about the history of Highland County.

This resource is not a significant example of its type or style, has no known associations with significant people, and is unlikely to yield significant information about the history of the surrounding area. Additionally, this resource is not a noteworthy example of a working farmstead and does not significantly contribute to the general pattern of agriculture on a local, regional, or national scale. Based on this assessment, Resource ID HIG0046509 is recommended not eligible for inclusion in the NRHP.

6.0 CONCLUSIONS

Terracon Consultants, Inc. (Terracon), on behalf of Hecate Energy Highland 2, LLC has completed a Phase I Cultural Resources Survey (CRS) of the proposed 292-acre and 4.98-mile long transmission line New Market II Solar Farm in Highland County, Ohio. The current investigation summarizes the applicable portions of previously conducted Phase I archaeological and historic resource surveys that were done for the Highland 300 MW Solar Project (Sain et al. 2020). As a result of these investigations, three previously recorded archaeological sites, 33HI466, 33HI471, and 33HI474, and two isolated finds, 33HI475 and 33HI476, were identified as being within the project area. All of these sites and isolated finds were recommended as being ineligible for inclusion in the NRHP and OHPO concurred with these recommendations.

In looking at the efficacy of the predictive model used, both sites with prehistoric components (33HI471 and 33HI474) and one prehistoric isolated find (33HI475) fell within high probability areas, while one prehistoric isolated find (33HI476) fell in a moderate probability area. For historic sites, one site (33HI466) fell within a high probability area while the other (33HI471) fell within a low probability area for historic sites, but within an area having a high probability for prehistoric sites. Based on this evidence, the model appears to be effective in predicting areas where archaeological resources are likely to occur.

In addition to the archaeological resources, 30 aboveground resources were identified within the 0.5-mile APE (Table 7). Twenty-six of these resources are recommended as being ineligible for inclusion in the NRHP as many have been significantly altered from their original form, are not a significant example of a type or style, and have no known associations with significant people or events. Three resources, HIG0037113, HIG0041414, and HIG0041614, were recommended as being eligible for inclusion in the NRHP, and one resource, HIG0041714, was unevaluated because it was unable to be fully documented from the public right-of-way. Three of these historic properties— HIG0041414, HIG0041614, and HIG0041714—are separated from the project area by substantial wooded areas surrounding drainages (Figures 31, 34, and 36) and the proposed solar farm will not be visible from these resources. Resource HIG0037113 is located within the APE of a proposed transmission line. The distribution line will be located underground and therefore will not visually impact Resource HIG0037113 (Figures 58 and 59). Based on this evaluation, no historic properties will be affected by the proposed undertaking.

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Figure 58. Resource ID HIG0037113, facing southeast.



Figure 59. Resource ID HIG0037113 view toward the proposed transmission line, facing northeast.

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Summary: Exhibit Application Exhibit I (Part 6) electronically filed by Ms. Karen A. Winters on behalf of Hecate Energy Highland 4 LLC