APPENDIX F

New York Branch
2390 Clinton Street
Buffalo, NY 14227
Tel: (716) 821-1650
Fax: (716) 821-1607

Alabama Branch
2301 Paul Bryant Drive
Tuscaloosa, AL 35401
Tel: (205) 556-3096
Fax: (205) 556-1144

Tennessee Branch
91 Tillman Street
Memphis, TN 38111
Tel: (901) 454-4733
Fax: (901) 454-4736

Corporate Headquarters
P.O. Box 20884
Tuscaloosa, AL 35402
Tel: (205) 248-8767
Fax: (205) 248-8739

PHASE 1A

CULTURAL RESOURCES INVESTIGATION

FOR THE PROPOSED DEER RIVER WIND FARM, TOWNS OF PINCKNEY, HARRISBURG, AND MONTAGUE, LEWIS COUNTY, NEW YORK

Prepared for:

STANTEC
30 Park Drive
Topsham, Maine 04086

Prepared by:

PANAMERICAN CONSULTANTS, INC.
Buffalo Branch Office
2390 Clinton Street
Buffalo, New York 14227
(716) 821-1650

March 2017

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Prepared for:

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30 Park Drive
Topsham, Maine 04086

Prepared by:

Christine M. Longiaru, M.A., Senior Architectural Historian/Co-Principal Investigator
Robert J. Hanley, M.A., RPA, Senior Archaeologist/Co-Principal Investigator
Mark A. Steinback, M.A., Senior Historian
Michael A. Cinquino, Ph.D., RPA, Project Director

PANAMERICAN CONSULTANTS, INC.
Buffalo Branch Office
2390 Clinton Street
Buffalo, New York 14227
(716) 821-1650

March 2017

Management Summary

SHPO Project Review Number: None assigned

Involved Federal and State Agencies: U.S. Army Corps of Engineers, New York State Department of Environmental Conservation, Public Service Commission

Phase of Survey: Phase 1A

Project Location Information:
Location: Lewis County / Jefferson County
Minor Civil Division: Towns of Harrisburg (MCD 04905), Montague (MCD 049112), Pinckney (MCD 04915) / Town of Rodman (MCD 04517)

Five-mile Visual APE Study Area Information:
Location: Lewis County
Minor Civil Division: Towns of Denmark (MCD 04902), Harrisburg (MCD 04905), Lowville (MCD 04909), Martinsburg (MCD 04911), Montague (MCD 04912), and Pinckney (MCD 04915)
Location: Jefferson County
Minor Civil Division: Towns of Champion (MCD 04506), Rodman (MCD 04517), Rutland (MCD 04518), Watertown (MCD 04520), and Worth (MCD 045222)

Number of Proposed Turbines: 39

Five-mile Visual APE Study Area: approximately ±222.53 sq. miles

USGS 7.5-Minute Quadrangle Maps (all New York):
Archaeological Investigation: Barnes Corners (1959), New Boston, (1943), Rutland Center (1959), Sears Pond (1943)
Architectural Investigation: Barnes Corners (1959), Carthage (1943), Copenhagen (1942), New Boston, (1943), Page (1943), Rodman (1959), Rutland Center (1959), Sears Pond (1943), Watertown (1959), West Lowville (1943), Worth Center (1960)

Archaeological Survey Area (Metric & English): N/A

Archaeological Survey Overview
Number & Interval of Shovel Tests: N/A

Results of Archaeological Survey
Number & name of historic sites identified: N/A
Number and name of sites recommended for Phase 2/Avoidance: N/A

Results of Historic Resources Identified in 5-mile Visual APE Study Area (See Tables 4.1-4.2)
Number of identified S/NRHP-Listed resources: 1
Number of identified S/NRHP-Eligible (Individual) resources: 22
Number of Historic Districts with an "Undetermined" S/NRHP eligibility status: 3
Number resources with an "Undetermined" S/NRHP eligibility status: 17

Report Author(s): C.M. Longiaru, R.J. Hanley, M.A. Steinback, M.A. Cinquino

Date of Report: March 2017

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1.0 Introduction

1.1 PROJECT DESCRIPTION

Panamerican Consultants, Inc. (Panamerican) was contracted by Stantec, Topsham, Maine, to conduct a Phase 1A cultural resources investigation for the proposed Deer River Wind Farm in the towns of Pinckney, Harrisburg, and Montague, Lewis County, New York (Figures 1.1 and 1.2). The project would have an estimated generating capacity, or nameplate capacity, of up to 100 megawatts (MW) of power from approximately 39 wind turbines. Atlantic Wind LLC, a wholly-owned subsidiary of Avangrid Renewables, LLC (AR), is proposing to submit an application to construct a major electric generating facility under Article 10 of the Public Service Law (PSL).

The proposed transmission interconnection location for the Deer River Wind Farm project crosses into the Town of Rodman in Jefferson County. Since Article 10 defines a wind "Project Area" to include the transmission interconnection point, the Town of Rodman is within the Project Area although no wind turbines are currently proposed for location in that municipality. The proposed Project Area covers approximately 44.24 square miles. During the development phase of the project, Atlantic Wind will lease approximately 8,000 acres of land, which will be spread out over this larger Project Area. However, once the project is constructed, the proposed permanent improvements would utilize less than 100 acres, where turbines, collection lines, roads, and facility components are constructed and buffers around these features are maintained. At that point, the vast majority of previously leased land will be released from lease agreements and would not be included in the facility, once constructed (Muscato and Bomyea 2016:6).

The purpose of the Phase 1A investigation was to determine if any previously recorded cultural resources are present within the Area of Potential Effect (APE) for the project and assess its general sensitivity for archaeological and historic architectural cultural resources. The APE for the archaeological sensitivity assessment comprised the general location of the Project Area (see Figure 1.1). At the time of this Phase 1A cultural resources investigation, the project layout and the specific locations of project components (e.g., access roads, workspaces, collection lines, etc.) had not been planned.

The visual APE is defined as the area from which the proposed undertaking may be visible within five miles from its turbines (New York State Historic Preservation Office [NYSHPO] 2006). As noted, the project layout has not been finalized. The accompanying map (see Figure 1.2) shows a general boundary of the visual APE. A formal visual APE based on topography will be generated by Panamerican once the locations and heights of the wind turbine generators have been determined.

The study area also includes the towns of Denmark, Lowville, Martinsburg in Lewis County; and the towns of Champion, Lorraine, Rutland, Watertown, and Worth in Jefferson County. The proposed study area is depicted in Figure 1.2, and covers approximately ±222.53 square miles, extending five miles in all directions from the Project Area's boundary (Muscato and Bomyea 2016:6).

The cultural resources investigation included documentary and historical map research, a site file and literature search, the examination of properties listed in the New York State and National Registers of Historic Places (S/NRHP), a cursory windshield survey of historical buildings/structures in the project area as well as its setting, assessments of cultural resource sensitivity and past disturbances within its APE, and photographic documentation of conditions characterizing the APE.

The investigation was conducted in compliance with the National Historic Preservation Act (as amended), the National Environmental Policy Act, the New York State Historic Preservation Act, and the State Environmental Quality Review Act, as well as all relevant federal and state legislation. The archaeological investigation also was conducted according to the New York Archaeological Council's (NYAC) standards and the historic structures assessment was conducted in compliance with NYSHPO's *Guidelines for Wind Farm Development Cultural Resources Survey Work* (2006). The field investigation was conducted during the week of December 5, 2016 by Senior Architectural Historian Ms. Christine M. Longiaru, M.A., Co-

Principal Investigator (Architecture); Senior Archaeologist Mr. Robert J. Hanley, M.A., RPA, served as Co-Principal Investigator (Archaeology); Senior Historian Mr. Mark A. Steinback, M.A., was Project Historian; and Senior Archaeologist Dr. Michael A. Cinquino, RPA, served as Project Director.

1.2 METHODOLOGY

Cultural resources investigations are designed to provide a complete examination of a project area in order to identify and assess any known or unknown cultural resources prior to potential impacts. These resources include archaeological sites (prehistoric and historic), and standing structures or other above-ground features. A Phase 1A survey consists of a background/literature search, a site file check, and a field inspection of the project area. Archaeological and historic site files at the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) are reviewed as an initial step to determine the presence of known archaeological sites within a one-mile radius of the APE. These files include data recorded at both the OPRHP and the New York State Museum (NYSM) and are accessed through OPRHP's electronic Culture Resource Information System (CRIS) database. Results of the site file check are summarized in Section 2.3.1. The prehistory and history of the region is reviewed for the preparation of an historic context within the APE (see Section 2.2).

Information collected during the Phase 1A survey is used to assess the sensitivity of the project area for the presence of cultural resources. The sensitivity of the project area is assessed through background research and field examination. Areas that are untestable or severely disturbed are identified according to the following criteria:

- graded and cut areas through surrounding terrain (e.g., hills or gorges), such as those resulting from road construction
- areas that appear to have over 5 feet (1.5 meters) of fill
- areas previously impacted by construction of utilities, drainage ditches, streets or other obvious areas of significant earth movement
- areas including poorly drained soils and wetlands
- areas having slopes greater than 15 percent

Areas of archaeological potential and high sensitivity are identified based on the following criteria:

- undisturbed areas that are environmentally sensitive with relatively level well-drained soils or in the vicinity of potable water such as springs, streams or creeks (these characteristics typify known site locations in the region)
- known prehistoric or historic site locations within or adjacent to the project area
- historic architectural resources identified within or immediately adjacent to the project area

Photographs of the general area, setting, and field conditions of the Project location are included in Appendix A. The historic resources background review is presented in Section 4.0.

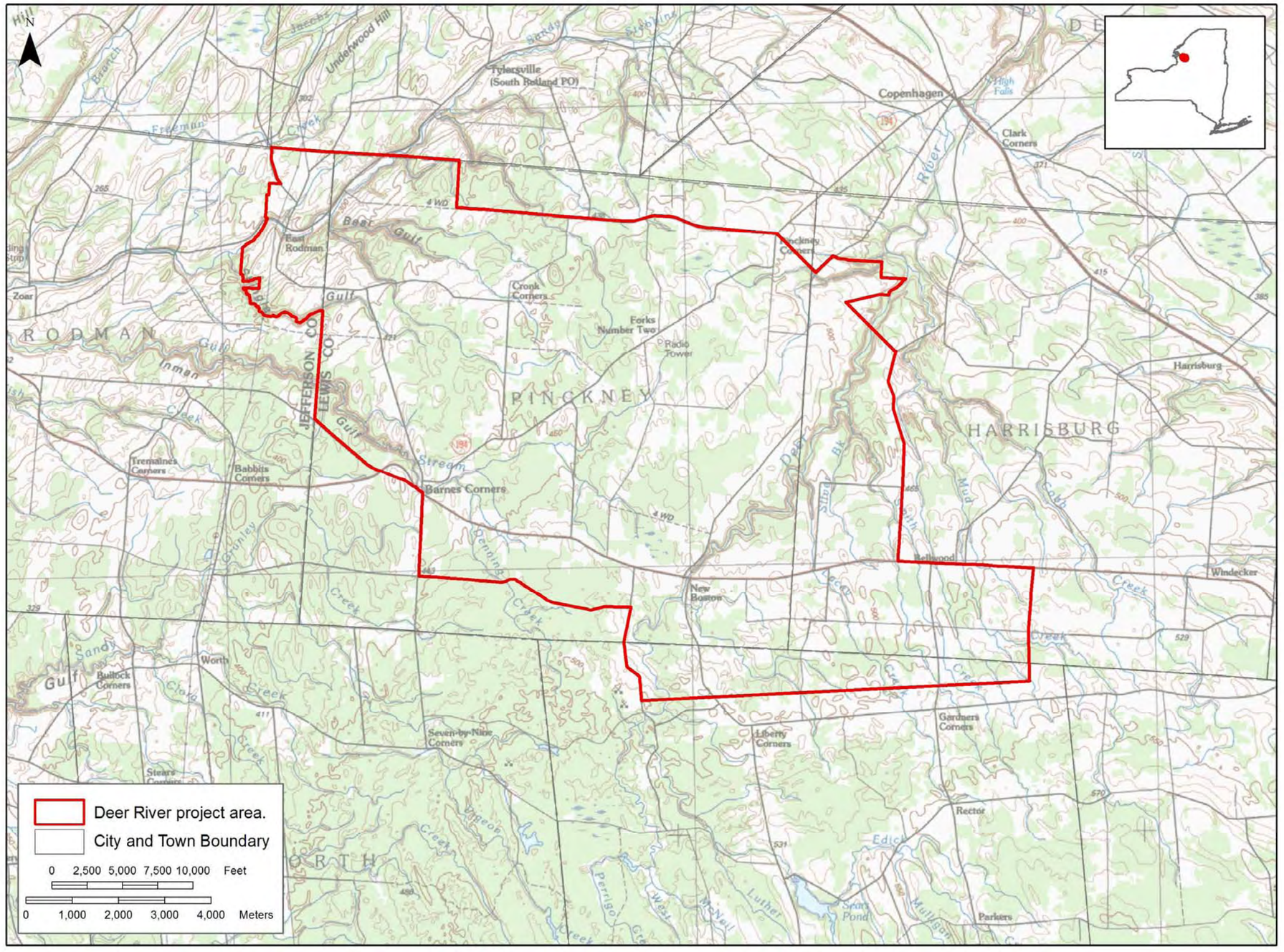

Figure 1.1. General Project location in the Towns of Pinckney, Harrisburg, and Montague, Lewis County, and the Town of Rodman, Jefferson County, New York *(Avangrid Renewables 2016).*

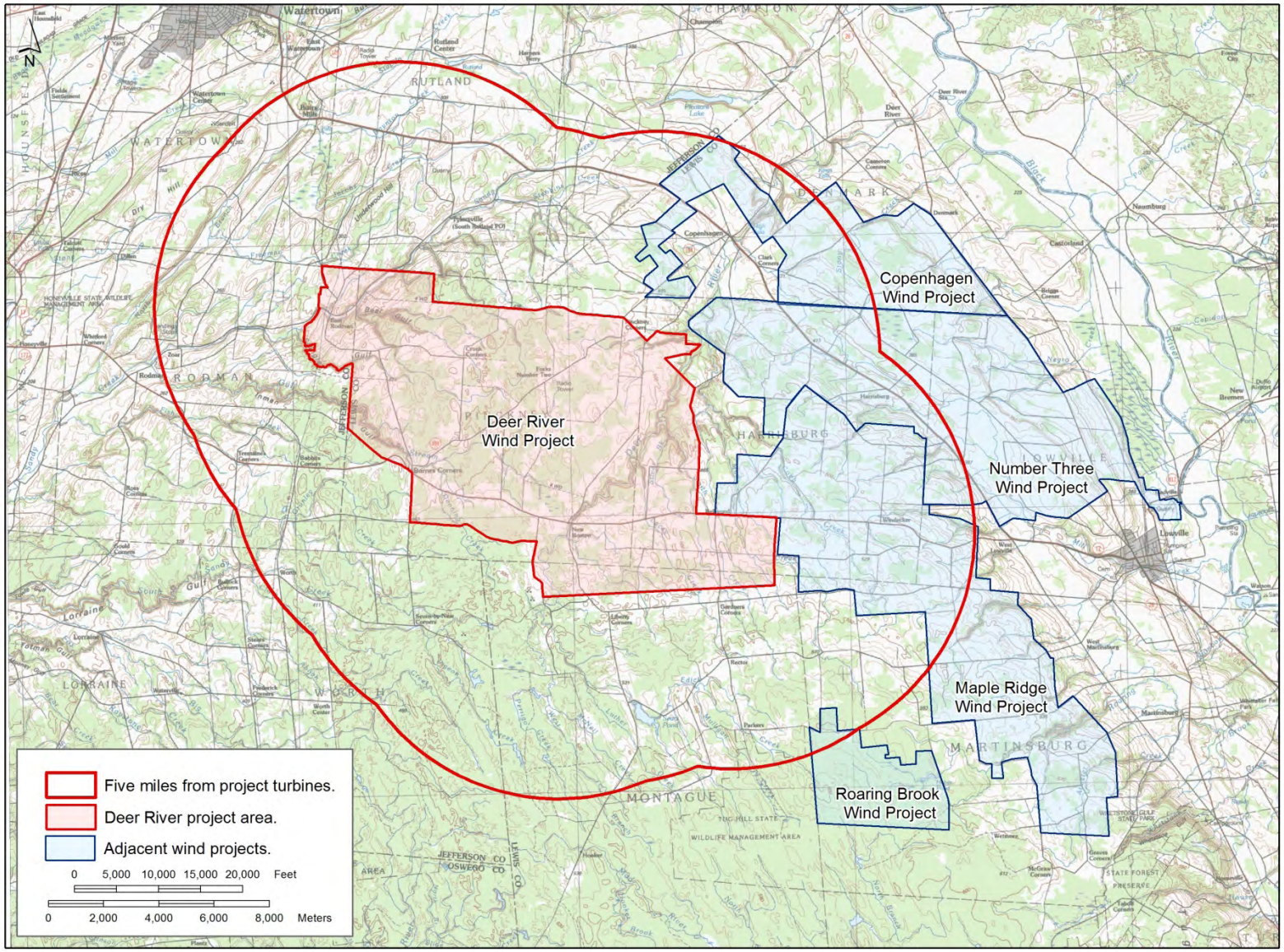

Figure 1.2. General boundary of the five-mile Visual APE study area in Lewis and Jefferson counties, as well as the general locations of previously investigated wind-power projects in proximity to the current project *(Panamerican 2017: USGS 1985)*.

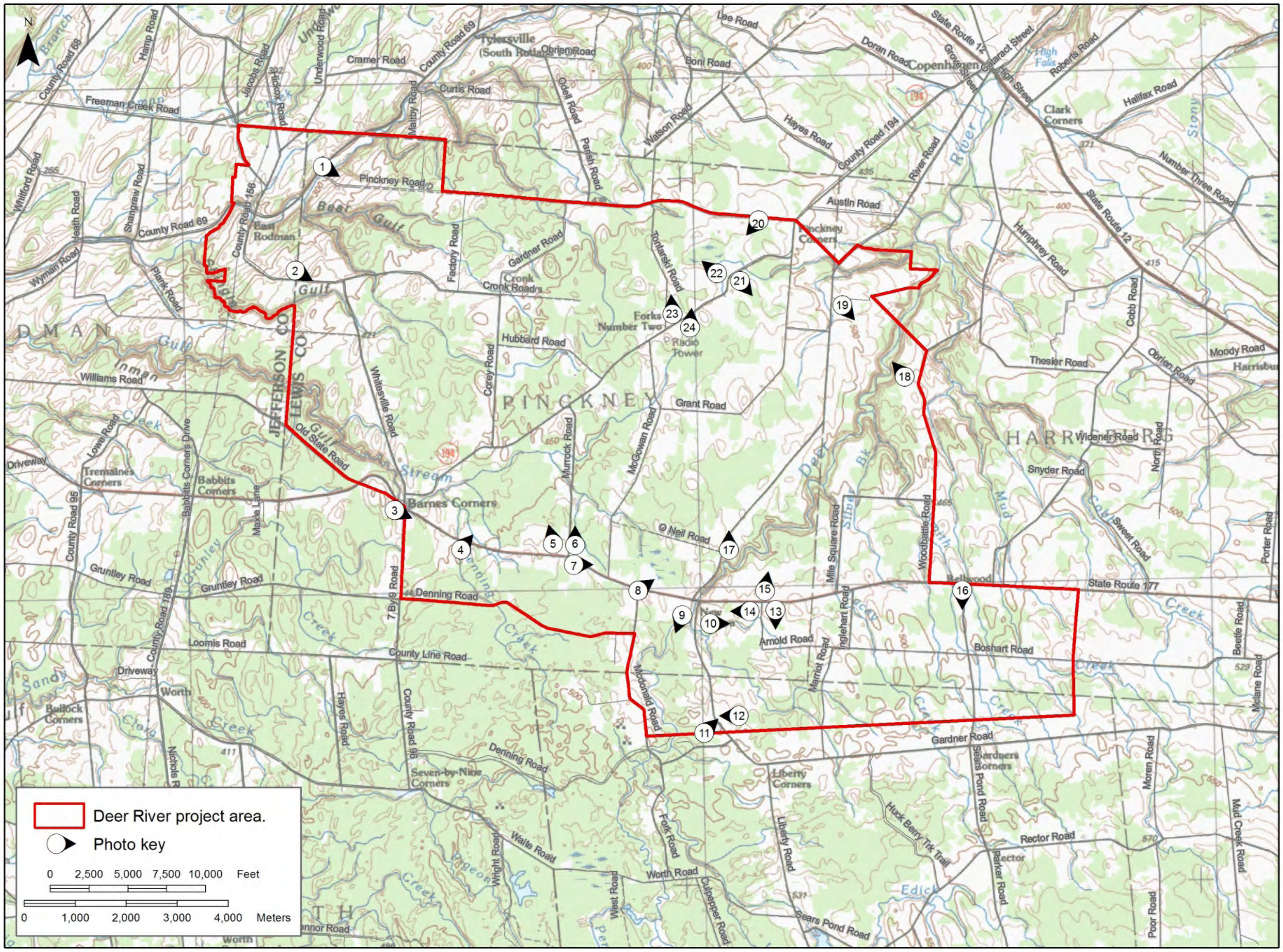

Figure 1.3. Location of photograph angles within the general Project location in Lewis and Jefferson counties *(USGS 1985).*

2.0 Context and Background Research

2.1 ENVIRONMENTAL SETTING

Geology and Topography. Lewis County is within three physiographic regions: The foothills of the Adirondacks on the east; the Black River Valley in the center; and, the Tug Hill Plateau on the west. The project area, including the proposed transmission line corridor in Jefferson County, is situated within the Tug Hill Plateau. The eastern portion of the project area rises to the west away from the Black River toward the Tug Hill Plateau, which rises gradually to a maximum elevation of approximately 2,012 feet (614 meters) at Welch Hill (Pearson and Cline 1960:103-104; Cressey 1966:26). The Tug Hill Uplands are underlain by Paleozoic sandstones, limestones, and shales which slope gently westward (Cressey 1966:33, 24). Bedrock underlying the project area comprises sedimentary rocks forms during the Ordovician period, and include Lorraine sandstones and shales and Oswego sandstone towards the south (Pearson and Cline 1960: 104, Figure 3).

The sloping and undulating topography of the general Project location rises generally from northeast to southwest away from the Black River in a series of ridges or escarpments, and from north to south in the western portion of Project location. Elevations in the eastern portion of the Project location increase from approximately 1,300 ft (397 m) along the Deer River in the western portion of the Town of Harrisburg at the northern end of the Project location to approximately 1,600 ft (488 m) south of New York State Route (NY) 177 in the Town of Harrisburg at the southern end of the Project location. In the undulating topography in the western portion of the Project location elevations increase to the south from approximately 930 ft (284 m) along Sandy Creek in the community of East Rodman in Jefferson County to approximately 1,400 ft (427 m) in the community of Barnes Corners in the Town of Pinckney to approximately 1,650 ft (503 m) east of the Deer River in the Town of Montague at the southern extreme of the Project location (U.S. Geological Survey [USGS] 1898, 1904, 1980 [1943], 1980 [1959], 1959).

Soils. The general Project location covers terrain with numerous soil types and soil associations designated by the U. S. Department of Agriculture Natural Resources Conservation Service (NRCS). Generally, these soils were formed in glacial till and vary in composition according to the underlying bedrock material from which they were created (Pearson and Cline 1960:104). The predominant soil associations are: Pinckney-Camroden-Bice; Insula-Bice; and Turnbridge-Schroon-Bice-Berkshire; with minor amounts of Pyrities-Malone-Katurah; Ontario-Madrid-Bombay; Muskellunge-Malone-Adjidaumo; Worth-Empeyville-Bice; and Worth-Westbury-Empeyville. Figure 2.1 depicts the general soil associations in and in proximity to the Project location.

Drainage. The Black River flows east of eastern portion of Project location and drains into Lake Ontario. The valley forms a low-lying area between the Tug Hill Plateau on the west and the Adirondack Mountains to the east. The proposed turbine locations are west of the Black River. Numerous streams flow through the general Project location, including Deer River, Sandy Creek, Mud Creek, Inman Gulf, and Cobb Creek (see Figure 1.1).

Forest Zone and Vegetation. Lewis County contains two forest zones: the Spruce–Northern Hardwood zone, found along Lake Ontario in the western third of the county, and the Northern Hardwood zone that makes up the remainder of the county. The project area lies within the Spruce-Northern Hardwood zone which is mostly found in the generally cooler areas of New York State where softwood trees intermingle with hardwoods. In addition to spruce, fir, and larch, white pine, red spruce, white cedar and hemlock can be found in these areas in poorly drained soils. The population of softwoods has been reduced because of logging and related timber industries. Wetlands can also be found in this area. Climatic conditions of this zone comprise cool wet summers, cold snowy winters, and a shorter growing season (de Laubenfels 1966:95-96). Vegetation within the project area mainly consists of deciduous and coniferous trees and brush (see Appendix A: Photographs 1 through 7).

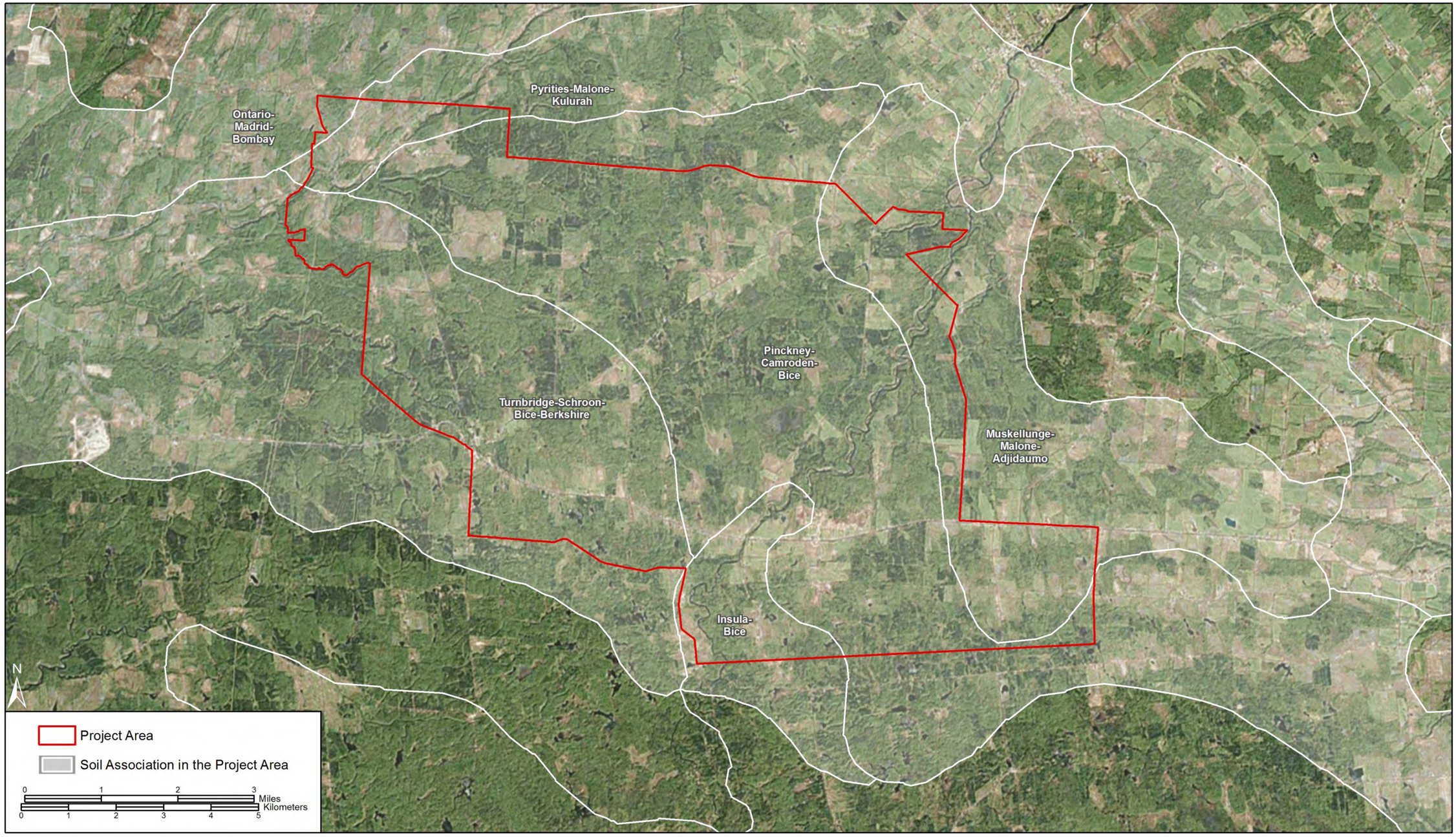

Figure 2.1. General soil associations within the approximate general Project location in Lewis and Jefferson counties *(ESRI 2016; NRCS 2006).*

2.2 CULTURAL BACKGROUND

2.2.1 Prehistoric (Precontact) Period. The three major cultural traditions manifested in New York State during the prehistoric (precontact) era were the Paleo-Indian, the Archaic, and Woodland. The earliest people were nomadic big-game hunters (12,000 to 8000 BC). Changing environmental conditions required an adaptation of the economy, resulting in a shift to the efficient exploitation of temperate forest resources by Archaic hunter-gatherers. In many areas of eastern North America, the Archaic (8000 to 1500 BC) is followed by a Transitional period (1500 to 1000 BC) that bridges the Archaic and the subsequent Woodland period. The Woodland period (1000 BC to AD 1600) is marked by the introduction of pottery, agriculture, and burial mounds. As a result of these innovations, many new and very different social and economic adaptations developed (Ritchie 1980; Hart 2011).

Paleo-Indian Period (ca. 12,000-8000 BC). Hunter-gatherer bands of the Paleo-Indian culture were the first humans in New York State after the last glacial retreat approximately 15,000 years ago. While much of the northern part of the state was locked in ice, it is possible that the environmental fluctuations that occurred during this early period were conducive to periodic forays by the Paleo-Indian groups into the region when conditions were suitable. As the climate gradually became more temperate, these forays likely became more extended. Prior to 10,000 years ago, the ice had not retreated very far north of the lake and the Lake Ontario basin was still somewhat inhospitable (Ritchie 1980:4-5; Cressey 1966:22).

Technologically, the Paleo-Indian period has been associated with the fluted Clovis point industry. These points are generally large (2.5 to 10 centimeters [1 to 4 inches] in length) with a flute on each face that facilitated hafting (Funk and Schambach 1964). A fluted point was collected near the Black River in Town of Croghan in northeastern Lewis County (Ritchie 1980:Figure 2).

The archaeological record suggests that Paleo-Indian subsistence strategies emphasized hunting big-game species, many of which are extinct. These included mastodon, mammoth, great beaver, caribou and moose-elk, along with a variety of smaller game. Few tool associations have been made with aquatic resources, although this food source was probably utilized as the climate moderated (Funk 1972:11; Ritchie 1980; Salwen 1975). The remains of mammoths and mastodon have been found throughout much of the state, and mastodon remains were identified at the western boundary of the Town of Denmark. Pleistocene elk remains were noted in the northern Lewis County (Ritchie 1980:Figure 3).

Adapted to the tundra, Paleo-Indians utilized a nomadic settlement system in which their movements followed that of game. During seasonal resource peaks, larger populations occupied strategically located base camps; and during periods of scarce resources, the population dispersed, occupying small camp sites and rockshelters on a temporary basis. A band-level social organization is attributed to Paleo-Indian groups, with each band consisting of 25 or 30 people (Snow 1980:150; Fitting 1968; Funk 1978). As climatic conditions allowed more permanent occupation of an area, this wandering became more restrictive and bands settled into loose territories.

Archaic Period (ca. 8000-1000 BC). The Archaic period is differentiated from the Paleo-Indian period by a functional shift in lithic technology, an apparent increase in population, changes in the subsistence strategy, and a less nomadic settlement system (Funk 1978; Tuck 1978). These changes reflect an adaptation to an improved climate and a more diversified biome (Funk 1972:10).

Although archaeological sites from the Early and Middle Archaic are rare, important sites have been found in central and eastern New York, in Ulster County and near Sylvan Lake (Dutchess County), as well as western Connecticut, the upper Delaware valley and the Susquehanna valley (Dent 1991; Funk 1991, 1993; Nicholas 1988). The Early Archaic tool kit consisted of Hardaway, Dalton, Palmer corner-notched, Kirk corner-notched, and bifurcate base points which frequently had serrated edges (Funk 1993). People of the Early Archaic also used end scrapers, side scrapers, spokeshaves, drills, gravers, choppers, hammers, and anvil stones.

In addition to an improved climate and more diversified biome, a few technological changes, such as the production of ground and polished stone tools, serve to identify the Middle Archaic (6000-4000 BC) (Funk 1991; Kraft 1986). The bannerstone, probably used as an atlatl weight, and the bell pestle were Middle Archaic innovations. People began to develop woodworking tools during this period, using coarse-grained stones and river cobbles as their raw materials. The Middle Archaic tool kit included anvil stones, choppers, netsinkers, an array of projectile points, axes, adzes, gouges, choppers, and other woodworking implements (Funk 1991; Kraft 1986). The territorial "settling in" process begun during the Early Archaic continued into the Middle Archaic, stimulating a process of group isolation. Sites from these periods cluster along major rivers and marshy, swampy land as well as lowlands.

During the Late Archaic period (4000-1500 BC) hunting, fishing, and gathering remained the principal daily activities, although greater emphasis was placed on deer and small game like birds and turtles, shellfish, nuts and possibly wild cereal grains like Chenopodium. Associated with the shift in subsistence strategies was the increase in population densities, and as population increased, camps became larger and more numerous. Bands moved seasonally or when resources dwindled. Most sites of the Late Archaic period were seasonal, special purpose habitation sites such as hunting camps, spring fishing stations, fall nut-gathering and processing stations, and shellfish processing, while some settlements located near major rivers or lakes were multi-activity spring and summer villages (Ritchie and Funk 1973). Groups probably congregated cyclically for exchange and socialization. Houses of this period may have been rectangular, 14-to-16 ft long and 7-to-13 ft wide. Several such house patterns were found at the Lamoka Lake site in Schuyler County (Ritchie and Funk 1973).

The Terminal Archaic or Transitional period (ca. 1500-1000 BC), continues Late Archaic cultural and economic patterns, with a few innovative traits. Among these are a developing burial/ceremonial complex and, toward the end of the period, the introduction of ceramics. Frost Island phase culture was generally situated in central New York with extensions into western and northern New York (Snow 1980; Ritchie 1980). Artifacts characteristic of this phase include Perkiomen and Susquehanna Broad points, drills and strike-a-lights made of reworked Susquehanna Broad points, flake tools, celts, netsinkers, hammerstones, pitted stones, anvil stones, and milling slabs (Funk 1993:197). The hallmark of this transition is the adoption of pottery around 1200 BC. The shift to pottery appears to have been preceded by the adoption of steatite or soapstone pots, which made cooking and food preparation easier (Ritchie and Funk 1973:87; Funk 1993:198).

Woodland Period (1000 BC-AD 1600). The definitive characteristic of the Woodland period in New York State is the adoption of pottery technology, a development that occurred at different times from one location to another (Feder 1984:101-102; Snow 1980:262). Native groups also became more dependent on domesticated plants—including maize, beans, and squash—although this change does not seem to have significantly altered subsistence and settlement patterns until the Late Woodland, after AD 1000 (Ritchie and Funk 1973:96). In the meantime, hunting and gathering continued to be important elements of Native lifeways for much of the Woodland and people likely still employed these strategies, at least part time, at the time of contact with Europeans. With agriculture came settled village life, a general increase in population, technological changes, warfare, and a litany of social and political changes.

The Early Woodland period (1000-100 BC) is marked by several cultural phases in New York State, including the Meadowood, Middlesex, Orient, and Bushkill phases. The Early Woodland is marked by an increase in burial ceremonialism. The Meadowood phase is strongly represented in northern, central, and western New York, but its presence is weaker and more sporadic east of the Susquehanna valley (Funk 1976). Settlement type information is scarce for the Meadowood phase. Meadowood cremation cemeteries have been found in the St. Lawrence drainage (Ritchie 1980).

The Middle Woodland period (100 BC-AD 1000) shows continued long-distance exchange, although perhaps with varying strength at different times. In northern New York, a sequence of occupation sites shows evidence of a long, Middle Woodland cultural tradition referred to as Point Peninsula (Ritchie 1980; Mason 1981).

In Ritchie's chronological framework, the end of the Middle Woodland, which he argued came around AD 1000, occurred when people in New York adopted the suite of characteristics he associated with the Late Woodland: primarily agriculture based on maize, beans, and squash; Owasco-style pottery (collarless vessels with elongate bodies, conoidal bases, slightly everted rims, and cord-wrapped-stick impressed exterior decoration confined largely to their necks); and house structures resembling historical Haudenosaunee longhouses. Ritchie believed people adopted these innovations relatively rapidly between AD 1000 and 1100. Recent studies, however, have demonstrated that none of these developments occurred at AD 1000, nor did they happen together at any other single time (Hart 1999, 2000, 2011; Hart et al. 2003; Hart and Brumbach 2003; Prezzano 1988; Schulenberg 2002). Moreover, this research has altered how events during the Middle Woodland are interpreted. The direct dating of maize using the accelerator mass spectrometry (AMS) technique, for example, has demonstrated that people in Central New York were growing the crop before AD 700 (Crawford et al. 1997:114-115; Hart et al. 2003:634). Meanwhile, Hart et al. (2003:624-625) and Schulenberg (2002:160-164) have obtained AMS dates from charred residue on the interiors of Owasco vessels that indicate people were manufacturing those pots as early as the seventh century AD (see also Hart and Brumbach 2003:743-744). Beyond this, Hart has demonstrated that people did not construct longhouses in central New York before the beginning of the thirteenth century AD and that they did not likely grow beans until an even later date (Hart 1999, 2000).

The Late Woodland, in Ritchie's scheme for the Northeast, was the period between AD 1000 and the time at which Native people traded for or otherwise obtained European goods, the precise timing of which varied throughout the region. In the 1930s, Ritchie (1937 [1936]) proposed dividing the Late Woodland into two shorter periods: the Owasco and Iroquois (see also Ritchie 1944). At the time, he believed Iroquoian groups migrated to the New York State area and replaced the Algonquian Owasco people already living there (see Tuck 1971:11-14). Although, since the 1950s, researchers have generally accepted that Iroquoian speakers did not immigrate to the Northeast at the beginning of the Late Woodland, the distinction between the Owasco and Iroquois periods has remained. Also, with the development of radiocarbon dating, the two have acquired distinct temporal boundaries, with the Owasco lasting from AD 1000 to 1300, and the Iroquois spanning the years thereafter (Hart and Brumbach 2003:747). In terms of material culture, the primary differences between the two entities are related to ceramic vessel form and decoration. While Owasco pots tend to be collarless, decorated with a cord-wrapped paddle or stick, and have elongate bodies surmounting conoidal and subconoidal bases, Iroquois vessels generally have collars, are decorated with incised designs, and have globular bodies (MacNeish 1952; Ritchie and MacNeish 1949). Each of the Haudenosaunee nations is represented by a cluster of sites during the late prehistoric and protohistoric periods.

In some cases, Owasco sites occur in sufficient proximity to suggest hypothetical ancestors of a Haudenosaunee site cluster (Tuck 1971; Snow and Starna 1986), although settlement pattern change is apparent. Owasco sites are often situated adjacent to rivers, other sizable streams and lakes, or on bluffs or terraces immediately overlooking these kinds of water bodies. Haudenosaunee villages, however, tend to be located on hillier sites, often defensible elevations nears springs or small creeks.

Although, as outlined above, some of the cultural developments Ritchie associated with the Late Woodland did not occur between AD 1000 and 1100, some—particularly those related to the development of an agricultural system based on maize, beans, and squash—did happen in the succeeding years. In fact, several developments appear to cluster around AD 1200 to 1300: the earliest evidence for longhouses and multiple household villages is from the thirteenth century AD and people added beans to their diets around AD 1300 (Hart and Brumbach 2003:744-746). In addition, Snow (2000:30) notes that groups in central New York began surrounding their settlements with defensive palisades after AD 1200. During the later years of the Iroquois period, people in some areas began clustering their villages within the territories occupied by historically known nations (Snow 2000:46-51). Likely in part because of the large amounts of wood consumed during the construction and maintenance of these settlements, as well as that needed for firewood, inhabitants periodically relocated their villages roughly every 10 to 20 years (Engelbrecht 2003:101-103). In several cases, researchers have reconstructed parts of the resulting sequences of settlements and produced detailed data concerning local culture change and the effects thereon of contact with Europeans (e.g., White 1961).

Important changes occurring in this period were social rather than techno-economic. The technology of the period is characterized by refinement of the developments of earlier periods with styles and techniques becoming more regionalized. Horticulture, primarily the growing of corn, beans, and squash, was the primary source of plant food for the prehistoric Haudenosaunee, but never totally supplanted the hunting, fishing, and collecting strategy as the most important means of subsistence procurement. The practice of horticulture allowed or even necessitated increased sedentarism. With the added premium placed on land in the Late Woodland, territorialism increased (Whallon 1968).

Contact Period (AD 1500–1650). During the late prehistoric and Contact periods, tribal clusters of Iroquoian-speaking peoples were situated throughout New York State and lower Ontario Province, Canada. Comprising several thousand people in at least one, and usually several, villages in proximity to one another, each tribal cluster was separated from the others by extensive and widespread hunting and fishing areas (Trigger 1978:344; Tuck 1978:324). Cultural changes during the late prehistoric period laid the groundwork for the development of the individual nations of the Haudenosaunee Confederacy (historically referred to as the Iroquois or Five Nations) during the historic period, in New York.

This period dates the beginning of the end of traditional Native American cultural patterns as a result of ever-increasing political, military, religious and economic interactions with Europeans. The trends occurring at the end of the Late Woodland were greatly accelerated by contact with European explorers beginning in the sixteenth century. Native American groups in Northern New York were profoundly affected by direct and indirect contacts with the fur trade, long before the arrival of a permanent European-American population to the area (Brasser 1978:79-81; Trigger 1978:345-346).

Beginning in the last decades of the sixteenth century, the increasingly regular encounters between Europeans and Native Americans incubated a pandemic of European diseases among unprepared Native populations, which decimated many Native nations. The presence of typhus, smallpox, measles, and others ravaged Native communities. In addition to the tensions introduced through simple contact with Europeans, trade has been recognized as having a major impact upon traditional aboriginal cultural patterns (Brasser 1978:83). Further, utilizing pre-existing intertribal exchange networks and relationships, changes in aboriginal cultural patterns were occurring as a result of the earliest tentative and sporadic introductions of European material culture (Trigger 1978:346-347). The most immediate changes were due to the introduction of a superior material culture. Once the fur trade was established, assuring a stable supply of these goods, the manufacture of Native goods rapidly declined until they were entirely replaced by European manufactured implements. Finally, changes occurred in sociopolitical relationships after 1640 as the fur trade intensified and the supply of furs declined. The most important of these changes was the formation of confederations, such as the Five Nations or Haudenosaunee Confederacy of New York State, and the Huron Confederacy.

During this time, a group referred to as the “St. Lawrence Iroquois” occupied villages along the north bank of the St. Lawrence River in what is now Canada. After 1550, these people vanished from this area. It is surmised that they succumbed to either disease brought by the Europeans or conflict with the Haudenosaunee and the survivors were incorporated into either the Huron or Onondaga nations (Tuck 1978:324; Trigger and Pendergast 1978:357, 360-361). After the “disappearance” of the St. Lawrence Iroquoians, the Tug Hill Plateau area became a depopulated middle ground between the Huron-Algonquian nations of present-day Canada and the Haudenosaunee nations of what is now New York State, and was not continuously occupied by either group, although the Mohawk exerted some control over the area. Despite its contested status, the present area was included within the traditional hunting areas of the Mohawk, although the region of their principal villages lay around the Mohawk River (Trigger 1978:346; Fenton and Tooker 1978:466).

2.2.2 Historic Period. The French were the first recorded Europeans to penetrate the valley of the St. Lawrence River. As early as 1615, Samuel de Champlain and a party of his Native allies landed in the vicinity of Chaumont, Henderson, and Black Bay on their way inland to harass the Oneida south of the Mohawk River (Aldenderfer 1982:III-23). French traders or Jesuit missionaries may have briefly visited the

region and explored the area's streams during the seventeenth and eighteenth centuries, but there are not records of such stops (Trigger 1978).

Colonial Period. The arrival of the Dutch in 1624 at what is now the City of Albany, initiated an era of rabid competition among the imperial powers for the lucrative fur trade. This competition spilled over to the Native nations with whom the Europeans dealt. As the supply of furs began to decline in the 1630s and 1640s, some Mohawk and Oneida ambushed and attacked Algonquians and French in the Ottawa and upper St. Lawrence valleys. These raids would continue intermittently until the end of the century. In 1664, the British seized New Netherland from the Dutch, renaming it New York, thereby becoming the patrons of the Haudenosaunee. For the British, as it had earlier for the French, the fur trade became an essential imperial concern, and the struggle between the English and the French over the fur trade once again affected their Native American clients, who were forced to ally themselves with one or the other power. The subsequent competition in the New World resulted in the erection of fortified trading posts within the frontier by both kingdoms.

Despite the erection of European posts in the Niagara, Mohawk, and St. Lawrence valleys, what is now northern New York was largely free of settlement until the middle of the eighteenth century. The British erected what became Fort Oswego near Lake Ontario (in what is now Oswego County) in 1727. This fort became their main frontier outpost during this period; and, as a result, the provisioning and protection of it became an imperial imperative. In 1749, a collection of Christian Haudenosaunee (identified as the Oswegatchies, but really Oneida, Onondaga, and Cayuga) settled at La Presentation (present-day Ogdensburg). This group, comprising approximately 1,500 people by 1751, was later dispersed into the St. Regis and Onondaga reservations (ca. 1807). This location served as a place for raids against British settlements in the Mohawk and Hudson valleys during the French and Indian War (Hurd 1880:117, 375; Blau et al. 1978:494-495). However, the French were unable to maintain this position.

In August 1760, troops under the command of Major General Jeffery Amherst dispersed the French and Indian occupation at La Presentation and the signing of Treaty of Paris in 1763 officially terminated French claims in most of North America. While the migration of homesteaders into the frontier recommenced at the end of the French and Indian War, no permanent settlements had been established in the lands north or west of German Flats in the Mohawk valley. Nevertheless, the erection of forts and trading posts and the trickle of European-American settlers into the northern and western woodlands aggravated relations with the Native groups who already lived and hunted there (Tooker 1978:433-434; Blau et al. 1978:495). The "Property Line Treaty of 1768" ceded to the British all lands east of the Allegheny Mountains (including territory not actually under Haudenosaunee control), excepting reservations of Mohawks and others, for the purposes of settlement. What is now Lewis County was well north of this line, and was generally not settled except for small outposts along the major rivers (Campisi 1978:483; Tooker 1978:434).

During the American Revolution, the fortifications at Oswegatchie were garrisoned by the British and served as the staging area for many of the marauding parties that harassed frontier settlements. Fighting on the frontier remained well south of the project area and consisted largely of raids in the Mohawk, Wyoming, and Cherry valleys (Abler and Tooker 1978:507-508; Campisi 1978:483). After the war, as a result of the Second Fort Stanwix Treaty (1784) the Haudenosaune lost all their land west of the Niagara River, except for small reservations. This treaty was disputed by several groups of Haudenosaunee until 1794, when a treaty was signed at Canandaigua between the United States and the Six Nations which defined the boundaries of Seneca lands and the reservations to the other Haudenosaunee nations (Abler and Tooker 1978:508). European-American settlement in northern New York dates from the end of the American Revolution.

> Northern New York was virtually unbroken wilderness in 1783 except for a few settlements fringing Lake Champlain. In fact, most of the region lying between Lake Champlain on the east, Lake Ontario on the west, the St. Lawrence River on the north, and the southern slopes of the Adirondacks remained wilderness until late in the nineteenth century [Ellis et al. 1967:156].

Early State Period. With the return of peace, settlers and land speculators again began to stream northward, exerting pressure to open up land formerly occupied by the Haudenosaunee. Alexander Macomb purchased 640,000 acres on the south side of the St. Lawrence River in 1787. Later, after the state acquired northern New York in a 1788 treaty at Fort Stanwix, Macomb, as leader of a three-man company, added 3,670,000 acres to his holdings in 1791, including all of what would become Jefferson and Lewis counties. Macomb's eponymous purchase was surveyed into six great tracts and put up for sale. Tracts Four, Five, and Six fell under the supervision of William Constable, who took over complete control after Macomb became insolvent" (Ellis et al. 1967:156-157; Dill 1990). Tracts One, Two, and Three, comprising the northern part of Macomb's Purchase, "had a similar history" (Ellis et al. 1967:157). The current project area situated in what were Great Tracts No. 5 and 6.

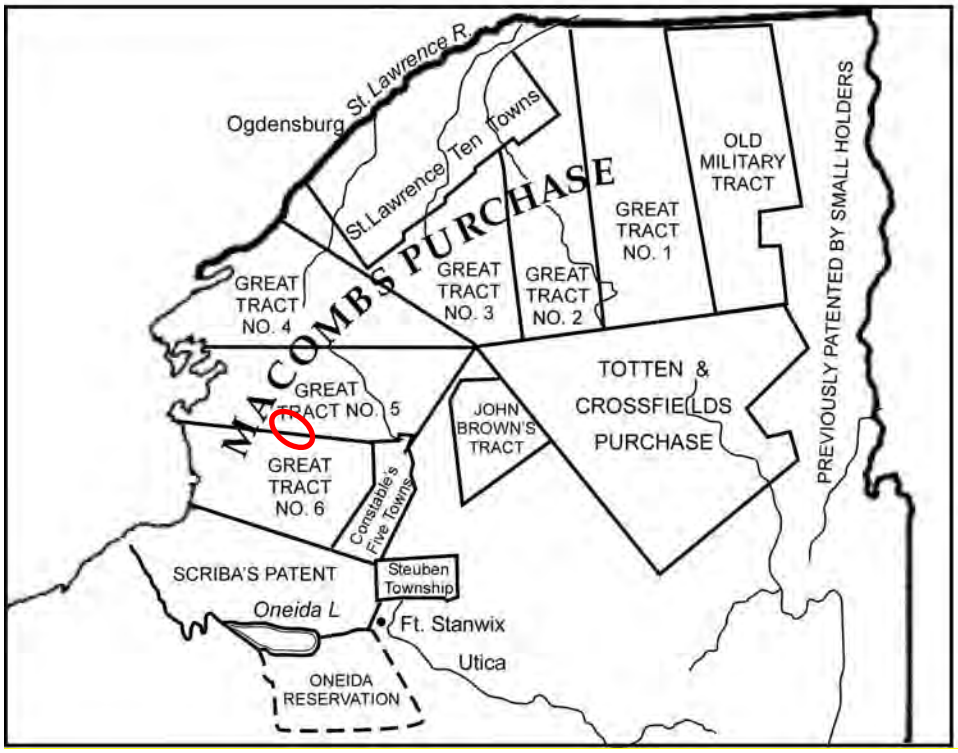

Figure 2.2. Approximate location of the project area (red oval) as shown with Northern New York land purchases prior to 1800 *(adapted from Ellis et al. 1967:157).*

With Macomb's bankruptcy, William Constable (one of Macomb's partners) actively sought buyers for property lots in the great tracts. Constable's efforts to develop the Black River valley led him to France, where 210,000 acres were purchased by La Compagnie de New York in 1793 and 600,000 were sold to the Antwerp Company. The land of La Compagnie became known as "Castorland" for the extensive number of beaver ("castor" is beaver in French) that were reputed to inhabit the heavily forested area. The current project area is located southwest of Castorland, although some settlements were farther south and east along the Black River. La Compagnie purchased the land to serve as a haven for French aristocrats (with their servants) escaping the Reign of Terror during the French Revolution. Several built grand estates now in ruin. Other speculators were attracted to the pristine North Country, including Joseph Bonaparte (Napoleon's older brother), John Brown of Providence, Rhode Island, David Parrish, William Inman, and James LeRay (de Chaumont) (Ellis et al. 1967:156-157; Pilcher 1985:2-3, 22-24, 122; Powell 1976). "All in all, the north country proved a disappointment to most land speculators, who could not successfully compete with the holders of the richer lands of western New York and, subsequently, of the Great Lakes states" (Ellis et al. 1967:158).

Closer to the project area, Thomas Boylston acquired all the Macomb's purchase south and west of the Black River (the Black River Tract), except Inman's Triangle in 1792 from Samuel Ward. However, after passing through the hands of several other speculators as a result of insufficient or questionable financing, the land was acquired in 1795 by Nicholas Low, William Henderson, Richard Harrison, and Josiah Ogden Hoffman. The following year the entire tract was subdivided by Benjamin Wright into eleven townships and distributed among the owners with acreage in the Town of Worth used to balance any inequities among the partners. Townships 1 (present-day Hounsfield, Jefferson County), 4 (Champion, Jefferson County), 5 (Denmark, Lewis County), 8 (Rodman, Jefferson County), and 10 (Harrisburg, Lewis County) were apportioned to Harrison and Hoffman; Township 2 (Watertown, Jefferson County, 7 (Adams, Jefferson County), and 11 (Lowville, Lewis County) apportioned to Nicolas Low; and Townships 3 (Rutland, Jefferson County), 6 (Henderson, Jefferson County), and 9 (Pinckney, Lewis County) apportioned to William Henderson. During the next several years the proprietors transferred interest in their shares to several other parties, and the lands were finally offered for sale to settlers in 1801 (Hough 1860:26; Emerson 1898; Goebel and Smith 1980:219-231).

Settlement in the Black River valley took root slowly during the late eighteenth century into the early nineteenth century as a result of stony soils, a short growing season, and inadequate in-land transportation (Ellis et al. 1967:156). Several of the more intrepid French settlers had begun settling their Castorland properties nearest the Black River at what is now Lyons Falls in the 1794 and Geoffrey Desjardins erected a mill near what is now Carthage in 1795, although these endeavors were short-lived with many of the immigrants returning to France. While speculators of the large land tracts were generally unsuccessful, numerous homesteaders from New England, in general, and Vermont, in particular, were drawn to the area by its cheap land and potential for industrial and commercial activity. During the early nineteenth century, rural communities formed around gristmill and sawmill sites as other enterprises, such as stores, taverns, and schools, emerged to service these nascent villages. The Village of Lowville was established in 1798, and developed into the commercial center of Lewis County during the nineteenth century (Pilcher 1985; Widdis 1991:233; Ellis 1991:109-110; Kula et al. 1989:18). Lewis County was created from Oneida County in March 1805 and name for then Governor of New York Morgan Lewis. The county initially was divided into five towns: Harrisburg, Leyden, Lowville, Martinsburg, and Turin. Adjacent Jefferson County was created at the same time and named to honor the third president of the United States, and comprised two towns: Mexico and Leyden (Hough 1860).

Aside from ample waterpower, entrepreneurs exploited other natural resources of the area, including iron ore and abundant timber. Serving as the foundation for nascent communities, prominent local forges attracted both people and additional commercial enterprises. For example, Sterlingburgh, initially a bloomary forge in 1816, attracted other industries including a distillery (1824), and a grist and plaster mill after 1835, as well as residential housing. Other types of iron production facilities included Joseph Bonaparte's short-lived blast furnace on the Indian River, which produced pig and cast before being sold in 1852 to James Sterling, the region's iron magnate. Sterling had operated iron mines in the area since 1837 as well as a blast furnace on Black Creek and a charcoal kiln. Sterling's iron works persevered through the vacillations of the iron market and were sold to the Jefferson Iron company in 1869. This company ceased operation in 1881 and the last ore shipment was sent in 1890. Other iron operations in the area were located at Alpina, and Philadelphia. Sterlingburg became Sterlingville and was subsumed into the Fort Drum military reservation, north of the project area (Klein et al. 1985:2/16-17; Child 1890).

As expected, agriculture provided the chief livelihood for most area residents. "The first cash crop from the heavily timbered land was potash derived from burning the timber cut while clearing land" (Klein et al. 1985:2-18). While land in the Black River valley was generally fertile, the rugged topography of the Tug Hill Plateau area precluded intensive agriculture. The thin soils of the plateau encouraged dairying and cheese making was a major nineteenth century industry in Lewis and Jefferson counties until the twentieth century. Begun largely for local or household consumption, numerous small cheese making operations flourished in the area during the second half of the nineteenth century, including several associated with cheese magnate F.X. Baumert (Kula et al. 1989:18-19; Klein et al. 1985:2/18-19; Aldenderfer et al. 1982:III-32).

Improved transportation networks improved commerce and industry as well as linking the area to the rest of New York State. Largely unpaved turnpike and plank roads connected the various industrial sites and small communities with distribution sites and farming areas prior to 1850. Initiating an economic boom beginning in 1848, the Black River Canal connected Carthage to Lyons Falls to the Erie Canal near Rome. The canal carried timber, mill and agricultural products from the region to downstate markets. With the advent of more reliable rail transportation in the North Country by the late nineteenth century, the canal was gradually abandoned between 1900 and 1925 (Ellis et al. 1967:246; Hough 1883:132).

Economic growth of Lewis County was enhanced by the introduction of railroad facilities after 1853. While the Northern Railroad (1850) connected Ogdensburg and other northern towns with the main, mid-state line, the Black River & Utica Railroad connected Philadelphia (NY), Boonville, Lowville (by 1868), and Carthage (by 1872) with Utica and points south (Aldenderfer et al. 1982:III-36; Klein et al. 1985:2-20; Kula et al. 1989:19). The more prominent Rome, Watertown & Ogdensburg Railroad hauled freight, passengers and dairy products (after refrigerated boxcars were invented). The two routes merged in 1886 and were consolidated in 1891 with the New York Central & Hudson River Railroad (Meinig 1966:176).

Immigration of different ethnic groups served to dilute the area's predominant New England character. After the completion of the Erie Canal in 1825, Irish immigrants trickled into the region, reinforced by another stream during the late 1840s with the construction of the Black River Canal. Germans arrived during the mid-century as well. As one might expect due to the area's proximity to Canada, English- and French-Canadians were a noticeable presence in the area's lumber and manufacturing industries, particularly after the 1870s. Italians and Eastern Europeans arrived during the late 1890s into 1900s (Widdis 1991:233).

The largest municipality in the vicinity of the project area, Lowville became Lewis County's commercial hub with a stop on the railroad and a canal running through it. Industrial and commercial development also occurred in the smaller villages and hamlets during the nineteenth century, including the Village of Copenhagen (Hough 1883). However, the economic prosperity did not last.

At the end of the nineteenth century as a result of increasing deforestation the once-prominent lumbering industry entered a long period of decline. The area's geographic isolation also would play a role in the decline of the manufacturing sector, as businesses sought to decrease transportation costs with the advent of cheaper electric power. Suffering a similar fate during the twentieth century, the cheese and dairying industry declined and consolidated as a result of competition from Wisconsin farms and increasing mechanization. The loss of economic opportunities resulted in a flight of population (Widdis 1991; Klein et al. 1985:2-19). At the end of the twentieth century, two cheese factories remained in the vicinity of the project area: Queens farm in Pierrepont Manor and Kraft Farm in Lowville. The Lowville train station was razed in 1960 and the tracks were removed in four years later (Kula et al. 1989:20).

The military presence in the area began in 1908 as the New York State National Guard and the U.S. Army held maneuvers on 10,000 acres around Pine Plains east of Watertown. Beginning in 1910, Pine Camp was permanently established as a site for maneuvers and artillery testing. A landing strip for planes was added in the 1920s. The camp added over 80,000 acres of land to its reservation during World War II and was renamed Camp Drum in 1951. Consisting of 107,265 acres at present, the installation was renamed Fort Drum in September 1974 (Klein et al. 1985:2/20-21). Currently, the fort is home to the U.S. Army 10th Mountain Division (Light Infantry) and involved in the mobilization and training of almost 80,000 troops annually. The population of Lewis County increased from 26,944 in 2000 to 27,087 in 2010. The population of nearby Jefferson County also increased during the period; from 111,738 in 2010 to 116,229 in 2010.

Lewis County Towns.

Town of Pinckney. Initially township number 9 (Handel), the town was originally part of the Town of Mexico and included as a part of the Town of Harrisburg in 1804. It was later divided with the creation of Lewis County in 1805 with the eastern part retained by Harrisburg and the western part was included as

part of the Town of Rodman. Formed in 1808 from the Town of Harrisburg, the town was under the proprietorship of William Henderson after the division of the Black River Tract. The town is named for a member of the Pinckney family of South Carolina, none of whom have any connection to the area. William Denning, Henderson's brother-in-law, actively promoted settlement of the town beginning in the 1820s. Pioneers during the early nineteenth century included Samuel and Joseph Clear, Ethan Russell, J. Greene, John Lucas, David Canfield, Levi and Elisha Barnes, James and Stephen Hart, James Armstrong, and Phineas Woolworth, among others (Hough 1883). During the second half of the nineteenth century industry was centered at the community of Barnes' Corners, which in the 1880s supported four stores, an undertaker, two wagon shops, two blacksmith shops, a shoe shop, a harness maker, two saw and planing mills, a hoop factory, and a manufacturer of farm implements, and a cheese factory (Hough 1883). Two other cheese factories and five sawmills were dispersed throughout the town. A community called New Boston on the Deer River supported a cheese factory, a cheese box factory, a grist mill, a planing mill, and a lath mill. Pinckney State Forest is located in the northern portion of the town, and other county and state forested areas are situated within the town, including Tug Hill, Lookout and Granger state forests. Both Barnes' Corners and New Boston are along present-day NY 177. The population of the Town of Pinckney in 2010 was 329, increasing from 319 in 2000.

Town of Harrisburg. Formed from the towns of Lowville, Champion (in Jefferson County), and Mexico (Oswego County) in 1803, Harrisburg attained its present size in 1808. The town was originally included in the Black River Tract (number 10, Platina), and is named for Richard Harrison, an early proprietor of the town, as well as a lawyer for both Constable and Pierrepont at one time. Early settlers of the town included Ralph Stoddard, John Bush, Ashbel Humphrey, Jared Knapp, Silas Greene, Charles Wright, Jr., Andrew Mills, Solomon Buck, Thomas and Ebenezer Kellogg, Palmer Hodge, Mark Petrie, Lewis Graves, and Jabez Wright, among others. Largely a farming community, the town at one time during the late nineteenth century supported eight cheese factories (Hough 1883). Cobb Creek State Forest is found in the central portion of the town, east of Deer River. The population of the Town of Harrisburg in 2010 was 437, increasing from 423 in 2000.

Town of Montague. Originally part of the Boylston Tract (Township number 3, Shakespeare), the Town of Montague was formed from the Town of West Turin in November 1850. It was named in honor of Mary Montague Pierrepont, one of the daughters of Hezekiah Pierrepont, a former proprietor of the town. The town was unsubdivided Pierrepont property until 1853 when the unconveyed portions of the property were conveyed to Joseph Bicknell and James Miner, both of whom were Pierrepont's sons-in-law. Settled late in the nineteenth century, Montague's first settler was Solomon Holden in 1846. A sawmill was constructed by Samuel P. Sears in 1847. Another sawmill was built in 1850 along the Deer River. Joseph Gardner was the first merchant (Hough 1883). Other early settlers included Calvin Rawson, Leonard Savage, Peter and Cornelius Durham, Oliver Stafford, William D. Bucklin, Isaiah Burr, and Zebulon Marcellus, among others. Largely a dairy farming community, the town supported six sawmills (two steam and four hydraulic), three stores, two blacksmiths, and four coopers during the late nineteenth century (Hough 1883). Grant Powell Memorial State Forest, Sears Pond State Forest, and the Tug Hill Wildlife Management Area are all located in the central portion of the town. The Lewis County Forest in situated west of Grant Powell State Forest. The population of the Town of Montague in 2010 was 78, decreasing from 108 in 2000.

Town of Lowville. What is now the Town of Lowville was part of the Black River Tract (Township 11) and was assigned to Nicholas Low when the tract was divided among the four proprietors in August 1796. The area was surveyed and opened for sale in 1798. Later, it was acquired by Silas Stow (Low's .land agent) and was included in the eponymous "Stow's Square." Pioneers of the town included Daniel Kelly and Moses Water in the area around the present village of Lowville where a sawmill and gristmill were constructed prior to 1800 (Hough 1860). The Town of Lowville was established in March 1800.

Settled around 1795, the Village of Lowville supported a gristmill, a sawmill, a tavern, an inn, a tannery, and a hat shop by 1814. The largest municipality in the vicinity of the project area, Lowville became Lewis County's commercial hub with a stop on the railroad and a canal running through it. Industrial and commercial development also occurred in the smaller villages and hamlets during the nineteenth century,

including the Village of Copenhagen (Hough 1883). The population of the Town of Lowville in 2010 was 4,982, increasing from 4,551 in 2000. The population of the Village of Lowville was 3,470 in 2010.

Town of Denmark. Formed in 1807 from the Town of Harrisburg, it had been referred to as Mantua (Township 10 of the Black River Tract) on earlier maps. Initial settlement was made by Abel French near what is now the village of Deer River ca 1799. The hamlet of Denmark was settled the following year by Jesse Blodget. Blodget kept a tavern as early as 1812 and erected a large stone hotel in 1824. A sawmill was erected along the Deer River in what is now the village of Copenhagen in 1801 by two men named Munger. It was later joined by a tavern, store, and other mills and the community was renamed Copenhagen by 1807. Freedom Wright erected the first frame house (an inn) in the hamlet of Denmark, and Levi Barnes constructed the first frame in Copenhagen. The village later became a stop on the Rome & Watertown Railroad and was incorporated in 1869. The village at one time supported a cheese factory, a furniture factory, a boot and shoe factory, and several blacksmiths (Hough 1883). The population of the Town of Denmark in 2010 was 2,860, increasing from 2,744 in 2000. The population of the Village of Copenhagen was 801 in 2010.

Town of Martinsburg. Originally part of the Boylston (township number 4, Cornells) and Black River Tract, the Town of Martinsburg was formed from the Town of Turin in March 1803. It was named for Walter Martin, the proprietor of the town at the time of settlement. Martin acquired 8,000 acres within the Boylston Tract erected the first sawmill in the town, which served as an impetus for further settlement. He later settled his family in the town in 1802. During the 1850s and 1860s a short-lived boom in lead and copper mining hit the town (Hough 1883). The population of the Town of Martinsburg in 2010 was 1,433, increasing from 1,249 in 2000.

Jefferson County Towns. Named to honor the third president of the United States, Jefferson County was culled from Oneida County on March 28, 1805. At that time, Watertown was selected for the county seat. During the early nineteenth century, Sackets Harbor was an important military outpost for the fledgling United States government. In 1809 soldiers were stationed there to control smuggling and formal trade between northern New York and Canada. During the War of 1812, Sackets Harbor became a center of U.S. naval and military activity in the northern theater (Ellis et al. 1967:140-141). During the last half of the twentieth century, recreational activities and vacationing have become an important sector in the North Country economy, especially for those areas near the lake and the Thousand Islands. In 2010, Jefferson County had a population of 116,229.

Town of Rodman. Formed from townships number 8 (Orpheus) and 9 (Handel) of the Black River Tract in 1804, the town was within the Town of Adams in Oswego County at that time. The original name of the town was Harrison, named for Richard Harrison, an early proprietor of the town, as well as a lawyer for both Constable and Pierrepont at one time. The town attained its present size and the name Rodman in 1808 (after the clerk of the Assembly, Daniel Rodman). Early settlers of the town included Noah, Asa, Jonathan, and Aaron Davis, Ebenezer Moody, Simeon Hunt, William Rice, and Benjamin Thomas ca. 1801. William Rice erected the first sawmill in the town on Sandy Creek in 1804 as well as a grist mill two years later, 1806. Simeon Hunt kept a public house. Subsequent settlers included William Dodge, Timothy Greenly, Reuben Smith, Daniel Todd, Thomas White, and Ariel Edwards. Enoch Todd, son of Daniel, built a tannery along Sandy Creek in 1806, and was also a shoemaker. Around the house and gristmill of Thomas White emerged the community of Whitesville in the northeastern corner of the town. Benjamin Stillman operated a tavern a little south of the community. The community also supported a store, a sawmill, and a hotel at the end of the nineteenth century (Emerson 1898; Child 1890).

As expected, potash and pearlash were the most profitable early commodities of the town as landowners cleared their lands in preparation for farming. Initially, corn, wheat, and rye were raised, but access to markets was difficult with the lack of adequate roads. As a result a number of distilleries were established along Sandy Creek to produce another commodity. Early distilleries were owned by Hiram Slocum, Asa Davis, C.W. McKinstry, and W.J. Nichols. Although by the end of the nineteenth century, no distilleries were in operation in the town. The population of the town was 1,287 in 1890. Butter and cheese making were prominent industries during the second half of the nineteenth century, and numerous cheese

factories were in operation (Emerson 1898). The population of the Town of Rodman in 2010 increased from 1,147 in 2000 to 1,176 in 2010.

Town of Champion. Formed from the Town of Mexico (Oswego County) in 1800, the town attained its present size in 1808. The area was originally included in the Black River tract, and was acquired by General Henry Champion and Colonel Lemuel Storrs ca. 1798. Early settlers of the town included Noadiah Hubbard, Silas Stow, Eli Church, Joel Mix, Timothy Pool, William Hadsall, Daniel Coffeen, and Moses Goodrich, among others. The Town of Champion was leading agricultural area in the county during the nineteenth century. Cheese making was a prominent industry during the second half of the nineteenth century, and numerous cheese factories were in operation. The Babcock cheese factory was one of the first in the county in 1862, and was situated north of Champion village (Emerson 1898). The population of the Town of Champion in 2010 was 4,494, increasing from 4,361 in 2000.

Town of Rutland. Formed in 1802 from the Town of Watertown, the town (number 3 of the Black River Tract) was under the proprietorship of William Henderson after the division of the Black River Tract in 1796. The earliest settler was Asher Miller, land agent who actively sold parcels to subsequent pioneers. He was followed by Ezekial Andrews in 1800. David Coffeen and Samuel Parker constructed the first gristmill in the town in 1800, which was followed by a sawmill in 1801. Samuel Porter, Joseph Russell, and Abel Sherman were also early settlers (Emerson 1898). The population of the Town of Rutland in 2010 was 3,060, increasing from 2,959 in 2000.

Town of Lorraine. Originally part of the Town of Mexico when it was part of Oneida County, the town was created in 1804 as the Town of Malta. Its name was changed to Lorraine in 1808. The area was included as Township number 1 (Atticus) in the Black River Tract, and was acquired by John Johnson Phyn in 1794. Circuitously, the lands comprising the town ended up with William Constable by 1796. By 1819 Hezekiah Pierrepont acquired the title to the unsold portions of the town. Nevertheless, James McKee and Elijah Fox, squatters, erected a log house in 1802, which they converted to a tavern. With the completion of the Rome to Brownville turnpike in 1803, settlement of the area in general increased. Early pioneers included Comfort Stancliff, Benjamin Gates, Seth Cutler, Clark Allen, William and Isaac Lanfear, Aaron, Ebenezer, Walter, Parley, and Joel Brown, and John Alger, who later converted his home into a tavern, among others (Emerson 1898).

Dr. Isaac Weston and David Frost were early hotel keepers. Michael Frost erected the first sawmill in the town in 1804. The mill was destroyed and rebuilt by Mabb & Aldrich in 1810. The mill passed through several hands before the Civil War. Seth Cutler erected the first gristmill ca. 1805 on Deer Creek. Thomas and Comfort Stancliff operated a sawmill on Deer Creek about the same time. Numerous other sawmills were in operation in the town during the Antebellum period. Like other interior New York towns, potash and pearlash were the most profitable early commodities as settlers cleared their land of trees in preparation for farming. Initially, corn, wheat, and rye were raised, but as more fertile lands in the Midwest were opened cattle raising, including dairy farming became prominent. The population of the town was 1,174 in 1890. Butter and cheese making were prominent industries during the second half of the nineteenth century, and numerous cheese factories were in operation (Emerson 1898). The population of the Town of Lorraine in 2010 was 1,037, increasing from 930 in 2000.

Town of Watertown. Township number 2 of the Black River Tract, the town was under the proprietorship of Nicholas Low after the division of the Black River Tract in 1796. Land speculators Nicholas Low, Henry Champion, and others lobbied the legislature to create the town in anticipation of future settlement. The town, which included what are now the towns of Rutland and Hounsfield, was formed as Watertown in March 1800 as part of Oneida County. The town attained its present configuration in 1806. The earliest settlers were Seyrel Harrington and Joshua Priest who settled in the southern part of the town in 1800. Other pioneers included Deacon Oliver Bartholmew, Simeon and Benjamin Woodruff, Jotham, Joel, and Titus Ives, Adam Blodgett, Samuel Bates, Asaph Butterfield, Ebenezer Iazelle, Williams Sampson, Jonathan Miles, Jacob Sears, Seth Peck, Henderson and Silas Howk, Job Whitney, Caleb and Nathaniel Burnham, Eli and James Rogers, Aaron Brown, Corlis Hinds, Jonathan Baker, William Huntington, John Gotham, Seth Bailey, Davis Doty, and Levi Cole, among others (Emerson 1898).

Manufacturing and industrial activity clustered along Sandy Creek in the Hamlet of Burrville, where Hart Massey built a saw and grist mill ca. 1801. John Burr purchased the property the following year. Jabez Foster opened a store near the mill, but the establishment of the Village of Watertown as the county seat drew much of the surrounding commercial and manufacturing interests to it. Other commercial activity at Burrville included William Lampson's blacksmith shop, as well as an axe factory and triphammer (which was still active as late as 1865). In 1806 James Mann operated a tannery. The area also supported a shoemaker, a carding machine and clothdressing works, as well as a hotel, an ashery, and Rev. Ebenezer Lazelle's distillery (Emerson 1898). However, according to Emerson (1898), "From first to last the history of the town at large has been uneventful, and neither record nor tradition furnishes us with many noteworthy incidents of pioneer life in the region." The population of the Town of Watertown in 2010 was 4,470, decreasing from 4,482 in 2000.

Town of Worth. Formed In the early history of the subdivision of Boylston and Black River tracts, lots in what is now the Town of Worth served as compensation land to make up the differences in area and value of other towns and tracts when the large tract was subdivided among the individual partners. In 1795, William Constable, agent for John Johnson Phyn, sold to Nicholas Low, William Henderson, Richard Harrison, and Josiah Ogden Hoffman the Black River Tract. However, when the tract was subdivided among the partners the size of the tract was less than estimated, so Constable, to make good the difference, conveyed portions of what is now Worth to these proprietors. Harrison & Hoffman acquired the lion's share of the town, which they surveyed and laid out. Hoffman took the north half, which he conveyed to Daniel McCormick to sell the land and hold the proceeds until certain debts were paid (Emerson 1898).

Township number 2, then called Fenelon, later forming a part of Malta or Lorraine, but now the Town of Worth, was acquired in 1802 by Leonard Bullock and Asaph Case. Early settlers included Elihu Gillet and John Houghtailing (in 1802), and Joseph Wilcox, Nathan Mattoon, and Timothy Greenly (in 1803). Joshua Miles erected a combined saw and grist mill on Sandy Creek in 1810. It was later owned by Timothy Greenly and Abner Rising. This was the only grist mill in the town for many years. Ca. 1816 Joseph Wilcox and Green Kellogg built a sawmill at Wilcox's Mill (what is now Worthville), on the site of the grist mill that existed at the end of the nineteenth century. In 1819 Lorenzo Gillet opened a store and tavern under one roof at Wilcox's Mill. Agriculture, as expected, was the predominant industry, comprising grazing, including the production of cheese, butter, and milk, and the growing of oats and potatoes (Emerson 1898).

The Town of Worth was formed in April 1848 from the Town of Lorraine, and named in honor of General William J. Worth, who was commanded troops at Sackets Harbor during the Patriot War. In 1850 the town had a population of 320; by 1880 it had risen to 951, its nineteenth century maximum (Emerson 1989). At the end of the nineteenth century, the hamlet of Worthville supported three stores, the Worthville hotel, S.B. Kellogg's saw and grist mills, A.B. Gillet's sawmill, Monroe Bullock's cheese factory, and N.H. Hyde's blacksmith shop (Emerson 1898). The population of the Town of Worth in 2010 was 231, decreasing from 234 in 2000.

2.3 DOCUMENTARY RESEARCH

2.3.1 Site File and Archival Review. A review of the New York State OPRHP archaeological site-file database accessed through the Cultural Resource Information System (CRIS) identified five historic archaeological sites and one Parker-report prehistoric archaeological sites within the general Project location. Since details regarding the locations of the project components are not available, determining distances is pointless. In addition, two historic archaeological sites and one Parker-reported prehistoric archaeological site were listed in the database within one mile of the general Project location (Table 2.1).

Early archaeological compendia such as Beauchamp (1900) do not indicate the presence of any prehistoric sites in the vicinity of the project area. Later archaeological work by Ritchie (1980) and Ritchie and Funk (1973) do not denote the presence of archaeological sites within the project area.

2.3.2 Previous Research. Numerous investigations have been conducted in proximity to the general Project location. These investigation were the result of either wind-energy (Heaton and Klein 2002; John Milner Associates, Inc. [JMA] 2003, 2004, 2007; edr Companies 2013, 2014; Longiaru et al. 2016) or other projects (Kula et al. 1989; Pratt and Pratt 2007). These investigations have inventoried numerous historic structures and data pertinent from these investigations appears in Section 4.0.

Table 2.1 Archaeological sites[1] within approximately one mile of the Project location.

OPRHP Site #	Additional Site #	In Project Location	Time Period	Site Type
04905.000022	Wheeler Shop Site; SUBi-1226	No	Nineteenth century	Rural industrial artifacts
04905.000023	McCormick-Vaughn-Bier-Bates; SUBi-1227	Yes	Mid-nineteenth century	Domestic scatter
04905.000024	White Site; SUBi-1228	No	Mid-nineteenth century	Domestic scatter
04517.000062	Whiteville Hotel Site; SUBi-3008	Yes	Nineteenth century	Low density sheet midden near hotel MDS
04517.000063	The Ciderman Site; SUBi-3009	Yes	Late nineteenth century-early twentieth century	Sheet midden near former residence
04517.000064	**The Avery Site; SUBi-3010; 13919 CR 156**	**Yes**	**Nineteenth century**	**Sheet midden near former residence**
04517.000065	The CR 156 Site #1; SUBi-3011; 25943 CR 69	Yes	Nineteenth century	Low density sheet midden near former residence
	NYSM 3540	No	Unidentified precontact	Traces of occupation (Parker 1922)
	NYSM 3541	Yes	Unidentified precontact	Traces of occupation (Parker 1922)

[1]-Sites in bold are eligible for listing in the National Register

Register Listings. A review of the New York State and National Registers of Historic Places, as recorded in the files of the OPRHP and accessed through CRIS, did not identify any sites or districts as listed within the Project location. One National Register Listed (NRL) resource was immediately adjacent to the general Project location—Pinckney Corner's Cemetery (14NR06570). Identified NRL and -eligible structures are discussed in Section 4.0.

2.3.3 Historical Map Analysis. Three historic period maps were reviewed for the current project area (Ligowski 1857; Beers and Beers 1864 [Figure 2.4]; Beers 1875 [Figure 2.3]; Robinson 1888 [Figure 2.5]) and a variety of USGS (1905 [Figure 2.6], 1905 [Figure 2.6], 1909 [Figure 6]). A more detailed discussion of potential map-documented structures will occur in the Phase 1B investigation once the actual locations of project components are determined.

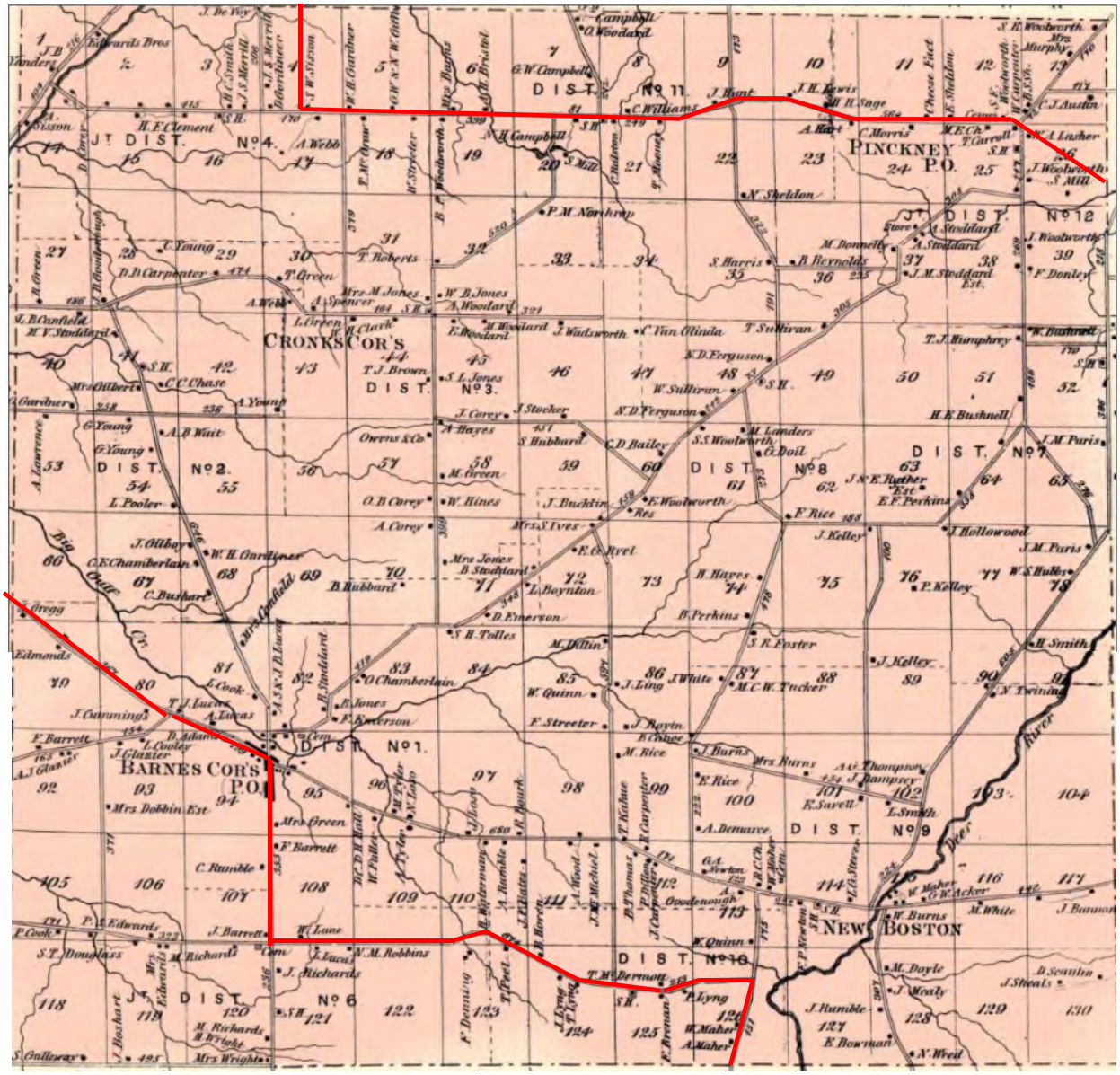

Figure 2.3a. The approximate location of the Project area (between red lines) in the Town of Pinckney in 1875 *(Beers 1875).*

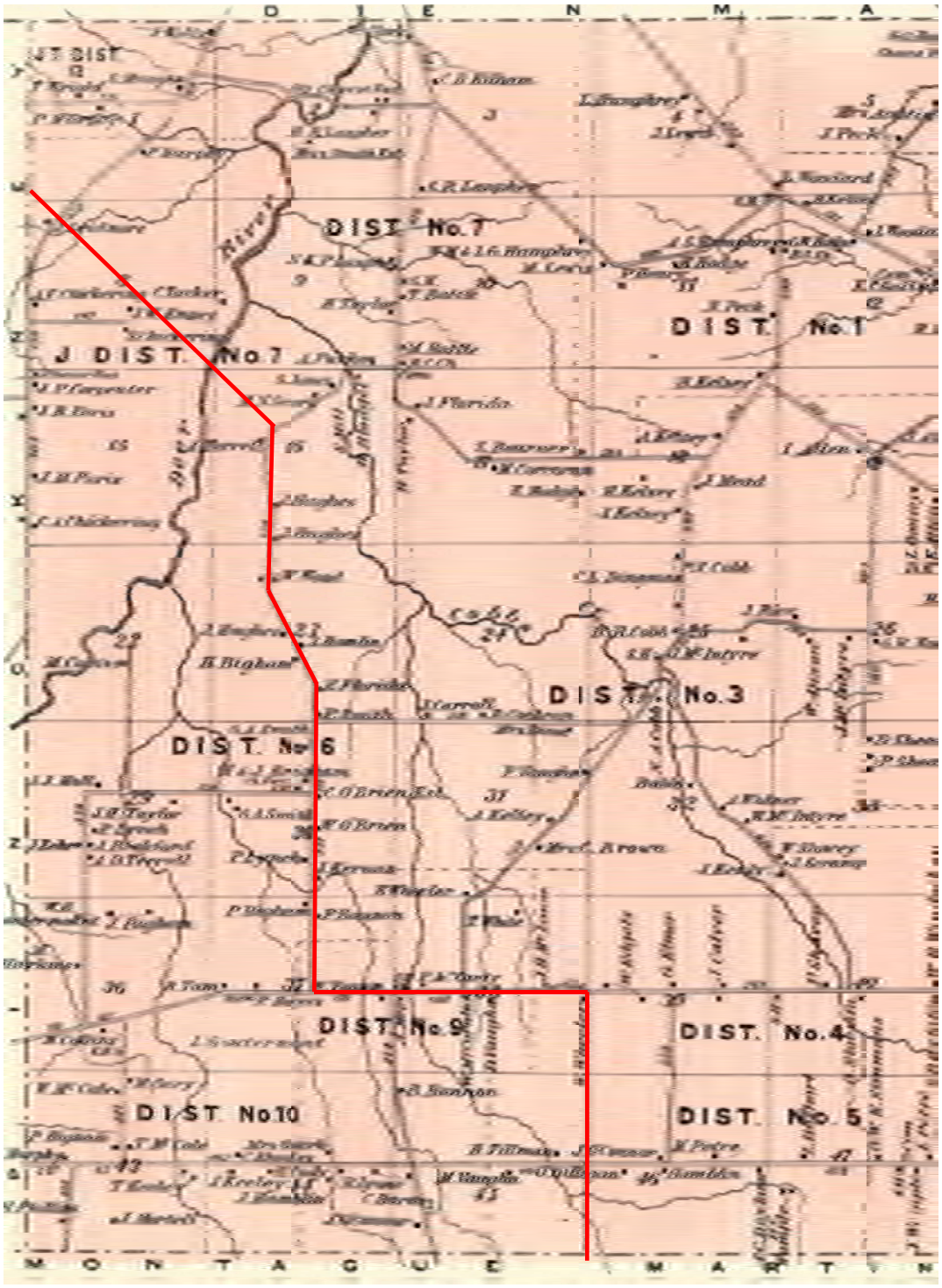

Figure 2.3b. The approximate location of the project area (to the left of the red line) in the Town of Harrisburg in 1875 *(Beers 1875).*

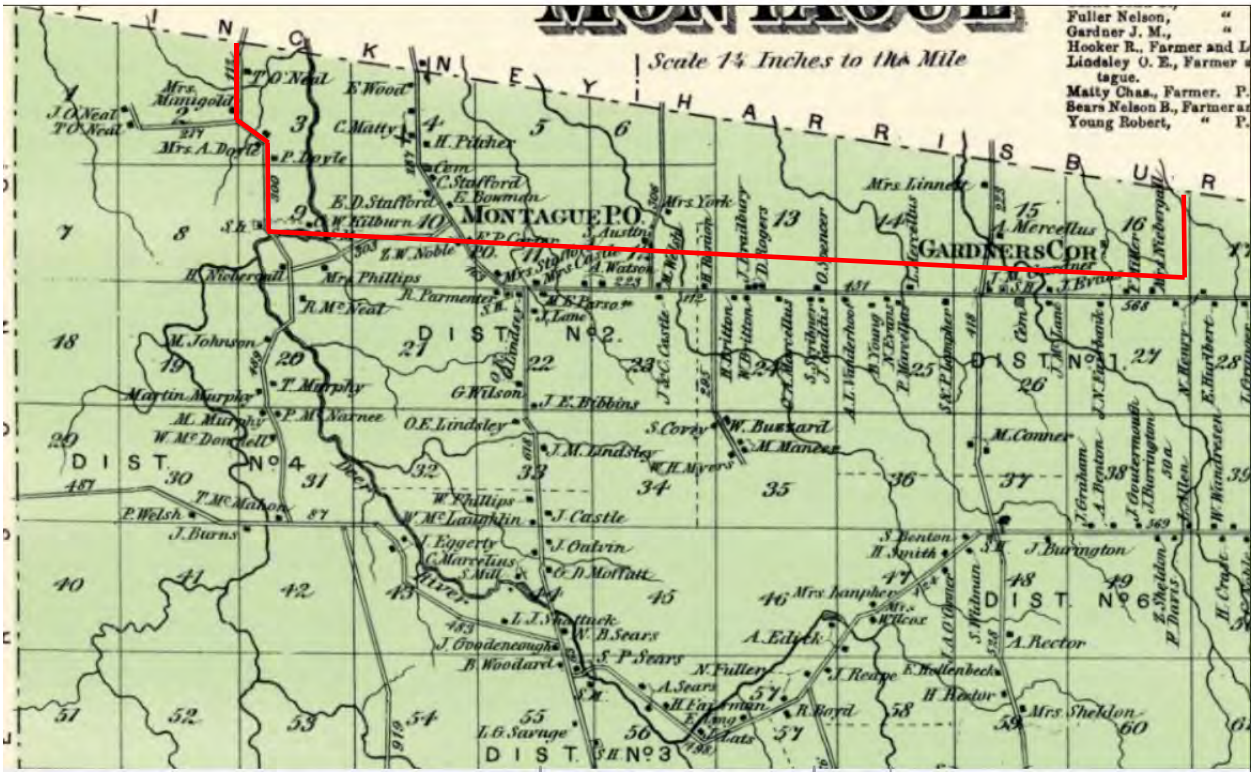

Figure 2.3c. The approximate location of the project area (in red) in the Town of Montague in 1875 *(Beers 1875).*

Figure 2.4. The approximate location of the project area (to the right of the red line) in the Town of Rodman in 1864 *(Beers and Beers 1864).*

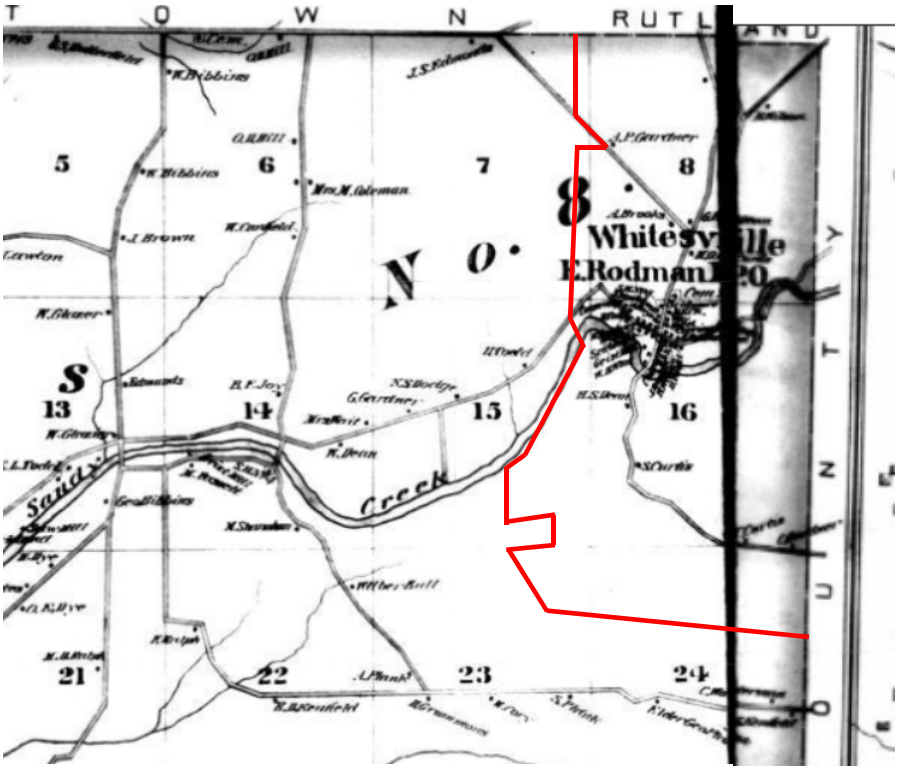

Figure 2.5. The approximate location of the project area (to the right of the red line) in the Town of Rodman in 1888 *(Robinson 1888).*

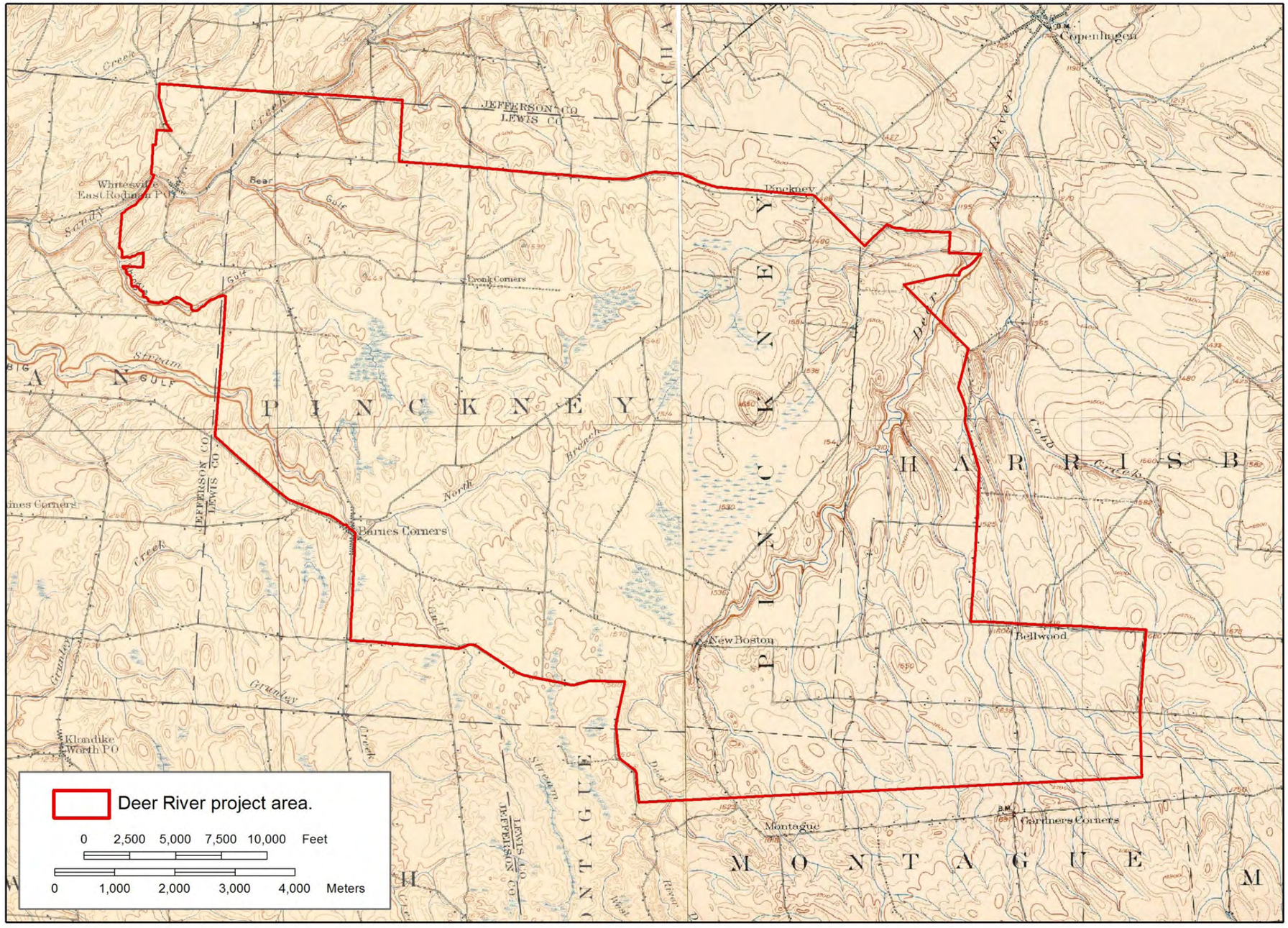

Figure 2.6. The approximate location of the Project area in Lewis and Jefferson counties in the early 1900s *(USGS 1904, 1905, 1909).*

3.0 Archaeological Sensitivity Assessment

The historical/background research and the setting of the Deer River Wind Farm project area indicate that its APE is generally sensitive for historical archaeological resources. Seven historic sites and two (2) prehistoric sites have been reported within or in the vicinity (one-mile radius) of the project area (see Table 2.1). In addition, map-documented structure (MDS) locations typically associated with farmsteads are also along roads in the general project area (see Figures 2.3 to 2.5).

The project area has primarily been used for agriculture through the historical period. Farming-associated activity such as soil tillage is not typically considered to have a significant adverse impact on any archaeological resources, if present. Although shallowly-buried archaeological sites will have been somewhat disrupted by plowing, patterns of artifacts from sites in plowed fields can typically still yield information of historic or prehistoric land use and lifeways. Disturbances from plows are relatively shallow and might not disrupt deep archaeological features, such as filled/covered storage pits, privies, or wells. Therefore, any archaeological sites present in the project APE could be relatively undisturbed.

The project area is considered to have moderate-to-low sensitivity for prehistoric/precontact period cultural resources. Precontact archaeological sites previously reported within one mile of the broadly defined project area include two broadly defined areas referred to as “trace of occupation” by Arthur Parker in 1922. These sites were assigned New York State Museum site numbers NYSM 3540 and NYSM 3541. The cultural time period of the sites is not known and no additional information could be found.

The most sensitive portion of the project area for precontact sites are those areas in proximity to streams and other sources of potable water, such as tributaries of the Deer River such as Silver Brook, Denning Creek, and other creeks in the area (e.g., Gulf Stream, Grunley Creek, Sandy Creek). Project components in proximity to wetlands are also considered sensitive for precontact archaeological sites. Precontact sites in the project area would most likely be the remains of small camps associated with short-duration tasks such as hunting (e.g., Funk 1993:279-283). Rock outcrops or other sources of raw lithic material for precontact tool making are not common in the project area and, therefore, quarry and workshop sites are unlikely. Burial sites and cemeteries, which are typically associated with long-term habitation sites, are also unlikely.

Conclusions and Recommendations. The project area is sensitive for both prehistoric/precontact and historic period archaeological sites and has been minimally disturbed by modern-era development and land use. Panamerican recommends a Phase 1B investigation be conducted that complies with the NYSHPO *Guidelines for Wind Farm Development Cultural Resources Survey Work*. Once the APE of project components (e.g., turbines, access roads, electric connector lines substations, equipment yards) is determined, a Phase 1B field-testing strategy should be developed by determining the acreage of the APE and the percentages of it relative to “environmental zones” and “local habitat areas.” The relative number of shovel tests should be allocated to match the relative sizes of the environmental factors which are assessed following Robert Funk’s *Archaeological Investigations in the Upper Susquehanna Valley, New York State* (1993). The Phase 1B testing strategy should also include investigation of MDS and previously reported sites within the APE.

Environmental zones are large-scale geographic regions (e.g., valley floor, valley walls, and interfluves/uplands [Funk 1993:65]). The project area is on “Tug Hill Upland” (Cressey 1966: Figure 9) and “Tug Hill Plateau” in *Roadside Geology of New York State* (Van Diver 1985:viii and 13). This is applicable to Funk’s Uplands (Interfluves) Environmental Zone and examples of local habitat areas include: summit knolls and ridges with no associated streams; saddles between knolls and ridges (no associated streams); near stream headwaters on banks and benches on knolls or saddles; near bogs, swamps, ponds at stream headwaters on saddles between knolls and ridges, and near springs on saddles between knolls and ridges.

4.0 Historic Architectural Resources

The project study area encompasses the Project location and a five-mile radius from the perimeter project components, which consists of approximately ±222.53 sq. miles in the towns of Harrisburg, Montague, and Pinckney in Lewis County, and the Town of Rodman, Jefferson County, New York (see Figure 1.1 and 1.2; Appendix B). The project would have an estimated generating capacity, or nameplate capacity, of up to 100 MW of power from up to 39 wind turbines. In additions to the towns in the Project location, the project Visual APE (five-mile study area) extends partially into the towns of Denmark, Lowville, and Martinsburg in Lewis County, and the towns of Champion, Lorraine, Rutland, Watertown, and Worth in Jefferson County. The entire municipal boundaries of the village of Copenhagen (Town of Denmark) are also in the study area. Panamerican generated a topographically-based Visual APE with visual analysis (i.e., viewshed) as per NYSHPO guidelines.

The study area is located in the Adirondacks Tug Hill Region of the North Country of New York State. Large tracts of open space distinguish this portion of the state. Towns in the study area are sparsely populated, rural communities that share the rich agricultural history identified with Lewis County and the Black River Valley. Both active and inactive farms are scattered throughout the study area. There are several large dairy farms with historic and modern farm buildings. Extant nineteenth-century farmhouses display elements associated with Federal, Greek Revival, Italianate, and Queen Anne styles. Many farmhouses and farm buildings represent the preference for the vernacular building traditions associated with the North Country region. Of note is the sizeable Amish community which is actively engaged in sustainable agricultural practices that contribute to the region's overall agricultural character. Agricultural landscape elements in the study area include farm buildings, farmhouses, silos, wide expanses of rolling pasture land, and agricultural fields. Other types of resources such as small cemeteries and rural district schools also contribute to the rural historic character of the area.

The Tug Hill landscape is further noted for significant stands of forested land dispersed throughout the region. The study area includes the entire boundaries and portions of eight State Forests: Tug Hill; Granger; Pinckney; Lookout; Cobb Creek, Grant Powell Memorial; Sears Pond; and Gould Corners.

4.1 PREVIOUSLY IDENTIFIED HISTORIC ARCHITECTURAL RESOURCES

Panamerican utilized the OPRHP's CRIS to identify and review all previously inventoried historic resources and historic districts located within a five-mile buffer around the Project and the topographic-based Visual APE (viewshed). The results of the CRIS search for State/National Registers (S/NRHP)-Listed and -Eligible resources are enumerated in Table 4.1 (see Five-mile Visual APE map in Appendix B). Resources in the study area with an "Undetermined" S/NRHP eligibility status are presented in Table 4.2. The tables also indicate whether a resource is in the Visual APE or not. Locations of S/NRHP-Listed and -Eligible (S/NRL and S/NRE) resources are identified by their assigned OPRHP Unique Site Number (USN) on the historic resources survey project map (see Appendix B). Not all of the inventoried resources in CRIS have updated GIS locational data. In some cases, resources in CRIS do not have any locational data and/or lack property information. Property locations and street addresses were cross-referenced with parcel data available on the Jefferson County GIS Maps (http://www.jeffcountymaps.com/), Lewis County Cloud Mapping Web App (http://lewiscountyny.giscloud.com/), and Google Earth. Note, the locations of all the resources were not identified.

The types of S/NRL and S/NRE historic resources include farm complexes, individual residences, commercial buildings, and cemeteries. Previously identified resources with OPRHP USNs located in the current Visual APE (viewshed) are presented below.

- One S/NRL resource, Pinckney Corners Cemetery (14PR03703)
- Twenty-two (22) individual S/NRE resources
- Three historic districts with an "Undetermined" S/NRHP eligibility status: Copenhagen Village Historic District North–Main Street (USN 04943.000098: west side of NY 12/Main Street; 16

resources); Copenhagen Village Historic District South—Main Street (USN 04943.000099: east side of NY 12/High Street; 15 resources); and Harrisburg Hamlet Historic District (USN 04905.000042: Vary Road/NY 12).

- Seventeen individual resources with an "Undetermined" S/NRHP eligibility status

Further, nine other individual S/NRE resources and ten other individual resources with an "Undetermined" S/NRHP eligibility status are either not in the Visual APE or their exact locations are not confirmed at present (see Tables 4.1 and 4.2).

For the Phase 1A study, all S/NRE historic resources in the study area are presented in the Table 4.1[1] and on the Project Map (Appendix B). This includes four individual S/NRE resources that are not in the current Visual APE and five individual S/NRE resources in the study area whose locations will be field checked during the next phase of the study (five-mile historic resources survey). The nine S/NRE resources are not included in the total number of resources indicated in the above list.

Table 4.1. State/National Registers-Eligible and Listed Resources in Study Area *(CRIS 2017).*

USN	Resource Name	Address	Town/Village/ Hamlet	S/NRHP Status	In Visual APE
Jefferson County					
04506.000057	South Champion Cemetery	NY 12; northeast corner at Switzer Rd	Champion	Eligible	Yes
04517.000040	Thomas Kostoroski Property	Williams Rd – no address in CRIS	Rodman	Eligible	Unknown – entire road in study area
04518.000043/ 04518.000045	South Rutland Cemetery	CR 69: southeast side, east of CR 161 (no parcel address)	Rutland	Eligible	Yes
04518.000044	Residence, Queen Anne	16801 Churchill Rd	Rutland	Eligible	Yes
04518.000047	Maple Hill Cemetery	CR 160/Middle Rd; south side, approx. 0.2 mi west of CR 161	Rutland	Eligible	Yes
04520.000043	Stone house	25516 NY 12	Watertown	Eligible	No
Lewis County					
04905.000032/ 04905.000041	Farm, pre-1875. Dairy farm; early twentieth-century barn complex—gambrel roofed, gable frame farmhouse	3829 Vary Road[2]	Harrisburg	Eligible	Yes
04905.000034	Fairview Cemetery	8542 NY 12[3]	Harrisburg	Eligible	Yes

[1] **Key for Tables 4.1-4.2.** USN=SHPO Unique Site Number; S/NRHP=State/National Registers of Historic Places; In Visual APE=in the five-mile Visual APE (viewshed); Unknown=location of resource is not known (no GIS data).

[2] Resource assigned two USNs: 04905.000032 (Eligible); 04905.000041 (Undetermined). Resource previously identified in proposed Harrisburg Hamlet Historic District (Undetermined). Street address in CRIS is 3830 Vary Road, which is the adjacent parcel to the north (field/woods).

[3] Resource previously identified in proposed Harrisburg Hamlet Historic District (Undetermined). Note, no street number listed for Fairview Cemetery in Lewis County Parcel Data.

Table 4.1. State/National Registers-Eligible and Listed Resources in Study Area *(CRIS 2017).*					
USN	**Resource Name**	**Address**	**Town/Village/ Hamlet**	**S/NRHP Status**	**In Visual APE**
04905.000036	St. Patrick's Cemetery (Battle Cemetery)	2813 Thesier Road	Harrisburg	Eligible	Yes
04905.000037	Greek Revival farmhouse	2952 Alexander Road	Harrisburg	Eligible	Yes
04905.000038	Gallup Cemetery	8735 NY 12	Harrisburg	Eligible	Yes
04909.000030	Frame Greek Revival farmhouse	8205 NY 12	Lowville (T)	Eligible	No
04912.000064	Vernacular 1½-story gabled ell frame residence (ca. 1855)	2176 Pitcher Rd *Location to be field verified in five-mile survey*	Montague	Eligible	Unknown – entire road in study area
04912.000066	Gardner Corners Cemetery	Gardner Rd; south side, 0.2-mi east of Sears Pond Rd	Montague	Eligible	Yes
04915.000034	Pinckney Corners Cemetery	Pinckney Road; north side, approx. 0.14-mi west of NY 194	Pinckney Corners, Pinckney	Listed; 14PR03703	Yes
04915.000005	Grange Hall (Saints Peter & Paul Parish Hall	309 NY 177[4]	Barnes Corners, Pinckney	Eligible	Yes
04915.000029	Saints Peter & Paul Church	1110 NY 177	New Boston, Pinckney	Eligible	Yes
04943.000051	St. Mary's Church	9790 NY 12	Copenhagen	Eligible	No
04943.000053	The Cottage Inn	9794 NY 12	Copenhagen	Eligible	No
04943.000054	Monument Park (Civil War)	9843 NY 12, at Cataract Street	Copenhagen	Eligible	Yes
04943.000055	Structure X	9854 NY 12	Copenhagen	Eligible	Yes
04943.000057	Structure X2	10005 NY 12	Copenhagen	Eligible	Yes
04943.000074	Structure F2; United Church of Copenhagen	9932 NY 12	Copenhagen	Eligible	Yes
04943.000075	Structure K2	9972 NY 12	Copenhagen	Eligible	Yes
04943.000076	Structure L2	9978 NY 12	Copenhagen	Eligible	Yes
04943.000080	Copenhagen Village Historic District South—Main Street	Main Street	Copenhagen	Eligible	Yes-partially in Visual APE

[4] USN 04915.000005 identified in CRIS as "Structure #7" with incorrect location description. Building form (dated 1990) is available in CRIS.

Table 4.1. State/National Registers-Eligible and Listed Resources in Study Area *(CRIS 2017).*					
USN	**Resource Name**	**Address**	**Town/Village/ Hamlet**	**S/NRHP Status**	**In Visual APE**
04943.000082	Building	110 High Street[5] *(in Copenhagen Village HD South?)*	Copenhagen	Eligible	Location unknown
04943.000083	Building	122 High Street *(in Copenhagen Village HD South?)*	Copenhagen	Eligible	Location unknown
04943.000084	Building	116 High Street *(in Copenhagen Village HD South?)*	Copenhagen	Eligible	Location unknown
04943.000091	Copenhagen Central School Main Building	3020 Mechanic Street	Copenhagen	Eligible	Yes
04943.000096	Residence	2968 Cataract Street	Copenhagen	Eligible	Yes
04943.000097	Residence	2963 Mechanic Street	Copenhagen	Eligible	Yes

Table 4.2. Resources with "Undetermined" S/NRHP Status in Project Study Area *(CRIS 2017).*				
USN	**Resource Name**	**Address**	**Town/Village/ Hamlet**	**In Visual APE**
Jefferson County				
04517.000013	East Rodman Cemetery	East Rodman Rd; south side, between CR 156 & Kramer Rd	East Rodman, Rodman	Yes
04517.000014	Zoar Cemetery	Zoar Rd/CR 68; east side, approx. 0.15-mi north of Pork Hill Rd	Zoar, Rodman	Yes
04517.000015	Fassett House	124 Sandy Valley Creek Rd	Zoar, Rodman Rodman	Yes
04517.000016	Century Farm	14651 Zoar Rd	Rodman	No
04517.000017	Schoolhouse No. 13	Zoar Rd; southeast corner at Freeman Creek Rd (Town line)	Rodman	No
04517.000018	Fairview Cemetery	Cemetery Rd; east side	Zoar, Rodman	Yes
04517.000019	Fairview Cemetery Chapel	Cemetery Rd: east side	Zoar, Rodman	Yes
04517.000022	Worden Rd Bridge	Worden Rd over Sandy Creek	Zoar, Rodman	No

[5] High Street name changed to NY 12. Street name update not reflected in CRIS for Nos. 110, 114 (Undetermined), 116, and 122 High St.

Table 4.2. Resources with "Undetermined" S/NRHP Status in Project Study Area *(CRIS 2017).*				
USN	**Resource Name**	**Address**	**Town/Village/ Hamlet**	**In Visual APE**
04517.000025	Freeman Creek Cemetery (Crandall Hill Cemetery)	Freeman Creek Rd; south side, west of Hamp Rd	Rodman	Yes
04517.000026	Frank W. Woolworth Birthplace (Site)	Whitford Rd; west side, opp. Smith St *Location to be field verified in five-mile survey*	Rodman	Yes
04517.000027	Woolworth-Lawton-Smith House (Moody House)	23384 Smith Rd	Rodman	Yes
04517.000029	Kenfield	Kenfield Rd *Location to be field verified in five-mile survey*	Rodman	Unknown – entire road in study area
04522.000003	Worthville Cemetery	CR 189; north side, approx. 0.2-mi west of CR 96[6]	Worth, Worth	Yes
04522.000004	Worthville School (District #1)	CR 196 *Location to be field verified in five-mile survey*	Worth, Worth	Location unknown; no GIS data in CRIS
Lewis County				
04902.000012	Farm	n/a NY 12	Denmark	Location unknown; no GIS data in CRIS
04902.000015	Structure A	n/a NY 12	Denmark	Location unknown; no GIS data in CRIS
04902.000064	Residence	2213 Route 194	Denmark	Yes
04905.000003	Farm	River Road	Harrisburg	Location unknown; no GIS data in CRIS
04905.000013	Structure 24 (DOT PIN #7011.15.101)	Rt 177; south side, 5/8-mi west of Beetle Road: *(possibly #3478 NY 177)*	Harrisburg	Yes
04905.000040/ 04905.000042	Harrisburg Hamlet Historic District[7]	Vary Road/NY 12	Harrisburg	Yes
04912.000062	Sears Pond Dam	Sears Pond Rd	Montague	Yes; entire road in Visual APE
04915.000003	Structure #5 NY 177 south side at Old State Rd	8696 Old State Rd	Barnes Corners, Pinckney	Yes

[6] Note: 1) Worthville Cemetery located on CR 96 in CRIS; 2) historic name of hamlet is Worthville.
[7] Previously proposed Harrisburg Hamlet Historic District assigned two USNs: 04905.000040 (Building: Not Eligible); 04905.000042 (Building District: Undetermined).

Table 4.2. Resources with "Undetermined" S/NRHP Status in Project Study Area *(CRIS 2017).*				
USN	**Resource Name**	**Address**	**Town/Village/ Hamlet**	**In Visual APE**
04915.000015	Structure #17 (former cheese factory)	519 NY 177	Barnes Corners, Pinckney	Yes
04943.000003	Former Woman's Christian Temperance Union/ Church building	10133 Washington St	Copenhagen	Yes
04943.000085	Residence	114 High Street *(in Copenhagen Village HD South?)*	Copenhagen	Location unknown
04943.000098	Copenhagen Village Historic District North—Main Street[8]	Main Street	Copenhagen	Yes
04943.000099	Copenhagen Village Historic District South—Main Street[9]	Main Street	Copenhagen	Yes

4.2 PREVIOUS HISTORIC ARCHITECTURAL RESOURCES SURVEYS

Four wind-energy projects have been constructed or proposed in the vicinity of the current Deer River Project—Roaring Brook Wind Project; Maple Ridge Wind Project; Copenhagen Wind Project; and Number Three Wind Energy Center (see Figure 1.2). Maple Ridge Wind Project is the only wind project that has been constructed to date. Historic architectural resources surveys were completed for all four of these projects, although copies of each survey report are not presently available in CRIS. These previous surveys share significant overlap in their five-mile Visual APE study areas with that of the Deer River Project. The largest section requiring new field survey is the western part of the of current study area. Any other locations scattered across the study area will also be surveyed, as necessary.

The Maple Ridge Wind Farm (formerly Flat Rock Wind Power Project) is a 321-MW project located in the towns of Martinsburg, Lowville, Watson, and Harrisburg. It is adjacent to the southeast boundary of the Project, between CR 25 and the Harrisburg-Lowville town line (see Figure 1.2). Maple Ridge Wind Farm consists of 195 turbines with a maximum height of 400 ft. Its turbines are visible from various locations throughout the study area. The Maple Ridge five-mile Visual APE study area encompassed areas within the towns of Harrisburg, Lowville, Martinsburg, Montague, New Bremen, and Pinckney in Lewis County (JMA 2004). The study also included the villages of Copenhagen and Lowville. Architectural surveys for Maple Ridge Wind Farm were completed in 2002 and 2003 (Heaton and Klein 2002; JMA 2003). For the Phase 1 of the Flat Rock project, JMA photographed 1,196 properties and 537 additional properties were photographed for the second phase of the project (JMA 2004). OPRHP identified 89 resources of interest as a result of the JMA survey, and determined the following: 19 resources were individually NRE; 49 resources were NRE as contributing to five potential historic districts; eight resources were not eligible; and 13 resources were not formally evaluated for National Register eligibility (JMA 2004; edr 2013).

The proposed Roaring Brook Wind Power Project (39 turbines) would be located in the southwestern part of the Town of Martinsburg in Lewis County (JMA 2007). Its proposed location is approximately five miles

[8] Copenhagen Village Historic District North—Main Street was previously determined Eligible and assigned USN 04943.000079. It has an "Undetermined" S/NRHP under its most recent assigned USN (04943.000098).

[9] Copenhagen Village Historic District South—Main Street was previously determined Eligible and assigned 04943.000080. It has an "Undetermined" S/NRHP under its most recent assigned USN (04943.00009).

south of the current project. The five-mile Visual APE study area encompassed areas within the towns of Harrisburg, Lowville, Martinsburg, Montague, Osceola, and West Turin in Lewis County. Completed in 2007, the study identified five resources that were either previously determined by OPRHP or recommended to meet S/NRHP eligibility criteria.

The proposed Copenhagen Power Project (up to 62 turbines) would be located in the Town of Denmark, Lewis County. The site for the Copenhagen Power Project is proposed along the northern boundary of the current project. A Phase 1A cultural resource survey was completed for the proposed project (edr 2013). The five-mile Visual APE study area encompassed areas within the towns of Croghan, Pinckney, and Lowville in Lewis County, and Wilna in Jefferson County. The Phase 1A study identified one NRL property, four historic districts, and twelve NRE resources within the five-mile Visual APE.

The proposed Number Three Wind Farm (35 to 50 wind turbines) would be located in the towns of Lowville, Harrisburg, and Denmark, Lewis County. A Phase 1A cultural resource survey was completed for the proposed project (Longiaru et al. 2016). The five-mile Visual APE historic resources survey has not been submitted as of February 2017. The Number Three Wind Farm study area extends partially into the towns of Croghan, Martinsburg, Montague, New Bremen, Pinckney, and Watson in Lewis County, and the towns of Champion and Rutland in Jefferson County.

4.3 PHASE 1A ARCHITECTURAL SURVEY

Panamerican conducted a Phase 1A field visit during the week of December 5, 2016 to assess the setting of the general location of the Project (see Figure 1.2: see photographs in Appendix A). A limited preliminary windshield survey was carried out in the general location of the Project and in those areas not previously surveyed.[10] These locations were visited to determine the level of survey effort required to complete the Phase 1B/five-mile historic resources survey. As a result of the significant overlap in the study areas with previous five-mile Visual APE surveys conducted for adjacent wind-energy projects, a one-mile ring survey (as per *SHPO Wind Guidelines* [2006]) was not required as part of this cultural resource investigation.

4.3.1 Individual NRE Resources in Proximity to the General Project Location. One S/NRL resource and one S/NRE are located in proximity to the Project.

Pinckney Corners Cemetery is a S/NRL cemetery located in proximity to the proposed wind-turbine array in the northeast section of the proposed Project. The cemetery is on the north side of Pinckney Road, approximately 0.14-mi west of NY 194 (Figure 4.1: see Five-mile Visual APE Project Map in Appendix B).

Saints Peter & Paul Church (USN 049170029) at 1110 NY 177 in the Town of Pinckney, Lewis County, is a previously determined S/NRE resource located in proximity to the proposed wind-turbine array in the southwest section of the proposed Project (Photograph 4.2: see Five-mile Visual APE Project Map in Appendix B). The church is prominently sited on a hill above Deer River and NY 177. An associated cemetery, Saints Peter & Paul Cemetery, is located on the north side NY 177, approximately 0.5-mi west of the church. The cemetery has not been previously evaluated for its eligibility to the S/NRHP (CRIS 2017).

[10] Note, there are several minimally maintained seasonal roads in the study area that were not accessible during the site visit.

Figure 4.1. S/NRL Pinckney Corners Cemetery on Pinckney Road, Town of Pinckney County, facing east toward the proposed Project (*Panamerican 2016*).

Figure 4.2. Previously determined S/NRE Saints Peter & Paul Church at 1110 NY 177, Town of Pinckney, Lewis County, facing southwest (*Panamerican 2016*).

4.3.2 Previously Undocumented Cemeteries in Proximity to the General Project Location. The background review and preliminary windshield survey completed for the Phase IA study noted four historic-period cemeteries in proximity to the general Project location which are not listed in CRIS (i.e., not previously surveyed).

- Saints Peter & Paul Cemetery on NY 177, Town of Pinckney
- New Boston Cemetery on NY 177, Town of Pinckney
- Barnes Corners Cemetery in Barnes Corners, Town of Pinckney
- Liberty Cemetery, Liberty Road, Town of Montague

These resources will be evaluated for S/NRHP eligibility in the next phase of the study (historic resources survey five-mile Visual APE).

4.4 HISTORIC RESOURCES SURVEY: SPRING 2017

Historic Resources Survey: Five-mile Visual APE Field Survey. The next phase of the cultural resources investigation is projected to start in late spring of 2017. The historic resources survey will be conducted in accordance with NYSHPO's *Guidelines for Wind Farm Development Cultural Resources Survey Work* (2006), and based on previous experience with conducting surveys for wind-energy projects. Any possible changes to the Project design will be addressed prior to initiation of the five-mile Visual APE field survey (i.e., revised Visual APE). A revised Visual APE survey area map will be generated to reflect a five-mile buffer around the final Project layout. Panamerican will consult with the OPRHP prior to initiation of the field survey.

All newly documented buildings included in resources survey of the five-mile Visual APE will be evaluated for National Register eligibility though application of the NRHP Criteria (36 CFR 60.4):

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association… The four aspects of significance used to evaluate National Register eligibility for listing in the NRHP (A) association with historic events or activities; (B) association with important persons; (C) distinctive design or physical characteristics; or (D) potential to provide important information about prehistory or history [National Park Service (NPS) 2002]. A property must meet at least one of the criteria for listing in the NRHP.

The historic resources field survey methodology is proposed as follows:

- Assess all buildings 50 years old or older within the five-mile Visual APE study area;
- Determine potential State and National Register eligibility of each resource using the National Register Criteria for Evaluation;
- Identify previously determined NRE resources without GIS data in the Visual APE, if possible;
- Identify and survey/evaluate resources with "Undetermined" NRHP status without GIS data in the Visual APE (viewshed), if possible; and
- Provide updated photographs of existing NRE resources in the Visual APE.

Visible inspection of properties will be limited to the exterior of buildings from public rights-of-way; no interiors will be accessed. Buildings less than 50 years of age or lacking architectural integrity will not be

included in or documented in the historic resources survey. General resource information to be collected includes the following: minimum of two digital photographs of each resource as per NYSHPO guidelines, location information, a brief description of the property (name, estimated date of construction, architectural style, existing condition assessment, building materials, and other relevant information), and a recommendation of NRHP eligibility.

Historic Resources Survey: Five-mile Visual APE Report. The methods and findings of the historic resources survey will be summarized in a technical report. The final report will be submitted to NYSHPO via the CRIS website. Any newly identified resources or resources recommended as eligible for listing in S/NRHP in the survey will be uploaded to the CRIS database as part of the report submittal to NYSHPO. An analysis of the potential visual effect of the Project on significant properties in the Visual APE will be included in the historic resources study report.

Per the NYSHPO Wind Farm guidelines, the APE for visual impacts on historic properties for wind projects is defined as those areas within five miles of proposed turbines which are within the potential viewshed (based on topography) of the project (NYSHPO 2006). The New York State Department of Environmental Conservation (NYSDEC) defines *Visual Impact* as:

> when the mitigating effects of perspective do not reduce the visibility of an object to insignificant levels. Beauty plays no role in this concept. A visual impact may also be considered in the context of contrast. For instance, all other things being equal, a blue object seen against an orange background has greater visual impact than a blue object seen against the same colored blue background. Again, beauty plays no role in this concept [NYSDEC 2000:10-11].

The analysis takes into consideration the resource's geographical distance and the effect of vegetation, and other landscape features that may screen or minimize views of the Project from historic resources. Resources previously identified as NRE will not be surveyed as part of the historic resources study, though the visual effect on those historic resources will be included in the visual effects analysis prepared for the Project. Recommendations for mitigation options will also be included in the report.

5.0 Conclusions and Recommendations

5.1 ARCHAEOLOGICAL INVESTIGATION

The project area is sensitive for both prehistoric/precontact and historic period archaeological sites and has been minimally disturbed by modern-era development and land use. Panamerican recommends a Phase 1B investigation be conducted that complies with the NYSHPO *Guidelines for Wind Farm Development Cultural Resources Survey Work*. Once the APE of project components (e.g., turbines, access roads, electric connector lines substations, and equipment yards) is determined, a Phase 1B field-testing strategy should be developed by determining the acreage of the APE and the percentages of it relative to "environmental zones" and "local habitat areas." The relative number of shovel tests should be allocated to match the relative sizes of the environmental factors which are assessed following Robert Funk's *Archaeological Investigations in the Upper Susquehanna Valley, New York State* (1993). The Phase 1B testing strategy should also include investigation of MDS and previously reported sites within the APE.

5.2 HISTORIC RESOURCES INVESTIGATION: PHASE 1A

One S/NRL resource and 22 individual S/NRE resources were identified in the Visual APE for the Deer River Wind Farm (see Section 4; Table 4.1). Three historic districts and 17 individual resources with "Undetermined" S/NRHP status are in the five-mile Visual APE (see Table 4.2). Locations of S/NRL and S/NRE resources are identified by their assigned OPRHP USN on the Five-mile Visual APE study area map in Appendix B. Based on these results, an historic resources survey of the five-mile Visual APE study area is recommended.

Note, six other S/NRE individual resources are in the study area whose locations will be field checked and verified, if possible, during the next phase of the study (five-mile historic resources survey). Three other individual S/NRE resources are within boundaries of the study area, but not in the Visual APE. These nine S/NRE resources are not included in the total number of resources.

Any changes to the Project design will be addressed prior to initiation of the five-mile Visual APE field survey (i.e., revised Visual APE). A revised Visual APE survey area map will be generated to reflect a five-mile buffer around the final Project layout. A review of the OPRHP's CRIS will be conducted to identify if any new resources were entered into CRIS since the initial background review for the Phase 1A study. Panamerican will consult with OPRHP prior to initiation of the field survey.

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Appendix A. Photographs

Photograph 1. Facing east-southeast on Pinckney Road from Creek Road toward the northwest section of the Project location in Pinckney *(Panamerican 2016).*

Photograph 2. Northwest section of the Project location in Pinckney from the Pinckney-Rodman Townline on Cronk Road, facing east *(Panamerican 2016).*

Photograph 3. Facing toward Project location from NY 177 in Barnes Corners, Pinckney, facing southeast from near its intersection with Whittesville Road *(Panamerican 2016).*

Photograph 4. Facing toward Project location in Pinckney from NY 177, southeast of Barnes Corners, facing north-northeast *(Panamerican 2016).*

Photograph 5. Facing northwest toward Project location in Pinckney from Murdock Road and NY 177 *(Panamerican 2016).*

Photograph 6. Facing north toward Project location in Pinckney from Murdock Road and NY 177 *(Panamerican 2016).*

Photograph 7. Facing east toward Project location in Pinckney from Murdock Road and NY 177 *(Panamerican 2016).*

Photograph 8. Facing northeast toward Project location in Pinckney from McDonald Road and NY 177 (Ss. Peter & Paul's Cemetery in center) *(Panamerican 2016).*

Photograph 9. Facing southwest toward Project location in Pinckney from Liberty Road, south of NY 177 *(Panamerican 2016).*

Photograph 10. Facing east southwest toward Project location in Pinckney from Liberty Road, south of NY 177 *(Panamerican 2016).*

Photograph 11. Facing northeast toward the Project location in Pinckney from Liberty Cemetery, Liberty Road, Montague *(Panamerican 2016).*

Photograph 12. Facing west toward the Project location in Montague from Liberty Cemetery, Liberty Road, Montague *(Panamerican 2016).*

Photograph 13. Facing south toward the Project location from NY 177 at Arnold Road in Pinckney *(Panamerican 2016).*

Photograph 14. Facing west toward the Project location from NY 177 at Arnold Road in Pinckney *(Panamerican 2016).*

Photograph 15. Facing north-northeast toward the Project location from NY 177 at Arnold Road in Pinckney *(Panamerican 2016).*

Photograph 16. Facing south toward the Project location in Montague from Sears Pond Road at NY 177 in Pinckney *(Panamerican 2016).*

Photograph 17. Facing northeast toward the Project location from River Road in Pinckney, just north of O'Neil Road *(Panamerican 2016).*

Photograph 18. Facing northwest toward the Project location from Woodbattle in Harrisburg *(Panamerican 2016).*

Photograph 19. Facing southeast toward the Project location from River Road at Hart Road in Harrisburg *(Panamerican 2016).*

Photograph 20. Facing southwest toward the Project location from Pinckney Road in Pinckney *(Panamerican 2016).*

Photograph 21. Facing south-southeast toward the Project location from CR 194 in Pinckney *(Panamerican 2016).*

Photograph 22. Facing west-northwest toward the Project location from CR 194 in Pinckney *(Panamerican 2016).*

Photograph 23. Facing northwest toward the Project location from CR 194 and Tontarski Road in Pinckney *(Panamerican 2016).*

Photograph 24. Facing north toward the Project location from CR 194 and Tontarski Road in Pinckney *(Panamerican 2016).*