

APPENDIX F

Phase 1A Historic Architectural Survey and Work Plan

Phase 1A Historic Architectural Resources Survey Work Plan

Mad River Wind Farm

Town of Worth, Jefferson County, and the Town of Redfield, Oswego County, New York

Prepared for:



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MANAGEMENT SUMMARY

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| SHPO Project Review Number: | ---- |
| Involved State and Federal Agencies: | Department of Public Service (DPS), Article 10 Application |
| Phase of Survey: | Phase 1A Historic Architectural Resources Survey Work Plan |
| Location Information: | Town of Worth, Jefferson County, and the Town of Redfield, Oswego County, New York |
| Survey Area: | |
| Facility Description: | Up to 88 wind turbines and associated infrastructure |
| Facility Area: | Approximately 19,020 acres (APE for Indirect [Visual] Effects = approximately 261 square miles) |
| USGS 30-Minute Quadrangle Map: | <i>Watertown, NY</i> |
| Historic Resources Survey Overview: | <p>There are no properties listed in the NRHP within the APE.</p> <p>There is one property within the APE that was previously determined to be NRHP-eligible and 22 properties whose NRHP-eligibility has not been formally determined.</p> |
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| Date of Report: | December 2017 |

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1.0 INTRODUCTION

1.1 Purpose of the Investigation

On behalf of Atlantic Wind, LLC, a wholly owned subsidiary of Avangrid Renewables, LLC (the Applicant), Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) prepared a Phase 1A historic architectural survey work plan for the proposed Mad River Wind Farm (or the Facility), located in the Town of Worth, Jefferson County, and the Town of Redfield, Oswego County, New York. The Phase 1A survey was prepared in support of a Preliminary Scoping Statement (PSS) being prepared as part of review of the Facility under Article 10 (Certification of Major Electrical Generating Facilities) of the New York State Public Service Law. The information and recommendations included in this report are intended to assist the Department of Public Service (DPS) and the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) in their review of the proposed Facility in accordance Article 10. Please note that this report addresses only historic-architectural resources; information concerning the Facility's potential effect on archaeological resources will be provided to NYSOPRHP under separate cover.

As described in 16 NYCRR § 1001.20 (Exhibit 20: Cultural Resources), an Article 10 application must include:

(b) A study of the impacts of the construction and operation of the facility and the interconnections and related facilities on historic resources, including the results of field inspections and consultation with local historic preservation groups to identify sites or structures listed or eligible for listing on the State or National Register of Historic Places within the viewshed of the facility and within the study area, including an analysis of potential impact on any standing structures which appear to be at least 50 years old and potentially eligible for listing in the State or National Register of Historic Places, based on an assessment by a person qualified pursuant to federal regulation (36 C.F.R. 61).

The purpose of the historic resources survey is to identify and document those buildings within the Facility's area of potential effect (APE) that appear to satisfy State and/or National Register of Historic Places (S/NRHP) eligibility criteria. The historic resources survey was conducted by a qualified architectural historian who meets the U.S. Secretary of Interior's Standards for Historic Preservation Projects (36 CFR Part 61) in a manner consistent with the *New York State Historic Preservation Office Guidelines for Wind Farm Development Cultural Resources Survey Work* (the *SHPO Wind Guidelines*) issued by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) in 2006.

The information and recommendations included in this report are intended to assist the New York State Department of Public Service (NYSDPS), the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), the U.S. Army Corps of Engineers (USACE), and other New York state and/or federal agencies in their review of the

Facility under Article 10 of the New York State Public Service Law, Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law, and/or Section 106 of the National Historic Preservation Act, as applicable.

All cultural resources studies undertaken by EDR in association with the Facility have been conducted by professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for Historic Preservation (36 CFR 61). The historic architectural resources survey was prepared in accordance with the *New York State Historic Preservation Office Guidelines for Wind Farm Development Cultural Resources Survey Work* (the *SHPO Wind Guidelines*; NYSOPRHP, 2006) and applicable portions of NYSOPRHP's *Phase 1 Archeological Report Format Requirements* (NYSOPRHP, 2005).

1.2 Facility Location and Description

The Facility is a proposed 350 megawatt (MW) wind powered electric generating project located within the Town of Worth, Jefferson County, and the Town of Redfield, Oswego County, New York (see Figure 1). The Facility Area and a preliminary Facility layout are depicted on Figure 2. Except for an off-site O&M facility, if necessary, the Facility will be located entirely on leased private land that is owned by a single landowner and managed for timber production. The actual footprint of the proposed Facility components will take advantage of an extensive network of existing private logging roads and skid trails, enabling the landowner to continue managing the property for timber production and compatible recreational uses (hunting and snowmobiling). The precise locations of Facility components and the parcels that host them (the "Facility Site") will be identified in detail in the Article 10 Application. However, in accordance with 16 NYCRR § 1000.5(l)(1), a preliminary layout is depicted in this report and the PSS to facilitate consideration of potential impacts.

The proposed Facility consists of the construction and operation of a commercial-scale wind power project, including the installation and operation of 88 wind turbines, together with the associated collection lines (below grade and overhead), access roads, meteorological towers, construction staging areas, and operation and maintenance (O&M) building. The proposed electrical interconnection location is proposed to be along the Volney – Marcy 345 kV transmission line, though the exact location is still under development and will be updated as details are refined. At this time, it is anticipated that the interconnection line will require separate review and approval under Article VII of the Public Service Law.

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

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| <u>Facility:</u> | Collectively refers to all components of the proposed project, including wind turbines, access roads, buried and above ground collection lines, substations, meteorological towers, staging areas, operations and maintenance building. |
| <u>Facility Area:</u> | An area of land within which all Facility components will ultimately be located (depicted on Figure 2). |
| <u>Facility Site:</u> | Those parcels currently under, or being pursued, for lease (or other real property interests) with the Applicant for the location of all Facility components (which will be defined in the Article 10 Application). |
| <u>Area of Potential Effect (APE) for Indirect (Visual) Effects:</u> | The Area of Potential Effect (or APE) for Indirect (Visual) Effects for the Facility is the areas within 5 miles of proposed Facility components (including wind turbines, above ground collection lines, substations, and meteorological towers) which are within the potential viewshed (based on topography) of the Facility. The current Facility layout has an APE for Indirect (Visual) Effects of approximately 30 square miles. |

1.3 NYSOPRHP Consultation

16 NYCRR § 1001.20 indicates that the scope of cultural resources studies for a major electrical generating facility should be determined in consultation with NYSOPRHP. In addition, the *SHPO Wind Guidelines* request that cultural resources surveys for wind energy projects include consultation with NYSOPRHP to determine the scope and methodology to identify and evaluate historic resources.

In December 2017, EDR initiated formal consultation with NYSOPRHP via the Cultural Resources Information System (CRIS) website. Previously, a Public Involvement Program Plan (PIP) was prepared as part of the Article 10 process and circulated to involved agencies (including NYSOPRHP), which was released in December 2016, and revised in February 2017.¹ The PIP is designed to initiate the Article 10 process, and includes consultation with the affected agencies and other stakeholders; pre-application activities to encourage stakeholders to participate at the earliest opportunity; activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties; the establishment of a website to disseminate information to the public and updates regarding the Facility and the Article 10 process; notifications to affected agencies and other stakeholders; and activities designed to encourage participation by stakeholders in the certification and compliance process.

This Phase 1A historic architectural survey work plan proposed methodologies and analyses that are consistent with NYSOPRHP correspondence related to cultural resources surveys prepared by EDR for previous wind energy

¹ The Public Involvement Program Plan (PIP) for the Facility is available on DPS' website here: <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-F-0713&submit=Search>

projects.² Following submission and review of this work plan by NYSOPRHP, EDR anticipates that a subsequent historic architectural resources survey will be conducted, as described herein. As stated in Section 1.1, this report addresses only historic architectural resources; information concerning the Facility's potential effect on archaeological resources is being provided to NYSOPRHP under separate cover.

1.4 Facility's Area of Potential Effect (APE) and Study Area

The Facility's potential effect on a given historic property would be a change (resulting from the introduction of wind turbines or other Facility components) in the property's visual setting. Therefore, the APE for visual effects on historic resources must include those areas where Facility components (including wind turbines) will be visible and where there is a potential for a significant visual effect. Per the requirements set forth in 16 NYCRR § 1000.2(ar), the study area to be used for analysis of major electric generating facilities is defined as:

(ar) Study Area: an area generally related to the nature of the technology and the setting of the proposed site. For large facilities or wind power facilities with components spread across a rural landscape, the study area shall generally include the area within a radius of at least five miles from all generating facility components, interconnections and related facilities and alternative location sites. For facilities in areas of significant resource concerns, the size of a study area shall be configured to address specific features or resource issues.

Per the *SHPO Wind Guidelines*, the APE for visual impacts on historic properties for wind projects is defined as those areas within 5 miles of proposed turbines (and other above ground features) which are within the potential viewshed (based on topography) of a given project (NYSOPRHP, 2006). The five-mile-radius study area for the Facility includes parts of the Towns of Lorraine, Worth, and Rodman in Jefferson County, the Towns of Pinckney, Harrisburg, Montague, and Osceola in Lewis County, and the Towns of Boylston, Redfield, and Orwell in Oswego County, New York (see Figure 2). Although a topographic viewshed is not depicted on Figure 2, based on previous historic architectural resources surveys completed for wind projects in New York State, the APE for indirect effects is assumed to only include a portion of the five-mile study area.

It is worth noting that the Facility's APE relative to historic architectural resources may be revised in association with subsequent layout changes during the permitting process, and that changes in the layout of the Facility are likely to result in changes in the size of the APE, which will be documented in the historic architectural resources survey report described herein.

² The Cassadaga Wind Project (15PR02730) was reviewed by NYSOPRHP under Article 10 of the New York State Public Service Law. EDR submitted an historic architectural survey work plan in June 2015, and at the request of NYSOPRHP, an historic architectural resources survey in April 2016.

2.0 BACKGROUND AND SITE HISTORY

2.1 Previously Identified Historic Resources

EDR reviewed the Cultural Resources Information System (CRIS) website maintained by NYSOPRHP to identify significant historic buildings, resources and/or districts located within five miles of the Facility (hereafter, the study area).

A total of 23 historic properties in the Facility's five-mile-radius study area were identified using the CRIS website, including 15 bridges and eight cemeteries. Of these 23 properties, only one (BIN 338570 - the Lorraine Gulf Bridge on County Route 95) has been determined eligible for listing in the S/NRHP. The remaining 14 bridges and the eight cemeteries have not been formally evaluated by NYSOPRHP in terms of their S/NRHP eligibility.

No properties listed in or determined eligible for the S/NRHP are located within the Facility Area. A review of the CRIS database indicated that two historic architectural surveys have been conducted within the five-mile study area for the Facility:

- The *Copenhagen Wind Farm Historic Resources Survey* was completed in 2014 to survey the historic architectural resources within a five-mile study area that included parts of the Towns of Croghan, Denmark, Harrisburg, Pinckney and Lowville in Lewis County, and Wilna in Jefferson County, New York. The survey identified 58 historic resources that were listed in, or recommended to be eligible for the S/NRHP (EDR, 2014).
- The *Roaring Brook Wind Farm Historic Architectural Resources Survey* was completed in 2007 to survey the historic architectural resources within a five-mile study area that included parts of Harrisburg, Lowville, Martinsburg, Montague, Osceola, and West Turin, Lewis County, New York. The survey identified four properties previously determined to be S/NRHP-eligible, and four additional historic resources that were recommended to be S/NRHP-eligible (JMA, 2007).

The five-mile study area for the Copenhagen Wind Farm Historic Resources Survey intersects with the Mad River Wind Farm five-mile study area in the Towns of Pinckney and Harrisburg, Lewis County. The study area for the Roaring Brook Wind Farm Historic Architectural Resources Survey intersects with the Mad River Wind Farm five-mile study area in the Towns of Montague and Osceola, Lewis County (see Figure 3). A review of CRIS indicates that there are no historic architectural resources located in the intersecting areas.

The “Previously Identified Historic Architectural Resources” map (see Figure 3) indicates the locations of historic architectural resources identified through review of the APE for the Facility using the CRIS database. A list of all previously identified historic architectural resources is included as Table 1.

Table 1. Previously Identified Historic Architectural Resources Located within the 5-Mile Study Area

| USN | Address | Name and/or Description | Municipality | County | NRHP-Eligibility Determination (NYSOPRHP) |
|-------------|--|---|------------------|-----------|---|
| BIN 338570 | County Route 95, approximately 0.3 miles north of Country Route 189 | Lorraine Gulf Bridge (BIN 338570) steel and timber box-girder bridge | Town of Worth | Jefferson | NRHP-Eligible Resource |
| BIN 3363400 | Town Line Road | Town Line Road Bridge over Big Brook (BIN 3363400), a steel Warren-truss bridge | Town of Lorraine | Jefferson | NRHP Eligibility Undetermined |
| BIN 1039780 | County Route 21, approximately 400 feet north of the intersection of County Routes 177 and 194 | County Route 21 over Gulf Stream (BIN 1039730), a riveted girder and floor beam bridge | Town of Pinckney | Lewis | NRHP Eligibility Undetermined |
| BIN 1039430 | County Route 189, approximately 1.3 miles south of County Route 177 | County Route 189 over Grunley Creek (BIN 1039430), a multi-beam girder bridge | Town of Worth | Jefferson | NRHP Eligibility Undetermined |
| BIN 1039420 | County Route 189, approximately one mile west of County Route 95 | County Route 189 over Abijah Creek (BIN 1039420), a jack arch, multi-beam girder bridge | Town of Lorraine | Jefferson | NRHP Eligibility Undetermined |
| BIN 3338540 | County Route 92 (Redfield Road), approximately one mile south of the hamlet of Lorraine | County Route 92 over Little Fox Creek (BIN 3338540), a concrete culvert | Town of Lorraine | Jefferson | NRHP Eligibility Undetermined |
| BIN 3339540 | French Settlement Road, approximately 0.5 miles north of County Route 95 | French Settlement Road over Raystone Creek (BIN 3339540), a multi-beam girder bridge | Town of Lorraine | Jefferson | NRHP Eligibility Undetermined |
| BIN 3338560 | Waterville Road, approximately 0.7 miles east from County Route 92 | Waterville Road over Big Brook (BIN 3338560), a concrete box beam bridge | Town of Lorraine | Jefferson | NRHP Eligibility Undetermined |

| USN | Address | Name and/or Description | Municipality | County | NRHP-Eligibility Determination (NYSOPRHP) |
|-------------|---|---|------------------|--------|---|
| BIN 3209200 | Abes Drive, approximately 0.3 miles west of County Route 17 | Abes Drive over Salmon River North Branch (BIN 3209300), a multi-beam girder bridge | Town of Redfield | Oswego | NRHP Eligibility Undetermined |
| BIN 3313400 | County Route 47, approximately one mile north east of the hamlet of Redfield | County Route 47 over Mill Stream (BIN 3313400), a multi-beam girder bridge | Town of Redfield | Oswego | NRHP Eligibility Undetermined |
| BIN 2220700 | Potter Road, approximately 2.5 miles south of junction of North Osceola and Jackson Roads | Potter Road over Prince Brook (BIN 2220700), a multi-beam girder bridge | Town of Osceola | Lewis | NRHP Eligibility Undetermined |
| BIN 2220690 | North Osceola Road, approximately 0.3 miles south west of junction of North Osceola and Jackson Roads | North Osceola Road over Stony Brook (BIN 2220690), a multi-beam girder bridge | Town of Osceola | Lewis | NRHP Eligibility Undetermined |
| BIN 3340310 | Salmon Road River, approximately 2.5 miles south west from the intersection with County Route 23 | Salmon River Road over Mad River (BIN 3340310), a multi-beam girder bridge | Town of Montague | Lewis | NRHP Eligibility Undetermined |
| BIN 3209220 | Waterbury Road, approximately 1.5 miles east from County Route 27 | Waterbury Road over Salmon River (BIN 3209220), a truss bridge | Town of Redfield | Oswego | NRHP Eligibility Undetermined |
| BIN 1039370 | County Road 177, approximately 3.8 miles east of the hamlet of Barnes Corners | County Route 177 over Deer River (BIN 1039370), a girder and floor beam bridge | Town of Pinckney | Lewis | NRHP Eligibility Undetermined |
| N/A | Denning Road, west of the intersection with Seven-by-Nine Road | Approximately 0.2-acre cemetery with an estimated 10 headstones circa 1852(Denning Road Cemetery/Hodkinson Cemetery/Barrett's Corners Cemetery) | Town of Pinckney | Lewis | NRHP Eligibility Undetermined |

| USN | Address | Name and/or Description | Municipality | County | NRHP-Eligibility Determination (NYSOPRHP) |
|-----|---|---|---------------------------------|--------|---|
| N/A | New York State Route 177, east of Mc Donald Road on the south side of the road | Approximately 0.3-acre cemetery with an estimated 16 headstones circa 1853 (Newton Cemetery/ New Boston Cemetery) | Town of Pinckney | Lewis | NRHP Eligibility Undetermined |
| N/A | New York State Route 177, east of Mc Donald Road on the north side of the road | Approximately 1.5-acre cemetery with an estimated 300 headstones circa 1858 (Saints Peter and Paul Cemetery). | Town of Pinckney | Lewis | NRHP Eligibility Undetermined |
| N/A | Liberty Road, approximately 1.5 miles south of New York State Route 177 | Approximately 1.1-acre cemetery with an estimated 150 headstones circa 1849 (Liberty Cemetery/Gardner's Corners Cemetery) | Town of Montague | Lewis | NRHP Eligibility Undetermined |
| N/A | County Route 17, approximately 700 feet south of Yeardon Drive on the east side of the road | Approximately 6.5-acre cemetery with an estimated 944 headstones circa 1801 (Redfield Village Cemetery/Myrtle Cemetery) | Town of Redfield | Oswego | NRHP Eligibility Undetermined |
| N/A | County Route 17, south of the fork with Old Slate Road | Approximately 3.9-acre cemetery with an estimated 189 headstones circa 1861 (Greenboro Cemetery) | Town of Redfield | Oswego | NRHP Eligibility Undetermined |
| N/A | South west corner of County Routes 15 and 17 | Approximately 1.5-acre cemetery with an estimated 70 headstones circa 1881 (Saint Joseph's Cemetery) | Towns of Redfield and Boyleston | Oswego | NRHP Eligibility Undetermined |
| N/A | County Route 17, approximately 0.75 miles from County Route 13 (Blount Mill Drive) | Approximately 0.3-acre cemetery with an estimated 14 headstones circa 1858 (Phelps Cemetery) | Town of Boyleston | Oswego | NRHP Eligibility Undetermined |

There are no NRHP-Listed resources located with the five-mile study area. There is one resource previously determined to be NRHP-Eligible located within the five-mile study area:

- Lorraine Gulf Bridge (04522.000001) (BIN 3338570) is located approximately 0.3 miles north of Country Route 189 in the Town of Worth, Jefferson County, New York. It is a steel and wood Pratt truss box girder bridge built in 1891. It was determined eligible for listing in the NRHP in 1981 (Stearns and Porter, 1981).³

A majority of the residences in the study area are late-twentieth century pre-fabricated double-wide trailers and one-and-one-half story cottages. Some nineteenth- and early-twentieth-century structures (primarily residences, cabins, and farmsteads) are located within the study area that have not been previously evaluated by NYSOPRHP to determine if they are NRHP-eligible. These types of resources are sometimes determined NRHP-eligible under NRHP Criterion C (i.e., they “embody the distinctive characteristics of a type, period, or method of construction” [CFR, 2004a]), and often derive their significance from being representative examples of vernacular nineteenth-century architectural styles that retain their overall integrity of design and materials. The architectural integrity of historic resources throughout the five-mile radius study area is highly variable, with many showing noticeable alteration, or deterioration due to the elements.

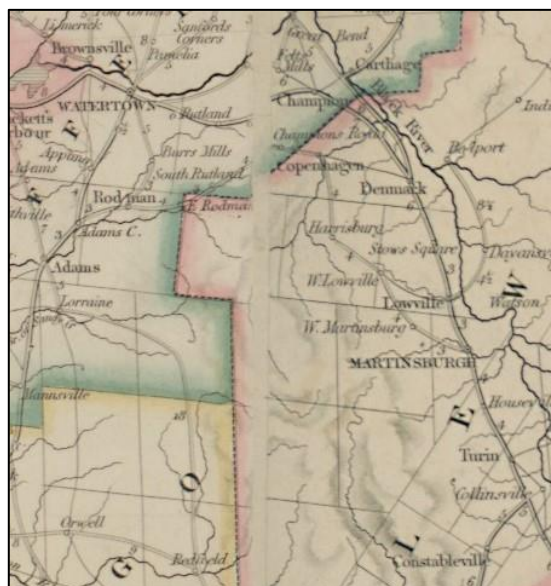
2.2 History of the Study Area

Archives and repositories consulted during EDR’s research for the Facility and five-mile study area included EDR’s in-house collection of reference materials, and online digital collections of the New York State Library, Ancestry.com, New York Heritage, David Rumsey Map Collection, and United States Geological Survey (USGS). Among the sources reviewed for the historic context of the Facility area and five-mile study area are the *History of Oswego County, New York* (Johnson, 1877), the *History of Jefferson County, New York* (Durant, 1878), *History of Lewis County, New York* (Hough, 1883), *The Adirondack Region* (Coughlin, 1921) and *The North Country* (Landon, 1932). Historic maps reproduced in the report include the 1840 Burr *Map of the County of Jefferson, Map of the County of Lewis and Map of the County of Oswego* (Figure 4), 1864 Beers *Atlas of Jefferson County*, 1867 Stone *Atlas of Oswego County*, 1904 *Carthage, NY*, 1905 *Orwell, NY*, 1906 *Highmarket, NY*, 1908 *Watertown, NY*, USGS 1:62500 topographic quadrangles (Figure 5), and the 1943 USGS *Barnes Corners, NY, Boylston, NY, North Osceola, NY, Redfield, NY, Rodman, NY and Worth Center, NY* 1:31680 topographic quadrangles (Figure 6).

³ Field reconnaissance undertaken on December 4, 2017 determined that the bridge has been recently replaced along a new alignment. An updated photograph, description, and recommendation of NRHP eligibility will be provided as part of the proposed historic architectural survey for the Facility.

The Facility is located in the Town of Worth, Jefferson County, and the Town of Redfield, Oswego County, and the five-mile study area extends into the Towns of Lorraine, Worth, and Rodman in Jefferson County, the Towns of Pinckney, Harrisburg, Montague, and Osceola in Lewis County, and the Towns of Boylston, Redfield, and Orwell in Oswego County, New York.

Like much of New York State, the area comprising the modern-day portions of Jefferson, Lewis, and Oswego Counties within the five-mile study area for the Facility has had human occupation for the last 12,000 years. Archaeological evidence indicates that there were dozens of St. Lawrence Iroquois villages located throughout the counties, but that disease and migration had eliminated the population by 1580. During the 17th and 18th century the five-mile study area was part of the hunting and fishing grounds of the Five Nations of the Iroquois (Wellman and Dix, 2005; Horne, 2005; Scharer, 2005a).



Inset 1. 1812 Lay Map of the State of New York (left)

The borders of Jefferson, Lewis, and Oswego Counties are located inland from the coastal ports and rivers that encouraged early development. By 1812, there was little to no settlement of this region (Lay, 1812; collections of David Rumsey).

Inset 2. 1839 Burr Atlas of New York State (right)

By 1839, minimal additional development had occurred within the five-mile study area. Development occurred mostly along the state roads around the periphery of the proposed Facility site (Burr, 1839; collections of David Rumsey).

European settlement of Jefferson County began in 1794 with the Castorland Colony, a planned community for French refugees fleeing the Revolution in France, centered in present-day Carthage. The Black River Tract, which included over 800,000 acres in Jefferson and Lewis Counties, was purchased by Thomas Boylston the same year, and “Macomb’s Purchase” involved the granting of 3,693,755 acres in Franklin, St. Lawrence, Jefferson, Lewis, Herkimer, and Oswego Counties to Daniel McCormick and Alexander Macomb over a seven-year span from 1791 to 1798.

Jefferson County was formed from Oneida county on March 28, 1805 and named after President Thomas Jefferson. Portions were taken from the Town of Rodman by Lewis County in 1809. Watertown was selected as the Jefferson County seat at the time of its formation. Industry and shipping dependent on the St. Lawrence and Black River grew steadily over the next 30 years, but was damaged by the opening of the Erie Canal in 1825. The military base at Fort Drum was established in 1909, and eventually became the largest employer in the county. Outside of Fort Drum and Watertown, development in Jefferson County has been very slow. The rural areas of the county were hurt economically and demographically by the construction of the St. Lawrence Seaway (1959) and Interstate 81 (1961), which diverted commerce and travelers away from the villages (French, 1860; Durant, 1878; Scharer, 2005a).

The Town of Lorraine was originally organized as “Malta” on March 24, 1804, a year before Jefferson County formed from Oneida County. Settlement began early along the state road between Rome and Sacket’s Harbor, constructed in 1804. The town’s name was permanently changed to Lorraine in 1808. The Town of Worth was divided from Lorraine in 1848. In 1860, Lorraine was described as the “central town on the south border of the county” (French, 1860). It was chiefly in the hamlet of Lorraine, where the Old State Road crossed Deer Creek (see Inset 3). Dairy farming and an egg-pickling factory led the local economy during the late nineteenth century. Development was slow during the twentieth century, and the town mostly serves as a place for seasonal recreation (Durant, 1878; Scharer, 2005b).

The Town of Rodman was also formed on March 24, 1804, originally under the name “Harrison.” The town’s name was changed permanently in 1808. Settlement in the Town began in 1801, and grew rapidly between 1803 and 1806. However, an epidemic of typhoid fever in 1813 reduced the population dramatically. During the 1820s and 30s several distilleries and mills were erected. Dairy farming has been the dominant industry since the mid-nineteenth century (French, 1860; Durant, 1878; Scharer, 2005c).

The Town of Worth was formed from Lorraine on April 12, 1848. The first settlement in Worth came in 1802. While a small number of settlers came in the early years, the War of 1812 and a deeply cold season in 1816-17 caused most of the town to be abandoned. Settlement resumed some years later, and no mills were constructed between 1816 and 1856. In 1860 there was one church, and the town was settled mostly around the hamlet of Worthville (see Inset 4). A few cheese factories were built in the 1860s, but none remained operation for more than a few years. The town is now largely utilized as a location for recreational sports (French, 1860; Durant, 1878; Scharer, 2005d).

Lewis County was formed from Oneida County on March 28, 1805 (the same day as Jefferson County), and named after then-Governor Morgan Lewis. The original county seat was at Martinsburg. The first settlers to the area came from Massachusetts and Connecticut to Leyden in 1791, drawn to the area by rumors of virgin land teeming with easy opportunities. The reality of pioneer life prevented extensive permanent settlement. The colony of French

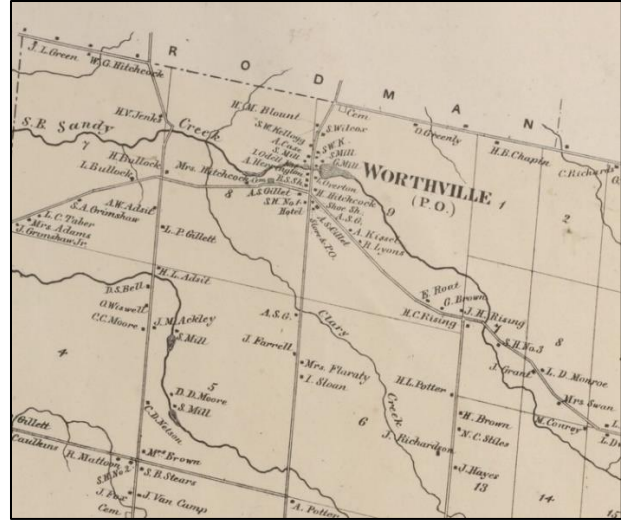
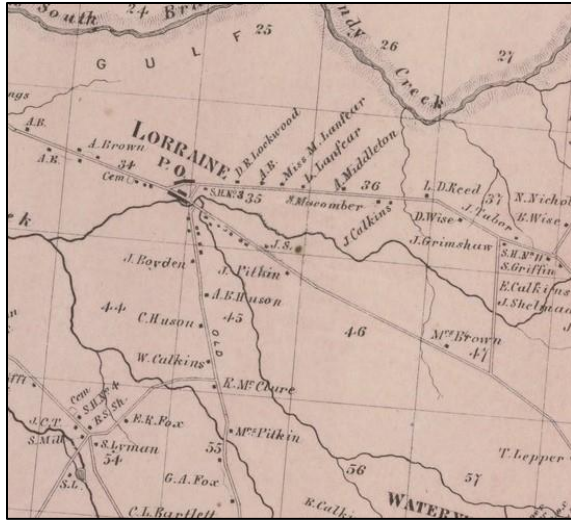
Revolutionary refugees floundered in the harsh environment. During the Civil War, several farms and cheese factories were established in the Black River valley. The county seat was moved from Martinsburg to Lowville in 1864. After the turn of the twentieth century agriculture began to decline. Lumber and forest products were produced during the twentieth century, but by the year 2000, only a few such businesses remained. The county is now a popular destination for snowmobiling (French, 1860; Hough, 1883; Horne, 2005).

The Town of Harrisburg was formed in 1803 from parts of Lowville and Champion in Jefferson County, and Mexico in Oswego County. Settlement began prior to the War of 1812. The first school was built in 1814. Development was slow, but by the late nineteenth century the town had eight cheese factories. The dairy industry was finished by the mid-twentieth century. Little to no development has taken place since that time (French, 1860; Hough, 1883; Einhorn, 2005a).

The Town of Montague was formed from West Turin in 1850. Settlement in the vicinity did not begin until 1846. The first framed school building was erected in 1850. Four hydraulic saw mills were established by the late nineteenth century. Lumbering and forest product are still produced in Montague. The town's service economy has grown in the early twentieth century due to an increase in winter recreation (French, 1860; Hough, 1883; Einhorn, 2005b).

The Town of Osceola was formed from West Turin in 1844. Settlement began in 1848, but in 1860 the town was still essentially wilderness, with only five frame houses. During the late nineteenth century three saw mills and a tannery were operating near the Village of Osceola. The last large-scale paper mill was closed in 2001. The town now relies on small-scale lumber and winter recreation industries (French, 1860; Hough, 1883; Einhorn, 2005c).

The Town of Pinckney was formed from Harrisburg and Rodman in 1808. Settlement began in 1804, and by 1860 the town had four post offices. Much of the town was abandoned during the mid-twentieth century and reclaimed by forest. In the late-twentieth century snowmobiling and winter recreation emerged as an attraction. Recent land use has involved the reuse of abandoned farms for raising elk and deer for high-end restaurants (French, 1860; Einhorn, 2005d).



Inset 3. 1864 Beers *Atlas of Jefferson County, New York* – detail of Lorraine (right)

By the Civil War, the Town of Lorraine developed largely in the Village of Lorraine, at the confluence of two branches of Deer Creek. The map shows the development at the village center, a school and nearly a dozen residences along the "Old State Road" (Beers, 1864; collections of David Rumsey).

Inset 4. 1864 Beers *Atlas of Jefferson County, New York* – detail of Worthville (Worth) (left)

By the mid-nineteenth century, the Town of Worth had mostly settled around the hamlet of Worthville, supported by the mills on Sandy Creek. The hamlet also boasted a shoestore, a hotel, and two schools, one public and one parochial (Beers, 1864; collections of David Rumsey).

The first European visitors to present-day Oswego County were French Jesuits who established missions at the mouth of the Oswego River for the conversion of the Iroquois. The British established a trading house in the area in 1722. A great deal of commerce was carried from Oswego to Albany over the Mohawk, Oneida, and Oswego Rivers, which led to the establishment of Oswego as a strategic location. After the French and Indian War, Oswego was the most important military outpost in Western New York for some time. The county was formed on March 1, 1816 from portions of Oneida and Onondaga Counties. After the conclusion of the War of 1812 and the formation of the county, trade flourished at the Port of Oswego. The increase in commercial traffic brought by the opening of the Erie Canal and its subsequent enlargements brought rapid growth to the City of Oswego, and after the Civil War, railroad began to proliferate. Oswego's economy increased steadily until the late-twentieth century, when urban renewal, manufacturing decline, and suburbanization drew population away from the urban areas. The economy has shifted to energy, education, and recreation. In the north-western portion of the county located within the five-mile study area, fishing and snowmobiling have become popular (French, 1860; Johnson, 1877; Wellman and Dix, 2005).

The Town of Boylston was formed in 1828 from the Town of Orwell. The two first settlers came in 1812, and immigration to the area began to slowly grow in 1815. A schoolhouse was erected in 1817, and a saw mill in 1822. Growth was slow and confined to the western portion of the township until about 1850. At that time sections of hill forest were cleared for grazing. Currently the town economy consists of small-scale maple processing and lumber businesses (French, 1860; Johnson, 1877; Dix, 2005a).

The Town of Orwell was formed in 1817 from Richland. The first settlers came to that area in 1806. The first saw mill was established on the Salmon River above the falls. During the War of 1812 the town was active due to the use of the overland road between Rome and Sacket's Harbor, although secondary to the one at Redfield. The first district school was erected in 1818 at Orwell Corners. Settlement increased during the 1820s and 1830s, and by 1860, the Town of Orwell had 40 houses and a compliment of pioneer industry including a grist mill, a tannery, saw mill, and an inn. Lumber and forest products continue to be important to the town's economy (French, 1860; Johnson, 1877; Dix, 2005b).

The Town of Redfield was formed in 1800 from Mexico, then a part of Oneida County. Settlement began in 1798 by Connecticut emigres, and the first saw mill was constructed two years later. A state road opened in the first decade of the nineteenth century brought travelers through Redfield during the War of 1812, when large numbers of troops passed between Rome and Sacket's Harbor. During the late 1860s (see Inset 5) a rail line extended through the town and brought some commercial benefits, but was abandoned and removed in 1876. The damming of the Salmon River in 1914 created the Salmon River Reservoir, which introduced waterpower generation and watersports to the town. The town includes some wildlife areas and is a bedroom community for commuters (French, 1860; Johnson, 1877; Dix, 2005c).



Inset 5. 1867 Stone Atlas of Oswego County, New York – detail of Redfield

The hamlet of Greenborough developed along the "Old State Road (County Route 17)" and consisted of about a dozen residences, a mill, and a school house. The area of the town of Redfield to the east of Greenborough has remained undeveloped and wild (Stone, 1867; collections of David Rumsey).

Historic maps reflect the slow rate of nineteenth-century settlement and expansion of the towns within the five-mile study area, and the continued lack of significant growth throughout the twentieth century. The 1840 Burr *Map of the County of Jefferson, Map of the County of Lewis and Map of the County of Oswego* (Figure 4) show the development patterns within the five-mile study area in the early nineteenth century, when populations settled in the locations where the state roads ran parallel to or crossed waterways in order to take advantage of the natural waterpower and the potential commercial traffic. All of the settlement clusters are located outside of the proposed Facility and at the edges of the five-mile study area. The mid-nineteenth century 1857 Levey *Jefferson County* map, 1864 Beers *Atlas of Jefferson County*, and 1867 Stone *Atlas of Oswego County*⁴ show that the pattern of development continued along the overland routes and waterways, with a few unpaved roads leading into or through the Facility.

The 1904 *Carthage, NY*, 1905 *Orwell, NY*, 1906 *Highmarket, NY*, 1908 *Watertown, NY*, USGS 1:62500 topographic quadrangles (Figure 5) show the western half of the five-mile study area. Little development has taken place since the middle of the nineteenth century. The map depicts a road passing through the Littlejohn Settlement, within the proposed study area. However, the 1943 USGS *Barnes Corners, NY, Boylston, NY, New Boston, NY, North Osceola, NY, Orwell, NY, Redfield, NY, Rodman, NY and Worth Center, NY* 1:31680 topographic quadrangles (Figure 6) show the road no longer passed through the proposed Facility and the land was part of the Littlejohn State Game Reserve. Field reconnaissance in December 2017 determined that the Littlejohn State Game Reserve is now inaccessible and part of the Mad River Club. The 1943 topographic quadrangles do not show significant change to the land within the five-mile study area in terms of additional development, though the maps indicate the extent of forest land throughout the study area.

2.3 Existing Conditions

Representative existing conditions within the Facility study area are summarized below, depicted on Figure 7 and in photographs included as Appendix A:

- The Facility Area is generally bordered on the east by Lewis County including the Town of Montague to the north east and the Town of Osceola to the south east. To the east and north, the Facility area is bordered by participating parcels within the Town of Worth in Jefferson County and the Town of Redfield within Oswego County. There are no major transportation routes through the Facility Area. The major transportation routes through the five-mile study area surrounding the Facility include Jefferson County Routes 92, 95, and 189, and Oswego County Routes 2 and 17, in addition to local roads.

⁴ These maps were reviewed as part of developing a historic context but were not reproduced as part of the report due to similar conditions being displayed on other maps.

- The proposed Facility Area is characterized by deep uncultivated forests and hunting lands (see Appendix A, Photographs 1-2). No areas of concentrated settlement occur within the Facility area.
- The area within five miles of the Facility Area is characterized by large patches of uncultivated forest, grazing pasture, reverting former agricultural lands in various stages of secondary succession, lumber mills, and scattered residences and farms. The area is rural and lightly populated, and many homeowners appear to be seasonal residents. Housing is concentrated in rural hamlets, with houses usually clustered around a four-way intersection or town square without any notable commercial development (see Appendix A, Photographs 3-5).
- Older homes and farms are widely spaced at irregular intervals along roadways and include houses in a variety of vernacular traditions (primarily prefabricated models of simple side-gabled homes and double-wide mobile homes, with some residences exhibiting extensive ad hoc additions and alterations) along with some rustic timber hunting cabins, A-frame houses and farm facilities (see Appendix A, Photographs 6-9).
- Significant areas of concentrated settlement within the five-mile study area include the Village of Redfield, and the hamlets of Worth, and Barnes Corners (see Figure 2).
- The Village of Redfield is located approximately six miles south of the Facility Area, and is comprised of two churches, a town hall, store, and scattered residences where Oswego County Route 17 crosses over the Salmon River Reservoir (see Appendix A, Photograph 10).
- The hamlet of Worth is located at the intersection of Jefferson County Routes 189 and 96, approximately four miles north east of the Facility Area. The hamlet is comprised of a few residences and a town hall located primarily along Jefferson County Route 189 (see Appendix A, Photograph 11).
- No properties listed on or determined eligible for the NRHP are located within the Facility area. One previously identified NRHP-eligible bridge (BIN 338570) within the five-mile study area dated to the early twentieth century, but has recently been replaced (see Appendix A, Photograph 12).
- Additional previously identified historic resources whose NRHP eligibility has yet to be determined include cemeteries and bridges (see Appendix A, Photographs 13-15).

3.0 HISTORIC RESOURCES SURVEY WORK PLAN

3.1 Criteria for Evaluating the Significance of Historic Resources

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

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

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

As noted in Section 1.1 of this report, historic resources surveys undertaken by EDR in association with the Facility will be conducted by professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for Historic Preservation (36 CFR 61). Our staff are thoroughly familiar with vernacular architectural styles, architectural traditions, historic settlement and land use patterns, and relevant historic contexts for rural western New York State.

3.2 Historic Resources Survey

The *SHPO Wind Guidelines* suggest the completion of a preliminary historic resources survey of the areas located within one mile of the turbines where viewshed analysis indicates the Facility is potentially visible, and then schedule a meeting with NYSOPRHP staff in Albany to review the results of the preliminary survey. The purpose of this meeting is to allow NYSOPRHP the opportunity to verify the evaluation criteria being used by the consultant to determine NRHP-eligibility. However, EDR's cultural resources staff have successfully undertaken numerous previous historic resources surveys for energy projects in New York State, including wind energy projects, in close consultation with NYSOPRHP staff. In these previous surveys, NYSOPRHP staff have concurred with EDR staff recommendations regarding the

potential NRHP-eligibility of historic resources without the need for additional survey or justification. In recent correspondence related to other wind energy projects in New York, NYSOPRHP staff have confirmed that EDR does not need to conduct this initial one-mile survey and confirmation of methodology. Therefore, a one-mile survey and initial consultation with NYSOPRHP to review the results of the one-mile survey are not proposed herein.

EDR will conduct a historic resources survey of the Facility's APE for Indirect (Visual) Effects (see Figure 2). The Facility's APE is defined in Section 1.4 of this report.⁵ The five-mile study area for the Facility includes approximately 30 square miles.⁶ The historic resources survey will be conducted by a qualified architectural historian who meets the Secretary of Interior's Standards for Historic Preservation Projects (36 CFR Part 61). The historic resources survey will identify and document those buildings within the APE that, in the opinion of EDR's architectural historian, appear to satisfy National Register of Historic Places (NRHP) eligibility criteria. In addition, the survey will also be conducted for the purpose of providing updated photographs and recommendations of eligibility for previously identified NRHP-eligible resources, as well as previously surveyed resources within the APE whose NRHP eligibility has not formally been determined (see Section 2.2 and Table 1).

Historic resources survey fieldwork will include systematically driving all public roads within the study area to evaluate the NRHP-eligibility of structures and properties within the APE. When sites that appeared to satisfy NRHP-eligibility criteria are identified, the existing conditions of the property will be documented by EDR's architectural historian. This includes photographs of the building(s) (and property) and field notes describing the style, physical characteristics and materials (e.g., number of stories, plan, external siding, roof, foundation, and sash), condition, physical integrity, and other noteworthy characteristics for each resource.

EDR's evaluation of historic resources within the APE will focus on the physical condition and integrity (with respect to design, materials, feeling, and association) to assess the potential architectural significance of each resource. If deemed appropriate, individual buildings located within villages and hamlets will not be documented as individual properties, but instead will be described collectively as clusters or districts. For previously surveyed historic properties, EDR will make a recommendation of NRHP-eligibility for structures and properties within the study area previously determined NRHP-eligible or whose NRHP eligibility has not formally been determined. An updated photograph (or photographs) of previously surveyed properties will be taken, and an updated recommendation of NRHP-eligibility will occur where applicable.

⁵ Although a topographic viewshed is not included in this work plan, based on previous historic architectural resources surveys completed for wind projects in New York State, the APE for indirect effects is assumed to only include a portion of the five-mile study area. The final APE for indirect (visual) effects will be described and depicted in the Historic Resources Survey Report.

⁶ Based on the current Facility site boundary, which is likely to change as the Facility layout is refined. The final survey area will reflect a five-mile buffer around the final layout of the Facility, which will be specified in the Historic Resources Survey Report.

If significant changes to materials or form are found to have occurred, or if a property is found to no longer be standing, an updated recommendation of NRHP eligibility will be provided. Previously identified resources whose NRHP eligibility has not formally been determined will be given an updated recommendation of NRHP eligibility.

Note that all properties included in the historic resources survey will be photographed and assessed from public rights of way. The condition and integrity of all resources will be evaluated based solely on the visible exterior of the structures. No inspections or evaluations requiring access to the interior of buildings, or any portion of private property, will be conducted as part of this assessment. In accordance with the *SHPO Wind Guidelines*, and based on previous consultation with NYSOPRHP for previous wind projects,⁷ buildings that are not sufficiently old (i.e., are less than 50 years in age), that lack architectural integrity, or otherwise were evaluated by EDR's architectural historian as lacking historical or architectural significance will *not* be included in or documented during the survey.

EDR will provide initial survey results and recommendations of NRHP eligibility for historic architectural properties surveyed, including photographs, brief property descriptions, and location maps, to NYSOPRHP via the CRIS website. EDR is requesting that NYSOPRHP review these results and provide determinations of eligibility prior to EDR completing a historic resources visual effects analysis for the Facility, so that only the potential effects of the Facility on historic properties determined eligible by NYSOPRHP are considered.

3.3 Historic Resources Survey Report

The methods and results of the survey will be summarized in an illustrated Historic Resources Survey report, along with an annotated properties table that will include an entry for each identified property. The annotated properties table will include one or more photographs of each property, a brief description of the property (name, address, estimated age, architectural style, materials, etc.), an assessment of its condition, and an evaluation of significance. The initial survey results and recommendations of NRHP eligibility will be provided to NYSOPRHP via the CRIS website. The Applicant will request that NYSOPRHP review these results and provide determinations of eligibility prior to completing a historic resources visual effects analysis for the Facility, so that only the potential effects of the Facility on historic properties determined eligible by NYSOPRHP are considered.

3.4 Historic Resources Effects Analysis

Construction of the Facility will not require the demolition or physical alteration of any buildings or other potential historic resources. No direct physical impacts to historic-architectural resources will occur as a result of the Facility.

⁷ See Historic Resources Survey for the Cassadaga Wind Project (15PR02730) (EDR, 2016).

The Facility's potential effect on historic resources would be a change (resulting from the introduction of wind turbines or other above-ground Facility components) in the visual setting associated with a given historic resource. The potential effect of the Facility on the visual setting associated with historic resources is highly variable, and is dependent on a number of factors including the distance to the project, the number of visible turbines/components, the extent to which the Facility is screened or partially screened by buildings, trees, or other objects, and the amount of existing visual clutter and/or modern intrusions in the view. It is also worth noting that visual setting may or may not be an important factor contributing to a given property's historical significance. Scenic views and/or association with the landscape are not specifically identified as contributing to the significance of any of the historic resources in the study area.

Following NYSOPRHP's review of the Historic Resources Survey results (described above) for the Facility, the Applicant will prepare a Historic Resources Effects Analysis that will evaluate the potential visual and auditory effects of the Facility on properties determined by NYSOPRHP to be S/NRHP-eligible. This will include consideration of distance and the effect of vegetation and other landscape features that may screen or minimize views of the Facility from historic resources, and will include visual simulations where appropriate. The effects analysis will specifically address the visual effect as well as potential operational noise/vibration impacts of the Facility on the setting associated with S/NRHP-eligible and listed sites and/or districts within the APE. The effects analysis will also include recommendations regarding potential cultural resources mitigation projects, as appropriate. The Historic Resources Effects Analysis will be provided to NYSOPRHP via the CRIS website and provide the basis for the evaluation of potential visual effects on historic resources included in Exhibit 24 of the Article 10 Application. The completed Historic Resources Effects Analysis will be submitted as part of the Article 10 Application.

In addition, 16 NYCRR § 1001.24 (Exhibit 24: Visual Impacts) describes the necessary components of a Visual Impact Assessment (VIA) that must be conducted as part of the Article 10 application. The VIA must include "identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), cumulative visual impact analysis, and proposed visual impact mitigation". 16 NYCRR § 1001.24 also requires that "the applicant shall confer with municipal planning representatives, DPS, DEC, OPRHP, and where appropriate, APA in its selection of important or representative viewpoints" (Article 10, Exhibit 24, Part 1001.24[b][4])⁸. To address this requirement, the Historic Resources Effects Analysis report will identify those historic resources where visual setting is an important factor in their significance and where viewshed analysis indicates potential visibility of the Facility. The report will recommend those historic resources where preparation of a visual simulation would be appropriate to assess the Facility's potential effect.

⁸ Note: "DPS" is the New York State Department of Public Service, "DEC" is the New York State Department of Environmental Conservation, "OPRHP" is the New York State Office of Parks, Recreation, and Historic Preservation, and "APA" is the Adirondack Park Agency.

Relevant to noise and vibration impacts to S/NRHP-eligible cultural resources, the implementing regulations for New York State Parks, Recreation and Historic Preservation Law, Section 14.09 (9 NYCRR § 428.7) state:

- a. In determining whether an undertaking will have an adverse impact on eligible or register property, the commissioner shall consider whether the undertaking is likely to cause:
 - 1. destruction or alteration of all or part of the property;
 - 2. isolation or alteration of the property's environment;
 - 3. *introduction of visual, audible or atmospheric elements which are out of character with the property or alter its setting;*
 - 4. neglect of the property resulting in its deterioration or destruction. [emphasis added] (9 NYCRR § 428.7))

In addition, the Federal Regulations entitled “Protection of Historic Resources” (36 CFR Part 800) include in Section 800.5(2) a discussion of potential adverse effects on historic resources:

“Adverse effects on historic properties include, but are not limited to: . . . (iv) Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance; [and] (v) *Introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s significant historic features.*” (CFR, 2004b). [emphasis added]

The Historic Resources Effects Analysis will address potential operational noise/vibration impacts to S/NRHP-eligible historic properties within the five-mile historic architectural study area. Construction-related noise/vibration impacts are not considered because they will be short-term and temporary in nature. A full assessment of potential noise impacts will be conducted in Exhibit 19 of the Article 10 application.

4.0 SUMMARY

4.1 Summary of Historic Architectural Survey Work Plan

On behalf of Atlantic Wind, LLC, a wholly owned subsidiary of Avangrid Renewables, LLC, EDR has prepared a Phase 1A Historic Architectural Resources Survey Work Plan for the proposed Mad River Wind Farm, located in the Town of Worth, Jefferson County, and the Town of Redfield, Oswego County, New York. Per the *SHPO Wind 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 (NYSOPRHP, 2006).

A total of 23 previously-identified historic resources are located within the five-mile study area for the Mad River Wind Farm:

- There is one property (BIN 338570 - the Lorraine Gulf Bridge on County Route 95) located within the five-mile study area that has been previously determined eligible by NYSOPRHP, and 22 potential historic properties (all bridges or cemeteries) identified within the CRIS database but whose NRHP eligibility has not been formally determined. All of the properties within the Facility study area previously determined NRHP-eligible or whose NRHP eligibility is currently undetermined were identified using the CRIS database.
- There are no properties listed in the NRHP located within the Facility area.
- Two previous architectural surveys have been conducted within the five-mile study area. No previously identified historic properties are located in the intersecting study areas of these surveys and the five-mile study area for the Facility.

This Phase 1A Historic Architectural Resources Work Plan proposes the following activities to identify historic properties and evaluate the potential effect of the Mad River Wind Farm:

- EDR will conduct a historic resources survey of the five-mile-radius APE for Indirect Effects for the Facility, and provide photographs and a brief description of all properties recommended to be NRHP-eligible.
- In addition, EDR will provide updated recommendations of NRHP eligibility for properties within the APE that have been previously determined eligible, as well as properties whose NRHP eligibility has not yet been determined.
- EDR will provide initial survey results and recommendations of NRHP eligibility for historic architectural properties surveyed, including photographs and a brief property description, to NYSOPRHP via the CRIS website. EDR is requesting that NYSOPRHP review these results and provide determinations of eligibility

prior to EDR completing a Historic Resources Effects Analysis for the Facility, so that only the potential effects of the Facility on historic properties determined eligible by NYSOPRHP are considered.

- Following the receipt of determinations of NRHP eligibility from NYSOPRHP, EDR will provide a Historic Resources Effects Analysis report to NYSOPRHP via the CRIS website. The report will include an analysis of the potential visual and auditory effects of the Facility on identified properties, recommendations for historic resources where the preparation of visual simulations would be useful to help assess potential visual impacts, and recommendations for mitigation efforts, if appropriate.

EDR has provided this work plan to NYSOPRHP in advance of conducting the historic architectural resources survey to confirm the visual APE for the project and to ensure that the proposed scope of the survey is consistent with NYSOPRHP's expectations. Please provide a formal response indicating NYSOPRHP's concurrence with and/or comments on the work plan described herein.

5.0 REFERENCES

Code of Federal Regulations (CFR). 2004a. Title 36 - Parks, Forests, and Public Property, Chapter I - National Park Service, Department of the Interior, Part 60 - National Register of Historic Places, Section 60.4 - Criteria For Evaluation. http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title36/36cfr60_main_02.tpl.

CFR. 2004b. 36 CFR 800 – Protection of Historic Properties [incorporating amendments effective August 5, 2004]. <http://www.achp.gov/regs-rev04.pdf>.

Coffin, Nathaniel. 1864. *The Forest Arcadia of Northern New York*. T. O. H. P. Burnham, New York, NY.

Coughlin, Richard. 1921. *The Adirondack Region*. Santway Photo-craft Company, Watertown, NY.

Dix, Barbara J. 2005a. *Boylston*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 203. Syracuse University Press, Syracuse, NY.

Dix, Barbara J. 2005b. *Orwell*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1163. Syracuse University Press, Syracuse, NY.

Dix, Barbara J. 2005c. *Redfield*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1288. Syracuse University Press, Syracuse, NY.

Durant, Samuel W. 1878. *History of Jefferson County*. L. H. Everts and Company, Philadelphia, PA.

Einhorn, Arthur. 2005a. *Harrisburg*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 699. Syracuse University Press, Syracuse, NY.

Einhorn, Arthur. 2005b. *Montague*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1001. Syracuse University Press, Syracuse, NY.

Einhorn, Arthur. 2005c. *Osceola*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1163. Syracuse University Press, Syracuse, NY.

Einhorn, Arthur. 2005d. *Pinckney*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1205. Syracuse University Press, Syracuse, NY.

Environmental Design and Research Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR). 2016. *Historic Architectural Resources Survey: Cassadaga Wind Project*. Report submitted to Everpower Wind Holdings by Environmental Design and Research Landscape Architecture, Engineering, & Environmental Services, D.P.C., Syracuse, NY.

French, John Homer. 1860. *Gazetteer of New York State*. R. Pearsall Smith. Syracuse, NY.

Horne, Field. 2005. *Lewis County*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 888-891. Syracuse University Press, Syracuse, NY.

Hough, Franklin B. 1883. *History of Lewis County, New York*. D. Mason & Company, Albany, NY.

Johnson, Crisfield. 1877. *History of Oswego County, New York*. L. H. Everts and Company, Philadelphia, PA.

Landon, Harry. 1932. *The North Country; A History*. Historical Publishing Company, Indianapolis, IN.

National Park Service (NPS). 1990. *How to Apply the National Register of Historic Places Criteria for Evaluation*. National Register Bulletin No. 15. National Register Branch, National Park Service, U.S. Department of the Interior, Washington, D.C. <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf>.

New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP). 2005. *New York State Historic Preservation Office (SHPO) Phase 1 Archaeological Report Format Requirements*. New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY.

NYSOPRHP. 2006. *New York State Historic Preservation Office Guidelines for Wind Farm Development Cultural Resources Survey Work*. New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY.

Scharer, Laura Lynne. 2005a. *Jefferson County*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 812-815. Syracuse University Press, Syracuse, NY.

Scharer, Laura Lynne. 2005b. *Lorraine*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 930. Syracuse University Press, Syracuse, NY.

Scharer, Laura Lynne. 2005c. *Rodman*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1330. Syracuse University Press, Syracuse, NY.

Scharer, Laura Lynne. 2005d. *Worth*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1728. Syracuse University Press, Syracuse, NY.

Stearns, Carl and J. Porter. 1981. *Lorraine Gulf Bridge*. Building Structure Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <https://cris.parks.ny.gov/>.

United States Geological Survey (USGS). 1905. *Orwell, NY*. 15 Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1905. *Orwell, NY*. New York. 15-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *Barnes Corners, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *Boylston, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *New Boston, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *North Osceola, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *Orwell, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

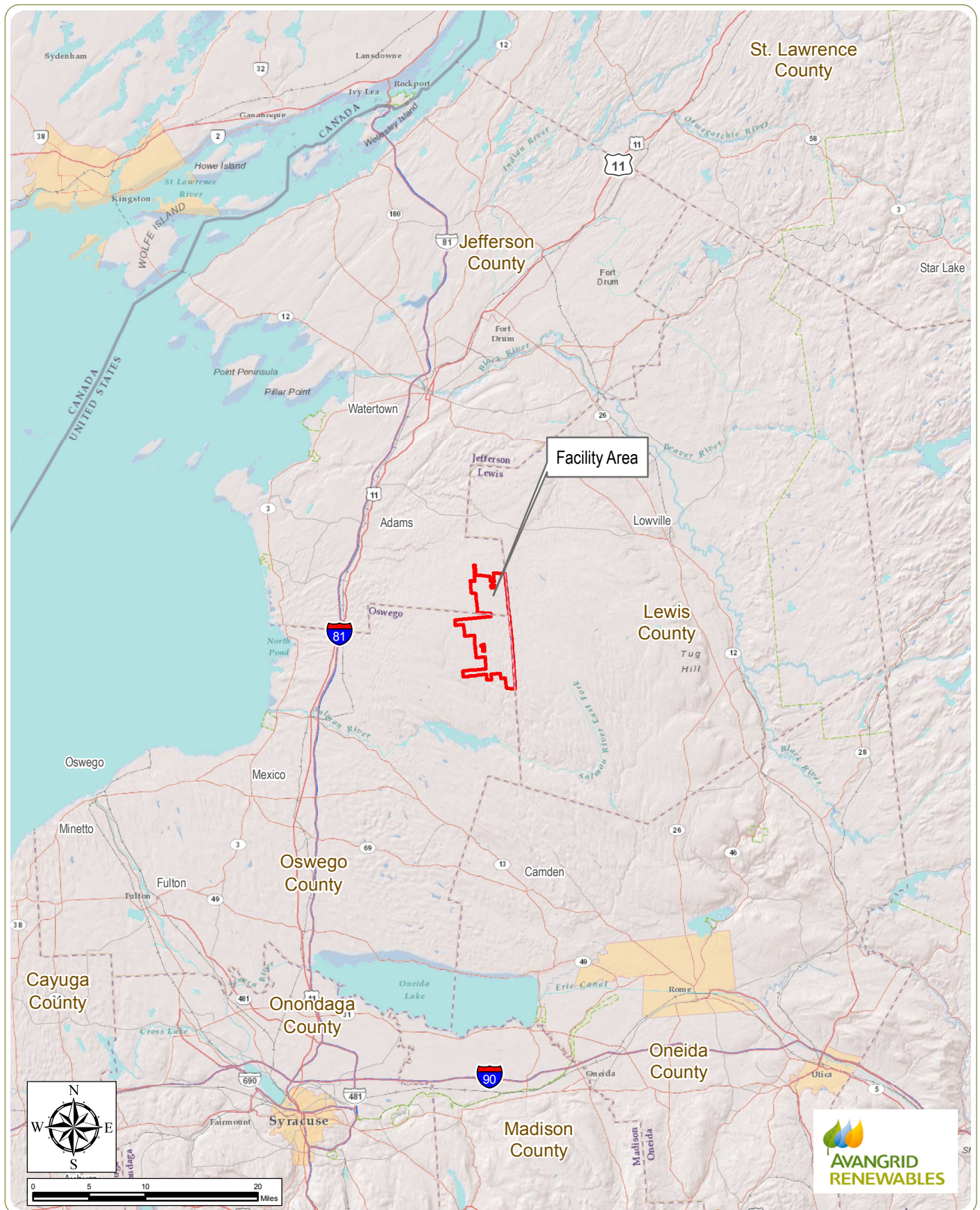
USGS. 1943. *Redfield, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *Rodman, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

USGS. 1943. *Worth Center, NY*. New York. 7.5-Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.

Wellman, Judith and Barbara Dix. 2005. *Oswego County*. In *The Encyclopedia of New York State*, edited by P. Eisenstadt, p. 1164-1167. Syracuse University Press, Syracuse, NY.

Figures

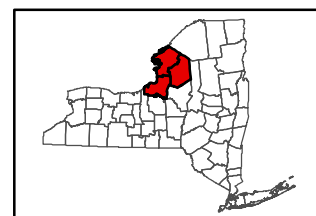


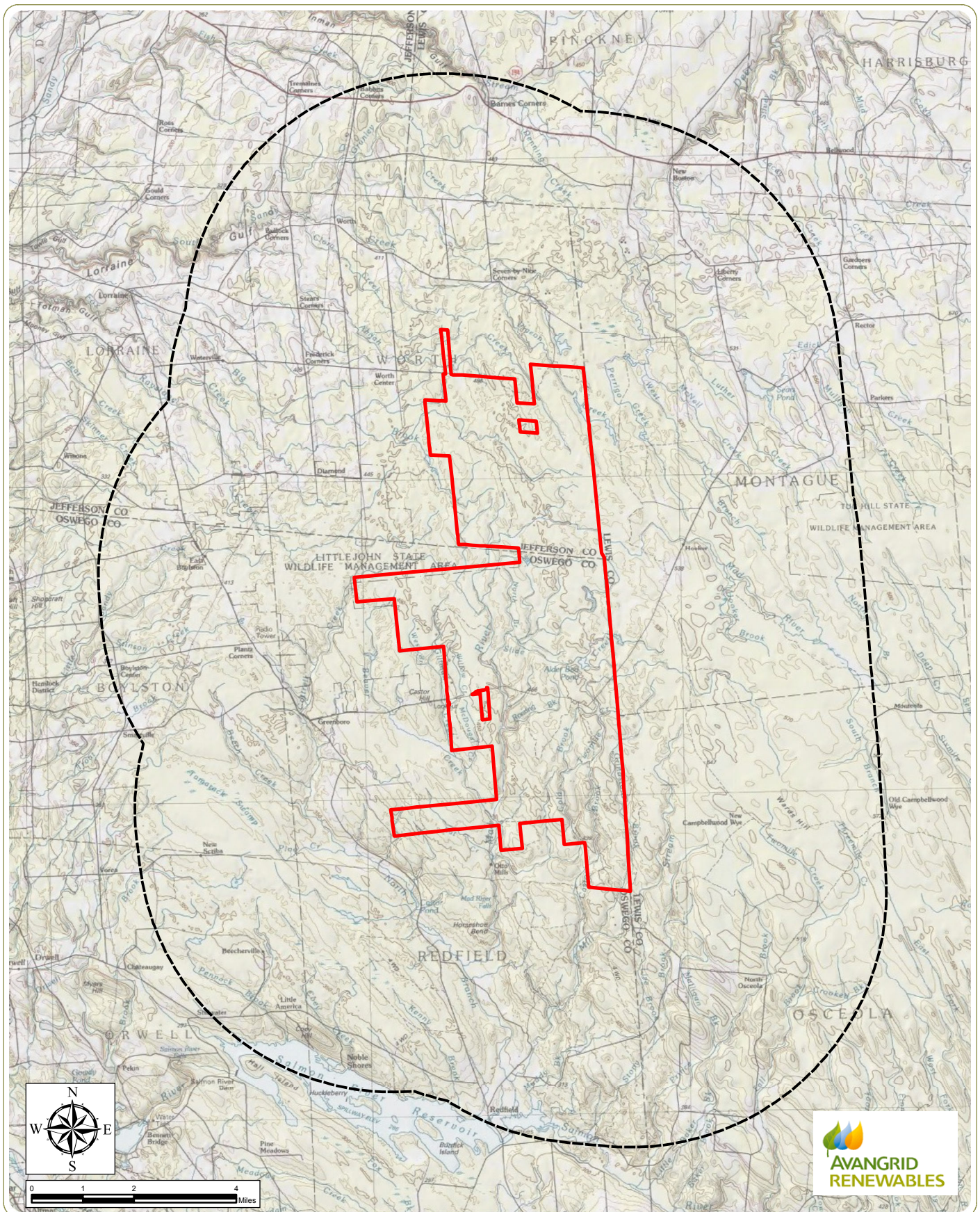
Mad River Wind Farm

Town of Redfield, Oswego County and Town of Worth, Jefferson County, New York

Figure 1. Regional Facility Location

- Notes:**
1. Basemap: ESRI StreetMap North America, 2008.
 2. This map was generated in ArcMap on December 8, 2017.
 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.







Mad River Wind Farm

Town of Redfield, Oswego County and Town of Worth, Jefferson County, New York

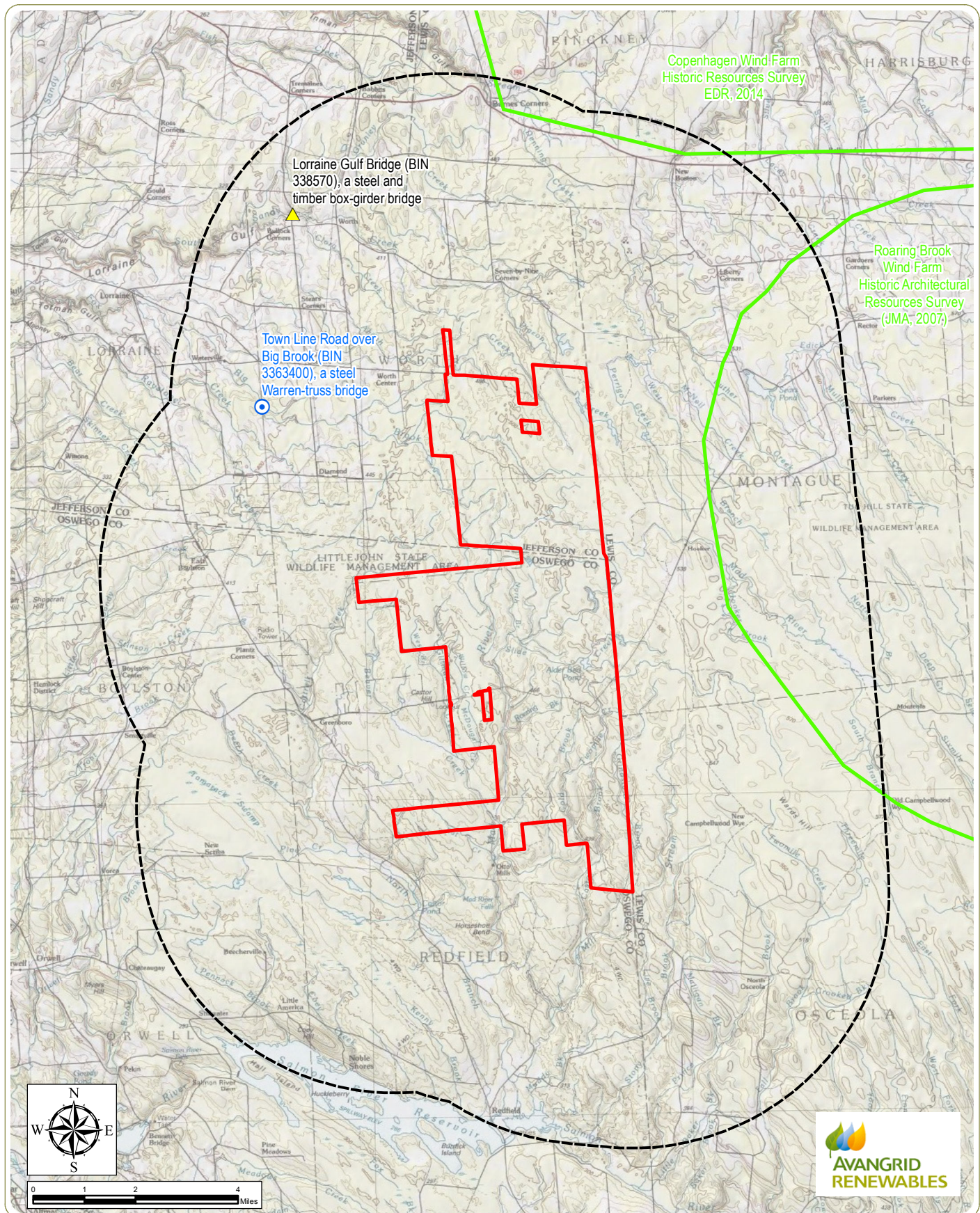
Figure 2. Facility Area and 5-Mile Study Area

- Notes:**
1. Basemap: ESRI ArcGIS Online "USA TopoMaps" map service.
 2. This map was generated in ArcMap on December 8, 2017.
 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

 5-Mile Study Area
 Facility Area



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Mad River Wind Farm

Town of Redfield, Oswego County and
Town of Worth, Jefferson County, New York

Figure 3. Previously Identified Historic Architectural Resources

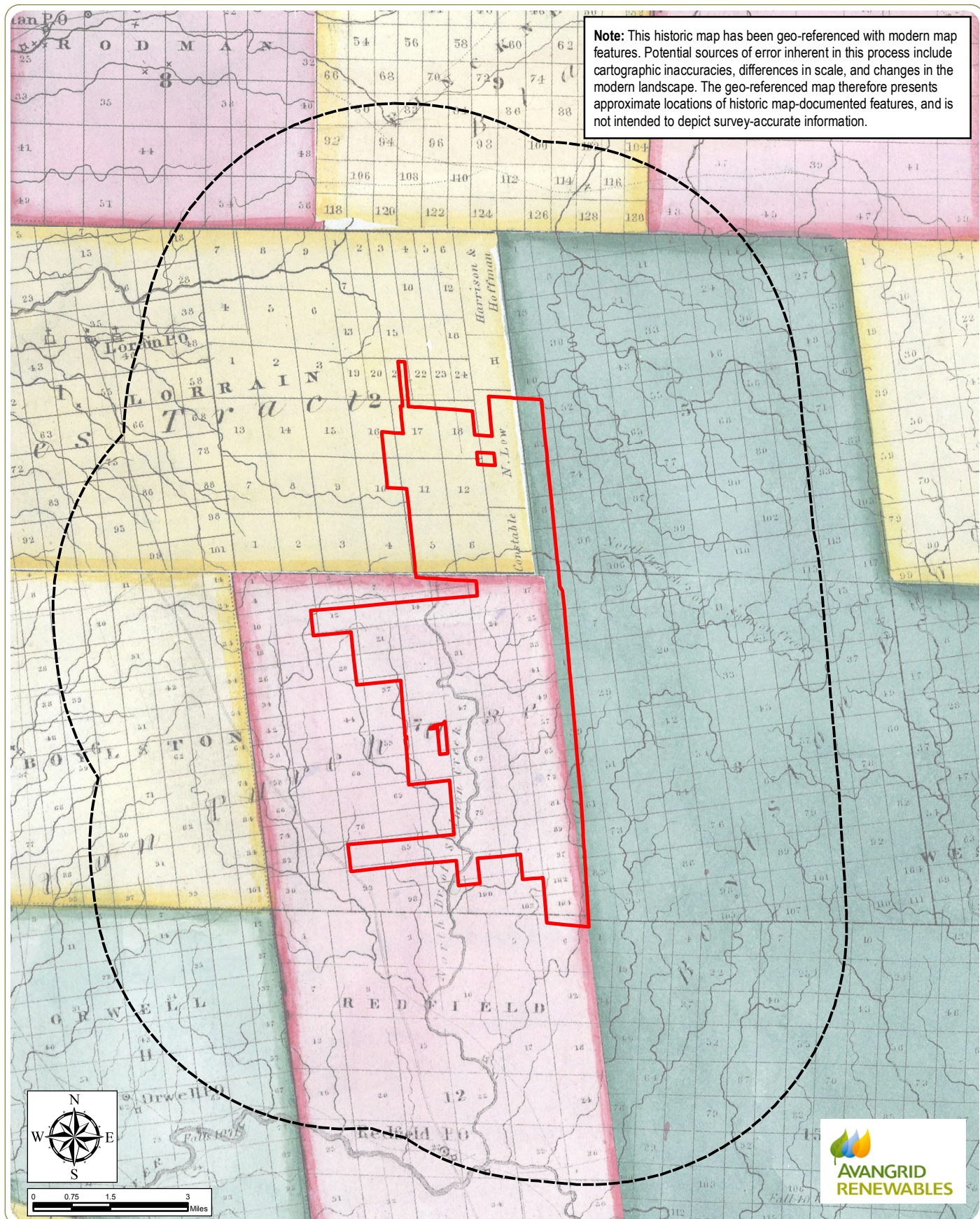
- Notes: 1. Basemap: ESRI ArcGIS Online "USA Topo Maps" map service.
2. This map was generated in ArcMap on December 8, 2017.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Previously Identified Historic Architectural Resource

- ▲ NRHP-Eligible Resource (NYSOPRHP Determined)
- NRHP Eligibility Undetermined
- Previous Historic Architectural Resources Survey
- 5-Mile Study Area
- Facility Area



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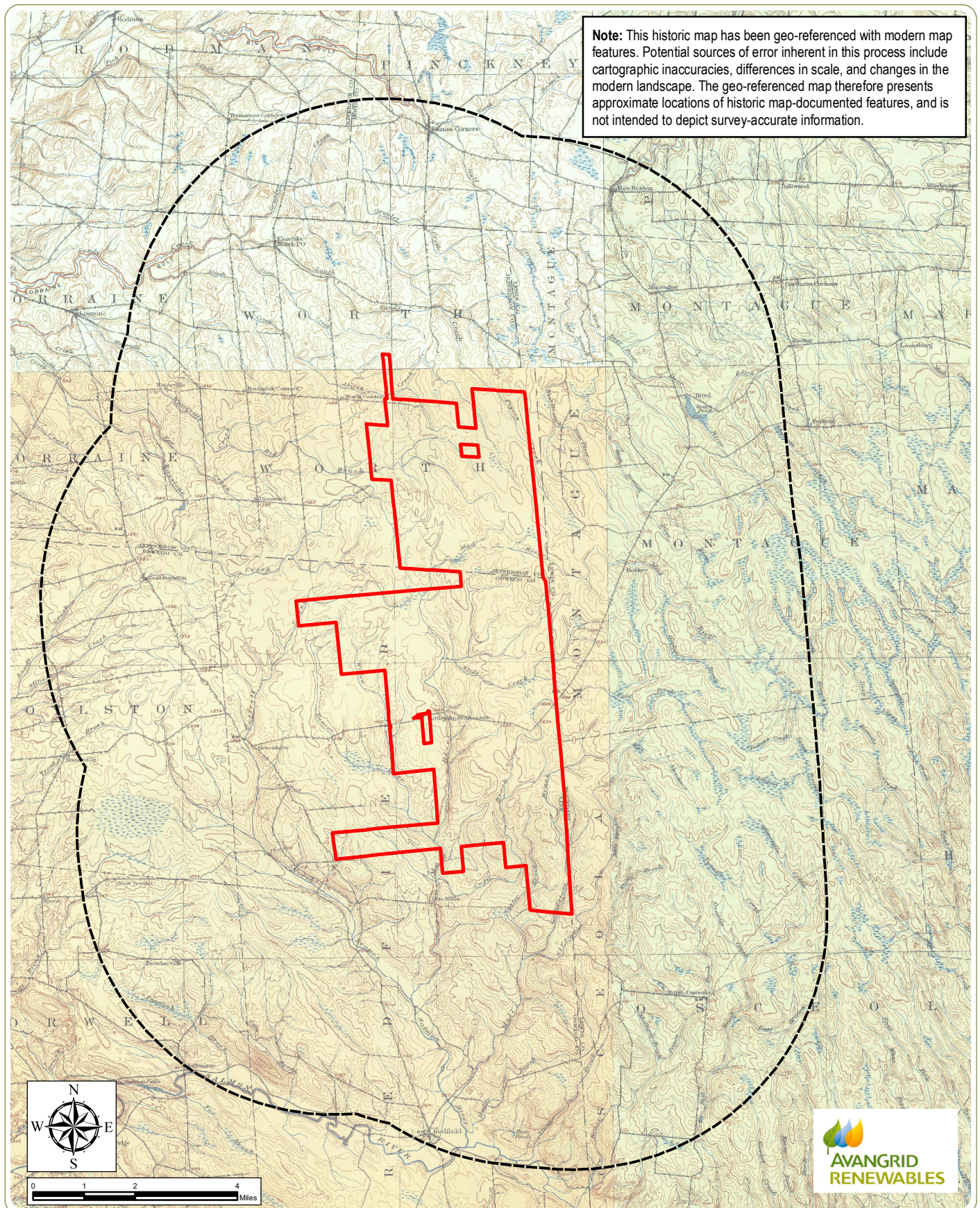
Mad River Wind Farm

Town of Redfield, Oswego County and Town of Worth, Jefferson County, New York

Figure 4. 1840 Burr Map of the County of Jefferson, Lewis, and Oswego, New York.

 Facility Area

- Notes:** 1. Basemap: 1840 Burr Map of the County of Jefferson, Lewis, and Oswego, New York.
2. This map was generated in ArcMap on December 8, 2017.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



Mad River Wind Farm

Town of Redfield, Oswego County and Town of Worth, Jefferson County, New York

Figure 5. 1904 Carthage, NY, 1905 Orwell, NY, 1906 Highmarket, NY, 1908 Watertown, NY
USGS 1:62500 topographic quadrangles.

 Facility Area

Notes: 1. Basemap: 1904 Carthage, NY, 1905 Orwell, NY, 1906 Highmarket, NY, 1908 Watertown, NY
USGS 1:62500 topographic quadrangles.

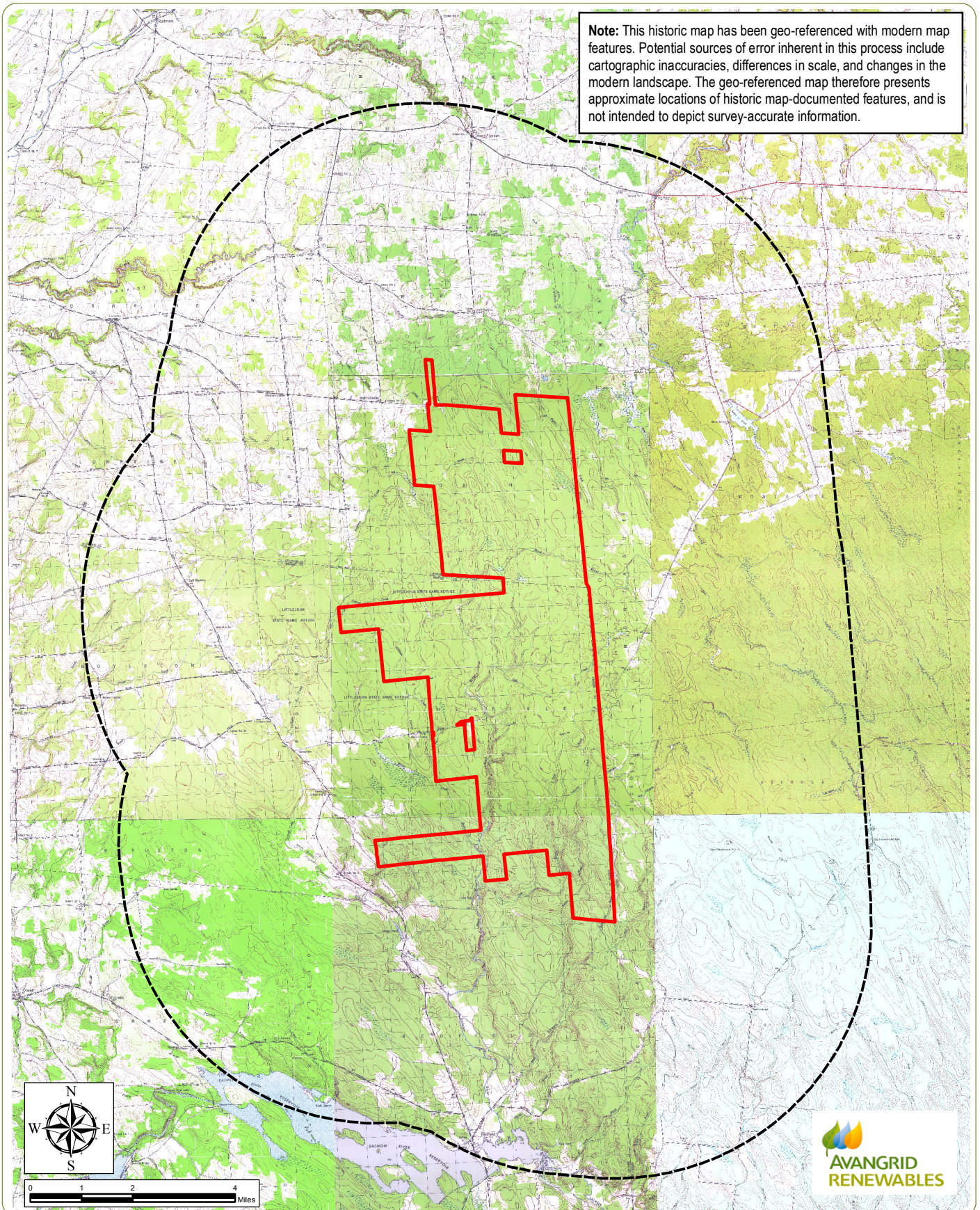
2. This map was generated in ArcMap on December 8, 2017.

3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



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



Mad River Wind Farm

Town of Redfield, Oswego County and Town of Worth, Jefferson County, New York

Figure 6. 1943 USGS Barnes Corners, NY, Boylston, NY, New Boston, NY, North Osceola, NY, Orwell, NY, Redfield, NY, Rodman, NY and Worth Center, NY 1:31680 topographic quadrangles

- Notes:**
1. Basemap: 1943 USGS Barnes Corners, NY, Boylston, NY, New Boston, NY, North Osceola, NY, Orwell, NY, Redfield, NY, Rodman, NY and Worth Center, NY 1:31680 topographic quadrangles
 2. This map was generated in ArcMap on December 8, 2017.
 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

 Facility Area



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