

Exhibit 14B
PAL Report

REPORT

**HISTORIC ARCHITECTURAL RECONNAISSANCE SURVEY
BOWERS WIND FARM PROJECT**

**Carroll Plantation, Penobscot County
and Kossuth Township, Washington County**

Carey L. Jones
Quinn Stuart

Prepared for:

Stantec
30 Park Drive
Topsham, Maine 04086

Submitted by:

The Public Archaeology Laboratory, Inc.
210 Lonsdale Avenue
Pawtucket, Rhode Island 02860

PAL Publications

CARTOGRAPHERS

Dana M. Richardi/Jane Miller

GIS SPECIALIST

Jane Miller

GRAPHIC DESIGN/PAGE LAYOUT SPECIALISTS

Alytheia M. Laughlin/Gail M. Van Dyke

EDITOR

Ken Alber

SUMMARY

Name of Survey:	Bowers Wind Architectural Reconnaissance Survey
Location:	Carroll Plantation, Penobscot County and Kossuth Township, Washington County
Sponsoring Agency or Group:	Champlain Wind, LLC
Survey Dates:	May 11, 2010 to May 14, 2010
Name of Surveyor:	PAL, Inc. 210 Lonsdale Avenue Pawtucket, RI 02860
Level of Survey:	Reconnaissance
Area Surveyed:	An 8-mile radius from the project area location equal to a 182,302 acre area.
Areas of Potential Effect:	Bowers Wind Direct Impact: 288 acres Bowers Wind Indirect Impact: 84,792 acres
Number of Buildings Surveyed:	The Bowers Wind Architectural Reconnaissance Survey identified an additional 62 individual resources.

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INTRODUCTION

This report presents the results of a historic architectural reconnaissance survey conducted for the proposed Bowers Wind Project (Project) located in Carroll Plantation and Kossuth Township, Maine. The purpose of the survey was to identify historic architectural properties within the Project's Area of Potential Effect (APE) and to provide information to the Maine Historic Preservation Commission (MHPC) regarding the potential direct or indirect effects on historic architectural properties. This report was prepared in support of the Project proponent's (Champlain Wind) application for a Land Use Regulation Commission (LURC) Grid-Scale Wind Energy Development Permit.

Project Description

Champlain Wind, LLC (Champlain; the applicant) proposes the construction of the Bowers Wind Project (Project), a utility-scale wind energy facility to be located in Carroll Plantation, Penobscot County, and in Kossuth Township, Washington County (Figure 1). The Project will include up to 27 turbines, associated access roads, up to four permanent 80-meter meteorological towers, a 34.5-kilovolt electrical collector system, an electrical collection substation, and an Operations and Maintenance building.

The turbines will be constructed on three ridges in the Project area: Bowers Mountain and an unnamed ridge to the south ("South Peak") in Carroll Plantation, and Dill Hill in Kossuth Township. Access roads will connect each turbine location and will provide construction and maintenance access from Route 6. The electrical collector line will connect each turbine location and will then travel north for approximately 5 miles towards a proposed substation located adjacent to Line 56, an existing transmission corridor owned by First Wind. The Project also will include up to three 80-m lattice type permanent meteorological (met) towers.

A 34.5-kilovolt (kV) electrical collector line will collect power from each turbine along the summit, and will then travel north in an "express collector" line for 4.2 miles to a proposed substation located adjacent to the existing Line 56. The substation will "step up" the power to 115 kv and transmit it to Line 56. Line 56 is an existing 115-kv transmission line that will accept the power from the Project without structural upgrades. Access roads will be constructed to connect each turbine and will provide construction and maintenance access from Route 6. To the extent possible, the Project will utilize the existing road network.

Project Setting

The area surrounding the Project includes the towns of Springfield, Lakeville, Whitney, Carroll Plantation, Kossuth Township, Prentiss Plantation, and Topsfield and is composed of a rural landscape defined by large expanses of dense deciduous forest, winding rivers, freshwater lakes, and an undulating rocky terrain formed by clusters of mountains.

North of the Project site, the area is defined by Sheepskin Ridge, Tolman Hill, and Brown Hill, mountains ranging in elevation from 900 feet to 1,110 feet. Pleasant Lake Ridge, Shaw Lake Ridge, Penobscot Bald Mountain and Vinegar Hill, reaching elevations of approximately 700 feet to 850 feet, are located south of the Project site. Getchell Mountain sits southwest of the Project site and is approximately 1,020 feet in elevation. Junior Lake, Scraggly Lake, and Pleasant Lake, all large bodies of water, are located south and southeast of the Project site. Smaller water bodies in the area include Duck Lake, Keg Lake, Bottle Lake,

Mill Privilege Lake, and Shaw Lake. Lowell Lake, a small body of water, is located to the west. The Baskahegan Stream flows north to south through Carroll Plantation then west to east through Kossuth Township to the north of the Project site.

The major road in the survey area is Route 6, locally known as Main Road in Springfield and Carroll Plantation and Lakeview Road in Kossuth Township. It runs east-west through the Project area and connects Lincoln to the west with Vanceboro to the east. Secondary roads include North Road, Danforth Road, and Osgood Road which run north-south from the north side of Route 6. Bottle Lake Road, Brown Road, and Oliver Road run north-south from the south side of Route 6 on the west side of the Project Area. Lowell Road, also a secondary road, runs east-west between Bottle Lake Road and Brown Road. There are no accessible roads in the eastern or southern portions of the Project area.

Development in the area is sparse and is closely tied to the natural landscape. Clusters of seasonal cottages line the edges of the lakes. Residential and agricultural development is located primarily along State Route 6, Brown Road, and Bottle Lake Road. Denser residential and commercial development is located in the town center of Springfield to the west of the Project area. There are only a few buildings within the area that serve social or governmental functions, they are mostly located on Route 6.

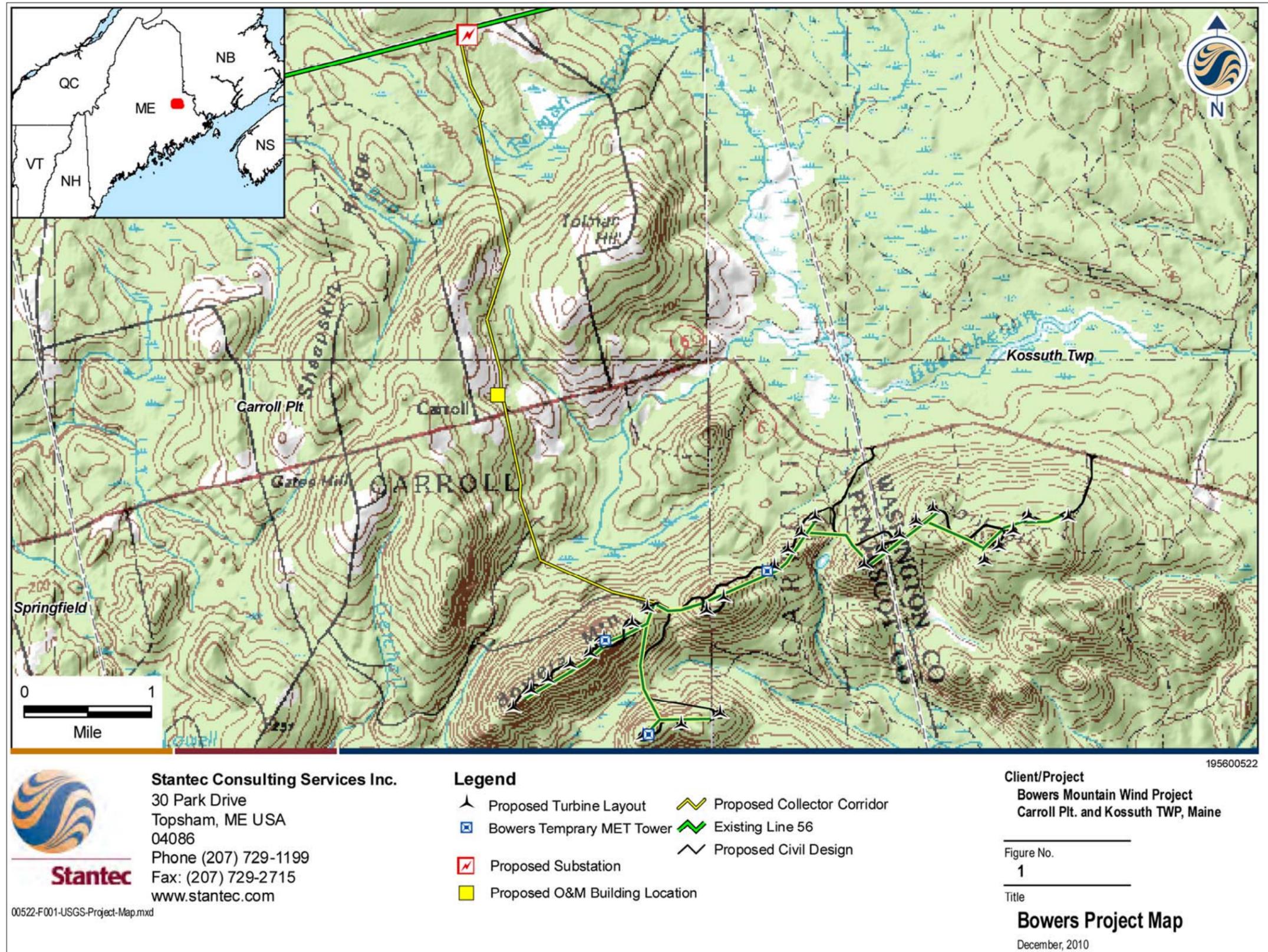


Figure 1. Location of the Proposed Bowers Wind Project, Carroll Plantation and Kossuth Township, Maine.

METHODOLOGY

The methodology for the architectural reconnaissance survey was designed to identify all aboveground historic properties, including districts, buildings, structures, objects, and sites within the APE for the Project that are listed, eligible, or potentially eligible for listing in the National Register of Historic Places (National Register). The survey was conducted in accordance with the standards and guidelines established in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*, as amended (48 FR 44716) (National Park Service [NPS 1983]), the MHPC's *Above Ground Cultural Resources Survey Manual, Guidelines for Identification: Architecture and Cultural Landscapes, Section 106 Specific* (MHPC 2010), the NPS's *National Register Bulletin No. 24, Guidelines for Local Survey: A Basis for Preservation Planning* (NPS 1985), and the NPS's *National Register Bulletin No. 15, How to Apply the National Register Criteria for Evaluation* (NPS 1997).

Prior to beginning survey fieldwork, PAL conducted research to identify all previously surveyed properties within or adjacent to the Project area that are listed or eligible for listing in the National Register or have been recorded as part of the MHPC's Maine State Survey Program. PAL initiated this search by using the National Register Information System (NRIS), an on-line database maintained by the NPS. Following the NRIS search, PAL conducted a visit to the MHPC to review and obtain copies of all National Register forms, relevant town files, and inventory forms for all properties within a 8-mile radius of the Project location. The National Register eligibility status of each surveyed property was noted if the property had been previously evaluated for listing in the National Register.

Fieldwork for the reconnaissance survey was conducted by two PAL architectural historians from May 11, 2010 to May 14, 2010. The fieldwork involved the identification of all properties within the APE that were at least 50 years old or included in previous inventories. Information regarding the viewsheds from recorded properties toward the Project area was noted during the fieldwork. Each identified property was photographed with black-and-white film using a 35mm SLR camera and with a high-resolution digital camera. Data regarding the current condition and significant characteristics of each resource was recorded, and the information on the inventory forms for previously surveyed properties was verified. In compliance with the MHPC's survey methodology, unique sets of information were collected for individual buildings, barns, and farmsteads. All identified properties were mapped in the field on United States Geological Survey (USGS) base maps or detailed aerial images. Site plans depicting farmsteads or other complexes with multiple resources were hand drawn on survey forms. Historical maps were referenced to help with the identification of properties in the field (USGS 1934).

PAL drove all accessible public roads within the study area, including unmarked, navigable gravel/dirt trails. All properties that met the criteria for inclusion in the survey and were visible from public rights-of-way were recorded. To ensure that no properties were overlooked, PAL made notes on the base maps during the survey, indicating which roads had been covered and which buildings were less than 50 years old. For roads that were gated or otherwise clearly marked as private, topographic maps and aerial images were used to verify the presence or absence of existing structures. Historical topographic maps and atlases were then used to determine whether any of these inaccessible properties contained resources at least 50 years old.

PAL entered the survey data into a database following the completion of the fieldwork. The database was then used to generate MHPC reconnaissance-level survey inventory forms for each of the surveyed

properties. Based on the condition, integrity, materials, approximate age, design, and setting of the identified resources observed in the field, PAL made a preliminary assessment regarding the potential National Register eligibility of each property. The preliminary eligibility evaluation of each property and an assessment of potential effects of the Project on properties evaluated as potentially eligible are included in the Recommendations section of this report.

SURVEY BOUNDARIES

The initial Bowers Wind Architectural Reconnaissance survey boundary was an 8-mile radius (182,302 acres) surrounding the proposed summit development. This 8-mile area was based on the Maine Wind Energy Act (35-A MRSA§3401) and its specific regulations that provides that determinations of effect on scenic resources, including historic properties, of national or state significance, shall consider whether the wind project will cause unreasonable adverse effects to resources within 8 miles of the facility. During the fieldwork for the architectural reconnaissance survey, PAL drove the entire 8-mile survey area and based on the viewshed analysis map and observations in the field, determined that many locations within the survey boundary would be blocked by existing topography and/or vegetation. The field observations, the viewshed analysis map (Figure 2), and current USGS maps were used to refine the limits of the study area and to develop the indirect APE (described below).

Area of Potential Effect

The APE is defined in regulations governing Section 106 of the National Historic Preservation Act as the “geographic area or areas within which an undertaking may directly or indirectly cause changes in the character of or use of historic properties, if any such properties exist” (36 CFR 800.1(d)). Typically there are multiple APEs since effects to historic properties can be caused by either a physical taking (direct impacts) or by the introduction of environmental impacts (indirect impacts). The direct impact APE is the geographic area in which properties would be affected by construction activities, including a property taking or physical modification of a historic property. The indirect impact APE consists of a larger area where visual, auditory, pollution, vibration, and/or other types of environmental impacts, might affect the qualities for which a historic property is eligible for or listed in the National Register.

The direct impact APE for the Bowers Wind Project is an 288-acre area that includes the proposed wind turbine complex, the location of the O&M building, the proposed substation site, the access roads, and the power collection system (Figure 3).

For the Bowers Wind Architectural Reconnaissance survey, potential indirect effects on historic properties were determined to be visual or auditory in nature. As such, the indirect effects APE includes all locations where impacts might be caused by noise resulting from the turbines and locations within 8 miles of the Project where the turbines might be visible. Potential noise impacts will occur in a far smaller area than potential visual impacts, so the extent of the indirect effects APE was determined by potential visual effects. Based on field observations and a comparison with the viewshed analysis map, the indirect effects APE was determined to be an irregularly shaped area, 84,792 acres in size, extending at least 5 miles and up to 8 miles from the turbine locations (see Figure 3).

Excluded areas between 5 and 8 miles are those that have no potential view of the Project due to visual obstructions caused by intervening topography or vegetation. Intervening mountains that buffer properties from the Project include Getchell Mountain, Brown Hill, Penobscot Bald Hill, and unnamed mountains in Kossuth Township. The indirect impact APE encompasses all or parts of the towns of Springfield, Lakeville, Carroll Plantation, Kossuth Township, and Prentiss Plantation.

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Figure 2. Draft Viewshed Analysis Map. Provided by Landworks, Middlebury VT.

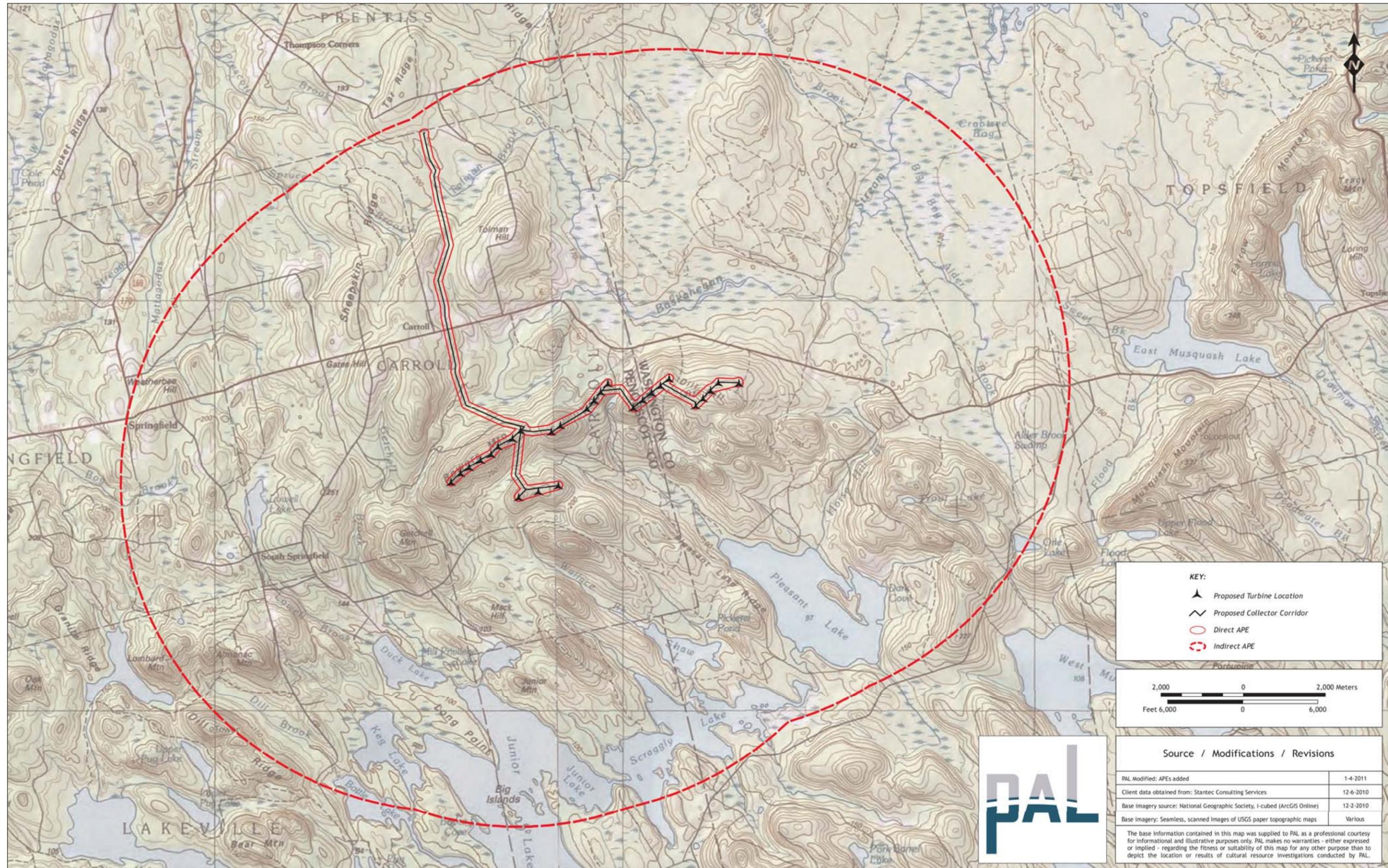


Figure 3. Bowers Wind Project Areas of Potential Effect.

SURVEY RESULTS

Properties Listed in or Evaluated Eligible for Listing in the National Register

The preliminary research identified one property in the APE that is listed in the National Register, the Springfield Congregational Church, Main Road/Route 6, Springfield, and five properties evaluated eligible for such listing (Figure 4). These five properties were evaluated as eligible for listing in the National Register by the MHPC on October 9, 2007 as part of their review of the Stetson Wind Project (MHPC# 2779-06). Appendix A includes a copy of the National Register nomination form for the Springfield Congregational Church and the reconnaissance level MHPC survey forms for the five properties evaluated eligible for listing.

Springfield Congregational Church, Main Road, Springfield

The Springfield Congregational Church on Main Road/Route 6, Springfield was listed in the National Register in 1978 under Criterion C as an representative example of a mid-nineteenth-century rural church. The church was built by the Congregational Society, which included residents from Springfield, Lee, and Carroll Plantation. The church is located on the western edge of the Project area, approximately 5.3 miles from the closest turbine. It is a rectangular, one-and-one-half story, two-bay wide by four-bay deep building designed in the Gothic Revival style. It is topped with an asphalt-shingled gable-front roof and is clad in vinyl siding. A brick chimney is located on the ridge line. The southeast corner of the facade contains a three-story tower with belfry. A one-story addition is located on the north (rear) elevation. Other decorative elements include Gothic arched windows on all elevations and quatrefoil windows located in the tower.

Residence, Lee Road, Springfield

The residence on Lee Road at the intersection with Shephard Road, Springfield (MHPC No. 406-0004) is evaluated eligible for listing in the National Register under Criteria C at the local level in the area of architecture for its unique exterior treatment and level of integrity for the area. The building is located approximately 5.0 miles from the closest turbine. The circa (ca.) 1880 Italianate inspired house is rectangular in plan, two-and-one-half stories in height, and five bays wide. It has an asphalt-shingled, gable-side roof and is clad in diamond-shaped wood shingles, a unique decorative element for this area. Two interior brick chimneys and an exterior concrete block chimney are located on the ridge line. On the west (side) elevation are two two-story bay windows. An attached non-contributing outbuilding is located on the south (rear) elevation.

Forest Lodge #148, Park Street, Springfield

The Forest Lodge #148 on Park Street, Springfield (MHPC No. 406-0007) is evaluated eligible for listing in the National Register under Criteria A and C at the local level in the areas of architecture and community development as an example of a rural community/social lodge. The lodge is located approximately 5.0 miles from the closet turbine. The building is sited close to the road on a narrow grassy lot. It was constructed ca. 1880 and is rectangular in plan, two-and-one-half stories in height, and three-bays by four-bays wide. The lodge is topped with an asphalt shingled gable front roof and clad in clapboard. A brick chimney is located on the interior slope of the roof. The foundation is concrete and partially covered with clapboard. Located on the facade is a one-story gable-front entry porch and on the east (rear) elevation is a small, one-story addition.

Springfield Fairgrounds, Park Street, Springfield

The Springfield Fairgrounds on Park Street, Springfield (MHPC No. 406-0014) is evaluated eligible for listing in the National Register under Criterion A at the local level as a collection of buildings and structures associated with rural patterns of recreation and agricultural fairs. The site is located approximately 5.1 miles from the closest turbine. The fairgrounds consist of 22 individual structures dating from ca. 1940 to the present. The structures are arranged around a central grassy arena. The primary structures are a grandstand, pavilion, and several corrals and animal sheds. Most of the structures are clad in clapboard or wood shingle and topped with asphalt shingled or metal roofs.

Carroll Congregational Church, Main Road, Carroll Plantation

The Carroll Congregational Church on Main Road/Route 6, Carroll Plantation (MHPC No. 080-0013) is evaluated eligible for listing in the National Register under Criteria A and C at the local level in the areas of architecture and community development as an example of a late-nineteenth-century rural religious building in Penobscot County. The church is located approximately 2.0 miles from the closet turbine. It is a rectangular, one-and-one-half story, three-bay wide by four-bay deep building constructed ca. 1889. It is topped with a metal gable-front roof, is clad in vinyl siding and has a concrete block foundation. A steeple with a pyramidal roof is located on the ridge line. Decorative elements include a stained glass window on the facade with a diamond-shaped window placed above it. A stone monument dedicated to the Carroll Plantation War Veterans is located in front of the building.

Farmstead, 166 North Road, Carroll Plantation

The farmstead at 166 North Road, Carroll Plantation is evaluated eligible for listing in the National Register under Criterion C at the local level in the area of architecture as a representative example of a connected farmstead with an intact house, ell, barn, and silo. The buildings are located approximately 2.5 miles from the closest turbine. The property includes three buildings sited close to the road and surrounded by open fields. The house (MHPC No. 080-0029) is an L-shaped, one-and-one-half story, three-bay wide by two-bay deep building constructed ca. 1870. It is topped by an asphalt shingled gable-front roof with gable returns and is clad in clapboards. A brick chimney is located on the ridge line. Located on the facade is a one-story, full-width porch. A one-story ell located on the west elevation connects the barn to the house. The barn (MPHC No. 080-0029a), constructed ca. 1900, is rectangular in plan and one-and-one-half stories in height. It is topped by an asphalt-shingled gambrel roof, is clad in wood shingles, and has a shed addition on the south (side) elevation. A silo (080-0029b) is located to the southeast of the barn. It is metal with a metal dome roof.

Previously Inventoried Resources

There are 85 individual resources in the indirect APE that were previously recorded in the MHPC inventory. All of the resources were recorded by PAL with MHPC Inventory Forms and have been assigned an MHPC number. PAL revisited these properties; any changes to the forms were noted during the fieldwork and are indicated on the forms. The properties were not re-photographed for this survey. A copy of the reconnaissance level MHPC survey forms for these resources is included in Appendix B. All previously inventoried properties are mapped on Figure 5 (Back Pocket). Properties Identified During the Historic Architectural Reconnaissance Survey

Number of Buildings/Structures Recorded and Property Types

The reconnaissance survey of the indirect impact APE identified 62 individual resources that were at least 50 years old and retained a portion of their original physical appearance. These resources include 8

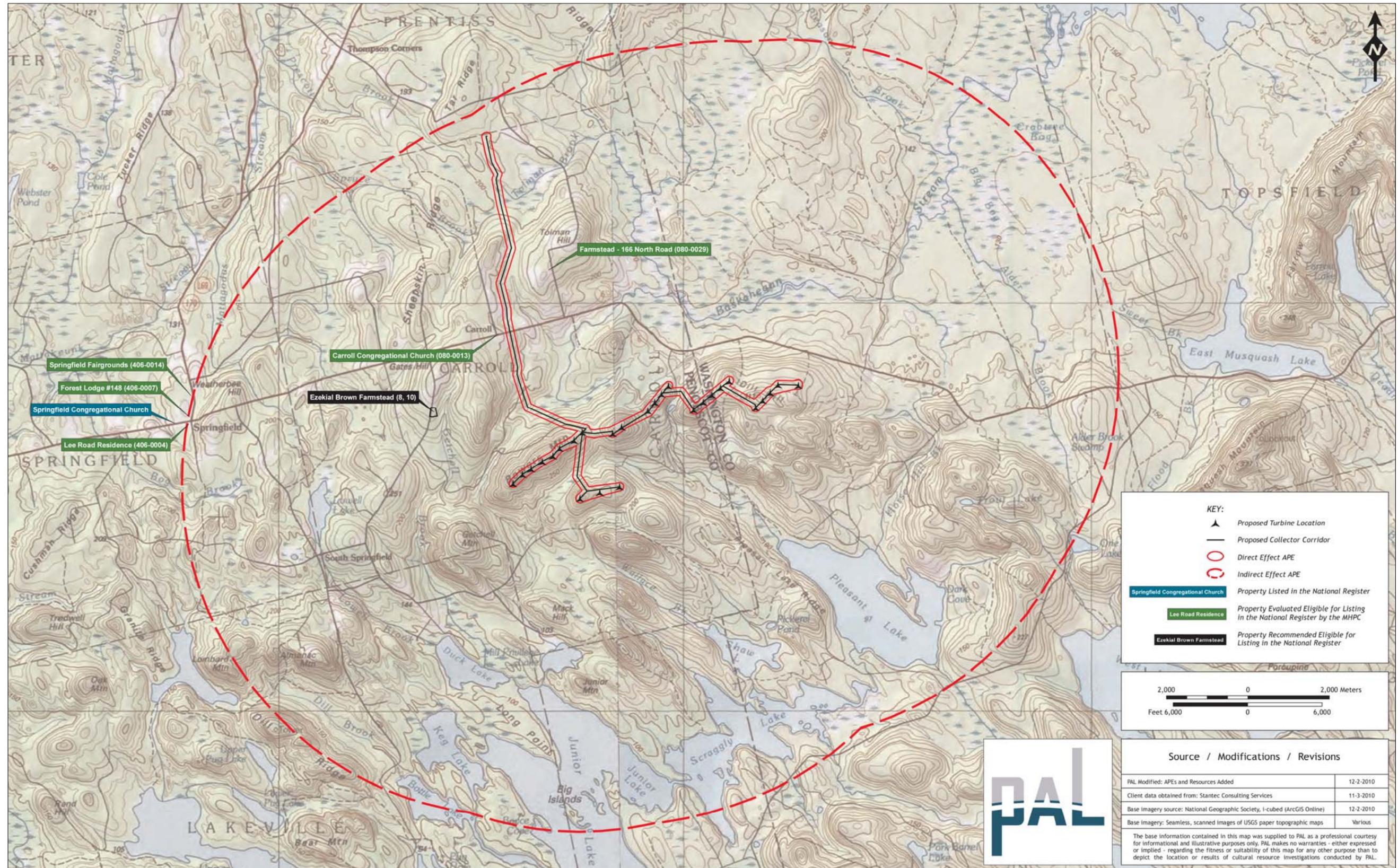


Figure 4. Properties within the Bowers Wind APE which are Listed in or Evaluated Eligible for Listing in the National Register

farmsteads, 21 residences, 20 barns/outbuildings, 4 cottages/summer camps, 4 garages/shops, 2 cemeteries and 3 civic/social/religious building. Appendix C contains the Survey Matrix and the reconnaissance level MHPC inventory forms for the properties identified by PAL during the Bowers Wind Reconnaissance Survey. All of the identified properties in the indirect effects APE are mapped on Figure 5 (Back Pocket).

The buildings identified by PAL range in date from approximately the mid-nineteenth century through the mid-twentieth century. Most of the residences identified as meeting the survey criteria are mid-nineteenth- to early-twentieth-century vernacular farmhouses and single-family detached residences of one to two stories in height and with a variety of historic and modern alterations. Typical alterations include window and door replacement, vinyl siding, the addition of rear or side ells, and enclosure or reorientation of original porches.

RECOMMENDATIONS

National Register Evaluation

All properties identified during the survey were evaluated in accordance with the National Register Criteria for Evaluation. The criteria are defined by the NPS as follows:

Properties eligible for inclusion in the National Register are those whose qualities of significance in American history, architecture, archaeology, engineering, and culture are 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.

The majority of the properties identified during the survey were evaluated as ineligible for listing in the National Register either individually or as contributing resources within a historic district. In general, the individual properties evaluated as ineligible for the National Register are common, vernacular structures that lack architectural significance or apparent significant historical associations. A large number of the properties have lost architectural integrity due to alterations and/or additions, removal of original architectural ornament, replacement of original materials, and replacement of original windows and doors.

Properties Recommended as Potentially Eligible for Listing in the National Register

PAL recommends one property, the Ezekiel Brown Farmstead at 483 Brown Road, Carroll Plantation (Survey Map Nos. 8-10) as potentially eligible for listing in the National Register. This property is described below.

Ezekiel Brown Farmstead, 483 Brown Road, Carroll Plantation

The Ezekiel Brown Farmstead at 483 Brown Road, Carroll Plantation (Survey Map Nos. 8-10) is recommended potentially eligible for listing in the National Register under Criteria A and C. Under Criterion A it is recommended eligible for its association with the early development of Carroll Plantation, originally settled circa (ca.) 1830. The property was established ca. 1840 by Ezekiel Brown, a farmer from Maine. He and his family remained on the farmstead until at least 1880. The Ezekiel Brown Farmstead is also recommended potentially eligible under Criterion C as a representative example of an early- to mid-nineteenth-century farmstead with a farmhouse and barn in rural Penobscot County (Photograph 1). The property is composed of a one-and-one-half story, five-bay by two-bay, Cape Cod-style farmhouse and a one-and-one-half story, front-gable barn (Photographs 2 and 3). The farmhouse



Photograph 1. Ezekiel Brown Farmstead, 483 Brown Road (Survey Map No. 8), Carroll Plantation.



Photograph 2. Ezekiel Brown House, 483 Brown Road (Survey Map No. 9), Carroll Plantation.



Photograph 3. Ezekiel Brown Barn, 483 Brown Road (Survey Map No. 10), Carroll Plantation.

has an asphalt-shingle side-gable roof, is clad in clapboards, and sits on a granite foundation. Exterior decoration is limited to cornice returns, and simple window and door frames. A one-story, five-bay wide ell extends from the east elevation. The associated barn has an asphalt-shingle, front-gable roof and is clad in clapboards. A large cupola is located on the ridge line of the roof. A two-bay wide ell is located on the north elevation. There are two modern buildings on the property, a one-story barn with a slightly pitched roof and a one-story barn with a shed roof. The house and barns are surrounded by open fields; however most of the property is heavily wooded. The Farmstead retains its integrity of location, design, materials, workmanship, and association. Integrity of setting and feeling is compromised by the construction of modern residences along Brown Road (United States Bureau of the Census 1840, 1850, 1860, 1870, 1880, 1900; Varney 1881:164; Walling 1859).

ASSESSMENT OF PROJECT EFFECTS

The Bowers Wind Project is located in an area recently designated by the state for expedited permitting and is therefore subject to review under the Maine Legislature's recently enacted standards specific to wind power projects located within the expedited permitting area. The law provides that determinations of effect on scenic resources, including historic properties, of national or state significance, shall consider whether the wind project will cause unreasonable adverse effects (35-A MRSA §3452). In assessing whether an unreasonable adverse effect on scenic values may be caused by a project, the law requires that the siting authority consider:

- A. The significance of the potentially affected scenic resource of state or national significance;
- B. The existing character of the surrounding area;
- C. The expectations of the typical viewer;
- D. The project purpose and the context of the proposed activity;
- E. The extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance and the potential effect of the generating facilities' presence on the public's continued use and enjoyment of the scenic resource of state or national significance; and
- F. The scope and scale of the potential effect of views of the generating facilities on the scenic resource of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource of state or national significance, the distance from the scenic resource of state or national significance and the effect of prominent features of the development on the landscape.

The framework used for assessing the effects of the Bowers Wind Project on historic properties was that established by the regulations governing Section 106 of the National Historic Preservation Act. In conducting the assessment, the criteria of adverse effect was applied to each of the properties identified in the survey as listed or eligible for listing in the National Register. An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)(1)).

Direct Effects

The direct impact APE was established to encompass all Project-related construction activities, including land acquisition, and the area where the turbines and collector lines will be located. There are no historic properties within the direct impact APE. Therefore, the Project will have no direct effects on historic properties.

Indirect Effects

As described in the methodology, the indirect impact APE was established to include the area where the Bowers Wind Project has the potential to cause visual or auditory impacts on properties that are listed or evaluated as potentially eligible for listing in the National Register. The following is a discussion of the potential effects and an assessment of the Project’s potential to cause adverse effects on those properties. Table 1 provides a summary of the findings for each property.

Table 1. Assessment of Potential Indirect Effects from the Bowers Wind Project.

MHPC No. or Survey Map No.	Property Name/Address	National Register Evaluation	Assessment of Visual Effect	Affect Finding
N/A	Springfield Congregational Church, Springfield	National Register Listed	The proposed turbines would not be visible in views to this property or from the surrounding area. They are blocked by existing vegetation and intervening topography.	No effect.
MHPC No. 406-0004	Residence, Lee Road/Route 6, Springfield	Evaluated as Potentially Eligible for National Register Listing	The proposed turbines would not be visible in views to this property or from the surrounding area. They are blocked by existing vegetation and intervening topography.	No effect.
MHPC No. 406-0007	Forest Lodge 148, Park Street, Springfield	Evaluated as Potentially Eligible for National Register Listing	The proposed turbines would not be visible in views to this property or from the surrounding area. They are blocked by existing vegetation and intervening topography.	No effect.
MHPC No. 406-0014	Springfield Fairgrounds, Park Street, Springfield	Evaluated as Potentially Eligible for National Register Listing	The proposed turbines would not be visible in views to this property or from the surrounding area. They are blocked by existing vegetation and intervening topography.	No effect.
MHPC No. 080-0013	Carroll Congregational Church, Main Road, Carroll Plantation	Evaluated as Potentially Eligible for National Register Listing	The proposed turbines would be visible in views to the south from this property but not in views north to the property. The qualities of significance and aspects of integrity for this property would not be affected by these views.	No adverse effect.

MHPC No. or Survey Map No.	Property Name/Address	National Register Evaluation	Assessment of Visual Effect	Affect Finding
MHPC No. 080-0029	Farmstead, 166 North Road, Carroll Plantation	Evaluated as Potentially Eligible for National Register Listing	The proposed turbines would be visible in views to the south from this property. These views would be screened by the existing vegetation along North Road and Route 6. The qualities of significance and integrity of this property would not be affected by these views.	No adverse effect.
Survey Map Nos. 8-10	Farmstead, 483 Brown Road, Carroll Plantation	Recommend Potentially Eligible for National Register Listing	A limited number of the proposed turbines would be visible in views southeast from this resource. These views would not alter the qualities of significance or its overall integrity.	No adverse effect.

Visual Effects

In order to assess whether the views to or from the constructed Project would have an unreasonable adverse effect, the magnitude, distance, and duration of the potential view, along with the qualities of significance that make the properties eligible for listing in the National Register was taken into account.

For assessing potential visual effects from the proposed Bowers Wind Project, the concept of distance zones formed the basis of the analysis. This concept is based upon the USDA Forest Service visual analysis criteria for forested landscapes, and on the amount of detail that an observer can differentiate at varying distances (United States Forest Service 1995). The distance zones used for the Bowers Wind Project are defined as the following:

- *Foreground: 0 to 1/2 mile in distance.* Within the foreground, the observer would be able to detect surface textures, details, and a full spectrum of color. For example, the details of the turbines (blades, nacelles, support towers) would be readily apparent.
- *Midground: 1/2 mile to 4 miles in distance.* The midground is a critical part of the natural landscape. Within this zone the details found in the landscape become subordinate to the whole: individual trees lose their identities and become forests; buildings are seen as simple geometric forms; roads and rivers become lines. Edges define patterns on the ground and hillsides. Development patterns are readily apparent, especially where there is noticeable contrast in scale, form, texture, or line. Colors of structures become somewhat muted and the details become subordinate to the whole. This effect is intensified in hazy weather conditions, which tend to mute colors and de-sharpen outlines even further. In panoramic views, the midground landscape is the most important element in determining visual impact.
- *Background: greater than 4 miles.* Background distances provide the setting for panoramic views that give the observer the greatest sense of the larger landscape. However, the effects of distance and haze will obliterate the surface textures, detailing, and form of project components. Objects

seen at this distance will be highly visible if they present a noticeable contrast in form or line and weather conditions are favorable. Due to the thinness of the design, the ends of the turbine blades will be minimally visible at distances greater than 8 miles.

In assessing the potential effects of the Project on historic properties, PAL utilized the viewshed map and observations made during the reconnaissance survey.

The following properties will have either no or very limited view of the constructed Project:

- Springfield Congregational Church (no MHPC No.), Route 6, Springfield
- Residence (MHPC No. 406-0004), Lee Road/Route 6, Springfield
- Forest Lodge #148 (MHPC No. 406-0007), Park Street, Springfield
- Springfield Fairgrounds (MHPC No. 406-0014), Park Street, Springfield
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The constructed Project would be visible from three resources in Carroll Plantation: the Carroll Congregational Church (MHPC No. 080-0013), the Farmstead at 166 North Road (MHPC No. 080-0029) and the Ezekiel Brown Farmstead at 483 Brown Road (Survey Map Nos. 8-10). The constructed Project could be visible in midground views from these resources. The project could be visible in views south from the Carroll Congregational Church, but not in views north to the Church from Route 6 (Photograph 4). These views would not affect its qualities of significance, namely its association with the early development of Carroll and its architectural character. Views of the constructed Project from the Farmstead at 166 North Road would be mostly screened by the dense vegetation that lines North Road and Route 6 (Photograph 5). These very limited views would not affect the qualities of significance for this property, namely its association with the development of Carroll. It would also not affect its historic



Photograph 4. View southwest from the Carroll Congregational Church, Main Road, Carroll Plantation, toward the Project site.



Photograph 5. View south from the Farmstead at 166 North Road, Carroll Plantation toward the Project site.

integrity, since long-range views are not an aspect of its setting. Approximately six of the 27 proposed turbines would be visible across the open fields of the Ezekiel Brown Farmstead (Photograph 6). Most of the turbines would be screened by the dense wooded areas on the property and blocked by Brown Hill. The constructed Project would not have an adverse effect on the Ezekiel Brown Farmstead due to the limited nature of the views; it would not alter the qualities of significance or its overall integrity. Therefore, the proposed Bowers Wind Project would have no adverse effects to these three historic resources in the APE.

Noise Effects

Sound levels produced during construction and operation of a Project are regulated by federal, state, and local noise standards. The Maine Department of Environmental Protection (MDEP) regulates noise under the authority of the Site Location of Development Law (38 M.R.S.A 481-490). The current MDEP noise regulation, Chapter 375.10, Control of Noise, was enacted in November 1989 to protect certain land uses from excessive sound levels generated by new or expanded developments and facilities.

Sound is measured in decibels, abbreviated as dB. When measuring sounds, A-weighted (dBA) sound levels are used to simulate the hearing response of humans. The hourly equivalent sound level resulting from routine operation of a wind project is limited to 75 dBA at any facility property boundary. Within residentially zoned areas or where the predominant surrounding land use is residential, the hourly sound level limits for routine operation are 60 dBA daytime and 50 dBA nighttime. In protected areas, the hourly sound level limits for routine operation are 55 dBA daytime and 45 dBA nighttime.



Photograph 6. View southwest toward the Project site from the Ezekiel Brown Farmstead at 483 Brown Road (Survey Map No. 8), Carroll Plantation.

The Bowers Wind Project’s Noise Level Assessment sets forth the predicted “worst case” sounds to be produced by the Project in its final design and configuration. The Assessment relies on a sophisticated

model to predict the sound levels from the Project. To generate a “worst-case scenario” a number of conservative assumptions were input in the model. The assessment determines expected sound levels from the Project and compares them to MDEP sound level limits for quiet areas of 45 decibels (dBA) nighttime and 55 dBA daytime at protected locations.

All of the listed and potentially eligible properties identified during the historic architectural reconnaissance survey are located outside the 45 dBA nighttime and 55 dBA daytime limits established during the noise assessment. Therefore, the Project will cause no indirect effects on historic properties.

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