

Cultural Resources Records Review

Timber Road III Transmission Line

Harrison and Benton Townships, Paulding County, Ohio

Prepared for:



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MANAGEMENT SUMMARY

Involved State and Federal Agencies:	Ohio Power Siting Board (OPSB) Ohio Historic Preservation Office (OHPO)
Phase of Survey:	Cultural Resources Records Review
Location Information:	Harrison and Benton Townships, Paulding County, Ohio
Project Area:	Primary Transmission Line Route – approximately 8.6 miles Alternate Transmission Line Route – approximately 11.6 miles Point of Interconnect Switchyard – approximately 2.1 acres
USGS 7.5-Minute Quadrangle Maps:	<i>Woodburn South, Indiana and Payne, Ohio</i>
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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Introduction and Purpose of the Investigation	1
1.2	Project Location and Description.....	2
2.0	RECORDS REVIEW AND IMPACT ASSESSMENT	9
2.1	Methodology.....	9
2.2	Cultural Resources Records Review	9
2.2.1	National Register of Historic Places (NRHP)	9
2.2.2	NRHP Determination of Eligibility (DOE) properties.....	9
2.2.3	National Historic Landmarks (NHL).....	10
2.2.4	Ohio Historic Inventory (OHI)	10
2.2.5	Ohio Archaeological Inventory (OAI).....	10
2.2.6	Ohio Genealogical Society (OGS) files	10
2.2.7	Mills Archaeological Atlas of Ohio (1914).....	10
2.2.8	Previous Cultural Resources Surveys.....	11
2.2.9	Historic Map Review	17
2.3	Impact Assessment	19
3.0	SUMMARY AND CONCLUSIONS	22
3.1	Summary of Cultural Resources Records Review	22
3.2	Conclusions and Recommendations	23
4.0	REFERENCES CITED	24

LIST OF TABLES

Table 1.	OHI Properties Within the Study Area.....	10
Table 2.	OGS Cemeteries Within the Study Area	10
Table 3.	JFNew-Inventoried Historic Structures Within the Study Area	17

LIST OF INSETS

Inset 1.	Photograph of Typical Tangent Structures (SGC Engineering).....	4
Inset 2.	Conceptual Drawing of Typical Tangent Structure (SGC Engineering).....	5
Inset 3.	Conceptual Drawing of Typical Dead End Structure (SGC Engineering).....	6
Inset 4.	1872 Gray, Lloyd and Walling <i>Topographical Atlas of Ohio</i> (left).....	18
Inset 5.	1906 Morrow <i>Atlas and Directory of Paulding County, Ohio</i> (right).....	18

LIST OF FIGURES

- Figure 1. Project Location
- Figure 2. Existing Conditions
- Figure 3. Previously Identified Cultural Resources
- Figure 4. Previous Cultural Resources Surveys
- Figure 5. 1914 USGS *Paulding, Ohio* topographic quadrangle map
- Figure 6. 1917 Ogle & Co. *Standard Atlas of Paulding County, Ohio*
- Figure 7. 1958 USGS *Woodburn South, Indiana* and 1960 *Payne, Ohio* topographic quadrangle maps

1.0 INTRODUCTION

1.1 Introduction

Paulding Wind Farm III LLC (hereafter referred to as the “Applicant”), a wholly owned subsidiary of EDP Renewables North America LLC, is proposing to construct a 138 kilovolt (kV) transmission line (Timber Road III Transmission Line) and a point of interconnect (POI) switchyard (Timber Road III POI Switchyard), collectively referred to as the “Facility” (see Figure 1). The Facility is associated with Timber Road I Wind Farm (see Case No. 09-0980-EL-BGN) and Timber Road III Wind Farm (see Case No. 10-369-EL-BGN), both located in Paulding County. The Applicant plans to submit an Application to the Ohio Power Siting Board (OPSB) for a Certificate of Environmental Compatibility and Public Need for the Timber Road III Transmission Line (see Case No. 15-1737-EL-BTX) and a Certificate of Environmental Compatibility and Public Need for the Timber Road III POI Switchyard.

The Application was prepared in compliance with Section 4906.06 of the Ohio Revised Code (Revised Code) and in accordance with Chapter 4906-15 of the Ohio Administrative Code (OAC), Instructions for the Preparation of Certificate Applications for Electric Power, Gas, and Natural Gas Transmission Facilities. Acquisition of rights-of-way and land rights began in June 2008 and will continue through the winter of 2015/16. Preparation of the Certificate Application occurred in the fall of 2015, with data and analyses added as various studies were completed. A public information meeting was held October 26, 2015. This Certificate Application was officially submitted in December 2015, and it is anticipated that the Certificate will be issued in the first quarter of 2016. Final designs will be completed in the first quarter of 2016. Construction is anticipated to begin following issuance of the Certificate, and will be completed within 9 months, on or around November 30, 2016, at which point the Facility will be placed in service.

1.2 Purpose of the Investigation

On behalf of the Applicant, Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) prepared this cultural resources records review in support of environmental review and permitting for the proposed Facility. The materials contained herein and attached hereto constitute a cultural resources records review for the proposed Facility. This cultural resources records review has been prepared under the supervision of a Registered Professional Archaeologist (RPA) by a qualified architectural historian who meets the U.S. Secretary of Interior’s Standards for Historic Preservation Projects (36 CFR Part 61).

The cultural resources records review and impact assessment is designed to satisfy the requirements of Ohio Administrative Code Chapter 4906-15-06 (F) for the OPSB:

(F) The applicant shall provide, for each of the site/route alternatives, a description of the impact of the proposed facility on cultural resources. This description shall include potential and identified recreational areas and those districts, sites, buildings, structures, and objects which are recognized by, registered with, or identified as eligible for registration by the Ohio historical society or the Ohio department of natural resources. It shall include but not be limited to the following:

(1) Location studies: The applicant shall describe studies used to determine the location of cultural resources within the study corridor. Correspondence with the Ohio historical preservation office shall be included.

(2) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on cultural resources.

(3) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility on cultural resources.

(4) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during the operation and maintenance of the proposed facility to minimize impact to cultural resources.

1.3 Project Location and Description

The primary purpose of the Timber Road III Transmission Line is to deliver electricity generated by the Timber Road I and III Wind Farms from the collection substation (see Case No. 10-369-EL-BGN) to the proposed Timber Road III POI Switchyard, to be located adjacent to the existing American Electric Power (AEP) 138 kV Lincoln – Sterling circuit. The purpose of the Timber Road III POI Switchyard is to allow for and make the interconnection to the AEP 138 kV Lincoln – Sterling circuit. The Timber Road III POI Switchyard will not require a voltage step-up, and will not require voltage transformers.

The Facility consists of a new 138 kV transmission line and a new POI Switchyard, which will be used to deliver power generated by Timber Road I Wind Farm and Timber Road III Wind Farm to the regional power grid. The Timber Road III Wind Farm collection substation (see Case No. 10-0369-EL-BGN) will be located along Road 124 just west of intersection with Road 33 in Harrison Township. The Timber Road III Transmission Line will run south from the collection substation to the existing 138 kV Lincoln – Sterling circuit (“Primary Transmission Route”), where the proposed Timber Road III POI Switchyard will be constructed (“POI Switchyard Location”). An alternate route has been identified for the transmission line (“Alternate Transmission Route”).

All components of the Facility are located on rural land in Harrison and Benton Townships in Paulding County, Ohio (see Figure 2):

Transmission Line: The Primary Transmission Route traverses approximately 8.6 miles of leased land in Harrison and Benton Townships, connecting the wind farm collection substation and the Timber Road III POI Switchyard. The Alternate Transmission Route traverses approximately 11.6 miles of partially leased land in Harrison and Benton

Townships, connecting the wind farm collection substation and the Timber Road III POI Switchyard. The transmission line will be installed within a 150 foot wide right-of-way (ROW), which will extend 75 feet from the centerline of the transmission line along each side. To minimize potential clearing impacts to forestland, the Primary Transmission Route and Alternate Transmission Route are located entirely within open agricultural land with the exception of one riparian crossing.

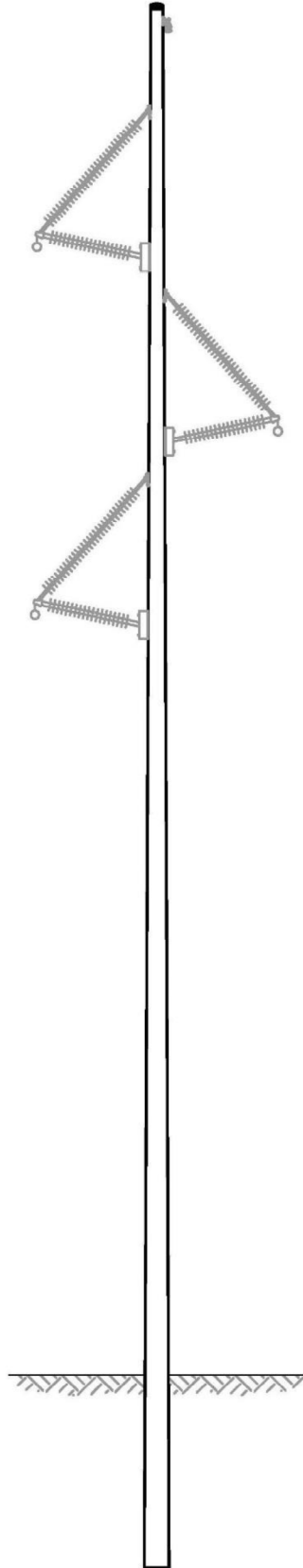
There may be a variety of different structure types used for the Facility, due to different constraints at different locations (e.g., angle structures). However, all of the structures along the transmission line are expected to utilize a single-pole design, which minimizes the amount of soil disturbance when compared to double-pole, H-frame designs.

The proposed Timber Road III Transmission Line will be supported on multiple mono-pole structures with direct embedment. All poles will be weathering steel, and all poles will be self-supported. Structure types will consist of single-pole tangent braced post structures and single-pole dead-end corner structures. The various structure types are illustrated in Insets 1 through 3, prepared by SGC Engineering and described below:

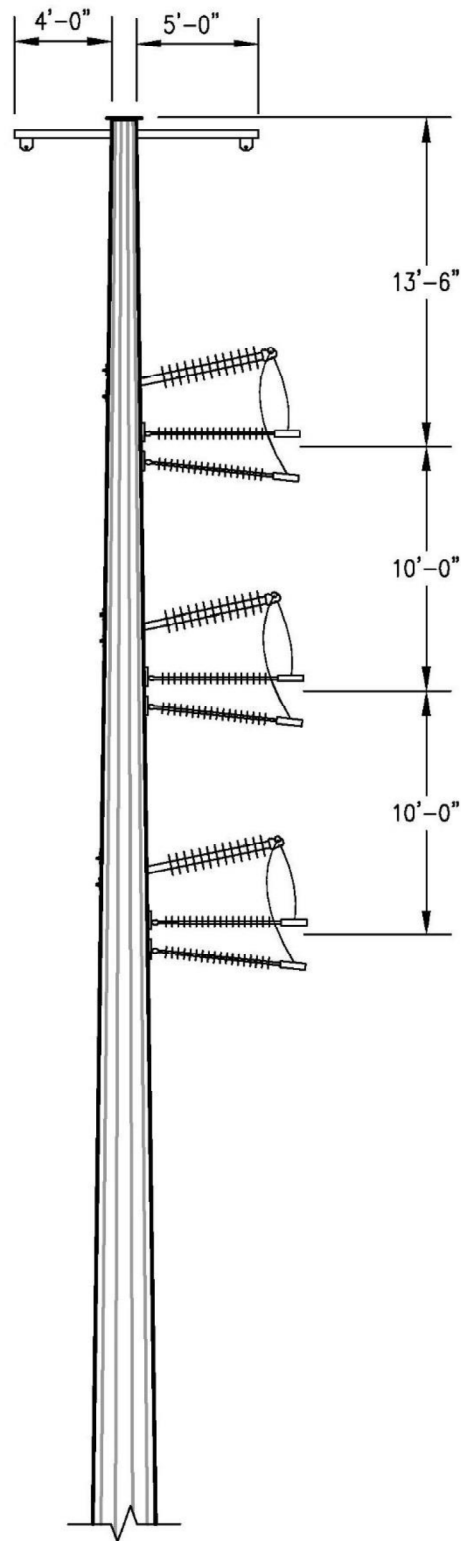
- For tangent configurations (assumes an angle range of 0-1 degree), the tower design will be a single, mono-pole design with a delta configuration. A photograph and a conceptual drawing of the proposed tangent structures is included as Inset 1 and Inset 2, respectively.
- For dead-end configurations (assuming an angle range of 0-90 degrees), the tower design will be a single, mono-pole design with anchors. A conceptual drawing of the proposed dead-end structures is included as Inset 3.



Inset 1. Photograph of Typical Tangent Structures (SGC Engineering).



Inset 2. Conceptual Drawing of Typical Tangent Structure (SGC Engineering).



Inset 3. Conceptual Drawing of Typical Dead End Structure (SGC Engineering).

The Timber Road III Transmission Line will be installed within a 150-foot wide right-of-way, which will extend 75 feet from the centerline of the transmission line along each side. To minimize potential clearing impacts to forestland, the Primary Transmission Route is located entirely within open agricultural land, with the exception of one riparian corridor crossing. A total of approximately 84 structures are proposed along the 8.6-mile Primary Route, which equates to an average spacing of approximately 545 feet between structures.

The type of materials used for the structures will be steel for the poles, and concrete and rebar steel for the foundations. All structures will be designed to meet the National Electric Safety Code's heavy loading and extreme wind condition ratings. Although steel poles were used for the preliminary design basis, the final design material may vary. The conductor size will be 795 kcmil¹ "Drake" 26/7. For grounding and communications needs, there will be two Optical Ground Wires (OPWGs) with 24 fibers. The insulator arrangement will be a "delta" configuration.

Aboveground pole heights will range from 80 to 120 feet. Pole diameter at ground line will range from 36-50 inches depending on the pole (e.g., dead end versus tangent), with slightly larger dimensions at the base. The auger diameter is typically the next largest size (i.e., 36 inch pole diameter at ground surface, 48 inch auger; 50 inch pole diameter at ground surface, 60 inch auger). The pole hole is typically backfilled with gravel to facilitate drainage and ensure consistency of the nearby soil.

The mono-pole structures will be direct embedded in the soil utilizing appropriate backfill materials as required by the engineering design. Gravel or concrete as backfill material for the poles is presently planned though native soil could also be used.

Construction equipment (line trucks, cranes, digging equipment) will be accessing the pole locations during installation in order to dig poles, set poles, and to connect the conductors to the pole insulators. It is anticipated that construction vehicles and cranes will cause temporary disturbance of approximately 22 feet x 22 feet around each pole during Facility construction. Temporary access will primarily be through farm roads and farm fields, as well as other access roads already planned as part of the wind farm project. The permanent impact from each pole foundation will be approximately 10 feet x 10 feet around each pole.

POI Switchyard: The transmission line will connect to the existing AEP Lincoln – Sterling 138 kV circuit via a new interconnect switching station. The Timber Road III POI Switchyard will be approximately 406 by 229 feet in size (2.1 acres in area), and enclosed by a chain link fence. The POI Switchyard site is located on the south side of State Route

¹"kcmil" wire size is the equivalent cross sectional area in thousands of circular mills. A circular mill is the area of a circle with a diameter of one thousandth (0.001) of an inch.

114 in Benton Township, just east of the intersection with Town Highway 27, immediately west of the existing Timber Road II POI Switchyard. The Timber Road III POI Switchyard design includes 138 kV circuit breakers and metering units, relays, a control house, and associated equipment. Land for the Timber Road III POI Switchyard will be provided to the Applicant by land that is currently owned by Timber Road II. The lightning mast will be the tallest structure associated with the Switchyard, and it will not exceed 50 feet in height. Additionally, no structures associated with either the Transmission Line or POI Switchyard are anticipated to exceed 120 feet in above ground height, and therefore, FAA/ODOT jurisdiction will not apply.

The Applicant will obtain all necessary permits and construct the Timber Road III POI Switchyard. The Applicant expects to own and construct all structures and equipment associated with the Timber Road III POI Switchyard, and then transfer ownership of the Switchyard to the transmission operator when the Project goes into operation.

Note that the term “Primary Facility” refers jointly to both the Primary Transmission Route and POI Switchyard, while the “Alternate Facility” refers jointly to both the Alternate Transmission Route and POI Switchyard.

2.0 RECORDS REVIEW AND IMPACT ASSESSMENT

2.1 Methodology

This section summarizes previously collected cultural and archaeological resources data for the area within 1,000 feet on either side of the Primary and Alternate Transmission Route centerlines and within 1,000 feet of the proposed POI Substation Site (“Study Area”). Per the requirements of Ohio Administrative Code Chapter 4906-15-06 (F)(1): the cultural resources records review prepared by EDR included the following records available from the Ohio State Historic Preservation Office (OHPO):

- National Register of Historic Places (NRHP),
- NRHP Determination of Eligibility (DOE) properties,
- National Historic Landmarks (NHL) List,
- Ohio Historic Inventory (OHI),
- Ohio Archaeological Inventory (OAI),
- Ohio Genealogical Society (OGS) cemetery files,
- *Mills Archaeological Atlas of Ohio* (1914), and
- Previous Phase I, II, and III cultural resources surveys conducted within the study area.

2.2 Cultural Resources Records Review

Archives and repositories consulted during EDR's research for the Project included the online Geographic Information Systems (GIS) mapping system of the Ohio Historic Preservation Office (OHPO), the David Rumsey map collection, Ancestry.com and other on-line history resources, and EDR's in-house collection of reference materials. The results of the cultural resources records review for the Study Area associated with the Facility are described below, and depicted on Figures 3 and 4.

2.2.1 National Register of Historic Places (NRHP)

The records review of the OHPO online GIS mapping revealed that no NRHP-listed properties have been recorded within 1,000 of the Primary or Alternate Transmission Routes.

2.2.2 NRHP Determination of Eligibility (DOE) properties

The records review of the OHPO online GIS mapping revealed that no properties previously determined eligible for the NRHP have been recorded within 1,000 of the Primary or Alternate Transmission Routes.

2.2.3 National Historic Landmarks (NHL)

The records review of the OHPO online GIS mapping revealed that no NHL-listed properties have been recorded within 1,000 of the Primary or Alternate Transmission Routes.

2.2.4 Ohio Historic Inventory (OHI)

The records review of the OHPO online GIS mapping revealed that two OHI properties have been recorded within 1,000 of the Primary or Alternate Transmission Routes:

Table 1. OHI Properties Within the Study Area

OHI #	Name	Zone	X	Y	Township	County
PAU0340804	A. Worm Farmstead	16	689176	4554484	Harrison	Paulding
PAU0343504	Leopold Baldwin Farmstead	16	688156	4554376	Harrison	Paulding

The A. Worm Farmstead (PAU0340804), a Craftsman dwelling constructed circa 1890-1900 is located at 3985 CR 124 in Harrison Township, approximately 940 feet northeast of the Primary Route. The Leopold Baldwin Farmstead (PAU0343504), a vernacular farmstead constructed circa 1890-1900, is located at 3354 CR 124 in Harrison Township, approximately 824 feet northwest of the Alternate Route.

2.2.5 Ohio Archaeological Inventory (OAI)

The records review of the OHPO online GIS mapping revealed that no OAI properties have been recorded within 1,000 of the Primary or Alternate Transmission Routes.

2.2.6 Ohio Genealogical Society (OGS) files

The records review of the OHPO online GIS mapping revealed that two OGS cemeteries have been recorded within 1,000 of the Primary or Alternate Transmission Routes:

Table 2. OGS Cemeteries Within the Study Area

OGS ID	Name	Zone	X	Y	Township	County
9219	Brady-Finnan-Pleasant Valley Cemetery	16	687942	4544962	Benton	Paulding
9222	Lehman Cemetery	16	689543	4547998	Benton	Paulding

2.2.7 Mills Archaeological Atlas of Ohio (1914)

A review of the 1914 *Mills Archaeological Atlas of Ohio* indicated that although six prehistoric sites have been recorded in Paulding County, none are located within 1,000 of the Primary or Alternate Transmission Routes. Regarding the

potential for prehistoric sites to be present, the atlas notes that “the topography of Paulding County appears to have been too flat to attract aboriginal settlement in a permanent form” (Mills, 1914: 63).

2.2.8 Previous Cultural Resources Surveys

Several previous cultural resources surveys have been conducted within the Study Area. Cultural resources surveys conducted within the study area are described below and depicted on Figure 4.

Haviland Lateral Interconnect Gas Pipeline Cultural Resources Survey

A Phase I Cultural Resources Survey for the proposed 8.7-mile Haviland Lateral Interconnect Gas Pipeline in Blue Creek and Benton Townships was conducted in 2004. Two previous prehistoric archaeological sites, one new historic period archaeological site and two pre-1954 historic architectural resources were identified as part of the survey. None of the resources were determined to be NRHP-eligible, and no additional investigations were recommended (Commonwealth, 2004).

Timber Road I Cultural Resources Surveys

The northeast portion of the Study Area for the Facility has been previously surveyed for cultural resources as part of support studies prepared for the Timber Road I Wind Farm. In 2009 and 2010, JFNew prepared three reports on the potential impacts to cultural resources of the proposed Timber Road Wind Farm Project (JFNew, 2009, 2010a, and 2010b). These reports focus on a study area consisting of a 5-mile buffer around the Timber Road Wind Farm in Harrison Township, consistent with OPSB guidelines. The northeast portion of Study Area for the Timber Road III Primary and Alternate Transmission Routes and the POI Substation is located within the previously surveyed areas covered in the studies conducted by JFNew for Timber Road I.

JFNew (2009) conducted a cultural resources records review of records from the Ohio Historic Preservation Office (OHPO) to identify known cultural resources in the vicinity of the Facility so that impacts to these resources can be minimized. Cultural resources include archaeological and historical sites, such as cemeteries, buildings, structures, objects, and districts. The cultural resources records review for the Timber Road I Wind Farm indicated the following:

- One NRHP-listed property (the Antwerp Norfolk and Western Depot, #80003205) and two DOE properties are located within the 5-mile study area for the Timber Road I Wind Farm. All of these resources are located in Antwerp, several miles north of the proposed Facility. None of these resources are located within the current Study Area.
- A review of the OHI indicated a total of 57 historic structures within the 5-mile study area for the Timber Road I Wind Farm, the majority of which were determined to be within the Village of Antwerp. Three of these historic

structures were determined to be located within or adjacent to the wind farm. None of these resources are located within the current Study Area.

- A review of the OAI indicate a total of 58 archaeological sites within the 5-mile study area for the Timber Road I Wind Farm. Two of these sites occur within the wind resource area (area of potential direct impact) of the Timber Road I Wind Farm, but do not meet eligibility criteria for inclusion on the NRHP. None of these resources are located within the current Study Area.
- A review of the OGS identified a total of 12 cemeteries within the 5-mile study area for the Timber Road I Wind Farm, two of which were located within or adjacent to the wind farm. None of these resources are located within the current Study Area.

JFNew also noted that the majority of the 5-mile study area for the Timber Road I Wind Farm had not been systematically surveyed for cultural resources, and recommended a Phase I archaeological reconnaissance and historic structure inventory to assess the effects of the proposed wind project on cultural resources located within the wind farm and study area (JFNew, 2009). JFNew conducted a Phase I archaeological reconnaissance survey (JFNew, 2010a) and a Phase I historic structure inventory and assessment (JFNew, 2010b) for the Timber Road I Wind Farm in 2010.

The Phase I archaeological reconnaissance included a summary of the previous records check, as well as a review of the Mills *Archaeological Atlas of Ohio* (1914), and historic maps and atlases for Harrison Township, as well as the Indiana Cemetery Registry and Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA) due to proximity of the project to the Indiana State Line. The additional records review determined the following:

- The Indiana State Historic Architectural and Archaeological Research Database (SHAARD) lists over 200 prehistoric archaeological sites within the 5-mile study area for the Timber Road II Wind Farm, none of which are located within or adjacent to the wind farm. No SHAARD-listed archaeological sites occur within the current Study Area.
- The Indiana Historic Sites and Structures Inventory (IHSSI) included 30 previously recorded historic structures within the 5-mile study area for the Timber Road II Wind Farm, none of which were located within or adjacent to the wind farm. The current Study Area is entirely within the State of Ohio, and no IHSSI historic structures occur within the Study Area.
- The Indiana Cemetery Registry lists a total of three cemeteries within the five mile study area. The current Study Area is entirely within the State of Ohio, and no Indiana cemeteries occur within the Study Area.

- A review of the 1914 Mills *Archaeological Atlas of Ohio* indicated a total of six archaeological sites within the 5-mile study area for the Timber Road I Wind Farm, though all were located outside the wind farm area and the current Study Area.
- A review of the 1892, 1894, 1905 and 1917 land owner atlases for Harrison Township indicated the presence of map-documented structures within the 5-mile study area for the Timber Road I Wind Farm, including within the current Study Area. None of the sites identified by JFNew that correspond to map-documented structures are located within the current Study Area.

The Phase I archaeological reconnaissance survey also included fieldwork conducted within the Timber Road I Wind Farm, consistent with OHPO guidelines (OHPO, 1994). Archaeological surveys conducted by JFNew identified five new archaeological sites within the wind farm, including three prehistoric sites and two historic sites. JFNew concluded that none of the prehistoric or historic sites identified appeared to meet the criteria for listing in the NRHP, and no further work was recommended at any of the sites. JFNew also recommended that any project activities avoid one of the prehistoric sites (33-Pa-242) due to its potential to yield important information regarding regional prehistory (JFNew, 2010a). None of the archaeological sites identified by JFNew are located within 1,000 feet of the Primary and Alternate Routes of the Timber Road III Transmission Line or within 1,000 feet of the POI Substation.

The Phase I historic structure inventory and assessment included background research, historic contexts, and photographic fieldwork conducted within the Timber Road I Wind Farm five-mile study area, followed by additional research to help determine historic significance of the properties surveyed. The historic structures inventory identified 72 total properties, including 63 newly recorded resources and 9 previously recorded resources, within the wind farm and adjacent area. Of these, three properties were determined to be NRHP-eligible (JFNew, 2010b). Of the total 72 properties identified by JFNew, none are located within 1,000 feet of the Primary and Alternate Routes of the Timber Road III Transmission Line or within 1,000 feet of the POI Substation.

Timber Road II Cultural Resources Surveys

In addition, the entire Study Area for the Facility has been previously surveyed for cultural resources as part of support studies prepared for the Timber Road II Wind Farm. In 2010, JFNew prepared three reports on the potential impacts to cultural resources of the proposed Timber Road II Wind Farm Project (JFNew, 2010c, 2010d, and 2010e). These reports focus on a study area consisting of a 5-mile buffer around the Timber Road II Wind Farm, consistent with OPSB guidelines. The entire Study Area for the Timber Road III Primary and Alternate Transmission Routes and the POI Substation is located within the previously surveyed areas covered in the studies conducted by JFNew. Therefore, discussion of the potential impacts on cultural resources located within the 5-mile study area for the Timber Road II

Wind Farm applies (in part) to cultural resources located within 1,000 feet of the Primary or Alternate Routes of the Timber Road III Transmission Line and POI Substation (consistent with OPSB guidelines).

JFNew (2010c) conducted a cultural resources records review of online resources from the Ohio Historic Preservation Office (OHPO), which was submitted as Exhibit L to the Timber Road II Wind Farm Certificate Application in Case No. 10-0369-EL-BGN. The purpose of this review was to identify known cultural resources in the vicinity of the Facility so that impacts to these resources can be minimized. Cultural resources include archaeological and historical sites, such as cemeteries, buildings, structures, objects, and districts. The literature review included the following records available from the OHPO, as well as the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA) due to proximity of the project to the Indiana State Line:

The cultural resources records review for the Timber Road II Wind Farm indicated the following:

- One NRHP-listed property (the Antwerp Norfolk and Western Depot, #80003205) and four NRHP-eligible properties are located within the 5-mile study area for the Timber Road II Wind Farm. All of these resources are located in Antwerp, several miles north of the proposed Facility. None of these resources are located within the current Study Area.
- A total of 290 historic structures were located within the 5-mile study area for the Timber Road II Wind Farm, of which 27 historic structures were located within or adjacent to the wind farm. Two of these resources are located along Wiegel Road (CR124) at the northern end of the Study Area, within the current Study Area. The A. Worm Farmstead (PAU0340804), a Craftsman dwelling constructed circa 1890-1900 is located at 3985 CR 124, approximately 940 feet northeast of the Primary Route, and the Leopold Baldwin Farmstead (PAU0343504), a vernacular farmstead constructed circa 1890-1900, is located at 3354 CR 124, approximately 824 feet northwest of the Alternate Route.
- A review of the OAI indicated 85 documented archaeological sites located within the 5-mile study area for the Timber Road II Wind Farm, six of which occur within or adjacent to the wind farm. None of these sites are located within the current Study Area.
- A review of the OGS identified a total of 27 cemeteries within the 5-mile study area for the Timber Road II Wind Farm, six of which were located within or adjacent to the wind farm. Two cemeteries are located within the current Study Area: Lehman Cemetery is located 0.16 miles east of the Primary Transmission Route, along Road 70, and The Brady-Finnan-Pleasant Valley Cemetery is located 0.18 miles west of the Primary Transmission Route along Road 48.
- The Indiana Historic Sites and Structures Inventory (IHSSI) included 184 previously recorded historic structures within the 5-mile study area for the Timber Road II Wind Farm, none of which were located

within or adjacent to the wind farm. The current Study Area is entirely within the State of Ohio, and no IHSSI historic structures occur within the Study Area.

- The Indiana State Historic Architectural and Archaeological Research Database (SHAARD) lists over 200 prehistoric archaeological sites within the 5-mile study area for the Timber Road II Wind Farm, none of which are located within or adjacent to the wind farm. No SHAARD-listed archaeological sites occur within the current Study Area.

JFNew also noted that the majority of the 5-mile study area for the Timber Road II Wind Farm had not been systematically surveyed for cultural resources, and recommended a Phase I archaeological reconnaissance and historic structure inventory to assess the effects of the proposed wind project on cultural resources located within the wind farm and study area (JFNew, 2010c). JFNew conducted a Phase I archaeological reconnaissance survey (JFNew, 2010d) and a Phase I historic structure inventory and assessment (JFNew, 2010e) for the Timber Road II Wind Farm in 2010. The Phase I archaeological reconnaissance included a summary of the previous records check, as well as a review of the Indiana Cemetery Registry, Mills *Archaeological Atlas of Ohio* (1914), and historic maps and atlases for Benton and Harrison Townships. The additional records review determined the following:

- The Indiana Cemetery Registry lists three cemeteries within the 5-mile study area for the Timber Road II Wind Farm, none of which are located within or adjacent to the wind farm or within the current Study Area.
- A review of the 1914 Mills *Archaeological Atlas of Ohio* indicated a total of six archaeological sites within the 5-mile study area for the Timber Road II Wind Farm, though all were located outside the wind farm area and the current Study Area.
- A review of the 1892, 1894, 1905 and 1917 land owner atlases for Benton and Harrison Townships indicated the presence of map-documented structures within the 5-mile study area for the Timber Road II Wind Farm, including within the current Study Area. None of the sites identified by JFNew that correspond to map-documented structures are located within the current Study Area.

The Phase I archaeological reconnaissance survey also included fieldwork conducted within the Timber Road II Wind Farm, consistent with OHPO guidelines (OHPO, 1994). Archaeological surveys conducted by JFNew identified nine new archaeological sites within the wind farm, including two prehistoric sites, six historic sites, and one multiple component prehistoric and historic site.² JFNew concluded that none of the prehistoric or historic sites identified

² Although they are not listed in the OHPO online system, the archaeological sites identified by JFNew are listed by OAI numbers in the JFNew report. Therefore the archaeological sites identified by JFNew and the OAI sites included in the OHPO database are depicted on Figure 4 as "OAI Sites."

appeared to meet the criteria for listing in the NRHP, and no further work was recommended at any of the sites. JFNew also recommended that any project activities avoid two of the historic sites, 33-Pa-257 and 33-Pa-263, both of which are associated with the former locations of historic structures (JFNew, 2010d). None of the archaeological sites identified by JFNew are located within 1,000 feet of the Primary and Alternate Routes of the Timber Road III Transmission Line or within 1,000 feet of the POI Substation.

The Phase I historic structure inventory and assessment included background research, historic contexts, and photographic fieldwork conducted within the Timber Road II Wind Farm, followed by additional research to help determine historic significance of the properties surveyed. The historic structures inventory identified 126 newly recorded resources and 32 previously recorded sites within the wind farm and adjacent area. Of these, eight properties were determined to be NRHP-eligible, and six additional properties were classified as notable in terms of significance, and potentially eligible for the NRHP, but requiring additional research and assessment (JFNew, 2010e). Of the total 158 properties identified by JFNew, 20 are located within the current Study Area (see Table 3 and Figure 4)³.

Of the eight properties recommended NRHP-eligible by JFNew, none are located within 1,000 feet of the Primary or Alternate Routes of the Timber Road Transmission Line or within 1,000 feet of the POI Substation. One resource, the Lehman School (PAU03465-08), is identified by JFNew as “Notable,” which they define as “properties that appear to possess potential to meet NRHP criteria but require additional research to accurately determine their significance” (JFNew, 2010e: 135). However, this is not a formal designation of NRHP eligibility, and therefore the Lehman School is not currently determined NRHP-eligible.

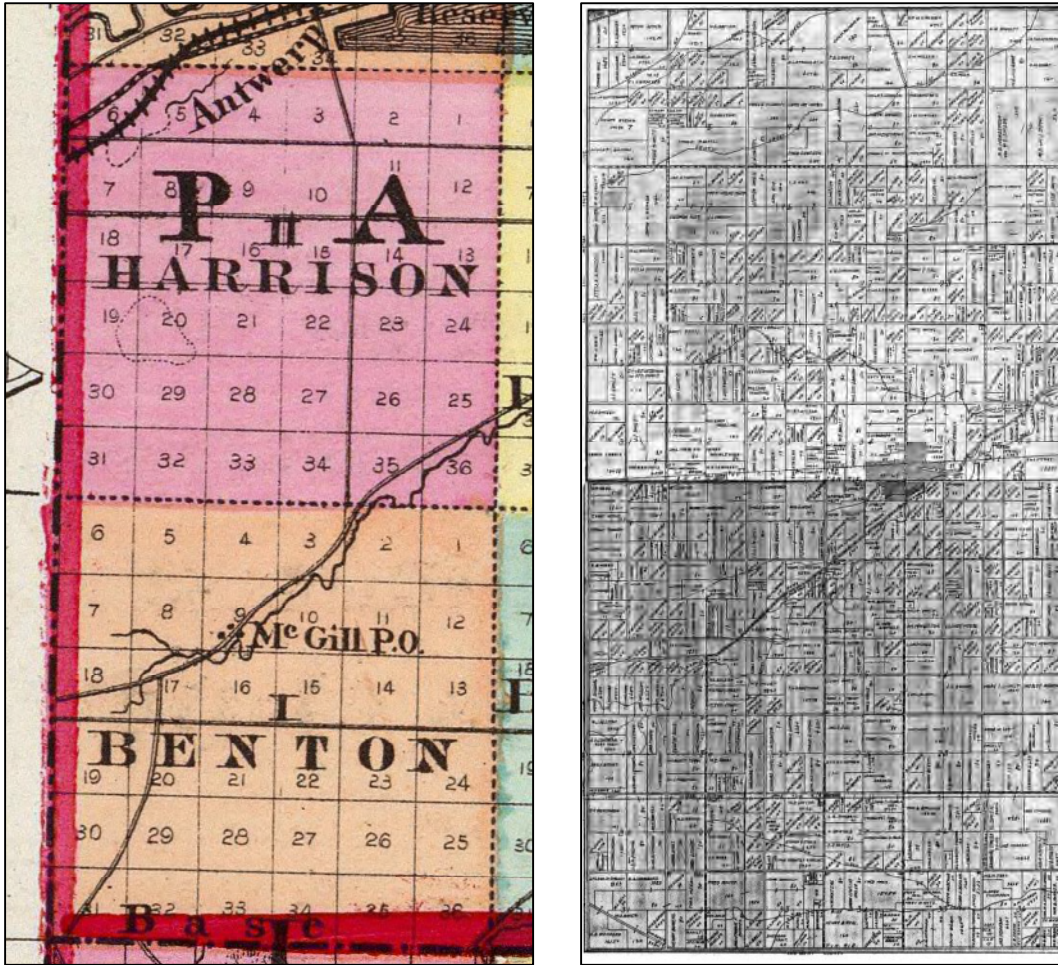
³ The historic structures identified by JFNew include the previously identified OHI properties listed in Table 1, and are listed by OHI numbers in the JFNew Phase I historic structure inventory. Therefore the historic structures identified by JFNew and the OHI properties included in the OHPO database are depicted on Figure 4 as “OHI Structures.”

Table 3. JFNew-Inventoried Historic Structures Within the Study Area

OHI Number	Address	Name	Township	County	JFNew NRHP Eligibility Recommendation
PAU-03435-04	3354 CR 124	-	Harrison	Paulding	Not Eligible
PAU-03408-04	3985 CR 124	-	Harrison	Paulding	Not Eligible
PAU-03555-04	2450 TR 96	-	Harrison	Paulding	Not Eligible
PAU-03540-04	7261 CR 11/Ewing Road	Lindner Farmstead	Harrison	Paulding	Not Eligible
PAU-03539-04	7314 CR 11/Ewing Road	Stabler Farmstead	Harrison	Paulding	Not Eligible
PAU-03561-04	3625 TR 94	-	Harrison	Paulding	Not Eligible
PAU-03487-08	No Visible Address 3000 Block SR 613	-	Benton	Paulding	Not Eligible
PAU-03483-08	1898 SR 613	-	Benton	Paulding	Not Eligible
PAU-03484-08	2498 SR 613	-	Benton	Paulding	Not Eligible
PAU-03490-08	3779 TR 70	-	Benton	Paulding	Not Eligible
PAU-03491-08	3764 TR 70	Yearling Farmstead	Benton	Paulding	Not Eligible
PAU-03464-08	5865 TR 33	Lehman School	Benton	Paulding	Notable
PAU-03465-08	5737 TR 33	-	Benton	Paulding	Not Eligible
PAU-03492-08	No Visible Address 4000 Block CR 72	-	Benton	Paulding	Not Eligible
PAU-03466-08	5401 TR 33	-	Benton	Paulding	Not Eligible
PAU-03468-08	No Visible Address 4000 Block TR 33	-	Benton	Paulding	Not Eligible
PAU-03523-08	4019 SR 114, Batson	-	Benton	Paulding	Not Eligible
PAU-03524-08	4314 SR 114	-	Benton	Paulding	Not Eligible
PAU-03554-04	2143 TR 96	Ida King Farmstead	Harrison	Paulding	Not Eligible
PAU-03463-08	No Visible Address 6000 Block TR 33	Lehman Cemetery	Benton	Paulding	Not Eligible

2.2.9 Historic Map Review

Historic maps reviewed for the Project included the 1872 Gray, Lloyd and Walling *Topographical Atlas of Ohio* (Inset 4), 1906 Morrow *Atlas and Directory of Paulding County, Ohio* (Inset 5), 1914 USGS *Paulding, Ohio* 1:62500 topographic quadrangle map (Figure 5), 1917 *Standard Atlas of Paulding County, Ohio* (Figure 6), and 1958 USGS *Woodburn South, Indiana* and 1960 *Payne, Ohio* 1:24000 topographic quadrangle maps (Figure 7). Based on the historic map review, much of the Study Area and surrounding vicinity was largely undeveloped until the late nineteenth and early twentieth century. The 1872 Gray, Lloyd and Walling *Topographical Atlas of Ohio* (Inset 4) depicts Harrison and Benton Townships (including the Study Area) as separated into approximate one-mile grids, with major roadways and major settlements noted, although no structures are depicted outside the hamlet of McGill, which is indicated as a significant settlement.. The 1906 Morrow *Atlas and Directory of Paulding County, Ohio* (Inset 5) shows the extent to which Harrison and Benton Townships had been further subdivided into individual plots (presumably for farming) labeled by landowner, although no structures are depicted.



Inset 4. 1872 Gray, Lloyd and Walling *Topographical Atlas of Ohio* (left).

This map depicts the platting of the rural land within much of Ohio and specifically Harrison and Benton Townships. (Gray, Lloyd & Walling, 1872; courtesy of the David Rumsey collection)

Inset 5. 1906 Morrow *Atlas and Directory of Paulding County, Ohio* (right).

By the early twentieth century the land including the Study Area within Harrison and Benton Townships was significantly settled, with the original square plats further subdivided into smaller parcels for primarily agricultural purposes. (Morrow, 1906)

Numerous map-documented structures are depicted within and immediately adjacent to the Study Area on the 1914 USGS *Paulding, Ohio* topographic quadrangle map (Figure 5), including multiple schools. The map-documented structures on this map correspond to several of the structures inventoried by JFNew within the Study Area. The 1917 *Standard Atlas of Paulding County, Ohio* (Figure 6) includes landowner information for the parcels and many of the structures located within the Study Area. The 1958 USGS *Woodburn South, Indiana* and 1960 *Payne, Ohio* 1:24000 topographic quadrangle maps (Figure 7) depict conditions similar to the current conditions within the Study Area, with structures located spaced far apart along rural roads, with numerous ditches and other agricultural roads having been constructed throughout the twentieth century to serve the predominantly rural, agrarian population within Harrison and Benton Townships.

Based on the historic map review, EDR concludes that numerous map-documented structures are present within the Study Area for the Primary and Alternate Transmission Routes. However, most if not all of these structures were field surveyed as part of the 2010 Phase I historic structure inventory and assessment (JFNew, 2010e).

2.3 Impact Assessment

Per the requirements of Ohio Administrative Code Chapter 4906-15-06 (F)(2), (3) and (4), EDR assessed the potential impact(s) posed by construction and operation and maintenance of the proposed Facility, as well as reviewed potential mitigation options. The results of this impact assessment are as follows:

(2) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on cultural resources.

There will be no direct impacts to above ground cultural resources (i.e., cemeteries or historic structures) from Facility construction. Indirect impacts to such impacts are addressed below under Operation and Maintenance (4906-15-06(F)(3)).

The proposed Primary and Alternate Transmission Routes have not been systematically surveyed for archaeological resources. After the final route has been selected, it is recommended that an archaeological survey be conducted for those portions of the proposed Facility where direct ground disturbance is proposed.

(3) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility on cultural resources.

In estimating the impact of the proposed Facility on the preservation and continued meaningfulness of known historic landmarks, direct, indirect, and reasonably foreseeable future impacts to aboveground historic resources were considered. Due to established setback requirements for the transmission line, direct effects to aboveground resources will not occur. Indirect visual effects are most likely, as the introduction of the Facility to the area may alter people's perceptions of the historic resources and landscapes within the study area, altering important characteristics of the historic setting. Given local land use patterns, which are largely categorized by open agricultural fields interspersed with scattered rural residences and a few small wood lots, it is likely that the Timber Road III Transmission Line and Substation Location will be visible from most locations within the study area. The extent to which the Facility may impact any individual historic property will depend on the property's area of significance and its orientation on the landscape relative to the proposed

Facility. Since the records review did not identify any properties within the study area that are listed or determined eligible for listing in the NRHP, there are no known impacts to aboveground historic properties at this time.

(4) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during the operation and maintenance of the proposed facility to minimize impact to cultural resources.

As described above, the proposed Facility will not directly (physically) impact any known cultural resources within the study area, and no specific mitigation measures are proposed at this time. However, the proposed Facility has the potential to cause indirect (visual) impacts to aboveground historic resources within the study area. While nearby residences may be sensitive to this visual change, the rural nature and low population density of the area, as well as the lack of major thoroughfares, limits the number of viewers potentially affected by the line. In addition, transmission lines are a common feature of rural landscapes, and do not appear entirely out of place in a working agricultural setting. Finally, the presence of the proposed Timber Road I, II, and III Wind Farms will further reduce any visual impact associated with the proposed Transmission Line and POI Switchyard. The wind turbines will be the dominant man-made features of the landscape. Their greater height and movement will make them focal points within the view, which will limit the prominence of the proposed Facility and any landscape contrast it presents.

As mentioned above certain routing and design features of the proposed Facility will help to mitigate visual impact. These include the following:

- Routing through open/agricultural land that minimizes the need for ROW clearing.
- Relatively short overall line length (8.6 miles for Primary and 11.6 miles for Alternate) that limits the geographic area and number of viewers potentially affected.
- Avoidance of major road crossings, areas of concentrated settlement, and recognized sensitive aesthetic resources, to limit the number and sensitivity of potentially affected viewers.
- Use of single monopole structures to minimize the number of poles required and present a simple clean appearance.
- Using existing farm roads to the extent practicable.
- Location of the line among or adjacent to the Timber Road wind turbines, which will be the dominant visual features of the landscape.

In addition, landscaping plans will be developed for the POI Switchyard. These plans will be designed to screen the proposed facility from adjacent residences, and will likely include a mix of deciduous and coniferous trees and shrubs.

Based on the relatively recent (2010) cultural resource surveys conducted for the Timber Road II Wind Farm, which included the entirety of the Study Area for the Primary and Alternate Routes of the Timber Road III Transmission Line and POI Switchyard, no further historic-architectural resources surveys are proposed or recommended.

3.0 SUMMARY AND CONCLUSIONS

3.1 Summary of Cultural Resources Records Review

The results of the Cultural Resources Records Review for the proposed Timber Road III Transmission Line can be summarized as follows.

Based on the records review of the OHPO online GIS mapping:

- No properties previously listed on or determined eligible for the NRHP or NHL are located within the Study Area.
- Two OHI properties (PAU0340804 and PAU0343504) are located within the Study Area.
- No OAI sites are located within the Study Area.
- Two OGS cemeteries (Brady-Finnan-Pleasant Valley Cemetery and Lehman Cemetery) are located within the Study Area.

Additional records review determined the following:

- A review of the 1914 Mills *Archaeological Atlas of Ohio* determined that there is minimal potential for prehistoric archaeological sites to be present within the Study Area.
- Five previous cultural resources surveys have been conducted within the Study Area. No NRHP-eligible archaeological or historic architectural resources were identified within the Study Area as a result of these surveys.
- The Phase I archaeological reconnaissance survey conducted for the Timber Road II Wind Farm (JFNew, 2010d) identified nine new archaeological sites within the wind farm, including two prehistoric sites, six historic sites, and one multiple component prehistoric and historic site. JFNew concluded that none of the prehistoric or historic sites identified appeared to meet the criteria for listing in the NRHP, and no further work was recommended at any of the sites. None of the archaeological sites identified by JFNew are located within 1,000 feet of the Primary and Alternate Routes of the Timber Road III Transmission Line or within 1,000 feet of the POI Substation.
- The Phase I historic structure inventory and assessment survey conducted for the Timber Road II Wind Farm (JFNew, 2010e) identified 126 newly recorded resources and 32 previously recorded sites within the wind farm and adjacent area. Of these, eight properties were determined to be NRHP-eligible, and six additional properties were classified as notable in terms of significance, and potentially eligible for the NRHP, but requiring additional research and assessment. Of the eight properties recommended NRHP-eligible by JFNew, none are located within 1,000 feet of the Primary or Alternate Routes of the Timber Road Transmission Line or within 1,000 feet of the POI Substation.

- Based on the historic map review, EDR concludes that numerous map-documented structures are present within the Study Area for the Primary and Alternate Transmission Routes. However, most if not all of these structures were field surveyed as part of the 2010 Phase I historic structure inventory and assessment (JFNew, 2010e).

3.2 Conclusions and Recommendations

Based on the results of the cultural resources records review, construction and operation of the Facility will not affect any known, potentially significant cultural resources. As described above, the proposed Facility will not directly (physically) impact any known cultural resources within the study area, and no specific mitigation measures are proposed at this time. However, the proposed Facility has the potential to cause indirect (visual) impacts to aboveground historic resources within the study area. Based on the relatively recent (2010) cultural resource surveys conducted for the Timber Road II Wind Farm, which included the entirety of the Study Area for the Primary and Alternate Routes of the Timber Road III Transmission Line and POI Switchyard, no further historic-architectural resources surveys are proposed or recommended.

The proposed Primary and Alternate Transmission Routes have not been systematically surveyed for archaeological resources. After the preferred alternative has been selected, it is recommended that an archaeological survey be conducted for those portions of the proposed Facility where direct ground disturbance is proposed.

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Summary: Application Exhibit E-1 (Cultural Resources Records Review Narrative)
electronically filed by Mr. Michael J. Settineri on behalf of Paulding Wind Farm III LLC